Part 2 of 4

Final Environmental Impact Report

Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component

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Attachment 1
Mitigation Monitoring and Reporting Program

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1.1 Purpose

The purpose of this Mitigation Monitoring and Reporting Program (MMRP) is to ensure that the Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component Project implements environmental mitigation, as required by the Final Environmental Impact Report (EIR) for the proposed project. Those mitigation measures have been integrated into this MMRP. The MMRP provides a mechanism for monitoring the mitigation measures in compliance with the EIR, and general guidelines for the use and implementation of the monitoring program are described below.

This MMRP is written in accordance with California Public Resources Code 21081.6 and Section 15097 of the California Environmental Quality Act (CEQA) Guidelines. California Public Resources Code Section 21081.6 requires the Lead Agency, for each project that is subject to CEQA, to adopt a reporting or monitoring program for changes made to the project, or conditions of approval, adopted in order to mitigate or avoid significant effects on the environment and to monitor performance of the mitigation measures included in any environmental document to ensure that implementation takes place. The San Diego Unified Port District (District) is the designated Lead Agency for the MMRP. The Lead Agency is responsible for review of all monitoring reports, enforcement actions, and document disposition. The Lead Agency will rely on information provided by a monitor as accurate and up to date and will field check mitigation measure status as required.

The District may modify how it will implement a mitigation measure, as long as the alternative means of implementing the mitigation still achieves the same or greater impact reduction. Copies of the measures shall be distributed to the participants of the monitoring effort to ensure that all parties involved have a clear understanding of the mitigation monitoring measures adopted.

1.2 Format

Mitigation measures applicable to the project include avoiding certain impacts altogether, minimizing impacts by limiting the degree or magnitude of the action and its implementation, and/or requiring supplemental structural controls. Within this document, approval mitigation measures are organized and referenced by subject category. Each of the mitigation measures has a numerical reference. The following items are identified for each mitigation measure.

- Mitigation Language and Numbering
- Mitigation Timing
- Methods for Monitoring and Reporting
- Responsible Parties

1.3 Mitigation Language and Numbering

Provides the language of the mitigation measure in its entirety.

1.4 Mitigation Timing

The mitigation measures required for the project will be implemented at various times before construction, during construction, prior to project completion, or during project operation.

1.5 Methods for Monitoring and Reporting

The MMRP includes the procedures for documenting and reporting mitigation implementation efforts. As the project proponent, the District is responsible for implementation of all mitigation measures.

1.6 Responsible Parties

For each mitigation measure, the party responsible for implementation, monitoring and reporting, and verifying successful completion of the mitigation measure is identified.

Table 1. Mitigation, Monitoring, and Reporting Program

Mitigation Measures	Timing and Methods	Responsible Parties
Air Quality and Health Risk		
Full TAMT Plan Buildout		
MM-AQ-1: Implement Best Management Practices During Construction of Future TAMT Plan Components. All proponents of future projects shall implement Best Management Practices (BMPs) to reduce air emissions from all construction activities implemented as part of full TAMT plan buildout. The following measures are required to limit construction equipment exhaust from on-road trucks and heavy-duty equipment used during construction. • Ensure that all off-road diesel-powered equipment used during construction between 2020 and 2025 is equipped with the U.S. Environmental Protection Agency (EPA) Tier 3 or cleaner engines, except for specialized construction equipment for which an EPA Tier 3 engine is not available. • Ensure that all off-road diesel-powered equipment used during construction beyond 2025 is equipped with EPA Tier 4 Final or cleaner engines, except for specialized construction equipment for which an EPA Tier 4 Final engine is not available. In addition, all future project proponents shall implement the relevant BMPs, consistent with the applicable industrial Storm Water Pollution Prevention Plan (SWPPP). In no case would any BMP be implemented if it conflicted with the SWPPP or other applicable water quality permit requirements. BMP dust control measures would include, but are not limited to, the following. • Water the grading areas at least twice daily to minimize fugitive dust. • Stabilize graded areas as quickly as possible to minimize fugitive dust. • Apply chemical stabilizer or pave the last 100 feet of internal travel path within the construction site prior to public road entry. • Install wheel washers adjacent to a paved apron prior to vehicle entry on public roads.	**Timing:** During project construction **Method:** Implement specific BMPs during construction	**Implementation:** Project Proponent (during construction), Construction Manager (during construction), and General Contractor (during construction) **Monitoring and Reporting:** Qualified agent, approved by and reporting to the District, District's marine terminal supervisors, Project Proponent **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
• Remove any visible track-out into traveled public streets within 30 minutes of occurrence. • Wet wash the construction access point at the end of each workday if any vehicle travel on unpaved surfaces has occurred. • Provide sufficient perimeter erosion control to prevent washout of silty material onto public roads. • Cover haul trucks or maintain at least 12 inches of freeboard to reduce blow-off during hauling. • Suspend all soil disturbance and travel on unpaved surfaces if winds exceed 25 mph. • Cover/water onsite stockpiles of excavated material. • Enforce a 15 mph speed limit on unpaved surfaces. • On dry days, sweep up any dirt and debris spilled onto paved surfaces immediately to reduce re-suspension of particulate matter caused by vehicle movement. Clean approach routes to construction sites daily for construction-related dirt in dry weather. • Hydroseed, landscape, or develop as quickly as possible all disturbed areas as directed by the San Diego Unified Port District and/or San Diego Air Pollution Control District to reduce dust generation. • Limit the daily grading volumes/area. Prior to the commencement of construction activities, the project proponent shall submit evidence to the San Diego Unified Port District of the project proponent’s compliance with the BMPs and that construction equipment is maintained and properly tuned in accordance with manufacturers’ specifications, which shall be subject to confirmation by the San Diego Unified Port District during construction.		

Mitigation Measures	Timing and Methods	Responsible Parties
MM-AQ-2: Implement Diesel Emission-Reduction Measures During Construction and Operations of Future TAMT Plan Components. The project proponent shall implement the following measures during construction and project operations, subject to verification by the District. **i.** All project proponents shall limit all construction and operations equipment, drayage, and delivery truck idling times by shutting down equipment when not in use and reducing the maximum idling time to less than 3 minutes. The project proponent shall install clear signage regarding the limitation on idling time at the delivery driveway and loading areas and shall submit quarterly reports of violators to the District. This measure shall be enforced by terminal supervisors, and repeat violators shall be subject to penalties pursuant to California airborne toxics control measure 13 California Code of Regulations Section 2485. The project proponent shall submit evidence of the use of diesel emission reduction measures to the District through annual reporting, with the first report due 1 year from the date of project completion and each report due exactly 1 year after, noting all violations with relevant identifying information of the vehicles and drivers in violation of these measures. **ii.** The project proponent shall verify that all construction and operations equipment is maintained and properly tuned in accordance with manufacturers' specifications. Prior to the commencement of construction and operations activities using diesel-powered vehicles or equipment, the project proponent shall verify that all vehicles and equipment have been checked by a certified mechanic and determined to be running in proper condition prior to admittance into any terminal leasehold. The project proponent shall submit a report by the certified mechanic of the condition of the construction and operations vehicles and equipment to the District prior to commencement of their use.	**Timing:** During project construction and operations **Method:** Implement specific diesel-reduction measures during construction and operations	**Implementation:** Project Proponent (during operation and construction), Construction Manager (during construction), and General Contractor (during construction) **Monitoring and Reporting:** Qualified agent, approved by and reporting to the District, District's marine terminal supervisors, Project Proponent **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
MM-AQ-3: Comply with San Diego Unified Port District Climate Action Plan Measures. Prior to approval of all discretionary actions and/or Coastal Development Permits, the project proponent shall be required to implement the following measures to be consistent with the Climate Action Plan. • Vessels shall comply with the District's voluntary vessel speed reduction program, which targets 80 percent compliance. • Eligible vessels shall comply with ARB's at-berth regulation that requires shore power or alternative control technology regulation for 80 percent of eligible calls by 2020, minus idle time to clear customs consistent with California Air Resources Board regulations. This is a project feature made into a mitigation measure to ensure compliance. • Designated truck haul routes shall be used, and the project proponent shall decrease onsite movements where practicable. • No commercial drive-through shall be implemented. • Compliance with Assembly Bill 939 and the City of San Diego's Recycling Ordinance shall be mandatory and shall include recycling at least 50 percent of solid waste; compliance with the City of San Diego's Construction and Demolition Debris Deposit Ordinance shall be mandatory and shall include recycling at least 50 percent of all construction debris. This measure shall be applied during construction and operation of the proposed project. • Light fixtures shall be replaced with lower-energy bulbs such as fluorescent, Light-Emitting Diodes (LEDs), Compact Fluorescent Lights (CFLs), or the most energy-efficient lighting that meets required lighting standards and is commercially available. • Implementation of Climate Action Plan measures will be included as part of any discretionary actions and/or Coastal Development Permit(s) associated with this project. Evidence of implementation and compliance with this mitigation measure shall be provided to the District by the project proponent on an annual basis through 2035 (buildout of the TAMT plan).	**Timing:** During project implementation, through project operation **Method:** Implement specific measures designed to be consistent with the San Diego Unified Port District CAP	**Implementation:** Project Proponent **Monitoring and Reporting:** Qualified agent, approved by the District, Project Proponent **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
MM-AQ-4: Implement Best Available Control Technologies for Conveyor System and Bulk Discharge Unloader for Future Dry Bulk Operations associated with the TAMT Plan. As a condition of approval of any new or amended real estate agreement or Coastal Development Permit for dry bulk operations that would result in an increase in daily or annual throughput over baseline conditions, the San Diego Unified Port District shall require the project proponent to install and use the best available control technologies to achieve a minimum 95% control efficiency for particulate matter in one of the following ways: • Upgrade the existing Conveyor System and Bulk Discharge Unloader (if proposed for use) to meet the minimum 95% control efficiency. • Replace the existing Conveyor System and Bulk Discharge Unloader with a new Conveyor System and Bulk Discharge Unloader that meets the minimum 95% control efficiency and properly dispose of the existing system in compliance with all applicable laws and regulations. • Bypass the existing Conveyor System and Bulk Discharge Unloader and install a new Conveyor System and Bulk Discharge Unloader that meets the minimum 95% control efficiency. The project proponent that finances an upgrade or replacement to the new system may be reimbursed, based on anticipated percent usage, by future users of the system. The San Diego Unified Port District will assist such reimbursement by conditioning its approval of other users of the system during the first 5 years of its operation on reimbursement of the cost of the system on a "fair share" basis. Under no circumstance shall a project proponent seeking discretionary approval for dry bulk operations be allowed to increase daily or annual throughput of dry bulk operations without first completing the upgrade or replacement of the existing system, or installation of a new system required above. The recipient of a discretionary approval by the San Diego Unified Port District subject to this mitigation measure shall provide written evidence of implementation and compliance with this mitigation measure to the San Diego Unified Port District on an annual basis through 2035 (buildout of the TAMT plan).	**Timing:** Prior to the first discretionary action approval and/or Coastal Development Permits related to dry bulk operations **Method:** Upgrade the existing or install a new Conveyor System and Bulk Discharge Unloader that shall include best available control technologies (BACT) that achieve a minimum 95 percent control efficiency for particulate matter. Evidence of implementation and compliance with this mitigation measure shall be provided to the District on an annual basis through 2035	**Implementation:** Project Proponent **Monitoring and Reporting:** District, Project Proponent **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
MM-AQ-5: Implement Vessel Speed Reduction Program Beyond Climate Action Plan Compliance for Future Operations Associated with the TAMT Plan. Every quarter following approval of the first discretionary action approval and/or issuance of the first Coastal Development Permit associated with a future project proposed under the TAMT plan, whichever occurs first, the project proponent shall provide a report of the annual vessel activity and throughput by cargo node to date and the projected total throughput for the previous 6 months to the San Diego Unified Port District's Planning & Green Port Department. Prior to the annual vessel calls reaching 91 calls (76 new calls over existing) for dry bulk, 117 calls (60 new calls over existing) for refrigerated containers, and 96 calls (68 new calls over existing) for multi-purpose general cargo under the MPC scenario (or 79 calls [64 new calls over existing] for dry bulk, 98 calls [41 new calls over existing] for refrigerated containers, and 78 calls [50 new calls over existing] for multi-purpose general cargo under the STC Alternative), or beginning January 1, 2030 for all vessels irrespective of the number of calls occurring on an annual basis, whichever occurs first, the project proponent shall implement vessel speed reduction measures to reduce the project's criteria pollutant emissions. The program shall require that 90 percent of the vessels calling at the project site reduce their speeds to 12 knots starting at 40 nautical miles from Point Loma. Due to the international border to the south and California Air Resources Board limit for rulemaking being 24 nautical miles from the coastline, some vessel calls travel within the San Diego Air Basin for less than 40 nautical miles. For those vessel calls, vessel operators are required to reduce their speeds to 12 knots at the point those vessels enter the San Diego Air Basin and maintain speeds of 12 knots over the entire distance to/from Point Loma. To be compliant with the vessel speed limit, the vessel's weighted average speed shall be 12 knots or less from the 40 nautical mile latitude and longitude positions on each respective route to/from Point Loma. Implementation of this VSR program will be required as part of any discretionary action and/or Coastal Development Permit(s) associated with the TAMT plan. Evidence of implementation and compliance with this mitigation measure shall be provided to the San Diego Unified Port District's Planning & Green Port Department on a	**Timing:** Every quarter following approval of the first discretionary action approval and/or issuance of the first Coastal Development Permit associated with a future project proposed under the TAMT plan, whichever occurs first **Method:** Implement vessel speed reduction measures to reduce the project's net-new criteria pollutant emissions. Provide evidence of implementation and compliance with this mitigation measure	**Implementation:** Project Proponent, District **Monitoring and Reporting:** District, Project Proponent **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
quarterly basis through 2035 (buildout of the TAMT plan). The San Diego Unified Port District will verify compliance through analysis of Automatic Identification System data or by requesting a vessel's Electronic Chart Display Identification System log from the captain.		
MM-AQ-6: Electric Cargo Handling Equipment Upgrades. This measure has multiple steps for compliance, as specified below. A. Prior to January 1, 2020, the San Diego Unified Port District shall ensure that at least three pieces of existing non-electric cargo handling equipment at the terminal are replaced by electric cargo handling equipment, none of which were previously operating at the terminal during the 2013/2014 baseline year of the EIR analysis. Possible ways the electric cargo handling equipment may be obtained include, but are not limited to, the following: 1. Purchased, leased, or otherwise acquired, in whole or in part, through funding provided to a tenant by the San Diego Unified Port District; 2. Purchased, leased, or otherwise acquired, in whole or in part, through funding provided to a tenant by other sources; or 3. Purchased, leased, or otherwise acquired, in whole or in part, by the tenant in compliance with a condition of a discretionary approval issued by the San Diego Unified Port District. Written evidence of the acquisition of the electric cargo handling equipment and the equipment it will replace and remove from further operation at the terminal must be provided to the San Diego Unified Port District. The San Diego Unified Port District shall further ensure that the electric cargo handling equipment is in use at each of the three nodes throughout the expected operating life. This will be accomplished by requiring each tenant that employs electric cargo handling equipment pursuant to this measure to report the equipment's annual number of hours of operation to the San Diego Unified Port District and by requiring the San Diego Unified Port District to monitor use of the electric cargo handling equipment as part of the San Diego Unified Port District's TAMT equipment inventory. B. Prior to January 1, 2025, the San Diego Unified Port District also shall ensure that no fewer than 20 non-electric yard trucks in	**Timing:** Multiple triggers as indicated in the measure. During project implementation, prior to January 1, 2020, again prior to January 1, 2025, and again prior to January 1, 2030 **Method:** Secure funding for and operate three electric pieces of CHE by January 1, 2020. By January 1, 2025, ensure that no fewer than 20 non-electric yard trucks in operation are replaced at the TAMT by 20 electric yard trucks. By January 1, 2030, ensure that no fewer than three existing non-electric reach stackers and ten non-electric forklifts in operation are replaced at the TAMT by three fully electric reach stackers and ten fully electric forklifts	**Implementation:** Project Proponent or District **Monitoring and Reporting:** District, Project Proponent **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
operation are replaced at the TAMT by 20 electric yard trucks. Possible ways the electric yard trucks may be obtained include, but are not limited to, the following: 1. Purchased, leased, or otherwise acquired, in whole or in part, through funding provided to a tenant by the San Diego Unified Port District; 2. Purchased, leased, or otherwise acquired, in whole or in part, through funding provided to a tenant by other sources; or 3. Purchased, leased, or otherwise acquired, in whole or in part, by the tenant in compliance with a condition of a discretionary approval issued by the San Diego Unified Port District. Written evidence of the acquisition of the electric yard trucks, and the non-electric yard trucks they will replace and remove from further operation at the terminal, must be provided to the San Diego Unified Port District. The San Diego Unified Port District shall further ensure that the electric yard trucks are in use at the TAMT throughout the expected operating life of the equipment. Each tenant that employs electric trucks pursuant to this measure shall report the equipment's annual number of hours of operation to the San Diego Unified Port District, and the San Diego Unified Port District shall monitor use of the electric trucks as part of the San Diego Unified Port District's TAMT equipment inventory. C. Prior to January 1, 2030, the San Diego Unified Port District also shall ensure that no fewer than three existing non-electric reach stackers and ten non-electric forklifts in operation are replaced at the TAMT by three fully electric reach stackers and ten fully electric forklifts. Possible ways the electric reach stackers and forklifts may be obtained include, but are not limited to: 1. Purchased, leased, or acquired, in whole or in part, through funding provided to the tenant by the San Diego Unified Port District; 2. Purchased, leased, or acquired, in whole or in part, through funding provided to the tenant by other sources; or 3. Purchased, leased, or otherwise acquired, in whole or in part, by the tenant in compliance with a condition of a discretionary approval issued by the San Diego Unified Port		

Mitigation Measures	Timing and Methods	Responsible Parties
District. Written evidence of the acquisition of the three electric reach stackers and ten electric forklifts and the conventional equipment they will replace and remove from further operation at the terminal must be provided to the San Diego Unified Port District. The San Diego Unified Port District shall further ensure that the electric reach stackers and forklifts are in use at the TAMT throughout the expected operating life of the equipment. Each tenant that employs electric reach stackers or electric forklifts pursuant to this measure shall report the equipment's annual number of hours of operation to the San Diego Unified Port District, and the San Diego Unified Port District shall monitor use of the electric reach stackers and forklifts as part of the San Diego Unified Port District's TAMT equipment inventory. D. The electric equipment employed pursuant to paragraphs A, B, and C of this mitigation measure may be replaced by other technologies or other types of cargo handling equipment as long as the replacement equipment achieves the same or greater criteria pollutant, toxic air contaminant, and greenhouse gas emission reductions as compared to the equipment required by paragraphs A, B, and C of this mitigation measure.		
MM-AQ-7: Annual Inventory Submittal and Periodic Technology Review. The San Diego Unified Port District regularly monitors technologies for reducing air emissions as part of its Climate Action Plan and long-range sustainability goals, which encourage the San Diego Unified Port District and its tenants to use cleaner technologies over time as they become available and feasible. As a condition of approval of any new or amended real estate agreement or Coastal Development Permit, the San Diego Unified Port District shall require the project proponent to submit to the San Diego Unified Port District an annual inventory of all equipment that generates criteria pollutant, toxic air contaminant, and greenhouse gas emissions operated by the project proponent at the TAMT throughout the life of the lease up to 2035 (buildout of the TAMT plan). The equipment inventory shall include the year, make, and model of the equipment that was used in the previous year, including annual hours of operation for each piece of equipment, including but not limited to heavy-duty drayage and	**Timing:** New or amended real estate agreements or Coastal Development Permits require inventories submitted annually. Equipment upgrades will be identified every 3 years, in conjunction with the District's CAP. **Method:** Conduct and maintain an equipment inventory and perform an investigation into emerging zero and near-zero technologies and submit a report to the District. Additional requirements if project reaches 4,000,000 MT in throughput	**Implementation:** Project Proponent **Monitoring and Reporting:** District, Project Proponent **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
non-drayage trucks, yard equipment, assist and ocean-going tugs, ocean-going vessels, bulk material handling equipment, and any other type of cargo handling equipment. The purpose of the inventory is to track emissions and equipment at TAMT and to assist in technological reviews, as described below. To promote new emission control technologies, the San Diego Unified Port District will perform a Periodic Technology Review annually. The Periodic Technology Review will coincide with monitoring and reporting pursuant to the San Diego Unified Port District's Climate Action Plan, and will include the following: 1. Develop and maintain an inventory of equipment in operation at the TAMT that generates criteria pollutant, toxic air contaminant, and greenhouse gas emissions, including the equipment model year, model name, and annual hours of operation, based on the annual tenant inventories submitted to the San Diego Unified Port District as described above. 2. Identify and assist with enforcement of changes to emission regulations for heavy-duty trucks, yard equipment, tugs, vessels, bulk handling equipment, and other equipment that generates criterial pollutant, toxic air contaminant, and greenhouse gas emissions. 3. Identify, and assist with implementation of, any feasible new emissions-reduction technologies that may reduce emissions at the project site, including technologies applicable to heavy-duty trucks, yard equipment, tugs, vessels, and bulk handling equipment. 4. Collaborate with the California Air Resources Board and San Diego Air Pollution Control District to ensure these technologies are available and to identify funding opportunities, including funding from the Prop 1B: Good Movement Emission Reduction Program, among others. 5. Prioritize older equipment in operation at the TAMT that generates the highest levels of criterial pollutant, toxic air contaminant, and greenhouse gas emissions to be replaced based on the level of emissions and cost-effectiveness of the emissions reduction (i.e., biggest reduction per dollar), and identify implementation mechanisms including, but not limited to, tenant-		

Mitigation Measures	Timing and Methods	Responsible Parties
based improvements, grant programs, or a combination thereof, based on regulatory requirements and the feasibility analyses specified in paragraph 3 above. Use the Carl Moyer Program, or similar cost-effectiveness criteria, to assess the economic feasibility (e.g., cost effectiveness) of the identified new technologies. 6. Ensure that any upgraded or retired equipment is accounted for as part of the San Diego Unified Port District's Maritime Emissions Inventory and Climate Action Plan. If Periodic Technology Review identifies new technology that will be effective in reducing emissions compared to the equipment in operation at the time of the review, and the San Diego Unified Port District determines that installation or use of the technology is feasible, the San Diego Unified Port District shall require the use of such technology as a condition of any discretionary approval issued by the San Diego Unified Port District for any new, expanded, or extended operations at the TAMT. Furthermore, the District and/or project proponent must demonstrate that emissions of volatile organic compounds (VOCs) would be less than 75 pounds per day on a peak day once cargo throughput exceeds 4,000,000 metric tons annually. If technological advancements are unable to reduce VOC emissions to 75 pounds per day or less on a peak day, then the District shall limit the number of vessels allowed to no more than three on a peak day once total throughput exceeds 4,000,000 metric tons annually. These operational restrictions will ensure that VOC emissions do not exceed threshold standards established by the San Diego Air Pollution Control District. Verification of compliance with this measure is the responsibility of the District.		
MM-AQ-8: Implement Exhaust Emissions Reduction Program at the Tenth Avenue Marine Terminal. The San Diego Unified Port District shall implement a program at the TAMT by January 1, 2020 to further reduce emissions from terminal-wide emissions sources. A. The program shall be implemented through the Coastal Development Permit process; the tenant leasing process, including the issuance of new, extended, or amended leases; and other short-term real estate agreements at the TAMT. B. The program shall be focused on incentives to reduce criteria	**Timing:** Prior to January 1, 2020 **Method:** Develop and implement an exhaust reduction program for TAMT	**Implementation:** District **Monitoring and Reporting:** District, Project Proponent **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
pollutant, toxic air contaminant, and greenhouse gas emissions by attracting clean vessels, trucks, and equipment to the TAMT—including but not limited to vessels that use shore power while at berth, zero and near-zero emission cargo handling equipment technologies, energy efficiency measures, or renewable energy—and by otherwise incorporating technological and operational practices that reduce criteria pollutant, toxic air contaminant, and greenhouse gas emissions from terminal operations beyond existing regulatory requirements. The program shall include specific incentives for existing and future tenants, which may include but are not limited to: an extended lease term, expedited permit processing, reduced permit fees, and eligibility for grants or other financial assistance. The nature and extent of such incentives will be based on an emissions reduction schedule established by the San Diego Unified Port District for criteria pollutants, toxic air contaminants, and greenhouse gas emissions. C. The program shall identify specific emission reduction equipment and practices that may qualify for incentives, which may include but not be limited to the following. • Vessels: Demonstrate that at least 50 percent of annual vessel calls will be equipped with Tier II or better main and auxiliary engines, as defined by International Convention for the Prevention of Pollution from Ships Annex VI 2008 regulations or other standards set forth by the International Convention for the Prevention of Pollution from Ships, U.S. Environmental Protection Agency, or the California Air Resources Board in the future. • Vessel Hoteling: Demonstrate that vessel calls will use shore power or a California Air Resources Board–approved alternative emission capture and control system or install a shore power or California Air Resources Board–approved alternative emission capture and control system for the purpose of reducing ocean-going vessel hoteling emissions. • Heavy-Duty Trucks: Demonstrate that at least 50 percent of annual cargo throughput will be transported with zero/near-zero emission trucks, hybrid trucks, and/or other alternative truck technologies. To qualify, the trucks must result in		

Mitigation Measures	Timing and Methods	Responsible Parties
emission reductions greater than those required by state and federal regulatory agencies at the time of project approval. • Switch and Line Haul Locomotives: Demonstrate that at least 50 percent of annual cargo will be transported with Tier 3 or above locomotive engines for line-haul, as defined by the U.S. Environmental Protection Agency in 2008 (73 Federal Register 88 25098–25352), and a Tier 3 or above switcher or railcar mover for switching activity at both the terminal and yard. • Terminal Infrastructure: Install electric charging stations and/or other terminal infrastructure and equipment that support and facilitate zero or near-zero emission technologies.		
MM-AQ-9: Use of At-Berth Emission Capture and/or Control System to Reduce Vessel Hoteling Emissions. The San Diego Unified Port District shall require the use of an At-Berth Emission Capture and/or Control System (i.e., Bonnet System) to reduce vessel hoteling emissions prior to terminal-related emissions reaching a cancer risk of 10 per million at the maximally exposed sensitive receptor location. Based on the Health Risk Assessment for the TAMT Redevelopment Plan Environmental Impact Report, an At-Berth Emission Capture and/or Control System shall be required prior to reaching an annual throughput of 691,418 metric tons for dry bulk, assuming no growth in multi-purpose general cargo; an annual throughput of 356,666 metric tons for multi-purpose general cargo (including break bulk, neobulk, roll-on/roll-off, and other non-container, non-dry bulk cargo, and non-liquid bulk cargo), assuming no growth in dry bulk; or any combination of dry bulk and multi-purpose general cargo throughput of 691,418 metric tons, whichever occurs first. The San Diego Unified Port District shall either install directly or enter into a contract with an entity that provides the emission capture and/or control system or an equivalent alternative technology, to reduce emissions from vessels that are unable to cold iron at TAMT or are exempt from the California Air Resources Board's at-berth regulation. The San Diego Unified Port District may charge a fee for the use of an Emissions Capture and Control System (or an alternative at-berth system that reduces vessel hoteling emissions)	**Timing:** Prior to reaching specific throughput numbers indicated within the measure **Method:** Use of an At-Berth Emission Capture and/or Control System (i.e., Bonnet System) to reduce vessel hoteling emissions (or an alternative at-berth system that reduces vessel hoteling emissions at an equivalent level)	**Implementation:** Project Proponent; District **Monitoring and Reporting:** Qualified agent, approved by the District, Proponent **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
based on the vessel type and the length of its stay. The system shall be a technology that has been approved by the California Air Resources Board and meets the requirements set forth in the California Air Resources Board's at-berth regulations. If the San Diego Unified Port District determines the need for an Emissions Capture and Control System (or an alternative at-berth system that reduces vessel hoteling emissions) prior to, or later than, the throughput figures listed above, or if shore power or other future regulatory requirements are able to reduce vessel hoteling emissions, then the requirement for the At-Berth Emission Capture and/or Control System shall be updated and adjusted accordingly, at the San Diego Unified Port District's discretion. All vessels that are not shore-power equipped shall use the Emission Capture and/or Control System (or an alternative at-berth system that reduces vessel hoteling emissions at an equivalent level), provided there are no operational limitations and it is not being used by another vessel. If the Emission Capture and/or Control System is operationally unable to connect to an at-berth vessel or if it is being used by another vessel, multi-purpose/general cargo or dry bulk vessels will be allowed to berth without it.		
Biological Resources		
Demolition and Initial Rail Component		
MM-BIO-1: Avoid Nesting Season for Birds or Conduct Preconstruction Nesting Survey. To ensure compliance with the MBTA and similar provisions under the California Fish and Game Code, the project proponent in direct coordination with the general contractor shall conduct demolition of Transit Shed #1, Transit Shed #2, Warehouse C, the molasses tanks, and other existing structures during the non-breeding season (between September 1 and January 31) or shall implement the following. • If demolition of a structure is scheduled to occur between February 1 and August 31, the project proponent shall retain a qualified biologist (with knowledge of the species to be surveyed) who shall conduct a focused nesting survey prior to demolition of any structures within 1 week of scheduled demolition. A qualified biologist is a person who, by reason of his or her knowledge of the natural sciences and the principles of wildlife biology, acquired by	**Timing:** Prior to demolition of any structures within 1 week of scheduled demolition/construction **Method:** Conduct nesting bird surveys if construction occurs between February 1 and August 31	**Implementation:** Project Proponent, Construction Manager, and General Contractor **Monitoring and Reporting:** Qualified agent, approved by the District, Project Proponent **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
wildlife biology education and experience, performs services including, but not limited to, consultation investigation, surveying, evaluation, planning, or responsible supervision of wildlife biology activities when those professional services require the application of biology principles and techniques. • The survey to look for active nests shall be conducted and results reported in writing to the District for review and approval prior to the commencement of any demolition or construction activities on the project site. The survey shall occur between sunrise and 12:00 p.m., when birds are most active. If no active nests are detected during these survey, the biologist will prepare a letter report to the District documenting the results of the survey. If there is a delay of more than 7 days between when the nesting bird survey is performed and demolition begins, the qualified biologist shall confirm in writing to the District that he/she has resurveyed the structure proposed for demolition and that no new nests have been established. • If the survey confirms an active nest on any of the structures to be demolished, demolition of the structure shall not occur until after a qualified biologist determines that the nest is no longer active or that the young have fledged.		
MM-BIO-2: Avoid Bat Maternity Roosts or Conduct Preconstruction Maternity Bat Roost Survey. If demolition of any structures is scheduled during the bat maternity season when reproductively active females and dependent young could be present (between April 15 and August 31), a qualified biologist (as defined under **MM-BIO-1** and with knowledge of the species to be surveyed) shall conduct a preconstruction survey to determine whether bats are present. The survey shall examine potential suitable roost sites for evidence of bat presence (presence of bats, guano, or urine stains), and it shall be conducted no more than 7 days prior to demolition of the structures. If no active maternity roosts are detected during these survey, the biologist will prepare a letter report to the District documenting the results of the survey. The survey shall be submitted in writing to the District for review and approval prior to the commencement of any demolition activities on the project site. If the biologist determines that the area surveyed does not contain any	**Timing:** No more than 7 days prior to demolition **Method:** Conduct maternity bat roost surveys if construction occurs between April 15 and August 31	**Implementation:** Project Proponent, Construction Manager, and General Contractor **Monitoring and Reporting:** Qualified agent, approved by the District, Project Proponent **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
active maternity roosts, demolition may commence. If active maternity roosts are found, demolition of the structure shall be postponed and roosting structures shall be retained until a qualified biologist has determined that the maternity roost is no longer active and the young can take care of themselves. The need for a construction buffer shall be determined through consultation among the qualified biologist, the District, and CDFW.		
Full TAMT Plan Buildout		
Implement **MM-BIO-1**	**Timing:** Prior to demolition of any structures within 1 week of scheduled demolition/construction **Method:** Conduct nesting bird surveys if construction occurs between February 1 and August 31	**Implementation:** Project Proponent, Construction Manager, and General Contractor **Monitoring and Reporting:** Qualified agent, approved by the District, Project Proponent **Verification:** District
Implement **MM-BIO-2**	**Timing:** No more than 7 days prior to demolition **Method:** Conduct maternity bat roost surveys if construction occurs between April 15 and August 31	**Implementation:** Project Proponent, Construction Manager, and General Contractor **Monitoring and Reporting:** Qualified agent, approved by the District, Project Proponent **Verification:** District
Cultural Resources		
Full TAMT Plan Buildout		
MM-CUL-1: Archaeological Monitoring in Areas of Sensitivity. To reduce potential impacts on CA-SDI-5931, all proposed grading, excavating, and geotechnical testing for the proposed project in the area of potential archaeological sensitivity shall be monitored by a qualified archaeologist(s), who meets the Secretary of the Interior's	**Timing:** Confirmed prior to the issuance of a grading permit; implemented during earthwork activities **Method:** Monitoring by a qualified	**Implementation:** Project Proponent, Construction Manager, and General Contractor

Mitigation Measures	Timing and Methods	Responsible Parties
Professional Qualifications Standards, as promulgated in 36 CFR 61, and a Native American cultural monitor, the latter of which has been requested by the Viejas Band of Kumeyaay Indians. The sensitive portion of the project area, where it is possible that artifacts associated with CA-SDI-5931 could be buried, is immediately east of Warehouse C and south and east of the silo complex and the rail car unloading building, as indicated on Figure 4.4-1. The sensitive area includes the molasses tanks, truck scale building, spur lines north, east, and south of the molasses tanks, and paved and unpaved parking areas near the Crosby Road entrance. The following additional conditions shall only apply to the sensitive portion of the project area indicated on Figure 4.4.-1 during earthwork activities, including grading and trenching. • The Qualified Archaeologist shall participate in a preconstruction meeting to inform all personnel of the potential for historical archaeological materials to be encountered during ground-disturbing activities. • If an isolated artifact or historic period deposit is discovered that requires salvaging, the Qualified Archaeologist shall have the authority to temporarily halt construction activities within 100 feet of the find and shall be given sufficient time to recover the item(s) and map its location with a global positioning system (GPS) device. • If a potentially eligible Native American archaeological resource is discovered, the Qualified Archaeologist shall have the authority to temporarily halt construction activities within 100 feet of the find until a Qualified Archaeologist Principal Investigator (PI) makes a determination regarding the significance of the resource. ○ The PI will notify the District to discuss the significance determination and shall also submit a letter indicating whether additional mitigation is required. If the resource is determined to be not significant, the PI shall submit a letter to the District indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that no further work is required. ○ If the resource is determined to be significant, the PI shall submit an Archaeological Data Recovery Plan that has been	archaeologist(s) for historical archaeological resources	**Monitoring and Reporting:** Qualified archaeologist(s), approved by the District, Project Proponent **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
reviewed by the Native American consultant/monitor, and obtain written approval from the Port to complete data recovery. Impacts on significant resources must be mitigated before ground-disturbing activities in the area of discovery will be allowed to resume. • The Qualified Archaeologist shall treat recovered items in accordance with current professional standards by properly determining provenance, cleaning, analyzing, researching, reporting, and curating them in a collection facility meeting the Secretary of the Interior's Standards, as promulgated in 36 CFR 79, such as the San Diego Archaeological Center. Within 60 days after completion of the ground-disturbing activity, the Qualified Archaeologist shall prepare and submit a final report to the District for review and approval, which shall discuss the monitoring program and its results, and provide interpretations about the recovered materials, noting to the extent feasible each item's class, material, function, and origin.		
Greenhouse Gas Emissions and Climate Change		
MM-GHG-1: Implement Diesel Emission-Reduction Measures During Construction and Operations of Future TAMT Plan Components. The District shall implement the following measures during project construction and operations, subject to verification by the District. i. All project proponents shall limit all equipment, drayage, and delivery truck idling times by shutting down equipment when not in use and reducing the maximum idling time to less than 3 minutes. The project proponent shall install clear signage regarding the limitation on idling time at the delivery driveway and loading areas and shall submit quarterly reports of violators to the District. This measure shall be enforced by terminal supervisors, and repeat violators shall be subject to penalties pursuant to California airborne toxics control measure 13 California Code of Regulations Section 2485. The project proponent shall submit evidence of the use of diesel reduction measures to the District through annual reporting, with the first report due 1 year from the date of project completion and each report due exactly 1 year after, noting all violations with relevant	**Timing:** During project construction and operations **Method:** Implement specific diesel-reduction measures during construction and operations	**Implementation:** Project Proponent (during operation and construction), Construction Manager (during construction), and General Contractor (during construction) **Monitoring and Reporting:** Qualified agent, approved by and reporting to the District, District's marine terminal supervisors, Project Proponent **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
identifying information of the vehicles and drivers in violation of these measures. ii. The project proponent shall verify that all construction and operations equipment is maintained and properly tuned in accordance with manufacturers' specifications. Prior to the commencement of construction and operations activities using diesel-powered vehicles or equipment, the project proponent shall verify that all vehicles and equipment have been checked by a certified mechanic and determined to be running in proper condition prior to admittance into TAMT. The project proponent shall submit a report by the certified mechanic of the condition of the construction and operations vehicles and equipment to the District prior to commencement of their use.		
MM-GHG-2: Comply with San Diego Unified Port District Climate Action Plan Measures. Prior to approval of all discretionary actions and/or Coastal Development Permits, the project proponent shall be required to implement the following measures to be consistent with the Climate Action Plan. • Vessels shall comply with the District's voluntary vessel speed reduction program, which targets 80 percent compliance. • Eligible vessels shall comply with ARB's at-berth regulation that requires shore power or alternative control technology regulation for 80 percent of eligible calls by 2020, minus idle time to clear customs consistent with California Air Resources Board regulations. This is a project feature made into a mitigation measure to ensure compliance. • Designated truck haul routes shall be used, and the project proponent shall decrease onsite movements where practicable. • No commercial drive-through shall be implemented. • Compliance with Assembly Bill 939 and the City of San Diego's Recycling Ordinance shall be mandatory and shall include recycling at least 50 percent of solid waste; compliance with the City of San Diego's Construction and Demolition Debris Deposit Ordinance shall be mandatory and shall include recycling at least 50 percent of all construction debris. This measure shall be applied during construction and operation of the proposed	**Timing:** Confirmation of intent and capability to implement prior to approval of all discretionary actions and/or Coastal Development Permits **Method:** Implement specific measures designed to be consistent with the District's CAP	**Implementation:** Project Proponent, District **Monitoring and Reporting:** District, Project Proponent **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
project. • Light fixtures shall be replaced with lower-energy bulbs such as fluorescent, Light-Emitting Diodes (LEDs), Compact Fluorescent Lights (CFLs), or the most energy-efficient lighting that meets required lighting standards and is commercially available. Implementation of Climate Action Plan measures will be included as part of any discretionary actions and/or Coastal Development Permit(s) associated with this project. Evidence of implementation and compliance with this mitigation measure shall be provided to the District by the project proponent on an annual basis through 2035 (buildout of the TAMT plan).		
MM-GHG-3: Electric Cargo-Handling Equipment Upgrades. Prior to January 1, 2020, the San Diego Unified Port District shall ensure that at least three pieces of existing non-electric cargo-handling equipment (CHE) at the terminal are replaced by electric CHE, none of which were previously operating at the terminal during the 2013/2014 baseline year of the EIR analysis. Possible ways the electric CHE may be obtained include, but are not limited to, the following: 1. Purchased, leased, or otherwise acquired, in whole or in part, through funding provided to a tenant by the San Diego Unified Port District; or 2. Purchased, leased, or otherwise acquired, in whole or in part, through funding provided to a tenant by other sources; or 3. Purchased, leased, or otherwise acquired, in whole or in part, by the tenant in compliance with the condition of a discretionary approval issued by the San Diego Unified Port District. Written evidence of the acquisition of the electric CHE equipment and the equipment it will replace and remove from further operation at the terminal must be provided to the San Diego Unified Port District. The San Diego Unified Port District shall further ensure that the electric CHE is in use at each of the three nodes throughout the expected operating life. This will be accomplished by requiring each tenant that employs electric CHE pursuant to this measure to report the equipment's annual number of hours of operation to the San Diego Unified Port District and by requiring the San Diego Unified Port District to monitor use of the electric CHE as part of the San Diego	**Timing:** During project implementation, prior to January 1, 2020 **Method:** Secure funding for and operate three pieces of electric CHE by January 1, 2020	**Implementation:** Project Proponent or District **Monitoring and Reporting:** District, Project Proponent **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
Unified Port District's TAMT equipment inventory. The electric equipment employed pursuant to this mitigation measure may be replaced by other technologies or other types of CHE as long as the replacement equipment achieves the same or greater criteria pollutant, toxic air contaminant, and greenhouse gas emission reductions as compared to the equipment required by this mitigation measure.		
MM-GHG-4: Electric Cargo-Handling Equipment Upgrades. In addition to the requirements in MM-GHG-3, this measure has multiple steps for compliance, as specified below. A. Implement MM-GHG-3. The three electric cargo-handling equipment pieces required in MM-GHG-3 will continue to be operational through 2035. B. Prior to January 1, 2025, the San Diego Unified Port District also shall ensure that no fewer than 20 non-electric yard trucks in operation are replaced at the TAMT by 20 electric yard trucks. Possible ways the electric yard trucks may be obtained include, but are not limited to, the following: 1. Purchased, leased, or otherwise acquired, in whole or in part, through funding provided to a tenant by the San Diego Unified Port District; or 2. Purchased, leased, or otherwise acquired, in whole or in part, through funding provided to a tenant by other sources; or 3. Purchased, leased, or otherwise acquired, in whole or in part, by the tenant in compliance with the condition of a discretionary approval issued by the San Diego Unified Port District. Written evidence of the acquisition of the electric yard trucks, and the non-electric yard trucks they will replace and remove from further operation at the terminal, must be provided to the San Diego Unified Port District. The San Diego Unified Port District shall further ensure that the electric yard trucks are in use at the TAMT throughout the expected operating life of the equipment. Each tenant that employs electric trucks pursuant to this measure shall report the equipment's annual number of hours of operation to the San Diego Unified Port District and the San Diego Unified Port District shall monitor use of the electric trucks as part of the	**Timing:** Prior to January 1, 2025, and again prior to January 1, 2030 **Method:** By January 1, 2025, ensure that no fewer than 20 non-electric yard trucks in operation are replaced at the TAMT by 20 electric yard trucks. By January 1, 2030, ensure that no fewer than three existing non-electric reach stackers and ten non-electric forklifts in operation are replaced at the TAMT by three fully electric reach stackers and ten fully electric forklifts	**Implementation:** Project Proponent or District **Monitoring and Reporting:** District, Project Proponent **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
San Diego Unified Port District's TAMT equipment inventory. C. Prior to January 1, 2030, the San Diego Unified Port District also shall ensure that no fewer than three existing non-electric reach stackers and ten non-electric forklifts in operation are replaced at the TAMT by three fully electric reach stackers and ten fully electric forklifts. Possible ways the electric reach stackers and forklifts may be obtained include, but are not limited to: 1. Purchased, leased, or acquired, in whole or in part, through funding provided to the tenant by the San Diego Unified Port District; or 2. Purchased, leased, or acquired, in whole or in part, through funding provided to the tenant by other sources; or 3. Purchased, leased, or otherwise acquired, in whole or in part, by the tenant in compliance with a condition of a discretionary approval issued by the San Diego Unified Port District. Written evidence of the acquisition of the three electric reach stackers and ten electric forklifts and the conventional equipment they will replace and remove from further operation at the terminal must be provided to the San Diego Unified Port District. The San Diego Unified Port District shall further ensure that the electric reach stackers and forklifts are in use at the TAMT throughout the expected operating life of the equipment. Each tenant that employs electric reach stackers or electric forklifts pursuant to this measure shall report the equipment's annual number of hours of operation to the San Diego Unified Port District and the San Diego Unified Port District shall monitor use of the electric reach stackers and forklifts as part of the San Diego Unified Port District's TAMT equipment inventory. D. The electric equipment employed pursuant to paragraphs A, B, and/or C of this mitigation measure may be replaced by other technologies or other types of cargo-handling equipment as long as the replacement equipment achieves the same or greater criteria pollutant, toxic air contaminant, and greenhouse gas emission reductions as compared to the equipment required by paragraphs A, B, and/or C of this mitigation measure.		

Mitigation Measures	Timing and Methods	Responsible Parties
MM-GHG-5: Implement Vessel Speed Reduction Program Beyond Climate Action Plan Compliance for Future Operations Associated with the TAMT Plan. Every quarter following approval of the first discretionary action approval and/or issuance of the first Coastal Development Permit associated with a future project proposed under the TAMT plan, whichever occurs first, the project proponent shall provide a report of the annual vessel activity and throughput by cargo node to date and the projected total throughput for the previous 6 months to the San Diego Unified Port District's Planning & Green Port Department. Prior to the annual vessel calls reaching 91 calls (76 new calls over existing) for dry bulk, 117 calls (60 new calls over existing) for refrigerated containers, and 96 calls (68 new calls over existing) for multi-purpose general cargo under the MPC scenario or 79 calls [64 new calls over existing] for dry bulk, 98 calls [41 new calls over existing] for refrigerated containers, and 78 calls [50 new calls over existing] for multi-purpose general cargo under the STC Alternative, or beginning January 1, 2030 for all vessels irrespective of the number of calls occurring on an annual basis, whichever occurs first, the project proponent shall implement vessel speed reduction measures to reduce the project's criteria pollutant emissions. The program shall require that 90 percent of the vessels calling at the project site reduce their speeds to 12 knots starting at 40 nautical miles from Point Loma. Due to the international border to the south and ARB limit for rulemaking 24 nautical miles from the coastline, some vessel calls travel within the San Diego Air Basin for less than 40 nautical miles. For those vessel calls that travel within the San Diego Air Basin for less than 40 nautical miles, vessel operators are required to reduce their speeds to 12 knots at the point those vessels enter the San Diego Air Basin and maintain speeds of 12 knots over the entire distance to/from Point Loma. To be compliant with the vessel speed limit, the vessel's weighted average speed shall be 12 knots or less from the 40-nautical-mile latitude and longitude positions on each respective route to/from Point Loma. Implementation of this vessel speed reduction program will be required as part of any discretionary action and/or Coastal Development Permit(s) associated with the TAMT plan. Evidence of implementation and compliance with this mitigation measure shall be provided to the San Diego Unified Port District's Planning & Green	**Timing:** Every quarter following approval of the first discretionary action approval and/or issuance of the first Coastal Development Permit associated with a future project proposed under the TAMT plan, whichever occurs first **Method:** Implement vessel speed reduction measures to reduce the project's net-new GHG emissions. Provide evidence of implementation and compliance with this mitigation measure	**Implementation:** Project Proponent, District **Monitoring and Reporting:** District, Project Proponent **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
Port Department on a quarterly basis through 2035 (buildout of the TAMT plan). The San Diego Unified Port District will verify compliance through analysis of Automatic Identification System data or by requesting a vessel's Electronic Chart Display Identification System log from the captain.		
MM-GHG-6: Implement a Renewable Energy Project or Purchase the Equivalent Greenhouse Gas Offsets from a California Air Resources Board Approved Registry or a Locally Approved Equivalent Program for Future Operations Associated with the TAMT Plan. Prior to the any discretionary approvals and/or issuance of a Coastal Development Permit(s), the project proponents of future components considered in the TAMT plan shall incorporate renewable energy within the TAMT or within/adjacent to areas of the San Diego Unified Port District's jurisdiction; otherwise, the project proponents shall purchase greenhouse gas reduction credits as specified herein to achieve requisite reductions to meet the 2035 reduction target. This requirement may include a micro-grid or similar type of energy management system to help distribute the loads and/or assist in energy storage. To meet the 2035 reduction target at full TAMT plan buildout (using full-buildout throughput numbers listed in Table 3-3 of Chapter 3, *Project Description*), the renewable energy project must offset 27,625 metric tons of carbon dioxide equivalent ($MTCO_2e$) per year or 130,751 megawatt-hours per year (MWh/year) or the equivalent amount of greenhouse gas offsets under the MPC scenario or 18,206 $MTCO_2e$ per year or 86,172 MWh/year or the equivalent amount of greenhouse gas offsets under the STC Alternative. Because it is unknown if the full buildout will ever be achieved given it is based on market demand, the amount of greenhouse gas offsets (whether from renewable energy or purchasing of offsets) per project proposed under the TAMT plan must reduce its fair share of the full buildout GHG emissions amount (i.e., fair share of 27,625 $MTCO_2e$ under the MPC scenario or 18,206 $MTCO_2e$ under the STC Alternative), which shall be calculated over the entire life of the project proponent's lease agreement with the District or (if no lease) over the life of the project. As such, a calculation of the greenhouse gas emissions that would be generated by a project proponent's project	**Timing:** Prior to any discretionary approvals and/or issuance of a Coastal Development Permit(s), proponent must show how compliance will be achieved **Method:** (1) Incorporate renewable energy within the TAMT, within other areas of the District's jurisdiction, or within the community adjacent (City of San Diego) that achieves the amount of MWh/year of renewable energy identified in the measure Or (2) Demonstrate and provide evidence that the equivalent amounts of GHG offsets, as indicated in the measure, have been achieved Or (3) Purchase the equivalent amount of greenhouse gas offsets from a California Air Resources Board approved registry, or a locally approved equivalent program	**Implementation:** Project Proponent, District **Monitoring and Reporting:** District, Project Proponent **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
over the life of the lease at the TAMT or the project life is required to determine the sufficient amount of renewable energy mitigation or greenhouse gas offsets. This proportion shall be based on anticipated throughput of the project proposed under the TAMT plan and shall include all potential emission sources (e.g., trucks, vessels, employees, cargo handling equipment). Evidence shall be submitted to the District prior to the commencement of construction activities. Because it is unknown how "solar ready" the available rooftop areas are within the TAMT, once at the design phase, the renewable energy project may be determined infeasible. Should this determination of infeasibility be made by the San Diego Unified Port District after considering evidence submitted by the project proponent related to any structural limitations (i.e., the rooftops cannot support a renewable energy system), then three additional options are available, listed here in order of priority. The San Diego Unified Port District shall either require the renewable energy project to be built off site within the San Diego Unified Port District's jurisdiction, or within the adjacent community (City of San Diego), or shall require the proponent to purchase the equivalent amount of greenhouse gas offsets from a California Air Resources Board approved registry, or a locally approved equivalent program. The selected option or a combination of the above-mentioned options must achieve a total annual reduction of 27,625 $MTCO_2e$ at full TAMT plan buildout under the MPC scenario or 18,206 $MTCO_2e$ under the STC Alternative assuming throughput numbers are reached by this point in time. Otherwise, the reduction amount will be proportional to the growth experienced at the TAMT, achieve the same reductions noted in the analysis, and scaled to the actual growth that occurs.		
MM-GHG-7: **Annual Inventory Submittal and Periodic Technology Review.** The San Diego Unified Port District regularly monitors technologies for reducing air emissions as part of its Climate Action Plan (CAP) and long-range sustainability goals, which encourages the San Diego Unified Port District and its tenants to use cleaner technologies over time as they become available and feasible. As a condition of approval of any new or amended real estate agreement or Coastal Development Permit, the San Diego Unified Port District shall require the project proponent to submit to the San Diego Unified Port	**Timing:** See timing under MM-AQ-7 **Method:** Conduct and maintain an equipment inventory and perform an investigation into emerging zero and near-zero technologies and submit a report to the District. Additional requirements if project reaches 4,000,000 MT in throughput	**Implementation:** Project Proponent **Monitoring and Reporting:** District, Project Proponent **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
District an annual inventory of all equipment that generates criteria pollutant, toxic air contaminant, and greenhouse gas emissions operated by the project proponent at the TAMT throughout the life of the lease up to 2035 (buildout of the TAMT plan). The equipment inventory shall include the year, make, and model of the equipment that was used in the previous year, including annual hours of operation for each piece of equipment, including but not limited to heavy duty drayage and non-drayage trucks, yard equipment, assist and ocean going tugs, ocean going vessels, bulk material handling equipment, and/or any other type of cargo handling equipment. The purpose of the inventory is to track emissions and equipment at TAMT and to assist in technological reviews, as described below, To promote new emission control technologies, the San Diego Unified Port District will perform a Periodic Technology Review (PTR) annually. The PTR will coincide with monitoring and reporting pursuant to the San Diego Unified Port District's CAP, and will include the following: 1. Develop and maintain an inventory of equipment in operation at the TAMT that generates criteria pollutant, toxic air contaminant, and greenhouse gas emissions, including the equipment model year, model name, and annual hours of operation, based on the annual tenant inventories submitted to the San Diego Unified Port District as described above. 2. Identify and assist with enforcement of changes to emission regulations for heavy-duty trucks, yard equipment, tugs, vessels, bulk handling equipment, and other equipment that generates criteria pollutant, toxic air contaminant, and greenhouse gas emissions. 3. Identify, and assist with implementation of, any feasible new emissions-reduction technologies that may reduce emissions at the project site, including technologies applicable to heavy-duty trucks, yard equipment, tugs, vessels, and bulk handling equipment. 4. Collaborate with the California Air Resources Board and San Diego Air Pollution Control District to ensure these technologies are available and to identify funding opportunities, including funding from the Prop 1B: Good Movement Emission Reduction		

Mitigation Measures	Timing and Methods	Responsible Parties
Program, among others. 5. Prioritize older equipment in operation at the TAMT that generates the highest levels of criteria pollutant, toxic air contaminant, and greenhouse gas emissions to be replaced based on the level of emissions and cost effectiveness of the emissions reduction (i.e., biggest reduction per dollar), and identify implementation mechanisms including, but not limited to, tenant-based improvements, grant programs, and/or a combination thereof, based on regulatory requirements and the feasibility analyses specified in paragraph 3 above. Utilize the Carl Moyer Program, or similar cost-effectiveness criteria, to assess the economic feasibility (e.g., cost effectiveness) of the identified new technologies. 6. Ensure that any upgraded and/or retired equipment is accounted for as part of the San Diego Unified Port District's Maritime Emissions Inventory and Climate Action Plan. If Periodic Technology Review identifies new technology that will be effective in reducing emissions compared to the equipment in operation at the time of the review, and the San Diego Unified Port District determines that installation or use of the technology is feasible, the San Diego Unified Port District shall require the use of such technology as a condition of any discretionary approval issued by the San Diego Unified Port District for any new, expanded, or extended operations at the TAMT. Furthermore, the District and/or project proponent must demonstrate that emissions of volatile organic compounds (VOCs) would be less than 75 pounds per day on a peak day once cargo throughput exceeds 4,000,000 metric tons annually. If technological advancements are unable to reduce VOC emissions to 75 pounds per day or less on a peak day, then the District shall limit the number of vessels allowed to no more than three on a peak day once total throughput exceeds 4,000,000 metric tons annually. These operational restrictions will ensure that VOC emissions do not exceed threshold standards established by the San Diego Air Pollution Control District. Verification of compliance with this measure is the responsibility of the District.		

Mitigation Measures	Timing and Methods	Responsible Parties
MM-GHG-8: Exhaust Emissions Reduction Program at the Tenth Avenue Marine Terminal. The San Diego Unified Port District shall implement a program at the TAMT by January 1, 2020 to further reduce emissions from terminal-wide emissions sources. A. The program shall be implemented through the Coastal Development Permit process, the tenant leasing process, including the issuance of new, extended or amended leases, and other short-term real estate agreements at the TAMT. B. The program shall be focused on incentives to reduce criteria pollutant, toxic air contaminant, and greenhouse gas emissions by attracting clean vessels, trucks, and equipment to the TAMT, including but not limited to vessels that utilize shore power while at berth, zero and near-zero emission cargo handling equipment technologies, energy efficiency measures and/or renewable energy, and by otherwise incorporating technological and operational practices that reduce criteria pollutant, toxic air contaminant, and greenhouse gas emissions from terminal operations beyond existing regulatory requirements. The program shall include specific incentives for existing and future tenants, which may include but is not limited to an extended lease term, expedited permit processing, reduced permit fees, and eligibility for grants or other financial assistance. The nature and extent of such incentives will be based on an emissions reduction schedule established by the San Diego Unified Port District for criteria pollutants, toxic air contaminants, and greenhouse gas emissions. C. The program shall identify specific emission-reduction equipment and practices that may qualify for incentives, which may include but not be limited to the following. o Vessels: Demonstrate that at least 50% of annual vessel calls will be equipped with Tier II or better main and auxiliary engines, as defined by the International Convention for the Prevention of Pollution from Ships Annex VI 2008 regulations or other standards set forth by the International Convention for the Prevention of Pollution from Ships, the U.S. Environmental Protection Agency, and/or California Air Resources Board in the future.	**Timing:** Prior to January 1, 2020 **Method:** Develop and implement an exhaust reduction program for TAMT	**Implementation:** District **Monitoring and Reporting:** District, Project Proponent **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
○ Vessel Hoteling: Demonstrate that vessel calls will utilize shore power or a California Air Resources Board-approved alternative emission capture and control system or install a shore power or California Air Resources Board-approved alternative emission capture and control system for the purpose of reducing ocean-going vessel hoteling emissions. ○ Heavy-Duty Trucks: Demonstrate that at least 50% of annual cargo throughput will be transported with zero/near-zero emission trucks, hybrid trucks, and/or other alternative truck technologies. To qualify, the trucks must result in emission reductions greater than those required by state and federal regulatory agencies at the time of project approval. ○ Switch and Line Haul Locomotives: Demonstrate that at least 50% of annual cargo will be transported with Tier 3 or above locomotive engines for line haul, as defined by the U.S. Environmental Protection Agency in 2008 (73 *Federal Register* 88 25098–25352), and a Tier 3 or above switcher or railcar mover for switching activity at both the terminal and yard. ○ Terminal Infrastructure: Install electric charging stations and/or other terminal infrastructure and equipment that support and facilitate zero or near-zero emission technologies.		
MM-GHG-9: Use of At-Berth Emission Capture and/or Control System to Reduce Vessel Hoteling Emissions. The San Diego Unified Port District shall require the use of an At-Berth Emission Capture and/or Control System (i.e., bonnet system) to reduce vessel hoteling emissions prior to terminal-related emissions reaching a cancer risk of 10 per million at the maximally exposed sensitive receptor location. Based on the Health Risk Assessment, located in Section 4.2 of the TAMT Redevelopment Plan Environmental Impact Report, an At-Berth Emission Capture and/or Control System shall be required prior to reaching an annual throughput of 691,418 metric tons for dry bulk assuming no growth in multi-purpose general cargo, or an annual throughput of 356,666 metric tons for multi-purpose general cargo (includes break bulk, neobulk, roll-on/roll-off, and other non-container, non-dry bulk cargo, and non-liquid bulk cargo)	**Timing:** Prior to reaching specific throughput numbers indicated within the measure **Method:** Use of an At-Berth Emission Capture and/or Control System (i.e., Bonnet System) to reduce vessel hoteling emissions (or an alternative at-berth system that reduces vessel hoteling emissions at an equivalent level)	**Implementation:** Project Proponent; District **Monitoring and Reporting:** Qualified agent, approved by the District, Proponent **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
assuming no growth in dry bulk, or a combined annual throughput of 691,418 metric tons for the dry bulk and multi-purpose/general cargo nodes, whichever occurs first. The San Diego Unified Port District shall either install directly or enter into a contract with an entity that provides the Emission Capture and/or Control System or an equivalent alternative technology, to reduce emissions from vessels that are unable to cold iron at TAMT and/or are exempt from the California Air Resources Board's at-berth regulation. The San Diego Unified Port District may charge a fee for the use of an Emissions Capture and Control System (or an alternative at-berth system that reduces vessel hoteling emissions) based on the vessel type and the length of its stay. The system shall be a technology that has been approved by the California Air Resources Board, and meets the requirements set forth in the California Air Resources Board's at-berth regulations. If the San Diego Unified Port District determines the need for an Emissions Capture and Control System (or an alternative at-berth system that reduces vessel hoteling emissions) prior to, or later than, the throughput figures listed above, or if shore power or other future regulatory requirements are able to reduce vessel hoteling emissions, then the requirement for the At-Berth Emission Capture and/or Control System shall be updated and adjusted accordingly, at the San Diego Unified Port District's discretion. All vessels that are not shore-power equipped shall use the Emission Capture and Control System (or an alternative at-berth system that reduces vessel hoteling emissions at an equivalent level), provided there are no operational limitations and it is not being used by another vessel. If the Emission Capture and Control System is operationally unable to connect to an at-berth vessel, or if it is being used by another vessel, multi-purpose/general cargo and/or dry bulk vessels will be allowed to berth without it.		
Hazards and Hazardous Materials		
Demolition and Initial Rail Component		
MM-HAZ-1: Compliance with Soil Management Plan. Prior to approval of the project grading plans and the commencement of any construction activities that would disturb the soil, the District or tenant, whichever is appropriate, and the contractor (collectively "Contractor") shall demonstrate compliance with the *10th Avenue*	**Timing:** Prior to the issuance of grading permits and during earthwork **Method:** Demonstrate compliance with the specific requirements of the *10th Avenue*	**Implementation:** District or Project Proponent, Construction Manager, and General Contractor

Mitigation Measures	Timing and Methods	Responsible Parties
Marine Terminal, San Diego, CA, Soil Management Plan, prepared by Tetra Tech EM, Inc., November 24, 2010 (Appendix J-1 of the Draft EIR) and consider the existing presence of the permitted underground storage tank on site (shown on Figure 4.7-1). Specifically, the Contractor shall demonstrate compliance with the following specific requirements of the plan including, but not limited to, the following. Conduct Soil Testing. The Contractor shall comply with the excavated soil management techniques specified in the plan. The Contractor shall follow the soil sampling protocol and soil sampling objectives, and shall comply with the soil characterization methodology identified within the plan. *Prepare and Implement a Community Health and Safety Program.* The Contractor shall develop and implement a site-specific Community Health and Safety Program (Program) that addresses the chemical constituents of concern for the project site. The guidelines of the Program shall be in accordance with the County of San Diego's Department of Environmental Health's Site Assessment and Mitigation Manual (2009) and Environmental Protection Agency. Program shall include detailed plans on air monitoring and other appropriate construction means and methods to minimize the public's and site workers' exposure to the chemical constituents. The contractor shall utilize a Certified Industrial Hygienist with significant experience with chemicals of concern on the project site to approve the Program and actively monitor compliance with the Program during construction activities. *Complete Soil Disposal.* Any soil disturbed by construction activities shall be profiled and disposed of in accordance with California Administrative Code, Title 22, Division 4.5 requirements. If soils are determined to be appropriate for reuse, they may be exported to Chula Vista Bayfront Harbor District area for use as fill material, provided the area is not previously developed and not classified as an environmentally sensitive area. Several Chula Vista Bayfront Harbor District parcels that have been cleared through the environmental review process to be used as streets and surface parking and to support subsequent development have been identified as appropriate locations to receive soils deemed suitable for reuse in Appendix J-3. If soils are determined to be hazardous and not suitable for reuse,	*Marine Terminal, San Diego, CA, Soil Management Plan, prepared by Tetra Tech EM, Inc., November 24, 2010* or as updated	**Monitoring and Reporting:** Qualified agent, approved by the District, Project Proponent **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
they shall be disposed of at a regulated Class I landfill. Soils shall be transported in accordance with the Soil Management Plan. Soils to be loaded into trucks for offsite disposal at a Class I landfill shall be moistened with a water spray or mist for dust control in accordance with Section 4.7, Dust Control, of the Soil Management Plan. If dust is visible, positive means shall be applied immediately to prevent airborne dust. Care shall be used to minimize the amount of water applied to soils that may contain elevated concentrations of contaminants. Loaded truck beds shall be covered with a tarp or similar covering device during transportation to the disposal facility. The truck shall be decontaminated after the soil has been removed. The Contractor shall minimize excess water generated during truck decontamination to the extent possible and shall be responsible for proper disposal of any contaminated water generated during truck cleanout.		
MM-HAZ-2: Implement Engineering Controls and Best Management Practices during Construction. Prior to construction, a site-specific Health and Safety Plan shall be prepared by the contractor and approved by a licensed California Certified Industrial Hygienist. The Health and Safety Plan shall be prepared per the requirements of 29 Code of Regulations 1910.120 and California Code of Regulations, Title 8, along with applicable federal, state, and local regulations and statutes. During construction, the contractor shall employ engineering controls and BMPs to minimize human exposure to potential contaminants, if encountered. Engineering controls and construction BMPs shall include but not be limited to the following. • Where required by the Health and Safety Plan, the contractor employees working on site shall be certified in the Occupational Health and Safety Administration's 40-hour Hazardous Waste Operations and Emergency Response training. • Contractor shall monitor the area around the construction site for fugitive vapor emissions with appropriate field screening instrumentation. • Contractor shall monitor excavation through visual observation by a qualified hazardous materials specialist to look for readily noticeable evidence of contamination, such as staining or odor. • Contractor shall water/mist soil as it is being excavated and	**Timing:** Prior to the issuance of construction permits and during construction **Method:** Implement engineering controls and BMPs	**Implementation:** Project Proponent, Construction Manager, and General Contractor **Monitoring and Reporting:** Qualified agent, approved by the District, Project Proponent **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
loaded onto transportation trucks. • Contractor shall place any stockpiled soil in areas shielded from prevailing winds and shall cover all stockpiles to prevent soil from eroding. Contactor shall thoroughly decontaminate all construction equipment that has encountered and/or handled lead-impacted soil prior to leaving the work site.		
Noise and Vibration		
Full TAMT Plan Buildout		
MM-NOI-1: Design and Implement Feasible Acoustical Treatments for Future Systems and Equipment to Reduce Operational Noise Levels at Nearby Noise-Sensitive Land Uses. Because the potential components described in the buildout condition may only be analyzed at a program level at this time, the District shall retain a qualified acoustical professional, which is defined as someone who is practiced in the science of noise transmission and abatement for a minimum of 5 years in a professional capacity, to evaluate and design acoustical treatments for project facilities once system design plans are available. This shall include design plans for any proposed cranes, dry bulk discharge system, conveying system, loading systems, and buildings added to the terminal under the TAMT plan. The acoustical professional shall evaluate acoustical treatment measures for each piece of equipment or system described herein, individually and in combination with one another (to the extent design plans are available for others), to determine feasibility and the potential to reduce overall noise levels at nearby noise-sensitive receptors. Measures that are available (but not necessarily feasible) include, but are not limited to, the following. • Installing equipment inside of acoustical enclosures, where feasible • Installing intake and/or exhaust silencers, where feasible • Using low-noise motors • Placing sound barriers around noise-generating equipment Each of these measures will be designed and evaluated for design feasibility, achievable noise reduction, and economic feasibility at noise-sensitive receiver locations, all of which are to be determined by	**Timing:** Once final system design plans are available for future components and prior to issuance of construction permits **Method:** Retain a qualified acoustical professional to evaluate and design acoustical treatments for project facilities once system design plans are available	**Implementation:** District **Monitoring and Reporting:** District **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
the District and not any tenants. If one or more acoustical treatments are incorporated into the facility design, verification noise monitoring shall be conducted at each affected location to determine the effectiveness of acoustical treatments, and to evaluate whether compliance with applicable noise standards is achieved.		
MM-NOI-2: Initiate and Maintain a Complaint and Response Tracking Program. Prior to the commencement of operations of the TAMT plan, the District shall designate a noise disturbance coordinator. The coordinator will be responsible for responding to complaints regarding noise from project operations, will investigate the cause of the complaint, and will ensure that reasonable measures are implemented to correct the problem, where feasible. A contact telephone number for the noise disturbance coordinator will be conspicuously posted at the main entrance to the project site and in other reasonable locations, as appropriate, to ensure the contact information is easily obtained. This measure shall be implemented in combination with MM-NOI-1, which provides several examples of what type of noise attenuation measures may be feasible. The goal of this measure is to provide additional information regarding the sources of loud noises and to assist in the design and implementation of measures to reduce the noise to a level that would be at or below the applicable noise standards for the land use experiencing the excessive noise.	**Timing:** Prior to project operation **Method:** Designate a noise disturbance coordinator and initiate and maintain a noise complaint and response tracking program	**Implementation:** District **Monitoring and Reporting:** District; or qualified agent for the District **Verification:** District
MM-NOI-3: Implement a Construction Noise Reduction Plan. Prior to the commencement of demolition or construction activity, the District shall prepare and implement a noise reduction plan including best practices to reduce construction noise at noise-sensitive land uses, such that a temporary increase of more than 5 dB in noise levels does not occur at adjacent noise-sensitive uses. Measures to be included in the noise reduction plan to limit construction noise include the following. • Locating stationary equipment (e.g., generators, compressors, rock crushers, cement mixers, idling trucks) as far as possible from noise-sensitive land uses • Prohibiting gasoline or diesel engines from having unmuffled exhaust • Requiring that all construction equipment powered by gasoline or	**Timing:** Prior to demolition or construction **Method:** Prepare and implement a construction noise reduction plan	**Implementation:** District **Monitoring and Reporting:** District; qualified agent of the District **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
diesel engines have sound-control devices that are at least as effective as those originally provided by the manufacturer and that all equipment be operated and maintained to minimize noise generation • Preventing excessive noise by limiting idle times for vehicles or equipment to 3 minutes, consistent with MM-AQ-2 • Using noise-reducing enclosures around stationary noise-generating equipment • Constructing temporary barriers between noise sources and noise-sensitive land uses or taking advantage of existing barrier features (e.g., terrain, structures) to block sound transmission to noise-sensitive land uses. The barriers shall be designed to obstruct the line of sight between the noise-sensitive land use and onsite construction equipment.		
Transportation, Circulation, and Parking		
Demolition and Initial Rail Component		
MM-TRA-1: Transportation Demand Management (TDM) Plan During Demolition and Initial Rail Component Construction. Prior to commencing construction activities associated with the Demolition and Initial Rail Component, the District shall prepare a TDM plan to reduce potential significant temporary construction-related transportation and parking impacts at the intersection of Norman Scott Road/32nd Street/Wabash Boulevard. The TDM plan shall be implemented during construction to reduce congestion at the Norman Scott Road/32nd Street/Wabash Boulevard intersection by limiting the number of construction worker trips that travel through the affected intersection during peak hours. The TDM plan shall incorporate TDM strategies to be implemented during construction, including, but not limited to, the following. • Implementation of a ride-sharing program to encourage carpooling among workers. • Adjusting work schedules so workers do not access the site during the peak hours. • Provide offsite parking locations for workers outside of the area with shuttle services to bring them on site. • Provide subsidized transit passes for construction workers.	**Timing:** Prior to construction **Method:** Prepare a TDM plan	**Implementation:** District **Monitoring and Reporting:** District **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
• Coordinate with the City of San Diego (which may also include coordination with the local planning group) for additional ideas.		
Full TAMT Plan Buildout		
MM-TRA-2: Traffic Study and Transportation Demand Management (TDM) for Specific Construction Projects. Prior to the approval of any construction activities associated with future components of the TAMT plan, the District shall retain a qualified traffic engineer to prepare a traffic study to analyze the potential transportation impacts associated with the specific construction project. The report shall consider any overlapping construction projects on the TAMT. If the traffic study determines that the proposed construction activity may have a significant impact, the traffic study shall recommend mitigation measures to avoid or reduce the potential impact. The traffic study shall specifically consider if a TDM plan is required to address potential temporary traffic impacts from construction vehicles and equipment. If determined necessary, the TDM plan shall incorporate TDM strategies to be implemented during construction, including, but not limited to, the following. • Implementation of a ride-sharing program to encourage carpooling among workers. • Adjusting work schedules so workers do not access the site during the peak hours. • Provide offsite parking locations for workers outside of the area with shuttle services to bring them on site. • Provide subsidized transit passes for construction workers. • Coordinate with the City of San Diego (which may also include coordination with the local planning group) for additional ideas.	**Timing:** Prior to the issuance of construction permits **Method:** Retain a qualified traffic engineer to prepare a traffic study to analyze the potential transportation impacts associated with the specific construction project	**Implementation:** District **Monitoring and Reporting:** District **Verification:** District
MM-TRA-3: Widen the Segment of 28th Street between Boston Avenue and National Avenue to a Four-Lane Major Arterial Classification Consistent with the Barrio Logan Community Plan. The District currently has an established program to track the number of trucks that enter and exit the terminal each year associated with TAMT operations. Prior to generating an additional 161 new daily truck trips, the District shall pay a fair-share contribution (MPC would be responsible for 3.9% and STC would be responsible for 2.8%) of	**Timing:** Prior to generating an additional number of new daily truck trips indicated in the measure **Method:** Pay a fair-share contribution of the cost to widen the roadway segment as indicated in the measure	**Implementation:** District **Monitoring and Reporting:** District **Verification:** District, City of San Diego

Mitigation Measures	Timing and Methods	Responsible Parties
the cost to widen the roadway segment of 28th Street between Boston Avenue and National Avenue to a Four-Lane Major Arterial classification. The improvement is identified within the draft Barrio Logan Community Plan, and therefore would be paid to the City of San Diego in accordance with Section 142.0640 of the San Diego Municipal Code. Payment of the District's fair share shall be completed prior to reaching 161 new daily truck trips. In order to ensure the significant impact does not occur before the District has paid its fair share to the City, the District shall initiate payment once approximately 150 new daily truck trips are reached under the proposed project. The trigger will be determined by the District by examining the ADT over a 1-month timeframe and comparing the ADT to the baseline of 93 daily trucks generating 186 trips per day (33,349 trucks per year divided by 360 days multiplied by 2 trips for each truck) and 935 daily employee trips (315 existing employees multiplied by 3 trips per day). At the District's discretion, the District may seek reimbursement from tenants that would contribute new daily trips in proportion to their contribution.		
MM-TRA-4: Westbound Right-Turn Overlap Phase at Norman Scott Road/32nd Street/ Wabash Boulevard Intersection. The San Diego Unified Port District currently has an established program to track the number of trucks that enter and exit the terminal each year associated with TAMT operations. Prior to generating an additional 195 new daily trips, the San Diego Unified Port District shall coordinate with the California Department of Transportation to determine the San Diego Unified Port District's fair share payment to fund the addition of a westbound right-turn overlap phase to the intersection of Norman Scott Road/32nd Street/Wabash Boulevard, a California Department of Transportation–controlled intersection, to improve the delay caused by the proposed project. This would reduce the delay associated with the project by 20.8 seconds during the AM peak hour and by 19.9 seconds during the PM peak hour compared to unmitigated conditions, and would effectively reduce delay at this intersection to below current levels. (Note, for the STC Alternative, this mitigation measure would reduce the unmitigated delay associated with this alternative by 19.4 seconds during the AM peak hour and by 19.3 seconds during the PM peak hour.) In order to ensure the significant impact does not occur before the San Diego	**Timing:** Prior to generating an additional number of new daily trips indicated in the measure **Method:** Coordinate with Caltrans to determine the District's fair share payment to fund the addition of a westbound right-turn overlap phase	**Implementation:** District **Monitoring and Reporting:** District **Verification:** District, Caltrans

Mitigation Measures	Timing and Methods	Responsible Parties
Unified Port District has paid its fair share to the California Department of Transportation, the San Diego Unified Port District shall initiate payment once approximately 150 new daily trips are reached under the proposed project. The trigger will be determined by the San Diego Unified Port District by examining the average daily trips over a 1-month timeframe and comparing the average daily trips to the baseline of 93 daily trucks generating 186 trips per day (33,349 trucks per year divided by 360 days multiplied by 2 trips for each truck) and 935 daily employee trips (315 existing employees multiplied by 3 trips per day). At the San Diego Unified Port District's discretion, the San Diego Unified Port District may seek reimbursement from tenants that would contribute new daily trips in proportion to their contribution.		
MM-TRA-5: District Shall Inform All TAMT Workers to Park at the TAMT Facility or at an Authorized Offsite Parking Lot or Parking Garage. All TAMT workers, employees, and contractors are prohibited from using on-street parking or from parking at the neighboring Cesar Chavez Park. If no parking is available on the project site, the District's marine terminal supervisors shall inform all dock workers that they shall park within a parking garage or surface parking lot.	**Timing:** During project operation **Method:** Inform all dock workers to park within a parking garage or surface parking lot	**Implementation:** District **Monitoring and Reporting:** District **Verification:** District
MM-TRA-6: District to Maintain a Parking Inventory of TAMT. The inventory shall be initiated once the District's maritime operations staff identifies that an average of 475 employees are present at the project site during any single 8-hour shift, or the inventory shall be initiated if any future components of the TAMT plan remove any of the parking areas identified within the EIR to come within 50 parking spaces of an onsite parking deficit. The inventory of the parking supply and demand at the TAMT shall be created and maintained by the District. The inventory shall include the following considerations and requirements: i. The inventory shall include all existing tenants, including tenant-specific parking lots or parking spaces identified in their lease and all non-exclusive parking spaces available at the TAMT. ii. The inventory shall include any parking required by the District's existing operations. iii. Once the trigger to prepare an inventory occurs, the inventory	**Timing:** Once the number of employees indicated in the measure are present at the project site during any single 8-hour shift or prior to coming within a 50 space parking deficit **Method:** Create and maintain an inventory of the parking supply and demand at the TAMT	**Implementation:** District **Monitoring and Reporting:** District, tenants **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
shall be updated for each new project component, new lease, or lease renewal where additional parking is required. iv. The inventory shall account for both construction- and operation-related parking supply and demand, but shall update the inventory once construction is completed and construction parking is no longer necessary. v. A determination of the surplus or deficit of parking on TAMT.		
MM-TRA-7: Proponents for Future Project Components, New Leases, or Lease Renewals Shall Prepare a Parking Management Plan. Prior to approval of any new project component or any new lease/lease renewal at TAMT, the project proponent (e.g., tenant) shall submit a Parking Management Plan to the District for review and approval, demonstrating that there would be adequate parking to accommodate all projected operational parking within their tenant's leasehold or within an area available for use as parking. The Parking Management Plan shall consider the following. i. The identification of areas within the tenant's leasehold to accommodate the new project component's, new lease's, or renewed lease's parking needs. ii. Reserved parking spaces outside the tenants leasehold at the TAMT, as authorized by the District through formal agreement signed by the District's Director of Maritime or his/her designee. iii. Alternative transportation options to reduce parking demand such as subsidized transit passes, bicycle racks, employee vanpools, or other carpooling incentive programs. iv. Preferential parking for carpools/vanpools. v. Employee shuttles to/from the union hall at shift changes, as feasible. vi. Reserved parking spaces with an offsite parking provider at either a parking garage or parking lot for the duration of the tenant's lease, which shall include a shuttle program. The offsite parking spaces shall be authorized through a formal agreement with a parking provider and is subject to approval by the District. vii. Employer Coordination with SANDAG's iCommute Program. The TAMT Parking Management Plan requires review and approval from the District's Director of Maritime, which shall be based on	**Timing:** Prior to approval of any new project component or any new lease/lease renewal at TAMT **Method:** Submit a Parking Management Plan to the District for review and approval	**Implementation:** Project Proponent **Monitoring and Reporting:** District, Project Proponent **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
consultation with the TAMT Superintendent. All TAMT Parking Management Plans shall be enforced by the TAMT Superintendent.		
MM-C-TRA-1: Construct Managed Lanes on I-5 and I-15. SANDAG currently has plans to construct two managed lanes (one in each direction) on I-5 between I-15 and Palomar Street by the year 2030 as well as two additional multi-purpose lanes and two managed lanes on SR-15 between I-5 and SR-94 by the year 2050. The District shall coordinate with SANDAG and Caltrans to determine the proposed project's fair share contribution. Because this mitigation measure is far into the future, the exact amount will need to be determined at a future date and prior to the project's contribution to the affected freeway mainline sections reaching 0.005 change in V/C ratio. The following fair-share percentages under the MPC scenario analyzed for the proposed project, per affected freeway facility, should serve as guidance to the amount the District should pay toward a program or plan for the aforementioned freeway facility improvements to be constructed. • I-5 northbound between SR-94 & Imperial Avenue: 5 percent of the total cost for improvements to this segment. • I-5 northbound between 28th Street & SR-15: 13 percent of the total cost for improvements to this segment. • I-5 northbound between SR-15 & Main Street: 6 percent of the total cost for improvements at this segment. • SR-15 southbound between Market Street & Ocean View Boulevard: 11 percent of the total cost for improvements to this segment. The following fair-share percentages under the STC Alternative scenario, per affected freeway facility, should serve as guidance to the amount the District should pay toward a program or plan for the aforementioned freeway facility improvements to be constructed. • I-5 northbound between SR-94 & Imperial Avenue: 5 percent of the total cost for improvements to this segment. • I-5 northbound between SR-15 & Main Street: 6 percent of the total cost for improvements at this segment. • SR-15 southbound between Market Street & Ocean View Boulevard: 11 percent of the total cost for improvements to this	**Timing:** Prior to the project's contribution to the affected freeway mainline sections reaching a change in V/C ratio indicated in the measure **Method:** Coordinate with SANDAG and Caltrans to determine the District's fair share contribution to construct managed lanes on I-5 and SR-15	**Implementation:** District **Monitoring and Reporting:** District, Caltrans **Verification:** District

Mitigation Measures	Timing and Methods	Responsible Parties
segment.		
Utilities and Energy		
Demolition and Initial Rail Component		
MM-C-UTIL-1: Prepare a Waste Management Plan. Prior to issuance of the construction permits, a waste management plan shall be prepared by the Applicant and submitted to the City's Environmental Services Department for approval. The plan shall address the demolition, construction, and operation phases of the proposed project as applicable, and shall include the following. 1. A timeline for each of the main phases of the proposed plan and near-term improvements (construction and operation). 2. Tons of waste anticipated to be generated (construction and operation). 3. Type of waste to be generated (construction and operation). 4. Description of how the proposed project will reduce the generation of construction and demolition (C&D) debris. 5. Description of how C&D material will be reused on site. 6. The name and location of recycling, reuse, and landfill facilities where recyclables and waste will be taken if not reused on site. 7. Description of how the C&D waste will be separated if a mixed C&D facility is not used for recycling. 8. Description of how the waste reduction and recycling goals will be communicated to subcontractors. 9. Description of how a "buy recycled" program for green construction products will be incorporated into the proposed project. 10. Description of any ISO or other certification, if any.	**Timing:** Prior to the issuance of construction permits **Method:** Prepare a waste management plan	**Implementation:** Project Proponent **Monitoring and Reporting:** District **Verification:** District, City of San Diego

Mitigation Measures	Timing and Methods	Responsible Parties
Full TAMT Plan Buildout		
Implement **MM-C-UTIL-1**	**Timing:** Prior to the issuance of construction permits **Method:** Prepare a waste management plan	**Implementation:** Project Proponent **Monitoring and Reporting:** District **Verification:** District, City of San Diego

Attachment 2
Revised Draft Environmental Impact Report

Volume I of III

Draft Environmental Impact Report

Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component

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DRAFT

ENVIRONMENTAL IMPACT REPORT TENTH AVENUE MARINE TERMINAL REDEVELOPMENT PLAN AND DEMOLITION AND INITIAL RAIL COMPONENT

VOLUME I

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~~June~~ December 2016

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Acronyms and Abbreviations

$\mu g/m^3$	micrograms per cubic meter
2008 Plan	San Diego Unified Port District Maritime Business Plan Update
AB	Assembly Bill
ACC	Advanced Clean Cars
ACCM	asbestos-containing construction material
ACM	asbestos-containing material
ADT	average daily trips
AEP	Association of Environmental Professionals
AFY	acre-feet per year
Alquist-Priolo Act	Alquist-Priolo Earthquake Fault Zoning Act
ALUCP	Airport Land Use Compatibility Plan
AMECS	Advanced Marine Emissions Control System
AQIA	Air Quality Impact Analysis
AR4	IPCC Fourth Assessment Report
ARB	California Air Resources Board
BACT	best available control technology
Basin Plan	San Diego Water Quality Control Plan
BAU	business-as-usual
BMP	best management practice
BNSF	Burlington Northern Santa Fe
BP	before present
BTU	British thermal unit
C&D	Construction & Demolition
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
Cal/EPA	California Environmental Protection Agency
Cal/OSHA	California Division of Occupational Safety and Health
CalEnviroScreen	California Communities Environmental Health Screening Tool
CALGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CBC	California Building Code
CBIA vs. BAAQMD case	California Building Industry Assoc. v. Bay Area Air Quality Management District (Dec. 17, 2015) Cal.4th
CBM	cubic meter
CDFW	California Department of Fish and Wildlife

CDP	Coastal Development Permit
CDS	Continuous Deflection Separation
CEC	California Energy Commission
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFL	compact fluorescent light
CFR	Code of Federal Regulations
CH_4	methane
CHE	cargo handling equipment
City	City of San Diego
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CO-CAT	California Climate Action Team
COPC	constituent of potential concern
CRHR	California Register of Historical Resources
CSLC	California State Lands Commission
CTR	California Toxics Rule
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dBA	A-weighted measurement of decibels
District	San Diego Unified Port District
DOT	Department of Transportation
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
ECA	Emission Control Area
EFH	essential fish habitat
EIR	environmental impact report
EMPN	Embarcadero Marina Park North
EMPS	Embarcadero Marina Park South
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ERA	Exceedance Response Action

ESA	Endangered Species Act
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FEU	Forty-foot Equivalent Unit
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
g	gravity
g/hp-hr	grams per horsepower-hour
GHG	greenhouse gas
gpd	gallons per day
GPS	global positioning system
GVWR	Gross Vehicle Weight Rating
GWP	global warming potential
HC	hydrocarbons
HDPE	high-density polyethylene
HFCs	hydrofluorocarbons
HMD	Hazardous Materials Division
HRA	health risk assessment
HREA	Health Risk and Exposure Assessment
HU	hydrologic unit
I	Interstate
ICF	ICF International
ILV	Intersection Lane Volume
IMO	International Maritime Organization
in/s	inches per second
Industrial General Permit	General Permit for Stormwater Discharges Associated with Industrial Activities
INRMP	Integrated Natural Resources Management Plan
IPCC	Intergovernmental Panel on Climate Change
IRWMP	Integrated Regional Water Management Plan
IT	Information Technology
JRMP	Jurisdictional Runoff Management Plan
KOP	Key Observation Point
kW	kilowatt
kWh	kilowatt hour
LBP	lead-based paint
LBST	liquid bulk storage tank
LCFS	Low Carbon Fuel Standard

LDA	light duty auto
L_{dn}	daytime-nighttime noise level
LEA	Local Enforcement Agency
LED	light-emitting diode
L_{eq}	equivalent noise level
$L_{eq}(h)$	hourly equivalent sound level
L_{max}	maximum sound pressure level
L_{min}	minimum sound pressure level
LOMC	Letter or Map Change
LOS	level of service
LRMOSP	Long-Term Resource Management Options Strategic Plan
LUST	leaking underground storage tank
MARPOL	International Convention for the Prevention of Pollution from Ships
MBF	metric board feet
MBTA	Migratory Bird Treaty Act
mgd	million gallons per day
MICR	maximum incremental cancer risk
MLD	most likely descendant
MLLW	mean lower low water
MMI	Modified Mercalli Intensity
MMPA	Marine Mammal Protection Act
MOU	Memorandum of Understanding
MPC	maximum practical capacity
mpg	miles per gallon
mph	miles per hour
MRT	metric revenue tons
MS4	Municipal Separate Storm Sewer System
MSL	mean sea level
MT	metric ton
$MTCO_2e$	metric tons of carbon dioxide equivalent
MTS	Metropolitan Transit Service
MWh	megawatt hour
MWh/year	megawatt-hours per year
N_2O	nitrous oxide
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NAL	Numeric Action Levels
NAT	no action taken
NCMT	National City Marine Terminal
NEPA	National Environmental Policy Act

NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NO	nitric oxide
NO_2	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NOP	Notice of Preparation
NO_X	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NRC	National Research Council
NRHP	National Register of Historic Places
NSR	New Source Review
NTR	National Toxics Rule
O_3	ozone
OEHHA	Office of Environmental Health Hazard Assessment
OGV	ocean-going vessel
OSHA	Occupational Safety and Health Administration
OSPR Act	California Oil Spill Prevention and Response Act of 1990
PAH	polycyclic aromatic hydrocarbon
Pathways	*Pathways to Zero and Near-Zero Emissions*
pc/h/ln	passenger-car per hour per main lane
PCB	polychlorinated biphenyl
PCE	Passenger Car Equivalent
PDP	priority development project
PFCs	perfluorinated carbons
PI	Principal Investigator
PLWTP	Point Loma Wastewater Treatment Plant
PM	particulate matter
PM10	particulate matter less than or equal to 10 microns in diameter
PM2.5	particulate matter less than or equal to 2.5 microns in diameter
PMP	Port Master Plan
Port Act	San Diego Unified Port District Act
Porter Cologne Act	Porter-Cologne Water Quality Control Act of 1969
ppb	parts per billion
ppm	parts per million
ppt	parts per trillion
PPV	peak particle velocity
PRC	Public Resources Code
Program	Community Health and Safety Program
PTR	Periodic Technology Review
PUD	Public Utilities Department

RAQS	Regional Air Quality Strategy
RCFZ	Rose Canyon Fault Zone
RCRA	Resource Conservation and Recovery Act of 1976
Regional Plan	San Diego Forward: Regional Plan
Reporting Rule	Greenhouse Gas Reporting Rule
RES	Regional Energy Strategy
ROG	reactive organic gas
RoRo	roll-on/roll-off
RPS	Renewables Portfolio Standard
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
Santa Fe Railway	Atchison, Topeka, and Santa Fe Railway
SB	Senate Bill
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SCH	State Clearinghouse and Planning Unit
SCIC	South Coastal Information Center
SCS	Sustainable Communities Strategy
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDG&E	San Diego Gas and Electric
SDIA	San Diego International Airport
SF_6	sulfur hexafluoride
SIC	standard industrial classification
SIP	State Implementation Plan
SLR	sea-level rise
SLT	screening-level threshold
SO_2	sulfur dioxide
SO_X	sulfur oxide
SPCC	Spill Prevention Control and Countermeasure
SR	State Route
STC	Sustainable Terminal Capacity
SVOC	semi-volatile organic compound
SWPPP	Storm Water Pollution Prevention Plan
SWQMP	Storm Water Quality Management Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TAMT	Tenth Avenue Marine Terminal
TAMT plan	Tenth Avenue Marine Terminal Redevelopment Plan

TAMT Precise Plan	Tenth Avenue Marine Terminal Planning District Precise Plan
TDM	transportation demand management
TEU	twenty-foot-equivalent unit
TIA	Transportation Impact Analysis
TMDL	total maximum daily load
TOG	total organic gases
TPH	total petroleum hydrocarbon
TRU	Transport Refrigeration Unit
UP	Union Pacific Railroad
USACE	U.S. Army Corps of Engineers
USC	United States Code
USCG	U.S. Coast Guard
USFWS	U.S. Fish and Wildlife Service
UWMP	Urban Water Management Plan
V/C	volume to capacity
VOC	volatile organic compound
VSR	vessel speed reduction
WoS	waters of the state
WoUS	waters of the United States
WQIP	Water Quality Improvement Plan

Introduction

This chapter provides a summary of the Draft Environmental Impact Report (EIR) prepared for the Tenth Avenue Marine Terminal Redevelopment Plan (TAMT plan) Project, prepared in compliance with the California Environmental Quality Act (CEQA). The San Diego Unified Port District (District) is the CEQA Lead Agency for the EIR and, as such, has the primary responsibility for evaluating the environmental effects of the proposed project and considering whether to approve or disapprove the proposed project in light of these effects.

As required by CEQA, this Draft EIR does the following: (1) describes the proposed project, including its location, objectives, and features; (2) describes the existing conditions at the project site and nearby environs; (3) analyzes the direct, indirect, and cumulative adverse physical effects that would occur on the existing conditions should the proposed project be implemented; (4) identifies feasible means of avoiding or substantially lessening the significant adverse effects; (5) provides a determination of significance for each impact after mitigation is incorporated; and (6) evaluates a reasonable range of feasible alternatives to the proposed project that would meet the basic project objectives and reduce a project-related significant impact.

This Executive Summary covers the following topics: (1) Project Description; (2) Areas of Controversy/Issues Raised by Agencies and the Public; and (3) Issues to Be Resolved, including significant environmental effects and the consideration of alternatives to the proposed project.

Project Description

Overview

The proposed project evaluated in this Draft EIR involves (1) adoption of the TAMT plan and (2) implementation of the Demolition and Initial Rail Component. The TAMT plan provides growth projections by cargo type and potential development scenarios to be considered, as market conditions allow. The Demolition and Initial Rail Component is the initial project-level component of the TAMT plan, which includes demolition of Transit Shed #1 and Transit Shed #2, conduit and electrical improvements to allow for future electrification of the project site, upgrading the sites existing stormwater system, replacement of existing lighting, grading and repaving of the site of the previous transit sheds, on-terminal rail upgrades that include a rail lubricator and compressed air system for air brake testing, and installation of a modular office with restroom facilities, a building with an electrical gear room, additional restroom facilities, and IT room, and outdoor storage space. Further details are provided below.

Project Location

As shown in Figure ES-1, ~~T~~the project site is located along San Diego Bay, south of downtown San Diego, east of the San Diego Convention Center and Hilton Bayfront Hotel, and west adjacent to the San Diego community of Barrio Logan. Figure ES-2 provides an aerial view of the project site. Harbor

Drive runs northwesterly approximately 160 feet from the project site boundary. Project site access from Harbor Drive is provided at two locations.

- Primary: from Cesar E. Chavez Parkway; this becomes Crosby Road as it approaches the Terminal
- Secondary: at the southern end of the Hilton hotel parking facility, adjacent to the backlands of the Dole container facility

Major circulation facilities in the area include State Route 75 (i.e., Coronado Bridge), approximately 0.25 mile to the south, and Interstate 5, about 0.5 mile to the north. Trucks that serve the project site are required to access the region's interstate system by transiting southbound from the project site along Harbor Drive, thereby limiting heavy truck activity along the residential streets of the Barrio Logan community.

Project Objectives

The District has identified the following objectives for the proposed project.

1. Enhance the District's competitive position by increasing throughput capabilities by:
    a) Improving onsite infrastructure and operational capacity for three distinct but flexible operating nodes for dry bulk, multi-purpose general cargo, and refrigerated container cargo types, as well as a centralized gate facility; and
    b) Establishing an expanded on-dock rail facility to broaden certain cargo customer access to rail in the long term.
2. Maintain and promote the District's longstanding commitment to dry bulk, liquid bulk, refrigerated containers, and multi-purpose general cargo.
3. Ensure benefits to existing project site tenants by implementing a series of short-term infrastructure improvements, which are designed to accommodate a variety of cargos and vessels within 1 to 5 years.
4. Maintain and expand the District's ability to support military deployment activities during a military contingency or national emergency in the District's capacity as a commercial Strategic Port as designated by the U.S. Department of Defense.
5. Enhance the efficiency, productivity, and long-term success of the TAMT by identifying potential infrastructure needs, decreasing intra-terminal transfer time, simplifying terminal layout patterns, and making internal traffic flows more predictable, all while remaining flexible and responsive to future market conditions.
6. Optimize the use of land and waterways and provide deep-water and water-dependent facilities in a manner that is consistent with the Port Master Plan and the California Coastal Act.
7. Balance the critical need of staying economically competitive with maintaining environmental sustainability and stewardship by supporting the cleanest feasible technology and infrastructure for terminal upgrades and by maintaining consistency with California's Sustainable Freight Strategy and the District's Climate Action Plan, Clean Air Program, and Jurisdictional Runoff Management Program.

Figure ES-1
Regional Location
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

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Figure ES-2
Project Location Map
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

Project Components

TAMT Plan

The TAMT plan replaces portions of the 2008 Maritime Business Plan (2008 Plan). The TAMT plan analyzes terminal configuration options, using an updated review of existing cargo throughput and a market forecast to 2035, and identifies five potential development concepts, three of which are analyzed in this Draft EIR.[1] The result is a proposed plan that would provide maximum flexibility at the project site to accommodate cargo market opportunities and to implement future terminal infrastructure investments. Although each development concept emphasizes a slightly different mix of cargo, all three development concepts involve establishing flexible but distinct nodes that would handle like cargos in similar operational areas and under similar conditions. The operating nodes are discussed below, whereas three development concepts are discussed in the subsequent section titled *Long-Term Operations*.

The TAMT plan identifies five operating nodes that include dry bulk, liquid bulk, refrigerated container, multi-purpose general cargo, as well as a central gate facility.[2] The Demolition and Initial Rail Component would affect all three nodes along the western portion of the project site boundary including the dry bulk node, the refrigerated container node, and the multi-purpose cargo node. In addition, the new modular offices with restroom facilities are anticipated to be located in the vicinity of the centralized gate facility. The locations of the nodes contemplated in the TAMT plan are shown in Figure ES-~~1~~3, and the Demolition and Initial Rail Component locations are shown in Figure ES-4~~2~~. The proposed locations for these nodes are discussed in greater detail below. Because berthing capacity at the project site has been deemed adequate, the TAMT plan focuses on land-side improvements only, and no dredging or waterside improvements are included.

Dry Bulk

The dry bulk node would be located on approximately 15 acres in the southeastern portion of the project site, also referred to as terminal "backlands" and shown in brown on Figure ES-3~~1~~. This node would be served primarily by Berths 10-7/10-8, with secondary access from Berths 10-5/10-6. Proposed dry bulk node improvements would include the following.

- **Open Air Storage Space.** Maintain approximately 5 acres of existing open storage space between Water Street and Terminal Street.
- **Conveyor System**. Upgrade the existing conveyor system to handle multiple bulk commodities, such as cement, bauxite, or soda ash. Currently, the existing conveyer system (which contains two conveyer belts) is owned and operated by a District tenant. It is elevated and ranges between 22 feet and 23.5 feet in height. The system is approximately 60 feet from the shoreline and runs parallel to Berths 10/7 and 10/8 for approximately 650 feet, and then heads northerly

[1] As acknowledged in the Notice of Preparation (NOP), the full refrigerated container and full dry container concepts were excluded from the EIR analysis of the proposed project because they would result in zero volume for multi-purpose/general cargo commodity types. The District has a longstanding commitment handling Multi-purpose/General Cargos and decided at the outset that it does not want to depart from this established and successful business strategy. However, the full refrigerated container and full dry container concepts are addressed in the discussion of alternatives to the proposed project in Chapter 7 of this Draft EIR.

[2] Although the TAMT Plan makes reference to a liquid bulk node as an existing condition, the TAMT Plan does not propose any changes (such as infrastructure improvements or capacity enhancements) to the existing liquid bulk node.

for another 400 feet to the southeast corner at Warehouse C. The elevated conveyor then splits into two directions; one system continues northerly for another 450 feet to the central portion of the dry bulk storage area parcel (shown in yellow), and the second system runs northeasterly for approximately 420 feet and zig-zags before it terminates within the dry bulk storage area parcel. The TAMT plan discusses potentially upgrading the conveyer system to enable the handling of multiple commodities by multiple tenants. Upgrades may include increasing the capacity and energy efficiency of the current system, or removing it entirely and replacing it with a new conveyer system. However, the ultimate goal would be to modernize the system so that it can handle multiple bulk commodities for multiple tenants. For the purposes of the environmental analysis, it is assumed that a new conveyer system would replace the existing system to take advantage of any technological upgrades. However, the overall footprint of the new conveyor system, including its size and height, would be similar to the existing system.

- **Consolidated Bulk Discharge Unloader**. Add a consolidated bulk discharge unloader using a 200-metric-ton (MT) per hour vacuum for cementitious materials at Berths 10-7/10-8 (either a Kovaco, Siwertell, or equivalent system). Dry bulk operations currently utilize diesel-powered cargo handling equipment, including traditional clamshell grabs and diesel trucks, to transfer bulk products to the first point of rest for storage until delivery to the customer. The consolidated bulk discharge unloader would likely use an electrically powered pneumatic loading device and be capable of handling additional throughput.
- **Consolidated Multi-Purpose Dry Bulk Facility.** Construct a consolidated multi-purpose dry bulk facility with two cement terminals and a new semi-permanent storage facility (up to a 100,000-square-foot horizontal structure and/or an equivalent vertical storage facility) to store dry bulk products. Under existing operations, dry bulk goods are stored at multiple storage locations throughout the project site. The consolidated dry bulk facility would centralize dry bulk handling operations on the southeastern portion of the project site to help maximize the existing on-dock rail facility. The consolidated bulk facility would be shared by multiple operators, resulting in operational efficiencies and streamlined traffic flows. For the purposes of the environmental analysis, two 54,000 MT silos at each terminal allowing for a total of 108,000 MT of bulk cement storage capacity were assumed because the vertical height of two large silos is likely to have a greater visual impact than several smaller silos and/or a 100,000-square-foot horizontal dry bulk storage facility. However, any combination of the following options were identified to help accommodate the project site's long-term dry bulk storage needs:
  - Semi-permanent Rubb style of building up to 100,000 square feet for the storage of dry bulk products, or
  - Six 9,000 MT silos to store up to 54,000 MT of bulk cement at each terminal, or
  - Two domes that would each store up to 54,000 MT of bulk cement at each terminal, or
  - Any combination of buildings, silos, and domes to allow up to 108,000 MT of bulk cement storage capacity.
- **Demolish Existing Molasses Tanks.** Demolish existing empty molasses tanks and establish a new dry bulk storage facility.

Refrigerated Container

The refrigerated container node would be located on approximately 40 acres within the northern portion of the project site served by Berths 10-1/10-2 and 10-3/10-4, with overflow handled at Berths 10-5/10-6. Figure ES-~~1~~3 shows the boundary between the refrigerated container node in

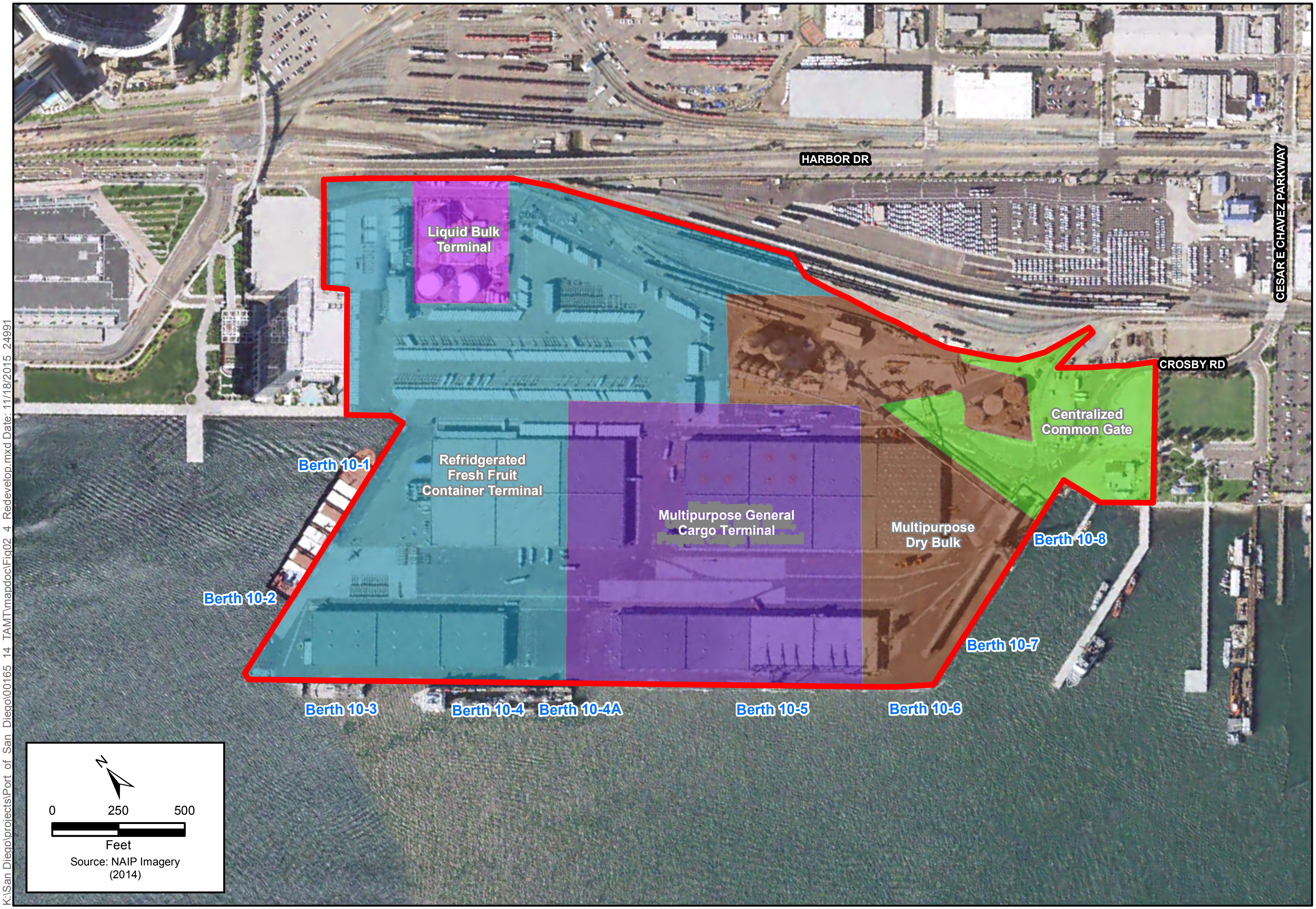

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Figure ES-3
Tenth Avenue Redevelopment Plan Layout
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

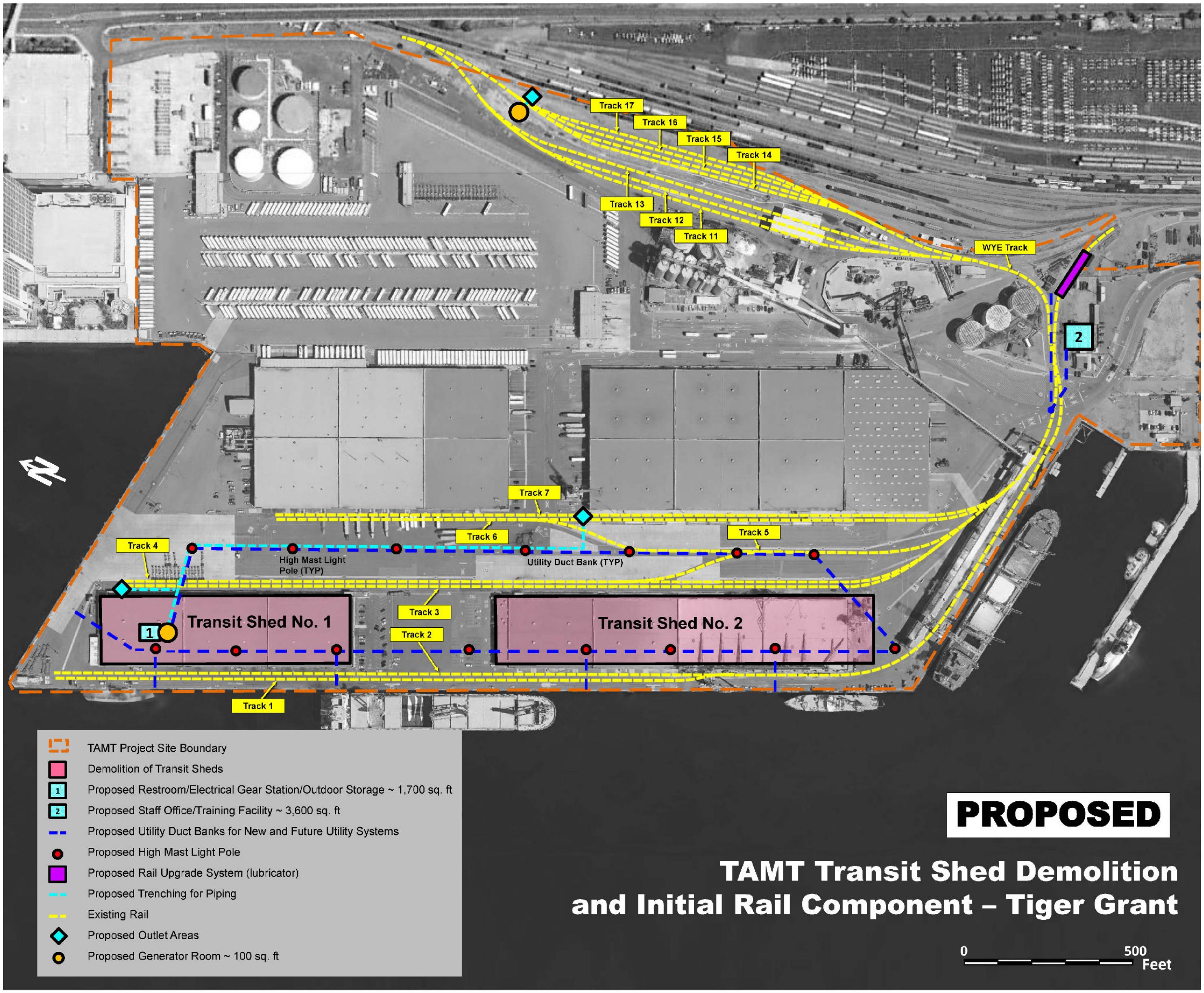

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Figure ES-4
Demolition and Initial Rail Component
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

blue and the multi-purpose general cargo node in purple. The boundaries would be flexible to allow the project site to be used for the handling of diverse cargos as market conditions and vessel schedules permit. As such, construction activities within the refrigerated container and multi-purpose nodes may happen simultaneously. The refrigerated container node would maintain approximately 16 acres of existing outside storage space for refrigerated containers as well as the existing 294,000 square feet of cold storage facility (Warehouse B) and would add the following improvements.

- **Gantry Cranes at Berths 10-1/10-2.** Install up to two rail-mounted 100-foot gauge electrical gantry cranes up to 270 feet tall (when boom is up) at Berths 10-1/10-2.[3]
- **Gantry Cranes at Berths 10-3/10-4**. Install up to two rail-mounted 100-foot gauge electrical gantry cranes up to 270 feet tall (when boom is up) at Berths 10-3/10-4, including electrical utility improvements to operate the cranes.

Multi-Purpose General Cargo

As shown on Figure ES-3~~1~~, the Multi-Purpose General Cargo node would comprise approximately 30 acres in the central portion of the project site and would be served primarily by Berths 10-5/10-6, with overflow handled at Berths 10-3/10-4. Similar to the refrigerated container node, the boundary would be flexible to accommodate market needs. This open area would allow the project site to be used for the handling of diverse cargos as market conditions and vessel schedules permit. As such, construction of the refrigerated container and multi-purpose nodes would happen simultaneously. Proposed improvements and operations that would occur at the multi-purpose general cargo node would include the following.

- **Gantry Cranes at Berths 10-5/10-6.** Install up to two rail-mounted 100-foot gauge electrical gantry cranes up to 270 feet tall (when boom is up) at Berths 10-5/10-6.
- **Demolish Warehouse C.** Demolish the 384,000-square-foot Warehouse C to open up access to up to 20 acres of open storage space. In the long term, demolition of Warehouse C would also enable the District to establish an expanded on-dock rail facility to broaden customer access to rail if market conditions allow. There are several other potential backland improvements that may be considered for multi-purpose and/or dry bulk cargos in the future, if market conditions allow. Please note that the items listed below are included here for informational purposes only. Subsequent environmental analysis would be required if any of the following improvements are pursued in the future.
    - Bridge crane[4]
    - Full wheel container module with gantry cranes
    - Rubber-tired cranes for load-on and load-off
    - Straddle carrier[5] (stacked) for an expanded on-dock rail facility
    - Additional paving of backland area

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[3] Note that, although Berths 10-1/10-2, 10-3/10-4, and 10-5/10-6 each state up to two gantry cranes each, the total would not exceed five gantry cranes for the entire project.

[4] Bridge crane = an overhead crane consisting of parallel runways with a traveling bridge spanning the gap. A hoist, the lifting component of a crane, travels along the bridge.

[5] Straddle carrier = a vehicle for use in port terminals and intermodal yards for stacking and moving ISO standard containers. Straddles pick and carry containers while straddling their loads and connecting to the top lifting points via a container spreader.

- Container-handling equipment to handle 100 kip[6] wheel live load
- Generator and accompanying housing structure
- Upgrade of shore-side power capabilities to provide shore power to two vessels at the same time

Central Gate Facility

The central gate facility is an existing facility that is located in the southeastern corner of the project site. The TAMT plan would include installing a new truck weigh station. Once a new truck weigh station has been procured, the existing truck weigh station would be sold for reuse or disposed of in a landfill.

The TAMT plan also identifies an alternative gate concept for the Refrigerated Container node and the Multi-purpose General Cargo node. The alternative gate would be sited in the northeast corner of the project site and provide access directly onto Harbor Drive. It would serve as the primary entry and exit location for "freight only" movements for the refrigerated container node and Multi-purpose General Cargo node. According to the Plan, however, the Dry Bulk Node would continue to utilize the existing gate off Caesar Chavez Parkway, particularly for domestic bulk shipments. As such, the transportation analysis looks at how this concept would affect traffic patterns in the area and any other environmental impacts that could result from an alternative gate.[7]

Long-Term Operation

To ensure that the "worst case" environmental scenario is analyzed, this Draft EIR analyzes the highest maximum practical capacity (MPC) identified for each of the three operating nodes, as shown in the fourth column in Table ES-1 below. In addition, this Draft EIR evaluates an alternative scenario that reduces maximum throughput by 25 percent from the MPC scenario. This alternative is referred to as the Sustainable Terminal Capacity (STC) Alternative. Furthermore, liquid bulk throughput is included in the analysis for each scenario, but, as indicated, buildout of the TAMT plan would result in no changes to the infrastructure, operational efficiency, or storage capacity at the liquid bulk node.

[6] kip = a unit of weight equal to 1,000 pounds; used to express deadweight load.

[7] Please note that at this time there have been no preliminary engineering studies or other technical work completed that evaluate the technical or operational feasibility of implementing the Alternative Gate Concept. Therefore, the transportation and traffic assessment prepared for the alternative gate concept does not include the same level of detail as that prepared for the existing Central Gate Facility.

Table ES-1. Development Concepts Identified in the TAMT Plan (in Metric Tons)

Node	Development Concept #1	Development Concept #2	Development Concept #3	"Worst Case" Scenario Analyzed in EIR
Improvements or Capacity Enhancements Identified in TAMT Plan				
Dry Bulk	2,650,000	2,650,000	2,650,000	2,650,000
Refrigerated Containers	2,288,000	1,555,840	1,555,840	2,288,000
Multi-Purpose General Cargo	327,700	977,400	583,850	977,400
Subtotal	**5,265,700**	**5,183,240**	**4,789,690**	**5,915,400**
No Improvements or Capacity Enhancements Identified in TAMT Plan				
Liquid Bulk	239,017	239,017	239,017	239,017
Total	**5,504,717**	**5,422,257**	**5,028,707**	**6,154,417**

Table ES-2 below compares the TAMT plan's "worst case" MPC scenario and STC scenario for each of the nodes with the project site's existing environmental baseline condition by cargo type. The project site's existing environmental baseline condition is based on actual throughput calculations from July 2013 to June 2014, with June 2014 being the point in time at which the environmental analysis was initiated. The table also provides the MPC identified in the 2008 Plan as a reference point to illustrate the MPC that could occur under the existing plan if the proposed TAMT plan were not approved. However, the 2008 Plan MPC is not used as the baseline for the environmental analysis because it represents the project site's theoretical capacity as opposed to the actual environmental conditions that occurred when the environmental analysis commenced. Although it is highly unlikely and improbable that all three nodes would be able to operate at their maximum levels for a sustained period of time, this approach is analyzed to provide the most conservative environmental analysis. However, the recommended scenario is the STC Alternative, which would reflect an approximately 25 percent reduction in throughput compared to the MPC scenario.

