CHAPTER 2.0 – SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

This chapter addresses technical issues for which one or more significant and unmitigable impacts have been identified based on implementation of the proposed project; including the topics of transportation/circulation and air quality.

Each of the subchapters below addresses existing conditions, presents guidelines for the determination of significance, analyzes the potential effects of project implementation against existing and anticipated future conditions (including the potential cumulative effect of other likely projects also being implemented), identifies potential mitigation measures, and assesses whether or not implementation of those measures would lower identified significant impacts to less than significant levels.

In order to assist the reader in tracking between impact significance conclusions and related mitigation measures, significance assessments and the associated mitigation measures have been given correlating numbers and letters. For example, for the topic of air quality, the first significant impact is identified in text in the analysis portion of the discussion as AQI-1 (Air Quality Impact Number 1). The measure designed to attenuate that impact is identified as AQM-1 (i.e., Air Quality Mitigation Measure Number 1) in the subsequent mitigation discussion.

2.1 Transportation/Circulation

Traffic impacts are addressed in Section 4.7 of the EOMSP Final EIR. The previously certified EIR stated that the Master Plan of Streets for the EOMSP is consistent with the goal of the County Circulation Element and does not constitute a significant impact. Nonetheless, the Final EIR concluded that significant and mitigable impacts would arise due to the traffic generated during the EOMSP implementation. Since the adoption of the EOMSP, the County approved an SPA in 2002 that divided the Plan Area into two subareas and modified the land uses and Circulation Element within the western portion of the Subarea Plan (as described in the Chapter 1.0, *Project Description, Location and Environmental Setting*). Despite these changes, the County concluded that traffic impacts would be the same or less, and roads in the Specific Plan area are projected to operate consistent with the Public Facility Element standards (County of San Diego 2002d). A second County SPA was approved in 2007 that revised the circulation plan of the EOMSP, among other items (County of San Diego 2007). Most recently, SPA 10-001 was approved by the Board of Supervisors on September, 15 2010. This SPA removed inconsistencies between Subareas 1 and 2 and combined the two subareas; modified streetscape, public right-of-way, and landscape requirements; and allowed the use of chain link and decomposed granite surface for interim uses on the SR-11 right-of-way. In addition, the SPA included a Zone Reclassification (REZ 10-001) that modified the boundary of the EOMSP area in response to Proposition A, the East Otay Mesa Recycling Collection Center and Landfill Ordinance, and rezoned approximately 33 acres of land from S-88 to RS-40 to accommodate a future solid waste facility east of the EOMSP area. The SPA also specified that a 1,000-foot-wide Landfill Overlay Buffer be established around the landfill site to prevent land use conflicts. The County determined in the *Environmental Review Update Form for Projects with Previously Approved Environmental Documents* for the proposed project that various roads in the project vicinity are at or will be at level of service (LOS) E or F in the future and, when combined with the proposed SPA, would constitute changes in both circumstances and the project that would result in new impacts to transportation.

The following subchapter addresses the potentially significant impacts of the proposed project and cumulative projects in the area that are described in detail in the traffic technical appendix.

Darnell and Associates, Inc. prepared a project-specific traffic impact study (TIS) for this SEIR (Darnell 2010). The following subchapter summarizes information and data contained in that technical study. Several traffic scenarios were analyzed in the TIS: existing conditions; existing conditions with the proposed project; cumulative 2015 conditions with SR-905 (Phases 1A and 1B) with and without the project; and 2030 conditions. Appendix B to this SEIR contains the TIS, in its entirety.

2.1.1 Discussion of Existing Conditions Relating to Transportation

As part of the TIS, a field review of the study area was conducted in January 2010. The traffic analyses of roadways and intersections in the project study area were performed in accordance with County of San Diego, City of San Diego, and Caltrans requirements. California's Congestion Management Program (CMP; Transportation Research Board 2000) also requires an evaluation of transportation and traffic impacts of large projects, such as the proposed project, on the regional transportation system.

The County of San Diego's and City of San Diego's criteria were utilized to determine the study area for the project, depending on the jurisdiction which the roadway segment or intersection was located in. The County of San Diego recommends the inclusion of all transportation facilities that receive 25 or more peak hour trips from the proposed project. The City of San Diego's criteria requires the analysis of all regionally significant arterial system segments and intersections where the proposed project will add 50 or more peak hour trips in either direction and all mainline freeway locations where the project will add 150 or more peak hour trips in either direction. In some cases, the intersections and/or roadway segments do not currently exist, but will be constructed as the Otay Mesa area builds out over time. Also, the segments start and end points vary in some scenarios. Figure 2.1-1, *Existing Roadway Conditions*, illustrates the current roadway configuration and intersection geometrics in the project study area.

Street Segments

The following existing and future street segments (organized by jurisdiction) are analyzed in the TIS for certain traffic scenarios, depending on the project traffic. Street segments, freeway segments, and arterial segments are noted below:

County of San Diego

- Otay Mesa Road – Enrico Fermi Drive to Alta Road
- Airway Road –Enrico Fermi Drive to Airway Place
- Airway Road – Airway Place to Alta Road
- Siempre Viva Road- Enrico Fermi Drive to Airway Place
- Enrico Fermi Drive – Otay Mesa Road to Airway Road
- Alta Road – Calzada de la Fuente to Paseo de la Fuente
- Alta Road –Paseo de la Fuente to Otay Mesa Road

County of San Diego/City of San Diego

- Otay Mesa Road – Sanyo Avenue to Vann Centre Boulevard
- Otay Mesa Road – Vann Centre Boulevard to Enrico Fermi Drive
- Airway Road –Paseo de las Americas to Michael Faraday Drive
- Airway Road – Michael Faraday Drive to Enrico Fermi Drive

City of San Diego/Caltrans

- Interim SR-905 – Heritage Road to Cactus Road (Arterial)
- Interim SR-905 – Cactus Road to Britannia Boulevard (Arterial)
- Interim SR-905 – Britannia Boulevard to La Media Road (Arterial)
- Interim SR-905 – La Media Road to Piper Ranch Road (Arterial)
- SR-905 – Otay Mesa Road to Siempre Viva Road
- SR-905 –South of Siempre Viva Road

County of San Diego/City of San Diego/Caltrans

- Interim SR-905 - Piper Ranch Road to SR-125(Arterial)
- Otay Mesa Road – SR-125 to Harvest Road
- Otay Mesa Road – Harvest Road to Sanyo Avenue

South Bay Expressway (SBX) (Caltrans)

- SR-125 - North of Otay Mesa Road

Caltrans

- New State Route SR-905 - Britannia to La Media, or West of La Media
- New State Route SR-905 - La Media to Siempre Viva Road, or East of La Media

City of San Diego

- Airway Road – La Media to SR-905
- Airway Road - SR-905 to Sanyo Avenue
- Airway Road – Sanyo Avenue to Paseo de las Americas
- Siempre Viva Road –Druker Lane to SR-905
- Siempre Viva Road – SR-905 Northbound (NB) to Paseo de las Americas
- Siempre Viva Road – Paseo de las Americas to Michael Faraday Drive
- Siempre Viva Road –Michael Faraday Drive to Enrico Fermi Drive
- La Media Road – Otay Mesa Road to St. Andrews Avenue
- La Media Road – St. Andrews Avenue to Airway Road
- La Media Road – St. Andrews Avenue to SR-905 Westbound to SR-905 Eastbound
- La Media Road - SR-905 Eastbound to Airway Road
- Sanyo Avenue – Otay Mesa Road and Airway Road
- Enrico Fermi Drive – Airway Road to Siempre Viva Road

Interim State Route 905 (SR-905)/Otay Mesa Road is an east-west six-lane expressway which extends from Interstate 5 to the City of San Diego Otay Mesa Community. Approximately one mile east of Interstate 805, there is a break in the route and Interim SR-905 becomes Otay Mesa Road.

The TIS refers to the segment of SR-905/Otay Mesa Road from Heritage Road to SR-125 Piper Ranch Road as Interim SR-905 and the segment from SR-125 Piper Ranch Road to Siempre Viva Road as SR-905 under existing conditions (Figure 2.1-1). It is at the junction with SR-125 where SR-905 and Otay Mesa Road split from one another (Otay Mesa Road continues traveling in the east-west direction, while SR-905 becomes a north-south roadway).

Interim SR-905 is improved to six-lane Prime Arterial standards from west of Caliente Avenue to approximately Piper Ranch Road. Immediately east of Piper Ranch Road, Interim SR-905 provides five travel lanes (two eastbound lanes and three westbound lanes), however as it traverses easterly towards the SR-125; Otay Mesa Road widens to provide a total of seven travel lanes (four eastbound lanes and three westbound lanes). For analysis purposes, this segment of Interim SR-905 was assumed to have the capacity equivalent to that of a six-lane Prime Arterial. From its junction at SR-125 to the International Border, Otay Mesa Road (SR-905) is a four-lane Major Arterial.

In the City of San Diego Circulation Element, a six-lane Prime Arterial has a capacity of 60,000 Average Daily Trips (ADT) at Level of Service (LOS) E with a cross section of 102 feet curb to curb and a ROW of 122 feet. A four-lane Major Arterial has a capacity of 40,000 ADT at LOS E with a cross section of 78 feet curb to curb and a ROW of 98 feet. In the County of San Diego Circulation Element, a six-lane Prime Arterial has a capacity of 57,000 ADT at LOS E.

Otay Mesa Road is an east-west two-lane roadway located within the jurisdictions of the County and City of San Diego. The segment from SR-905 to approximately 1,200 feet east of Sanyo Avenue is located within both jurisdictions, with the centerline of the existing road as the approximate boundary. Otay Mesa Road has a varying pavement width of 40 to 64 feet. The posted speed limit on this section of Otay Mesa Road is 55 mph.

The segment of Otay Mesa Road between the SR-125 southbound (SB) ramp and the Interim SR-905 connection is currently constructed to provide six travel lanes (two eastbound lanes and four westbound lanes). The segment of Otay Mesa Road between the Interim SR-905 connection and Harvest Road is currently constructed to provide five travel lanes (two eastbound lanes and three westbound lanes). For the purpose of analysis, these segments of Otay Mesa Road were assumed to have the capacity equivalent to that of a five-lane Major Arterial, approximately 47,000 ADT at LOS E.

The current capacity on the City two-lane segments of Otay Mesa Road segment is estimated to be equivalent to that of a two-lane Collector Road with no fronting property, which is a capacity of 10,000 ADT at LOS E. The current capacity on the County two-lane segments of Otay Mesa Road is estimated to be equivalent to that of a Light Collector, which is a capacity of 16,200 ADT at LOS E. A two-lane Collector for the City and a Light Collector for the County have the same cross section of 40 feet curb to curb, and 60 feet of ROW.

Based on the EOMSP, the ultimate classification of the segment of Otay Mesa Road between Harvest Road and Enrico Fermi Drive is as a Prime Arterial. In the EOMSP, this segment is a Prime Arterial with a capacity of 57,000 ADT at LOS E, with a modified cross section of 90 feet curb to curb and

110 feet of ROW. Between Enrico Fermi Drive and Alta Road, Otay Mesa Road is classified as a four-lane Major Road. A Major Road has a capacity of 37,000 ADT at LOS E, with a cross section of 78 feet curb to curb and 98 feet of ROW.

Airway Road is an east-west roadway that is located within the jurisdiction of both the City of San Diego (west of Paseo de Las Americas) and the County of San Diego (between Paseo de Las Americas to Enrico Fermi Drive). Airway Road, between La Media Road and Avenida Costa Azul, is a two-lane undivided roadway. Between Avenida Costa Azul and Piper Ranch Road, Airway Road widens to a four-lane roadway with a raised median. East of Piper Ranch Road, for approximately 150 feet, Airway Road provides one eastbound lane and two westbound lanes. Between SR-905 and Sanyo Avenue, Airway Road is only striped to provide two travel lanes, however, the westbound lane is approximately 29 feet wide, and the eastbound lane is approximately 25 feet wide. Airway Road between Sanyo Avenue and Paseo de las Americas has been improved to the standards of a four-lane Major Road. Between Paseo de las Americas and Enrico Fermi Drive, Airway Road narrows back down to a two-lane roadway. Just east of Enrico Fermi Drive to its current terminus, Airway Road is a four-lane roadway with a raised median.

For the purpose of analysis, the segment of Airway Road between La Media and Sanyo Avenue was assumed to have the capacity equivalent to that of a two-lane Collector Road with a capacity of 15,000 ADT at LOS E. The segment between Sanyo Avenue and Michael Faraday Drive was assumed to have the capacity equivalent to the City's classification of a Major Arterial with a capacity of 40,000 ADT at LOS E. It should be noted that Airway Road is expected to be reconstructed with no access to SR-905.

In the EOMSP, Airway Road has the ultimate classification as a four-lane Major with a capacity of 40,000 ADT at LOS E for the segment located within the City and a capacity of 37,000 ADT at LOS E for the segment located within the County. The cross section for a four-lane Major is 78 feet curb to curb, with 98 feet ROW.

Siempre Viva Road is an east-west roadway that is located under the jurisdiction of the City of San Diego. From west of SR-905 to Paseo de las Americas, Siempre Viva Road is a six-lane facility with a cross-section equivalent to that of a Prime Arterial, capacity of 60,000 ADT at LOS E. Currently, east of Paseo de las Americas to Enrico Fermi Drive, Siempre Viva Road is a four-lane road with a cross-section equivalent to that of a Collector Road, capacity of 30,000 ADT at LOS E. This segment of Siempre Viva Road is planned as a six-lane facility with a cross-section equivalent to that of a Prime Arterial, which has a capacity of 60,000 ADT at LOS E. Just east of Enrico Fermi Drive to the California Highway Patrol (CHP) facility, Siempre Viva Road has one eastbound lane and two westbound travel lanes. From the CHP facility to Airway Place, Siempre Viva Road is constructed to provide two westbound travel lanes. For purposes of analysis, the segment of Siempre Viva Road between Enrico Fermi Drive and Airway Place was assumed to have the capacity equivalent to that of a Light Collector, 16,200 ADT at LOS E.

La Media Road is a north-south roadway currently under construction for the SR-905 interchange. La Media Road immediately south of Otay Mesa Road currently provides two northbound travel lanes (one northbound left, and one northbound shared through-right) and three southbound lanes (two southbound through and one southbound right turn lane) along with a partially painted median. Just north of Saint Andrews Avenue and the future SR-905 westbound off ramp, La Media Road provides one northbound travel lane, and two southbound travel lanes (one southbound through and one

southbound right) along with a painted median. For purposes of analysis, the segment of La Media Road between Otay Mesa Road and Saint Andrews Avenue/future SR-905 westbound off ramp was assumed to have the capacity equivalent to that of a four-lane Collector, 30,000 ADT at LOS E. La Media Road from Saint Andrews Avenue/SR-905 westbound off ramp to Siempre Viva Road is currently constructed as a two-lane undivided roadway that has a classification equivalent to that of a two-lane Collector, capacity 10,000 ADT at LOS E.

Upon completion of the SR-905 interchange, La Media Road from Otay Mesa Road to Saint Andrews Avenue would still provide two northbound travel lanes (one northbound left, and one northbound shared through-right) and three southbound lanes (two southbound through and one southbound right-turn lane) along with a partially painted median immediately south of Otay Mesa Road. However, just north of Saint Andrews Avenue, La Media Road would be widened to provide two northbound through lanes, three southbound through lanes, one southbound right-turn lane, and a painted median. Therefore, upon completion of the SR-905 interchange, La Media Road from Otay Mesa Road to Saint Andrews Avenue (SR-905 westbound off ramp) is estimated to have a capacity equivalent to that of a modified four-lane Collector, approximately 35,000 ADT at LOS E (the half-way point between a 4-lane Collector and a 4-lane Major Arterial).

Upon completion of the SR-905 interchange, La Media Road from Saint Andrews Avenue (SR-905 westbound off ramp) to the SR-905 eastbound ramp is a six-lane divided roadway that has a classification equivalent to that of a six-lane Prime Arterial, capacity of 60,000 ADT at LOS E. La Media Road from approximately 300 feet south of the proposed SR-905 eastbound ramp to Siempre Viva Road is constructed as a two-lane undivided roadway that has a classification equivalent to that of a two-lane Collector, capacity 10,000 ADT at LOS E.

Sanyo Avenue is a north-south four-lane undivided roadway between Otay Mesa Road and Airway Road. The roadway segment of Sanyo Avenue between Otay Mesa Road and Airway Road is under the City's jurisdiction and has the classification of a four-lane Collector, which has a capacity of 30,000 ADT at LOS E.

Enrico Fermi Drive is a north-south roadway segment that is split between the County and City of San Diego jurisdictions. The segment north of Airway Road is under the County's jurisdiction and exists as a three-lane roadway just south of Otay Mesa Road and north of Airway Road. Portions of this roadway segment are two lanes. For the purpose of analysis, the roadway segment under the County's jurisdiction was analyzed as a Town Collector, which has a capacity of 19,000 ADT at LOS E. The segment of Enrico Fermi Drive, south of Airway Road is under the City's jurisdiction and is a four-lane Major Arterial, which has a capacity of 40,000 ADT at LOS E.

Enrico Fermi Drive has the ultimate classification in the EOMSP Amendment as a four-lane Major facility with a capacity of 40,000 ADT at LOS E for the segment located within the City and a capacity of 37,000 ADT at LOS E for the segment located within the County. A four-lane Major facility is 78 feet from curb to curb, with a 98-foot ROW. Per the EOMSP Amendment adopted in August 2007, the segment of Enrico Fermi Drive between Otay Mesa Road and SR-11 is proposed as an Enhanced Major Road Facility that would have additional turn lanes to facilitate freeway access.

Alta Road is a north-south roadway that is generally constructed as a two-lane (one lane each direction) undivided roadway with a capacity of a Light Collector, what has a capacity of 16,200 ADT at LOS E. The segment of Alta Road between Paseo de la Fuente and Calzada de la Fuente was

widened to provide two northbound travel lanes and one southbound travel lane. This segment of Alta Road has a capacity equivalent to that of a Town Collector, which has a capacity of 19,000 ADT at LOS E.

Based on the County Circulation Element, the ultimate classification of Alta Road between Lone Star Road/Paseo de la Fuente and Otay Mesa Road is a four-lane Major Road (i.e., capacity of 37,000 ADT at LOS E) with a bike trail within the east side of roadway. The ultimate classification of Alta Road between Lone Star Road/Paseo de la Fuente and Donovan State Prison Road is a four-lane Industrial Collector with a center left turn lane, which has a capacity of 34,200 ADT at LOS E and a modified curb to curb of 62 feet and 86-foot ROW. North of State Donavan Road, the roadway segment of Alta Road is a four-lane Industrial Collector, which has a capacity of 34,200 ADT at LOS E and a modified curb to curb width of 58-foot and 84-foot ROW.

Intersections

The following existing and future intersections (organized by jurisdiction) are analyzed in the TIS for all traffic scenarios:

County of San Diego

- Otay Mesa Road/Enrico Fermi Drive (signalized);
- Otay Mesa Road/Alta Road (all-way stop-controlled);
- Otay Mesa Road/Vann Centre Boulevard (signalized);
- Otay Mesa Road/Paseo de la Fuente – Lone Star Road (one-way stop controlled);
- Airway Road/Alta Road (signalized);
- Siempre Viva Road/Airway (signalized); and
- Alta Road/Calzada de la Fuente (one-way stop-controlled)
- Alta Road/Paseo de la Fuente (signalized).

County of San Diego/City of San Diego

- Otay Mesa Road/Harvest Road (signalized);
- Otay Mesa Road/Sanyo Avenue (all-way stop-controlled);
- Airway Road/Paseo de las Americas (one-way stop-controlled);
- Airway Road/Michael Faraday Drive (one-way stop-controlled);
- Airway Road/Enrico Fermi Drive (signalized); and
- Siempre Viva Road/Enrico Fermi Drive (signalized).

County of San Diego/City of San Diego/Caltrans

- Interim SR-905 (Otay Mesa Road)/Piper Ranch Road (signalized);
- Interim SR-905 (Otay Mesa Road)/SR-125 Southbound Ramp (signalized);
- Interim SR-905 (Otay Mesa Road)/SR-125 Northbound Ramp (signalized); and
- Otay Mesa Road/SR-905 Connector (signalized).

City of San Diego

- Airway Road/La Media Road (all-way stop-controlled);
- Airway Road/Sanyo Avenue (all-way stop-controlled);
- Siempre Viva Road/La Media Road (all-way stop-controlled);
- Siempre Viva Road/Paseo de las Americas (signalized); and
- Siempre Viva Road/Michael Faraday Drive (two-way stop-controlled).

City of San Diego/Caltrans

- Interim SR-905 (Otay Mesa Road)/Heritage Road (signalized);
- Interim SR-905 (Otay Mesa Road)/Cactus Road (signalized);
- Interim SR-905 (Otay Mesa Road)/Britannia Boulevard (signalized);
- Interim SR-905 (Otay Mesa Road)/La Media Road (signalized);
- Siempre Viva Road/SR-905 Southbound Ramp to Eastbound Siempre Viva Road (signalized);
- Siempre Viva Road/SR-905 Southbound Ramp to Westbound Siempre Viva Road (signalized); and
- Siempre Viva/SR-905 Northbound Ramp (signalized).

Planned Improvements

The TIS also took into account programmed road improvement projects in the vicinity of the project site. The only planned improvements expected to impact transportation in the project vicinity are Capitol Improvement Projects, two Caltrans major roadway projects (SR-905 and SR-11) and changes associated with Airway Road Closure/Detour Mitigation Measures. These roadway projects and the schedule for each are described below:

Capital Improvement Projects – The current County of San Diego's 5-Year Capital Improvement Plan 2008/09 – 2012/13 includes the following three roadway segments within the East Otay Mesa area: (1) construction of Additional Lanes on Airway Road between Michael Faraday Drive and Enrico Fermi Drive; (2) construction of Lone Star Road from Alta Road to the west for 0.5 miles, and (3) widening Otay Mesa Road from Vann Centre Boulevard to Enrico Fermi Drive. Funding for the Airway Road improvements are anticipated to come from Transportation Impact fees, the schedule for completion is to be determined. The Lone Star Road improvements are anticipated to be completed in spring of 2014 with funding anticipated to come from Federal sources. The Otay Mesa Road widening project is anticipated to be completed in spring of 2014 with funding still to be determined. See TIS Appendix B for more details on each of these projects.

