5.13 TRANSPORTATION AND TRAFFIC

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Proposed Project to result in transportation and traffic impacts in the City of Long Beach. The analysis in this section is based in part on the following technical report:

- Long Beach Boulevard Specific Plan Transportation Impact Analysis (TIA), Fehr & Peers, June 2015

A complete copy of this study is included as Appendix H to this DEIR.

5.13.1 Environmental Setting

5.13.1.1 REGULATORY SETTING

State and local laws, regulations, plans or guidelines that are potentially applicable to the Proposed Project are summarized below.

State

Assembly Bill 1358: The California Complete Streets Act

On September 30, 2008, Assembly Bill 1358 (AB 1358), the California Complete Streets Act, was signed into law. AB 1358 states: "In order to fulfill the commitment to reduce greenhouse gas emissions, make the most efficient use of urban land and transportation infrastructure, and improve public health by encouraging physical activity, transportation planners must find innovative ways to reduce vehicle miles traveled (VMT) and to shift from short trips in the automobile to biking, walking and use of public transit."

The legislation impacts local general plans by adding the following language to California Government Code Section 65302(b)(2)(A) and (B):

(A) Commencing January 1, 2011, upon any substantial revision of the circulation element, the legislative body shall modify the circulation element to plan for a balanced, multimodal transportation network that meets the needs of all users of the streets, roads, and highways for safe and convenient travel in a manner that is suitable to the rural, suburban, or urban context of the general plan.

(B) For the purposes of this paragraph, "users of streets, roads, and highways" means bicyclists, children, persons with disabilities, motorists, movers of commercial goods, pedestrians, users of public transportation, and seniors.

AB 1358 places the planning, designing, and building of complete streets into the larger planning framework of the general plan by requiring jurisdictions to amend their circulation elements to plan for multimodal transportation networks. These networks should allow all users to effectively travel by motor vehicle, foot, bicycle, and transit to reach key destinations within their community and the larger region.

AB 1358 also requires the Governor's Office of Planning and Research (OPR) to amend the *2003 General Plan Guidelines* to assist city and counties in integrating multimodal transportation network policies. In December 2010, OPR published its *Update to the General Plan Guidelines: Complete Streets and the Circulation Element*, in accordance with AB 1358. OPR recommends that local jurisdictions use the *Update* in conjunction with the *2003 General Plan Guidelines* when they are updating their general plan circulation elements. In addition, OPR recommends that local jurisdictions view all transportation projects, new or retrofit, as opportunities to improve safety, access, and mobility for all travelers and recognize pedestrian, bicycle, and transit modes as integral elements of their transportation system (OPR 2010).

Senate Bill 743

On September 27, 2013, Senate Bill (SB) 743 was signed into law. The Legislature found that with the adoption of the Sustainable Communities and Climate Protection Act of 2008 (SB 375), the State had signaled its commitment to encourage land use and transportation planning decisions and investments that reduce vehicle miles traveled (VMT) and thereby contribute to the reduction of greenhouse gas emissions (GHG), as required by the California Global Warming Solutions Act of 2006 (Assembly Bill [AB 32]). Additionally, AB 1358, described above, requires local governments to plan for a balanced, multimodal transportation network that meets the needs of all users.

SB 743 started a process that could fundamentally change transportation impact analysis as part of CEQA compliance. These changes will include the elimination of auto delay, level of service (LOS), and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts in many parts of California (if not statewide). As part of the new CEQA Guidelines, the new criteria "shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." OPR is in the process of developing alternative metrics and thresholds based on VMT. OPR expects to publish the final draft of changes to CEQA Guidelines, which will require certification and adoption by the California Secretary for Natural Resources before they go into effect, which may take multiple months depending on the amount and type of input received during the rulemaking review process. Once the guidelines are prepared and certified by the Secretary of the Natural Resources Agency "automobile delay, as described solely by level of service of similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment." OPR is still in the process of preparing the guidelines and has prepared a preliminary discussion draft, with public comments submitted at the end of 2014. The final guidelines are expected to be published in the summer or fall of 2015 and implementation is expected to occur in 2016. As OPR has not yet amended the CEQA Guidelines to implement this change, automobile delay is still considered a significant impact and the City of Long Beach will continue to use the established LOS criteria.

Regional and Local

SCAG's 2013 RTP/SCS

The Southern California Association of Government's (SCAG) 2013 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) provides a regional transportation plan for six counties in Southern California: Orange, San Bernardino, Riverside, Los Angeles, Ventura, and Imperial. The primary

goal of the RTP is to increase mobility for the region. With recent legislation, this plan also encompasses sustainability as a key principle in future development.

Los Angeles County Metropolitan Transportation Authority

Los Angeles County Metropolitan Transportation Authority (Metro) serves as transportation planner and coordinator, designer, builder, and operator for Los Angeles County. Metro funds improvements to all modes of transportation through several programs, including the Transportation Improvement Program (TIP), the Congestion Management Program (CMP), and Bicycle Transportation Strategic Plan. Metro operates rail and bus transit services throughout Los Angeles County, including the City of Long Beach.

Los Angeles County Congestion Management Program

For Los Angeles County, Metro is responsible for implementing the CMP, which was last revised in 2010. Compliance with CMP requirements ensures a city's eligibility to compete for state gas tax funds for local transportation projects. The CMP involves monitoring traffic conditions and performance measures on the designated transportation network, analyzing the impact of land use decisions on the transportation network, and implementing mitigation measures to reduce impacts on the network. The CMP for Los Angeles County requires that the traffic impact of individual development projects of potentially regional significance be analyzed. A specific system of arterial roadways plus all freeways compose the CMP system. New projects within the County of Los Angeles must comply with the CMP, which was adopted by the Metro pursuant to state law (Metro 2010).

Based on the CMP criteria, the following locations must be analyzed:

- Mainline freeway monitoring locations where a project will add 150 or more trips, in either direction, during either AM or PM weekday peak hours.

- All CMP arterial monitoring intersections, including freeway on- and off-ramp intersections, where a proposed project will add 50 or more trips during either the AM or PM weekday peak hours (of adjacent street traffic).

Appendix D of the CMP includes Transportation Impact Assessment (TIA) guidelines. It requires a TIA for any project that impacts CMP highways and intersections. If a project does not add, but merely shifts trips at a given monitoring location, a CMP analysis is not required.

A significant impact occurs when a project increases traffic demand on a CMP facility by 2 percent of capacity ($V/C \geq 0.02$), causing LOS F ($V/C > 1.00$); if the facility is already at LOS F, a significant impact occurs when a project increases traffic demand on a CMP facility by 2 percent of capacity ($V/C \geq 0.02$).

City of Long Beach

The City's current Mobility Element, contained within the Long Beach General Plan, was adopted in 2013. It identifies the existing transportation conditions within the City including roadway configuration and capacities. In addition, the element identifies issues and opportunities, goals, policies, and actions related to

circulation within the City. The City's goals include safe and efficient transportation and promoting non-motorized transportation; these goals encourage alternative transportation, congestion management, and traffic demand management. The City's Mobility Element identifies that LOS D is generally considered the lowest acceptable level for operation of intersections and roadway segments that fall under its jurisdiction.

In addition, the City's Municipal Code includes regulations related to pedestrian, bicycle and vehicular mobility as listed below:

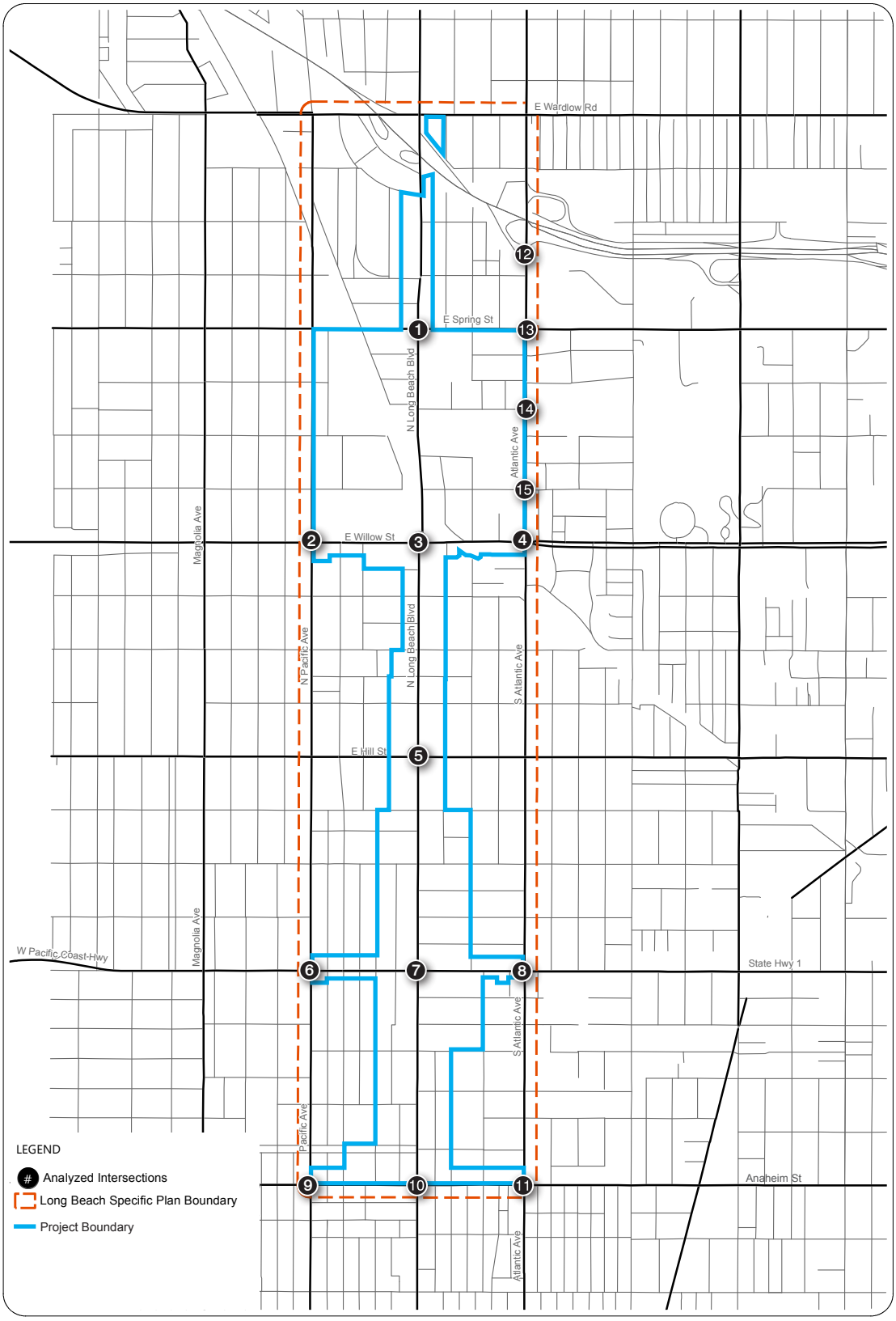
- Chapter 10.08 (Traffic Control Devices)
- Chapter 10.58 (Pedestrians)
- Chapter 10.48 (Bicycles)
- Chapter 18.17 (Transportation Improvement Fee)