Table ES-2. TAMT Cargo Throughput Comparisons in Metric Tons

Node	Existing Conditions – July 2013 to June 2014	2008 Plan Maximum Practical Capacity	TAMT Redevelopment Plan Maximum Practical Capacity "Worst-Case" Scenario[a]	TAMT Redevelopment Plan Sustainable Terminal Capacity Alternative Scenario
Improvements or Capacity Enhancements Identified in TAMT Plan				
Dry Bulk	289,864[b]	2,250,000	2,650,000[c]	1,987,500
Refrigerated Containers	637,931	730,000	2,288,000	1,716,000
Multi-Purpose General Cargo	85,131[e]	1,670,000	977,400	733,050
No Improvements or Capacity Enhancements Identified in TAMT Plan				
Liquid Bulk	31,520	220,000	239,017[d]	239,017
Total	**1,044,446**	**4,870,000**	**6,154,417**	**4,675,567**

Notes:

[a] The infrastructure improvements identified in the TAMT plan are required to attain the MPCs identified. To provide for a "worst case" environmental impact scenario, this Draft EIR analyzes the highest MPC of each of the three cargo nodes as well as the throughput associated with the STC Alternative.

[b] Vessels brought in approximately 158,205 MT of dry bulk, whereas dry bulk tenants trucked in approximately 131,659 MT of dry bulk.

[c] For the purposes of the analysis, two additional dry bulk customers were assumed over existing tenant volume, which resulted in a forecast of approximately 2,146,645 MT. However, the MPC indicates that additional dry bulk volume could be accommodated.

[d] The TAMT plan acknowledges the existing liquid bulk facility; however, it does not propose any operational or infrastructure changes to the existing facility. Current capacity is sufficient to handle market demand and operations at the MPC, and is projected to remain sufficient throughout the plan horizon.

[e] In addition to 33,666 MT of neo-bulk material, the project site also processed 51,465 metric revenue tons of other miscellaneous cargo, yielding a total of 85,131 MT.

Demolition and Initial Rail Component

Improvements

The Demolition and Initial Rail Component is an initial, project-level component that is necessary to implement the various program-level development scenarios identified in the TAMT plan. The Demolition and Initial Rail Component would include the following features and modifications discussed below and shown on Figure ES-~~2~~4.

- **Demolition of Transit Sheds #1 and #2.** The transit sheds consist of seven warehouse bays, restroom facilities, and office space. Transit Shed #1 includes approximately 148,000 square feet of warehouse space, comprising Bays A, B, and C, and Transit Shed #2 includes approximately 194,000 square feet of warehouse space, comprising Bays E, F, G, and H. Both transit sheds are approximately 32 feet tall and 200 feet wide. Transit Shed #1 is 740 feet long and Transit Shed #2 is 970 feet long. Transit Shed #1 includes an approximately 2,400-square-foot maintenance shed. Transit Shed #2 includes an approximately 7,000-square-foot head house, which is currently used as office space for terminal operations. Demolition would involve the proper removal of any asbestos, lead, polychlorinated biphenyls, or other potentially hazardous materials that may be present in the Transit Sheds, followed by removal of the existing fire alarm, fire protection systems, and electrical systems. In addition, demolition of Transit Shed #2 would include the removal and/or reuse of all off-loading equipment including the existing distribution and conveyor system.[8] Once this is completed, soil excavation and grading would occur and underground conduit to facilitate future electrification of the area would be installed, followed by paving and leveling across the site.

- **Conduit and Electrical Improvements.** Up to 2,500 linear feet of conduit would be installed west of Warehouse B and Warehouse C and east of the existing Transit Shed #1 and Transit Shed #2 to provide for future electrification of the project site. Trenching for the conduit and electrical improvements would occur prior to paving activities. All electrical utilities would utilize the existing vault system.
- **Subsurface Stormwater Improvements.** Excavate up to 9,200 cubic yards of soil and install one of two potential stormwater drainage systems. Both systems would include design features to capture the 85th percentile storm event. The first option would involve concrete retention vaults that would capture the stormwater and allow water to infiltrate into the underlying soil by placing orifices in the bases of the vaults. The second option would involve collecting and routing overflows to an underground high-density polyethylene (HDPE) pipe retention system. The HDPE pipe retention would also rely on infiltration by placing holes in the bases of the pipes. Both options have been designed to comply with the San Diego Regional Municipal Separate Storm Sewer System Permit (R9-2015-0100) and allow for settling time and capture of aluminum, copper, iron, lead, and zinc.
- **Replacement of Existing Lighting.** The existing 90-foot-tall light poles at the loading docks and around both Transit Shed perimeters would be replaced with 90-foot-tall lights capable of an average 5 foot-candles of light during cargo operations. During non-cargo operations, foot candles would be reduced to 1. The replacement lighting would use light-emitting diodes, improving energy efficiency at the project site, and would be directed downward and away from adjacent land uses and the open water of the bay.
- **On-Terminal Rail Facility Upgrades.** The proposed project would include installation of a rail lubricator and a compressed air system for testing of train air brakes on the existing tracks. As shown on Figure ES-~~2~~4, the rail lubricator (purple rectangle) would be installed in the southeastern portion of the project site, where there is a sharp and inefficient curve that regularly impedes operations. Manual lubrication would be replaced with an automated lubrication system, thereby increasing both the safety and efficiency of the rail movement.

  The purpose of the train air brake tests is twofold: to ensure that the air brakes work on each car and that air propagation exists between the locomotive and the end of the train. The compressed air system would include a compressed air generator and receiver, as well as subsurface piping (approximately 2-inch diameter) that would lead to steel outlets approximately 4 feet in height. The generators would be housed in an approximately 100-square-foot structure (an orange circle on Figure ES-4~~2~~). The outlets (shown as blue diamonds

[8]To ensure a worst-case environmental scenario, the analysis assumes removal of approximately 5,250 tons of metal, which would be transported to a scrap metal recycling yard or appropriate landfill. This figure is based on the following estimates: existing dust collector (~380 tons), unloading facility, buffer hopper, and horizontal screw converter (~600 tons), the aeroslide and support framing (~2,520 tons), and a 50% contingency factor (~1,750 tons). However, depending on operational needs and the condition/efficiency of the existing equipment, these facilities may also be either upgraded and/or reused at the TAMT.

on Figure ES-4~~2~~) would be sited adjacent to tracks 3 and 4 (within the former footprint of Transit Shed #1) and adjacent to tracks 6 and 7 (near Warehouse C). A separate compressed air generator system and outlets would be sited along the eastern boundary of the project site to service tracks 14, 15, 16, and 17 (near Searles Valley Operations). In all cases, the outlets would include calibrated air gauges to monitor the air pressure of the yard air system at the outlet, and would feed the train air system by connecting a long braided hose to the glad-hand on the rail cars. This system would be in compliance with the Federal Railroad Administration requirements for air brake systems,[9] and train crews would be required to adhere to the Air Brake and Train Handling rules established by the BNSF railroad.[10]

- **Temporary Modular Office.** An approximately 3,600-square-foot modular office for marine operations with offices, a conference room, a work area, a break room, and parking for up to 15 employees would be constructed in the vicinity of the centralized common gate area. Up to three restrooms would also be added. This modular office and restroom facility would replace the existing approximately 5,400-square-foot headhouse after it is demolished with Transit Shed #2. Underground water, sewer, and electrical utilities would be installed to support the proposed modular structure.
- **Electrical Gear Room, Restroom Facility, and Information Technology (IT) Room (approximately 782 square feet), and Outdoor Equipment Storage Area (850 square feet).** The project would include the construction of a facility totaling approximately 782 square feet on the western portion of the project site where the existing Transit Shed #1 is located. The restroom facilities would be approximately 16 feet by 23 feet, the switching gear room for charging stations would be approximately 12 feet by 23 feet, and the IT and back services area would be approximately 6 feet by 23 feet. In addition, there would be an outdoor storage area of approximately 34 feet by 25 feet, which would be surrounded by a chain-link fence that could be covered with a chain-link fence or tarp. The following types of equipment would be stored in this area.
  - Cones and cone baskets
  - Lashing rods
  - Stokes baskets (e.g., rescue baskets)
  - Up to three forklifts
  - Electric plug-ins as needed
  - Other miscellaneous equipment.

[9] The Federal Railroad Administration establishes brake system safety standards in 49 CFR 232. Typically, a Class 1 air test is required before a train departs a terminal per section 232.205. However, when yard air is used to test cars, the train is only required to do a Class III air test pursuant to Section 232.217, which ensures that the train air-line is intact after making up the train. This avoids performing the detailed Class 1 air test, which avoids blocking crossings while each car is examined during the air test.

[10] BNSF Air Brake and Train Handling Rules (April 7, 2010, including revisions through May 1, 2013) Section 100.10.2 identifies specific rules train crews must follow subsequent to a yard air test.

Near-Term Operation

Once the existing transit sheds are removed, cargo nodes may be developed as recommended by the proposed TAMT plan, based on cargo type and market availability. The throughput that is anticipated as a result of the Demolition and Initial Rail Component is provided below.

Table ES-3. Demolition and Initial Rail Component Cargo Estimates Compared to Existing Conditions (in Metric Tons)

Node	Existing Conditions – Actual Throughput July 2013 to June 2014	Demolition and Initial Rail Component – Throughput Estimates July 2020 to June 2021[a]	Anticipated Net Increase
Improvements and Capacity Enhancements Identified in TAMT Plan			
Dry Bulk	289,864[b]	289,864	0
Refrigerated Containers	637,931	685,931	+48,000
Multi-Purpose General Cargo	85,131[c]	124,078	+38,947
Subtotal	**1,012,926**	**1,099,873**	**+86,947**
No Improvements or Capacity Enhancements Identified in TAMT Plan			
Liquid Bulk	31,520	31,520[d]	0
Total	**1,044,446**	**1,131,393**	**+86,947**

[a] Throughput estimates are based on the District's 5-year budgetary projections that were developed after receiving notification of the TIGER Grant Award. Throughput estimates are higher than baseline conditions due to increased activity from existing customers. Note that these project-level throughput estimates exclude tenant projects (such as Mitsubishi and the Dole Refrigerated Rack project) because these projects have independent utility and are not directly associated with the Demolition and Initial Rail Component. Both projects will be doing stand-alone environmental analyses, which are summarized in Chapter 5, *Cumulative Analysis*.

[b] Vessels brought in approximately 158,205 MT of dry bulk, whereas dry bulk tenants trucked in approximately 131,659 MT of dry bulk.

[c] In addition to 33,666 MT of neo-bulk material, the project site also processed 51,465 metric revenue tons of other miscellaneous cargo, yielding a total of 85,131 MT.

[d] Liquid bulk throughput is not expected to increase as a result of the Demolition and Initial Rail Component. Therefore, throughput projections for Liquid Bulk reflect existing conditions.

Areas of Known Controversy/Issues Raised by Agencies and the Public

Section 15123 of the State CEQA Guidelines requires the summary of an EIR to include areas of controversy known to the Lead Agency, including issues raised by agencies and the public. The District circulated a Notice of Preparation (NOP) to solicit agency and public comments on the scope and content of the environmental analysis beginning on March 6, 2015, and ending on April 14, 2015. The Initial Study/Environmental Checklist and NOP are included as Appendix A.

A total of 14 comment letters were received during the NOP public review period. The primary issues raised related to air quality, greenhouse gas emissions, and transportation and traffic. In addition, a few comments were raised on the project's effect on water quality, energy, environmental justice, Coastal Act consistency, and alternatives. A summary of all comments received is included in Table 1-2 of Chapter 1, *Introduction*, and all NOP comment letters are included in Appendix B of this EIR.

Issues to be Resolved

Summary of Project Impacts

This Draft EIR examines the potential environmental effects of the proposed project, including information related to existing site conditions, analyses of the types and magnitude of individual and cumulative environmental impacts, and feasible mitigation measures that could reduce or avoid environmental impacts. In accordance with Appendix G of the State CEQA Guidelines, the potential environmental effects of the proposed project were analyzed for the following areas.

- Aesthetics and Visual Resources
- Air Quality and Health Risk
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions and Climate Change
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise and Vibration
- Transportation, Circulation, and Parking
- Utilities and Energy

Table ES-4, presented at the end of this chapter, provides a summary of the environmental impacts that could result from implementation of the proposed project and feasible mitigation measures that would reduce or avoid the impacts. For each impact, Table ES-4 identifies the significance of the impact before mitigation, applicable mitigation measures, and the level of significance of the impact after the implementation of the mitigation measures. Impacts on agriculture and forestry resources, land use and planning, mineral resources, population and housing, public services, and recreation are considered to be "Effects Found Not to be Significant," in accordance with Section 15128 of the State CEQA Guidelines. These issues are discussed further in Chapter 6, *Additional Consequences of Project Implementation*.

Summary of Project Alternatives

The following alternatives are analyzed in detail in Chapter 7 of this Draft EIR. The objective of the alternatives analysis is to consider a reasonable range of potentially feasible alternatives to foster informed decision-making and public participation. The alternatives to the proposed project are summarized below.

Alternative 1 – No Project/No Build Alternative

The No Project Alternative is required by CEQA to discuss and analyze potential impacts that would occur if the proposed project was not implemented. Under the No Project/No Build Alternative, adoption of the proposed TAMT plan would not occur, nor would the demolition of Transit Sheds #1 and #2, Warehouse C, or the molasses tanks. No gantry cranes or additional dry bulk facility improvements (e.g., new conveyor system and bulk discharger, 100,000 square feet of warehouse space) would be added and no changes would occur to the entry gate or weigh station. Upgrades to the rail infrastructure, including installation of a rail lubricator and a compressed air system for testing of train air brakes, would also not occur. New utility lines, a modular office, a gear and IT building, and outdoor storage would not be installed. Onsite lighting would remain as it currently stands. Growth at the project site would occur in an ad hoc manner, and due to the existing capacity constraints, the maximum annual cargo throughput would only reach approximately 1,439,017 million metric tons. Most of the increase in throughput would come from liquid bulk given the existing capacity already available. Under this alternative, the District would not be able to respond to projected market demands of multi-purpose general cargo and, as such, the No Project Alternative would not meet the project objectives.

Alternative 2 –2008 Maritime Business Plan Buildout Alternative

The 2008 Maritime Business Plan Buildout Alternative would involve implementation of the Maritime Business Plan that was adopted in 2008. Under this alternative, the TIGER Grant would not be awarded. Transit Shed #1 would remain and would continue to provide general cargo storage space at a cost of loss of flexibility and inability to maximize the storage area. The molasses tanks, Warehouse C, and half of Transit Shed #2 would be demolished to accommodate increased laydown area for break bulk cargo and to allow more efficient access between the berths and other areas of the project site. Office space currently in Transit Shed #2 would be located off site. The dry bulk facility could be expanded to accommodate a much higher dry bulk throughput; however, the refrigerated cargo area, an area that the District projects to see significant growth opportunities, would be limited to the existing facilities. Upgrades to the rail infrastructure—including installation of a rail lubricator and compressed air system for train air brake testing, replacement of existing lighting, installation of new utility lines, and construction of a gear and IT building, a new entry gate, and a weigh station are not in the 2008 Maritime Business Plan and would not be constructed. Finally, installation of gantry cranes would not occur under this alternative. Total MPC under the 2008 Maritime Business Plan Buildout Alternative would equal 4,889,017 metric tons.

Alternative 3 – Reduced Project Alternative

Under this alternative, the MPC of the proposed project would be reduced by approximately 345 percent and would result in a total throughput of 1,480,000 metric tons annually. This alternative was developed to avoid the significant roadway segment impact at 28th Street between Boston Avenue and National Avenue, which would occur once the project reaches 1,175 new daily trips.

It is also assumed that all components of the Demolition and Initial Rail Component would occur under this alternative, including demolition of Transit Sheds #1 and #2; conduit and electrical improvements; installation of a subsurface stormwater detention tank; replacement of existing lighting; upgrades to the on-terminal rail infrastructure, including installation of a rail lubricator and compressed air system for train air brake testing; construction of a 3,600-square-foot modular office; construction of an approximately 782-square-foot electrical gear room, restroom facility and IT building; and construction of an approximately 850-square-foot outdoor equipment storage area. The demolition of the transit sheds would increase the area for multi-purpose general cargo and refrigerated cargo and improve circulation within the project site. Warehouse C would be retained and would be used to accommodate the modest increase in dry bulk cargo, as necessary. Installation of gantry cranes or the consolidated dry bulk facility improvements (e.g., new conveyor system and bulk discharger, 100,000 square feet of warehouse space) is not assumed under this alternative. However, because certain improvements would not occur, specifically demolition of Warehouse C, installation of gantry cranes, and the improvement to the dry bulk facility, the TAMT would retain a modest increase in overall throughput that, in order to avoid a significant impact at 28th Street between Boston Avenue and National Avenue, would not allow throughput to increase beyond 1,480,000 MT annually or an approximately 42 percent increase over the existing throughput.

Alternative 4 – Full Refrigerated and Dry Container Buildout Alternative[11]

The Full Refrigerated and Dry Container Buildout Alternative would implement one of the two scenarios discussed in the TAMT plan that were not being considered by the District because they would limit the flexibility of the terminal and the District's commitment to handling neo bulk, break bulk, and roll-on/roll-off cargos as indicated in Objective #1 of the proposed project. The second of these two scenarios, the Full Dry Container Buildout Alternative, was rejected from consideration as a fully evaluated alternative. Under this alternative, increased space for multi-purpose general cargo would be eliminated from the project site and area dedicated to both refrigerated and dry containers would be maximized. The MPC for the cargo types would be as follows.

- Dry bulk: 2,650,000 metric tons
- Liquid bulk: 239,017 metric tons
- Refrigerated and dry containers: 2,960,840 metric tons

Total MPC under this alternative would equal 5,849,857. Other improvements under this alternative would be similar to those occurring under the proposed project, including demolition of Transit Sheds #1 and #2 and Warehouse C and upgrades to the rail infrastructure, including installation of a rail lubricator and compressed air system for train air brake testing; replacement of existing lighting; installation of new utility lines; construction of a gear and IT building, a new entry gate, and a weigh station a new modular office; installation of up to 5 additional gantry cranes; and additional dry bulk facility improvements (e.g., new conveyor system and bulk discharger, 100,000 square feet of warehouse space).

Alternative 5 – Sustainable Terminal Capacity Alternative

The STC Alternative was added to the Final EIR in response to comments received by the California Air Resources Board (ARB), the San Diego Air Pollution Control District, and the Environmental Health Coalition about the MPC scenario's significant and unavoidable impacts associated with criteria pollutants and health risk. Extensive coordination between the District's Maritime business and operations staff, Real Estate staff, and Planning and Green Port staff occurred in an effort to develop an alternative that would reduce criteria pollutants and toxic air contaminants further while still achieving the basic project objectives and remaining feasible.

The STC Alternative represents what the TAMT could handle on a regular basis without having to maximize all facilities concurrently as under the MPC scenario. Under this alternative, the throughput that could be reached under the MPC scenario of the proposed project would be reduced by 25 percent for each of the three cargo nodes that are proposed for changes under the TAMT plan

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[11] This alternative was considered in the TAMT plan and would be similar to the Full Dry Container Buildout except with slightly less throughput and fewer modifications to the existing condition (e.g., refrigerated containers are already a major portion of the terminal and the infrastructure would not have to be removed under the Full Refrigerated and Dry Container Buildout Alternative). Neither of these alternatives are seriously considered because they would fail to meet one of the central project objectives (Objective #1). They are considered in Chapter 7 because they were mentioned in the TAMT plan.

(i.e., Dry Bulk, Refrigerated Containers, and Multipurpose General Cargo). Total annual throughput would be limited to 4,675,567 MT. These throughput limits would be enforced throughout the life of the plan.

An estimated throughput breakdown by node includes:

- Dry Bulk: 1,987,500 MT
- Refrigerated Containers: 1,716,000 MT
- Multi-Purpose/General Cargo 733,050 MT
- Liquid Bulk (No Change): 239,017 MT

Like with the MPC throughput scenario, all features described for the proposed project would still be possible with the STC Alternative. However, if adopted, this alternative would not allow throughput to exceed a total of 4,675,567 MT without analyzing the environmental effects of additional throughput, consistent with State law.

Environmentally Superior Alternative

Pursuant to CEQA, the EIR is required to identify the environmentally superior alternative. Although the No Project/No Build Alternative reduces the greatest number of significant impacts, CEQA requires that when the environmentally superior alternative is the No Project Alternative, another alternative should be identified. Therefore, as indicated in Table 7-3 of Chapter 7, *Alternatives to the Proposed Project*, the Reduced Project Alternative would be the environmentally superior alternative. The Reduced Project Alternative would reduce significant impacts on air quality and health risk, greenhouse gas emissions, noise, and transportation by eliminating components such as the gantry cranes and other efficient technologies and strategies that would otherwise help the terminal increase its throughput. The reduced throughput would mean less activity on the project site and fewer vessel and truck trips. More importantly, though, is the fact that the Reduced Project Alternative would not meet several of the central project objectives, including Objectives #1, #2, #5, or #6 as described in Section 7.5.3.12.

However, as indicated above, based on feedback received during public review of the Draft EIR, notably from ARB, the San Diego Air Pollution Control District, and the Environmental Health Coalition, about the MPC scenario's significant and unavoidable impacts associated with criteria pollutants and health risk, the District organized multiple working sessions with the District's Maritime business and operations staff, Real Estate staff, and Planning and Green Port staff in an effort to develop an alternative that would reduce criteria pollutants and toxic air contaminants further while still achieving the basic project objectives and remaining feasible. In addition, the District met with ARB, the San Diego Air Pollution Control District, and the Environmental Health Coalition to discuss feasible solutions to reduce air quality impacts. The result was the STC Alternative (Alternative 5). The STC Alternative would reduce throughput by 25 percent from the MPC scenario proposed under the project, but would still allow the District to accommodate realistic market forecasts without severely harming the port's and TAMT's economic competitiveness. As such, the STC Alternative is considered feasible, and would reduce significant health risk impacts and several impacts associated with the emission of criteria pollutants while still achieving the basic project objectives. As a result, District staff supports approval of the STC Alternative in place of the MPC scenario.

Table ES-4. Project Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
4.1 Aesthetics and Visual Resources				
Project Impacts				
Existing Visual Character or Quality	*Demolition and Initial Rail Component*			
	Implementation of the Demolition and Initial Rail Component would not substantially degrade the existing visual character or quality of the site and its surroundings.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout			
	Impact-AES-1: Visual Impacts from Installation of up to Five Gantry Cranes. Implementation of up to two gantry cranes at Berths 10-1/10-2, two gantry cranes at Berths 10-3/10-4, and up to two gantry cranes at Berths 10-5/10-6 (not to exceed a total of 5 cranes) would result in a significant adverse change to the existing visual character and quality of the project site from key observation points surrounding the project site.	STC: PS MPC: PS	No mitigation is available to reduce this impact.	STC: SU MPC: SU
New Source of Substantial Light or Glare	*Demolition and Initial Rail Component*			
	Implementation of the proposed project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout			
	Buildout of the TAMT plan would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.	STC: LS MPC: LS	No mitigation is required.	N/A

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
4.2 Air Quality				
Project Impacts				
Conflict with an Air Quality Management Plan	*Demolition and Initial Rail Component*			
	Implementation of the Demolition and Initial Rail Component would not conflict with or obstruct implementation of an applicable air quality plan.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout			
	Buildout of the TAMT plan would not conflict with or obstruct implementation of an applicable air quality plan.	STC: LS MPC: LS	No mitigation is required.	N/A
Criteria Pollutants (Construction)	*Demolition and Initial Rail Component*			
	Construction of the Demolition and Initial Rail Component would not violate an air quality standard or contribute substantially to an existing or projected air quality standard.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout			
	Impact-AQ-1: Emissions in Excess of Criteria Pollutant Thresholds During TAMT Plan Buildout Construction. Specific construction details (such as timing, phasing, and overlapping of possible construction projects that would be implemented over the life of the TAMT plan) are not known at this time. Therefore, project emissions during construction, before mitigation, could exceed the San Diego County SLTs. The contribution of project-related emissions is considered significant because the project would have the potential to exceed thresholds that have been set by SDAPCD to attain the NAAQS and CAAQS, the purpose of which is to provide for the protection of public health.	STC: PS MPC: PS	**MM-AQ-1: Implement Best Management Practices During Construction of Future TAMT Plan Components.** All proponents of future projects shall implement Best Management Practices (BMPs) to reduce air emissions from all construction activities implemented as part of full TAMT plan buildout. The following measures are required to limit construction equipment exhaust from on-road trucks and heavy-duty equipment used during construction. ~~• Use~~Ensure that all off-road diesel~~ oxidation catalysts and catalyzed diesel particulate traps.~~ ~~• Maintain all~~ -powered equipment used during construction ~~vehicles and equipment according to manufacturers' specifications.~~ • ~~Restrict idling of~~between 2020 and 2025 is equipped with the U.S. Environmental Protection Agency (EPA) Tier 3 or cleaner engines, except for specialized construction ~~vehicles and~~ equipment ~~to~~	STC: SU MPC: SU

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			~~a maximum of 3 minutes when~~for which an EPA Tier 3 engine is not ~~in use (see MM-AQ-2 for definition of "not in use").~~ available. • ~~Install high-pressure fuel injectors on construction equipment vehicles.~~ • Ensure that all off-road diesel-powered equipment used during construction beyond 2025 is equipped with EPA Tier 4 Final or cleaner engines, except for specialized construction equipment for which an EPA Tier 4 Final engine is not available. In addition, all future project proponents shall implement the relevant BMPs, consistent with the applicable industrial Storm Water Pollution Prevention Plan (SWPPP). In no case would any BMP be implemented if it conflicted with the SWPPP or other applicable water quality permit requirements. BMP dust control measures would include, but are not limited to, the following. • Water the grading areas at least twice daily to minimize fugitive dust. • Stabilize graded areas as quickly as possible to minimize fugitive dust. • Apply chemical stabilizer or pave the last 100 feet of internal travel path within the construction site prior to public road entry. • Install wheel washers adjacent to a paved apron prior to vehicle entry on public roads. • Remove any visible track-out into traveled public streets within 30 minutes of occurrence. • Wet wash the construction access point at the end of each workday if any vehicle travel on unpaved surfaces has occurred. • Provide sufficient perimeter erosion control to prevent washout of silty material onto public roads. • Cover haul trucks or maintain at least 12 inches of	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			freeboard to reduce blow-off during hauling. • Suspend all soil disturbance and travel on unpaved surfaces if winds exceed 25 mph. • Cover/water onsite stockpiles of excavated material. • Enforce a 15 mph speed limit on unpaved surfaces. • On dry days, sweep up any dirt and debris spilled onto paved surfaces immediately to reduce re-suspension of particulate matter caused by vehicle movement. Clean approach routes to construction sites daily for construction-related dirt in dry weather. • Hydroseed, landscape, or develop as quickly as possible all disturbed areas as directed by the San Diego Unified Port District and/or ~~SDAPCD~~San Diego Air Pollution Control District to reduce dust generation. • Limit the daily grading volumes/area. Prior to the commencement of construction activities, the project proponent shall submit evidence to the San Diego Unified Port District of the project proponent's compliance with the BMPs and that construction equipment is maintained and properly tuned in accordance with manufacturers' specifications, which shall be subject to confirmation by the San Diego Unified Port District during construction.	
Criteria Pollutants (Operation)	*Demolition and Initial Rail Component*			
	Operation of the Demolition and Initial Rail Component would not violate an air quality standard or contribute substantially to an existing or projected air quality standard.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout			
	Impact-AQ-2: Emissions in Excess of Criteria Pollutant Thresholds During TAMT Plan Buildout Operations. Project emissions during operations, before	STC: PS MPC: PS	**MM-AQ-2: Implement Diesel Emission-Reduction Measures During Construction and Operations of Future TAMT Plan Components.** The project proponent shall implement the following measures	~~SU~~STC: LS MPC: LS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	mitigation, would exceed the San Diego County SLTs for VOC, NO_X, CO, SO_X, PM10, and PM2.5. The contribution of project-related emissions is considered significant because the project would exceed thresholds that have been set by SDAPCD to attain the NAAQS and CAAQS, the purpose of which is to provide for the protection of public health.		during construction and project operations, subject to verification by the District. **i.** All project proponents shall limit all construction and operations equipment, drayage, and delivery truck idling times by shutting down equipment when not in use and reducing the maximum idling time to less than 3 minutes. The project proponent shall install clear signage regarding the limitation on idling time at the delivery driveway and loading areas and shall submit quarterly reports of violators to the District. This measure shall be enforced by terminal supervisors, and repeat violators shall be subject to penalties pursuant to California airborne toxics control measure 13 California Code of Regulations Section 2485. The project proponent shall submit evidence of the use of diesel emission reduction measures to the District through annual reporting, with the first report due 1 year from the date of project completion and each report due exactly 1 year after, noting all violations with relevant identifying information of the vehicles and drivers in violation of these measures. **ii.** The project proponent shall verify that all construction and operations equipment is maintained and properly tuned in accordance with manufacturers' specifications. Prior to the commencement of construction and operations activities using diesel-powered vehicles or equipment, the project proponent shall verify that all vehicles and equipment have been checked by a certified mechanic and determined to be running in proper condition prior to admittance into any terminal leasehold. The project proponent shall submit a report by the certified mechanic of the condition of the construction and operations vehicles and equipment to the District prior to	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			commencement of their use. **MM-AQ-3: Comply with San Diego Unified Port District Climate Action Plan Measures.** Prior to approval of all discretionary actions and/or Coastal Development Permits, the project proponent shall be required to implement the following measures to be consistent with the Climate Action Plan. • Vessels shall comply with the District's voluntary vessel speed reduction program, which targets 80 percent compliance. • Eligible vessels shall comply with ARB's at-berth regulation that requires shore power or alternative control technology regulation for 80 percent of eligible calls by 2020, minus idle time to clear customs consistent with California Air Resources Board regulations. This is a project feature made into a mitigation measure to ensure compliance. • Designated truck haul routes shall be used, and the project proponent shall decrease onsite movements where practicable. • No commercial drive-through shall be implemented. • Compliance with Assembly Bill 939 and the City of San Diego's Recycling Ordinance shall be mandatory and shall include recycling at least 50 percent of solid waste; compliance with the City of San Diego's Construction and Demolition Debris Deposit Ordinance shall be mandatory and shall include recycling at least 50 percent of all construction debris. This measure shall be applied during construction and operation of the proposed project. • Light fixtures shall be replaced with lower-energy bulbs such as fluorescent, Light-Emitting Diodes (LEDs), Compact Fluorescent Lights (CFLs), or the	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			most energy-efficient lighting that meets required lighting standards and is commercially available. • Implementation of Climate Action Plan measures will be included as part of any discretionary actions and/or Coastal Development Permit(s) associated with this project. Evidence of implementation and compliance with this mitigation measure shall be provided to the District by the project proponent on an annual basis through 2035 (buildout of the TAMT plan). **MM-AQ-4: Implement Best Available Control Technologies for Conveyor System and Bulk Discharge Unloader for Future Dry Bulk Operations associated with the TAMT Plan**. ~~Prior to the first discretionary action~~ As a condition of approval ~~and/~~of any new or amended real estate agreement or Coastal Development ~~Permits related to~~ Permit for dry bulk operations ~~associated with~~that would result in an increase in daily or annual throughput over baseline conditions, the San Diego Unified Port District shall require the ~~TAMT plan, any~~ project proponent ~~shall upgrade the existing or~~ to install ~~a new Conveyor System and Bulk Discharge Unloader that shall include~~ and use the best available control technologies ~~(BACT) that~~to achieve a minimum 95~~ percent~~% control efficiency~~. The project proponent that finances~~ for particulate matter in one of the ~~system may be reimbursed, based on anticipated percent usage, by future users of the system. Alternatively, other funding mechanisms may be developed. However, under no circumstance shall the upgrade or new system that includes BACT not be implemented prior to the first discretionary action approval and/or Coastal Development Permits related to dry bulk operations.~~following ways: • ~~Implementation~~Upgrade the existing Conveyor System and Bulk Discharge Unloader (if proposed	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			for use) to meet the minimum 95% control efficiency. • Replace the existing Conveyor System and Bulk Discharge Unloader with a new Conveyor System and Bulk Discharge Unloader that meets the minimum 95% control efficiency and properly dispose of ~~BACT~~the existing system in compliance with all applicable laws and regulations. • Bypass the existing Conveyor System and Bulk Discharge Unloader and install a new Conveyor System and Bulk Discharge Unloader that meets the minimum 95% control efficiency. The project proponent that finances an upgrade or replacement to the new system may be reimbursed, based on anticipated percent usage, by future users of the system. The San Diego Unified Port District will ~~be a part of any~~assist such reimbursement by conditioning its approval of other users of the system during the first 5 years of its operation on reimbursement of the cost of the system on a "fair share" basis. Under no circumstance shall a project proponent seeking discretionary ~~action approval and/or Coastal Development Permit(s) associated with the TAMT plan. Evidence~~approval for dry bulk operations be allowed to increase daily or annual throughput of dry bulk operations without first completing the upgrade or replacement of the existing system, or installation of a new system required above. The recipient of a discretionary approval by the San Diego Unified Port District subject to this mitigation measure shall provide written evidence of implementation and compliance with this mitigation measure ~~shall be provided~~ to the San Diego Unified Port District on an annual basis through 2035 (buildout of the TAMT plan).	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			MM-AQ-5: Implement Vessel Speed Reduction Program Beyond Climate Action Plan Compliance for Future Operations Associated with the TAMT Plan. Every quarter following approval of the first discretionary action approval and/or issuance of the first Coastal Development Permit associated with a future project proposed under the TAMT plan, whichever occurs first, the project proponent shall provide a report of the annual vessel activity and throughput by cargo node to date and the projected total throughput for the previous 6 months to the San Diego Unified Port District's Planning & Green Port Department. Prior to the annual vessel calls reaching ~~52~~91 calls (~~37~~76 new calls over existing) for dry bulk, ~~77~~117 calls (~~20~~60 new calls over existing) for refrigerated containers, and ~~68~~96 calls (~~40~~68 new calls over existing) for multi-purpose general cargo under the MPC scenario (or 79 calls [64 new calls over existing] for dry bulk, 98 calls [41 new calls over existing] for refrigerated containers, and 78 calls [50 new calls over existing] for multi-purpose general cargo under the STC Alternative), or beginning January 1, 2030 for all vessels irrespective of the number of calls occurring on an annual basis, whichever occurs first, the project proponent shall implement ~~VSR~~vessel speed reduction measures to reduce the project's criteria pollutant emissions. The program shall require that 90 percent of the vessels calling at the project site reduce their speeds to 12 knots starting at 40 nautical miles from Point Loma. Due to the international border to the south and California Air Resources Board limit for rulemaking being 24 nautical miles from the coastline, some vessel calls travel within the San Diego Air Basin for less than 40 nautical miles. For those vessel calls, vessel operators are required to reduce their speeds to 12 knots at the point those vessels enter the San Diego Air Basin and maintain speeds of 12 knots over the entire distance to/from Point Loma. To be compliant	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			with the vessel speed limit, the vessel's weighted average speed shall be 12 knots or less from the 40 nautical mile latitude and longitude positions on each respective route to/from Point Loma. Implementation of this VSR program will be required as part of any discretionary action and/or Coastal Development Permit(s) associated with the TAMT plan. Evidence of implementation and compliance with this mitigation measure shall be provided to the San Diego Unified Port District's Planning & Green Port Department on ~~an annual~~a quarterly basis through 2035 (buildout of the TAMT plan). The San Diego Unified Port District will verify compliance through analysis of Automatic Identification System data or by requesting a vessel's Electronic Chart Display Identification System log from the captain. ~~**MM-AQ-6: Electric Cargo Handling Equipment Upgrades.** As a condition of any Coastal Development Permit, the project proponent, or the District, shall secure funding for and operate one piece of CHE associated with each node. Operation of such equipment on the leasehold shall occur by January 1, 2020 through the expected operating life of the equipment, and evidence of operation shall be provided to the District upon request. Equipment shall be replaced if alternative technologies (i.e., advancements in electric equipment) are identified and determined to be feasible pursuant to MM-AQ-7. For purposes of the analysis, it was assumed that each node would operate one electric yard truck. This mitigation is similar to MM-GHG-3, and the number of CHE equipment required between the two mitigation measures does not aggregate to more than one piece of CHE per node.~~ ~~**MM-AQ-7: Periodic Technology Review.** To promote new emission control technologies, each tenant who seeks~~ **MM-AQ-6: Electric Cargo Handling Equipment Upgrades.** This measure has multiple steps for	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			compliance, as specified below. A. Prior to January 1, 2020, the San Diego Unified Port District shall ensure that at least three pieces of existing non-electric cargo handling equipment at the terminal are replaced by electric cargo handling equipment, none of which were previously operating at the terminal during the 2013/2014 baseline year of the EIR analysis. Possible ways the electric cargo handling equipment may be obtained include, but are not limited to, the following: 1. Purchased, leased, or otherwise acquired, in whole or in part, through funding provided to a tenant by the San Diego Unified Port District; 2. Purchased, leased, or otherwise acquired, in whole or in part, through funding provided to a tenant by other sources; or 3. Purchased, leased, or otherwise acquired, in whole or in part, by the tenant in compliance with a condition of a discretionary ~~action~~ approval ~~and/or Coastal Development Permit(s) shall perform an investigation into emerging zero and near-zero technologies and submit a report to~~issued by the San Diego Unified Port District ~~on an annual basis, beginning on~~ . Written evidence of the ~~date such construction, occupancy, or use commences and continuing through 2035 (buildout of the TAMT plan). The District regularly monitors technologies as part of its CAP and long-range sustainability goals, which require the~~ acquisition of the electric cargo handling equipment and the equipment it will replace and remove from further operation at the terminal must be provided to the San Diego Unified Port District. The San Diego Unified Port District shall further ensure that the electric cargo handling equipment is in use at each of the three nodes	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			throughout the expected operating life. This will be accomplished by requiring each tenant that employs electric cargo handling equipment pursuant to this measure to report the equipment's annual number of hours of operation to the San Diego Unified Port District and by requiring the San Diego Unified Port District to monitor use of the electric cargo handling equipment as part of the San Diego Unified Port District's TAMT equipment inventory. B. Prior to January 1, 2025, the San Diego Unified Port District also shall ensure that no fewer than 20 non-electric yard trucks in operation are replaced at the TAMT by 20 electric yard trucks. Possible ways the electric yard trucks may be obtained include, but are not limited to, the following: 1. Purchased, leased, or otherwise acquired, in whole or in part, through funding provided to a tenant by the San Diego Unified Port District; 2. Purchased, leased, or otherwise acquired, in whole or in part, through funding provided to a tenant by other sources; or 3. Purchased, leased, or otherwise acquired, in whole or in part, by the tenant in compliance with a condition of a discretionary approval issued by the San Diego Unified Port District. Written evidence of the acquisition of the electric yard trucks, and the non-electric yard trucks they will replace and remove from further operation at the terminal, must be provided to the San Diego Unified Port District. The San Diego Unified Port District shall further ensure that the electric yard trucks are in use at the TAMT throughout the expected operating life of the equipment. Each tenant that employs electric trucks pursuant to this measure shall report the equipment's annual number of hours of operation to the San Diego	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			Unified Port District, and the San Diego Unified Port District shall monitor use of the electric trucks as part of the San Diego Unified Port District's TAMT equipment inventory. C. Prior to January 1, 2030, the San Diego Unified Port District also shall ensure that no fewer than three existing non-electric reach stackers and ten non-electric forklifts in operation are replaced at the TAMT by three fully electric reach stackers and ten fully electric forklifts. Possible ways the electric reach stackers and forklifts may be obtained include, but are not limited to: 1. Purchased, leased, or acquired, in whole or in part, through funding provided to the tenant by the San Diego Unified Port District; 2. Purchased, leased, or acquired, in whole or in part, through funding provided to the tenant by other sources; or 3. Purchased, leased, or otherwise acquired, in whole or in part, by the tenant in compliance with a condition of a discretionary approval issued by the San Diego Unified Port District. Written evidence of the acquisition of the three electric reach stackers and ten electric forklifts and the conventional equipment they will replace and remove from further operation at the terminal must be provided to the San Diego Unified Port District. The San Diego Unified Port District shall further ensure that the electric reach stackers and forklifts are in use at the TAMT throughout the expected operating life of the equipment. Each tenant that employs electric reach stackers or electric forklifts pursuant to this measure shall report the equipment's annual number of hours of operation to the San Diego Unified Port District, and the San Diego Unified Port District shall monitor use of the electric reach stackers and	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			forklifts as part of the San Diego Unified Port District's TAMT equipment inventory. D. The electric equipment employed pursuant to paragraphs A, B, and C of this mitigation measure may be replaced by other technologies or other types of cargo handling equipment as long as the replacement equipment achieves the same or greater criteria pollutant, toxic air contaminant, and greenhouse gas emission reductions as compared to the equipment required by paragraphs A, B, and C of this mitigation measure. **MM-AQ-7: Annual Inventory Submittal and Periodic Technology Review**. The San Diego Unified Port District regularly monitors technologies for reducing air emissions as part of its Climate Action Plan and long-range sustainability goals, which encourage the San Diego Unified Port District and its tenants to use cleaner technologies over time as they become available and feasible. ~~The Annual Technology Review shall identify any~~As a condition of approval of any new or amended real estate agreement or Coastal Development Permit, the San Diego Unified Port District shall require the project proponent to submit to the San Diego Unified Port District an annual inventory of all equipment that generates criteria pollutant, toxic air contaminant, and greenhouse gas emissions operated by the project proponent at the TAMT throughout the life of the lease up to 2035 (buildout of the TAMT plan). The equipment inventory shall include the year, make, and model of the equipment that was used in the previous year, including annual hours of operation for each piece of equipment, including but not limited to heavy-duty drayage and non-drayage trucks, yard equipment, assist and ocean-going tugs, ocean-going vessels, bulk material handling equipment, and any other type of cargo handling equipment. The purpose of the inventory is to track emissions and equipment at TAMT and to assist in	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			technological reviews, as described below. To promote new emission control technologies, the San Diego Unified Port District will perform a Periodic Technology Review annually. The Periodic Technology Review will coincide with monitoring and reporting pursuant to the San Diego Unified Port District's Climate Action Plan, and will include the following: 1. Develop and maintain an inventory of equipment in operation at the TAMT that generates criteria pollutant, toxic air contaminant, and greenhouse gas emissions, including the equipment model year, model name, and annual hours of operation, based on the annual tenant inventories submitted to the San Diego Unified Port District as described above. 2. Identify and assist with enforcement of changes to emission regulations for heavy-duty trucks, yard equipment, tugs, vessels, bulk handling equipment, and other equipment that generates criterial pollutant, toxic air contaminant, and greenhouse gas emissions. 3. Identify, and assist with implementation of, any feasible new emissions-reduction technologies that may reduce emissions at the project site, including ~~the feasibility of zero and near-zero emissions~~ technologies applicable to heavy-duty trucks, yard equipment, tugs, vessels, and bulk handling equipment. 4. Collaborate with the California Air Resources Board and San Diego Air Pollution Control District to ensure these technologies ~~for heavy-duty trucks, yard equipment, tugs, vessels, and bulk handling equipment. If the Periodic Technology Review demonstrates the new technology~~ are available and to identify funding opportunities, including funding from the Prop 1B: Good Movement Emission Reduction Program, among others. 5. Prioritize older equipment in operation at the	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			TAMT that generates the highest levels of criterial pollutant, toxic air contaminant, and greenhouse gas emissions to be replaced based on the level of emissions and cost-effectiveness of the emissions reduction (i.e., biggest reduction per dollar), and identify implementation mechanisms including, but not limited to, tenant-based improvements, grant programs, or a combination thereof, based on regulatory requirements and the feasibility analyses specified in paragraph 3 above. Use the Carl Moyer Program, or similar cost-effectiveness criteria, to assess the economic feasibility (e.g., cost effectiveness) of the identified new technologies. 6. Ensure that any upgraded or retired equipment is accounted for as part of the San Diego Unified Port District's Maritime Emissions Inventory and Climate Action Plan. If Periodic Technology Review identifies new technology that will be effective in reducing emissions ~~and the~~compared to the equipment in operation at the time of the review, and the San Diego Unified Port District determines that installation or use of the technology is feasible, the ~~tenant~~San Diego Unified Port District shall ~~implement~~require the use of such technology ~~within 12 months of the District's determination.~~as a condition of any discretionary approval issued by the San Diego Unified Port District for any new, expanded, or extended operations at the TAMT. Furthermore, the District and/or project proponent must demonstrate that emissions of volatile organic compounds (VOCs) would be less than 75 pounds per day on a peak day once cargo throughput exceeds 4,000,000 metric tons annually. If technological advancements are unable to reduce VOC emissions to 75 pounds per day or less on a peak day, then the District shall limit the number of vessels allowed to no more than three on a peak day once total throughput exceeds 4,000,000 metric tons annually. These	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			operational restrictions will ensure that VOC emissions do not exceed threshold standards established by the San Diego Air Pollution Control District. Verification of compliance with this measure is the responsibility of the District. **MM-AQ-8: Implement ~~a Sustainable Leasing~~Exhaust Emissions Reduction Program~~.~~ at the Tenth Avenue Marine Terminal.** The San Diego Unified Port District shall ~~work with tenants to develop and~~ implement a ~~policy incentive-based sustainable~~program at the TAMT by January 1, 2020 to further reduce emissions from terminal-wide emissions sources. A. The program shall be implemented through the Coastal Development Permit process; the tenant leasing ~~program to achieve the District's goals to attract the cleanest ships, ships that utilize~~process, including the issuance of new, extended, or amended leases; and other short-term real estate agreements at the TAMT. B. The program shall be focused on incentives to reduce criteria pollutant, toxic air contaminant, and greenhouse gas emissions by attracting clean vessels, trucks, and equipment to the TAMT—including but not limited to vessels that use shore power while at berth, zero and near-zero emission cargo handling equipment technologies, energy efficiency measures, or renewable energy—and by otherwise incorporat~~e~~ing technological and operational practices that reduce criteria pollutant ~~emissions. The District's CAP identifies the development of a Sustainable Leasing Policy as one of the GHG reduction measures prioritized for implementation,~~, toxic air contaminant, and greenhouse gas emissions from terminal operations beyond existing regulatory requirements. The program shall include specific incentives for existing and future ~~components~~	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			~~under the TAMT plan shall be subject to the Sustainable Leasing Policy~~tenants, which may include but are not limited to: an extended lease term, expedited permit processing, reduced permit fees, and eligibility for grants or other financial assistance. The nature and extent of such incentives will be based on an emissions reduction schedule established by the San Diego Unified Port District for criteria pollutants, toxic air contaminants, and greenhouse gas emissions. C. The program shall identify specific emission reduction equipment and practices that may qualify for incentives, including but not limited to the following. ● Vessels: Demonstrate that at least 50 percent of annual vessel calls will be equipped with Tier II or better main and auxiliary engines, as defined by International Convention for the Prevention of Pollution from Ships Annex VI 2008 regulations or other standards set forth by the International Convention for the Prevention of Pollution from Ships, U.S. Environmental Protection Agency, or the California Air Resources Board in the future. ● Vessel Hoteling: Demonstrate that vessel calls will use shore power or a California Air Resources Board–approved alternative emission capture and control system or install a shore power or California Air Resources Board–approved alternative emission capture and control system for the purpose of reducing ocean-going vessel hoteling emissions. ● Heavy-Duty Trucks: Demonstrate that at least 50 percent of annual cargo throughput will be transported with zero/near-zero emission trucks, hybrid trucks, and/or other alternative truck technologies. To qualify, the trucks must	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			result in emission reductions greater than those required by state and federal regulatory agencies at the time of project approval. • Switch and Line Haul Locomotives: Demonstrate that at least 50 percent of annual cargo will be transported with Tier 3 or above locomotive engines for line-haul, as defined by the U.S. Environmental Protection Agency in 2008 (73 Federal Register 88 25098–25352), and a Tier 3 or above switcher or railcar mover for switching activity at both the terminal and yard. • Terminal Infrastructure: Install electric charging stations and/or other terminal infrastructure and equipment that support and facilitate zero or near-zero emission technologies. **MM-AQ-9: Use of At-Berth Emission Capture and/or Control System to Reduce Vessel Hoteling Emissions.** The San Diego Unified Port District shall require the use of an At-Berth Emission Capture and/or Control System (i.e., Bonnet System) to reduce vessel hoteling emissions prior to terminal-related emissions reaching a cancer risk of 10 per million at the maximally exposed sensitive receptor location. Based on the Health Risk Assessment for the TAMT Redevelopment Plan Environmental Impact Report, an At-Berth Emission Capture and/or Control System shall be required prior to reaching an annual throughput of 691,418 metric tons for dry bulk, assuming no growth in multi-purpose general cargo; an annual throughput of 356,666 metric tons for multi-purpose general cargo (including break bulk, neobulk, roll-on/roll-off, and other non-container, non-dry bulk cargo, and non-liquid bulk cargo), assuming no growth in dry bulk; or any combination of dry bulk and multi-purpose general cargo throughput of 691,418 metric tons, whichever	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			occurs first. The San Diego Unified Port District shall either install directly or enter into a contract with an entity that provides the emission capture and/or control system or an equivalent alternative technology, to reduce emissions from vessels that are unable to cold iron at TAMT or are exempt from the California Air Resources Board's at-berth regulation. The San Diego Unified Port District may charge a fee for the use of an Emissions Capture and Control System (or an alternative at-berth system that reduces vessel hoteling emissions) based on the vessel type and the length of its stay. The system shall be a technology that has been approved by the California Air Resources Board and meets the requirements set forth in the California Air Resources Board's at-berth regulations. If the San Diego Unified Port District determines the need for an Emissions Capture and Control System (or an alternative at-berth system that reduces vessel hoteling emissions) prior to, or later than, the throughput figures listed above, or if shore power or other future regulatory requirements are able to reduce vessel hoteling emissions, then the requirement for the At-Berth Emission Capture and/or Control System shall be updated and adjusted accordingly, at the San Diego Unified Port District's discretion. All vessels that are not shore-power equipped shall use the Emission Capture and/or Control System (or an alternative at-berth system that reduces vessel hoteling emissions at an equivalent level), provided there are no operational limitations and it is not being used by another vessel. If the Emission Capture and/or Control System is operationally unable to connect to an at-berth vessel or if it is being used by another vessel, multi-purpose/general cargo or dry bulk vessels will be allowed to berth without it.	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Cumulatively Considerable Criteria Pollutant Contribution under an Ambient Air Quality Standard	*Demolition and Initial Rail Component* Implementation of the Demolition and Initial Rail Component would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout **Impact-AQ-3: Cumulative Emissions in Excess of Criteria Pollutant Thresholds During TAMT Plan Buildout Operations**. Project emissions during operations, before mitigation, would exceed the San Diego County SLTs for VOC, NO_X, ~~CO,~~ PM10, and PM2.5, and when combined with other nearby past, present, and probable future projects, the full TAMT plan buildout's contribution would be cumulatively considerable. The contribution of project-related emissions is considered significant because full TAMT plan buildout would exceed thresholds that have been set by SDAPCD to attain the NAAQS and CAAQS, the purpose of which is to provide for the protection of public health	STC: PS MPC: PS	Implement **MM-AQ-2** through **MM-AQ-~~8~~9**, as described above.	~~SU~~STC: LS MPC: LS
Sensitive Receptors	*Demolition and Initial Rail Component* Implementation of the Demolition and Initial Rail Component would not expose sensitive receptors to substantial pollutant concentrations.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout **Impact-AQ-4: Health Risk During Full TAMT Plan Buildout Operations.** Project TAC emissions during full TAMT plan buildout operations, before mitigation, would result in a significant incremental health risk by exceeding thresholds for incremental cancer	STC: PS MPC: PS	Implement **MM-AQ-2** through **MM-AQ-~~8~~9**, as described above.	~~SU~~STC: LS MPC: SU for residential receptors; LS for park and school

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	risk at nearby receptors.			receptors
Objectionable Odors	*Demolition and Initial Rail Component*			
	Implementation of the Demolition and Initial Rail Component would not create objectionable odors affecting a substantial number of people.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout			
	Buildout of the TAMT plan would not create objectionable odors affecting a substantial number of people.	STC: LS MPC: LS	No mitigation is required.	N/A
Cumulative Impacts				
Criteria Pollutants (Construction)	*Demolition and Initial Rail Component*			
	Implementation of the Demolition and Initial Rail Component would not violate an air quality standard or contribute substantially to an existing or projected air quality standard.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout			
	Impact-C-AQ-1: Emissions in Excess of Cumulative Thresholds During Full TAMT Plan Buildout Construction. Emissions during construction of full TAMT plan buildout would exceed the cumulative San Diego County SLTs.	STC: PS MPC: PS	Implement **MM-AQ-1**, as described above.	STC: SU MPC: SU
Criteria Pollutants (Operation)	*Demolition and Initial Rail Component*			
	Implementation of the Demolition and Initial Rail Component would not violate an air quality standard or contribute substantially to an existing or projected air quality standard.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout			
	Impact-C-AQ-2: Emissions in Excess of Cumulative Thresholds During Full TAMT Plan Buildout Operations. Emissions during operations would exceed the cumulative San Diego County SLTs for VOC, NO_X, PM10, and	STC: PS MPC: PS	Implement **MM-AQ-2** through **MM-AQ-~~8~~9**, as described above.	STC: LTS MPC: LTS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	PM2.5 at maximum capacity primarily of the full TAMT plan buildout due to vessel, train, and truck activity and bulk processing.			
Health Risk	*Demolition and Initial Rail Component*			
	Implementation of the Demolition and Initial Rail Component would not expose sensitive receptors to substantial pollutant concentrations.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout			
	Impact-C-AQ-3: Cumulative Health Risk Emissions During Operations. Emissions during full TAMT plan buildout operations would exceed the incremental risk thresholds associated with long-term operation up to maximum capacity primarily due to vessel, terminal equipment, and truck activity.	STC: PS MPC: PS	Implement **MM-AQ-2** through **MM-AQ-~~8~~9**, as described above	~~SU~~STC: LS MPC: SU for residential receptors; LS for park and school receptors
4.3 Biological Resources				
Project Impacts				
Candidate, Sensitive, or Special-Status Species	*Demolition and Initial Rail Component*			
	Impact-BIO-1: Potential Destruction of Migratory Bird Treaty Act Protected Nests. Onsite demolition of structures during construction, as well as noise from construction activity, could result in the destruction and loss of active bird nests that could be present within the project area during the nesting season (February 1 through August 31). The MBTA prohibits take of nearly all native birds. Similar provisions within the California Fish and Game Code protect all native birds of prey (Section 3503.5) and all non-game birds that occur naturally in the state (Section 3800).	STC: PS MPC: PS	~~**For Impact-BIO-1:**~~ **MM-BIO-1: Avoid Nesting Season for Birds or Conduct Preconstruction Nesting Survey.** To ensure compliance with the MBTA and similar provisions under the California Fish and Game Code, the project proponent in direct coordination with the general contractor shall conduct demolition of Transit Shed #1, Transit Shed #2, Warehouse C, the molasses tanks, and other existing structures during the non-breeding season (between September 1 and January 31) or shall implement the following. • If demolition of a structure is scheduled to occur between February 1 and August 31, the project proponent shall retain a qualified biologist (with knowledge of the species to be surveyed) who shall conduct a focused nesting survey prior to	STC: LS MPC: LS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			demolition of any structures within 1 week of scheduled demolition. A qualified biologist is a person who, by reason of his or her knowledge of the natural sciences and the principles of wildlife biology, acquired by wildlife biology education and experience, performs services including, but not limited to, consultation investigation, surveying, evaluation, planning, or responsible supervision of wildlife biology activities when those professional services require the application of biology principles and techniques. • The survey to look for active nests shall be conducted and results reported in writing to the District for review and approval prior to the commencement of any demolition or construction activities on the project site. The survey shall occur between sunrise and 12:00 p.m., when birds are most active. If no active nests are detected during these survey, the biologist will prepare a letter report to the District documenting the results of the survey. If there is a delay of more than 7 days between when the nesting bird survey is performed and demolition begins, the qualified biologist shall confirm in writing to the District that he/she has resurveyed the structure proposed for demolition and that no new nests have been established. • If the survey confirms an active nest on any of the structures to be demolished, demolition of the structure shall not occur until after a qualified biologist determines that the nest is no longer active or that the young have fledged.	
	Impact-BIO-2: Potential Destruction of Special-Status and other Sensitive Bat Maternity Roosts. Demolition of onsite structures during construction could result in the loss of bat maternity roosts that could occur within the project area during the	STC: PS MPC: PS	**MM-BIO-2: Avoid Bat Maternity Roosts or Conduct Preconstruction Maternity Bat Roost Survey.** If demolition of any structures is scheduled during the bat maternity season when reproductively active females and dependent young could be present (between April 15 and August 31), a qualified biologist (as defined	STC: LS MPC: LS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	maternity season (April 15 through August 31).		under MM-BIO-1 and with knowledge of the species to be surveyed) shall conduct a preconstruction survey to determine whether bats are present. The survey shall examine potential suitable roost sites for evidence of bat presence (presence of bats, guano, or urine stains), and it shall be conducted no more than 7 days prior to demolition of the structures. If no active maternity roosts are detected during these survey, the biologist will prepare a letter report to the District documenting the results of the survey. The survey shall be submitted in writing to the District for review and approval prior to the commencement of any demolition activities on the project site. If the biologist determines that the area surveyed does not contain any active maternity roosts, demolition may commence. If active maternity roosts are found, demolition of the structure shall be postponed and roosting structures shall be retained until a qualified biologist has determined that the maternity roost is no longer active and the young can take care of themselves. The need for a construction buffer shall be determined through consultation among the qualified biologist, the District, and CDFW.	
	Full TAMT Plan Buildout See **Impact-BIO-1** and **Impact BIO-2**	STC: PS MPC: PS	Implement **MM-BIO-1** and **MM-BIO-2**.	STC: LS MPC: LS
4.4 Cultural Resources				
Project Impacts				
Historical Resource	*Demolition and Initial Rail Component* Implementation of the Demolition and Initial Rail Component would not cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the State CEQA Guidelines.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout Buildout of the TAMT plan would not cause a	STC: LS	No mitigation is required.	N/A

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the State CEQA Guidelines.	MPC: LS		
Archaeological Resource	*Demolition and Initial Rail Component*			
	Implementation of the Demolition and Initial Rail Component would not cause a substantial adverse change in the significance of an archaeological resource as defined in Section 15064.5 of the State CEQA Guidelines.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout			
	Impact-CUL-1: Potential Buried Archaeological Resources. The recorded portions of site CA-SDI-5931 are close to the eastern study area boundary. The exact boundaries of CA-SDI-5931 are not known and evidence suggests that the site could be larger than the area tested in 1993. Therefore, project activities within the eastern area of the project site, as mapped on Figure 4.4-1, could potentially encounter archaeological subsurface deposits associated with CA-SDI-5931. Such an encounter, if it were to destroy archaeological resources, would be considered significant.	STC: PS MPC: PS	**MM-CUL-1: Archaeological Monitoring in Areas of Sensitivity**. To reduce potential impacts on CA-SDI-5931, all proposed grading ~~and~~, excavating, and geotechnical testing for the proposed project in the area of potential archaeological sensitivity shall be monitored by a qualified archaeologist(s), who meets the Secretary of the Interior's Professional Qualifications Standards, as promulgated in 36 CFR 61, and a Native American cultural monitor, the latter of which has been requested by the Viejas Band of Kumeyaay Indians. The sensitive portion of the project area, where it is possible that artifacts associated with CA-SDI-5931 could be buried, is immediately east of Warehouse C and south and east of the silo complex and the rail car unloading building, as indicated on Figure 4.4-1. The sensitive area includes the molasses tanks, truck scale building, spur lines north, east, and south of the molasses tanks, and paved and unpaved parking areas near the Crosby Road entrance. The following additional conditions shall only apply to the sensitive portion of the project area indicated on Figure 4.4.-1 during earthwork activities, including grading and trenching. • The Qualified Archaeologist shall participate in a preconstruction meeting to inform all personnel of the potential for historical archaeological materials to be encountered during ground-disturbing	STC: LS MPC: LS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			activities. • If an isolated artifact or historic period deposit is discovered that requires salvaging, the Qualified Archaeologist shall have the authority to temporarily halt construction activities within 100 feet of the find and shall be given sufficient time to recover the item(s) and map its location with a global positioning system (GPS) device. • If a potentially eligible Native American archaeological resource is discovered, the Qualified Archaeologist shall have the authority to temporarily halt construction activities within 100 feet of the find until a Qualified Archaeologist Principal Investigator (PI) makes a determination regarding the significance of the resource. ○ The PI will notify the District to discuss the significance determination and shall also submit a letter indicating whether additional mitigation is required. If the resource is determined to be not significant, the PI shall submit a letter to the District indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that no further work is required. ○ If the resource is determined to be significant, the PI shall submit an Archaeological Data Recovery Plan that has been reviewed by the Native American consultant/monitor, and obtain written approval from the Port to complete data recovery. Impacts on significant resources must be mitigated before ground-disturbing activities in the area of discovery will be allowed to resume. • The Qualified Archaeologist shall treat recovered items in accordance with current professional standards by properly determining provenance, cleaning, analyzing, researching, reporting, and	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			curating them in a collection facility meeting the Secretary of the Interior's Standards, as promulgated in 36 CFR 79, such as the San Diego Archaeological Center. • Within 60 days after completion of the ground-disturbing activity, the Qualified Archaeologist shall prepare and submit a final report to the District for review and approval, which shall discuss the monitoring program and its results, and provide interpretations about the recovered materials, noting to the extent feasible each item's class, material, function, and origin.	
Disturbance of Human Remains	*Demolition and Initial Rail Component* Implementation of the proposed Demolition and Initial Rail Component would not disturb human remains, including those interred outside of formal cemeteries.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout **Impact-CUL-2: Potential Disturbance of Prehistoric Human Remains.** The recorded portion of CA-SDI-5931 included one Native American burial found during grading activities within the rail yard adjacent to the project site and testing indicated the possibility of other prehistoric human burials beyond the areas tested. The exact boundaries of site CA-SDI-5931 are not known, and it is possible that the site extends to the eastern portion of the study area as indicated in Figure 4.4-1, where ground-disturbing activities could take place as part of the implementation of the proposed TAMT plan. Therefore, any ground-disturbing activities in this area would have the potential to encounter prehistoric human remains.	STC: PS MPC: PS	Implement **MM-CUL-1**, as described above.	STC: LS MPC: LS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
4.5 Geology and Soils				
Project Impacts				
Earthquake Fault; Seismic Ground Shaking; Seismic-related Ground Failure	*Demolition and Initial Rail Component* Implementation of the Demolition and Initial Rail Component would not exacerbate the potential of a: (i) rupture of a known earthquake fault; (ii) strong seismic ground shaking; and (iii) seismic-related ground failure, including liquefaction.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout Buildout of the TAMT plan would not exacerbate the potential of a: (i) rupture of a known earthquake fault; (ii) strong seismic ground shaking; and (iii) seismic-related ground failure, including liquefaction.	STC: LS MPC: LS	No mitigation is required.	N/A
Unstable soils; Lateral Spreading, Subsidence, or Collapse	*Demolition and Initial Rail Component* Implementation of the Demolition and Initial Rail Component would not cause a geologic unit or soil to become unstable and exacerbate the potential of onsite or offsite lateral spreading, subsidence, or collapse.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout Buildout of the TAMT plan would not cause a geologic unit or soil to become unstable and exacerbate the potential of onsite or offsite lateral spreading, subsidence, or collapse.	STC: LS MPC: LS	No mitigation is required.	N/A
4.6 Greenhouse Gas Emissions and Climate Change				
Project Impacts				
Direct and Indirect Generation of GHGs by 2020	**Impact-GHG-1: Project GHG Emissions through 2020.** Project GHG emissions during combined project construction and operational activities, before mitigation, would be inconsistent with the CAP's reduction target of 33 percent. Additionally,	STC: PS MPC: PS	**MM-GHG-1: Implement Diesel Emission-Reduction Measures During Construction and Operations of Future TAMT Plan Components.** The District shall implement the following measures during project construction and operations, subject to verification by the District.	STC: LS MPC: LS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	the proposed project would only partially comply with plans, policies, and regulatory programs outlined in the Scoping Plan and adopted by ARB or other California agencies for the purpose of reducing the emissions of GHGs.		**i.** All project proponents shall limit all equipment, drayage, and delivery truck idling times by shutting down equipment when not in use and reducing the maximum idling time to less than 3 minutes. The project proponent shall install clear signage regarding the limitation on idling time at the delivery driveway and loading areas and shall submit quarterly reports of violators to the District. This measure shall be enforced by terminal supervisors, and repeat violators shall be subject to penalties pursuant to California airborne toxics control measure 13 California Code of Regulations Section 2485. The project proponent shall submit evidence of the use of diesel reduction measures to the District through annual reporting, with the first report due 1 year from the date of project completion and each report due exactly 1 year after, noting all violations with relevant identifying information of the vehicles and drivers in violation of these measures. **ii.** The project proponent shall verify that all construction and operations equipment is maintained and properly tuned in accordance with manufacturers' specifications. Prior to the commencement of construction and operations activities using diesel-powered vehicles or equipment, the project proponent shall verify that all vehicles and equipment have been checked by a certified mechanic and determined to be running in proper condition prior to admittance into TAMT. The project proponent shall submit a report by the certified mechanic of the condition of the construction and operations vehicles and equipment to the District prior to commencement of their use.	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			MM-GHG-2: Comply with San Diego Unified Port District Climate Action Plan Measures. Prior to approval of all discretionary actions and/or Coastal Development Permits, the project proponent shall be required to implement the following measures to be consistent with the Climate Action Plan. • Vessels shall comply with the District's voluntary vessel speed reduction program, which targets 80 percent compliance. • Eligible vessels shall comply with ARB's at-berth regulation that requires shore power or alternative control technology regulation for 80 percent of eligible calls by 2020, minus idle time to clear customs consistent with California Air Resources Board regulations. This is a project feature made into a mitigation measure to ensure compliance. • Designated truck haul routes shall be used, and the project proponent shall decrease onsite movements where practicable. • No commercial drive-through shall be implemented. • Compliance with Assembly Bill 939 and the City of San Diego's Recycling Ordinance shall be mandatory and shall include recycling at least 50 percent of solid waste; compliance with the City of San Diego's Construction and Demolition Debris Deposit Ordinance shall be mandatory and shall include recycling at least 50 percent of all construction debris. This measure shall be applied during construction and operation of the proposed project. • Light fixtures shall be replaced with lower-energy bulbs such as fluorescent, Light-Emitting Diodes (LEDs), Compact Fluorescent Lights (CFLs), or the most energy-efficient lighting that meets required lighting standards and is commercially available. Implementation of Climate Action Plan measures will be	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			included as part of any discretionary actions and/or Coastal Development Permit(s) associated with this project. Evidence of implementation and compliance with this mitigation measure shall be provided to the District by the project proponent on an annual basis through 2035 (buildout of the TAMT plan). **MM-GHG-3: Electric Cargo-Handling Equipment Upgrades.** ~~As a condition of any Coastal Development Permit, the project proponent, or the District, shall secure funding for and operate one piece of CHE associated with each node. Operation of such equipment on TAMT shall occur by January 1, 2020 through the expected operating life of the equipment, and evidence of operation shall be provided to the District upon request. Equipment shall be replaced if alternative technologies (i.e., advancements in electric equipment) are identified and determined to be feasible pursuant to MM-AQ-7. For purposes of the analysis, it was assumed that each node would operate one electric yard truck. This mitigation is similar to MM-AQ-6, and the number of CHE equipment required between the two mitigation measures does not aggregate to more than one piece of CHE per node.~~Prior to January 1, 2020, the San Diego Unified Port District shall ensure that at least three pieces of existing non-electric cargo-handling equipment (CHE) at the terminal are replaced by electric CHE, none of which were previously operating at the terminal during the 2013/2014 baseline year of the EIR analysis. Possible ways the electric CHE may be obtained include, but are not limited to, the following: 1. Purchased, leased, or otherwise acquired, in whole or in part, through funding provided to a tenant by the San Diego Unified Port District; or 2. Purchased, leased, or otherwise acquired, in whole or in part, through funding provided to a tenant by other sources; or 3. Purchased, leased, or otherwise acquired, in whole	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			or in part, by the tenant in compliance with the condition of a discretionary approval issued by the San Diego Unified Port District. Written evidence of the acquisition of the electric CHE equipment and the equipment it will replace and remove from further operation at the terminal must be provided to the San Diego Unified Port District. The San Diego Unified Port District shall further ensure that the electric CHE is in use at each of the three nodes throughout the expected operating life. This will be accomplished by requiring each tenant that employs electric CHE pursuant to this measure to report the equipment's annual number of hours of operation to the San Diego Unified Port District and by requiring the San Diego Unified Port District to monitor use of the electric CHE as part of the San Diego Unified Port District's TAMT equipment inventory. The electric equipment employed pursuant to this mitigation measure may be replaced by other technologies or other types of CHE as long as the replacement equipment achieves the same or greater criteria pollutant, toxic air contaminant, and greenhouse gas emission reductions as compared to the equipment required by this mitigation measure.	
Direct and Indirect Generation of GHGs Beyond 2020	**Impact-GHG-2: Project GHG Emissions Beyond 2020.** Although proposed project emissions would be on a downward trajectory in the post-2020 period, the proposed project's reduction in GHG emissions during combined project construction and operational activities, before mitigation, may not contribute sufficiently to post-2020 progress toward statewide 2030 and 2050 reduction targets and would not always be in compliance with plans, policies, and regulatory programs adopted by ARB or other California agencies for post-2020 for the	STC: PS MPC: PS	Implement **MM-GHG-1** through **MM-GHG-3**. **MM-GHG-4: Electric Cargo-Handling Equipment Upgrades.** ~~As~~ In addition to the requirements in MM-GHG-3, this measure has multiple steps for compliance, as specified below. A. Implement MM-GHG-3. The three electric cargo-handling equipment pieces required in MM-GHG-3 will continue to be operational through 2035. B. Prior to January 1, 2025, the San Diego Unified Port District also shall ensure that no fewer than 20 non-electric yard trucks in operation are replaced at the TAMT by 20 electric yard trucks. Possible ways the electric yard trucks may be obtained	STC: SU MPC: SU

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	purpose of reducing the emissions of GHGs.		include, but are not limited to, the following: 1. Purchased, leased, or otherwise acquired, in whole or in part, through funding provided to a tenant by the San Diego Unified Port District; or 2. Purchased, leased, or otherwise acquired, in whole or in part, through funding provided to a tenant by other sources; or 3. Purchased, leased, or otherwise acquired, in whole or in part, by the tenant in compliance with the condition of ~~any Coastal Development Permit, the project proponent, or the District, shall secure funding for and operate one piece of CHE associated with each node. Operation~~a discretionary approval issued by the San Diego Unified Port District. Written evidence of the acquisition of ~~such equipment on TAMT~~ the electric yard trucks, and the non-electric yard trucks they will replace and remove from further operation at the terminal, must be provided to the San Diego Unified Port District. The San Diego Unified Port District shall ~~occur by January 1, 2030 through~~ further ensure that the electric yard trucks are in use at the TAMT throughout the expected operating life of the equipment~~, and evidence of operation shall be provided to the District upon request. Equipment shall be replaced if alternative~~. Each tenant that employs electric trucks pursuant to this measure shall report the equipment's annual number of hours of operation to the San Diego Unified Port District and the San Diego Unified Port District shall monitor use of the electric trucks as part of the San Diego Unified Port District's TAMT equipment inventory. C. Prior to January 1, 2030, the San Diego Unified Port District also shall ensure that no fewer than three	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			existing non-electric reach stackers and ten non-electric forklifts in operation are replaced at the TAMT by three fully electric reach stackers and ten fully electric forklifts. Possible ways the electric reach stackers and forklifts may be obtained include, but are not limited to: 1. Purchased, leased, or acquired, in whole or in part, through funding provided to the tenant by the San Diego Unified Port District; or 2. Purchased, leased, or acquired, in whole or in part, through funding provided to the tenant by other sources; or 3. Purchased, leased, or otherwise acquired, in whole or in part, by the tenant in compliance with a condition of a discretionary approval issued by the San Diego Unified Port District. Written evidence of the acquisition of the three electric reach stackers and ten electric forklifts and the conventional equipment they will replace and remove from further operation at the terminal must be provided to the San Diego Unified Port District. The San Diego Unified Port District shall further ensure that the electric reach stackers and forklifts are in use at the TAMT throughout the expected operating life of the equipment. Each tenant that employs electric reach stackers or electric forklifts pursuant to this measure shall report the equipment's annual number of hours of operation to the San Diego Unified Port District and the San Diego Unified Port District shall monitor use of the electric reach stackers and forklifts as part of the San Diego Unified Port District's TAMT equipment inventory. D. The electric equipment employed pursuant to paragraphs A, B, and/or C of this mitigation measure may be replaced by other technologies ~~(i.e., advancements in electric equipment) are~~	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			~~identified and determined to be feasible pursuant to MM-AQ-7. For purposes of the analysis, it was assumed that each node would operate one electric yard truck. This mitigation is similar to MM-GHG-3, which requires a purchase by 2020, but the number of CHE equipment required by MM-GHG-4 is in addition to MM-GHG-3.~~or other types of cargo-handling equipment as long as the replacement equipment achieves the same or greater criteria pollutant, toxic air contaminant, and greenhouse gas emission reductions as compared to the equipment required by paragraphs A, B, and/or C of this mitigation measure. **MM-GHG-5: Implement Vessel Speed Reduction Program Beyond Climate Action Plan Compliance for Future Operations Associated with the TAMT Plan.** Every quarter following approval of the first discretionary action approval and/or issuance of the first Coastal Development Permit associated with a future project proposed under the TAMT plan, whichever occurs first, the project proponent shall provide a report of the annual vessel activity and throughput by cargo node to date and the projected total throughput for the previous 6 months to the San Diego Unified Port District's Planning & Green Port Department. Prior to the annual vessel calls reaching ~~52~~91 calls (~~37~~76 new calls over existing) for dry bulk, ~~77~~117 calls (~~20~~60 new calls over existing) for refrigerated containers, and ~~68~~96 calls (~~40~~68 new calls over existing) for multi-purpose general cargo under the MPC scenario or 79 calls [64 new calls over existing] for dry bulk, 98 calls [41 new calls over existing] for refrigerated containers, and 78 calls [50 new calls over existing] for multi-purpose general cargo under the STC Alternative, or beginning January 1, 2030 for all vessels irrespective of the number of calls occurring on an annual basis, whichever occurs first, the project	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			proponent shall implement ~~VSR~~vessel speed reduction measures to reduce the project's criteria pollutant emissions. The program shall require that 90 percent of the vessels calling at the project site reduce their speeds to 12 knots starting at 40 nautical miles from Point Loma. Due to the international border to the south and ARB limit for rulemaking 24 nautical miles from the coastline, some vessel calls travel within the San Diego Air Basin for less than 40 nautical miles. For those vessel calls that travel within the San Diego Air Basin for less than 40 nautical miles, vessel operators are required to reduce their speeds to 12 knots at the point those vessels enter the San Diego Air Basin and maintain speeds of 12 knots over the entire distance to/from Point Loma. To be compliant with the vessel speed limit, the vessel's weighted average speed shall be 12 knots or less from the 40-nautical-mile latitude and longitude positions on each respective route to/from Point Loma. Implementation of this ~~VSR~~vessel speed reduction program will be required as part of any discretionary action and/or Coastal Development Permit(s) associated with the TAMT plan. Evidence of implementation and compliance with this mitigation measure shall be provided to the San Diego Unified Port District's Planning & Green Port Department on ~~an annual~~a quarterly basis through 2035 (buildout of the TAMT plan). The San Diego Unified Port District will verify compliance through analysis of Automatic Identification System data or by requesting a vessel's Electronic Chart Display Identification System log from the captain. **MM-GHG-6: Implement a Renewable Energy Project or Purchase the Equivalent Greenhouse Gas Offsets from a California Air Resources Board Approved Registry or a Locally Approved Equivalent Program for Future Operations Associated with the TAMT Plan.** Prior to the any discretionary approvals and/or	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			issuance of a Coastal Development Permit(s), the project proponents of future components considered in the TAMT plan shall incorporate renewable energy within the TAMT or within ~~other~~/adjacent to areas of the San Diego Unified Port District's jurisdiction; otherwise, the project proponents shall purchase greenhouse gas reduction credits as specified herein to achieve requisite reductions to meet the 2035 reduction target. This requirement may include a micro-grid or similar type of energy management system to help distribute the loads and/or assist in energy storage. To meet the 2035 reduction target at full TAMT plan buildout (using full-buildout throughput numbers listed in Table 3-3 of Chapter 3, *Project Description*), the renewable energy project must offset ~~34,044~~27,625 metric tons of carbon dioxide equivalent ($MTCO_2e$) per year or ~~161,134~~130,751 megawatt-hours per year (MWh/year) or the equivalent amount of greenhouse gas offsets under the MPC scenario or 18,206 $MTCO_2e$ per year or 86,172 MWh/year or the equivalent amount of greenhouse gas offsets under the STC Alternative. Because it is unknown if the full buildout will ever be achieved given it is based on market demand, the amount of greenhouse gas offsets (whether from renewable energy or purchasing of offsets) per project proposed under the TAMT plan must reduce its fair share of the full buildout GHG emissions amount (i.e., fair share of ~~34,044~~27,625 $MTCO_2e$ under the MPC scenario or 18,206 $MTCO_2e$ under the STC Alternative), which shall be calculated over the entire life of the project proponent's lease agreement with the District or (if no lease) over the life of the project. As such, a calculation of the greenhouse gas emissions that would be generated by a project proponent's project over the life of the lease at the TAMT or the project life is required to determine the sufficient amount of renewable energy mitigation or greenhouse gas offsets. This proportion shall be based on anticipated	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			throughput of the project proposed under the TAMT plan and shall include all potential emission sources (e.g., trucks, vessels, employees, cargo handling equipment). Evidence shall be submitted to the District prior to the commencement of construction activities. Because it is unknown how "solar ready" the available rooftop areas are within the TAMT, once at the design phase, the renewable energy project may be determined infeasible. Should this determination of infeasibility be made by the San Diego Unified Port District after considering evidence submitted by the project proponent related to any structural limitations (i.e., the rooftops cannot support a renewable energy system), then ~~two~~three additional options are available, listed here in order of priority. The San Diego Unified Port District shall either require the renewable energy project to be built off site ~~(i.e., at a location not within the TAMT but~~ within the San Diego Unified Port District's jurisdiction~~)~~, or within the adjacent community (City of San Diego), or shall require the proponent to purchase the equivalent amount of greenhouse gas offsets from ~~sources listed on the American Carbon Registry and/or the Climate Action Reserve (or any other such registry approved by the~~a California Air Resources Board~~).~~ approved registry, or a locally approved equivalent program. The selected option or a combination of the above-mentioned options must achieve a total annual reduction of ~~34,044~~27,625 $MTCO_2e$ at full TAMT plan buildout under the MPC scenario or 18,206 $MTCO_2e$ under the STC Alternative assuming throughput numbers are reached by this point in time. Otherwise, the reduction amount will be proportional to the growth experienced at the TAMT, achieve the same reductions noted in the analysis, and scaled to the actual growth that occurs.	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			MM-GHG-7: **Annual Inventory Submittal and Periodic Technology Review.** ~~To promote new emission control technologies, each tenant who seeks a discretionary action approval and/or Coastal Development Permit(s) shall perform an investigation into emerging zero and near-zero technologies and submit a report to the District on an annual basis, beginning on the date such construction, occupancy, or use commences and continuing through 2035 (buildout of the TAMT plan). The~~The San Diego Unified Port District regularly monitors technologies for reducing air emissions as part of its Climate Action Plan (CAP) and long-range sustainability goals, which ~~require~~encourages the San Diego Unified Port District and its tenants to use cleaner technologies over time as they become available and feasible. ~~The Annual Technology Review shall identify any~~As a condition of approval of any new or amended real estate agreement or Coastal Development Permit, the San Diego Unified Port District shall require the project proponent to submit to the San Diego Unified Port District an annual inventory of all equipment that generates criteria pollutant, toxic air contaminant, and greenhouse gas emissions operated by the project proponent at the TAMT throughout the life of the lease up to 2035 (buildout of the TAMT plan). The equipment inventory shall include the year, make, and model of the equipment that was used in the previous year, including annual hours of operation for each piece of equipment, including but not limited to heavy duty drayage and non-drayage trucks, yard equipment, assist and ocean going tugs, ocean going vessels, bulk material handling equipment, and/or any other type of cargo handling equipment. The purpose of the inventory is to track emissions and equipment at TAMT and to assist in technological reviews, as described below, To promote new emission control technologies, the San Diego Unified Port District will perform a Periodic	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			Technology Review (PTR) annually. The PTR will coincide with monitoring and reporting pursuant to the San Diego Unified Port District's CAP, and will include the following: 1. Develop and maintain an inventory of equipment in operation at the TAMT that generates criteria pollutant, toxic air contaminant, and greenhouse gas emissions, including the equipment model year, model name, and annual hours of operation, based on the annual tenant inventories submitted to the San Diego Unified Port District as described above. 2. Identify and assist with enforcement of changes to emission regulations for heavy-duty trucks, yard equipment, tugs, vessels, bulk handling equipment, and other equipment that generates criteria pollutant, toxic air contaminant, and greenhouse gas emissions. 3. Identify, and assist with implementation of, any feasible new emissions-reduction technologies that may reduce emissions at the project site, including technologies applicable to heavy-duty trucks, yard equipment, tugs, vessels, and bulk handling equipment. 4. Collaborate with the California Air Resources Board and San Diego Air Pollution Control District to ensure these technologies are available and to identify funding opportunities, including funding from the Prop 1B: Good Movement Emission Reduction Program, among others. 5. Prioritize older equipment in operation at the TAMT that generates the highest levels of criteria pollutant, toxic air contaminant, and greenhouse gas emissions to be replaced based on the level of emissions and cost effectiveness of the emissions reduction (i.e., biggest reduction per dollar), and identify implementation mechanisms including, but not limited to, tenant-based improvements, grant	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			programs, and/or a combination thereof, based on regulatory requirements and the feasibility analyses specified in paragraph 3 above. Utilize the Carl Moyer Program, or similar cost-effectiveness criteria, to assess the economic feasibility (e.g., cost effectiveness) of ~~zero and near-zero emissions~~the identified new technologies~~ for heavy-duty trucks, yard~~. 6. Ensure that any upgraded and/or retired equipment~~, tugs, vessels,~~ is accounted for as part of the San Diego Unified Port District's Maritime Emissions Inventory and ~~bulk handling equipment.~~ Climate Action Plan. If ~~the~~ Periodic Technology Review ~~demonstrates the~~identifies new technology that will be effective in reducing emissions ~~and the~~compared to the equipment in operation at the time of the review, and the San Diego Unified Port District determines that installation or use of the technology is feasible, the ~~tenant~~San Diego Unified Port District shall require the use of such technology as a condition of any discretionary approval issued by the San Diego Unified Port District for any new, expanded, or extended operations at the TAMT. Furthermore, the District and/or project proponent must demonstrate that emissions of volatile organic compounds (VOCs) would be less than 75 pounds per day on a peak day once cargo throughput exceeds 4,000,000 metric tons annually. If technological advancements are unable to reduce VOC emissions to 75 pounds per day or less on a peak day, then the District shall limit the number of vessels allowed to no more than three on a peak day once total throughput exceeds 4,000,000 metric tons annually. These operational restrictions will ensure that VOC emissions do not exceed threshold standards established by the San Diego Air Pollution Control District. Verification of compliance with this measure is the responsibility of	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			the District. **MM-GHG-8: Exhaust Emissions Reduction Program at the Tenth Avenue Marine Terminal.** The San Diego Unified Port District shall implement ~~such technology within 12 months of the District's determination~~a program at the TAMT by January 1, 2020 to further reduce emissions from terminal-wide emissions sources. A. ~~**MM-GHG-8: Implement a Sustainable Leasing Program.** The District shall work with tenants to develop and implement a policy incentive-based sustainable~~The program shall be implemented through the Coastal Development Permit process, the tenant leasing ~~program to achieve the District's goals to attract the cleanest ships, ships~~process, including the issuance of new, extended or amended leases, and other short-term real estate agreements at the TAMT. B. The program shall be focused on incentives to reduce criteria pollutant, toxic air contaminant, and greenhouse gas emissions by attracting clean vessels, trucks, and equipment to the TAMT, including but not limited to vessels that utilize shore power while at berth, zero and near-zero emission cargo handling equipment technologies, energy efficiency measures and/or renewable energy, and by otherwise ~~incorporate technology~~incorporating technological and operational practices that reduce criteria pollutant ~~emissions. The~~ , toxic air contaminant, and greenhouse gas emissions from terminal operations beyond existing regulatory requirements. The program shall include specific incentives for existing and future tenants, which may include but is not limited to an extended lease term, expedited permit processing, reduced permit fees, and eligibility for grants or other financial	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			assistance. The nature and extent of such incentives will be based on an emissions reduction schedule established by the San Diego Unified Port District for criteria pollutants, toxic air contaminants, and greenhouse gas emissions. C. The program shall identify specific emission-reduction equipment and practices that may qualify for incentives, including but not limited to the following. ○ Vessels: Demonstrate that at least 50% of annual vessel calls will be equipped with Tier II or better main and auxiliary engines, as defined by the International Convention for the Prevention of Pollution from Ships Annex VI 2008 regulations or other standards set forth by the International Convention for the Prevention of Pollution from Ships, the U.S. Environmental Protection Agency, and/or California Air Resources Board in the future. ○ Vessel Hoteling: Demonstrate that vessel calls will utilize shore power or a California Air Resources Board-approved alternative emission capture and control system or install a shore power or California Air Resources Board-approved alternative emission capture and control system for the purpose of reducing ocean-going vessel hoteling emissions. ○ Heavy-Duty Trucks: Demonstrate that at least 50% of annual cargo throughput will be transported with zero/near-zero emission trucks, hybrid trucks, and/or other alternative truck technologies. To qualify, the trucks must result in emission reductions greater than those required by state and federal regulatory agencies at the time of project approval. ○ Switch and Line Haul Locomotives: Demonstrate that at least 50% of annual cargo	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			will be transported with Tier 3 or above locomotive engines for line haul, as defined by the U.S. Environmental Protection Agency in 2008 (73 *Federal Register* 88 25098–25352), and a Tier 3 or above switcher or railcar mover for switching activity at both the terminal and yard. ○ Terminal Infrastructure: Install electric charging stations and/or other terminal infrastructure and equipment that support and facilitate zero or near-zero emission technologies. **MM-GHG-9: Use of At-Berth Emission Capture and/or Control System to Reduce Vessel Hoteling Emissions.** The San Diego Unified Port District shall require the use of an At-Berth Emission Capture and/or Control System (i.e., bonnet system) to reduce vessel hoteling emissions prior to terminal-related emissions reaching a cancer risk of 10 per million at the maximally exposed sensitive receptor location. Based on the Health Risk Assessment, located in Section 4.2 of the TAMT Redevelopment Plan Environmental Impact Report, an At-Berth Emission Capture and/or Control System shall be required prior to reaching an annual throughput of 691,418 metric tons for dry bulk assuming no growth in multi-purpose general cargo, or an annual throughput of 356,666 metric tons for multi-purpose general cargo (includes break bulk, neobulk, roll-on/roll-off, and other non-container, non-dry bulk cargo, and non-liquid bulk cargo) assuming no growth in dry bulk, or a combined annual throughput of 729,925 metric tons for the dry bulk and multi-purpose/general cargo nodes, whichever occurs first. The San Diego Unified Port District shall either install directly or enter into a contract with an entity that provides the Emission Capture and/or Control System or an equivalent alternative technology, to reduce	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			emissions from vessels that are unable to cold iron at TAMT and/or are exempt from the California Air Resources Board's at-berth regulation. The San Diego Unified Port District may charge a fee for the use of an Emissions Capture and Control System (or an alternative at-berth system that reduces vessel hoteling emissions) based on the vessel type and the length of its stay. The system shall be a technology that has been approved by the California Air Resources Board, and meets the requirements set forth in the California Air Resources Board's at-berth regulations. If the San Diego Unified Port District determines the need for an Emissions Capture and Control System (or an alternative at-berth system that reduces vessel hoteling emissions) prior to, or later than, the throughput figures listed above, or if shore power or other future regulatory requirements are able to reduce vessel hoteling emissions, then the requirement for the At-Berth Emission Capture and/or Control System shall be updated and adjusted accordingly, at the San Diego Unified Port District's ~~Climate Action Plan identifies the development of a Sustainable Leasing Policy as one of the GHG reduction measures prioritized for implementation, and future components under the TAMT plan shall be subject to the Sustainable Leasing Policy~~discretion. All vessels that are not shore-power equipped shall use the Emission Capture and Control System (or an alternative at-berth system that reduces vessel hoteling emissions at an equivalent level), provided there are no operational limitations and it is not being used by another vessel. If the Emission Capture and Control System is operationally unable to connect to an at-berth vessel, or if it is being used by another vessel, multi-purpose/general cargo and/or dry bulk vessels will be allowed to berth without it.	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Effects from Climate Change on Project	Buildout of the TAMT plan, including the Demolition and Initial Rail Component) would not place people or structures at substantial risk of harm due to predicted climate change effects, including sea level rise.	STC: LS MPC: LS	No mitigation is required.	N/A
Cumulative Impacts				
Direct and Indirect Generation of GHGs through 2020	*Demolition and Initial Rail Component* **Impact-C-GHG-1: Demolition and Initial Rail Component GHG Emissions through 2020.** Demolition and Initial Rail Component GHG emissions during combined project construction and operational activities, before mitigation, would not achieve the CAP's reduction target of 33 percent below unmitigated levels in 2020 and would only partially comply with plans, policies, and regulatory programs outlined in the Scoping Plan and adopted by ARB or other California agencies for the purpose of reducing the emissions of GHGs.	STC: PS MPC: PS	Implement **MM-GHG-1** through **MM-GHG-3**, as described above.	STC: LS MPC: LS
Direct and Indirect Generation of GHGs Beyond 2020	*Full TAMT Plan Buildout* **Impact-C-GHG-2: Full TAMT Plan Buildout GHG Emissions Beyond 2020.** Although full TAMT plan buildout emissions would be on a downward trajectory in the post-2020 period, the proposed project's reduction in GHG emissions during combined project construction and operational activities, before mitigation, may not contribute sufficiently to post-2020 progress toward statewide 2030 and 2050 reduction targets and would be in non-compliance with plans, policies, and regulatory programs adopted by ARB or other California agencies for post-2020 for the purpose of reducing the emissions of GHGs.	STC: PS MPC: PS	Implement **MM-GHG-1** through **MM-GHG-~~8~~9**, as described above.	STC: SU MPC: SU

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
4.7 Hazards and Hazardous Materials				
Project Impacts				
Routine Transport, Use, or Disposal of Hazardous Materials	*Demolition and Initial Rail Component* Implementation of the Demolition and Initial Rail Component would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout Buildout of TAMT plan would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	STC: LS MPC: LS	No mitigation is required.	N/A
Possible Onsite Soil Contamination	*Demolition and Initial Rail Component* **Impact-HAZ-1: Possible Onsite Soil Contamination.** Historical information compiled from previous site assessments and database searches indicates that TPH, benzene, toluene, PAHs, SVOCs, metals (copper, zinc, and lead), and diesel may be encountered during construction activities on the project site. Construction and grading activities within the project site would potentially result in a release of hazardous materials and create a potentially significant hazard to workers, the public, and environment.	STC: PS MPC: PS	**MM-HAZ-1: Compliance with Soil Management Plan.** Prior to approval of the project grading plans and the commencement of any construction activities that would disturb the soil, the District or tenant, whichever is appropriate, and the contractor (collectively “Contractor”) shall demonstrate compliance with the *10th Avenue Marine Terminal, San Diego, CA, Soil Management Plan, prepared by Tetra Tech EM, Inc., November 24, 2010* (Appendix J-1 of the Draft EIR) and consider the existing presence of the permitted underground storage tank on site (shown on Figure 4.7-1). Specifically, the Contractor shall demonstrate compliance with the following specific requirements of the plan including, but not limited to, the following. Conduct Soil Testing. The Contractor shall comply with the excavated soil management techniques specified in the plan. The Contractor shall follow the soil sampling protocol and soil sampling objectives, and shall comply with the soil characterization methodology identified within the plan. *Prepare and Implement a Community Health and Safety*	STC: LS MPC: LS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			Program. The Contractor shall develop and implement a site-specific Community Health and Safety Program (Program) that addresses the chemical constituents of concern for the project site. The guidelines of the Program shall be in accordance with ~~California Code~~the County of ~~Regulations Title 23, Division 3, Chapter 16 regulations. The~~San Diego's Department of Environmental Health's Site Assessment and Mitigation Manual (2009) and Environmental Protection Agency. Program shall include detailed plans on air monitoring and other appropriate construction means and methods to minimize the public's and site workers' exposure to the chemical constituents. The contractor shall utilize a Certified Industrial Hygienist with significant experience with chemicals of concern on the project site to approve the Program and actively monitor compliance with the Program during construction activities. *Complete Soil Disposal.* Any soil disturbed by construction activities shall be profiled and disposed of in accordance with California Administrative Code, Title 22, Division 4.5 requirements. If soils are determined to be appropriate for reuse, they may be exported to Chula Vista Bayfront Harbor District area for use as fill material, provided the area is not previously developed and not classified as an environmentally sensitive area. Several Chula Vista Bayfront Harbor District parcels that have been cleared through the environmental review process to be used as streets and surface parking and to support subsequent development have been identified as appropriate locations to receive soils deemed suitable for reuse in Appendix J-3~~,~~. If soils are determined to be hazardous and not suitable for reuse, they shall be disposed of at a regulated Class I landfill. Soils shall be transported in accordance with the Soil Management Plan. Soils to be loaded into trucks for offsite disposal at a Class I landfill shall be moistened with a water spray or mist for dust control in	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			accordance with Section 4.7, Dust Control, of the Soil Management Plan. If dust is visible, positive means shall be applied immediately to prevent airborne dust. Care shall be used to minimize the amount of water applied to soils that may contain elevated concentrations of contaminants. Loaded truck beds shall be covered with a tarp or similar covering device during transportation to the disposal facility. The truck shall be decontaminated after the soil has been removed. The Contractor shall minimize excess water generated during truck decontamination to the extent possible and shall be responsible for proper disposal of any contaminated water generated during truck cleanout. **MM-HAZ-2: Implement Engineering Controls and Best Management Practices during Construction.** Prior to construction, a site-specific Health and Safety Plan shall be prepared by the contractor and approved by a licensed California Certified Industrial Hygienist. The Health and Safety Plan shall be prepared per the requirements of 29 Code of Regulations 1910.120 and California Code of Regulations, Title 8, along with applicable federal, state, and local regulations and statutes. During construction, the contractor shall employ engineering controls and BMPs to minimize human exposure to potential contaminants, if encountered. Engineering controls and construction BMPs shall include but not be limited to the following. • Where required by the Health and Safety Plan, the contractor employees working on site shall be certified in the Occupational Health and Safety Administration's 40-hour Hazardous Waste Operations and Emergency Response training. • Contractor shall monitor the area around the construction site for fugitive vapor emissions with appropriate field screening instrumentation. • Contractor shall monitor excavation through visual	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			observation by a qualified hazardous materials specialist to look for readily noticeable evidence of contamination, such as staining or odor. • Contractor shall water/mist soil as it is being excavated and loaded onto transportation trucks. • Contractor shall place any stockpiled soil in areas shielded from prevailing winds and shall cover all stockpiles to prevent soil from eroding. • Contactor shall thoroughly decontaminate all construction equipment that has encountered and/or handled lead-impacted soil prior to leaving the work site.	
	Full TAMT Plan Buildout			
	See **Impact-HAZ-1**	STC: PS MPC: PS	Implement **MM-HAZ-1** and **MM-HAZ-2**.	STC: LS MPC: LS
Existing or Proposed Schools	*Demolition and Initial Rail Component*			
	Implementation of the Demolition and Initial Rail Component would potentially emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	STC: PS MPC: PS	Implement **MM-HAZ-1** and **MM-HAZ-2**, as described above.	STC: LS MPC: LS
	Full TAMT Plan Buildout			
	Buildout of the TAMT plan would potentially emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	STC: PS MPC: PS	Implement **MM-HAZ-1** and **MM-HAZ-2**, as described above.	STC: LS MPC: LS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Hazardous Materials Site	*Demolition and Initial Rail Component*			
	The Demolition and Initial Rail Component would be located near a site that that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would potentially create a significant hazard to the public or the environment.	STC: PS MPC: PS	Implement **MM-HAZ-1** and **MM-HAZ-2**, as described above.	STC: LS MPC: LS
	Full TAMT Plan Buildout			
	Buildout of the TAMT plan would be located on a site that that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would potentially create a significant hazard to the public or the environment.	STC: PS MPC: PS	Implement **MM-HAZ-1** and **MM-HAZ-2**, as described above.	STC: LS MPC: LS
4.8 Hydrology and Water Quality				
Project Impacts				
Water Quality Standards and Requirements	*Demolition and Initial Rail Component*			
	Implementation of the Demolition and Initial Rail Component would not violate any water quality standards or waste discharge requirements.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout			
	Buildout of the TAMT plan would not violate any water quality standards or waste discharge requirements.	STC: LS MPC: LS	No mitigation is required.	N/A
Degrade Water Quality	*Demolition and Initial Rail Component*			
	Implementation of the Demolition and Initial Rail Component would not otherwise substantially degrade water quality.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout			
	Buildout of the TAMT plan would not otherwise substantially degrade water quality.	STC: LS MPC: LS	No mitigation is required.	N/A

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
100-Year Flood Hazard Area	*Demolition and Initial Rail Component*			
	Implementation of the Demolition and Initial Rail Component would not place within a 100-year flood hazard area structures that would impede or redirect flood flows such that the existing environment is substantially affected.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout			
	Buildout of the TAMT plan would not place within a 100-year flood hazard area structures that would impede or redirect flood flows such that the existing environment is substantially affected.	STC: LS MPC: LS	No mitigation is required.	N/A
4.9 Noise and Vibration				
Project Impacts				
Generate noise levels in excess of established standards	*Demolition and Initial Rail Component*			
	The Demolition and Initial Rail Component would not expose persons to or generate noise levels in excess of standards established in the City of San Diego's Significance Determination Thresholds and/or the City's Noise Ordinance.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout			
	Impact-NOI-1: Exceedance of an Adopted Noise Standard During Plan Operation. Noise levels from operation of the TAMT plan buildout would exceed the City of San Diego's noise ordinance standard of 60 dBA L_{eq} at two parks in the vicinity of the project site.	STC: PS MPC: PS	**MM-NOI-1: Design and Implement Feasible Acoustical Treatments for Future Systems and Equipment to Reduce Operational Noise Levels at Nearby Noise-Sensitive Land Uses.** Because the potential components described in the buildout condition may only be analyzed at a program level at this time, the District shall retain a qualified acoustical professional, which is defined as someone who is practiced in the science of noise transmission and abatement for a minimum of 5 years in a professional capacity, to evaluate and design acoustical treatments for project facilities once system design plans are available. This shall include design plans for any proposed cranes, dry bulk discharge system, conveying	STC: SU MPC: SU

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			system, loading systems, and buildings added to the terminal under the TAMT plan. The acoustical professional shall evaluate acoustical treatment measures for each piece of equipment or system described herein, individually and in combination with one another (to the extent design plans are available for others), to determine feasibility and the potential to reduce overall noise levels at nearby noise-sensitive receptors. Measures that are available (but not necessarily feasible) include, but are not limited to, the following. • Installing equipment inside of acoustical enclosures, where feasible • Installing intake and/or exhaust silencers, where feasible • Using low-noise motors • Placing sound barriers around noise-generating equipment Each of these measures will be designed and evaluated for design feasibility, achievable noise reduction, and economic feasibility at noise-sensitive receiver locations, all of which are to be determined by the District and not any tenants. If one or more acoustical treatments are incorporated into the facility design, verification noise monitoring shall be conducted at each affected location to determine the effectiveness of acoustical treatments, and to evaluate whether compliance with applicable noise standards is achieved. **MM-NOI-2: Initiate and Maintain a Complaint and Response Tracking Program.** Prior to the commencement of operations of the TAMT plan, the District shall designate a noise disturbance coordinator. The coordinator will be responsible for responding to complaints regarding noise from project operations, will investigate the cause of the complaint, and will ensure that reasonable measures are implemented to correct the problem, where feasible. A contact	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			telephone number for the noise disturbance coordinator will be conspicuously posted at the main entrance to the project site and in other reasonable locations, as appropriate, to ensure the contact information is easily obtained. This measure shall be implemented in combination with MM-NOI-1, which provides several examples of what type of noise attenuation measures may be feasible. The goal of this measure is to provide additional information regarding the sources of loud noises and to assist in the design and implementation of measures to reduce the noise to a level that would be at or below the applicable noise standards for the land use experiencing the excessive noise.	
Groundborne Noise	*Demolition and Initial Rail Component*			
	Implementation of the Demolition and Initial Rail Component would not expose persons to or generate excessive groundborne vibration or groundborne noise levels.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout			
	Buildout of the TAMT plan would not expose persons to or generate excessive groundborne vibration or groundborne noise levels.	STC: LS MPC: LS	No mitigation is required.	N/A
Permanent Increase in Ambient Noise Levels	*Demolition and Initial Rail Component*			
	Implementation of the Demolition and Initial Rail Component would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout			
	Impact-NOI-2: Substantial Permanent Increase in Ambient Noise Levels in the Project Site Vicinity from Buildout of the TAMT Plan. The TAMT plan would result in a substantial permanent increase of 5 dB or more above average existing noise levels at	STC: PS MPC: PS	Implement **MM-NOI-1** and **MM-NOI-2**, as described above.	STC: SU MPC: SU

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	Cesar Chavez Park, Bayfront Park, Embarcadero Marine Park, and Hilton Bayfront Hotel, due to added cranes and unloading systems under the TAMT plan buildout.			
Substantial Temporary or Periodic Increase in Ambient Noise Levels	*Demolition and Initial Rail Component* **Impact-NOI-3: Substantial Temporary Increase in Ambient Noise Levels During Construction of the Demolition and Initial Rail Component.** Construction of the Demolition and Initial Rail Component would result in a substantial temporary increase of 5 dB or more above average existing noise levels at two parks. This impact would be significant.	STC: PS MPC: PS	**MM-NOI-3: Implement a Construction Noise Reduction Plan.** Prior to the commencement of demolition or construction activity, the District shall prepare and implement a noise reduction plan including best practices to reduce construction noise at noise-sensitive land uses, such that a temporary increase of more than 5 dB in noise levels does not occur at adjacent noise-sensitive uses. Measures to be included in the noise reduction plan to limit construction noise include the following. • Locating stationary equipment (e.g., generators, compressors, rock crushers, cement mixers, idling trucks) as far as possible from noise-sensitive land uses • Prohibiting gasoline or diesel engines from having unmuffled exhaust • Requiring that all construction equipment powered by gasoline or diesel engines have sound-control devices that are at least as effective as those originally provided by the manufacturer and that all equipment be operated and maintained to minimize noise generation • Preventing excessive noise by limiting idle times for vehicles or equipment to 3 minutes, consistent with MM-AQ-2 • Using noise-reducing enclosures around stationary noise-generating equipment • Constructing temporary barriers between noise sources and noise-sensitive land uses or taking advantage of existing barrier features (e.g., terrain,	STC: SU MPC: SU

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			structures) to block sound transmission to noise-sensitive land uses. The barriers shall be designed to obstruct the line of sight between the noise-sensitive land use and onsite construction equipment.	
	Full TAMT Plan Buildout			
	Impact-NOI-4: Substantial Temporary Increase in Ambient Noise Levels During Construction of the Full TAMT Plan Buildout. Construction of the other future components associated with the TAMT plan buildout would result in a substantial temporary increase of 5 dB or more above average existing noise levels at three parks.	STC: PS MPC: PS	Implement **MM-NOI-3**, as described above.	STC: SU MPC: SU
Cumulative Impacts				
Operational Noise	*Demolition and Initial Rail Component*			
	The Demolition and Initial Rail Component's incremental contribution to cumulative noise impacts would not be cumulatively considerable.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout			
	Impact-C-NOI-1: Cumulative Contribution to Cumulative Operational Noise. The incremental operational noise contribution from the proposed project combined with operational noise from cumulative projects would result in an exceedance of City standards.	STC: PS MPC: PS	Implement **MM-NOI-1** and **MM NOI-2**, as described above.	STC: SU MPC: SU

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
4.10 Transportation, Circulation, and Parking				
Project Impacts				
Performance of the Circulation System	*Demolition and Initial Rail Component* **Impact-TRA-1: Construction-Related Impact on an Intersection: Norman Scott Road/32nd Street/Wabash Boulevard from Demolition and Initial Rail Component Construction.** Construction activities associated with the Demolition and Initial Rail Component, particularly during demolition of Transit Sheds #1 and #2, would generate construction-related traffic that would worsen the existing delay experienced at the Norman Scott Road/32nd Street/Wabash Boulevard intersection by 8.7 seconds in the AM peak hour and by 4.2 seconds in the PM peak hour. The increase in delay at this intersection would exceed the threshold of 1.0 second of additional delay for intersections operating at LOS F and threshold of 2.0 seconds of additional delay for intersections operating at LOS E, resulting in a significant construction-related traffic impact. ~~**Impact-TRA-2: Operation-Related Impact on an Intersection: Norman Scott Road/32nd Street/Wabash Boulevard from Demolition and Initial Rail Component Operations.** Operation of the Demolition and Initial Rail Component would worsen the existing delay experienced during the peak hours at the Norman Scott Road/32nd Street/Wabash Boulevard intersection by 4.8 seconds in the AM peak hour and by 2.3 seconds in the PM peak hour, where a threshold of 1.0 second of additional delay~~	STC: PS MPC: PS	~~For Impact-TRA-1:~~ **MM-TRA-1: Transportation Demand Management (TDM) Plan During Demolition and Initial Rail Component Construction.** Prior to commencing construction activities associated with the Demolition and Initial Rail Component, the District shall prepare a TDM plan to reduce potential significant temporary construction-related transportation and parking impacts at the intersection of Norman Scott Road/32nd Street/Wabash Boulevard. The TDM plan shall be implemented during construction to reduce congestion at the Norman Scott Road/32nd Street/Wabash Boulevard intersection by limiting the number of construction worker trips that travel through the affected intersection during peak hours. The TDM plan shall incorporate TDM strategies to be implemented during construction, including, but not limited to, the following. • Implementation of a ride-sharing program to encourage carpooling among workers. • Adjusting work schedules so workers do not access the site during the peak hours. • Provide offsite parking locations for workers outside of the area with shuttle services to bring them on site. • Provide subsidized transit passes for construction workers. • Coordinate with the City of San Diego (which may also include coordination with the local planning group) for additional ideas. ~~For Impact-TRA-2:~~ ○ ~~**MM-TRA-2: Westbound Right-Turn Overlap Phase at Norman Scott Road/32nd Street/**~~	STC: SU MPC: SU

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	~~applies to LOS F and a threshold of 2.0 seconds of additional delay applies to LOS E.~~		~~**Wabash Boulevard Intersection.** The District currently has an established program to track the number of trucks that enter and exit the terminal each year associated with TAMT operations. Prior to generating an additional 276 new daily trips, the District shall coordinate with Caltrans to determine the District's fair share payment to fund the addition of a westbound right-turn overlap phase to the intersection of Norman Scott Road/32nd Street/Wabash Boulevard, a Caltrans-controlled intersection, to improve the delay caused by the proposed project. This would reduce the delay associated with the project by 6.0 seconds during the AM peak hour and by 12.8 seconds during the PM peak hour compared to unmitigated conditions, and would effectively reduce delay at this intersection to below current levels. In order to ensure the significant impact does not occur before the District has paid its fair share to Caltrans, the District shall initiate payment once approximately 200 new daily trips are reached under the proposed project. The trigger will be determined by the District by examining the ADT over a 1-month timeframe and comparing the ADT to the baseline of 93 daily trucks generating 186 trips per day (33,349 trucks per year divided by 360 days multiplied by 2 trips for each truck) and 935 daily employee trips (315 existing employees multiplied by 3 trips per day). At the District's discretion, the District may seek reimbursement from tenants that would contribute new daily trips in proportion to their contribution.~~	
	Full TAMT Plan Buildout			
	Impact-TRA-~~3~~2: Construction Traffic from Future TAMT Plan Construction Projects. Because the timing and details of future construction projects are not yet known, it is	STC: PS MPC: PS	**MM-TRA-~~3~~2: Traffic Study and Transportation Demand Management (TDM) for Specific Construction Projects.** Prior to the approval of any construction activities associated with future	STC: SU MPC: SU

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	possible that two or more construction projects may overlap (the timing of which depends on market need). Because it is not known if the overlap would generate a sufficient number of peak hour trips to result in a significant impact, a worst case is conservatively assumed that several construction projects could occur at the same time, resulting in temporary but significant traffic congestion in the project study area.		components of the TAMT plan, the District shall retain a qualified traffic engineer to prepare a traffic study to analyze the potential transportation impacts associated with the specific construction project. The report shall consider any overlapping construction projects on the TAMT. If the traffic study determines that the proposed construction activity may have a significant impact, the traffic study shall recommend mitigation measures to avoid or reduce the potential impact. The traffic study shall specifically consider if a TDM plan is required to address potential temporary traffic impacts from construction vehicles and equipment. If determined necessary, the TDM plan shall incorporate TDM strategies to be implemented during construction, including, but not limited to, the following. • Implementation of a ride-sharing program to encourage carpooling among workers. • Adjusting work schedules so workers do not access the site during the peak hours. • Provide offsite parking locations for workers outside of the area with shuttle services to bring them on site. • Provide subsidized transit passes for construction workers. • Coordinate with the City of San Diego (which may also include coordination with the local planning group) for additional ideas.	
	Impact-TRA-43: Operation-Related Impact on a Roadway Segment: 28th Street between Boston Avenue and National Avenue from TAMT Plan Operations. The proposed project would add approximately ~~847~~891 daily trips (647 daily trips for STC Alternative) to the roadway segment of 28th Street between Boston Avenue and National Avenue within the project study area, which would degrade the operations of a roadway	STC: PS MPC: PS	**MM-TRA-43: Widen the Segment of 28th Street between Boston Avenue and National Avenue to a Four-Lane Major Arterial Classification Consistent with the Barrio Logan Community Plan.** The District currently has an established program to track the number of trucks that enter and exit the terminal each year associated with TAMT operations. Prior to generating an additional ~~1,175~~161 new daily truck trips ~~(approximately 29% of buildout of the TAMT plan),~~, the District shall pay a fair-share contribution (MPC would	STC: SU MPC: SU

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	segment that is already operating at an unacceptable level under existing conditions (LOS E) to LOS F~~)~~ by increasing volume to capacity ratio by 0.~~036, which is more than the threshold of~~ 040 (0.~~01.~~029 for STC Alternative). The initial impact is anticipated to occur ~~at 29% of the TAMT plan buildout, or~~ when ~~1,175~~161 new daily truck trips are being generated, at which point the proposed project would result in a change in V/C ratio greater than 0.01 along the roadway segment of 28th Street between Boston Avenue and National Avenue. Therefore, impacts would be significant.		be responsible for 3.~~7~~9% and STC would be responsible for 2.8%) of the cost to widen the roadway segment of 28th Street between Boston Avenue and National Avenue to a Four-Lane Major Arterial classification. The improvement is identified within the draft Barrio Logan Community Plan, and therefore would be paid to the City of San Diego in accordance with Section 142.0640 of the San Diego Municipal Code. Payment of the District's fair share shall be completed prior to reaching ~~1,175~~161 new daily truck trips. In order to ensure the significant impact does not occur before the District has paid its fair share to the City, the District shall initiate payment once approximately ~~1,000~~150 new daily truck trips are reached under the proposed project. The trigger will be determined by the District by examining the ADT over a 1-month timeframe and comparing the ADT to the baseline of 93 daily trucks generating 186 trips per day (33,349 trucks per year divided by 360 days multiplied by 2 trips for each truck)~~ and 935 daily employee trips (315 existing employees multiplied by 3 trips per day)~~. At the District's discretion, the District may seek reimbursement from tenants that would contribute new daily trips in proportion to their contribution. ~~**For Impact-TRA-5:**~~ ~~Implement **MM-TRA-2**.~~	
	Impact-TRA-~~5~~4: Operation-Related Impact on an Intersection: Norman Scott Road/32nd Street/Wabash Boulevard from TAMT Plan Operations. The proposed project would worsen the existing delay experienced during the peak hours at the Norman Scott Road/32nd Street/Wabash Boulevard intersection by ~~32.6~~19.1 seconds in the AM peak hour (17.7 seconds for STC Alternative) and by ~~13.3~~7.8 seconds in the PM peak hour~~,~~ (7.2 seconds for STC Alternative),	STC: PS MPC: PS	**MM-TRA-4: Westbound Right-Turn Overlap Phase at Norman Scott Road/32nd Street/ Wabash Boulevard Intersection.** The San Diego Unified Port District currently has an established program to track the number of trucks that enter and exit the terminal each year associated with TAMT operations. Prior to generating an additional 195 new daily trips, the San Diego Unified Port District shall coordinate with the California Department of Transportation to determine the San Diego Unified Port District's fair share payment to fund the addition of a westbound right-turn overlap	STC: SU MPC: SU

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	where a threshold of 1.0 second of additional delay applies to LOS F and a threshold of 2.0 seconds of additional delay applies to LOS E. The initial impact is anticipated to occur ~~at 7% of the TAMT plan buildout, or when 276~~when 195 new daily trips are being generated, at which point the proposed project would contribute more than 1.0 second of delay in the AM peak hour period at the Norman Scott Road/32nd Street/Wabash Boulevard study area intersection. Therefore, impacts would be significant.		phase to the intersection of Norman Scott Road/32nd Street/Wabash Boulevard, a California Department of Transportation–controlled intersection, to improve the delay caused by the proposed project. This would reduce the delay associated with the project by 20.8 seconds during the AM peak hour and by 19.9 seconds during the PM peak hour compared to unmitigated conditions, and would effectively reduce delay at this intersection to below current levels. (Note, for the STC Alternative, this mitigation measure would reduce the unmitigated delay associated with this alternative by 19.4 seconds during the AM peak hour and by 19.3 seconds during the PM peak hour.) In order to ensure the significant impact does not occur before the San Diego Unified Port District has paid its fair share to the California Department of Transportation, the San Diego Unified Port District shall initiate payment once approximately 150 new daily trips are reached under the proposed project. The trigger will be determined by the San Diego Unified Port District by examining the average daily trips over a 1-month timeframe and comparing the average daily trips to the baseline of 93 daily trucks generating 186 trips per day (33,349 trucks per year divided by 360 days multiplied by 2 trips for each truck) and 935 daily employee trips (315 existing employees multiplied by 3 trips per day). At the San Diego Unified Port District's discretion, the San Diego Unified Port District may seek reimbursement from tenants that would contribute new daily trips in proportion to their contribution.	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Congestion Management Plan	*Demolition and Initial Rail Component*			
	Implementation of the Demolition and Initial Rail Component would not conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout			
	Buildout of the TAMT plan would not conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.	STC: LS MPC: LS	No mitigation is required.	N/A
Hazards Because of a Design Feature or Incompatible Uses	*Demolition and Initial Rail Component*			
	Implementation of the Demolition and Initial Rail Component would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout			
	Buildout of the TAMT plan would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	STC: LS MPC: LS	No mitigation is required.	N/A

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Conflict with Alternative Transportation	*Demolition and Initial Rail Component*			
	Implementation of the Demolition and Initial Rail Component would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout			
	Buildout of the TAMT plan would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	STC: LS MPC: LS	No mitigation is required.	N/A
Insufficient Parking	*Demolition and Initial Rail Component*			
	Implementation of the Demolition and Initial Rail Component of the TAMT plan would not result in an inadequate parking supply, either on site or off site.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout			
	Impact-TRA-~~6~~5: Insufficient Parking at Full TAMT Plan Buildout. Full buildout of the TAMT plan may result in a long-term parking shortage, which could increase if future components are implemented in areas that currently serve as parking.	STC: PS MPC: PS	**MM-TRA-5: District Shall Inform All TAMT Workers to Park at the TAMT Facility or at an Authorized Offsite Parking Lot or Parking Garage.** All TAMT workers, employees, and contractors are prohibited from using on-street parking or from parking at the neighboring Cesar Chavez Park. If no parking is available on the project site, the District's marine terminal supervisors shall inform all dock workers that they shall park within a parking garage or surface parking lot. **MM-TRA-6: District to Maintain a Parking Inventory of TAMT.** The inventory shall be initiated once the District's maritime operations staff identifies that an average of 475 employees are present at the project site during any single 8-hour shift, or the inventory shall be initiated if any future components of the TAMT plan	STC: LS MPC: LS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			remove any of the parking areas identified within the EIR to come within 50 parking spaces of an onsite parking deficit. The inventory of the parking supply and demand at the TAMT shall be created and maintained by the District. The inventory shall include the following considerations and requirements: i. The inventory shall include all existing tenants, including tenant-specific parking lots or parking spaces identified in their lease and all non-exclusive parking spaces available at the TAMT. ii. The inventory shall include any parking required by the District's existing operations. iii. Once the trigger to prepare an inventory occurs, the inventory shall be updated for each new project component, new lease, or lease renewal where additional parking is required. iv. The inventory shall account for both construction- and operation-related parking supply and demand, but shall update the inventory once construction is completed and construction parking is no longer necessary. v. A determination of the surplus or deficit of parking on TAMT. **MM-TRA-7: Proponents for Future Project Components, New Leases, or Lease Renewals Shall Prepare a Parking Management Plan.** Prior to approval of any new project component or any new lease/lease renewal at TAMT, the project proponent (e.g., tenant) shall submit a Parking Management Plan to the District for review and approval, demonstrating that there would be adequate parking to accommodate all projected operational parking within their tenant's leasehold or within an area available for use as parking. The Parking Management Plan shall consider the following. i. The identification of areas within the tenant's	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			leasehold to accommodate the new project component's, new lease's, or renewed lease's parking needs. ii. Reserved parking spaces outside the tenants leasehold at the TAMT, as authorized by the District through formal agreement signed by the District's Director of Maritime or his/her designee. iii. Alternative transportation options to reduce parking demand such as subsidized transit passes, bicycle racks, employee vanpools, or other carpooling incentive programs. iv. Preferential parking for carpools/vanpools. v. Employee shuttles to/from the union hall at shift changes, as feasible. vi. Reserved parking spaces with an offsite parking provider at either a parking garage or parking lot for the duration of the tenant's lease, which shall include a shuttle program. The offsite parking spaces shall be authorized through a formal agreement with a parking provider and is subject to approval by the District. vii. Employer Coordination with SANDAG's iCommute Program. The TAMT Parking Management Plan requires review and approval from the District's Director of Maritime, which shall be based on consultation with the TAMT Superintendent. All TAMT Parking Management Plans shall be enforced by the TAMT Superintendent.	
Cumulative Impacts				
Performance of the Circulation System	*Demolition and Initial Rail Component* **Impact-C-TRA-1: Construction-Related Impact on an Intersection: Norman Scott Road/32nd Street/Wabash Boulevard from Demolition and Initial Rail Component.** Construction activities associated with the Demolition and Initial Rail Component,	STC: PS MPC: PS	Implement **MM-TRA-1** ~~**and MM-TRA-2**~~, as described above.	STC: SU MPC: SU

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	particularly during demolition of Transit Sheds #1 and #2, would generate construction-related traffic that would worsen the existing delay experienced at the Norman Scott Road/32nd Street/ Wabash Boulevard intersection by 7.3 seconds in the AM peak hour and 2.6 seconds in the PM peak hour. The increase in delay at this intersection would exceed the threshold of 1.0 second of additional delay for intersections operating at LOS F and threshold of 2.0 seconds of additional delay for intersections operating at LOS E. Because construction-related traffic for the Demolition and Initial Rail Component would cause greater than a 1-second delay at the intersection of Norman Scott Road/32nd Street/Wabash Boulevard within the project study area, the Demolition and Initial Rail Component would result in a cumulatively considerable significant impact on this intersection. ~~**Impact-C-TRA-2: Contribute to an Unacceptable Level of Operation at an Intersection: Norman Scott Road/32nd Street/Wabash Boulevard from Demolition and Initial Rail Component.** Operation of the Demolition and Initial Rail Component would worsen the delay experienced during the peak hours at the Norman Scott Road/32nd Street/ Wabash Boulevard intersection by 1.9 seconds in the AM peak hour and 0.8 second in the PM peak hour under near-term cumulative conditions, where a threshold of 1.0 second of additional delay applies to intersections operating at LOS F and a threshold of 2.0 seconds of additional delay applies to intersections operating at LOS E. Because the addition of Demolition and Initial Rail~~			

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	~~Component traffic would cause greater than a 1-second delay at the intersection of Norman Scott Road/32nd Street/ Wabash Boulevard within the project study area, the Demolition and Initial Rail Component would result in a cumulatively considerable significant impact on this intersection during the AM peak hour.~~			
	Full TAMT Plan Buildout			
	Impact-C-TRA-~~3~~2: Contribute to Temporary Traffic Congestion from Construction of Full TAMT Plan Buildout. Given the lack of construction and schedule details at this time, it is not known if construction of the full TAMT plan buildout would overlap with construction of cumulative projects in the project study area. As a result, it is unknown whether construction associated with full TAMT plan buildout, when combined with construction traffic from past, present, and reasonably foreseeable future projects, would result in temporary but cumulatively considerable traffic congestion in the project study area.	STC: PS MPC: PS	Implement **MM-TRA-2.**	STC: SU MPC: SU
	Impact-C-TRA-~~4~~3: Contribute to an Unacceptable Level of Operation at a Roadway Segment: 28th Street between Boston Avenue and National Avenue from TAMT Plan Buildout. Operation of the full TAMT plan buildout would result in a considerable contribution to the cumulative impact at the roadway segment of 28th Street between Boston Avenue and National Avenue within the project study area, which would degrade the operations of a roadway segment that would already operate at an unacceptable level under cumulative conditions (LOS F). The proposed project would increase the V/C	STC: SU MPC: SU	Implement **MM-TRA-3.**	STC: SU MPC: SU

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	ratio by ~~0.036~~0.040, which exceeds the City's threshold of 0.01 for roadway segments operating at LOS F. Therefore, full TAMT plan buildout would result in a cumulatively considerable significant impact on this roadway segment.			
	Impact-C-TRA-~~4~~5: Contribute to an Unacceptable Level of Operation at an Intersection: Norman Scott Road/32nd Street/Wabash Boulevard from TAMT Plan Buildout. Operation of the full TAMT plan buildout would worsen the delay experienced during the peak hours at the Norman Scott Road/32nd Street/Wabash Boulevard intersection by ~~25.0~~17.5 seconds in the AM peak hour and by ~~14.2~~8.2 seconds in the PM peak hour under Future Year 2035 cumulative conditions, where a threshold of 1.0 second of additional delay applies to intersections operating at LOS F and a threshold of 2.0 seconds of additional delay applies to intersections operating at LOS E. Because the proposed project would cause greater than a 1-second delay on the intersection of Norman Scott Road/32nd Street/Wabash Boulevard within the project study area, full buildout of the TAMT plan would result in a cumulatively considerable significant impact on this intersection.	STC: SU MPC: SU	Implement **MM-TRA-4.**	STC: SU MPC: SU
	Impact-C-TRA-~~6~~5: Contribute to an Unacceptable Level of Operation at Four Freeway Segments from TAMT Plan Buildout. Operation of the full TAMT plan buildout would result in a considerable contribution to the cumulative impact at the freeway segments of I-5 northbound between SR-94 and Imperial Avenue, I-5 northbound	~~LS~~STC: SU MPC: SU	~~Implement **MM-TRA-2** through **MM-TRA-5.**~~ **MM-C-TRA-1: Construct Managed Lanes on I-5 and I-15.** SANDAG currently has plans to construct two managed lanes (one in each direction) on I-5 between I-15 and Palomar Street by the year 2030 as well as two additional multi-purpose lanes and two managed lanes on SR-15 between I-5 and SR-94 by the year 2050. The District shall coordinate with SANDAG and Caltrans to	~~N/A~~STC: SU MPC: SU

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	between 28th Street and I-15, I-5 northbound between I-15 and Main Street, and I-15 southbound between Market Street and Ocean View Boulevard, which are projected to operate at LOS F. Operation of the full TAMT plan buildout would result in a change in V/C ratio greater than 0.005 for freeway segments operating at LOS F, and therefore would result in cumulatively considerable significant impact on these freeway segments.		determine the proposed project's fair share contribution. Because this mitigation measure is far into the future, the exact amount will need to be determined at a future date and prior to the project's contribution to the affected freeway mainline sections reaching 0.005 change in V/C ratio. The following fair-share percentages under the MPC scenario analyzed for the proposed project, per affected freeway facility, should serve as guidance to the amount the District should pay toward a program or plan for the aforementioned freeway facility improvements to be constructed. • I-5 northbound between SR-94 & Imperial Avenue: 5 percent of the total cost for improvements to this segment. • I-5 northbound between 28th Street & SR-15: ~~7~~13 percent of the total cost for improvements to this segment. • I-5 northbound between ~~I~~SR-15 & Main Street: ~~14~~6 percent of the total cost for improvements at this segment. • SR-15 southbound between Market Street & Ocean View Boulevard: ~~25~~11 percent of the total cost for improvements to this segment. The following fair-share percentages under the STC Alternative scenario, per affected freeway facility, should serve as guidance to the amount the District should pay toward a program or plan for the aforementioned freeway facility improvements to be constructed. • I-5 northbound between SR-94 & Imperial Avenue: 5 percent of the total cost for improvements to this segment. • I-5 northbound between SR-15 & Main Street: 6 percent of the total cost for improvements at this segment. • SR-15 southbound between Market Street & Ocean View Boulevard: 11 percent of the total cost for	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			improvements to this segment.	
Utilities and Energy				
Project Impacts				
Water supplies and treatment facilities	*Demolition and Initial Rail Component*			
	Implementation of the Demolition and Initial Rail Component would: a) Not result in insufficient water supplies from existing entitlements and resources, resulting in the need for new or expanded entitlements; b) Not require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout			
	Buildout of the TAMT plan would: a) Not result in insufficient water supplies from existing entitlements and resources, resulting in the need for new or expanded entitlements; b) Not require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	STC: LS MPC: LS	No mitigation is required.	N/A

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Stormwater drainage	*Demolition and Initial Rail Component*			
	The Demolition and Initial Rail Component would not result in or require the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effect.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout			
	Buildout of the TAMT plan would not result in or require the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effect.	STC: LS MPC: LS	No mitigation is required.	N/A
Landfills	*Demolition and Initial Rail Component*			
	Implementation of the Demolition and Initial Rail Component would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.	STC: LS MPC: LS	No mitigation is required.	N/A
	Full TAMT Plan Buildout			
	Buildout of the TAMT plan would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.	STC: LS MPC: LS	No mitigation is required.	N/A
Wasteful, Inefficient, and Unnecessary Usage of Direct or Indirect Energy	*Demolition and Initial Rail Component*			
	Implementation of the Demolition and Initial Rail Component would not result in the wasteful, inefficient, and unnecessary usage of direct or indirect energy	STC: LS MPC: LS	No mitigation is required, but **MM-GHG-1** through **MM-GHG-7** would further reduce the project's energy demand and reduce fossil fuel use.	N/A
	Full TAMT Plan Buildout			
	Buildout of the TAMT plan would not result in the wasteful, inefficient, and unnecessary usage of direct or indirect energy	STC: LS MPC: LS	No mitigation is required, but **MM-GHG-1** through **MM-GHG-7** would further reduce the project's energy demand and reduce fossil fuel use.	N/A

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Cumulative Impacts				
Solid waste	*Demolition and Initial Rail Component*			
	Impact-C-UTIL-1: The Demolition and Initial Rail Component would Generate Solid Waste that Would Exceed the City Threshold. The Demolition and Initial Rail Component would exceed an annual generation of 60 tons of solid waste, which would exceed the City's cumulative solid waste threshold. Therefore, this is considered to be a significant cumulative impact.	STC: PS MPC: PS	**MM-C-UTIL-1: Prepare a Waste Management Plan.** Prior to issuance of the construction permits, a waste management plan shall be prepared by the Applicant and submitted to the City's Environmental Services Department for approval. The plan shall address the demolition, construction, and operation phases of the proposed project as applicable, and shall include the following. 1. A timeline for each of the main phases of the proposed plan and near-term improvements (construction and operation). 2. Tons of waste anticipated to be generated (construction and operation). 3. Type of waste to be generated (construction and operation). 4. Description of how the proposed project will reduce the generation of construction and demolition (C&D) debris. 5. Description of how C&D material will be reused on site. 6. The name and location of recycling, reuse, and landfill facilities where recyclables and waste will be taken if not reused on site. 7. Description of how the C&D waste will be separated if a mixed C&D facility is not used for recycling. 8. Description of how the waste reduction and recycling goals will be communicated to subcontractors. 9. Description of how a "buy recycled" program for green construction products will be incorporated into the proposed project. 10. Description of any ISO or other certification, if any.	STC: LS MPC: LS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	Full TAMT Plan Buildout			
	Impact-C-UTIL-2: The TAMT Plan would Generate Solid Waste that Would Exceed the City Threshold. The TAMT plan would exceed an annual generation of 60 tons of solid waste, which would exceed the City's cumulative solid waste threshold. Therefore, this is considered to be a significant cumulative impact.	STC: PS MPC: PS	Implement **MM-C-UTIL-1**	STC: LS MPC: LS

Notes: PS = Potentially significant; LS = Less than significant; SU = Significant and Unavoidable; N/A = Not applicable; STC = Sustainable Terminal Capacity Alternative scenario; MPC = Maximum Practical Capacity scenario.