State Route 905 – The SR-905 project will consist of constructing a transportation facility from I-805 to the Otay Mesa Port of Entry (POE) at the US- Mexico Border. Project alternatives under study include a variable alignment of a six lane freeway alternative that would run parallel and roughly 1,300 feet to the south of the existing Otay Mesa Road, and a six lane toll way. The project will include grade separated local access interchanges with SR-125. The portion of the project from the Otay Mesa POE to Airway Road began construction in January 2003. As a part of this project the SR-905/Siempre Viva Road grade separated interchange was completed and opened to traffic in 2005.

The remainder of the project has been divided into 4 phases. In discussions with Caltrans, it has been determined that the SR-905 facility would be constructed in the following four phases:

Phase 1A: Phase 1 consists of two phases, namely Phase 1A (east) and Phase 1B (west). Phase 1A would consist of a six-lane facility between Britannia Boulevard and the Otay Mesa Port of Entry with a full interchange at SR-905/La Media Road and ramps on the eastern side of Britannia Boulevard. Roadway improvements will be made along Otay Mesa Road, Airway Road, Sanyo Avenue, and Harvest Road. Phase 1B consists of a six-lane facility between Caliente Avenue and Britannia Boulevard. Phase 1B includes an interchange at Caliente Avenue and ramps on the western side of Britannia Boulevard. Phase 1A is fully funded. Construction of Phase 1A began in April 2008 and is scheduled to be completed by late 2010. Phase 1B is also fully funded and secured with the majority of the funding coming from the American Recovery & Reinvestment Act funding. Construction of Phase 1B began in July 2009 and is scheduled to be completed by summer 2012.

La Media Road Improvements: Currently La Media Road between Otay Mesa Road and approximately 300 feet south of the proposed SR-905 eastbound ramp is under construction. The Caltrans improvements to La Media Road have improved the existing cross-section of the segment of La Media Road between Otay Mesa Road and approximately Saint Andrews Avenue (the approximate location of the SR-905 ramps) to the equivalent of a four-lane Collector. See TIS Appendix P for Caltrans proposed striping concept of La Media Road.
Phase 2: Phase 2 consists of improvements at the interchange at Interstate 805 (I-805)/SR-905 that includes construction of the westbound SR-905 to northbound I-805 connector from SR-905. An auxiliary lane will also be constructed along northbound I-805 between SR-905 and Palm Avenue. This Phase will also include widening of the Del Sol Boulevard under crossing. Phase 2 is funded through a Transportation Investment Generating Economic Recovery grant award.

Phase 3: Phase 3 consists of construction of the interchange at SR-125/SR-905. Phase 3 is not currently funded.

Phase 4: Construction of the interchange at Heritage Road. Phase 4 is not currently funded. (See TIS Appendix B for more information regarding SR-905.)

State Route 11 – The State Route 11 (SR-11) project will consist of constructing approximately two miles of a new four-lane freeway from the proposed SR-905/SR-125 junction to the future Federal Port of Entry (POE) at east Otay Mesa in San Diego County. An environmental study for the SR-11 program has been completed and a second study for the project itself is underway, with completion expected in 2010. The current schedule calls for the SR-11 breaking ground in 2012 and opening in 2014, contingent on full funding. The location of the ramp interchanges, and the ramp interchange configurations will not be determined until after the completion of the SR-11 Phase 2 Project-level EIR. In the traffic analysis and study, the SR-11 facility and the POE at the third border crossing were assumed to be constructed and operational only under the 2030 conditions. TIS Appendix B contains the Caltrans fact sheet for the SR-11 project.

Airway Road Closure/Detour Mitigation Measures – Currently Airway Road between the SR-905 and Sanyo Avenue is closed for the construction of the SR-905 overpass. The Caltrans schedule shows

Airway Road between SR-905 and Sanyo Avenue opening to traffic on January 5, 2011. While the segment of Airway Road between SR-905 and Sanyo Avenue is closed for the construction of the SR-905/Airway Road structures, Caltrans proposes to implement a detour to re-route traffic via Sanyo Avenue and Otay Mesa Road (Old Otay Mesa Road). As a mitigation requirement of the detour (closure of Airway Road) Caltrans is required to signalize the Otay Mesa Road/Sanyo Avenue intersection and improve the roadway segment of Otay Mesa Road between Harvest Road and Sanyo Avenue to the standards of a four-lane Major Road and the segment of Sanyo Avenue between Otay Mesa Road and Airway Road to the standards equivalent to that of a four-lane Collector Road. Upon completion of the SR-905 overcrossings with Airway Road, Caltrans is widening Airway Road to provide two lanes in each direction and a painted median with pavement transitions to provide the equivalent of a collector road that provides one lane in each direction plus a center turn lane from Sanyo Avenue to La Media Road. Per field checks conducted in June 2009, the proposed improvements by Caltrans have been completed.

Planned State Route SR-11 along with the completion of all phases of SR-905 are critical to accommodating the future development of the entire Otay Mesa area. It should be noted that the SR-125 facility is a major roadway project in the Otay Mesa area that was completed and opened to traffic in November 2007. All traffic counts and existing conditions included within this analysis include the completion and operation of the SR-125.

Existing Traffic Volumes

Existing ADT volumes were compiled for roadway segments in the project area with assistance from traffic studies submitted to the County Department of Public Works for other projects in the area, the SANDAG website, and the California Department of Transportation (Caltrans) website. Existing ADT counts represent the Existing traffic conditions. Twenty-four hour count data for the key roadway segments and morning (AM) and afternoon (PM) peak period intersection traffic volume counts were collected on typical weekdays during the months of February and March, 2008. Existing ADT volumes on the study area street segments are presented in Table 2.1-1, *Existing Conditions Roadway Segment Daily LOS Summary*. Existing ADT volumes on arterials in the study area are presented in Table 2.1-2, *Existing Conditions Arterial LOS Summary*. Peak hour traffic volumes at the study area intersections are contained in Table 2.1-3, *Existing Conditions Intersection LOS Summary*.

Existing Road Segment Level of Service Analysis

Table 2.1-1 summarizes ADT and LOS observed for study roadway segments under the existing conditions. As shown in Table 2.1-1, the following seven segments operate at unacceptable levels:

- La Media Road from Saint Andrews Avenue to Airway Road (LOS F); and
- SR-905 from Otay Mesa Road to Siempre Viva Road (LOS E).

All other key roadway and freeway segments currently operate at an acceptable LOS D or better under existing conditions. Field observations conducted in January 2010 found the segment of Airway Road between SR-905 and Sanyo Avenue, was closed for SR-905 construction and was not included in this analysis.

Existing Arterial Level of Service Analysis

Twenty-four-hour counts on Otay Mesa Road found that the traffic flow is relatively constant between the hours of 7 AM and 6 PM, compared to most five-lane and six-lane roadways that have high peak hour flows in the morning and afternoon. Further, it should be noted that the existing Otay Mesa Port of Entry (POE) is open 24 hours per day, with long lines of vehicles crossing the border. This results in the spread of vehicles through the day and increased daily traffic volumes. Since level of service based on daily volumes assumes significant increases in traffic counts during the peak hour periods, daily capacity is not very accurate for Otay Mesa Road. Therefore, Otay Mesa Road was also analyzed using the Highway Capacity Manual's (HCM) Arterial Segment Methodology based on the average travel speeds on the roadway. The results of the AM and PM peak hour analysis are summarized in Table 2.1-2. As shown in Table 2.1-2, all arterial roadway segments along Interim SR-905 in the study area operate at an acceptable LOS D or better under existing conditions.

Existing Intersection Level of Service Analysis

As presented in Table 2.1-3, all of the intersections in the study area operate at acceptable levels (LOS D or better) under the existing conditions.

Since SR-905 and SR-125 are state owned facilities and Caltrans requires the completion of the Intersecting Lane Vehicles (ILV) analysis for its facilities, ILV analysis was completed for the intersections along Otay Mesa Road (Interim SR-905) between Britannia Boulevard and the SR-905 connector and the intersections of SR-905 at Siempre Viva Road. Since the control/ownership of Otay Mesa Road (Interim SR-905) between Britannia Boulevard and the SR-905 connector will be relinquished to the City of San Diego once the new SR-905 facility is constructed, the ILV analysis was only completed for these intersections under existing and existing plus project conditions. ILV analysis is only applicable to signalized intersections. Since the upper limits of the ILV analysis is based on the premise of an operating condition of LOS C or better and since LOS D was considered an acceptable level of service, the ILV analysis was not utilized to determine project significance. It is included hereto meet the Caltrans requirements.

As shown in Table 2.1-4, all signalized intersections would operate at stable flow conditions per the ILV analysis.

2.1.2 Guidelines for the Determination of Significance

The roadway segments and intersections in the vicinity of the proposed project are located in the jurisdiction of both the County and City of San Diego, and in some cases are under the combined jurisdiction of the County, City and/or Caltrans. The criteria for determining project significance depend on the location of the roadway segment or intersection and the corresponding jurisdiction(s). The County's and City's significance of impact criteria, as well as those of Caltrans, are discussed below.

County of San Diego

The following guidelines are based on the Public Facility Element (PFE) of the County of San Diego General Plan and *County of San Diego Guidelines for Determining Significance*, *February 19, 2010*, as well as verbal follow-up guidance from County staff. For Regionally Significant Arterials (RSAs), the

County uses the guidelines established by the San Diego Traffic Engineers' Council (SANTEC) and the Institute of Transportation Engineers (ITE).

Roadway Segments

1. Traffic volumes increases from public or private projects that result in one or more of the following criteria will have a significant traffic volume or LOS traffic impact on a road segment if:

    a. The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a Circulation Element Road or State Highway currently operating at LOS E or F as identified for road segments in the County Threshold Table below; or
    b. The additional or redistributed ADT generated by the proposed project will cause a Circulation Element Road or State Highway to operate at LOS E or LOS F as a result of the proposed project as identified for road segments in the County Threshold Table below; or
    c. The additional or redistributed ADT generated by the proposed project will cause a residential street to exceed its design capacity.

County Traffic Thresholds						
Allowable Increases on Congested Roads and Intersections						
LOS	**Intersections**		**Road Segments**			
	Signalized	**Unsignalized**	**2-Lane Road[1] with intersection spacing less than one mile**	**2-Lane Road [1]**	**4-Lane Road**	**6-Lane Road**
LOS E	Delay of 2 seconds or less	20 or less peak hour trips on a critical movement	Delay of 2 or less seconds at adjacent signalized intersection	200[2] ADT	400 ADT	600 ADT
LOS F	Either a delay of 1 second, or 5 or less peak hour trips on a critical movement	5 or less peak hour trips on a critical movement	Delay of 1 second or less, or 5 peak hour trips or less on a critical movement	100[3] ADT	200 ADT	300 ADT

Allowable Change due to Project Impact on County Circulation Element Roads, Signalized Intersections, and Ramps for Regionally Significant Arterials						
LOS with Project	**Freeways**		**Roadway Segments[4]**		**Intersections[5]**	**Ramps with > 15 min. delay**
	V/C	**Speed (mph)**	**V/C**	**Speed (mph)**	**Delay (sec.)**	**Delay (min.)**
E and F	0.01	1	0.02	1	2	2

Notes:

– A critical movement is an intersection movement (right turn, left turn, through-movement) that experiences excessive queues, which typically operate at LOS F. Also if a project adds significant volume to a minor roadway approach, a gap study should be provided that details the headways between vehicles on the major roadway.

– By adding proposed project trips to all other trips from a list of projects, these same tables are used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes additional trips must mitigate a share of the cumulative impacts.

– The County may also determine impacts have occurred on roads even when a project's traffic or cumulative impacts do not trigger an unacceptable level of service, when such traffic uses a significant amount of remaining road capacity.

– For determining significance at signalized intersection with LOS F conditions, the analysis must evaluate both the delay and the number of trips on a critical movement, exceedance of either criteria result in a significant impact.

[1] Impacts related to operational features on two-lane highway may be evaluated on a case-by-case basis, based upon traffic flow patterns, geometrics, available sight distance, accident histories, and other factors.

[2] For 2-lane roads with intersection spacing over one mile, the LOS criteria for LOS E is 16,200 ADT or more, and the threshold for impact significance is an increase of 325 ADT or more.

[3] For 2-lane roads with intersection spacing over one mile, the LOS criteria for LOS F is 22,900 ADT or more, and the threshold for impact significance is an increase of 225 ADT or more.

[4] For County arterials, which are identified in SANDAG's Regional Transportation plan and Congestion Management Plan as regionally significant arterials, significance may be measured based on an increase in ADT. The allowable change in ADT due to project impacts in this instance would be identified in the table.

[5] Signalized intersections

sec. = Seconds of Delay per Vehicle
V/C = Volume-to-capacity ratio
mph = miles per hour
Source: Darnell and Associates 2010.

Signalized Intersections

2. Traffic volume increases from public or private projects that result in one or more of the following criteria being exceeded will have a significant traffic volume or LOS traffic impact on a road segment if:

    a. The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a signalized intersection currently operating at LOS E or LOS F as identified for signalized intersections in the County Threshold table above; or.
    b. The additional or redistributed ADT generated by the proposed project will cause a signalized intersection to operate at LOS E or LOS F as identified for signalized intersections in the County Threshold table above.
    c. Based upon an evaluation of existing accident rates, the signal priority list, intersection geometrics, proximity of adjacent driveways, sight distance or other factors, the project would significantly impact the operations of the intersection.

Unsignalized Intersections

3. Traffic volume increases from public or private projects will have a significant traffic v impact on a road segment if:

    a. The additional or redistributed ADT generated from the proposed project will add 21 or more peak hour trips to a critical movement of an unsignalized intersection, and cause the unsignalized intersection to operate below LOS D, or
    b. The additional or redistributed ADT generated from the proposed project will add 21 or more peak hour trips to a critical movement of an unsignalized intersection and the unsignalized intersection currently operate at LOS E, or
    c. The additional or redistributed ADT generated from the proposed project will add six or more peak hour trips to a critical movement of an unsignalized intersection, and cause the unsignalized intersection to operate at LOS F, or
    d. The additional or redistributed ADT generated form the proposed project will add six or more peak hour trips to a critical movement of an unsignalized intersection currently operating at LOS F, or
    e. Based on an evaluation of existing accident rates, the signal priority list, intersection geometrics, proximity of adjacent driveways, sight distance, or other factors, the project would significantly impact the operations of the intersections.

Regionally Significant Arterials

4. Traffic volume increases from public or private projects will have a significant traffic volume or LOS traffic impact on a Regionally Significant Arterial if:

    a. The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a Regionally Significant Arterial currently operating at LOS E or F as identified in the County Threshold Table above.

Ramps

5. Additional or redistributed ADT generated by the proposed project may significantly increase congestion at a freeway ramp, if the thresholds in the County Threshold table above are exceeded. Other factors affecting these values will be considered, including ramp metering, location (rural vs. urban), ramp design, and the proximity of adjacent intersections.

Traffic Hazards

6. A significant traffic hazard impact due to a design feature would occur if the proposed project would (on a case-by-case basis):

    a. Have design features/physical configurations of access roads that would adversely affect the safe transport of vehicles along the roadway.
    b. Result in a percentage or magnitude of increased traffic on the road that would affect the safety of the roadway.
    c. Result in physical conditions of the project site and surrounding area, such as curves, slopes, walls, landscaping or other barriers, that could result in vehicle conflicts with other vehicles and/or stationary objects.
    d. Does not conform to the requirements of the private or public road standards, as applicable.

7. A significant traffic hazard impact to pedestrians and/or bicyclists would occur if the proposed project would (on a case-by-case basis):

    a. Result in design features/physical configurations that would adversely affect the visibility of pedestrians and/or bicyclists to drivers entering and exiting the site, and the visibility of cars to pedestrians and bicyclists.
    b. Result in an amount of pedestrian activity at the proposed project access points that may adversely affect pedestrian safety.
    c. Result in the preclusion or substantial hindrance of the provision of a planned bike lane or pedestrian facility on a roadway adjacent to the project site.
    d. Result in a percentage and/or magnitude of increased traffic on the road due to the proposed project that may adversely affect pedestrian and bicycle safety.
    e. Result in physical conditions on the project site and surrounding area, such as curves, slopes, walls, landscaping or other barriers, that could result in vehicle/pedestrian, vehicle/bicycle conflicts.
    f. Not conform to the requirements of the private or public road standards, as applicable.
    g. Result in a substantial increase in pedestrian or bicycle activity without the presence of adequate facilities.

City of San Diego

The City of San Diego uses significance thresholds that are outlined in Section O, Transportation/Circulation and Parking, of the *Significance Determination Thresholds* (Development Services Department, January 2007). Section O thresholds apply to all projects deemed complete on or after January 1, 2007. Per the City thresholds, project impacts would be significant if:

8. Any intersection, roadway segment, or freeway segment affected by a project would operate at LOS E or LOS F under either direct or cumulative conditions, as identified in the City Thresholds table below.

CITY TRAFFIC THRESHOLDS

LOS with Project*	Allowable Change Due to Project Impact**					
	Freeways		Roadway Segments		Intersections	Ramp Metering
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec.)	Delay (min.)
E (or ramp meter delays above 15 min.)	0.010	1.0	0.02	1.0	2.0	2.0
F (or ramp meter delays above 15 min.)	0.005	0.5	0.01	0.5	1.0	1.0

Notes: The allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS E is 2 minutes.
The allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS F is 1 minute.

* All LOS measurements are based on Highway Capacity Manual procedures for peak hour conditions. However,, V/C ratios for roadway segments are estimated on an ADT/24-hour traffic volume basis (using Table 2 of the City's Traffic Impact Study Manual. The acceptable LOS for freeways, roadways, and intersections is generally LOS D (LOS C for undeveloped locations). For metered freeway ramps, LOS does not apply. Ramp meter delays above 15 minutes are considered excessive.

** If a proposed project's traffic causes the values shown on the table to be exceeded, the impacts are determined to be significant. The project applicant shall then identify feasible improvements (within the Traffic Impact Study) that will restore/and maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable, or if the project adds a significant amount of peak hour trips to cause any traffic queues to exceed on- or off-ramp storage capacities, the project applicant shall be responsible for mitigating the project's direct significant and/or cumulatively considerable traffic impacts.

9. A project exceeds the thresholds at any ramp meter location with delays above 15 minutes, as identified in the City Thresholds table above.

10. A project would add a substantial amount of traffic to a congested freeway segment, interchange, or ramp, as shown in the City Thresholds table above.

11. A project would increase traffic hazards to motor vehicles, bicyclists, or pedestrians due to proposed non-standard design features (e.g., poor sight distance, proposed driveway onto an access-restricted roadway).

California Department of Transportation

The *Caltrans Guide for the Preparation of Traffic Impact Studies*, December 2002, requires that State highway facilities (i.e., freeway segments, signalized intersections, on- or off-ramps, etc.) maintain a target LOS at the transition between LOS C and LOS D. Appendix A of the TIS includes excerpts from Caltrans traffic impact guidelines. Per Caltrans guidance, project impacts would be significant if:

12. Any intersection, freeway segment or ramp affected by a project would operate at below LOS D under either direct or cumulative conditions, as identified in the Caltrans Thresholds.

2.1.3 Analysis of Project Effects and Determination as to Significance

Scenarios Analyzed

This analysis of project transportation/circulation impacts includes the following scenarios:

- Existing Conditions Plus Project Unit 1, Units 1-2, Units 1-3, Units 1-4, and Units 1-5;
- Cumulative 2015 Conditions (With SR-905 Phases 1A and 1B) Plus Project Unit 1, Units 1-2, Units 1-3, Units 1-4, and Units 1-5; and
- Cumulative Year 2030 Plus Project Units 1-5.

This subchapter includes the existing conditions analysis. The cumulative analyses are discussed in Subchapter 2.1.4.

Study Area

To determine the study area for the project, the County of San Diego's and City of San Diego's criteria were used, depending on the applicable jurisdiction. The County of San Diego's criteria recommends the inclusion of all transportation facilities that receive 25 or more peak hour trips from the proposed project. The City of San Diego's criteria requires the analysis of all regionally significant arterial system segments and intersections where the proposed project will add 50 or more peak hour trips in either direction and all mainline freeway locations where the project will add 150 or more peak hour trips in either direction.

Project Generation and Trip Distribution

The trip generation potential for the industrial component of the project was based on daily and peak hour trip generation rates obtained from the *Brief Guide of Traffic Generators for the San Diego Region* published by SANDAG in April 2002 and the trip generation potential for the truck parking component of the project was based on daily and peak hour trip generation rates obtained from the Trip Generation Manual published by the City of San Diego in May 2003. An average trip generation rate of 120 trips per acre was used for the Technology Business Park land use, which corresponds to the trip generation rate specified in the traffic analysis for the EOMSP. The trip generation potential for the interim truck parking component of the project used was 30 trips per acre.

Grading for the proposed project is expected to be completed in two phases. Grading Phase 1 comprises three final maps (Units 1, 2, and 3) and Grading Phase 2 comprises two final maps (Units 4

and 5). The project proposes to develop the project in the following timeline: Grading Phase 1 to begin in early 2010 and Grading Phase 2 to begin in mid-2012.