5.13.1.2 EXISTING ROADWAY NETWORK

The study area limits for the Proposed Project are Pacific Avenue to the west, Wardlow Road to the north, Atlantic Avenue to the east, and Anaheim Street to the south. The project study area is comprised of 15 intersections. The study area was established in accordance with City of Long Beach Traffic Engineering staff and covers the area surrounding Long Beach Boulevard that would be affected by the Proposed Project. A vicinity map displaying the Project Site, study area, and analyzed intersections is provided in Figure 5.13-1, *Study Area Roadway Networks and Intersection Analysis Locations*. The following intersections were evaluated:

1. Long Beach Boulevard and Spring Street
2. Pacific Avenue and Willow Street
3. Long Beach Boulevard and Willow Street
4. Atlantic Avenue and Willow Street
5. Long Beach Boulevard and Hill Street
6. Pacific Avenue and Pacific Coast Highway (SR-1)
7. Long Beach Boulevard and Pacific Coast Highway (SR-1)
8. Atlantic Avenue and Pacific Coast Highway (SR-1)
9. Pacific Avenue and Anaheim Street
10. Long Beach Boulevard and Anaheim Street
11. Atlantic Avenue and Anaheim Street
12. Atlantic Avenue and Interstate 405 (I-405) Southbound Ramps
13. Atlantic Avenue and Spring Street
14. Atlantic Avenue and Columbia Street
15. Atlantic Avenue and 27th Street

Figure 5.13-1 Study Area Roadway Networks and Intersection Analysis Locations



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Scale (Feet)

Source: Fehr & Peers, 2015

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Regional access to Long Beach Boulevard within the study area is provided by I-405, I-710 and Pacific Coast Highway. Roadways in the study area are classified per the City's Mobility Element and Los Angeles County CMP, and described in detail below.

- **Pacific Coast Highway (SR-1):** Pacific Coast Highway is classified in the Los Angeles County CMP as a State Highway (Arterial) and in the City's Mobility Element as a Regional Corridor. The roadway extends from State Route 101 in Leggett, California south along the Pacific Coast over 650 miles before terminating at Interstate 5 in Dana Point, California. Within the study area, the Pacific Coast Highway has an east-west orientation and is a six lane facility divided by a two-way left turn lane. On-street parking is generally permitted with time restraints and other restrictions. The posted speed limit along Pacific Coast Highway within the study limits is 35 miles per hour (mph).

- **Long Beach Boulevard:** Long Beach Boulevard is classified in the City's Mobility Element as a Boulevard. The roadway runs in a north-south direction providing direct access to the I-405, I-710 and Pacific Coast Highway. Long Beach Boulevard begins in Huntington Park as Pacific Boulevard and extends through the Cities of South Gate, Lynwood, and Compton before terminating in Long Beach at Ocean Boulevard. Within the study area Long Beach Boulevard is a four lane facility divided by the Metro Blue Line rail line in the center median. On-street parking is permitted throughout Long Beach Boulevard with some exceptions and the posted speed limit varies between 30-35 mph.

- **Atlantic Avenue:** Atlantic Avenue is classified in the City's Mobility Element as a Major Avenue. The roadway runs in a north-south direction providing access to I-405 and Pacific Coast Highway. Atlantic Avenue begins in the City of Commerce as Atlantic Boulevard and stretches south through the Cities of Maywood, South Gate, Lynwood and Compton before terminating at Ocean Boulevard in the City of Long Beach. Within the study area Atlantic Avenue is an undivided four lane facility. On-street parking is generally permitted throughout Atlantic Avenue and the posted speed limit varies between 30-35 mph.

- **Pacific Avenue:** Pacific Avenue is classified as a Major Avenue south of Pacific Coast Highway and as a Minor Avenue north of Pacific Coast Highway in the City's Mobility Element as a Major Avenue. The roadway runs in a north-south direction providing access to I-405 and Pacific Coast Highway. Pacific Avenue begins at I-405 and stretches south before terminating at Ocean Boulevard in the City of Long Beach. Within the study area Pacific Avenue is a four lane facility divided by either a two-way left turn lane or a raised center median. On-street parking is generally permitted throughout Pacific Avenue and the posted speed limit varies between 30-35 mph.

- **Spring Street:** Spring Street is classified in the City's Mobility Element as a Neighborhood Connector west of Pacific Avenue, a Minor Avenue west of Long Beach Boulevard, and a Major Avenue east of Long Beach Boulevard. The roadway runs in an east-west direction providing access to Long Beach Boulevard and I-405. Spring Street begins at the Los Angeles River west of Long Beach Boulevard and extends to I-605 where it changes to Cerritos Avenue. Within the study area Spring Street is a four lane facility divided by a two-way left turn lane west of Long Beach Boulevard and by a raised center median east of Long Beach Boulevard. West of Long Beach Boulevard, Spring Street provides on-street bicycle

facilities and does not permit on-street parking, while east of Long Beach Boulevard, Spring Street provides a shared bicycle route and permits on-street parking. The posted speed limit on Spring Street is 30 mph.

- **Willow Street:** Willow Street is classified in the City's Mobility Element as a Boulevard. Willow Street begins at SR-103 continuing from Sepulveda Boulevard and turns into Katella Avenue at I-605, providing access to SR-103, I-710, Long Beach Boulevard, I-405 and I-605. Within the study area Willow Street is a 6 lane facility divided by a raised center median except 400 feet east and west of Long Beach Boulevard where the segment is undivided. Limited on-street parking is provided by Willow Street and the posted speed limit varies between 35-40 mph.

- **Hill Street:** Hill Street is classified in the City's Mobility Element as a Neighborhood Connector. Hill Street begins at the Los Angeles River at De Forest Avenue and extends through Long Beach before terminating at Bay View Drive. Within the study area Hill Street is a two lane, undivided facility. On-street parking is generally permitted on Hill Street and the posted speed limit is 25 mph.

- **Anaheim Street:** Anaheim Street is classified in the City's Mobility Element as a Major Avenue. Anaheim Street begins in Harbor City at Western Avenue and terminates in Long Beach at Pacific Coast Highway, providing access to I-110, I-710 and Pacific Coast Highway. Within the study area Anaheim Street is a four lane facility divided by a two-way left turn lane. On-street parking on Anaheim Street is generally not permitted with some exceptions and the posted speed limit is 30 mph.

5.13.1.3 EXISTING TRAFFIC CONDITIONS

Existing morning (7:00 to 9:00 AM) and afternoon (4:00 to 6:00 PM) peak period vehicle counts were taken at all study-area intersections, and 24-hour daily traffic counts were taken along at ten roadway segments. In addition, signal timing for the signalized study area intersections was provided for the AM and PM peak hours by the City and Caltrans, and used in the traffic analysis. Figure 6 (Existing Traffic Controls, Lane Configurations, and Peak Hour Volumes) of the TIA (see Appendix H) summarizes the existing AM and PM peak hour traffic volumes and lane configurations in the study area.

Intersection Level of Service Analysis Methodology

For signalized intersections, the Proposed Project's traffic analysis was evaluated in accordance with the CMP guidelines using the Intersection Capacity Utilization (ICU) methodology. The ICU methodology is considered a standard approach for evaluating signalized intersection operations in Los Angeles County and in the City of Long Beach. It reports the volume-to-capacity (V/C) ratio at the intersection for signalized intersections, which evaluates the critical movements for each signal and compares that to the critical movement capacity of the intersection. For unsignalized intersections, methodologies consistent with the Highway Capacity Manual 2010 (HCM 2010) were applied.