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Chapter 1
Introduction

1.1 Project Overview

The proposed Tenth Avenue Marine Terminal Redevelopment Plan (TAMT plan) includes a variety of infrastructure investments that may be undertaken over the long term to accommodate an increase of the terminal's (project site) capabilities and capacity. These include up to five gantry cranes, additional and consolidated dry bulk storage capacity (which may include a new 100,000-square-foot dry bulk structure or an equivalent vertical storage facility), enhancements to the existing conveyor system, demolition of the molasses tanks and Warehouse C, additional open storage space, on-dock intermodal rail facilities, a centralized gate facility, and the Demolition and Initial Rail Component, and are herein referred to as the proposed project. Furthermore, as berthing capacity at the project site has been deemed adequate, the TAMT plan focuses on landside improvements only, and no dredging or waterside improvements are proposed.

One near-term and well-defined component of the TAMT plan is the Demolition and Initial Rail Component. This component is analyzed at the project level and would include demolition of two underutilized transit sheds (Transit Shed #1 and Transit Shed #2), on-terminal rail upgrades that include a rail lubricator and compressed air system for air brake testing, stormwater drainage improvements, subsurface conduit and electrical improvements to allow for further electrification and/or shore power capabilities prior to resurfacing, a new electrical gear room, restroom, technology support room (approximately 782 square feet), and an outdoor storage facility (approximately 850 square feet), as well as a new 3,600-square-foot modular office with restroom facilities near the central gate facility, which would replace the offices that would be demolished as part of Transit Shed #2.

The TAMT plan would replace the existing San Diego Unified Port District Maritime Business Plan Update (2008 Plan) and is intended to guide future potential terminal infrastructure investments and to optimize terminal flexibility. The TAMT plan would allow the project site to accommodate medium- to long-range cargo opportunities, based on a business and marketing strategy with a build-out year of 2035, thereby ensuring future growth and sustainability for the District's maritime cargo operation.

It should be noted that all contemplated infrastructure would be market-driven and customer-dependent. Therefore, implementation of the various development concepts and associated infrastructure improvements identified in the TAMT plan would depend on market opportunities that occur throughout the life of the plan. The TAMT plan has identified 2035 as its build-out year. Given the flexibility that has been built into the TAMT plan, this environmental impact report (EIR) evaluates the scenario that would result in the "worst-case" effect on the environment. Consequently, the "worst-case scenario" assumes that the project site would operate at its maximum practical capacity (MPC) during the long-term planning horizon and all potential structures that are identified in the TAMT plan would be developed. This EIR evaluates these changes at the project level when possible, but otherwise impacts are evaluated at the program level when specific information about future actions is not yet known.

In addition to the project overview provided above, this introduction chapter briefly discusses (1) the purpose of the California Environmental Quality Act (CEQA) and this Draft EIR, (2) the intended uses for this Draft EIR, (3) the scope and content of this Draft EIR, and (4) the organization of this Draft EIR.

1.2 Purpose of the California Environmental Quality Act and the Environmental Impact Report

This Draft EIR evaluates the environmental effects of the proposed project and has been prepared in compliance with CEQA (Public Resources Code Section 21000 et seq.) and the procedures for implementation of CEQA set forth in the State CEQA Guidelines (California Code of Regulations Title 14, Section 15000 et seq.). This Draft EIR has also been prepared in compliance with the San Diego Unified Port District (District) Guidelines for Compliance with CEQA (Resolution 97-191).

CEQA was enacted by the California legislature in 1970. As noted under State CEQA Guidelines Section 15002, CEQA has four basic purposes.

1. Inform governmental decision-makers and the public about the potential significant environmental effects of proposed activities.
2. Identify the ways in which environmental damage can be avoided or significantly reduced.
3. Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
4. Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

An EIR is an informational document, the purpose of which is to inform members of the public and agency decision-makers of the significant environmental effects of a proposed project, identify feasible ways to reduce the significant effects of the proposed project, and describe a reasonable range of feasible alternatives to the project that would reduce one or more significant effects and still meet the proposed project’s objectives. In instances where significant impacts cannot be avoided or mitigated, the proposed project may nonetheless be carried out or approved if the approving agency finds that economic, legal, social, technological, or other benefits outweigh the unavoidable significant environmental impacts.

1.3 Intended Uses of the Environmental Impact Report

This section discusses the intended uses for this Draft EIR and includes (1) a list of agencies that would be expected to use this Draft EIR for decision-making, (2) a list of required permits and other approvals that would be required to implement the proposed project, and (3) an explanation of the program- and project-level analyses contained within this EIR. Environmental review and consultation requirements under federal, State, or local laws, regulations, or policies that are in addition to CEQA are discussed in the applicable individual resource sections within Chapter 4, *Environmental Analysis*.

1.3.1 Agencies Expected to Use this Environmental Impact Report

The District is the CEQA lead agency, as defined under State CEQA Guidelines Section 15050, because it has principal responsibility for carrying out and approving the proposed project. As the lead agency, the District also has primary responsibility for complying with CEQA. As such, the District has analyzed the environmental effects of the proposed project; the results of that analysis are presented in this Draft EIR. The Board of Port Commissioners, in its role as the decision-making body of the District, is responsible for certifying the Final EIR and approving the Findings of Fact and Statement of Overriding Considerations pursuant to Sections 15090–15093 of the State CEQA Guidelines prior to project approval.

No responsible agencies, as defined under State CEQA Guidelines Section 15381, have been identified. The project is consistent with the Port Master Plan and therefore a Port Master Plan amendment is not required. Furthermore, a Coastal Development Permit is not needed for the TAMT plan component because it is not considered development with regard to the Coastal Act. However, a Coastal Development Permit would be required for the Demolition and Initial Rail Component. The City of San Diego (City) will consider the proposed project as it relates to the issuance of ministerial permits, such as building permits for the construction of structures and grading permits. However, because these actions are not discretionary actions, the City is not considered a responsible agency.

The California State Lands Commission (CSLC) is a trustee agency, as defined in State CEQA Guidelines Section 15386. It is anticipated that CSLC may have an interest in the proposed project; however, CSLC would not issue approvals or permits that would be required to implement the proposed project.

Table 1-1 provides a summary list of the approvals and permits that would be required.

Table 1-1. List of Required Discretionary Actions

Discretionary Action	Port District
Certification of Final EIR	X
Adoption of Mitigation Monitoring and Reporting Program	X
Adoption of Findings of Fact	X
Adoption of Statement of Overriding Considerations	X
Issue of non-appealable Coastal Development Permit for the Demolition and Initial Rail Component	X
Approval and Adoption of the TAMT plan	X

1.3.2 Program and Project Level Analysis

The proposed project is the implementation of the TAMT plan, which includes the Demolition and Initial Rail Component. Other than the Demolition and Initial Rail Component, the District is not proposing to approve and implement specific components of the TAMT plan at this time. Unless sufficient details are provided so as to enable a project-level impact analysis (such as in the case of the Demolition and Initial Rail Component), this Draft EIR evaluates changes associated with the TAMT plan at a program level.

Although this Draft EIR considers the "worst-case" effect on the environment from implementing the TAMT plan with projected MPC throughput by 2035, as well as the effects from construction and operation of potential structures identified in the TAMT plan in general terms, the details regarding future specific actions that are contemplated under the TAMT plan may not all be available at the time of this Draft EIR's preparation. The lack of details regarding construction and operation of one or more of these specific actions may not permit a full and complete environmental impact assessment of these individual actions at the time of this Draft EIR's preparation. Correspondingly, approval of the TAMT plan and certification of this program-level EIR may not automatically permit the District to implement all actions contemplated within the TAMT plan if the information considered about a specific action is only conceptual. In this case, further CEQA compliance documentation may be required once the specific action proposed for implementation is sufficiently defined to undergo a project-level environmental analysis.

However, the program-level analysis of the TAMT plan may provide sufficient environmental clearance for one or more actions contemplated in the TAMT plan where sufficient detail of these actions is known at the time of this Draft EIR's preparation and such detail is analyzed in this Draft EIR. This would allow future implementation of these particular actions without additional CEQA compliance documentation because their impacts would have been analyzed and mitigated (as appropriate) in this Draft EIR.

Other than the Demolition and Initial Rail Component, all future components of the TAMT plan will be subject to additional environmental review pursuant to State CEQA Guidelines Section 15168(c). In the case of insufficiently defined actions that are sufficiently defined later, the required CEQA compliance documentation for these actions may be in the form of an addendum or subsequent/supplemental EIR that would use this EIR as a first-level tiering document in accordance with State CEQA Guidelines Section 15168. In this manner, this program-level analysis would serve to streamline future CEQA approvals and reduce future paperwork.

1.4 Scope and Content of the Draft Environmental Impact Report

As the CEQA lead agency, the District is responsible for determining the scope and content of this Draft EIR, a process referred to as "scoping." As part of the scoping process, the District considered the environmental resources present on site and in the surrounding area and identified the probable environmental effects of the proposed project (i.e., both the TAMT plan as a whole and its Demolition and Initial Rail Component). On March 6, 2015, the District posted a Notice of Preparation (NOP) with the County Clerk in accordance with Section 15082 of the State CEQA

Guidelines. The NOP was mailed to public agencies, organizations, and other interested individuals to solicit their comments on the scope and content of the environmental analysis. The District also held a public scoping meeting on March 18, 2015 at the District's Administration Building at 3165 Pacific Highway, San Diego, CA, 92101. Free public parking was available at the surface lot in front of the building, as well as adjacent to the building. A second scoping meeting was held on April 8, 2015 at the Ryan Bros. Coffee House at 1894 Main St., San Diego, CA, 92113. Free on-street parking was available.

Comments received in response to the NOP and during the public scoping meeting were used to determine the scope of this Draft EIR. The comments are summarized in Table 1-2 below. Based on the District's preliminary evaluation of the probable effects of the proposed project and a thorough review of the comments on the NOP, the Draft EIR analyzes effects associated with the following resources.

- Aesthetics and Visual Resources
- Air Quality and Health Risk
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions and Climate Change
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise and Vibration
- Transportation, Circulation, and Parking
- Utilities, Service Systems, and Energy

There are no agricultural, forestry, or mineral resources on site; therefore, the proposed project would not have an adverse effect on any of these resources. In addition, the proposed project would not have a significant adverse effect on land use and planning, population or housing, public services (police protection, fire protection, schools, and other public facilities), and recreational facilities. Chapter 6, *Additional Consequences of Project Implementation*, includes a brief analysis as to why impacts on agricultural and forestry resources, mineral resources, land use and planning, population and housing, public services, and recreational facilities would not be significant, as discussed in the initial study/environmental checklist included as Appendix A of this Draft EIR.

1.4.1 Comments Received in Response to the Notice of Preparation

Several specific environmental issues were raised in the comments on the NOP. A summary of these comments and the sections where they are addressed in this Draft EIR are provided in Table 1-2. Only comments that pertain to the environmental scope of this Draft EIR are summarized. Copies of all NOP comment letters are provided in Appendix B of this Draft EIR and the NOP is included as Appendix A.

Table 1-2. Summary of NOP Comments Received

Commenter	Environmental Topic(s)	Location Where Addressed in this Draft EIR
State		
State of California, Governor's Office of Planning and Research, State Clearinghouse and Planning Unit (SCH), March 12, 2015	Provides SCH# 2015031046 and notes which state agencies received a copy of the NOP	N/A
California Department of Transportation (Caltrans), District 11, Jacob M. Armstrong, March 24, 2015	Prepare a traffic impact study to determine near-term and long-term impacts on State facilities; use Caltrans Guide to the Preparation of Traffic Impact Studies	Section 4.10, *Transportation, Circulation, and Parking* Appendix G, *Traffic Impact Analysis*
	Lead agency should consult with Caltrans regarding Level of Service on State highway facilities	Section 4.10, *Transportation, Circulation, and Parking* Appendix G, *Traffic Impact Analysis*
	Use the intersecting lane vehicle procedure to analyze State-owned signalized intersections	Section 4.10, *Transportation, Circulation, and Parking* Appendix G, *Traffic Impact Analysis*
	Study area should include all regionally significant segments and intersections where the project would add over 100 peak hour trips or between 50 and 100 peak hour trips where noticeable delays are currently present	Section 4.10 *Transportation, Circulation, and Parking* Appendix G, *Traffic Impact Analysis*
	Analyze the effects on ramp metering	Section 4.10, *Transportation, Circulation, and Parking* Appendix G, *Traffic Impact Analysis*
	Traffic study data should not be more than 2 years old	Section 4.10, *Transportation, Circulation, and Parking* Appendix G, *Traffic Impact Analysis*
	Include mitigation measures where needed; specific suggestions are mentioned	Section 4.10, *Transportation, Circulation, and Parking* Appendix G, *Traffic Impact Analysis*
	Work within Caltrans right-of-way will require an encroachment permit	Section 4.10, *Transportation, Circulation, and Parking* Appendix G, *Traffic Impact Analysis*
California Public Utilities Commission, Kevin Schumacher, April 7, 2015	Review pedestrian and vehicular violations as part of the Draft EIR process; development adjacent to or near the railroad right-of-way should consider the safety of the rail corridor	Section 4.10, *Transportation, Circulation, and Parking* Appendix G, *Traffic Impact Analysis*

Commenter	Environmental Topic(s)	Location Where Addressed in this Draft EIR
California Air Resources Board, Kelly Lier, October 22, 2015	Notes sensitive receptors in the area	Section 4.2, *Air Quality and Health Risk*
	Support zero and near-zero technology that would be commercially available over the life of the project	Section 4.2, *Air Quality and Health Risk* Section 4.6, *Greenhouse Gas Emissions and Climate Change* Chapter 5, *Cumulative Impacts*
	Implement and plan for zero and near-zero technology	
	Consider the requirements for and implementation of shore power at all berths	
	Reduce the amount of time that fossil-fueled transport refrigeration systems operate on the terminal	
	Install electronic gate access	
	Use clean construction practices and equipment	
	Ensure compliance with current air quality regulations	
	Conduct a health risk assessment, using two baselines (existing and future)	Section 4.2, *Air Quality and Health Risk*
	Use highest cargo throughput scenario	Chapter 3, *Project Description*
	Consider impacts from truck traffic routes	Section 4.10, *Transportation, Circulation, and Parking* Appendix G, *Traffic Impact Analysis*
	Add an alternative that uses the cleanest feasible technologies	Chapter 7, *Alternatives to the Proposed Project*
Regional		
San Diego Association of Governments (SANDAG), Susan Baldwin, Senior Regional Planner, April 14, 2015	Transportation study should consider the needs of motorists, transit riders, pedestrians, and bicyclists, and implementation of a Transportation Demand Management Program	Section 4.10, *Transportation, Circulation, and Parking* Appendix G, *Traffic Impact Analysis*
	Coordinate with the City of San Diego on the potential impacts on Harbor Drive	Section 4.10, *Transportation, Circulation, and Parking* Appendix G, *Traffic Impact Analysis*
	Prepare a traffic analysis that considers the impacts on site access and other related traffic impacts	Section 4.10, *Transportation, Circulation, and Parking* Appendix G, *Traffic Impact Analysis*
	Consider methods for deterring single-occupancy trips from the nearly 460 jobs that would be created; examples include local pedestrian/bicycle treatments and improvements to the 12th and Imperial Transit Center	Section 4.10, *Transportation, Circulation, and Parking* Appendix G, *Traffic Impact Analysis*

Commenter	Environmental Topic(s)	Location Where Addressed in this Draft EIR
	Consider the safety and security of workers and other pedestrians, especially along major freight improvements, and consider alternative mode choices such as transit, biking, and walking to and from the project site	Section 4.10, *Transportation, Circulation, and Parking* Appendix G, *Traffic Impact Analysis*
	Mitigate potential impacts from goods movement, especially air quality, greenhouse gases, and local transportation circulation	Section 4.2, *Air Quality and Health Risk* Section 4.6, *Greenhouse Gas Emissions and Climate Change* Section 4.10, *Transportation, Circulation, and Parking* Appendix F, *Air Quality/ GHG Calculations* Appendix G, *Traffic Impact Analysis*
	Refer to prevailing California Air Resources Board regulations, and the evolving Sustain Freight Pathways to Zero and Near-Zero Emissions as it relates to air quality and greenhouse gas-related impacts	Section 4.2, *Air Quality and Health Risk* Section 4.6, *Greenhouse Gas Emissions and Climate Change*
	Consider opportunities for aggregate off-loading, storage, and distribution facilities	Chapter 3, *Project Description*
	Consider transportation demand management strategies to address transportation and greenhouse gas impacts; examples provided	Section 4.10, *Transportation, Circulation, and Parking*
	Consider parking management plan to assist in reducing the parking demand; SANDAG offers its expertise	Section 4.10, *Transportation, Circulation, and Parking*
Organizations		
BNSF Railway Company, Sean Hower, Director Port Business Development, April 14, 2015	Consideration of rail and effects related to truck traffic	Chapter 3, *Project Description* Section 4.10, *Transportation, Circulation, and Parking*
Environmental Health Coalition, Kayla Race, Policy Advocate, Joy Williams, Research Director, Georgette Gomez, Associate Director, April 14, 2015	Commenter provides several suggestions related to project objectives	Chapter 3, *Project Description*
	Consider the worst-case scenario for the environmental analysis	All chapters and sections
	Consider the maximum capacity for liquid bulk or place a cap on amount allowed	Chapter 3, *Project Description*
	Consider an alternative that places a cap on future throughput	Chapter 7, *Alternatives to the Proposed Project*
	Recommendation on baselines for air and	Section 4.2, *Air Quality and*

Commenter	Environmental Topic(s)	Location Where Addressed in this Draft EIR
	greenhouse gas emissions	*Health Risk* Section 4.6, *Greenhouse Gas Emissions and Climate Change*
	Threshold recommendations for air quality and health risk	Section 4.2, *Air Quality and Health Risk*
	Threshold recommendations for greenhouse gases	Section 4.6, *Greenhouse Gas Emissions and Climate Change*
	A list of potential air quality and health risk impacts is provided for consideration along with a list of possible mitigation measures	Section 4.2, *Air Quality and Health Risk*
	Recommendations on how to analyze greenhouse gas impacts and potential mitigation strategies	Section 4.6, *Greenhouse Gas Emissions and Climate Change*
	Consider release of hazardous materials during high sea levels, storm surges, and tsunamis	Section 4.6, *Greenhouse Gas Emissions and Climate Change* Section 4.7, *Hazards and Hazardous Materials*
	Consider analyzing the project's consistency with the Port's Transition Zone Policy, Port Master Plan, Coastal Act, and Public Trust Doctrine	Chapter 6, *Additional Consequences of Project Implementation*
	Consider the effects from light pollution	Section 4.1, *Aesthetics and Visual Resources*
	Consider the effects from noise; mitigation suggestions are provided	Section 4.9, *Noise and Vibration*
	Consider impacts on public services, including impacts on Cesar Chavez Park and firefighting resources	Chapter 6, *Additional Consequences of Project Implementation*
	Consider the impacts on traffic and transportation; mitigation suggestions are provided	Section 4.10, *Transportation, Circulation, and Parking* Appendix G, *Traffic Impact Analysis*
	Consider the impacts on water quality; engineering recommendations are provided	Section 4.8, *Hydrology and Water Quality*
	Consider the effect on energy demand; mitigation recommendations are provided	Section 4.11, *Utilities and Energy*
	Recommendations about what projects to include as cumulative projects	Chapter 5, *Cumulative Impacts*
	Consider environmental justice in the Draft EIR	Not required by CEQA Environmental effects are addressed in Chapter 4, *Environmental Analysis*, and Chapter 5, *Cumulative Impacts*

Commenter	Environmental Topic(s)	Location Where Addressed in this Draft EIR
	Additional mitigation measures provided and recommended	Environmental effects and required mitigation measures are addressed in Chapter 4, *Environmental Analysis*, and Chapter 5, *Cumulative Impacts*
Environmental Health Coalition, Laura Hunter, Policy Advocate, Joy Williams, Research Director, Kayla Race, Policy Adovcate, April 22, 2015	Consider project objectives that include energy, air quality, consistency with ARB Sustainable Freight Strategy, and reduction of community impacts (examples provided)	Chapter 3, *Project Description*
	Use 2013 Air Emissions Inventory and Dole shore power in baseline	Section 4.2, *Air Quality and Health Risk* Section 4.6, *Greenhouse Gas Emissions and Climate Change*
	Include hot spots analysis and regional impacts	Section 4.2, *Air Quality and Health Risk*
	Use No Net Increase thresholds for several air quality pollutants and toxic contaminants	Section 4.2, *Air Quality and Health Risk*
	Calculate GHGs as both annual summation and cumulative total	Section 4.6, *Greenhouse Gas Emissions and Climate Change*
	Be consistent with State's GHG reduction target of 80% below 1990 level by 2050	Section 4.6, *Greenhouse Gas Emissions and Climate Change*
	The proposed project should consider all TAMT cargo remaining on TAMT and not being transferred to the National Distribution Center or significantly reduced; impacts from the TAMT and the NDC should be analyzed	Chapter 3, *Project Description*
	Increases at the NDC should be a cumulative project for the National City Marine Terminal master planning	Chapter 3, *Project Description*
	Include an analysis of an alternative central gate	Chapter 3, *Project Description*
The League of Women Voters of San Diego, Kay Ragan, President, and Cathy O'Leary, Port Observer, April 17, 2015	Concern over air emissions that may be generated from vessel calls, truck trips, increased rail activity, worker trips, energy, and water use that could exceed thresholds for greenhouse gases	Section 4.2, *Air Quality and Health Risk* Section 4.6, *Greenhouse Gas Emissions and Climate Change*
	Concern over air quality and health risk	Section 4.2, *Air Quality and Health Risk*
	Confirm a non-appealable Coastal Development Permit is appropriate and the project is not subject to Coastal Commission review	Chapter 1, *Introduction*

Commenter	Environmental Topic(s)	Location Where Addressed in this Draft EIR
Individuals		
Interested Party, Mike VandenBergh, received April 14, 2015	Requests verification of truck movements and asks several questions related to transportation-related impacts, project costs, and existing conditions	Chapter 2, *Environmental Setting* Chapter 3, *Project Description* Section 4.10, *Transportation, Circulation, and Parking*
Interested Party, John Karpinski, received April 8, 2015	Provides sketches of a theme park alternative to the project	Chapter 7, *Alternatives to the Proposed Project*
Interested Party, Bryan Constantino, received April 8, 2015	Consider environmental effects on the neighborhoods and residents	Chapter 4, Sections 4.1 to 4.11 Chapter 5, *Cumulative Impacts*
Interested Party, Cathy O'Leary Carey and John Carey, April 13, 2015	Consider effects on Downtown San Diego, the San Diego Convention Center and Hilton Bayfront Hotel, and Barrio Logan community	Chapter 4, Sections 4.1 to 4.11 Chapter 5, *Cumulative Impacts*
Interested Party, Don Wood, March 18, 2015	Consider the environmental effects related to existing public access and public views	Section 4.1, *Aesthetics and Visual Resources*
	Identify all air quality impacts affecting the terminal and Barrio Logan community and provide mitigation for significant impacts	Section 4.2, *Air Quality and Health Risk*
	Consider an alternative with fewer impacts on surrounding neighborhoods	Chapter 7, *Alternatives to the Proposed Project*
	Consider an alternative that moves cruise ship operations from North Embarcadero down to the TAMT	Chapter 7, *Alternatives to the Proposed Project*
	Additional comments provided unrelated to the environmental scope of the Draft EIR	N/A

1.5 Organization of the Draft EIR

The content and format of this Draft EIR are designed to meet the requirements of CEQA and State CEQA Guidelines Article 9. Table 1-3 summarizes the organization and content of the Draft EIR.

Table 1-3. Document Organization and CEQA Requirements

Draft EIR Chapter	Contents
Summary	Includes a brief summary of the proposed project; identifies each significant effect, including proposed mitigation measures and alternatives to reduce or avoid the effect; identifies the areas of controversy known to the lead agency, including issues raised by agencies and the public; and summarizes the issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects (State CEQA Guidelines Section 15123).
Chapter 1 Introduction	Discusses the purpose of CEQA and this Draft EIR, the scope and content of this Draft EIR, the organization of this Draft EIR, and the intended uses for this Draft EIR (State CEQA Guidelines Section 15124(d)).
Chapter 2 Environmental Setting	Describes the overall existing physical conditions in the vicinity of the proposed project when the analysis was initiated. In addition, the specific existing conditions for each resource area are described in the applicable resource section in Chapter 4, *Environmental Analysis* (State CEQA Guidelines Section 15125).
Chapter 3 Project Description	Contains both a map of the precise location and boundaries of the proposed project and its location relative to the region, lists the proposed project's central objectives and underlying purpose, and provides a detailed description of the proposed project's characteristics (State CEQA Guidelines Section 15124(a), (b), and (c)).
Chapter 4 Environmental Analysis	Describes the existing physical conditions for each resource area, lists the applicable laws and regulations germane to the specific resource, describes the impact assessment methodology, lists the criteria for determining whether an impact is significant, identifies the direct and indirect significant impacts that would result from implementation of the proposed project, and lists feasible mitigation measures that would eliminate or reduce the identified significant impacts (State CEQA Guidelines Sections 15125–15126.4).
Chapter 5 Cumulative Impacts	Defines the cumulative study area for each resource; identifies past, present, and reasonably foreseeable future projects with related impacts within each study area; and evaluates the contribution of the proposed project to a cumulatively significant impact. This chapter also lists feasible mitigation measures that would eliminate or reduce the identified significant cumulative impacts (State CEQA Guidelines Section 15130).
Chapter 6 Additional Consequences of Project Implementation	Discusses the way the proposed project could foster economic or population growth, either directly or indirectly, in the surrounding environment; describes the significant irreversible changes associated with the proposed project's implementation; and provides a brief discussion of the environmental resource impacts that were found to be not significant during preparation of this Draft EIR (State CEQA Guidelines Sections 15126.2(c) and (d), 15127, and 15128).

Draft EIR Chapter	Contents
Chapter 7 Alternatives to the Proposed Project	Describes a reasonable range of alternatives to the proposed project, including the No-Project Alternative; compares and contrasts the significant environmental impacts of alternatives to the proposed project; and identifies the environmentally superior alternative (State CEQA Guidelines Section 15126.6).
Chapter 8 List of Preparers and Agencies Consulted	Lists the individuals and agencies involved in preparing this Draft EIR (State CEQA Guidelines Section 15129).
Chapter 9 References	Provides a comprehensive listing by chapter of all references cited in this Draft EIR (State CEQA Guidelines Section 15148).
Acronyms and Abbreviations	A list of acronyms and abbreviations is provided for the reader's reference immediately following the list of tables and figures in the Table of Contents.
Appendices	Presents additional background information and technical detail for several of the resource areas.

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Chapter 2
Environmental Setting

2.1 Introduction

This chapter provides a description of the overall physical environmental conditions in the vicinity of the project, from both a local and regional perspective, as they existed at the time the Notice of Preparation was published.[1] Resource-specific existing conditions are provided within each individual resource section of Chapter 4, *Environmental Analysis*. Chapter 4 also describes any inconsistencies with applicable plans.[2]

2.2 Background Setting

2.2.1 District

The mission of the San Diego Unified Port District (District) is to protect Tidelands Trust resources by providing economic vitality and community benefit through a balanced approach to maritime industry, tourism, water and land recreation, environmental stewardship, and public safety. The District was created with the San Diego Unified Port District Act (Port Act), adopted by the California State Legislature in 1962, as amended through 2006. The Port Act recognizes the Public Trust Doctrine and states that tidelands and submerged lands are to be used only for statewide public purposes. To this end, the District is charged with management of the tidelands and diverse waterfront uses along San Diego Bay that promote commerce, navigation, fisheries, and recreation on the granted lands. The District is responsible for the management and administration of the Tenth Avenue Marine Terminal (TAMT) facility.

2.2.2 Tenth Avenue Marine Terminal

The Tenth Avenue Marine Terminal—Planning District 4, as identified within the District's Port Master Plan (PMP), is a developed marine-related industrial area of great importance to the region's economy. Within District tidelands, the industrial and maritime commerce sectors yield an estimated 12,800 direct jobs and approximately 10,200 indirect or induced jobs, resulting in a total of 23,000 jobs (District 2015). The vast majority of these industrial and maritime-related jobs are focused within Planning District 4. Notably, the TAMT and the National City Marine Terminal are the only areas in the entire San Diego region that provide established waterfront industrial sites with

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[1] State CEQA Guidelines Section 15125 states that an EIR must include "a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will *normally* constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. The description of the environmental setting shall be no longer than is necessary to an understanding of the significant effects of the proposed project and its alternatives" (emphasis added).

[2] For example, Section 4.2, *Air Quality and Health Risk*, contains a project consistency analysis with the applicable air quality plans.

railroad service, close freeway access, commercial port-related support functions, and deep-water berthing.

The 96-acre TAMT (i.e., project site), created in 1958, is a paved landfill with concrete bulkheads and rubber or timber fenders along each berth face. It serves as a dry bulk, liquid bulk, multi-purpose general cargo, and specialty container facility and remains a critical gateway for cargo movement on the West Coast. Water depths at the project site (as well as the adjacent industrial area in Planning District 4) can accommodate vessels with drafts up to 42 feet.

The District has implemented a number of measures to help reduce environmental impacts associated with terminal activity. These efforts include implementing the “clean truck” and voluntary vessel speed-reduction programs, identifying specific truck routes away from sensitive receptors, and instituting shore power.

In 2005, the District partnered with the U.S. Army Corps of Engineers (USACE) to complete dredging along San Diego Bay’s primary navigational channel to accommodate commercial, cargo, and military vessels. The District invested approximately $2 million to complete this improvement, whereas USACE invested upward of $5 million. This significant investment in the navigational channel ensures that maritime uses consistent with the Port Act continue at the project site.

2.3 Existing Setting

2.3.1 Location

As shown in Figure 2-1, the project site is located along San Diego Bay, south of downtown San Diego, east of the San Diego Convention Center and Hilton Bayfront Hotel, and west adjacent to the San Diego community of Barrio Logan. Harbor Drive runs northwesterly approximately 160 feet from the project site boundary. Project site access from Harbor Drive is provided at two locations.

- Primary: from Cesar E. Chavez Parkway; this becomes Crosby Road as it approaches the Terminal
- Secondary: at the southern end of the Hilton hotel parking facility, adjacent to the backlands of the Dole container facility

Major circulation facilities in the area include State Route 75 (i.e., Coronado Bridge), approximately 0.25 mile to the south, and Interstate 5, about 0.5 mile to the north. Trucks that serve the project site are required to access the region’s interstate system by transiting southbound from the project site along Harbor Drive, thereby limiting heavy truck activity along the residential streets of the Barrio Logan community.

2.3.2 Surrounding Conditions

Three water-dependent shipyards are located immediately south of the project site. Other industrial uses include a Burlington Northern Santa Fe (BNSF) rail facility between the project site and Harbor Drive, and a Metropolitan Transit System yard, located north and east of the project site, that serves the San Diego Trolley system. The nearby shipyards, BNSF rail facility, and Restaurant Depot (a wholesale distribution warehouse located off tidelands, just east of the project site) are all industrial uses in the immediate area. The Barrio Logan community, immediately east of the project site,

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Figure 2-1
Regional Location
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component

includes a mix of light industrial, commercial, residential, school, and park uses. Other areas within the vicinity of the project site include a baseball stadium (i.e., Petco Park), several hotels, and the San Diego Convention Center.

2.3.3 Existing Land Use Designation

The District's PMP, which has been certified by the California Coastal Commission, identifies TAMT within Planning District 4. The land use designations for the project site include a combination of Marine Terminal and Marine-Related Industrial.

The PMP states that intent of this planning district is to retain and continue marine-related, water-dependent industrial uses. It foresees the continuation and intensification of cargo operations at TAMT. The District's policy is to maintain established marine-oriented industrial areas that are devoted to transportation, commerce, industry, and manufacturing and encourage modernization and construction of necessary facilities within these established areas to minimize or eliminate the necessity for future dredging and filling in new areas.

2.3.4 Existing Site Conditions

The project site, completed in 1958, is a paved landfill with concrete bulkheads and rubber or timber fenders along each berth face. The project site includes eight berths that are capable of accommodating oceangoing vessels. The berths have a depth of 30 to 42 feet, with the deeper berths along the southern and western faces of the project site and the navigation channel (Berths 10-3 through 10-8). Currently shorepower is available at Berths 10-2 and 10-4. Table 2-1 provides a summary of the characteristics of each berth.

Table 2-1. TAMT Berth Characteristics

Berth	Location (facing)	Berth Space (in feet)	Mean Lower Low-Water Depth (in feet)
10-1/10-2	North	1,118	-30
10-3/10-4	West	1,290	-41
10-5/10-6	West	1,290	-41
10-7/10-8	South	650	-36 to -42

As shown in Figure 2-2 and summarized in Table 2-2 below, terminal infrastructure consists of two transit sheds (i.e., Transit Sheds #1 and #2), two warehouses (i.e., Warehouses B and C), two bulk liquid storage facilities, a silo complex and conveyor system, on-dock rail tracks, and an entrance gate into the project site with a security guard structure at the end of Crosby Road. The remaining areas within the project site are dedicated to grounded refrigerated container storage, limited stacked containers, and open space for the handling and staging of import and export cargo. The locations of on-site structures are shown on Figure 2-3 below. Figure 2-4 shows the existing conveyor system.

The project site does not include any formally dedicated streets or roads. However, three distinct paved areas essentially function as roads; these are referred to by terminal users as Terminal Street, Switzer Street, and Water Street. A crane rail that runs parallel to Terminal Street operates and maneuvers a Siwertell,[3] which is utilized by an existing dry bulk tenant in the discharge of bulk cement. The site does not contain any vegetation, and the entire site is underlain by fill. The majority of the site is covered by asphalt, although there is a small 1-acre portion of the site at the entrance that is unpaved.

Table 2-2. Existing Structures at TAMT

On-Site Structure	Location	Description/Use
Entrance Gate and Security Guard Structure	Southern end of Crosby Road	Primary terminal entrance; security
Silo Complex and Conveyor System	East of Warehouse C	Soda ash import, export, and storage
Warehouse B (San Diego Refrigerated Services Facility)	Northeast area of TAMT; served by Berths 10-1/10-2	317,802-square-foot on-dock cold storage facility; 116,163 square feet of cargo, storage, and cross-docking operations
Transit Shed #1	Northwest area of TAMT; served by Berths 10-3/10-4	145,000 square feet for general cargo, military
Transit Shed #2	Southwest area of TAMT; served by Berths 10-5/10-6	194,000 square feet for general cargo, bulk cement
Warehouse C	South and center area of TAMT	384,000 square feet of dry bulk and equipment storage and two clerk shacks: C-10, 385 square feet, and C-11, 569 square feet
Liquid Storage Facility 1 (Jankovich Fuel Farm)	Northeast area of TAMT	Diesel and kerosene storage in five silos including silo capacities of 2,344,986 gallons; 2,326,128 gallons; 1,501,584 gallons; 836,090 gallons; and 2,040,780 gallons
Liquid Storage Facility 2	Southeast area of TAMT, near Crosby Street entrance	Three empty silos, previously used for molasses storage including: three one-million-gallon-capacity silos
Dole Refrigerated Container Facility	Northeast area of TAMT, generally between Warehouse B and Harbor Drive	Open refrigerated container facility, utilized for Dole operations. Includes offices, maintenance and repair capabilities, reefer plugs, and racks within a 900,966-square-foot area of the TAMT.
Mobile Harbor Crane	Stored in the vicinity of Warehouse C	Lifting capacity of 100 metric tons
Siwertell Bulk Unloader (Owned by Cemex)	Along crane rail at Berth 10-6	N/A
On-Dock Rail	Rails run along Berths 10-3/10-4 and 10-5/10-6, and along the western side of Warehouses B and C	N/A

[3] A vacuum-like apparatus that runs on rails and is able to pick up fine bulk materials during the discharge of an oceangoing vessel.

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Figure 2-2
Project Location Map
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component

Figure 2-3
Existing Site Conditions
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component

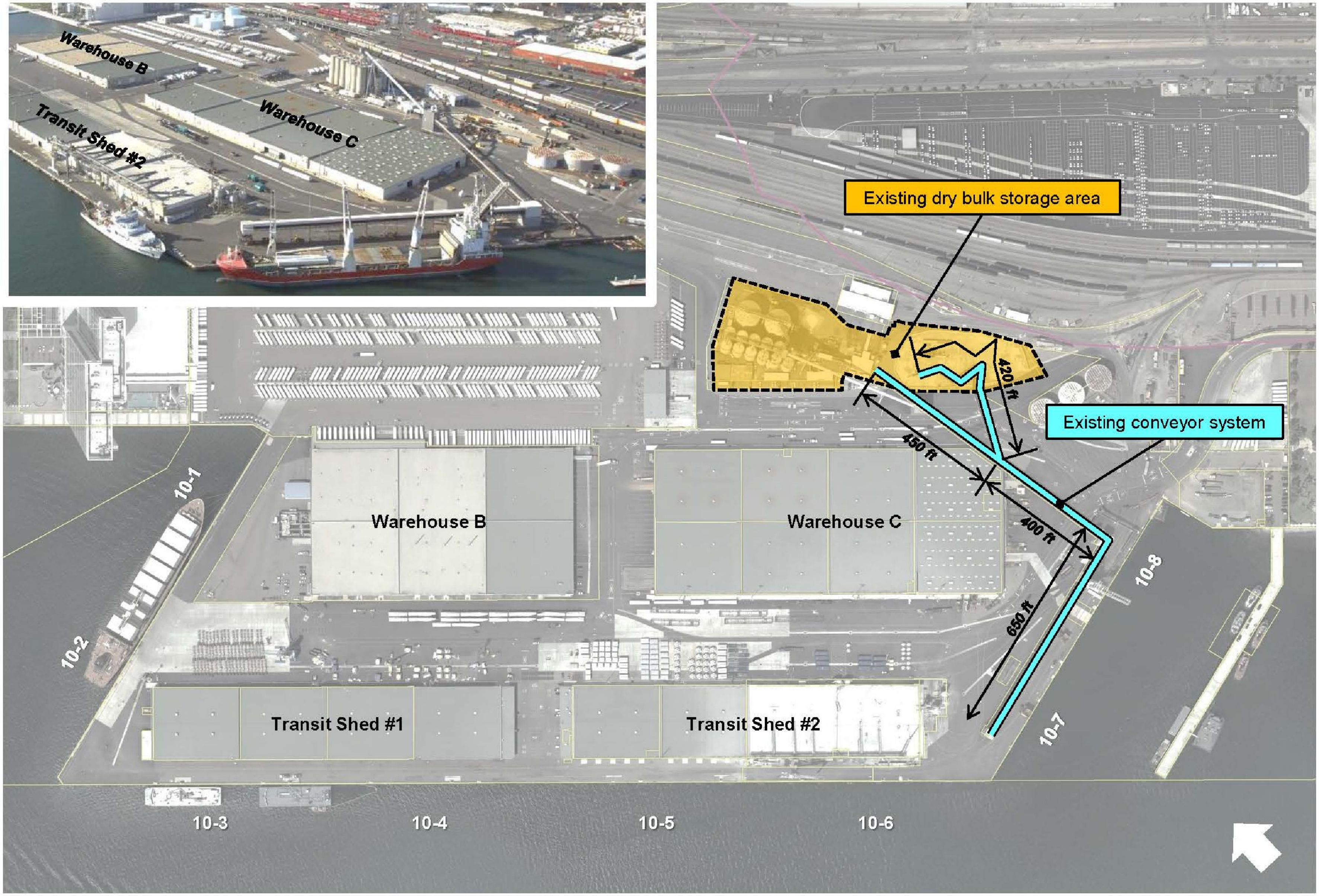

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Figure 2-4
Existing Dry Bulk Conveyor System
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component

2.3.5 Existing Site Operations

Existing Cargo Throughput

The 96-acre project site handles import, export, and domestic cargo. Goods and materials handled at the project site generally fit into one of the following four categories: Dry Bulk, Liquid Bulk, Refrigerated Container, and Multi-Purpose General Cargo (e.g., neo-bulk/break bulk).

- **Dry bulk** is a commodity cargo that is transported unpackaged or in super sacks[4] in large quantities. Dry bulk handled at the project site includes minerals such as bauxite and soda ash; fertilizing materials such as potash; sand and gravel; and cement. The existing tenants that transport dry bulk cargo at the project site include CEMEX, International Materials, and Searle's Valley Minerals Operations. Approximately 289,864 metric tons (MT) of dry bulk cargo passed through the project site between July 2013 and June 2014, with June 2014 being the month in which the environmental analysis was initiated.
- **Liquid bulk** is a commodity cargo that, similar to dry bulk, is transported unpackaged in large quantities. The 3.2-acre liquid bulk facility provides liquid fuel to oceangoing vessels and San Diego International Airport. These operations are considered an essential regional asset and are unlikely to change over the life of the proposed TAMT plan. Approximately 31,250 MT of liquid bulk was processed at the project site via truck or barge between July 2013 and June 2014. However, while these baseline activities were disclosed in the NOP, the proposed project does not propose any change in the existing infrastructure improvements or operational efficiencies related to liquid bulk.
- **Refrigerated containers**, generally 40 feet in length, provide transport for perishable commodities that require temperature-controlled transportation. The primary refrigerated cargo at the project site is bananas, along with other tropical fruits. The current tenant that transports refrigerated cargo is Dole Fresh Fruit. San Diego Refrigerated Services is a support service and also handles refrigerated containers, along with other cargo. Approximately 637,931 MT of container cargo throughput occurred between July 2013 and June 2014. This yielded approximately 27,089 forty-foot-equivalent units (FEUs) of refrigerated cargo.
- **Multi-purpose general cargo** is goods that must be loaded individually, and not in intermodal containers nor in bulk as with liquid or dry bulk. Multi-purpose general cargo at the project site includes roll-on/roll-off cargo (e.g., automobiles, military vehicles), project cargo, and break bulk cargo. However, unlike the other three types of cargo that are routinely handled at the project site, general cargo does not lend itself to one standard form of measurement. General cargo shipments at the project site include a wide range of cargo, including heavy commercial vehicles, light commercial vehicles, regular passenger vehicles, pipes, generators, metals, machinery, transformers, yachts, trailers, campers, lumber, and windmill components, among others. Depending on the type of goods being transported, one of the following units of measure is utilized to capture throughput of the general cargo type: tonnage, individual units, cubic meters (CBMs), twenty-foot-equivalent units (TEUs), FEUs, or metric board feet (MBF). To estimate the throughput of all general cargo types, these metrics have been converted based on industry standards into MT, which are provided in Appendix E of this Draft EIR. Between July 2013 and June 2014, TAMT processed 85,131 MT of general cargo.

[4] 1.2 to 1.5 MT per super sack

Table 2-3 provides a breakdown of the cargo throughput by cargo type that was handled at TAMT between July 2013 and June 2014.

Table 2-3. Existing Throughput by Cargo Type between July 2013 and June 2014

Node	Throughput in Metric Tons
Dry bulk	289,864
Liquid bulk	31,520
Refrigerated container	637,931
Multi-purpose general cargo	85,131[a]
TOTAL	**1,044,446**

Notes:

[a] Provided in MT because of non-standard cargo types.

[b] Approximately 31,250 metric tons of liquid bulk was processed at the project site via truck or barge between July 2013 and June 2014. However, while this baseline amount was disclosed in the NOP, the proposed project does not identify any infrastructure improvements or market forecasts related to liquid bulk.

Existing Workforce

Based on information supplied by the District's Maritime Department, the project site employs up to 165 permanent employees per day. In addition, one or more "work gangs" may be present at the project site when vessels need loading and off-loading. Depending on the type of cargo, a work gang can range from 12 to approximately 25 longshoremen and dock managers. Moreover, the number of work gangs required per vessel can vary, depending on the amount of cargo present. The District's maritime operational staff indicates that there are up to 150 longshoremen at the project site over a 24-hour day (i.e., three shifts). Therefore, for purposes of this EIR, it is assumed that TAMT employs approximately 315 persons per day on site.

Chapter 3

Project Description

3.1 Introduction

The proposed TAMT plan would replace the existing 2008 Maritime Business Plan (2008 Plan) to provide greater flexibility and meet current and future market conditions at the project site. A copy of the TAMT plan is attached to this Draft EIR as Appendix C. The proposed TAMT plan includes a variety of infrastructure investments that may be undertaken over the long term to accommodate an increase of the project site's capabilities and capacity. These include up to five gantry cranes, additional and consolidated dry bulk storage capacity (which may include a new 100,000-square-foot dry bulk structure or an equivalent vertical storage facility), enhancements to the existing conveyor system, demolition of the molasses tanks and Warehouse C, additional open storage space, establishment of an on-dock rail facility, a centralized gate facility, and the Demolition and Initial Rail Component (described below). It should be noted that all contemplated infrastructure would be market driven and customer dependent. Therefore, implementation of the various development concepts and associated infrastructure improvements identified in the TAMT plan would depend on market opportunities that occur throughout the life of the plan. The TAMT plan has identified 2035 as its buildout year.

Given the flexibility that has been built into the TAMT plan, this Draft EIR evaluates the scenario that would result in the "worst-case" effect on the environment. Consequently, the "worst-case scenario" assumes that the project site would operate at its maximum practical capacity (MPC) for each operating node during the long-term planning horizon and all potential structures that are identified in the TAMT plan would be developed. In addition, the Draft EIR evaluates the Sustainable Terminal Capacity (STC) Alternative, which is approximately a 25 percent~~%~~ reduction in throughput from the MPC scenario and represents a more sustainable level of operations over a consistent basis at the terminal. Other than the Demolition and Initial Rail Component, this Draft EIR evaluates potential impacts at the program level because specific information about future actions is not yet known.

The proposed Demolition and Initial Rail Component is the necessary first step that would modernize the project site to enable the subsequent implementation of the various development scenarios contemplated in the TAMT plan. The Demolition and Initial Rail Component would include demolition of two underutilized transit sheds (Transit Shed #1 and Transit Shed #2), on-terminal rail upgrades that include a rail lubricator for more efficient rail movement and three compressed air systems for air brake testing on the terminal rather than its current off-terminal testing, subsurface conduit and electrical improvements to allow for future electrification and/or shore power capabilities prior to resurfacing, and stormwater drainage improvements. In addition, improvements include a new electrical gear room, restroom facilities, information technology room, and outdoor storage facility where Transit Shed #1 was formerly located. Finally, a new modular office with approximately 15 parking spaces and restroom facilities near the central gate facility would replace the offices that would be demolished as part of Transit Shed #2. These proposed construction activities are anticipated to begin in approximately 2017 and be completed by approximately 2020. As described herein, this Draft EIR analyzes the proposed Demolition and Initial Rail Component at the project level.

3.2 Project Background and Purpose

San Diego combines a natural deep-water, all-weather harbor, strategic southern location, and industry expertise in handling specialty cargo. These factors have the potential to provide the District with a competitive advantage and resultant cost savings for "specialty" cargo and vessel owners.

The District's 2012–2017 COMPASS Strategic Plan establishes the goal of providing a "thriving and modern maritime seaport." The District has two cargo terminals: the TAMT and National City Marine Terminal (NCMT). NCMT is managed under a long-term operating agreement with District tenant Pasha Automotive Services, while the project site is managed with multiple tenant leaseholds and open/covered terminal spaces for handling diverse cargos. This Draft EIR only analyzes conditions at the project site.

The project site is footprint-constrained, being adjacent to a thriving downtown San Diego to the north, the Barrio Logan community consisting of light industrial, commercial, and residential land uses to the east, and shipyards and Navy installations to the south. Additionally, the District strives to facilitate commerce, to be an economic engine and job generator, and to protect the environment. To accomplish these goals within a limited space, the District plans to invest in infrastructure improvements that would accommodate increased cargo throughput and maximize efficiency within the project site's existing footprint.

3.2.1 TAMT Plan

The proposed TAMT plan is intended to guide future potential terminal infrastructure investments and to optimize terminal flexibility. The TAMT plan would allow the project site to accommodate increased medium- to long-range cargo opportunities, based on a business and marketing strategy with a planning horizon of 2035, thereby ensuring future growth and sustainability for the District's maritime cargo operation.

The District's maritime marketing strategy is currently guided by the 2008 Plan. The 2008 Plan, which used economic and market data collected during 2006 and 2007 and covered marketing activities at both the project site and NCMT, was used to present a "vision for maritime activity through 2030."[1] Since that plan was implemented, the cargo markets, as well as national and regional economies, have changed significantly. Because of the dynamic nature of cargo markets, as well as the impact of the Great Recession of 2008 and 2009, the 2008 Plan no longer accurately portrays existing and future market conditions for the cargos that the project site is ideally positioned to handle. Accordingly, the District has determined that a periodic update of the business plan is appropriate.

3.2.2 Demolition and Initial Rail Component

The Demolition and Initial Rail Component is an initial project-level component of the TAMT plan. It is consistent with President Obama's State of Good Repair infrastructure initiative because it repairs existing infrastructure and removes outdated facilities to maximize operational efficiency. Demolishing the obsolete transit sheds would allow the District to use contemporary technologies

[1] San Diego Unified Port District Maritime Business Plan Update, Page ES-1, December 2008

and handling techniques to serve the needs of specialized and refrigerated cargos in an open area. The project would also renovate and upgrade the aging rail infrastructure. An automatic rail lubricator system would replace an existing manual process, and installation of air brake testing equipment would allow safety inspections to take place on the project site, replacing the need for an additional stop at the adjacent rail yard facility. Elimination of this additional stop, without compromising safety, would contribute directly to improved safety, efficiency, and emissions reductions.

Additionally, the demolition of the transit sheds, followed by the re-grading and paving of the area, would allow the District to achieve greater efficiency while attracting new business opportunities. Prior to repaving the area, the project would add subsurface conduit and other electrical improvements to allow future electrification of the project site, including shore power capabilities at Berths 10-5/10-6. The creation of an open lay-down area would link cargo from vessels to a multi-modal regional transportation system that includes industrial cross-docking facilities, cold storage facilities, rail facilities, and highways without the operational impediments under existing conditions.

3.3 Project Objectives

The District has identified the following objectives for the proposed project.

1. Enhance the District's competitive position by increasing throughput capabilities by:
   a. Improving onsite infrastructure and operational capacity for three distinct but flexible operating nodes for dry bulk, multi-purpose general cargo, and refrigerated container cargo types, as well as a centralized gate facility, and
   b. Establishing an expanded on-dock rail facility to broaden certain cargo customer access to rail in the long term.
2. Maintain and promote the District's longstanding commitment to dry bulk, liquid bulk, refrigerated containers, and multi-purpose general cargo.
3. Ensure benefits to existing project site tenants by implementing a series of short-term infrastructure improvements, which are designed to accommodate a variety of cargos and vessels within 1 to 5 years.
4. Maintain and expand the District's ability to support military deployment activities during a military contingency or national emergency in the District's capacity as a commercial Strategic Port as designated by the U.S. Department of Defense.
5. Enhance the efficiency, productivity, and long-term success of the TAMT by identifying potential infrastructure needs, decreasing intra-terminal transfer time, simplifying terminal layout patterns, and making internal traffic flows more predictable, all while remaining flexible and responsive to future market conditions.
6. Optimize the use of land and waterways and provide deep-water and water-dependent facilities in a manner that is consistent with the Port Master Plan and the California Coastal Act.
7. Balance the critical need of staying economically competitive with maintaining environmental sustainability and stewardship by supporting the cleanest feasible technology and infrastructure for terminal upgrades and by maintaining consistency with California's Sustainable Freight

Strategy and the District's Climate Action Plan, Clean Air Program, and Jurisdictional Runoff Management Program.

3.4 Proposed Project Description

The proposed project evaluated in this Draft EIR involves (1) adoption of the TAMT plan and (2) implementation of the Demolition and Initial Rail Component. The TAMT plan provides growth projections by cargo type and potential development scenarios to be considered, as market conditions allow. The Demolition and Initial Rail Component is the initial project-level component of the TAMT plan, which includes demolition of Transit Shed #1 and Transit Shed #2, conduit and electrical improvements to allow for future electrification of the project site, upgrading the project site's existing stormwater system, replacement of existing lighting, grading and repaving of the site of the previous transit sheds, on-terminal rail upgrades that include a rail lubricator and compressed air system for air brake testing, and installation of a modular office with restroom facilities, a building with an electrical gear room, additional restroom facilities, and IT room, and outdoor storage space. Further details are provided below.

3.4.1 Tenth Avenue Marine Terminal Redevelopment Plan

The TAMT plan replaces portions of the 2008 Plan. The TAMT plan analyzes terminal configuration options, using an updated review of existing cargo throughput and a market forecast to 2035, and identifies five potential development concepts, three of which are analyzed in this Draft EIR.[2] The result is a proposed plan that would provide maximum flexibility at the project site to accommodate cargo market opportunities and to implement future terminal infrastructure investments. Although each development concept emphasizes a slightly different mix of cargo, all three development concepts involve establishing flexible but distinct nodes that would handle like cargos in similar operational areas and under similar conditions. The size and configuration of the nodes may expand or contract depending on future market opportunities and/or operational needs at the terminal. The operating nodes are discussed below, whereas three development concepts are discussed in the subsequent section titled *Long-Term Operations with the Proposed Plan*.

The TAMT plan identifies five operating nodes that include dry bulk, liquid bulk, refrigerated container, multi-purpose general cargo, as well as a central gate facility.[3] The Demolition and Initial Rail Component would affect all three nodes along the western portion of the project site boundary including the dry bulk node, the refrigerated container node, and the multi-purpose cargo node. In addition, the new modular offices with restroom facilities are anticipated to be located in the vicinity of the centralized gate facility. The locations of the nodes contemplated in the TAMT plan are shown

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[2] As acknowledged in the Notice of Preparation (NOP), the full refrigerated container and full dry container concepts were excluded from the EIR analysis of the proposed project because they would result in zero volume for multi-purpose/general cargo commodity types. The District has a longstanding commitment handling Multi-purpose/General Cargos and decided at the outset that it does not want to depart from this established and successful business strategy. However, the full refrigerated container and full dry container concepts are addressed in the discussion of alternatives to the proposed project in Chapter 7 of this EIR.

[3] Although the TAMT Plan makes reference to a liquid bulk node as an existing condition, the TAMT Plan does not propose any changes (such as infrastructure improvements or capacity enhancements) to the existing liquid bulk node.

in Figure 3-1, and the Demolition and Initial Rail Component locations are shown in Figure 3-2. The proposed locations for these nodes are discussed in greater detail below. Because berthing capacity at the project site has been deemed adequate, the TAMT plan focuses on land-side improvements only, and no dredging or waterside improvements are included.

Dry Bulk

The dry bulk node would be located on approximately 15 acres in the southeastern portion of the project site, also referred to as terminal "backlands" and shown in brown on Figure 3-1. This node would be served primarily by Berths 10-7/10-8, with secondary access from Berths 10-5/10-6. Proposed dry bulk node improvements would include the following.

- **Open Air Storage Space.** Maintain approximately 5 acres of existing open storage space between Water Street and Terminal Street.
- **Conveyor System**. Upgrade the existing conveyor system to handle multiple bulk commodities, such as cement, bauxite, or soda ash. Currently, the existing conveyer system (which contains two conveyer belts) is owned and operated by a District tenant. The existing conveyor system is shown on Figure 2-4. It is elevated and ranges between 22 feet and 23.5 feet in height. The system is approximately 60 feet from the shoreline and runs parallel to Berths 10/7 and 10/8 for approximately 650 feet, and then heads northerly for another 400 feet to the southeast corner at Warehouse C. The elevated conveyor then splits into two directions; one system continues northerly for another 450 feet to the central portion of the dry bulk storage area parcel (shown in yellow), and the second system runs northeasterly for approximately 420 feet and zig-zags before it terminates within the dry bulk storage area parcel. The TAMT plan discusses potentially upgrading the conveyer system to enable the handling of multiple commodities by multiple tenants. Upgrades may include increasing the capacity and energy efficiency of the current system, or removing it entirely and replacing it with a new conveyer system. However, the ultimate goal would be to modernize the system so that it can handle multiple bulk commodities for multiple tenants. For the purposes of the environmental analysis, it is assumed that a new conveyer system would replace the existing system to take advantage of any technological upgrades. However, the overall footprint of the new conveyor system, including its size and height, would be similar to the existing system.
- **Consolidated Bulk Discharge Unloader**. Add a consolidated bulk discharge unloader using a 200-metric-ton (MT) per hour vacuum for cementitious materials at Berths 10-7/10-8 (either a Kovaco, Siwertell, or equivalent system). Dry bulk operations currently utilize diesel-powered cargo handling equipment, including traditional clamshell grabs and diesel trucks, to transfer bulk products to the first point of rest for storage until delivery to the customer. The consolidated bulk discharge unloader would likely use an electrically powered pneumatic loading device and be capable of handling additional throughput.
- **Consolidated Multi-Purpose Dry Bulk Facility.** Construct a consolidated multi-purpose dry bulk facility with two cement terminals and a new semi-permanent storage facility (up to a 100,000-square-foot horizontal structure and/or an equivalent vertical storage facility) to store dry bulk products. Under existing operations, dry bulk goods are stored at multiple storage locations throughout the project site. The consolidated dry bulk facility would centralize dry bulk handling operations on the southeastern portion of the project site to help maximize the existing on-dock rail facility. The consolidated bulk facility would be shared by multiple operators, resulting in operational efficiencies and streamlined traffic flows. For the purposes of

the environmental analysis, two 54,000 MT silos at each terminal allowing for a total of 108,000 MT of bulk cement storage capacity were assumed because the vertical height of two large silos is likely to have a greater visual impact than several smaller silos and/or a 100,000-square-foot horizontal dry bulk storage facility. However, any combination of the following options were identified to help accommodate the project site's long-term dry bulk storage needs:

- Semi-permanent Rubb style of building up to 100,000 square feet for the storage of dry bulk products, or
- Six 9,000 MT silos to store up to 54,000 MT of bulk cement at each terminal, or
- Two domes that would each store up to 54,000 MT of bulk cement at each terminal, or
- Any combination of buildings, silos, and domes to allow up to 108,000 MT of bulk cement storage capacity.

- **Demolish Existing Molasses Tanks.** Demolish existing empty molasses tanks and establish a new dry bulk storage facility.

Refrigerated Container

The refrigerated container node would be located on approximately 40 acres within the northern portion of the project site served by Berths 10-1/10-2 and 10-3/10-4, with overflow handled at Berths 10-5/10-6. Figure 3-1 shows the approximate boundary between the refrigerated container node in blue and the multi-purpose general cargo node in purple. The boundaries would be flexible to allow the project site to be used for the handling of diverse cargos as market conditions and vessel schedules permit. As such, construction activities within the refrigerated container and multi-purpose nodes may happen simultaneously. The refrigerated container node would maintain approximately 16 acres of existing outside storage space for refrigerated containers as well as the existing 294,000 square feet of cold storage facility (Warehouse B) and would add the following improvements.

- **Gantry Cranes at Berths 10-1/10-2.** Install up to two rail-mounted 100-foot gauge electrical gantry cranes up to 270 feet tall (when boom is up) at Berths 10-1/10-2.[4]
- **Gantry Cranes at Berths 10-3/10-4**. Install up to two rail-mounted 100-foot gauge electrical gantry cranes up to 270 feet tall (when boom is up) at Berths 10-3/10-4, including electrical utility improvements to operate the cranes.

Multi-Purpose General Cargo

As shown on Figure 3-1, the Multi-Purpose General Cargo node would comprise approximately 30 acres in the central portion of the project site and would be served primarily by Berths 10-5/10-6, with overflow handled at Berths 10-3/10-4. Similar to the refrigerated container node, the boundary would be flexible to accommodate market needs. This open area would allow the project site to be used for the handling of diverse cargos as market conditions and vessel schedules permit. As such, construction of the refrigerated container and multi-purpose nodes would happen

[4] Note that, although Berths 10-1/10-2, 10-3/10-4, and 10-5/10-6 each state up to two gantry cranes each, the total would not exceed five gantry cranes for the entire project.

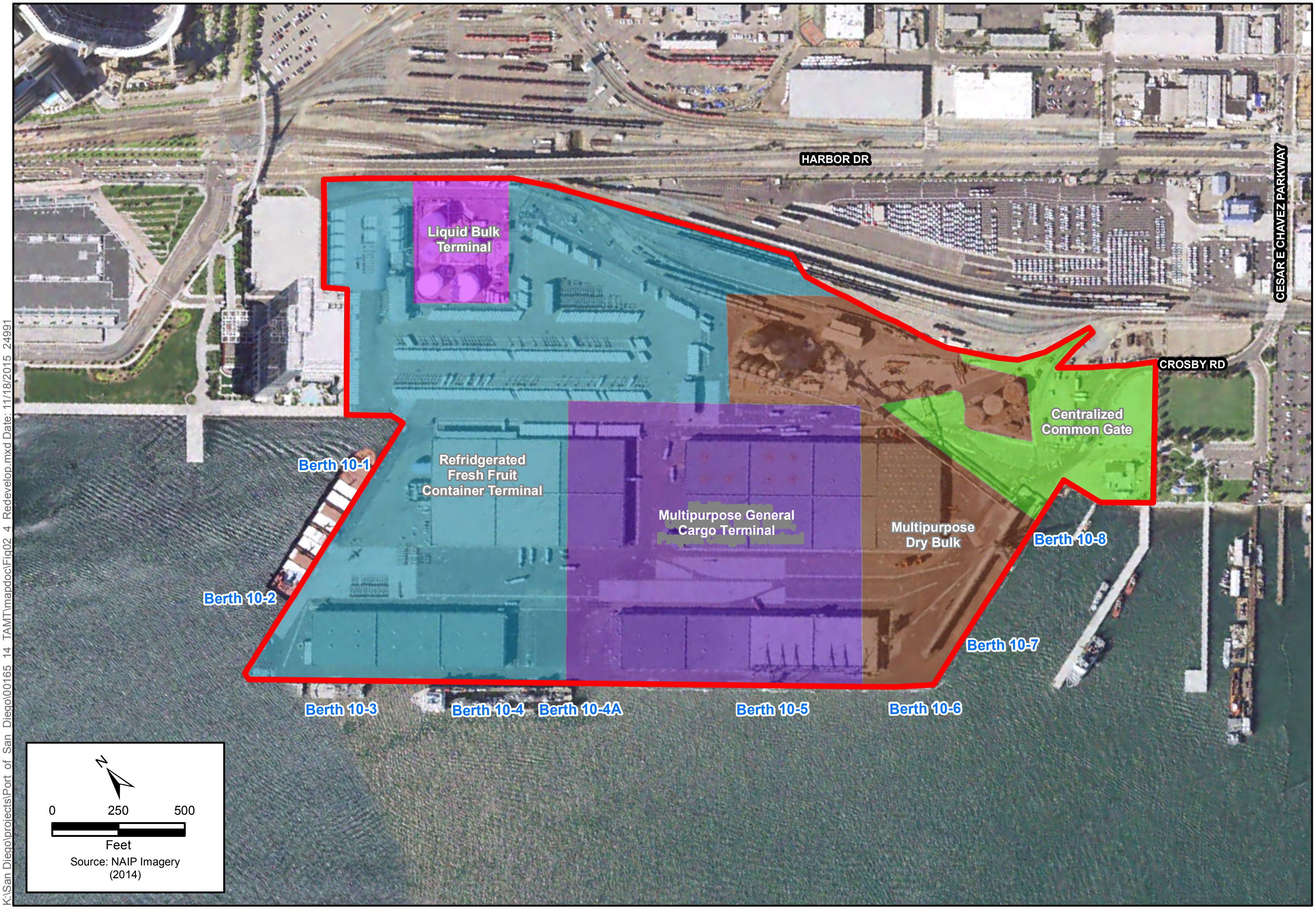

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Figure 3-1
Tenth Avenue Redevelopment Plan Layout
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component

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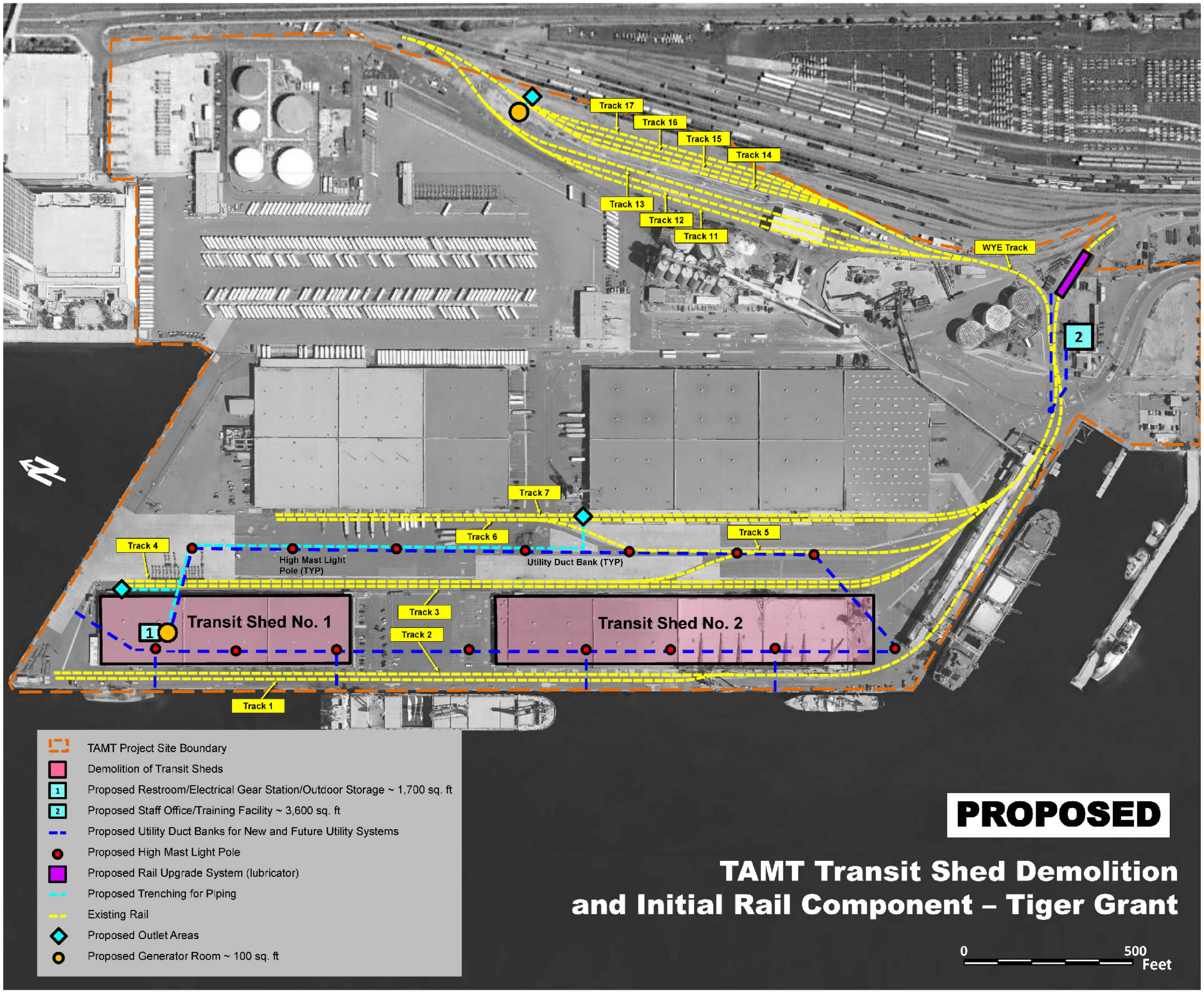

ICF INTERNATIONAL

Figure 3-2
Demolition and Initial Rail Component
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

simultaneously. Proposed improvements and operations that would occur at the multi-purpose general cargo node would include the following.

- **Gantry Cranes at Berths 10-5/10-6.** Install up to two rail-mounted 100-foot gauge electrical gantry cranes up to 270 feet tall (when boom is up) at Berths 10-5/10-6.
- **Demolish Warehouse C.** Demolish the 384,000-square-foot Warehouse C to open up access to up to 20 acres of open storage space. In the long term, demolition of Warehouse C would also enable the District to establish an expanded on-dock rail facility to broaden customer access to rail if market conditions allow. There are several other potential backland improvements that may be considered for multi-purpose and/or dry bulk cargos in the future, if market conditions allow. Please note that the items listed below are included here for informational purposes only. Subsequent environmental analysis would be required if any of the following improvements are pursued in the future.
    - Bridge crane[5]
    - Full wheel container module with gantry cranes
    - Rubber-tired cranes for load-on and load-off
    - Straddle carrier[6] (stacked) for an expanded on-dock rail facility
    - Additional paving of backland area
    - Container-handling equipment to handle 100 kip[7] wheel live load
    - Generator and accompanying housing structure
    - Upgrade of shore-side power capabilities to provide shore power to two vessels at the same time

Central Gate Facility

The central gate facility is an existing facility that is located in the southeastern corner of the project site. The TAMT plan would include installing a new truck weigh station. Once a new truck weigh station has been procured, the existing truck weigh station would be sold for reuse or disposed of in a landfill.

The TAMT plan also identifies an alternative gate concept for the Refrigerated Container node and the Multi-purpose General Cargo node. The alternative gate would be sited in the northeast corner of the project site and provide access directly onto Harbor Drive. It would serve as the primary entry and exit location for “freight only” movements for the refrigerated container node and Multi-purpose General Cargo node. According to the Plan, however, the Dry Bulk Node would continue to utilize the existing gate off Caesar Chavez Parkway, particularly for domestic bulk shipments. As

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[5] Bridge crane = an overhead crane consisting of parallel runways with a traveling bridge spanning the gap. A hoist, the lifting component of a crane, travels along the bridge.

[6] Straddle carrier = a vehicle for use in port terminals and intermodal yards for stacking and moving ISO standard containers. Straddles pick and carry containers while straddling their loads and connecting to the top lifting points via a container spreader.

[7] kip = a unit of weight equal to 1,000 pounds; used to express deadweight load.

such, the transportation analysis looks at how this concept would affect traffic patterns in the area and any other environmental impacts that could result from an alternative gate.[8]

Construction

Construction of facilities identified in the TAMT plan would depend on market conditions and would occur periodically over the next approximately 20 years. Because no individual project component (other than the Demolition and Initial Rail Component described below) is proposed for approval, exact construction schedules are unknown and are thus unavailable at this time. However, the general construction activities proposed in the TAMT plan are summarized below in Table 3-1. For additional information, please see the project's air quality and greenhouse gas technical study (Appendix F), which lists the assumptions regarding the TAMT plan's earthwork, demolition, and other related construction activities.

Table 3-1. Summary of Proposed Construction Activities

Component (node)	Existing Structures	Proposed Activity
Dry Bulk	Molasses tanks	Demolish, grade, and repave
	Dry bulk silos	Convert or expand all or a portion of silos
	Location of Transit Shed #2[1]	Demolish, grade, and repave site. Install subsurface conduit and other electrical improvements to allow for future electrification of the site.
	Warehouse C	Demolish, grade, and repave site. Construct a new structure to provide cover for ground-stored bulk products. Structure may consist of any combination of domes, silos, or buildings (up to 100,000 square feet of building for horizontal storage and/or 108,000 metric tons of storage capacity, vertical). Structures may be permanent or semi-permanent.
	Berths 10-7/10-8 unloading systems	Modernize
Liquid Bulk	--	No changes proposed
Refrigerated Container Node	Infrastructure improvements	Install crane rails. Use most of the open area created by the demolition of Transit Shed #1 for staging and circulation. Construct small electrical gear room, restroom facility, and information technology support room (approximately 782 square feet) and outdoor equipment storage area (approximately 850 square feet).
	Dole vessel operations	Circulation and staging improvements
	--	Install up to two rail-mounted 100-foot gauge electrical gantry cranes up to 270 feet tall (when boom is up) at Berths 10-1/10-2

[8] Please note that at this time there have been no preliminary engineering studies or other technical work completed that evaluate the technical or operational feasibility of implementing the Alternative Gate Concept. Therefore, the transportation and traffic assessment prepared for the alternative gate concept does not include the same level of detail as that prepared for the existing Central Gate Facility.

Component (node)	Existing Structures	Proposed Activity
	--	Install up to two new rail-mounted 100-foot gauge electrical gantry cranes up to 270 feet tall (when boom is up) at Berths 10-3/10-4 (also referenced in Multi-purpose General Cargo Node)
Multi-Purpose General Cargo	Warehouse C[2]	Demolish
	Infrastructure improvements	Install additional rail infrastructure in the vicinity of what is currently Warehouse C to create an expanded on-dock rail facility; install crane rails and use open area created by the demolition of Transit Shed #2
	--	Install up to two rail-mounted 100-foot gauge electrical gantry cranes up to 270 feet tall (when boom is up) at Berths 10-3/10-4[3] (also referenced in Refrigerated Container Node) Install up to two rail-mounted 100-foot gauge electric gantry cranes up to 270 feet tall (when boom is up) at Berths 10-5/10-6; install a stormwater detention system to capture and treat flows through infiltration.
Centralized Common Gate	Gate and security booth; weigh station	Utilize existing gate and security booth and replace weigh station.

[1] Demolished under Demolition and Initial Rail Component; see Table 3-3.

[2] Warehouse C is sited within the proposed Dry Bulk Node and Multi-purpose General Cargo areas and therefore is mentioned in both locations.

[3] Berths 10-3 and 10-4 would be utilized by both the Refrigerated Container Node and the Multi-purpose General Cargo Node and therefore are mentioned in both locations.

Long-Term Operations with the Proposed Plan

The TAMT plan identifies the MPC, which is the highest theoretical activity level at which the project site, or node, could operate if all physical improvements were made and if market conditions allowed. The environmental analysis uses MPC because it represents the "worst case," or most impactful environmental scenario. However, there is no specific time horizon associated with the MPC. Rather, MPC is a theoretical figure that assumes all of the physical improvements identified in the TAMT plan are constructed, and that favorable market conditions are in place. Assuming strong market conditions, MPC is oftentimes governed by terminal equipment, equipment conditions, operations, and vessel/train/truck arrival and departure schedules. It is also important to note that, typically, MPC can only be achieved for relatively short periods of time because Terminal operators can rarely tolerate the level of stress MPC puts on the terminal system for any prolonged period. Therefore, although it is unlikely that project site would continue to attain the identified MPC for each node year after year, it is used in the programmatic EIR to evaluate the most environmentally impactful scenario.

Additionally, the Draft EIR evaluates the impacts associated with the STC Alternative. Unlike the MPC scenario, the STC Alternative proposes to achieve a lower throughput amount that can be maintained over sustained periods of time. The STC Alternative would include all of the proposed components that have been identified with the MPC, only throughput would be limited to 75 percent of the throughput associated with the MPC scenario. The STC Alternative is covered in Chapter 7, *Alternatives to the Proposed Project*.

In an effort to ensure that the TAMT plan is flexible enough to accommodate different cargo types at different levels of intensity, the TAMT plan identified three different development concepts that result in slightly different MPCs for each of the three cargo nodes[9] (see Table 3-2 below). All three development concepts assume the same MPC for the dry bulk node, which is 2,650,000 MT annually. However, Development Concept #1 looks at maximizing refrigerated containers, which results in an MPC of 2,288,000 MT per year. To attain this MPC for refrigerated containers, however, multi-purpose/general cargo would only be capable of reaching an MPC of 327,700 MT per year. Conversely, Development Concept #2 looks at maximizing dry containers in the Multi-purpose/ General Cargo node, which would result in an MPC of 977,400 MT per year, but only up to 1,555,840 MT per year of refrigerated containers. Finally, Development Concept #3 would emphasize automobiles, trucks, and other roll-on/roll-off cargo, which would result in an MPC of 585,850 MT per year for multi-purpose general cargo, but at a cost of having a similar throughput of refrigerated containers as identified under Development Concept #2. To ensure that the "worst case" environmental scenario is analyzed, this Draft EIR analyzes the highest MPC identified for each of the three operating nodes, as shown in the fourth column in Table 3-2 below. Furthermore, liquid bulk throughput is included in the analysis, but, as indicated, buildout of the TAMT plan would result in no changes to the infrastructure, operational efficiency, or storage capacity at the liquid bulk node.

Table 3-2. Development Concepts Identified in the TAMT Plan (in Metric Tons)

Node	Development Concept #1	Development Concept #2	Development Concept #3	"Worst Case" Scenario Analyzed in EIR
Improvements or Capacity Enhancements Identified in TAMT Plan				
Dry Bulk	2,650,000	2,650,000	2,650,000	2,650,000
Refrigerated Containers	2,288,000	1,555,840	1,555,840	2,288,000
Multi-Purpose General Cargo	327,700	977,400	583,850	977,400
Subtotal	**5,265,700**	**5,183,240**	**4,789,690**	**5,915,400**
No Improvements or Capacity Enhancements Identified in TAMT Plan				
Liquid Bulk	239,017	239,017	239,017	239,017
Total	**5,504,717**	**5,422,257**	**5,028,707**	**6,154,417**

The TAMT plan includes two additional conceptual options that will not be analyzed as part of the proposed project, but instead are discussed as project alternatives in Chapter 7 of this Draft EIR, including:

- Development Concept #4, Full Refrigerated and Dry Container Buildout: with an estimated total MPC of 5.8 million MT of container cargo; and
- Development Concept #5, Full Dry Container Buildout: with an estimated total MPC of 6.0 million MT of container cargo.

[9] As noted earlier, the TAMT plan does not make any improvement recommendations for the liquid bulk node and its MPC would be the same as without the proposed project.

Both of these development concepts exclude neo bulk, break bulk, and roll-on/roll-off cargos from consideration, resulting in zero volume for these commodity types. However, the District has a longstanding commitment to handling neo bulk, break bulk, and roll-on/roll-off cargos and the benefits of cargo diversification. Furthermore, the additional metric tonnage potential for a full-container scenario is not significant enough to justify the exclusion of non-containerized commodities. Finally, the market for container vessels suitable to the project site is clearly defined and limited; focusing exclusively on only a few carriers would represent a departure from an established and successful business development strategy. For these reasons, it was determined that this Draft EIR would focus on only the feasible options (i.e., the first three redevelopment concepts) for the analysis.

Table 3-3 below compares the TAMT plan's "worst case" MPC scenario and STC scenario for each of the nodes with the project site's existing environmental baseline condition by cargo type. The project site's existing environmental baseline condition is based on actual throughput calculations from July 2013 to June 2014, with June 2014 being the point in time at which the environmental analysis was initiated. The table also provides the MPC identified in the 2008 Plan as a reference point to illustrate the MPC that could occur under the existing plan if the proposed TAMT plan were not approved. However, the 2008 Plan MPC is not used as the baseline for the environmental analysis because it represents the project site's theoretical capacity as opposed to the actual environmental conditions that occurred when the environmental analysis commenced. Although it is highly unlikely and improbable that all three nodes would be able to operate at their maximum levels for a sustained period of time, this approach is analyzed to provide the most conservative environmental analysis. However, the recommended scenario is the STC Alternative, which would reflect an approximately 25 percent~~%~~ reduction in throughput compared to the MPC scenario.

Table 3-3. TAMT Cargo Throughput Comparisons in Metric Tons

Node	Existing Conditions – July 2013 to June 2014	2008 Plan Maximum Practical Capacity	TAMT Redevelopment Plan Maximum Practical Capacity "Worst-Case" Scenario[a]	TAMT Redevelopment Plan Sustainable Terminal Capacity Alternative Scenario
Improvements or Capacity Enhancements Identified in TAMT Plan				
Dry Bulk	289,864[b]	2,250,000	2,650,000[c]	1,987,500
Refrigerated Containers	637,931	730,000	2,288,000	1,716,000
Multi-Purpose General Cargo	85,131[e]	1,670,000	977,400	733,050
No Improvements or Capacity Enhancements Identified in TAMT Plan				
Liquid Bulk	31,520	220,000	239,017[d]	239,017
Total	**1,044,446**	**4,870,000**	**6,154,417**	**4,675,567**

Notes:

[a] The infrastructure improvements identified in the TAMT plan are required to attain the MPCs identified. To provide for a "worst case" environmental impact scenario, this Draft EIR analyzes the highest MPC of each of the three cargo nodes as well as the throughput associated with the STC Alternative.

[b] Vessels brought in approximately 158,205 MT of dry bulk, whereas dry bulk tenants trucked in approximately 131,659 MT of dry bulk.

[c] For the purposes of the analysis, two additional dry bulk customers were assumed over existing tenant volume, which resulted in a forecast of approximately 2,146,645 MT. However, the MPC indicates that additional dry bulk volume could be accommodated.

[d] The TAMT plan acknowledges the existing liquid bulk facility; however, it does not propose any operational or infrastructure changes to the existing facility. Current capacity is sufficient to handle market demand and operations at the MPC, and is projected to remain sufficient throughout the plan horizon.

[e] In addition to 33,666 MT of neo-bulk material, the project site also processed 51,465 metric revenue tons of other miscellaneous cargo, yielding a total of 85,131 MT.

Projected Workforce at TAMT Plan Buildout

Similar to the MPC scenario discussed above, a "worst-case" environmental scenario was used to estimate the maximum number of daily workers for the TAMT plan at plan buildout in 2035. The maximum number of daily workers is based on the total number of District and tenant employees who work at the terminal, plus the total number of dock workers (e.g., management and longshoremen responsible for loading/unloading cargo) that would be needed for a 24-hour period.

Assuming the cargo growth projections identified above involve a combination of additional spot cargo, existing tenants expanding their operations, and new future tenants, District staff estimates there would be approximately 63 new office employees working at the project site, which averages to about 3 new employees per year for the next 21 years and is derived from current office employees working at the terminal.

In order to be as conservative as possible, the maximum number of dock workers is calculated based on berth capacity at the project site. Assuming that four large vessels are berthed simultaneously at project site in 2035, which would be the maximum that the project site could accommodate, the maximum number of dock workers to service the most intensive cargo at each one of the four berths within a 24-hour period would be 611 dock workers. Subtracting today's existing baseline average of 150 dock workers over a 24-hour period would allow for an additional 461 new dock workers by plan buildout. Therefore, the maximum workforce estimated for the TAMT plan is 524 new daily employees, of which 63 would be new District or tenant employees and 461 would be new dock workers. Given that the number of employees is based on berth capacity at TAMT, the number of employees in either the MPC scenario or the STC Alternative scenario would be similar.

3.4.2 Demolition and Initial Rail Component

The Demolition and Initial Rail Component is an initial, project-level component that is necessary to implement the various program-level development scenarios identified in the TAMT plan. The Demolition and Initial Rail Component would include the following features and modifications discussed below and shown on Figure 3-2.

- **Demolition of Transit Sheds #1 and #2.** The transit sheds consist of seven warehouse bays, restroom facilities, and office space. Transit Shed #1 includes approximately 148,000 square feet of warehouse space, comprising Bays A, B, and C, and Transit Shed #2 includes approximately 194,000 square feet of warehouse space, comprising Bays E, F, G, and H. Both transit sheds are approximately 32 feet tall and 200 feet wide. Transit Shed #1 is 740 feet long and Transit Shed #2 is 970 feet long. Transit Shed #1 includes an approximately 2,400-square-foot maintenance shed. Transit Shed #2 includes an approximately 7,000-square-foot head house, which is currently used as office space for terminal operations. Demolition would involve the proper removal of any asbestos, lead, polychlorinated biphenyls, or other potentially hazardous materials that may be present in the Transit Sheds, followed by removal of the existing fire alarm, fire protection systems, and electrical systems. In addition, demolition of Transit Shed #2 would include the removal and/or reuse of all off-loading equipment including the existing distribution and conveyor system.[10] Once this is completed, soil excavation and grading would occur and underground conduit to facilitate future electrification of the area would be installed, followed by paving and leveling across the site.
- **Conduit and Electrical Improvements.** Up to 2,500 linear feet of conduit would be installed west of Warehouse B and Warehouse C and east of the existing Transit Shed #1 and Transit Shed #2 to provide for future electrification of the project site. Trenching for the conduit and electrical improvements would occur prior to paving activities. All electrical utilities would utilize the existing vault system.
- **Subsurface Stormwater Improvements.** Excavate up to 9,200 cubic yards of soil and install one of two potential stormwater drainage systems. Both systems would include design features to capture the 85th percentile storm event. The first option would involve concrete retention vaults that would capture the stormwater and allow water to infiltrate into the underlying soil by placing orifices in the bases of the vaults. The second option would involve collecting and routing overflows to an underground high-density polyethylene (HDPE) pipe retention system.

[10] To ensure a worst-case environmental scenario, the analysis assumes removal of approximately 5,250 tons of metal, which would be transported to a scrap metal recycling yard or appropriate landfill. This figure is based on the following estimates: existing dust collector (~380 tons), unloading facility, buffer hopper, and horizontal screw converter (~600 tons), the aeroslide and support framing (~2,520 tons), and a 50% contingency factor (~1,750 tons). However, depending on operational needs and the condition/efficiency of the existing equipment, these facilities may also be either upgraded and/or reused at the TAMT.

The HDPE pipe retention would also rely on infiltration by placing holes in the bases of the pipes. Both options have been designed to comply with the San Diego Regional Municipal Separate Storm Sewer System Permit (R9-2015-0100) and allow for settling time and capture of aluminum, copper, iron, lead, and zinc.

- **Replacement of Existing Lighting.** The existing 90-foot-tall light poles at the loading docks and around both Transit Shed perimeters would be replaced with 90-foot-tall lights capable of an average 5 foot-candles of light during cargo operations. During non-cargo operations, foot candles would be reduced to 1. The replacement lighting would use light-emitting diodes, improving energy efficiency at the project site, and would be directed downward and away from adjacent land uses and the open water of the bay.
- **On-Terminal Rail Facility Upgrades.** The proposed project would include installation of a rail lubricator and a compressed air system for testing of train air brakes on the existing tracks. As shown on Figure 3-2, the rail lubricator (purple rectangle) would be installed in the southeastern portion of the project site, where there is a sharp and inefficient curve that regularly impedes operations. Manual lubrication would be replaced with an automated lubrication system, thereby increasing both the safety and efficiency of the rail movement.

  The purpose of the train air brake tests is twofold: to ensure that the air brakes work on each car and that air propagation exists between the locomotive and the end of the train. The compressed air system would include a compressed air generator and receiver, as well as subsurface piping (approximately 2-inch diameter) that would lead to steel outlets approximately 4 feet in height. The generators would be housed in an approximately 100-square-foot structure (an orange circle on Figure 3-2). The outlets (shown as blue diamonds on Figure 3-2) would be sited adjacent to tracks 3 and 4 (within the former footprint of Transit Shed #1) and adjacent to tracks 6 and 7 (near Warehouse C). A separate compressed air generator system and outlets would be sited along the eastern boundary of the project site to service tracks 14, 15, 16, and 17 (near Searles Valley Operations). In all cases, the outlets would include calibrated air gauges to monitor the air pressure of the yard air system at the outlet, and would feed the train air system by connecting a long braided hose to the glad-hand on the rail cars. This system would be in compliance with the Federal Railroad Administration requirements for air brake systems,[11] and train crews would be required to adhere to the Air Brake and Train Handling rules established by the BNSF railroad.[12]
- **Temporary Modular Office.** An approximately 3,600-square-foot modular office for maritime operations with offices, a conference room, a work area, a break room, and parking for up to 15 employees would be constructed in the vicinity of the centralized common gate area. Up to three restrooms would also be added. This modular office and restroom facility would replace the existing approximately 5,400-square-foot headhouse after it is demolished with Transit Shed

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[11] The Federal Railroad Administration establishes brake system safety standards in 49 CFR 232. Typically, a Class 1 air test is required before a train departs a terminal per section 232.205. However, when yard air is used to test cars, the train is only required to do a Class III air test pursuant to Section 232.217, which ensures that the train air-line is intact after making up the train. This avoids performing the detailed Class 1 air test, which avoids blocking crossings while each car is examined during the air test.

[12] BNSF Air Brake and Train Handling Rules (April 7, 2010, including revisions through May 1, 2013) Section 100.10.2 identifies specific rules train crews must follow subsequent to a yard air test.

#2. Underground water, sewer, and electrical utilities would be installed to support the proposed modular structure.

- **Electrical Gear Room, Restroom Facility, and Information Technology (IT) Room (approximately 782 square feet), and Outdoor Equipment Storage Area (850 square feet).** The project would include the construction of a facility totaling approximately 782 square feet on the western portion of the project site where the existing Transit Shed #1 is located. The restroom facilities would be approximately 16 feet by 23 feet, the switching gear room for charging stations would be approximately 12 feet by 23 feet, and the IT and back services area would be approximately 6 feet by 23 feet. In addition, there would be an outdoor storage area of approximately 34 feet by 25 feet, which would be surrounded by a chain-link fence that could be covered with a chain-link fence or tarp. The following types of equipment would be stored in this area.
  - Cones and cone baskets
  - Lashing rods
  - Stokes baskets (e.g., rescue baskets)
  - Up to three forklifts
  - Electric plug-ins as needed
  - Other miscellaneous equipment.

Construction

The Demolition and Initial Rail Component is expected to commence in 2017, and would be sequenced in order to allow for existing terminal operations to proceed as usual. The demolition of Transit Shed #1 would begin in 2017 and would take approximately 15 months to complete. The demolition of Transit Shed #2 would begin upon completion of Transit Shed #1 demolition. Construction activities for Transit Shed #2 are anticipated to take approximately 18 months, with the Demolition and Initial Rail Component completed in approximately 2020. To provide for a conservative analysis, it is assumed that construction activities for both sheds would partially overlap in order to analyze the worst-case construction impacts of the project. Table 3-3 includes a summary of the construction activities that would occur under this project component.

Table 3-3. Summary of Construction Activities under the Demolition and Initial Rail Component

Existing Infrastructure	Proposed Action/Description
Transit Shed #1	Demolish, install underground conduit, grade and repave site; construct an approximately 782-square-foot electrical gear room, IT room, and restroom facility with 850 square feet for outdoor storage in the existing location of Transit Shed #1 to serve onsite operations. Install compressed air system in one 100-square-foot square enclosure
Transit Shed #2	Demolish, install underground conduit, grade and repave site
Lighting	Replace and add a 90-foot-tall light system with more energy-efficient lighting
On-Dock Rail	Install compressed air system and rail lubricator in 100-square-foot enclosure
--	Install an approximately 3,600-square-foot modular office/restroom; trench and install water, sewer, and electrical lines; install subsurface stormwater detention tank

Total earthwork associated with the Demolition and Initial Rail Component would consist of excavating approximately 18,500 cubic yards of soil at the site of Transit Shed #1, approximately 24,200 cubic yards at the site of Transit Shed #2, and approximately 9,136 cubic yards for the installation of an underground detention storage tank for stormwater drainage. Total excavation would be approximately 51,836 cubic yards. Approximately 47,036 cubic yards of soil would be exported off site (16,400 cubic yards from Transit Shed #1, 21,500 cubic yards from Transit Shed #2, and 9,136 cubic yards from the underground detention storage tank installation). It is anticipated that 4,800 cubic yards of fill materials would be balanced and re-compacted on site, while an additional 3,915 cubic yards of soil would be imported for the installation of the underground detention storage tank.

If excavated soils are found appropriate for reuse, they may be exported to the Chula Vista Bayfront Harbor District area for use as fill material to raise surface elevations, provided the parcels are not classified as environmentally sensitive areas, including any sensitive habitat. Several Chula Vista Bayfront Harbor District parcels, which have been cleared through the environmental review process to be used as streets and surface parking and to support subsequent development, have been identified in Appendix D as appropriate locations to receive soils deemed suitable for reuse. Some parcels have been identified for temporary storage of the soil (e.g., stockpiling), whereas other parcels have been identified for final reuse of the soil (permanent fill). The soil may be placed on any of these parcels during grading (or immediately after grading) and/or once the District confirms placement would not result in any new biological impacts on the affected parcel(s).

However, in the event that the sites listed above are not able to receive the excavated soil amounts based on the project's construction schedule, all material would be disposed of in a landfill. This Draft EIR includes an analysis of both scenarios, including (1) reusing 47,100 cubic yards of soil at the Chula Vista Bayfront Harbor District or (2) transporting and disposing of 47,100 cubic yards of soil at a landfill.

In addition, approximately 17,300 cubic yards of concrete and asphalt would be exported from the project site. Concrete and asphalt demolition found appropriate for reuse may also be exported to the Chula Vista Bayfront or another project site within the Port of San Diego jurisdiction to use as fill material. If the concrete and asphalt are found unsuitable to use as fill material, they would be disposed of at an appropriate local landfill. Furthermore, if portions of the soils, concrete, and asphalt are determined to contain hazardous materials, the project would comply with an approved hazardous materials management plan that may require disposal at an appropriate hazardous waste facility.

Sequencing of this component would include demolition, grading, and paving. Construction equipment would include excavators, loaders, forklifts and scissor lifts, water trucks, dump trucks, backhoes, dozers, saw cutting equipment, and air compressors. A full list of construction equipment, hours of operation, and days in operation is included in the project's air quality appendix (Appendix F).

Operation

Once the existing transit sheds are removed, cargo nodes may be developed as recommended by the proposed TAMT plan, based on cargo type and market availability. The throughput that is anticipated as a result of the Demolition and Initial Rail Component is provided below.

Table 3-4. Demolition and Initial Rail Component Cargo Estimates Compared to Existing Conditions (in Metric Tons)

Node	Existing Conditions – Actual Throughput July 2013 to June 2014	Demolition and Initial Rail Component – Throughput Estimates July 2020 to June 2021[a]	Anticipated Net Increase
Improvements and Capacity Enhancements Identified in TAMT Plan			
Dry Bulk	289,864[b]	289,864	0
Refrigerated Containers	637,931	685,931	+48,000
Multi-Purpose General Cargo	85,131[c]	124,078	+38,947
Subtotal	**1,012,926**	**1,099,873**	**+86,947**
No Improvements or Capacity Enhancements Identified in TAMT Plan			
Liquid Bulk	31,520	31,520[d]	0
Total	**1,044,446**	**1,131,393**	**+86,947**

[a] Throughput estimates are based on the District's 5-year budgetary projections that were developed after receiving notification of the TIGER Grant Award. Throughput estimates are higher than baseline conditions due to increased activity from existing customers. Note that these project-level throughput estimates exclude tenant projects (such as Mitsubishi and the Dole Refrigerated Rack project) because these projects have independent utility and are not directly associated with the Demolition and Initial Rail Component. Both projects will be doing stand-alone environmental analyses, which are summarized in Chapter 5, *Cumulative Analysis*.

[b] Vessels brought in approximately 158,205 MT of dry bulk, whereas dry bulk tenants trucked in approximately 131,659 MT of dry bulk.

[c] In addition to 33,666 MT of neo-bulk material, the project site also processed 51,465 metric revenue tons of other miscellaneous cargo, yielding a total of 85,131 MT.

[d] Liquid bulk throughput is not expected to increase as a result of the Demolition and Initial Rail Component. Therefore, throughput projections for Liquid Bulk reflect existing conditions.

Projected Workforce for Demolition and Initial Rail Component

In addition to the throughput estimates provided above, additional employment is also expected as part of the Demolition and Initial Rail Component. For the District's 2015 TAMT TIGER Grant Application, HDR, Inc. estimated that the project would result in approximately 295 construction jobs, based on the initial project cost of $34 million dollars. As a result of the TIGER Grant award, however, the Demolition and Initial Rail Component was re-scoped to reflect a total project cost of $22 million dollars. In addition, to ensure minimal disruption to ongoing operations, the construction schedule was updated to provide an estimated 15 months for the demolition of Transit Shed #1 and 18 months for the rail improvements and demolition of Transit Shed #2. Given the prolonged 33-month construction period, and considering the bulk of the work involves demolition (not construction), the District's Engineering Department estimated that no more than 50 construction workers would be working per day. When the Demolition and Initial Rail Component is complete, employment for ongoing terminal operations may result in an additional 92 new daily workers at the project site. This estimate assumes favorable market conditions to ensure potential environmental impacts are not underestimated and is based on the District's 5-year budget estimates and near-term industry trends identified in the TAMT plan. A maximum of 10 new District or tenant office employees and a maximum of 82 new dock workers were estimated for a 24-hour period.[13]

3.5 Project Review and Approvals

The District is the lead agency under CEQA and responsible for permitting and carrying out the proposed project and implementing the proposed TAMT plan. The following permits and approvals would be required to implement the proposed project.

3.5.1 San Diego Unified Port District

- Certification of the EIR
- Adoption of the mitigation monitoring and reporting program
- Adoption of the Findings of Fact
- Adoption of the Statement of Overriding Considerations
- Approval and adoption of the proposed TAMT plan
- Approval of the Demolition and Initial Rail Component
- Issuance of a non-appealable Coastal Development Permit for the Demolition and Initial Rail Component

3.5.2 City of San Diego

The City of San Diego would not issue any discretionary permits; however, the City would issue ministerial permits (e.g., Building, Electrical).

3.6 Inconsistencies between the Proposed Project and Applicable General Plans, Specific Plans, and Regional Plans

Pursuant to 15125(d), the EIR must evaluate the project's potential to result in an inconsistency with the applicable general plans, specific plans, and regional plans. The proposed project would not result in any inconsistencies with applicable plans, including the District's Port Master Plan (PMP) and Climate Action Plan (CAP), the California Coastal Act, the California Public Trust Doctrine, San Diego Water Quality Control Plan (Basin Plan), the San Diego Association of Governments' Regional Transportation Plan (RTP), the State Implementation Plan (SIP), and the Regional Air Quality

[13] If anticipated employment from the two cumulative projects, the Dole Refrigerated Rack Improvement Project and the Mitsubishi Cement Project at Warehouse C, are considered with the Demolition and Initial Rail Component, the total increase in employment at the terminal by 2021, the year the Demolition and Initial Rail Component is completed, would be approximately 154 dock workers and 21 new office employees.

Strategy (RAQS).[14] The project's consistency with these plans is summarized in Table 3-5, and these plans are discussed, where relevant, in Chapter 4, *Environmental Analysis*.[15]

Table 3-5. Consistency with Applicable Plans

Plan	Intent	Project Inconsistent?
San Diego Unified Port District		
Port Master Plan	The PMP is the governing land use document for physical development within areas granted in trust to the District. The PMP, as certified, provides the District permitting authority and the ability to issue CDPs. The proposed project is within Planning District 4, Tenth Avenue Marine Terminal. The Planning District consists of 257 acres of land and 114 acres of submerged land, for a total of 371 acres. The focus of this planning district is to retain and continue marine-related, water-dependent industrial uses. The proposed project is a marine-related, water-dependent industrial use, which allows for marine terminals; passenger terminals; railroad switching and spur tracks; cargo handling equipment such as bulkloaders and container cranes; berthing facilities; warehouses, silos, and fueling facilities; bulk liquid storage tanks and pipelines; shipping offices and custom facilities; power generation plants; ship building, repair, and conversion yards; marine rails, lifts, and graving docks; steel fabrication and foundry; storage, repair, and maintenance of marine machinery and construction equipment; kelp and seafood processing, canning, and packaging; aquaculture; and marine-related support and transportation facilities.	No
Climate Action Plan	The CAP serves as a guide for action, including a targeted set of greenhouse gas (GHG) reduction policies and measures within the District's jurisdiction. To meet the District's reduction goal of 10% less than the 2006 baseline by 2020, the CAP includes a wide range of GHG reduction measures that have the potential to reduce GHG emissions from the projected 2020 scenario total of 855,489 to 745,695 million tons of carbon dioxide equivalent per year (see Section 4.6, *Greenhouse Gas Emissions, Climate Change, and Energy Use*). The project would implement all feasible and relevant GHG measures in accordance with the CAP, proportional to the project's contribution to GHGs. The CAP has been prepared to help ensure compliance with Assembly Bill 32, which requires California to reduce its GHG emissions to 1990 levels by 2020—a reduction of approximately 15% below emissions expected under a "business as usual" scenario.	No

[14] The requirement to discuss inconsistencies with applicable plans is pursuant to State CEQA Guidelines Section 15125(d), which does not require discussion of consistency.