The proposed project would generate different amounts of traffic at each development phase. With Unit 1 (51.6 acres of technology business park), the project would generate 6,192 ADT. Unit 2 (49.1 acres of technology business park) would generate an additional 5,892 ADT. Unit 3 (22.1 acres of technology business park and 23.7 acres of interim truck parking) would generate 3,363 ADT. Unit 4 (33.6 acres of technology business park and 0.9 acre of interim truck parking) would generate 4,059 ADT. Unit 5 (59.1 acres of interim truck parking) would generate 1,773 ADT. Overall, Units 1 to 5 of the proposed project would generate 21,279 ADT. Refer to the matrix below for more information regarding the project trip generation.

TRIP GENERATION CALCULATIONS SUMMARY								
Land Use	**Acres**	**Daily ADT**	**AM Peak Hour**			**PM Peak Hour**		
			Total	**In**	**Out**	**Total**	**In**	**Out**
Unit 1								
Technology Business Park[1]	51.6	6,192	867	694	173	929	279	650
Unit 2								
Technology Business Park[1]	49.1	5,892	825	660	165	884	265	619
Total Units 1-2	**100.7**	**12,084**	**1,692**	**1,354**	**338**	**1,813**	**544**	**1,269**
Unit 3								
Technology Business Park[1]	22.1	2,652	371	297	74	398	119	279
Interim Truck Parking[2]	23.7	711	64	26	38	57	29	28
Sub Total Unit 3	**45.8**	**3,363**	**435**	**323**	**112**	**455**	**148**	**307**
Total Units 1-3	**146.5**	**15,447**	**2,127**	**1,677**	**450**	**2,268**	**692**	**1,576**
Unit 4								
Technology Business Park[1]	33.6	4,032	564	451	113	605	182	423
Interim Truck Parking[2]	0.9	27	2	1	1	2	1	1
Sub Total Unit 4	**34.5**	**4,059**	**566**	**452**	**114**	**607**	**183**	**424**
Total Units 1-4	**181.0**	**19,506**	**2,693**	**2,129**	**564**	**2,875**	**875**	**2,000**
Unit 5								
Interim Truck Parking[2]	59.1	1,773	160	64	96	142	71	71
Total Units 1-5	**240.1**	**21,279**	**2,853**	**2,193**	**660**	**3,017**	**946**	**2,071**
w/o Interim Truck Parking Total Units 1-4	**156.4**	**18,768**	**2,627**	**2,102**	**525**	**2,816**	**845**	**1,971**

[1] Technology Business Park=120 average daily traffic (ADT) per acre
[2] Truck Parking=30 average daily traffic per acre
Source: Darnell and Associates 2010.

The proposed project trip distribution depends on where access to external roads is taken. The access points are different for different units of the project and at different points in time. Refer to Section II of the TIS for project distribution. The project trip distribution for the cumulative 2015 scenarios and the 2030 scenario are based on SANDAG Select Zone forecasts for 2015 and for 2030 conditions, respectively. Figures 3 to 9 of the TIS illustrate the project trip distribution percentages and project related traffic under the existing conditions and cumulative conditions for Units 1, 1-2, 1-3, 1-4, and 1-5, respectively.Under 2030 conditions it was assumed that both SR-11 and the re-aligned SR-905

would be constructed and that all five units of the proposed project would be completely built out based on current construction and funding of the improvements.

2.1.3.1 *Roadway Segments (Guidelines 1 and 8)*

Table 2.1-5a summarizes the daily roadway segment level of service analysis for the first three analysis scenarios: Existing Conditions Plus Project Unit 1, Existing Conditions Plus Project Units 1-2, and Existing Conditions Plus Project Units 1-3 (end of Grading Phase 1). Table 2.1-5b summarizes the daily roadway segment level of service analysis for the last two stages: Existing Conditions Plus Project Units 1-4 and Existing Conditions Plus Project Units 1-5 (end of Grading Phase 2 and completion of the project). Please note that Interim SR-905 is analyzed as an arterial in Subchapter 2.1.3.2 below.

Under the Existing Conditions, two roadway segments operate at unacceptable levels. One additional roadway, Airway Road between SR-905 and Sanyo Avenue, is projected to operate at unacceptable LOS E under the existing conditions; however it is presently closed to traffic. The addition of the proposed Unit 1 traffic to the Existing Conditions would cause two additional Otay Mesa Road segments to operate at unacceptable LOS E. Unit 1 would not add a significant amount of traffic (refer to Guidelines 1 and 8) to the segments currently operating at unacceptable levels. The significantly impacted roadway segments are as follows:

- Otay Mesa Road from Sanyo Avenue to Enrico Fermi Drive (County/City) (**TI-1**); and
- Otay Mesa Road from Enrico Fermi Drive to Alta Road (County) (**TI-2**).

The addition of Unit 2 to the Existing plus Unit 1 traffic conditions would add a significant amount of traffic to the following segments:

- Airway Road from SR-905 to Sanyo Avenue (City) (**TI-3**).

The completion of Units 3, 4 and 5 would not cause any additional significant impacts to roadway segments.

2.1.3.2 *Arterial Roadway Segments (Guidelines 4, 8, 10 and 12)*

Table 2.1-6a illustrates the arterial LOS summary for Interim SR-905 during the AM and PM peak hour, respectively, during the first three stages of the proposed project's development (i.e., Unit 1 alone, Units 1 and 2, and Units 1, 2 and 3). As the table indicates, all arterial segments of Interim SR-905 would operate at an acceptable LOS D or better under the Unit 1, Units 1-2, and Units 1-3 scenarios. Once Units 1 to 4 are in place, however, the following segments would operate at unacceptable LOS E (see Table 2.1-6b):

- Interim SR-905 between Heritage Road and Cactus Road (Westbound) (PM) (City/Caltrans) (**TI-4**); and
- Interim SR-905 between Cactus Road and Britannia Boulevard (Eastbound) (AM) (City/Caltrans) (**TI-5**).

With the addition of Unit 5, these segments would continue to operate at LOS E and, in addition, the eastbound Interim SR-905 segment between Heritage Road and Cactus Road would operate at LOS E during the AM peak hour.

2.1.3.3 *Intersections (Guidelines 2, 3, 8 and 12)*

Tables 2.1-7a and 7b illustrate the LOS summary of the intersections in the area during the AM and PM peak hour, respectively, during the first three stages of the proposed project's development (i.e., Unit 1 alone, Units 1 and 2, and Units 1, 2 and 3), and Tables 2.1-7c and 7d present a similar analysis for the last two stages of project development (Units 1-4 and Units 1-5).

Syncro Analysis

As described above and shown in Table 2.1-3, all intersections currently operate at acceptable levels under the Existing Conditions. The following intersection would be significantly impacted by the completion of Unit 1 since LOS would be reduced to an unacceptable LOS F and/or delay would be significantly increased by over one second:

- Otay Mesa Road/Alta Road (AM/PM) (County) (**TI-6**).

The addition of Unit 2 to the Existing Conditions with Unit 1 would cause two additional significant impacts at the following intersections since LOS would be reduced to an unacceptable LOS and delay would be significantly increased (see Tables 2.1-7a and 7b):

- Otay Mesa Road/SR-905 (PM) (County/City/Caltrans) (**TI-7**);
- Otay Mesa Road/Sanyo Avenue (PM) (County/City) (**TI-8**); and
- Otay Mesa Road/Enrico Fermi Drive (AM) (County) (**TI-9**).

The addition of Unit 3 would cause the Otay Mesa Road/SR-905 and Otay Mesa Road/Enrico Fermi Drive impacts to occur in both the AM/PM peak hours (Tables 2.1-7a and 7b). Also, one additional significant impact would occur with the implementation of Unit 3. Specifically, the following intersection would be reduced to unacceptable LOS E and delay would increase by over two seconds with the addition of Unit 3:

- Otay Mesa Road/Heritage Road (AM) (City/Caltrans) (**TI-10**).

With the addition of Unit 4, the Otay Mesa Road/SR-905 and Otay Mesa Road/Enrico Fermi Drive intersection impacts would occur in both the AM/PM peak hours. Also, the addition of Unit 4 would cause the following additional intersection would be reduced to LOS E and delay would increase by over two seconds (see Table 2.1-7c):

- Otay Mesa Road/Britannia Boulevard (AM) (City/Caltrans) (**TI-11**).

No additional significant impacts would occur with the implementation of Unit 5.

ILV Analysis (Informational Purposes Only)

As mentioned previously, all signalized intersection operate at stable flow conditions under the Existing Conditions. With the addition of Unit 1, the following intersection would operate at unstable flow conditions (Table 2.1-8):

- Otay Mesa Road/Heritgate Road (AM);
- Otay Mesa Road/Cactus Road (AM); and
- Otay Mesa Road/SR-905 Connector (PM).

With the completion of Unit 2, Otay Mesa Road/Heritgate Road and Otay Mesa Road/Cactus Road would improve to operate at stable flow conditions in the AM peak hour. However, the addition of Unit 2 would cause those two intersections to operate at unstable flow during the PM peak hour and cause one additional intersections to operate at unstable flow conditions. These additional unstable flows that occur with the addition of Unit 2 are as follows:

- Otay Mesa Road/Heritage Road (PM);
- Otay Mesa Road/Cactus Road (PM); and
- Otay Mesa/Britannia Boulevard (PM).

Under the Existing plus Unit 1-3 conditions, Otay Mesa Road/Heritage Road and Otay Mesa Road/Cactus Road would again operate at unstable flow conditions under the AM peak hour. The Otay Mesa Road/SR-905 Connector would additionally operate at unstable flows during the AM peak hour and the PM peak hour would operate at over capacity with the addition of Unit 3. Also, the following would operate at unstable flow or overcapacity conditions with the addition of Unit 3:

- Otay Mesa Road/La Media Road (PM);
- Otay Mesa Road/Piper Ranch Road (AM); and
- Otay Mesa Road/SR-125 NB (PM).

The addition of Unit 4 to the Existing with Units 1-3 would cause the Otay Mesa Road/Heritage Road to drop from unstable flows to over capacity flows in the AM peak hour. The Otay Mesa Road/Britannia Boulevard and Otay Mesa Road/SR-125 intersections would operate at unstable flows in both the AM/PM peak hours under the Existing plus Unit 1-4 conditions. The Otay Mesa Road/SR-905 Connector would additionally operate at over capacity under both the AM/PM peak hours with the addition of Unit 4.

Under the Existing plus Unit 1-5 conditions, no additional intersections would operate at unstable or over capacity conditions.

2.1.3.4 *Project Access and On-site Circulation (Guidelines 1, 2, 3, 8 and 12)*

Access

The project site can be accessed via Otay Mesa Road, Alta Road, and Airway Road. It is proposed that with the development of Grading Phase 1 (Units 1, 2 and 3), the project site would provide access off the Otay Mesa Road/Alta Road and Otay Mesa Road/Paseo de la Fuente-Lone Star Road (formerly

Loop Road) intersections. Subsequently, with the development of Grading Phase 2 (Units 4 and 5), the project site would provide additional access off the Alta Road/ Airway Road intersection. Theplanned Paseo De La Fuente-Lone Star Road (formerly Loop Road) and SR-11 would also traverse the project site under buildout conditions and provide additional access.

On-site Circulation

The project proposes construction of various roadways on site and adjacent to the project site, as described in Table 1-2 in Chapter 1.0, *Project Description, Location and Environmental Setting*. TIS Table 37 also provides the roadway improvements required to facilitate the project's access in order to maintain an acceptable LOS at all on-site circulation element roads.

The roadway segments of Calle Ventner, Street C, and Street D are non-circulation element roadways proposed on the project site to facilitate internal circulation. Additionally, Street A and B are cul-de-sac streets that provide access to lots.

It should be noted that Street C, Street D and the extension of Siempre Viva Road would be built to provide access to the adjacent properties to the east of the project. The Subarea 2 EOMSP designated these areas as Rural Residential, with a density of one dwelling unit per twenty acres. Additionally, some of Streets A and B would be cul-de-sac streets that provide access to lots. Per the County of San Diego's Public Road Standards, the recommended capacity for LOS C for a two-lane industrial/commercial cul-de-sac is 1,000 ADT. Due to the projected volumes on Street A and Street B, both would be constructed to the standards of a two-lane industrial/commercial collector. The site plan shown in Figure 1-4 in Chapter 1.0 identifies the approximate location of the driveways for each of the lots. The exact driveway locations would be refined as the project moves further along in the design process.

It should be noted that the segments of Otay Mesa Road between Alta Road and Lone Star Road, Siempre Viva Road between Airway Road and Lone Star Road, Alta Road between Otay Mesa Road and Airway Road, and Lone Star Road between Otay Mesa Road and its terminus are classified as bike routes with class two bike lanes. Since no parking is provided along these roadways, no additional right-of-way is required to accommodate the bike lanes.

Lane configurations for the project access intersections and the recommended lane configurations and traffic control for the internal intersections under Existing Plus Project Units 1 through 5 are illustrated in Figures 34 through 38 of the TIS.

Tables 2.1-9 and 10 present a summary of LOS at the project access intersections and segments for all Units 1 through 5 traffic under the Existing Plus Project Conditions. These tables show that all access intersections and segments would operate at acceptable levels at all stages of the proposed project under the Existing Plus Project Conditions.

2.1.3.5 *Traffic Hazards (Guidelines 6, 7 and 11)*

The proposed project would take access directly off existing Otay Mesa Road, Alta Road and would construct new roads within the project site. Adequate sight distance would be included in the project plans in accordance with County requirements.

The project does not propose any hazards or barriers for pedestrians or bicyclists on adjacent roadways. All roads would be constructed to County road standards. It is noted that driveways are proposed on some major roads and some driveways on would not meet the EOMSP 300-foot minimum driveway separation for circulation element road (i.e., Alta Road, Siempre Viva Road, Lonestar Road). The County has approved design exceptions for these driveways and no traffic hazards are expected to result. Improvements would be constructed to maintain and enhance existing conditions as they relate to pedestrians and bicyclists. Because of these provisions, impacts to pedestrian and bicyclist safety would be less than significant.

2.1.4 Cumulative Impact Analysis (Guidelines 1 through 12)

The traffic forecast for cumulative (2020) with SR-905 Phases 1A and 1B was prepared by SANDAG based on the Series 11 model and utilizes the cumulative project list and associated access improvements indicated above and in Figure 2.1-2. The cumulative year 2030 analysis is based on the County study prepared for the amendment of the EOMSP approved on August 1, 2007 and the associated build-out roadway conditions (Figure 2.1-3).

Traffic generation by the cumulative projects for the cumulative (year 2020) analysis was further refined based on the December 15, 2006 *Addendum to Real Estate Market Analysis*, which was prepared by Economics Research Associates (ERA) for the City of San Diego during the preparation of the Otay Mesa Community Plan. Based on the ERA analysis, a total of 9 of the 17 cumulative projects (Use Permits and Site Plans) were assumed to be completely constructed by the year 2020 and eight projects (Subdivisions) were assumed to be partially (13 percent of their total development) completed. This is because the ERA study determined that 13 percent of the subdivision development capacity would reasonably develop by the year 2020 based on market absorption data. Refer to TIS Table 32 for the cumulative projects assumed in the year 2020 analysis. Overall, the approved/pending projects within the County of San Diego are estimated to generate a total of approximately 155,932 ADT, of which approximately 52,045 ADT are anticipated to be added to the roadway network by the year 2020.

Three of the approved/pending projects would require the construction of new roadway facilities and/or modifications of existing intersections in order to provide access to their project site. Frontage improvements were assumed to be completed for the International Industrial Park, Otay Business Park, and Otay Crossings Commerce Park (proposed project). Since these cumulative projects were assumed to be at least partially constructed by the year 2020 based on their current status in discretionary permit processing, the following improvements following new roadway facilities and intersection modifications within the County jurisdiction were assumed constructed under the cumulative conditions:

- SR-905 Phases 1A & 1B were assumed to be completed and operational. This includes the removal of the interim signalized SR-905 intersection at Otay Mesa (Old Otay Mesa Road) and the removal of the interim SR-905 between Otay Mesa Road and Airway Road upon opening of Phase 1A of SR-905;
- Old Otay Mesa Road between Alta Road and Lone Star Road (Paseo de la Fuente) (currently a dirt road) will be built to the standards of a Light Collector (provides access for Vulcan Materials (OMC Properties LLC) [responsible for the northern half] and Otay Crossing Commerce Park, proposed TM 5405 project [responsible for the southern half]);

- Airway Road between Airway Place and Siempre Viva Road (currently does not exist) will be built to the standards of a Light Collector (provides access for Otay Business Park [Paragon]);
- Siempre Viva Road between the CHP entrance east of Enrico Fermi Drive and Airway Place will be built to the standards of a Light Collector (provides access for Otay Business Park [Paragon);
- Siempre Viva Road between Airway Place and Lone Star Road (currently does not exist) will be built to the equivalence of a Light Collector Road (provides access for the Otay Business Park);
- Harvest Road between Old Otay Mesa Road and Sunroad Boulevard (currently a dirt road) will be built to the standards of a Modified 4-Lane Industrial/Commercial Collector to accommodate a painted median and turn lanes at intersections (provides access for California Crossings and Otay Tech Centre [Sunroad]);
- The Otay Mesa Road (SR-905)/Piper Ranch Road intersection has been modified to a four-legged intersection (south leg does not currently exist, provides access for Interstate Industrial Centre and Sunroad Otay Park);
- The Old Otay Mesa Road/Sanyo Avenue-Sunroad Boulevard intersection has been constructed as a four-legged intersection (north leg does not currently exist, provides access for Otay Tech Centre [Sunroad]).
- The Old Otay Mesa Road/Vann Centre Boulevard intersection has been constructed as a T-intersection (provides access for Otay Tech Centre [Sunroad]);
- The Old Otay Mesa Road/Enrico Fermi Drive intersection has been modified to a four-legged intersection (provides access for International Industrial Park);
- The Alta Road/Lone Star Road (Paseo de la Fuente) intersection has been modified to a four-legged intersection (provides access for t International Industrial Park);
- The Old Otay Mesa Road/Harvest Road intersection was assumed to be signalized (required to provide access for California Crossings).

2.1.4.1 *Cumulative 2020 Conditions*

Roadway Segments (Guidelines 1, 8, and 10)

Tables 2.1-11 provide the roadway segment level of service analysis under the existing conditions compared to the cumulative conditions without and with Units 1-5 of the project. As shown in this table, two roadway segment analyzed would operate at unacceptable levels (LOS E) under Cumulative 2020 With Project Conditions (with SR-905 Phases 1A and 1B). Since the proposed project would have a cumulatively considerable contribution of traffic to these roadways, the project impacts to the following roadways are considered significant:

- Old Otay Mesa Road between Enrico Fermi Drive and Alta Road (County) (**TI-2**); and
- Enrico Fermi Drive between Otay Mesa Road and Airway Road (County) (**TI-12**).

Intersections (Guidelines 2, 3, and 8)

Syncro Analysis

Table 2.1-12 illustrates the intersection level of service Syncro analysis summary for the cumulative 2020 situation with SR-905 and Units 1-5 project conditions. As can be seen from this table, five

intersections would operate at unacceptable levels under the Cumulative 2020 (with SR-905) with the project. The project would have a cumulatively considerable contribution of traffic (between 9 to 2,105 peak hour trips) to the following intersections operating at unacceptable LOS:

- Otay Mesa Road/Vann Centre Boulevard (County) (PM) (**TI-13**);
- Otay Mesa Road/Alta Road (County) (AM/PM) (**TI-6**);
- Airway Road/Sanyo Avenue (City) (AM/PM) (**TI-14**);
- Airway Road/Paseo de las Americas (County/City) (AM/PM) (**TI-15**); and
- Siempre Viva Road/Michael Faraday Drive (City) (AM/PM) (**TI-16**).

ILV Analysis (For Informational Purposes Only)

Table 2.1-13 summarizes the Cumulative (2020) ILV intersection analysis. As shown in the table, the following signalized intersection would be reduced from stable flow to unstable flow with the addition of the cumulative traffic:

- Siempre Viva Road/SR-905 SB Ramp to EB Siempre Viva Road (PM).

2.1.4.2 *Cumulative 2030 Conditions*

The 2030 roadway conditions and traffic forecast for the East Otay Mesa area in the TIS are based on the study prepared by the County for the 2007 amendment of the EOMSP. The buildout forecast provided in the traffic assessment update for EOMSP area included the retention of previously approved land uses. Since the project would be generally consistent with the EOMSP, the traffic from the proposed project (Units 1 to 5) is included in the 2030 forecast. Refer to TIS Figure 23 for more information.

As shown in Table 2.1-14, all roadway segments in the proposed circulation plan for EOMSP area would operate at acceptable LOS under 2030 conditions without and with Units 1-5 of the proposed project; as a result, the project would not have a significant impact under 2030 conditions.

2.1.5 Mitigation Measures Proposed to Minimize the Significant Effects

Background Information

The determination of the roadway improvements which are appropriate to require as mitigation for the impacts of the proposed project is dependent on the implementation of each project unit, whether the impact is direct or cumulative, the jurisdiction responsible for the roadway network where the impact would occur, and the feasibility/practicality of the mitigation. Each proposed project unit generates a different amount of traffic and/or has different access points that result in changes in traffic flow and impacts.

The timing of SR-905 also has a bearing on determining the degree to which the project applicant should be responsible for mitigation that would be rendered unnecessary once SR-905 Phases 1A or 1B are completed. For example, TI-5, 6, 7, 11, and 12 all require the completion of SR-905 1A and/or 1B improvements to be mitigated. Furthermore, the design, environmental review and ultimate construction of the necessary improvements to the Otay Mesa Road/SR-905 intersection

would likely prevent the improvements from being completed in advance of SR-905. Thus, the applicant proposes to delay the project phases to mitigate for these impacts.