Based on the V/C and delay findings, the methodologies assign a qualitative letter grade that represents the operations of the intersection. These grades range from level of service (LOS) A (minimal delay) to LOS F (excessive congestion). LOS E represents at-capacity operations. Descriptions of the LOS letter grades for signalized and unsignalized intersections are provided in Table 5.13-1.

Table 5.13-1 Intersection Level of Service Criteria

LOS	Interpretation	Signalized Intersections	Unsignalized Intersections V/C Ratio
A	Signalized: Operations with very low delay occurring with favorable progression and/or short cycle length. Unsignalized: Little or no delay.	0.000 – 0.600	≤ 10.0
B	Signalized: Operations with low delay occurring with good progression and/or short cycle lengths. Unsignalized: Short traffic delays.	0.601 – 0.700	> 10.0 to 15.0
C	Signalized: Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear. Unsignalized: Average traffic delays..	0.701 – 0.800	> 15.0 to 25.0
D	Signalized: Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable. Unsignalized: Long traffic delays.	0.801 – 0.900	> 25.0 to 35.0
E	Signalized: Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. Unsignalized: Very long traffic delays.	0.901 – 1.000	> 35.0 to 50.0
F	Signalized: Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths. Unsignalized: Extreme traffic delays with intersection capacity exceeded	Greater than 1.000	Greater than 50.0

Source: Fehr & Peers 2015.
Notes: V/C = Volume to Capacity

Analysis Scenarios

As part of the TIA, and consistent with Los Angeles County CMP Guidelines, the following scenarios were analyzed:

- Existing (2014) Without Project Conditions – Consists of existing counts collected at study intersections.
- Existing (2014) With Project Conditions – Existing traffic volumes plus project traffic.
- Cumulative Year (2035) Without Project Conditions – Annual growth rate factor applied through Year 2035.
- Cumulative Year (2035) With Project Conditions – Cumulative Year traffic volumes plus project traffic.

Existing (2014) Without Project Conditions

Existing (2014) Without Project conditions traffic volumes, lane configurations, and signal timing information provided by City staff were used to analyze operations at the study intersections for existing AM and PM peak hour conditions using methodologies described above. The results of the analysis are summarized in Table 5.13-2. The City's Mobility Element identifies that LOS D is generally considered the lowest acceptable level for operation of intersections that fall under its jurisdiction. As shown in Table 5.13-2, all of the study area intersections currently operate acceptably at LOS D or better during the AM and PM peak hours.

Table 5.13-2 Intersection Level of Service for Existing (2014) Without Project Conditions

Intersection	Control	AM Peak Hour		PM Peak Hour	
		V/C[1] or Delay[2]	LOS	V/C[1] or Delay[2]	LOS
1. Long Beach Boulevard and Spring Street	Signal	0.645	B	.780	C
2. Pacific Avenue and Willow Street	Signal	0.689	B	.774	C
3. Long Beach Boulevard and Willow Street	Signal	0.713	C	.752	C
4. Atlantic Avenue and Willow Street	Signal	0.643	B	.779	C
5. Long Beach Boulevard and Hill Street	Signal	0.490	A	.524	A
6. Pacific Avenue and Pacific Coast Highway	Signal	0.646	B	.700	C
7. Long Beach Boulevard and Pacific Coast Highway	Signal	0.713	C	.737	C
8. Atlantic Avenue and Pacific Coast Highway	Signal	0.681	B	.730	C
9. Pacific Avenue and Anaheim Street	Signal	0.735	B	.735	C
10. Long Beach Boulevard and Anaheim Street	Signal	0.502	A	.651	B
11. Atlantic Avenue and Anaheim Street	Signal	0.705	C	.800	C
12. Atlantic Avenue and I-405 SB Ramps	Signal	0.583	A	.546	A
13. Atlantic Avenue and Spring Street	Signal	0.772	C	.889	D
14. Atlantic Avenue and Columbia Street	Signal	0.521	A	.573	A
15. Atlantic Avenue and 27th Street	Side-Street Stop	13.9	B	18.0	C

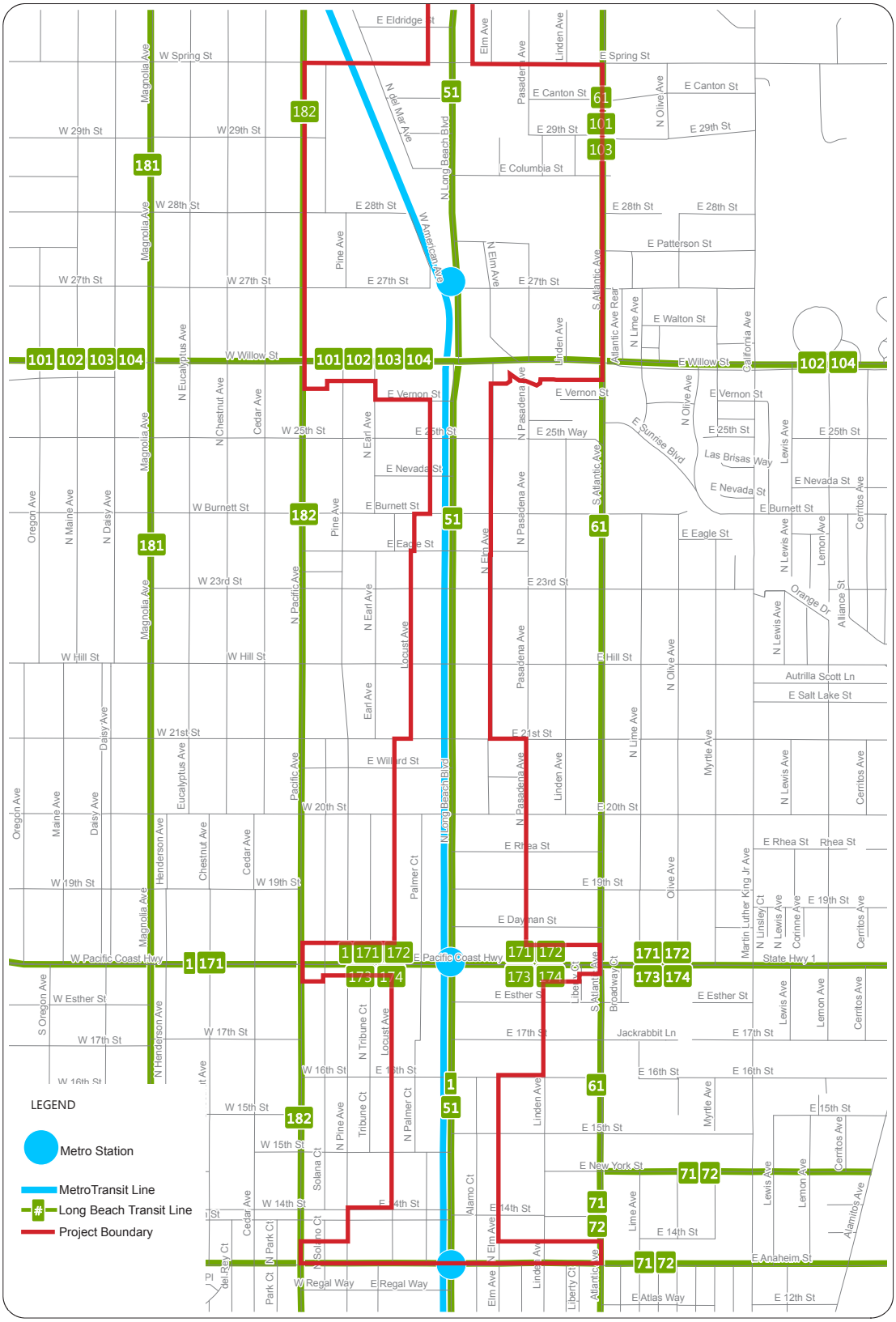
Source: Fehr & Peers 2015.
1 V/C for signalized intersections based on application of Intersection Capacity Utilization methodology using Traffix software. V/C = Volume / Capacity Ratio.
2 Delay for unsignalized intersections based on application of Highway Capacity Methodology using Synchro software. Delay reported is the worst-case approach delay.

5.13.1.4 EXISTING TRANSIT FACILITIES

The study area is serviced by multiple Long Beach Transit bus routes and the Metro Rail Blue Line. Metro Blue Line, which serves the area with three stations within the Project Site boundary has the highest ridership rates in the county, totaling 89,523 average weekday boardings as of June 2012. The Long Beach Transit and Metro routes are shown in Figure 5.13-2, *Transit Routes and Facilities*, and described in detail in the *Existing Transit Facilities* section of the TIA (see Appendix H).

Figure 5.13-2 Transit Routes and Facilities

5. Environmental Analysis



Source: Fehr & Peers, 2015

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5.13.1.5 EXISTING BICYCLE AND PEDESTRIAN FACILITIES

The City of Long Beach is serviced by bicycle lanes, bicycle boulevards and separated bicycle lanes. Bicycle boulevards are low speed streets that have been 'optimized' for bicycle traffic through traffic calming and right-of-way assignment. The City has approved the installation of three new bicycle boulevards, which will amount to four total bicycle boulevards that stretch over 15 miles throughout the City. Separated bicycle lanes, also known as the "Cycle Track" in the City, are exclusive bicycle facilities with elements of a separated path and on-road bike lane. In 2002, the City installed over two miles of Cycle Track in the downtown area.