[15] The SIP and RAQS are discussed in detail in Section 4.1, *Air Quality and Health Risk.* Plans such as the CAP are discussed in Section 4.6, *Greenhouse Gas Emissions, Climate Change, and Energy Use*. Transportation plans are discussed in Section 4.10, *Transportation, Circulation, and Parking*.

Plan	Intent	Project Inconsistent?
State of California		
California Coastal Act	The California Coastal Act of 1976 (Public Resources Code Sections 30000–30900) established the Coastal Commission to oversee future development along California's coastline. Chapter 8, Article 3 of the act establishes a framework for ports, including the Port of San Diego, to develop PMPs by which to conduct discretionary project reviews and issue individual CDPs within their jurisdictions. Individual PMPs require review and certification by the Coastal Commission, including any amendments to the certified PMPs. Additionally, Chapter 3 of the act, Coastal Resources Planning and Management Policies, provides guidance for public access to the coast, recreation, marine environment, land resources, and development, including Industrial Development. As stated under Section 30260, "coastal-dependent industrial facilities shall be encouraged to locate or expand within existing sites and shall be permitted reasonable long-term growth where consistent with this division. However, where new or expanded coastal-dependent industrial facilities cannot feasibly be accommodated consistent with other policies of this division, they may nonetheless be permitted in accordance with this section and Sections 30261 and 30262 if (1) alternative locations are infeasible or more environmentally damaging; (2) to do otherwise would adversely affect the public welfare; and (3) adverse environmental effects are mitigated to the maximum extent feasible."	No
California Public Trust Doctrine	The Public Trust Doctrine is a common law doctrine that provides that public lands and waters are held by the state or its delegated trustee (i.e., the California State Lands Commission) for the benefit of all people. All tide and submerged lands, granted or ungranted, as well as navigable rivers, sloughs, etc., are impressed with the Public Trust. The Public Trust Doctrine, as overseen by the California State Lands Commission and considered by the Coastal Commission, restricts the types of land uses allowed on public lands, including the District Tidelands. The Public Trust Doctrine limits the uses of sovereign lands to waterborne commerce, navigation, fisheries, open space, water-oriented recreation, ecological habitat protection, or other recognized Public Trust purposes. The entire project site would be subject to the Public Trust Doctrine.	No
State Implementation Plan (Air Quality)	Federal clean air laws require areas with unhealthy levels of ozone, inhalable particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide to develop plans, known as SIPs. SIPs are comprehensive plans that describe how an area will attain national ambient air quality standards. The 1990 amendments to the federal Clean Air Act set deadlines for attainment based on the severity of an area's air pollution problem. SIPs are not single documents. They are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, and permitting), district rules, state regulations, and federal controls. Many of California's SIPs rely on the same core set of control strategies, including emissions standards for cars and heavy trucks, fuel regulations, and limits on emissions from consumer products. State law makes the California Air Resources	No

Plan	Intent	Project Inconsistent?
	Board the lead agency for all purposes related to the SIP. The San Diego RAQS demonstrates how pollution-reduction measures are helping to achieve state air quality goals by moving from nonattainment for select criteria pollutants in the San Diego Air Basin to attainment. See Section 4.2, *Air Quality and Health Risk*, for a complete analysis of consistency.	
Regional Plans		
San Diego Forward (Regional Comprehensive Plan/Regional Transportation Plan)	The San Diego Forward regional plan is the blueprint for how the region will grow, and how the San Diego Association of Governments will invest in transportation infrastructure that will provide more choices. The RTP considers growth over the next 35 years of an additional 1 million residents in the region. This growth will lead to about 460,000 more jobs and over 325,000 more apartments, condos, houses, and other types of housing. The regional plan envisions most of these new jobs and homes as situated in environmentally sustainable communities that are more conducive to walking and bicycling. People also will have more access to public transit. Freight also is moved on the regional transportation network, and it requires good access and connectivity to local logistics centers and terminals to ensure the efficient movement of goods onto and off the network. The Draft 2015 Freight Gateway Study Update (Appendix U15 of the San Diego Forward regional plan) considers the growing importance of freight and goods movement to the region's economic prosperity, and it seeks to balance regional and national freight priorities. Although the majority of goods is moved by truck, the San Diego region relies on air cargo, maritime, pipeline and rail systems, intermodal centers, and international border crossings. Since the 2030 RTP, the San Diego Association of Governments completed a number of studies including the Urban Area Transit Strategy, Interstate 5 South Corridor Study, Comprehensive Freight Gateway Study, Destination Lindbergh, and San Diego Regional Bicycle Plan. The recommendations from these studies were considered in the RTP.	No
San Diego Water Quality Control Plan	The federal Clean Water Act and the California Porter-Cologne Water Quality Control Act (California Water Code Division 7) require that the Regional Water Quality Control Board adopt a water quality control plan to guide and coordinate the management of water quality in the region. The water quality control plan, also referred to as the Basin Plan, sets forth water quality objectives for constituents that could potentially cause an adverse effect on the beneficial uses of water. Specifically, the Basin Plan is designed to accomplish the following: (1) designate beneficial uses for surface and ground waters; (2) set the narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy; (3) describe mitigation measures to protect the beneficial uses of all waters within the region; and (4) describe surveillance and monitoring activities to evaluate the effectiveness of the Basin Plan. The Basin Plan incorporates by reference all applicable State Water Resources	No

Plan	Intent	Project Inconsistent?
	Control Board and Regional Water Quality Control Board plans and policies. The project would comply with all District water quality requirements, which are designed to comply with state and regional requirements. See Section 4.8, *Hydrology and Water Quality*, for a complete discussion of the project's consistency with applicable water quality plans.	

Chapter 4
Environmental Analysis

Introduction

Sections 4.1 through 4.11 of Chapter 4 of this Draft EIR contain a discussion of the potential significant environmental effects resulting from implementation of the proposed project, including information related to existing site conditions, criteria for determining significance of potential environmental impacts, analyses of the type and magnitude of environmental impacts, and feasible mitigation measures that would reduce or avoid significant environmental impacts.

Potential Environmental Impacts

This chapter provides an analysis of the following potential environmental impacts of the proposed project.

- 4.1, Aesthetics and Visual Resources
- 4.2, Air Quality and Health Risk
- 4.3, Biological Resources
- 4.4, Cultural Resources
- 4.5, Geology and Soils
- 4.6, Greenhouse Gas Emissions and Climate Change
- 4.7, Hazards and Hazardous Materials
- 4.8, Hydrology and Water Quality
- 4.9, Noise and Vibration
- 4.10, Transportation, Circulation, and Parking
- 4.11, Utilities, Service Systems, and Energy

It was determined during preparation of the Initial Study/Environmental Checklist (Appendix A) that the proposed project would have either a less-than-significant impact or no impact associated with the following topics: Agriculture and Forestry Resources; Mineral Resources, Land Use and Planning; Population and Housing; Public Services; and Recreation. These topics are described in Section 6.4, *Effects Not Found to be Significant,* of this Draft EIR.

Format of the Environmental Analysis

Each of the 11 environmental topic sections of this chapter includes the following subsections.

Overview

This subsection briefly describes the criteria considered in the particular resource section, summarizes the resources used to compile the information presented for the environmental analysis, and also summarizes the environmental effects of the proposed project and any feasible mitigation measures.

Existing Conditions

According to Section 15125 of the State CEQA Guidelines, an EIR must include a description of the existing physical environmental conditions in the vicinity of a project to provide the "baseline condition" against which project-related impacts are compared. Normally, the baseline condition is the physical condition that exists when the NOP is published; however, a different baseline may be used in specific cases where it is deemed appropriate. Unless otherwise indicated, the environmental setting described in each of the following sections will be that which existed on the date the NOP was published.

Applicable Laws and Regulations

This subsection provides a summary of regulations, plans, policies, and laws at the federal, state, and local levels that are relevant to proposed project as they relate to the particular environmental resource area in discussion. Compliance with these applicable laws and regulations is mandatory unless noted otherwise within the analysis. Therefore, as it relates to the Project Impact Analysis below, compliance is assumed because it is required by law and specified in a tenant lease, and mitigation would generally not be required when an existing law or regulation would ensure that a significant impact would not occur.

Project Impact Analysis

This subsection describes the methodology used for the analysis of the potential environmental impacts of the proposed project, identifies the criteria for determining the significance of potential impacts, states a conclusion as to whether the environmental impacts would be considered significant and unavoidable, less than significant with mitigation incorporated, or less than significant (see definitions below). Each topic analyzed is divided into specific issues, based on potential impacts, and is separated by construction and operation impacts wherever relevant. The discussion of potential impacts is based on the applicable threshold of significance (see below) for each issue. Where potential impacts are significant, mitigation measures are identified, as feasible, to minimize, rectify, reduce, eliminate, or compensate for the significant impacts with the goal of reaching a less-than-significant impact determination.

Methodology

Each methodology subsection describes the means used to analyze potential impacts on a particular resource, discussing the steps followed and listing any studies relied on for arriving at conclusions as to significance.

Thresholds of Significance

Thresholds of significance are criteria used to assess whether potential environmental effects are significant. The significance criteria used in this analysis are primarily based on the recommendations provided in Appendix G of the State CEQA Guidelines. The thresholds of significance define the type, amount, and/or extent of impact that would be considered a significant adverse change in the environment. The thresholds of significance for some environmental topics, such as air quality and noise, are quantitative, while those for other topics, such as visual quality, are qualitative. The thresholds of significance are intended to assist the reader in understanding how an impact is determined to be significant.

Project Impacts and Mitigation

The analysis of environmental impacts considers both the construction and operation of the proposed project. As required by Section 15126.2(a) of the State CEQA Guidelines, direct, indirect, short-term, long-term, onsite, and/or offsite impacts are addressed, as appropriate, for the environmental issue being analyzed. This EIR utilizes the following terms to describe the level of significance of impacts identified during the course of the environmental analysis.

No Impact: This term is used when the project's construction and/or operation would have no adverse effect on a resource.

Less than Significant: This term is used to refer to impacts resulting from implementation of the proposed project that are not likely to exceed the defined thresholds of significance, and potentially significant impacts that are reduced to a level that does not exceed the defined thresholds of significance after implementation of mitigation measures. In the latter case, the determination may also be stated as "less than significant with mitigation incorporated."

Significant: This term is often used to refer to impacts resulting from implementation of the proposed project that exceed the defined thresholds of significance and can be applied before identification of any mitigation measures. A "significant effect" is defined by Section 15382 of the State CEQA Guidelines as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment [but] may be considered in determining whether the physical change is significant." For impacts that exceed a threshold of significance, mitigation measures that avoid or reduce the potential impact are identified, which may cause the impact to be reclassified as less than significant if it is sufficiently reduced, or the impact may remain significant, in which case it is referred to as a significant and unavoidable impact (or unavoidable significant impact).

Significant and Unavoidable: This term is used to refer to significant impacts resulting from implementation of the proposed project that cannot be eliminated or reduced to below standards of significance through implementation of feasible mitigation measures.

Mitigation Measures

Section 15126.4 of the State CEQA Guidelines requires an EIR to "describe feasible measures which could minimize significant adverse impacts." Mitigation includes avoiding an impact altogether, minimizing impacts, rectifying impacts, reducing or eliminating impacts over time, or compensating for impacts by replacing or providing substitute resources. The State CEQA Guidelines define feasibility as "capable of being accomplished in a successful manner within a reasonable period of time taking into account economic, legal, social, technological, or other considerations." This subsection lists the mitigation measures that could reduce the severity of impacts identified in the *Impact Analysis* subsection. Mitigation measures are the specific environmental requirements for construction or operation of the proposed project that will be included in the Mitigation Monitoring and Reporting Program and adopted as conditions of approval of the proposed project.

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Section 4.1
Aesthetics and Visual Resources

4.1.1 Overview

This section describes the existing aesthetic and visual conditions that could be adversely affected by the proposed project, discusses the applicable laws and regulations related to aesthetics and visual quality, and analyzes the proposed project's effect on (1) designated scenic views, (2) scenic resources from a designated highway, (3) the existing visual character of the site and its surroundings, and (4) day and nighttime views affected by introducing light or glare. Visual concepts and terminology are present below. For an explanation of viewer sensitivity and the process used to select the Key Observation Points (KOPs) for the impact analysis, please see Section 4.1.4.1, *Methodology*. As discussed in Section 4.1.4, *Project Impact Analysis*, construction and operation of the proposed project would result in a significant and unavoidable impact related to the existing visual quality of the site and its surroundings.

Table 4.1-1 summarizes the significant impacts and mitigation measures discussed in Section 4.1.4.3, *Project Impacts and Mitigation*.

Table 4.1-1. Summary of Significant Aesthetics and Visual Resources Impacts and Mitigation Measures

Summary of Potentially Significant Impact(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-AES-1: Visual Impacts from the Installation of Up to Five Gantry Cranes.	No feasible mitigation measures are available.	Significant and unavoidable	The introduction of gantry cranes 270 feet in height would introduce large structures into the viewshed between KOP 1 and KOP 2, and the Coronado Bridge, and existing views of the bridge would be significantly affected. Moreover, the cranes would represent a major change in the view of KOP 3.

4.1.1.1 Concepts and Terminology

This section defines the key concepts and terminology used to describe existing aesthetic and visual quality conditions or to describe the change in existing conditions after implementation of the proposed project. Although there may be more than one definition for any of the terms below, these common definitions are used for analytical consistency.

Views refer to visual access and obstruction, or whether it is possible to see a focal point or panoramic scene from an area. Views may be discussed in terms of *foreground*, *middleground*, and *background.* Foreground views are those immediately presented to the viewer and include objects at close range that may tend to dominate the view. Middleground views occupy the center of the viewshed and tend to include objects that are the center of attention if they are sufficiently large or visibly different from adjacent visual features. Background views include distant objects and other objects that make up the horizon. Objects in the background eventually fade to obscurity with increasing distance. In the context of background, the skyline or the ocean can be an important visual feature because objects above this point are highlighted against the background of the sky or water. These "skylined" elements are typically more evident to the viewer because of their inherent contrast.

Visual quality is evaluated based on the relative degree of vividness, intactness, and unity within a landscape, as modified by viewer preference and sensitivity. *Vividness* is the visual power or memorability of landscape components as they combine in striking and distinctive visual patterns. *Intactness* is the visual integrity of the natural and human-built landscape and its freedom from encroaching elements; this factor can be present in well-kept urban and rural landscapes, and in natural settings. *Unity* is the visual coherence and compositional harmony of the landscape considered as a whole; it frequently attests to the careful design of individual components in the landscape. High-quality views are highly vivid and relatively intact, and exhibit a high degree of visual unity. Low-quality views lack vividness, are not visually intact, and possess a low degree of visual unity (FHWA 1981).

The following additional definitions pertain to terminology used in visual analysis.

- *Aesthetics* generally refers to the identification of visual resources and the quality of what can be seen, or the overall visual perception of the environment.
- *Key Observation Point (KOP)* is a viewing area selected by evaluating an area's scenic quality, visual sensitivity, and viewer response. Project visualizations are often created from these points.
- *Viewer sensitivity*, or viewer concern about noticeable changes to views, is based on the visibility of a scenic resource, proximity of viewers to the resource, relative elevation of viewers to the resource, frequency and duration of views, number of viewers, and types and expectations of the viewers.
- *Viewshed* is all of the surface area visible from a particular location or sequence of locations (e.g., roadway or trail).
- *Vista Areas* are "points of natural visual beauty, photo vantage points, and other panoramas" as depicted in the Port Master Plan (PMP) (San Diego Unified Port District 2012:28)

4.1.2 Existing Conditions

The project site is located in the District's jurisdiction and is within the urban setting of downtown San Diego (see Figure 2-2). The visual character of the project site and surrounding area is defined primarily by the industrial Burlington Northern Santa Fe railyards directly east of the project site; Cesar Chavez Park and multiple piers to the southeast; the Metropolitan Transit Service (MTS) rail yard and 12th and Imperial Transit Center, commercial Hilton Bayfront Hotel, Convention Center, and Petco Park ballfield to the north; and the San Diego Bay to the west and south. Development north of the project site exhibits professionally designed buildings with ornamental landscaping and is contrasted by the utilitarian nature of the industrial areas with visible infrastructure, open storage, the use of unfinished or unadorned building materials, and safety-conscious, highly visible colors such as orange, red, or bright green for mobile equipment such as cranes and containers. Also, a large number and variety of watercraft are present to the south and southwest of the project site, ranging from small recreational craft near Coronado and north of Embarcadero Marina Park South to large vessels such as container and general cargo vessels and U.S. Naval vessels.

4.1.2.1 Designated Scenic Views

The PMP considers the scenic quality of the land within its jurisdiction and establishes District policies for maintenance of important public views. Within many of its precise plans, the District has identified vista areas—key public viewpoints from which to enjoy the scenic beauty of the bay and other visible Port District features. Vista areas within the District's jurisdiction are identified on the PMP's precise plans by arrow symbols placed on the vista areas that point toward the intended view. The Public Recreation portion of Section III of the PMP explains that these symbols identify "points of natural visual beauty, photo vantage points, and other panoramas. It is the intent of [the PMP] to guide the arrangement of development on those sites to preserve and enhance such vista points" (San Diego Unified Port District 2012:28).

The PMP does not identify any designated vista areas in Planning District 4 (Tenth Avenue Marine Terminal); however, vista areas are identified in nearby planning districts, including Planning District 3 (Centre City Embarcadero), just north of and adjacent to the project site, and Planning District 6 (Coronado Bayfront), directly across the San Diego Bay from the project site. The designated vista areas within Planning Districts 3 and 6 are shown on Figure 4.1-1. Views of the project site are available from some designated vista areas within Planning District 3; however, the direction of the views are oriented westward toward the bay and not toward the project site. Designated vista areas in Planning District 6 are oriented toward the site and include views of the project site from across the bay (about one-half mile away). Several views from Planning Districts 3 and 6 were considered as candidate KOPs, and three KOPs were carried forward for the analysis. (See the discussion of Key Observation Points under Section 4.1.4.1, *Methodology*.)

4.1.2.2 Scenic Highways

State Route (SR)-75 is a California State-designated scenic highway as it crosses the San Diego–Coronado Bay Bridge (Caltrans 2011). Views from the 200-foot-tall bridge are expansive in all directions. However, the bridge is only open to motor vehicles, there are no pullouts for viewing, and stopping on the bridge is prohibited by law. Also, the bridge has a speed limit of 50 miles per hour and a concrete guardrail that limits the view in lower profile vehicles. The project site is between 0.25 and 0.75 mile from the bridge, and views of the project site for motorists traveling in mid- and high-profile vehicles are available along some of its expanse.

4.1.2.3 Other Public Views to the Project Site

Aside from views from the PMP-designated vista areas and from public scenic highways described above, the principal public viewer groups for the proposed project include motorists and pedestrians within public roadways and rights-of-way and downtown/bayfront tourists and recreationists,[1] such as promenade and park users and boaters in the bay.

Recreational Land Uses

Recreational land uses within the surrounding area provide recreationists with public views of the project site. The Embarcadero Marina Park South (EMPS), northwest of the project site, is a public park with a Bayfront promenade encircling the entire park. Direct, unobstructed views of the project site are available from the eastern half of the park; however, clear views from the western portion of the park are obstructed by mature trees and other intervening elements. (See the discussion of Key Observation Points under Section 4.1.4.1, *Methodology*.)

Farther west of the project site and northwest of EMPS is the Embarcadero Marina Park North (EMPN). The EMPN is a park with a Bayfront promenade that meanders across the park. However, because of the project site's orientation and existing intervening elements, such as docked boats and mature trees, views of the project site are partially or completely blocked from most EMPN locations. The Martin Luther King Jr. Promenade, a landscaped linear park, is north of the project site. Views of the project from this park are obstructed by the existing Convention Center and Hilton Bayfront Hotel. In addition, there are a couple of recreational areas associated with the Convention Center complex, including the Convention Center Park/Plaza and the Convention Hotel Park/Plaza. A promenade that surrounds the park/plaza to the east, south, and west leads to the bay.

Another park, Hilton Park/Plaza, is between the Hilton Bayfront Hotel and the Convention Center along the bay with a public bayfront promenade and seating areas. The park/plaza offers grassy areas for passive recreational use and public seating areas along the waterfront promenade. The promenade continues westbound. (See the discussion of Key Observation Points under Section 4.1.4.1, *Methodology*.) Moreover, recreational boaters have visual access to the project site. Passersby may take in views of downtown with the project site prominently situated at the waterfront. The views from nearby recreational boaters at dock consist primarily of the existing project site. (See the discussion of *Key Observation Points* under Section 4.1.4.1, *Methodology*.)

Public Roadways and Rights-of-Way

Harbor Drive runs adjacent to the northeastern side of the project site and is the primary access route to the project site. Views from Harbor Drive to the project site are generally available; however, these views are typically of stacked containers, train cars, and the tops of the existing silos. Views onto the transit shed or warehouses are not available, and views to the bay are also precluded by intervening structures on the project site. Park Boulevard is a designated view corridor in the San Diego Downtown Community Plan and has a direct line of sight to the project site, although much of the project site is obstructed from this perspective due to development on the project site. Views from Park Boulevard consist of the existing shipping containers, silos, and trains.

[1] The term *recreationist* is used to distinguish the sub-group of viewers who are organizing their recreational activities around experiencing the visual environment from those viewers who are engaged in competitive sports activities. Viewers engaged in most active recreation, such as playing sports, tend to have only an average sensitivity to visual quality and visual change. Although they are aware of their surroundings, they are usually focused on the activity itself rather than surrounding views.

K:\San Diego\projects\Port of San Diego\00165 14 TAMT\mapdoc\Fig04 1 1 Vista Areas.mxd Date: 11/16/2015 24991

Figure 4.1-1
Port Master Plan Vista Areas Location Map
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

4.1.2.4 Light and Glare

There are two typical types of light intrusion. First, light emanates from the interior of structures and passes out through windows. Second, light projects from exterior sources, such as street, security, and landscape lighting. *Light spillover* is typically defined as the presence of unwanted or misdirected light on properties adjacent to the property being illuminated. Light spillover can be a nuisance to adjacent areas and can diminish views of the clear night sky.

Glare is described as the distraction, discomfort, or impairment of vision caused by extreme contrasts in the field of vision, where light sources such as sunlight, lamps, luminaries, or reflecting surfaces are excessively bright in relation to the general brightness of surroundings. Glare also results from sunlight reflecting off flat building surfaces, with glass typically contributing the highest degree of reflectivity.

On Site

Light

The project site includes nighttime security and operational lighting as well as lighting for evening and nighttime offloading operations. High-intensity boom lighting and high-mast lighting is provided throughout the terminal for security purposes and operational activities. Also, during nighttime loading or offloading of ships, barges, and containers, floodlights attached to the bottoms of crane booms and sides of crane structures illuminate cranes and the areas around them. Headlights from vehicles transferring container goods to and from the berths are another source of transitory nighttime lighting. The overall onsite nighttime lighting environment is considered low to moderate because the site does not require substantial amounts of night lighting.

Glare

Existing sources of daytime glare include bidirectional transitory glare from trucks, cars, and semi-trailers driving along Harbor Drive, Crosby Road, and internal streets where sunlight reflects off windshields. Because the project site does not contain structures with reflective architectural finishes, the overall daytime glare environment is considered low. Glare conditions on the project site are relatively low in relation to offsite conditions, which are described below.

Off Site

Light

As described in Chapter 3, *Project Description*, the area surrounding the project site is highly urbanized and supports a mixture of commercial, industrial, recreational, residential, civic, and marine-related uses. The nighttime lighting environment surrounding the project site consists mainly of ambient light produced by recreational facilities, the existing Hilton Bayfront Hotel, Petco Park, the Convention Center, interior and exterior building (residential, office, commercial) lighting, highly ordered/structured lighting from streetlights, and transitory lighting from vehicle and transit-related (i.e., buses and trolley) headlights.

Commercial developments, such as large-scale hotel developments, also contribute to ambient lighting conditions. Exterior security lighting and interior operational lighting at these hotels cause light spillover, which illuminates the area surrounding the project site. Finally, recreational boating uses near the project site contribute minor transitory lighting to the area.

Other significant sources of nighttime lighting include commercial, residential, and transit-related development in the downtown community. Several high-rise hotels and residential buildings contribute to ambient night lighting conditions in the form of spillover light from exterior and interior security and operational lighting. Also, Petco Park, just north of the project site, is a major contributor to nighttime lighting during the baseball season (normal stadium lighting and fireworks displays). Finally, transitory nighttime lighting from vehicle and transit-related (i.e., buses and trolley) headlights further contributes to ambient lighting conditions in the area. Overall, because the area is highly urbanized, existing ambient lighting levels are considered to be high.

~~In addition, because the project site operates 24 hours per day, 7 days per week, lighting is required for nighttime activities. Sources of nighttime lighting at the project site include boom lighting and mast lighting for security and operational activities as well as floodlights on the bottom of crane booms and the sides of crane structures for illuminating during nighttime loading and off-loading of vessels, barges, and containers.~~

Glare

Offsite glare conditions, which are not as prevalent as nighttime lighting, are generally moderate in the area surrounding the project site. The most noticeable sources of glare are the numerous mid- and high-rise commercial developments to the north, west, and east, including the Convention Center, the existing Hilton Bayfront Hotel, the Omni San Diego Hotel, the Harbor Club Towers, the San Diego Marriott Gaslamp Quarter Hotel, and the Hilton San Diego Gaslamp Quarter Hotel. Glare occurs as a result of light reflecting off the architectural finishes of buildings, and glare conditions are most severe when light reflects off glass surfaces. Most of these high-rise buildings have highly finished surfaces, including window and glass façades, which results in noticeable amounts of daytime glare.

A second primary source of daytime glare in the surrounding area is sunlight reflecting off the open waters of the bay, which encircles the project site to the south and west. Glare from horizontal water surfaces is most prevalent in the early and late portions of the day when reflected sunlight is most likely to affect viewers. Other scattered sources of daytime glare are sunlight reflecting off windows of boats docked at the marina, which produces minor amounts of glare; and sunlight reflecting off vehicles and delivery trucks traveling along Harbor Drive, Park Boulevard, Convention Way, and other surrounding roadways, which also produces minor amounts of transitory glare. Overall, existing daytime glare conditions surrounding the project site are considered to be moderate.

4.1.3 Applicable Laws and Regulations

4.1.3.1 State

California Scenic Highway Program

The California Department of Transportation (Caltrans) manages the California Scenic Highway Program, which was created in 1963 by the California legislature to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to highways. The program includes a list of highways that are eligible for designation as scenic highways or that have been designated as such. A highway may be designated as scenic based on how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes on the traveler's enjoyment of the view. State laws governing the Scenic Highway Program are found in the Streets and Highways Code, Sections 260 through 263.

4.1.3.2 Local

Port Master Plan

Section II of the PMP sets forth planning goals and related policies for development and operation of land within the District's jurisdiction. The goals and related policies pertinent to the aesthetic resources of the proposed project are presented below.

Goal II. The Port District, as trustee for the people of the State of California, will administer the tidelands so as to provide the greatest economic, social, and aesthetic benefits to present and future generations**.**

Goal VIII. The Port District will enhance and maintain the bay and tidelands as an attractive physical and biological entity.

- Each activity, development, and construction should be designed to best facilitate its particular function, which function should be integrated with and related to the site and surroundings of that activity.
- Views should be enhanced through view corridors, the preservation of panoramas, accentuation of vistas, and shielding of the incongruous and inconsistent.
- Establish guidelines and standards facilitating the retention and development of an aesthetically pleasing tideland environment free of noxious odors, excessive noise, and hazards to the health and welfare of the people of California.

Precise Plans

Section IV of the PMP provides specific guidance for land development within ten geographic planning districts. These ten precise plans include maps for each district, tables showing the acreages of various uses within the districts, and lists of projects planned within the districts. The precise plans also identify vista areas within each planning district that indicate points of natural visual beauty, photo vantage points, and other panoramas to be preserved and enhanced by the arrangement of development. As discussed under Section 4.1.2.1, above, the project site is located within Planning District 4, Tenth Avenue Marine Terminal, and the PMP does not identify any designated vista areas for Planning District 4.

4.1.4 Project Impact Analysis

4.1.4.1 Methodology

Aesthetic experiences can be highly subjective and vary from person to person; therefore, when feasible, it is preferable to evaluate aesthetic resources using a process that strives to objectively identify the visual features of the area, their importance, and the sensitivity of the associated viewers. The proposed project–related changes to the aesthetic character of the project site and surrounding area are identified and qualitatively evaluated based on the extent of the modification to the existing physical conditions and based largely on viewer sensitivity to the modification.

The following section identifies viewer groups that would be sensitive to changes in the visual setting and discusses key vantage points of the proposed project that would be visually accessible to these viewers. The existing visual environment is then compared to the anticipated future visual environment through a series of computer-generated visualizations that include representative images of proposed project elements, which are modeled to scale. Proposed project–related changes are evaluated using the threshold criteria discussed in Section 4.1.4.2, *Thresholds of Significance*, to determine significance. It should be noted that views from private property are not considered a protected resource by the District.

Viewer Groups and Viewer Sensitivity

Viewer sensitivity is based on the visibility of a scenic resource, the proximity of viewers to the resource, the relative elevation of viewers to the resource, the frequency and duration of views, the number of viewers, and the types and expectations of the individuals and viewer groups. Generally, visual sensitivity increases as the total number of viewers, frequency, and duration of viewing activities increases.

The degree of visual sensitivity is treated as occurring at one of the following four levels.

- **High Sensitivity** suggests that the majority of the public is likely to react strongly to a threat to visual quality. A highly concerned public is assumed to be more aware of any given level of adverse change and is substantially less tolerant than a public that has little to moderate concern. A small modification of the existing landscape may be visually distracting to a highly sensitive public and represent a substantial reduction in visual quality.
- **Moderate Sensitivity** suggests that the public would probably voice concern over substantial visual impacts. Often, the affected views are secondary in importance or are similar to others commonly available to the public.
- **Low Sensitivity** is considered to prevail where the public is expected generally to have little concern about adverse changes in the landscape, or only a small minority may be expected to voice such concern, even where the adverse change is substantial in intensity and duration.
- **No Sensitivity** occurs when the views are not public, or there are no indications of public concern over, or interest in, scenic/visual resource impacts on the affected area.

An evaluation of the project site and the potentially affected environs, along with a review of public scoping comments, served to identify indicators of public sensitivity to changes to views. An analysis of the surrounding area was also conducted to identify areas where the proposed project would be most visible and to assess the quality of public views of the project site. The range and quality of public views of the project site were determined by reviewing street maps, the PMP, and photos of areas within or adjoining the project site. The range of sensitive views was then considered, and several representative views in which the proposed project elements would be most noticeable were selected for detailed analysis. This decision was based primarily on proximity and degree of proposed project exposure. Consideration was also given to how viewers within each setting would experience the proposed project due to varying degrees of visibility and distance from the project site, as well as the structures, vegetation, topographic features, or other intervening obstacles that were present. Because objects within the foreground have more detail, views from such locations would be more detailed compared to objects that are less distinguishable in the distance. Therefore, the potential sensitivity of close-in viewers was considered higher than those who have more distant public views of the project site and surrounding area. Based on these considerations, candidate KOPs were identified. A discussion of the KOP process is below.

Key Observation Points

Seven candidate KOPs were initially identified for consideration in the impact analysis at public vantage points throughout the Port District and downtown San Diego. Some of the candidate KOPs were eliminated for several reasons, including visual obstructions from the KOPs (e.g., flat terrain, vegetation, or buildings blocking the view), lack of project features that would be visible, redundancies with other chosen KOPs, or the lack of representative sensitive viewer groups. Three KOPs were identified as providing a representative cross-section of scenic quality, viewer types, and viewer sensitivities. These are representative of the existing viewsheds described below, and their locations and relationships to the project site are illustrated on Figure 4.1-2.

Embarcadero Marina Park South Viewshed (KOP 1)

The EMPS is a recreational area about a quarter-mile northwest of the project site adjacent to the San Diego Convention Center. Vehicle and pedestrian access to the park is achieved from Park Boulevard via Convention Way. The park includes two outdoor basketball courts, a large gazebo structure, grass areas, concrete walkways/bikeways, exercise stations, restrooms, a T-shaped boat dock/pier used for boating and fishing, a restaurant, and parking areas. There are a variety of mature trees throughout the park, along the parking areas and the edge of the bay. Views in general from the EMPS are dominated by the San Diego Bay and Coronado Island. KOP 1 is situated at the southern edge of the park, facing southward toward the project site.

KOP 1 is located at about one-quarter mile from the project site (see Figure 4.1-2). This KOP is representative of views from the EMPS toward the Coronado Bridge, and views from KOP 1 are experienced by recreationists and tourists. As shown on Figure 4.1-3, existing typical views from this area include the open waters of the bay as the dominant foreground element, with the project site and the Coronado Bridge in the middleground. Some middleground views of the existing Hilton Bayfront Hotel are also visible. The project site precludes further southern-facing background views. The entire project site is not visible from KOP 1 due to the existing buildings and infrastructure on the site. Views of the site from KOP 1 include the transit sheds, Warehouse B, the silo complex and conveyer system, and the bulk unloader. Views of the entrance gate, Warehouse C, liquid storage facilities, Dole refrigerated container facility, mobile harbor crane, and on-dock rail are not included from KOP 1. When a vessel is berthed at Berths 10-1/10-2, views of nearly the entire project site are unavailable.

Views within KOP 1, including the project site, Coronado Bridge, and San Diego Bay, are considered to have moderate to high visual quality. The existing visual character of the project site and immediately surrounding area is that of an industrial shipping operation with gray concrete buildings, vessels, containers, and a variety of construction vehicles (e.g., unloaders, trucks). However, KOP 1 is also located at an area that recreationists and tourists visit to experience views of the bay and Coronado Bridge. Because the majority of the project site is highly visible and the overall visual quality of the views is moderate, viewer sensitivity from the EMPS is considered to be moderate.

Convention Way Basin Viewshed (KOP 2)

The viewshed from Convention Way Basin (KOP 2) includes a small park between the bay and the San Diego Convention Center, about a quarter-mile north of the project site. The area is mostly flat and grassy, with a pedestrian and bicycle bayfront promenade extending in a north-south direction along the water. There are benches along the waterfront for visitors to enjoy western-facing views of the bay and Coronado Island. The Hilton Bayfront Hotel is adjacent to and south of KOP 2, and the San Diego Convention Center is adjacent to and west of KOP 2. KOP 2 is situated at the top of a slight knoll in the grass nearly in the middle of the span of the park.

KOP 2 faces south directly toward the project site and is representative of the designated vista area in the PMP. From KOP 2, foreground views include grass, a concrete pedestrian/bicycle pathway, and the bay (see Figure 4.1-4). Middleground views include mostly the project site, along with the Coronado Bridge. Background views beyond the project site are mostly limited; however, there are some distant background views onto Coronado Island that are dominated by views of mature trees. Views of blue cranes at other bayside areas farther south of the project site are visible in the background. The northernmost quarter of the project site is visible from KOP 2 and includes Transit Sheds #1 and #2 and Warehouse B. Views of stacked Dole containers are visible when a vessel is not berthed at Berths 10-1/10-2. At times when a vessel is berthed at Berths 10-1/10-2, views of the project site are generally unavailable from KOP 2. Views onto the rest of the site are precluded by the Hilton Bayfront Hotel, Warehouse B, and the transit sheds on the project site. At those times, the entrance gate, silo complex and conveyer system, Warehouse C, the liquid storage facilities, the Dole refrigerated container facility, mobile harbor crane, Siwertell Bulk unloader, and the on-dock rail are not visible from KOP 2.

Visual quality from KOP 2 is considered to be moderate to high. Similar to KOP 1, KOP 2 includes a view of an industrial shipping operation with views of the bay and Coronado Bridge along a public area that recreationists and tourists visit to experience views of the bay, Coronado Island, and the Coronado Bridge. Public benches and the concrete pedestrian/bicycle bayfront promenade further add to the sensitivity of the views from KOP 2, as visitors tend to have prolonged and extensive views from this area. Because the majority of the project site is highly visible and the overall visual quality of the views is moderate, viewer sensitivity from Convention Way Basin is considered to be moderate.

Coronado Tidelands Park Viewshed (KOP 3)

KOP 3 is about 0.5 mile west of the project site on Coronado Island at the Coronado Tidelands Park. This park is at the foot of the Coronado Bridge along the bay and includes a small beach and dinghy landing, picnic areas, exercise stations, children's play equipment, four baseball/softball diamonds, a

K:\San Diego\projects\Port of San Diego\00165 14 TAMT\mapdoc\Figu04 1-2 KOP Location Map.mxd Date: 11/17/2015 24991

Figure 4.1-2
Key Observation Points Location Map
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Figure 4.1-3
KOP 1 – Embarcadero Marina Park South Viewshed (Existing)
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Figure 4.1-4
KOP 2 – Convention Way Basin Viewshed (Existing)
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

large grass field, a concessions stand, a pedestrian/bicycle promenade along the bay, and several benches facing the bay. Specifically, KOP 3 is located along the concrete pedestrian/bicycle pathway, adjacent to the eastern edge of the grass field (see Figure 4.1-5).

The entire project site is not visible from KOP 3. Typical views from KOP 3 include the bay in the foreground and views of the project site and Coronado Bridge in the middleground. Other middleground elements in KOP 3 include multi-story commercial buildings in the southern part of downtown San Diego. Distant background views include suburban development along hillsides; on clear days, mountains are somewhat visible. The entire western edge of the project site is visible from KOP 3 and includes views of Transit Sheds #1 and #2, the silo complex and conveyer system, and the mobile harbor crane. Views of the entrance gate and security guard structure, Warehouses B and C, the liquid bulk facility, the refrigerated container facility, the Siwertell bulk unloader, and the on-dock rail are obstructed due primarily to the location of Transit Sheds #1 and #2. When vessels are berthed at the project site, views of Transit Sheds #1 and #2 are partially obscured, depending on the number of vessels at berth and the size of the vessels; however, the silo complex and conveyer systems are still visible over the tops of the vessels.

Visual quality from KOP 3 is considered to be moderate to high. Similar to KOPs 1 and 2, views of the site include a mass of grey industrial buildings and associated infrastructure, such as cranes and trucks. Foreground views of the bay and background views of mountains are available from KOP 3, which is a recreation area where people have expansive and prolonged views of the bay and downtown San Diego. Because the majority of the project site is highly visible and the overall visual quality of the views is moderate, viewer sensitivity from Coronado Tidelands Park is considered to be moderate.

4.1.4.2 Thresholds of Significance

The following significance criteria are based on Appendix G of the State CEQA Guidelines and provide the basis for determining the significance of impacts associated with aesthetics and visual quality resulting from the proposed project. The determination of whether an aesthetics and visual quality impact would be significant is based on the thresholds described below and the professional judgment of the Port District as Lead Agency and the recommendations of qualified personnel at ICF, all of which is based on the evidence in the administrative record.

Impacts are considered significant if the proposed project would result in any of the following.

1. Have a substantial adverse effect on a scenic vista, including but not limited to the vista areas designated by the District in the PMP.
2. Substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
3. Substantially degrade the existing visual character or quality of the site and its surroundings.
4. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

As discussed in the Initial Study/Environmental Checklist (Appendix A of this Draft EIR), Thresholds 1 and 2 are not included in the analysis below, as the proposed project would not result in significant impacts related to a substantial adverse effect on a scenic vista or substantially damage scenic resources from view of a state scenic highway. Those conclusions and the rationale that supports them are summarized in Chapter 6, *Additional Consequences of Project Implementation*. Therefore, only Thresholds 3 and 4 are discussed in the impact analysis that follows.

4.1.4.3 Project Impacts and Mitigation Measures

Threshold 3: Implementation of the proposed project would substantially degrade the existing visual character or quality of the site and its surroundings.

Impact Discussion

Demolition and Initial Rail Component

Construction

Construction of the proposed improvements associated with the Demolition and Initial Rail Component may be visible from surrounding areas, including the EMPS, Convention Way Basin, and across the bay from Coronado (e.g., the transit shed demolition and construction work) and other nearby areas, such as Crosby Street Park (e.g., the modular office installation and some of the on-terminal rail upgrades).

Specifically, construction activities on the project site would consist of demolishing the transit sheds, trenching to install underground conduit for future shore power use, and grading and repaving the areas to allow for open area storage. These actions would involve construction equipment, earthwork, debris, and trucks hauling the debris off site for recycling and disposal. Grading and paving equipment and activities would be visible during the creation of the onsite open storage area. The replacement of the pole lighting, the new restroom and gear shack facility, installation of a modular office, and on-terminal rail upgrades would all be less noticeable than the transit sheds because of their relatively small areas, quicker construction schedules, and the use of smaller construction equipment. None of these actions would block views from surrounding areas, the equipment would come and go in the public view, all would be present for only a short period of time, and, given the busy industrial nature of the project site with large marine vessels at berth, cranes in operation, and yard equipment moving cargo, these construction activities would be difficult to separate from normal operations. As such, the proposed construction activities associated with the Demolition and Initial Rail Component would not result in significant visual construction-related impacts, and no mitigation would be required.

Operation

Operation of the Demolition and Initial Rail Component identified in the TAMT plan could be visible from surrounding areas, depending on the location of the observer. However, the only noticeable operational changes that would result from this component would be the lack of transit sheds and the open area storage in their place. The cargo stored at these open storage areas would vary day to day and may include stacking of containers up to four or five containers high some days; other days may include high and heavy break bulk cargo, and still other days may involve storage of roll-on/roll-off cargo. Due to the industrial nature of the area of the project site and sites to the south, these changes would not be especially noticeable and would not substantially degrade the existing visual character of the site or the surroundings. Other activities, such as the lighting pole

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Figure 4.1-5
KOP 3 – Coronado Tidelands Park Viewshed (Existing)
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replacement and on-terminal rail facility upgrades, would not be readily noticeable from surrounding areas. As described in Section 4.1.4.1, *Methodology*, project impacts were determined through a qualitative analysis of visualizations of the proposed project from three KOPs. Visual impacts on the character and quality of the project site and its surroundings as seen from the identified KOPs are discussed below.

KOP 1

KOP 1 is at the southeastern corner of the EMPS, approximately 0.25 mile northwest of the project site, and includes southern-facing views toward Berths 10-1 and 10-2 (see Figure 4.1-2). Views are experienced by recreationists (including boaters) and tourists, and viewer sensitivity is considered to be moderate.

Existing Visual Quality and Character

From KOP 1, views toward the project site and surrounding areas are considered to have moderate visual quality, and views are primarily available of the northernmost portion of the project site, which includes Transit Shed #1, Warehouse B, stacks of containers, trucks, light poles, and several silos. The existing visual character of KOP 1 is defined by the open water of the bay, the existing terminal operations at the project site, and part of the existing Hilton Bayfront Hotel. When considered together, the combination of open water, industrial operations, and a commercial hotel generally lacks a unified visual coherence and overall visual quality is moderate because of the existing industrial operations. As the industrial operations occur, the locations and activities at the site change and stacks of containers are relocated, trucks arrive and leave, and other miscellaneous equipment is relocated as needed. Also, vessels are not always berthed at the project site; however, they can be present several days per week at the terminal, which can dramatically change the overall existing visual quality. When a vessel is docked at Berths 10-1/10-2, most if not all views onto the project site are prohibited from KOP 1. Regardless of the presence of a docked vessel, the existing views of the project site from KOP 1 are not unified in quality. Likewise, existing visual character lacks definition; however, because KOP 1 is focused directly and relatively close to the project site, the overall visual character from KOP 1 exhibits an industrial and working port operation. While open water views of the bay and the Coronado Bridge are available, the developed project site includes the most prominent elements in the viewshed and generally detracts from the vividness of the open-water views (see Figure 4.1-3). As a result, the existing visual quality and character of the project site from KOP 1 is moderate.

Visual Quality and Character with the Demolition and Initial Rail Component

As shown on Figure 4.1-6, implementation of the proposed project would modify views from KOP 1 due to the removal of Transit Sheds #1 and #2, the addition of stacked containers, and an approximately 850-square-foot outdoor storage area. Additional stacked containers would be visible where the existing transit sheds are located and would not result in significant impacts on visual quality, as these containers would not exceed the size in height or mass compared to the transit sheds under existing conditions and would appear similar to the refrigerated containers stacked on the project site under existing conditions. The outdoor storage area would be relatively small in the viewshed and difficult to identify without close scrutiny. Other project-level elements such as the single-story 782-square-foot equipment room, the single-story 3,600-square-foot modular office, rail improvements, and shore-side power upgrades would be typical of port operations and would not have a substantial effect on the visual quality and character of the site and surrounding areas due to their lack of visibility from KOP 1. Impacts would be less than significant.

KOP 2

KOP 2 is at the southeastern corner of the project site near the endpoint of the bayfront promenade, adjacent to the existing Hilton Bayfront Hotel. Views are experienced by recreationists and tourists. This KOP focuses on the visual changes that would occur along the bayfront promenade. Generally, views from KOP 2 are similar to KOP 1, as KOP 2 is about 800 feet east of KOP 1.

Existing Visual Quality and Character

From KOP 2, views toward the project site and surrounding areas are considered to have moderate visual quality, and views would primarily be available of the northernmost portion of the project site. Similar to the description above for KOP 1, the existing visual character comprises open water and the existing terminal that generally lacks a unified quality due to the ongoing operations at the project site, including the berthing of ships directly in view from KOP 2. When a vessel is docked at Berths 10-1/10-2, most if not all views onto the project site would be obstructed. As such, the existing views of the project site from KOP 2 are not unified in quality. While open water views of the bay and the Coronado Bridge are available, the developed project site is the most prominent element in the viewshed and generally detracts from the vividness of the open-water views (see Figure 4.1-4). As a result, the existing visual quality and character of the site from KOP 2 is moderate.

Visual Quality and Character with the Demolition and Initial Rail Component

Implementation of the Demolition and Initial Rail Component would result in the removal of Transit Sheds #1 and #2 and the addition of stacked containers, which would permanently modify existing views of the project site from KOP 2 (see Figure 4.1-7). The additional stacked containers would be visible in place of Transit Sheds #1 and #2 and would not result in any impacts on visual quality because the bulk and scale would be similar and existing containers are currently stacked on the project site. An approximately 850-square-foot outdoor storage area would be difficult to identify in the viewshed given its relatively small size. Other project-level elements such as the single-story 782-square-foot equipment room, the single-story 3,600-square-foot modular office, rail improvements, and shore-side power upgrades would be typical of port operations and would not have a substantial effect on the visual quality and character of the site and surrounding areas due to their lack of visibility from KOP 2. Impacts would be less than significant.

KOP 3

KOP 3 is located on Coronado Island across San Diego Bay from the project site at a public park with views experienced by recreationists and tourists. This KOP focuses on the visual changes that would occur as seen from a distance across the bay and includes views of the entire western-facing portion of the site spanning Berths 10-3 through 10-6 (see Figure 4.1-5).

Existing Visual Quality and Character

Views from KOP 3 are considered to be moderate to high in terms of visual quality due to the expansive views of San Diego and part of the downtown skyline. Existing visual quality is moderate to high because of the intactness of the elements within the view, which consist of a defined

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Figure 4.1-6
KOP 1 – Embarcadero Marina Park South Viewshed (Proposed with Demolition and Initial Rail Component Only)
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Figure 4.1-7
KOP 2 – Convention Way Basin Viewshed (Proposed with Demolition and Initial Rail Component Only)
Tenth Avenue Marine Terminal Redevelopment Plan and Demoltion and Initial Rail Component EIR

downtown skyline, and the intactness of the horizontal elements at the project site. Due to the distance from the site, the industrial developed terminal is not highly noticeable and does not contrast with the surrounding elements when compared to views of the site from KOPs 1 and 2. Visual character from KOP 3 is that of a bayside metropolitan urbanized area, and while there are some noticeable industrial elements in view at the project site—such as the silos and open bay doors along Transit Sheds #1 and #2—these elements do not represent focal points or strong visual elements from a distance. As such, both existing visual quality and visual character of the site from KOP 3 are moderate to high.

Visual Quality and Character with the Demolition and Initial Rail Component

The proposed changes associated with the Demolition and Initial Rail Component at the project site, primarily the removal of Transit Sheds #1 and #2 and the replacement with surface storage, would be noticeable from KOP 3. These changes would not alter the existing visual character of the project site as an industrial marine terminal. As discussed above under the existing visual quality and character from KOP 3, existing visual quality is defined by expansive views of the bay and views of downtown. Views of the bay from KOP 3 would remain unobstructed (see Figure 4.1-8). Other project-level elements such as the single-story 782-square-foot equipment room, the single-story 3,600-square-foot modular office, rail improvements, and shore-side power upgrades would be typical of port operations and would not have a substantial effect on the visual quality and character of the site and surrounding areas due to the difficulty in identifying them in the viewshed from KOP 3 located across the bay. Impacts would be less than significant.

Full TAMT Plan Buildout

Construction

Construction of the other future components identified in the TAMT plan may be visible from surrounding areas, depending on the specific location of the improvements; however, due to the industrial nature of the area along the bay, these temporary activities would not be especially noticeable and would not substantially degrade the existing visual character of the site or the surroundings. Construction activities on the project site would take place periodically through plan buildout and would involve a variety of demolition and construction activities that could involve construction vehicles, temporary stockpiling of equipment, staging areas, temporary construction fencing, and partially constructed projects while in progress. These temporary construction elements could be visible from various areas in the vicinity of the project, including the EMPS, Convention Way Basin, and Coronado Tidelands Park locations and other nearby areas, such as Harbor Drive, Crosby Road, and Crosby Street Park.

Larger improvements at the project site may include construction of a new dry bulk facility that would be sized up to 100,000 square feet, construction of domes and silos with a potential dry bulk capacity of up to 108,000 metric tons, and demolition of Warehouse C and the existing molasses tanks. While the construction timeframe for these projects is unknown, it is likely that they would occur over a period of several months, and short-term visual changes related to the project may include the introduction of temporary construction equipment and materials on the site.

The existing visual character on the project site involves shipping trucks, stacks of containers, and miscellaneous equipment related to typical port operations. The temporary presence of additional construction vehicles and equipment and temporary staging and stockpiling of materials would not substantially degrade the existing visual character or quality of the project site or its surroundings. Other proposed improvements at the project site, such as upgrading the existing dry bulk conveyer system, maintaining open-storage space, adding a bulk discharge unloader, introducing up to five gantry cranes, and constructing a new centralized gate would involve some additional trucks, equipment, and employees at the project site; however, these improvements would not involve significant construction time, nor would they be visible from surrounding areas due to intervening development. For example, gantry crane installation would not require a prolonged construction effort and would be established in a relatively short period of time that would be measured in months. (Note that the permanent long-term visual impacts of structures such as gantry cranes are addressed under *Operation*, below.) Likewise, improvements such as upgrading the conveyer system would occur internal to the project site, and views from most surrounding areas would be obscured by existing development and/or by the general distance to the closest observers. Improvements at the project site that would be visible from surrounding areas and the visual character and quality of the project site would be temporarily changed during construction with the introduction of construction equipment and related materials; however, for reasons stated above, overall impacts would be less than significant, and no mitigation is required.

Operation

Operation of the other future components identified in the TAMT plan would be visible from surrounding areas, depending on the specific location of the improvements. Despite the industrial nature of the area along the bay, these changes would be noticeable and would potentially degrade the existing visual character of the site or the surroundings to an impact condition that would be considered significant. At the completion of construction activities, visually noticeable elements as a result of the implementation of the other future components of the TAMT plan would include additional open area storage space at the former Warehouse C and the molasses tanks location, new storage structures (up to 100,000 square feet), a combination of new domes and/or silos near the existing silos (up to 108,000 metric tons of dry bulk capacity), and the addition of up to five gantry cranes along the waterfront of the project site. As described in Section 4.1.4.1, *Methodology*, project impacts were determined through a qualitative analysis of visualizations of the proposed project from three KOPs. Visual impacts on the character and quality of the project site and its surroundings as seen from the identified KOPs are discussed below.

KOP 1

Visual Quality and Character with Full TAMT Plan Buildout

As shown on Figure 4.1-9, implementation of the proposed project would modify views from KOP 1 with the addition of up to five gantry cranes and the potential of additional domes or silos for dry bulk storage. The removal of Warehouse C and the molasses tanks would not be visible from KOP 1 because Warehouse B would remain between the viewer and the current location of Warehouse C, and, consequently, views would continue to be unavailable from this viewpoint.

Once all the of the components of the TAMT plan are implemented, the project site would continue to operate in a similar manner as it does under existing conditions, albeit at higher throughput levels. The removal of buildings (Warehouse C and the molasses tanks) and the potential

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Figure 4.1-8
KOP 3 – Coronado Tidelands Park Viewshed (Proposed with Demolition and Initial Rail Component Only)
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Figure 4.1-9
KOP 1 – Embarcadero Marina Park South Viewshed (Proposed)

introduction of more silos or domes,[2] along with other miscellaneous improvements dedicated to improving operations at the site, would not have a substantial effect on the existing industrial character at the project site. Other project-related elements, such as the new central gate and the additional open storage space, would be expected and typical of port operations and would not have a substantial effect on the visual quality and character of the site and surrounding areas due to their lack of visibility from KOP 1.

The introduction of up to five gantry cranes would potentially include up to two rail-mounted electrical 100-foot gauge cranes at Berths 10-1/10-2, up to two rail-mounted electrical 100-foot gauge cranes at Berths 10-3/10-4, and up to two electric gantry cranes up to 100 feet tall at Berths 10-5/10-6.[3,4] When the boom of the 100-foot gauge crane is stowed (i.e., the boom is pointed upward), the total height of the 100-foot gauge crane would be approximately 270 feet. When the crane is in use and the boom is extended outward, the estimated height is approximately 240 feet. As shown in Figure 4.1-9, the five gantry cranes would appear as large structures in front of the Coronado Bay Bridge and would dominate the viewshed from KOP 1. The overall industrial goods movement-related visual character of the project site would remain similar to existing conditions; however, the existing visual quality of the project site and surrounding areas, which includes views of the Coronado Bridge, would be similarly altered by the introduction of gantry cranes. There are some existing elements on the project site that preclude some views of the bridge, such as light poles and portions of the transit sheds; however, five new gantry cranes potentially occurring on the project site would result in a substantial visual change that would have an adverse impact on the existing visual quality (**Impact-AES-1**). As such, project implementation would result in a substantial degradation of the existing visual quality of the site and its surroundings. No feasible mitigation is available to reduce the visual presence of the proposed cranes. Therefore, this visual impact would be significant and unavoidable.

KOP 2

Visual Quality and Character with Full TAMT Plan Buildout

Implementation of the other future components would result in the addition of stacked containers, the addition of up to five gantry cranes, and the potential of additional domes or silos, which would permanently modify existing views of the project site from KOP 2 (see Figure 4.1-10). The removal of Warehouse C and the molasses tanks would not be visible from this viewpoint and would not result in any impacts on visual quality. The addition of up to five gantry cranes would introduce new tall and large elements into the viewshed up to 270 feet in height and portions of each would partially block views of the Coronado Bridge, resulting in significant impacts.

Once all other future components of the TAMT plan are implemented, the project site would continue to operate in a similar manner as it does under existing conditions, albeit at higher throughput levels. The removal of buildings (Warehouse C, molasses tanks) and the introduction of silos or domes, up to five gantry cranes, and other small-scale miscellaneous improvements dedicated to improving operations at the project site would not have a substantial effect on the

[2] For purposes of this analysis, domes would be lower in profile but generally broader than silos.

[3] Note that the gauge refers to the distance between the two rails that the crane would travel along.

[4] Note that only up to five gantry cranes would be added under the proposed project, although the description considers six possible locations. This is to provide flexibility based on future market needs.

existing industrial character at the project site. Other project-related elements, such as a new centralized gate and the additional open storage space, would not have a substantial effect on the visual quality and character of the site and surrounding areas due to their lack of visibility, including from KOP 2, their similarity to existing operations, or the general improvement to existing site conditions that would result from their implementation (such as from replacing the existing guard shack with an improved facility). However, as stated above, the introduction of gantry cranes 270 feet in height would introduce large structures into the viewshed between KOP 2 and the Coronado Bridge, and existing views of the bridge would be significantly affected (**Impact-AES-1**). Project implementation would substantially degrade the existing visual quality of the site and its surroundings as viewed from KOP 2. No feasible mitigation is available to reduce the visual presence of the proposed cranes. Therefore, this visual impact would be significant and unavoidable.

KOP 3

Visual Quality and Character with Full TAMT Plan Buildout

The proposed changes associated with the other future components at the project site would be noticeable from KOP 3, including the removal of Warehouse C, the addition of silos or domes, and the addition of up to five gantry cranes (see Figure 4.1-11). These changes would not alter the existing visual character of the project site as an industrial marine terminal; however, the introduction of gantry cranes would be highly noticeable and impacts related to changes to the existing visual quality of the project site are considered to be significant. As discussed above under the existing visual quality and character from KOP 3, existing visual quality is defined by expansive views of the bay and views of downtown. While views of the bay from KOP 3 would remain unobstructed, the introduction of up to five gantry cranes at the project site would distract from views of the bay, as those views would include the largest visual elements from KOP 3 (see Figure 4.1-11). The cranes would dominate views from KOP 3 and would appear similar in height to some downtown high-rise buildings. While the cranes themselves would not equal or exceed the height of the downtown high-rise buildings, they would appear similar in height because they would be located closer to KOP 3 along the water. Other changes to the project site could include modifying the gray building of Warehouse C with general cargo or dry bulk operations. This would represent some change in the visual appearance of the project site; however, such changes would be less than significant given they are consistent with the surrounding character and expected on a marine industrial terminal. The introduction of up to five gantry cranes up to 270 feet tall, however, would substantially degrade the existing visual quality of the project site and its surroundings as viewed from KOP 3 (**Impact-AES-1**). No feasible mitigation is available to reduce the visual presence of the proposed cranes. Therefore, this visual impact would be significant and unavoidable.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component would not substantially degrade the existing visual character or quality of the site and its surroundings. Impacts would be less than significant.

Full TAMT Plan Buildout

The other future components of the TAMT plan would substantially degrade the existing visual character or quality of the site and its surroundings. Potentially significant impact(s) include:

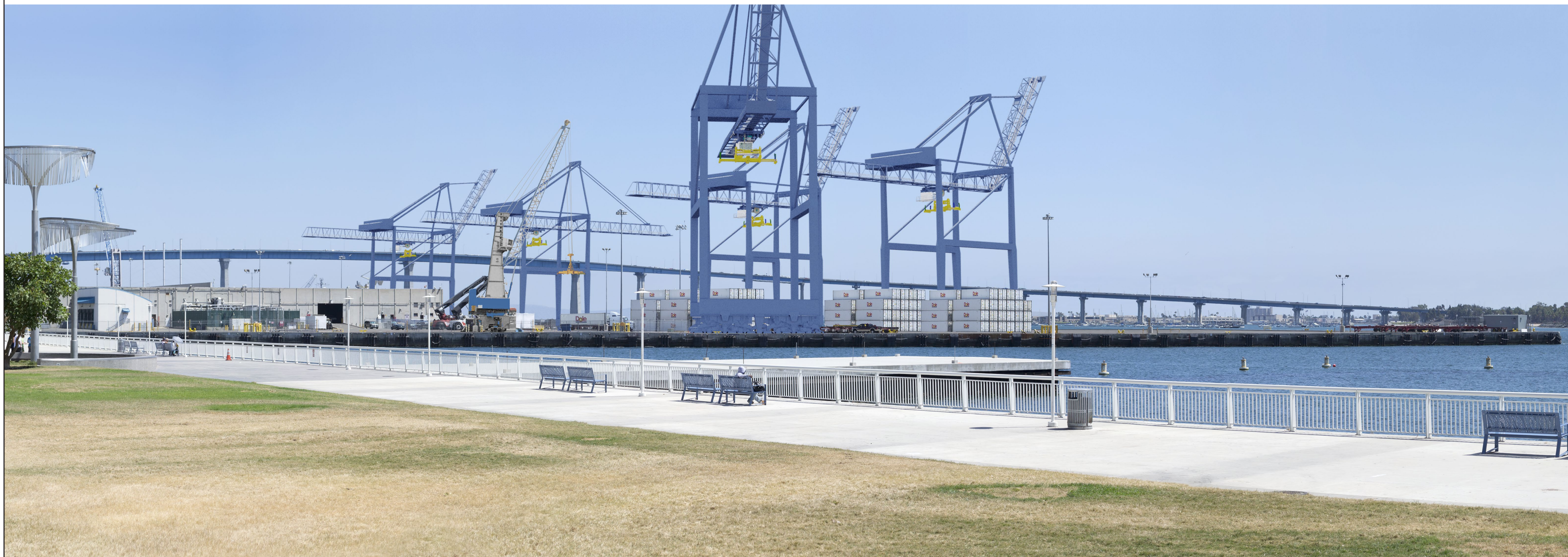

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Figure 4.1-10
KOP 2 – Convention Way Basin Viewshed (Proposed)

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Figure 4.1-11
KOP 3 – Coronado Tidelands Park Viewshed (Proposed)

Impact-AES-1: Visual Impacts from Installation of up to Five Gantry Cranes. Implementation of up to two gantry cranes at Berths 10-1/10-2, two gantry cranes at Berths 10-3/10-4, and up to two gantry cranes at Berths 10-5/10-6 (not to exceed a total of 5 cranes) would result in a significant adverse change to the existing visual character and quality of the project site from key observation points surrounding the project site.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

Mitigation measures for structures whose height, mass, or bulk result in a significant impact on views generally include actions that are capable of screening or otherwise reducing the visual impact of the structure. Given the height of the proposed gantry cranes, potential mitigation, such as a visual barrier, would not be feasible because the barrier would have to be at least 270 feet in height, crane operation would not be possible if a barrier were installed around each crane, and a barrier of sufficient height to screen the proposed cranes would itself result in a significant change in the existing visual character and quality of the project site. Reducing the maximum height of the proposed cranes also is not feasible because the movement of cargo and equipment anticipated under the TAMT plan would require cranes of the size proposed and reduced size cranes would be inadequate to perform the required tasks.

Level of Significance after Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

No feasible mitigation measures are available; **Impact-AES-1** would remain significant and unavoidable.

Threshold 4: Implementation of the proposed project would <u>not</u> create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Impact Discussion

Demolition and Initial Rail Component

Construction and Operation

The actions associated with the Demolition and Initial Rail Component would involve demolishing both transit sheds, replacing existing lighting poles, upgrading the on-terminal rail facility, implementing subsurface conduit and electrical improvements, constructing a new 782-square-foot electrical gear room, installing restroom facilities, installing an information technology room, and constructing a 850-square-foot outdoor storage facility, none of which would result in the introduction of new source of substantial light or glare. The demolition of the existing transit sheds would provide an additional outside storage area that could contain a variety of cargo types that would vary from day to day; however, such uses already exist within the project site and the additional storage area would not result in new lighting or glare. The existing lighting poles would be replaced with new energy-efficient lights, but the amount of lighting would remain similar to the existing condition and would be shielded and pointed downward to direct light onto the terminal and to avoid spill light onto adjacent land uses and the open water of the bay. On-terminal rail improvements would not have any effect on existing lighting and glare. The new modular office and electrical gear room would replace the existing offices located within Transit Shed #2 and would not have any excessive lighting or glare associated with its installation or operation, while the outdoor storage area would be located within the area of the pole lighting and would not require any additional lighting and no additional glare would be created. Impacts would be less than significant and no mitigation measures would be required.

Full TAMT Plan Buildout

Construction

Light

As noted above under Section 4.1.2.4, the project site is located in a highly urbanized part of San Diego where existing ambient lighting levels are considered to be high. In addition, because the project site currently includes nighttime operations, the project site already includes sources of nighttime lighting. These sources include boom lighting and mast lighting for security and operational activities as well as floodlights on the bottom of crane booms and the sides of crane structures for illuminating during nighttime loading and off-loading of vessels, barges, and containers. Construction required to implement the TAMT plan would be limited to times that would not violate the City of San Diego Noise Abatement and Control Ordinance Section 59.5.0404, which specifies that any loud construction noise is only permitted from 7 a.m. to 7 p.m., Monday through Saturday. As such, project construction activities that would require nighttime lighting would cease by 7 p.m. This would require any construction that would generate loud noises and any light associated with such construction to cease operation by 7 p.m. When necessary to illuminate construction activities occurring after sunset, lighting sources during construction would consist of floodlights that would be focused downward on the work area to minimize light spillover. As such, the proposed project construction lighting would not result in high-brightness illuminated surfaces that would cause light spillover off site, and would not result in substantial changes to existing artificial light conditions or interfere with offsite activities. Therefore, construction lighting would not create a new source of substantial light that would adversely affect day or nighttime views in the area, and impacts would be less than significant.

Glare

Increased truck traffic and transport of construction materials to the project site would temporarily increase glare conditions as a result of light reflecting off vehicle windshields and construction materials. However, this increase in glare would be temporary and would not affect existing glare conditions, which already involve varying degrees of vehicle and equipment activity—from light activity to heavy activity. Travel routes for construction traffic would include Harbor Drive and surrounding roadways, which are considered highly traveled routes that characteristically experience moderate levels of daytime glare from light reflecting off vehicle windshields. As such, the temporary increase in motor vehicle traffic that would occur during construction of the proposed project would not be considered a new source of substantial glare and would also not introduce a significant number of new sources of glare. The increased truck traffic would blend in with the existing traffic and would be comparable to other truck traffic created by construction in the downtown community. Therefore, construction of the proposed project would not create a new source of substantial glare that would affect daytime views in the area. Impacts would be less than significant.

Operation

Light

Once operational, the project site would include more laydown areas for cargo to be stored and would include replaced light poles. Existing lighting on the transit sheds (as part of the Demolition and Initial Rail Component) and Warehouse C would be removed, and new exterior lighting would be installed on the proposed 100,000-square-foot consolidated dry bulk facility and/or the 108,000-metric-ton-capacity dry bulk silos (or domes). Additionally, up to five new gantry cranes may be installed, along with other permanent operational equipment. The cranes would be equipped with night lighting to allow operational activities to continue through nighttime hours. Any lighting installed would be visible from offsite locations and would contribute to the overall ambient glow of the project site and surrounding areas; however, lighting from onsite uses would be designed so as not to spill directly onto other areas, consistent with Section 142.0740 of the City of San Diego Municipal Code, and the proposed conditions would be similar to existing conditions because nighttime activities already occur at the project site and similar conditions are located farther south along the waterfront.

Finally, headlights from delivery trucks and other motor vehicles traveling along Park Boulevard and surrounding roadways would represent an additional light source related to the project. The roadways in the project vicinity, including Harbor Drive, Crosby Road, and Cesar E. Chavez Parkway, have low to high levels of lighting currently resulting from vehicle headlights. Therefore, a moderate increase in the number of vehicles traveling to and from the project site would not represent a new substantial source of nighttime lighting. Moreover, views of headlights originating from the project site would be partially obscured from several viewers in the downtown community by changes in topography and intervening development. Overall, existing nighttime views in the area surrounding the project site are already compromised due to the high level of nighttime lighting. A substantial change in lighting would not occur as a result of the project, and contributions to increased ambient glow would not represent a significant change in existing conditions that would be perceptible from surrounding sensitive viewing areas. Impacts would be less than significant.

Glare

Improvements included as part of the TAMT plan would not generally include the introduction of new reflective surfaces. Proposed project improvements, such as removal of transit sheds and Warehouse C, new storage structures (up to 100,000 square feet), a combination of new domes and/or silos near the existing silos (up to 108,000 metric tons of dry bulk capacity), and gantry cranes along the western edge of the project site, would not require or be designed with reflective surfaces. Therefore, the proposed changes, including any new structures, would not result in a substantial increase in glare, and impacts would be less than significant.

The proposed project would also result in increased motor vehicle traffic on onsite and surrounding roadways, including Harbor Drive, Crosby Road, and Cesar E. Chavez Parkway. These vehicles would potentially produce glare from light reflecting off vehicle windshields. Harbor Drive and surrounding roadways are already considered highly traveled routes that currently experience moderate levels of daytime glare from light reflecting off vehicle windshields. As such, the permanent increase in motor vehicle traffic that would occur during operation of the project would not be considered a new source of substantial glare because it would only contribute to existing levels of glare along these roadways and the addition would have no effect associated with expanding the area affected by existing glare. As such, implementation of the proposed project would not create a new source of substantial daytime glare that would that would adversely affect daytime views. Impacts would be less than significant.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Implementation of the Demolition and Initial Rail Component of the TAMT plan would not create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area. Impacts would be less than significant.

Full TAMT Plan Buildout

Implementation of the TAMT plan would not create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area. Impacts would be less than significant.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

No mitigation is required.

Level of Significance after Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

Impacts would be less than significant.

4.2.1 Overview

This section describes the existing conditions and applicable laws and regulations for air quality and health risk. The section also discusses the proposed project's potential to increase air emissions in the region. Impacts on air quality are considered significant if the proposed project were to (1) conflict with or obstruct implementation of the applicable air quality plan, (2) violate any air quality standard or contribute substantially to an existing or projected air quality violation, (3) result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard, (4) expose sensitive receptors to substantial pollutant concentrations, or (5) create objectionable odors affecting a substantial number of people.

Table 4.2-1 summarizes the significant impacts and mitigation measures discussed in this section.

Table 4.2-1. Summary of Significant Impacts and Mitigation Measures

Summary of Potentially Significant Impact(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-AQ-1: Emissions in Excess of Criteria Pollutant Thresholds During TAMT Plan Buildout Construction	**MM-AQ-1:** Implement Best Management Practices During Construction of Future TAMT Plan Components	Significant and Unavoidable	Mitigation would reduce project-related construction emissions but, without quantification, emissions would remain above thresholds.
Impact-AQ-2: Emissions in Excess of Criteria Pollutant Thresholds During TAMT Plan Buildout Operations	**MM-AQ-2:** Implement Diesel-Reduction Measures During Construction and Operations of Future TAMT Plan Components **MM-AQ-3:** Comply with San Diego Unified Port District Climate Action Plan Measures **MM-AQ-4:** Implement Best Available Control Technologies for Conveyor System and Bulk Discharge Unloader for Future Dry Bulk Operations associated with the TAMT Plan **MM-AQ-5:** Implement Vessel Speed Reduction Program Beyond Climate Action Plan Compliance for Future Operations Associated with the TAMT	Less than Significant ~~and Unavoidable~~	Mitigation would reduce project-related operational ~~emissions, but~~ VOC, NO_X, CO, SO_X, PM10, and PM2.5 emissions ~~would remain above~~below thresholds.

Summary of Potentially Significant Impact(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
	Plan **MM-AQ-6:** Electric Cargo Handling Equipment Upgrades **MM-AQ-7:** Annual Inventory Submittal and Periodic Technology Review **MM-AQ-8:** Implement ~~a Sustainable Leasing~~an Exhaust Emissions Reduction Program at the Tenth Avenue Marine Terminal **MM-AQ-9:** Use of At-Berth Capture and/or Control System to Reduce Vessel Emissions		
Impact-AQ-3: Cumulative Emissions in Excess of Criteria Pollutant Thresholds during TAMT Plan Buildout Operations.	**MM-AQ-2 through MM-AQ-~~8~~9**	Less than Significant ~~and Unavoidable~~	Mitigation would reduce project-related operational ~~emissions, but~~ VOC, NO_X, CO, SO_X, PM10, and PM2.5 cumulative emissions ~~would remain above thresholds~~below the threshold.
Impact-AQ-4: Health Risk in Excess of NO_X Thresholds During Full TAMT Plan Buildout Operations	**MM-AQ-1 through MM-AQ-~~8~~9**	Significant and Unavoidable	Mitigation would reduce incremental health risk but not to a level below thresholds.

4.2.2 Existing Conditions

4.2.2.1 Climate and Atmospheric Conditions

Regional

Set within the TAMT, the proposed project is within the San Diego Air Basin (SDAB), which covers all of San Diego County. The SDAB is bordered by the Pacific Ocean to the west, the South Coast Air Basin (SCAB) to the north, the Salton Sea Air Basin to the east, and the U.S.–Mexico border to the south.

The climate in Southern California, including the SDAB, is controlled largely by the strength and position of a subtropical high-pressure cell over the Pacific Ocean. Areas within 3–5 miles of the coast, including the project site, experience moderate temperatures and comfortable humidity (SDAPCD 2010a). Precipitation is mostly limited to a few storms during the winter season. Winds in the vicinity of the project site usually are driven by the dominant land/sea breeze circulation system. During the day, regional wind patterns are dominated by onshore sea breezes. At night, wind generally slows, remains still, or reverses direction, traveling toward the sea.

The atmospheric conditions of the SDAB contribute to the region's air quality conditions. Because of its climate, the SDAB experiences frequent temperature inversions. Typically, temperature decreases with height. However, under inversion conditions, temperature increases as altitude increases. Temperature inversions prevent the air close to the ground from mixing with the air at higher elevations. As a result, air pollutants are trapped near the ground. During the summer, the interaction between the ocean surface and the lower layer of the atmosphere creates a moist marine layer. An upper layer of warm air mass forms over the cool marine layer, preventing air pollutants from dispersing upward. Additionally, hydrocarbons (HC) and nitrogen oxides (NO_X) react under strong sunlight and temperature, creating smog. Light and daytime winds, primarily from the northwest, further aggravate this condition by driving the air pollutants inland toward the warmer foothills. During the fall and winter, elevated carbon monoxide (CO) and NO_X levels usually occur during fall or winter, on days with summer-like conditions (SDAPCD 2010b).

High air pollution levels in coastal communities of San Diego can often occur when polluted air from the SCAB, particularly from Los Angeles, travels southwest over the ocean at night and is brought on shore into San Diego by the sea breeze during the day. Smog transported from the SCAB is a key factor on more than 50 of the days San Diego exceeds clean air standards. Ozone (O_3) and its precursor emissions (HC and NO_X) are transported to San Diego during relatively mild Santa Ana weather conditions. During strong Santa Ana weather conditions, however, pollutants are pushed away from San Diego far out to sea. When smog is blown in from the SCAB at ground level, the highest O_3 concentrations are measured at coastal and near-coastal monitoring stations. When the transported smog is elevated, coastal sites may be passed over, and the transported ozone is measured farther inland and on the mountain slopes (SDAPCD 2010b).

Local

The weather station closest to the project site is the San Diego/Lindbergh Field Station, which is approximately 2.5 miles to the northwest. Given its proximity, historic climatic conditions at San Diego/Lindbergh Field are assumed to be representative of the prevailing climatic conditions. The annual average temperature at Lindbergh Field is 63°F, with an average winter temperature of 57°F and an average summer temperature of 69°F. Total annual precipitation averages 10.13 inches. Precipitation occurs mostly during the winter and relatively infrequently during the summer (WRCC 2014).

The project site is in the vicinity of two wind monitoring stations operated by the San Diego Air Pollution Control District (SDAPCD): Perkins Elementary School, approximately 0.4 mile southeast of the project site in the Barrio Logan community, and the San Diego/Lindbergh Field Station, approximately 6.5 miles northwest of the project site. Wind patterns at Perkins School indicate a prominence of westerly winds that average 4.27 miles per hour (mph), with calm winds present approximately 10.01 percent of the time. Wind monitoring data recorded at the San Diego/Lindbergh Field Station indicate a more west–northwest prominence, averaging 6.33 mph (2.83 meters per second) with calm winds present approximately 0.84 percent of the time (Reeve pers. comm.). A wind rose showing wind directions, speeds, and frequency in the project vicinity is shown in Appendix F.

4.2.2.2 Air Quality Conditions

Regional

The Clean Air Act (CAA) requires the U.S. Environmental Protection Agency (EPA) to designate areas within the country as either attainment or nonattainment for each criteria pollutant based on whether the national ambient air quality standards (NAAQS) have been achieved. Similarly, the California CAA requires the California Air Resources Board (ARB) to designate areas within California as either attainment or nonattainment for each criteria pollutant based on whether the California Ambient Air Quality Standards (CAAQS) have been achieved. If a pollutant concentration is lower than the state or federal standard, the area is classified as being in attainment for that pollutant. If a pollutant violates the standard, the area is considered a nonattainment area. If data are insufficient to determine whether a pollutant is violating the standard, the area is designated unclassified. Under the California CAA, areas are designated as nonattainment for a pollutant if air quality data show that a state standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a state standard and are not used as a basis for designating areas as nonattainment. The attainment status of San Diego County is summarized in Table 4.2-2.

Table 4.2-2. Federal and State Attainment Status for San Diego County

Criteria Pollutant	Federal Designation	State Designation
Ozone (O_3) (8-hour)	Nonattainment – Marginal	Nonattainment
Carbon Monoxide (CO)	Attainment/Maintenance	Attainment
Respirable Particulate Matter (PM10)	Attainment	Nonattainment
Fine Particulate Matter (PM2.5)	Unclassifiable/Attainment	Nonattainment
Nitrogen Dioxide (NO_2)	Attainment	Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
Lead (Pb)	Attainment	Attainment
Sulfates	(No federal standard)	Attainment
Hydrogen Sulfide	(No federal standard)	Unclassified[1]
Visibility	(No federal standard)	Unclassified

Sources: ARB 2014a; SDAPCD 2016.

[1] At the time of designation, if the available data do not support a designation of attainment or nonattainment, the area is designated as unclassifiable.

Local

SDAPCD maintains and operates a network of ambient air monitoring stations throughout the county. The purpose of the monitoring stations is to measure ambient concentrations of the pollutants and determine whether the ambient air quality meets the CAAQS and NAAQS. The ambient monitoring station closest to the proposed project is the San Diego–Beardsley Street station (ARB 80142), approximately 0.3 mile to the east.

Concentrations of pollutants from the San Diego–Beardsley Street station over the last 4 years (2012–2015) of complete data are presented in Table 4.2-3. Over the previous 4 years of available data, monitoring has shown the following pollutant concentrations trends: the 8-hour O_3 CAAQS was exceeded twice in 2014; 24-hour particulate matter (PM) less than or equal to 10 microns in diameter (PM10) CAAQS was exceeded once in 2013, but did not exceed the NAAQS; and 24-hour PM less than or equal to 2.5 microns in diameter (PM2.5) NAAQS was exceeded once each in 2012 and 2013. No violations of the CO CAAQS or NAAQS or the nitrogen dioxide (NO_2) NAAQS were recorded.

Table 4.2-3. Ambient Background Concentrations from the San Diego–Beardsley Street Monitoring Station

Pollutant Standards	2012	2013	2014	2015
1-Hour Ozone (O_3)				
Maximum Concentration (ppm)	0.071	0.063	0.093	0.089
Number of Days Standard Exceeded				
CAAQS 1-hour (>0.09 ppm)	0	0	0	0
8-Hour Ozone (O_3)				
State Maximum Concentration (ppm)	0.065	0.053	0.073	0.067
National Maximum Concentration (ppm)	0.065	0.053	0.072	0.067
National 4th Highest Concentration (ppm)	0.052	0.052	0.068	0.061
Number of days standard exceeded				
CAAQS 8-hour (>0.070 ppm)	0	0	2	0
NAAQS 8-hour (> 0.075 ppm)	0	0	0	0
Carbon Monoxide (CO)				
Maximum Concentration 8-hour Period (ppm)	1.9	2.1	1.9	1.9
Maximum Concentration 1-hour Period (ppm)	2.6	3.0	2.7	2.6
Number of days standard exceeded				
NAAQS 8-hour (≥9 ppm)	0	0	0	0
CAAQS 8-hour (≥9.0 ppm)	0	0	0	0
NAAQS 1-hour (≥35 ppm)	0	0	0	0
CAAQS 1-hour (≥20 ppm)	0	0	0	0
Nitrogen Dioxide (NO_2)				
Maximum 1-hour Concentration	65.0	72.0	75.0	62.0
Annual Average Concentration	13	14	13	14
Number of Days Standard Exceeded				
CAAQS 1-Hour (0.18 ppm)	0	0	0	0
NAAQS 1-Hour (0.100 ppm)	0	0	0	0
Suspended Particulates (PM10)				
State Maximum 24-hour Concentration	47.0	92.0	41.0	54.0
National Maximum 24-hour Concentration	45.0	90.0	40.0	53.0
State Annual Average Concentration (CAAQS = 20 μg/m^3)	22.2	25.4	23.8	23.0
Number of Days Standard Exceeded				

Pollutant Standards	2012	2013	2014	2015
CAAQS 24-hour (>50 μg/m^3)	0	1	0	0
NAAQS 24-hour (>150 μg/m^3) - *Expected Days*	0	0	0	0
Suspended Particulates (PM2.5)				
National Maximum 24-hour Concentration (μg/m^3)	39.8	37.4	36.7	44.9
24-hour Standard 98th Percentile (μg/m^3)	24.1	19.6	24.8	19.6
National Annual Average Concentration (NAAQS = 12.0 μg/m^3)	11.0	10.3	10.1	9.3
State Annual Average Concentration (CAAQS = 12 μg/m^3)	--	10.4	10.2	10.2
Number of Days Standard Exceeded				
NAAQS 24-Hour (>35 μg/m^3)	1	1	1	0

Source: ARB 2015a; EPA 2015a. Data compiled by ICF.
ppm = parts per million; μg/m^3 = micrograms per cubic meter

Pollutants of Concern

Criteria Pollutants

As discussed above, the federal and state governments have established NAAQS and CAAQS, respectively, for six criteria pollutants: O_3, lead, CO, NO_2, sulfur dioxide (SO_2), and PM10 and PM2.5. Ozone and NO_2 are considered regional pollutants because they (or their precursors) affect air quality on a regional scale. Pollutants such as PM10, PM2.5, CO, SO_2, and lead are considered local pollutants that tend to accumulate in the air locally.

The primary pollutants of concern in the project area are O_3 (including NO_X and reactive organic gases [ROGs]), CO, and PM. Principal characteristics surrounding these pollutants are discussed below.

- **Ozone**, or smog, is a photochemical oxidant that is formed when ROG and NO_X (both by-products of the internal combustion engine) react with sunlight. O_3 poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Additionally, O_3 has been tied to crop damage, typically in the form of stunted growth and premature death. O_3 can also act as a corrosive, resulting in property damage such as the degradation of rubber products. Meteorology and terrain play major roles in O_3 formation. Ideal conditions occur during summer and early autumn, on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. O_3 is considered a regional pollutant; high levels often occur downwind of the emission source because of the length of time between when the ROG form and when they react with light to change to O_3.
- **Organic Gases—Precursors to Ozone** include ROGs and volatile organic compounds (VOCs). HC are organic gases that are formed solely of hydrogen and carbon. ROGs include all HC except those exempted by ARB. Therefore, ROGs are a set of organic gases based on state rules and regulations. VOCs are similar to ROGs in that they include all organic gases except those exempted by federal law. Both VOCs and ROGs are emitted from incomplete combustion of HC

or other carbon-based fuels. Combustion engine exhaust, oil refineries, and oil-fueled power plants are the primary sources of HC. Another source of HC is evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint. Generally speaking, and in this analysis, ROGs and VOCs are used interchangeably to refer to the HC that are a precursor to O_3 formation.

The primary health effects of HC result from the formation of O_3 and its related health effects. High levels of HC in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. There are no separate ambient air quality standards for ROGs. Carcinogenic forms of ROG are considered to be toxic air contaminants (TACs), which are described below. An example is benzene, which is a carcinogen.

- **Nitrogen Oxides** serve as integral participants in the process of photochemical smog production. The two major forms of NO_X are nitric oxide (NO) and NO_2. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. NO_2 is a reddish-brown irritating gas formed by the combination of NO and oxygen. NO_X acts as an acute respiratory irritant and increases susceptibility to respiratory pathogens. NO_X is a precursor to O_3 formation.
- **Carbon Monoxide** is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation.
- **Particulate Matter** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized—inhalable course particles, or PM10, and inhalable fine particles, or PM2.5. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. However, wind on arid landscapes also contributes substantially to local particulate loading. Both PM10 and PM2.5 may adversely affect the human respiratory system, especially in those people who are naturally sensitive or susceptible to breathing problems.
- **Sulfur Dioxide** is a product of high-sulfur fuel combustion. Main sources of SO_2 are coal and oil used in power stations, in industries, and for domestic heating. Industrial chemical manufacturing is another source of SO_2, which is an irritant gas that attacks the throat and lungs. It can cause acute respiratory symptoms and diminished ventilator function in children. SO_2 also can cause plant leaves to turn yellow and can erode iron and steel. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary-source emissions of SO_2 and limits on the sulfur content of fuels.

Health Effects of Criteria Air Pollutants

Criteria air pollutants are recognized to have a variety of health effects on humans. Research by ARB shows that exposure to high concentrations of air pollutants can trigger respiratory diseases, such as asthma, bronchitis, and other respiratory ailments; and cardiovascular diseases. A healthy person exposed to high concentrations of air pollutants may become nauseated or dizzy, may develop a headache or cough, or may experience eye irritation and/or a burning sensation in the chest. O_3 is a powerful irritant that attacks the respiratory system, leading to the damage of lung tissue. Inhaled particulate matter, NO_2, and SO_2 can directly irritate the respiratory tract, constrict airways, and interfere with the mucous lining of the airways. Exposure to CO, when absorbed into the bloodstream, can endanger the hemoglobin, the oxygen-carrying protein in blood, by reducing the amount of oxygen that reaches the heart, brain, and other body tissues. When air pollutant levels are high, children, the elderly, and people with respiratory problems are advised to remain indoors. Outdoor exercise also is discouraged because strenuous activity may cause shortness of breath and chest pains. A brief discussion of the criteria pollutants and their effects on human health and the environment is provided in Table 4.2-4.

Table 4.2-4. Health Effects Summary of the Major Criteria Air Pollutants

Pollutants	Sources	Primary Effects
Ozone (O_3)	• Atmospheric reaction of organic gases with NO_2 in sunlight	• Aggravation of respiratory and cardiovascular diseases • Irritation of eyes • Impairment of cardiopulmonary function • Plant leaf injury
Nitrogen Dioxide (NO_2)	• Motor vehicle exhaust • High temperature stationary combustion • Atmospheric reactions	• Aggravation of respiratory illness • Reduced visibility • Reduced plant growth • Formation of acid rain
Carbon Monoxide (CO)	• Incomplete combustion of fuels and other carbon containing substances, such as motor exhaust • Natural events, such as decomposition of organic matter	• Reduced tolerance for exercise • Impairment of mental function • Impairment of fetal development • Death at high levels of exposure • Aggravation of some heart diseases (angina)
Particulate Matter (PM2.5 and PM10)	• Stationary combustion of solid fuels • Construction activities • Industrial processes • Atmospheric chemical reactions	• Reduced lung function • Aggravation of the effects of gaseous pollutants • Aggravation of respiratory and cardio-respiratory diseases • Increased cough and chest discomfort • Soiling • Reduced visibility
Sulfur Dioxide (SO_2)	• Combustion of sulfur-containing fossil fuels • Smelting of sulfur-bearing metal ores • Industrial processes	• Aggravation of respiratory diseases (asthma, emphysema) • Reduced lung function • Irritation of eyes • Reduced visibility • Plant injury • Deterioration of metals, textiles, leather, finishes, coatings, etc.
Lead (Pb)	• Contaminated soil	• Impairment of blood function and nerve construction • Behavioral and hearing problems in children

Source: SCAQMD 2005

Toxic Air Contaminants

TACs are pollutants that have no ambient standard but pose the potential to increase the risk of developing cancer or acute or chronic health risks. The most relevant TAC associated with the proposed project is diesel particulate matter (DPM). For TACs that are known or suspected carcinogens, ARB has consistently found that there are no levels or thresholds below which exposure is risk-free. Therefore, no NAAQS or CAAQS exist for TACs. Individual TACs vary greatly in the risks they present. At a given level of exposure, one TAC may pose a hazard that is many times greater than another. TACs are identified and their toxicity is studied by the California Office of Environmental Health Hazard Assessment (OEHHA). Adverse health effects of TACs can be carcinogenic (cancer-causing), short-term (acute) noncarcinogenic, and long-term (chronic) noncarcinogenic. Direct exposure to these pollutants has been shown to cause cancer, birth defects, damage to the brain and nervous system, and respiratory disorders.

Sensitive Receptors

The impact of air pollutant emissions on sensitive members of the population is a special concern. Sensitive receptors are defined as locations where pollutant-sensitive members of the population may reside or where the presence of air pollutant emissions could adversely affect use of the land. ARB has identified the following people as the most likely to be affected by air pollution: children younger than 14, the elderly older than 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors (ARB 2005a). Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder-care facilities, elementary schools, and parks (see Figure 4.2-1 for sensitive receptor locations in the project area).

Land uses within vicinity of the project site include a mix of recreation (including Embarcadero Park and the San Diego Convention Center) to the north and northwest, Burlington Northern Santa Fe (BNSF) railyard to the north, and Port industrial uses to the south. The closest residential land uses to the project site are the residences approximately 1,300 feet north, 1,400 feet west, and 1,500 feet to the east-northeast (in the Sigsbee Row neighborhood) of the project boundary. There are also many nearby recreational land uses, including Cesar Chavez Park, Petco Park, other outdoor parks, and promenades. The closest sensitive receptors to truck travel along Harbor Drive and 28th Street are the multi- and single-family residential areas directly adjacent to truck travel along both 28th Street and Boston Avenue and the residential areas along Harbor Drive, Tidelands Avenue, and Bay Marine Drive near the National Distribution Center. Additionally, there are schools (Perkins Elementary, Logan Elementary, and Monarch School) and residences approximately 380 feet north of Harbor Drive as well as recreational receptors adjacent to truck travel at Cesar Chavez Park. The closest sensitive receptors to ocean-going vessels (OGV) and tug travel within the harbor include the various multi- and single-family residential areas in Point Loma, Shelter Island, and Coronado, multi-family residential areas in Downtown, and the various recreational areas along Point Loma, Shelter Island, Harbor Island, along the Embarcadero, and in Coronado.

4.2.2.3 Background Air Quality and Health Risk

Background Criteria Pollutant Emissions

ARB periodically develops existing and future year emission inventories for the entire state and for individual regions by source (e.g., stationary, mobile, and area-wide). An inventory of the most recent inventory year (2012) and future year 2020 and 2035 statewide projections for major sources and goods movement sources relevant to the project (e.g., heavy-duty trucks, vessels, cargo handling equipment, and freight rail) is presented in Table 4.2-5. As shown, emissions from certain pollutants are expected to decrease over time, particularly due to mobile source-related regulations. Relative to the state as a whole, Port operations and general goods movement account for minor amounts of VOC, PM10, and PM2.5 (between 2 percent and 6 percent), but contribute a relatively large portion of statewide NO_X (33 percent) and SO_X (37 percent) under 2012 conditions. Current regulations in place to reduce combustion-related NO_X and SO_X will continue to drive down emissions from trucks, cargo handling equipment, and freight rail. Note that Table 4.2-5 does not include all sources included in the inventory but only those major sources relevant to the project.

Table 4.2-5. Estimate of Statewide Emissions by Source (pounds per day)

Emission Source	VOC	NO_X	CO	SO_X	PM10	PM2.5
2012						
Stationary Sources	768,126	567,155	519,358	103,673	245,609	123,394
Area-wide Sources	1,217,590	150,163	1,941,307	12,221	2,426,456	542,012
Mobile Sources	1,491,497	3,493,996	12,283,924	94,271	247,676	170,637
Heavy Duty Trucks	*41,804*	*745,404*	*196,154*	*1,175*	*35,831*	*29,135*
Vessel Transit	*16,214*	*374,106*	*32,566*	*65,650*	*13,459*	*13,126*
Vessel Maneuvering	*2,456*	*30,479*	*9,160*	*730*	*1,117*	*1,017*
Vessel Hoteling	*1,298*	*30,403*	*2,897*	*6,436*	*1,076*	*1,037*
Cargo Equipment	*690*	*9,255*	*6,034*	*15*	*233*	*214*
Freight Rail	*14,844*	*183,591*	*57,358*	*168*	*5,761*	*5,300*
Statewide Total	**3,477,213**	**4,211,313**	**14,744,589**	**210,165**	**2,919,741**	**836,043**
2020						
Stationary Sources	849,810	582,945	586,152	110,314	280,389	137,533
Area-wide Sources	1,260,053	147,662	1,957,717	12,698	2,516,533	556,668
Mobile Sources	1,011,834	2,376,096	8,793,307	41,767	207,135	128,205
Heavy Duty Trucks	*28,591*	*385,136*	*154,840*	*1,588*	*17,503*	*11,042*
Vessel Transit	*26,171*	*412,240*	*52,264*	*13,582*	*9,604*	*9,359*
Vessel Maneuvering	*2,897*	*23,383*	*11,838*	*353*	*699*	*627*
Vessel Hoteling	*1,191*	*22,114*	*2,599*	*5,060*	*848*	*819*
Cargo Equipment	*808*	*5,464*	*11,677*	*30*	*129*	*118*
Freight Rail	*10,935*	*196,710*	*77,350*	*224*	*5,054*	*4,649*
Statewide Total	**3,121,697**	**3,106,703**	**11,337,177**	**164,779**	**3,004,057**	**822,406**
2035						
Stationary Sources	962,057	619,348	656,831	126,289	324,483	155,789

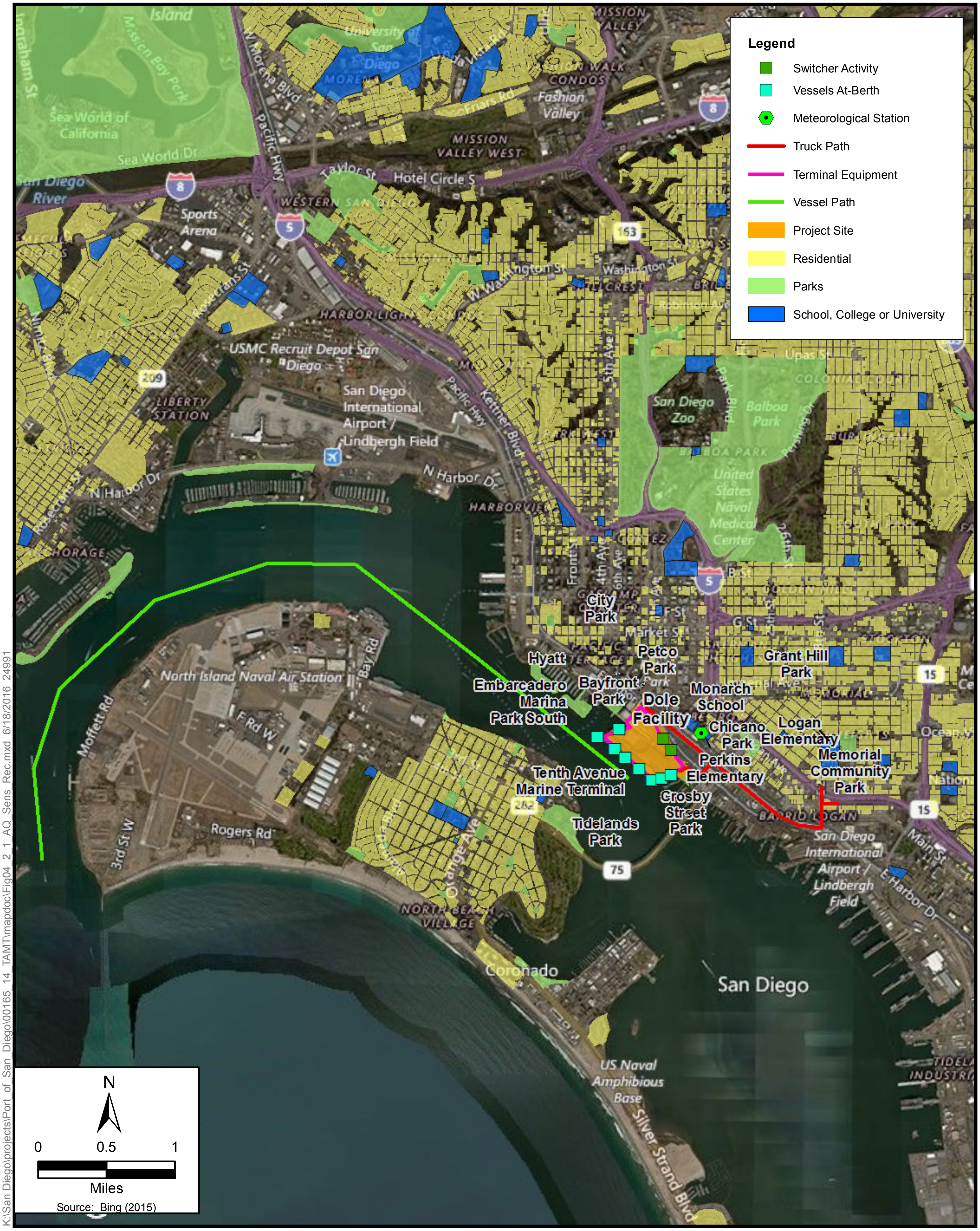

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Figure 4.2-1
Air Quality Sensitive Receptor Locations
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

Area-wide Sources	1,346,612	150,721	2,076,818	13,122	2,582,431	584,480
Mobile Sources	839,517	1,629,794	7,843,857	62,561	226,088	136,518
Heavy Duty Trucks	*39,055*	*334,920*	*216,255*	*2,274*	*24,561*	*15,358*
Vessel Transit	*53,028*	*323,955*	*105,223*	*26,950*	*19,262*	*18,780*
Vessel Maneuvering	*4,535*	*19,399*	*14,420*	*747*	*1,049*	*922*
Vessel Hoteling	*2,432*	*23,586*	*5,321*	*9,907*	*1,707*	*1,652*
Cargo Equipment	*1,231*	*4,554*	*26,321*	*70*	*147*	*136*
Freight Rail	*6,709*	*120,406*	*117,989*	*337*	*2,691*	*2,476*
Statewide Total	**3,148,186**	**2,399,863**	**10,577,506**	**201,973**	**3,133,002**	**876,787**

Source: ARB Almanac of Emissions (ARB 2013a).
Notes: Totals may not add exactly due to rounding. Emissions were converted from tons per day to pounds per day for illustrative purposes.

Background Toxic Air Contaminants and Health Risk

Between 1990 and 2007, ARB monitored outdoor concentrations for various TACs at two sites in the SDAB: Chula Vista and El Cajon. Based on this information, ARB estimated the overall ambient risk from all pollutants in the SDAB at 607 chances per million, 420 chances per million of which were attributed to DPM (ARB 2009). Note that DPM is not directly monitored because an accepted measurement method does not currently exist, but ARB estimated concentrations based on monitored PM10 data and the results from several studies on chemical speciation of ambient data (e.g., ratio of DPM to monitored PM10).

More recently, the State released the California Communities Environmental Health Screening Tool (CalEnviroScreen), which provides a relative ranking of communities based on a selected group of environmental, health, demographic, and socioeconomic indicators. Neighborhoods near the project site represent some of the highest rankings (e.g., worst air quality) in the state. The project site itself (census tract 6073005100) is within the worst 86–90 percent air quality in the state. The Barrio Logan community both west/south (census tract 6073005000) and east/north of Interstate 5 (census tract 6073004900) is within the worst 96–100 percent in the state. Twenty-six communities in the San Diego region have been identified as disadvantaged and will be the target of cap-and-trade investment to improve public health, quality of life, and economic opportunity (Cal/EPA 2014).

Note that while the results of CalEnviroScreen provide information on background pollution that allows the state to prioritize funding resources, the scoring results are not directly applicable to project-level or cumulative impact analyses required under CEQA. As such, the information provided by CalEnviroScreen cannot substitute for analyzing a specific project's cumulative impacts as required in a CEQA environmental review (Cal/EPA 2014). The information presented herein regarding CalEnviroScreen is for illustrative purposes only.

Local Emissions at the Project Site

Activity at the project site generates criteria pollutant and TAC emissions. Specifically, criteria pollutant and TAC emissions result from activity associated with existing cargo throughput, including OGV activity; assist tug activity; tug and fuel barge activity; BNSF rail activity; truck travel; cargo handling equipment; worker trips; and loading and unloading of dry bulk. A description of each of these sources and associated emissions modeling are provided in Section 4.2.4.1 below. Emissions associated with existing activity at the daily time scale (pounds per day) are presented in Table 4.2-6 and emissions associated with existing activity at the annual time scale (tons per year) are presented in Table 4.2-7. Note that the estimate of baseline emissions was revised based on two sets of assumptions that changed. First, the baseline emission estimates in the Draft EIR assumed one vessel call on a peak day. However, during the baseline period, there were five separate instances where three vessels called on TAMT at the same time. These three vessels represent the peak day under existing condition. Second, the baseline emission estimates in the Draft EIR assumed BNSF-owned GP-60 switchers perform all of the switching and rail activity between the yard and the terminal. However, through discussions with District staff, this assumption was revised to assume an existing railcar mover splits the rail activity between the yard and the terminal with the switchers. These revised assumptions change the estimate of emissions during the baseline period, as reflected in Table 4.2-7.

Local Health Risk near the Project Site

Activity at the project site generates TAC emissions that may affect neighboring communities. Specifically, TAC emissions result from activity associated with existing cargo throughput, including OGV activity, assist tug activity, tug and fuel barge activity, BNSF rail activity, truck travel, cargo handling equipment, worker trips, and loading and unloading of dry bulk. A description of each of these sources and associated emissions modeling are provided in Section 4.2.4.1 below. A summary of existing cancer risk, chronic hazard, and acute hazard indices at nearby sensitive receptor locations is presented in Table 4.2-8. At the maximum residential and school receptors, the greatest contributors to cancer risk are terminal equipment (49–50% of maximum risk), vessel hoteling (42–43%), and (to a lesser extent) vessel activity (2–3%), rail activity (2–3%), and trucks (2–3%). The greatest contributors to cancer risk associated with existing terminal operations at the maximum park receptor are terminal equipment (41%), vessel hoteling (35%), and trucks (21%). The maximally exposed residential areas, parks (namely Cesar Chavez Park), and school receptor locations (namely Perkins Elementary and Monarch School) are all close to the terminal and the railyard. Trucks entering and existing the main gate pass by Cesar Chavez Park, which explains the higher impact trucks have on those receptors. A breakdown of source contribution under existing conditions is provided in Appendix F. Table 4.2-8 reflects revisions to the assumptions regarding baseline rail activity, as discussed in the preceding paragraph that discuses baseline criteria pollutant and TAC emissions.

Table 4.2-6. Estimate of Existing Conditions at the Project Site (pounds per day)

Operational Element	VOC	NO_X	CO	SO_X	PM10	PM2.5
Dry Bulk (289,864 MT)						
Ocean-Going Vessels	~~10~~29	~~174~~523	~~14~~43	~~5~~16	~~3~~10	~~3~~9
Assist Tugs	~~<~~1	~~3~~10	~~3~~9	<1	<1	<1
Tugs and Fuel Barges	~~3~~10	~~33~~98	~~25~~74	<1	~~1~~3	~~1~~3
Trucks	2	85	5	<1	2	1
Worker Trips	<1	1	11	<1	1	<1
Rail - Regional Line Haul	9	247	29	1	6	6
Rail - Switching between Terminal and Yard	~~2~~1	~~58~~31	2	<1	1	<1
Cargo Handling Equipment	1	12	6	<1	<1	<1
Bulk Loading	-	-	-	-	583	172
Dry Bulk Existing Daily	**~~28~~53**	**~~613~~1,077**	**~~97~~181**	**~~7~~17**	**~~599~~608**	**~~184~~192**
Refrigerated Containers (637,931 MT)						
Ocean-Going Vessels	~~53~~158	~~1,145~~ 3,436	~~95~~284	~~36~~109	~~21~~64	~~20~~56
Assist Tugs	~~2~~5	~~12~~37	~~12~~35	<1	~~<~~1	~~<~~1
Tugs and Fuel Barges	~~13~~38	~~125~~374	~~94~~281	<1	413	413
Trucks	4	187	12	<1	5	2
Worker Trips	1	3	24	<1	3	1
Cargo Handling Equipment	2	27	14	0	1	1
Refrigerated Containers Existing Daily	**~~74~~207**	**~~1,499~~ 4,064**	**~~250~~651**	**~~37~~110**	**~~35~~87**	**~~28~~77**
Multi-Purpose General Cargo (85,131 MT)						
Ocean-Going Vessels	~~18~~54	~~330~~990	~~28~~84	~~11~~32	~~6~~19	~~6~~18
Assist Tugs	~~1~~2	~~6~~18	~~6~~17	<1	<1	<1
Tugs and Fuel Barges	~~6~~18	~~61~~184	~~46~~138	<1	~~2~~6	~~2~~6
Trucks	<1	9	1	<1	<1	<1
Worker Trips	<1	<1	3	<1	<1	<1
Rail - Regional Line Haul	9	247	29	1	6	6
Rail - Switching between Terminal and Yard	~~5~~1	12~~3~~	~~5~~6	<1	~~2~~<1	~~2~~<1
Cargo Handling Equipment	<1	4	2	<1	<1	<1
Multi-Purpose General Cargo Existing Daily	**~~40~~85**	**~~780~~1,463**	**~~120~~281**	**~~12~~34**	**~~18~~33**	**~~16~~31**
Total Daily Pounds from all cargo types	**~~141~~346**	**~~2,892~~ 6,534**	**~~467~~1,113**	**~~56~~161**	**~~652~~728**	**~~229~~300**

Source: Appendix F.
Notes: Totals may not add exactly due to rounding.

Table 4.2-7. Estimate of Existing Conditions at the Project Site (tons per year)

Operational Element	VOC	NO_X	CO	SO_X	PM10	PM2.5
Dry Bulk (289,864 MT)						
Ocean-Going Vessels	0.5	10.2	0.9	0.3	0.2	0.2
Assist Tugs	<0.0	0.2	0.2	<0.0	<0.0	<0.0
Tugs and Fuel Barges	<0.0	0.4	0.3	<0.0	<0.0	<0.0
Trucks	0.3	15.2	1.0	<0.0	0.1	0.1
Worker Trips	0.1	0.2	2.0	<0.0	0.0	<0.0
Rail - Regional Line Haul	0.1	2.~~7~~8	0.3	<0.0	0.1	0.1
Rail - Switching between Terminal and Yard	<0.0	0.~~6~~3	<0.0	<0.0	<0.0	<0.0
Cargo Handling Equipment	0.2	2.2	1.1	<0.0	0.1	0.1
Bulk Loading	-	-	-	-	105.0	30.9
Dry Bulk Existing Annual	**1.3**	**31.~~8~~5**	**5.8**	**0.4**	**105.5**	**31.3**
Refrigerated Containers (637,931 MT)						
Ocean-Going Vessels	5.1	~~121.0~~120.8	9.~~9~~8	4.0	2.3	2.1
Assist Tugs	0.1	0.6	0.6	<0.0	<0.0	<0.0
Tugs and Fuel Barges	0.2	1.7	1.3	<0.0	0.1	0.1
Trucks	0.7	36.5	2.3	<0.0	0.2	0.2
Worker Trips	0.1	0.5	4.4	<0.0	0.1	<0.0
Cargo Handling Equipment	0.4	4.8	2.5	<0.0	0.1	0.1
Refrigerated Containers Existing Annual	**6.6**	**164.9**	**20.9**	**4.1**	**2.8**	**2.5**
Multi-Purpose General Cargo (85,131 MT)						
Ocean-Going Vessels	1.0	19.5	1.7	0.7	0.4	0.4
Assist Tugs	<0.0	0.3	0.3	<0.0	<0.0	<0.0
Tugs and Fuel Barges	0.1	0.8	0.6	<0.0	<0.0	<0.0
Trucks	0.1	2.7	0.2	<0.0	<0.0	<0.0
Worker Trips	<0.0	0.1	0.6	<0.0	<0.0	<0.0
Rail - Regional Line Haul	0.1	1.5	0.2	<0.0	<0.0	<0.0
Rail - Switching between Terminal and Yard	≤0.0	0.~~9~~5	≤0.0	<0.0	<0.0	<0.0
Cargo Handling Equipment	≤0.1	0.6	0.3	<0.0	<0.0	<0.0
Multi-Purpose General Cargo Existing Annual	**1.43**	**26.40**	**3.9**	**0.7**	**0.5**	**0.5**
Total Annual Tons from all cargo types	**9.2**	**~~223.1~~222.4**	**30.5**	**5.2**	**108.8**	**34.3**

Source: Appendix F.
Notes: Totals may not add exactly due to rounding.

Table 4.2-8. Estimate of Maximum Existing Health Risk at Nearby Receptors

Receptor Type	Cancer Risk Per Million	Chronic Hazard Index	Acute Hazard Index
Dry Bulk			
Residential	~~8~~7	<0.01	<0.01
Park	1	<0.01	<0.01
School	~~2~~1	<0.01	<0.01
Refrigerated Containers			
Residential	~~31~~28	0.01	<0.01
Park	3	0.01	<0.01
School	5	0.01	<0.01
Multi-Purpose General Cargo			
Residential	~~5~~3	<0.01	<0.01
Park	<0	<0.01	<0.01
School	1	<0.01	<0.01
Total for all cargo			
Residential	~~43~~38	0.01	<0.01
Park	5	0.02	<0.01
School	7	0.01	<0.01

Note that risk for the various receptor types is not additive and the risk is not the sum of all the risks shown here; rather, the risk at each receptor type is already the sum of emissions.
Source: Appendix F.

4.2.3 Applicable Laws and Regulations

The air quality management agencies of direct importance in the county are EPA, ARB, and SDAPCD. EPA has established federal air quality standards for which ARB and SDAPCD have primary implementation responsibility. ARB and SDAPCD are also responsible for ensuring that state air quality standards are met. The following sections discuss international, federal, state, and local regulations applicable to the project.

4.2.3.1 International Regulations

International Maritime Organization International Convention for the Prevention of Pollution from Ships Annex VI

The International Maritime Organization (IMO) International Convention for the Prevention of Pollution from Ships (MARPOL) Annex VI, which came into force in May 2005, set new international NO_X emission limits on marine engines over 130 kilowatts (kW) installed on new vessels retroactive to the year 2000. In October 2008, IMO adopted amendments to international requirements under MARPOL Annex VI, which introduced NO_X emission standards for new engines and more stringent fuel quality requirements (DieselNet 2011; IMO 2008). The Annex VI North American Emission Control Area (ECA) requirements applicable to the proposed project include the following.

- Caps on the sulfur content of fuel as a measure to control sulfur oxide (SO_X) emissions and, indirectly, PM emissions. For ECAs, the sulfur limits are capped at 1.0 percent starting in 2012 and 0.1 percent starting in 2015.[1] The proposed project and alternatives assume full compliance with MARPOL Annex VI SO_X limits. The Port of San Diego is within an ECA.

- NO_X engine emission rate limits for new engines. Tier I rate limits, effective in 2000, and Tier II rate limits, effective in 2011, are global limits and apply to all new vessel builds, whereas Tier III limits, effective in 2016, apply only in NO_X ECAs. As of July 2014, the average vessel that calls on the project site is a year 1995-built Tier 0 vessel. Over time, vessels with newly built engines will call on the project site. Dole recently introduced new Tier II vessels, fully equipped with alternative maritime power capabilities, which are already calling on the project site. These new Dole vessels are considered in this analysis. Note that the NO_X emission rates limits only apply to newly built engines, and it is unknown to what extent vessels with newly built engines will call on the project site. Therefore, other than the Dole vessels, reductions due to these engine limits were excluded from this analysis.

4.2.3.2 Federal

Federal Clean Air Act

The CAA was first enacted in 1963 and has been amended numerous times in subsequent years (1967, 1970, 1977, and 1990). The CAA establishes the NAAQS and specifies future dates for achieving compliance. The CAA also mandates that each state submit and implement a State Implementation Plan (SIP) for local areas not meeting those standards. The plans must include pollution control measures that demonstrate how the standards will be met. Because the Port of San Diego is within the SDAB, it is in an area designated as nonattainment for certain pollutants that are regulated under the CAA.

The 1990 amendments to the CAA identify specific emission-reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable progress toward attainment and incorporation of additional sanctions for failure to attain or meet interim milestones. The sections of the CAA that would most substantially affect the development of the proposed project include Title I (Nonattainment Provisions) and Title II (Mobile-Source Provisions).

Title I provisions were established with the goal of attaining the NAAQS for criteria pollutants. Table 4.2-9 shows the NAAQS currently in effect for each criteria pollutant. The NAAQS were amended in July 1997 to include an 8-hour standard for O_3 and adopt a standard for PM2.5. The 8-hour O_3 NAAQS was further amended in October 2015. EPA will designate O_3 attainment and nonattainment areas in late 2017.

[1] The sulfur requirements in ECAs are 1.0% as of July 2010 and 0.1% starting in January 2015. North America was designated as an ECA in August 2012, and the sulfur requirements became applicable at the time of designation.

Table 4.2-9. Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	CAAQS[1]	NAAQS[2]
Ozone (O_3)	1 hour	0.09 ppm[3]	--
	8 hour	0.070 ppm	0.070 ppm
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm
	8 hour	9.0 ppm	9 ppm
Nitrogen Dioxide (NO_2)	1 hour	0.18 ppm	100 ppb
	Annual Arithmetic Mean	0.030 ppm	53 ppb
Sulfur Dioxide (SO_2)	1 hour	0.25 ppm	75 ppb
	24 hour	0.04 ppm	0.14 ppm
Respirable Particulate Matter (PM10)	24 hour	50 $\mu g/m^3$	150 $\mu g/m^3$
	Annual Arithmetic Mean	20 $\mu g/m^3$	--
Fine Particulate Matter (PM2.5)	24 hour	--	35 $\mu g/m^3$
	Annual Arithmetic Mean	12 $\mu g/m^3$	12.0 $\mu g/m^3$
Sulfates	24 hour	25 $\mu g/m^3$	--
Lead (Pb)	30 day average	1.5 $\mu g/m^3$	--
	Calendar quarter	--	1.5 $\mu g/m^3$
	Rolling 3-Month Average	--	0.15 $\mu g/m^3$
Hydrogen Sulfide	1 hour	0.03 ppm	--
Vinyl Chloride	24 hour	0.01 ppm	--

[1] The CAAQS for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM10, and PM2.5 are values not to be exceeded. All other California standards shown are values not to be equaled or exceeded.

[2] The NAAQS, other than O_3 and those based on annual averages, are not to be exceeded more than once a year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than 1. For PM2.5, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, is equal to or less than the standard.

ppm = parts per million by volume; ppb = parts per billion; $\mu g/m^3$ = micrograms per cubic meter.

Source: ARB 2016a.

General Conformity Regulation

EPA enacted the federal General Conformity regulation (40 Code of Federal Regulations [CFR] Parts 5, 51, and 93) in 1993. The purpose of the General Conformity rule is to ensure that federal actions do not generate emissions that interfere with state and local agencies' SIPs and emission-reduction strategies to ensure attainment of the NAAQS.