Whether the impact would be direct or cumulative dictates the degree to which the mitigation is the responsibility of the project applicant. Direct impacts are the full responsibility of the project applicant. However, traditionally, the project applicant's responsibility for cumulative impacts is based upon the degree to which the project contributes to a cumulative impact. For example, if the proportion of project traffic to the anticipated increase responsible for the cumulative impact is 10 percent, the project would be responsible for 10 percent of the cost of the roadway improvements required to mitigate the collective impact of the anticipated traffic. This contribution is referred to as a "fair-share" contribution. Fair-share contributions are not identified in the mitigation below since they have not been approved by the appropriate jurisdictions.

Whether the impact occurs in the City, County of San Diego and/or Caltrans is critical to the ability of the project to implement mitigating roadway improvements. Implementing roadway improvements within the County is simplified by the fact that, as the Lead Agency, the County has several mechanisms to implement roadway improvements in the unincorporated areas. First and foremost, the County has developed an ordinance, known as the Traffic Impact Fee (TIF) ordinance, to collect fees from development to pay for planned roadway improvements in the County that are considered essential to the long-term ability of the County's Circulation Element roadway system to accommodate planned growth. A description of the TIF program follows in the next four paragraphs:

The County of San Diego Board of Supervisors adopted a TIF ordinance (April 2005, updated January 2008) for the unincorporated areas of San Diego County. The ordinance enables the County to implement TIF programs. The TIF program requires payment of fees that constitute a proposed project's fair share contribution towards the construction costs of the planned transportation facilities that are affected by the proposed development. The TIF fees are collected as a condition of approval of a subdivision or prior to issuance of a development permit, including, and most typically, a building permit.

The TIF program provides a mechanism for mitigating the impacts created by future growth within the unincorporated areas. The TIF is offered to developers to facilitate compliance with the CEQA mandate that development projects mitigate their indirect, cumulative traffic impacts. The County TIF program assesses the fee on all new development that results in new/added traffic. The primary purpose of the TIF is twofold: (1) to fund the construction of identified roadway facilities needed to reduce, or mitigate, projected cumulative traffic impacts resulting from future development within the County; and (2) to allocate the costs of these roadway facilities proportionally among future developing properties based upon their individual cumulative traffic impacts.

TIF funds are collected into 23 local Community Planning Area accounts, 3 regional accounts, and 3 regional freeway ramp accounts. TIF funds are only used to pay for improvements to roadway facilities identified for inclusion in the TIF program, which include both County roads and Caltrans highway facilities. TIF funds collected for a specific local or regional area must be spent in the same area. For example, the TIF collected in the North Region TIF account may only be used for improvements to TIF facilities in the North Region. By ensuring TIF funds are spent for the specific roadway improvements identified in the TIF program, the CEQA mitigation requirement is satisfied and the Mitigation Fee Act nexus is met.

Recognizing that an individual development project is not wholly responsible for cumulative traffic impacts, each development project is required to mitigate in proportion to the project's estimated traffic generation. The County TIF program enables projects to achieve CEQA compliance by paying a fair share toward the cost of improving roads in the future as the levels of service become unacceptable due to the increased traffic volume caused by the cumulative impacts of various developments. The County TIF program goes into great detail in identifying anticipated development, the roads affected, roadway costs, and the existing and projected levels of service on those roads. As sufficient funds become available, the County will implement the improvements to which it has committed.

The ability of the applicant to complete improvements (for direct impacts) or provide a fair-share contribution (for cumulative impacts) to mitigate project impacts on the street system within the City of San Diego's jurisdiction is more problematic because of the lack of enforceable mechanisms to assure that: 1) the City would approve the roadway improvement; 2) fair-share contributions from the proposed project would be provided to the City of San Diego; and 3) the fair-share contributions would actually be used to construct the facilities for which they were intended. Therefore, impacts within the City would potentially remain significant and unmitigated.

Mitigation Measures

Roadway and intersection improvements that would reduce the impacts of the proposed project are identified in Table 2.1-15. As indicated earlier, the need for these roadway improvements and the project applicant's responsibility are a function of the timing of the development Units and the degree to which project traffic is responsible for creating the impact. Some mitigation measures may not be feasible because the applicant and County would not be able to guarantee that improvements under the jurisdiction of the City/Caltrans would be completed. Table 2.1-15 identifies which impacts would remain significant and indicates why that impact is not mitigable.

As the proposed project would not have a significant impact on traffic under 2030 Conditions, no mitigation measures are required for 2030.

2.1.6 Conclusion

Development of the proposed project would result in significant direct project-level impacts to three roadways segments, two arterials, and six intersections. The project would have additional cumulative 2020 (with SR-905) impacts to one roadway segments and four intersections. As shown in Table 2.1-15, mitigation would have the potential to reduce all impacts to less than significant levels. However, because there is no way to guarantee that proposed mitigation measures within the City's jurisdiction would be completed, traffic impacts within the City's jurisdiction are considered unmitigated. In total, 2 of the project's 16 impacts would remain significant and not mitigated.

The project is not anticipated to have any impacts under future 2030 Conditions with the completion of SR-905, SR-11, Airway Road, Siempre Viva Road, and other circulation element roadways.

Table 2.1-1
EXISTING CONDITIONS ROADWAY SEGMENT DAILY LOS SUMMARY

Roadway Segment	Classification	Capacity (LOS E)	ADT	V/C	LOS
Interim SR-905(Refer to Arterial Analysis)					
Otay Mesa Road					
SR-125 to SR-905 NB[3]	5M	47,000	16,686	0.36	A
SR-905 NB to Harvest Rd.[3]	5M	47,000	9,738	0.21	A
Harvest Rd. to Sanyo Ave.[1]	4M	37,000	8,224	0.22	A
Sanyo Ave. to Enrico Fermi Dr.[2]	LC	16,200	9,133	0.56	D
Enrico Fermi Dr. to Alta Rd.[2]	LC	16,200	6,928	0.43	C
Airway Road					
La Media to SR-905[1]	2C	15,000	8,093	0.54	**C**
SR-905 to Sanyo Ave.[1] (Currently closed)	2C	10,000	**9,631**	**0.96**	E
Sanyo Ave. to Paseo de las Americas[2]	4M	40,000	5,649	0.14	C
Paseo de las Americas to Michael Faraday Dr.	4M	37,000	4,533	0.12	C
Michael Faraday Dr. to Enrico Fermi Dr.	LC	16,200	2,918	0.18	B
Enrico Fermi Dr. to Airway Pl.	C	34,200	1,160	0.03	A
Siempre Viva Road					
Drucker Ln. to SR-905	6P	60,000	12,976	0.22	A
SR-905 NB to Paseo de las Americas[1]	6P	60,000	26,653	0.44	B
Paseo de las Americas to Michael Faraday Dr.	4C	30,000	9,886	0.33	A
Michael Faraday Dr. to Enrico Fermi Dr.	4C	30,000	6,442	0.21	A
Enrico Fermi Dr. to Airway Pl.	LC	16,200	830	0.05	A
La Media Road					
Interim SR-905 to St. Andrews Ave.[1]	4C	30,000	15,225	0.51	C
SR 125					
North of Otay Mesa Rd.	4-Fwy	-	30,000	0.33	A
SR-905					
Otay Mesa Rd to Siempre Viva Rd	4M	40,000	**37,823**	**0.95**	**E**
South of Siempre Viva Rd. [1]	4-Fwy	-[1]	**28,000**	**0.32**	**A**
Sanyo Avenue					
Otay Mesa Rd. to Airway Rd.[1]	4C	30,000	2,666	0.09	A
Enrico Fermi Drive					
Otay Mesa Rd. to Airway Rd.[2]	TC	19,000	2,681	0.14	A
Airway Rd. to Siempre Viva Rd.[1]	4M	40,000	7,110	0.18	A
Alta Road					
Calzada de la Fuente to Paseo de la Fuente	TC	19,000	6,787	0.36	C
Paseo de la Fuente to Otay Mesa Rd.	LC	16,200	6,787	0.42	C

[1] Segment is located in the City of San Diego- Capacity is based on the upper limits of LOS E per the City of San Diego.
[2] Segment is located in the County of San Diego- Capacity is based on the upper limits of LOS E per the County of San Diego.
[3] Segment is a 5-lane roadway with additional lanes provided to accommodate turning movements and freeway access; hence, the roadway capacity was assumed to be 45,000 ADT at LOS E.
ADT = Average Daily Traffic; LOS = Level of Service; V/C = Volume to LOS E Capacity Ratio; 6P = 6-Lane Prime Arterial; 5M = 5-Lane Major Arterial; 4M = 4-Lane Major Arterial; 4C = 4-Lane Collector; 2C = 2-lane Collector with no fronting property; LC = Light Collector; TC =Town Collector; NB = northbound.
Source: Darnell and Associates 2010.

Table 2.1-2
EXISTING CONDITIONS ARTERIAL LOS SUMMARY
INTERIM SR-905 (OTAY MESA ROAD)

Arterial Segment	Jurisdiction	Direction of Travel	AM Peak Hour		PM Peak Hour	
			Speed (mph)	LOS	Speed (mph)	LOS
Heritage Rd. to Cactus Rd.	City/Caltrans	Eastbound	35.3	A	29.3	B
		Westbound	31.2	B	24.4	C
Cactus Rd. to Britannia Blvd.	City/Caltrans	Eastbound	32.1	B	36.1	A
		Westbound	38.9	A	38.2	A
Britannia Blvd. to La Media Rd.	City/Caltrans	Eastbound	42.6	A	35.4	A
		Westbound	43.6	A	39.4	A
La Media Rd. to Piper Ranch Rd.	City/Caltrans/ County	Eastbound	38.5	A	38.1	A
		Westbound	33.0	B	28.3	B
Piper Ranch Rd. to SR-125 SB	City/Caltrans/ County	Eastbound	34.0	B	35.8	B
		Westbound	29.5	B	34.2	B

LOS = Level of Service; Speed is measured in miles per hour (mph).
Source: Darnell and Associates 2010.

Table 2.1-3
EXISTING CONDITIONS INTERSECTION LOS SUMMARY

Intersection	Jurisdiction	Critical Movement	AM Peak		PM Peak	
			Delay	LOS	Delay	LOS
Otay Mesa Rd./Heritage Rd. (sig)	City/Caltrans	Int	30.1	C	29.2	C
Otay Mesa Rd./Cactus Rd. (sig)	City/Caltrans	Int	8.9	A	11.5	B
Otay Mesa Rd./Britannia Blvd. (sig)	City/Caltrans	Int	10.3	B	18.8	B
Otay Mesa Rd./La Media Rd. (sig)	City/Caltrans	Int	14.1	B	27.0	C
Otay Mesa Rd./Piper Ranch Rd. (sig)	County/City/ Caltrans	Int	6.1	A	3.6	A
Otay Mesa Rd./SR-125 SB (sig)	County/City/ Caltrans/SBX	Int	11.2	B	2.5	A
Otay Mesa Rd./SR-125 NB (sig)	County/City/ Caltrans/SBX	Int	0.9	A	5.6	A
Otay Mesa Rd./SR-905 NB (sig)	County/City/ Caltrans/SBX	Int	16.1	B	21.1	C
Otay Mesa Rd./Sanyo Ave. (sig)	County/City	Int	4.1	A	12.6	B
Otay Mesa Rd./Enrico Fermi Dr. (sig)	County	Int	10.4	B	9.4	A
Otay Mesa Rd./Alta Rd. (AWSC)	County	EB	32.5	D	9.8	A
		NB	9.3	A	8.2	A
		SB	9.8	A	18.3	C
		Int	27.6	D	17.2	C
Airway Rd./La Media Rd. (AWSC)	City	EB	11.1	B	14.5	B
		WB	10.9	B	13.9	B
		NB	11.4	B	15.4	C
		SB	13.3	B	12.2	B
		Int	12.3	B	13.9	B
Airway Rd./Sanyo Ave. (AWSC)	City	EB	10.1	B	9.9	A
		WB	8.1	A	9.1	A
		NB	8.0	A	9.2	A
		SB	9.6	A	8.0	A
		Int	9.3	A	9.1	A
Airway Rd./Paseo de las Americas (OWSC)	City/County	NBL	9.7	A	10.6	B
Airway Rd./Michael Faraday Dr. (OWSC)	City/County	NBL	9.6	A	9.6	A
Airway Rd./Enrico Fermi Dr. (sig)	City/County	Int	6.6	A	13.0	B
Siempre Viva Rd. /La Media Rd. (AWSC)	City	EB	8.0	A	8.4	A
		WB	7.8	A	8.5	A
		NB	7.6	A	8.4	A
		SB	9.8	A	11.0	B
		Int	9.2	A	9.9	A

Table 2.1-3 (cont.)
EXISTING CONDITIONS INTERSECTION LOS SUMMARY

Intersection	Jurisdiction	Critical Movement	AM Peak		PM Peak	
			Delay	LOS	Delay	LOS
Siempre Viva Rd./SR-905 SB to EB Siempre Viva Rd. (Sig.)	City/Caltrans	Int	7.0	A	8.5	A
Siempre Viva Rd./SR-905 SB to WB Siempre Viva Rd. (OWSC)	City/Caltrans	SBR	14.3	B	13.3	B
Siempre Viva Rd./ SR-905 NB Ramp (sig)	City/Caltrans	Int	10.8	B	11.0	B
Siempre Viva Rd./Paseo de las Americas (sig)	City	Int	24.7	C	40.0	D
Siempre Viva Rd./Michael Faraday Dr. (TWSC)	City	NB	14.5	B	13.2	B
		SBL-T	15.9	C	12.3	B
Siempre Viva Rd./Enrico Fermi Dr. (sig)	City/County	Int	12.6	B	13.7	B
Calzada De La Fuente/Alta Rd. (OWSC)	County	WB	14.1	B	12.3	B
Paseo de la Fuente/Alta Rd. (sig)	County	Int	2.7	A	12.6	B

LOS = Level of Service; Delay is measured in seconds/vehicle; sig = signalized; OWSC = One Way Stop Controlled; AWSC = All-Way Stop-Controlled: SBR = Southbound Right; NB = Northbound; NBL = Northbound Left; Int = Intersection
Source: Darnell and Associates 2010.

Table 2.1-4
EXISTING CONDITIONS INTERSECTION ILV ANALYSIS SUMMARY

Intersection	AM Peak		PM Peak	
	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition
Otay Mesa Rd. / Heritage Rd.	1,115	Stable Flow	1,049	Stable Flow
Otay Mesa Rd. / Cactus Rd.	1,129	Stable Flow	1,055	Stable Flow
Otay Mesa Rd. / Britannia Blvd.	708	Stable Flow	936	Stable Flow
Otay Mesa Rd. / La Media Rd.	740	Stable Flow	924	Stable Flow
Otay Mesa Rd. / Piper Ranch Rd.	696	Stable Flow	766	Stable Flow
Otay Mesa Rd. / SR-125 SB	701	Stable Flow	677	Stable Flow
Otay Mesa Rd. / SR-125 NB	417	Stable Flow	754	Stable Flow
Otay Mesa Rd. / SR-905 Connector	700	Stable Flow	911	Stable Flow
Siempre Viva Rd./ SR-905 SB to EB Siempre Viva Rd.	363	Stable Flow	463	Stable Flow
Siempre Viva Rd./ SR-905 NB Ramp	372	Stable Flow	483	Stable Flow

ILV/Hour = Intersecting Lane Vehicles Per Hour; <1,200 ILV/Hour = Stable Flow; 1,200 - 1,500 ILV/Hour = Unstable Flow; 1,500 ILV/Hour = Capacity, Stop and Go Operation
Source: Darnell and Associates 2010.

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Table 2.1-5a
EXISTING PLUS PROJECT ROADWAY SEGMENT DAILY LOS SUMMARY (UNIT 1, UNITS 1-2, AND UNITS 1-3)

Roadway Segment	Capacity (LOS E)	Existing			Existing Plus Project Unit 1						Existing Plus Project Units 1-2						Existing Plus Project Units 1-3					
		ADT	V/C	LOS	Project Traffic	ADT	V/C	LOS	ΔV/C	Significant?	Project Traffic	ADT	V/C	LOS	ΔV/C	Significant?	Project Traffic	ADT	V/C	LOS	ΔV/C	Significant?
Otay Mesa Rd (Old Otay Mesa Rd.)																						
SR-125 NB to SR-905 NB	47,000	16,686	0.36	A	5,573	22,259	0.47	B	0.11	No	10,876	27,562	0.59	B	0.23	No	13,902	30,588	0.65	B	0.29	No
SR-905 NB to Harvest Rd.	47,000	9,738	0.21	A	5,573	15,311	0.33	A	0.12	No	10,876	20,614	0.44	B	0.23	No	13,902	23,640	0.50	B	0.29	No
Harvest Rd. to Sanyo Ave.	37,000	8,224	0.22	A	5,573	13,573	0.37	A	0.15	No	10,876	19,100	0.52	B	0.30	No	13,902	22,126	0.60	B	0.38	No
Sanyo Ave. to Enrico Fermi Dr.	16,200	9,133	0.56	D	**5,573**	**14,706**	**0.91**	**E**	**0.35**	**Yes-TI-1**	**10,876**	**20,009**	**1.24**	**F**	**0.68**	**Yes-TI-1**	**13,902**	**23,035**	**1.42**	**F**	**0.86**	**Yes-TI-1**
Enrico Fermi Dr. to Alta Rd.	16,200	6,928	0.43	C	**6,192**	**13,120**	**0.81**	**E**	**0.38**	**Yes-TI-2**	**12,084**	**19,012**	**1.17**	**F**	**0.74**	**Yes-TI-2**	**15,447**	**22,375**	**1.38**	**F**	**0.95**	**Yes-TI-2**
Airway Road																						
La Media Rd. to SR-905	15,000	**8,093**	**0.54**	**C**	155	**8,248**	**0.55**	**C**	0.01	No	302	8,395	0.56	**C**	0.02	No	386	**8,479**	**0.57**	**C**	0.03	No
SR-905 to Sanyo Ave.	10,000	**9,631**	**0.96**	**E**	155	**9,786**	**0.98**	**E**	0.02	No	**302**	**9,933**	**0.99**	**E**	**0.03**	**Yes-TI-3**	386	**10,017**	**1.00**	**F**	0.04	**Yes-TI-3**
Sanyo Ave. to Paseo de las Americas	40,000	5,649	0.14	C	155	5,804	0.15	C	0.01	No	302	5,951	0.15	C	0.01	No	386	6,035	0.15	C	0.01	No
Paseo de las Americas to Michael Faraday Dr.	40,000	4,513	0.12	C	155	4,688	0.13	C	0.01	No	302	4,835	0.13	C	0.01	No	386	4,919	0.13	C	0.01	No
Michael Faraday Dr. to Enrico Fermi Dr.	16,200	2,918	0.18	B	155	3,073	0.19	B	0.01	No	302	3,220	0.20	B	0.02	No	386	3,304	0.20	B	0.01	No
Enrico Fermi Dr. to Airway Pl.	34,200	1,160	0.03	A	0	1,160	0.03	A	0.00	No	0	1,160	0.03	A	0.00	No	0	1,160	0.03	A	0.00	No
Siempre Viva Road																						
SR-905 NB to Paseo de las Americas	60,000	26,653	0.44	B	310	26,963	0.45	B	0.01	No	604	27,257	0.45	B	0.01	No	773	27,426	0.46	B	0.02	No
Paseo de las Americas to Michael Faraday Dr.	30,000	9,886	0.33	A	310	10,196	0.34	B	0.01	No	604	10,490	0.35	B	0.02	No	773	10,659	0.36	B	0.03	No
Michael Faraday Dr to Enrico Fermi Dr.	30,000	6,442	0.22	A	310	6,752	0.23	A	0.02	No	604	7,046	0.23	A	0.02	No	773	7,215	0.24	A	0.03	No
Enrico Fermi Dr. To Airway Pl.	16,200	830	0.05	A	0	830	0.05	A	0.00	No	0	830	0.02	A	0.00	No	0	830	0.05	A	0.00	No
La Media Road																						
Otay Mesa Road to St. Andrews Ave.	30,000	15,225	0.51	C	0	15,225	0.51	C	0.00	No	0	15,225	0.51	C	0.00	No	0	15,225	0.51	C	0.00	No
SR 125																						
North of Otay Mesa Rd.	-	30,000	0.33	A	1,239	31,239	0.34	A	0.01	No	2,417	32,417	0.36	A	0.03	No	3,089	33,089	0.36	A	0.03	No

Table 2.1-5a (cont.)
EXISTING PLUS PROJECT ROADWAY SEGMENT DAILY LOS SUMMARY (UNIT 1, UNITS 1-2, AND UNITS 1-3)

Roadway Segment	Capacity (LOS E)	Existing			Existing Plus Project Unit 1						Existing Plus Project Units 1-2						Existing Plus Project Units 1-3					
		ADT	V/C	LOS	Project Traffic	ADT	V/C	LOS	ΔV/C	Significant?	Project Traffic	ADT	V/C	LOS	ΔV/C	Significant?	Project Traffic	ADT	V/C	LOS	ΔV/C	Significant?
SR-905																						
Otay Mesa Rd to Siempre Viva Rd.	40,000	**37,823**	**0.95**	**E**	**0**	**37,823**	**0.95**	**E**	**0.00**	No	**0**	**37,823**	**0.95**	**E**	**0.00**	No	0	37,823	0.95	E	0.00	No
South of Siempre Viva Rd.	-	28,000	0.32	A	310	28,310	0.32	A	0.00	No	604	28,604	0.32	A	0.00	N/A	773	28,773	0.33	A	0.01	No
Sanyo Avenue																						
Otay Mesa Rd. to Airway Rd.	30,000	2,666	0.09	A	0	2,666	0.09	A	0.00	No	0	2,666	0.09	A	0.00	No	0	2,666	0.09	A	0.00	No
Enrico Fermi Drive																						
Otay Mesa Rd. to Airway Rd.	19,000	2,681	0.14	A	619	3,300	0.17	B	0.03	No	1,208	3,889	0.20	B	0.06	No	1,545	4,226	0.22	B	0.08	No
Airway Rd. to Siempre Viva Rd.	40,000	7,110	0.19	A	464	7,574	0.19	A	0.01	No	906	8,016	0.20	A	0.02	No	1,158	8,268	0.21	A	0.03	No

City = Capacity of city segments is based on the upper limits of LOS E per the City of San Diego; County = Capacity of county segments is based on the upper limits of LOS E per the County of San Diego; ADT= Average Daily Traffic; LOS= Level of Service; V/C = Volume-to LOS E Capacity Ratio; 6P = 6-Lane Prime Arterial; 5M = 5-Lane Major Arterial; 4M = 4-Lane Major Arterial; 2C= 2-Lane Collector with no fronting property; LC = Light Collector; TC = Town Collector; NA = Not Applicable.
Shading indicates significant impact.; TI- indicates traffic impact number.
Note: Interim SR-905 (Otay Mesa Road) is analyzed as an arterial; refer to Table 2.1-5a for the results of that analysis.
Source: Darnell and Associates 2010.