Pedestrian facilities throughout the City are well developed along most major roadways. Roadways within the Project Site have sidewalks on both sides of the street, pedestrian crosswalks, appropriate pedestrian crossing controls and allow for connectivity to local activity centers.

Existing and future bicycle facilities are shown in Figure 5.13-3, *Existing and Planned Bicycle Facilities*. Existing morning and afternoon peak period bicycle and pedestrian counts at 11 analyzed intersections were conducted by Fehr & Peers on May 17, 2012, and January 14, 2014. The existing AM and PM bicycle and pedestrian volumes at the 11 analyzed intersections are shown in Figure 5 (Existing Peak Hour and Pedestrian Volumes) of the TIA (see Appendix H).

5.13.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project could:

T-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.

T-2 Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.

T-3 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.

T-4 Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

T-5 Result in inadequate emergency access.

T-6 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 Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold T-3
- Threshold T-4
- Threshold T-5

These impacts will not be addressed in the following analysis.

5.13.3 Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.13-1: Project-related trip generation would impact levels of service for the existing area roadway system. [Threshold T-1]

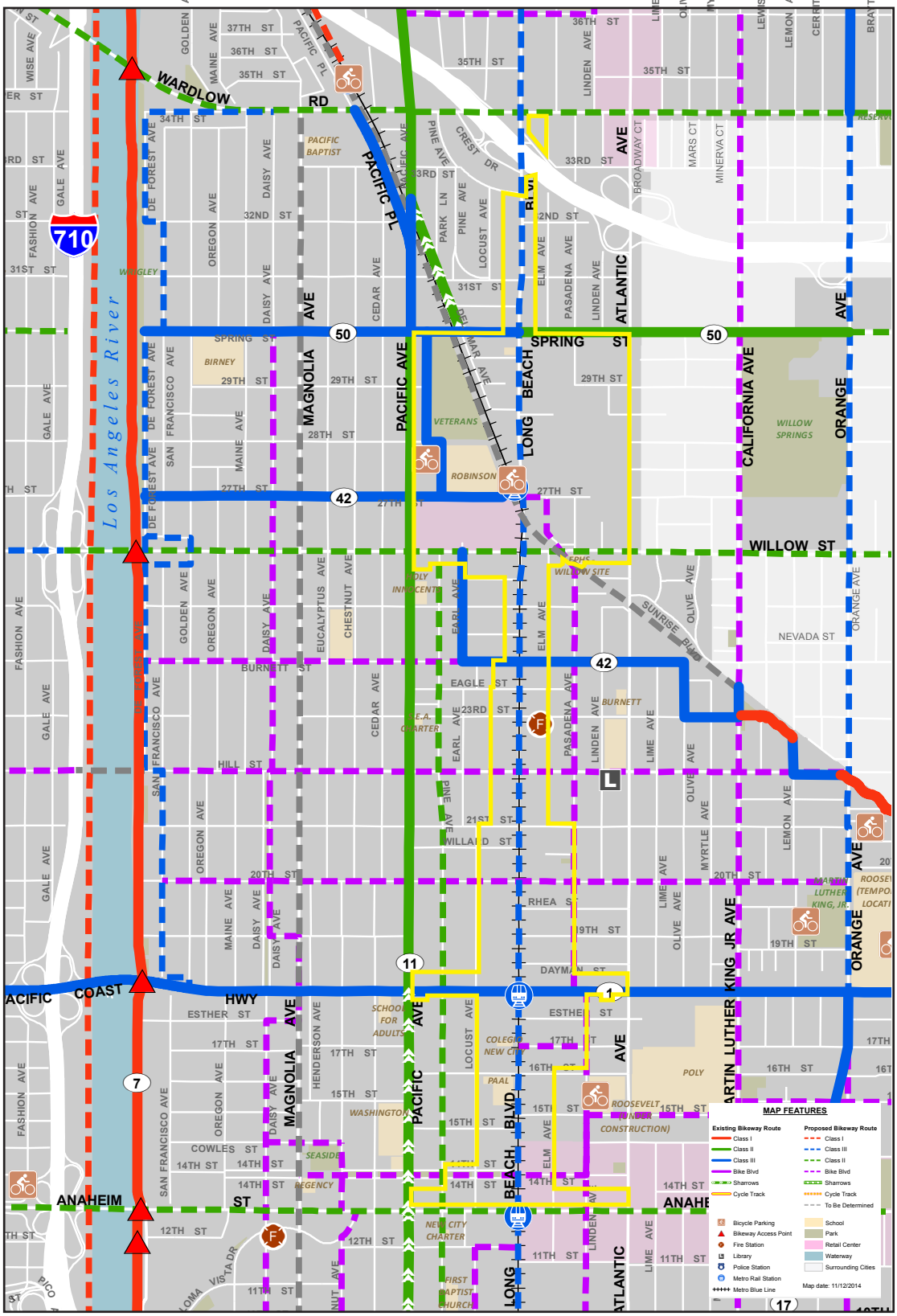
Impact Analysis: The potential traffic impacts resulting from the Proposed Project within each of the areas of the Project Site are addressed below.

Midtown Specific Plan Area

The Midtown Specific Plan would result in an increase in the number of residential units within the Midtown Specific Plan area to 3,619, approximately 1,700 more than existing conditions. The Midtown Specific Plan also increases potential commercial and employment building space to approximately 3 million square feet, a net increase of approximately 369,000 square feet over existing conditions. Additionally, the Midtown Specific Plan's buildout projections assume a small increase in the number of licensed hospital beds (27 beds) and the addition of a business hotel with up to 81 hotel rooms (see Table 3-1, *Land Use Projections for Midtown Specific Plan Area*). Detailed descriptions of land use assumptions by district for the Midtown Specific Plan area are provided in Section 3.6.1.2, *Description of the Project*, of Chapter 3, *Project Description*.

The Midtown Specific Plan also includes the closure of the following roadway segments, which intersect with Long Beach Boulevard, to vehicular traffic in order to create parklets (small street parks; see Figure 5.12-1, *Parks and Recreational Facilities Serving the Project Site*): 25th Street west of Long Beach Boulevard; 25th Street east of Long Beach Boulevard; 23rd Street west of Long Beach Boulevard; 23rd Street east of Long Beach Boulevard; 21st Street west of Long Beach Boulevard; 21st Street east of Long Beach Boulevard; Rhea Street east of Long Beach Boulevard; Esther Street east of Long Beach Boulevard; 15th Street west of Long Beach Boulevard; 15th Street east of Long Beach Boulevard; and 14th Street east of Long Beach Boulevard.

Figure 5.13-3 Existing and Planned Bicycle Facilities



Project Boundary

0 2,000
Scale (Feet)

Source: Fehr & Peers, 2015

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Trip Generation and Distribution

The Midtown Specific Plan would generate additional vehicular travel in the study area. Given the mixed-use nature of the Midtown Specific Plan area, the Midtown Specific Plan would not generate traffic in a similar manner as traditional development sites. Therefore, the Midtown Specific Plan's transportation analysis utilized the MXD methodology (or mixed-use development trip generation) to calculate project-related trips. This methodology considers the combined effects of the Midtown Specific Plan's mixed uses, regional location, demographics, and development scale, and is described in detail on pages 21 to 25 of the TIA (see Appendix H).

Table 5.13-3 summarizes the Midtown Specific Plan's trip generation by district and presents the net change in trip generation compared to the existing land use plan. As shown in the table, the net change would result in an increase of 388 AM peak hour inbound trip ends, 577 AM peak hour outbound trip ends, 580 PM peak hour inbound trip ends, 409 PM peak hour outbound trip ends, and 13,754 daily trip ends. Based on the trip generation and trip distribution estimates developed for the Midtown Specific Plan, project trips were assigned to the study area roadway network by district. Traffic conditions were evaluated for Existing (2014) and Cumulative Year (2035) Without and With Project scenarios.

The Midtown Specific Plan's trips were distributed in the network based on the likely approach and departure routes to study area, as determined through multiple sources such as the location of complementary land uses and existing traffic volumes on study roadways. The 2010 Longitudinal Employer-Household Dynamics Origin Destination Employment Statistics were also used to provide insight into local travel patterns. Based on the trip generation and trip distribution estimates developed and described above, project trips were assigned to the study area roadway network. The assignment of "project only" trips for the Proposed Project is shown in Figure 7 (Project Only Peak Hour Traffic Volumes) of the TIA (see Appendix H).

Table 5.13-3 Project Trip Generation Estimates

Zone	Daily	AM Peak		PM Peak	
		In	Out	In	Out
Existing Land Use Plan					
Corridor District 1	8,524	206	189	328	352
Corridor District 2	17,908	414	343	649	697
Corridor District 3	5,433	298	222	210	245
Medical District 4	10,568	415	147	339	617
Transit Node District 5	30,248	1,146	817	1,044	1,214
Transit Node District 6	18,895	515	482	678	694
Transit Node District 7	10,304	147	96	403	433
Total	101,881	3,140	2,295	3,651	4,252
Proposed Land Use Plan					
Corridor District 1	9,696	236	255	351	363
Corridor District 2	19,299	338	416	763	713
Corridor District 3	3,149	215	232	182	141
Medical District 4	19,335	758	390	626	947
Transit Node District 5	30,843	1,045	796	1,139	1,274
Transit Node District 6	19,637	626	515	708	747
Transit Node District 7	13,675	310	269	461	475
Total	115,635	3,528	2,872	4,231	4,660
Difference in Land Use Plans					
Corridor District 1	1,172	30	66	24	11
Corridor District 2	1,391	-76	73	115	16
Corridor District 3	-2,284	-83	10	-28	-103
Medical District 4	8,767	344	243	287	330
Transit Node District 5	595	-101	-20	95	61
Transit Node District 6	742	111	33	30	53
Transit Node District 7	3,371	163	173	58	41
Final Trip Generation Estimate	13,754	388	577	580	409

Source: Fehr & Peers 2015.