The General Conformity rule applies to all federal actions located in nonattainment and maintenance areas, unless one or more of the following criteria are satisfied.

- The action is exempt from General Conformity (i.e., the action is covered by Transportation Conformity or is listed in the General Conformity rule).

- The action is covered by a Presumed-to-Conform approved list.[2]
- The action does not have *de minimis* emissions.

If none of the above criteria apply, the federal lead agency must perform a conformity determination. The determination is made only for direct and indirect emissions associated with the federal action that are subject to the New Source Review (NSR) (i.e., the rule does not apply to stationary industrial sources that require air quality permits from local air pollution control agencies); that a federal permitting agency has directly caused or initiated; or over which the federal permitting agency has continued program responsibility or can practically control. A conformity determination is made by satisfying any of the following requirements.

- Showing that the emission increases caused by the federal action are included in the SIP.
- Demonstrating that the state agrees to include the emission increases in the SIP.
- Offsetting the action's emissions in the same or nearby area.
- Mitigating to reduce the emission increase.
- Utilizing a combination of the above strategies.

In this instance, the General Conformity rule applies to construction and operation of the Demolition and Initial Rail Component only, because the Demolition and Initial Rail Component is being funded in part by and subject to the requirements of the Department of Transportation TIGER Grant, which was awarded in 2015 to modernize the TAMT.

EPA Emission Standards for Large Marine Diesel Engines—Category 3 Engines

Category 3 engines have engine displacements per cylinder greater than 30 liters. Category 3 engines are propulsion engines on OGVs. To reduce emissions from these engines, EPA established 2003 Tier 1 NO_X standards for marine diesel engines above 30 liters per cylinder, and large Category 3 marine propulsion engines on U.S. flagged ocean-going vessels (40 CFR Parts 9 and 94) (68 FR 9745–9789). The standards went into effect for new engines built in 2004 and later. Tier 1 limits were achieved by engine-based controls, without the need for exhaust gas after-treatment.

In December 2009, EPA adopted Tier 2 and Tier 3 emissions standards for newly built Category 3 engines installed on U.S. flagged vessels, as well as marine fuel sulfur limits. The Tier 2 and 3 engines standards and fuel limits are equivalent to the amendments to MARPOL Annex VI. Tier 2 NO_X standards for newly built engines apply beginning in 2011 and require the use of engine-based controls, such as engine timing, engine cooling, and advanced electronic controls. Tier 3 standards will apply beginning in 2016 in ECAs and would be met with the use of high-efficiency emission control technology, such as selective catalytic reduction. The Tier 2 standards are anticipated to result in a 15 to 25 percent NO_X reduction below the Tier 1 levels; Tier 3 standards are expected to achieve NO_X reductions 80 percent below the Tier 1 levels (DieselNet 2011). In addition to the Tier 2 and Tier 3 NO_X standards, the final regulation established standards for HC and CO.

[2] Category of activities designated by a federal agency as having emissions below *de minimis* levels or that otherwise do not interfere with the applicable SIP or the attainment and maintenance of the NAAQS.

EPA Emission Standards for Locomotives

To reduce emissions from switch and line-haul locomotives, EPA established a series of increasingly strict emission standards for new or remanufactured locomotive engines (63 FR 18997-19084). Tier 0 standards, effective as of 2000, applied to engines manufactured or remanufactured from 1973 to 2001. Tier 1 standards applied to engines manufactured/remanufactured from 2002 to 2004. Tier 2 standards applied to engines manufactured/remanufactured after 2004.

In 2008, EPA strengthened the Tier 0 through 2 standards to apply to existing locomotives and introduced more stringent Tier 3 and 4 emission requirements (73 FR 88 25098-25352). Tier 3 standards, met by engine design methods, were phased in between 2011 and 2014. Tier 4 standards, which are expected to require exhaust gas after-treatment technologies, became effective starting in 2015 (DieselNet 2008).

EPA Emission Standards for Non-Road Diesel Engines

To reduce emissions from non-road diesel equipment, EPA established a series of increasingly strict emission standards for new non-road diesel engines. Tier 1 standards were phased in on newly manufactured equipment from 1996 through 2000 (year of manufacture), depending on the engine horsepower category. Tier 2 standards were phased in on newly manufactured equipment from 2001 through 2006. Tier 3 standards were phased in on newly manufactured equipment from 2006 through 2008. Tier 4 standards, which require advanced emission control technology to attain them, are being phased in between 2008 and 2015.

EPA Non-Road Diesel Fuel Rule

With this rule, EPA set sulfur limitations for non-road diesel fuel, including locomotives and marine vessels (though not for the marine residual fuel used by very large engines on OGVs). For the proposed project and alternatives, this rule affects line-haul locomotives; the California Diesel Fuel Regulation (described below) (ARB 2005b) generally pre-empts this rule for other sources such as yard locomotives, construction equipment, terminal equipment, and harbor craft. Under this rule, the diesel fuel used by line-haul locomotives was limited to 500 parts per million (ppm) starting June 1, 2007, and further limited to 15 ppm sulfur content (ultra-low-sulfur diesel) starting January 1, 2010, for non-road fuel, and June 2012 for marine and locomotive fuels (EPA 2004).

EPA On-Road Diesel Fuel Rule

In December 2000, EPA signed the Heavy-Duty Highway Rule, which reduces emissions from on-road, heavy-duty diesel trucks by establishing a series of increasingly strict emission standards for new engines. Manufacturers were required to produce new diesel vehicles that meet PM and NO_X emission standards beginning with model year 2007, with the phase-in period being between 2007 and 2010. The phase-in was based on a percentage-of-sales basis: 50 percent from 2007 to 2009 and 100 percent in 2010 (EPA 2000).

Recently, a coalition of state- and nationwide clean air agencies, including the Bay Area Air Quality Management District and the South Coast Air Quality Management District (SCAQMD), petitioned EPA to adopt a “near-zero” or “ultra-low” emissions standard for heavy-duty trucks. They hope the new standard will require new trucks to achieve an NO_X standard by 2022 that is 90% lower than the current standard (SCAQMD et al. 2016).

4.2.3.3 State

The California CAA, signed into law in 1988, requires all areas of the state to achieve and maintain the CAAQS by the earliest practical date. The CAAQS incorporate additional standards for most of the criteria pollutants and set standards for other pollutants recognized by the state. In general, the California standards are more health protective than the corresponding NAAQS. California has also set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Table 4.2-9 shows the CAAQS currently in effect for each criteria pollutant.

ARB and local air districts bear responsibility for achieving California's air quality standards, which are to be achieved through district-level air quality management plans that would be incorporated into the SIP. In California, EPA has delegated authority to prepare SIPs to ARB, which, in turn, has delegated that authority to individual air districts. ARB traditionally has established state air quality standards, maintaining oversight authority in air quality planning, developing programs for reducing emissions from motor vehicles, developing air emission inventories, collecting air quality and meteorological data, and approving SIPs.

The California CAA substantially adds to the authority and responsibilities of air districts. The California CAA designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control measures. The California CAA also emphasizes the control of "indirect and area-wide sources" of air pollutant emissions. The California CAA gives local air pollution control districts explicit authority to regulate indirect sources of air pollution and to establish traffic control measures.

Toxic Air Contaminants Regulations

California regulates TACs primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Toxic Air Contaminant Identification and Control Act (AB 1807) created California's program to reduce exposure to air toxics. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) supplements the AB 1807 program by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks. In August 1998, ARB identified particulate emissions from diesel-fueled engines as TACs. In September 2000, ARB approved a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel-fueled engines and vehicles. As an ongoing process, ARB reviews air contaminants and identifies those that are classified as TACs. ARB also continues to establish new programs and regulations for the control of TACs, including DPM, as appropriate. Among the programs and strategies ARB has developed to reduce diesel emissions for various sources, many of these are applicable to sources that are present at the Port, including off-road sources (cargo-handling equipment, locomotives, construction equipment, and Transport Refrigeration Units), on-road trucks (drayage trucks), and marine vessels (harbor craft, OGVs, and shore power).

ARB California Diesel Fuel Regulation

With this rule, ARB set sulfur limitations for diesel fuel sold in California for use in on- and off-road motor vehicles (13 CCR 2281–2285; 17 CCR 93114). Harbor craft and intrastate locomotives were originally excluded from the rule, but were later included by a 2004 rule amendment (ARB 2005b). Under this rule, diesel fuel used in motor vehicles except harbor craft and intrastate locomotives has been limited to 500 ppm sulfur since 1993. The sulfur limit was reduced to 15 ppm on September 1, 2006. A federal diesel rule similarly limited sulfur content nationwide to 15 ppm by October 15, 2006.

ARB Airborne Toxic Control Measure for Diesel-Fueled Transport Refrigeration Units, Generator Sets, and Facilities Where Transport Refrigeration Units Operate

In 2011, ARB amended the 2004 rule designed to reduce the DPM emissions from in-use Transport Refrigeration Units (TRUs) and TRU generator set engines (13 CCR 2477). Under the rule, TRU engines are required to meet in-use performance standards by installing the required level of verified diesel emission control strategy or using an alternative technology. Compliance may also be maintained by replacing the engine with a cleaner new or rebuilt engine.

The in-use performance standards have two levels of stringency (Low Emission and Ultra Low Emission in-use performance standards) that are phased in per the compliance schedule set forth in the rule.

ARB Agreements with Class I Freight Railroads

1998 South Coast Locomotive Emissions Agreement

In 1998, ARB, Class I freight railroads operating in the SCAB (BNSF and Union Pacific Railroad [UP]), and EPA signed the 1998 Memorandum of Understanding (MOU), agreeing to a locomotive fleet average emissions program. The 1998 MOU required that, by 2010, the Class I freight railroad fleet of locomotives in the SCAB achieve average emissions equivalent to the NO_X emission standard established by EPA for Tier 2 locomotives (5.5 grams per brake horsepower-hour). BNSF and UP must continue to comply with the Tier 2 locomotive fleet average from 2010 to 2030. The MOU applies to both line-haul (freight) and switch locomotives operated by the railroads (ARB 1998). This MOU also provides emission reductions at the Port of San Diego because all trains arrive from and depart to the SCAB. As of 2014, BNSF's NO_X emission level is 5.2 grams per brake horsepower-hour, which is better than the MOU requirement (see Appendix F).

2005 Railroad Statewide Agreement

In 2005, ARB, Class I freight railroads operating in the SCAB, and EPA signed the 2005 MOU agreeing to several program elements intended to reduce the emission impacts of railyard operations on local communities. The 2005 MOU includes a locomotive idling-reduction program, early introduction of lower-sulfur diesel fuel in interstate locomotives, and a visible emission reduction and repair program. The 2005 agreement also required a number of efforts to gather information and assess advanced technologies to further reduce locomotive and railyard emissions in the future, including the preparation of emission inventories and health risk assessments (HRAs) at the 17 major railyards in the state (including San Diego Railyard), community and air district involvement, evaluation and development of measures to further reduce impacts on local communities, and ongoing efforts to evaluate and assess advanced control technologies (ARB 2005c).

ARB Measures to Reduce Emissions from Goods Movement Activities

Emission Reduction Plan for Ports and Goods Movement in California

In April 2006, ARB approved the Emission Reduction Plan for Ports and Goods Movement in California (ARB 2006). This plan proposes measures that would reduce emissions from the main sources associated with port cargo-handling activities, including ships, harbor craft, terminal equipment, trucks, and locomotives. This effort was a step in implementing the Goods Movement Action Plan developed by the California Business, Transportation, and Housing Agency and the California Environmental Protection Agency. The final Goods Movement Action Plan was released on January 11, 2007, and includes measures to address the various layers of the goods movement system throughout the state such as freeways, rail, and ports.

ARB Regulations for Fuel Sulfur and Other Operational Requirements for OGVs within California Waters and 24 Nautical Miles of the California Baseline

In July 2008, ARB approved the Regulation for Fuel Sulfur and Other Operational Requirements for Ocean-Going Vessels within California Waters and 24 Nautical Miles of the California Baseline (13 CCR 2299.2). These regulations have required ship main engines, auxiliary engines, and auxiliary boilers operating in California waters since July 2009 to either use marine diesel oil with a maximum sulfur content of 0.5 percent or marine gas oil with a maximum sulfur content of 1.5 percent. By August 1, 2012, these source activities were required to meet a marine diesel oil limit of 0.5 percent or marine gas oil limit of 1.0 percent. By January 1, 2012, these source activities were required to meet a marine diesel or gas oil sulfur limit of 0.1 percent, which is now in effect. The analysis herein assumes all existing and future vessels comply with the 0.1 percent sulfur limit.

ARB Regulation to Reduce Emissions from Diesel Auxiliary Engines on OGVs While at Berth at a California Port

In December 2007, ARB adopted a regulation to reduce emissions from diesel auxiliary engines on OGVs while at berth for container, passenger cruise, and refrigerated cargo vessels (17 CCR 93118.3). The regulation requires that auxiliary diesel engines on OGVs be shut down for specified percentages of a fleet's visits and also for the fleet's at-berth auxiliary engine power generation to be reduced by the same percentages. Vessels can either plug into the electrical grid (i.e., shore power, otherwise known as cold-ironing or alternative maritime power) or use an alternative emission control device. The law sets compliance percentages that phase in over time. By 2014, vessel operators were required to shut down their auxiliary engines at berth for 50 percent of the fleet's vessel visits and also reduce their onboard auxiliary engine power generation by 50 percent. The specified percentages will increase to 70 percent in 2017 and 80 percent in 2020. Vessel operators can also choose an emissions reduction equivalency alternative; the regulation requires a 10 percent reduction in OGV hoteling emissions starting in 2010, increasing in stringency to an 80 percent reduction by 2020 (ARB 2007). Note that this regulation only applies to container, passenger cruise, and refrigerated cargo vessels and does not yet apply to the auto carrier and roll-on/roll-off (RoRo), bulk, and general cargo vessels that call at the project site. However, ARB is currently considering extending at-berth regulation to all vessels, with workshops starting in the summer of 2016 (Milkey pers. comm.), but at present no formal rulemaking has been drafted or adopted.

ARB Mobile Cargo-Handling Equipment at Ports and Intermodal Rail Yards

In December 2005, ARB approved the Regulation for Mobile Cargo-Handling Equipment at Ports and Intermodal Rail Yards (13 CCR 2479) designed to use best available control technology (BACT) to reduce diesel PM and NO_X emissions from mobile cargo-handling equipment at ports and intermodal rail yards. Since January 1, 2007, the regulation has imposed emission performance standards on new and in-use terminal equipment that vary by equipment type. The regulation also includes recordkeeping and reporting requirements.

ARB Emission Standards and Test Procedures for Large Spark Ignition Engine Forklifts and Other Industrial Equipment

Since 2007, ARB has promulgated more stringent emissions standards for HC and NO_X combined emissions and test procedures. The engine emission standards and test procedures were implemented in two phases. The first phase was implemented for engines built between January 2007 and December 2009. The second, more stringent, phase was implemented for engines built starting in January 2010. The regulation was amended in 2010, establishing fleet average emissions requirements for existing engines.

ARB California Drayage Truck Regulation

ARB adopted the drayage truck regulation in December 2007 to modernize the class 8 drayage truck fleet (trucks with a Gross Vehicle Weight Rating [GVWR] greater than 33,000 pounds) in use at California's ports. Emergency vehicles and yard trucks are exempted from this regulation. The regulatory objective is to be achieved in two phases.

1. By December 31, 2009, pre-1994 model year engines were to be retired or replaced with 1994 and newer model year engines. In addition, all drayage trucks with 1994 to 2003 model year engines were required to achieve an 85 percent PM emission reduction through the use of an ARB-approved Level 3 verified diesel emission control strategy.
2. By December 31, 2013, all trucks operating at California ports must have complied with the 2007 and newer on-road heavy-duty engine standards.

In December 2010, ARB amended the regulation to include Class 7 drayage trucks with a GVWR between 26,000 and 33,001 pounds. ARB further expanded the definition of drayage trucks to include dray-offs, those non-compliant trucks that may not directly come to the ports to pick up/drop off cargo but that engage in moving cargo destined to or originating from port facilities and to/from near-port facilities or railyards (ARB 2013b).

ARB On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation—Truck and Bus Regulation

In December 2011, ARB amended the existing 2008 Statewide Truck and Bus Regulation to modernize in-use heavy-duty vehicles operating throughout the state. Under this regulation, existing heavy-duty trucks are required to be replaced with trucks meeting the latest NO_X and PM BACT, or be retrofitted to meet these levels.

Trucks with a GVWR less than 26,000 pounds (most construction trucks) are required to replace engines with 2010 or newer engines, or equivalent, by January 2023. Trucks with a GVWR greater than 26,000 pounds (most drayage trucks) must meet PM BACT and upgrade to a 2010 or newer model year emissions equivalent engine pursuant to the compliance schedule set forth by the rule. By January 1, 2023, all model year 2007 class 8 drayage trucks are required to meet NO_X and PM BACT (i.e., EPA 2010 and newer standards) (ARB 2011).

ARB On-Road Heavy-Duty Diesel Vehicle Idling Emission Reduction Regulation

ARB adopted this airborne toxic control measure in 2005 to limit diesel-fueled commercial motor vehicle idling. This regulation states that diesel vehicles with GVWR greater than 10,000 pounds shall not idle the vehicle's diesel-powered primary or auxiliary power system for greater than 5 minutes at any location (CCR Title 13, Section 1956.8 and 2485). This regulation applies to all trucks used that visit the Port.

EO B-32-15 and the ARB Sustainable Freight Action Plan

ARB is working on various strategies to improve freight efficiency, transition to zero-emission technologies, and increase competitiveness of California's freight system. EO B-32-15 requires State agencies to develop an integrated action plan that establishes clear targets to improve freight efficiency, transition to zero-emission technologies, and increase the competitiveness of California's freight system. The integrated Draft California Sustainable Freight Action Plan was released in May 2016 and identifies potential State policies, programs, and investments to achieve these targets. The plan provides a high-level vision and broad direction and recommendations on long-term vision for 2030 and 2050, short-term actions to initiate in the next 5 years, pilot project opportunities, and additional concepts to explore. The Draft Action Plan builds on existing State agency strategies, including *California Freight Mobility Plan*, *Sustainable Freight Pathways to Zero and Near-Zero Emissions Discussion Document*, and *Integrated Energy Policy Report*, as well as broad stakeholder input.

Senate Bill 535 and Assembly Bill 1532

Senate Bill 535 requires the California Environmental Protection Agency (Cal/EPA) to identify disadvantaged communities based on geographic, socioeconomic, public health, and environmental hazard criteria. It also requires that the investment plan developed and submitted to the Legislature pursuant to AB 1532 allocate no less than 25 percent of available proceeds from the carbon auctions held under AB 32 to projects that will benefit these disadvantaged communities. At least 10 percent of the available funds from these auctions must be directly invested in such communities. Because CalEnviroScreen has been developed to identify areas disproportionately affected by pollution and those areas whose populations are socioeconomically disadvantaged, it is well suited for the purposes described by Senate Bill 535 (Cal/EPA 2014).

California Communities Environmental Health Screening Tool (CalEnviroScreen)

Cal/EPA adopted the Environmental Justice Action Plan in 2004, which called for the development of guidance to analyze the impacts of multiple pollution sources in California communities. CalEnviroScreen is primarily designed to assist Cal/EPA in carrying out its environmental justice mission. CalEnviroScreen is a science-based guidance and screening tool aiming to assess the cumulative impacts of environmental pollution in California communities, primarily used to identify disadvantaged communities and to assist planning and decision-making such as administering environmental justice grants, prioritizing cleanup activities, and guiding environmental community programs. CalEnviroScreen provides a relative ranking of communities based on a selected group of indicators and will help to identify disadvantaged communities per Senate Bill 535.

4.2.3.4 Local

Port of San Diego

The Port Master Plan (PMP) is the governing land use document for physical development within the District; however, there are also other District programs that apply to air quality. The District developed the Green Port Program to support the goals of the Green Port Policy, which was adopted in 2008. The Green Port Program supports resource conservation, waste reduction, and pollution prevention. The Clean Air Program is one key area of the Clean Port Program, with the primary goal of reducing air emissions from Port operations at its three marine terminals: the Cruise Ship Terminal, TAMT, and National City Marine Terminal. The Clean Air Program seeks to voluntarily reduce criteria pollutants and greenhouse gas (GHG) emissions from current and future District operations through the identification and evaluation of feasible and effective control measures for each category of Port emissions. The District has developed various control measures geared toward reducing emissions from the greatest contributors of air pollution. The District has identified control measures to achieve a reduction of pollutants from the largest sources, including shore power (to enable ships to turn off their vessels and plug into electric power while docked), truck replacement/retrofits, replacement/retrofits of cargo handling equipment, and voluntary vessel speed reductions. The Clean Air Program will continue to be refined and be adapted to future changes in District operations (District 2008).

The District's Clean Truck Program (implemented in 2009) requires all drayage trucks with 2004 model year or older engines and with a GVWR greater than 33,000 pounds to be equipped with a level 3 verified diesel emission control strategy (likely diesel particulate filters) for PM emissions or be replaced with a new truck. The Clean Truck Program has similar requirements to, and ensures compliance with, ARB's drayage truck regulation.

Through efforts at the international, federal, state, and local levels, air emissions from goods movement sources at the Port have been greatly reduced. For example, between the 2006 and 2012 Emission Inventories, NO_X emissions were reduced 50 percent, DPM emissions were reduced 75 percent, and SO_2 emissions were reduced 94 percent (District 2014).

Additionally, the project site currently supports shore power, also known as "cold-ironing," with plans to install additional connections at marine terminals. Vessels equipped to connect to shore power will use electric grid power at berth (e.g., while "hoteling") rather than power generated by running the ship's engines. Of the vessels that call on the project site, only the Dole-owned or -operated refrigerated container vessels are required to implemented at-berth emissions reductions, including use of shore power. No other container ships and no passenger ships call on the project site. Dole vessels began using shore power at the project site in February 2014; 66 percent of Dole vessels have shore power capability (two of its three vessels), and 100 percent of the Dole vessels calling at the project site will have shore power capability starting in 2016.

The Port's vessel speed reduction (VSR) program is a voluntary strategy to reduce air pollutants and GHG emissions from cargo and cruise ships by reducing speeds in the vicinity of San Diego Bay. The VSR program asks cargo vessel operators entering or leaving San Diego Bay to observe a 12-knot speed limit and for cruise ships to observe a 15-knot speed limit. The VSR zone extends 20 nautical miles seaward from Point Loma. Several vessels that call at the project site have voluntarily complied with the Port's voluntary VSR program, achieving on average 78 percent compliance on arrivals and 65 percent compliance on calls during the baseline period.

San Diego Air Pollution Control District

Local air pollution control districts have the primary responsibility for the development and implementation of rules and regulations designed to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources, development of air quality management plans, and adoption and enforcement of air pollution regulations. SDAPCD is the local agency responsible for the administration and enforcement of air quality regulations in San Diego County.

Regional Air Quality Strategy and State Implementation Plan

ARB, SDAPCD, and the San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The San Diego Regional Air Quality Strategy (RAQS) outlines SDAPCD's plans and control measures designed to attain and maintain the State standards while San Diego's portions of the SIP are designed to attain and maintain federal standards. The RAQS was initially adopted in 1991 and is updated on a triennial basis. The RAQS was updated in 1995, 1998, 2001, 2004, and most recently in 2009 (2016 update in progress). The RAQS does not currently address the state air quality standards for PM10 or PM2.5. SDAPCD has also developed the air basin's input to the SIP, which is required under the federal CAA for areas that are out of attainment of air quality standards. Both the RAQS and SIP demonstrate the effectiveness of ARB measures (mainly for mobile sources) and SDAPCD's plans and control measures (mainly for stationary and area-wide sources) for attaining the O_3 NAAQS. The SIP is also updated on a triennial basis. For the 8-hour O_3 standard, SDAPCD submitted its 8-hour O_3 Redesignation Request and Maintenance Plan in December of 2012. In addition, the *Measures to Reduce Particulate Matter in San Diego County* report (December 2005) proposes measures to reduce PM emissions and recommends measures for further detailed evaluation and, if appropriate, future rule development (or non-regulatory development, if applicable), adoption, and implementation in San Diego County, in order to attain PM CAAQS.

ARB is currently working on an update to the SIP and recently released a *Proposed 2016 State Strategy* for the SIP. This strategy describes proposed State measures to achieve the reductions necessary from the mobile sector and consumer products to meet O_3 and PM2.5 NAAQS over the next 15 years. The 2016 SIP update will incorporate regional SIPs (to be developed) as well as the Scoping Plan Update, California's Sustainable Freight Action Plan, the Short-Lived Climate Pollutant Strategy, and implementation of Senate Bill 375. ARB notes that while existing programs have achieved tremendous success in reducing NO_X emissions, further reductions are required. Proposed SIP measures include various measures relevant to goods movement and maritime operations, including working with EPA on a low-NO_X standard and finalizing the Phase 2 GHG standard for heavy trucks; further deployments of cleaner on- and off-road technologies; working with EPA on more stringent locomotive emission standards; working with IMO on Tier 4 vessel standards; incentivizing low-emissions vessel calls; and extending at-berth requirements to all vessels (ARB 2016b).

SDAPCD Rules and Regulations

SDAPCD is responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and state air quality laws. The proposed project may be subject to the following SDAPCD rules, and others, during construction.

- **Regulation 2, Rule 20.2—New Source Review Non-Major Stationary Sources:** establishes Air Quality Impact Analysis (AQIA) Trigger Levels, which set emission limits for non-major new or modified stationary sources.
- **Regulation 2, Rule 20.3—New Source Review Major Stationary Sources and Prevention of Significant Deterioration Stationary Sources:** establishes AQIA Trigger Levels, which set emission limits for major new or modified stationary sources or Prevention of Significant Deterioration stationary sources. Major sources are defined in Regulation 8 as sources that emit 100 tons per year of PM10, SO_X, CO, and lead; and 50 tons per year of NO_X and VOC in federal ozone nonattainment areas.
- **Rule 50—Visible Emissions:** establishes limits for the opacity of emissions within the SDAPCD. The proposed project is subject to Rule 50(d)(1) and (6) and should not exceed the visible emission limitation.
- **Rule 51—Nuisance:** prohibits emissions that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; endanger the comfort, repose, health, or safety of any such persons or the public; or cause injury or damage to business or property.
- **Rule 52—Particulate Matter:** establishes limits for the discharge of any particulate matter from nonstationary sources.
- **Rule 54—Dust and Fumes:** establishes limits for the amount of dust or fume discharged into the atmosphere in any 1 hour.
- **Rule 55—Fugitive Dust Control:** sets restrictions on visible fugitive dust from construction and demolition projects.
- **Rule 67—Architectural Coatings:** establishes limits to the VOC content for coatings applied within the SDAPCD.
- **Regulation 8, Rules 1200–1210:** establish rules and procedures governing new, relocated, or modified emission units that may increase emissions of one or more TAC. While the project is not necessarily subject to the requirements of this regulation, the risk assessment guidelines and procedures published as part of this regulation are used in the HRA herein.

4.2.4 Project Impact Analysis

4.2.4.1 Methodology

Air quality impacts associated with construction and operation of the project and program were assessed and quantified using industry standard and accepted software tools, techniques, and emission factors. A summary of the methodology is provided below. A full list of assumptions and emission calculations can be found in Appendix F. Note that the estimate of existing emissions at the project site is based on activity associated with the EIR baseline, which is the July 2013 to June 2014 timeframe. The methodology used to estimate air quality emissions discussed below is the same that was used to estimate GHG emissions, as described in Section 4.6, *Greenhouse Gas Emissions and Climate Change.*

Construction

The project would include construction of a Demolition and Initial Rail Component, which is a necessary first step to enable the subsequent implementation of the various development scenarios contemplated in the TAMT plan. Construction would include Demolition of Transit Sheds #1 and #2, excavation and grading to level the site, asphalt paving, conduit and electrical improvements, replacement of lighting, installation of a rail lubricator and a compressed air system, installation of a modular office, and construction of the gear and IT room. Construction activities would result in emissions associated with onsite construction equipment, haul trucks to remove debris from the project site, delivery trucks to deliver building and upgrade materials to the site, construction worker trips to and from the site, fugitive dust from demolition of the transit sheds and from moving dirt to level the site, and off-gassing from asphalt paving.

Construction activities associated with the Demolition and Initial Rail Component are expected to begin in 2017. Construction for the most part would occur sequentially, starting with demolition of Transit Shed #1, which would take approximately 15 months to complete, followed by demolition of Transit Shed #2, which would take approximately 18 months. Construction associated with the conduit and electrical improvements (to facilitate shore power upgrades), replacement of lighting, and on-terminal rail facility upgrades are expected to occur along and concurrently with the transit shed work. The Demolition and Initial Rail Component would be completed in approximately 2020. To provide for a conservative analysis, it is assumed that construction activities may overlap for one day in order to analyze the worst-case construction impacts of the project. Emissions from all sources described below were summed at the daily time scale and compared to San Diego County's screening-level thresholds (SLTs) shown in Table 4.2-10. Additionally, given the federal nexus due to the TIGER Grant funding, emissions from all direct and indirect sources described below were summed at the annual time scale and compared to federal *de minimis* levels shown in Table 4.2-11 and Table 4.2-12. The construction phasing assumptions and emissions calculation worksheets are provided in Appendix F.

Emissions were estimated based on a construction phasing schedule and details regarding the types and numbers of construction equipment, haul, delivery, and employee vehicle trips, and material volumes obtained from the project applicant.

- Equipment would include typical heavy-duty equipment (e.g., loaders, excavators, crushers) to demolish the sheds, grade and level the area, pave, and install utility improvements, including conduit and electrical improvements. Emissions associated with construction equipment were estimated based on emission and load factors from CalEEMod and OFFROAD, activity data (hours per days, days of use) provided by the project applicant, and horsepower information obtained from the manufacturer (if available) and CalEEMod defaults.
- Emissions associated with demolition fugitive dust were estimated based on calculation methodologies for mechanical dismemberment and truck loading in CalEEMod. Demolition quantities include 148,000 square feet of demolition associated with Transit Shed #1, 194,000 square feet of demolition associated with Transit Shed #2, and 7,000 square feet of demolition associated with the headhouse (which is attached to Transit Shed #2).

- Emissions associated with truck travel to haul demolition debris were estimated based on the assumption that all demolition debris would be hauled off site (i.e., no debris would be crushed and reused on site). Emissions associated with truck travel were estimated based on a CalEEMod default 20-ton (16 cubic yards) truck capacity and a CalEEMod default 20-mile round-trip distance to the nearest landfill.
- Emissions associated with fugitive dust associated with earthwork and grading were estimated based on calculation methodologies for grading and truck loading in CalEEMod. Earthwork and grading activities would include excavating approximately 18,500 cubic yards of soil associated with Transit Shed #1, excavating approximately 24,200 cubic yards associated with Transit Shed #2, excavating up to 9,200 cubic yards to install an upgraded stormwater drainage system, 5.7 acres of grading at Transit Shed #1, and 7.3 acres of grading at Transit Shed #2.
- Emissions associated with truck travel to haul excavated soils were estimated using 47,100 cubic yards of soil export, based on 16,400 cubic yards from Transit Shed #1, 21,500 cubic yards from Transit Shed #2, and 9,200 cubic yards for the stormwater system, which was split evenly between Transit Sheds #1 and #2. Peak day truck activity of 79 trucks is expected to occur during the latter part of Transit Shed #2 work when soil export during earthwork and grading would overlap with asphalt paving truck and rail installation deliveries. Excavated soils may either be used as fill material at the southern end of the Chula Vista Bayfront Harbor District area (if found appropriate for reuse) or hauled to the nearest landfill. The distance to the southern end of the Chula Vista Bayfront Harbor District area and the default CalEEMod round-trip haul distance are both 20 miles. Thus, emissions associated with truck travel were estimated based on a CalEEMod default 16-cubic-yard truck capacity and this 20-mile round-trip distance to either disposal site.
- Emissions associated with asphalt paving were estimated based on the assumption that the entire area currently occupied by Transit Sheds #1 and #2 would be paved. Emissions were estimated based on 5.7 acres of paving at Transit Shed #1 over a 10-day period, 7.3 acres of paving at Transit Shed #2 over a 12-day period, and the CalEEMod default VOC offgassing emission factor of 2.62 pounds of VOC per acre paved.
- Emissions associated with the construction worker commute travel were estimated based on a weighted average of light duty auto (LDA), LDT1, and LDT2 emission rates from ARB's EMFAC 2014 web tool, similar to the vehicle split used in CalEEMod (e.g., LDA = 50 percent, LDT1 = 25 percent, LDT2 = 25 percent), a CalEEMod default trip length of 9.5 miles per trip, 50 workers on the average peak day, and three trips per worker per day.

Operation

Cargo throughput is anticipated to increase as a result of Demolition and Initial Rail Component and full TAMT plan buildout, as denoted in Table 3-4 of Chapter 3, *Project Description*. The increase in throughput would increase emissions from all sources at the project site, including increased OGV calls, truck travel, cargo handling equipment (CHE) and TRU activity, rail activity, worker trips, electricity, and loading and unloading of cargo.

Descriptions of each of these sources and associated emissions modeling are provided below. Activity associated with operation of the Demolition and Initial Rail Component is based on the fleet that was active at the project site during the EIR baseline (July 2013 through June 2014), including vessel, truck, and freight rail visits. It was assumed that the Demolition and Initial Rail Component would be operational in 2020.

Note that increased use of refrigeration, electricity, and water use at the project site is discussed solely in Section 4.6, *Greenhouse Gas Emissions and Climate Change.*

Ocean-Going Vessels

OGV emissions result primarily from three activities: transit, maneuvering, and hoteling. Transit occurs within both the outer unrestricted speed zone and within the VSR zone to the Whistle Buoy. Maneuvering includes movement and maneuvering within the harbor until the vessel anchors. Hoteling occurs once the ship is at berth. During hoteling, the vessel is stationary at the dock/berth, typically during loading and unloading of cargo. The vessel is typically still active, operating boilers and providing the ship's power needs either by running on-board auxiliary engines or by cold ironing (utilizing at-berth shore power), but the vessel's propulsion engines are not operating.

Transit and maneuvering emissions under existing and project conditions were assumed to be similar, as speeds and time in transit and maneuvering modes is not expected to change under project conditions. While hoteling, vessels that do not cold iron run auxiliary engines for power needs (e.g., for lights and fans on auto carriers and RoRos) and boilers (for maintaining fuel temperature), while vessels that cold iron turn off their auxiliary engines but do continue to run boilers.

OGVs that call on the project site consist of a mixture of auto carriers and RoRo vessels, bulk carriers, container ships, and general cargo vessels, as well as various tug calls that primarily export and import fuel. There were 100 OGV calls in the baseline time period: 57 by container ship, 23 by general cargo, 13 by bulk carrier, and 8 by auto carriers. Additionally, there were 44 ocean-going tug calls, of which 27 were for direct vessel refueling.

The Demolition and Initial Rail Component and full TAMT plan buildout would increase cargo throughput, which would invariably increase the number of vessels that call on the project site. Moreover, while the project would not directly change the composition of vessels that currently visit the project site, a portion of the fleet would change. For example, Dole is currently replacing its dated current fleet of three refrigerated container vessels (497 Forty-foot Equivalent Units [FEUs]),[3] 15,189 kW propulsion, 7,220 kW auxiliary, 20 knot service speed) with three new and larger vessels (770 FEUs, 19,420 kW propulsion, 11,320 kW auxiliary, 19.5 knot service speed) that will enter service in 2016. Replacement of the Dole vessels would change the type and size of vessels calling on the project site and would increase the number of calls that cold iron because each of these vessels has cold ironing capabilities. These new Dole vessels were assumed to be operational in the Demolition and Initial Rail Component and full TAMT plan buildout analyses. Based on the increase in throughput and known changes in Dole vessel fleet, OGV call activity is expected to increase from 100 annual calls during the baseline period to 104 annual calls under the Demolition and Initial Rail Component in 2020 and 579 annual calls under full TAMT plan buildout in 2035.

[3] A Twenty-foot Equivalent Unit (TEU) is a unit of cargo capacity often used to describe the capacity of container ships and container terminals. Forty-foot Equivalent Units (FEUs) are defined as two TEUs.

Shore power is currently installed at Berths 10-3/10-4. During the most recent period for which data are available, July 2013 to June 2014, only a portion of the refrigerated container ships used shore power while at berth. Currently, only one vessel can cold iron at a time, but the additional infrastructure would be in place to facilitate additional cold ironing at Berth 10-5/10-6 at a future date.

Emissions associated with changes in OGV activities were estimated based on ARB's OGV methodology for Tier 0 engines (ARB 2011), EPA's Category 3 Rulemaking for main and auxiliary engine Tier 1 and Tier 2 NO_X rates (EPA 2009), the Port of Long Beach Inventory for estimating boiler load (Port of Long Beach 2015), and vessel activity and VSR data obtained from the District. The increase in vessel calls was estimated based on the projected increase in throughput, which would increase cargo throughput associated with the Demolition and Initial Rail Component in 2020 and full TAMT plan buildout in 2035 by cargo type, as indicated above.

~~Under~~There were five separate instances where three vessels called on TAMT during the baseline period. These three vessels represent the peak day under existing condition. In estimating existing conditions, it was assumed that ~~a given vessel~~these three vessels would arrive, hotel, and depart on the same day~~, because it is feasible that a given vessel would depart on the same day that another vessel arrives.~~. This three daily round-trip assumption was scaled up by the projected increase in throughput, which averages out to approximately ~~1.04~~3.11 calls per day under the Demolition and Initial Rail Component based on the increase in throughput. Under full TAMT plan buildout, it was assumed that the project site could handle up to four vessels at a time. Therefore, daily activity under full TAMT plan buildout assumes up to four round-trip calls on a given day. The analysis includes round-trip vessel emissions within the air basin based on the last and next port of call in the vessel call data. Trip distances for each direction (north, south, and west) within the VSR zone and air basin were assigned based on information in the District's inventory, which set the basin consistent with the ARB limit for rulemaking and the National Oceanic and Atmospheric Administration Contiguous Zone at 24 nautical miles from the California baseline and the VSR zone at 20 nautical miles from the tip of Point Loma. This analysis assumes the number of vessel calls increases and the hotel time for the larger Dole vessels increases, but does not assume the at-berth hotel time for other vessels would increase. A detailed methodology describing vessel activity assumptions and emission calculations is provided in Appendix F.

Tugboats

Tugboat activity at the project site includes assist tugs and ocean-going tugs.

Assist Tugs

Assist tugs ensure safe navigation for large cargo vessel movements upon arrival to and departure from the Port by assisting vessels during in-harbor movement and berthing. Assist tugs do most of the work when vessels are docking. Assist tug activity is based on information from the assist tug operator, Crowley, which owns and operates two Tier-3 repowered tugs that are based in San Diego Bay. Activity per call is based on a 0.5-nautical-mile travel distance to vessels from the Crowley pier to the ship berthing location plus 0.5 hour of maneuvering the ship into and out of the berth. Emission estimates assume that two assist tugs are required for each call, and assist tug activity increases proportional to the increase in overall OGV calls in 2020 and 2035.

Emissions are based on the zero-hour emission factors, engine deterioration factors, fuel correction factors, useful life, and load factors for main propulsion and auxiliary tug engines from the Port of Long Beach Inventory, which provides a detailed recent methodology for many of the same sources (Port of Long Beach 2014).

Ocean-going Tugs and Barges

Ocean-going tugs pull fuel barges between the project site and the Port of Los Angeles. Ocean-going tug activity is based on time in transit, time in-harbor (maneuvering), and time at-berth to allow barges to tie and untie from the docks. The tugs themselves never berth, but instead just anchor the fuel barges in place while the barges are tied to and untied from the docks. Once the barges are in place, the tugs are free to leave and provide assistance or do other work in the Bay.

Fuel barges currently call on the project site for three reasons: to fill the liquid bulk tanks, to remove fuel from the liquid bulk tanks, and to fuel vessels that are at berth. Neither the Demolition and Initial Rail Component nor full TAMT buildout proposes changes to the liquid bulk facilities. Therefore, any calls related to the liquid bulk tanks are not accounted for in this analysis. However, because a portion of the barge calls is to directly fuel vessels that are at berth, it can be argued that these calls would increase as the number of calls increase at the project site.

An inventory of tug calls by fuel transfer type was obtained from the District for the baseline year, and calls that filled or moved fuel from the tanks were removed so that only fuel transfer directly to vessels was analyzed. To estimate tug transit time, the route to and from the north was assumed with a one-way distance of 50 nautical miles at 7 knots along with an in-harbor distance of 7 nautical miles at 7 knots to the project site for fuel barges. The per-call transit time and the number of calls were used to estimate the total tug transit hours, similar to the assumptions used in the District's 2012 Maritime Inventory (District 2014). The tug used for the fuel-barge trips is the Robyn J, which was repowered in 2010 with Tier 3 engines: two 750 kW propulsion engines and two 60 kW auxiliary engines. The three fuel barges that call on the project site range in fuel capacity but are each equipped with two 75 kW diesel engines, repowered in 2007 with Tier 3 engines, connected to fuel pumps that each pump up to 2,000 barrels per hour per barge (Pratley pers. comm.). Barge time per call for fueling vessels was estimated based on this 2,000-barrel-per-hour fueling rate and the total barrel capacity of each barge. Calls were limited to fueling ships. The number of tug and fuel barge calls is expected to increase proportional to the increase in OGV calls by cargo node in 2020 and 2035. It was assumed that it takes 30 minutes to tie the barges up at the ship to begin fueling and 30 minutes to untie the barges once fueling is complete, and that the tugs depart during fueling.

Tug and barge emissions are based on the zero-hour emission factors for the Tier 3 tug engines, engine deterioration factors, fuel correction factors, useful life, and load factors for main propulsion and auxiliary tug engines as well as auxiliary barge engines from the Port of Long Beach Inventory (Port of Long Beach 2014).

Rail

Trains servicing the project site are operated by BNSF. Rail activity is split between switching (or switch-duty) and regional travel (or line-haul). BNSF switching locomotives are used to break and assemble trains adjacent to the project site at the BNSF yard. Line haul refers to the movement of cargo over long distances (e.g., from the project site north to Los Angeles) and occurs within the Port as the initiation or termination of a line-haul trip. Switching refers to the assembling and disassembling of trains, sorting of the cars of inbound cargo trains into contiguous “fragments” for subsequent delivery to terminals, and the short-distance hauling of rail cargo within the Port (District 2008).

Most of the current train activity involves importing soda ash from Searles Valley and exporting some multi-purpose general cargo, including vehicles and windmill parts. Rail switching occurs when soda ash is delivered and switchers and railcar movers pull the cargo from the BNSF yard to the project site, while all switching at the project site for other cargo types is done by the line-haul locomotives.

As a result of project implementation, rail activity would increase as throughput increases and the mix of cargo type changes. The emission calculation methodologies are adapted from the emission inventories at the Port of San Diego (District 2014) and Port of Long Beach (Port of Long Beach 2014), using switch duty and Class 1 line-haul notch time and power fraction emissions from EPA’s locomotive rulemaking support document (EPA 1998). Emissions associated with the railcar mover were estimated based on engine specifications (ShuttleWagon SW605C car mover equipped with a Tier 3 8.3-liter Cummins QSC, rated at 300 horsepower), assuming the railcar mover operates at full load while in use. The simplified methodology for estimating both onsite switching and regional travel emissions is as follows.

- Emissions = locomotive hours x total locomotive horsepower x load factor x emission factors (in grams per horsepower-hour [g/hp-hr]).

The increase in activity (locomotive hours) is based on the assumption that loaded trains include four active (running) locomotives and empty trains include one active (running) locomotive while up to three locomotives idle to save fuel. BNSF line-haul locomotives are 4,400 horsepower on average and the GP-60 switchers include 3,600 horsepower engines. Currently, up to one train on a maximum day and 72 trains per year arrive and then exit the BNSF yard. All activity from the BNSF yard to the project site is done by switchers~~.~~ and a railcar mover. For regional line-haul activity, all inbound and outbound trains were assumed to operate along the main line within San Diego County, with emissions based on what was determined to be a one-way distance of 61 miles to the Orange County border. Locomotive travel time is based on a 10 mph travel speed through downtown and a 2-hour travel time from just north of Santa Fe Depot to the Orange County line (based on a 30 mph travel speed).

The Demolition and Initial Rail Component would increase annual visits from 72 per year under existing conditions to up to 82 trains per year due to the increase in multi-purpose general cargo, but maximum daily visitation would remain at one trip. Full TAMT plan buildout would increase annual visits from 72 per year under existing conditions to up to 684 trains per year due to the increase in dry bulk and multi-purpose general cargo, and maximum daily visitation would increase to two trips on the peak day. Rail emissions are based to the extent possible on BNSF-specific emission factors for the 1998 MOU (ARB 2015c) and EPA engine certification data (EPA 2015b), with the remainder of the emission factors based on the Port of Long Beach inventory (Port of Long Beach 2014). Railcar mover emissions are based on the EPA’s Engine and Vehicle Compliance Information System (for ROG, NO_X, CO, and PM10) (EPA 2015), EPA non-road emissions factors (for CO_2 and SO_X) (EPA 2009), and the Climate Registry (for CH_4 and N_2O). Maximum daily emissions under existing conditions are based on an average of BNSF’s 2013 and 2014 locomotive fleets while emissions associated with new train activity from the Demolition and Initial Rail Component and full

TAMT plan buildout are based on the BNSF locomotive fleet expected in years 2020 and 2035, respectively (see locomotive fleet turnover and emission factor calculations in Appendix F).

Trucks

Truck activity is split into three groups: idling at or near the project site, driving between the project site and nearest freeway entrance, and driving regionally on public roadways. Emissions associated with truck trips were estimated using trip generation from the traffic analysis (Appendix G), idling and running exhaust emission factors from ARB's EMFAC model (ARB 2014b), and fugitive road dust methodology from EPA (2011) and ARB (2014b). Emissions from idling at the terminal are based on an average total idling time on the entire terminal area of 15 minutes (0.25 hour) per truck per trip, consistent with the District's air emissions inventory (District 2014). Note that 15 minutes (0.25 hour) per truck per trip is the sum of all idling at and near the project site in the District's inventory, and not the idling time at a given location, which is restricted to 5 minutes by ARB (13 CCR 1956.8 and 2485). Emissions from truck travel between the project site and nearest freeway entrance are based on the assumption that trucks travel along Harbor Drive and enter and exit the freeway at 28th Street. Emissions from regional travel are based on the assumption that all trucks travel the 60-mile one-way travel distance from the project site to the Riverside County line.[4] Emission factors for running exhaust, brake and tire wear, and idling were obtained from the EMFAC 2014 software for annual average heavy-duty drayage trucks operating at the Port (i.e., "T7 other port") assuming a baseline year of 2013, operational year of 2020 for the Demolition and Initial Rail Component, and operational year of 2035 for full TAMT plan buildout. Daily truck activity was based on the 94 one-way truck trips per day under existing conditions, with the Demolition and Initial Rail Component adding 7 new one-way truck trips per day for all nodes and full TAMT plan buildout adding 423 new one-way truck trips per day for all nodes. A breakdown of trips by node is included in Appendix F).

Cargo Handling Equipment

CHE includes equipment used to move cargo (containers, general cargo, and bulk cargo) to and from marine vessels, railcars, and on-road trucks at the project site. Typical cargo handling equipment at the project site includes forklifts, yard trucks, container handlers (reach stackers), aerial lifts, loaders, sweepers/scrubbers, and other equipment. By increasing throughput at the project site, CHE activity would increase, which may increase the amount of equipment used. Existing CHE emissions are based on the CHE emissions shown in the District's Air Emissions Inventory (District 2014) and emissions were apportioned to each cargo type by percentage of existing throughput. Projected future CHE emissions in 2020 and 2035 are based on the overall increase in throughput and apportioned to each cargo type by percentage of throughput associated with the implementation of both the Demolition and Initial Rail Component and full TAMT buildout. Because emissions are based on the CHE shown in the inventory, which is based on year 2012 activity and emission rates, this analysis assumes no fleet turnover in CHE over time and instead simply scales up existing CHE activity. Note that the new terminal cranes to be added under full TAMT plan buildout would be electric and, therefore, would have no direct emissions. These new cranes are discussed in Section 4.6, *Greenhouse Gas Emissions and Climate Change*.

[4] As the CEQA thresholds used in the impact analysis are regional and relate to the attainment status of air quality standards within San Diego County, haul truck trip emissions were confined to those occurring within the county.

Workers

Emissions associated with increased worker trips were estimated using emission factors for running exhaust idling from EMFAC 2014 assuming a baseline year of 2013 and an opening year of 2020. It was assumed that there are currently 315 employees (combined dock and administrative workers), with the Demolition and Initial Rail Component adding 92 employees and full TAMT plan buildout adding 524. Based on information from the traffic analysis, the analysis assumes three trips per employee per day to account for vehicle-dependent errands during the work shift (Appendix G).

Bulk Material Handling (Dry Bulk Only)

A conveyer system (which contains two conveyer belts) is currently used to transfer dry bulk from vessels and trucks and diesel-powered CHE, including traditional clamshell grabs and diesel trucks, which currently transfer bulk products to onsite storage. Ultimately the plan is to modernize the system to handle multiple bulk commodities for multiple tenants. Because it is unknown what system and controls would be in place, this analysis assumes the existing conveyer system would remain in place as throughput increases. Fugitive PM10 and PM2.5 dust emissions are emitted from transferring and loading dry bulk into trucks and vessels. Currently, soda ash is only imported via train and bauxite is imported by vessel, and full TAMT plan buildout would result in cement storage on site. Daily and annual emissions were estimated based on AP-42 emission factors for handling soda ash, bauxite, and cement, assuming soda ash emissions are currently controlled, bauxite handling is uncontrolled, and cement would be uncontrolled under the unmitigated scenario. Dry bulk throughput is not expected to increase under the Demolition and Initial Rail Component; therefore, emissions would not change relative to existing conditions. However, emissions under full TAMT plan buildout were estimated based on scaling up throughput and associated emissions by the projected throughput for dry bulk expected by 2035. Note that the conveyor system is electric, and GHG emissions associated with this electricity consumption are included in Section 4.6, *Greenhouse Gas Emissions and Climate Change*.

Health Risk Assessment

Current and future operations at the project site would emit TACs that could affect public health in neighboring communities. The main sources of TACs from proposed project operations are and will continue to be DPM and other TAC emissions from vessels, terminal equipment, locomotive activity, and truck activity at and near the project site. For health effects resulting from long-term exposure, ARB considers DPM as representative of the total health risks associated with the combustion of diesel fuel. TAC emissions from non-diesel sources, particularly non-internal combustion sources (such as auxiliary boilers on vessels), were also evaluated in the HRA given the proximity of boiler emissions to recreational receptors near the project site.

The HRA evaluated three different types of health effects: individual lifetime cancer risk, chronic non-cancer hazard index, and acute non-cancer hazard index. Individual lifetime cancer risk is the additional chance for a person to contract cancer after a lifetime of exposure to proposed project emissions, with "lifetime" exposure duration defined as 30 years for a residential receptor per OEHHA guidance. The chronic hazard index is a ratio of the long-term average concentrations of TACs in the air to established reference exposure levels. A chronic hazard index below 1.0 indicates that adverse non-cancer health effects from long-term exposure are not expected. Similarly, the acute hazard index is a ratio of the short-term average concentrations of TACs in the air to established reference exposure levels. An acute hazard index below 1.0 indicates that adverse non-cancer health effects from short-term exposure are not expected.

The determination of health risks required the calculation of annual average, 30-year average, and maximum 1-hour DPM and TAC emissions associated with TAMT operations. Speciation of boiler total organic gases (TOG) emissions consist of various compounds (e.g., benzene and formaldehyde), and each compound has its own risk factors and variables. This analysis estimates the various TAC organic compounds of TOG and DPM based on speciation profiles (or factors) developed and recommended by ARB and OEHHA (ARB and OEHHA 2016). Note that PM10 exhaust emissions are used as a surrogate for DPM based on OEHHA guidance.

EPA's AERMOD dispersion model (version 15181) was used to estimate annual average DPM and TOG concentrations and maximum 1-hour TOG concentrations at nearby sensitive land uses. A detailed description of the various inputs used in AERMOD is contained within Appendix F. Receptors were placed at the various sensitive land uses described in Section 4.2.2.2. The HRA is based on historical (2010–2012) meteorological data recorded at the Perkins Elementary School, approximately 0.4 mile southeast of the project site. Assumptions, model outputs, and risk calculation worksheets are provided in Appendix F.

- A summary of the methodology used to estimate health risks from truck and train activity is based on the following. Trucks enter the project site off Crosby Street and exit the project site on Harbor Drive. All trucks travel to and from the south on Harbor Drive. At 28th Street, a portion of the trucks travel north on 28th Street to access I-5, while the remaining trucks continue on Harbor Drive, ultimately turning north on 32nd Street to access I-15. The traffic report (Appendix G) provides a thorough description of the haul route. Sensitive land uses are located near truck travel routes and include residences along Harbor Drive, 28th Street and Boston Street, and Bay Marina Drive, recreation at Crosby Park, and school receptors near Harbor Drive (Perkins Elementary and Monarch School) and National Avenue and the ramps to and from I-5 north (Burbank Elementary and Logan Elementary). DPM emissions from truck travel are based on the anticipated travel speed on each road and average daily truck trips on each roadway segment. Emission rates take into account some truck fleet turnover over time as obtained from EMFAC 2014 modeling software. Note that PM10 exhaust emissions are used as a surrogate for DPM based on OEHHA guidance. Truck travel was simulated as a series of line-area sources, with each roadway segment modeled as a separate source to account for the varying travel speeds and roadway widths assuming a plume height of 6.53 meters (based on 1.7 times the truck height of 3.84 meters), release height of 3.26 meters (based on 0.5 times the plume height), and plume width of 9.66 meters (based on 3.66-meter truck width plus 3 meters on either side). Inputs are based on published guidance from the San Joaquin Valley Air Pollution Control District (SJVAPCD 2007) and guidance for roadways within AERMOD View (Lakes 2015).
- Rail cars are currently loaded and unloaded at the terminal while switchers bring some cargo back and forth from the project site to the BNSF yard. As discussed in the rail methods above, train emissions result from regional line-haul and switcher idling at the yard and switching between the yard and project site. Train-related DPM emissions were estimated based on the projected new activity at the yard and switching based on the projected increase in rail activity (Appendix F). Switching emissions are assumed to occur over a 24-hour day and emissions are split evenly between day and night. Switching activity was modeled as two point sources where

switchers empty and fill dry bulk at the yard. Source inputs regarding stack height, stack diameter, exhaust temperature, and exit velocity are based on the inputs used in the ARB railyard study for the same switcher fleet (ARB 2008).

- OGVs and tugs enter the harbor and transit through the harbor until they berth at the project site. Emissions from vessel and tug transit within the harbor were simulated as a series of separated volume sources from the harbor entrance to the terminal, and emissions were divided equally among various volume sources for each vessel and tug. Vessel plume height was based on a series of visual observations of container ship exhaust plumes at the Port of Los Angeles, which conservatively assumes plume height to be 50 percent above stack height for harbor transit. All vessel source inputs, including plume height and initial dispersion, were modeled based on methods presented in previous Port of Los Angeles documents (Port of Los Angeles 2013). The vessels were assumed to travel along the centerline of the North Bay Channel, with the vessel path drawn by overlaying nautical maps obtained from the National Oceanic and Atmospheric Administration in Google Earth. Based on the nautical charts, it was assumed that vessels generally travel a path that is approximately 100 meters wide.
- OGV hoteling emissions from auxiliary engines and boilers occur while at berth and auxiliary engines only run when vessels are not cold ironing. Note that boilers are assumed to always run at berth, regardless of whether vessels are plugged in. Because vessels are stationary during hoteling, hoteling emissions were modeled as stack-type point sources located adjacent to each berth at the project site. Because of the high stacks and distance to receptors, adjustments were not made for building downwash effects. Stack exhaust parameters for auxiliary DPM and boiler TOG, including stack height, exit velocity, exhaust temperature, and stack diameter, were modeled based on methods presented in previous Port of Los Angeles documents (Port of Los Angeles 2013).
- Cargo handling equipment operates at the terminal all hours of the day, consistent with previous large modeling studies at the Port of Los Angeles (Port of Los Angeles 2013) and at the various railyards conducted by ARB, including in San Diego (ARB 2008). TAC emissions from CHE were modeled as an area source polygon equal to the size of the entire terminal. Release heights were taken from methods presented in previous Port of Los Angeles documents (Port of Los Angeles 2013).

Project- and plan-level cancer risk and non-cancer hazard index were estimated based on peak hourly and average annual concentrations within AERMOD and accepted OEHHA (2015) values for residential, school, and recreational uses. The risk calculations incorporate OEHHA's recent guidance update, which includes age-specific factors to take into account the increased sensitivity to carcinogens during early-in-life exposure. Note that while OEHHA, ARB, and EPA continue to examine the relationship between DPM exposure and short-term (acute) health effects, health studies to date have not provided sufficient exposure information to establish a short-term (acute) non-cancer health risk value. Short-term (acute) non-cancer health risk effects are only analyzed for pollutants that have been assigned risk values. Assumptions, including source parameters and receptor locations, along with model outputs and risk calculation worksheets are provided in Appendix F.

4.2.4.2 Thresholds of Significance

The following significance criteria are based on Appendix G of the State CEQA Guidelines and provide the basis for determining significance of impacts associated with air quality resulting from the proposed project. The determination of whether an air quality impact would be significant is based on the applicable thresholds and the professional judgment of the District as Lead Agency, supported by the recommendations of qualified personnel at ICF, and relies wholly on the substantial evidence in the administrative record. Impacts would be considered significant if the project would do any of the following.

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
3. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).
4. Expose sensitive receptors to substantial pollutant concentrations.
5. Create objectionable odors affecting a substantial number of people.

Appendix G of the State CEQA Guidelines further indicates the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the significance determinations.

Supplemental Thresholds

An EIR should disclose and evaluate the public health consequences associated with increasing air pollutants. Consequently, the following section summarizes the thresholds established by the County of San Diego, presents substantial evidence regarding the basis upon which they were developed, and also describes how they are used to determine whether project construction and operational emissions would result in a significant impact within the context of (1) interfering with or impeding attainment of CAAQS and NAAQS, or (2) causing or contributing to increased risks to human health.

Regional Thresholds for SDAB Attainment of State and Federal Ambient Air Quality Standards

As previously indicated, the State CEQA Guidelines state that the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the significance determination of whether a project would violate or impede attainment of air quality standards. Attainment status for each pollutant is assigned for the entire air basin. In San Diego, the SDAB is defined as "all of San Diego County" (see 17 CCR 60110). Therefore, the current attainment status for the entire San Diego region, which includes nonattainment status for ozone NAAQS and ozone CAAQS, PM10 CAAQS, and PM2.5 CAAQS, applies to the entire county.

Neither the City of San Diego nor the District has developed CEQA thresholds of significance for air quality and health risk.[5] Although SDAPCD has not developed specific thresholds of significance to evaluate construction and operational impacts within CEQA documents, SDAPCD's Regulation II, Rules 20.2 and 20.3 (new source review for non-major and major stationary sources, respectively), outline AQIA Trigger Levels for criteria pollutants for new or modified sources. Based on SDAPCD's AQIA Trigger Levels, as well as EPA rulemaking and CEQA thresholds adopted by SCAQMD, San Diego County has established SLTs to assist lead agencies in determining the significance of project-level air quality impacts within the county (as shown in Table 4.2-10). Although SDAPCD does not have VOC or PM2.5 AQIA Trigger Levels, the county has adopted a PM2.5 SLT based on EPA's "Proposed Rule to Implement the Fine Particle National Ambient Air Quality Standards" published on September 8, 2005, which is also consistent with SCAQMD's Air Quality Significance Thresholds (SCAQMD 2015a), and a VOC SLT based on the threshold of significance for VOCs from the SCAQMD for the Coachella Valley. Emissions in excess of San Diego County's SLTs, shown in Table 4.2-10, would be expected to have a significant impact on air quality because an exceedance of the SLTs is anticipated to contribute to CAAQS and NAAQS violations in the county.

The County's SLTs are based on SDAPCD AQIA Trigger Levels, and these AQIA Trigger Levels are based on emissions levels identified under the NSR program, which is a permitting program established by Congress as part of the CAA Amendments of 1990 to ensure that air quality is not significantly degraded by new or modified sources of emissions. The NSR program requires that stationary sources receive permits before construction begins and/or the use of equipment. By permitting large stationary sources, the NSR program ensures that new emissions would not slow regional progress toward attaining the NAAQS. SDAPCD implements the NSR program through Rules 20.2 and 20.3, and has concluded that the stationary pollutants described under the NSR program are equally significant as those pollutants generated with land use projects. SDAPCD's Trigger Levels were set as the total emission thresholds associated with the NSR program to help attain and maintain the NAAQS from new and modified non-major stationary sources.[6] SDAPCD's Trigger Levels take into account the region's attainment status, emission profile, inventory, and projections, and represent levels above which project-generated emissions could affect SDAPCD's and SANDAG's commitment to attain the state and federal standards in the region. Consistent with Section 15064.7(c) of the State CEQA Guidelines,[7] the evidence in support of the air quality thresholds shown in Table 4.2-10 is deemed appropriate for their use in this analysis and in this location within the greater SDAB.

[5] The District is currently in the process of drafting CEQA thresholds of significance for all resources, including air quality. Until these thresholds are adopted, the District will continue to rely on established regional thresholds, which are based on substantial evidence summarized herein.

[6] San Diego Air Pollution Control District, Rule 20.2, Table 20.2-1, hereby incorporated by reference: http://www.sdapcd.org/rules/Reg2pdf/R20-2.pdf

[7] "When adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence."

Table 4.2-10. San Diego County Screening-Level Thresholds

	Emission Rate		
Air Contaminant	**(pounds per hour)**	**(pounds per day)[1]**	**(tons per year)**
Respirable Particulate Matter (PM10)	--	100	15
Fine Particulate Matter (PM2.5) [2]	--	55	10
Nitrogen Oxides (NO_X)	25	250	40
Sulfur Oxides (SO_X)	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead (Pb) [3]	--	3.2	0.6
Volatile Organic Compounds (VOC) [4]	--	75	13.7 [5]

Source: SDAPCD Regulation II, Rule 20.2, County of San Diego 2007.

[1] According to San Diego County, the daily SLTs are most appropriate when assessing impacts from standard construction and operational emissions. Therefore, daily SLTs are used to evaluate project significance, while hourly and annual SLTs are provided for informational purposes only.

[2] Based on EPA's "Proposed Rule to Implement the Fine Particle National Ambient Air Quality Standards" published September 8, 2005, and also SCAQMD's Air Quality Significance Thresholds (SCAQMD 2015a).

[3] Lead and lead compounds.

[4] County SLTs for VOCs were originally based on the threshold of significance for VOCs from SCAQMD for the Coachella Valley. The terms VOC and ROG are used interchangeably, although VOC is used in this table because the City and County use the term VOC.

[5] 13.7 tons per year threshold is based on 75 pounds per day multiplied by 365 days per year and divided by 2,000 pounds per ton.

Health-Based Thresholds for Project-Generated Pollutants of Human Health Concern

An EIR should disclose and evaluate the public health consequences associated with increasing air pollutants. As discussed above, all criteria pollutants are associated with some form of health risk (e.g., asthma, asphyxiation). Adverse health effects associated with criteria pollutant emissions are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, and the number and character of exposed individuals [e.g., age, gender]). Moreover, O_3 precursors (ROG and NO_X) affect air quality on a regional scale. Health effects related to O_3 are therefore the product of emissions generated by numerous sources throughout a region. As part of the setting and updating of the NAAQS, EPA develops and considers quantitative characterizations of exposures and associated risks to human health or the environment, known as a Health Risk and Exposure Assessment (HREA), with recent air quality conditions and with air quality estimated to just meet the current or alternative standard(s) under consideration (EPA 2016a). The HREA estimates population exposure to and resulting mortality and morbidity health risks associated with the full range of observed pollutant concentrations, as well as incremental changes in exposures and risks associated with ambient air quality adjusted to just meeting the existing NAAQS and just meeting potential alternative NAAQS under consideration (EPA 2014). However, existing models have limited sensitivity to small changes in criteria pollutant concentrations and, as such, translating project-generated criteria pollutants to specific health effects would produce meaningless results. In other words, minor increases in regional air pollution from project-generated ROG and NO_X would have nominal or negligible impacts on human health.[8]

As such, an analysis of impacts on human health associated with project-generated regional emissions is not included in the project-level analysis. Increased emissions of O_3 precursors (ROG and NO_X) generated by the project could increase photochemical reactions and the formation of tropospheric O_3, which, at certain concentrations, could lead to respiratory symptoms (e.g., coughing), decreased lung function, and inflammation of airways. Although these health effects are associated with O_3, the impacts are a result of cumulative and regional ROG and NO_X emissions, and the incremental contribution of the project to specific health outcomes from criteria pollutant emissions would be limited and cannot be solely traced to the project. (See Threshold 3 and Chapter 5 for a discussion of regional cumulative impacts.)

Because localized pollutants generated by a project can directly affect adjacent sensitive receptors, the analysis of project-related impacts on human health focuses only on those localized pollutants with the greatest potential to result in a significant, material impact on human health. This is consistent with the current state-of-practice and published guidance by the California Air Pollution Control Officers Association (CAPCOA 2009), OEHHA (2015), SDAPCD (2006), and ARB (2000). These localized pollutants are (1) locally concentrated CO and (2) DPM.[9] Locally adopted thresholds of significance for each pollutant are identified below. Note that a qualitative health-based analysis of criteria pollutants is briefly discussed under Threshold 4, but the health-based analysis focuses primarily on CO and DPM, which are most often associated with adverse health outcomes (i.e., acute, chronic, and cancer risks) as opposed to the respiratory irritability outcomes typically seen from exposure to elevated concentrations of the criteria pollutants discussed above.

Local Micro-Scale Carbon Monoxide Concentration Standards

The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below state and federal CO standards. If ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a state or federal standard, project emissions are considered significant if they increase 1-hour CO concentrations by 1.0 ppm or more or 8-hour CO concentrations by 0.45 ppm or more (SCAQMD 1993). The following are applicable local emission concentration standards for CO.

- CAAQS and NAAQS 1-hour CO standards of 20 and 35 ppm, respectively
- CAAQS and NAAQS 8-hour CO standard of 9.0 and 9 ppm, respectively

[8] As an example, the Bay Area Air Quality Management District's Multi-Pollutant Evaluation Method requires a 3 to 5% increase in regional ozone precursors to produce a material change in modeled human health impacts. Based on 2008 ROG and NO_X emissions in the Bay Area, a 3 to 5% increase equates to over 20,000 pounds per day of ROG and NO_X.

[9] DPM is the primary TAC of concern for mobile sources—of all controlled TACs, emissions of DPM are estimated to be responsible for about 70% of the total ambient TAC risk. Given the risks associated with DPM, tools and factors for evaluating human health impacts from project-generated DPM have been developed and are readily available. Conversely, tools and techniques for assessing project-specific health outcomes as a result of exposure to other TACs (e.g., benzene) remain limited. These limitations impede the ability to evaluate and precisely quantify potential public health risks posed by TAC exposure.

As in most urban areas, high short-term concentrations of CO, known as “hot-spots,” can be a problem in San Diego County. Hot-spots typically occur in areas of high motor vehicle use, such as in parking lots, at congested intersections, and along highways. Because elevated CO concentrations typically occur at locations with high traffic volumes and congestion, elevated CO concentrations are often correlated with level of service (LOS) at intersections. LOS expresses the congestion level for an intersection and is designated by a letter from A to F, with LOS A representing the best operating conditions and LOS F the worst. Significant concentrations of CO sometimes occur (depending on temperature, wind speed, and other variables) at intersections where LOS is rated at D or worse.

In order to assess the potential for CO hot-spots at nearby intersections, the analysis herein uses the County’s CO hot-spot screening criteria, which indicate that any project that would place receptors within 500 feet of a signalized intersection with peak-hour trips exceeding 3,000 trips and operating at or below LOS E must conduct a hot-spot analysis for CO. Likewise, projects that will cause road intersections with intersection peak-hour trips exceeding 3,000 trips to operate at or below LOS E must also conduct a CO hot-spot analysis.

Localized Diesel Particulate Matter Concentrations

DPM is a form of localized PM (see above) that is generated by diesel equipment and vehicle exhaust. DPM has been identified as a TAC by ARB and is particularly concerning because long-term exposure can lead to cancer, birth defects, and damage to the brain and nervous system. The County has adopted incremental cancer and hazard thresholds to evaluate receptor exposure to DPM emissions, which are adapted from SDAPCD Regulation XII, Rule 1200. Projects that would result in exposure to TACs resulting in a maximum incremental cancer risk (MICR) greater than 1 in 1 million without application of Toxics BACT,[10] MICR greater than 10 in 1 million with application of Toxics BACT, or a chronic and acute non-cancer health hazard index greater than 1 would be deemed as having a potentially significant impact related to health risks from DPM exposure. Because various Toxics BACTs are in place at the Port—including ARB rules on vessels, shore power, and drayage trucks—the MICR of 10 in 1 million is utilized herein.

Asbestos-Containing Materials

There are no quantitative thresholds related to receptor exposure to asbestos. However, SDAPCD Rule 40 requires the demolition or renovation of asbestos-containing building materials to comply with the limitations of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulations as listed in the Code of Federal Regulations.

Criteria for Cumulative Impacts

Potential cumulative air quality impacts would result when cumulative projects’ pollutant emissions would combine to degrade air quality conditions to below acceptable levels. This could occur on a local level, such as through increases in vehicle emissions at congested intersections, or at sensitive receptor locations due to concurrent construction activities; at a regional level, such as the potential

[10] Best Available Control Technology (BACT) is the level of air contaminant emission control or reduction required by state law and District rules for new, modified, relocated, and replacement emission sources. Examples of Toxics BACT include diesel particulate filters, catalytic converters, and selective catalytic reduction technology.

impact of multiple past, present, and reasonably foreseeable projects on O_3 within the SDAB; or globally, such as the potential impact of GHG emissions on global climate change.

Neither the District, nor the City of San Diego, nor SDAPCD has established quantitative thresholds to determine whether a project would have a cumulatively considerable contribution to air quality. The County of San Diego thresholds (see below), set forth by SDAPCD and SCAQMD, for cumulative air quality impacts are utilized for the analysis of the impacts of proposed project construction and operations related to emissions on air quality.

Cumulatively considerable net increases during the construction phase would typically happen if two or more projects near each other are simultaneously constructed. The following thresholds are used to determine the cumulatively considerable net increase in emissions during the construction phase.

- A project that has a significant direct impact on air quality with regard to emissions of PM10, PM2.5, NO_X, and/or ROGs (i.e., an exceedance of SLT values indicated in Table 4.2-10) would also have a significant cumulatively considerable net increase.
- In the event that direct impacts from the proposed project are less than significant, a project may still have a cumulatively considerable impact on air quality if the emissions of concern from the proposed project, in combination with the emissions of concern from other past, present, or reasonably foreseeable future projects within the proximity relevant to the pollutants of concern, are in excess of direct air quality impact thresholds.

The following thresholds are used to determine the cumulatively considerable net increase in emissions during the operation phase:

- A project that does not conform to the RAQS and/or has a significant direct impact on air quality with regard to operational emissions of PM10, PM2.5, NO_X, and/or ROGs (i.e., an exceedance of SLT values indicated in Table 4.2-10) would also have a significant cumulatively considerable net increase.
- Projects that cause road intersections to operate at or below LOS E for intersections with total (proposed project and surrounding project) peak-hour trips in excess of 3,000 trips and create a CO hot-spot would create a cumulatively considerable net increase of CO.

Criteria for General Conformity

The project would generate air pollutant emissions from activities occurring within the SDAB. As shown in Table 4.2-2, the SDAB is classified as a federal nonattainment area for O_3 and a maintenance area for CO, and the TIGER Grant funding, because it is federal funds, requires a conformity evaluation to be undertaken to determine whether all emission sources during construction (e.g., haul trucks, construction equipment) and operations (e.g., OGVs, haul trucks, CHE, rail) that operate on and off the project site exceed the General Conformity *de minimis* levels, as shown in Tables 4.2-11 and 4.2-12. If the conformity evaluation indicates that emissions are in excess of any of the General Conformity *de minimis* thresholds, the applicant must perform a conformity determination. A conformity determination is made by satisfying any of the requirements described in Section 4.2.3.2 above. In the event that emissions associated with the project exceed the General Conformity *de minimis* thresholds, the project proponents would consult with the local applicable air quality management or pollution control district to ensure a conformity determination is made.

Table 4.2-11. Federal *de minimis* Threshold Levels for Criteria Pollutants in Nonattainment Areas (tons per year)

Pollutant	Emission Rate (tons per year)
Ozone (ROG/VOC or NO_X)	
Serious nonattainment areas	50
Severe nonattainment areas	25
Extreme nonattainment areas	10
Other ozone nonattainment areas outside an ozone transport region[a]	100
Other ozone nonattainment areas inside an ozone transport region[a]	
ROG/VOC	50
NO_X	100
CO: All nonattainment areas	100
SO_2 or NO_2: All nonattainment areas	100
PM10	
Moderate nonattainment areas	100
Serious nonattainment areas	70
PM2.5	
Direct emissions	100
SO_2	100
NO_X (unless determined not to be a significant precursor)	100
ROG/VOC or ammonia (if determined to be significant precursors)	100
Pb: All nonattainment areas	25

Source: 40 CFR 93.153.

Notes: *de minimis* threshold levels for conformity applicability analysis.

Underlined text indicates pollutants for which the region is in nonattainment, and a conformity evaluation must be made.

[a] Ozone Transport Region consists of the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, the Consolidated Metropolitan Statistical Area that includes the District of Columbia, and northern Virginia (Section 184 of the CAA). The SDAB is not considered an Ozone Transport Region.

Table 4.2-12. Federal *de minimis* Threshold Levels for Criteria Pollutants in Maintenance Areas (tons per year)

Pollutant	Emission Rate (tons per year)
Ozone (NO_X, SO_2, or NO_2)	
All maintenance areas	100
Ozone (ROG/VOC)	
Maintenance areas inside an ozone transport region[a]	50
Maintenance areas outside an ozone transport region[a]	100
CO: All maintenance areas	100
PM10: All maintenance areas	100
PM2.5	
Direct emissions	100
SO_2	100
NO_X (unless determined not to be a significant precursor)	100
ROG/VOC or ammonia (if determined to be significant precursors)	100
Pb: All maintenance areas	25

Source: 40 CFR 93.153.

Notes: *de minimis* threshold levels for conformity applicability analysis.

Underlined text indicates pollutants for which the region is in maintenance, and a conformity determination must be made.

[a] Ozone Transport Region consists of the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, the Consolidated Metropolitan Statistical Area that includes the District of Columbia, and northern Virginia (Section 184 of the CAA). The SDAB is not considered an Ozone Transport Region.

4.2.4.3 Project Impacts and Mitigation Measures

Threshold 1: Implementation of the proposed project would not conflict with or obstruct implementation of an applicable air quality plan.

Impact Discussion

Demolition and Initial Rail Component

SDAPCD is required, pursuant to the NAAQS and CAAQS, to reduce emissions of criteria pollutants for which the County and air basin are in nonattainment (i.e., O_3, PM10, and PM2.5). The most recent SDAPCD air quality attainment plans are the 2009 RAQS and the 2002 and 2012 O_3 maintenance plans. The RAQS outlines SDAPCD's plans and control measures designed to attain the CAAQS for O_3, while the 2002 and 2012 maintenance plans include SDAPCD's plans and control measures for attaining the NAAQS for O_3. The 2009 RAQS projects future emissions and determines the strategies necessary for the reduction of stationary source emissions through regulatory controls. The RAQS relies on the emission projections and control measures outlined in the SIP. ARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the region's cities and by the County of San Diego. The 2002 and

2012 maintenance plans represent SDAPCD's portion of the SIP. The SIP is a comprehensive plan of previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, State regulations, and federal controls that describes how each nonattainment area in the state will meet NAAQS, as described 4.2.3.4, *Local*.

The simplest test to assess project consistency is that if the project proposes development that is consistent with the growth anticipated by the relevant land use plans that were used in the formulation of the RAQS and SIP, the project would be consistent with the RAQS and SIP. Moreover, if the project is consistent with the overarching goals (i.e., to reduce emissions and attain NAAQS and CAAQS) and strategies (i.e., measures implemented to reduce emissions), then the project would be consistent with the RAQS and SIP. The PMP is the governing land use document for physical development under the jurisdiction of the District. The PMP incorporates the Tenth Avenue Marine Terminal Planning District Precise Plan (TAMT Precise Plan), which calls for the continuation of existing cargo operations at TAMT and foresees future intensification, consistent with the Coastal Act, to prioritize marine-based commerce and lead to economic benefits for the region and state. The TAMT Precise Plan states that renovation and redevelopment of existing facilities will continue as industries respond to market demands and changes in the maritime industrial climate (District 2015). Projects that propose development consistent with growth anticipated by the current PMP and its TAMT Precise Plan are considered consistent with the RAQS and SIP. Moreover, in the event that a project would propose development that is less dense than anticipated within the current PMP, the project would likewise be consistent with the RAQS and SIP because emissions would be less than estimated within the current PMP. If a project proposes development that is greater than that anticipated in the PMP and SANDAG's growth projections, the project would be in conflict with the RAQS and SIP and might have a potentially significant impact on air quality because emissions would exceed those estimated for the existing land use plan (i.e., PMP). This situation would warrant further analysis to determine if a proposed project and surrounding projects would exceed the growth projections used in the RAQS for a specific subregional area. As discussed in Chapter 3, *Project Description*, the project site is within Planning District 4, which has been identified as one of only two areas in the entire San Diego region with an established waterfront industrial shipping operation (the other being Planning District 5). The proposed project would allow the District to achieve greater efficiency and use contemporary terminal technologies to better and more efficiently handle cargo at the project site and renovate and upgrade the aging rail infrastructure to allow trains to bypass the additional stop currently required at the railyard facility. Moreover, prior to repaving the area after demolition of the transit sheds, the Demolition and Initial Rail Component would add subsurface conduit and other electrical improvements to allow future electrification of the project site, including shore power capabilities at Berths 10-5/10-6. In total, the Demolition and Initial Rail Component would allow for greater throughput. Additionally, the Demolition and Initial Rail Component would include on-terminal rail upgrades to allow for more efficient rail movement on terminal. This is consistent with the TAMT Precise Plan, which states that renovation and redevelopment of existing facilities will continue as industries respond to market demands.

No changes in land uses would occur. The Demolition and Initial Rail Component would not result in land use designations that would be incompatible with existing onsite PMP land use designations, nor would it result in unanticipated growth. The Demolition and Initial Rail Component would be consistent with control measures from the SIP, including clean vessel fuel, truck idling limits, CHE equipment rules, and agreements with locomotive operators to reduce emissions, as well as proposed new SIP control measures, including improvements to allow future shore power capabilities at Berths 10-5/10-6 (ARB 2016b). In addition, the Demolition and Initial Rail Component would be consistent with the District's Green Port and Clean Air Programs, which aim to reduce air pollution from operations at the Port and include various strategies that the District is employing to reduce criteria pollutant and GHG emissions from its largest sources. The Demolition and Initial Rail Component would also comply with SDAPCD rules that have been implemented to reduce regional particulate matter and O_3 emissions—Rule 50 (Visible Emissions), Rule 51 (Nuisance), Rule 52 (Particulate Matter), Rule 54 (Dust and Fumes), Rule 55 (Fugitive Dust Control), and Rule 67 (Architectural Coatings)—and fugitive dust control measures during any demolition activities.

In summary, the Demolition and Initial Rail Component would be consistent with current land use designations of the PMP, would be consistent with the goals of the TAMT Precise Plan, would not result in changes in land use or population, and would be consistent with the statewide and local strategies to reduce emissions. Therefore, the Demolition and Initial Rail Component would not hinder, conflict with, or obstruct the implementation of the applicable air quality plan. This impact is considered less than significant.

Full TAMT Plan Buildout

As discussed in Chapter 3, *Project Description*, the proposed TAMT plan would replace the existing 2008 Maritime Business Plan (2008 Plan) to provide greater flexibility and meet current and future market conditions at the project site. The proposed TAMT plan includes a variety of infrastructure investments that may be undertaken over the long term to accommodate an increase of the project site's capabilities and capacity, to include up to five gantry cranes, additional and consolidated dry bulk storage capacity, enhancements to the existing conveyor system, demolition of the molasses tanks and Warehouse C, additional open storage space, on-dock intermodal rail facilities, and a centralized gate facility, in addition to the Demolition and Initial Rail Component described above.

The TAMT plan identifies five operating nodes that include dry bulk, liquid bulk, refrigerated container, multi-purpose general cargo, and a central gate facility. The improvements proposed in the TAMT plan would allow for significant increases in the terminal's overall maximum practical throughput capacity for each operating node while maximizing efficiency within the existing TAMT footprint.

No changes in land uses would occur. Full TAMT plan buildout would not result in land use designations that would be incompatible with existing onsite PMP land use designations, nor would it result in unanticipated growth. The full TAMT plan buildout would be consistent with control measures from the SIP, including clean vessel fuel, truck idling limits, CHE equipment rules, and agreements with locomotive operators to reduce emissions. Moreover, after mitigation, the full TAMT plan buildout would be consistent with and help facilitate the proposed new SIP control measures, including future power capabilities at Berths 10-5/10-6 to accommodate additional vessel types, accommodate additional new and larger vessels equipped with shore power capabilities, and allow for concurrently cold ironing. Mitigation would further reduce project-related emissions, including VSR, shore power, and electric cargo handling upgrades. In addition, full TAMT plan buildout would be consistent with the District's Green Port and Clean Air Programs, which aim to reduce air pollution from operations at the Port and include various strategies that the District is employing to reduce criteria pollutant and GHG emissions from its largest sources. Full TAMT plan buildout would also comply with SDAPCD rules that have been implemented to reduce regional particulate matter and ozone emissions—Rule 50 (Visible Emissions), Rule 51 (Nuisance), Rule 52 (Particulate Matter), Rule 54 (Dust and Fumes), Rule 55 (Fugitive Dust Control), and Rule 67 (Architectural Coatings)—and fugitive dust control measures during any demolition activities.

In summary, full TAMT plan buildout would be consistent with current land use designations of the PMP, would be consistent with the goals of the TAMT Precise Plan, would not result in changes in land use or population, and would be consistent with the statewide and local strategies to reduce emissions. Therefore, the full TAMT plan buildout would not hinder, conflict with, or obstruct the implementation of the applicable air quality plan. This impact is considered less than significant.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

Impacts would be less than significant.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

No mitigation is required.

Level of Significance After Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

Impacts would be less than significant.

Threshold 2: Implementation of the proposed project would violate an air quality standard or contribute substantially to an existing or projected air quality standard.

Impact Discussion

Construction and operation of the Demolition and Initial Rail Component and full TAMT plan buildout have the potential to create air quality impacts by violating an air quality standard or contributing substantially to an existing or projected air quality violation. A discussion of construction- and operations-related impacts is presented below.

Demolition and Initial Rail Component

Construction

An estimate of emissions associated with construction of the Demolition and Initial Rail Component is presented in Table 4.2-13. As shown in Table 4.2-13, emissions during worst-case construction would be below San Diego County's SLTs. Therefore, construction would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Impacts would be less than significant.

Additionally, as shown in Table 4.2-14, total and annual emissions of all pollutants during construction would be below the applicable *de minimis* levels for the region. Therefore, project construction would not result in an adverse regional air quality effect.

Table 4.2-13. Estimate of Construction Emissions associated with the Demolition and Initial Rail Component (pounds per day)

Construction Phase	VOC	NO_X	CO	SO_X	PM10	PM2.5
Transit Shed #1						
Demolition of Roofing and Steel Frame	4	44	36	<1	4	3
Demolition of Concrete Walls	6	59	48	<1	5	4
Demolition of Asphalt, Foundation, and Pile Caps	5	54	24	<1	6	3
Demolition and Removal of Asbestos/Lead/Hazardous Waste	1	7	7	<1	2	1
Earthwork & Grading	8	100	48	<1	5	4
Paving	3	19	10	<1	1	1
Utilities, Lighting, Misc.	2	21	17	<1	2	1
Max Daily - Transit Shed #1	***20***	***199***	***123***	***<1***	***14***	***10***
Transit Shed #2						
Demolition of Roofing and Steel Frame	4	40	38	<1	4	2
Demolition of Concrete Walls	6	56	51	<1	5	3
Demolition of Asphalt, Foundation, and Pile Caps	5	53	24	<1	6	3
Demolition and Removal of Asbestos/Lead/Hazardous Waste	0	4	6	<1	2	1
Earthwork & Grading	8	94	44	<1	5	4
Paving	3	18	10	<1	1	1
Utilities, Lighting, Misc.	2	19	17	<1	1	1
Max Daily - Transit Shed #2	***19***	***186***	***122***	***<1***	***14***	***9***
Rail Lubrication Install	<1	3	3	<1	<1	<1
Maximum Daily Construction	**21**	**203**	**126**	**<1**	**14**	**10**
San Diego County SLTs	75	250	550	150	100	55
Exceed Significant Threshold?	*No*	*No*	*No*	*No*	*No*	*No*

Notes: Maximum daily emissions for Transit Sheds #1 and #2 assumes the maximum demolition phase for each shed overlaps with the remainder of construction of that shed. Maximum overall construction occurs if the maximum day for each shed overlaps with rail lubrication installation. It is assumed that demolition of each transit shed would occur independently and would not overlap with construction of the other shed. Totals may not add exactly due to rounding.
Source: Appendix F.

Table 4.2-14. Estimate of Construction Emissions associated with the Demolition and Initial Rail Component (tons per year)

Construction Phase	VOC	NO_X	CO	SO_X	PM10	PM2.5
2017	0.26	2.69	1.72	<0.00	0.25	0.15
2018	0.29	3.08	2.20	<0.00	0.30	0.17
2019	<0.00	0.02	0.01	<0.00	<0.00	<0.00
Total Emissions	0.55	5.78	3.93	0.01	0.55	0.31
Maximum Yearly Emissions	0.29	3.08	2.20	<0.00	0.30	0.17
Applicable *de minimis* levels	100	100	100	N/A	N/A	N/A
Exceed *de minimis*?	No	No	No	N/A	N/A	N/A

Notes: Totals may not add exactly due to rounding.
Source: Appendix F.

Operation

Table 4.2-15 shows the anticipated criteria pollutant emissions associated with Demolition and Initial Rail Component operations relative to existing conditions. "Net new" emissions refer to the extent to which emissions from Demolition and Initial Rail Component operations would exceed emissions from existing daily (Table 4.2-6) and annual (Table 4.2-7) conditions. As shown in Table 4.2-15, daily emissions during Demolition and Initial Rail Component operations are anticipated to increase but this increase would be below San Diego County's SLTs for all pollutants. Therefore, the Demolition and Initial Rail Component would not violate any air quality standards or contribute substantially to an existing or projected air quality violation; impacts would be less than significant.

Note that although the Demolition and Initial Rail Component would increase throughput and activity, port-related equipment emissions per unit of activity (i.e., emissions factors) generally decline over time in response to existing air quality regulations and equipment fleet turnover. As shown in Table 4.2-15, emissions associated with Demolition and Initial Rail Component operations would decrease relative to existing conditions, particularly because the new Tier 2 Dole vessels are cleaner during transit and maneuvering and the new vessels will shift hoteling activity that is currently mostly diesel-powered to electricity-based hoteling. Additionally, BNSF line haul~~, which~~ currently averages Tier 2 NO_X rates~~, but as~~. As their locomotive engines reach the end of their useful life (approximately 40 years~~), newly built~~ after being placed into operation), they will be replaced by new, cleaner locomotives. The result will ~~come online, reducing BNSF's~~be a reduction in line haul emissions over time.

Additionally, as shown in Table 4.2-16, annual operational emissions would be below the appropriate *de minimis* levels for the region for each pollutant. Therefore, operation of the Demolition and Initial Rail Component would not result in an adverse regional air quality effect.

Table 4.2-15. Estimate of Operational Emissions under ~~Unmitigated~~ Existing Plus Demolition and Initial Rail Component Unmitigated Conditions (pounds per day)

Operational Element	VOC	NO_X	CO	SO_X	PM10	PM2.5
Dry Bulk (289,864 MT)						
Project Daily						
Ocean-Going Vessels	~~10~~29	~~174~~523	~~14~~43	~~5~~16	~~3~~10	~~3~~9
Assist Tugs	~~<~~1	~~3~~10	~~3~~9	~~<1~~0	~~<1~~0	~~<1~~0
Tugs and Fuel Barges	~~3~~10	~~33~~99	~~25~~75	~~<1~~0	~~1~~3	~~1~~3
Trucks	2	85	5	~~<1~~0	2	1
Worker Trips	~~<1~~0	1	11	~~<1~~0	~~2~~1	~~1~~0
Rail - Regional Line Haul	8	212	25	1	5	5
Rail - Switching between Terminal and Yard	~~2~~1	~~58~~31	2	~~<1~~0	1	~~1~~0
Cargo Handling Equipment	1	12	6	~~<1~~0	~~<1~~0	~~<1~~0
Bulk Loading	-	-	-	-	583	172
Dry Bulk Existing Plus Project Daily	**~~27~~52**	**~~578~~972**	**~~93~~177**	**~~7~~17**	**~~598~~607**	**~~184~~192**
Dry Bulk Existing Daily[1]	~~28~~53	~~613~~1,007	~~97~~181	~~7~~17	~~599~~608	~~184~~192
Net New Over Existing	-1	-~~35~~34	-4	~~<-1~~0	-1	-1
Exceed Significant Threshold?	*No*	*No*	*No*	*No*	*No*	*No*
Refrigerated Containers (685,931 MT)						
Project Daily						
Ocean-Going Vessels	~~49~~146	~~722~~2,165	~~82~~247	~~32~~96	~~19~~56	~~17~~51
Assist Tugs	~~1~~4	~~11~~33	~~10~~31	~~<1~~0	<1	<1
Tugs and Fuel Barges	~~13~~33	~~134~~330	~~101~~249	~~<1~~0	~~5~~12	~~5~~11
Trucks	4	195	13	~~<1~~0	5	2
Worker Trips	1	3	27	~~<1~~0	4	~~2~~1
Cargo Handling Equipment	3	28	15	~~<1~~0	1	1
Refrigerated Containers Existing Plus Project Daily	**~~71~~190**	**~~1,093~~2,755**	**~~249~~582**	**~~33~~97**	**~~34~~78**	**~~26~~68**
Refrigerated Containers Existing Daily[1]	~~74~~207	~~1,499~~4,064	~~250~~651	~~37~~110	~~35~~87	~~28~~77
Net New Over Existing	-~~3~~17	-~~406~~1,309	-~~2~~69	-~~4~~13	-~~1~~9	-~~2~~9
Exceed Significant Threshold?	*No*	*No*	*No*	*No*	*No*	*No*
Multi-Purpose General Cargo (124,078 MT)						
Project Daily						
Ocean-Going Vessels	~~25~~74	~~451~~1,354	~~38~~115	~~15~~44	~~9~~26	~~8~~24
Assist Tugs	~~1~~3	~~8~~25	~~8~~24	~~<1~~0	<1	<1

Operational Element	VOC	NO_X	CO	SO_X	PM10	PM2.5
Tugs and Fuel Barges	~~9~~25	~~89~~250	~~67~~189	~~<1~~0	~~3~~9	~~3~~8
Trucks	~~<1~~0	12	1	~~<1~~0	~~<1~~0	~~<1~~0
Worker Trips	~~<1~~0	1	6	~~<1~~0	1	~~<1~~0
Rail - Regional Line Haul	8	212	25	1	5	5
Rail - Switching between Terminal and Yard	~~5~~1	12~~3~~	~~5~~6	~~<1~~0	~~2~~0	~~2~~0
Cargo Handling Equipment	~~<1~~0	5	3	~~<1~~0	~~<1~~0	~~<1~~0
Multi-Purpose General Cargo Existing Plus Project Daily	**~~48~~112**	**~~901~~1,871**	**~~152~~368**	**~~16~~46**	**~~21~~43**	**~~19~~39**
Multi-Purpose General Cargo Existing Daily[1]	~~40~~85	~~780~~1,463	~~120~~281	~~12~~34	~~17~~33	~~16~~31
Net New Over Existing	~~8~~26	~~100~~408	~~31~~87	~~3~~12	~~3~~10	~~2~~8
Exceed Significant Threshold?	*No*	*~~No~~Yes*	*No*	*No*	*No*	*No*
All Cargo Types (1,131,393 MT)						
All Cargo Types Existing Plus Project Daily	**~~146~~354**	**~~2,572~~5,598**	**~~493~~1,127**	**~~55~~160**	**~~653~~728**	**2~~2~~98**
All Cargo Types Existing Daily[1]	~~141~~346	~~2,892~~6,534	~~467~~1,113	~~56~~161	~~652~~728	~~229~~300
Net New Over Existing	~~5~~9	-~~320~~936	~~27~~14	~~<~~-1	~~1~~0	~~<~~-1
Exceed Significant Threshold?	*No*	*No*	*No*	*No*	*No*	*No*
Significance Thresholds	75	250	550	150	100	55

[1] Existing daily emissions shown in Table 4.2-6.
Notes: Totals may not add exactly due to rounding.
Source: Appendix F.

Table 4.2-16. Estimate of Operational Emissions under ~~Unmitigated~~ Existing Plus Demolition and Initial Rail Component Unmitigated Conditions (tons per year)

Operational Element	VOC	NO_X	CO	SO_X	PM10	PM2.5
Dry Bulk (289,864 MT)						
Project Annual						
Ocean-Going Vessels	0.5	10.2	0.9	0.3	0.2	0.2
Assist Tugs	<0.0	0.2	0.2	<0.0	<0.0	<0.0
Tugs and Fuel Barges	<0.0	0.4	0.3	<0.0	<0.0	<0.0
Trucks	0.3	15.2	1.0	<0.0	0.1	0.1
Worker Trips	0.1	0.2	2.0	<0.0	<0.0	<0.0
Rail - Regional Line Haul	0.1	2.3	0.3	<0.0	0.1	0.1
Rail - Switching between Terminal and Yard	<0.0	0.~~6~~4	<0.0	<0.0	<0.0	<0.0
Cargo Handling Equipment	0.2	2.2	1.1	<0.0	0.1	<0.0
Bulk Loading	-	-	-	-	105.0	30.9

Operational Element	VOC	NO_X	CO	SO_X	PM10	PM2.5
Dry Bulk Existing Plus Project Annual	**1.3**	**31.~~4~~1**	**5.7**	**0.4**	**105.5**	**31.3**
Dry Bulk Existing Annual[1]	1.3	31.~~8~~5	5.8	0.4	105.5	31.3
Net New	<0.0	-0.4	<0.0	<0.0	<0.0	<0.0
Exceed de minimis levels?	*No*	*No*	*No*	*N/A*	*N/A*	*N/A*
Refrigerated Containers (685,931 MT)						
Project Annual						
Ocean-Going Vessels	4.0	66.2	7.4	3.4	1.8	1.6
Assist Tugs	0.1	0.5	0.5	<0.0	<0.0	<0.0
Tugs and Fuel Barges	0.~~2~~1	1.~~8~~5	1.~~4~~1	<0.0	0.1	0.1
Trucks	0.8	37.8	2.5	0.1	0.2	0.2
Worker Trips	0.2	0.5	4.9	<0.0	0.1	0.1
Cargo Handling Equipment	0.5	5.1	2.7	<0.0	0.1	0.1
Refrigerated Containers Existing Plus Project Annual	**5.6**	**~~112.0~~ 111.7**	**19.~~4~~1**	**3.5**	**2.3**	**2.1**
Refrigerated Containers Existing Annual[1]	6.6	164.9	20.9	4.1	2.8	2.5
Net New Over Existing	-1.0~~.9~~	-~~52.9~~5 3.2	-1.~~5~~7	-0.6	-0.5	-0.4
Exceed de minimis levels?	*No*	*No*	*No*	*N/A*	*N/A*	*N/A*
Multi-Purpose General Cargo (124,078 MT)						
Project Annual						
Ocean-Going Vessels	1.4	26.6	2.3	1.0	0.5	0.5
Assist Tugs	0.1	0.4	0.4	<0.0	<0.0	<0.0
Tugs and Fuel Barges	0.9	9.2	6.9	<0.0	0.3	0.3
Trucks	0.1	3.3	0.2	<0.0	<0.0	<0.0
Worker Trips	<0.0	0.1	1.0	<0.0	<0.0	<0.0
Rail - Regional Line Haul	0.1	1.7	0.2	<0.0	<0.1	<0.1
Rail - Switching between Terminal and Yard	<0.0	~~1.2~~0.6	<0.0	<0.0	<0.0	<0.0
Cargo Handling Equipment	0.1	0.9	0.5	<0.0	<0.0	<0.0
Multi-Purpose General Cargo Existing Plus Project Annual	**2.~~7~~6**	**~~43.4~~4 2.9**	**11.6**	**1.0**	**1.0**	**0.9**
Multi-Purpose General Cargo Existing Annual[1]	1.~~4~~3	26.~~4~~0	3.9	0.7	0.5	0.5
Net New Over Existing	1.3	~~17.0~~1 6.8	7.7	0.3	0.5	0.4
Exceed de minimis levels?	*No*	*No*	*No*	*N/A*	*N/A*	*N/A*
All Cargo Types						
All Cargo Types Existing Plus Project Annual Total	**9.~~6~~5**	**~~186.8~~ 185.7**	**36.~~7~~5**	**4.8**	**108.8**	**34.3**
All Cargo Types Existing Annual Total[1]	9.2	~~223.1~~ 222.4	30.5	5.2	108.8	34.3
Net New Over Existing	0.~~4~~3	-36.~~3~~7	~~6.2~~5.9	-0.3	<0.1	<0.1
Exceed de minimis levels?	*No*	*No*	*No*	*N/A*	*N/A*	*N/A*

Operational Element	VOC	NO_X	CO	SO_X	PM10	PM2.5
de minimis levels	100	100	100	N/A	N/A	N/A

[1] Existing annual emissions shown in Table 4.2-7.
Notes: Totals may not add exactly due to rounding.
Source: Appendix F.

Full TAMT Plan Buildout

Construction

Construction associated with full TAMT plan buildout would result in the temporary generation of emissions of ozone precursors (ROG, NO_X), CO, and PM exhaust emissions that could result in short-term impacts on ambient air quality. Emissions would originate from mobile and stationary construction equipment exhaust, employee vehicle exhaust, dust from demolishing structures and soil movement, exposed soil eroded by wind, and any architectural coatings and asphalt paving. Construction-related emissions would vary substantially depending on the level of activity, length of the construction period, specific construction operations, types of equipment, number of personnel, wind and precipitation conditions, and soil moisture content.

The various components of the TAMT plan are described in detail in Section 3.4.1 of this Draft EIR and include open air storage space, a conveyor system, consolidated bulk discharge unloader, consolidated multi-purpose dry bulk facility, and demolition of the existing molasses tanks for the Dry Bulk node; installation of gantry cranes at Berths 10-1/10-2 and 10-3/10-4 for the Refrigerated Container node; installation of gantry cranes at Berths 10-5/10-6 and demolition of Warehouse C for the Multi-Purpose General Cargo node; and a new truck weigh station and potential alternative gate concept for the Refrigerated Container node and the Multi-purpose General Cargo node. The timing of these long-term components would depend on market conditions and would occur periodically over the next approximately 20 years. Because no specific project component (other than the Demolition and Initial Rail Component described above) is proposed for approval, exact construction schedules and construction activities are unknown and are thus unavailable at this time.

Table 3-1 of this Draft EIR provides a general summary of the proposed construction activities. Emissions associated with construction of the various components of full TAMT plan buildout would include activities and emissions sources that are similar to construction of the Demolition and Initial Rail Component, as shown and quantified in Table 4.2-13. For example, while Warehouse C (384,000 square feet) is larger than both Transit Shed #1 (148,000 square feet) and Transit Shed #2 (194,000 square feet), demolition activity on any given day would be similar to that assumed for the demolition of both Transit Sheds #1 and #2. Demolition would include fugitive dust from land clearing and soil movement, excavation, grading, and truck loading and exhaust emissions from heavy-duty construction equipment (e.g., loaders) use on site, heavy-duty haul and delivery truck travel, worker commutes, and VOC offgassing from painting activities.

Because the exact construction schedule and activity associated with full TAMT plan buildout are unknown, it is unknown if individual project components would result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation. Therefore, construction activities associated with full TAMT plan buildout cannot be quantified and are evaluated qualitatively for purposes of this analysis.

Emissions from construction of any individual component of full TAMT plan buildout must not exceed San Diego County's SLTs or else a significant construction-related impact would occur. Additionally, all construction projects must abide by relevant SDAPCD rules adopted to reduce emissions throughout the region, including Rule 55 (Fugitive Dust). However, given the lack of information regarding the timing and design of future construction projects at this time, it is uncertain whether construction activities from individual components would result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation. Therefore, potential construction impacts are assumed to be significant (**Impact AQ-1**) and mitigation is required.

Operation

Table 4.2-17 shows the anticipated criteria pollutant emissions associated with operation of full TAMT plan buildout relative to existing conditions. Existing conditions are shown in Table 4.2-6. As shown in Table 4.2-17, emissions during full TAMT plan operations are anticipated to exceed San Diego County's SLTs for multiple cargo types for VOC, NO_X, ~~CO, SO_X,~~ PM10, and PM2.5. The VOC, NO_X, CO, and SO_X exceedances would primarily be due to fossil fuel combustion from OGV, trucks, fuel tugs, and rail activities, while the PM10~~,~~ and PM2.5 exceedance would primarily be due to bulk loading and material handling, and in particular to the uncontrolled nature of current soda ash and bauxite handling at the project site. **Impact-AQ-2** would be significant and mitigation is required.

Mitigation has been added to require the District to implement alternative control measures in order to reduce health risk in the surrounding community. The alternative control technique assumed in the analysis is the most recently approved technology by the ARB, which is the Advanced Marine Emissions Control System (AMECS) developed by Advanced Cleanup Technologies, Inc. AMECS is equipped with barge-mounted Tier 4 auxiliary engines, which are smaller and require less energy than the previous ARB-approved technology. Based on a recent analysis by the EPA (EPA 2016b) it is assumed that roughly 2 hours is necessary to install and remove the AMECS from a given vessel, during which time both the barge and ship auxiliary engines are operating and producing emissions. AMECS captures 90% of the exhaust from vessels with a single stack and 80% and from vessels with a two stacks. However, based on the power ratings, it was assumed that dry bulk and general cargo vessels contain a single stack. Once applied, the AMECS reduces NO_X emissions by 90% and all other pollutants by 95%. Overall, the AMECS system reduces dry bulk and multi-purpose general cargo at-berth emissions by approximately 77% for NO_X and 80% for DPM per call.

Table 4.2-17. Estimate of Operational Emissions under ~~Unmitigated~~ Existing Plus Full TAMT Buildout Unmitigated Conditions (pounds per day)

Operational Element	VOC	NO_X	CO	SO_X	PM10	PM2.5
Dry Bulk (2,650,000 MT)						
Project Daily						
Ocean-Going Vessels	39	706	58	21	13	12
Assist Tugs	2	13	12	<1	<1	<1
Tugs and Fuel Barges	22	221	166	<1	8	7

Operational Element	VOC	NO_X	CO	SO_X	PM10	PM2.5
Trucks	7	190	39	1	17	6
Worker Trips	1	2	18	<1	6	2
Rail - Regional Line Haul	5	142	13	1	3	3
Rail - Switching between Terminal and Yard	~~2~~1	~~58~~33	~~2~~3	<1	1	1
Cargo Handling Equipment	10	111	59	<1	3	2
Bulk Loading	-	-	-	-	5,933	1,666
Dry Bulk Existing plus Project Daily	**~~87~~86**	**1,4~~4~~17**	**36~~8~~9**	**24**	**5,984**	**1,~~700~~699**
Dry Bulk Existing Daily[1]	~~28~~53	~~613~~1,077	~~97~~181	~~7~~17	~~599~~608	~~184~~192
Net New Over Existing	~~60~~33	~~829~~410	~~272~~188	~~17~~7	5,~~385~~376	1,~~515~~507
Exceed Significant Threshold?	*No*	***Yes***	*No*	*No*	***Yes***	***Yes***
Refrigerated Containers (2,288,000 MT)						
Project Daily						
Ocean-Going Vessels	188	2,785	318	124	72	66
Assist Tugs	5	42	40	<1	1	1
Tugs and Fuel Barges	18	181	136	<1	6	6
Trucks	8	261	36	1	15	6
Worker Trips	1	3	27	<1	4	1
Cargo Handling Equipment	9	96	51	<1	2	2
Refrigerated Containers Existing plus Project Daily	**228**	**3,369**	**607**	**125**	**101**	**82**
Refrigerated Containers Existing Daily[1]	~~74~~207	~~1,499~~4,064	~~250~~651	~~37~~110	~~35~~87	~~28~~77
Net New Over Existing	~~155~~21	~~1,870~~-695	~~357~~-43	~~88~~15	~~66~~15	~~54~~6
Exceed Significant Threshold?	~~***Yes***~~*No*	~~***Yes***~~*No*	*No*	*No*	*No*	*No*
Multi-Purpose General Cargo (977,400 MT)						
Project Daily						
Ocean-Going Vessels	95	1,742	148	57	34	31
Assist Tugs	4	32	30	<1	1	1
Tugs and Fuel Barges	47	473	356	<1	17	16
Trucks	1	23	5	<1	2	1
Worker Trips	<1	1	6	<1	2	1
Rail - Regional Line Haul	8	249	23	2	5	5
Rail - Switching between Terminal and Yard	~~5~~3	~~123~~63	~~5~~3	<1	~~2~~1	~~2~~1
Cargo Handling Equipment	4	41	22	<1	1	1

Operational Element	VOC	NO_X	CO	SO_X	PM10	PM2.5
Multi-Purpose General Cargo Existing plus Project Daily	**1642**	**2,6~~8~~23**	**59~~5~~3**	**60**	**~~64~~63**	**57**
Multi-Purpose General Cargo Existing Daily[1]	~~40~~85	~~780~~1,463	~~120~~281	~~12~~34	~~17~~33	~~16~~31
Net New Over Existing	~~125~~76	1,~~903~~160	~~475~~312	~~48~~26	~~47~~30	~~41~~26
Exceed Significant Threshold?	***Yes***	***Yes***	*No*	*No*	*No*	*No*
All Cargo Types (6,154,417 MT)						
All Cargo Types Existing plus Project Daily Total	**~~480~~476**	**7,~~493~~408**	**1,570**	**209**	**6,149**	**1,83~~9~~8**
All Cargo Types Existing Daily Total[1]	~~141~~346	~~2,892~~6,534	~~467~~1,113	~~56~~161	~~652~~728	~~229~~300
Net New Over Existing	~~339~~131	~~4,601~~875	~~1,104~~457	~~153~~48	5,~~497~~421	1,~~610~~539
Exceed Significant Threshold?	***Yes***	***Yes***	***~~Yes~~****No*	***~~Yes~~****No*	***Yes***	***Yes***
Significance Thresholds	75	250	550	150	100	55

[1] Existing daily emissions shown in Table 4.2-6.
Notes: Totals may not add exactly due to rounding.
Source: Appendix F.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Impacts related to implementation of the Demolition and Initial Rail Component would be less than significant.

Full TAMT Plan Buildout

Implementation of full TAMT plan buildout would violate an air quality standard or contribute substantially to an existing or projected air quality standard. Potentially significant impact(s) include:

Impact-AQ-1: Emissions in Excess of Criteria Pollutant Thresholds During TAMT Plan Buildout Construction. Specific construction details (such as timing, phasing, and overlapping of possible construction projects that would be implemented over the life of the TAMT plan) are not known at this time. Therefore, project emissions during construction, before mitigation, could exceed the San Diego County SLTs. The contribution of project-related emissions is considered significant because the project would have the potential to exceed thresholds that have been set by SDAPCD to attain the NAAQS and CAAQS, the purpose of which is to provide for the protection of public health.

Impact-AQ-2: Emissions in Excess of Criteria Pollutant Thresholds During TAMT Plan Buildout Operations. Project emissions during operations, before mitigation, would exceed the San Diego County SLTs for VOC, NO_X, CO, SO_X, PM10, and PM2.5. The contribution of project-related emissions is considered significant because the project would exceed thresholds that have been set by SDAPCD to attain the NAAQS and CAAQS, the purpose of which is to provide for the protection of public health.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

MM-AQ-1: Implement Best Management Practices During Construction of Future TAMT Plan Components. All proponents of future projects shall implement Best Management Practices (BMPs) to reduce air emissions from all construction activities implemented as part of full TAMT plan buildout. The following measures are required to limit construction equipment exhaust from on-road trucks and heavy-duty equipment used during construction.

- ~~Use diesel oxidation catalysts and catalyzed diesel particulate traps.~~
- Ensure that all off-road diesel-powered equipment used during construction between 2020 and 2025 is equipped with the U.S. Environmental Protection Agency (EPA) Tier 3 or cleaner engines, except for specialized construction equipment for which an EPA Tier 3 engine is not available.
- Ensure that all off-road diesel-powered equipment used during construction beyond 2025 is equipped with the EPA Tier 4 Final or cleaner engines, except for specialized construction equipment for which an EPA Tier 4 Final engine is not available.
- Maintain all construction vehicles and equipment according to manufacturers' specifications.
- Restrict idling of construction vehicles and equipment to a maximum of 3 minutes when not in use (see MM-AQ-2 for definition of "not in use").
- Install high-pressure fuel injectors on construction equipment vehicles.

In addition, all future project proponents shall implement the relevant BMPs, consistent with the applicable industrial Storm Water Pollution Prevention Plan (SWPPP). In no case would any BMP be implemented if it conflicted with the SWPPP or other applicable water quality permit requirements. BMP dust control measures would include, but are not limited to, the following.

- Water the grading areas at least twice daily to minimize fugitive dust.
- Stabilize graded areas as quickly as possible to minimize fugitive dust.
- Apply chemical stabilizer or pave the last 100 feet of internal travel path within the construction site prior to public road entry.
- Install wheel washers adjacent to a paved apron prior to vehicle entry on public roads.
- Remove any visible track-out into traveled public streets within 30 minutes of occurrence.
- Wet wash the construction access point at the end of each workday if any vehicle travel on unpaved surfaces has occurred.

- Provide sufficient perimeter erosion control to prevent washout of silty material onto public roads.
- Cover haul trucks or maintain at least 12 inches of freeboard to reduce blow-off during hauling.
- Suspend all soil disturbance and travel on unpaved surfaces if winds exceed 25 mph.
- Cover/water onsite stockpiles of excavated material.
- Enforce a 15 mph speed limit on unpaved surfaces.
- On dry days, sweep up any dirt and debris spilled onto paved surfaces immediately to reduce re-suspension of particulate matter caused by vehicle movement. Clean approach routes to construction sites daily for construction-related dirt in dry weather.
- Hydroseed, landscape, or develop as quickly as possible all disturbed areas as directed by the District and/or SDAPCD to reduce dust generation.
- Limit the daily grading volumes/area.

Prior to the commencement of construction activities, the project proponent shall submit evidence to the District of the project proponent's compliance with the BMPs and that construction equipment is maintained and properly tuned in accordance with manufacturers' specifications, which shall be subject to confirmation by the District during construction.

MM-AQ-2: Implement Diesel Emission-Reduction Measures During Construction and Operations of Future TAMT Plan Components. The project proponent shall implement the following measures during construction and project operations, subject to verification by the District.

i. All project proponents shall limit all construction and operations equipment, drayage, and delivery truck idling times by shutting down equipment when not in use and reducing the maximum idling time to less than 3 minutes. The project proponent shall install clear signage regarding the limitation on idling time at the delivery driveway and loading areas and shall submit quarterly reports of violators to the District. This measure shall be enforced by terminal supervisors, and repeat violators shall be subject to penalties pursuant to California airborne toxics control measure 13 California Code of Regulations Section 2485. The project proponent shall submit evidence of the use of diesel emission reduction measures to the District through annual reporting, with the first report due 1 year from the date of project completion and each report due exactly 1 year after, noting all violations with relevant identifying information of the vehicles and drivers in violation of these measures.

ii. The project proponent shall verify that all construction and operations equipment is maintained and properly tuned in accordance with manufacturers' specifications. Prior to the commencement of construction and operations activities using diesel-powered vehicles or equipment, the project proponent shall verify that all vehicles and equipment have been checked by a certified mechanic and determined to be running in proper condition prior to admittance into any terminal leasehold. The project proponent shall submit a report by the certified mechanic of the condition of the construction and operations vehicles and equipment to the District prior to commencement of their use.

MM-AQ-3: Comply with San Diego Unified Port District Climate Action Plan Measures. Prior to approval of all discretionary actions and/or Coastal Development Permits, the project proponent shall be required to implement the following measures to be consistent with the Climate Action Plan.

- Vessels shall comply with the District's voluntary vessel speed reduction program, which targets 80 percent compliance.
- Eligible vessels shall comply with ARB's at-berth regulation that requires shore power or alternative control technology regulation for 80 percent of eligible calls by 2020, minus idle time to clear customs consistent with California Air Resources Board regulations. This is a project feature made into a mitigation measure to ensure compliance.
- Designated truck haul routes shall be used, and the project proponent shall decrease onsite movements where practicable.
- No commercial drive-through shall be implemented.
- Compliance with Assembly Bill 939 and the City of San Diego's Recycling Ordinance shall be mandatory and shall include recycling at least 50 percent of solid waste; compliance with the City of San Diego's Construction and Demolition Debris Deposit Ordinance shall be mandatory and shall include recycling at least 50 percent of all construction debris. This measure shall be applied during construction and operation of the proposed project.
- Light fixtures shall be replaced with lower-energy bulbs such as fluorescent, Light-Emitting Diodes (LEDs), Compact Fluorescent Lights (CFLs), or the most energy-efficient lighting that meets required lighting standards and is commercially available.

Implementation of Climate Action Plan measures will be included as part of any discretionary actions and/or Coastal Development Permit(s) associated with this project. Evidence of implementation and compliance with this mitigation measure shall be provided to the District by the project proponent on an annual basis through 2035 (buildout of the TAMT plan).