Table 2.1-5b
EXISTING PLUS PROJECT ROADWAY SEGMENT DAILY LOS SUMMARY (UNITS 1-4 AND UNITS 1-5)

Roadway Segment	Capacity (LOS E)	Existing			Existing Plus Project Units 1-4						Existing Plus Project Units 1-5					
		ADT	V/C	LOS	Project Traffic	ADT	V/C	LOS	ΔV/C	Sig	Project Traffic	ADT	V/C	LOS	ΔV/C	Sig
Otay Mesa Rd (Old Otay Mesa Rd.)																
SR-125 to SR-905 NB	47,000	16,686	0.36	A	16,580	33,266	0.71	C	0.35	No	18,087	34,773	0.74	C	0.38	No
SR-905 NB to Harvest Rd.	47,000	9,738	0.21	A	16,580	26,318	0.56	B	0.35	No	18,087	27,825	0.59	B	0.38	No
Harvest Rd. to Sanyo Ave.	37,000	8,224	0.22	A	**16,580**	**25,804**	**0.67**	**C**	**0.45**	No	18,087	26,311	0.71	C	0.49	No
Sanyo Ave. to Enrico Fermi Dr.	16,200	9,133	0.56	D	**16,580**	**25,713**	**1.59**	**F**	**1.03**	**Yes-TI-1**	**18,087**	**27,220**	**1.68**	**F**	**1.12**	**Yes-TI-1**
Enrico Fermi Dr. to Alta Rd.	16,200	6,928	0.43	C	**9,759**	**16,687**	**1.03**	**F**	**0.60**	**Yes-TI-2**	**10,646**	**17,574**	**1.08**	**F**	**0.65**	**Yes-TI-2**
Airway Road																
La Media Rd. to SR-905	15,000	**8,093**	**0.54**	**C**	**488**	**8,581**	**0.57**	**C**	**0.03**	**No**	532	8,625	0.58	C	0.04	No
SR-905 to Sanyo Ave.	10,000	**9,631**	**0.96**	**E**	**878**	**10,509**	**1.05**	**F**	**0.09**	**Yes-TI-3**	**958**	**10,589**	**1.06**	**F**	**0.10**	**Yes-TI-3**
Sanyo Ave. to Paseo de las Americas	40,000	5,649	0.14	C	1,463	7,112	0.18	C	0.04	No	1,596	7,245	0.18	C	0.04	No
Paseo de las Americas to Michael Faraday Dr.	40,000	4,513	0.12	C	1,463	5,996	0.16	C	0.04	No	1,596	6,129	0.17	C	0.05	No
Michael Faraday Dr. to Enrico Fermi Dr.	16,200	2,918	0.18	B	1,463	4,381	0.27	C	0.09	No	1,596	4,514	0.28	C	0.10	No
Enrico Fermi Dr. to Airway Pl.	34,200	1,160	0.03	A	9,748	10,908	0.32	A	0.29	No	10,635	11,795	0.34	A	0.31	**No**
Airway Pl. to Alta Rd.	16,200	Does Not Exist			9,748	9,748	0.60	D	0.60	No	10,635	10,635	0.66	D	0.66	**No**
Siempre Viva Road																
SR-905 NB to Paseo de las Americas	60,000	26,653	0.44	B	975	27,628	0.46	B	0.02	No	1,064	27,717	0.46	B	0.02	No
Paseo de las Americas to Michael Faraday Dr.	30,000	9,886	0.33	A	975	10,861	0.36	B	0.03	No	1,064	10,950	0.37	B	0.04	No
Michael Faraday Dr. to Enrico Fermi Dr.	30,000	6,442	0.22	A	975	7,417	0.25	A	0.04	No	1,064	7,506	0.25	A	0.04	No
Enrico Fermi Dr. to Airway Pl.	16,200	830	0.05	A	0	830	0.05	A	0.00	No	0	830	0.02	A	0.00	No
La Media Road																
Otay Mesa Rd. to Airway Rd.	30,000	15,225	0.51	C	0	15,225	0.51	C	0.00	No	0	15,225	0.51	C	0.00	No
SR-125											4,256	34,256	0.38	A	0.05	
North of Otay Mesa Rd.	-	30,000	0.33	A	3,901	33,901	0.37	A	0.04	No	4,256	34,256	0.38	A	0.05	No
SR-905																
Otay Mesa Rd to Siempre Viva Rd.	40,000	**37,823**	**0.95**	**E**	0	37,823	0.95	E	**0.00**	No	**0**	**37,823**	**0.95**	**E**	**0.00**	No
South of Siempre Viva Rd.	-	28,000	0.32	A	975	28,975	0.33	A	**0.01**	No	1,064	29,064	0.33	A	0.01	No
Sanyo Avenue																
Otay Mesa Rd. to Airway Rd.	30,000	2,666	0.09	A	390	3,056	0.10	A	0.01	No	425	3,091	0.10	A	0.01	No
Enrico Fermi Drive																
Otay Mesa Rd. to Airway Rd.	19,000	2,681	0.14	A	7,796	10,477	0.55	D	0.41	No	8,505	11,186	0.59	D	0.45	No
Airway Rd. to Siempre Viva Rd.	40,000	7,110	0.19	A	1,463	8,573	0.21	A	0.03	No	1,596	8,706	0.22	A	0.04	No

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Shading indicates significant impact. TI- indicates traffic impact number.
Note: Interim SR-905 (Otay Mesa Road) is analyzed as an arterial; refer to Table 2.1-5a for the results of that analysis.
Source: Darnell and Associates 2010.

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Table 2.1-6a
EXISTING PLUS PROJECT ARTERIAL LOS SUMMARY (UNIT 1, UNITS 1-2, AND UNITS 1-3)

AM Peak Hour

Intersection	Direction of Travel	Existing		Existing Plus Unit 1				Existing Plus Units 1-2				Existing Plus Units 1-3			
		Speed (mph)	LOS	Speed (mph)	LOS	Δ Speed	Sig. Impact	Speed (mph)	LOS	Δ Speed	Sig. Impact	Speed (mph)	LOS	Δ Speed	Sig. Impact
Interim SR-905 - Heritage Rd. to Cactus Rd.	EB	35.3	A	34.4	B	(0.9)	No	30.1	B	(5.2)	No	22.6	C	(12.7)	No
	WB	31.2	B	30.8	B	(0.4)		30.4	B	(0.8)		30.2	B	(1.0)	
Interim SR-905 - Cactus Rd. to Britannia Blvd.	EB	32.1	B	29.5	B	(2.6)	No	23.5	C	(8.6)	No	17.8	D	(14.3)	No
	WB	38.9	A	38.9	A	0.0		39.0	A	0.1		39.0	A	0.1	
Interim SR-905 - Britannia Blvd. to La Media Rd.	EB	42.6	A	42.2	A	(0.03)	No	41.4	A	(1.2)	No	40.5	A	(2.1)	No
	WB	43.6	A	43.5	A	(0.1)		43.4	A	(0.2)		43.3	A	(0.3)	
Interim SR-905 - La Media Rd. to Piper Ranch Rd.	EB	38.5	A	37.4	A	(1.3)	No	33.8	B	(4.7)	No	29.4	B	(9.1)	No
	WB	33.0	B	32.7	B	(0.3)		32.4	B	(0.6)		32.3	B	(0.7)	
Interim SR-905 - Piper Ranch Rd. to SR-125	EB	34.0	B	27.4	C	(6.6)	No	23.6	C	(10.4)	No	22.0	C	(12.0)	No
	WB	29.5	B	31.1	B	1.6		31.3	B	(1.8)		29.1	B	(0.4)	

PM Peak Hour

Intersection	Direction of Travel	Existing		Existing Plus Unit 1				Existing Plus Units 1-2				Existing Plus Units 1-3			
		Speed (mph)	LOS	Speed (mph)	LOS	Δ Speed	Sig. Impact	Speed (mph)	LOS	Δ Speed	Sig. Impact	Speed (mph)	LOS	Δ Speed	Sig. Impact
Interim SR-905 - Heritage Rd. to Cactus Rd.	EB	29.3	B	29.8	B	0.5	No	30.6	B	1.3	No	30.8	B	1.5	No
	WB	24.4	C	24.0	C	(0.4)		22.2	C	(2.2)		20.4	D	(4.0)	
Interim SR-905 - Cactus Rd. to Britannia Blvd.	EB	36.1	A	36.0	A	(0.1)	No	34.1	B	(2.0)	No	33.3	B	(2.8)	No
	WB	38.2	A	37.7	A	(0.5)		35.9	A	(2.3)		34.5	B	(3.7)	
Interim SR-905 - Britannia Blvd. to La Media Rd.	EB	35.4	A	34.9	B	(0.5)	No	34.3	B	(1.1)	No	34.0	B	(1.4)	No
	WB	39.4	A	38.2	A	(1.2)		36.5	A	(2.9)		35.2	A	(4.2)	
Interim SR-905 - La Media Rd. to Piper Ranch Rd.	EB	38.2	A	37.7	A	(0.4)	No	37.1	A	(1.0)	No	36.7	A	(1.4)	No
	WB	28.3	B	26.6	C	(1.7)		24.3	C	(4.0)		22.4	C	(5.9)	
Interim SR-905 - Piper Ranch Rd to SR-125	EB	35.8	B	33.5	B	(2.3)	No	32.4	B	(3.4)	No	32.0	B	(3.8)	No
	WB	34.2	B	31.3	B	2.9		31.3	B	(2.9)		30.9	B	(3.3)	

Shading indicates significant impact; TI- indicates traffic impact number.
Source: Darnell and Associates 2010.

Table 2.1-6b
EXISTING PLUS PROJECT ARTERIAL LOS SUMMARY (UNITS 1-4 AND 1-5)

AM Peak Hour											
Intersection	Direction of Travel	Existing		Existing Plus Units 1-4				Existing Plus Units 1-5			
		Speed (mph)	LOS	Speed (mph)	LOS	Δ Speed	Sig. Impact	Speed (mph)	LOS	Δ Speed	Sig. Impact
Interim SR-905 - Heritage Rd. to Cactus Rd.	EB	35.3	A	17.4	D	(17.9)	No	16.7	E	(18.6)	Yes-TI-4
	WB	31.2	B	30.4	B	(0.8)		30.2	B	(1.0)	
Interim SR-905 - Cactus Rd. to Britannia Blvd.	EB	32.1	B	13.7	E	(18.4)	Yes-TI-5	13.1	E	(19.0)	Yes-TI-5
	WB	38.9	A	38.9	A	0.0		38.9	A	0.0	
Interim SR-905 - Britannia Blvd. to La Media Rd.	EB	42.6	A	38.5	A	(4.1)	No	37.1	A	(5.5)	No
	WB	43.6	A	43.2	A	(0.4)		43.2	A	(0.4)	
Interim SR-905 - La Media Rd. to Piper Ranch Rd.	EB	38.5	A	22.0	D	(16.5)	No	20.5	D	(18.0)	No
	WB	33.0	B	32.2	B	(0.8)		32.0	B	(1.0)	
Interim SR-905 - Piper Ranch Rd. to SR-125 SB	EB	34.0	B	20.8	D	(13.2)	No	20.5	D	(13.5)	No
	WB	29.5	B	27.3	B	(2.2)		26.8	C	(2.7)	
PM Peak Hour											
Intersection	Direction of Travel	Existing		Existing Plus Units 1-4				Existing Plus Units 1-5			
		Speed (mph)	LOS	Speed (mph)	LOS	Δ Speed	Sig. Impact	Speed (mph)	LOS	Δ Speed	Sig. Impact
Interim SR-905 - Heritage Rd. to Cactus Rd.	EB	29.3	B	30.8	B	1.5	Yes-TI-4	30.7	B	1.4	Yes-TI-4
	WB	24.4	C	16.1	E	(8.3)		15.4	E	(9.0)	
Interim SR-905 - Cactus Rd. to Britannia Blvd.	EB	36.1	A	32.7	B	(3.4)	No	32.4	B	(3.7)	No
	WB	38.2	A	33.4	B	(4.8)		33.1	B	(5.1)	
Interim SR-905 - Britannia Blvd. to La Media Rd.	EB	35.4	A	33.7	B	(1.7)	No	33.5	B	(1.9)	No
	WB	39.4	A	33.6	B	(5.8)		33.0	B	(6.4)	
Interim SR-905 - La Media Rd. to Piper Ranch Rd.	EB	38.1	A	36.2	A	(1.9)	No	36.0	A	(2.1)	No
	WB	28.3	B	19.2	D	(9.1)		18.2	D	(10.1)	
Interim SR-905 - Piper Ranch Rd. to SR-125 SB	EB	35.8	B	31.3	B	(4.5)	No	30.8	B	(5.0)	No
	WB	34.2	B	30.7	B	(3.5)		30.7	B	(3.5)	

Shading indicates significant impact; TI- indicates traffic impact number.
Source: Darnell and Associates 2010.

Table 2.1-7a
EXISTING PLUS PROJECT INTERSECTION LOS SUMMARY (AM PEAK HOUR – UNIT 1, UNITS 1-2, AND UNITS 1-3)

Intersection	Critical Movement	Existing		Existing Plus Unit 1					Existing Plus Units 1-2					Existing Plus Units 1-3				
		Delay	LOS	Delay	LOS	Project Trips	Δ Delay	Sig. Impact	Delay	LOS	Project Trips	Δ Delay	Sig. Impact	Delay	LOS	Project Trips	Δ Delay	Sig. Impact
AM Peak Hour																		
Otay Mesa Rd./Heritage Rd. (sig)	Int	30.1	C	34.5	C	538	4.4	No	49.0	D	1,049	18.9	No	**64.5**	**E**	**1,319**	**34.4**	**Yes-TI-10**
Otay Mesa Rd./Cactus Rd. (sig)	Int	8.9	A	9.7	A	555	0.8	No	15.0	B	1,083	6.1	No	29.1	C	1,361	20.2	No
Otay Mesa Rd./Britannia Blvd. (sig)	Int	10.3	B	13.3	B	580	3.0	No	23.0	C	1,134	12.7	No	38.0	D	1,462	27.7	No
Otay Mesa Rd./La Media Rd. (sig)	Int	14.1	B	13.0	B	599	(1.1)	No	13.3	B	1,168	(0.08)	No	14.0	B	1,468	(0.1)	No
Otay Mesa Rd./Piper Ranch Rd. (sig)	Int	6.1	A	5.2	A	607	(0.9)	No	8.0	A	1,184	1.9	No	13.7	B	1,488	7.6	No
Otay Mesa Rd./SR-125 SB (sig)	Int	11.2	B	13.4	B	746	2.2	No	13.1	B	1,456	1.9	No	14.0	B	1,824	2.8	No
Otay Mesa Rd./SR-125 NB (sig)	Int	0.9	A	1.6	A	781	0.7	No	4.1	A	1,524	3.2	No	6.6	A	1,913	5.7	No
Otay Mesa Rd./SR-905 NB (sig)	Int	16.1	B	16.6	**B**	**781**	**0.5**	No	**31.0**	**C**	**1,523**	**14.9**	No	-	**E**	**1,914**	**58.7**	**Yes-TI-7**
Otay Mesa Rd./Sanyo Ave. (sig)	Int	4.1	A	3.4	A	781	(0.7)	No	**7.2**	**A**	**1,523**	**3.1**	No	8.6	A	1,914	4.5	No
Otay Mesa Rd./Enrico Fermi Dr. (sig)	Int	10.4	B	26.8	C	867	16.4	No	**180.3**	**F**	**1,692**	**169.9**	**Yes TI-9**	-	**F**	**2,127**	**273.1**	**Yes-TI-9**
Otay Mesa Rd./Alta Rd. (AWSC)	EB	32.5	D	**463.5**	**F**	**694**	**431.0**	**Yes-TI-6**	**1,050.8**	**F**	**1,354**	**1,018.3**	**Yes-TI-6**	**1,447.8**	**F**	**1,677**	**1,415.3**	**Yes-TI-6**
	WB	0.0	A	0.0	A	0	0.0		12.8	B	193	12.8		4.9	B	211	14.9	
	NB	9.3	A	12.8	B	0	3.5		13.4	B	145	4.1		18.2	C	239	8.9	
	SB	9.8	A	11.0	B	173	1.2		12.2	B	0	2.4		13.3	B	0	3.5	
	Int	27.6	D	**369**	**F**	**867**	**341.7**		**837.3**	**F**	**1,692**	**809.7**		**1142.4**	**F**	**2,127**	**1114.8**	
Airway Rd./La Media Rd. (AWSC)	EB	11.1	B	11.2	B	0	0.1	No	11.2	B	0	0.1	**No**	11.3	B	0	0.2	**No**
	WB	10.9	B	11.1	B	9	0.2		11.3	B	17	0.4		11.5	B	23	0.6	
	NB	11.4	B	11.5	B	0	0.1		11.6	B	0	0.2		11.6	B	0	0.2	
	SB	13.3	B	13.4	B	0	0.1		13.6	B	0	0.3		13.7	B	0	0.4	
	Int	12.3	B	12.4	B	9	0.1		12.5	B	17	0.2		12.6	B	23	0.3	
Airway Rd./Sanyo Ave. (AWSC)	EB	10.1	B	10.2	B	0	0.1	No	10.2	B	0	0.1	No	10.2	B	0	0.1	No
	WB	8.1	A	8.2	A	9	0.1		8.3	A	17	0.2		8.4	A	23	0.3	
	NB	8.0	A	8.0	A	0	0.0		8.0	A	0	0.0		8.1	A	0	0.1	
	SB	9.6	A	9.6	A	0	0.0		9.7	A	0	0.1		9.7	A	0	0.1	
	Int	9.3	A	9.4	A	9	0.1		9.4	A	17	0.1		9.4	A	23	0.1	
Airway Rd./Paseo de las Americas (OWSC)	NBL	9.7	A	9.7	A	0	0.0	No	9.8	A	0	0.1	No	9.8	A	0	0.1	No
Airway Rd./Michael Faraday Dr. (OWSC)	NBL	9.6	A	9.2	A	0	(0.4)	No	9.6	A	0	0.0	No	9.6	A	0	0.0	No
Airway Rd./Enrico Fermi Dr. (sig)	Int	6.6	A	6.3	A	87	(0.3)	No	6.3	A	169	(0.3)	No	6.5	A	214	(0.1)	No
Siempre Viva Rd./La Media Rd. (AWSC)	EB	8.0	A	8.0	A	0	0.0	No	8.0	A	0	0.0	No	8.0	A	0	0.0	No
	WB	7.8	A	7.8	A	0	0.0		7.9	A	0	0.1		7.9	A	0	0.1	
	NB	7.6	A	7.6	A	0	0.0		7.6	A	0	0.0		7.6	A	0	0.0	
	SB	9.8	A	10.0	A	9	0.2		10.1	B	17	0.3		10.2	B	23	0.4	
	Int	9.2	A	9.3	A	9	0.1		9.4	A	17	0.2		9.5	A	23	0.3	
SR-905 SB Ramp/EB Siempre Viva Rd. (sig)	Int	7.0	A	7.2	A	9	0.2	No	7.4	A	17	0.4	No	7.5	A	23	0.5	No
SR-905 SB Ramp/WB Siempre Viva Rd. (OWSC)	SBR	14.3	B	14.4	B	0	0.1	No	14.5	B	0	0.2	No	14.6	B	0	0.3	No
SR-905 NB Ramp/Siempre Viva Rd. (sig)	Int	10.8	B	10.7	B	44	(0.1)	No	10.6	B	85	(2)	No	10.5	B	107	(0.3)	No
Siempre Viva Rd./Paseo de las Americas (sig)	Int	24.7	C	24.5	C	44	(0.2)	No	24.3	C	85	(0.4)	No	24.3	C	107	(0.4)	No
Siempre Viva Rd./Michael Faraday Dr. (TWSC)	NB	14.5	B	15.3	C	0	0.8	No	16.1	C	0	1.6	No	16.6	C	0	2.1	No
	SB	15.9	C	16.7	C	0	0.8		17.5	C	0	1.6		17.9	C	0	2.0	
Siempre Viva Rd. /Enrico Fermi Dr. (sig)	Int	12.6	B	12.6	B	79	0.0	No	12.6	B	153	0.0	No	12.7	B	191	0.1	No
Paseo de la Fuente/Alta Rd. (sig)	Int	2.7	A	2.2	A	0	(0.5)	No	2.2	A	0	(0.5)	No	2.2	A	0	(0.5)	No

ADT= Average Daily Traffic; LOS= Level of Service; V/C = Volume-to LOS E Capacity Ratio; sig=signalized; OWSC=One Way Stop Controlled; TWSC = Two-Way Stop-Controlled; AWSC = All-Way Stop-Controlled: Δ=change; sig. impact=is the project impact significant?; SB=southbound; EB=eastbound; NB=northbound; SB=southbound; Int=intersection; NBL=northbound left-turn lane
Shading indicates significant impact. TI- indicates traffic impact number.
Source: Darnell and Associates 2010.