Significance Criteria

The significant criteria listed below are consistent with the City's Mobility Element level of service policy and the Los Angeles County CMP Guidelines. A significant impact would occur at a study intersection when the project-related traffic causes:

- A signalized intersection to degrade from an acceptable LOS D or better to LOS E or LOS F, or
- The V/C ratio to increase by 0.02 or more at a signalized intersection that operates at LOS E or LOS F, or

- Causes an unsignalized intersection operating at LOS D or better to degrade to LOS E or LOS F and the intersection satisfies the Manual for Uniform Traffic Control Devices (MUTCD) Peak Hour Volume Warrant for Traffic Signal Installation, or

- Adds traffic to an unsignalized intersection operating at an unacceptable LOS E or LOS F such that it satisfies the MUTCD Peak Hour Volume Warrant for traffic signal installation.

Existing (2014) With Project Conditions

Intersection LOS results for Existing (2014) With Project conditions are summarized in Table 5.13-4. As shown in the table, the majority of the study intersections would continue to operate at and acceptable level of service (LOS D or better), except for the Atlantic Avenue and Spring Street intersection, which would operate at LOS E during the PM peak hour.

Table 5.13-4 Intersection Level of Service for Existing (2014) With Project Conditions

Intersection	Control	AM Peak Hour		PM Peak Hour	
		V/C[1] or Delay[2]	LOS	V/C[1] or Delay[2]	LOS
1. Long Beach Boulevard and Spring Street	Signal	0.705	C	0.819	D
2. Pacific Avenue and Willow Street	Signal	0.698	B	0.793	C
3. Long Beach Boulevard and Willow Street	Signal	0.742	C	0.796	C
4. Atlantic Avenue and Willow Street	Signal	0.680	B	0.809	D
5. Long Beach Boulevard and Hill Street	Signal	0.525	A	0.549	A
6. Pacific Avenue and Pacific Coast Highway	Signal	0.657	B	0.712	C
7. Long Beach Boulevard and Pacific Coast Highway	Signal	0.755	C	0.756	C
8. Atlantic Avenue and Pacific Coast Highway	Signal	0.713	C	0.746	C
9. Pacific Avenue and Anaheim Street	Signal	0.605	B	0.741	C
10. Long Beach Boulevard and Anaheim Street	Signal	0.510	A	0.653	B
11. Atlantic Avenue and Anaheim Street	Signal	0.711	C	0.800	D
12. Atlantic Avenue and I-405 SB Ramps	Signal	0.627	B	0.586	A
13. Atlantic Avenue and Spring Street	Signal	0.818	D	0.933	E
14. Atlantic Avenue and Columbia Street	Signal	0.622	B	0.661	B
15. Atlantic Avenue and 27th Street	Side-Street Stop	15.0	C	21.6	C

Source: Fehr & Peers 2015.
Notes: **Bold** indicates unacceptable LOS.
1 V/C for signalized intersections based on application of Intersection Capacity Utilization methodology using Traffix software. V/C = Volume / Capacity Ratio.
2 Delay for unsignalized intersections based on application of Highway Capacity Methodology using Synchro software. Delay reported is the worst-case approach delay.

As shown in Table 5.13-5, the addition of project traffic would degrade operations from LOS D to LOS E in the PM peak hour at the intersection of Atlantic Avenue and Spring Street. According to the significance criteria described previously, this would be a significant impact.

Table 5.13-5 Existing (2014) With Project Significant Impacts

Intersection	Peak Hour	Existing (2014) Without Project		Existing (2014) With Project			Significant Impact?
		V/C[1]	LOS	V/C[1]	LOS	Project Change	
13. Atlantic Avenue and Spring Street	PM	0.889	D	0.933	E	0.044	Yes

Source: Fehr & Peers 2015.
[1] V/C for signalized intersections based on application of Intersection Capacity Utilization methodology using Traffix software. V/C = Volume / Capacity Ratio.

Cumulative Year (2035) Without Project Conditions

Future volumes for Cumulative Year (2035) Without and With Project conditions were developed using a 0.71 percent per year growth rate consistent with the Los Angeles County CMP Guidelines. The growth rate accounts for pending and approved projects within the City of Long Beach as well as regional growth anticipated by Year 2035. Cumulative Year (2035) Without Project AM and PM peak hour traffic volumes for study intersections are shown on Figure 9 (Cumulative Year [2035] Without Project Volumes) of the TIA (see Appendix H). For this assessment it was assumed that the intersection configurations would be the same as existing, as no intersection capacity enhancement projects were assumed to occur prior to Year 2035.

Intersection LOS results for Cumulative Year (2035) Without Project conditions are summarized in Table 5.13-6.

As shown in Table 5.13-6, the following intersections are expected to operate at LOS E or F:

11. Atlantic Avenue and Anaheim Street (during the PM peak hour)

13. Atlantic Avenue and Spring Street (during the PM peak hour)

15. Atlantic Avenue and 27th Street (during the AM and PM hours)

Table 5.13-6 Intersection Level of Service for Cumulative Year (2035) Without Project Conditions

Intersection	Control	AM Peak Hour		PM Peak Hour	
		V/C[1] or Delay[2]	LOS	V/C[1] or Delay[2]	LOS
1. Long Beach Boulevard and Spring Street	Signal	0.747	C	0.887	D
2. Pacific Avenue and Willow Street	Signal	0.781	C	0.883	D
3. Long Beach Boulevard and Willow Street	Signal	0.814	D	0.854	D
4. Atlantic Avenue and Willow Street	Signal	0.734	C	0.891	D
5. Long Beach Boulevard and Hill Street	Signal	0.553	A	0.588	A
6. Pacific Avenue and Pacific Coast Highway	Signal	0.730	C	0.797	C
7. Long Beach Boulevard and Pacific Coast Highway	Signal	0.816	D	0.841	D
8. Atlantic Avenue and Pacific Coast Highway	Signal	0.772	C	0.831	D
9. Pacific Avenue and Anaheim Street	Signal	0.691	B	0.837	D
10. Long Beach Blvd and Anaheim Street	Signal	0.569	A	0.743	C
11. Atlantic Avenue and Anaheim Street	Signal	0.803	D	**0.912**	**E**
12. Atlantic Avenue and I-405 SB Ramps	Signal	0.666	B	0.616	B
13. Atlantic Avenue and Spring Street	Signal	0.881	D	**1.012**	**F**
14. Atlantic Avenue and Columbia Street	Signal	0.594	A	0.647	B
15. Atlantic Avenue and 27th Street	Side-Street Stop	>50.0	F	>50.0	F

Source: Fehr & Peers 2015.
Notes: **Bold** indicates unacceptable LOS.
[1] V/C for signalized intersections based on application of Intersection Capacity Utilization methodology using Traffix software. V/C = Volume / Capacity Ratio.
[2] Delay for unsignalized intersections based on application of Highway Capacity Methodology using Synchro software. Delay reported is the worst-case approach delay.

Cumulative Year (2035) With Project Conditions

To estimate Cumulative Year (2035) With Project conditions traffic volumes, the project-only volumes were added to Cumulative Year (2035) Without Project conditions traffic volumes based on the trip generation and trip distribution assumptions summarized previously. The resulting Cumulative Year (2035) With Project conditions traffic volumes are shown in Figure 10 (Cumulative Year [2035] With Project Volumes) of the TIA (see Appendix H). Intersection LOS results for Cumulative Year (2035) With Project conditions are summarized in Table 5.13-7.

As shown in Table 5.13-7, the following intersections would operate at LOS E or F:

1. Long Beach Boulevard and Spring Street (during the PM hour)
2. Pacific Avenue and Willow Street (during the PM hour)
4. Atlantic Avenue and Willow Street (during the PM hour)
11. Atlantic Avenue and Anaheim Street (during the PM hour)

13. Atlantic Avenue and Spring Street (during the AM and PM hour)
15. Atlantic Avenue and 27th Street (during the AM and PM hour)

Table 5.13-7 Intersection Level of Service for Cumulative Year (2035) With Project Conditions

Intersection	Control	AM Peak Hour		PM Peak Hour	
		V/C[1] or Delay[2]	LOS	V/C[1] or Delay[2]	LOS
1. Long Beach Boulevard and Spring Street	Signal	0.791	C	0.927	E
2. Pacific Avenue and Willow Street	Signal	0.790	C	0.902	E
3. Long Beach Boulevard and Willow Street	Signal	0.842	D	0.898	D
4. Atlantic Avenue and Willow Street	Signal	0.771	C	0.921	E
5. Long Beach Boulevard and Hill Street	Signal	0.587	A	0.612	B
6. Pacific Avenue and Pacific Coast Highway	Signal	0.741	C	0.808	D
7. Long Beach Boulevard and Pacific Coast Highway	Signal	0.854	D	0.859	D
8. Atlantic Avenue and Pacific Coast Highway	Signal	0.803	D	0.847	D
9. Pacific Avenue and Anaheim Street	Signal	0.703	C	0.844	D
10. Long Beach Boulevard and Anaheim Street	Signal	0.577	A	0.745	C
11. Atlantic Avenue and Anaheim Street	Signal	0.809	D	0.913	E
12. Atlantic Avenue and I-405 SB Ramps	Signal	0.710	C	0.656	B
13. Atlantic Avenue and Spring Street	Signal	0.927	E	1.056	F
14. Atlantic Avenue and Columbia Street	Signal	0.695	B	0.735	C
15. Atlantic Avenue and 27th Street	Side-Street Stop	>50.0	F	>50.0	F

Source: Fehr & Peers 2015.
Notes: **Bold** indicates unacceptable LOS.
1 V/C for signalized intersections based on application of Intersection Capacity Utilization methodology using Traffix software. V/C = Volume / Capacity Ratio.
2 Delay for unsignalized intersections based on application of Highway Capacity Methodology using Synchro software. Delay reported is the worst-case approach delay.