MM-AQ-4: Implement Best Available Control Technologies for Conveyor System and Bulk Discharge Unloader for Future Dry Bulk Operations associated with the TAMT Plan. ~~Prior to the first discretionary action approval and/or Coastal Development Permits related to dry bulk operations associated with the TAMT plan, any project proponent shall upgrade the existing or install a new Conveyor System and Bulk Discharge Unloader that shall include best available control technologies (BACT) that achieve a minimum 95 percent control efficiency. The project proponent that finances the system may be reimbursed, based on anticipated percent usage, by future users of the system. Alternatively, other funding mechanisms may be developed. However, under no circumstance shall the upgrade or new system that includes BACT not be implemented prior to the first discretionary action approval and/or Coastal Development Permits related to dry bulk operations.~~

~~Implementation~~As a condition of ~~BACT will be a part of any discretionary action~~ approval ~~and/~~of any new or amended real estate agreement or Coastal Development Permit~~(s) associated with~~ for dry bulk operations that would result in an increase in daily or annual throughput over baseline conditions, the ~~TAMT plan. Evidence~~San Diego Unified Port District shall require the project proponent to install and use the best available control technologies to achieve a minimum 95 percent control efficiency for particulate matter in one of the following ways:

- Upgrade the existing Conveyor System and Bulk Discharge Unloader (if proposed for use) to meet the minimum 95 percent control efficiency.
- Replace the existing Conveyor System and Bulk Discharge Unloader with a new Conveyor System and Bulk Discharge Unloader that meets the minimum 95 percent control efficiency and properly dispose of the existing system in compliance with all applicable laws and regulations, including any permits from the San Diego Air Pollution Control District.
- Bypass the existing Conveyor System and Bulk Discharge Unloader and install a new Conveyor System and Bulk Discharge Unloader that meets the minimum 95 percent control efficiency and properly dispose of the existing system in compliance with all applicable laws and regulations, including any permits from the San Diego Air Pollution Control District.

The project proponent that finances an upgrade or replacement to the new system may be reimbursed, based on anticipated percent usage, by future users of the system. The San Diego Unified Port District will assist such reimbursement by conditioning its approval of other users of the system during the first 5 years of its operation on reimbursement of the cost of the system on a “fair share” basis.

Under no circumstance shall a project proponent seeking discretionary approval for dry bulk operations be allowed to increase daily or annual throughput of dry bulk operations without first completing the upgrade or replacement of the existing system, or installation of a new system required above.

The recipient of a discretionary approval by the San Diego Unified Port District subject to this mitigation measure shall provide written evidence of implementation and compliance with this mitigation measure ~~shall be provided~~ to the San Diego Unified Port District on an annual basis through 2035 (buildout of the TAMT plan).

MM-AQ-5: Implement Vessel Speed Reduction Program Beyond Climate Action Plan Compliance for Future Operations Associated with the TAMT Plan. Every quarter following approval of the first discretionary action approval and/or issuance of the first Coastal Development Permit associated with a future project proposed under the TAMT plan, whichever occurs first, the project proponent shall provide a report of the annual vessel activity and throughput by cargo node to date and the projected total throughput for the previous 6 months to the District’s Planning & Green Port Department. Prior to the annual vessel calls reaching ~~52~~91 calls (~~37~~76 new calls over existing) for dry bulk, ~~77~~117 calls (~~20~~60 new calls over existing) for refrigerated containers, and ~~68~~96 calls (~~40~~68 new calls over existing) for multi-purpose general cargo under the MPC scenario, 79 calls (64 new calls over existing) for dry bulk, 98 calls (41 new calls over existing) for refrigerated containers, and 78 calls (50 new calls over existing) for multi-purpose general cargo under the STC Alternative, or beginning January 1, 2030 for all vessels irrespective of the number of calls occurring on an annual basis, whichever occurs first, the project proponent shall implement ~~VSR~~vessel speed reduction measures to reduce the project’s criteria pollutant emissions. The program shall require that 90 percent of the vessels calling at the project site reduce their speeds to 12 knots starting at 40 nautical miles from Point Loma. Due to the international border to the south and California Air Resources Board limit for rulemaking being 24 nautical miles from the coastline, some vessel calls travel within the San Diego Air Basin for less than 40 nautical miles. For those vessel calls, vessel operators are required to reduce their speeds to 12 knots at the point those vessels enter the San Diego Air

Basin and maintain speeds of 12 knots over the entire distance to/from Point Loma. To be compliant with the vessel speed limit, the vessel's weighted average speed shall be 12 knots or less from the 40 nautical mile latitude and longitude positions on each respective route to/from Point Loma.

Implementation of this ~~VSR~~vessel speed reduction program will be required as part of any discretionary action and/or Coastal Development Permit(s) associated with the TAMT plan. Evidence of implementation and compliance with this mitigation measure shall be provided to the San Diego Unified Port District's Planning & Green Port Department on ~~an annual~~a quarterly basis through 2035 (buildout of the TAMT plan). The San Diego Unified Port District will verify compliance through analysis of Automatic Identification System data or by requesting a vessel's Electronic Chart Display Identification System log from the captain.

~~**MM-AQ-6: Electric Cargo Handling Equipment Upgrades.** As a condition of any Coastal Development Permit, the project proponent, or the District, shall secure funding for and operate one piece of CHE associated with each node. Operation of such equipment on the leasehold shall occur by January 1, 2020 through the expected operating life of the equipment, and evidence of operation shall be provided to the District upon request. Equipment shall be replaced if alternative technologies (i.e., advancements in electric equipment) are identified and determined to be feasible pursuant to MM-AQ-7. For purposes of the analysis, it was assumed that each node would operate one electric yard truck. This mitigation is similar to MM-GHG-3, and the number of CHE equipment required between the two mitigation measures does not aggregate to more than one piece of CHE per node.~~

~~**MM-AQ-7: Periodic Technology Review**. To promote new emission control technologies, each tenant who seeks~~ **MM-AQ-6: Electric Cargo Handling Equipment Upgrades.** This measure has multiple steps for compliance, as specified below.

A. Prior to January 1, 2020, the San Diego Unified Port District shall ensure that at least three pieces of existing non-electric cargo handling equipment at the terminal are replaced by electric cargo handling equipment, none of which were previously operating at the terminal during the 2013/2014 baseline year of the EIR analysis. Possible ways the electric cargo handling equipment may be obtained include, but are not limited to, the following:

   1. Purchased, leased, or otherwise acquired, in whole or in part, through funding provided to a tenant by the San Diego Unified Port District;

   2. Purchased, leased, or otherwise acquired, in whole or in part, through funding provided to a tenant by other sources; or

   3. Purchased, leased, or otherwise acquired, in whole or in part, by the tenant in compliance with a condition of a discretionary ~~action~~ approval ~~and/or Coastal Development Permit(s) shall perform an investigation into emerging zero and near-zero technologies and submit a report to~~issued by the San Diego Unified Port District ~~on an annual basis, beginning on~~ .

   Written evidence of the ~~date such construction, occupancy, or use commences and continuing through 2035 (buildout of the TAMT plan). The District regularly monitors technologies as part of its CAP and long-range sustainability goals, which require the~~ acquisition of the electric cargo handling equipment and the equipment it will replace and remove from further operation at the terminal must be provided to the San Diego Unified

Port District. The San Diego Unified Port District shall further ensure that the electric cargo handling equipment is in use at each of the three nodes throughout the expected operating life. This will be accomplished by requiring each tenant that employs electric cargo handling equipment pursuant to this measure to report the equipment's annual number of hours of operation to the San Diego Unified Port District and by requiring the San Diego Unified Port District to monitor use of the electric cargo handling equipment as part of the San Diego Unified Port District's TAMT equipment inventory.

B. Prior to January 1, 2025, the San Diego Unified Port District also shall ensure that no fewer than 20 non-electric yard trucks in operation are replaced at the TAMT by 20 electric yard trucks. Possible ways the electric yard trucks may be obtained include, but are not limited to, the following:

1. Purchased, leased, or otherwise acquired, in whole or in part, through funding provided to a tenant by the San Diego Unified Port District;
2. Purchased, leased, or otherwise acquired, in whole or in part, through funding provided to a tenant by other sources; or
3. Purchased, leased, or otherwise acquired, in whole or in part, by the tenant in compliance with a condition of a discretionary approval issued by the San Diego Unified Port District.

Written evidence of the acquisition of the electric yard trucks, and the non-electric yard trucks they will replace and remove from further operation at the terminal, must be provided to the San Diego Unified Port District. The San Diego Unified Port District shall further ensure that the electric yard trucks are in use at the TAMT throughout the expected operating life of the equipment. Each tenant that employs electric trucks pursuant to this measure shall report the equipment's annual number of hours of operation to the San Diego Unified Port District, and the San Diego Unified Port District shall monitor use of the electric trucks as part of the San Diego Unified Port District's TAMT equipment inventory.

C. Prior to January 1, 2030, the San Diego Unified Port District also shall ensure that no fewer than three existing non-electric reach stackers and ten non-electric forklifts in operation are replaced at the TAMT by three fully electric reach stackers and ten fully electric forklifts. Possible ways the electric reach stackers and forklifts may be obtained include, but are not limited to:

1. Purchased, leased, or acquired, in whole or in part, through funding provided to the tenant by the San Diego Unified Port District;
2. Purchased, leased, or acquired, in whole or in part, through funding provided to the tenant by other sources; or
3. Purchased, leased, or otherwise acquired, in whole or in part, by the tenant in compliance with a condition of a discretionary approval issued by the San Diego Unified Port District.

Written evidence of the acquisition of the three electric reach stackers and ten electric forklifts and the conventional equipment they will replace and remove from further operation at the terminal must be provided to the San Diego Unified Port District. The San Diego Unified Port District shall further ensure that the electric reach stackers and forklifts are in use at the TAMT throughout the expected operating life of the equipment. Each tenant that employs electric reach stackers or electric forklifts pursuant to this measure shall report the equipment's annual number of hours of operation to the San Diego Unified Port District, and the San Diego Unified Port District shall monitor use of the electric reach stackers and forklifts as part of the San Diego Unified Port District's TAMT equipment inventory.

D. The electric equipment employed pursuant to paragraphs A, B, and C of this mitigation measure may be replaced by other technologies or other types of cargo handling equipment as long as the replacement equipment achieves the same or greater criteria pollutant, toxic air contaminant, and greenhouse gas emission reductions as compared to the equipment required by paragraphs A, B, and C of this mitigation measure.

MM-AQ-7: Annual Inventory Submittal and Periodic Technology Review. The San Diego Unified Port District regularly monitors technologies for reducing air emissions as part of its Climate Action Plan and long-range sustainability goals, which encourage the San Diego Unified Port District and its tenants to use cleaner technologies over time as they become available and feasible. ~~The Annual Technology Review shall identify any~~As a condition of approval of any new or amended real estate agreement or Coastal Development Permit, the San Diego Unified Port District shall require the project proponent to submit to the San Diego Unified Port District an annual inventory of all equipment that generates criteria pollutant, toxic air contaminant, and greenhouse gas emissions operated by the project proponent at the TAMT throughout the life of the lease up to 2035 (buildout of the TAMT plan). The equipment inventory shall include the year, make, and model of the equipment that was used in the previous year, including annual hours of operation for each piece of equipment, including but not limited to heavy-duty drayage and non-drayage trucks, yard equipment, assist and ocean-going tugs, ocean-going vessels, bulk material handling equipment, and any other type of cargo handling equipment. The purpose of the inventory is to track emissions and equipment at TAMT and to assist in technological reviews, as described below.

To promote new emission control technologies, the San Diego Unified Port District will perform a Periodic Technology Review annually. The Periodic Technology Review will coincide with monitoring and reporting pursuant to the San Diego Unified Port District's Climate Action Plan, and will include the following:

1. Develop and maintain an inventory of equipment in operation at the TAMT that generates criteria pollutant, toxic air contaminant, and greenhouse gas emissions, including the equipment model year, model name, and annual hours of operation, based on the annual tenant inventories submitted to the San Diego Unified Port District as described above.

2. Identify and assist with enforcement of changes to emission regulations for heavy-duty trucks, yard equipment, tugs, vessels, bulk handling equipment, and other equipment that generates criterial pollutant, toxic air contaminant, and greenhouse gas emissions.

3. Identify, and assist with implementation of, any feasible new emissions-reduction technologies that may reduce emissions at the project site, including ~~the feasibility of zero and near-zero emissions~~ technologies applicable to heavy-duty trucks, yard equipment, tugs, vessels, and bulk handling equipment.

4. Collaborate with the California Air Resources Board and San Diego Air Pollution Control District to ensure these technologies ~~for heavy-duty trucks, yard equipment, tugs, vessels, and bulk handling equipment. If the Periodic Technology Review demonstrates the new technology~~ are available and to identify funding opportunities, including funding from the Prop 1B: Good Movement Emission Reduction Program, among others.

5. Prioritize older equipment in operation at the TAMT that generates the highest levels of criterial pollutant, toxic air contaminant, and greenhouse gas emissions to be replaced based on the level of emissions and cost-effectiveness of the emissions reduction (i.e., biggest reduction per dollar), and identify implementation mechanisms including, but not limited to, tenant-based improvements, grant programs, or a combination thereof, based on regulatory requirements and the feasibility analyses specified in paragraph 3 above. Use the Carl Moyer Program, or similar cost-effectiveness criteria, to assess the economic feasibility (e.g., cost effectiveness) of the identified new technologies.

6. Ensure that any upgraded or retired equipment is accounted for as part of the San Diego Unified Port District's Maritime Emissions Inventory and Climate Action Plan.

If Periodic Technology Review identifies new technology that will be effective in reducing emissions ~~and the~~compared to the equipment in operation at the time of the review, and the San Diego Unified Port District determines that installation or use of the technology is feasible, the ~~tenant~~San Diego Unified Port District shall ~~implement~~require the use of such technology ~~within 12 months of the District's determination~~as a condition of any discretionary approval issued by the San Diego Unified Port District for any new, expanded, or extended operations at the TAMT. Furthermore, the District and/or project proponent must demonstrate that emissions of Volatile Organic Compounds (VOCs) would be less than 75 pounds per day on a peak day once cargo throughput exceeds 4,000,000 metric tons annually. If technological advancements are unable to reduce VOC emissions to 75 pounds per day or less on a peak day, then the District shall limit the number of vessels allowed to no more than three on a peak day once total throughput exceeds 4,000,000 metric tons annually. These operational restrictions will ensure that VOC emissions do not exceed threshold standards established by the San Diego Air Pollution Control District. Verification of compliance with this measure is the responsibility of the District.

MM-AQ-8: Implement ~~a Sustainable Leasing~~Exhaust Emissions Reduction Program~~.~~ at the Tenth Avenue Marine Terminal. The San Diego Unified Port District shall ~~work with tenants to develop and~~ implement a ~~policy incentive-based sustainable~~program at the TAMT by January 1, 2020 to further reduce emissions from terminal-wide emissions sources.

A. The program shall be implemented through the Coastal Development Permit process; the tenant leasing ~~program to achieve the District's goals to attract the cleanest ships, ships that utilize~~process, including the issuance of new, extended, or amended leases; and other short-term real estate agreements at the TAMT.

B. The program shall be focused on incentives to reduce criteria pollutant, toxic air contaminant, and greenhouse gas emissions by attracting clean vessels, trucks, and equipment to the TAMT—including but not limited to vessels that use shore power while at berth, zero and near-zero emission cargo handling equipment technologies, energy efficiency measures, or renewable energy—and by otherwise incorporat~~e~~ing technological and operational practices that reduce criteria pollutant ~~emissions. The District's CAP identifies the development of a Sustainable Leasing Policy as one of the GHG reduction~~

~~measures prioritized for implementation,~~, toxic air contaminant, and greenhouse gas emissions from terminal operations beyond existing regulatory requirements. The program shall include specific incentives for existing and future ~~components under the TAMT plan shall be subject to the Sustainable Leasing Policy~~tenants, which may include but are not limited to: an extended lease term, expedited permit processing, reduced permit fees, and eligibility for grants or other financial assistance. The nature and extent of such incentives will be based on an emissions reduction schedule established by the San Diego Unified Port District for criteria pollutants, toxic air contaminants, and greenhouse gas emissions.

C. The program shall identify specific emission reduction equipment and practices that may qualify for incentives, including but not limited to the following.

- Vessels: Demonstrate that at least 50 percent of annual vessel calls will be equipped with Tier II or better main and auxiliary engines, as defined by International Convention for the Prevention of Pollution from Ships Annex VI 2008 regulations or other standards set forth by the International Convention for the Prevention of Pollution from Ships, U.S. Environmental Protection Agency, or the California Air Resources Board in the future.
- Vessel Hoteling: Demonstrate that vessel calls will use shore power or a California Air Resources Board–approved alternative emission capture and control system or install a shore power or California Air Resources Board–approved alternative emission capture and control system for the purpose of reducing ocean-going vessel hoteling emissions.
- Heavy-Duty Trucks: Demonstrate that at least 50 percent of annual cargo throughput will be transported with zero/near-zero emission trucks, hybrid trucks and/or other alternative truck technologies. To qualify, the trucks must result in emission reductions greater than those required by state and federal regulatory agencies at the time of project approval.
- Switch and Line Haul Locomotives: Demonstrate that at least 50 percent of annual cargo will be transported with Tier 3 or above locomotive engines for line-haul, as defined by the U.S. Environmental Protection Agency in 2008 (73 Federal Register 88 25098–25352), and a Tier 3 or above switcher or railcar mover for switching activity at both the terminal and yard.
- Terminal Infrastructure: Install electric charging stations and/or other terminal infrastructure and equipment that support and facilitate zero or near-zero emission technologies.

MM-AQ-9: Use of At-Berth Emission Capture and/or Control System to Reduce Vessel Hoteling Emissions. The San Diego Unified Port District shall require the use of an At-Berth Emission Capture and/or Control System (i.e., Bonnet System) to reduce vessel hoteling emissions prior to terminal-related emissions reaching a cancer risk of 10 per million at the maximally exposed sensitive receptor location. Based on the Health Risk Assessment for the TAMT Redevelopment Plan Environmental Impact Report, an At-Berth Emission Capture and/or Control System shall be required prior to reaching an annual throughput of 691,418 metric tons for dry bulk, assuming no growth in multi-purpose general cargo; an annual throughput of 356,666 metric tons for multi-purpose general cargo (including break bulk, neobulk, roll-on/roll-off, and other non-container, non-dry bulk cargo, and non-liquid bulk cargo), assuming no growth in dry bulk; or any combination of dry bulk and multi-purpose general cargo throughput of 691,418 metric tons, whichever occurs first. The San Diego Unified Port District shall either install directly or enter into a contract with an entity that provides the emission capture and/or control system or an equivalent alternative technology, to reduce emissions from vessels that are unable to cold iron at TAMT or are exempt from the California Air Resources Board's at-berth regulation. The San Diego Unified Port District may charge a fee for the use of an Emission Capture and/or Control System (or an alternative at-berth system that reduces vessel hoteling emissions) based on the vessel type and the length of its stay. The system shall be a technology that has been approved by the California Air Resources Board and meets the requirements set forth in the California Air Resources Board's at-berth regulations. If the San Diego Unified Port District determines the need for an Emission Capture and/or Control System (or an alternative at-berth system that reduces vessel hoteling emissions) prior to, or later than, the throughput figures listed above, or if shore power or other future regulatory requirements are able to reduce vessel hoteling emissions, then the requirement for the At-Berth Emission Capture and/or Control System shall be updated and adjusted accordingly, at the San Diego Unified Port District's discretion.

All vessels that are not shore-power equipped shall use the Emission Capture and/or Control System (or an alternative at-berth system that reduces vessel hoteling emissions at an equivalent level), provided there are no operational limitations and it is not being used by another vessel. If the Emission Capture and/or Control System is operationally unable to connect to an at-berth vessel or if it is being used by another vessel, multi-purpose/general cargo or dry bulk vessels will be allowed to berth without it.

Level of Significance after Mitigation

Demolition and Initial Rail Component

No mitigation is required, and impacts would be less than significant.

Full TAMT Plan Buildout

Impact-AQ-1 would remain significant after implementation of **MM-AQ-1** and **MM-AQ-2** because it is unknown if construction of individual project components would result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation and to what extent mitigation would reduce the effects. As such, it is conservatively assumed that construction of the full TAMT plan buildout would potentially violate an air quality standard or contribute substantially to an existing or projected air quality standard during construction. Construction impacts associated with buildout of the TAMT plan on air quality standards (**Impact-AQ-1**) would be considered significant and unavoidable.

As shown in Table 4.2-18, ~~**Impact-AQ-2** would remain significant after implementation of **MM-AQ-2** through **MM-AQ-8** because~~emissions of VOC, NO_X, CO, SO_X, PM10, and PM2.5 ~~emissions from~~ would ~~remain in excess of~~be reduced to below San Diego County SLTs during operations~~.~~ of full TAMT plan buildout after mitigation. As such, operation at full buildout of the TAMT plan would not violate an air quality standard or contribute substantially to an existing or projected air quality standard during operation; **Impact-AQ-2** would be considered ~~significant and unavoidable.~~less than significant after mitigation. Operation at full buildout of the TAMT plan would not violate an air quality standard or contribute substantially to an existing or projected air quality standard during operation for all criteria pollutants (VOC, NO_X, CO, SO_X, PM10, and PM2.5).

Note that the CO ~~exceedance~~emissions shown in Table 4.2-18 is not a localized CO hot-spot concern. CO hot-spots typically (and rarely) occur at congested roadways with high traffic volumes near sensitive receptors. In the case of congested intersections, vehicle emissions occur within a small area relatively close to receptors (i.e., only a few feet). In the case of the full TAMT plan buildout, emissions occur over a large area (in the open ocean, within the bay, at the terminal, on the roadways), and sensitive receptors are rarely if ever as close as a few feet away. A localized analysis of CO hot-spots is contained under Threshold 4 and localized CO concentrations are presented in Table 4.2-~~24~~23.

Table 4.2-18. Estimate of Operational Emissions under Mitigated Existing Plus Full TAMT Buildout Conditions (pounds per day)

Operational Element	VOC	NO_X	CO	SO_X	PM10	PM2.5
Dry Bulk (2,650,000 MT)						
Unmitigated Emissions						
Ocean-Going Vessels	39	706	58	21	13	12
Assist Tugs	2	13	12	<1	<1	<1
Tugs and Fuel Barges	22	221	166	<1	8	7
Trucks	7	190	39	1	17	6
Worker Trips	1	2	18	<1	6	2
Rail - Regional Line Haul	5	142	13	1	3	3
Rail - Switching between Terminal and Yard	~~2~~1	~~58~~33	~~2~~3	<1	1	1
Cargo Handling Equipment	10	111	59	<1	3	2
Bulk Loading	-	-	-	-	5,933	1,666
Mitigated Reductions						
MM-AQ-2 Idling[1]	*<-1*	*<-1*	*<-1*	*<-1*	*<-1*	*<-1*
MM-AQ-3 CAP Measures[2]	*-1*	-11	*-1*	*<-1*	*<-1*	*<-1*
MM-AQ-4 Dry Bulk BACT[3]	~~<-1~~-	~~<-1~~-	~~<-1~~-	~~<-1~~-	~~<-1~~-5,648	~~<-~~-1,571
MM-AQ-5 VSR Beyond CAP[4]	*-5*	-97	*-7*	*-2*	*-2*	*-2*
MM-AQ-6 Electric CHE	*-5*	*-84*	*-53*	*<-1*	*-3*	*-3*
MM-AQ-~~6 Electric CHE~~ 9 At-Berth Emissions Capture	~~<-~~-1	~~<-1~~-25	~~<-~~<1	~~<-~~-1	~~<-~~-1	*<-1*
Dry Bulk Existing Plus Project Daily	**~~67~~75**	**1,~~334~~200**	**3~~6~~08**	**~~21~~20**	**~~5,982~~331**	**~~1,698~~123**
Dry Bulk Existing Daily	~~28~~53	~~613~~1,007	~~97~~181	~~7~~17	~~599~~608	~~184~~192
Net New Over Existing	~~39~~22	~~721~~193	~~264~~128	~~15~~3	~~5,383~~-277	~~1,514~~-69
Exceed Significant Threshold?	*No*	~~*Yes*~~*No*	*No*	*No*	~~*Yes*~~*No*	~~*Yes*~~*No*

Operational Element	VOC	NO_X	CO	SO_X	PM10	PM2.5
Refrigerated Containers (2,288,000 MT)						
Unmitigated Emissions						
Ocean-Going Vessels	~~281~~188	~~4,567~~ 2,785	~~516~~318	~~196~~124	~~117~~72	~~107~~66
Assist Tugs	5	42	40	<1	1	1
Tugs and Fuel Barges	18	181	136	<1	6	6
Trucks	8	261	36	1	15	6
Worker Trips	1	3	27	<1	4	1
Cargo Handling Equipment	9	96	51	<1	2	2
Mitigated Reductions						
MM-AQ-2 Idling[1]	*<-1*	*<-1*	*<-1*	*<-1*	*<-1*	*<-1*
MM-AQ-3 CAP Measures[2]	*~~-94~~1*	*~~-1,792~~11*	*~~-199~~1*	*~~-72~~<1*	*~~-45~~<1*	*~~-42~~<1*
MM-AQ-5 VSR Beyond CAP[4]	*-1*	*-16*	*-1*	*<-1*	*<-1*	*<-1*
MM-AQ-6 Electric CHE	*~~<-1~~-5*	*~~<-1~~-84*	*~~<-1~~-53*	*<-1*	*~~<-1~~-3*	*~~<-1~~-3*
Refrigerated Containers Existing Plus Project Daily	**227~~7~~2**	**3,~~342~~ 258**	**~~605~~553**	**124**	**~~100~~99**	**~~82~~79**
Refrigerated Containers Existing Daily[5]	~~74~~207	~~1,499~~ 4,064	~~250~~651	~~37~~110	~~35~~87	~~28~~77
Net New Over Existing	15~~3~~	~~1,843~~- 806	~~355~~- 98	~~88~~14	~~65~~12	~~53~~3
Exceed Significant Threshold?	~~**Yes**~~No	~~**Yes**~~No	No	No	No	No
Multi-Purpose General Cargo (977,400 MT)						
Unmitigated Emissions						
Ocean-Going Vessels	95	1,742	148	57	34	31
Assist Tugs	4	32	30	<1	1	1
Tugs and Fuel Barges	47	473	356	<1	17	16
Trucks	1	23	5	<1	2	1
Worker Trips	<1	1	6	<1	2	1
Rail - Regional Line Haul	8	249	23	2	5	5
Rail - Switching between Terminal and Yard	~~5~~3	~~123~~63	~~5~~3	<1	~~2~~1	~~2~~1
Cargo Handling Equipment	4	41	22	<1	1	1
Mitigated Reductions						
MM-AQ-~~1~~2 Idling[1]	*<-1*	*<-1*	*<-1*	*<-1*	*<-1*	*<-1*
MM-AQ-~~2~~3 CAP Measures[2]	*-4*	*-74*	*-5*	*-1*	*-1*	*-1*
MM-AQ-~~4~~5 VSR Beyond CAP[4]	*-14*	*-266*	*-19*	*-6*	*-4*	*-4*
MM-AQ-6 Electric CHE	*~~<-1~~-5*	*~~<-1~~-84*	*~~<-1~~-53*	*<-1*	*~~<-1~~-3*	*~~<-1~~-3*
MM-AQ-9 At-Berth Emissions Capture	*-4*	*-97*	*<-1*	*-3*	*-2*	*-2*

Operational Element						
	VOC	NO_X	CO	SO_X	PM10	PM2.5
Multi-Purpose General Cargo Existing Plus Project Daily	**~~147~~136**	**2,~~343~~102**	**5~~7~~17**	**~~53~~49**	**~~59~~53**	**~~52~~47**
Multi-Purpose General Cargo Existing Daily[5]	~~40~~85	~~780~~1,463	~~120~~281	~~12~~34	~~18~~33	~~16~~31
Net New Over Existing	~~108~~51	~~1,563~~639	~~451~~236	~~41~~15	~~41~~20	~~36~~16
Exceed Significant Threshold?	~~***Yes***~~*No*	***Yes***	*No*	*No*	*No*	*No*
All Cargo Types						
All Cargo Types Daily Existing Plus Project Total	**43~~41~~**	**~~7,019~~6,560**	**1,~~536~~379**	**19~~8~~4**	**~~6,141~~483**	**~~1,832~~250**
All Cargo Types Existing Daily Total[5]	~~141~~346	~~2,892~~6,534	~~467~~1,113	~~56~~161	~~652~~728	~~229~~300
Net New Over Existing	~~300~~75[6]	~~4,128~~26	~~1,070~~265	~~143~~33	~~5,490~~-245	~~1,603~~-50
Exceed Significant Threshold?	~~***Yes***~~*No*	~~***Yes***~~*No*	~~***Yes***~~*No*	~~***Yes***~~*No*	~~***Yes***~~*No*	~~***Yes***~~*No*
Significance Thresholds	75	250	550	150	100	55

Source: Appendix F. Totals may not add exactly due to rounding.

[1] Reductions from idling are not quantified because reductions would be speculative, as it is not fully known whether long trucks currently idle at any given location.

[2] Includes VSR compliance with the CAP target of 80% (12 knot speed within 20 nautical miles of Point Loma) and 80% compliance with at-berth regulations.

[3] Dry Bulk BACT reductions ~~are not quantified because reductions would be speculative.~~assume 95% reduction with controls. Any concrete handling will require an APCD permit, which may require up to 99% reduction.

[4] Includes VSR compliance of 90% (12 knot speed within 40 nautical miles of Point Loma).

[5] Existing daily emissions shown in Table 4.2-6.

[6] Net new daily emissions will not exceed 75 pounds on a peak day at TAMT plan buildout under the MPC because MM-AQ-7 requires the use of advanced technologies to limit VOC emissions to no more than 75 pounds on a peak day once throughput exceeds 4,000,000 MT annually, ***OR*** to limit the number of vessels to no more than three vessels on a peak day once throughput exceeds 4,000,000 metric tons annually, if advanced technologies are not available.

Assumptions and Additional Discussion Regarding Impact-AQ-2

On Future Fleet Turnover

Note that the emissions presented herein are based on a set of conservative assumptions regarding activity at the project site that would be driving the substantial emissions increase at full buildout of the TAMT plan. The overarching assumption is that operation of the Demolition and Initial Rail Component and full buildout of the TAMT plan would occur with minimal changes to the fleet of emission sources that occur at the project site, which is not likely realistic.

For example, the operational analyses herein assume only minimal changes to the OGV fleet that calls at the project site, only accounting for known changes associated with new Dole-owned Tier 2 refrigerated container vessels. The average age of vessels that called on the project site during the baseline period is a 1995 model year (18–19 years old). This is consistent with other documentation that says the average age of U.S.-flagged commercial OGVs is approximately 20 years (EPA 2009).

Vessel life is generally defined as 25–30 years. Over time, as the fleet of vessels ages, vessels that call at the project site will be replaced and will meet the stricter MARPOL Annex VI emission limits required of new vessel builds, which particularly affect NO_X rates (Tier 2 required after 2011; Tier 3 required after 2016) as well as the portion of vessels equipped to cold iron. Moreover, these new vessel builds are generally larger, which allows cargo owners to ship more cargo on fewer trips. Over time, newer vessels will likely bring more cargo to the project site with fewer calls than the large number of calls that has been analyzed herein.

On Future At-Berth Regulations

This analysis only assumes compliance with existing at-berth vessel regulations. ARB is in discussion to extend at-berth vessel regulations to other vessel types beyond 2020, including bulk carriers, general cargo vessels, and auto carriers. The dry bulk (15 existing calls; 146 calls at buildout) and multi-purpose general cargo (28 existing calls; 313 calls at buildout) nodes would see the largest increases over existing conditions at full TAMT plan buildout. If ARB requires additional at-berth regulations from these other vessel types, emissions would be reduced (possibly significantly) below what was analyzed within this air quality analysis.

On Future Cargo Handling Equipment and Rail Switching Turnover

This analysis assumes that the CHE fleet at the project site and the switcher that moves cargo between the BNSF yard and the project site would remain unchanged over time. This assumption is conservative in that it is unknown what equipment updates will become available at TAMT. Over time, either through the Periodic Technology Review under MM-AQ-7 or through other means, such as a grant to purchase pre-commercial equipment, cleaner equipment than what is currently available may be used (or required to be used) at the terminal. According to ARB, emissions from CHE are expected to decrease over time even as activity increases. For example, as shown in Table 4.2-5, NO_X is expected to drop 41 percent by 2020 (from 2012 levels) and 51 percent by 2035 (from 2012 levels), while PM10 is expected to drop 45 percent by 2020 (from 2012 levels) and 37 percent by 2035 (from 2012 levels). These emissions are expected because ARB assumes commercialization and deployment of zero or near-zero technologies over time. The District has already begun the transition to zero or near-zero technologies. For example, the recent CEC grant will allow CEMEX to purchase electric yard trucks and Dole Fresh Fruit Company to purchase two electric yard trucks. Operation of the electric yard trucks will reduce criteria pollutant and TAC emissions from terminal operations. However, because it is unknown to what extent zero or near-zero technologies will be deployed at the project site in the future, a conservative estimate of CHE emissions based on scaling up of existing CHE fleet was deemed appropriate. The existing Tier 0 locomotive switcher that moves cargo between the project site and the BNSF yard was not assumed to be replaced over the life of the plan. An additional conservative assumption is that existing switcher activity is scaled up by dry bulk and multi-purpose throughput increases over time. This assumption does not take in to account that the rail upgrades implemented as part of the Demolition and Initial Rail Component would allow for BNSF line-haul locomotives, which are much cleaner than the switcher, to bypass the yard and access the existing on-dock rail facility at the southeastern portion of the project site and the proposed expanded on-dock rail where Warehouse C currently resides. Shifting work from the switcher to the line-haul locomotive and removing the stop at the yard would help to reduce criteria pollutant and TAC emissions beyond that shown here.

On Future Statewide Regulations

As discussed in detail in Section 4.6, *Greenhouse Gas Emissions and Climate Change*, ARB is working on various strategies to transition goods movement to zero- and near-zero emission sources. The *Pathways to Zero and Near-Zero Emissions* (*Pathways*) discussion document presents various near- and long-term actions the State may take toward zero to near-zero emissions goods movement, which includes trucks, ships, locomotives, aircraft, harbor craft, and all types of equipment used to move freight at seaports, airports, railyards, warehouses, and distribution centers. The majority of these near- and long-term actions are regulatory in nature and require developing regulations or guidance or cooperating with and petitioning other agencies, including EPA (for improved truck and locomotive standards) and IMO (for improved OGV standards), to adopt rulemaking or new emission standards, and investigating usefulness of renewable fuels in OGVs. Moreover, the *Sustainable Freight Action Plan* provides high-level vision and broad direction, long-term Vision and Guiding Principles, 2030 targets, and actions to initiate over the next 5 years to meet the long-term targets and vision. Over time, the policy goals and discrete actions implemented by the State will reduce emissions from all goods movement sources and facilitate the transition to zero to near-zero emissions goods movement at TAMT. Additionally, the 2016 SIP Strategy outlines various measures to be proposed to not only attain air quality standards, but to also achieve GHG emission reduction targets, reduce petroleum consumption, and decrease health risk from transportation emissions. The SIP update includes various measures relevant to goods movement and maritime operations, including working with EPA on a low-NO_X standard and finalizing the Phase 2 GHG standard for heavy trucks; further deployments of cleaner on- and off-road technologies; working with EPA on more stringent locomotive emission standards; working with IMO on Tier 4 vessel standards, incentivizing low emissions vessel calls, and extending at-berth requirements to all vessels (ARB 2016b).

Recently, SCAQMD published a white paper that describes a number of potential scenarios for reducing emissions from the goods movement sector. The SCAQMD paper focused on various ozone precursors (VOC and NO_X) reduction scenarios accounting for varying degrees of technology deployment and future rulemaking. The scenarios included the following: (1) Equal Share Reduction in NO_X (e.g., overall basin-wide reduction needed to achieve the ozone standard); (2) 100% (or full) implementation of existing exhaust standards (e.g., all locomotives and CHE achieve Tier 4 standard; all OGVs are Tier 3; all trucks are ~~MY~~model year 2010 and newer); (3) 90 percent Cleaner Combustion Technologies Scenario (e.g., all locomotives, CHE, OGVs, and trucks 90 percent cleaner than existing standards); (4) 25 percent penetration of zero-emission technologies; (5) 50 percent penetration of zero-emission technologies, and; (6) 75 percent penetration of zero-emission technologies. A summary of the emission reductions associated with these various scenarios is presented in Table 4.2-19.

The SCAQMD analysis drew some conclusions that are relevant to the proposed project, including the following: existing emissions standards may not be enough to attain regional air quality goals (particularly in South Coast); accelerated deployment of commercially available zero-emission vehicles in the goods movement sector achieves the greatest reductions in SCAQMD's analysis (for example, see the "75% Zero/25% Near-Zero" scenario in Table 4.2-19); new exhaust emission standards are needed; and the most effective set of strategies will consist of a combination of accelerated advanced technology deployment, incentives programs to accelerate replacement of older trucks and CHE, infrastructure enhancements, and funding incentives. SCAQMD provides various recommendations to move forward, which include EPA and ARB establishing a new heavy-duty truck standard that is 90 percent cleaner than the current standard; establishing cleaner standards for vessels and locomotives; developing additional mechanisms and incentives for deploying zero- and near-zero technologies; and developing systems to capture OGV and locomotive emissions at ports. While this white paper was developed specifically for SCAQMD to investigate various policy choices in an effort to achieve attain State and federal air quality standards for ozone, the results and recommendations are relevant to the proposed project and goods movement as a whole. Operation of the full TAMT plan buildout would result in emissions that far exceed thresholds for regional thresholds, and a combination of strategies are needed to reduce emissions. As noted in the *Pathways* and *Action Plan* documents, various international, federal, and state organizations are working to develop new emission standards for trucks, OGVs, locomotives, and CHE. This SCAQMD paper further reiterates the need for coordinated international, federal, and state action to develop and implement new and innovative approaches to reducing emissions from the goods movement sector.

Aggressive regulatory actions and deployment of zero- and near-zero technologies would drastically reduce emissions associated with TAMT operations. As shown in Table 4.2-20, reductions from the most aggressive scenario SCAQMD investigated result in a 53 percent reduction from unmitigated NO_X associated with full TAMT plan buildout, while reductions from the least aggressive scenario (full implementation of existing regulations) result in a 25 percent reduction from unmitigated NO_X associated with full TAMT plan buildout. Under either scenario, emissions of all pollutants from full TAMT plan buildout would be reduced, which would act to reduce ozone precursors, reduce DPM emissions and risk in neighboring communities, and help the District attain its CAP targets. This analysis has been provided for illustrative purposes only to highlight to potential long-term effects of international (e.g., vessel emission standard updates), federal (e.g., locomotive emission standard updates, and state (e.g., at-berth vessels regulation and deployment of zero emission technologies) actions on full TAMT plan buildout NO_X emissions (SCAQMD 2015b). <u>After implementation of all mitigation, the District would be deploying various zero- and near-zero technologies that would drastically reduce emissions associated with TAMT operations.</u>

Table 4.2-19. Summary of Goods Movement Reduction Scenarios from South Coast Air Quality Management District

	Percentage Reduction in NO_X from Baseline in 2032					
Source	**Equal Share Reductions**	**100% Existing Standards**	**90% Cleaner**	**25% Zero/ 75% Near-Zero**	**50% Zero/ 50% Near-Zero**	**75% Zero/ 25% Near-Zero**
Heavy Duty Trucks	77%	**4%**	90%	93%	95%	**98%**
Ocean-Going Vessels	72%	**28%**	52%	52%	52%	**52%**
Freight Locomotives	72%	**56%**	96%	97%	98%	**99%**
CHE	70%	**21%**	92%	94%	96%	**98%**
Total	*74%*	***22%***	*78%*	*79%*	*81%*	***82%***

Source: SCAQMD 2015b. Note that this table was compiled based on the emissions shown in Table 9 of SCAQMD 2015b.

Table 4.2-20. Summary of Goods Movement Reduction Scenarios on Full TAMT Plan Buildout

Operational Element	Unmitigated NO_X [1]	*Maximum Reduction*[2]	Mitigated NO_X[3]	*Minimum Reduction*[4]	Mitigated NO_X[3]
Dry Bulk (2,650,000 MT)					
Project Daily					
Ocean-Going Vessels	706	*52%*	340	*28%*	509
Assist Tugs	13	-	13	-	13
Tugs and Fuel Barges	221	-	221	-	221
Trucks	190	*98%*	5	*4%*	183
Worker Trips	2	*85%*	0	*41%*	1
Rail - Regional Line Haul	142	*99%*	2	*56%*	63
Rail - Switching between Terminal and Yard	~~58~~33	*99%*	≤1	*56%*	~~26~~14
Cargo Handling Equipment	111	*98%*	2	*21%*	88
Bulk Loading	-	-	-	-	-
Dry Bulk Existing plus Project Daily	**1,4417**	**-**	**584~~~3**	**--**	**1,~~103~~092**
Dry Bulk Existing Daily[1]	~~613~~1,007	-	~~613~~1,007	--	~~613~~1,007
Net New Over Existing	~~829~~410	-	~~-29~~423	--	~~491~~86
Exceed Significant Threshold?	***Yes***	-	*No*	--	~~***Yes***~~*No*
Refrigerated Containers (2,288,000 MT)					
Project Daily					
Ocean-Going Vessels	2.785	*52%*	1,344	*28%*	2,009
Assist Tugs	42	-	42	-	42
Tugs and Fuel Barges	181	-	181	-	181
Trucks	261	*98%*	6	*4%*	251
Worker Trips	3	*85%*	<1	*41%*	2
Cargo Handling Equipment	96	*98%*	2	*21%*	76
Refrigerated Containers Existing plus Project Daily	**3,369**	**-**	**1,576**	**-**	**2,561**
Refrigerated Containers Existing Daily[1]	~~1,499~~4,064	-	~~1,499~~4,064	-	~~1,499~~4,064
Net New Over Existing	~~1,870~~-695	-	~~77~~-2,488	-	-1,50~~6~~2
Exceed Significant Threshold?	~~***Yes***~~*No*	-	No	-	Yes
Multi-Purpose General Cargo (977,400 MT)					
Project Daily					
Ocean-Going Vessels	1,742	*52%*	841	*28%*	1,256
Assist Tugs	32	-	32	-	32
Tugs and Fuel Barges	473	-	473	-	473
Trucks	23	*98%*	1	*4%*	23
Worker Trips	1	*85%*	~~0~~<1	*41%*	~~0~~<1
Rail - Regional Line Haul	249	*99%*	3	*56%*	110

Operational Element	Unmitigated NO_X [1]	*Maximum Reduction*[2]	Mitigated NO_X[3]	*Minimum Reduction*[4]	Mitigated NO_X[3]
Rail - Switching between Terminal and Yard	~~123~~63	*99%*	1	*56%*	~~55~~28
Cargo Handling Equipment	41	*98%*	1	*21%*	33
Multi-Purpose General Cargo Existing plus Project Daily	**2,683**	-	**1,35~~1~~0**	-	**1,~~981~~955**
Multi-Purpose General Cargo Existing Daily[1]	~~780~~1,463	-	~~780~~1,463	-	~~780~~1,463
Net New Over Existing	1,~~903~~160	-	~~571~~-113	-	~~1,201~~491
Exceed Significant Threshold?	***Yes***	-	~~Yes~~No	-	**Yes**
All Cargo Types					
All Cargo Types Existing plus Project Daily Total	**7,~~493~~408**	-	**3,51~~1~~0**	-	**5,~~646~~608**
All Cargo Types Existing Daily Total[1]	~~2,882~~6,534	-	~~2,892~~6,534	-	~~2,892~~6,534
Net New Over Existing	~~4,601~~875	-	~~619~~-3,024	-	~~2,754~~-926
Exceed Significant Threshold?	***Yes***	-	***~~Yes~~****No*	-	***~~Yes~~****No*
Significance Threshold	250	-	250	-	250

Source: Appendix F. Totals may not add exactly due to rounding.

[1] Unmitigated NO_X emissions are shown in Table 4.2-17.

[2] Represents the maximum reductions from SCAQMD's White Paper as shown in Table 4.2-19 ("75% Zero/25% Near-Zero").

[3] Mitigated NO_X estimated by multiplying unmitigated NO_X from table 4.2-17 by the appropriate maximum and minimum reductions.

[4] Represents the minimum reductions from SCAQMD's White Paper as shown in Table 4.2-19 ("100% Existing Standards").

Threshold 3: Implementation of the proposed project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.

Impact Discussion

Demolition and Initial Rail Component

The SDAB is currently in nonattainment for O_3 under NAAQS and for O_3, PM10, and PM2.5 under CAAQS, as a result of past and present projects, and will be further impeded by reasonably foreseeable future projects (see Chapter 5, *Cumulative Impacts*). As discussed above and shown in Tables 4.2-13 through 4.2-16, criteria pollutant emissions are expected to be below County SLT levels for all nonattainment criteria pollutants and precursors during construction and operation. The projects identified by the District within a 1-mile radius of the project site include the following: Mitsubishi Cement (cumulative project #2), Ballpark Village Parcel C (cumulative project #7), Ballpark Village Parcel D (cumulative project #8), the San Diego Convention Center Phase III Expansion and Hotel (cumulative project #11), and Dole Fresh Fruit Refrigerated Rack

Improvements Project (cumulative project #13). Construction of one or more of these projects, including cumulative project #2 and cumulative project #13 on TAMT, would potentially overlap with the construction of the Demolition and Initial Rail Component, which is scheduled to be completed by the end of 2020.

Emissions from all nearby projects, including those listed above, would be subject to the same SDAPCD rules and regulations that reduce emissions from the Demolition and Initial Rail Component, including fugitive dust control per Rule 55. As such, cumulative impacts with respect to criteria pollutant emissions would be less than significant.

In terms of operations, the Demolition and Initial Rail Component would not exceed thresholds for any nonattainment pollutant, would conform to the RAQS and/SIP, and would not create a CO hot-spot. As such, the proposed project is not expected to result in a cumulatively considerable net increase in a nonattainment pollutant. This impact is considered less than significant, and no mitigation is required.

Full TAMT Plan Buildout

Operation of full TAMT plan buildout, when combined with cumulative projects, would exceed the thresholds for non-attainment pollutants including VOC, NO_X, ~~SO_X,~~ PM10, and PM2.5 (**Impact-AQ-3**). As such, full buildout of the TAMT plan is expected to result in a cumulatively considerable net increase in a nonattainment pollutant. With mitigation measures **MM-AQ-2** through **MM-AQ-~~8~~9** incorporated, VOC, NO_X, ~~CO,~~ PM10, and PM2.5 emissions would ~~remain above the County's~~be reduced below County SLTs. Therefore, after mitigation, full TAMT plan buildout operational air quality impacts would be less than significant~~ and unavoidable.~~.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Impacts related to implementation of the Demolition and Initial Rail Component would be less than significant.

Full TAMT Plan Buildout

Full TAMT plan buildout would result in a cumulatively considerable net increase of VOC, NO_X, CO, SO_X, PM10, and PM2.5, which are nonattainment pollutants (**Impact-AQ-3**). Potentially significant impact(s) include:

Impact-AQ-3: Cumulative Emissions in Excess of Criteria Pollutant Thresholds During TAMT Plan Buildout Operations. Project emissions during operations, before mitigation, would exceed the San Diego County SLTs for VOC, NO_X, ~~CO,~~ PM10, and PM2.5, and when combined with other nearby past, present, and probable future projects, the full TAMT plan buildout's contribution would be cumulatively considerable. The contribution of project-related emissions is considered significant because full TAMT plan buildout would exceed thresholds that have been set by SDAPCD to attain the NAAQS and CAAQS, the purpose of which is to provide for the protection of public health.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

Implement **MM-AQ-2** through **MM-AQ-~~8~~9**, as described under Threshold 2.

Level of Significance after Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

As shown in Table 4.2-18, **Impact AQ-3** would ~~remain~~ be reduced to a less-than-significant level after implementation of Mitigation Measures **MM-AQ-2** through **MM-AQ-~~8~~9**, because mitigation would reduce operations-related emissions ~~but not~~ to a level below County SLTs for all pollutants. Therefore, when combined with contributions of nonattainment pollutant emissions of past, present, and probable future projects, buildout of the full TAMT plan's contribution of a nonattainment ~~pollutants (VOC, NO_X, CO, SO_X, PM10, and PM2.5)~~pollutant would be less than cumulatively considerable during operations and impacts are considered less than significant.

Threshold 4: Implementation of the proposed project would expose sensitive receptors to substantial pollutant concentrations.

Impact Discussion

The discussion of pollutant concentrations associated with both the Demolition and Initial Rail Component and full TAMT plan buildout are provided below.

Demolition and Initial Rail Component

Construction of the Demolition and Initial Rail Component would occur over an approximately 3-year period, which is much shorter than the assumed 30- or 70-year exposure period typically used to estimate lifetime cancer risks. DPM emitted by these construction sources can remain airborne for several days. However, given the prevailing winds and meteorological conditions at the project site, pollutant emission concentrations would be expected to be well dispersed. Construction activities would be sporadic, transitory, and short term in nature; once construction activities end, so too would the source emissions. In addition, Table 4.2-13 indicates that diesel exhaust (PM10) associated with construction activities would be minimal, and diesel-vehicle activity on public roadways would be minimal, consisting of 5,775 haul and delivery trips over the 3-year construction period (or about 7.5 truck trips per day on average). Diesel activity occurring both on and off site would be short term and occur at distances not expected to expose sensitive receptor locations to substantial pollutant concentrations.

Once operational, the Demolition and Initial Rail Component and full TAMT plan buildout would result in increased vessel activity through the harbor and at the project site, truck traffic on neighboring roads, locomotive switching activity between the yard and project site, and CHE activity at the project site. Vessels, tugs, heavy-duty trucks, CHE, and locomotives are all diesel-powered and emit TACs, specifically DPM, while the vessel boilers emit other TACs. A detailed description of the emission sources and TACs of concern is contained within Appendix F.

In order to estimate the potential risk on neighboring communities, an HRA was conducted to analyze the potential health risks associated with new vessel, tug, CHE, truck, and locomotive activity at the closest receptors along the vessel path, near the project site, along truck traffic corridors, and near the yard. The results of the Demolition and Initial Rail Component HRA are summarized in Table 4.2-21 and the results of the full TAMT plan buildout HRA are summarized in Table 4.2-22. Note that risk is presented for two scenarios for the Demolition and Initial Rail Component: one that accounts for existing shore power compliance, and one that accounts for increased compliance as new Dole vessels come online. Shore power compliance from eligible vessels (refrigerated container vessels) will increase over time, and this analysis demonstrates the effectiveness of shore power alone on reducing risk on nearby receptors. As shown in Table 4.2-21, maximum risk at nearby receptors associated with Demolition and Initial Rail Component operations assuming existing shore power compliance is approximately 63 cases per million at maximum exposed residences, 6 per million at maximum exposed parks, and 10 per million at maximum exposed schools. Relative to existing conditions, this represents an increase of 20 cases per million at maximum exposed residences, a level that is above the cancer risk threshold of 10 cases per million. Much of the risk (approximately 80 percent) of the risk stems from Refrigerated Container activity, primarily from hoteling at berth. As shown in Table 4.2-21, increased compliance with shore power reduces risk to 11 cases per million at the maximum exposed residences, a level that is below existing conditions. As such, no health risk impact would occur with construction and operation of the Demolition and Initial Rail Component.

Full TAMT Plan Buildout

For full TAMT plan buildout, risk is first presented for two scenarios: one that accounts for existing shore power compliance, and one that accounts for increased compliance associated with new Dole vessels and increased vessel calls at full buildout. Similar to the Demolition and Initial Rail Component analysis above, shore power compliance from eligible vessels (refrigerated container vessels) will increase over time, and this analysis demonstrates the effectiveness of shore power alone on reducing risk on nearby receptors. As shown in Table 4.2-22, maximum risk at nearby receptors associated with full TAMT plan buildout operations assuming existing shore power compliance is approximately 240 cases per million at maximum exposed residences, 25 per million at maximum exposed parks, and 43 per million at maximum exposed schools. Relative to existing conditions, this represents an increase of 197 cases per million at maximum exposed residences, 18 cases per million at maximum exposed parks, and 33 cases per million at maximum exposed schools, a level that is well above the cancer risk threshold of 10 cases per million. Similar to the Demolition and Initial Rail Component above, much of the risk stems from refrigerated container vessel hoteling, but dry bulk and multi-purpose general cargo operations make up a larger share of the risk. As shown in Table 4.2-22, increased compliance with shore power reduces risk by 56 percent, but risk at maximum exposed residences, parks, and schools would remain above the cancer risk threshold.

As shown in Table 4.2-22, risk is expected to increase at nearby receptor locations at full TAMT plan buildout. Table 4.2-22 also indicates that the chronic and acute non-cancer health hazards are expected to be well below thresholds. Because the levels of exposure and risk during full TAMT plan buildout are expected to exceed the cancer risk and hazard thresholds, this impact would be significant (**Impact-AQ-4**).

At the maximum residential receptor, the greatest contributors to cancer risk are terminal equipment, vessel hoteling, and (to a lesser extent) rail activity. The greatest contributors to unmitigated cancer risk at the maximum residential, park, and school receptors are terminal equipment (47–48% of risk), vessel hoteling (42–45%), and (to a lesser extent) rail activity (4–7%). The maximally exposed residential areas, parks (namely Cesar Chavez Park), and school receptor locations (namely Perkins Elementary and Monarch School) are all close to the terminal and the railyard. Receptor locations further away from the terminal show dramatically lower health risk values.

Table 4.2-21. Estimate of Health Risk at Nearby Receptors during Existing Plus Demolition and Initial Rail Component Operations

	Existing plus Demolition and Initial Rail Component (existing shore power compliance)			Net Over Existing[1]			Existing plus Demolition and Initial Rail Component (increased shore power compliance)			Net Over Existing[1]		
Receptor Type	**Cancer Risk Per Million**	**Chronic Hazard Index**	**Acute Hazard Index**	**Cancer Risk Per Million**	**Chronic Hazard Index**	**Acute Hazard Index**	**Cancer Risk Per Million**	**Chronic Hazard Index**	**Acute Hazard Index**	**Cancer Risk Per Million**	**Chronic Hazard Index**	**Acute Hazard Index**
Dry Bulk												
Residential	8	<0.00	<0.00	<1	<0.00	<0.00	8	<0.00	<0.00	<1	<0.00	<0.00
Park	1	<0.00	<0.00	<1	<0.00	<0.00	1	<0.00	<0.00	<1	<0.00	<0.00
School	2	<0.00	<0.00	<1	<0.00	<0.00	2	<0.00	<0.00	<1	<0.00	<0.00
Refrigerated Containers												
Residential	**50**	0.01	<0.00	**19**	<0.00	<0.00	**18**	0.01	<0.00	-13	<0.00	<0.00
Park	5	0.01	<0.00	2	0.01	<0.00	2	0.01	<0.00	-1	<0.00	<0.00
School	8	0.01	<0.00	3	0.01	<0.00	3	0.01	<0.00	-2	<0.00	<0.00
Multi-Purpose General Cargo												
Residential	**6**	<0.00	<0.00	2	<0.00	<0.00	**6**	<0.00	<0.00	2	<0.00	<0.00
Park	1	<0.00	<0.00	<1	<0.00	<0.00	1	<0.00	<0.00	<1	<0.00	<0.00
School	1	<0.00	<0.00	<1	<0.00	<0.00	1	<0.00	<0.00	<1	<0.00	<0.00
Total for all cargo												
Residential	**63**	0.01	<0.00	**20**	0.01	<0.00	**32**	0.01	<0.00	-11	<0.00	<0.00
Park	6	0.02	<0.00	2	0.01	<0.00	4	0.02	<0.00	-1	<0.00	<0.00
School	**10**	0.01	<0.00	3	0.01	<0.00	16	0.01	<0.00	-1	<0.00	<0.00
Threshold	--	--	--	*10*	*1.0*	*1.0*	--	--	--	*10*	*1.0*	*1.0*
Exceed Threshold?	--	--	--	***Yes***	*No*	*No*	--	--	--	*No*	*No*	*No*

Source: Appendix F.

Note that risk for the various receptor types is not additive and the risk is not the sum of all the risks shown here; rather, the risk at each receptor type is already the sum of emissions.

Bold = exceedance.

[1] Existing health risk is shown in Table 4.2-8.

Table 4.2-22. Estimate of Health Risk at Nearby Receptors during Existing Plus Full TAMT Plan Build Operations

	Full TAMT Plan Build (unmitigated)			Net Over Existing[1]			Full TAMT Plan Build (mitigated)			Net Over Existing[1]		
Receptor Type	**Cancer Risk Per Million**	**Chronic Hazard Index**	**Acute Hazard Index**	**Cancer Risk Per Million**	**Chronic Hazard Index**	**Acute Hazard Index**	**Cancer Risk Per Million**	**Chronic Hazard Index**	**Acute Hazard Index**	**Cancer Risk Per Million**	**Chronic Hazard Index**	**Acute Hazard Index**
Dry Bulk												
Residential	~~73~~66	0.02	<0.01	**~~65~~59**	0.02	<0.01	~~73~~36	0.02	<0.01	**~~65~~29**	0.02	<0.01
Park	8	0.03	<0.01	~~6~~7	0.03	<0.01	~~8~~5	0.03	<0.01	~~6~~4	0.03	<0.01
School	~~14~~12	0.03	<0.01	~~12~~11	0.02	<0.01	~~14~~7	0.03	<0.01	**~~12~~**5	0.02	<0.01
Refrigerated Containers												
Residential	~~121~~136	0.03	<0.01	**~~90~~109**	0.02	<0.01	~~53~~28	0.01	<0.01	**~~22~~**1	0.01	<0.01
Park	~~13~~12	0.05	<0.01	~~8~~7	0.03	<0.01	~~6~~3	0.03	<0.01	~~3~~<1	0.01	<0.01
School	~~21~~22	0.04	<0.01	**~~13~~14**	0.02	<0.01	~~9~~5	0.02	<0.01	~~4~~<1	0.01	<0.01
Multi-Purpose General Cargo												
Residential	~~49~~36	0.01	<0.01	~~44~~**33**	0.01	<0.01	~~49~~16	0.01	<0.01	**~~44~~13**	0.01	<0.01
Park	4	0.02	<0.01	~~4~~3	0.02	<0.01	~~4~~2	0.02	<0.01	~~4~~2	0.02	<0.01
School	~~9~~6	0.02	<0.01	~~8~~5	0.02	<0.01	~~9~~3	0.02	<0.01	~~8~~2	0.02	<0.01
Total for all cargo												
Residential	~~240~~225	0.01	<0.01	**~~197~~188**	0.05	<0.01	~~174~~80	0.05	<0.01	**~~132~~42**	0.03	<0.01
Park	~~25~~24	0.02	<0.01	**~~18~~17**	0.07	<0.01	~~19~~9	0.08	<0.01	**~~14~~**5	0.06	<0.01
School	~~43~~40	0.02	<0.01	**~~33~~30**	0.06	<0.01	~~32~~15	0.06	<0.01	**~~25~~**8	0.05	<0.01
Threshold	--	--	--	*10*	*1.0*	*1.0*	--	--	--	*10*	*1.0*	*1.0*
Exceed Threshold?	--	--	--	***Yes***	*No*	*No*	--	--	--	***Yes***	*No*	*No*

Source: Appendix F.

Note that risk for the various receptor types is not additive and the risk is not the sum of all the risks shown here; rather, the risk at each receptor type is already the sum of emissions.

Bold = exceedance.

[1] Existing health risk is shown in Table 4.2-8.

Demolition and Initial Rail Component and Full TAMT Plan Buildout

Carbon Monoxide Hot-spots

The following analysis considers both the Demolition and Initial Rail Component and the full buildout of the TAMT plan. Additional traffic created by the proposed project would have the potential to create CO hot-spots at nearby roadways and intersections. Multiple intersections would operate at LOS D or worse under existing, existing plus Demolition and Initial Rail Component, and existing plus full TAMT plan buildout conditions (Appendix G). The intersection that shows the most congestion and highest volumes across the various scenarios is the Harbor Drive and 32nd Street intersection, which has 2,642 vehicles and operates at LOS D during the PM peak hour under existing conditions and would increase to 3,418 vehicles and continue to operate at LOS D during the PM peak hour under ~~future~~TAMT plan buildout year~~ with project conditions~~. To provide a conservative analysis, CO concentrations were modeled to estimate pollutant concentrations at the Harbor Drive and 32nd Street intersection based on existing and full TAMT plan buildout volumes assuming existing year emission rates remain consistent over time. Table 4.2-23 presents the results of the CO hot-spot modeling and indicates that implementation of the proposed project would not result in violations of the state or federal 1- or 8-hour CO standards during the existing plus project, near term, and future year conditions. Consequently, the impact of traffic conditions from the proposed project on ambient CO levels is considered less than significant.

Table 4.2-23. Modeled CO ~~Levels~~Concentrations Measured at Receptors in the Vicinity of the Affected Intersection (parts per million)

	Existing Plus Demolition and Initial Rail Component [a]		Existing Plus TAMT Plan Buildout [a]	
Intersection	**1-Hr**	**8-Hr**	**1-Hr**	**8-Hr**
Harbor Drive and 32nd Street concentrations (ppm)	4.2	3.2	4.1	3.1
Ambient Air Quality Standards (NAAQS/CAAQS~~)~~), in ppm	*35/20*	*9/9.0*	*35/20*	*9/9.0*
Exceed Threshold?	*No*	*No*	*No*	*No*

[a] Background concentrations of 3.0 and 2.4 ppm were added to the modeling 1- and 8-hour results, respectively.
Source: Appendix F.

Criteria Air Pollutants

High levels of criteria pollutants are associated with some form of health risk (e.g., asthma, asphyxiation). Adverse health effects associated with criteria pollutant emissions are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals [e.g., age, gender]). Moreover, ozone precursors (VOC and NO_X) affect air quality on a regional scale. Health effects related to ozone are therefore the product of emissions generated by numerous sources throughout a region. As part of the setting and updating of the NAAQS, EPA develops and considers quantitative characterizations of exposures and associated risks to human health or the environment associated, known as an HREA, with recent air quality conditions and with air quality estimated to just meet the current or alternative standard(s) under consideration (EPA 2016a). The HREA estimates population exposure to and resulting mortality and morbidity health risks associated with the full range of observed pollutant concentrations, as well as incremental changes in exposures and risks associated with ambient air quality adjusted to just meeting the existing NAAQS and just meeting potential alternative NAAQS under consideration (EPA 2014). However, existing models have limited sensitivity to small changes in criteria pollutant concentrations and, as such, translating project-generated criteria pollutants to specific health effects would produce meaningless results. In other words, increases in regional air pollution from project-generated VOC and NO_X would have no effect on specific human health outcomes that could be attributed to specific project emissions. Other criteria pollutant emissions, including CO, PM10, and PM2.5, generally affect air quality on a localized scale. Health effects related to localized pollutants are the product of localized sources and emissions generated by numerous sources throughout a region. Certain air quality models, particularly dispersion models, have the ability to translate project-generated localized pollutants to specific health effects.

As shown in Table 4.2-15, operation of the Demolition and Initial Rail Component by itself would not significantly increase emissions of ozone precursors (VOC and NO_X), as emissions would be below thresholds, but as shown in Table 4.2-17, full TAMT plan buildout would significantly increase emissions of ozone precursors (VOC and NO_X) (**Impact-AQ-2**). After implementation of Mitigation Measures **MM-AQ-2** through **MM-AQ-~~8~~9**, VOC, and NO_X emissions would ~~remain in excess of~~be reduced below the ~~applicable~~ County SLT thresholds (Table 4.2-18). Project-generated ozone precursors could increase photochemical reactions and the formation of tropospheric ozone, which, at certain concentrations, could lead to respiratory symptoms (e.g., coughing), decreased lung function, and inflammation of airways. Although these health effects are associated with ozone, the impacts are a result of cumulative and regional VOC and NO_X emissions. However, the incremental contribution of the project to specific health outcomes related to criteria pollutant emissions would be limited and any effects thereof would be below any health-based significance threshold (e.g., NAAQS and CAAQS). ~~Furthermore, while the incremental contribution could not be traced solely to the proposed project, the contribution of project-related emissions is considered less than significant because the project would result in emissions below thresholds that have been set by SDAPCD and adopted by the County to attain the NAAQS and CAAQS, which are designed to provide public health protection.~~ However, because the project would result in emissions ~~above~~below health-based thresholds (SDAPCD Trigger Levels and County SLTs) for VOC and NO_X emissions after mitigation, operation of full TAMT plan buildout would not result in adverse health effects associated with criteria pollutant emissions ~~(~~. Therefore, after mitigation, **Impact AQ-3**~~).~~ would be less than significant.

As shown in Table 4.2-22, operation of the proposed project would result in adverse health effects on the nearby populations from localized DPM exhaust at full TAMT plan buildout. Thus, the health-related impacts of the full TAMT plan buildout's localized DPM emissions are considered significant (**Impact AQ-4)**. Note that the increase in operations at the project site would not occur immediately and all at once, but would instead occur incrementally over time as regional air quality improves and regulations to reduce emissions from Port-related sources take effect. Also note that fugitive particulate matter dust from soda ash and bauxite handling is not considered in the localized DPM exhaust analysis because particulate matter dust is not listed as a carcinogen by OEHHA. As shown in Table 4.2-23, operation of the proposed project would not result in adverse health effects on the nearby populations associated with localized CO at nearby roadways.

Asbestos-Containing Materials

Demolition of existing structures results in fugitive dust and other particulates that may disperse to adjacent sensitive receptor locations. Asbestos-containing materials (ACMs) were commonly used as fireproofing and insulating agents prior the 1977, which is when the U.S. Consumer Product Safety Commission banned most ACM use due to their link to mesothelioma. However, buildings constructed prior to 1977 that would be demolished by the project may have used ACM and could expose receptors to asbestos, which may become airborne with other particulates during demolition.

A discussion of asbestos-related impacts is presented in Section 4.7 of the Draft EIR, *Hazards and Hazardous Materials.* As discussed therein, compliance with Title 8, Industrial Relations, of the California Code of Regulations would ensure that removal of any asbestos-containing materials and lead-based paints would be conducted in a safe manner, including proper disposal in an approved facility, and includes mitigation (MM-HAZ-1 and MM-HAZ-2) related to removal of any contaminated materials.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

Implementation of full buildout of the TAMT plan would expose sensitive receptors to substantial pollutant concentrations. Potentially significant impact(s) include:

> **Impact-AQ-4: Health Risk During Full TAMT Plan Buildout Operations**. Project TAC emissions during full TAMT plan buildout operations, before mitigation, would result in a significant incremental health risk by exceeding thresholds for incremental cancer risk at nearby receptors.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

Implement **MM-AQ-2** through **MM-AQ-~~8~~9**, as described under Threshold 2.

Level of Significance after Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

As shown in Table 4.2-22, **Impact-AQ-4** would remain significant after implementation of **MM-AQ-2** through **MM-AQ-~~8~~9** because mitigation would not reduce emissions to incremental risk thresholds. As such, the contribution of project-related TAC emissions would exceed thresholds that have been set by OEHHA and adopted by various agencies to protect public health. The proposed project's operational impact related to exposing sensitive receptors to substantial pollutant concentrations would be significant and unavoidable.

Assumptions and Additional Discussion Regarding Impact-AQ-4

On Future Vessel Hoteling

The greatest contributors to cancer risk, in order, are vessel hoteling, vessel transit, and CHE emissions. The only vessels that call on the project site that are currently required to comply with ARB's at-berth regulations are refrigerated containers. During construction of the Demolition and Initial Rail Component, electrical conduits would be installed that would allow for future installation of shore power infrastructure at Berths 10-5/10-6, which are designated for the Multi-Purpose General Cargo node. There were 28 multi-purpose general cargo vessel calls during the baseline period, and the number of multi-purpose general cargo vessel calls is estimated to increase to 313 calls per year under full TAMT plan buildout. The need to make shore power available to multi-purpose general cargo calls will increase as the calls increase over time. Given that it is unknown to what extent these multi-purpose general cargo vessel calls will use shore power while at berth, this analysis does not account for any reductions from multi-purpose general cargo vessel use of shore power.

On Future Vessel Regulations

There are currently no standards to reduce DPM emissions from Category 3 vessels (i.e., OGVs). Tiering standards to date have only been adopted to reduce NOx emissions. ARB's *Pathways* and *2016 SIP Strategy* documents state that near-term ARB measures will be to advocate with international partners for new IMO Tier 4 NO_X and PM standards along with actual fuel efficiency targets by 2020. Therefore, while not official yet, newly built vessels may soon be required to comply with Tier 4 standards that will reduce DPM from vessel transit both on the open ocean and at slow speeds in the Bay (and closer to receptors).

On Future Cargo Handling Equipment Turnover

CHE emissions were conservatively scaled up for the Demolition and Initial Rail Component and full TAMT plan buildout solely by throughput. The analysis does not take into account fleet turnover over time as zero or near-zero technologies are deployed throughout the state. According to the ARB inventory and forecast (ARB 2013a), PM10 emissions from CHE are expected to decrease 45 percent by 2020 (from 2012 levels) and 37 percent by 2035 (from 2012 levels). In making these assumptions, ARB assumed a degree of zero or near-zero technology deployment.

Plausible Future Scenarios

This analysis provides a comparison of plausible future scenarios of risk at nearby receptors due to varying emissions reduction scenarios. These scenarios are reasonable and take into account District and/or ARB actions that are likely to occur. The scenarios are as follows.

- Shore Power at 10-5/10-6: to allow for multi-purpose general cargo vessels to use shore power while at berth. This scenario assumes 80 percent compliance for multi-purpose general cargo calls.
- Shore Power for all vessels: this assumes ARB will extend the at-berth regulation to all vessels by 2035. This scenario assumes 80 percent compliance for all calls.
- Shore Power for all vessels plus CHE turnover: this scenario builds on the above scenario but also assumes that emissions associated with CHE activity over time parallel the statewide inventory, which shows reductions even as activity increases. By default, this scenario assumes deployment of various zero or near-zero technologies at the terminal.

A summary of the estimated future risk associated with these scenarios is presented in Table 4.2-24. As shown therein, reductions from shore power alone do not achieve much in the way of reducing cancer risk at nearby receptors. However, when combined with CHE turnover that follows state averages, cancer risk at nearby receptors is reduced significantly—from 192 cases per million under the unmitigated full TAMT plan buildout scenario (Table 4.2-22) to 46 cases per million under the Shore Power for all vessels plus CHE turnover scenario (Table 4.2-24). This results in a total increase of only 3 cases per million over existing conditions even as throughput increases.

Therefore, while the analysis concludes conservatively that **Impact-AQ-4** would be significant and unavoidable, it is probable that risk at nearby receptors would be reduced further as the State acts to implement additional at-berth regulations, and the District, with support from State agencies and advancing technologies, continues to work to deploy more zero or near-zero technologies at TAMT. This analysis has been provided for illustrative purposes only to highlight the potential long-term effects of international (e.g., vessel emission standard updates), federal (e.g., locomotive emission standard updates), and state (e.g., at-berth vessels regulation and deployment of zero emission technologies) actions on health risk associated with full TAMT plan buildout.

Similar to the Goods Movement Reduction Scenarios discussed in Table 4.2-19 and Table 4.2-20, the Final EIR includes additional mitigation that, after implementation, would result in emissions and health risk far below the levels that were presented in the Draft EIR. Specifically, the District is deploying various zero- and near-zero CHE and at-berth technologies that would drastically reduce health risk similar to the levels shown in the "Full TAMT Plan Build (Shore Power for All Vessels plus CHE Turnover) numbers shown in Table 4.2-24. The plausible future scenario analysis shown in Table 4.2-24 has not been updated but remains to illustrate that the promotion of zero- and near-zero technologies reduce health risk in surrounding communities.

Table 4.2-24. Estimate of Health Risk at Nearby Receptors for Associated Plausible Future Scenarios

	Full TAMT Plan Build (Shore Power at 10-5/10-6)			Full TAMT Plan Build (Shore Power for All Vessels)			Full TAMT Plan Build (Shore Power for All Vessels plus CHE Turnover)		
Receptor Type	**Cancer Risk Per Million**	**Chronic Hazard Index**	**Acute Hazard Index**	**Cancer Risk Per Million**	**Chronic Hazard Index**	**Acute Hazard Index**	**Cancer Risk Per Million**	**Chronic Hazard Index**	**Acute Hazard Index**
Dry Bulk									
Residential	**73**	0.02	<0.01	**67**	0.02	<0.01	**20**	0.01	<0.01
Park	9	0.04	<0.01	7	0.04	<0.01	3	0.01	<0.01
School	**14**	0.03	<0.01	**13**	0.03	<0.01	4	0.01	<0.01
Refrigerated Containers									
Residential	**51**	0.01	<0.01	**51**	0.01	<0.01	**18**	<0.01	<0.01
Park	6	0.02	<0.01	6	0.02	<0.01	3	0.01	<0.01
School	9	0.02	<0.01	9	0.02	<0.01	3	0.01	<0.01
Multi-Purpose General Cargo									
Residential	**43**	0.01	<0.01	**43**	0.01	<0.01	7	<0.01	<0.01
Park	4	0.02	<0.01	4	0.02	<0.01	1	<0.01	<0.01
School	8	0.02	<0.01	8	0.02	<0.01	1	<0.01	<0.01
Total for all cargo									
Residential	**168**	0.04	<0.01	**162**	0.04	<0.01	**46**	0.01	<0.01
Park	**18**	0.07	<0.01	**17**	0.07	<0.01	6	0.02	<0.01
School	**31**	0.06	<0.01	**30**	0.06	<0.01	8	0.02	<0.01
Threshold	*10*	*1.0*	*1.0*	*10*	*1.0*	*1.0*	*10*	*1.0*	*1.0*
Exceed Threshold?	***Yes***	*No*	*No*	***Yes***	*No*	*No*	***Yes***	*No*	*No*

Risk shown here is not the net over existing but total risk (existing + full TAMT plan).
Note that risk for the various receptor types is not additive and the risk is not the sum of all the risks shown here; rather, the risk at each receptor type is already the sum of emissions.
Bold = exceedance.
Source: Appendix F.

Threshold 5: Implementation of the proposed project would not create objectionable odors affecting a substantial number of people.

Impact Discussion

Demolition and Initial Rail Component

Although offensive odors rarely cause any physical harm, they can be unpleasant and lead to considerable distress among the public. This distress may often generate citizen complaints to local governments and air districts. Any project with the potential to frequently expose the public to objectionable odors would be deemed as having a significant impact.

According to ARB's *Air Quality and Land Use Handbook*, land uses associated with odor complaints typically include sewage treatment plants, landfills, recycling facilities, and manufacturing (ARB 2005a). Odor impacts on residential areas and other sensitive receptors, such as hospitals, daycare centers, and schools, warrant the closest scrutiny, but consideration should also be given to other land uses where people may congregate, such as recreational facilities, work sites, and commercial areas.

Potential odor emitters during construction activities include diesel exhaust, asphalt paving, and architectural coatings (for parking area and curb striping) to paint paved surfaces. Construction-related activities near existing receptors would be temporary in nature, and construction activities would not result in nuisance odors that would violate SDAPCD Rule 51. Potential odor emitters during operations would include diesel exhaust from truck and train activity. However, odor impacts would be limited to the circulation routes, parking areas, and areas immediately adjacent to terminal operations. Although such brief exhaust odors may be considered adverse, they would not affect a substantial number of people and any odor-related impacts would be less than significant.

Full TAMT Plan Buildout

Potential odor emitters during construction activities include diesel exhaust, asphalt paving, and architectural coatings (for parking area and curb striping) to paint paved surfaces. Construction-related activities near existing receptors would be temporary in nature, and construction activities would not result in nuisance odors that would violate SDAPCD Rule 51. Potential odor emitters during operations would include diesel exhaust from truck and train activity. However, odor impacts would be limited to the circulation routes, parking areas, and areas immediately adjacent to terminal operations. Although such brief exhaust odors may be considered adverse, they would not affect a substantial number of people and any odor-related impacts would be less than significant.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

Impacts would be less than significant.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

No mitigation is required.

Level of Significance After Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

Impacts would be less than significant.

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4.3.1 Overview

This section describes the existing conditions and applicable laws and regulations for biological resources, and analyzes the potential effect of the proposed project on candidate, sensitive, or special-status species. As described in the Initial Study/Environmental Checklist (Appendix A), the proposed project would not have any significant impacts on riparian habitat or any other sensitive natural community, federally protected wetlands, wildlife movement, and local policies, ordinances, or habitat conservation plans protecting biological resources; therefore, these issues are not analyzed further in this section.

As discussed in Section 3.4.1, the proposed project would involve land-side improvements only, and would not include any in-water work (see Figure 3-1). However, the analysis does consider the potential adverse effects on marine biological resources from ballast water, propeller wash, and shading from gantry cranes.

Mitigation is proposed for potentially significant biological resource impacts related to the potential destruction of bird nests and bat roosts. After the implementation of mitigation measures, all biological resource impacts would be reduced to less-than-significant levels.

Table 4.3-1 summarizes the significant impacts and mitigation measures discussed in detail in Section 4.3.4.3, *Project Impact Analysis*.

Table 4.3-1. Summary of Significant Biological Resources Impacts and Mitigation Measures

Summary of Potentially Significant Impact(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-BIO-1: Potential Destruction of Migratory Bird Treaty Act Protected Nests	**MM-BIO-1:** Avoid Nesting Season for Birds or Conduct Preconstruction Nesting Survey	Less than Significant	Compliance with the MBTA would avoid any impact on nesting birds.
Impact-BIO-2: Potential Destruction of Special-Status and other Sensitive Bat Maternity Roosts	**MM-BIO-2:** Avoid Bat Maternity Roosts or Conduct Preconstruction Maternity Bat Roost Survey	Less than Significant	Avoidance of any bat roosts would avoid any significant impact on bat roosting.

4.3.2 Existing Conditions

The project site is entirely disturbed and nearly completely developed with pavement and storage warehouses. These areas are mostly devoid of any types of vegetation. Vegetation that is present on the project site occurs in small patches and consists of weedy, nonnative plant species.

4.3.2.1 Candidate, Sensitive, and Special-Status Species

Special-status species are those plants or animals that have been officially listed, proposed for listing, or are candidates for listing as threatened or endangered under provisions of the Endangered Species Act (ESA) and the California Endangered Species Act (CESA), as well as any animal species listed as a species of special concern or fully protected by the State, and plants listed on the California Rare Plant Ranking. Sensitive species also include species listed by local or regional jurisdictions.

Plants

Terrestrial

A California Natural Diversity Database (CNDDB) record search for sensitive terrestrial plant species was conducted for the project site and a 1-mile radius (CDFW 2015). Seven sensitive plant species have been recorded within 1 mile of the project site. A full description of these species and their potential to occur within the project area are presented in Table 4.3-2.

No federally or state-listed terrestrial plant species or plant species considered rare by the California Native Plant Society (CNPS) (i.e., List 1, 2, or 4 species) were observed within the project site. Because of the developed nature of the project site, federally or state-listed plants and plants considered rare by CNPS are not expected to occur on the project site.

Table 4.3-2. Sensitive Terrestrial Plant Species with Potential to Occur in Project Site

Common Name (*Scientific Name*)	Sensitivity Code & Status	Habitat Preference/Requirements	Verified On Site (Yes/No)	Potential to Occur	Rationale
South coast saltscale (*Atriplex pacifica*)	CRPR 1B.2	Annual herb. Coastal bluff scrub, coastal dunes, coastal scrub, playas; 0–140 m (0–459 ft). Blooming period: March–October	No	None	Site is completely urban developed. Suitable habitat for this species does not exist in the project area.
Campbell's liverwort (*Geothallus tuberosus*)	CRPR 1B.1	Ephemeral liverwort. Coastal scrub, vernal pools; 10–600 m (33–1,969 ft).	No	None	Site is completely urban developed. Suitable habitat for this species does not exist in the project area.
Sea dahlia (*Leptosyne maritima*)	CRPR 2B.2	Perennial herb. Coastal bluff scrub and coastal scrub; 5–150 m (16–492 ft). Blooming period: March–May	No	None	Site is completely urban developed. Suitable habitat for this species does not exist in the project area.
San Diego mesa mint (*Pogogyne abramsii*)	FE, SE, CRPR 1B.1	Annual herb. Vernal pools; 90–200 m (295–656 ft). Blooming period: March–July	No	None	Site is completely urban developed. Suitable habitat for this species does not exist in the project area.
Bottle liverwort (*Sphaerocarpos drewei*)	CRPR 1B.1	Ephemeral liverwort. Chaparral, coastal scrub; 90–600 m (295–1,969 ft).	No	None	Site is completely urban developed. Suitable habitat for this species does not exist in the project area.
Oil neststraw (*Stylocline citroleum*)	CRPR 1B.1	Annual herb. Clay soils in chenopod scrub, coastal scrub, and valley and foothill grassland, associated with oilfields; 50–400 m (164–1,312 ft). Blooming period: March–April	No	None	Site is completely urban developed. Suitable habitat for this species does not exist in the project area.
Estuary seablite (*Suaeda esteroa*)	CRPR 1B.2	Perennial herb. Coastal salt marshes and swamps; 0–5 m (0–16 ft). Blooming period: May–January	No	None	Site is completely urban developed. Suitable habitat for this species does not exist in the project area.

Sources: CDFW 2015; CNPS 2015; CNDDB 2015.
Status:
Federal
FE - listed as endangered under the federal Endangered Species Act
State
SE - listed as endangered under the California Endangered Species Act

Other
CA Rare Plant Rank (CRPR) – Formerly known as CNPS List
1B. Rare, Threatened, or Endangered in California and elsewhere
2B. Rare, Threatened, or Endangered in California; more common elsewhere
Threat Ranks
.1 - Seriously endangered in California
.2 – Fairly endangered in California

Marine

Eelgrass (*Zostera marina*) is a marine plant that provides predation refuge and serves as an important food source for a diverse group of fish species. Eelgrass beds reduce wave and current action, which improves water quality by trapping suspended particulates, thus reducing erosion by stabilizing sediment. Eelgrass beds also generate oxygen for the marine environment during daylight hours. Although eelgrass is not a threatened or endangered species, it is considered essential fish habitat under the Magnuson-Stevens Act, the federal legislation that protects waters and substrates necessary for fish spawning, breeding, feeding, or growth to maturity (see Section 4.3.3, *Applicable Laws and Regulations*).

Eelgrass beds are generally limited to shallow tidal waters because of their dependence on sunlight to reproduce and grow. Eelgrass beds are not known to be present in the area of the bay where the project site is located because the depth of the adjacent water is between 30 and 42 feet, which significantly reduces the ability of sunlight to reach the bay floor.

Wildlife

Terrestrial

A CNDDB record search for special-status terrestrial wildlife species was conducted for the project site and a 1-mile radius (CDFW 2015). Ten special-status wildlife species have been recorded within 1 mile of the project site. A full description of these species and their potential to occur within the project area are presented in Table 4.3-3. The majority of the special-status species would not occur within the project area because the developed nature of the project area does not provide suitable habitat.

Table 4.3-3. Sensitive Terrestrial Wildlife Species with Potential to Occur in Project Site

Common Name (*Scientific Name*)	Sensitivity Code & Status	Habitat Preference/Requirements	Verified On Site (Yes/No)	Potential to Occur	Rationale
Reptiles					
Orange-throated Whiptail (*Aspidoscelis hyperythra*)	CSC	The habitat characteristics are poorly understood; however, historically it was found in floodplains or terraces along streams. Closely tied to coastal sage scrub plants and some chaparral plants.	No	None	Site is completely urban developed. Suitable habitat for this species does not exist in the project area.
Blainville's Horned Lizard (*Phrynosoma blainvillii*)	CSC	Grasslands, brushlands, woodlands, and open coniferous forest with sandy or loose soil; requires abundant ant colonies for foraging.	No	None	Site is completely urban developed. Suitable habitat for this species does not exist in the project area.
Birds					
Burrowing Owl (*Athene cunicularia*)	CSC	Prairies, grasslands, lowland scrub, agricultural lands, coastal dunes, desert floors, and some artificial, open areas. They require large, open expanses of sparsely vegetated areas on gently rolling or level terrain with an abundance of active small mammal burrows. They use rodent or other burrows for roosting and nesting cover and are also known to use pipes, culverts, and nest boxes where burrows are scarce.	No	Breeding: Low Foraging: Moderate	Site consists of highly developed surroundings and open water. No burrows were detected during the site visit. Breeding habitat for this species is marginal.
Swainson's Hawk (*Buteo Swainsoni)*	ST	Open country of the western U.S. and Canada for breeding, from low to moderate elevations. Prairies, rangelands, meadows, open areas with scattered trees. Cultivated lands attract this hawk in some areas, where the human disturbance of agriculture causes concentrations of insects and rodents.	No	Breeding: None Foraging: None	Site is completely urban developed. Suitable nesting and foraging habitat for this species does not exist in the project area.
American peregrine falcon (*Falco peregrines anatum*)	FPS	Occurs along coast; breeds in woodland, forest, and coastal habitats. Riparian areas important year-round habitats.	No	Breeding: None Foraging: Moderate	Site is completely urban developed. Site lacks suitable natural or artificial cliff-like ledges for nesting.

Common Name (*Scientific Name*)	Sensitivity Code & Status	Habitat Preference/Requirements	Verified On Site (Yes/No)	Potential to Occur	Rationale
California least tern (*Sternula antillarum browni*)	FE SE FPS	Shallow estuaries, lagoons, and long marine shores.	No	Breeding: None Foraging: None	Site is completely urban developed. Species nests in open areas relatively free of human disturbance on sandy or gravelly substrate, which may exist on some rooftop areas. However, rooftop nesting has not been documented in the county.
Least Bell's Vireo (*Vireo bellii pusillus*)	FE SE	Riparian thickets either near water or in dry portions of river bottoms; nests along margins of bushes and forages low to the ground; may also be found using mesquite and arrow weed in desert canyons.	No	Nesting: None Foraging: None	Site is completely urban developed. Riparian vegetation does not occur within or adjacent to the project area.
Mammals					
Yellow Bat (*Lasiurus xanthinus*)	CSC	Preferred roosting habitat is palm trees.	No	Roosting: None Foraging: Low	Site is completely urban developed. Palm trees not observed within the project area.
Pocketed Free-tailed Bat (*Nyctinomops femorosaccus*)	CSC	Favors rocky desert areas with high cliffs or rock outcrops for roosts; roosts in crevices; reproduces in crevices, caverns, or buildings.	No	Roosting: Moderate Foraging: Low	Site is completely urban developed. May roost within sheds within the project area.
Big free-tailed Bat (*Nyctinomops macrotis*)	CSC	Inhabits arid, rocky areas; roosts in crevices in cliffs. Has been recorded in urban locations in San Diego County.	No	Roosting: Moderate Foraging: Low	Site is completely urban developed. May roost within sheds within the project area.

Source: CDFW 2015

Status:

Federal

FE – listed as endangered under the federal Endangered Species Act.

FT – listed as threatened under the federal Endangered Species Act.

State

SE - listed as endangered under the California Endangered Species Act.

ST – listed as threatened under the California Endangered Species Act.

FPS – fully protected species in California.

CSC – species of special concern in California.

Marine

Mammals

All marine mammals are protected under the Marine Mammal Protection Act (MMPA) of 1972, and some are also protected by the ESA of 1973. Marine mammal species may forage in the harbor but do not breed there (U.S. Department of the Navy 2013). Occurrences and probability of marine mammals with San Diego Bay can be categorized into three levels, as follows (U.S. Department of the Navy 2013).

- Species known to regularly occur within San Diego Bay
  - California sea lion (*Zalophus californianus californianus*)
  - Coastal bottlenose dolphin (*Tursiops truncatus*)
- Species that are occasional to frequent visitors to San Diego Bay
  - Pacific harbor seal (*Phoca vitulina richardsi*)
- Species that have potential for isolated occurrences in San Diego Bay
  - Northern elephant seal (*Mirounga angustirostris*)
  - Long-beaked common dolphin (*Delphinus capensis*)
  - Pacific white-sided dolphin (*Lagenorhynchus obliquidens*)
  - Short-finned pilot whale (*Globicephala macrorhynchus*)
  - Gray whale (*Eschrichtius robustus*)
  - Minke whale (*Balaenoptera acutorostrata*)
  - Fin whale (*Balaenoptera physalus*)

Reptiles

The only marine reptile found in the waters of San Diego Bay is the eastern Pacific green sea turtle (*Chelonia mydas*). The population of sea turtles in San Diego Bay is estimated at 30 to 60 individuals. Eelgrass beds and associated algae and invertebrates are known to provide food sources for green sea turtles and are extensive in the south and south-central part of San Diego Bay. Sea turtles do not breed or nest within San Diego Bay. The nearest nesting grounds for eastern Pacific green sea turtles are in Mexico at Isla Revillagigedos and Michoacan (U.S. Department of the Navy 2013).

4.3.2.2 Existing Threats to Marine Wildlife and Habitat

Marine Wildlife and Vessel Strikes

Ship strikes involving marine mammals and sea turtles, although uncommon, have been documented for the following listed species in the eastern North Pacific: blue whale (*Balaenoptera musculus*), fin whale, gray whale, humpback whale *(Megaptera novaeangliae*), sperm whale (*Physeter macrocephalus*), southern sea otter (*Enhydra lutris nereis*), loggerhead sea turtle(*Caretta caretta*), green sea turtle, olive ridley sea turtle (*Lepidochelys olivacea*), and leatherback sea turtle (*Dermochelys coriacea*) (Los Angeles Harbor Department 2014). The blue whale, fin whale, humpback whale, and sperm whale are all listed as endangered under the ESA by the National Oceanic and Atmospheric Administration (NOAA).

Determining the cause of death for marine mammals and sea turtles that wash ashore dead or are found adrift is not always possible, nor is it always possible to determine whether propeller slashes were inflicted before or after death. In the case of a sea otter, for example, wounds originally thought to represent propeller slashes were determined to have been inflicted by great white sharks. In general, dead specimens of marine mammals and sea turtles showing injuries consistent with vessel strikes are not common (Los Angeles Harbor Department 2014).

The majority of reported vessel collisions with marine mammals involve whales. The National Marine Fisheries Service (NMFS) has records of vessel strikes with whales in U.S. coastal waters for 1982 through 2007. Of the recorded strikes in the NMFS database, most of the identified species were gray whales (42%) and blue whales (15%), with a few fin whales and humpback whales. The number of strikes per year ranged from a low of zero to a maximum of seven and averaged 2.6, but the actual number is likely to be greater because not all strikes are reported (Los Angeles Harbor Department 2014).

Between 2005 and 2009, 12 California sea lion deaths were attributed to collisions with boats along the coasts of California, Oregon, and Washington combined, while one harbor seal death was attributed to vessel strikes in California waters between 2005 and 2009 (Carretta et al. 2013). Stock assessments for bottlenose dolphin (coastal and offshore stocks) do not list any information on ship strikes, although dolphins (as well as seals, sea lions, and some whale species) are susceptible to injury and mortality from fishery interactions (e.g., entanglement in nearshore gill nets). From January 2000 through June 2010, two olive ridley sea turtles were found with injuries consistent with ship strikes: one washed ashore near the launch ramp in Alamitos Bay (Los Angeles County) in 2003, and the other washed ashore at Goleta (Santa Barbara County) in 2004 (Los Angeles Harbor Department 2014).

Vessel speed does seem to influence whale/ship collision incidences. The Jensen and Silber Whale Strike Database (Jensen and Silber 2004) reports that between 1975 and 2002, there were 292 confirmed or possible ship strikes to large whales worldwide. Information on the vessel type involved in the collision were known from 134 of the 292 cases. Of the 134 known vessel types 14.9% (20) involved container/cargo ships/freighters, and 6.0% (8) involved tankers. The remaining incidents involved Navy vessels (17.1% or 23 cases), whale-watching vessels (14.2% or 19 cases), cruise ships/liners (12.7% or 17 cases), ferries (11.9% or 16 cases), Coast Guard vessels (6.7% or 9 cases), recreational vessels (5.2% or 6 cases), and fishing vessels (3.0% or 4 cases), with one collision (0.75%) reported from each of the following: dredge boat, research vessel, pilot boat, and whaling catcher boat. Of the 134 cases, vessel speed was known for 58 cases. Of these 58 cases, most vessels were traveling in the ranges of 13–15 knots, followed by speed ranges of 16–18 knots and 22–24 knots.

According to a report from NMFS, which was based on information in the Jensen and Silber (2004) whale strike database and Laist et al. (2001), the majority of vessel collisions with whales occurred at speeds between 13 and 15 knots. Specifically, NMFS recommends the following (NOAA 2008):

> Overall, most ship strikes of large whale species occurred when ships were traveling at speeds of 10 knots or greater. Only 12.3% of the ship strikes in the Jensen and Silber database occurred when vessels were traveling at speeds of 10 knots or less. While vessel speed may not be the only factor in ship/whale collisions, data indicate that collisions are more likely to occur when ships are traveling at speeds of 14 knots or greater. This strongly suggests that ships going slower than 14 knots are less

likely to collide with large whales. Therefore, NOAA Fisheries recommends that speed restrictions in the range of 10–13 knots be used, where appropriate, feasible, and effective, in areas where reduced speed is likely to reduce the risk of ship strikes and facilitate whale avoidance.

Invasive Species

Vessels may take on, discharge, or redistribute ballast water during cargo loading and unloading, as they encounter rough seas, or as they transit through shallow waterways. As ballast is transferred from one place to another, so are thousands of organisms taken into the tanks along with the water. These organisms can establish themselves in new places and can have severe ecological, economic, and human health impacts in the receiving environment (CSLC 2015).

Aquatic nuisance species are carried across the seas not only inside ships but also attached to the outside. This is known as hull fouling, vessel fouling, or biofouling. Organisms like barnacles, mussels, sponges, algae, and sea squirts attach themselves to the hulls of ships, fouling these wetted hull surface areas, or live within the matrix of the fouling community and protected nooks and crannies such as sea chests. These organisms then colonize the hull and "hitch a ride" from one port or bioregion to the next. Invasions can occur when these fouling organisms come in contact with structures in a new port or release their larvae into its waters, possibly establishing themselves in the new port and spreading to nearby areas within that bioregion.

Aquatic invasive species are one of the most serious threats to the integrity of San Diego's coastal ecosystems. The nonindigenous bivalve *Musculista senhousia* and nonindigenous species *Microcosmus squamiger* accounted for over 50% of the total catch during a trawl sampling survey conducted in 1998. This threat in San Diego Bay and throughout California is only likely to grow as global movements of goods, services, and people continue to increase rapidly (U.S. Department of the Navy 2013).

4.3.3 Applicable Laws and Regulations

4.3.3.1 Federal

Coastal Zone Management Act of 1972

The U.S. Congress recognized the importance of meeting the challenge of continued growth in the coastal zone by passing the Coastal Zone Management Act in 1972. The act, administered by NOAA's Office of Ocean and Coastal Resource Management, provides for management of the nation's coastal resources and balances economic development with environmental conservation.

The Coastal Zone Management Act outlines two national programs. The National Coastal Zone Management Program includes 34 coastal programs that aim to balance competing land and water issues in the coastal zone. The National Estuarine Research Reserve System creates field laboratories that provide a greater understanding of estuaries and how humans affect them. The overall program objectives of the act are to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone."

The Coastal Zone Management Act ensures that development projects in coastal areas are designed and sited in a manner that is consistent with coastal zone land uses, maximizes public health and safety, and ensures that biological resources (e.g., wetlands, estuaries, beaches, and fish and wildlife and their habitat) within the coastal zone are protected. The enforceable policies of that document are Chapter 3 of the California Coastal Act of 1976 (as amended). The California Coastal Commission enforces the Coastal Zone Management Act by certifying that the proposed project is consistent with the California Coastal Act.

Rivers and Harbors Act (Section 10)

Pursuant to Section 10 of the Rivers and Harbors Act, the U.S. Army Corps of Engineers (USACE) is authorized to regulate any activity within or over any navigable water of the United States (WoUS). Rivers and Harbors Act Section 10 jurisdiction is defined as "those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use, to transport interstate or foreign commerce" (33 Code of Federal Regulations 322). The San Diego Bay portion of the proposed project is considered a traditional navigable water regulated under Section 10 of the Rivers and Harbors Act; therefore, work activities proposed within or over the bay portion of the project would require Section 10 compliance and coordination with USACE.

Endangered Species Act of 1973

Species listed as endangered and/or threatened by the U.S. Fish and Wildlife Service (USFWS) are protected under Section 9 of the federal ESA, which forbids any person to "take" an endangered or threatened species. Take is defined in Section 3 of the act as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." The U.S. Supreme Court ruled in 1995 that the term "harm" includes destruction or modification of habitat. Sections 7 and 10 of the act may authorize "incidental take" for an otherwise lawful activity (a development project, for example) if it is determined that the activity would not jeopardize survival or recovery of the species. Section 7 applies to projects where a federally listed species is present and there is a federal nexus, such as a federal Clean Water Act (CWA) Section 404 permit (e.g., impacts on WoUS) that is required. Section 10 applies when a federally listed species is present but no federal nexus is present. No federally listed species have been detected on the project site.

Magnuson-Stevens Fishery Management and Conservation Act, as amended 1996 (Public Law 104-267)

Federal agencies must consult with NOAA Fisheries on actions that may adversely affect essential fish habitat (EFH). EFH is defined as those "waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." NOAA Fisheries encourages streamlining the consultation process using review procedures under the National Environmental Policy Act, Fish and Wildlife Coordination Act, the CWA, and/or the federal ESA provided that documents meet requirements for EFH assessments under Section 600.920(g). EFH assessments must include (1) a description of the proposed action, (2) an analysis of effects, including cumulative effects, (3) the federal agency's views regarding the effects of the action on EFH, and (4) proposed mitigation, if applicable.

Marine Mammal Protection Act of 1972

The MMPA prohibits, with certain exceptions, the take of marine mammals in U.S. waters and by U.S. citizens on the high seas, and the importation of marine mammals and marine mammal products into the United States. Congress passed the MMPA based on the following findings and policies: (1) some marine mammal species or stocks may be in danger of extinction or depletion as a result of human activities, (2) these species of stocks must not be permitted to fall below their optimum sustainable population level (depleted), (3) measures should be taken to replenish these species or stocks, (4) there is inadequate knowledge of the ecology and population dynamics, and (5) marine mammals have proven to be resources of great international significance.

The MMPA was amended substantially in 1994 to provide for: (1) certain exceptions to the take prohibitions, such as for Alaska Native subsistence, and for permits and authorizations for scientific research; (2) a program to authorize and control the taking of marine mammals incidental to commercial fishing operations; (3) preparation of stock assessments for all marine mammal stocks in waters under U.S. jurisdiction; and (4) studies of pinniped-fishery interactions. NOAA Fisheries and USFWS administer the MMPA. The proposed project must be analyzed to ensure that marine mammals protected under the MMPA would not be harassed or injured as a result of project activities in or adjacent to San Diego Bay. Any project activities that may result in Level A or B harassment, injury, or mortality would require consultation with NOAA Fisheries and USFWS under the MMPA.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) was enacted in 1918 to prohibit the killing or transport of native migratory birds, or any part, nest, or egg of any such bird, unless allowed by another regulation adopted in accordance with the MBTA. A list of migratory bird species that are protected by the MBTA is maintained by USFWS, which regulates most aspects of the taking, possession, transportation, sale, purchase, barter, exportation, and importation of migratory birds. Under the MBTA, "take" means to kill, directly harm, or destroy individuals, eggs, or nests or to otherwise cause failure of an ongoing nesting effort. Permits are available under the MBTA through USFWS, and authorization for potential take under the MBTA is addressed as part of the ESA Section 7 consultation process. The proposed project must be analyzed to ensure consistency with the MBTA, including avoidance of take of nesting birds, their eggs, or activities that may cause nest failure. This applies for both terrestrial and marine migratory species protected under the MBTA that may be directly or indirectly affected by the proposed project. Any potential take must be either permitted through consultation with USFWS or avoided and minimized through mitigation measures.

Clean Water Act

The Federal Water Pollution Control Act Amendments of 1972, commonly known as the CWA (33 United States Code [USC] 1251–1376), as amended by the Water Quality Act of 1987, is the major federal legislation governing water quality. The purpose of the CWA is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Discharges into WoUS are regulated under CWA Section 404. WoUS include: (1) all navigable waters (including all waters subject to the ebb and flow of the tide); (2) all interstate waters and wetlands; (3) all other waters, such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, or natural ponds; (4) all impoundments of waters mentioned above; (5) all tributaries to waters mentioned above; (6) the territorial seas; and (7) all wetlands adjacent to waters mentioned above. Important applicable sections of the CWA are discussed below.

- **Section 303** requires states to develop water quality standards for inland surface and ocean waters and submit them to the U.S. Environmental Protection Agency (EPA) for approval. Under Section 303(d), the states are required to list waters that do not meet water quality standards and to develop action plans, called total maximum daily loads, to improve water quality.
- **Section 304** provides for water quality standards, criteria, and guidelines.

- **Section 401** requires an applicant for any federal permit that proposes an activity that may result in a discharge to WoUS to obtain certification from the state that the discharge will comply with other provisions of the CWA. Certification is provided by the respective Regional Water Quality Control Board (RWQCB). A Section 401 certification from the San Diego RWQCB would be required for the proposed project if a Section 404 permit and Rivers and Harbor Act (Section 10) permit are required.
- **Section 402** establishes the National Pollutant Discharge Elimination System (NPDES), a permitting system for the discharge of any pollutant (except for dredge or fill material) into WoUS. The NPDES program is administered by the RWQCB. Conformance with Section 402 is typically addressed in conjunction with water quality certification under Section 401. All construction activities must be consistent with Section 402 of the CWA and avoid significant water quality-related impacts. See Section 4.8, *Hydrology and Water Quality*, for an analysis related to the proposed project's impacts on water quality.
- **Section 404** provides for issuance of dredge/fill permits by USACE. Permits typically include conditions to minimize impacts on water quality. Common conditions include: (1) USACE review and approval of sediment quality analysis before dredging; (2) a detailed pre- and post-construction monitoring plan that includes disposal site monitoring; and (3) requiring compensation for loss of WoUS. The project does not propose any fill or dredge.

4.3.3.2 State

California Coastal Act of 1976

The California Coastal Act of 1976 recognizes California ports, harbors, and coastline beaches as primary economic and coastal resources and as essential elements of the national maritime industry. Decisions to undertake specific development projects, where feasible, are to be based on consideration of alternative locations and designs in order to minimize any adverse environmental impacts. The California Coastal Act is implemented by the Coastal Commission. The proposed project would require a non-appealable coastal development permit (which would be issued by the District) for activities within the coastal zone that occur within the immediate shoreline (i.e., tidelands, submerged lands, and public trust lands).

California Endangered Species Act

The CESA establishes the policy of the State to conserve, protect, restore, and enhance threatened or endangered species and their habitats. The CESA mandates that state agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. For projects that affect both a state- and federally listed species, compliance with the federal ESA will satisfy the CESA if the California Department of Fish and Wildlife (CDFW) determines that the federal incidental take authorization is consistent with the CESA under California Fish and Game Code Section 2080.1. For projects that would result in a take of a state-only listed species, the project proponent must apply for a take permit under Section 2081(b). No state-listed species have been detected on the project site.

California Fish and Game Code

The Fish and Game Code establishes the Fish and Game Commission, as authorized by Article IV, Section 20, of the Constitution of the State of California. The Fish and Game Commission is responsible, under the provisions of Sections 200–221, for regulating the take of fish and game, not including the taking, processing, or use of fish, mollusks, crustaceans, kelp, or other aquatic plants for commercial purposes. However, the Fish and Game Commission does regulate aspects of commercial fishing, including fish reduction; shellfish cultivation; take of herring, lobster, sea urchins, and abalone; kelp leases; leases of state water bottoms for oyster allotments; aquaculture operations; and other activities. These resource protection responsibilities involve the setting of seasons, bag and size limits, and methods and areas of take, as well as prescribe the terms and conditions under which permits or licenses may be issued or revoked by CDFW. The Fish and Game Commission also oversees the establishment of wildlife areas and ecological reserves and regulates their use, as well as setting policy for CDFW.

Sections 3503, 3503.5, 3505, 3800, and 3801.6 of the Fish and Game Code protect all native birds, birds of prey, and all nongame birds, including their eggs and nests, that are not already listed as fully protected and that occur naturally within the state. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptors (e.g., hawks, owls, eagles, falcons), including their nests or eggs.

CDFW is a lead state agency that manages native fish, wildlife, plant species, and natural communities for their ecological value and their benefits to people. CDFW oversees the management of marine species through several programs, some in coordination with NMFS and other agencies.

The California Eelgrass Mitigation Plan is administered by NMFS and CDFW. The effects of the proposed project on any surrounding eelgrass beds and any compensatory mitigation would be addressed under the California Eelgrass Mitigation Plan.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act is the California equivalent of the federal CWA. It provides for statewide coordination of water quality regulations through the establishment of the State Water Resources Control Board (SWRCB) and nine separate RWQCBs that oversee water quality on a day-to-day basis at the regional/local level. The RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, within any region that could affect the water of the state" (Water Code Section 13260(a)), pursuant to provisions of the Porter-Cologne Act. Waters of the state (WoS) are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code Section 13050 (e)).

The RWQCB also regulates WoS under Section 401 of the CWA. A Water Quality Certification or a waiver must be obtained from the RWQCB if an action would potentially result in any impacts on jurisdictional WoS.

The proposed project must be analyzed to determine if it will result in any impacts on WoS, and any potential impacts would require an application for an RWQCB Water Quality Certification (or waiver), consultation with the RWQCB, and compensatory mitigation.

Nonindigenous Aquatic Nuisance Prevention and Control Act as amended by the National Invasive Species Act (Ballast Water Discharge Regulations)

The California Marine Invasive Species Act of 2003 renewed and expanded on the Ballast Water Management for Control of Nonindigenous Species Act of 1999 to address the threats posed by the introduction of nonindigenous species. The law charged the California State Lands Commission with oversight and administration of the State's program to prevent or minimize the release of nonindigenous species from vessels that are 300 gross registered tons and above. To advance this goal, the commission's Marine Invasive Species Program uses an inclusive, multi-faceted approach to develop sound, science-based policies in consultation with technical experts and stakeholders; track and analyze ballast water and vessel biofouling management practices of the California commercial fleet; enforce laws and regulations to prevent introductions; and facilitate outreach to promote information exchange among scientists, legislators, regulators, and other stakeholders.

Both the U.S. Coast Guard (Ballast Water Management) and EPA (Vessel General Permit) regulate ballast water discharges, and both agencies currently require ballast water exchange for most vessels operating in U.S. waters. In addition, California requires ballast water exchange on coastwise voyages (e.g., between Los Angeles and Oakland). However, at present, the discharge standards in California are more stringent than federal regulations. In accordance with governing statutes and regulations, vessels have four options to comply with California's performance standards: (1) retention of all ballast water on board; (2) use of potable water as an alternative ballast water management method; (3) discharge to a shore-based ballast water reception and treatment facility; and (4) treatment of all ballast prior to discharge by a shipboard ballast water treatment system. Performance standards for ballast water discharge are: (1) no detectable living organisms greater than 50 microns in minimum dimension; (2) fewer than 0.01 living organism per milliliter of organisms 10–50 microns in minimum dimension; and (3) multiple standards for bacteria and viruses. The performance standards for vessels with ballast water capacities of 1,500–5,000 metric tons will apply in 2016, while standards for vessels with capacities of fewer than 1,500 metric tons and greater than 5,000 metric tons will apply in 2018. The State Legislature delayed implementation of the performance standards in 2013 because the State lacks the scientific protocols and capacity to measure compliance (Scianni et al. 2013), and no shipboard ballast water treatment systems are currently available to meet all of California's performance standards for the discharge of ballast water (CSLC 2013).

4.3.3.3 Local

San Diego Unified Port District Port Master Plan

Through implementation of the Port Master Plan, the District maintains authority over tidelands and submerged lands conveyed in trust to the District by the California legislature. Any amendments to the Port Master Plan are first reviewed and adopted by the Board of Port Commissioners and then certified by the California Coastal Commission, thereby allowing the District to issue coastal development permits for projects within its jurisdiction. The Port Master Plan provides for protection of biological resources and states that the District will remain sensitive to the needs of, and will cooperate with, other communities and other agencies in bay and tideland development, including the City of San Diego's Multiple Species Conservation Program or Environmentally Sensitive Lands Ordinance.

San Diego Bay Integrated Natural Resources Management Plan

The District and U.S. Navy jointly implement the Integrated Natural Resources Management Plan. This long-term strategy document provides direction and planning guidance for good stewardship of the natural resources within the bay. The Integrated Natural Resources Management Plan includes objectives and policy recommendations to guide planning, management, conservation, restoration, and enhancement of the bay ecosystem.

4.3.4 Project Impact Analysis

4.3.4.1 Methodology

A search of CDFW's CNDDB was conducted on July 1, 2014 and May 22, 2015 to determine the potential for sensitive plant and wildlife species to occur within the vicinity of the project site. The search included the project area and a 1-mile buffer (CDFW 2015).

An ICF International (ICF) biologist surveyed the project site on April 21, 2014 to identify habitat conditions within the project site and to assess the potential for special-status plant and wildlife species to occur within the project site. The results of the biological resources assessment have been incorporated directly into this section.

On March 5, 2015, senior ICF wildlife biologist Will Kohn conducted an assessment of Transit Sheds #1 and #2, Warehouse C, and the molasses tanks for the potential to provide suitable bat roost habitat. The survey consisted of visually inspecting the structures for suitable bat roosts and searching for signs of bat use (e.g., guano on the ground or urine staining on the walls). Binoculars and a flashlight were used during the assessment. The biologist walked the inside and outside areas of Transit Sheds #1 and #2 and walked the outside areas of Warehouse C and the molasses tanks. The inside of Warehouse C was not surveyed because it was full of sand, and the insides of the molasses tanks were not surveyed because they could not be entered. No bats or evidence of bats were observed. However, areas that provide suitable areas for maternity roosting bats were observed within the transit sheds.

The primary reference source used to establish the existing marine conditions was the *2014 San Diego Bay Eelgrass Inventory for the Port of San Diego and Naval Facilities Engineering Command* (Naval Facilities Engineering Command and Port of San Diego 2014).

Although the Demolition and Initial Rail Component does not propose any work activities within or over the bay, the other future components described in the TAMT plan include the possibility of installing up to five 270-foot-tall, 100-foot gauge gantry cranes that have the potential to affect navigable WoUS. As such, the District will be coordinating with USACE to determine what, if any, federal approvals would be necessary when the District pursues additional gantry cranes over the 20-year plan horizon. The analysis under Section 4.3.4.3 assumes all necessary permits would be obtained by the federal and state agencies.

4.3.4.2 Thresholds of Significance

The following significance criteria are based on Appendix G of the State CEQA Guidelines and provide the basis for determining significance of impacts associated with biological resources resulting from the implementation of the proposed project. The determination of whether a biological resource impact would be significant is based on the professional judgment of the District as Lead Agency supported by the recommendations of qualified personnel at ICF and is based wholly on the substantial evidence in the administrative record.

Impacts are considered significant if the project would result in any of the following.

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW and USFWS.
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW, NMFS, or USFWS.
3. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA through direct removal, filling, hydrological interruption, or other means.
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.
5. Conflict with any applicable local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
6. Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

As analyzed in the Initial Study/Environmental Checklist (Appendix A), project impacts related to thresholds 2 through 6 were determined to be less than significant. Specifically, the proposed project would not result in significant impacts related to a substantial adverse effects on riparian habitat, other sensitive natural communities, or federally protected wetlands; would not interfere substantially with the movement of any resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites; and would not conflict with the provisions of any applicable local policies or ordinances protecting biological resources or with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Therefore, these thresholds are not included in the analysis below, although the analyses associated with these thresholds are included in Chapter 6, *Additional Consequences of Project Implementation*. Therefore, only Threshold 1 is discussed in the impact analysis below.

4.3.4.3 Project Impacts and Mitigation Measures

Threshold 1: Implementation of the proposed project <u>would not</u> have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW and USFWS.

Impact Discussion

Plant Species

As indicated in Table 4.3-1, because of the developed nature of the project site, there is no potential for federally or state-listed as threatened or endangered terrestrial plant species or plant species considered rare by CNPS (Lists 1, 2, or 4) to occur within or adjacent to the project site. No eelgrass is located within the immediate area surrounding the project site. The closest patch is near the pier extending from the Convention Center Park area, approximately 500 feet northwest of Berths 10-1 and 10-2 and approximately 1,100 feet southeast of Berth 10-6 (Naval Facilities Engineering Command Southwest and Port of San Diego 2014). No other eelgrass areas are near the project site. Consequently, the increase in the number of vessels calling at the project site and the minor shading that would result from the outstretched arms of the proposed gantry cranes (which could reach out to 130 feet past the terminal bulkhead) would have no effect on eelgrass or any other sensitive marine habitat. Therefore, the buildout of the TAMT plan, including the Demolition and Initial Rail Component, would not affect any candidate, sensitive, or special-status plant species during construction or operation, and no impact would occur.

Wildlife Species

Construction

Reptiles

As noted in Table 4.3-2, there are two special-status reptiles, Blainville's horned lizard and orange-throated whiptail, identified during the CNDDB search that may occur within the vicinity of the project site. Because of the developed state of the project site and lack of suitable habitat, there is no potential for these special-status reptiles to occur on site. Therefore, the buildout of the TAMT plan, including the Demolition and Initial Rail Component, would not have an impact on either of these species.

Birds

Special-status avian species shown in Table 4.3-2 do not have the potential to occur within the Demolition and Initial Rail Component site because it is developed and lacks suitable habitat. Avian species that are tolerant of human development and that may nest on human-made structures, such as mourning dove (*Zenaida macroura*), rock dove (*Columba livia*), black phoebe (*Sayornis nigricans*), and house finch (*Carpodacus mexicanus*), have the potential to nest within the transit sheds, Warehouse C, and other structures that are scheduled to be demolished as part of the Demolition and Initial Rail Component and as part of the overall TAMT plan buildout. Although these species do not have any special status, their nests are protected under the MBTA and the California Fish and Game Code. Demolition of Transit Sheds #1 and #2, Warehouse C, and other buildings on site may result in direct impacts on active nests or indirect impacts through construction noise or dust, or nighttime lighting. A nest is considered active as soon as construction of a new nest or use of an existing nest commences. In most cases, a previously active nest becomes inactive when it no longer contains viable eggs and/or living young and is not being used by a bird as part of the reproductive cycle (eggs, young, fledgling young still dependent upon the nest). In some cases, a nest can be abandoned by the bird constructing it and become inactive prior to egg laying. In such cases, determination that the nest is inactive is to be made on a case-by-case basis through consistent observations and the determination of the qualified biologist. The MBTA regulates the destruction of an active nest, and any destruction of active nests would be considered a significant impact and a violation of the MBTA and Sections 3503, 3503.5, 3505, 3800, and 3801.6 of the California Fish and Game Code (Impact-BIO-1). Therefore, a significant impact would potentially occur and mitigation would be required. Mitigation measure MM-BIO-1 would reduce the significant impact associated with MBTA-covered bird species to a less-than-significant level by providing detailed guidance on how to comply with the MBTA.