Table 2.1-7b
EXISTING PLUS PROJECT INTERSECTION LOS SUMMARY (PM PEAK HOUR – UNIT 1, UNITS 1-2, AND UNITS 1-3)

Intersection	Critical Movement	Existing		Existing Plus Unit 1					Existing Plus Units 1-2					Existing Plus Units 1-3				
		Delay	LOS	Delay	LOS	Project Trips	Δ Delay	Sig. Impact	Delay	LOS	Project Trips	Δ Delay	Sig. Impact	Delay	LOS	Project Trips	Δ Delay	Sig. Impact
PM Peak Hour																		
Otay Mesa Rd./Heritage Rd. (sig)	Int	29.2	C	32.5	C	577	3.3	No	37.1	D	1,123	7.9	No	41.4	D	1,405	12.2	No
Otay Mesa Rd./Cactus Rd (sig)	Int	11.5	B	11.2	B	596	(0.3)	No	11.8	B	1,160	0.3	No	12.9	B	1,451	1.4	No
Otay Mesa Rd./Britannia Blvd. (sig)	Int	18.8	B	19.3	B	623	0.5	No	22.1	C	1,215	3.3	No	24.2	C	1,520	5.4	No
Otay Mesa Rd./La Media Rd. (sig)	Int	27.0	C	28.5	C	642	1.5	No	31.6	C	1,251	4.6	No	34.8	C	1,565	7.8	No
Otay Mesa Rd./Piper Ranch Rd. (sig)	Int	3.6	A	4.1	A	652	0.5	No	4.3	A	1,269	0.7	No	4.6	A	1,586	1.0	No
Otay Mesa Rd./SR125 SB (sig)	Int	2.5	A	3.2	A	706	0.7	No	3.8	A	1,378	1.3	No	4.3	A	1,727	1.8	No
Otay Mesa Rd./SR 125 NB (sig)	Int	5.6	A	4.1	A	836	(1.4)	No	7.3	A	1,632	0.2	No	15.5	B	2,043	9.9	No
Otay Mesa Rd./SR 905 NB (sig)	Int	21.1	C	22.2	C	836	1.4	No	**80.5**	**E**	**1,632**	**48.9**	**Yes-TI-7**	**107.3**	**F**	**2,041**	**86.2**	**Yes-TI-7**
Otay Mesa Rd./Sanyo Ave. (sig)	Int	12.6	B	22.8	C	836	13.5	No	**164.0**	**F**	**1,632**	**133.4**	**Yes-TI-8**	**213.3**	**F**	**2,041**	**200.7**	**Yes-TI-8**
Otay Mesa Rd./Enrico Fermi Dr. (sig)	Int	9.4	A	13.5	B	930	4.1	No	13.9	B	1,813	4.5	No	**137.6**	**F**	**2,268**	**128.2**	**Yes-TI-9**
Otay Mesa Rd./Alta Rd. (AWSC)	EB	9.8	A	31.9	D	279	22.1	**Yes-TI-6**	**454.6**	**F**	**544**	**444.8**	**Yes-TI-6**	**645.4**	**F**	**692**	**635.6**	**Yes-TI-6**
	WB	0.0	A	0.0	A	0	0.0		**576.6**	**F**	**723**	576.6		**549.4**	**F**	**703**	549.4	
	NB	8.2	A	**221.8**	**F**	**650**	**213.6**		**361.7**	**F**	**546**	**353.5**		**815.3**	**F**	**873**	**807.1**	
	SB	18.3	C	**205.3**	**F**	**0**	187.0		**518.9**	**F**	**0**	500.6		**518.9**	**F**	**0**	500.6	
	Int	17.2	C	**173.9**	**F**	**929**	**156.7**		**486.2**	**F**	**1,813**	**469.0**		**642.1**	**F**	**2,268**	**624.9**	
Airway Rd./La Media Rd. (AWSC)	EB	14.5	B	15.0	B	0	0.5	No	15.5	C	0	1.0	No	15.7	C	0	1.2	No
	WB	13.9	B	15.5	B	33	1.6		17.3	C	63	3.4		18.4	B	78	4.5	
	NB	15.4	C	16.0	C	0	0.6		16.6	C	0	1.2		16.9	C	0	1.5	
	SB	12.2	B	12.6	B	0	0.4		13.0	B	0	0.8		13.2	B	0	1.0	
	Int	13.9	B	14.6	B	33	0.7		15.5	C	63	1.6		16.0	C	78	2.1	
Airway Rd./Sanyo Ave. (AWSC)	EB	9.9	A	10.0	B	0	0.1	No	10.1	A	0	0.2	No	10.2	B	0	0.3	No
	WB	9.1	A	9.8	A	33	0.7		10.5	B	63	1.4		10.9	B	78	1.8	
	NB	9.2	A	9.4	A	0	0.2		9.5	A	0	0.3		9.6	A	0	0.4	
	SB	8.0	A	8.2	A	0	0.2		8.3	A	0	0.3		8.4	A	0	0.4	
	Int	9.1	A	9.5	A	33	0.4		9.9	A	63	0.8		10.1	B	78	1.0	
Airway Rd./Paseo de las Americas (OWSC)	NBL	10.6	B	11.1	B	0	0.5	No	11.4	B	0	0.8	No	11.6	B	0	1.0	No
Airway Rd./Michael Faraday Dr. (OWSC)	NBL	9.6	A	9.7	A	0	0.1	No	10.0	A	0	0.4	No	10.1	A	0	0.5	No
Airway Rd./Enrico Fermi Dr. (sig)	Int	13.0	B	7.8	B	94	(3.2)	No	8.1	A	180	(4.9)	No	7.5	A	225	(5.5)	No
Siempre Viva Rd./La Media Rd. (AWSC)	EB	8.4	A	8.5	A	0	0.1	No	8.6	A	0	0.2	No	8.6	A	0	0.2	No
	WB	8.5	A	8.7	A	0	0.2		8.8	A	0	0.3		8.9	A	0	0.4	
	NB	8.4	A	8.5	A	0	0.1		8.6	A	0	0.2		8.6	A	0	0.2	
	SB	11.0	B	11.8	B	33	0.8		12.7	B	63	1.7		13.2	B	78	2.2	
	Int	9.9	A	10.5	B	33	0.6		11.2	B	63	1.3		11.5	B	78	1.6	
SR-905 SB Ramp/EB Siempre Viva Rd. (sig)	Int	8.5	A	8.8	A	33	0.3	No	9.2	A	63	0.7	No	9.3	A	78	0.8	No
SR-905 SB Ramp/WB Siempre Viva Rd. (OWSC)	SBR	13.3	B	13.3	B	0	0.0	No	13.2	B	0	(0.1)	No	13.2	B	0	(0.1)	No
SR-905 NB Ramp/Siempre Viva Rd. (sig)	Int	11.0	B	10.9	B	47	(0.1)	No	10.9	B	90	(0.1)	No	10.9	B	112	(0.1)	No
Siempre Viva/Paseo de las Americas (sig)	Int	40.0	D	40.7	D	47	0.7	No	41.3	D	90	1.3	No	41.6	D	112	1.6	No
Siempre Viva Rd./Michael Faraday Dr. (TWSC)	NB	13.2	B	13.8	B	0	0.6	No	14.4	B	0	1.2	No	14.8	B	0	1.6	No
	Int.	12.3	B	12.8	B	0	0.5		13.4	B	0	1.1		13.7	B	0	1.4	
Siempre Viva Rd./Enrico Fermi Dr. (sig)	Int	13.7	B	13.7	B	61	0.0	No	13.0	B	117	(0.7)	No	12.8	B	146	(0.9)	No
Alta Rd./Paseo de la Fuente (sig)	Int	12.6	B	12.6	A	0	0.0	No	12.6	A	0	0.0	No	12.6	A	0	0.0	No

LOS=Level of Service; Delay is measured in seconds/vehicle; sig=signalized; OWSC=One Way Stop Controlled; TWSC = Two-Way Stop-Controlled; AWSC = All-Way Stop-Controlled; Int = Intersection; NB = Northbound Approach; NBL = Northbound Left; SBR = Southbound Right;
Δ Delay = Increase (decrease) in delay; Occasionally adding traffic to a critical movement optimizes the intersection resulting in a decrease in delay; Shading indicates significant impact; TI- indicates traffic impact number.
Source: Darnell and Associates 2010.

Table 2.1-7c
EXISTING PLUS PROJECT INTERSECTION LOS SUMMARY (AM PEAK HOUR – UNITS 1-4 AND UNITS 1-5)

Intersection	Critical Movement	Existing (A)		Existing Plus Units 1-4					Existing Plus Units 1-5				
		Delay	LOS	Delay	LOS	Project Trips	Δ Delay	Sig. Impact	Delay	LOS	Project Trips	Δ Delay	Sig. Impact
AM Peak Hour													
Otay Mesa Rd./Heritage Rd. (sig)	Int	30.1	C	**81.6**	**F**	1,617	**51.5**	**Yes TI-10**	**84.6**	**F**	1,713	**54.5**	**Yes TI-10**
Otay Mesa Rd./Cactus Rd. (sig)	Int	8.9	A	45.9	D	1,617	37.0	No	49.1	D	1,713	40.2	No
Otay Mesa Rd./Britannia Blvd. (sig)	Int	10.3	B	**56.5**	**E**	**1,672**	**46.2**	**Yes TI-11**	**60.4**	**E**	**1,771**	**50.1**	**Yes TI-11**
Otay Mesa Rd./La Media Rd. (sig)	Int	14.1	B	16.7	B	1,723	2.6	No	18.8	B	1,828	4.7	No
Otay Mesa Rd./Piper Ranch Rd. (sig)	Int	6.1	A	27.7	C	1,750	21.6	No	31.5	C	1,854	25.4	No
Otay Mesa Rd./SR-125 SB (sig)	Int	11.2	B	15.7	B	2,176	4.5	No	15.9	B	2,293	4.7	No
Otay Mesa Rd./SR-125 NB (sig)	Int	0.9	A	5.7	A	2,289	4.8	No	5.7	A	2,424	4.8	No
Otay Mesa Rd./SR-905 NB (sig)	Int	16.1	B	**121.6**	**F**	**2,289**	**105.5**	**Yes TI-7**	**128.5**	**F**	**2,425**	**112.4**	**Yes TI-7**
Otay Mesa Rd./Sanyo Ave. (sig)	Int	4.1	A	23.5	B	2,289	19.4	No	31.0	C	2,425	26.9	**No**
Otay Mesa Rd./Enrico Fermi Dr. (sig)	Int	10.4	B	**512.3**	**F**	**2,317**	**501.9**	**Yes TI-9**	**569.2**	**F**	**2,457**	**558.8**	**Yes TI-9**
Otay Mesa Rd./Alta Rd. (AWSC)	EB	32.5	D	**800.6**	**F**	**1,065**	**768.1**	**Yes TI-6**	**865.3**	**F**	**1,097**	**832.8**	**Yes TI-6**
	WB	0.0	A	10.8	B	96	10.8		11.9	B	144	11.9	
	NB	9.3	A	14.0	B	187	4.7		14.5	B	187	5.2	
	SB	9.8	A	11.7	B	0	1.9		12.1	B	0	2.3	
	Int	27.6	D	**632.8**	**F**	**1,348**	**605.2**		**672.1**	**F**	**1,428**	**644.5**	
Airway Rd./La Media Rd. (AWSC)	EB	11.1	B	11.3	B	0	0.2	**No**	11.3	B	0	0.2	**No**
	WB	10.9	B	11.7	B	28	0.2		11.8	B	33	(0.1)	
	NB	11.4	B	11.7	B	0	0.3		11.8	B	0	0.4	
	SB	13.3	B	13.8	B	0	0.5		13.9	B	0	0.6	
	Int	12.3	B	12.7	B	28	0.4		12.8	B	33	0.5	
Airway Rd./Sanyo Ave. (AWSC)	EB	10.1	B	11.6	B	43	1.5	No	11.7	B	44	1.6	No
	WB	8.1	A	9.0	A	52	0.9		9.1	A	61	1.0	
	NB	8.0	A	8.5	A	0	0.5		8.5	A	0	0.5	
	SB	9.6	A	11.4	B	43	1.8		11.6	B	44	2.0	
	Int	9.3	A	10.7	B	138	1.4		10.8	B	149	1.5	
Airway Rd./Paseo de las Americas (OWSC)	NBL	9.7	A	10.9	B	0	1.2	No	11.0	B	0	1.3	No
Airway Rd./Michael Faraday Dr.(OWSC)	NBL	9.6	A	10.4	B	0	0.8	No	10.5	B	0	0.9	No
Airway Rd./Enrico Fermi Dr.(sig)	Int	6.6	A	29.4	C	1,373	22.8	No	30.8	C	1,457	24.2	No
Siempre Viva Rd./La Media Rd. (AWSC)	EB	8.0	A	8.1	A	0	0.1	No	8.1	A	0	0.1	No
	WB	7.8	A	7.9	A	0	0.1		7.9	A	0	0.1	
	NB	7.6	A	7.6	A	0	0.0		7.6	A	0	0.0	
	SB	9.8	A	10.3	B	28	0.5		10.3	B	33	0.5	
	Int	9.2	A	9.5	A	28	0.3		9.6	A	33	0.4	
SR-905 SB Ramp/EB Siempre Viva Rd.(sig)	Int	7.0	A	7.6	A	28	0.6	No	7.7	A	33	0.7	No
SR-905 SB Ramp/WB Siempre Viva Rd.(OWSC)	SBR	14.3	B	14.7	B	0	0.4	No	14.7	B	0	0.4	No
SR-905 NB Ramp/Siempre Viva Rd.(sig)	Int	10.8	B	10.4	B	134	(0.4)	No	10.4	B	142	(0.4)	No
Siempre Viva Rd./Paseo de las Americas (sig)	Int	24.7	C	24.2	C	134	(0.5)	No	24.3	C	142	(0.4)	No
Siempre Viva Rd./Michael Faraday Dr. (TWSC)	NB	14.5	B	17.2	C	0	2.7	No	17.4	C	0	2.9	No
	SB	15.9	C	18.5	C	0	2.6		18.7	C	0	2.8	
Siempre Viva Rd./Enrico Fermi Dr. (sig)	Int	12.6	B	12.7	B	240	0.1	No	12.7	B	251	0.1	No
Paseo de la Fuente/Alta Rd. (sig)	Int	2.7	A	2.2	A	0	(0.5)	No	2.2	A	0	(0.5)	No

ADT= Average Daily Traffic; LOS= Level of Service; V/C = Volume-to LOS E Capacity Ratio; sig=signalized; OWSC=One Way Stop Controlled; TWSC = Two-Way Stop-Controlled; AWSC = All-Way Stop-Controlled: Δ=change; sig. impact=is the project impact significant?; SB=southbound; EB=eastbound; NB=northbound; SB=southbound; Int=intersection; NBL=northbound left-turn lane
Source: Darnell and Associates 2010.

Table 2.1-7d
EXISTING PLUS PROJECT INTERSECTION LOS SUMMARY (PM PEAK HOUR – UNITS 1-4 AND UNITS 1-5)

Intersection	Critical Movement	Existing		Existing Plus Units 1-4					Existing Plus Units 1-5				
		Delay	LOS	Delay	LOS	Project Trips	Δ Delay	Sig. Impact	Delay	LOS	Project Trips	Δ Delay	Sig. Impact
PM Peak Hour													
Otay Mesa Rd./Heritage Rd. (sig)	Int	29.2	C	52.1	D	1,726	22.9	No	54.8	D	1,812	25.6	No
Otay Mesa Rd./Cactus Rd. (sig)	Int	11.5	B	13.6	B	1,726	2.1	No	13.9	B	1,812	2.4	No
Otay Mesa Rd./Britannia Blvd. (sig)	Int	18.8	B	27.0	C	1,784	8.2	No	28.0	C	1,872	9.2	No
Otay Mesa Rd./La Media Rd. (sig)	Int	27.0	C	42.0	D	1,840	15.0	No	44.7	D	1,932	17.7	No
Otay Mesa Rd./Piper Ranch Rd. (sig)	Int	3.6	A	5.0	A	1,869	1.4	No	5.1	A	1,961	1.5	No
Otay Mesa Rd./SR-125 SB (sig)	Int	2.5	A	5.1	A	2,044	2.6	No	5.5	A	2,150	3.0	No
Otay Mesa Rd./SR-125 NB (sig)	Int	5.6	A	39.0	D	2,444	33.4	No	35.6	D	2,564	30.0	No
Otay Mesa Rd./SR-905 NB (sig)	Int	21.1	C	**153.2**	**F**	2,444	**132.1**	**Yes TI-7**	**173.5**	**F**	2,564	**152.4**	**Yes TI-7**
Otay Mesa Rd./Sanyo Ave./Sunroad Blvd. (sig)	Int	12.6	B	**289.5**	**F**	2,444	**276.9**	**Yes TI-8**	**299.9**	**F**	2,564	**287.3**	**Yes TI-8**
Otay Mesa Rd./Enrico Fermi Dr. (sig)	Int	9.4	A	**205.2**	**F**	2,545	**195.8**	**Yes TI-9**	**220.7**	**F**	2,670	**271.3**	**Yes TI-9**
Otay Mesa Rd./Alta Rd. (AWSC)	EB	9.8	A	**310.6**	**F**	438	**300.8**	**Yes TI-6**	**358.5**	**F**	474	**348.7**	**Yes TI-6**
	WB	0.0	A	**104.7**	**F**	356	104.7		**143.0**	**F**	392	143.0	
	NB	8.2	A	497.7	**F**	645	**489.5**		497.7	**F**	645	**489.5**	
	SB	18.3	C	**518.9**	**F**	**0**	**500.6**		**518.9**	**F**	**0**	500.6	
	Int	17.2	C	**398.5**	**F**	1,439	**381.3**		**410.8**	**F**	1,511	**393.6**	
Airway Rd./La Media Rd. (AWSC)	EB	14.5	B	16.1	C	0	1.6	**No**	16.2	C	0	1.7	**No**
	WB	13.9	B	20.4	C	100	6.5		20.8	C	104	6.9	
	NB	15.4	C	17.4	C	0	2.0		17.5	C	0	2.1	
	SB	12.2	B	13.5	C	0	1.3		13.5	B	0	1.3	
	Int	13.9	B	16.9	C	100	3.0		17.1	C	104	3.2	
Airway Rd./Sanyo Ave. (AWSC)	EB	9.9	A	11.0	B	18	1.1	No	11.1	B	19	1.2	No
	WB	9.1	A	13.2	B	180	4.1		13.5	B	186	4.4	
	NB	9.2	A	10.3	B	0	1.1		10.4	B	0	1.2	
	SB	8.0	A	9.3	A	18	1.3		9.3	A	19	1.3	
	Int	9.1	A	11.7	B	216	2.6		11.9	B	224	2.8	
Airway Rd./Paseo de las Americas (OWSC)	NBL	10.6	B	13.8	B	0	3.2	No	14.0	B	0	3.4	No
Airway Rd./Michael Faraday Dr.(OWSC)	NBL	9.6	A	11.8	B	0	2.2	No	11.9	B	0	2.3	No
Airway Rd./Enrico Fermi Dr.(sig)	Int	13.0	B	20.2	C	1,536	7.2	No	21.3	C	1,612	8.3	No
Siempre Viva Rd./La Media Rd. (AWSC)	EB	8.4	A	8.7	A	0	0.3	No	8.7	A	0	0.3	No
	WB	8.5	A	9.0	A	0	0.5		9.0	A	0	0.5	
	NB	8.4	A	8.6	A	0	0.2		8.7	A	0	0.3	
	SB	11.0	B	14.0	B	100	3.0		14.2	B	104	3.2	
	Int	9.9	A	12.2	B	100	2.3		12.3	B	104	2.4	
SR-905 SB Ramp/EB Siempre Viva Rd.(sig)	Int	8.5	A	9.6	A	100	1.1	No	9.7	A	104	1.2	No
SR-905 SB Ramp/WB Siempre Viva Rd.(OWSC)	SBR	13.3	B	13.1	B	0	0.2	No	13.1	B	0	(0.2)	No
SR-905 NB Ramp/Siempre Viva Rd.(sig)	Int	11.0	B	10.9	B	143	(0.1)	No	10.9	B	151	(0.1)	No
Siempre Viva Rd./Paseo de las Americas (sig)	Int	40.0	D	42.2	D	143	(2.2)	No	42.3	D	151	2.3	No
Siempre Viva Rd./Michael Faraday Dr. (TWSC)	NB	13.2	B	15.3	C	0	2.1	No	15.4	C	0	2.2	No
	SB	12.3	B	14.1	B	0	1.8		14.2	B	0	1.9	
Siempre Viva Rd./Enrico Fermi Dr. (sig)	Int	13.7	B	13.0	B	186	(0.7)	No	13.0	B	198	(0.7)	No
Paseo de la Fuente/Alta Rd. (sig)	Int	12.6	B	12.6	A	0	0.0	No	12.6	A	0	0.0	No

LOS=Level of Service; Delay is measured in seconds/vehicle; sig=signalized; OWSC=One Way Stop Controlled; TWSC = Two-Way Stop-Controlled; AWSC = All-Way Stop-Controlled: Int = Intersection; NB = Northbound Approach; NBL = Northbound Left; SBR = Southbound Right;
Δ Delay = Increase (decrease) in delay; Occasionally adding traffic to a critical movement optimizes the intersection resulting in a decrease in delay; Shading indicates significant impact; TI- indicates traffic impact number.
Source: Darnell and Associates 2010.