As shown in Table 5.13-8, the addition of project traffic would degrade operations at all intersections listed below, resulting in unacceptable LOS. According to the significance criteria described previously, this would be a significant impact.

- Long Beach Boulevard and Spring Street – In the PM peak hour the LOS degrades from D to E.
- Pacific Avenue and Willow Street – In the PM peak hour the LOS degrades from D to E.
- Atlantic Avenue and Willow Street – In the PM peak hour the LOS degrades from D to E.
- Atlantic Avenue and Spring Street – In the AM peak hour, the LOS degrades from D to E. In the PM peak hour the LOS remains at F and the V/C ratio increases by 0.044.

- Atlantic Avenue and 27th Street – In the AM and PM peak hours the LOS is F and the MUTCD Peak Hour Volume Warrant for traffic signal installation is met.

Table 5.13-8 Cumulative Year (2035) With Project Significant Impacts

Intersection	Peak Hour	Cumulative Year (2035) Without Project		Cumulative Year (2035) With Project			Significant Impact?
		V/C[1]	LOS	V/C[1]	LOS	Project Change	
1. Long Beach Boulevard and Spring Street	PM	0.887	D	0.927	E	0.040	Yes
2. Pacific Avenue and Willow Street	PM	0.883	D	0.902	E	0.019	Yes
4. Atlantic Avenue and Willow Street	PM	0.891	D	0.921	E	0.030	Yes
11. Atlantic Avenue and Anaheim Street	PM	0.912	E	0.913	E	0.001	No
13. Atlantic Avenue and Spring Street	AM PM	0.881 1.012	D F	0.927 1.056	E F	0.046 0.044	Yes
15. Atlantic Avenue and 27th Street	AM PM	>50.0 >50.0	F F	>50.0 >50.0	F F	>50.0 >50.0	Yes

Source: Fehr & Peers 2015.
Notes: **Bold** indicates unacceptable LOS.
[1] V/C for signalized intersections based on application of Intersection Capacity Utilization methodology using Traffix software. V/C = Volume / Capacity Ratio.

Cumulative Year (2035) With Project Conditions: Without and With Parklets

As noted earlier, the Midtown Specific Plan includes the closure of a number of roadway segments, which intersect with Long Beach Boulevard, to vehicular traffic in order to create parklets (small street parks; see Figure 5.12-1, *Parks and Recreational Facilities Serving the Project Site*). The roadway segment closures would cause motorists to find a new route to access development along the proposed closures and to Long Beach Boulevard. This was accounted for in the TIA by shifting traffic volumes from the proposed roadway segments closures to adjacent study intersections along Long Beach Boulevard.

Given the relatively low peak hour traffic volumes on the proposed roadway segments to be closed and the shift in traffic volumes to adjacent intersections along the Long Beach Boulevard corridor, the redistribution of these vehicle trips would be negligible when considering impacts relative to the new trips associated with the land uses of the Midtown Specific Plan, as shown in Table 5.13-9. For the Cumulative Year (2035) With Project condition, most intersections experience little to no impact on V/C ratio or delay. LOS is only affected in two instances; with addition of the parklets, the LOS drops from A to B at Long Beach Boulevard and Hill Street in the PM peak hour and improves from B to A for Long Beach Boulevard and Anaheim Street in the AM peak hour.

Table 5.13-9 Cumulative Year (2035) With Project Conditions: Without and With Parklets

Intersection	Peak Hour	Without Parklet		With Parklet		
		V/C[1] or Delay[2]	LOS	V/C[1] or Delay[2]	LOS	Project Change
1. Long Beach Boulevard and Spring Street	AM	0.791	C	0.791	C	0.000
	PM	0.927	E	0.927	E	0.000
2. Pacific Avenue and Willow Street	AM	0.790	C	0.790	C	0.000
	PM	0.902	E	0.902	E	0.000
3. Long Beach Boulevard and Willow Street	AM	0.834	D	0.842	D	0.008
	PM	0.889	D	0.898	D	0.009
4. Atlantic Avenue and Willow Street	AM	0.771	C	0.771	C	0.000
	PM	0.921	E	0.921	E	0.000
5. Long Beach Boulevard and Hill Street	AM	0.563	A	0.587	A	0.024
	PM	0.586	A	0.612	B	0.026
6. Pacific Avenue and Pacific Coast Highway	AM	0.741	C	0.741	C	0.000
	PM	0.808	D	0.808	D	0.000
7. Long Beach Boulevard and Pacific Coast Highway	AM	0.850	D	0.854	D	0.004
	PM	0.835	D	0.859	D	0.024
8. Atlantic Avenue and Pacific Coast Highway	AM	0.803	D	0.803	D	0.000
	PM	0.847	D	0.847	D	0.000
9. Pacific Avenue and Anaheim Street	AM	0.703	C	0.703	C	0.000
	PM	0.844	D	0.844	D	0.000
10. Long Beach Boulevard and Anaheim Street	AM	0.601	B	0.577	A	-0.024
	PM	0.757	C	0.745	C	-0.012
11. Atlantic Avenue and Anaheim Street	AM	0.809	D	0.809	D	0.000
	PM	0.913	E	0.913	E	0.000
12. Atlantic Avenue and I-405 SB Ramps	AM	0.710	C	0.710	C	0.000
	PM	0.656	B	0.656	B	0.000
13. Atlantic Avenue and Spring Street	AM	0.927	E	0.927	E	0.000
	PM	1.056	F	1.056	F	0.000
14. Atlantic Avenue and Columbia Street	AM	0.695	B	0.695	B	0.000
	PM	0.735	C	0.735	C	0.000
15. Atlantic Avenue and 27th Street	AM	>50.0	F	>50.0	F	0.000
	PM	>50.0	F	>50.0	F	0.000

Source: Fehr & Peers 2015.
1 V/C for signalized intersections based on application of Intersection Capacity Utilization methodology using Traffix software. V/C = Volume / Capacity Ratio.
2 Delay for unsignalized intersections based on application of Highway Capacity Methodology using Synchro software. Delay reported is the worst-case approach delay.

Conclusion

In summary, the Midtown Specific Plan would result in a significant impact at the intersection of Atlantic Avenue and Spring Street under Existing (2014) With Project conditions and at the intersections of Long Beach Boulevard and Spring Street, Pacific Avenue and Willow Street, Atlantic Avenue and Willow Street, Atlantic Avenue and Spring Street, and Atlantic Avenue and 27th Street under the Cumulative Year (2035) With Project conditions. Mitigation for these intersections has been provided at the end of this section.

Additionally, individual development projects that would be accommodated under the Midtown Specific Plan would be reviewed by the City and would be required to comply with the requirements in effect at the time building permits are issued, including the payment of the transportation improvement fee, per Chapter 18.17 (Transportation Improvement Fee) of the City's Municipal Code. Per Chapter 18.17, a transportation improvement fee is imposed on new development in the City for the purpose of assuring that the transportation level of service goals of the City as set forth in the traffic mitigation program are met with respect to the additional demands placed on the transportation system by traffic generated from such development.

Area Outside the Midtown Specific Plan

Under the Proposed Project, the area that is outside the Midtown Specific Plan, which covers two residential blocks around Officer Black Park (approximately 4 acres) west of Pasadena Avenue between 21st Street and 20th Street (see Figure 3-5, *Current and Proposed Zoning Designations*), would be extracted from PD 29 and retain its underlying conventional zoning designations, which include Single-Family Residential, standard lot (R-1-N); Three-Family Residential (R-3-S); and Park (P). With the exception of the zoning designation revisions that would be undertaken, no physical change (e.g., additional development intensity, redevelopment) is expected to occur within this area and all existing uses (which include residential uses, a church, and Officer Black Park) are expected to remain. Therefore, no traffic impacts are anticipated to occur.

IMPACT 5.13-2: Project-related traffic would not result in significant impacts to congestion management plan facilities in the study area. [Threshold T-2]

Impact Analysis: The CMP was created statewide as a result of Proposition 111 and has been implemented locally by Metro. The CMP in effect in Los Angeles County was issued by Metro in 2010. The CMP requires that the traffic impact of individual development projects of potential regional significance be analyzed. A specific system of arterial roadways plus all freeways comprise the CMP system. A total of 164 intersections are identified for monitoring on the system in Los Angeles County. According to the CMP Traffic Impact Analysis Guidelines developed by Metro, a traffic impact analysis is required if a CMP arterial monitoring intersection, including freeway on- or off-ramps, where a proposed project would add 50 or more trips during either the AM or PM weekday peak hours. For CMP-designated intersections, the acceptable LOS is E.