Bats

Yellow bats are foliage roosters and have adapted to roosting in the fronds of palm trees. As indicated in Table 4.3-2, no suitable foliage for roosting yellow bats occurs on site; therefore, the project would not affect yellow bats. Table 4.3-2 also notes that big free-tailed bat, pocket free-tailed bat, and other non-special-status bats including Yuma myotis (*Myotis yumanensis*) are colonial roosters and are known to roost in man-made structures. These species are known to occur within the vicinity of the project and have potential to roost in large numbers during the maternity season (April 15 to August 31) within Transit Sheds #1 and #2, Warehouse C, and other structures on the project site. Colonial maternity roosts of special-status and non-special-status bat species are highly sensitive to disturbance and are considered a sensitive resource by CDFW. Demolition of Transit Sheds #1 and #2 and Warehouse C may result in the destruction of active maternity roosts, resulting in the loss of many individuals; these effects could be considered significant if the subsequent population decline was large and affected the viability of the local populations of bats (**Impact-BIO-2**). Mitigation measure **MM-BIO-2** would reduce the significant impact associated with maternity roosting bats to a less-than-significant level by ensuring that they are not present prior to demolition activities.

Operation

On-Terminal Operations

Operations that result as a consequence of the TAMT plan buildout, including the Demolition and Initial Rail Component, would not adversely affect any special-status wildlife, including any special-status bird species and bat species. Bird and bat species that currently use the proposed project site for foraging could continue to do so because the proposed project would not appreciably change the industrial activities at the project site or cause a loss of habitat for those species. Moreover, operations associated with the proposed project would not measurably change the numbers or species of common birds and bats in the project area. As a result, the full buildout of the TAMT plan, which includes the Demolition and Initial Rail Component, would not affect any special-status wildlife, including any special-status bird species and bat species.

In addition, operation of up to five 270-foot-tall, 100-foot gauge gantry cranes would extend over the bay, a navigable WoUS. The District is coordinating with USACE to determine what permit(s) may be necessary. The District would be required to obtain the necessary permit(s) before installing and operating the cranes. No other features would extend over navigable WoUS.

Vessels

Vessel Strikes. An increase in cargo throughput within the existing terminal footprint is an expected outcome of the TAMT plan's implementation. An increase in container ships transiting the coastal waters of Southern California could potentially cause harm to marine mammals and sea turtles from vessel collisions. Therefore, any increase in vessel traffic induced by the buildout of the TAMT plan, including the Demolition and Initial Rail Component, may incrementally increase the potential for vessel strikes. To minimize the potential of vessel strikes, vessels entering into San Diego Bay are required to comply with the District's safe speed policy. This policy requires every vessel to travel at a safe speed to reduce the potential for collisions, ensure sufficient time and distance to maneuver vessels, reduce vessel wake, and generally minimize disturbance to surrounding vessels.

Moreover, vessels entering into San Diego Bay are served by the San Diego Bay Pilots Association. Pilots board vessels in the vicinity of San Diego Bay Approach Lighted Whistle Buoy 1 (32° 37.3'N, 117° 14.7'W). When boarding, pilots request vessels maintain a speed of 7 knots. All foreign vessels and vessels from a foreign port or bound thereto, and all vessels over 300 gross tons sailing under register between the Port of San Diego and any other U.S. port, are subject to pilotage charges and, unless permission is granted from the U.S. Coast Guard Captain of the Port, shall be under the direction of a federally licensed pilot for the Port of San Diego. Thus, compliance with the District's safe speed policy and the use of a highly experienced port pilot to ensure the safe transport of the vessel through the bay would minimize the potential for collisions with marine mammals and sea turtles, and the potential impact would be less than significant.

Vessel Noise. The increase of vessel traffic would not result in a loss of habitat for special-status species, marine mammals, or sea turtles. Sounds from the engines and drive systems of vessels approaching San Diego Bay could disturb marine mammals that happen to be nearby. However, marine mammals and sea turtles would likely move away from the sound of approaching vessels as it increased in intensity, and exposure would be of short duration. Although the number of vessels approaching and entering San Diego Bay would increase, the overall underwater noise levels would not measurably increase because the vessels would travel along defined routes (i.e., Central Channel) and would pass relatively quickly at low speeds (i.e., in a matter of minutes); impacts from vessel noise would be less than significant.

Propeller Wash. Vessels maneuvering into berth at the project site would not result in adverse effects from propeller wash. The sea floor is at depths between -30 feet mean lower low water (MLLW) (Berths 10-1, 10-2) and -42 feet MLLW (Berth 10-7) (see Table 2-1 in Chapter 2, *Environmental Setting*), as established in part of the Central Channel Deepening Project conducted by USACE and the District in 2005. No sensitive marine habitat is present in the area immediately surrounding the project site, and depths at the project site and surrounding vicinity are sufficient to accommodate smaller Panamax-sized vessels without any excessive propeller wash.

Ballast Water Discharge. The amount of ballast water discharged into the project area and the bay, and thus the potential for introduction of invasive exotic species, could increase because more container ships would use the bay as a result of the Demolition and Initial Rail Component. However, these vessels would be subject to regulations to minimize the introduction of nonnative species in ballast water as described in Section 4.3.3.2, which require (1) retention of all ballast water on board; (2) use of potable water as an alternative ballast water management method; (3) discharge to a shore-based ballast water reception and treatment facility; or (4) treatment of all ballast prior to discharge by a shipboard ballast water treatment system. Compliance with these required measures would diminish the opportunity for discharge of nonnative species. Therefore, the impact from ballast water would be less than significant.

Biofouling. Nonnative invertebrate species can also be introduced via vessel hulls, propellers, anchors, and associated chains. The potential for introduction of exotic species via vessels would be increased proportionately to the increase in number of vessels from the proposed project. However, vessel hulls are generally coated with antifouling paints and cleaned at intervals to reduce the frictional drag from growths of organisms on the hull (Global Security 2007), which would reduce the potential for transport of exotic species. California law requires regular biofouling removal for vessels over 300 gross tons during one of the following stages: (1) no longer than by the expiration date (or extension) of the vessel's full-term Safety Construction Certificate, or (2) no longer than by the expiration date (or extension) of the vessel's U.S. Coast Guard Certificate of Inspection, or (3) no longer than 60 months (5 years) since the vessel's most recent out-of-water drydocking. In addition, vessels over 300 gross tons are required to submit an annual report known as the Hull Husbandry Reporting Form, which provides information about the care of the hull that occurred that year. Thus, compliance with the regular maintenance requirements and the reporting requirement would reduce potential impacts and the impact from biofouling would be less than significant.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Implementation of the Demolition and Initial Rail Component would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW and USFWS. Potentially significant impact(s) include:

Impact-BIO-1: Potential Destruction of Migratory Bird Treaty Act Protected Nests. Onsite demolition of structures during construction, as well as noise from construction activity, could result in the destruction and loss of active bird nests that could be present within the project area during the nesting season (February 1 through August 31). The MBTA prohibits take of nearly all native birds. Similar provisions within the California Fish and Game Code protect all native birds of prey (Section 3503.5) and all non-game birds that occur naturally in the state (Section 3800). The destruction of an active nest would be considered a significant impact and a violation of the MBTA and the California Fish and Game Code.

Impact-BIO-2: Potential Destruction of Special-Status and other Sensitive Bat Maternity Roosts. Demolition of onsite structures during construction could result in the loss of bat maternity roosts that could occur within the project area during the maternity season (April 15 through August 31). The loss of a bat maternity roost would be considered a significant impact.

Full TAMT Plan Buildout

Full buildout of the TAMT plan would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW and USFWS. Potentially significant impact(s) include:

Impact-BIO-1: Potential Destruction of Migratory Bird Treaty Act Protected Nests. Onsite demolition of structures during construction, as well as noise from construction activity, could result in the destruction and loss of active bird nests that could be present within the project area during the nesting season (February 1 through August 31). The MBTA prohibits take of nearly all native birds. Similar provisions within the California Fish and Game Code protect all native birds of prey (Section 3503.5) and all non-game birds that occur naturally in the state (Section 3800). The destruction of an active nest would be considered a significant impact and a violation of the MBTA and the California Fish and Game Code.

Impact-BIO-2: Potential Destruction of Special-Status and other Sensitive Bat Maternity Roosts. Demolition of onsite structures during construction could result in the loss of bat maternity roosts that could occur within the project area during the maternity season (April 15 through August 31). The loss of a bat maternity roost would be considered a significant impact.

Mitigation Measures

Demolition and Initial Rail Component

For Impact-BIO-1:

MM-BIO-1: Avoid Nesting Season for Birds or Conduct Preconstruction Nesting Survey. To ensure compliance with the MBTA and similar provisions under the California Fish and Game Code, the project proponent in direct coordination with the general contractor shall conduct demolition of Transit Shed #1, Transit Shed #2, Warehouse C, the molasses tanks, and other existing structures during the non-breeding season (between September 1 and January 31) or shall implement the following.

- If demolition of a structure is scheduled to occur between February 1 and August 31, the project proponent shall retain a qualified biologist (with knowledge of the species to be surveyed) who shall conduct a focused nesting survey prior to demolition of any structures within 1 week of scheduled demolition. A qualified biologist is a person who, by reason of his or her knowledge of the natural sciences and the principles of wildlife biology, acquired by wildlife biology education and experience, performs services including, but not limited to, consultation investigation, surveying, evaluation, planning, or responsible supervision of wildlife biology activities when those professional services require the application of biology principles and techniques.
- The survey to look for active nests shall be conducted and results reported in writing to the District for review and approval prior to the commencement of any demolition or construction activities on the project site. The survey shall occur between sunrise and 12:00 p.m., when birds are most active. If no active nests are detected during these survey, the biologist will prepare a letter report to the District documenting the results of the survey. If there is a delay of more than 7 days between when the nesting bird survey is performed and demolition begins, the qualified biologist shall confirm in writing to the District that he/she has resurveyed the structure proposed for demolition and that no new nests have been established.
- If the survey confirms an active nest on any of the structures to be demolished, demolition of the structure shall not occur until after a qualified biologist determines that the nest is no longer active or that the young have fledged.

For Impact-BIO-2:

MM-BIO-2: Avoid Bat Maternity Roosts or Conduct Preconstruction Maternity Bat Roost Survey. If demolition of any structures is scheduled during the bat maternity season when reproductively active females and dependent young could be present (between April 15 and August 31), a qualified biologist (as defined under MM-BIO-1 and with knowledge of the species to be surveyed) shall conduct a preconstruction survey to determine whether bats are present. The survey shall examine potential suitable roost sites for evidence of bat presence (presence of bats, guano, or urine stains), and it shall be conducted no more than 7 days prior to demolition of the structures. If no active maternity roosts are detected during these survey, the biologist will prepare a letter report to the District documenting the results of the survey. The survey shall be submitted in writing to the District for review and approval prior to the commencement of any demolition activities on the project site. If the biologist determines that the area surveyed does not contain any active maternity roosts, demolition may commence. If active maternity roosts are found, demolition of the structure shall be postponed and roosting structures shall be retained until a qualified biologist has determined that the maternity roost is no longer active and the young can take care of themselves. The need for a construction buffer shall be determined through consultation among the qualified biologist, the District, and CDFW.

Full TAMT Plan Buildout

Implement **MM-BIO-1** and **MM-BIO-2**.

Level of Significance after Mitigation

Demolition and Initial Rail Component

Implementation of **MM-BIO-1** and **MM-BIO-2** would reduce impacts on nesting migratory birds and bat maternity roosts (respectively) to less-than-significant levels by avoiding the bird nesting season and bat maternity roosting season or through preconstruction surveys to ensure that sensitive avian and bat species are not present if demolition and construction activities take place during the bird nesting season and bat maternity season.

Full TAMT Plan Buildout

As with the Demolition and Initial Rail Component, implementation of **MM-BIO-1** and **MM-BIO-2** would reduce impacts on nesting migratory birds and bat maternity roosts (respectively) to less-than-significant levels by avoiding the bird nesting season and bat maternity roosting season or through preconstruction surveys to ensure that sensitive avian and bat species are not present if demolition and construction activities take place during the bird nesting season and bat maternity season.

4.4.1 Overview

This section describes the existing conditions and applicable laws and regulations for cultural resources, followed by an analysis of the potential impacts on cultural resources that could result from implementation of the proposed project. Cultural resources include archaeological resources, ethnographic resources, and elements of the historic-era built environment (architectural resources). Although not specifically cultural resources, paleontological resources (i.e., fossils) are typically addressed along with cultural resources. However, paleontological resources were addressed in the Initial Study/Environmental Checklist (Appendix A) and it was determined that any impacts on subsurface paleontological deposits would be less than significant.

No resources that have been listed in or are eligible for listing in the California Register of Historical Resources (CRHR) exist in the cultural resources study area, which encompasses the 96-acre project site and a portion of the of the Burlington Northern Santa Fe (BNSF) railroad yard between the northeast portion of the terminal and Harbor Drive. Therefore, there would be no impacts on any known historical or archaeological resources. However, ground disturbance associated with the project in the eastern portion of the cultural resources study area has the potential to uncover any as-yet-unidentified archaeological resources and prehistoric human remains, which may result in a significant impact on cultural resources. As detailed in Section 4.4.4.3, *Project Impacts and Mitigation Measures*, below, implementation of mitigation measures would reduce potential impacts to less-than-significant levels. A more detailed and comprehensively referenced analysis of the cultural resources within the project area is included in the cultural resources technical study, Appendix H.

Table 4.4-1 summarizes the significant impacts and mitigation measures discussed in Section 4.4.4.3, *Project Impacts and Mitigation*.

Table 4.4-1. Summary of Significant Cultural Resources Impacts and Mitigation Measures

Summary of Potentially Significant Impact(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-CUL-1: Potential Buried Archaeological Resources.	**MM-CUL-1:** Archaeological Monitoring in Areas of Sensitivity.	Less than significant	Monitoring by a qualified archaeologist and Native American monitor of any ground-disturbing activities in the designated area near CA-SDI-5931, as indicated in Figure 4.4-1, would significantly reduce the potential of damage or loss of unknown subsurface archaeological resources.
Impact-CUL-2: Potential Disturbance of Prehistoric Human Remains.	Implement **MM-CUL-1**	Less than significant	With existing laws and regulations such as the California Health and Safety Code Section 7050.5 and PRC Section 5097.98, along with monitoring by a qualified archaeologist and Native American monitor in the designated area as indicated in Figure 4.4-1, any potential human remains discovered would be treated in accordance with best practices to ensure impacts would be less than significant.

4.4.2 Existing Conditions

4.4.2.1 Environmental Setting

The project site is located along San Diego Bay, south of downtown San Diego, east of the San Diego Convention Center and Hilton Bayfront Hotel, and west adjacent to the San Diego community of Barrio Logan. Harbor Drive runs northwesterly approximately 160 feet from the project site boundary. The project site, completed in 1958, is an artificially created inlet that is paved with concrete bulkheads and rubber or timber fenders along each berth face. It serves as a dry bulk, liquid bulk, multi-purpose general cargo, and specialty container facility and remains a critical gateway for cargo movement on the west coast. Water depths at the project site (as well as the adjacent industrial area in Planning District 4) can accommodate vessels with drafts up to 42 feet.

Three water-dependent shipyards are located immediately south of the project site. Other industrial uses include the BNSF rail facility between the project site and Harbor Drive and a Metropolitan Transit System yard, located north and east of the project site, which serves the San Diego Trolley system. The nearby shipyards, BNSF rail facility, and Restaurant Depot (a wholesale distribution warehouse located off tidelands, just east of the Terminal) are all industrial uses in the immediate area. The Barrio Logan community, immediately east of the project site, includes a mix of light industrial, commercial, residential, school, and park uses. Other areas within the vicinity of the project site include a baseball stadium (i.e., Petco Park), several hotels, and the San Diego Convention Center.

4.4.2.2 Prehistoric Setting

The approximately 10,000 years of documented prehistory of the San Diego region has often been divided into three periods: Early Period (San Dieguito tradition/complex), Archaic Period (Milling Stone Horizon, Encinitas tradition, La Jolla, and Pauma complexes), and Late Prehistoric Period (Cuyamaca and San Luis Rey complexes).

The Early Period encompasses the earliest dated occupation and documented human habitation in the region. The assemblage of artifacts associated with the San Dieguito complex has been studied and elaborated upon extensively. The earliest component of the Harris Site (CA-SDI-149/316/4935B), which is located along the San Dieguito River, is characteristic of the San Dieguito complex. Artifacts from the lower levels of the site include leaf-shaped knives, ovoid bifaces, flake tools, choppers, core and pebble hammerstones, several types of scrapers, crescents, and short-bladed shouldered points. Some researchers interpret the San Dieguito complex as having a primarily, but not exclusively, hunting subsistence orientation, while others see a more diversified San Dieguito subsistence system as possibly ancestral to, or as a developmental stage for, the subsequent, predominantly gathering-oriented complex denoted as the “La Jolla/Pauma complex.”

In the southern coastal region of California, the Archaic Period dates from circa 8,600 years before present (BP) to circa 1300 BP. The Archaic Period’s La Jolla/Pauma complexes have been identified from the content of archaeological assemblages occurring at a range of coastal and inland sites. These sites indicate that a relatively stable and sedentary hunting and gathering complex, possibly associated with one people, was present in the coastal and immediately inland areas of San Diego County for more than 7,000 years. The inland or “Pauma complex” aspect of this culture lacks shellfish remains, but is otherwise similar to the La Jolla complex. The content of these site assemblages is characterized by manos and metates, shell middens, terrestrial and marine mammal remains, burials, rock features, cobble-based tools at coastal sites, and increased hunting equipment and quarry-based tools at inland sites. Artifact assemblages can also include bone tools, doughnut stones, discoidals, stone balls, plummets, biface points/knives, Elko-eared dart points, and beads made of stone, bone, and shell. Beginning approximately 5500 BP and continuing during the latter half of the Archaic Period, evidence of hunting and the gathering and processing of acorns gradually increases. The evidence in the archaeological record consists of artifacts such as dart points and the mortar and pestle, which are essentially absent during the early Archaic Period. The increasing use of these technologies during the middle and late Archaic constitutes a major transition in how the prehistoric populations interacted with their environment in the southern coastal region. The period of this shift, from circa 4000 BP to 1300 BP, has been designated as the Final Archaic Period.

The Late Prehistoric Period has been characterized by an increased number of sites and innovations in technology, material culture, and belief systems across the San Diego area. The archaeological record indicates that substantial changes in tool and ornament types, burial practices, and site location choices occurred. Two Late Prehistoric Period complexes have been defined for the protohistoric occupants of the area: “San Luis Rey,” identified in the southern Orange, western Riverside, and northern San Diego county areas; and “Cuyamaca,” identified in southern San Diego County. The San Luis Rey complex is believed to be the progenitor of the Shoshonean-speaking peoples (Luiseño/Juaneño culture) living in the area at the time of historic contact in northern San Diego County (referred to as San Luis Rey of Shoshonean origin). Those of southern San Diego County (Cuyamaca, Yuman) are believed to be the ancestors of the Hokan-speaking Diegueño or Kumeyaay (Ipai/Tipai) occupying southern San Diego County at contact. Although territorial boundaries likely did not remain static, during Late Prehistoric times the project area would have been within the area commonly associated with the archaeologically defined Diegueño or Kumeyaay (Ipai/Tipai) complex.

4.4.2.3 Ethnographic Setting

The project site is situated within the traditional territory of the people known to the Spaniards as the Diegueño, a term derived from the San Diego Mission Alcalá, with which these people came to be associated. This term was later adopted by anthropologists and divided into the southern and northern Diegueño. Anthropologists later initiated use of a Yuman language term, "Kumeyaay," for the central-based nomadic hunter-gather society of people formerly designated as the Diegueño. The linguistic and language boundaries as seen by some anthropologists subsume the Yuman speakers into a single nomenclature, the Kumeyaay, a name applied previously to the mountain Tipai or Southern Diegueño, while others noted that Iipai applied to the Northern Diegueño, with Tipai and Kumeyaay for the Southern Diegueño. However, others have suggested that while these groups consisted of over 30 patrilineal clans, no singular tribal name was used, and have therefore referred to the Yuman-speaking people as Iipai/Tipai.

As with most hunting-gathering societies, Kumeyaay social organization was formed around culturally defined kinship ties. The Kumeyaay possessed a patrilocal type of band organization with band exogamy (marriage outside of one's band) and virilocal marital residence (the married couple integrates into the male's band). The band is often considered synonymous with a village or rancheria, which is a political entity. Some anthropologists have suggested that the term *rancheria* be applied to both a social and geographical unit, as well as to the particular population and territory held in common by a native group or band, and stressed that the territory for a rancheria might comprise a 30-square-mile area. Several villages or rancherias were part of a much larger social system usually referred to as a consanguineal kin group. This type of kin group is typically an exogamous, multilocal, patrilineal, consanguineal descent unit, often widely dispersed in local lineage. The members of the consanguineal kin group do not intermarry because of their presumed common ancestry, but they maintain close relations and often share territory and resources.

Other researchers have designated the San Diego River as a natural feature dividing the Kumeyaay with those people living north of it being the Iipai (Northern Diegueño), and those south of the River and into Baja California being the Tipai (Southern Diegueño). With a history stretching back at least 2,000 years, the Kumeyaay at the point of contact were settled in permanent villages or rancherias with strong alliances. While the Kumeyaay exploited a large variety of terrestrial and marine food sources, emphasis was placed on acorn procurement and processing, as well as the capture of rabbit and deer. It has been suggested that the Kumeyaay, or at least some bands of the Kumeyaay, were practicing proto-agriculture at the time of Spanish contact. Although evidence of this is problematic, the Kumeyaay were certainly adept land and resource managers with a history of intensive plant husbandry.

The Kumeyaay practiced many forms of spiritualism with the assistance of shamans (kuessay) and kin group leaders. Spiritual leaders were neither elected nor inherited their position, but achieved status because they knew all the songs involved in ceremonies and had an inclination toward the supernatural. Important Kumeyaay ceremonies included male and female puberty rites, the fire ceremony, the whirling dance, the eclipse ceremony, the eagle dance, and the cremation ceremony, as well as the yearly mourning ceremony. The primary ceremonial direction among the Kumeyaay is east, with rock art and entrances to ceremonial enclosures usually facing this direction. The Kumeyaay are the only California tribe known to possess a color-direction system where white represents the east, green-blue the south, black the west, and red the north.

4.4.2.4 Historic Setting

Nineteenth Century Development

William Heath Davis made the first attempt to promote settlement and development beyond Old Town San Diego in 1850. Davis acquired land near Punta de los Muertos, the original Spanish harbor-landing point, and constructed a wharf and a cluster of homes. Davis's "New Town San Diego" ultimately failed and became known as Davis's folly. In 1867, Alonzo Horton purchased 800 acres of land around New Town, and eventually succeeded where Davis had failed. By 1870, Horton's Addition—the second New Town San Diego—had 2,300 residents. The project site is south of Horton's addition. Near the end of that decade, National City's Frank Kimball persuaded the Atchison, Topeka, and Santa Fe Railway (Santa Fe Railway) to support construction of a transcontinental connection from San Bernardino south to San Diego and National City. This line, the California Southern Railroad, was completed during the early 1880s and was eventually acquired by the Santa Fe Railway. Washouts plagued the Temecula Canyon portion of the line approximately 45 miles north of San Diego, which the Santa Fe Railway ultimately abandoned. San Diego became dependent on a coastal branch line north to the main Santa Fe rail line at Fullerton, and the Santa Fe Railway reneged on its agreement to locate its maintenance shops at National City.

San Diego's main nineteenth-century commercial port facilities consisted of the wharf Davis constructed in 1850 near the southern end of today's Kettner Boulevard, and a wharf constructed in 1868 by Alonzo Horton. In 1891, the War Department improved the navigation channel north of Ballast Point. At that time San Diego had almost no industrial activity. Its maritime exports remained limited to sand and rocks extracted at Ballast Point and hinterland agricultural products. Commercial trade through the harbor averaged only $70,000 per year throughout the 1890s. At the end of the decade, the Zuniga Jetty was built south from the west end of North Island at the harbor entrance.

Early Twentieth Century Harbor Development

Although San Diego was fortunate to have an ideal natural harbor, and much of its citizenry supported tideland development and expanded port commerce, the city and harbor remained challenged by geography and regional patterns of transportation development. Agricultural producers in Imperial Valley across the mountains to the east made use of the Southern Pacific Railroad's main line from Arizona to Los Angeles, where convenient railroad connections, increasing agricultural output, and booming petroleum production helped support increasing trade through that city's engineered port. Hoping for increased trade, San Diego voters approved bond issues for harbor improvements. A rail line between San Diego and the Imperial Valley, the San Diego and Arizona Railroad, was completed in 1919. Eventually renamed the San Diego and Arizona Eastern, the rail line did not substantially boost exports through San Diego Harbor.

San Diego's first municipal maritime shipping facilities were developed in the 1910s at D Street (now Broadway) in association with planning for the Panama-California Exposition of 1915. While business interests committed to commercial and industrial development supported development of the municipal wharf, others viewed it as a violation of the 1908 Nolan plan for San Diego. Embodying City Beautiful ideals, John Nolan's plan had put significant emphasis on the waterfront and attempted to balance commercial development with aesthetically pleasing civic and recreational space. Nolan had envisioned a public plaza and transportation terminals at the end of D Street, with the waterfront to the north reserved for recreation and the waterfront south of E Street reserved for commercial and industrial development. The D Street/Broadway Pier, which included a long warehouse with a Mission Revival-style office front, or "headhouse," was completed in 1915. In 1926, a second nearby municipal wharf, the B Street Pier, was completed, and City leaders commissioned Nolan to update his plan.

By the end of the 1920s, federal investment in naval facilities had transformed San Diego's harbor and its economy. The construction and operation of military facilities developed in the 1910s and 1920s became the largest factor in the local economy. During the 1920s, San Diego's population doubled to 147,995, new residential subdivisions spread east, the business district expanded, and the local military payroll reached $15 million. In conjunction with the Navy's plans for increased harbor dredging to accommodate aircraft carriers, San Diego voters approved a $650,000 bond in 1928 to develop the first phase of the airport that would become Lindbergh Field on reclaimed land north of the Embarcadero Piers and east of the Marine Corps Recruit Base. In addition to naval facilities, San Diego Harbor came to support thriving tuna fishing and shipbuilding industries, while industrial production increased along the southerly waterfront.

Commercial maritime shipping, however, did not thrive in San Diego. Although the overall volume of shipping through San Diego Harbor nearly doubled amid the booming national economy of the 1920s, that volume remained overwhelmingly dominated by imports. Shipping volumes declined during the 1930s, and at the end of that decade San Diego ranked 23rd among 24 west coast shipping ports. By the onset of World War II, the Port of Los Angeles and other west coast cities had developed thriving commercial shipping facilities that dwarfed San Diego's modest Embarcadero Piers in terms of size and capacity. Portland, for example, had abundant export commodities, four marine terminals (including one incorporating three major piers), numerous warehouses and transit sheds, and facilities for efficiently conveying dry bulk export such as rock, ores, coal, sulfur, and grain from rail cars to ships. As early as 1922, these dry bulk facilities included a rail car unloader that tilted cars to empty their contents out of opened doors, as well as extensive conveyor-belt systems that transported bulk commodities to traveling dockside loading towers with spouts that deposited such commodities directly into ship hulls. These kinds of dry bulk loading facilities would not be developed in San Diego until the 1960s.

Post-World War II Harbor Development

In 1948, 2.6 million pounds of material with a shipping value of $300,000 moved through the harbor, ranking San Diego last among 13 California ports and 24th among 25 active west coast ports. At that time, John Bate, new Director of the City's Harbor Department, initiated a tireless effort to secure a greater share of west coast shipping business for San Diego. No individual had more influence on San Diego port governance and port-related commercial, recreational, and transportation development during the post-war era. Bate was the architect of the San Diego Unified Port District, created in 1963, and served as its Director until 1966. Under Bate's leadership, the Harbor Department or the District created Shelter Island and Harbor Island, dramatically expanded and improved Lindbergh Field, developed the TAMT, and established a second terminal that would become the National City Marine Terminal. Bate helped San Diego's harbor economy move beyond federal naval operations, fishing, and shipbuilding. His planning diversified the harbor economy to include new recreational facilities in conjunction with modern shipping facilities.

Tenth Avenue Marine Terminal Development

Until the mid-1950s, most of the TAMT site was within the waters of San Diego Bay. Around the turn of the century, the bay shoreline approximated the eastern boundary of the study area, and the Santa Fe Railway line was aligned within the far northeastern boundary of the study area. At that time, most of the railroad line within the study area was carried over bay waters or tideland marsh by a bridge. Until the 1920s, dry land was limited to the eastern portion of the study area. By the 1940s, filling created dry land in the northeastern portion of the project area. Land within and along the study area's eastern boundaries was devoted to industrial uses. The southeastern portion included the Benson Lumber Company yard, mills, and other facilities, Southern Reduction Company facilities, and fish tallow and oil tanks associated with the American Processing Company. The northwestern portion of the study area was occupied by City dumping facilities and a gas works refuse settling tank. The first port facility constructed within the study area, Warehouse A, was completed by 1955 and would later become part of the TAMT.

Development of the TAMT site began in 1956 when the City started dredging channels and placing fill west of the Benson Lumber Company and American Processing Company facilities at the foot of Sigsbee Street and Beardsley Street, and south of the recently constructed Harbor Department warehouse on Gull Street (Warehouse A). The Harbor Department contracted for spoil from channel dredging to fill the shoreline westward at the terminal site. Harbor Department engineers chose a "mole" or "marginal wharf" design rather than finger wharfs such as the Embarcadero Piers. Solid fill would support more weight than pier pilings, and the mole design would allow for more storage structures, railroad and truck access, and other planned facilities. A bulkhead or quay resembling a gravity dam was constructed of rock and concrete, and provided for nine ship berths.

The first two major buildings on the property were Transit Sheds #1 and #2. These rectilinear storage buildings were constructed of tilt-up, fireproof concrete walls with steel roof trusses. Each transit shed provided nearly 200,000 square feet of storage space. Some of the wall slabs featured modest decorative scoring in the form of fluted panels and Moderne-style signage identifying berth numbers or the Port of San Diego and the year 1957. The major engineering challenge posed by construction of the transit sheds was their weight and location atop dredged fill in an earthquake-prone region. For each transit shed, 370 concrete piles with steel shells were driven to minimum depths of 40 feet or to a resistance of 35 tons. Steel wall columns were installed above each pile. At the base of the longitudinal walls, the tops of the piles were connected to a continuous concrete beam that functioned like a strut. The buildings also incorporated mutually facing two-story office headhouses at the southeast elevation of Transit Shed #1 and the northwest elevation of Transit Shed #2. The headhouses were Modern in architectural style, with flat roofs, overhanging cantilevered second stories, and horizontal bands of flush steel-frame windows. They included several circular second-story windows and other elements that evoked nautical associations as well. Between the headhouses, the Harbor Department constructed an oval traffic control island with a concrete pillar featuring signage identifying the terminal and transit sheds. This was flanked by tenant directories for the transit sheds. The traffic island and pillar, as well as the southeastern quarter of Transit Shed #1, including the headhouse, have been demolished.

By the time the terminal was dedicated on November 21, 1958, Union Oil had begun construction of the facility's four large bunker fuel tanks. Pipes connected to tanks at the north end of the terminal site conveyed the fuel directly to docked ships, while other pipes running from each berth provided for docked ships to empty the ballast water in their fuel tanks. Although their development did not require major engineering innovation for the period, the bunker fuel facilities offered convenience and efficiency, which provided a crucial element of the Harbor Department's marketing efforts to attract ships to San Diego.

By 1963, two smaller tanks had been constructed immediately east of the larger Union Oil tanks. Several buildings had also been constructed by that time. One of these was a Port Department office/union hall building located immediately south of the Union Oil tanks. Two truck repair buildings were also constructed south of the office/union hall building and north of an area then used as a scrap metal yard. These buildings are no longer present at the site. Southeast of the scrap metal yard, the San Francisco-based Pacific Molasses Company constructed a distribution plant consisting of three large tanks and several smaller tanks. Another large molasses tank (no longer present) was later built north of the Union Oil tanks by a different company than Pacific Molasses. A small truck scale building that remains present today was also constructed south of the three Pacific Molasses tanks by 1963.

The bulk loader system was completed by 1963. Planning for the bulk loader began years earlier, when City Harbor Department officials inspected bulk loading systems on the east coast, at Houston, and at Stockton. The Port of Portland had a dry-bulk loader system by the 1920s. Within California by the early 1960s, only the Port of Stockton had bulk loading facilities comparable to the one planned for the TAMT, though the Port of Long Beach also planned and built a bulk loader system during the early 1960s. The TAMT's bulk loader would include a rail car unloader building (including a rotary rail car unloader), a junction house, and a conveyor that stretched to the terminal's southernmost two berths, where an additional conveyor and a traveling ship loader provided for dry bulk commodities to be deposited directly into ship hulls.

As the bulk loader was constructed, the Harbor Department initiated development of buildings that would add significantly to the covered storage space provided by Warehouse A and Transit Sheds #1 and #2. Completed in 1962 and 1964 respectively, Warehouses B and C added approximately 600,000 square feet of storage space to the terminal. The two warehouses were constructed of tilt-up, fireproof concrete walls and, apart from limited Moderne-style scored signage at corners, these buildings were designed without the architectural elements incorporated into the design of Transit Sheds #1 and #2. The completion of the two warehouse buildings marks the end of the TAMT's 1957–1964 period of potential significance.

As of 1964, the TAMT offered better centralized onsite cargo handling and distribution services, warehouse space, and fueling and ballast water removal facilities than the Ports of Los Angeles and Long Beach. However, the Port of Long Beach had developed bulk loading facilities that would compete with the TAMT's and cut into San Diego's potential share of the market for shipping dry bulk commodities produced in the American southwest. San Diego's bulk loader would have a variety of problems, and for the Port of San Diego to maintain its status in the west-coast maritime shipping economy, it would be forced to alter the TAMT.

The bulk loader became the most problematic and controversial element of the TAMT. It repeatedly broke down during its first several years of operation partly as a result of potash dust short-circuiting the electrical system. It did not handle enough bulk cargo and generate enough income to cover its annual amortization costs. Competition from cheap potash producers in Canada slowed output from the American Southwest. Larger dry-bulk cargo ships began to be developed that could not pass through San Diego's harbor channels. Dry bulk shipments from the terminal were dependent on stockpiling enough commodity-filled railroad cars to fill an outgoing ship hull. Hoping to increase dry bulk exports, the Port District joined with a private organization, San Diego Bulk Terminal, to develop 12 silos for onsite storage of livestock feed and other grain products. With a storage capacity of 15,000 tons, the silo complex was completed in early 1970. As the global economic recession of the early 1970s cut into San Diego's share of west coast shipping, the Port District worked with the Garnac Grain Company and Koppel Inc. to stockpile wheat at the terminal's silos and thereby increase shipments out of San Diego.

The TAMT underwent a series of other substantial physical alterations after 1970. Warehouse C received an addition at its northwest elevation that was later demolished, and received the large addition at its southeast end that remains present today. In 1975, the Van Camp Tuna Cannery was constructed immediately northeast of Warehouse B. The cannery facility operated for several decades. The northern portion of Warehouse B was converted to a cold storage facility in the 1990s, and the building received a small addition and refrigeration machinery at its northwest elevation at that time. The northern portion of the Van Camp Tuna Cannery building was demolished by 1998, and the remainder of the building was demolished several years later. Also by 1998, the truck repair buildings north of the silos had been demolished, smaller buildings and fish oil and tallow tanks had been removed from the area southeast of the Pacific Molasses Company tanks, and several new piers extended into the bay from this area. By 1998 the south portion of Transit Shed #2 had been fitted with large cement unloading and conveyance machinery. Over the next decade, a number of buildings and structures present at the site during the late 1950s and early 1960s were demolished. Warehouse A was demolished along with the molasses tank north of the bunker fuel tanks. The maintenance shop farther north was also demolished along with the office/union hall building. The 1970 silo complex was altered in the mid-1980s when two new silos, both much larger than the original ones, were added to the north side of the facility. A rectangular, multi-story corrugated metal element with steel stairs on the southeastern side of the original silos appears to have been built in the mid-1980s. A large non-original conduit that extends southeast from the top of the southeast silos, a new junction structure, and a conveyor connecting the new junction house to the original bulk loader junction house were installed by 2006. The traffic island, pillar, and signage between the transit sheds—which formed the focal point of the terminal's 1958 dedication ceremonies—were demolished at an unknown date. Finally, the headhouse at the southern side of Transit Shed #1 and the southernmost portion of that transit shed's storage spaces were demolished after 2000.

4.4.2.5 Existing Cultural Resources

Prehistoric and Archaeological Resources

A record search performed by the South Coastal Information Center (SCIC) did not identify archaeological resources within the study area. On April 21, 2014, ICF International (ICF) archaeologist Karolina Chmiel assessed the potential for archaeological surface deposits at the project site during a site visit. Most of the terminal is underlain by artificial fill material placed in the late 1950s. Nearly the entire project site is developed with buildings, structures, pavement areas, and railroad lines. Two unpaved gravel-covered parking areas are located within the project study area south and southeast of the main gate and Crosby Road. Pavement is not clearly present at several smaller strips along rail lines in the vicinity of the molasses tanks and at patches near the tanks. Gravel or weed growth covers these unpaved strips and patches. However, all of these areas have been graded, driven over, used for vehicle parking, or otherwise disturbed. The potential for archaeological deposits within the project site is limited to subsurface deposits. For these reasons, the cultural resources study area was not subjected to a formal archaeological survey.

While the record search did not indicate the presence of archaeological resources within the project site boundaries (see Section 4.4.4.1 for more detail), there exists potential for subsurface resources in the eastern section of the project site due to the presence of an extensive prehistoric resource (CA-SDI-5931) previously identified to the east of the study area boundary.

Prehistoric Resource: CA-SDI-5931

CA-SDI-5931 ranges from approximately 125 to 180 feet east of the study area boundary and consists of an extensive artifact scatter and included one Native American burial found during grading activities within the BNSF railroad yard (formerly Santa Fe Railway yard). CA-SDI-5931 was tested in 1993 within the BNSF railroad yard and yielded multiple artifacts. The record suggests the possibility of intact buried deposits and possible other human burials within the railroad yard beyond the areas tested in 1993. The full extent of CA-SDI-5931 is not known. Due to its proximity to the study area, it is possible that the site extends into the project site.

Historic-Era Built Environment Resources

On May 14, 2014, ICF historian/architectural historian Tim Yates surveyed the study area for intact built-environment resources 45 years of age or older and determined that the project site contains multiple built environment resources 45 years of age or older that contributed to its operation during the historic era. As such, the project site has the potential to be considered a historic district. Additionally, a total of 10 individual built-environment resources 45 years of age or older are located within the study area: Transit Sheds #1 and #2, the bunker fuel complex, the molasses tanks, the truck scale building, the bulk loader system, Warehouses B and C, the terminal's network of rail tracks, and the silo complex. None of these resources have been previously evaluated for CRHR eligibility.

As part of the proposed project, the project site was evaluated for CRHR eligibility as a potential historic district. The TAMT has some association with Harbor Department/District Director John Bate, who is a significant figure in post-World War II San Diego history. However, as discussed in more detail below, the association with Bate is not direct enough to confer historical significance on the project site under CRHR Criterion 2. Additionally, physical alterations have substantially diminished the TAMT's historical integrity. The 10 individual properties were also evaluated for individual CRHR eligibility. None of the individual resources were found to meet any of the significance criteria for CRHR listing. The results of the evaluations are summarized in Table 4.4-2 and under *Evaluation of Historic Resources*, below. Detailed evaluations, including photographs, resource descriptions, and references for primary and secondary resource materials, are presented in the cultural resources technical study included in Appendix H.

Table 4.4-2. Identified Historic-Era Resources within the Study Area

Resource	Date	Eligible	Reason
TAMT 1: Potential Tenth Avenue Marine Terminal Historic District	1957–64	No	Not associated with historically significant events or patterns of events; association with an individual important to San Diego history is insufficiently direct; site lacks architectural or engineering significance; substantially diminished historical integrity
TAMT 2: Transit Shed #1	1958	No	Lacks historical, architectural, or engineering significance
TAMT 3: Transit Shed #2	1958	No	Lacks historical, architectural, or engineering significance
TAMT 4: Bunker Fuel Complex	1959	No	Lacks historical or engineering significance
TAMT 5: Molasses Tanks	1963	No	Lacks historical or engineering significance
TAMT 6: Truck Scale Building	1963	No	Lacks historical or architectural significance
TAMT 7: Bulk Loader	1962	No	Lacks historical or engineering significance
TAMT 8: Warehouse B	1962	No	Lacks historical, architectural, or engineering significance
TAMT 9: Warehouse C	1964	No	Lacks historical, architectural, or engineering significance
TAMT 10: Rail Tracks	ca. 1945–1958	No	Lacks historical or engineering significance
TAMT 11: Silo Complex	1970		Lacks historical or engineering significance

Evaluation of Historic Resources

Potential TAMT Historic District

The project site is located along the northeast shoreline of San Diego Harbor, south of downtown San Diego and north of the Coronado Bridge. The terminal's remaining original elements dating to the 1957–1964 period of its initial development include Transit Sheds #1 and #2, Warehouses B and C, the bunker fuel complex at the northeast corner of the site, the truck scale building and Pacific Molasses Company tanks at the southeast corner of the site, the bulk loader, and rail lines that run throughout the site. These resources are described and evaluated individually below. The project site is a mole wharf (also known as marginal wharf) formed of dredged fill and rock and concrete bulkhead walls (or quay walls) adjacent to ship channels. The project site provides nine ship-berthing spaces.

The project site does not appear to be eligible for listing on the CRHR as a historic district for the following reasons.

- The project site was not San Diego's first municipally developed commercial maritime shipping facility. It is not an example of "seed" infrastructure without which San Diego might not have grown into a major west coast city. The development of the site does not appear to constitute an event or pattern of events meeting the threshold of significance under CRHR Criterion 1.

- The project site has some association with Harbor Department/District Director John Bate, who is a significant figure in post-World War II San Diego history. The development of the TAMT was one of the Port Department/Port District projects that occurred under Bate's directorship. However, the association with Bate is not sufficiently direct for the site to meet CRHR Criterion 2. The TAMT was not Bate's residence or primary workplace. Although the San Diego Harbor Department had offices at the TAMT, its headquarters and Bate's main office were over a mile northwest of the terminal in a building at Harbor Drive and Ash Street that has been demolished. In 1965 the Port District headquarters were relocated farther north to the current headquarters building on Pacific Coast Highway. Even if the project site did meet the threshold for significance under Criterion 2 as a historic district, it would no longer sufficiently convey such significance due to substantially diminished historical integrity. As explained in detail above, the TAMT has undergone extensive physical alterations, including the demolition of buildings and structures present at the site during its 1957–1964 period of potential significance, and the construction of various buildings and structures at the site after 1964.
- The project site does not appear to be significant for its overall design and engineering, or for the limited architectural elements of its larger 1957–1964 period buildings. The project site's mole (or marginal) design and construction do not appear to have represented a major milestone in harbor engineering, nor do the transit sheds and warehouses appear to have significance within the history of engineering. The limited architectural features observable at the site include the decorative fluted panels on some exterior transit shed walls; the limited nautically oriented features and the commonplace overall Modern design of the surviving transit shed headhouse; and, in terms of late-1950s design trends, the somewhat retrograde Moderne lettering of scored signage on limited portions of the transit sheds' and warehouses' walls. These limited Moderne and Modern elements do not reach the level of architectural distinctiveness and historical importance appropriate for CRHR listing. For these reasons, the project site does not appear to meet CRHR Criterion 3 as a historic district with engineering or architectural significance.

Consequently, the TAMT does not appear to be a district qualifying as a historical resource for the purposes of CEQA.

Transit Shed #1

Located at the northwestern portion of the project site, Transit Shed #1 has a long rectangular plan covering an approximately 145,000-square-foot area, and is constructed of tilt-up, fireproof concrete walls and steel roof trusses. Some wall slabs rise higher than adjacent wall slabs to form parapets. These parapet-topped concrete wall slabs are scored with decorative Moderne-style fluted panels and signage identifying berth numbers or the Port of San Diego and the year 1957, the year construction began on the terminal's transit sheds. The roofs of the building's three interior spaces slope downward to the southwest and northeast from central ridges. Each of the building's three interior spaces has five large loading entries with roll-up metal warehouse doors along the southwest and northeast elevations. Concrete truck-loading platforms extend along most of the building's northeast elevation. The southeast and northwest elevations each have a single centered entry large enough to allow trucks to enter the building. These are also secured by metal roll-up warehouse doors. Industrial-grade pedestrian doors provide access to the building at various locations. The southwest elevation features windows at two locations, including a pair of original steel-frame windows that appear to incorporate awning or hopper sashes.

Transit Shed #1 has undergone several notable alterations, including a corrugated metal shed addition that was constructed at the northwest elevation sometime after 1970. Originally, the building had four rather than three interior storage spaces, and its southern end consisted of headhouse offices. Both have been demolished. As noted above, the original traffic island, pillar, and associated directories at the southeast elevation of Transit Shed #1 have also been demolished.

Transit Shed #1 does not appear to be individually eligible for the CRHR. Research efforts have yielded no evidence that Transit Shed #1 is associated with important historical events or patterns of events. Furthermore, research has yielded no evidence that a noteworthy individual performed historically important work at the transit shed building. The building does not have a direct enough association with Harbor Department/District Director John Bate to confer significance upon it. Consequently, the building does not appear to meet Criterion 1 or Criterion 2 for listing in the CRHR. Research efforts produced no evidence that the building is associated with a historically important engineer or architect. Transit Shed #1's limited remaining architectural features, which consist of decorative fluting and Moderne signage on some walls, are not distinctive enough to confer architectural significance on the building as a whole. The building has also been substantially altered, and these alterations have diminished its integrity of design, materials, workmanship, and feeling. For these reasons, Transit Shed #1 does not appear to meet Criterion 3 for individual CRHR listing.

Transit Shed #2

Located at the southwestern portion of the project site, Transit Shed #2 is a cargo storage building that incorporates headhouse offices at the northwest elevation. The 194,000-square-foot building has a long rectilinear plan. Most of the building consists of tilt-up, fireproof concrete walls and steel roof trusses that enclose large interior storage spaces southeast of the headhouse. The two-story Modern style headhouse has a centered cargo-loading bay large enough to accommodate trucks and includes pedestrian entries at the façade's first-floor offices and atop stairways leading to the second story. One stairway is at the northwest elevation, and the other two are within the central bay. Clad mostly in stucco, the headhouse has a slightly pitched shed roof that overhangs broadly at the northwest and northeast (front) elevations to shelter the northwest stairway and the first-floor entries. The second story is slightly cantilevered. Fenestration consists mainly of rectangular banks of multi-pane, aluminum-frame windows. On each side of the central bay, the façade's second-story windows are framed by long rectangular surrounds incorporating mullion-like fluted panels. Aluminum-frame glass doors with transoms are integrated into the window banks along the first floor. The walls at the ends of the headhouse and on each side of the central bay feature circular windows. Six steel poles extend from the sides of each stairway to the overhanging roof. The circular windows, the steel poles lining the stairways, and the headhouse's overall resemblance to a ship's navigation bridge are reminiscent of Streamline Moderne architecture's references to transportation technology. However, the headhouse's horizontal emphasis, window bands, sharp corners, and overhanging projections make it a Modern building.

The remainder of the transit shed to the southwest has the same wall arrangement, roof trusses, and decorative scoring (Moderne-style fluting and signage) as Transit Shed #1. Concrete truck-loading platforms extend along most of the building's northeast elevation. Industrial-grade pedestrian doors provide access to the building's storage spaces at various locations. The southwest elevation features windows at two locations, including a pair of original steel-frame windows that appear to incorporate awning or hopper sashes. The southeastern portion of the building incorporates multiple non-original structures, including a ship unloader and associated conveyance machinery at the southwest and northeast elevations, and across the building's roof. As noted above, the original traffic island, pillar, and associated directories near the northwest elevation of Transit Shed #2 have been demolished.

Transit Shed #2 has the same development history as Transit Shed #1. Transit Shed #2 does not appear to be individually eligible for the CRHR. Research revealed no evidence that the building has direct individual associations with an important event or pattern of events, nor has research revealed any evidence that a noteworthy individual performed historically important work that was strongly associated with Transit Shed #2. The building does not have sufficiently direct association with Harbor Department/District Director John Bate to confer significance upon it. Consequently, the building does not appear to meet Criterion 1 or Criterion 2 for listing in the CRHR. Research has yielded no evidence that Transit Shed #2 is associated with a historically important architect or engineer. In addition, Transit Shed #2 does not possess high artistic value or exhibit innovative architectural design or engineering techniques. For these reasons, Transit Shed #2 does not appear to be eligible for individual CRHR listing under Criterion 3.

Bunker Fuel Complex

Located at the northern portion of the project site, the above-ground portion of the bunker fuel complex consists of five large steel tanks and two buildings secured by chain-link fences topped with barbed wire. The two steel tanks closest to the buildings at the southeastern side of the complex appear to be equivalent in size and have diameters of approximately 100 feet. Immediately northwest of those tanks are two additional tanks. The southern tank has a diameter of approximately 80 feet and the northeast tank has a diameter of approximately 55 feet. An additional tank at the northernmost portion of the complex was constructed within the last decade. The two buildings are located on the southeast side of the tanks. The northeastern building functions as a utility building, and the southwestern building is a small office. Both are utilitarian in design, with concrete-block walls and flat roofs with broadly overhanging eaves. The southwestern building has several window openings. Access restrictions during the field visit prohibited clear observation of the contents of the window openings.

The project site's bunker fuel complex was completed in 1959. An in-depth history of the project site's development has identified the owner of the tank complex from 1959 through 1971 as Union Oil of California. Several smaller original tanks have been removed from the complex. The purpose of the tanks was to store ship fuel and provide refueling services to ships docked at the project site. Pipes from the tanks conveyed fuel directly to terminal berths so that ships could refuel during cargo loading or unloading. The same pipes provided for removal of ballast water from arriving ships' fuel tanks. At most earlier developed west coast ports during the 1950s and 1960s, cargo ships were refueled from barges or tugboats. Harbor Department officials heavily promoted the TAMT's bunker fuel facilities. Although their development does not appear to have required major engineering innovation for the period, the bunker fuel facilities offered convenience, promoted efficiency, and provided a crucial element of the Harbor Department's marketing efforts to attract ships to San Diego. While the bunker fuel facilities helped make the Port of San Diego more competitive in the west coast shipping market for a time, this initially successful feature was undermined fairly quickly during the 1960s as ports in Japan began selling ship fuel at substantially lower prices than other Pacific ports.

The project site's bunker fuel complex does not appear to be individually eligible for the CRHR. As part of the project site's bunker fuel facilities, the bunker fuel complex does not appear to have direct individual associations with important events or patterns of events. Research has revealed no evidence that a noteworthy individual performed historically important work that was strongly associated with the bunker fuel complex. The complex does not have sufficiently direct association with Harbor Department/District Director John Bate to confer significance upon it. Consequently, the complex does not appear to meet Criterion 1 or Criterion 2 for listing in the CRHR.

Research efforts did not reveal any evidence that the bunker fuel complex is significant as the work of a master engineer or builder. Neither the tank complex nor the underground pipeline system for conveying fuel and ballast water appear to qualify as engineering masterworks. The system appears to be the product of technology that was well established by the late 1950s. The two small buildings associated with the tanks are also commonplace examples of utilitarian 1950s buildings. As such, the bunker fuel complex does not appear to meet Criterion 3 for listing in the CRHR.

Molasses Tanks

The project site's remaining tanks for molasses storage are located approximately 170 feet east of Warehouse C's southeastern corner. The three steel molasses tanks appear to be the same size and have diameters of approximately 70 feet. The tops are connected by steel catwalks. The lower circumference of the eastern tank and the entire circumference of the central tank have been covered with non-original insulating material. Various associated pipes and valves are located on the south side of the tanks.

The San Francisco-based Pacific Molasses Company arranged for construction of the three large tanks in 1962. Imported molasses stored in the tanks was trucked to the Imperial Valley and processed into cattle feed. The Pacific Molasses Company tanks remain intact; an additional molasses tank constructed near the bunker fuel tank complex by a different company than Pacific Molasses was later demolished. Several smaller tanks constructed at the same time as the Pacific Molasses tanks and located immediately north of them have been removed from the site.

The Pacific Molasses Company tanks do not appear to be individually eligible for the CRHR. The molasses tanks do not appear to have significance for direct individual association with a historically important event or pattern of events. Research has revealed no evidence that a noteworthy individual performed historically important work that was strongly associated with the molasses tanks. The tank complex does not have sufficiently direct association with Harbor Department/District Director John Bate to confer significance upon it. Consequently, the tanks do not appear to meet Criterion 1 or Criterion 2 for listing in the CRHR.

Research efforts did not reveal any evidence that the molasses tanks are significant as the work of a master engineer or builder. The tanks do not appear to be an engineering masterwork. Tanks of comparable size, with equivalent steel construction, are commonplace elements of the industrial built environment in numerous cities in California and across the west coast. For these reasons, the molasses tanks do not appear to meet Criterion 3 for listing in the CRHR. Additionally, two of the tanks have been entirely or partially covered with non-original insulating material, which has diminished their historical integrity of design, materials, and feeling. The integrity of the site as whole has also been compromised by the removal of the smaller tanks originally installed immediately north of the existing three larger tanks.

Truck Scale Building

The Truck Scale Building faces southwest and is immediately south of the project site's molasses tanks. The predominantly utilitarian building has a rectangular plan with a small projecting square element at the southwest elevation that accommodates the main drive-up window. The building's concrete block walls support a flat roof outlined by low parapets atop the square element, and a flat Modern-style roof with broadly projecting eave overhangs and angled fascia boards across the main rectangular mass. Most windows are inset, horizontally sliding aluminum-frame units above wood sills. Two non-original horizontally sliding vinyl windows are located at the northwestern portion of the southwest elevation. Wood doors with upper glazing provide access at the northwestern and southeastern sides of the drive-up window projection, as well as the southwest elevation of the main rectangular element. The northwest elevation of the main rectangular element has a metal door that slides horizontally on a mounted track.

The project site's Truck Scale Building was constructed by 1963. It is unclear whether the Pacific Molasses Company constructed the building or whether the building was developed by Westside Metals/Scrap Metals, which operated a scrap metal yard during the early 1960s at the TAMT near the northeastern side of Warehouse C.

The Truck Scale Building does not appear to be individually eligible for the CRHR. Research efforts have revealed no evidence that a noteworthy individual performed historically important work that was strongly associated with the building, which does not have sufficiently direct association with Harbor Department/District Director John Bate to confer significance upon it. Individually, therefore, the building does not appear to meet Criterion 1 or Criterion 2 for listing in the CRHR.

Research efforts did not reveal any evidence that the Truck Scale Building was designed by a master architect or builder. The building does not have high artistic value and does not appear to be a distinctive example of any architectural style or building technique. The building registers the influence of Modern architecture in its flat roof and broadly overhanding eaves, but such elements are entirely commonplace among buildings constructed at industrial sites throughout California during the 1950s and 1960s. For these reasons, the Truck Scale Building does not appear to meet Criterion 3 for listing in the CRHR.

Bulk Loader System

The TAMT's bulk loader is a multicomponent system for conveying dry bulk commodities from railroad cars and onsite storage structures to ships berthed at the project site's southern edge. Its original elements consist of a rail car unloading building, an underground conveyor from the rail car unloading building to a junction house to the west, a much longer conveyor extending from south of the junction house to southern berths, and a conveyor and traveling loader at the southern berths that provide for dry bulk commodities to be dumped directly into ship hulls. Original portions of the system total approximately 1,600 feet in length. The commodities delivered to ships through the system included potash, soda ash, grain, alfalfa pellets, and chemical fertilizers.

The historic-era portion of the system begins at the rail car unloading building, north of the molasses tanks, east of Warehouse C, and southeast of the silo complex, along spur tracks connected to the railroad lines that run east of the site. The building's corrugated-metal rectangular western portion has a low-pitched gable roof and two large openings at the northwest and southeast elevations. This portion of the building contains facilities for receiving materials dumped from the bottoms of cars through steel grills to a conveyor system underneath the building. A corrugated metal shelter projects from the building's northeast elevation and is supported at the northeastern side by several steel posts. Under the shelter along the northeast wall of the building is an elevated operations room accessed at a steel stairway. A rotary car dumper was originally located in this part of the building.

Commodity materials received at the rail car unloading building are conveyed underground and within a corrugated metal conveyance structure to the corrugated metal junction house approximately 200 feet to the west. Originally, the system's 42-inch-wide conveyor belt extended from the junction house south to the TAMT's southern berthing area. Within the past decade, however, the system has been altered in the vicinity of the original junction house. A second, taller junction structure was built south of the original structure. This new structure incorporates a four-sided conduit with a conveyor that extends to the original junction house, as well as a long cylindrical conduit with three sets of support legs. This conduit connects to the top of the grain silo complex. Steel conveyance structures between the aforementioned features and the concrete ramp to the south have been introduced to the system since 1970.

The elevated steel frame of the 42-inch conveyor belt extends from the newer junction structure (rather than the original junction structure) approximately 600 feet south to an additional rectangular corrugated metal junction structure in the vicinity of the southern berths. Comparison of historic and current aerial imagery indicates that the junction structure has been altered, and that it originally incorporated several windows. The remainder of the system consists of an elevated steel structure incorporating a conveyor belt, a corrugated metal shelter, and an affixed track along which the system's steel traveling ship loader (or boom conveyor) is connected. The loader moves parallel to the elevated conveyor structure to allow for optimal positioning relative to berthed ships. Once positioned, the traveling loader conveys material to a vertical telescoping chute with a dust suppressor, which transmits the material directly into ship compartments.

The bulk loader system was completed and put into service in 1963. The TAMT's bulk loader system does not appear to be eligible for the CRHR. The bulk loader does not appear to have significance for direct association with a historically important event or pattern of events. Research has revealed no evidence that a noteworthy individual performed historically important work that was strongly associated with the bulk loader. The bulk loader does not have sufficiently direct association with Harbor Department/District Director John Bate to confer significance upon it. Consequently, the bulk loader does not appear to meet Criterion 1 or Criterion 2 for individual listing in the CRHR.

As an early-1960s engineering structure, the bulk loader had impressive size and capacity both in terms of its conveyance speed and the rate at which its rail car unloading machinery could intake railroad cargo. However, it does not appear that the TAMT's bulk loader has historic engineering or technological significance qualifying it for CRHR listing. San Diego's bulk loader was developed on the basis of similar existing facilities on the east coast, in Houston, and in Stockton, and constructed at roughly the same time that the Port of Long Beach developed similar facilities. It does not appear that San Diego's bulk loader was particularly unique or that its development represented a milestone in port engineering history. For these reasons, the bulk loader does not appear to meet Criterion 3 for individual listing in the CRHR.

Warehouse B

Warehouse B has a rectangular plan and currently provides 294,000 square feet of cold storage space. It is constructed of tilt-up, fireproof concrete walls and steel roof trusses. Along the southwest and northeast elevations, rectangular and square-shaped wall slabs rise higher than adjacent wall slabs to form parapets. The walls across the northwest and southeast elevations are as high as the parapet-topped wall slabs along the southwest and northeast elevations. The roof is slightly angled downward to the northeast and southwest from the top of the central interior longitudinal wall. Numerous cargo loading bays secured by metal roll-up doors are distributed across the exterior walls. These open to concrete loading platforms along the southwest and northeast elevations. The platforms have steel railing and concrete stairs in some places. Warehouse B does not have any of the decorative fluting visible on Transit Sheds #1 and #2, but at several places the building is identified by concrete-scored Moderne lettering similar to the signage lettering of the transit sheds. Pedestrian entries and windows are concentrated at the building's western and southern corners, and at the southern portion of the northeast elevation. Solid industrial-grade doors secure the pedestrian entries. The windows have steel frames and appear to be original awning or hopper units. They include single-pane, three-pane, and 12-pane windows.

The building has been altered in several places. The loading bays at the northwestern portion of the northeast elevation are covered by a non-original metal shelter. Non-original refrigeration machinery is concentrated at the center of the northwest elevation. In recent decades, an addition with a curving roof has been constructed at the northeastern portion of the northwest elevation.

The Harbor Department contracted I.C. Curry, Inc. to construct Warehouse B. The building was completed in early 1962, and dedicated along with the bulk loader on February 9, 1962.

Warehouse B does not appear to be individually eligible for the CRHR. The building does not appear to be associated with an important event or pattern of events that would confer individual significance upon it. Research efforts have revealed no evidence that a noteworthy individual performed historically important work that was strongly associated with Warehouse B. The building does not have sufficiently direct association with Harbor Department/District Director John Bate to confer significance upon it. Individually, therefore, the building does not appear to meet Criterion 1 or Criterion 2 for listing in the CRHR.

Research efforts did not reveal who designed Warehouse B. However, its utilitarian design essentially repeats the arrangement and materials of the concrete walls and steel roof trusses that compose the majority of the transit shed buildings previously built on the project site. Limited concrete-scored Moderne signage identifies the warehouse at several corners of the building. Apart from this decorative element, the warehouse lacks the kinds of architectural elements observable on the earlier transit sheds. The warehouse is not an architectural masterwork, does not embody high artistic value, and is not the product of an important milestone in engineering or building techniques. For these reasons, Warehouse B does not appear to meet Criterion 3 for individual listing in the CRHR.

Warehouse C

Originally, Warehouse C had the same design as Warehouse B. It has been altered to a greater extent than Warehouse B. The present-day southeastern portion of Warehouse C is a major addition. The addition exterior is concrete at the wall bases and metal at the upper portions and has multiple loading bays with roll-up metal doors. The far southeastern portion of the addition does not form a corner; instead, it is shaped so as not to interfere with the immediately adjacent bulk-loader conveyor.

The Harbor Department contracted I.C. Curry, Inc. to construct Warehouse C and it was completed in 1964. The building's major southeasterly addition was constructed during the 1970s.

Warehouse C does not appear to be individually eligible for the CRHR. The building does not appear to be associated with an important event or pattern of events that would confer individual significance upon it. Research efforts have revealed no evidence that a noteworthy individual performed historically important work that was strongly associated with Warehouse C. The building does not have sufficiently direct association with Harbor Department/District Director John Bate to confer significance upon it. Individually, therefore, Warehouse C does not appear to meet Criterion 1 or Criterion 2 for listing in the CRHR.

Research efforts did not reveal who designed Warehouse C. However, its utilitarian design essentially repeats Warehouse B, completed in early 1962. Moreover, Warehouses B and C repeated the arrangement and materials of the concrete walls and steel roof trusses that composed the majority of the TAMT's earlier-built transit shed buildings. Limited Moderne signage identifies the warehouse at several corners of the building, which lacks the kinds of other architectural elements observable on the earlier transit sheds. The warehouse is not an architectural masterwork, does not exhibit high artistic value, and does not embody an important milestone in engineering or building techniques. For these reasons, Warehouse C does not appear to meet Criterion 3 for individual listing in the CRHR.

Rail Tracks

Numerous historic-era railroad tracks are located within the project site (the cultural resources study area). The rail lines within the project site were installed as part of the facility's initial development in the late 1950s and early 1960s and represent standard railroad construction. They consist of steel rails affixed to cross-ties across a layer of ballast, or tracks imbedded in asphalt pavement or concrete. The track within the project site totals over 50,000 linear feet. Four tracks within the eastern portion of the project site east of the silo complex are aligned adjacent to the BNSF (former Santa Fe Railway) railroad yard. The four tracks adjacent to the yard are at the same grade as the yard tracks, and are demarcated from other terminal facilities by a fence and a slope. Trains access the project site proper via a spur from the BNSF rail yard that enters the project site at the southeastern corner of the site, east of the molasses tanks and north of the main gate.

Just east of the molasses tanks, the spur splits into multiple lines running to the southwest and northwest. The line to the northwest splits into multiple tracks to provide for railcars to be conveyed to the bulk loader's rail car unloading building. An additional connecting track extends between the track leading to the rail car unloading building and tracks running south of the molasses tanks. Northwest of the rail car unloading building, these lines converge into a single track in the vicinity of the bunker fuel complex. That single track continues to the northwest beyond the project site.

Multiple tracks run parallel to one another south of the molasses tanks toward the traveling ship loader at the southernmost berths. These split into multiple tracks extending southwest and west. The line running southwest wraps around the southern end of the bulk loader system and Transit

Shed #2, and then splits into two lines that extend to the northwest along the southwestern sides of both transit sheds. The rail line running west splits into multiple tracks that continue along the northeastern sides of the transit sheds and the southwestern sides of Warehouses B and C. Several tracks extend across the paved space between the transit sheds and warehouses.

The railroad tracks have undergone periodic alteration in the form of repair, replacement, and even realignment over the decades. Tracks that formerly provided for rail cars to be conveyed northwest from the northern side of the molasses tanks to the northeastern sides of Warehouses B and C have been removed or abandoned.

None of the rail lines within the study area were part of the original Santa Fe Railway line constructed during the early 1880s, which was aligned nearby and to the east study area boundary, nor were any of the tracks within the terminal part of sidings associated with the Santa Fe Railway line. The original spur line into the TAMT and various tracks within the site were constructed during the late 1950s and early 1960s. A maintenance evaluation of the TAMT's rail system conducted in the 1990s states that some of the track alignments within the TAMT were added in the 1970s and 1980s, and that tracks along some of the original alignments were replaced prior to the 1990s. The evaluation recommended replacing much of the track present at that time. Therefore, like most historic-period rail lines generally, the project site's tracks have been subject to repeated maintenance and replacement.

The railroad tracks at the project site do not appear to be eligible for the CRHR. The project site's tracks do not appear to be associated with an important event or pattern of events that would confer significance upon them. Research efforts have revealed no evidence that a noteworthy individual performed historically important work associated with the project site's rail lines. These resources do not have sufficiently direct association with Harbor Department/District Director John Bate to confer significance upon them. Individually, therefore, the project site's rail tracks do not appear to meet Criterion 1 or Criterion 2 for listing in the CRHR.

Railroad tracks represent a ubiquitous, commonplace form of infrastructure. Research has revealed no evidence that the project site's internal tracks have significance for any association with a master engineer or builder, and they do not represent an engineering masterwork. They are entirely commonplace features of the industrial built environment that can be observed at shipping facilities throughout California and the nation. For these reasons, the project site's railroad tracks do not appear to meet Criterion 3 for listing in the CRHR.

Silo Complex

Twelve silos originally constructed for dry bulk storage are located immediately northeast of the northwestern half of Warehouse C and west of the bulk loader railcar unloading building. The 12 original silos have flat roofs and are constructed of concrete. They rise approximately 75 feet in height. A utilitarian corrugated metal building on the southwestern side of the northwestern silos appears to have been constructed along with the original 12 silos. Numerous associated features have been added to the silo complex since the 1970s. Two much bulkier silo structures and associated steel conduits and catwalks were added to the northeastern side of the original 12 silos. The rectangular, multi-story corrugated metal element with steel stairs on the southeastern side of the original silos, which is not present in a 1976 bird's eye aerial photograph of the site, appears to have been built along with the two larger, non-original silos. Two manufactured buildings and an open-sided shelter have also been introduced to the site since that time. The large elevated cylindrical conduit that connects to the square element above the southernmost original silos was introduced to the site during alterations to the bulk loader system within the last decade.

The silo complex at the project site does not appear to be eligible for the CRHR. The complex does not appear to have significance for direct associations with a historically important event or pattern of events. Research has revealed no evidence that a noteworthy individual performed historically important work that was strongly associated the silo complex. Consequently, the complex does not appear to meet Criterion 1 or Criterion 2 for CRHR listing. Research efforts did not reveal any evidence that the silo complex is significant as the work of a master engineer or builder, and the original silos do not appear to be an engineering masterwork. Silo structures comparable in size, with equivalent reinforced-concrete construction, can be encountered throughout California and across the west coast. The same can be said for the complex's original and entirely commonplace utilitarian corrugated-metal building. For these reasons, the silo complex does not appear to meet Criterion 3 for listing in the CRHR.

4.4.3 Applicable Laws and Regulations

4.4.3.1 State

California Environmental Quality Act and Public Resources Code Section 5024.1 (California Register of Historical Resources)

CEQA requires public agencies to evaluate the implications of their project(s) on the environment and includes significant historical resources as part of the environment. According to CEQA, a project that causes a *substantial adverse change* in the significance of a *historical resource* or a *unique archaeological resource* has a significant effect on the environment (State CEQA Guidelines 15064.5, Public Resources Code [PRC] Section 21083.2).

CEQA defines a substantial adverse change as:

- Physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired; or
- Demolition or material alteration of the physical characteristics that convey the resource's historical significance and justify its designation as a *historical resource*.

Public agencies must treat any cultural resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant (Title 14 CCR, Section 15064.5). A historic resource is considered significant if it meets the definition of *historical resource* or *unique archaeological resource*.

The term *historical resource* includes but is not limited to any object, building, structure, site, area, place, record, or manuscript that is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California (PRC Section 5020.1(j)). Historical resources may be designated as such through three different processes.

1. Official designation or recognition by a local government pursuant to local ordinance or resolution (PRC Section 5020.1(k))
2. A local survey conducted pursuant to PRC Section 5024.1(g)
3. The property is listed in or eligible for listing in the National Register of Historic Places (NRHP) (PRC Section 5024.1(d)(1))

The process for identifying historical resources is typically accomplished by applying the criteria for listing in the CRHR (Title 14 CCR, Section 4852), which states that a historical resource must be significant at the local, state, or national level under one or more of the following four criteria.

1. It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. It is associated with the lives of persons important in our past.
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values.
4. It has yielded, or may be likely to yield, information important in prehistory or history.

To be considered a *historical resource* for the purposes of CEQA, the resource must also have integrity, which is the authenticity of a resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance.

Resources, therefore, must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. It must also be judged with reference to the particular criteria under which a resource is eligible for listing in the CRHR (California Code of Regulations Title 14, Section 4852(c)).

Assembly Bill 52

On September 25, 2014, California Governor Jerry Brown signed into law Assembly Bill 52, which amended PRC Section 5097.94 and added Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to establish a new category of environmental resources that must be considered under CEQA: tribal cultural resources. Tribal cultural resources are defined as either (1) sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are included in the CRHR or a local register of historical resources, or that are determined to be eligible for inclusion in the CRHR; or (2) resources determined by the lead agency, in its discretion, to be significant based on the criteria for listing in the CRHR. For projects with applications filed on or after July 1, 2015, lead agencies are also required to consult with California Native American tribes that are traditionally and culturally affiliated with the geographic area of a proposed project if the tribe requested to the lead agency, in writing, to be informed by the lead agency of proposed projects in that geographic area, and the tribe requests consultation, prior to determining whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project.

Public Resources Code Section 5097

PRC Section 5097 addresses archaeological, paleontological, and historic sites on state land as well as the cooperative efforts with the Native American Heritage Commission (NAHC) that are to be undertaken as part of a project being evaluated under CEQA. PRC Section 5097 specifies the procedures to be followed in the event of the unexpected discovery of human remains on non-federal public lands. PRC Section 5097.5 considers it a misdemeanor to knowingly and willfully excavate upon or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological, or historical feature situated on public lands, except with the express permission of the public agency having jurisdiction over the lands. The disposition of Native American burials falls within the jurisdiction of the NAHC, which prohibits willfully damaging any historic, archaeological, or vertebrate paleontological site or feature on public lands (PRC Section 5097.9). PRC Section 5097.98 stipulates that whenever the NAHC receives notification of a discovery of Native American human remains from the county corner, it shall immediate notify those people it believes to be the most likely descendants of the deceased Native American. The descendants may inspect the site of discovery and make recommendations on the removal or reburial of the remains.

Health and Safety Code 7050.5

Health and Safety Code 7050.5 addresses the protection of human remains discovered in any location other than a dedicated cemetery and makes it a misdemeanor for any person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law, except as provided in PRC Section 5097.99. It further states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined that the remains are not subject to the provisions concerning investigation of the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in PRC Section 5097.98. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the NAHC.

California Government Code Section 6254(r) and 6254.10

California Government Code Section 6254(r) and Section 6254.10 of the California Public Records Act were enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 6254(r) explicitly authorizes public agencies to withhold information from the public relating to "Native American graves, cemeteries, and sacred places maintained by the Native American Heritage Commission." Section 6254.10 specifically exempts from disclosure requests for "records that relate to archaeological site information and reports, maintained by, or in the possession of the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, the Native American Heritage Commission, another state agency, or a local agency, including the records that the agency obtains through a consultation process between a Native American tribe and a state or local agency."

4.4.3.2 Local

As a property under the jurisdiction of the District, the project site is not within the jurisdiction of the City of San Diego. Therefore, the proposed project is not subject to review and approval by the City of San Diego's Historical Resources Board. Consequently, the significance criteria outlined in the Historical Resources Guidelines of the City of San Diego's *Land Development Manual* are not used to evaluate cultural resources within the study area for the proposed project.

4.4.4 Project Impact Analysis

4.4.4.1 Methodology

Background research and field studies were conducted in compliance with CEQA (PRC Section 21000 et seq.), pursuant to the State CEQA Guidelines (CCR Title 14 Section 15000 et seq.). The effort to identify cultural resources in the study area, which comprises the TAMT property, included records searches of previous cultural resource investigations and recorded sites; background research and a review of literature relevant to the prehistory, ethnography, and history of the project site and proposed project vicinity; consultation with the NAHC and Native Americans; and site visits. A map of the cultural resources study area and a detailed discussion of methodology are presented in the cultural resources technical study included in Appendix H.

Record Search and Literature Review

To address potential impacts associated with cultural resources, ICF obtained a cultural resources record search from the SCIC at San Diego State University, which is part of the California Historical Resources Information System. The record search and literature review provide for identification of previously documented archaeological and historic-era built environment resources within the cultural resources study area and within a half-mile radius of the cultural resources study area. The search included the following elements of the California Historical Resources Information System: previously recorded sites, previously recorded studies, California Points of Historical Interest, California Historical Landmarks, the NRHP, the CRHR, California Inventory of Historic Resources, the Office of Historic Preservation's Historic Properties Directory, and San Diego area historic maps. The SCIC reported results of the record search on June 15, 2014.

The record search revealed that 136 cultural resources surveys have been conducted within a half-mile radius of the project area. Of these, 10 have covered at least some portion of the cultural resources study area (Table 4.4-3).

Table 4.4-3. Previous Studies within the Study Area

NADB #*	Year	Author	Title
1122631	1991	Carrico, Richard et Al.	Archaeological Survey, Monitoring and Testing Report for the AT&SF Railway Company Crosby Street TOFC Yard, CA-SDI-5931, San Diego County
1124309	1990	Carrico, Richard and Steven Briggs	Draft Archaeological Survey, Monitoring & Testing Report for the AT&SF Railway Company Crosby Street TOFC Yard CA-SDI-5931
1124354	1995	Carrico, Richard L.	Draft Archaeological Survey, Monitoring & Testing Report for the AT&SF Railway Company Crosby Street TOFC Yard CA-SDI-12,093 & CA-SDI-5931, San Diego
1124358	1991	Carrico, Richard L.	Archaeological Survey, Monitoring & Testing Report for the AT&SF Railway Company Crosby Street TOFC Yard CA-SDI-5931, San Diego
1124599	1991	City of San Diego	Public Notice of Proposed Mitigated Negative Declaration Santa Fe TOFC Yard, City of San Diego
1125924	1997	City of San Diego	Mitigated Negative Declaration for Addition to Sewer Pump Station No. 22, City of San Diego
1127998	2002	May, Ronald V.	Historical Nomination of the South Park Commercial Transit Historic District
1130654	2006	Pierson, Larry J.	An Archaeological Report for the Mitigation Monitoring and Reporting Program at the Hilton San Diego Convention Center Hotel, Port of San Diego/Centre City Development Corporation
1132200	2009	Herrmann, Myra	Draft Environmental Impact Report for the Master Storm Water System Maintenance Program (MSWSMP), City of San Diego Development Services Department
1134730	2013	Davison, Kristina, and Mary Robbins-Wade	Lake Morena's Oak Shores Mutual Water Company Water System Improvements Project Phase 2 Archaeological Monitoring

* NADB: National Archaeological Database

Within a half-mile radius of the study area, the record search revealed the presence of 54 previously recorded cultural resources. Of these, one is a prehistoric resource and 53 are historic-era resources. Portions of two previously recorded historic-era cultural resources are within the cultural resources study area. No previously recorded historic-era resources are within the cultural resources study area.

Historic maps and aerial photographs indicate that one previously recorded cultural resource, CA-SDI-16385, the historic-period Santa Fe Railway line (constructed in 1882–83), was close to the eastern boundary of the study area. That segment of the Santa Fe Railway line was part of a larger 5.9-mile segment surveyed and evaluated for NRHP eligibility in 2002, and found to have insufficient historical integrity to convey any significance attributable to it. The 2002 evaluation of the resource found that most of the 5.9-mile segment consisted of modern tracks and associated railroad features, not track or associated features dating to the nineteenth century. During the built environment survey conducted for the cultural resources technical study prepared to support this Draft EIR, no railroad tracks or associated features pre-dating the development of the TAMT in the late 1950s and early 1960s were identified in the eastern portion of the study area adjacent to the BNSF rail yard.

Historical Research

Historical research for this study was conducted at multiple repositories in the San Diego area. These included the Main Branch of the San Diego Public Library and the historical collection housed in its California Room, the San Diego History Center, and Geisel Library, the central library at the University of California, San Diego. Extensive use was made of the Newsbank database at Geisel Library, which provides digital, full-text searchable access to the historical *San Diego Evening Tribune* and *San Diego Union*. Sources were also gathered through online searches of Google, the full-text searchable JSTOR database of academic journals, and the Internet Archive. The District provided ICF staff with several useful sources, including the original plans from 1958 of the TAMT's two transit sheds and an extensive site history of the project site prepared by Ninyo & Moore that includes numerous historic aerial and bird's-eye views of the project site from the early twentieth to the early twenty-first century.

Native American Outreach

On June 16, 2014, ICF requested a review of the sacred lands files from the NAHC. The NAHC responded on June 30, 2014, stating that the sacred lands files failed to indicate the presence of Native American cultural resources in the study area. The NAHC also provided a list of 19 Native American individuals and organizations that may have knowledge of cultural resources in the study area. On May 14, 2015, outreach letters were sent to all 19 individuals and organizations identified by the NAHC. On May 26, 2015, a letter was received from the Viejas Band of Kumeyaay Indians stating that the study area has cultural significance or ties to Viejas. The letter requests the presence of a Kumeyaay Cultural Monitor on site for all ground-disturbing activities.

Field Surveys

On April 21, 2014, ICF archaeologist Karolina Chmiel assessed the potential for archaeological surface deposits at the project site during a site visit and tour of the project site. However, because the majority of the project site is developed with buildings, structures, pavement, and railroad lines or is otherwise disturbed, the cultural resources study area was not subjected to a formal archaeological survey. In addition, on May 14, 2014, ICF historian/architectural historian Tim Yates, PhD, surveyed the study area for intact built-environment resources 45 years of age or older.

4.4.4.2 Thresholds of Significance

The following significance criteria for evaluation of cultural resources is based on State CEQA Guidelines Appendix G, and provide the basis for determining the significance of impacts associated with cultural resources resulting from implementation of the proposed project. The project would have a significant impact on cultural resources if it would result in the following.

1. Cause a substantial adverse change in the significance of a historical resource as defined by Section 15064.5 of the State CEQA Guidelines.
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the State CEQA Guidelines.

3. Directly or indirectly destroy a unique paleontological resource or site or a unique geological feature.
4. Disturb any human remains, including those interred outside of formal cemeteries.

As discussed in the Initial Study/Environmental Checklist (Appendix A), Threshold 3 is not included in the analysis below, as impacts on paleontological resources have been evaluated and were determined to be less than significant. Those conclusions are summarized in Chapter 6, *Additional Consequences of Project Implementation*. The analysis below pertains to Thresholds 1, 2, and 4 and is concerned only with potential impacts on significant historical resources, significant archaeological resources, and prehistoric human remains.

4.4.4.3 Project Impacts and Mitigation Measures

Threshold 1: Implementation of the proposed project would not cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the State CEQA Guidelines.

Impact Discussion

Demolition and Initial Rail Component

The Demolition and Initial Rail Component would include the demolition of Transit Sheds #1 and #2, relocation of an existing dry bulk tenant from Transit Shed #2 to a location within the proposed northeastern portion of the consolidated dry bulk facility, on-terminal rail upgrades that include a rail lubricator and compressed air system for air brake testing, and addition of a modular office with restroom facilities to replace the office that would be demolished as part of Transit Shed #2. As discussed under Section 4.4.2.5, none of these potential historic resources are significant and each was found to be “not eligible” for listing in the CRHR. None of the historic-era built environment resources within the Demolition and Initial Rail Component study area qualify as historical resources for the purposes of CEQA.

Full TAMT Plan Buildout

As described in Chapter 3, *Project Description*, implementation of the individual components described within the TAMT plan depends on market opportunities that occur through the planning horizon (Year 2035). Aside from the buildings proposed for demolition under the Demolition and Initial Rail Component discussed above, it is uncertain if buildings would be demolished in the future. To be conservative and provide the greatest flexibility to future components, however, it is assumed that any of the existing buildings and structures within the project site boundary may be demolished within the planning horizon (Year 2035), including Warehouse C and the molasses tanks. The demolition of a federally or state-listed building or structure or any such resources eligible for listing would be considered a significant impact.

The identified historic-era built-environment resources within the study area were evaluated for CRHR eligibility in Section 4.4.2.5, and were found to be “not eligible” for listing in the CRHR. None of the historic-era built environment resources within the study area appear to qualify as historical resources for the purposes of CEQA. Therefore, demolition of any of the buildings or structures within the project site boundaries would not result in a significant impact on a historical resource as defined by CEQA.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Implementation of the Demolition and Initial Rail Component would not cause a substantial adverse change in the significance of an historical resource as defined in Section 15064.5 of the State CEQA Guidelines.

Full TAMT Plan Buildout

Full buildout of the TAMT plan would not cause a substantial adverse change in the significance of an historical resource as defined in Section 15064.5 of the State CEQA Guidelines.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

No mitigation is required.

Level of Significance After Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

Impacts would be less than significant.

Threshold 2: Implementation of the proposed project would not cause a substantial adverse change in the significance of an archaeological resource as defined in Section 15064.5 of the State CEQA Guidelines.

Impact Discussion

Demolition and Initial Rail Component

As discussed under Section 4.4.4.1, no archaeological resources have been identified or recorded in the areas that would be subject to ground-disturbing activities as part of the proposed Demolition and Initial Rail Component. Because these areas of the project site were previously within bay waters and filled during the first half of the twentieth century, it is highly unlikely that the fill material in these areas contains subsurface deposits of potentially significant archaeological resources. For these reasons, the Demolition and Initial Rail Component does not have the potential to result in an adverse change in the significance of an archaeological resource.

Full TAMT Plan Buildout

The record search yielded no records of previously recorded archaeological resources within the cultural resources study area for the TAMT plan, as discussed under Section 4.4.4.1. However, the potential exists that subsurface deposits could be present within the eastern section of the study area due to the proximity of an extensive prehistoric resource located nearby. The recorded portions of CA-SDI-5931 are east of the study area boundary. CA-SDI-5931 consists of an extensive artifact scatter and included one Native American burial found during grading activities within the rail yard adjacent to the terminal. The site was tested in 1993, and the record suggests the possibility of intact buried deposits and possible other prehistoric human remains beyond the areas tested. Thus, the exact boundaries of site CA-SDI-5931 are not known, and while the site is not directly adjacent to the study area, it is possible that the site extends into the eastern portion of the study area, as indicated on Figure 4.4-1. Any ground-disturbing activities within this area could potentially encounter a significant archaeological resource, and damage to such a resource may ensue if precautions are not taken (**Impact-CUL-1**).

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Implementation of the Demolition and Initial Rail Component would not cause a substantial adverse change in the significance of an archaeological resource as defined in Section 15064.5 of the State CEQA Guidelines.

Full TAMT Plan Buildout

Full buildout of the TAMT plan may cause a substantial adverse change in the significance of an archaeological resource as defined in Section 15064.5 of the State CEQA Guidelines. Potentially significant impact(s) include:

> **Impact-CUL-1: Potential Buried Archaeological Resources**. The recorded portions of site CA-SDI-5931 are close to the eastern study area boundary. The exact boundaries of CA-SDI-5931 are not known and evidence suggests that the site could be larger than the area tested in 1993. Therefore, project activities within the eastern area of the project site, as mapped on Figure 4.4-1, could potentially encounter archaeological subsurface deposits associated with CA-SDI-5931. Such an encounter, if it were to destroy archaeological resources, would be considered significant.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

> **MM-CUL-1: Archaeological Monitoring in Areas of Sensitivity**. To reduce potential impacts on CA-SDI-5931, all proposed grading, ~~and~~ excavating, and geotechnical testing for the proposed project in the area of potential archaeological sensitivity shall be monitored by a qualified archaeologist(s), who meets the Secretary of the Interior's Professional Qualifications Standards,

as promulgated in 36 CFR 61, and a Native American cultural monitor, the latter of which has been requested by the Viejas Band of Kumeyaay Indians. The sensitive portion of the project area, where it is possible that artifacts associated with CA-SDI-5931 could be buried, is immediately east of Warehouse C and south and east of the silo complex and the rail car unloading building, as indicated on Figure 4.4-1. The sensitive area includes the molasses tanks, truck scale building, spur lines north, east, and south of the molasses tanks, and paved and unpaved parking areas near the Crosby Road entrance. The following additional conditions shall only apply to the sensitive portion of the project area indicated on Figure 4.4.-1 during earthwork activities, including grading and trenching.

- The Qualified Archaeologist shall participate in a preconstruction meeting to inform all personnel of the potential for historical archaeological materials to be encountered during ground-disturbing activities.
- If an isolated artifact or historic period deposit is discovered that requires salvaging, the Qualified Archaeologist shall have the authority to temporarily halt construction activities within 100 feet of the find and shall be given sufficient time to recover the item(s) and map its location with a global positioning system (GPS) device.
- If a potentially eligible Native American archaeological resource is discovered, the Qualified Archaeologist shall have the authority to temporarily halt construction activities within 100 feet of the find until a Qualified Archaeologist Principal Investigator (PI) makes a determination regarding the significance of the resource.
    - The PI will notify the District to discuss the significance determination and shall also submit a letter indicating whether additional mitigation is required. If the resource is determined to be not significant, the PI shall submit a letter to the District indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that no further work is required.
    - If the resource is determined to be significant, the PI shall submit an Archaeological Data Recovery Plan that has been reviewed by the Native American consultant/monitor, and obtain written approval from the Port to complete data recovery. Impacts on significant resources must be mitigated before ground-disturbing activities in the area of discovery will be allowed to resume.
- The Qualified Archaeologist shall treat recovered items in accordance with current professional standards by properly determining provenance, cleaning, analyzing, researching, reporting, and curating them in a collection facility meeting the Secretary of the Interior’s Standards, as promulgated in 36 CFR 79, such as the San Diego Archaeological Center.
- Within 60 days after completion of the ground-disturbing activity, the Qualified Archaeologist shall prepare and submit a final report to the District for review and approval, which shall discuss the monitoring program and its results, and provide interpretations about the recovered materials, noting to the extent feasible each item’s class, material, function, and origin.

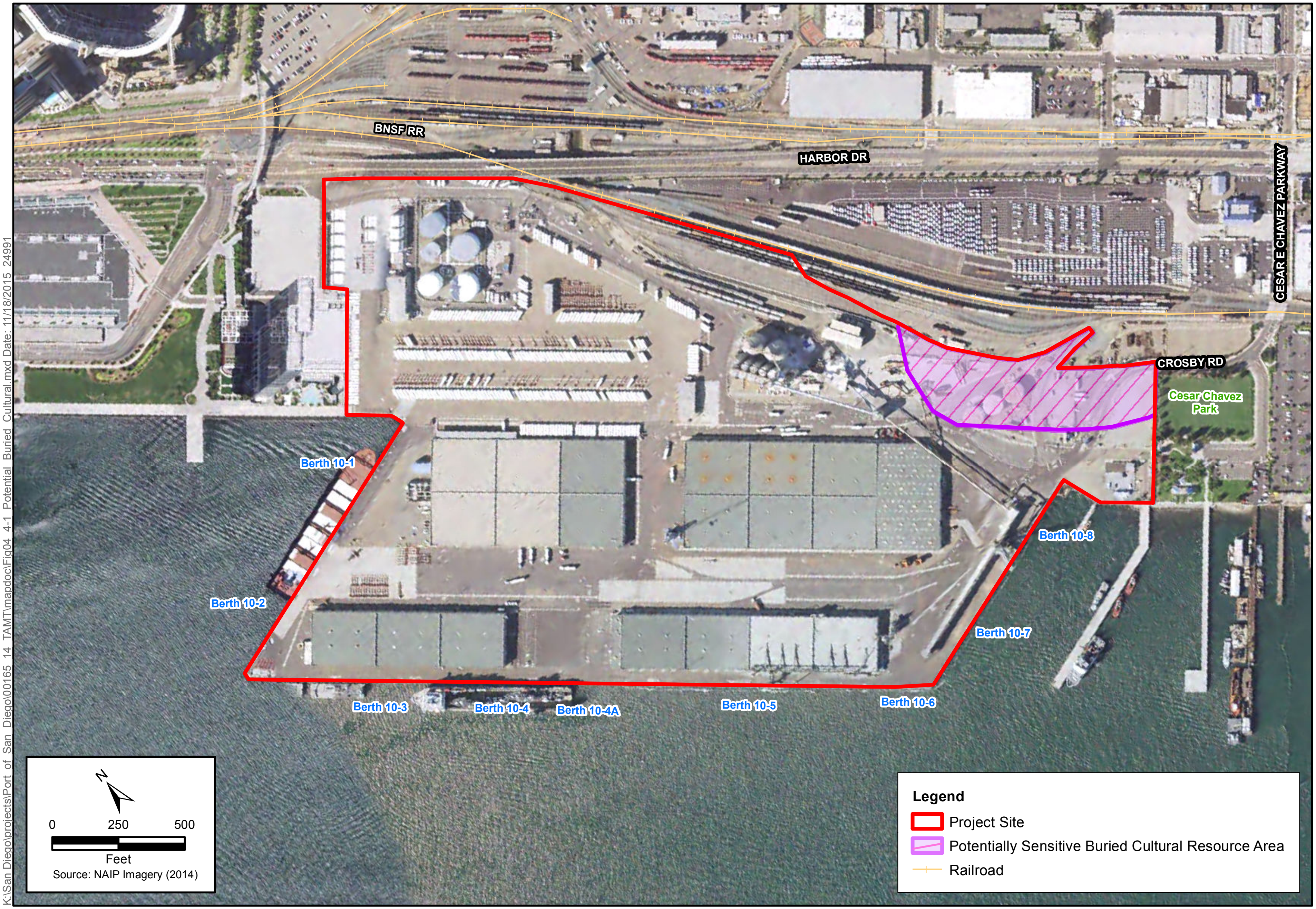

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Figure 4.4-1
Potentially Sensitive Buried Cultural Resource Area
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component

Level of Significance After Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

After implementation of **MM-CUL-1, Impact-CUL-1** would be reduced to a less-than-significant level because the recommended monitoring of any ground-disturbing activities in the area near CA-SDI-5931 would minimize the potential of damage or loss of unknown subsurface archaeological resources. Impacts would be less than significant for the full buildout of the TAMT plan.

Threshold 4: Implementation of the proposed project <u>would not</u> disturb human remains, including those interred outside of formal cemeteries.

Impact Discussion

Demolition and Initial Rail Component

No human remains are known to be located within the Demolition and Initial Rail Component study area. The eastern portion of the study area is potentially sensitive for archaeological deposits and prehistoric human remains because of its proximity to CA-SDI-5931. However, ground-disturbing activities associated with the Demolition and Initial Rail Component would take place in areas that were within bay waters prior to the year 1900 and that were filled during the first five decades of the twentieth century. Therefore, there is a very low potential for human remains to be located with the study area of the Demolition and Initial Rail Component. Should an unexpected discovery be made, California Health and Safety Code Section 7050.5 and PRC Section 5097.98 would apply, as discussed under the full TAMT plan buildout analysis below.

Full TAMT Plan Buildout

No human remains are known to be within the study area. However, recorded portions of CA-SDI-5931 are located east of the study area boundary. The recorded portion of CA-SDI-5931 outside the study area included one Native American burial found during grading activities within the rail yard, which is adjacent to the project site. Testing of the site indicated the possibility of other human burials beyond the areas tested. The exact boundaries of site CA-SDI-5931 are not known, and it is possible that the site extends to the eastern portion of the study area, where ground-disturbing activities could take place as part of the implementation of the proposed TAMT plan (**Impact-CUL-1**).

Any ground-disturbing activities that would occur within this area would be monitored by a qualified archaeologist and a Native American monitor pursuant to Mitigation Measure **MM-CUL-1**. Should human remains be encountered during any future excavation activities in this portion of the project site, California Health and Safety Code Section 7050.5 states that no further disturbance can occur until the county coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. The construction supervisor on site, in coordination with the qualified archaeological and Native American monitors, must notify the county coroner of the find immediately. If the remains are determined to be prehistoric, the coroner will notify the NAHC, which will designate and notify the most likely descendant (MLD). The MLD would complete their inspection and make their recommendation to the District for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98. MLD recommendations must be made within 48 hours of the NAHC notification to the MLD, consistent with applicable law. Because existing laws preclude the potential to affect possible buried prehistoric human remains and MM-CUL-1 would require monitoring in the area that may contain buried human remains, impacts would be less than significant.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Implementation of the proposed Demolition and Initial Rail Component would not disturb human remains, including those interred outside of formal cemeteries. Impacts would be less than significant.

Full TAMT Plan Buildout

Full buildout of the TAMT plan may disturb human remains, including those interred outside of formal cemeteries. Potentially significant impact(s) include:

> **Impact-CUL-2: Potential Disturbance of Prehistoric Human Remains.** The recorded portion of CA-SDI-5931 included one Native American burial found during grading activities within the rail yard adjacent to the project site and testing indicated the possibility of other prehistoric human burials beyond the areas tested. The exact boundaries of site CA-SDI-5931 are not known, and it is possible that the site extends to the eastern portion of the study area as indicated in Figure 4.4-1, where ground-disturbing activities could take place as part of the implementation of the proposed TAMT plan. Therefore, any ground-disturbing activities in this area would have the potential to encounter prehistoric human remains.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

Implement **MM-CUL-1** as indicated under Threshold 2, **Impact-CUL-1**.

Level of Significance After Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

With existing laws and regulations such as the California Health and Safety Code Section 7050.5 and PRC Section 5097.98, along with monitoring by a qualified archaeologist and Native American monitor in the designated area as indicated in Figure 4.4-1, any potential human remains discovered would be treated in accordance with best practices to ensure impacts would be less than significant.

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Section 4.5
Geology and Soils

4.5.1 Overview

This section describes the existing conditions and applicable laws and regulations for geology and soils, followed by an analysis related to the proposed project's potential of (1) exposing people or structures to geologic hazards and (2) being located on unstable ground.

Information in this section is based on geotechnical reports prepared at the project site by Ninyo & Moore, including the *Geotechnical Evaluation for the Proposed Light Poles, Bay D, and Headhouse of Transit Shed #1 at 10th Avenue Marine Terminal* (Appendix I-1); *Updated Geotechnical and Fault Hazard Evaluation, Commercial Berthing Pier and TAMT* (Appendix I-2), and the *Geotechnical Evaluation for Proposed Container Storage Areas and Light Poles at 10th Avenue Marine Terminal* (Appendix I-3).

Pursuant to the recent Supreme Court case decision in *California Building Industry Association v. Bay Area Air Quality Management District (2015)* 62 Cal. 4th 369, Case No. S213478, CEQA does not require an analysis of how the existing environmental conditions will affect a project's residents or users unless the project would exacerbate those conditions. Therefore, when discussing impacts of the environment on the project, such as how a fault rupture or soil condition may affect a project, the analysis will first determine if there is a potential for the project to exacerbate the issue. If evidence indicates it would not, then the analysis will conclude by stating such. If it would potentially exacerbate the issue, then evidence is provided to determine if the exacerbation would or would not be significant.

Based on the analysis that follows, all impacts related to geology and soils would be less than significant. No mitigation is required.

4.5.2 Existing Conditions

4.5.2.1 Subsurface Conditions

The project site is generally underlain by fill, bay deposits, and materials of the Quaternary-aged Bay Point Formation, which are also known as old paralic deposits. The general stratigraphy consists of two surficial soil units of fill materials and bay deposits underlain by old paralic deposits to total depths explored; these units are described below in order of increasing age. The following information is summarized from Appendix I-2.

Undocumented Fill

The project site was constructed on fill material and reclaimed tidelands between 1930 and 1950. The undocumented fill generally consists of damp to saturated, very loose to medium dense sand, silty sand, and clayey sand, with gravel and cobbles. Undocumented fill was encountered from ground surface to a depth of up to 9 feet.

Bay Deposits

Bay deposits were encountered below the fill, extending to a depth of approximately 15.5 feet below ground surface. The contact between the Bay Point Formation and the younger bay deposits generally increases in depth toward the bay. The bay deposits are characterized by saturated, very loose to very dense sand, silty sand, and clayey sand, and very stiff to hard sandy clay.

Old Paralic Deposits

Quaternary-age old paralic deposits (previously called Bay Point Formation) underlie both the shallow fill materials and the bay deposits at the project site. In general, old paralic deposits consist of marine and non-marine, light yellowish to light reddish-brown, poorly consolidated, fine- to medium-grained sandstone.

4.5.2.2 Groundwater

Groundwater was encountered at a depth of approximately 8.5 feet below ground surface and is anticipated to occur at a depth of approximately 5 to 10 feet below ground surface (Appendix I-1). Fluctuations in the groundwater level may occur due to variations in ground surface topography, subsurface geologic conditions and structure, rainfall, irrigation, tides, and other factors. Groundwater at the project site is characterized by high total dissolved solids, chloride, and sodium content, which generally exceeds the recommended limits for drinking. These impairments are likely due to seawater intrusion from San Diego Bay (DWR 2004).

4.5.2.3 Faults and Seismicity

Regional

The project area contains several faults that have the potential to create seismic impacts at the project site. The approximate locations of fault strands encountered during previous seismic surveys are shown on Figure 4.5-1. As shown, projections of the active Rose Canyon Fault Zone (RCFZ) trend in the direction of the site and there are indications of active or potentially active faults underlying the site.

The RCFZ is a complex series of fault segments that strike generally north–northwest through San Diego. Within San Diego Bay, the RCFZ splays into multiple, subparallel strands. The major faults that compose the southern end of the RCFZ within the San Diego Bay area are the Spanish Bight, Coronado, and Silver Strand faults. Together, these faults define a wide and complex faulted basin occupied by San Diego Bay and a narrow section of the continental shelf west of the Silver Strand. The RCFZ has been mapped as “active” by the California Geological Survey, and a State of California Earthquake Fault Zone has been established for several areas of downtown San Diego, Coronado, and San Diego Bay.

The seismic record indicates that there have been numerous moderate earthquakes in the San Diego Bay area, including a cluster of events in 1964 and 1985 between magnitude 3 and 4+. The greatest

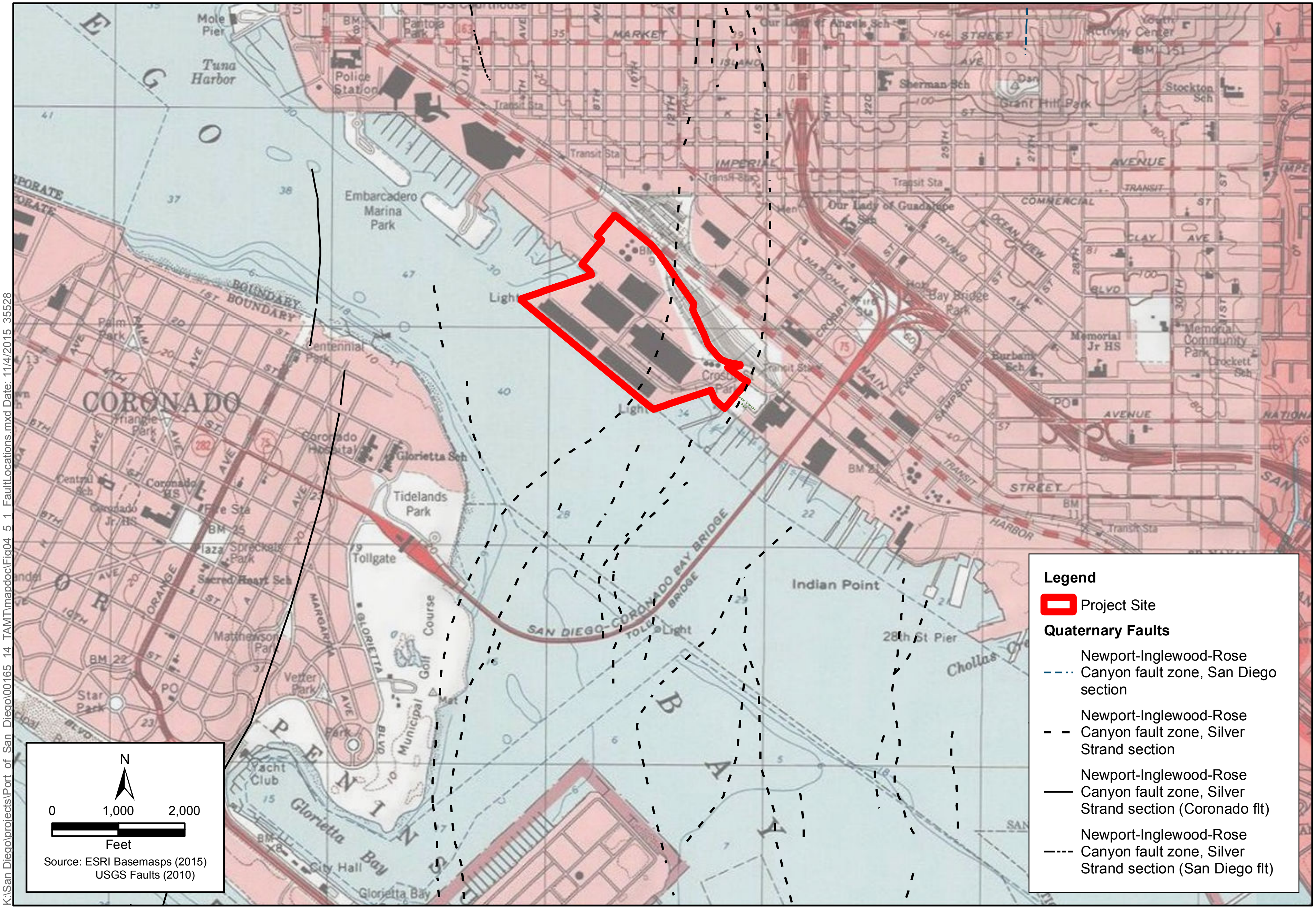

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Figure 4.5-1
Fault Locations
Tenth Ave Marine Terminal Near-Term Optimization Improvements Project and Maritime Cargo Redevelopment Plan

peak acceleration recorded in the downtown area was 34 centimeters/second (0.03 gravity [g]) produced by an offshore magnitude 5.6 earthquake in 1964. It is estimated that earthquakes with a magnitude of 5.0 to 5.9 are expected approximately once every 100 years. Higher magnitude earthquakes may also occur, but with a lower probability of occurrence. Approximate comparisons of earthquake magnitude, intensity, and peak acceleration are provided in Table 4.5-1.

Table 4.5-1. Correlation of Earthquake Intensity and Acceleration

Magnitude (Richter scale)[1]	Intensity (MMI) Value[2]	Acceleration (g)	Perceived Shaking	Potential Damage
< 2.0	I	<0.0017	Not felt	None
2.0–2.9	II–III	0.0017–0.014	Weak	None
3.0–3.9	IV	0.014–0.039	Light	None
4.0–4.9	V	0.039–0.092	Moderate	Very light
5.0–5.9	VI	0.092–0.18	Strong	Light
6.0–6.9	VII	0.18–0.34	Very strong	Moderate
7.0–7.9	VIII	0.34–0.65	Severe	Moderate to heavy
8.0+	IX–X+	0.65–1.24	Violent to Extreme	Heavy to very heavy

Sources: Association of Bay Area Governments 2015; USGS 2015.

Notes:

[1] The magnitude of an earthquake is determined from the logarithm of the amplitude of waves recorded by seismographs. Adjustments are included for the variation in the distance between the various seismographs and the epicenter of the earthquakes.

[2] The Modified Mercalli Intensity (MMI) scale depicts shaking severity. An earthquake has a single magnitude that indicates the overall size and energy released by the earthquake. However, the amount of shaking experienced at different locations varies based on overall magnitude, how far you are from the fault that ruptured in the earthquake, and whether you are on rock or thick valley deposits that shake longer and harder than rock.

On Site

Earthquakes that may occur on the RCFZ or other faults within the Southern California and northern Baja California areas are potential generators of significant ground motion at the project site. The City of San Diego Safety Study, Geologic Hazards and Faults, Sheet 17 defines the eastern portion of the project site as a *Hazard Category 11: Active, Alquist-Priolo Earthquake Fault Zone.* In addition, the California Geological Survey issued a revised Earthquake Fault Zone Map for the Point Loma Quadrangle that includes a portion of the downtown San Diego area. The Silver Strand fault is mapped as crossing the eastern portion of the project site under the existing Transit Shed #2 and Warehouse C. Additionally, during preparation of the geotechnical evaluation conducted for the project site, evidence was found of a subsurface anomaly that is interpreted as an active or potentially active fault at the site (Appendix I-3). Therefore, there is a potential for ground rupture from onsite faulting at the site. However, surface rupture at the project site has not been recorded with any of the previous seismic activity.

4.5.2.4 Liquefaction, Lateral Spreading, and Seismically Induced Settlement

Seismically induced soil liquefaction can be described as a significant loss of strength and stiffness due to cyclic pore water pressure generation from seismic shaking or other large cyclic loading. Liquefaction typically occurs when a site is located in a zone with seismic activity, onsite soils are cohesionless, groundwater is encountered within 50 feet of the surface, and soils' relative densities are less than about 70 percent. If these four criteria are met, a seismic event could result in a rapid pore-water pressure increase from the earthquake-generated ground accelerations. The material is a free-flowing material that does not allow for increased pore-water pressure. Adverse impacts associated with liquefaction include lateral spreading, ground rupture and/or sand boils, and settlement of the liquefiable layers. Lateral spreading occurs when there is liquefiable soil in the immediate vicinity of a free face, such as a slope. Factors controlling lateral displacement include earthquake magnitude, distance from the earthquake epicenter, thickness of liquefiable soil layer, grain size characteristics, fine contents of the soil, and the density of granular deposits, such as sands and gravel. Seismically induced settlement is settlement that may occur whether or not the potential for liquefaction exists.

The project site is underlain by relatively loose, unconsolidated bay deposits and fill materials, generally consisting of poorly graded fine sand. These characteristics suggest that the potential for liquefaction and seismically induced settlement occurring at the project site is high due to the relatively low density of the underlying loose to medium dense sands and silty sands coupled with the shallow groundwater table. As mapped by the City of San Diego Seismic Safety Study, Geologic Hazards and Fault Maps, and provided as Figure 4.5-2, the site is within an area with a high potential for liquefaction (City of San Diego 2008).

4.5.3 Applicable Laws and Regulations

4.5.3.1 Federal

International Building Codes

Development and building design standards, implemented through the California Building Code (CBC), require the proposed project to comply with appropriate seismic design criteria in the International Building Code, adequate drainage facility design, and preconstruction soils and grading studies. Seismic design standards have been established to reduce many of the structural problems occurring because of major earthquakes. In 1998, the code was revised as follows.

- Upgrade the level of ground motion used in the seismic design of buildings.
- Add site amplification factors based on local soils conditions.
- Improve the way ground motion is applied in detailed design.

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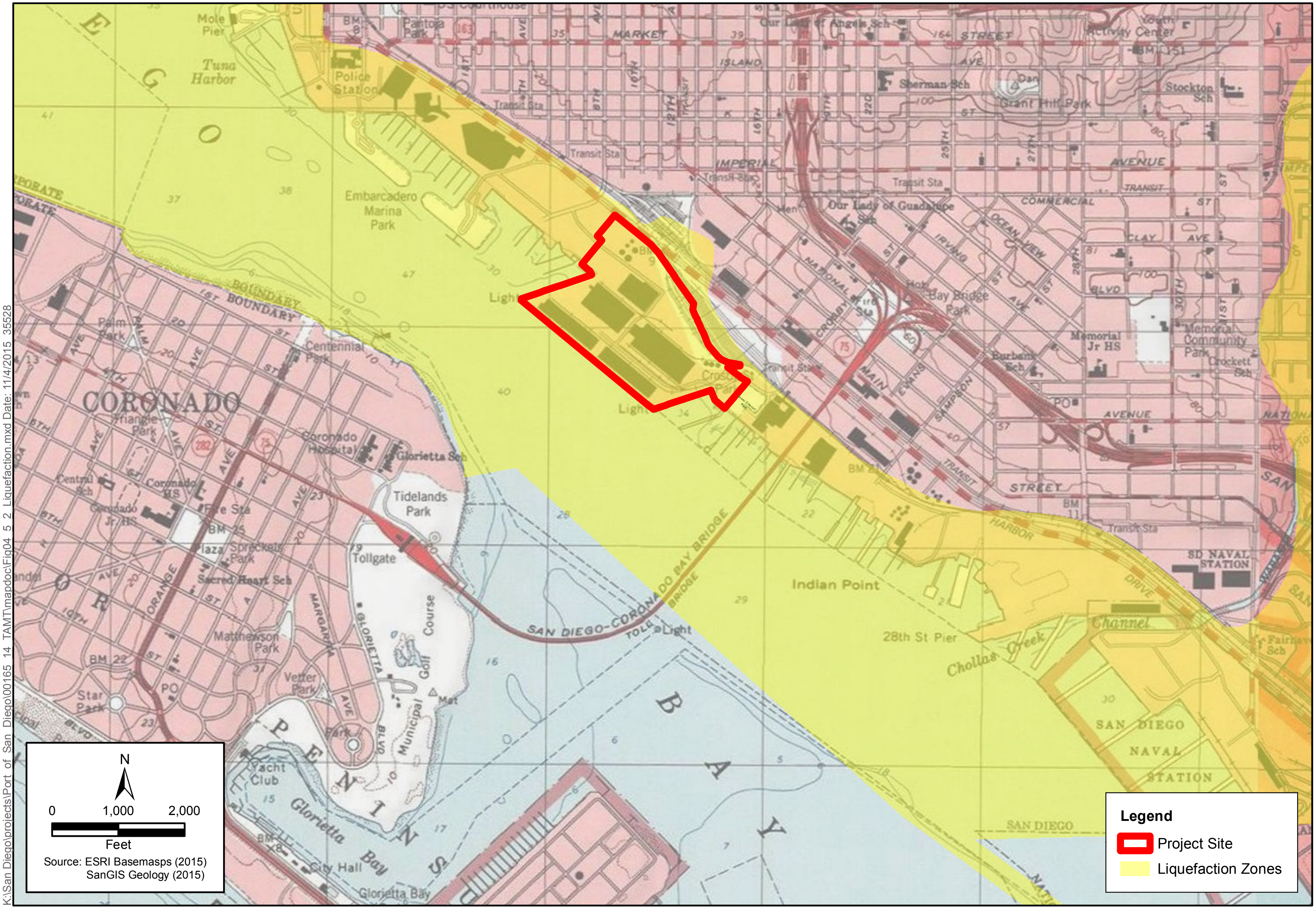

Figure 4.5-2
Seismic Hazards Zone Map
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component

Occupational Safety and Health Act of 1970

The Occupational Safety and Health Act establishes the framework for safe and healthful working conditions for working men and women by authorizing enforcement of the standards developed under the act. The act assigns the Occupational Safety and Health Administration (OSHA) two regulatory functions: setting standards and conducting inspections to ensure that employers are providing safe and healthful workplaces. OSHA standards may require that employers adopt certain practices, means, methods, or processes reasonably necessary and appropriate to protect workers on the job. Employers must become familiar with the standards applicable to their establishments and eliminate hazards.

Compliance with standards may include implementing engineering controls to limit exposures to physical hazards and toxic substances, implementing administrative controls, and ensuring that employees have been provided with, have been effectively trained on, and use personal protective equipment when required for safety and health, where the former controls cannot be feasibly implemented. Employees must comply with all rules and regulations that apply to their own actions and conduct. Even in areas where OSHA has not set forth a standard addressing a specific hazard, employers are responsible for complying with the act's "general duty" clause. The general duty clause (Section 5(a)(1)) states that each employer "shall furnish…a place of employment which is free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees."

Regulations defining safe standards have been developed for general industry, construction, maritime, recordkeeping, and agriculture. OSHA standards specific to safety and health regulations pertaining to construction are listed in 29 Code of Federal Regulations (CFR) 1926, Subtitle B. Specifically, subpart C handles general safety and health provisions including safety training and education, first aid and medical attention, fire protection and prevention, and personal protective equipment. Subpart D is specific to occupational health and environmental controls such as radiation, gases/vapors/fumes/dust, lead, hazardous chemicals, and noise exposure. Subpart P handles excavation work and safety. Subparts Q and R handle concrete/masonry and steel structures, respectively. Subpart T provides specifications for demolition, while subpart CC provides requirements for crane operation during construction. In addition, several more subparts provide additional requirements.

4.5.3.2 State

Alquist-Priolo Earthquake Fault Zoning Act

California's Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) (Public Resources Code [PRC] 2621 et seq.) was enacted by the State of California in 1972.[1] The Alquist-Priolo Act's primary purpose is to prohibit the construction of structures intended for human occupancy across the traces of active faults and strictly regulates construction in the corridors along active faults. It also defines criteria for identifying active faults, giving legal weight to terms such as "active," and establishes a process for reviewing building proposals in and adjacent to active faults. In addition, the Alquist-Priolo Act requires the State Geologist to establish regulatory zones, known as "earthquake fault zones," around the surface traces of active faults and to issue appropriate maps to

[1] The act was originally titled the Alquist-Priolo Geologic Hazards Zone Act.

assist cities and counties in planning, zoning, and building regulation functions. Maps are distributed to all affected cities and counties for the controlling of new or renewed construction and are required to sufficiently define potential surface rupture or fault creep. The State Geologist is charged with continually reviewing new geologic and seismic data and revising existing zones and delineating additional earthquake fault zones when warranted by new information. According to the Alquist-Priolo Act, before a project can be permitted, cities and counties shall require a geologic investigation, prepared by a licensed geologist, to demonstrate that buildings will not be constructed across active faults. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back. Although setback distances may vary, a minimum 50-foot setback is required.

Under the Alquist-Priolo Act, faults are zoned, and construction along or across them is strictly regulated if the faults are considered "sufficiently active" and "well-defined." A fault is considered sufficiently active if one or more of its segments or strands shows evidence of surface displacement during Holocene time (defined for the purposes of the act as within the last 11,000 years). A fault is considered well-defined if its trace can be clearly identified by a trained geologist at the ground surface or in the shallow subsurface, using standard professional techniques, criteria, and judgment.