Table 2.1-8
EXISTING PLUS PROJECT INTERSECTION ILV ANALYSIS SUMMARY (UNITS 1, 1-2, 1-3, 1-4 AND 1-5)

Intersection	Existing				Existing + Unit 1				Existing + Units 1-2				Existing + Units 1-3				Existing + Units 1-4				Existing + Units 1-5			
	AM Peak Hour		PM Peak Hour		AM Peak		PM Peak		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	ILV/Hr	Operating Condition	ILV/ Hr	Operating Condition	ILV/ Hr	Operating Condition	ILV/ Hr	Operating Condition	ILV/ Hr	Operating Condition	ILV/ Hr	Operating Condition	ILV/ Hr	Operating Condition	ILV/ Hr	Operating Condition	ILV/ Hr	Operating Condition	ILV/ Hr	Operating Condition	ILV/ Hr	Operating Condition	ILV/ Hr	Operating Condition
Otay Mesa Rd./Heritage Rd.	1,115	Stable Flow	1,049	Stable Flow	1,268	Unstable Flow	1,186	Stable Flow	1,414	Unstable Flow	1,313	Unstable Flow	1,485	Unstable Flow	1,397	Unstable Flow	1,541	Over Capacity	1,450	Unstable Flow	1,554	Over Capacity	1,464	Unstable Flow
Otay Mesa Rd./Cactus Rd.	1,129	Stable Flow	1,055	Stable Flow	1,206	Unstable Flow	1,122	Stable Flow	1,395	Unstable Flow	1,259	Unstable Flow	1,424	Unstable Flow	1,353	Unstable Flow	1,487	Unstable Flow	1,425	Unstable Flow	1,490	Unstable Flow	1,415	Unstable Flow
Otay Mesa Rd./Britannia Blvd.	708	Stable Flow	936	Stable Flow	944	Stable Flow	1,077	Stable Flow	1,091	Stable Flow	1,211	Unstable Flow	1,163	Stable Flow	1,277	Unstable Flow	1,229	Unstable Flow	1,336	Unstable Flow	1,244	Unstable Flow	1,350	Unstable Flow
Otay Mesa Rd./La Media Rd.	740	Stable Flow	924	Stable Flow	897	Stable Flow	1,038	Stable Flow	1,047	Stable Flow	1,196	Stable Flow	1,120	Stable Flow	1,266	Unstable Flow	1,196	Stable Flow	1,331	Unstable Flow	1,200	Stable Flow	1,346	Unstable Flow
Otay Mesa Rd./Piper Ranch Rd.	696	Stable Flow	766	Stable Flow	989	Stable Flow	864	Stable Flow	1,168	Stable Flow	955	Stable Flow	1,281	Unstable Flow	1,007	Stable Flow	1,385	Unstable Flow	1,049	Stable Flow	1,406	Unstable Flow	1,072	Stable Flow
Otay Mesa Rd./SR-125 SB	701	Stable Flow	677	Stable Flow	667	Stable Flow	725	Stable Flow	887	Stable Flow	895	Stable Flow	883	Stable Flow	982	Stable Flow	982	Stable Flow	1,067	Stable Flow	1,003	Stable Flow	1,088	Stable Flow
Otay Mesa R.d/SR-125 NB	417	Stable Flow	754	Stable Flow	659	Stable Flow	982	Stable Flow	956	Stable Flow	1,198	Stable Flow	1,101	Stable Flow	1,306	Unstable Flow	1,252	Unstable Flow	1,404	Unstable Flow	1,279	Unstable Flow	1,427	Unstable Flow
Otay Mesa Rd./SR-905 Connector	700	Stable Flow	911	Stable Flow	1,013	Stable Flow	1,204	Unstable Flow	1,310	Unstable Flow	1,477	Unstable Flow	1,455	Unstable Flow	1,620	Over Capacity	1,605	Over Capacity	1,761	Over Capacity	1,632	Over Capacity	1,791	Over Capacity
Siempre Viva Rd./SR-905 SB to EB Siempre Viva	363	Stable Flow	463	Stable Flow	350	Stable Flow	551	Stable Flow	372	Stable Flow	561	Stable Flow	375	Stable Flow	568	Stable Flow	370	Stable Flow	533	Stable Flow	391	Stable Flow	593	Stable Flow
Siempre Viva Rd./ SR-905 NB Ramp	372	Stable Flow	483	Stable Flow	370	Stable Flow	494	Stable Flow	372	Stable Flow	508	Stable Flow	373	Stable Flow	515	Stable Flow	378	Stable Flow	530	Stable Flow	383	Stable Flow	537	Stable Flow

ILV/Hour = Intersecting Lane Vehicles Per Hour; <1,200 ILV/Hour = Stable Flow; 1,200 - 1,500 ILV/Hour = Unstable Flow; 1,500 ILV/Hour = Capacity, Stop and Go Operation; E-W = East-West Roadway; N-S = North-South Roadway
Source: Darnell and Associates 2010.

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Table 2.1-9
EXISTING CONDITIONS PROPOSED ACCESS ROADWAY SEGMENT DAILY LOS SUMMARY

Roadway Segment	Existing + Project Unit 1			Existing + Project Units 1-2			Existing + Project Units 1-3			Existing + Project Units 1-4			Existing + Project Units 1-5		
	Capacity (LOS E)	ADT	LOS	Capacity (LOS E)	ADT	LOS	Capacity (LOS E)	ADT	LOS	Capacity (LOS E)	ADT	LOS	Capacity (LOS E)	ADT	LOS
Otay Mesa Road															
Alta Rd. to Lone Star Rd.	DNE	DNE	DNE	16,200	6,707	C	19,000	7,124	C	19,000	3,570	B	19,000	4,457	B
Airway Road															
Alta Rd. to Siempre Viva Rd.	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	16,200	7,026	C	16,200	7,913	D
Siempre Viva Road															
Airway Rd. to Lone Star Rd.	DNE	DNE	DNE	DNE	DNE	DNE	1,000	640	<C	16,200	6,855	C	19,000	7,742	C
East of Lone Star Rd.	DNE	DNE	DNE	4,500	1,329	<C	4,500	1,326	<C	4,500	2,252	<C	4,500	2,252	<C
Alta Road															
Otay Mesa Rd. to Calle Ventner	16,200	6,192	C	16,200	5,377	C	19,000	8,323	C	19,000	6,192	C	19,000	6,192	C
Calle Ventner to Street B	DNE	DNE	DNE	DNE	DNE	DNE	16,200	2,505	B	16,200	2,907	B	16,200	2,907	B
Street B to Airway Rd.	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	16,200	2,907	B	16,200	2,907	B

Table 2.1-9 (cont.)
EXISTING CONDITIONS PROPOSED ACCESS ROADWAY SEGMENT DAILY LOS SUMMARY

Roadway Segment	Existing + Project Unit 1			Existing + Project Units 1-2			Existing + Project Units 1-3			Existing + Project Units 1-4			Existing + Project Units 1-5		
	Capacity (LOS E)	ADT	LOS	Capacity (LOS E)	ADT	LOS	Capacity (LOS E)	ADT	LOS	Capacity (LOS E)	ADT	LOS	Capacity (LOS E)	ADT	LOS
Lone Star Road															
Otay Mesa Rd. to Calle Ventner	DNE	DNE	DNE	16,200	6,707	C	19,000	7,124	C	19,000	3,570	B	19,000	4,457	B
Calle Ventner to Siempre Viva Rd.	DNE	DNE	DNE	16,200	4,350	C	16,200	5,061	C	16,200	1,787	A	16,200	2,674	B
Siempre Viva Rd. to Street C	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	4,500	2,815	<C	16,200	4,588	<C
Street C to Street D	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	4,500	938	<C	4,500	2,711	<C
South of Street D	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	4,500	1,773	<C
Calle Ventner															
Alta Rd. to Street A	16,200(a)	5,697	C	16,200(a)	4,894	C	16,200(a)	5,305	C	16,200(a)	5,724	C	16,200(a)	5,724	C
Street A to Lone Star Rd.	16,200(a)	1,176	A	16,200(a)	1,752	A	16,200(a)	1,179	A	16,200(a)	1,408	A	16,200(a)	1,408	A
Street A															
North of Calle Ventner	4,500	2,539	<C	4,500	2,296	<C	4,500	2,358	<C	4,500	2,440	<C	4,500	2,440	<C
Street B															
East of Alta Rd.	DNE	DNE	DNE	DNE	DNE	DNE	4,500	2,210	<C	4,500	2,252	<C	4,500	2,252	<C
Street C															
East of Lone Star Rd.	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	4,500	1,126	<C	4,500	1,126	<C

LOS=Level of Service; Delay is measured in seconds/vehicle; Δ Delay = Increase (decrease) in delay; DNE=Does not exist; Occasionally adding traffic to a critical movement optimizes the intersection resulting in a decrease in delay
(a) The roadway classification is a 2-lane Industrial/Commercial Collector with the capacity equivalent to that of a Light Collector.
Source: Darnell and Associates 2010.

Table 2.1-10a
EXISTING CONDITIONS PROPOSED ACCESS INTERSECTION LOS SUMMARY (UNIT1, 1-2, AND 1-3)

Intersection	Critical Movement	Existing + Project Unit 1				Existing + Project Units 1-2				Existing + Project Units 1-3			
		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Otay Mesa Rd./Paseo de la Fuente-Lone Star Rd.	Eastbound	DNE	DNE	DNE	DNE	16.8	C	9.7	A	17.7	C	9.9	A
Alta Rd./Calle Ventner	Intersection	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	9.4	A	27.0	D
Alta Rd./Street B	Westbound	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
Alta Rd./Airway Rd.	Southbound	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
Lone Star Rd./Calle Ventner	Eastbound	DNE	DNE	DNE	DNE	11.3	B	17.3	C	10.6	B	15.3	C
Lone Star Rd./Siempre Viva Rd.	Eastbound	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
	Westbound	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
	Northbound	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
	Southbound	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	9.6	A	10.0	A
	Intersection	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
Lone Star Rd./Street C	Westbound	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
Calle Ventner/Street A	Southbound	8.8	A	0.0	A	8.6	A	9.9	A	8.7	A	10.6	B

Delay is measured in seconds/vehicle; LOS=Level of Service; DNE=Does not exist.
Source: Darnell and Associates 2010.

Table 2.1-10b
EXISTING CONDITIONS PROPOSED ACCESS INTERSECTION LOS SUMMARY (UNITS 1-4, AND 1-5)

Intersection	Critical Movement	Existing + Project Units 1-4				Existing + Project Units 1-5			
		AM Peak		PM Peak		AM Peak		PM Peak	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Otay Mesa Rd./Paseo de la Fuente-Lone Star Rd.	Eastbound	10.4	B	9.0	A	10.7	B	9.2	A
Alta Rd./Calle Ventner	Intersection	17.9	C	23.1	C	11.5	B	23.1	C
Alta Rd./Street B	Westbound	12.9	B	12.9	B	12.9	B	12.9	B
Alta Rd./Airway Rd.	Southbound	10.3	B	20.6	C	10.8	B	22.0	C
Lone Star Rd./Calle Ventner	Eastbound	9.9	A	10.7	B	10.3	B	11.0	B
Lone Star Rd./Siempre Viva Rd.	Eastbound	20.1	C	12.5	B	15.3	C	12.0	B
	Westbound	9.6	A	16.5	C	10.0	B	16.5	C
	Northbound	10.9	B	20.3	C	10.7	B	22.8	C
	Southbound	8.5	A	11.7	B	8.7	A	11.7	B
	Intersection	17.9	C	15.6	C	13.4	B	16.5	C
Lone Star Rd./Street C	Westbound	8.6	A	9.4	A	9.1	A	9.9	A
Calle Ventner/Street A	Southbound	8.8	A	10.8	B	8.8	A	10.8	B

Delay is measured in seconds/vehicle; LOS=Level of Service; DNE=Does not exist.
Source: Darnell and Associates 2010.

Table 2.1-11
CUMULATIVE (2020) ROADWAY SEGMENT DAILY LOS SUMMARY

Roadway Segment	Existing						Cumulative (2020) With SR-905 1A & 1B						
	Jurisdiction	Class	Capacity (LOS E)	ADT	V/C	LOS	Class	Capacity (LOS E)	Proj. Tr (c)	ADT	V/C	LOS	Impact?
Otay Mesa Rd.													
Heritage Rd. to Cactus Rd.	City/Caltrans	6P	60,000	64,299	1.07	F	6P	60,000	1,064	29,860	0.50	B	No
Cactus Rd. to Britannia Blvd.	City/Caltrans	6P	60,000	71,080	1.18	F	6P	60,000	1,064	32,830	0.55	B	No
Britannia Blvd. to La Media Rd.	City/Caltrans	6P	60,000	58,999	0.98	E	6P	60,000	1,277	22,070	0.37	A	No
La Media Rd. to Piper Ranch Rd.	City/Caltrans	5M	45,000	44,523	0.99	E	5M	45,000	1,702	31,600	0.70	C	No
Piper Ranch Rd. to SR-125	County/City/ Caltrans	6P	57,000	43,109	0.76	C	6P	57,000	1,915	27,750	0.49	B	No
Old Otay Mesa Rd.													
SR-125 to Harvest Rd.	County/City/ Caltrans	5M(a)	47,000	16,686	036	A	5M(a)	47,000	3,405	33,340	0.71	C	No
Harvest Rd. to Sanyo Ave.	County/City/ Caltrans	4M	37,000	8,224	0.22	A	4M	37,000	3,405	12,870	0.35	A	No
Sanyo Ave. to Vann Centre Blvd.	County/City	LC	16,200	9,133	0.56	D	LC	16,200	4,469	5,270	0.33	C	No
Vann Centre Blvd. to Enrico Fermi Dr.	County/City	LC	16,200	9,133	0.56	D	LC	16,200	4,681	5,480	0.34	C	No
Enrico Fermi Dr. to Alta Rd.	County	LC	16,200	6,928	0.43	C	LC	16,200	**20,428**	**16,060**	**0.99**	**E**	**Yes**
Airway Road													
La Media Rd. to SR-905	City	2C	15,000	8,093	0.54	C	2C	15,000	638	9,700	0.65	C	No
SR-905 to Sanyo Ave.	City	2C	10,000	9,631	0.96	E	2C	10,000	638	6,600	0.66	C	No
Sanyo Ave. to Paseo de las Americas	City	4M	40,000	5,649	0.14	A	4M	40,000	426	16,030	0.40	B	No
Paseo de las Americas to Michael Faraday Dr.	County/City	4M	37,000	4,533	0.12	A	4M	37,000	1,490	4,090	0.11	A	No
Michael Faraday Dr. to Enrico Fermi Dr.	County/City	LC	16,200	2,918	0.18	B	LC	16,200	2,979	5,380	0.33	C	No
Enrico Fermi Dr. to Airway Pl.	County	C	34,200	1,160	0.03	A	4C	34,200	426	1,300	0.04	A	No
Airway Pl. to Alta Rd.	County	Does Not Exist		-	-	-	LC	16,200	426	1,220	0.08	A	No
Siempre Viva Road													
Drucker Ln. to SR-905	City	6P	60,000	12,976	0.22	A	6P	60,000	426	21,180	0.35	A	No
SR-905 to Paseo de las Americas	City	6P	60,000	26,653	0.44	B	6P	60,000	13,406	53,620	0.89	D	No
Paseo de las Americas to Michael Faraday Dr.	City	4C	30,000	9,886	0.33	A	4C	30,000	12,767	22,180	0.74	D	No

Table 2.1-11 (cont.)
CUMULATIVE (2020) ROADWAY SEGMENT DAILY LOS SUMMARY

Roadway Segment	Existing						Cumulative (2020) With SR-905 1A & 1B						
	Jurisdiction	Class	Capacity (LOS E)	ADT	V/C	LOS	Class	Capacity (LOS E)	Proj. Tr (c)	ADT	V/C	LOS	Impact?
Siempre Viva Road (cont.)													
Michael Faraday Dr. to Enrico Fermi Dr.	City	4C	30,000	6,442	0.21	A	4C	30,000	11,065	19,090	0.64	C	No
La Media Road													
Otay Mesa Rd. to St. Andrews/SR-905 WB Ramp	City	4C	30,000	15,225	0.51	C	4MC	35,000	426	28,210	0.81	D	No
SR-125													
North of Otay Mesa Rd	SBX	4-FWY	(b)	30,000	0.33	A	4-FWY	(b)	1,490	13,490	0.15	A	No
Existing State Route 905													
Otay Mesa Rd. to Siempre Viva Rd.	**City**/Caltrans	4M	40,000	**37,823**	**0.95**	**E**	Does Not Exist		-	-	-	-	-
South of Siempre Viva Rd.	City/**Caltrans**	4-FWY	(b)	28,000	0.32	A	4-FWY	(b)	3,192	76,130	0.86	D	No
New State Route 905													
Britannia Blvd. to La Media Rd.	Caltrans	Does Not Exist		-	-	-	6-FWY	(b)	10,214	102,240	0.77	C	No
La Media Rd. to Siempre Viva Rd.	Caltrans	Does Not Exist		-	-	-	6-FWY	(b)	9,788	90,160	0.68	C	No
Sanyo Avenue													
Otay Mesa Rd. to Airway Rd.	City	4C	30,000	2,666	0.09	A	4C	30,000	426	16,220	0.54	C	No
Enrico Fermi Drive													
Otay Mesa Rd. to Airway Rd.	County	TC	19,000	2,681	0.14	A	TC	19,000	**14,895**	**16,830**	**0.89**	**E**	**Yes**
Airway Rd. to Siempre Viva Rd.	City	4M	40,000	7,110	0.18	A	4M	40,000	11,491	13,400	0.34	A	No
Alta Road													
Calzada de la Fuente to Lone Star Rd. (Paseo de la Fuente)	County	TC	19,000	6,787	0.36	C	TC	19,000	638	10,350	0.54	D	No
Lone Star Rd (Paseo de la Fuente) to Otay Mesa Rd.	County	LC	16,200	6,787	0.42	C	LC	16,200	0	9,950	0.61	D	No

City = Capacity of City segments is based on the upper limits of LOS E per the City of San Diego; County = Capacity of County segments is based on the upper limits of LOS E per the County of San Diego; SBX = South Bay Expressway; Bold = Jurisdiction which capacity & significance criteria is based on; ADT= Average Daily Traffic; LOS= Level of Service; V/C = Volume-to LOS E Capacity Ratio; 6-FWY = 6-Lane Freeway: 4-FWY = 4-Lane Freeway:6P = 6-Lane Prime Arterial; 5M = 5-Lane Major Arterial; 4M = 4-Lane Major Arterial; C = Collector; 4MC = 4-Lane Modified Collector; 4C = 4-Lane Collector; 2C= 2-Lane Collector with no fronting property; LC = Light Collector; Cuml. Impact = Identifies whether there is a significant cumulative impact

(a) Additional lanes may be provided to accommodate turning movements and freeway access; hence the roadway capacity was assumed to be 47,000 ADT at LOS E (half-way between a 4-lane Major & 6-Lane Prime Arterial).

(b) Capacity based on Caltrans District 11 & HCM procedures,

(c) Project Traffic is representative of what the project would assign to the roadway network if 100% of the project was developed by the year 2020,

Source: Darnell and Associates 2010.