The potential impacts to CMP facilities resulting from the Proposed Project within each of the areas of the Project Site are addressed below.

Midtown Specific Plan Area

There are no CMP intersections in the study area, the nearest CMP intersection is Pacific Coast Highway at Alamitos Avenue/Orange Avenue, approximately 1,000 feet east from the Midtown Specific Plan area. Figure 7 (Project Only Peak Hour Traffic Volumes) of the TIA (see Appendix H) shows the Midtown Specific Plan's peak hour traffic volumes in the AM and PM peak hours. Per Figure 7, approximately 121 AM and 106 PM peak hour trips would be directed eastbound towards this intersection.

As shown in Table 5.13-10, the intersection is currently operating at LOS B during the AM peak hour and C during the PM peak hour. As also shown in the table, the CMP analysis at the intersection of Pacific Coast Highway and Alamitos Avenue/Orange Avenue was conducted by Fehr & Peers for all four traffic conditions. For future volumes, Fehr & Peers grew the existing counts by 10.1 percent (2015 to 2035) in accordance with the CMP Traffic Impact Analysis Guidelines. Additionally, when project traffic was added to the intersection, it was assumed that every trip made it to that intersection as a conservative approach.

Table 5.13-10 Intersection Level of Service for Pacific Coast Highway at Alamitos/Orange Avenue

	AM Peak Hour		PM Peak Hour	
Traffic Scenario	V/C	LOS	V/C	LOS
Existing (2015) With Project Conditions	0.634	B	0.712	C
Existing (2015) With Project Conditions	0.645	B	0.721	C
Cumulative Year (2035) Without Project Conditions	0.699	B	0.774	C
Cumulative Year (2035) With Project Conditions	0.709	C	0.783	C

Source: Fehr & Peers 2015.
Notes: VC = volume-to-capacity; LOS = level of service

As shown in Table 5.13-10, the intersection of Pacific Coast Highway and Alamitos Avenue/Orange Avenue would operate at LOS C or better during both peak hours under all four traffic conditions. Therefore, the Midtown Specific Plan would not result in this CMP-designated intersection to exceeding the congestion management agency service standards.

Area Outside the Midtown Specific Plan

As noted above, with the exception of the zoning designation revisions that would be undertaken in this area of the Project Site under the Proposed Project, no physical change (e.g., additional development intensity, redevelopment) is expected to occur within this area and all existing uses (which include residential uses, a church, and Officer Black Park) are expected to remain. No new parks or recreation facilities would occur within this area of the Project Site. Therefore, no impacts CMP facilities are anticipated to occur.

Impact 5.13-3: The Proposed Project complies with adopted policies, plans, and programs for alternative transportation. [Threshold T-6]

Impact Analysis: The potential impacts to adopted policies, plans, and programs for alternative transportation resulting from the Proposed Project within each of the areas of the Project Site are addressed below.

Midtown Specific Plan

The mobility and streetscape plan for the Midtown Specific Plan is guided by the City's Mobility Element. The Midtown Specific Plan would provide an equitable method of vehicular, public transit, pedestrian, and bicycle access for development of the Midtown Specific Plan area. The detailed project description provided in Section 3.6.1.2, *Description of the Project*, of Chapter 3, *Project Description*, discusses the improvements to Long Beach Boulevard and its cross-streets within the Midtown Specific Plan area to accommodate transit, pedestrian, bicycle and autos, which in turn would create an efficient, balanced, multi-modal mobility network by integrating autos, transit, bicycles and pedestrians into a complete street.

Following is a discussion of the alternative modes of transportation that would be implemented by the Midtown Specific Plan.

Pedestrian

The Midtown Specific Plan would enhance pedestrian facilities throughout the Midtown Specific Plan area through the widening of sidewalks, improved intersection crossings, enhanced lighting and landscaping along the corridor, and implementation of bicycle lanes, which would enhance pedestrian safety. The Midtown Specific Plan also includes the closure of thru traffic on a few low volume roadway segments that intersect with Long Beach Boulevard to create parklets (small street parks; see Figure 5.12-1, *Parks and Recreational Facilities Serving the Project Site*). The parklets would provide pedestrian enhancements that would serve as oases amid the urbanized nature of the corridor, as well as connections from the adjoining neighborhoods to the corridor. Additionally, as outlined in the Midtown Specific Plan, an enhancement that would occur in the norther portion of the Midtown Specific Plan area would be the installation of a pedestrian bridge over Long Beach Boulevard, which would link the Long Beach Memorial Medical Center, Veterans Park, and Willow Metro Station.

Bicycle

With the integration of complete streets and enhanced mobility, the Midtown Specific Plan prescribes improved crossings and reevaluates the right-of-way design for Long Beach Boulevard (the portion within the Midtown Specific Plan boundaries) to better accommodate bicycles along the corridor. Implementation of the mobility and streetscape plan would include improvements to Long Beach Boulevard and its cross-streets (e.g., Spring Street, Willow Street, and Pacific Coast Highway). The updated street designs for the Midtown Specific Plan area combine the existing amenities along the corridor with new features such as additional bicycle facilities.

Specifically, the Midtown Specific Plan includes recommendations for an improved Class III or IV bikeway and bike boxes along Long Beach Boulevard where and when feasible. Bicycle improvements along Long Beach Boulevard will be determined in the City's Bicycle Master Plan Update. As conditions change along the boulevard, new bikeways would add connectivity to other transit options, such as the Metro Blue line, and other bicycle connections in the City. Where feasible and when on-street parking is deemed unnecessary, new bike lanes could be physically separated from pedestrian and vehicular traffic. Curb extensions could also be considered to create space for the new lanes by reducing on-street parking and right-turn pockets. This treatment creates safer environments for pedestrians and bicyclists while encouraging healthy alternative transportation options for people living and working in the area.

Transit

The Midtown Specific Plan area is currently served by the Metro Blue Line light rail, local and regional bus services, and shuttle service (see Figure 5.13-2, *Transit Routes and Facilities*). Implementation of the Midtown Specific Plan would, in the long term, convert the existing open platform at Willow Metro Station (which is located in the northern portion of the Midtown Specific Plan area; see Figure 5.13-2) into an enclosed transit station that could serve as a connection point for multiple lines and modes of transportation. This would include the current Metro Blue Line and the proposed expansion of the Metro Green Line. Moreover, this would also connect the local bus system and other potential types of transit service, such as bus rapid transit and trolley service. Additionally, the enclosed transit station would provide bicycle and pedestrian connections to nearby shops, offices, and parking facilities.

The Midtown Specific Plan also recognizes the importance of the Willow Metro Station as a multi-modal transit hub along the Long Beach Boulevard corridor. The Willow Station Bike Transit Hub Access Plan identifies improvements for the Willow Station. Recommended improvements under the Willow Station Bike Transit Hub Access Plan include new bike lanes, restriping, and intersection improvements such as bicycle signal detectors, modifications to signal timing, and reconfigured crosswalks. The goals and vision for the Midtown Specific Plan are consistent with the access and onsite improvements in and leading to the Willow Station. The design guidelines and development standards contained in the Midtown Specific Plan would be used for improving signage, landscaping, bike racks, and other furnishings for the area associated with the Willow Station. Therefore, the Midtown Specific Plan would help implement the Willow Station Bike Transit Hub Access Plan.

Furthermore, under the Midtown Specific Plan, three transit nodes would be created within the Midtown Specific Plan area to support the three existing Metro stations along the corridor (see Figure 5.13-2) and foster transit-oriented development around them. Transit improvements for the Metro stations would include installation of bike racks to help riders' first and last mile, and pedestrian and bicycle access would be improved.

Conclusion

In summary and as demonstrate above, the Midtown Specific Plan would improve transit, bicycle and pedestrian facilities and infrastructure throughout the Project Site to promote active and alternative modes of

transportation. Additionally, the Midtown Specific Plan is guided by the City's Mobility Element and is consistent with several policies to promote complete streets and alternative transportation modes, including:

- **MOP Policy 1-1:** To improve the performance and visual appearance of Long Beach's streets, design streets holistically using "complete streets approach" which considers walking, those with mobility constraints, bicyclists, public transit users, and various modes of mobility in parallel.
- **MOP Policy 1-4:** Allow for flexible use of public right-of-way to accommodate all users of the street system, while maintaining safety standards.
- **MOP Policy 1-9:** Increase mode shift of transit, pedestrians, and bicycles.
- **MOP Policy 2-2:** Design the character and scale of the street to support its street type and place-type designation and overlay networks.
- **MOP Policy 2-6:** Ensure high-quality, on-street access to transit stops and stations.
- **MOP Policy 2-11:** Consider every street in Long Beach as a street that bicyclists and pedestrians will use.
- **MOP Policy 2-18:** Provide adequate sidewalk widths and clear path of travel as determined by street type classification, adjoining land uses, and expected pedestrian usage.
- **MOP Policy 5-2:** Reduce Vehicle Miles Traveled (VMT) and vehicle trips through the use of alternative modes of transportation and TDM.

Furthermore, the Midtown Specific Plan would help the City implement AB 1358, the California Complete Streets Act. AB 1358, described above, requires local governments to plan for a balanced, multimodal transportation network that meets the needs of all users. By incorporating Complete Streets elements/components into the Midtown Specific Plan, the City would increase the number of trips made by alternative modes of travel (e.g., transit, bicycling, and walking), correspondingly reducing the number of vehicle trips and associated greenhouse gas emissions. An increase in transit trips, bicycling, and walking would thus help the City meet the transportation needs of all residents, workers, and visitors while reducing traffic congestion and also helping meet the greenhouse gas reduction goals of AB 32 (the Global Warming Solutions Act) and SB 375 (the Sustainable Communities and Climate Protection Act), which are implemented through SCAG's 2012–2035 RTP/SCS.

Area Outside the Midtown Specific Plan

As noted above, with the exception of the zoning designation revisions that would be undertaken in this area of the Project Site under the Proposed Project, no physical change (e.g., additional development intensity, redevelopment) is expected to occur within this area and all existing uses (which include residential uses, a church, and Officer Black Park) are expected to remain. No new parks or recreation facilities would occur

within this area of the Project Site. Therefore, no impacts to adopted policies, plans, and programs for alternative transportation are anticipated to occur.

5.13.4 Cumulative Impacts

Cumulative traffic impacts are created when the Proposed Project combined with other future development projects accommodated by the City's General Plan contributes to the overall traffic impacts, requiring additional improvements to maintain acceptable level of service operations with or without the Proposed Project. A significant cumulative impact is identified when a facility is projected to operate below the level of service standards due to cumulative future traffic and project-related traffic increases of 50 or more peak hour trips. Cumulative traffic impacts were addressed above in Impacts 5.13-1 and 5.13-2. Impacts and mitigation measures are discussed in Section 5.13.6 and 5.13.7 below. As discussed in these sections, the Proposed Project's incremental effect to congested intersections would be significant at certain study area intersections. The City of Long Beach requires payment of transportation improvement fees in accordance with Chapter 18.17 (Transportation Improvement Fee) of the City's Municipal Code to mitigate local traffic impacts. Contribution to cumulative traffic impacts would be cumulatively considerable and would therefore, be significant.

5.13.5 Existing Regulations

State and Regional

- The California Complete Streets Act (Assembly Bill 1358)
- SCAG 2013 Regional Transportation Plan/Sustainable Communities Strategy
- Los Angeles County Congestion Management Program

Local

- City of Long Beach Municipal Code, Chapters 10.08 (Traffic Control Devices), 10.58 (Pedestrians), 10.48 (Bicycles), 18.17 (Transportation Improvement Fee)

5.13.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, the following impacts would be less than significant: 5.13-2 and 5.13-3.

Without mitigation, the following impacts would be **potentially significant**:

- Impact 5.13-1 Project related traffic would result in a substantial impact at the intersections of Atlantic Avenue and Spring Street, Long Beach Boulevard and Spring Street, Pacific Avenue and Willow Street, Atlantic Avenue and Willow Street, and Atlantic Avenue and 27th Street during the traffic peak hours.

5.13.7 Mitigation Measures

The following identifies the improvements necessary to achieve acceptable level of service to a condition equal to the without project scenario.

TRAF-1 As part of the subsequent environmental review for development projects that would be accommodated by the Midtown Specific Plan, a site-specific traffic study shall be prepared by the project applicant/developer to evaluate the project's potential traffic and transportation impacts and to identify specific improvements, as deemed necessary, to provide safe and efficient onsite circulation and access to the Midtown Specific Plan area.

TRAF -2 Prior to issuance of occupancy permits for development projects that would be accommodated by the Midtown Specific Plan, project applicants/developers shall make fair-share payments to the City of Long Beach toward construction of the traffic improvements listed below. The following traffic improvements and facilities are necessary to mitigate impacts of the Midtown Specific Plan and shall be included in the fee mechanism(s) to be determined by the City of Long Beach:

Existing (2014) With Project Improvements

- **Atlantic Avenue and Spring Street:** Improve the northbound approach by modifying the shared through-right lane to an exclusive through lane and an addition of an exclusive right-turn lane. The intersection is currently built out to capacity and would require right-of-way acquisition by the City of Long Beach.

Cumulative Year (2035) With Project Improvements

- **Long Beach Boulevard and Spring Street:** Improve the northbound approach by modifying the shared through-right lane to an exclusive through lane and an addition of an exclusive right-turn lane. Given the 74-foot cross section of Long Beach Boulevard, this improvement could be completed with restriping of the approach.
- **Pacific Avenue and Willow Street:** Improve the northbound approach by modifying the shared through-right lane to an exclusive through lane and an addition of an exclusive right-turn lane. Given the 74-foot cross section of Long Beach Boulevard, this improvement could be completed with restriping of the approach.
- **Atlantic Avenue and Willow Street:** Improve the northbound approach by modifying the shared through-right lane to an exclusive through lane and an addition of an exclusive right-turn lane. Given the 50-foot cross section of Atlantic Avenue, this improvement could be completed with restriping of the approach.

- **Atlantic Avenue and Spring Street:** Improve the southbound approach by modifying the shared through-right lane to an exclusive through lane and an addition of an exclusive right-turn lane. Implementation of this improvement also requires improving the southbound approach by modifying the shared through-right lane to an exclusive through lane and an addition of an exclusive right-turn lane. The intersection is currently built out to capacity and would require right-of-way acquisition by the City of Long Beach.
- **Atlantic Avenue and 27th Street:** Construct a traffic signal at the intersection.

5.13.8 Level of Significance After Mitigation

Existing (2014) With Project Conditions

- **Atlantic Avenue and Spring Street:** Implementation of Mitigation Measure TRAF-2 would improve the intersection operations to a V/C ratio of 0.870 and LOS D. The intersection is currently built out to capacity and would require right-of-way acquisition by the City of Long Beach. With implementation of Mitigation Measure TRAF-2, the impact at this intersection would be less than significant.

Cumulative Year (2035) With Project Conditions

- **Long Beach Boulevard and Spring Street:** Given the 74-foot cross section of Long Beach Boulevard, this mitigation measure could be completed with restriping of the approach. Implementation of this mitigation measure would improve the intersection operations to a V/C ratio of 0.839 and LOS D. With implementation of Mitigation Measure TRAF-2, the impact at this intersection would be less than significant.

- **Pacific Avenue and Willow Street:** Given the 76-foot cross section of Long Beach Boulevard, this mitigation measure could be completed with restriping of the approach. Implementation of this mitigation measure would improve the intersection operations to a V/C ratio of 0.889 and LOS D. With implementation of Mitigation Measure TRAF-2, the impact at this intersection would be less than significant.

- **Atlantic Avenue and Willow Street:** Given the 50-foot cross section of Atlantic Avenue, this mitigation measure could be completed with restriping of the approach. Implementation of this mitigation measure would improve PM peak hour operations to a V/C ratio of 0.877 and LOS D. With implementation of Mitigation Measure TRAF-2, the impact at this intersection would be less than significant.

- **Atlantic Avenue and Spring Street:** Implementation of Mitigation Measure TRAF-2 would improve AM peak hour operations to a V/C ratio of 0.879 and LOS D and PM peak hour operations to a V/C ratio of 0.984 and LOS E. The intersection is currently built out to capacity and would require right-of-way acquisition by the City of Long Beach. With implementation of Mitigation Measure TRAF-2, the impact at this intersection would be less than significant.

- **Atlantic Avenue and 27th Street:** Implementation of a traffic signal at this intersection would improve AM peak hour operations to a V/C ratio of 0.441 and LOS A and PM peak hour operations to a V/C ratio of 0.534 and LOS A. With implementation of Mitigation Measure TRAF-2, the impact at this intersection would be less than significant.

Table 5.13-11 summarizes the findings of significant impacts at the study area intersections and if feasible mitigation would be available to mitigate impacts.

Table 5.13-11 Intersection Impacts Summary

Intersection	Scenario(s) Where Impacts Occur	Possible Mitigation?
1. Long Beach Blvd & Spring St	2035 (PM peak hour)	Yes
2. Pacific Ave & Willow St	2035 (PM peak hour)	Yes
4. Atlantic Ave & Willow St	2035 (PM peak hour)	
13. Atlantic Ave & Spring St	2014 (PM peak Hour) 2035 (AM peak hour) 2035 (PM peak hour)	Yes Yes
15. Atlantic Ave & 27th St	2035 (AM peak hour) 2035 (PM peak hour)	Yes Yes

Source: Fehr & Peers 2015.

Mitigation Measures TRAF-1 and TRAF-2 identified above would reduce potential impacts associated with transportation and traffic to a level that is less than significant at all intersections. Therefore, with implementation of these mitigation measures no significant unavoidable traffic impacts would occur.

5.13.9 References

Los Angeles County Metropolitan Transportation Authority (Metro). 2010. 2010 Congestion Management Program. http://media.metro.net/docs/cmp_final_2010.pdf.

Long Beach Department of Development Services and Department of Public Works, City of Long. 2013, October. Long Beach General Plan Mobility Element.

Fehr & Peers. 2015, June. Long Beach Boulevard Specific Plan Transportation Impact Analysis.

State of California Governor's Office of Planning and Research (OPR). 2010. Update to the General Plan Guidelines: Complete Streets and the Circulation Element. http://opr.ca.gov/docs/Update_GP_Guidelines_Complete_Streets.pdf.

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