Table 2.1-12
CUMULATIVE (2020) INTERSECTION LEVEL OF SERVICE SUMMARY

Intersections	Jurisdiction	Traffic Control	Critical Move	Existing				Cumulative (2020) w/ SR-905 1A & 1B							
				AM Peak		PM Peak		AM Peak				PM Peak			
				Delay	LOS	Delay	LOS	Delay	LOS	Proj. Trips(a)	Impact?	Delay	LOS	Proj. Trips(a)	Impact?
Otay Mesa Rd./ Heritage Rd.	**City**/Caltrans	Sig.	Int	30.1	C	29.2	C	22.5	C	143	No	22.2	C	150	No
Otay Mesa Rd./Cactus Rd.	**City**/Caltrans	Sig.	Int	8.9	A	11.5	B	5.1	A	143	No	10.8	B	151	No
Otay Mesa Rd./Britannia Blvd	**City**/Caltrans	Sig.	Int	10.3	B	18.8	B	8.6	A	143	No	12.6	B	151	No
Otay Mesa Rd./La Media Rd.	**City**/Caltrans	Sig.	Int	14.1	B	27.0	C	11.3	B	229	No	23.7	C	241	No
Otay Mesa Rd./Piper Ranch Rd.	**County**/City/ Caltrans	Sig.	Int	6.1	A	3.6	A	10.0	A	257	No	8.7	A	272	No
Otay Mesa Rd./ SR-125 SB	**County**/City/SBX	Sig.	Int	11.2	B	2.5	A	11.2	B	410	No	7.3	A	337	No
Otay Mesa Rd./SR-125 NB	**County**/City/SBX	Sig.	Int	0.9	A	5.6	A	3.0	A	456	No	3.3	A	482	No
Otay Mesa Rd./Harvest Rd.	**County**/City/SBX	Sig.	Int	16.1	B	21.1	C	14.0	B	457	No	23.3	C	482	No
Otay Mesa Rd./Sanyo Ave.	**County**/City	Sig.	Int	4.1	A	12.6	B	18.9	B	600	No	52.6	D	632	No
Otay Mesa Rd./Vann Centre Blvd.	County	OWSC	SB	Does Not Exist				20.6	C	22	No	**73.0**	**F**	9	**Yes**
Otay Mesa Rd./Enrico Fermi Dr.	County	Sig.	Int	10.4	B	9.4	A	28.2	C	2,653	No	22.6	C	2,806	No
Otay Mesa Rd./Alta Rd.	County	AWSC	EB	32.5	D	9.8	A	**261.3**	**F**	**2,105**	**Yes**	**230.0**	**F**	**908**	**Yes**
			WB	0.0	A	0.0	A	13.9	B	198		**17.5**	C	621	
			NB	9.3	A	8.2	A	13.9	B	436		**22.6**	**C**	**1,367**	
			SB	9.8	A	18.3	C	34.8	D	0		**279.3**	F	0	
			Int	27.6	D	17.2	C	**146.3**	**F**	**2,739**		**203.4**	**F**	**2,896**	

Table 2.1-12 (cont.)
CUMULATIVE (2020) W/ SR-905 1A & 1B INTERSECTION LEVEL OF SERVICE SUMMARY

Intersections	Jurisdiction	Traffic Control	Critical Move	Existing				Cumulative (2020) w/ SR-905 1A & 1B							
				AM Peak		PM Peak		AM Peak				PM Peak			
				Delay	LOS	Delay	LOS	Delay	LOS	Proj. Trips (a)	Impact?	Delay	LOS	Proj. Trips (a)	Impact?
Airway Rd./La Media Rd.	City	AWSC	EB	11.1	B	14.5	B	12.0	B	22	No	13.0	B	9	No
			WB	10.9	B	13.9	B	13.8	B	7		27.1	D	21	
			NB	11.4	B	15.4	C	12.4	B	0		15.9	C	0	
			SB	13.3	B	12.2	B	13.5	B	0		12.0	B	0	
			Int	12.3	B	13.9	B	13.1	B	29		19.3	C	30	
Airway Rd./Sanyo Ave.	City	AWSC	EB	9.0	A	9.0	A	21.5	C	66	**Yes**	21.2	C	28	**Yes**
			WB	8.7	A	10.3	B	**63.6**	**F**	13		**165.5**	**F**	41	
			NB	7.9	A	9.1	A	13.8	B	0		**191.2**	**F**	**0**	
			SB	9.4	A	8.0	A	**312.8**	**F**	7		**46.0**	**E**	**21**	
			Int	9.0	A	9.3	A	**153.8**	**F**	86		**135.0**	**F**	**90**	
Airway Rd./Paseo de las Americas	**County**/City	OWSC	NB	9.7	A	10.6	B	**683.3**	**F**	110	**Yes**	**7,473.4**	**F**	47	**Yes**
Airway Rd./Michael Faraday Dr.	**County**/City	OWSC	NB	9.6	A	9.6	A	13.7	B	154	No	16.7	C	66	No
Airway Rd./Enrico Fermi Dr.	**County**/City	Sig.	Int	6.6	A	13.0	B	21.4	C	1,996	No	24.1	C	2,111	No
Siempre Viva Rd./ SR-905 SB off to Siempre Viva Rd. EB	Caltrans	Sig.	Int	7.0	A	8.5	A	9.3	A	1,165	No	16.5	B	806	No
Siempre Viva Rd./SR-905 SB off to Siempre Viva Rd. WB	Caltrans	OWSC	SB	14.3	B	13.3	B	32.2	D	0	No	18.9	C	0	No
Siempre Viva Rd./SR-905 NB Ramp	Caltrans	Sig.	Int	10.8	B	11.0	B	13.9	B	1,798	No	14.7	B	1,901	No
Siempre Viva Rd./Paseo de las Americas	City	Sig.	Int	24.7	C	40.0	D	47.3	D	1,827	No	51.9	D	1,931	No
Siempre Viva Rd./Michael Faraday Dr.	City	TWSC	NB	14.5	B	13.2	B	**ERR**	**F**	**0**	**Yes**	**ERR**	**F**	**0**	**Yes**
			SB	15.9	C	12.3	B	**ERR**	**F**	**40**		**58.3**	**F**	124	
Siempre Viva Rd./Enrico Fermi Dr.	County/City	Sig.	Int	12.6	B	13.7	B	17.4	B	1,540	No	28.2	C	1,629	No
Alta Rd./Calzada De La Fuente	County	OWSC	WB	14.1	B	12.3	B	16.7	C	86	No	18.8	C	90	No
Alta Rd./Paseo De La Fuente	County	Sig.	Int	2.7	A	12.6	B	14.2	B	86	No	23.5	C	90	No

(a) Project Traffic is representative of what the project would assign to the roadway network if 100% of the project was developed by the year 2020,
LOS=Level of Service; Delay is measured in seconds/vehicle; sig=signalized; AWSC=All Way Stop Controlled; TWSC = Two-Way Stop-Controlled; OWSC=One Way Stop Controlled; Int = Intersection; NB = Northbound Approach; SB = Southbound Approach; EB = Eastbound Approach; WB = Westbound Approach; NBL = Northbound Left; SBX = South Bay Expressway; E-W = East-West Roadway; N-S = North-South Roadway; **Bold** = Jurisdiction which significance criteria is based on; ERR = Delay is too high for the software to calculate
Source: Darnell and Associates 2010.

Table 2.1-13
CUMULATIVE (2020) ILV ANALYSIS SUMMARY

Intersection	Existing				Cumulative (2020) w/ SR-905 1A & 1B			
	AM Peak Hour		PM Peak Hour		AM Peak		PM Peak	
	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition
Otay Mesa Rd./SR-125 SB	701	Stable Flow	677	Stable Flow	517	Stable Flow	507	Stable Flow
Otay Mesa Rd./SR-125 NB	417	Stable Flow	754	Stable Flow	615	Stable Flow	730	Stable Flow
Siempre Viva Rd./ SR-905 SB to EB Siempre Viva Rd.	363	Stable Flow	463	Stable Flow	807	Stable Flow	1,220	Unstable Flow
Siempre Viva Rd./SR-905 NB Ramp	372	Stable Flow	483	Stable Flow	837	Stable Flow	930	Stable Flow

ILV/Hour = Intersecting Lane Vehicles Per Hour; <1,200 ILV/Hour = Stable Flow; 1,200 - 1,500 ILV/Hour = Unstable Flow; 1,500 ILV/Hour = Capacity, Stop and Go Operation; E-W = East-West Roadway; N-S = North-South Roadway
Source: Darnell and Associates 2010.

Table 2.1-14
2030 CONDITIONS ROADWAY SEGMENT DAILY LOS SUMMARY

Roadway Segment	Jurisdiction	Class	Capacity LOS E	2030 without Project			2030 Plus Project Unit 1-5					
				ADT	V/C	LOS	Project Traffic	ADT	V/C	LOS	ΔV/C	Impact?
Otay Mesa Road												
Britannia Blvd. to La Media Rd.	City	6P	60,000	41,249	0.69	C	851	42,100	0.70	C	0.01	No
La Media Rd. to Piper Ranch Rd.	City	6P	60,000	37,749	0.63	C	851	38,600	0.64	C	0.01	No
Piper Ranch Rd. to SR-125	County/City	6P	57,000	26,049	0.46	B	851	26,900	0.47	B	0.01	No
SR-125 to Harvest Rd.	County/City	6P	57,000	40,789	0.72	C	851	41,640	0.73	C	0.01	No
Harvest Rd. to Sunroad Blvd./Sanyo Ave.	County/City	6P	57,000	19,649	0.34	A	851	20,500	0.36	A	0.02	No
Sunroad Blvd./Sanyo Ave. to Vann Centre Dr.	County/City	6P	57,000	21,910	0.38	A	1,490	23,400	0.41	B	0.03	No
Vann Centre Dr. to Enrico Fermi Dr.	County	6P	57,000	19,810	0.35	A	1,490	21,300	0.37	A	0.02	No
Enrico Fermi Dr. to Alta Rd.	County	4M	37,000	11,872	0.32	A	2,128	14,000	0.38	A	0.06	No
Airway Road												
SR-905 to Sanyo Ave.	City	4M	40,000	33,075	0.83	D	425	33,500	0.84	D	0.01	No
Sanyo Ave. to Paseo de las Americas	City	4M	40,000	10,562	0.26	A	638	11,200	0.28	A	0.02	No
Paseo de las Americas to Michael Faraday Dr.	County/City	4M	37,000	14,062	0.38	A	638	14,700	0.40	A	0.02	No
Michael Faraday Dr. to Enrico Fermi Dr.	County/City	4M	37,000	12,262	0.33	A	638	12,900	0.35	A	0.02	No
Enrico Fermi Dr. to Alta Rd.	County	4M	37,000	5,149	0.14	A	851	6,000	0.16	A	0.02	No
Siempre Viva Road												
SR-905 NB to Paseo de las Americas	City	6P	60,000	52,872	0.88	D	2,128	55,000	0.92	D	0.04	No
Paseo de las Americas to Michael Faraday Dr.	City	6P	60,000	34,572	0.58	B	2,128	36,700	0.61	C	0.03	No
Michael Faraday Dr. to Enrico Fermi Dr	City	6P	60,000	29,472	0.49	B	2,128	31,600	0.53	B	0.04	No
Enrico Fermi Dr. to Alta Rd..	County	4M	37,000	23,860	0.64	B	2,340	26,200	0.71	C	0.07	No

Table 2.1-14 (cont.)
2030 CONDITIONS ROADWAY SEGMENT DAILY LOS SUMMARY

Roadway Segment	Jurisdiction	Class	Capacity LOS E	2030 without Project			2030 Plus Project Unit 1-5					
				ADT	V/C	LOS	Project Traffic	ADT	V/C	LOS	ΔV/C	Impact?
La Media Road												
Otay Mesa Rd. to St. Andres Ave.	City	6P	60,000	30,800	0.51	B	0	30,800	0.51	B	0.00	No
St. Andres Ave. to SR-905	City	6P	60,000	30,800	0.51	B	0	30,800	0.51	B	0.00	No
SR-905 to Airway Rd.	City	6P	60,000	18,000	0.30	A	0	18,000	0.30	A	0.00	No
SR-125												
North of Otay Mesa Rd.	SBX	4-Fwy	(b)	76,908	0.84	D	3,192	80,100	0.88	D	0.04	No
SR-905												
Otay Mesa Rd. to Siempre Viva Rd.	Caltrans	6-Fwy	(b)	83,275	0.63	C	425	83,700	0.63	C	0.00	No
South of Siempre Viva Rd.	Caltrans	6-Fwy	(b)	71,023	0.54	B	1,277	72,300	0.55	B	0.01	No
Sanyo Avenue												
Otay Mesa Rd. to Airway Rd.	City	4C	30,000	24,787	0.83	D	213	25,000	0.83	D	0.00	No
Enrico Fermi Drive												
Otay Mesa Rd. to Airway Rd.	County	5M(a)	47,000	36,287	0.77	C	213	36,500	0.78	C	0.01	No
Airway Rd. to Siempre Viva Rd.	City	4M	40,000	13,287	0.33	A	213	13,500	0.34	A	0.01	No
Alta Road												
Calzada de la Fuente to Paseo de la Fuente	County	4C	34,200	12,772	0.37	A	2,128	14,900	0.44	B	0.07	No
Paseo de la Fuente to Otay Mesa Rd.	County	4M	37,000	9,872	0.27	A	2,128	12,000	0.32	A	0.05	No
SR-905												
West of La Media Rd.	Caltrans	8-Fwy	(b)	148,765	0.84	D	7,235	156,000	0.89	D	0.05	No
East of La Media Rd.	Caltrans	8-Fwy	(b)	73,165	0.42	B	7,235	80,400	0.46	B	0.04	No

Segment is located in the City of San Diego- Capacity is based on the upper limits of LOS E per the City of San Diego; Segment is located in the County of San Diego – Capacity is based on the upper limits of LOS E per the County of San Diego; ADT= Average Daily Traffic; LOS= Level of Service; V/C = Volume-to LOS E Capacity Ratio; Fwy. – Freeway; 6P = 6-Lane Prime Arterial; P = Prime Arterial; M = Major Arterial; 4M = 4-Lane Major Arterial; 4C = 4-Lane Collector

Source: Darnell and Associates 2010.

Table 2.1-15
SUMMARY OF REQUIRED MITIGATION MEASURES

Impact	Impact Location (Roadway Segment or Intersection)	Jurisdiction	Scenario (Units Impacted)	Type of Impact	Mitigation	Significance After Mitigation
TI-1	Otay Mesa Road from Sanyo Avenue to Enrico Fermi Drive	County/City	Existing (1-5)	Direct	TM-1: Prior to recordation of the final map for Unit 1 the applicant shall improve the segment of Otay Mesa Road between Sanyo Avenue and Enrico Fermi Drive to a provide a four-lane facility with two lanes in each direction. The segment of Otay Mesa Road between Sanyo Avenue (STA 532 + 00) and the future alignment of Vann Centre Boulevard (STA 549 + 00) will require widening on the north side of the road. The segment of Otay Mesa Road between the future alignment of Vann Centre Boulevard (STA 549 + 00) and Enrico Fermi Drive (STA 572 + 00) will require widening on the north and south side of the road. (Striping concepts for the proposed improvements are provided on Sheet 11 in the Preliminary Route Study prepared by Stevens Cresto Engineering, Inc. located in TIS Appendix Q.) (See TIS Figure 42.)	Less than Significant
TI-2	Otay Mesa Road from Enrico Fermi Drive to Alta Road	County	Existing (1-5) Cumulative 2020	Direct Cumulative	TM-2: Prior to recordation of final map for Unit 1 the applicant shall re-stripe the segment of Otay Mesa Road from Enrico Fermi Drive (STA 572 + 00) to approximately 1,290 feet west of Alta Road (STA 585 + 85) to provide a four-lane facility with two-lanes in each direction. Prior to recordation of the final map for Unit 1 the applicant shall widen the north and south side of Otay Mesa Road from approximately 1,290 feet west of Alta Road (STA 585 + 85) to Alta Road (STA 599 + 00) to provide a four-lane facility with two lanes in each direction and a painted median. (Striping concepts for the proposed improvements are provided on Sheet 11 in the Preliminary Route Study prepared by Stevens Cresto Engineering, Inc. located in TIS Appendix Q.) (See TIS Figure 42.)	Less than Significant
TI-3	Airway Road from SR-905 to Sanyo Avenue	City	Existing (2-5)	Direct	TM-3: Prior to recordation of final map for Unit 2 the applicant shall re-stripe the segment of Airway Road between the SR-905 and Sanyo Avenue to provide a three-lane facility consisting of two eastbound travel lanes and one westbound travel lane within the existing pavement width of the road. (Refer to TIS Figure P-27.)	Less than Significant
TI-4	Interim SR-905 between Heritage Road and Cactus Road	City/Caltrans	Existing (4-5)	Direct	TM-4: Delay recordation of final map for Unit 4 until SR-905 Phase 1B is open to traffic.	Less than Significant

Table 2.1-15 (cont.)
SUMMARY OF REQUIRED MITIGATION MEASURES

Impact	Impact Location (Roadway Segment or Intersection)	Jurisdiction	Scenario (Units Impacted)	Type of Impact	Mitigation	Significance After Mitigation
TI-5	Interim SR-905 between Cactus Road and Britannia Boulevard	City/Caltrans	Existing (4-5)	Direct	TM-5: Delay recordation of final map for Unit 4 until SR-905 Phase 1B is open to traffic.	Less than Significant
TI-6	Otay Mesa Road/Alta Road	County	Existing (1-5) Cumulative 2020	Direct Cumulative	Unit 1 TM-6a: Prior to recordation of final map for Unit 1, the applicant shall signalize and widen the Otay Mesa Road/Alta Road intersection to provide the following lane configurations: • Two eastbound left turn lanes; • One eastbound shared through-right lane; • One westbound shared left-through-right lane; • Two northbound left turn lanes; • One northbound shared through-right lane; and • One southbound shared left-through-right lane. (Refer to TIS Figure 42.) Units 2-5 and Cumulative TM-6b: Prior to recordation of final map for Unit 2 the applicant shall widen the Otay Mesa Road/Alta Road intersection and modify the traffic signal (which was required to be installed to mitigate Unit 1 direct impacts) to provide the following lane configurations: • Two eastbound left turn lanes; • One eastbound through lane; • One eastbound right turn lane; • One westbound shared left-through lane; • One westbound shared through-right lane; • Two northbound left turn lanes; • One northbound shared through-right lane; • One southbound shared left-through-right lane; and • One southbound right turn lane. (Refer to TIS Figure 43.)	Less than Significant
TI-7	Otay Mesa Road/SR-905	County/City/ Caltrans	Existing (2-5)	Direct	TM-7: Delay recordation of final maps for Unit 2 until Phase 1A of SR-905 is open to traffic.	Less than Significant

Table 2.1-15 (cont.)
SUMMARY OF REQUIRED MITIGATION MEASURES

Impact	Impact Location (Roadway Segment or Intersection)	Jurisdiction	Scenario (Units Impacted)	Type of Impact	Mitigation	Significance After Mitigation
TI-8	Otay Mesa Road/Sanyo Avenue	County/City	Existing (2-5)	Direct	TM-8: Prior to recordation of final map for Unit 2, the applicant shall widen the Otay Mesa Road/Sanyo Avenue intersection and modify the existing traffic signal to provide the following lane configurations: • One eastbound through lane; • One eastbound through-right lane; • One westbound left turn lane; • Two westbound through lanes; • One northbound left turn lane; and • One northbound left-right turn lane. (Refer to TIS Figure 43.)	Less than Significant
TI-9	Otay Mesa Road/Enrico Fermi Drive	County	Existing (2-5)	Direct	Units 2-3 TM-9a: Prior to recordation of final map for Unit 2, the applicant shall widen the Otay Mesa Road/Enrico Fermi Drive intersection modify the existing traffic signal to provide the following lane configurations: • One eastbound through lane; • One eastbound through-right lane; • One westbound left turn lane; • Two westbound through lanes; • One northbound left turn lane; and • One northbound right turn lane. (Refer to TIS Figure 43.) Units 4-5 TM-9b: Prior to recordation of final map for Unit 4, the applicant shall widen the Otay Mesa Road/Enrico Fermi Drive intersection and modify the existing traffic signal to provide the following lane configurations: • Two eastbound through lanes; • One eastbound right turn lane; • One westbound left turn lane; • Two westbound through lanes; • Two northbound left turn lanes; and • One northbound right turn lane. (Refer to TIS Figure 45.)	Less than Significant

Table 2.1-15 (cont.)
SUMMARY OF REQUIRED MITIGATION MEASURES

Impact	Impact Location (Roadway Segment or Intersection)	Jurisdiction	Scenario (Units Impacted)	Type of Impact	Mitigation	Significance After Mitigation
TI-10	Otay Mesa Road/Heritage Road	City/Caltrans	Existing (3-5)	Direct	TM-10: Delay recordation of final map for Unit 3 until SR-905 Phase 1B is open to traffic.	Less than Significant
TI-11	Otay Mesa Road/Britannia Boulevard	City/Caltrans	Existing (4-5)	Direct	TM-11: Delay recordation of final map for Unit 4 until SR-905 Phase 1B is open to traffic.	Less than Significant
TI-12	Enrico Fermi Drive between Otay Mesa Road and Airway Road	County	Cumulative 2020	Cumulative	TM-12: Prior to issuance of building permits for the proposed project, the applicant shall pay the County's TIF towards the improvement of Enrico Fermi Drive between Otay Mesa Road (Old Otay Mesa Road) and Airway Road to a four lane facility with two lanes in each direction. (Refer to TIS Figure 47.)	Less than Significant
TI-13	Otay Mesa Road/Vann Centre Boulevard	County	Cumulative 2020	Cumulative	TM-13: Prior to issuance of building permits for the proposed project, the applicant shall pay the County's TIF towards the improvement of Otay Mesa Road (Old Otay Mesa Road)/Vann Centre Boulevard intersection and modifications to provide the following lane configurations: • One eastbound left turn lane; • Two eastbound through lanes; • One westbound through lane; • One westbound shared through-right lane; and • One southbound shared left-right lane. (Refer to TIS Figure 47.)	Less than Significant
TI-14	Airway Road/Sanyo Avenue	City	Cumulative 2020	Cumulative	TM-14: Prior to recordation of the final map for Unit 1 of the proposed project, the applicant shall to the satisfaction of the Director of Public Works and the City of San Diego improve or agree to improve and provide security or identify and provide the appropriate fair-share contribution to construct for a traffic signal at the Airway Road/Sanyo Avenue intersection. The signalization of the intersection shall provide the following lane configurations: • One eastbound shared left-through lane; • One eastbound shared through-right lane; • One westbound left turn lane; • One westbound through lane; • One westbound right turn lane; • One northbound left turn lane; • One northbound shared through-right lane; • One southbound shared left through lane; and • One southbound right turn lane. (Refer to TIS Figure 47.)	Significant (mitigation is outside the jurisdiction of the Lead Agency)

Table 2.1-15 (cont.)
SUMMARY OF REQUIRED MITIGATION MEASURES

Impact	Impact Location (Roadway Segment or Intersection)	Jurisdiction	Scenario (Units Impacted)	Type of Impact	Mitigation	Significance After Mitigation
TI-15	Airway Road/Paseo de las Americas	County/City	Cumulative 2020	Cumulative	TM-15: Prior to issuance of building permits, the applicant shall pay the County's TIF towards the signalization and restriping of the Airway Road/Paseo de las Americas intersection to provide the following lane configurations: • One eastbound left turn lane; • One eastbound through lane; • One eastbound shared through-right lane; • One westbound left turn lane; • One westbound through lane; • One westbound shared through-right lane; • One northbound shared left-through lane; • One northbound right turn lane; and • One southbound left-through-right turn lane. (See TIS Figure 47.)	Less than Significant
TI-16	Siempre Viva Road/Michael Faraday Drive	City	Cumulative 2020	Cumulative	TM-16: Prior to recordation of the final map for Unit 1 of the proposed project, the applicant shall to the satisfaction of the Director of Public Works and the City of San Diego improve or agree to improve and provide security or identify and provide the appropriate fair-share contribution to construct a traffic signal at the Siempre Viva Road/Michael Faraday Drive intersection. The signalization of the intersection should provide the following lane configurations: • One eastbound left turn lane; • One eastbound through lane; • One eastbound shared through right lane; • One westbound left turn lane; • One westbound through lane; • One westbound shared through-right lane; • One northbound shared left-through-right lane; • One southbound shared left-through lane; and One southbound right turn lane. (See TIS Figure 47.)	Significant (mitigation is outside the jurisdiction of the Lead Agency)