California Building Code

The State of California provides minimum standards for building design through the CBC, including seismic safety standards for new buildings. The CBC is based on the International Building Code (formerly known as the Uniform Building Code) established by the International Code Council (formerly known as the International Council of Building Officials), which is used widely throughout the United States (generally adopted on a state-by-state or agency-by-agency basis), and has been modified for conditions within California. The current edition is the 2013 edition, which became effective on January 1, 2014.[2] The 2013 CBC incorporates the latest seismic design standards for structural loads and materials as well as provisions from the National Earthquake Hazards Reduction Program to mitigate losses from an earthquake and provide for the latest in earthquake safety. Chapter 16 specifically of the CBC contains precise requirements for seismic safety.

Building codes provide minimum standards regulating a number of aspects of construction that are relevant to geology and geologic hazards. These include excavation, grading, and fill placement; foundations; mitigation of soil conditions such as expansive soils; and seismic design standards for various types of structures.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (PRC 2690–2699.6) is intended to reduce damage resulting from earthquakes. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. Its provisions are similar in concept to those of the Alquist-Priolo Act: the State is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards; and cities and counties are required to regulate development within mapped seismic hazard zones.

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[2] California Building Standards Commission, Current 2013 Codes, http://www.bsc.ca.gov/Home/Current2013Codes.aspx

Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development. Under PRC 2697, cities and counties shall require, prior to the approval of a project located in a seismic hazard zone, a geotechnical report defining and delineating any seismic hazard. Each city or county shall submit one copy of each geotechnical report, including mitigation measures, to the State Geologist within 30 days of its approval.

4.5.3.3 Local

The proposed project is required to obtain grading and construction permits from the City of San Diego. This includes any future projects proposed consistent with the TAMT plan. Therefore, the following City ordinance applies to the proposed project.

City of San Diego Municipal Code

Chapter 14, Article 2, Division 1: Grading Regulations

Earthwork activities, including grading, are regulated by the City of San Diego Municipal Code, Chapter 14, Article 2, Division 1. This Division provides standards for slope stability, protection of property, erosion control, water quality, and landform preservation and to protect the public health, safety, and welfare of persons, property, and the environment. The following sections are related to geology and soils and apply to the proposed project.

Section 142.0130: Development Standards for Grading

All *grading* shall be designed and performed in conformance with applicable City Council policies and the standards established in the Land Development Manual.

Section 142.0131: Geotechnical Report Requirements

All *grading* shall be designed to incorporate the recommendations of any required *geotechnical reports*.

All *geotechnical reports* shall be prepared in accordance with the standards established in the Lands Development Manual and the City of San Diego Technical Guidelines for Geotechnical Reports.

Section 142.0135: Grading Within the *Special Flood Hazard Area*

Grading within the *Special Flood Hazard Area* shall comply with Chapter 14, Article 2, Division 2 (Drainage Regulations) and Chapter 14, Article 3, Division 1 (Environmentally Sensitive Lands Regulations).

Section 142.0146: Erosion, Sedimentation, and Water Pollution Control

All *grading* work shall incorporate erosion and siltation control measures in accordance with Chapter 14, Article 2, Division 4 (Landscape Regulations) and the standards established in the Land Development Manual.

All *development* shall be conducted to prevent erosion and stop sediment and pollutants from leaving the work site. The property owner is responsible to implement and maintain temporary and permanent erosion, sedimentation, and water pollution control measures to the satisfaction of the

City Manager, whether or not such measures are a part of approved plans. The property owner shall install, monitor, maintain, and revise these measures, as appropriate, to ensure their effectiveness. Controls shall include measures outlined in Chapter 14, Article 2, Division 2 Storm Water Runoff Control and Drainage Regulations) that address the *development's* potential erosion and sedimentation impacts.

Section 142.0148: Protection of Adjacent Properties and Public Rights-of-Way

During *grading*, the property owner shall take all necessary measures to protect adjacent property and public rights-of-way from damage that may result from the work. The property owner shall provide *fences* or barricades needed to eliminate any hazard to the public in their normal use of the property or *public right-of-way* as follows:

Where a temporary excavation is adjacent to an existing developed public right-of-way or other public property and the slope gradient is 50 percent (2 horizontal feet to 1 vertical foot) or steeper or the height of the *excavation* is more than 6 feet, temporary *fences* or barricades shall be provided adjacent to the *excavation* satisfactory to the City Engineer. The *fences* or barricades shall be constructed and maintained as long as the hazard resulting from the *excavation* exists.

Where a permanent *excavation* is adjacent to an existing developed *public right-of-way* or other public property and the slope gradient is 50 percent (2 horizontal feet to 1 vertical foot) or steeper, the height of the *excavation* is more than 6 feet, and the top of the slope is within 10 feet of the *public right-of- way*, the property owner shall construct a permanent, 4-foot-high *fence* adjacent to the *public right-of-way*, satisfactory to the City Engineer.

The City Engineer may modify the requirements of this section where it is evident that the *grading* work will present no hazard to the adjacent property or *public rights-of-way*.

Chapter 12, Article 9, Division 2: Building Permit Procedures

Section 129.0201: Purpose of Building Permit Procedures

The purpose of these procedures is to establish the process for review of Building Permit applications for compliance with the minimum standards necessary to safeguard life or limb, public health, property, and welfare. The intent of these procedures is to review the proposed design, construction methods, and type and quality of materials used for new construction or for construction involving existing structures.

Section 129.0202: When a Building Permit Is Required

(a) No structure regulated by the Land Development Code shall be erected, constructed, enlarged, altered, repaired, improved, converted, permanently relocated or partially demolished unless a Building Permit has first been obtained from the Building Official, except as exempted in Sections 129.0202(b) and 129.0203.

(c) The placement of factory-built housing, meaning one or more factory assembled components comprising a single structure suitable for human occupancy that is brought to the job site for connection to a foundation, requires a Building Permit in accordance with this division.

Section 129.0206: Who May Prepare Plans for Building Permits

If plans or other material submitted are not prepared by an architect or engineer licensed by the State of California, the Building Official may require the applicant to demonstrate that state law does not require the material to be prepared by a licensed architect or engineer. The Building Official may require plans, computations, and specifications to be prepared by an architect or engineer licensed by the State of California, in circumstances where preparation by a licensed professional is not required by state law.

Section 129.0210: Plan Review Procedures

The application, plans, specifications, and other data filed by an applicant for a Building Permit shall be reviewed by the Building Official. The plans may be reviewed by other departments of the City to verify compliance with any other applicable provisions of the Municipal Code.

4.5.4 Project Impact Analysis

4.5.4.1 Methodology

Potential direct and indirect impacts associated with the proposed TAMT plan and Demolition and Initial Rail Component were identified based on a review of technical reports prepared by Ninyo & Moore, which are included in this EIR as Appendices I-1, I-2, and I-3. The evaluation presents findings and recommendations for the TAMT plan and Demolition and Initial Rail Component based on the geotechnical properties of the subsurface conditions.

4.5.4.2 Thresholds of Significance

As noted in Section 4.5.1, *Overview*, since the decision handed down by the California Supreme Court in *California Building Industry Assoc. v. Bay Area Air Quality Management District* (CBIA vs. BAAQMD case), there is no longer ambiguity as to whether CEQA documents must analyze the environment's potential impact on a project, including any residents or users that a project may newly introduce to an existing environmental condition. The exception occurs if the proposed project, by developing in an area with a known environmental condition, may exacerbate the condition. Examples of a project exacerbating an existing environmental condition specific to geologic hazards and soil conditions may include grading into a hillside that is prone to land or mudslides. In this case, because the project would directly influence the likelihood of such an action occurring, the conclusion is that the project would exacerbate the existing environmental condition. On the other hand, if the project would build near the hillside, but would not actually cause a modification to it such that the potential to experience a hazardous event is not increased, then the project would not exacerbate the condition, even considering that by bringing new residents or users to the area, it may place more people and structures in harm's way. Therefore, the analysis below applies this same logic, consistent with the California Supreme Court's direction.

In light of the CBIA vs. BAAQMD case, the following significance criteria are based on Appendix G of the State CEQA Guidelines and modified to reflect the Supreme Court's recent guidance and provide the basis for determining significance of impacts from geotechnical hazards and soil conditions associated with the implementation of the proposed project. The determination of whether a geology and soils impact would be significant is based on the professional judgment of the District as Lead Agency supported by the recommendations of qualified personnel at ICF and based on the evidence in the administrative record.

Impacts are considered significant if the project would result in any of the following.

1. Exacerbate the potential of a: (i) rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42); (ii) strong seismic ground shaking; (iii) seismic-related ground failure, including liquefaction; (iv) landslides.
2. Result in substantial soil erosion or the loss of topsoil.
3. Cause a geologic unit or soil to become unstable and exacerbate the potential of onsite or offsite lateral spreading, subsidence, or collapse.
4. Exacerbate the potential of expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.
5. Have soils that would be incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater such that the potential for a hazardous condition would be exacerbated.

As discussed in the Initial Study/Environmental Checklist (Appendix A), Thresholds 1 (iv), 2, 4, and 5 are not included in the analysis below, as the proposed project would not result in significant impacts related to soil erosion and the loss of topsoil, expansive soil, and wastewater disposal systems. Those conclusions are summarized in Chapter 6, *Additional Consequences of Project Implementation*. Therefore, only Thresholds 1 (i through iii) and 3 are discussed in the impact analysis below.

4.5.4.3 Project Impacts and Mitigation Measures

Threshold 1: Implementation of the proposed project <u>would not</u> exacerbate the potential of a: (i) rupture of a known earthquake fault; (ii) strong seismic ground shaking; and (iii) seismic-related ground failure, including liquefaction.

Impact Discussion

The project site is within an area that is susceptible to ground rupture, liquefaction, and strong ground shaking due to seismic activity. At full buildout, implementation of the TAMT plan would involve the Demolition and Initial Rail Component phase of the project, the potential demolition of Warehouse C and the molasses tanks, and construction of new structures including expanded dry bulk storage facilities and up to five gantry cranes. The Demolition and Initial Rail Component would involve the demolition of two transit sheds and would replace them with a paved open storage area. New structures that would be constructed under the Demolition and Initial Rail Component would include an electrical gear room, restroom facility, information technology room, and outdoor equipment storage area.

As described in Section 4.5.2.3 and shown on Figure 4.5-1, the existing fault runs beneath Transit Shed #2 and Warehouse C. It is anticipated that these structures would be demolished and replaced with a paved open storage area under the proposed project, which would reduce the exposure of people or structures to harm or damage from ground rupture. All structures would be sited at least 50 feet away from an active fault, in accordance with the Alquist-Priolo Act. Influencing faults would require deep and significant intrusion, such as from the creation of reservoirs and the pumping of fluids in deep wells, to increase the potential for a rupture to occur (Southern California Earthquake Center n.d.). Construction of the features associated with the TAMT plan and its Demolition and Initial Rail Component, given their shallow grading and foundation depths, would not be capable of exacerbating the rupture of existing faults in the area. Moreover, once operational, these structures and the terminal operations that would result would have no effect on existing faults and their potential to rupture.

Strong to intense ground shaking could occur at the project site. Moreover, given the presence of water-saturated hydraulic fill as well as bay deposits, the project site also contains characteristics that indicate a high potential for liquefaction to occur. Compliance with the Seismic Mapping Hazard Act, given the site's location within a seismic hazards zone as shown in Figure 4.5-2, is required. Projects within seismic hazard zones are required to prepare geotechnical reports to ensure the project is built to withstand any existing hazardous geologic or soil conditions.

However, while the project site may experience strong seismic ground shaking, the proposed project would not exacerbate the potential for strong seismic ground shaking to occur or cause the ground shaking to be more powerful. The occurrence of earthquakes in Southern California is common and all buildings and structures will experience strong ground shaking at some point. However, development that is proposed with the full buildout of the proposed project would have no potential to exacerbate the potential for earthquakes for the same reasons it would not exacerbate a fault rupture; namely, the grading and foundations needed are too shallow to influence fault movement or rupture, which in turn is the cause of an earthquake. Thus, the proposed project could not cause an earthquake.

Similarly, the buildout of the proposed project would not exacerbate the potential for liquefaction to occur. Liquefaction typically occurs when a site is located in a zone with seismic activity, onsite soils are cohesionless, groundwater is encountered within 50 feet of the surface, and soils' relative densities are less than about 70 percent. The proposed project would not increase any of these characteristics and therefore would not exacerbate the potential for liquefaction.

Finally, the proposed project would be required to follow OSHA regulations related to worker safety, pursuant to the Occupational Safety and Health Act of 1970 contained in Title 29 CFR. Furthermore, as with any new development within the state, building design and construction for the proposed project would be required to comply with the current seismic design provisions of the CBC. The 2013 CBC incorporates the latest seismic design standards for structural loads and materials as well as provisions from the National Earthquake Hazards Reduction Program to mitigate losses from an earthquake and provide for the latest in earthquake safety. Additionally, construction of the proposed project would be required to adhere to the seismic safety requirements contained in the San Diego Municipal Code, which incorporates the CBC, with additional City-specific requirements.

Thus, the buildout of the TAMT plan, including the Demolition and Initial Rail Component, would not have the potential to exacerbate an active fault, strong seismic ground shaking, or soil liquefaction, and impacts would be less than significant.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Implementation of the Demolition and Initial Rail Component would not exacerbate the potential of: (i) rupture of a known earthquake fault; (ii) strong seismic ground shaking; and (iii) seismic-related ground failure, including liquefaction.

Full TAMT Plan Buildout

Full buildout of the TAMT plan would not exacerbate the potential of: (i) rupture of a known earthquake fault; (ii) strong seismic ground shaking; and (iii) seismic-related ground failure, including liquefaction.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

No mitigation is required.

Level of Significance after Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

Impacts would be less than significant.

Threshold 3: The proposed project <u>would not</u> cause a geologic unit or soil to become unstable and exacerbate the potential of onsite or offsite lateral spreading, subsidence, or collapse.

Impact Discussion

Due to the liquefaction potential, there is potential for lateral spreading and differential settlement to occur during construction activities associated with the full buildout of the TAMT plan, including the Demolition and Initial Rail Component. As analyzed above under Threshold 1, full buildout of the TAMT plan would not exacerbate the potential for liquefaction to occur. Liquefaction typically occurs when a site is located in a zone with seismic activity, onsite soils are cohesionless, groundwater is encountered within 50 feet of the surface, and soils' relative densities are less than about 70 percent. Lateral spreading occurs when there is liquefiable soil in the immediate vicinity of a free face, such as a slope. Factors controlling lateral displacement include earthquake magnitude, distance from the earthquake epicenter, thickness of liquefiable soil layer, grain size characteristics, fine contents of the soil, and the density of granular deposits, such as sands and gravel. The buildout of the TAMT plan (which includes the Demolition and Initial Rail Component) would not increase any of these characteristics and therefore would not exacerbate the potential for lateral spreading. Impacts would be less than significant.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component would not cause a geologic unit or soil to become unstable and exacerbate the potential of onsite or offsite lateral spreading, subsidence, or collapse.

Full TAMT Plan Buildout

Full buildout of the TAMT plan would not cause a geologic unit or soil to become unstable and exacerbate the potential of onsite or offsite lateral spreading, subsidence, or collapse.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

No mitigation is required.

Level of Significance After Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

Impacts would be less than significant.

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Section 4.6
Greenhouse Gas Emissions and Climate Change

4.6.1 Overview

This section describes the existing conditions and applicable laws and regulations for greenhouse gas (GHG) emissions and climate change and analyzes the proposed project's potential to result in emissions that are (1) consistent with the District's Climate Action Plan (CAP) reduction targets and in compliance with regulatory programs outlined in the Scoping Plan and adopted by the California Air Resources Board (ARB) or other California agencies to reduce GHG emissions in 2020; and (2) consistent with the post-2020 reduction targets set forth through California Executive Order (EO) S-03-05 and EO B-30-15 and in compliance with plans, policies, and regulations promulgated to reduce GHG emissions post-2020; and whether the project would (3) expose property and persons to the physical effects of climate change, including but not limited to flooding, public health risk, wildfire risk, or other impacts resulting from climate change.

Table 4.6-1 summarizes the significant impacts and mitigation measures discussed in this section.

Table 4.6-1. Summary of Significant Impacts and Mitigation Measures

Potentially Significant Impact(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-GHG-1: GHG Emissions in Excess of 2020 Target During Demolition and Initial Rail Component	**MM-GHG-1:** Implement Diesel-Reduction Measures During Construction and Operations of Future TAMT Plan Components **MM-GHG-2:** Comply with San Diego Unified Port District Climate Action Plan Measures **MM-GHG-3:** Electric Cargo Handling Equipment Upgrades	Less than Significant	Project GHG emissions with mitigation achieve the CAP's reduction target for maritime projects (33%) and the project would comply with plans, policies, and regulatory programs outlined in the Scoping Plan and adopted by ARB or other California agencies for the purpose of reducing the emissions of GHGs.
Impact-GHG-2: GHG Emissions in excess of post-2020 Target During TAMT Plan Buildout	**MM-GHG-1** through **MM-GHG-3** **MM-GHG-4:** Electric Cargo Handling Equipment Upgrades **MM-GHG-5:** Implement Vessel Speed Reduction Program Beyond Climate Action Plan Compliance for Future Operations Associated with the TAMT Plan **MM-GHG-6:** Implement a Renewable Energy Project or Purchase the Equivalent Greenhouse Gas Offsets from a California Air Resources Board Approved Registry or a Locally Approved Equivalent Program for Future Operations Associated with the TAMT Plan **MM-GHG-7:** Annual Inventory Submittal and Periodic Technology Review **MM-GHG-8:** Implement ~~a Sustainable Leasing~~an Exhaust Emissions Reduction Program at the Tenth Avenue Marine Terminal **MM-GHG-9:** Use of At-Berth Emission Capture and/or Control System to Reduce Vessel Emissions	Significant and Unavoidable	Mitigation would reduce project-related operational emissions, but there are no known reduction targets that apply to the project based on its location and development type. In addition, there is no statewide guidance document to indicate how to achieve the deep reductions set by EO S-03-05 and EO B-30-15.

4.6.2 Existing Conditions

This section provides a discussion of the existing understanding of global climate change and its effects. This section also provides an explanation of GHG emissions, as well as energy resources as they relate to the project area.

4.6.2.1 Global Climate Change

The phenomenon known as the *greenhouse effect* keeps the atmosphere near the Earth's surface warm enough for the successful habitation of humans and other life forms. GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), perfluorinated carbons (PFCs), sulfur hexafluoride (SF_6), and hydrofluorocarbons (HFCs), in addition to water vapor. These six gases are also identified as GHGs in Section 15364.5 of the State CEQA Guidelines.

Sunlight in the form of infrared, visible, and ultraviolet light passes through the atmosphere. Some of the sunlight striking the Earth is absorbed and converted to heat, which warms the surface. The surface emits infrared radiation to the atmosphere, where some of it is absorbed by GHGs and re-emitted toward the surface. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and amplifying the warming of the Earth (Center for Climate and Energy Solutions 2011).

Increases in fossil fuel combustion and deforestation have exponentially increased concentrations of GHGs in the atmosphere since the Industrial Revolution. Rising atmospheric concentrations of GHGs in excess of natural levels enhance the greenhouse effect, which contributes to global warming of the Earth's lower atmosphere. This warming induces large-scale changes in ocean circulation patterns, precipitation patterns, global ice cover, biological distributions, and other changes to the Earth system that are collectively referred to as *climate change*.

GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants (TACs). Criteria air pollutants and TACs occur locally or regionally, and local concentrations respond to locally implemented control measures. However, the long atmospheric lifetimes of GHGs allow them to be transported great distances from sources and become well mixed, unlike criteria air pollutants, which typically exhibit strong concentration gradients away from point sources. GHGs and global climate change represent cumulative impacts; that is, GHG emissions contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change.

4.6.2.2 Principal Greenhouse Gases

The GHGs listed by the Intergovernmental Panel on Climate Change (IPCC) (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) (2014) are discussed in this section in order of abundance in the atmosphere, and the principal characteristics surrounding these pollutants are discussed below. Note that PFCs are not discussed because those gases are primarily generated by industrial processes, which are not anticipated as part of the project. California law and the State CEQA Guidelines contain a similar definition of GHGs (Health and Safety Code Section 38505(g); 14 CCR Section 15364.5). Water vapor, the most abundant GHG, is not included in this list because its natural concentrations and fluctuations far outweigh its anthropogenic (human-made) sources. Consequently, the primary GHGs of concern associated with the project are CO_2, CH_4, N_2O, HFCs, and SF_6.

- **Carbon Dioxide (CO_2)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, respiration, and also as a result of other chemical reactions (e.g., manufacture of cement). CO_2 is also removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.
- **Methane (CH_4)** is emitted during the production and transport of coal, natural gas, and oil. CH_4 also results from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills.
- **Nitrous Oxide (N_2O)** is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.
- **Hydrofluorocarbons(HFCs)** are anthropogenic chemicals used in commercial, industrial, and consumer products and have high global warming potential (GWP; see below). HFCs are generally used as substitutes for ozone-depleting substances in automobile air conditioners and refrigerants.
- **Sulfur hexafluoride(SF_6)**, a human-made chemical, is used as an electrical insulating fluid for power distribution equipment, in the magnesium industry, in semiconductor manufacturing, and also as a tracer chemical for the study of oceanic and atmospheric processes.

Methods have been set forth to describe emissions of GHGs in terms of a single gas to simplify reporting and analysis. The most commonly accepted method to compare GHG emissions is the GWP methodology defined in the IPCC reference documents. IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of carbon dioxide equivalent (CO_2e), which compares the gas in question to that of the same mass of CO_2 (which has a GWP of 1 by definition). The GWP values used in this report are based on the IPCC Fourth Assessment Report (AR4) and United Nations Framework Convention on Climate Change reporting guidelines and are defined in Table 4.6-2 (IPCC 2007). The AR4 GWP values are used in ARB's California inventory and Assembly Bill (AB) 32 Scoping Plan estimate update, as well as in the Port of San Diego's GHG emissions inventory (ARB 2016a; ARB 2014; Unified Port of San Diego 2013).

Table 4.6-2 lists the GWP of CO_2, CH_4, N_2O, HFCs, and SF_6, their lifetimes, and abundances in the atmosphere.

Table 4.6-2. Lifetimes, GWPs, and Abundances of Significant GHGs

Gas	GWP (100 years)	Lifetime (years)[1]	Atmospheric Abundance
CO_2	1	50–200	400 ppm
CH_4	25	9–15	1,834 ppb
N_2O	298	121	328 ppb
HFC-23	14,800	222	18 ppt
HFC-134a	1,430	13.4	84 ppt
HFC-152a	124	1.5	3.9 ppt
SF_6	22,800	3,200	8.6 ppt

Sources: Myhre et al. 2013; Blasing 2016; IPCC 2007.
[1] Defined as the half-life of the gas.
ppm = parts per million; ppb = parts per billion; ppt = parts per trillion.

4.6.2.3 Greenhouse Gas Inventories

A GHG inventory is a quantification of all GHG emissions and sinks[1] within a selected physical and/or economic boundary. GHG inventories can be performed on a large scale (e.g., for global and national entities) or on a small scale (e.g., for a particular building or person). Although many processes are difficult to evaluate, several agencies have developed tools to quantify emissions from certain sources.

Table 4.6-3 outlines the most recent global, national, statewide, and local GHG inventories to help contextualize the magnitude of potential project-related emissions.

Table 4.6-3. Global, National, State, and Local GHG Emissions Inventories

Emissions Inventory	CO_2e (metric tons)
2010 IPCC Global GHG Emissions Inventory	52,000,000,000
2014 EPA National GHG Emissions Inventory	6,870,000,000
2014 ARB State GHG Emissions Inventory	441,500,000
2012 County of San Diego GHG Emissions Inventory	34,670,000
2010 City of San Diego GHG Emissions Inventory	13,091,591
2006 Port of San Diego GHG Emissions Inventory[1]	826,429

Sources: IPCC 2014; EPA 2016a; ARB 2016a; Energy Policy Initiatives Center 2015; City of San Diego 2015; District 2013.

[1] The Port of San Diego's GHG emissions inventory is based on the 2013 Climate Action Plan, rather than the District's 2012 Maritime Air Emissions Inventory, because the Climate Action Plan provides a more comprehensive inventory of the Port's activities and GHG emissions profile.

Local Emissions at the Project Site

Activity at the project site associated with handling and processing various cargo types generates GHG emissions. Specifically, GHG emissions result from activity associated with dry bulk, refrigerated container, and multi-purpose general cargo throughput, including ocean-going vessel (OGV) activity; harbor craft (ocean-going and assist tug) activity; Burlington Northern Santa Fe (BNSF) and switcher rail activity; heavy-duty truck travel; cargo handling equipment (CHE); electricity consumption; water consumption; and worker trips. A description of each of these sources and associated emissions modeling is provided in Section 4.6.4.1 below. OGV transit activity takes into account existing compliance with the District vessel speed reduction and shore power for vessels that call on the project site. GHG emissions associated with existing activity at the annual time scale is presented in Table 4.6-4. Note that unlike the existing conditions described in Section 4.2, *Air Quality and Health Risk*, GHG emissions do not result from bulk material handling, which only results in fugitive (particulate matter 10 microns or less in diameter [PM10] and 2.5 microns or less in diameter [PM2.5]) criteria pollutant emissions.

[1] A GHG sink is a process, activity, or mechanism that removes a GHG from the atmosphere.

Table 4.6-4. Estimate of Existing GHG Emissions at the Project Site (metric tons per year)

Operational Element	CO_2e
Dry Bulk (289,864 MT)	
Ocean-Going Vessels	519
Assist Tugs	17
Tugs and Fuel Barges	36
Trucks	2,373
Worker Trips	352
Rail - Regional Line Haul	232
Rail - Switching between Terminal and Yard	~~37~~26
Cargo Handling Equipment	~~337~~305
Electricity	194
Water	57
Dry Bulk Baseline	**4,~~153~~110**
Refrigerated Containers (637,931 MT)	
Ocean-Going Vessels	6,202
Shore Power	997
Assist Tugs	64
Tugs and Fuel Barges	137
Trucks	5,677
Worker Trips	775
Cargo Handling Equipment	~~741~~672
Electricity	323
Water	128
Refrigerants	15
Refrigerated Containers Baseline	**~~15,059~~14,990**
Multi-Purpose General Cargo (85,131 MT)	
Ocean-Going Vessels	1,062
Assist Tugs	31
Tugs and Fuel Barges	67
Trucks	424
Worker Trips	103
Rail - Regional Line Haul	125
Rail - Switching between Terminal and Yard	~~50~~30
Cargo Handling Equipment	~~99~~90
Water	17
Multi-Purpose General Cargo Baseline	**1,9850**
Total Baseline from all cargo types	**21,~~191~~050**

Source: Appendix F. Totals may not add up exactly due to rounding.

4.6.2.4 Impacts of Global Climate Change

Climate change is a complex phenomenon that has the potential to alter local climatic patterns and meteorology. Although modeling indicates that climate change will result in sea-level rise (SLR) (both globally and regionally) as well as changes in climate and rainfall, among other effects, there remains uncertainty with regard to characterizing precise *local* climate characteristics and predicting precisely how various ecological and social systems will react to any changes in the existing climate at the local level. Regardless of this uncertainty, it is widely understood that substantial climate change is expected to occur in the future, although the precise extent will take further research to define. Consequently, the entire San Diego region, including the project area, will be affected by changing climatic conditions.

Research efforts coordinated through ARB, the California Energy Commission (CEC), the California Environmental Protection Agency, the University of California system, and others are examining the specific changes to California's climate that will occur as the Earth's surface warms. Potential impacts include rising sea levels along the California coastline; extreme heat conditions; an increase in heat-related human deaths, infectious diseases, and respiratory problems caused by deteriorating air quality; reduced snow pack and streamflow in the Sierra Nevada, affecting winter recreation and water supplies; potential increase in the severity of winter storms, affecting peak stream flows and flooding; changes in growing season conditions that could affect California agriculture, causing variations in crop quality and yield; and changes in the distribution of plant and wildlife species due to changes in temperature, competition from colonizing species, changes in hydrologic cycles, changes in sea levels, and other climate-related effects.

With respect to the San Diego region, the San Diego Foundation's *A Regional Wake-Up Call* (2013), which summarizes the CEC's *Climate Change-Related Impacts in the San Diego Region by 2050* paper (CEC 2009), provides a summary of potential climate change impacts in the region (Ocean Protection Council 2013), which include the following.

- **Increased temperatures**: The San Diego region will see hotter and drier days and more frequent, prolonged heat waves. Average annual temperatures are expected to increase 1.5–4.5°F (CEC 2009; The San Diego Foundation 2013).
- **Reduction in air quality:** Hotter and drier days create more air pollution by raising ozone levels, and this can exacerbate asthma and other respiratory and cardiovascular diseases (CEC 2009).
- **Introduction of new public health issues:** Warmer temperatures year-round could lead to growing mosquito populations, increasing the regional occurrence of West Nile virus and potentially introducing tropical diseases such as malaria and dengue fever (CEC 2009).
- **Reductions in fresh water:** Water and energy demand will increase, while extended and more frequent droughts will cause traditional sources of fresh water supplies to diminish. Reduced local and regional precipitation could shrink water supplies by 20 percent or more, while water demand is expected to increase 37 percent. There could be an 18 percent water shortage by 2050 (CEC 2009; The San Diego Foundation 2013).
- **Increased rate of wildfires:** Drier weather may increase the frequency and size of wildfires, with an estimated 20 percent increase in days with ideal fire conditions (CEC 2009; The San Diego Foundation 2013).

- **Rising sea levels:** Projected SLR, coastal erosion, and increasing storm surges may cause fragile sea cliffs to collapse, shrink beaches, and destroy coastal property and ecosystems. Sea levels are expected to rise 12–16 inches by 2020 (CEC 2009;The San Diego Foundation 2013), 24 inches by 2050, and 65.7 inches by 2100, relative to 2000 conditions (Ocean Protection Council 2013; Coastal and Ocean Working Group of the California Climate Action Team 2013).

Sea Level Rise

Projected SLR as an effect of climate change is expected to increase the number of areas that experience coastal flooding along San Diego Bay in the future. Coastal and low-lying areas, such as the project sites, are particularly vulnerable to future SLR. More specifically, SLR is a concern for the future, particularly in combination with future storm events and coastal flooding. A scenario with 100-year flood flows that coincide with high tides, taking into account SLR over a 50- or 100-year horizon, would dramatically increase the risk of flooding in the project vicinity.

Specifically regarding SLR, the San Diego Bay Vulnerability Assessment conducted by ICLEI– Local Governments for Sustainability found that the greatest concern from SLR will be an increase in the kind of flooding that the region already experiences due to waves, storm surge, El Niño events, and very high tides. Furthermore, starting around mid-century, the San Diego Bay may become more susceptible to regularly occurring inundation of certain locations and assets. The most vulnerable sectors in the community include stormwater management, wastewater collection, shoreline parks and public access, transportation facilities, commercial buildings, and ecosystems (ICLEI 2012). According to the map in the San Diego Bay Vulnerability Assessment report, the project site is outside of the SLR hazard zone for 2050.

The Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT) developed the *State of California Sea-Level Rise Guidance Document* for State agencies to incorporate SLR into planning and decision-making for projects in California. The document was developed in response to Governor Schwarzenegger's EO S-13-08, issued on November 14, 2008, which directed State agencies to plan for SLR and coastal impacts. That executive order also requested the National Research Council (NRC) to issue a report on SLR to advise California on planning efforts. The final report from NRC, *Sea-Level Rise for the Coasts of California, Oregon, and Washington*, was released in June 2012. The *State of California Sea-Level Rise Guidance Document* was last updated in March 2013 with the scientific findings of the 2012 NRC report.

In the CO-CAT SLR guidance document (Coastal and Ocean Working Group of the California Climate Action Team 2013), three SLR projections based on time periods (2030, 2050, and 2100) were selected for south of Cape Mendocino using year 2000 as the baseline. Table 4.6-14 provides a summary of the SLR projections relevant to the project area during the life of the project, which is out to 2040.

4.6.3 Applicable Laws and Regulations

This section summarizes international, federal, state, and local regulations related to GHG emissions, climate change, and energy resources that are applicable to the proposed project.

4.6.3.1 International Regulations

International Maritime Organization International Convention for the Prevention of Pollution from Ships Annex VI

The International Maritime Organization International Convention for the Prevention of Pollution from Ships amended Annex VI in 2011 to include fuel economy and GHG requirements. The new Chapter 4 includes requirements for energy efficiency for ships and makes mandatory the Energy Efficiency Design Index for new ships, and the Ship Energy Efficiency Management Plan for all ships. The regulations apply to all ships of 400 gross tonnage and became effective January 1, 2013, with certain exceptions.

4.6.3.2 Federal

Climate change is widely recognized as an imminent threat to the global climate, economy, and population. The U.S. Environmental Protection Agency (EPA) has acknowledged potential threats imposed by climate change in a Cause or Contribute Finding, which found that the GHG emissions contribute to pollution that threatens public health and welfare and was a necessary finding prior to adopting new vehicle emissions standards that reduce GHG emissions. Federal climate change regulation under the federal Clean Air Act (CAA) is also currently under development for both existing and new sources. Despite the actions discussed below, there is still no comprehensive, overarching federal law specifically related to the reduction of GHG emissions.

U.S. Environmental Protection Agency Mandatory Reporting Rule for GHGs (2009)

On September 22, 2009, EPA released its final Greenhouse Gas Reporting Rule (Reporting Rule). The Reporting Rule is a response to the fiscal year 2008 Consolidated Appropriations Act (H.R. 2764; Public Law 110-161), which required EPA to develop "mandatory reporting of greenhouse gases above appropriate thresholds in all sectors of the economy." The Reporting Rule would apply to most entities that emit 25,000 metric tons of CO_2e or more per year. Starting in 2010, facility owners are required to submit an annual GHG emissions report with detailed calculations of facility GHG emissions. The Reporting Rule also would mandate recordkeeping and administrative requirements in order for EPA to verify annual GHG emissions reports.

Update to Corporate Average Fuel Economy Standards (2009)

The Corporate Average Fuel Economy (CAFE) standards incorporate stricter fuel economy standards promulgated by the State of California into one uniform standard. Additionally, automakers are required to cut GHG emissions in new vehicles by roughly 25 percent by 2016.

EPA, the National Highway Traffic Safety Administration (NHTSA), and ARB issued joint Final Rules for CAFE standards and GHG emissions regulations for 2017 to 2025 model year passenger vehicles, which require an industry-wide average of 54.5 miles per gallon (mpg) in 2025.

U.S. Environmental Protection Agency Endangerment Finding and Cause or Contribute Finding (2009)

On December 7, 2009, EPA signed the Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the CAA. Under the Endangerment Finding, EPA finds that the current and projected concentrations of the six key well-mixed GHGs—CO_2, CH_4, N_2O, PFCs, SF_6, and HFCs—in the atmosphere threaten the public health and welfare of current and future generations. Under the Cause or Contribute Finding, EPA finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare. However, unlike some criteria pollutants and TACs, GHG emissions do not directly affect human health. Rather, elevated GHG concentrations in excess of natural levels induce large-scale climate shifts, which can expose individuals to increased public health risks. For example, increases in ambient temperature can lead to heat-related illnesses and death, whereas changes in disease vectors may lead to increased risk of infectious diseases. Climate change and air pollution are also closely coupled. Ozone and particulate pollution, both of which can negatively affect human health, are strongly influenced by weather and can be concentrated near Earth's surface during extreme heat events.

These findings do not themselves impose any requirements on industry or other entities. However, this action is a prerequisite to finalizing EPA's proposed new CAFE standards for light-duty vehicles, which EPA proposed in a joint proposal including the Department of Transportation's proposed CAFE standards.

Council on Environmental Quality Draft NEPA Guidance (2010/2014)

On February 19, 2010, the Council on Environmental Quality (CEQ) issued draft National Environmental Policy Act (NEPA) guidance on the consideration of the effects of climate change and GHG emissions. This guidance advises federal agencies that they should consider opportunities to reduce GHG emissions caused by federal actions, adapt their actions to climate change effects throughout the NEPA process, and address these issues in their agency NEPA procedures. Where applicable, the scope of the NEPA analysis should cover the GHG emissions effects of a proposed action and alternative actions, as well as the relationship of climate change effects on a proposed action or alternatives. The guidance identified a reference point of 25,000 metric tons per year of direct CO_2e as an indicator that further NEPA review may be warranted. This reference point, however, is not intended to be used as a threshold for determining a significant impact or effect on the environment due to GHG emissions (Council on Environmental Quality 2010).

The draft guidance was updated in 2014 to further refine the scope of NEPA analyses. The 2014 guidance recommends that analyses should include the potential effects of a proposed action on climate change as indicated by its GHG emissions, as well as the implication of climate change for the environmental effects of the proposed action (Council on Environmental Quality 2014). ~~The 2014 CEQ guidance is still considered draft as of the writing of this document and is not an official CEQ policy document~~This CEQ guidance was adopted in August 2016.

EPA and NHTSA Fuel Economy for Medium and Heavy Duty Engines and Vehicles (2011/2015)

On August 9, 2011, EPA and NHTSA announced a new national program to reduce GHG emissions and improve fuel economy for new medium- and heavy-duty engines and vehicles sold in the U.S. EPA and NHTSA finalized a joint rule (Phase 1) that established a national program consisting of new standards for engines in model years 2014 through 2018, which would reduce CO_2 emissions by about 270 million metric tons and save about 530 million barrels of oil over the life of vehicles built for the 2014 to 2018 model years.

EPA and NHTSA ~~are currently working on~~adopted the Phase 2 standards in August 2016, which ~~would~~will reduce CO_2 emissions associated with model year 2018 and beyond, reducing fuel consumption and GHG emissions from tractor trailers as much as 24 percent once fully implemented~~. The Notice of Proposed Rulemaking was issued in June 2015, and the final rule is expected to be issued in spring of 2016.~~ for certain truck types.

4.6.3.3 State

California has adopted statewide legislation addressing various aspects of climate change, GHG mitigation, and energy efficiency. Much of this establishes a broad framework for the State's long-term GHG and energy reduction goals and climate change adaptation program. The former and current governors of California have also issued several EOs related to the State's evolving climate change policy. Summaries of key policies, EOs, regulations, and legislation at the State level that are relevant to the project are provided below in chronological order.

Assembly Bill 1493—Pavley Rules (2002, amendments 2009)/Advanced Clean Cars (2011)

Known as Pavley I, AB 1493 provided the nation's first GHG standards for automobiles. AB 1493 required ARB to adopt vehicle standards that will lower GHG emissions from new light-duty autos to the maximum extent feasible beginning in 2009. Additional strengthening of the Pavley standards (referred to previously as *Pavley II* and now referred to as the *Advanced Clean Cars* [ACC] measure) was adopted for vehicle model years 2017–2025 in 2012. Together, the two standards are expected to increase average fuel economy to roughly 54.5 mpg in 2025.

Senate Bills 1078/107/X 1-2—Renewables Portfolio Standard and Renewable Energy Resources Act (2002, 2006, 2011)

SBs 1078 and 107, California's Renewables Portfolio Standard (RPS), obligated investor-owned utilities, energy service providers, and Community Choice Aggregations to procure an additional 1 percent of retail sales per year from eligible renewable sources until 20 percent is reached by 2010. The California Public Utilities Commission and CEC are jointly responsible for implementing the program. SB X 1-2, called the California Renewable Energy Resources Act, obligates all California electricity providers to obtain at least 33 percent of their energy from renewable resources by 2020. As of 2014, San Diego Gas and Electric's (SDG&E) renewable procurement was 36.4 percent. As noted above, SB 350 increased the RPS to 50 percent for 2030.

Executive Order S-03-05 (2005)

EO S-03-05 is designed to reduce California's GHG emissions to (1) 2000 levels by 2010, (2) 1990 levels by 2020, and (3) 80 percent below 1990 levels by 2050.

Assembly Bill 32—California Global Warming Solutions Act (2006)

AB 32 codified the State's GHG emissions target by requiring California's global warming emissions to be reduced to 1990 levels by 2020. Since being adopted, ARB, CEC, the California Public Utilities Commission, and the California Building Standards Commission have been developing regulations that will help the State meet the goals of AB 32 and EO S-03-05. The scoping plan for AB 32 identifies specific measures to reduce GHG emissions to 1990 levels by 2020 and requires ARB and other State agencies to develop and enforce regulations and other initiatives to reduce GHG emissions. The AB 32 Scoping Plan, first adopted in 2008, comprises the State's roadmap for meeting AB 32's reduction target. Specifically, the scoping plan articulates a key role for local governments by recommending that they establish GHG emissions-reduction goals for both their municipal operations and the community that are consistent with those of the State (i.e., approximately 15 percent below current levels) (ARB 2008).

ARB re-evaluated its emissions forecast in light of the economic downturn and updated the projected 2020 emissions to 545 million metric tons of carbon dioxide equivalent ($MTCO_2e$). Two reduction measures (Pavley I and RPS [12–20 percent]) that were not previously included in the 2008 scoping plan baseline were incorporated into the updated baseline, further reducing the 2020 statewide emissions projection to 507 million $MTCO_2e$. The updated forecast of 507 million $MTCO_2e$ is referred to as the AB 32 2020 baseline. An estimated reduction of 80 million $MTCO_2e$ is necessary to lower statewide emissions to the AB 32 target of 427 million $MTCO_2e$ by 2020 (ARB 2014).

ARB approved the *First Update to the Scoping* Plan on May 22, 2014 (ARB 2014). The first update includes both a 2020 element and a post-2020 element. The 2020 element focuses on the state, regional, and local initiatives that are being implemented now to help the State meet the 2020 goal. ARB is currently working on a second update to the Scoping Plan to reflect the 2030 target established in EO B-30-15, noting that "California has already made great progress in driving the development of clean technologies thanks to programs developed under AB 32 and other important Legislation; the 2030 target will ensure that success continues beyond 2020" (ARB 2015a). ~~ARB is expecting to present the final 2030 Target Scoping Plan to the board in late 2016.~~

~~ARB recently released a *2030 Target Scoping Plan Concept Paper* within which ARB lays out four concepts or paths to achieving the 2030 target. The four concepts include: (1) Complementary Policies with a Cap-and-Trade Program; (2) Ambitious Complementary Policies without Cap-and-Trade: a Focus on Industrial Sources; (3) Ambitious Complementary Policies without Cap-and-Trade: a Focus on Transportation; and (4) Complementary Policies with a Carbon Tax. ARB will host various stakeholder workshops in 2016 and early 2017 (ARB 2016b).~~

ARB recently began publishing workshop presentations that lay out the vision for the 2030 scoping plan. Of particular note is that ARB's preliminary policy scenario evaluations include recommendations for local action that include a community-wide efficiency target of 6 $MTCO_2e$ per capita by 2030 and 2 $MTCO_2e$ per capita by 2050 to be used in local climate action planning. These efficiency targets would replace the "15 percent from 2008 levels by 2020" approach recommended in the initial Scoping Plan, which would allow for local governments to grow in a sustainable manner. The preliminary policy scenario evaluations also presents alternatives to extending the cap-and-trade program beyond 2020, including a no-cap-and-trade alternative as well as a carbon tax. The modeled scenarios include extending RPS to 80% by 2050, increasing the low carbon fuel standard to 25% by 2030, and increasing the number of zero-emission freight vehicles up to 4.7 million pieces by 2030. ARB will hold various public workshops over the next few months.

Senate Bill 32, California Global Warming Solutions Act of 2006: Emissions Limit, and Assembly Bill 197, State Air Resources Board, Greenhouse Gases, Regulations (2016)

SB 32 (Pavley) bill requires ARB to ensure that statewide GHG emissions are reduced to at least 40% below the 1990 level by 2030, consistent with the target set forth in EO B-30-15. The bill specifies that SB 32 shall become operative only if AB 197 (Garcia) is enacted and becomes effective on or before January 1, 2017. AB 197 creates requirements to form the Joint Legislative Committee on Climate Change Policies; requires ARB to prioritize direct emission reductions from stationary sources, mobile sources, and other sources and consider social costs when adopting regulations to reduce GHG emissions beyond the 2020 statewide limit; requires ARB to prepare reports on sources of GHGs, criteria air pollutants, and toxic air contaminants; establishes 6-year terms for voting members of ARB; and adds two legislators as non-voting members of ARB. Both bills were signed by Governor Brown in September 2016.

Assembly Bill 1383 (2016), Short-Lived Climate Pollutants: Methane Emissions: Dairy and Livestock: Organic Waste: Landfills

AB 1383 requires ARB to approve and implement a plan to reduce methane by 40%, fluorinated gases (F-gases) by 40%, and anthropogenic black carbon by 50% below 2013 levels by 2030. AB 1383 establishes specific targets for reducing organic waste in landfills (50% by 2020 and 75% by 2025 compared to 2014). The legislation also adopted regulations to reduce methane emissions from livestock manure management operations and dairy management operations that would take effect in 2024.

Executive Order S-01-07—Low Carbon Fuel Standard (2007)

EO S-01-07, the Low Carbon Fuel Standard (LCFS), mandates (1) that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020, with a reduction in the carbon content of fuel by a quarter of a percent starting in 2011, and (2) that a low carbon fuel standard for transportation fuels be established in California. The EO initiates a research and regulatory process at ARB. The LCFS regulation does not apply to certain transportation applications, including locomotives and OGVs. Note that the majority of the emissions benefits due to the LCFS come from the production cycle (upstream emissions) of the fuel rather than the combustion cycle (tailpipe). As a result, LCFS-related reductions are not included in this analysis of combustion-related emissions of CO_2.

Senate Bill 375—Sustainable Communities Strategy (2008)

SB 375 provides for a new planning process that coordinates land use planning, regional transportation plans, and funding priorities in order to help California meet the GHG reduction goals established in AB 32. SB 375 requires regional transportation plans (RTPs), developed by metropolitan planning organizations, to incorporate a "sustainable communities strategy" (SCS). The goal of the SCS is to reduce regional vehicle miles traveled through land use planning and consequent transportation patterns. SB 375 also includes provisions for streamlined CEQA review for some infill projects such as transit-oriented development.

The final reduction targets from ARB require the San Diego Association of Governments (SANDAG) to identify strategies to reduce per capita GHG emissions from passenger vehicles by approximately 7 percent by 2020 and 13 percent by 2035 over base year 2005. SANDAG's 2050 RTP and SCS, which detail steps the region will take to reduce GHG emissions to State-mandated levels, were originally adopted by SANDAG on October 28, 2011 (SANDAG 2011). However, due to a legal challenge to the CEQA document for the RTP/SCS, the RTP/SCS was revised and adopted by SANDAG on October 9, 2015 (SANDAG 2015).

California Energy Efficiency Standards for Non-Residential Buildings—Title 24 (2008)

The Green Building Standards Code (CALGreen) applies to the planning, design, operation, construction, use, and occupancy of newly constructed buildings and requires the installation of energy- and water-efficient indoor infrastructure for all new projects beginning after January 1, 2011. CALGreen also requires newly constructed buildings to develop a waste management plan and divert at least 50 percent of the construction materials generated during project construction.

Administrative regulations to CALGreen Part 11 and the California Building Energy Efficiency Standards were adopted in 2013 and took effect on January 1, 2014. The 2013 Building Energy Efficiency Standards are 30 percent more efficient than the 2008 standards for commercial construction. Part 11 also established voluntary standards in the 2008 edition of the code that became mandatory in the 2010 edition of the code, including planning and design for sustainable site development, energy efficiency, water conservation, material conservation, and internal air contaminants (CEC 2012). The next set of energy efficiency standards (the 2016 Building Energy Efficiency Standards) take effect on January 1, 2017.

State CEQA Guidelines (2010)

The State CEQA Guidelines require lead agencies to describe, calculate, or estimate the amount of GHG emissions that would result from a project. Moreover, the State CEQA Guidelines emphasize the necessity to determine potential climate change effects of a project and propose mitigation as necessary. They do not prescribe or recommend a specific analysis methodology or provide quantitative criteria for determining the significance of GHG emissions. However, the State CEQA Guidelines do confirm the discretion of lead agencies to determine appropriate significance thresholds, but require the preparation of an EIR if "there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with adopted regulations or requirements" (Section 15064.4).

State CEQA Guidelines Section 15126.4 includes considerations for lead agencies related to feasible mitigation measures to reduce GHG emissions, which may include, among others, measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision; implementation of project features, project design, or other measures that are incorporated into the project to substantially reduce energy consumption or GHG emissions;

offsite measures, including offsets that are not otherwise required, to mitigate a project's emissions; and measures that sequester carbon or carbon-equivalent emissions.

State CEQA Guideline Section 15183.5(a) provides that a lead agency may analyze and mitigate significant effects of GHG emissions at a programmatic level, such as in a plan targeted to reduce GHG emissions. Additionally, the section allows for tiering off and incorporating by reference the environmental analysis done for such plans.[2] Subdivision (b) of Section 15183.5 also states that a plan to reduce GHG emissions may be used to find that a project's incremental contribution to the cumulative effect of GHG emissions is not cumulatively considerable if the project complies with the adopted plan and mitigation program. Subdivision (b) of Section 15183.5 provides that such a plan should (1) quantify GHG emissions over a specific time period resulting from activities within a defined geographic area; (2) establish a level below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable; (3) identify and analyze GHG emissions resulting from specific actions or categories of actions within the defined geographic area; (4) specify measures or a group of measures, including performance standards, that if implemented on a project-by-project basis would collectively achieve the specified emissions level; (5) establish a mechanism to monitor the plan's progress; and (6) be adopted in a public process following environmental review. Such plans may be used in the cumulative impact analysis of later projects, but such later project analysis must identify those requirements specified in the plan that apply to the project and, if those requirements are not otherwise binding and enforceable, incorporate them as mitigation measures.

Western Climate Initiative/California Cap-and-Trade (2010/2011)

On October 20, 2011, ARB adopted the final cap-and-trade program for California. The California cap-and-trade program is a market-based system with an overall emissions limit for affected sectors. Examples of affected entities include CO_2 suppliers, in-state electricity generators, hydrogen production, petroleum refining, and other large-scale manufacturers and fuel suppliers. The cap-and-trade program is currently regulating more than 85 percent of California's emissions. Compliance requirements began according to the following schedule: (1) electricity generation and large industrial sources (2012) and (2) fuel combustion and transportation (2015). Cap-and-trade allowance auction proceeds are used to fund a variety of investments. The first 3-year investment plan prioritizes (1) sustainable communities and clean transportation (including low-carbon freight equipment with specific emphasis on efforts that would be beneficial for disadvantaged communities located near ports, railyards, freeways, and distribution centers), (2) energy efficiency and clean energy, and (3) natural resources and waste diversion (ARB 2013).

Tractor-Trailer Greenhouse Gas Regulation (2013)

ARB approved the Tractor-Trailer Greenhouse Gas Regulation to reduce GHG emissions by requiring the use of aerodynamic tractors and trailers that are also equipped with low rolling resistance tires. The regulation applies to certain Class 8 tractors manufactured for use in California and is harmonized with the parallel EPA and NHTSA heavy-duty truck standards. This regulation could reduce fuel consumption and GHG emissions from new heavy-duty trucks between 4 and 5 percent per year between 2014 and 2018 (EPA 2015a). Upon EPA and NHTSA's adoption of Phase 2, ARB plans to approve the California Phase 2 program in late 2016 or 2017.

[2]Note that this analysis does not tier off or rely on any previous CEQA analysis conducted for a GHG plan.

Short-Lived Climate Pollutant Reduction Strategy (proposed)

Short-lived climate pollutants are powerful climate forcers that remain in the atmosphere for a much shorter period of time than longer-lived climate pollutants (such as CO_2) but their GWP is much greater than CO_2. Short-lived climate pollutants contribute about 40 percent to current anthropogenic global radiative forcing, which is the primary forcing agent for observed climate change. Reducing these emissions can have an immediate beneficial impact on climate change. ARB released a proposed strategy in 2016 to reduce emissions of three main short-lived climate pollutants: black carbon (soot), fluorinated gases (F-gases), and CH_4. Black carbon is not included in international climate framework and is not yet included in California's AB 32 inventory, but recent studies have shown that black carbon plays a far greater role in global warming than previously believed. Existing air quality regulations and other strategies, including the Sustainable Freight Action Plan, will continue the transition to cleaner and more efficient uses of energy, which will reduce black carbon. Wildfire remains the largest source of black carbon, and this strategy focuses on ways to reduce wildfire risk. In the freight sector, continued black carbon emission reductions are expected through efficiency improvements and electrification (ARB 2016c).

ARB Regulation to Reduce Emissions from Diesel Auxiliary Engines on OGVs While at Berth at a California Port (2011)

As discussed in Section 4.2, *Air Quality and Health Risk*, ARB has adopted at-berth regulations that require that auxiliary diesel engines on OGVs be shut down for specified percentages of a fleet's visits and also for the fleet's at-berth auxiliary engine power generation to be reduced by the same percentages. Vessels can either plug into the electrical grid (i.e., shore power, otherwise known as cold-ironing or alternative maritime power) or use an alternative emission control device. The law sets compliance percentages that phase in over time. By 2014, vessel operators were required to shut down their auxiliary engines at berth for 50 percent of the fleet's vessel visits and also reduce their onboard auxiliary engine power generation by 50 percent. The specified percentages will increase to 70 percent in 2017 and 80 percent in 2020. Vessel operators can also choose an emissions reduction equivalency alternative; the regulation requires a 10 percent reduction in OGV hoteling emissions starting in 2010, increasing to an 80 percent reduction requirement by 2020 (ARB 2007). Note that this regulation currently only applies to container, passenger cruise, and refrigerated cargo vessels and does not yet apply to the auto carrier and roll-on/roll-off (RoRo), bulk, and general cargo vessels that call at the project site. However, ARB is currently considering extending at-berth regulations to all vessels, with workshops starting in the summer of 2016 (Milkey pers. comm.), but at present no formal rulemaking has been drafted or adopted.

ARB Airborne Toxic Control Measure for Diesel-Fueled Transport Refrigeration Units, Generator Sets, and Facilities Where Transport Refrigeration Units Operate (2004)

As discussed in Section 4.2, *Air Quality and Health Risk*, ARB has adopted various measures to reduce air toxic emissions. In 2004, ARB amended the rule designed to reduce the diesel particulate matter emissions from in-use transport refrigeration units (TRUs) and TRU generator set engines (CCR

Title 13, Section 2477). Under the rule, TRUs[3] are required to meet in-use performance standards by installing the required level of verified diesel emission control strategy or using an alternative technology. While the rule primarily deals with air toxics, ARB recently released an assessment of technologies that ARB and manufacturers may employ to help meet long-term statewide GHG reduction goals as well, and include various zero and near-zero emission technologies. ARB is proposing a phase-in schedule to reduce fossil-fuel use dependency in the units (ARB 2015b).

EO B-32-15 and the ARB Sustainable Freight Action Plan (2016)

As discussed in Section 4.2, *Air Quality and Health Risk*, ARB is working on various strategies to improve freight efficiency and transition to zero-emission technologies, and increase the competitiveness of California's freight system. EO B-32-15 requires State agencies to develop an integrated action plan that establishes clear targets to improve freight efficiency, transition to zero-emission technologies, and increase the competitiveness of California's freight system. The integrated Draft California Sustainable Freight Action Plan was released in May 2016 and identifies potential state policies, programs, and investments to achieve these targets (ARB 2016d). The plan provides a high-level vision and broad direction and recommendations on long-term vision for 2030 and 2050, short-term actions to initiate in the next 5 years, pilot project opportunities, and additional concepts to explore. The Sustainable Freight Action Plan builds on existing State agency strategies, including *California Freight Mobility Plan*, *Sustainable Freight Pathways to Zero and Near-Zero Emissions Discussion Document*, and *Integrated Energy Policy Report*, as well as broad stakeholder input.

4.6.3.4 Regional

The AB 32 Scoping Plan does not provide an explicit role for local air districts in implementing AB 32, but it does state that ARB will work actively with air districts in coordinating emissions reporting, encouraging and coordinating GHG reductions, and providing technical assistance in quantifying reductions. The ability of air districts to control emissions (both criteria pollutants and GHGs) is provided primarily through permitting as well as through their role as CEQA lead or commenting agency, the establishment of CEQA thresholds, and the development of analytical requirements for CEQA documents. To date, the San Diego Air Pollution Control District has not developed specific thresholds of significance with regard to addressing the GHG emissions in CEQA documents.

4.6.3.5 Local

Port of San Diego Clean Air Program

The District developed the Green Port Program to support the goals of the Green Port Policy, which was adopted in 2008. The Green Port Program supports resource conservation, waste reduction, and pollution prevention. The Clean Air Program is one key area of the Green Port Program, with the primary goal of reducing GHG emissions and other air emissions from Port operations at its three

[3] A TRU is a refrigeration system powered by integral (inside housing) internal combustion engines designed to control the environment of temperature-sensitive products that are transported in trucks and refrigerated trailers, and are generally powered by diesel fuel.

marine terminals: the Cruise Ship Terminal, TAMT, and National City Marine Terminal. The Clean Air Program seeks to voluntarily reduce emissions through the identification and evaluation of feasible and effective control measures. Through this program, the District has identified control measures to achieve a reduction of pollutants from the largest sources, including shore power (to enable ships to turn off their auxiliary engines and plug into electric power while docked), truck replacement/ retrofits, replacement/retrofits of CHE, and voluntary vessel speed reductions (VSR). The Clean Air Program will continue to be refined and adapted to future changes in District operations.

Additionally, the project site currently supports shore power, also known as "cold-ironing," with plans to install additional connections at marine terminals. Vessels equipped to connect to shore power will use electric grid power at berth (e.g., while "hoteling") rather than power generated by running the ship's engines. Of the vessels that call on the project site, only the Dole-owned or -operated refrigerated container vessels are required to implement at-berth emissions reductions, including use of shore power or an alternative method. No other container ships and no passenger ships call on the project site. Dole vessels began using shore power at the project site in February 2014 and Dole is currently replacing its vessels, and each Dole vessel fleet calling at the project site will have shore power capability starting in 2016.

In addition, the Port's voluntary VSR program reduces air pollutants and GHG emissions from cargo and cruise ships by reducing speeds in the vicinity of San Diego Bay. The VSR program asks cargo vessel operators entering or leaving San Diego Bay to observe a 12-knot speed limit and for cruise ships to observe a 15-knot speed limit. The VSR zone extends 20 nautical miles seaward from Point Loma. Most of the vessels that call at the project site have voluntarily complied with the Port's voluntary VSR program, achieving on average 78 percent compliance on arrivals and 65 percent compliance on calls during the baseline period.

The District, through the San Diego Port Tenants Association, was awarded a grant on May 19, 2016 as part of the CEC's effort to reduce GHG emissions, decrease petroleum use, and benefit disadvantaged communities. The grant allotted various tenants at the Port to purchase alternatively fueled medium- and heavy-duty freight vehicles. Among the tenants included in the award are CEMEX, which was awarded one electric yard truck, and Dole Fresh Fruit Company, which was awarded two electric yard trucks. Operation of the electric yard trucks will reduce GHG emissions from terminal operations and support District-wide efforts to reduce emissions in support of the CAP.

The District and SDG&E have also established a partnership to increase energy efficiency and reduce overall energy consumption. SDG&E currently allocates a portion of funds collected from utility customers to energy efficiency programs with local governments. The District uses some of those funds to develop energy efficiency education programs, track energy consumption, perform energy audits, and implement energy retrofits. The District's energy efficiency programs benefit employees, tenants, and the general public.

Climate Action Plan

As noted above in Section 4.6.3.3, ARB encourages local governments to adopt a reduction goal for municipal operations emissions and move toward establishing similar goals for community emissions that parallel the State's commitment to reducing GHG emissions (ARB 2008). The District adopted a CAP in December 2013. The CAP includes an inventory of existing (2006) and projected emissions in 2020, 2035, and 2050 and identifies the District's GHG reduction goals and measures to be implemented to support meeting the statewide reduction goals set forth in AB 32 (1990 levels by 2020). Port-wide 1990 emissions were not quantified given activity data gaps; instead, a base year of 2006 was used to calculate reductions needed at the Port to reach 1990 levels by 2020. Consistent with AB 32 targets, a 10 percent reduction target (471.3 million $MTCO_2e$ in 2006 and estimated 426.6 million $MTCO_2e$ in 1990 statewide) was used as the Port-wide reduction target for 2020.[4]

The CAP's 2020 projections and reduction targets (1990 levels) for each activity are based on the growth projections specific to each tenant and activity type. For example, the CAP assumes a 3 percent annual growth in maritime-related uses between 2006 and 2020. Thus, the CAP and its reduction targets are specific to the District's geography, type and intensity of uses, and future year projected conditions. Table 4.6-5 provides the CAP's 2006 baseline, projected future year (2020) GHG emissions, and future year GHG emission targets (1990 levels) by activity within the District's jurisdiction. As shown, maritime-related emissions, the activity type the proposed project falls within, are expected to increase from 224,845 $MTCO_2e$ in 2006 to 300,897 $MTCO_2e$ in 2020 without implementation of any CAP or State measures. In order to reach the CAP's target of achieving 202,880 $MTCO_2e$ by 2020 (1990 levels), District maritime-related emissions would need to be reduced by 33 percent below 2020 business-as-usual (BAU) levels.[5] To achieve the requisite reductions, the CAP includes various reduction measures related to transportation and land use, alternative energy generation, energy conservation, waste reduction and recycling, and water conservation and recycling, several of which are specific to the maritime sector.[6]

A critical aspect of having a CAP that fits the criteria within State CEQA Guidelines Section 15183.5 is to have reduction targets that align with statewide goals. The CAP's reduction targets parallel the State's commitment to reducing GHG emissions in AB 32, and go even further by identifying targets for a specific location based on projected emissions specific to the Port of San Diego's geographic location as well as specific activity types and their associated sources. Therefore, because the CAP targets align with statewide goals, the CAP is consistent with AB 32.

[4] The CAP also includes projected emissions and some reduction policies to achieve the reduction target of 25% less than 2006 baseline levels by 2035, but does not yet quantify those reductions.

[5] Unlike ARB's BAU targets, which are statewide percentage targets, these targets are specific to the District in order to meet the CAP's 2020 goal and AB 32's reduction requirement.

[6] Measures specific to the maritime sector are listed and analyzed in Table 4.6-8 below, in Section 4.6.4, *Project Impact Analysis*.

Table 4.6-5. GHG Emissions (Metric Tons per Year) by Activity Shown in the CAP

		GHG Emissions By Category and District Activity Type			Percentage Reduction to Achieve 1990 Levels – Specific to the District	
Category	**Activity**	**2006 Baseline**	**2020 BAU**	**1990[1] Levels**	**2006 Baseline**	**2020 BAU**
Port Operations	Port Operations	37,164	38,930	33,533	10%	14%
Maritime	Ocean Going Vessels	55,162	72,786	49,773	10%	32%
	Recreational Boating	80,441	118,252	72,583	10%	39%
	Other Terminal Activity[2]	89,242	109,859	80,524	10%	27%
	Total Maritime	**224,845**	**300,897**	**202,880**	**10%**	**33%**
Other	Industrial	137,426	138,258	124,001	10%	10%
	Shipbuilding	123,725	123,545	111,638	10%	10%
	Lodging	137,429	249,852	124,004	10%	50%
	Other	165,840	188,217	149,639	10%	20%
	Total Other	564,420	699,872	509,282	10%	27%
	Total Port-wide	826,429	1,039,699	745,695	10%	28%

Source: Table ES-2 of the CAP (District 2013)

[1] The CAP only presents the 2020 target (1990 levels) for broad source types (electricity & natural gas, transportation, water, and waste) and does not clearly present the emissions target for each activity (OGVs, shipbuilding, etc.) in the main body of the CAP. However, these emission estimates are presented in the CAP appendices (Table ES-2). To calculate the reductions needed from maritime-specific sources, the same methodology as was used in the CAP, using information in the CAP appendices, was employed; 2006 levels were reduced by approximately 10% to get to 1990 emission estimates. This allows for percentage reductions below 2020 levels to be calculated and used as the performance-based standard herein.

[2] "Other Terminal Activity" includes cargo handling equipment, commercial harbor craft, locomotives, heavy-duty trucks (for transport of goods to/from OGVs), cruise terminal transportation, and terminal tenant operations.

4.6.4 Project Impact Analysis

4.6.4.1 Methodology

GHG impacts associated with construction and operation of the project and program were assessed and quantified using industry standard and accepted software tools, techniques, and emission factors. A summary of the methodology is provided below. A full list of assumptions and emission calculations can be found in Appendix F. Note that the estimate of existing emissions at the project site is based on activity associated with the EIR baseline, which is the July 2013 to June 2014 timeframe. The methodology used to estimate GHG emissions discussed below is similar to that used to estimate air quality and TAC emissions, as described in Section 4.2, *Air Quality and Health Risk*, with the exception of shore power-, electricity-, water-, and refrigerant-related emissions.

Construction

The project would include construction of a Demolition and Initial Rail Component, which is a necessary first step to enable the subsequent implementation of the various development scenarios contemplated in the TAMT plan. Construction would include Demolition of Transit Sheds #1 and #2, excavation and grading to level the site, asphalt paving, conduit and electrical improvements, replacement of lighting, installation of a rail lubricator and a compressed air system, installation of a modular office, and construction of the gear and IT room. Construction activities would result in a short-term generation of GHG emissions associated with onsite construction equipment, haul trucks to remove debris from the project site, delivery trucks to deliver building and upgrade materials to the site, and construction worker trips to and from the site.

Construction activities associated with the Demolition and Initial Rail Component are expected to begin in 2017. Construction for the most part would occur sequentially, starting with demolition of Transit Shed #1, which would take approximately 15 months to complete, followed by demolition of Transit Shed #2, which would take approximately 18 months. Construction associated with the conduit and electrical improvements (to facilitate shore power upgrades), replacement of lighting, and on-terminal rail facility upgrades are expected to occur along and concurrently with the transit shed work. The Demolition and Initial Rail Component would be completed by 2020. GHG emissions from all sources described below were summed and amortized over the expected life of the project (assumed to be 20 years), consistent with industry standards. The construction phasing assumptions and emissions calculation worksheets are provided in Appendix F.

Emissions were estimated based on a construction phasing schedule and details regarding the types and numbers of construction equipment, haul, delivery, and employee vehicle trips, and material volumes obtained from the project applicant.

- Equipment would include typical heavy-duty equipment (e.g., loaders, excavators, crushers) to demolish the sheds, grade and level the area, pave, and install utility improvements, including conduit and electrical improvements. Emissions associated with construction equipment were estimated based on emission and load factors from CalEEMod and OFFROAD, activity data (hours per days, days of use) provided by the project applicant, and horsepower information obtained from the manufacturer (if available) and CalEEMod defaults.
- GHG emissions associated with truck travel to haul demolition debris were estimated based on the assumption that all demolition debris would be hauled off site (i.e., no debris would be crushed and reused on site). Emissions associated with truck travel were estimated based on 148,000 square feet of demolition associated with Transit Shed #1, 194,000 square feet of demolition associated with Transit Shed #2, 7,000 square feet of demolition associated with the headhouse (which is attached to Transit Shed #2), a CalEEMod default 20-ton (16 cubic yards) truck capacity, and a CalEEMod default 20-mile round-trip distance to the nearest landfill.
- GHG emissions associated with truck travel to haul excavated soils were estimated based on 47,100 cubic yards of soil export based on 16,400 cubic yards from Transit Shed #1, 21,500 cubic yards from Transit Shed #2, and 9,200 cubic yards for the stormwater system, which was split evenly between Transit Sheds #1 and #2.
- Excavated soils may either be used as fill material at the southern end of the Chula Vista Bayfront Harbor District area (if found appropriate for reuse) or hauled to the nearest landfill. The distance to the southern end of the Chula Vista Bayfront Harbor District area and the default

CalEEMod round-trip haul distance are both 20 miles. Total truck activity was estimated to be 1,763 haul/end dump trucks and 22 asphalt truck deliveries during Transit Shed #1 and 2,302 haul/end dump trucks and 22 asphalt truck deliveries during Transit Shed #2. Total GHG emissions were estimated based on a CalEEMod default 16 cubic-yard truck capacity, total truck activity by truck type, and 20-mile round-trip distance to either disposal site.

- GHG emissions associated with construction worker commute travel were estimated based on a weighted average of light duty auto (LDA), LDT1, and LDT2 emission rates from ARB's EMFAC 2014 web tool, similar to the vehicle split used in CalEEMod (e.g., LDA = 50 percent, LDT1 = 25 percent, LDT2 = 25 percent), a CalEEMod default trip length of 9.5 miles per trip, 50 workers on the average peak day, and three trips per worker per day.

Operation

Cargo throughput is anticipated to increase as a result of implementation of the Demolition and Initial Rail Component and full TAMT plan buildout, as denoted in Table 3-4 of Chapter 3, *Project Description*. The increase in throughput would increase CO_2, CH_4, and N_2O emissions from all sources at the project site, including increased vessel calls, harbor craft, truck travel, CHE, rail, worker trips, electricity, water, and loading and unloading of cargo. Descriptions of each of these sources and associated emissions modeling are provided below. Baseline and future year activity is based on the activity and fleet mix that was active at the project site during the EIR baseline (July 2013 through June 2014). Although the expected maximum throughput is not anticipated to be reached immediately, for a conservative analysis, emissions for all source categories assume that maximum Demolition and Initial Rail Component throughput is reached in 2020 and that maximum full TAMT plan buildout throughput is reached in 2035.

Ocean-Going Vessels

OGV emissions result primarily from three activities: transit, maneuvering, and hoteling. Transit occurs within both the outer unrestricted speed zone and within the VSR zone to the Whistle Buoy. Maneuvering includes movement and maneuvering within the harbor until the vessel anchors. Hoteling occurs once the ship is at berth. During hoteling, the vessel is stationary at the dock/berth, typically during loading and unloading of cargo. The vessel is typically still active, operating boilers and providing the ship's power needs either by running on-board auxiliary engines or by cold ironing (utilizing at-berth shore power), but the vessel's propulsion engines are not operating.

Transit and maneuvering emissions under existing and project conditions were assumed to be similar, as speeds and time in transit and maneuvering modes is not expected to change under project conditions. While hoteling, vessels that do not cold iron run auxiliary engines for power needs (e.g., for lights and fans on auto carriers and RoRos) and boilers (for maintaining fuel temperature), while vessels that cold iron turn off their auxiliary engines but do continue to run boilers.

OGVs that call on the project site consist of a mixture of auto carriers and RoRo vessels, bulk carriers, container ships, and general cargo vessels, as well as various tug calls that primarily export and import fuel. There were 100 OGV calls in the baseline time period: 57 by container ship, 23 by general cargo, 13 by bulk carriers, and 8 by auto carriers. Additionally, there were 44 ocean-going tug calls, of which 27 were for vessel fueling.

The Demolition and Initial Rail Component and full TAMT plan buildout would increase cargo throughput, which would invariably increase the number of vessels that call on the project site. Moreover, while the project would not directly change the composition of vessels that currently visit the project site, a portion of the fleet would change. For example, Dole is currently replacing its dated current fleet of refrigerated container vessels (497 Forty-foot Equivalent Units (FEUs)[7], 15,189 kilowatt (kW) propulsion, 7,220 kW auxiliary, 20 knot service speed) with three new and larger vessels (770 FEU, 19,420 kW propulsion, 11,320 kW auxiliary, 19.5 knot service speed) that will enter service in 2016. Replacement of the Dole vessels would change the type and size of vessels calling at the project site and would increase the number of calls that cold iron because each of these vessels has cold ironing capabilities. These new Dole vessels were assumed to be operational in the Demolition and Initial Rail Component and full TAMT plan buildout analyses. Based on the increase in throughput and known changes in the Dole vessel fleet, OGV call activity is expected to increase to from 100 annual calls during the baseline period to 104 annual calls under the Demolition and Initial Rail Component in 2020 and 579 annual calls under full TAMT plan buildout in 2035.

Shore power is currently installed at Berths 10-3/10-4. During the most recent period for which data are available, July 2013 to June 2014, only a portion of the refrigerated container ships used shore power while at berth. Currently, only one vessel can cold iron at a time, but the additional infrastructure would be in place to facilitate additional cold ironing at Berth 10-5/10-6 at a future date.

Emissions associated with changes in OGV activities were estimated based on CO_2, CH_4, and N_2O emission rates from ARB's OGV methodology (ARB 2011), the Port of Long Beach Inventory for estimating boiler load (Port of Long Beach 2015), and vessel activity and VSR data obtained from the District. The increase in vessel calls was estimated based on the projected increase in throughput, which would increase cargo throughput associated with the Demolition and Initial Rail Component in 2020 and full TAMT plan buildout in 2035 by cargo type, as previously indicated above.

The analysis includes round-trip vessel emissions within the air basin based on the last and next port of call in the vessel call data. Trip distances for each direction (north, south, and west) within the VSR zone and air basin were assigned based on information in the District's inventory, which set the basin consistent with the ARB limit for rulemaking and the National Oceanic and Atmospheric Administration Contiguous Zone at 24 nautical miles from the California baseline and the VSR zone at 20 nautical miles from the tip of Point Loma. This analysis assumes the number of vessel calls increases and the hotel time for the larger Dole vessels increases, but does not assume the at-berth hotel time for other vessels would increase. A detailed methodology describing vessel activity assumptions and emission calculations is provided in Appendix F.

Note that unlike criteria pollutants, GHG emission rates do not vary by engine tier, but instead only vary based on activity (including horsepower, transit speeds, and hotel time), which do vary by engine tier and vessel size (e.g., newer vessels are larger and have more main and auxiliary engine horsepower). Therefore, GHG emission rates per level of activity (grams per kilowatt-hour) for existing Tier 0, Tier 1, and Tier 2 vessels do not vary, but emissions do change due to the changes in activity.

[7] A Twenty-foot Equivalent Unit (TEU) is a unit of cargo capacity often used to describe the capacity of container ships and container terminals. Forty-foot Equivalent Units (FEUs) are defined as two TEUs.

Tugboats

Tugboat activity at the project site includes assist tugs and ocean-going tugs.

Assist Tugs

Assist tugs ensure safe navigation for large cargo vessel movements upon arrival to and departure from the Port by assisting vessels during in-harbor movement and berthing. Assist tugs do most of the work when vessels are docking. Assist tug activity is based on information from the assist tug operator, Crowley, which owns and operates two Tier-3 repowered tugs that are based in San Diego Bay. Activity per call is based on a 0.5-nautical-mile travel distance to vessels from the Crowley pier to the ship berthing location plus 0.5 hour of maneuvering the ship into and out of the berth. Emission estimates assume that two assist tugs are required for each call, and activity increases proportional to the increase in overall OGV calls in 2020 and 2035.

Emissions are based on the zero-hour CO_2, CH_4, and N_2O emission factors, engine deterioration factors, fuel correction factors, useful life, and load factors for main propulsion and auxiliary tug engines from the Port of Long Beach Inventory (Port of Long Beach 2014).

Ocean-going Tugs and Barges

Ocean-going tugs pull fuel barges between the project site and the Port of Los Angeles. Ocean-going tug activity is based on time in transit, time in-harbor (maneuvering), and time at-berth to allow barges to tie and untie from the docks. The tugs never berth, but instead just anchor the fuel barges in place while the barges are tied to and untied from the docks. Once the barges are in place, the tugs are free to leave and provide assistance or do other work in the Bay.

Fuel barges currently call on the project site for three reasons: to fill the liquid bulk tanks, to remove fuel from the liquid bulk tanks, and to fuel vessels that are at berth. Neither the Demolition and Initial Rail Component nor full TAMT plan buildout proposes changes to the liquid bulk facilities. Therefore, any calls related to the liquid bulk tanks are not accounted for in this analysis. However, because a portion of the barge calls is to directly fuel vessels that are at berth, it can be argued that these calls would increase as the number of calls increases at the project site.

An inventory of tug calls by fuel transfer type was obtained from the District for the baseline year, and calls that filled or moved fuel from the tanks were removed so that only fuel transfer directly to vessels was analyzed. To estimate tug transit time, the route to and from the north was assumed with a one-way distance of 50 nautical miles at 7 knots along with an in-harbor distance of 7 nautical miles at 7 knots to the project site for fuel barges. The per-call transit time and the number of calls were used to estimate the total tug transit hours, similar to the assumptions used in the District's 2012 Maritime Inventory (District 2014). The tug used for the fuel-barge trips is the Robyn J, which was repowered in 2010 with Tier 3 engines: two 750 kW propulsion engines and two 60 kW auxiliary engines. The three fuel barges that call on the project site range in fuel capacity but are each equipped with two 75 kW diesel engines, repowered in 2007 with Tier 3 engines, connected to fuel pumps that each pump up to 2,000 barrels per hour per barge (Pratley pers. comm.). Barge time per call for fueling vessels was estimated based on this 2,000-barrel-per-hour fueling rate and the total barrel capacity of each barge. Calls were limited to fueling ships. The number of calls is expected to increase proportional to the increase in overall OGV calls in 2020 and

2035. It was assumed that it takes 30 minutes to tie the barges up at the ship to begin fueling and 30 minutes to untie the barges once fueling is complete, and that the tugs depart during fueling.

Tug emissions are based on the zero-hour CO_2, CH_4, and N_2O emission factors, engine deterioration factors, fuel correction factors, useful life, and load factors for main propulsion and auxiliary tug engines as well as auxiliary barge engines from the Port of Long Beach Inventory (Port of Long Beach 2014).

Rail

Trains servicing the project site are operated by BNSF. Rail activity is split between switching (or switch-duty) and regional travel (or line-haul). BNSF switching locomotives are used to break and assemble trains adjacent the project site at the BNSF yard. Line haul refers to the movement of cargo over long distances (e.g., from the project site north to Los Angeles) and occurs within the Port as the initiation or termination of a line-haul trip. Switching refers to the assembling and disassembling of trains, sorting of the cars of inbound cargo trains into contiguous “fragments” for subsequent delivery to terminals, and the short-distance hauling of rail cargo within the Port (District 2008).

Most of the current train activity involves importing soda ash from Searles Valley and exporting some multi-purpose general cargo, including vehicles and windmill parts. Rail switching occurs when soda ash is delivered and switchers and railcar movers pull the cargo from the BNSF yard to the project site, while all switching at the project site for other cargo types is done by the line-haul locomotives.

As a result of project implementation, rail activity would increase as throughput increases and the mix of cargo type changes. The emission calculation methodologies are adapted from the emission inventories at the Port of San Diego (District 2014) and Port of Long Beach (Port of Long Beach 2014), using switch duty and Class 1 line-haul notch time and power fraction emissions from EPA’s locomotive rulemaking support document (EPA 1998). Emissions associated with the railcar mover were estimated based on engine specifications (ShuttleWagon SW605C car mover equipped with a Tier 3 8.3-liter Cummins QSC, rated at 300 horsepower), assuming the railcar mover operates at full load while in use. The simplified methodology for estimating both onsite switching and regional travel emissions is as follows.

- Emissions = locomotive hours x total locomotive horsepower x load factor x emission factors (in grams per horsepower-hour [g/hp-hr]).

The increase in activity (locomotive hours) is based on the assumption that loaded trains include four active (running) locomotives and empty trains include one active (running) locomotive while up to three locomotives idle to save fuel. BNSF line-haul locomotives are 4,400 horsepower on average and the GP-60 switchers include 3,600 horsepower engines. Additionally, a Tier 3 railcar mover helps with switching duties. Approximately half of the switching activity is performed by the GP-60 switchers and half is done by the railcar mover. Currently, up to one train on a maximum day and 72 trains per year arrive and then exit the BNSF yard. Switchers and railcar movers are active between the BNSF yard and the project site. For regional line-haul activity, all inbound and outbound trains were assumed to operate along the main line within San Diego County, with emissions based on what was determined to be a one-way distance of 61 miles to the Orange County border. Locomotive travel time is based on a 10 mph travel speed through downtown and a 2-hour travel time from just north of Santa Fe Depot to the Orange County line (based on a 30 mph travel speed).

Annual train activity would increase from 72 per year under existing conditions to up to 82 trains per year under the Demolition and Initial Rail Component and up to 684 trains per year under full TAMT plan buildout. Rail emissions are based on line-haul and switcher GHG emission factors from the Port of Long Beach inventory (Port of Long Beach 2015) (see locomotive activity and emission factor calculations in Appendix F).

Trucks

Truck activity is split into three groups: idling at or near the project site, driving between the project site and nearest freeway entrance, and driving regionally on public roadways. Emissions associated with truck trips were estimated using trip generation from the traffic analysis (Appendix G) and idling and running exhaust GHG emission factors from ARB's EMFAC model. Emissions from idling at the terminal are based on an average total idling time on the entire terminal area of 15 minutes (0.25 hour) per truck per trip, consistent with the District's air emissions inventory (District 2014). Note that 15 minutes (0.25 hour) per truck per trip is the sum of all idling at and near the project site in the District's inventory, and not the idling time at a given location, which is restricted to 5 minutes by ARB (13 CCR 1956.8 and 2485). Emissions from truck travel between the project site and nearest freeway entrance are based on the assumption that trucks travel along Harbor Drive and enter and exit the freeway at 28th Street. Emissions from regional travel are based on the assumption that all trucks travel the 60-mile one-way travel distance from the project site to the Riverside County line.[8] Emission factors for running exhaust and idling were obtained from the EMFAC 2014 software for annual average heavy-duty drayage trucks operating at the Port (i.e., "T7 other port") assuming a baseline year of 2013, operational year of 2020 for the Demolition and Initial Rail Component, and operational year of 2035 for full TAMT plan buildout. Annual truck activity was based on the 33,840 one-way truck trips per day under existing conditions, with the Demolition and Initial Rail Component adding 2,520 new one-way truck trips per day for all nodes, and full TAMT plan buildout adding 152,280 new one-way truck trips per day for all nodes under maximum practicable buildout. A breakdown of trips by node is included in Appendix G.

Phase 2 heavy-duty truck standards were adopted by the Federal Highway Administration and EPA following release of the Draft EIR. The Phase 2 standards phase in beginning in model year 2021 and culminate in model year 2027. Because the Phase 2 standards are not included in the statewide and CAP BAU calculations, reductions are included in the revised mitigated analysis herein. The standards are phased in over time, incrementally increasing strength and compliance between 2021 and 2027. The reductions under full TAMT plan buildout in 2035 were estimated based on vehicle miles traveled by model year from EMFAC and the Class 7 and Class 8 reductions per ton-mile from the Phase 2 (MDHD2) Final EIS (NHTSA 2016), which increases from approximately 10% for model years 2021–2023, 15% for model years 2024–2026, and 19% for model years 2027 and beyond. The GHG reductions for each model year were weighted by the vehicle population in EMFAC, resulting in a 15.9% reduction in GHG emissions per mile in 2035. A breakdown of these reductions is included in Appendix F.

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[8] As the CEQA thresholds used in the impact analysis are regional and relate to the attainment status of air quality standards within San Diego County, haul truck trip emissions were confined to those occurring within the county.

Cargo Handling Equipment

CHE includes equipment used to move cargo (containers, general cargo, and bulk cargo) to and from marine vessels, railcars, and on-road trucks at the project site. Typical CHE at the project site includes forklifts, yard trucks, container handlers (reach stackers), aerial lifts, loaders, sweepers/scrubbers, and other equipment. By increasing throughput at the project site, CHE activity would increase, which may increase the amount of equipment used. Existing CHE GHG emissions are based on the CHE emissions shown in the District's Air Emissions Inventory (District 2014) and emissions were apportioned to each cargo type by percentage of existing throughput. Projected future CHE emissions in 2020 and 2035 are based on the overall increase in throughput and apportioned to each cargo type by percentage of throughput associated with the implementation of both the Demolition and Initial Rail Component and full TAMT plan buildout. Because emissions are based on the CHE shown in the inventory, which is based on year 2012 activity and emission rates, this analysis assumes no fleet turnover in CHE over time and instead simply scales up existing CHE activity. Emissions associated with the new electric and terminal cranes were based on size and consumption data from a container terminal project at the Port of Los Angeles (Port of Los Angeles 2014). Consumption and activity are based on maximum refrigerated container and multi-purpose general cargo throughput at full TAMT plan buildout.

Workers

Emissions associated with increased worker trips were estimated using emission factors for running exhaust idling from EMFAC 2014 assuming a baseline year of 2013 and an opening year of 2020. It was assumed that there are currently 315 employees (combined dock and administrative workers), with the Demolition and Initial Rail Component adding 92 employees and full TAMT plan buildout adding 524. Based on information from the traffic analysis, the analysis assumes three trips per employee per day to account for vehicle-dependent errands during the work shift (Appendix G).

Electricity

The additional space and throughput at the project site would result in an increase in electricity consumption to power equipment, bulk loading, and lighting. Electricity-related emissions were estimated based on existing electricity consumption for individual tenants and scaling up to 2020 and 2035 based on the increase in throughput. Emissions are based on SDG&E's most recent published emission rate for operating year 2014 and adjustments for the projected RPS in opening year 2020 and year 2035. Note that vessel shore power is discussed above under the vessel methods.

Water Use

Water consumption at the project site includes employee consumption (e.g., for toilets and sinks) and vessel restocking. Water consumption for each cargo node was scaled up by the increase in employment and vessel calls expected in 2020 and 2035. Energy use associated with water supply, treatment, distribution, and wastewater was estimated based on energy intensity factors (kilowatt-hour per million gallons) from CalEEMod, expected water consumption, and the same utility emission rates described above in estimating electricity-related emissions.

GHG Emissions Scenarios

Given EO S-03-05 and EO B-30-15 and the scientific evidence that additional GHG reductions are needed through 2050 to stabilize CO_2 concentrations, project-related impacts for both 2020 (AB 32) and the post-2020 period are considered in the analysis.[9] Specifically, the analysis includes an inventory of baseline GHG emissions without the project and the estimated GHG emissions that the project would contribute in 2020 through implementation of the Demolition and Initial Rail Component and in 2035 through implementation of the full TAMT plan buildout. The analysis assumes incorporation of features proposed by the project proponent that will be incorporated into the Coastal Development Permit (CDP) as conditions of approval.

4.6.4.2 Thresholds of Significance

Climate change is a global problem and GHGs are global pollutants, unlike criteria air pollutants (such as ozone precursors), which are primarily pollutants of regional and local concern. Given their long atmospheric lifetimes, GHGs emitted by countless sources worldwide accumulate in the atmosphere. No single emitter of GHGs is large enough to trigger global climate change on its own. Rather, climate change is the result of the individual contributions of countless past, present, and future sources. Therefore, GHG impacts are inherently cumulative, and the analysis below is a cumulative impact analysis.

Greenhouse Gases

The State CEQA Guidelines do not indicate what amount of GHG emissions would constitute a significant impact on the environment. Instead, they authorize the lead agency to consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence (State CEQA Guidelines Sections 15064.4(a) and 15064.7(c)).

A number of agencies throughout the state, including multiple air districts, have drafted and/or adopted varying threshold approaches and guidelines for analyzing GHG emissions and climate change in CEQA documents. However, none of these are binding; they are only recommendations for consideration by CEQA lead agencies. Some commonly used threshold approaches include (1) consistency with a qualified GHG reduction strategy, (2) performance-based reductions,[10]

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[9]The Association of Environmental Professionals' Climate Change Committee recommended in the *Beyond 2020: The Challenge of Greenhouse Gas Reduction Planning by Local Governments in California* (*Beyond 2020*) white paper, incorporated herein by reference, that CEQA analyses for most land use development projects can continue to rely on current thresholds for the immediate future but that general plans and long-term projects should consider "post-2020 emissions consistent with 'substantial progress' along a post-2020 reduction trajectory toward meeting the 2050 target." *Beyond 2020* further recommends that the "significance determination…should be based on consistency with 'substantial progress' along a post-2020 trajectory." This point is further clarified in the more recent *Beyond 2020 and Newhall: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California* white paper, that "the best measure of whether an individual project is providing its fair share of GHG reductions or efficiency levels is whether that project is supporting 'substantial progress' toward the statewide reduction targets over time, not whether the project is meeting a milestone target many years in the future, such as for 2050."

[10] Performance-based reductions include the "percentage below business-as-usual" threshold approach and are generally based solely on statewide targets, which has been used widely in the past. This approach was the subject

(3) numeric "bright-line" thresholds, and (4) efficiency-based thresholds.

Summary of "Newhall Ranch" Supreme Court Decision

The recent California Supreme Court decision in the *Center for Biological Diversity et al. vs. California Department of Fish and Wildlife, the Newhall Land and Farming Company* (November 30, 2015, Case No. S217763) (hereafter *Newhall Ranch*), confirmed that the use of BAU analysis (i.e., 29 percent below business as usual), a performance-based approach, would be satisfactory. However, for a project-level analysis that uses ARB's statewide BAU targets, substantial evidence must be presented to support the use of those targets for a particular project at a specific location. The Court notes that this may require examination of the data behind the statewide model and adjustment to the levels of reduction from BAU used for project evaluation. To date, neither ARB nor any lead agencies have provided any guidance on how to adjust AB 32's statewide BAU target for use at the project level.

The *Newhall Ranch* decision suggested several approaches for determining significance of GHG emissions are appropriate as alternatives to the percentage below BAU approach, but did not foreclose other methodologies that may be used by lead agencies. In any case, the decision affirmed that "thresholds only define the level at which an environmental effect 'normally' is considered significant; they do not relieve the lead agency of its duty to determine the significance of an impact independently." Some of the Court's suggested approaches are introduced next and are discussed more thoroughly in the context of the proposed project below.

- **Consistency with a Qualified GHG Emissions Reduction Plan.** Use of a GHG emission reduction plan consistent with State CEQA Guidelines Sections 15183.5 or 15064.4 for a particular geographic area.
- **Quantitative Thresholds.** Use of a quantitative threshold (such as the Bay Area Air Quality Management District's bright-line threshold).[11]
- **Compliance with Regulatory Programs**. This approach would include an assessment of the project's compliance with regulatory programs designed to reduce GHG emissions from particular activities (e.g., building efficiency, transportation, water usage). To the extent that a project's design features comply with or exceed the regulations outlined in the Scoping Plan and adopted by ARB or other State agencies, the lead agency could appropriately rely on their use as showing that the project is reducing emissions consistent with AB 32 and, thus, that emissions are less than significant.
- **CEQA Streamlining.** Certain land use projects (such as residential, mixed use, and transit priority projects) could use SB 375's expressed allowance for streamlining of transportation impacts based on metropolitan regional SCS to streamline analysis of emissions from cars and light trucks. Under any methodology, the *Newhall Ranch* case recognizes that if GHG emission impacts are still significant after adoption of all feasible mitigation measures and consideration

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of the *Newhall Ranch* case and presently is subject to uncertainty until the issues raised by the California Supreme Court ruling are resolved.

[11] Note that while *Newhall Ranch* did not explicitly discuss efficiency-based thresholds, they are a form of quantitative threshold and therefore are included in the *Applicability of Available Thresholds* discussion herein.

of project alternatives, the lead agency may adopt a statement of overriding considerations with the appropriate findings.

Applicability of Available Thresholds

In light of the recent *Newhall Ranch* decision, the following section discusses each applicable approach and analyzes its specific applicability to the project.

Performance-Based Reductions

Performance-based thresholds are based on a percentage reduction from a projected future condition. For example, reducing future BAU emissions by the AB 32 target of 29 percent (below 2020 BAU levels) through a combination of State measures, project design features (e.g., renewable energy), or mitigation is a performance-based threshold. The performance-based approach is based on the project's reduction in emissions from an unmitigated condition. Other lead agencies have adopted performance-based targets that are all tied to the AB 32 target of achieving 1990 levels by 2020, but the prescribed percentage reduction can vary depending on the version of the Scoping Plan and targets therein that were used. For example, San Joaquin Valley Air Pollution Control District recommends a 29 percent reduction, which is based on the 2008 Scoping Plan, while Sacramento Metro Air Quality Management District previously recommended a 21.7 percent reduction from a projected no action taken (NAT) scenario,[12] which is based on the 2011 re-adopted Scoping Plan, whose emission targets vary slightly from 2008 to account for revised estimates for future fuel and energy demand. With the *Newhall Ranch* decision, relating a given project to the achievement of State reduction targets likely requires adjustments to ARB's statewide BAU model not only to isolate new development emissions but also to consider unique geographic conditions that would be required to use the BAU performance-based methodology for a specific project. To date, this type of adjustment to the statewide BAU target has not been formulated and, therefore, is not appropriate for the project's analysis. The primary value of a performance-based target, as indicated in *Newhall Ranch*, is that it can provide a scenario by which to evaluate the effectiveness of a project's efficiency and conservation measures to reduce GHG emissions. As such, future year targets can be used to benchmark performance, using either statewide or regional emission targets, to determine a project's fair share of mitigation.

Compliance with a Qualified GHG Reduction Plan

Under this approach, a qualified plan may be used in the cumulative impact analysis for later projects when the analysis "identifies those requirements specified in the plan that apply to the project." For a GHG reduction plan to be considered a qualified plan, it must meet certain criteria established under State CEQA Guidelines Sections 15183.5 (b) and 15064.4, also specified above. Consequently, if a project is consistent with a local CAP that was created to meet AB 32's GHG targets, then the project would be considered consistent with statewide GHG reduction goals for 2020. Additionally, if a CAP was adopted that was consistent with the State's overall goals for post-2020, including the downward trajectory as clarified in EO B-30-15 and EO S-03-05, and a project is consistent with that CAP, it would be considered consistent with the State's post-2020 GHG emission strategy. Section 15183.5 also specifies that the project's CEQA analysis "must identify those

[12] The NAT scenario does not include any State regulations designed to reduce GHG emissions, including improvements to the Title 24 standards, RPS, LCFS, or Pavley Rules.

requirements specified in the plan that apply to the project, and, if those requirements are not otherwise binding and enforceable, incorporate those requirements as mitigation measures applicable to the project." The District adopted a CAP in 2013 that sets forth GHG 2020 and 2035 reduction targets and reduction measures to achieve these targets.

For 2020, the CAP meets the requirements of State CEQA Guidelines Section 15183.5 as specified in Appendix A of the CAP. The CAP quantifies existing and projected GHG emissions by sectors[13] and activity type,[14] as well as identifies and analyzes GHG emission reductions from the same time period within the District. The CAP establishes a 10 percent reduction goal for the District for 2020, below which the contribution of GHG emissions from activities covered by the plan would not be cumulatively considerable. The GHG emission reduction goal and measures also serve as the CAP's performance standards, with accompanying reduction targets or performance standards across six categories.[15] The CAP also specifies measures that, if implemented on a project-by-project basis, collectively achieve the GHG reduction goals for the District.[16] The plan and its effectiveness are regularly monitored through a process known as *adaptive management* to ensure that it is achieving the GHG reduction goals.[17] The CAP was adopted through a lengthy public process and a CEQA exemption was adopted by the District (with an initial study) prior to the CAP's adoption. For the proposed project, consistency with the CAP is appropriate for 2020 to determine whether significant GHG emission impacts would result. However, because the CAP does not include post-2020 reduction quantification, consistency with the CAP post-2020 is not appropriate.

Quantitative Thresholds

Numerical Bright-Line

In general, numerical bright-line thresholds identify the point at which additional analysis and mitigation of project-related GHG emission impacts is necessary. Currently, bright-line thresholds have been developed for commercial projects, residential projects, and stationary sources. Commercial and residential bright-line thresholds are typically based on a market capture rate or a gap analysis,[18] which is tied back to AB 32 reduction targets (1990 levels by 2020).[19] These bright-line thresholds reflect local or regional land use conditions, particularly residential and commercial density and access to transit. For example, the Bay Area Air Quality Management District's bright-line threshold of 1,100 $MTCO_2e$ captures land use conditions present in the Bay Area at the time of analysis, and does not necessarily reflect conditions in other areas of the state, including within the District, that may display varying land use patterns and density. A stationary source bright-line

[13] Sectors include electricity, natural gas, on-road transportation, off-road equipment, water usage and wastewater, and waste.

[14] Activities include industrial, shipbuilding, lodging, ocean-going vessels, recreational boating, other terminal activities, port operations, the convention center, and other activities within the District.

[15] Categories include energy efficiency, alternative energy, transportation and land use, water, waste, and miscellaneous.

[16] The implementation of the measures and performance standards are specified in Appendices A and F of the CAP, as well as Board of Port Commissioners Policy 750, which is incorporated herein by reference.

[17] Board of Port Commissioners Policy 750.

[18] The gap analysis demonstrates the reductions needed at the residential and commercial land use levels to achieve State targets. Capture is the process of estimating the portion of projects that would result in emissions that exceed a significance threshold and would be subject to mitigation.

[19] The AB 32 scoping plan identifies specific measures to reduce GHG emissions to 1990 levels by 2020.

threshold of 10,000 $MTCO_2e$ has been adopted by multiple air districts and other agencies as part of the permitting process, and the South Coast Air Quality Management District (SCAQMD) currently recommends use of the same threshold for permitted source projects when SCAQMD is the lead agency.

A numerical bright-line value based solely on District-wide and/or large marine terminal projects does not yet exist. Moreover, no bright-line threshold has been formally adopted by an air district or other lead agencies for use in the San Diego region. Both the City and County of San Diego are recommending an interim 900 $MTCO_2e$ screening level as a theoretical approach to identify projects that require further analysis and potential mitigation. The screening level identifies projects that would result in sufficiently low GHG emissions to be less than cumulatively considerable without mitigation. This 900 $MTCO_2e$ screening level threshold, while potentially appropriate for small maritime projects or other land use types, was not devised to include emissions associated with larger goods movement (e.g., OGV, freight rail) projects or larger industrial processes that are typically associated with marine terminals. Consequently, the interim screening level recommended by the City and County of San Diego is inappropriate for the proposed project. The stationary bright-line threshold of 10,000 $MTCO_2e$ is also inappropriate for goods movement activities because they are typically not an industrial stationary permitted sources with a single point of emissions (e.g., single exhaust pipe or release point), but may be appropriate for stationary-source activities (e.g., boilers) at the Port. Because the proposed project is not a residential, commercial, or industrial stationary source project, established bright-line numerical thresholds would be inappropriate and are not used in the analysis.

Efficiency-Based

Another type of quantitative threshold is an efficiency-based threshold. Efficiency-based thresholds represent the GHG efficiency needed for development to achieve California's GHG emissions target established under AB 32. While the *Newhall Ranch* dicta did not specifically recommend the efficiency-based approach, the ruling did note that numerical threshold approaches may be appropriate for determining significance of GHG emissions and to emphasize the consideration of GHG efficiency. Efficiency-based thresholds are typically calculated by dividing emissions associated with residential and commercial uses (also termed the "land use sector" in the Scoping Plan) within the state (or a certain geographic area) by the sum of jobs and residents within the same geography. The sum of jobs and residents is called the "service population," and a project's service population is defined as the people that work and live within the project site. Because typical efficiency-based thresholds are based on the land use sector (residential and commercial uses) and only account for land use-related emissions and residential population and employment, they may be misleading to use for industrial uses, stationary source projects,[20] or marine terminal projects,[21] because these types of uses are specifically excluded from the land use sectors and typically do not directly propose housing or result in population growth. Moreover, the *Beyond Newhall and 2020* white

[20]See the Bay Area Air Quality Management District's October 2009 Threshold Options and Justification Report for additional evidence: http://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines.

[21]An example of appropriate use of an efficiency-based threshold at the Port would be for a large visitor-serving commercial project (i.e., has a jobs-based component consistent with the efficiency-based threshold) that accommodates population and employment growth in a way that is consistent with the emissions limit established under AB 32.

paper discusses the idea that an efficiency threshold could be developed for a specific industrial sector if one were to benchmark GHG emissions by a meaningful industrial output unit, such as Twenty-foot Equivalent Units (TEUs) for ports and goods movement projects. As a way to measure progress toward the State's 25 percent system efficiency target, the *Sustainable Freight Action Plan* also proposes a metric that compares the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces (ARB 2016c). However, no industrial-, goods movement-, or port-specific threshold has been adopted or proposed to date. Therefore, the efficiency-based methodology is not used for the proposed project analysis.

Compliance with Regulatory Programs

Another approach for determining whether a project would result in significant GHG emission impacts is determining whether a proposed project is in compliance with regulatory programs designed to reduce GHG emissions from particular activities. To the extent a project complies with or exceeds those programs adopted by ARB or other State agencies, a lead agency could rely on this compliance to show less-than-significant impacts. However, such analysis is only applicable within the area governed by the regulations. For example, consistency with regulations addressing building efficiency would not suffice to determine that the project would not have significant GHG emissions from transportation. The proposed project's compliance with regulatory programs adopted by ARB or other State agencies is used, in part, for the proposed project's GHG emission analysis.

Newhall Ranch specifically mentions consistency with both SCS (per SB 375) and AB 32, which are each discussed below. Also, other recent case law mention the need to demonstrate consistency with the long-term targets in B-30-15 (2030) and S-03-05 (2050), which are also addressed below.

- **Compliance/Consistency with AB 32 (2020).** A lead agency could also assess project-level consistency with AB 32 in whole or part by looking to compliance with regulatory programs designed to implement AB 32. To the extent a project's design features comply with or exceed the regulations outlined in the Scoping Plan and adopted by ARB or other State agencies, a lead agency could appropriately rely on their use as showing compliance with performance-based standards adopted to fulfill the statewide goal for reducing GHG emissions.
- **Consistency with B-30-15 (2030) and S-03-05 (2050) Targets and Planning.** A lead agency could also assess project-level consistency with the targets in the EOs and with current planning for the post-2020 period or substantial progress toward these goals over time. At present, the regulatory framework to achieve the 2030 target is in its infancy and is not sufficiently robust to support a consistency argument, but consistency with the targets is nevertheless a potential approach.

CEQA Streamlining

The *Newhall Ranch* ruling affirmed that CEQA expressly allows streamlining under SB 375 of certain residential, commercial, and mixed use projects that that are consistent with the limits and policies specified in an applicable SCS. The ruling pointed out that a qualifying project need not additionally analyze GHG emissions from cars and light trucks. In San Diego, the SCS is contained within SANDAG's recently adopted 2050 RTP/SCS (SANDAG 2015). Projects eligible for this streamlining can "tier" off the RTP/SCS EIR for CEQA purposes. However, the proposed marine terminal project would not be eligible for streamlined review because it does not meet the qualifying criteria defined in SB 375.

Post-2020 Thresholds

While the *Newhall Ranch* holding did not rule on whether a post-2020 climate change analysis is required for CEQA documents, the decision mentioned that consistency with 2020 goals will become a less definitive guide over time and consistency with long-term emission reduction targets may be needed in the near future. Although EO B-30-15 has set forth an interim reduction target to reduce GHG emissions by 40 percent below 1990 levels by 2030 and EO S-03-05 has set forth a long-term reduction target to reduce GHG emissions by 80 percent below 1990 levels by 2050, and there are proposals at the State legislature to adopt interim (2030) and long-term (2050) binding GHG targets,[22] there is no current statewide GHG reduction plan or framework thereof that extends beyond 2020.[23] Additionally, these EOs have not been codified into law.

However, the State and the District have shown interest in adopting regulatory programs and frameworks designed to support meeting statewide post-2020 reduction goals. For example, the Scoping Plan First Update includes some post-2020 concepts (reduction measures) either currently underway or being considered that may be incorporated in the next Scoping Plan update. Meeting the ambitious targets in EO B-30-15 and EO S-03-05 will require substantial effort at the state, regional, and local levels. Lacking an adopted post-2020 plan, the Association of Environmental Professionals (AEP) (2015, 2016) recommends that CEQA GHG analyses evaluate project emissions in light of the trajectory of State climate change legislation and assess their "substantial progress" toward achieving longer-term reduction targets identified in available plans (e.g., CAPs), legislation, or executive orders. The best measure is thus progress toward long-range targets, and not necessarily meeting milestone targets many years in the future, such as for 2050. Currently there are no proposed or adopted significance thresholds for analyzing post-2020 emissions for development projects in California, and there are no adopted statewide or local plans to reduce emissions 40 percent below 1990 levels by 2030. Moreover, there are no thresholds, post-2020, that are explicitly applicable to large marine terminal projects.

Threshold Approach

As discussed above, there are multiple potential thresholds and methodologies for evaluating project-level GHG emissions consistent with CEQA, depending on the circumstances of a given project. While efforts at framing GHG significance issues have not yet coalesced into any widely accepted set of numerical significance thresholds across the state and within the region, a range of alternative approaches do exist.

The project as a whole includes two separate benchmark years. First, the Demolition and Initial Rail Component would be built out and operational in year 2020. Year 2020 aligns with the timeline set forth in both AB 32 and the District's CAP. Use of 2020 as a target or milestone year for GHG emissions reductions per AB 32 as a significance criterion is widely employed and was further validated in *Newhall Ranch* for projects with 2020 or pre-2020 timelines (AEP 2016). The Demolition and Initial Rail Component is the initial project-level component of the TAMT plan, which would enable the remaining components of the full TAMT plan buildout to occur. For purposes of analysis, operation of the Demolition and Initial Rail Component is only analyzed in

[22] The 2030 target of 40% below 1990 levels may be adopted in legislation per the proposed SB 32, which was withdrawn during the 2015 legislative term but is expected to be considered in the 2016 legislative term.

[23] EO B-30-15 requires ARB to update the Scoping Plan to include a plan to achieve the 2030 target, which is expected in late 2016.

2020. Beyond 2020, the next statewide target or milestone year is 2030 as set by EO B-30-15 and as addressed in recent ARB movement on the Scoping Plan update (ARB 2016b). Buildout of the full TAMT plan is expected beyond 2030, in 2035, and therefore this analysis treats 2035 as the post-2020 target or milestone year.

Based on the available threshold concepts recommended by air districts or other lead agencies and recent case law, the thresholds of significance that will be applied to the proposed project's GHG emissions for both the 2020 and post-2020 periods are as follows.

- For **2020**, impacts from the project's GHG emissions would be considered less than significant if the project is found to be:
  (1) consistent with the District CAP (a qualified GHG reduction plan), including a 33 percent maritime-specific GHG emissions reduction target and reduction measures specified therein, and
  (2) in compliance with regulatory programs outlined in the Scoping Plan and adopted by ARB or other California agencies.

The analysis for 2020 is both quantitative with respect to the CAP and AB 32 consistency and qualitative with respect to compliance with the CAP's measures and regulatory programs outlined in the Scoping Plan and adopted by ARB or other California agencies. The analysis for compliance with regulatory programs only applies to the individual area addressed by the regulatory program. Project emissions are compared to unmitigated levels in determining consistency with CAP reduction targets. If the project is (1) determined to be consistent with the District's CAP, including a 33 percent maritime-specific reduction target required to reduce maritime-related emissions pursuant to the CAP (see Table 4.6-5), and (2) will implement regulatory programs adopted by ARB or other agencies to reduce GHG emissions, then the project's cumulative contribution of GHG emissions would be considered less than significant for 2020. Conversely, if the project is determined to be inconsistent with the measures listed in the CAP, is inconsistent with the 33 percent reduction required pursuant to the CAP,[24] or will not implement regulatory programs adopted by ARB or other State agencies to reduce GHG emissions, then the project's cumulative contribution of GHG emissions would be considered significant and feasible mitigation measures are required.

- For the **2020 to 2035** period, impacts from the project on GHG emissions would be less than significant if the project is found to be:
  (1) consistent with the State's overall reduction targets (including EO S-03-05 and EO B-30-15) for post-2020, and
  (2) in compliance with regulatory programs adopted by ARB or other California agencies for post-2020 GHG emissions.[25]

Based on the available threshold concepts recommended by expert agencies and the "substantial progress" approach, the analysis for the post-2020 time period is both quantitative with respect to

[24] The maritime-related target addresses the *Newhall Ranch* ruling's concerns about difference in location of new development as it represents reductions needed for the local jurisdiction (District) to meet an AB 32 equivalent target.

[25]Because the CAP does not yet quantify reductions for 2035, it is not relied on for the post-2020 analysis.

consistency with long-term reduction targets and qualitative with respect to compliance with the measures and regulatory programs outlined, adopted, or proposed by ARB or other California agencies. Project emissions are compared to levels without mitigation in determining consistency with the State's overall reduction targets for the post-2020 period. The analysis for compliance with regulatory programs only applies to the topic of the regulatory program. In keeping with the guidance provided in *Newhall Ranch* that the extent to which a project's design features comply with or exceed the regulations outlined in the Scoping Plan or by other State agencies, a lead agency could appropriately rely on showing compliance with performance-based standards (e.g., future reduction targets) adopted to fulfill a statewide plan for the reduction or mitigation of GHG emissions.

To date, pursuant to the EOs, the statewide strategy for the reduction of GHG emissions is the 2030 (40 percent below 1990 levels) and 2050 (80 percent below 1990 levels) reduction targets. Given the buildout of the TAMT plan beyond 2030, this Draft EIR uses a single target to both benchmark performance and determine the fair share of reductions needed to demonstrate progress in the post-2020 time period. For 2035, the performance-based standard (reduction targets) uses the *Reference Case* emissions estimate from the *Pathways* analysis (ARB 2015c), after backing out the effect of current GHG policies.[26] The resultant 2035 emissions forecast estimate was then compared to the 2030 target of 40 percent below 1990 levels to derive a performance benchmark of 57 percent below 2020 levels for the District and the project in 2035. Therefore, in order to demonstrate "substantial progress" by 2035 toward meeting the State's downward trajectory, the project would need to demonstrate that GHG emissions would be consistent with this 57 percent target. If the project is determined to be consistent with the State's overall reduction strategy by demonstrating a downward trajectory toward 2050 targets by 2035 (by using the above reduction target for 2035 as a benchmark of performance), and is determined to be in compliance with regulatory programs adopted by ARB or other California agencies for post-2020 GHG emissions, then the project's cumulative contribution of GHG emissions would be considered less than significant. Conversely, if the project is determined to be inconsistent with the State's overall reduction strategy for 2035 and is determined to not be in compliance with regulatory programs adopted by ARB or other California agencies for post-2020 GHG emissions, then the project's cumulative contribution of GHG emissions would be considered significant and feasible mitigation measures are required.

The comparison to the State's reduction strategy for 2035 (as interpolated between 2030 and 2050 targets) is an appropriate approach by which to determine the project's fair share of mitigation because it would result in project emissions that would be consistent with or even exceed the emissions targets for the post-2020 period. Additionally, the project is an improvement to an existing facility and not a new development project. Unlike a new development project, the proposed project does not have the ability to implement a wide range of GHG reduction measures and features given the limited scale of the proposed project's changes to the existing condition.

[26] The Energy + Environmental Economics Reference Case (current GHG policies) 2030 GHG emissions estimate is approximately 400 million $MTCO_2e$. In order to derive a 2030 BAU estimate, the effect of current GHG policies was assumed to be equivalent to the percentage statewide reduction from ARB's 2014 estimate of 2020 BAU emissions (539 million $MTCO_2e$) to the 1990 emissions level (431 million $MTCO_2e$), which is 20% overall. Therefore, the Energy + Environmental Economics *Reference Case* estimate was "inflated" by 20% to result in a 2030 BAU estimate of approximately 500 million $MTCO_2e$.
The Energy + Environmental Economics Pathways documentation can be found at: https://ethree.com/public_projects/energy_principals_study.php/.

Hence, the project's fair share of GHG reductions to meet California's GHG reduction strategy for the post-2020 period may actually be less than a new development project within the District. However, the use of the 57 percent performance benchmark would likely also apply to new development, and, therefore, this approach is considered a conservative worst-case analysis. Moreover, at present, there is no means to define a specific reduction level suitable for this individual project; however, use of these targets will establish a downward trajectory consistent with the EOs.

Feasible mitigation measures have been identified for both 2020 and post-2020. For 2020, mitigation measures are based primarily on the measures presented in the CAP that can be implemented at the project level. For post-2020, mitigation measures are based, in part, on the measures presented in the CAP, as well as measures and potential action items presented in ARB's Sustainable Freight Action Plan and supporting E3 Pathways analysis (2015)[27] document (ARB 2015c), which aims to improve goods movement and freight efficiency, transition to zero-emission technologies, and increase competitiveness of California's freight system. This analysis relies on adopted standards and remains valid regardless if the State adopts a long-term reduction plan (e.g., 2030 Scoping Plan) in the near future, because any approved plan will only provide a framework to meet long-term targets using measures (e.g., RPS 50 percent) already known at the time of this analysis. ~~The mitigated analysis includes adopted statewide measures and does not take credit for any prospective measures that are not yet adopted. For example~~Since the Draft EIR was released, the Phase 2 heavy-duty truck standards ~~are likely to be approved~~were adopted by the Federal Highway Administration and EPA on August 16, 2016. The Phase 2 standards phase in ~~2016 or 2017, but they remain~~beginning in ~~draft form.~~model year 2021 and culminate in model year 2027. Therefore, the GHG- and fuel-related reductions from Phase 2 are no~~t~~w included in the analysis herein ~~even though~~because reductions will ~~likely~~ be realized over the life of the project.

Note that, consistent with established protocols and published guidance from other lead agencies and air districts, construction emissions are amortized over the expected operational life of the project and added to annual operational emissions.

Climate Change

There have been recent court cases that have concluded that an EIR need not evaluate the environment's effect on a project, often referred to as "Reverse CEQA."[28] In one case directly discussing the issue of SLR, the California Second District Court of Appeal has held that while an EIR must analyze the environmental effects that may result from a project, an EIR is not required to examine the effects of the environment, such as SLR, on a project (see *Ballona Wetlands Land Trust v. City of Los Angeles*, 201 Cal. App. 4th 455). In its decision, the Court called into question the validity of portions of the State CEQA Guidelines that require consideration of impacts of the environment on a project. The *Ballona* decision potentially eliminates the need for lead agencies to consider the impacts of climate change on proposed projects. The *Ballona* decision did not, however, call into question the State CEQA Guidelines amendments enacted in 2010 that establish how GHG emissions

[27]The E3 Pathways documentation can be found here and is incorporated by reference: https://ethree.com/public_projects/energy_principals_study.php/

[28]See *South Orange County Wastewater Authority v. City of Dana Point* (2011) 196 Cal.App.4th 1604; *Ballona Wetlands Land Trust v. City of Los Angeles* (2011) 201 Cal.App.4th 455; *Baird v. County of Contra Costa* (1995) 32 Cal.App.4th 1464, 1468 (Baird); *City of Long Beach v. Los Angeles Unified School Dist.* (2009) 176 Cal.App.4th 889 (Long Beach).

are to be analyzed and mitigated under CEQA.

Although the California Supreme Court denied review of the *Ballona* decision,[29] the issue of the environment's effect on a project was raised once again in *California Building Industry Association v. Bay Area Quality Management District*, Supreme Court Case No. S213478. The Supreme Court ruled on December 17, 2015, that CEQA does not direct agencies to analyze the environment's effects on a project unless the project would exacerbate environmental hazards or certain specific exemptions apply. However, the project site is within the Coastal Zone and, pursuant to EO S-13-08, the California Coastal Commission considers the potential impacts of SLR on a proposed project in determining consistency with the Coastal Act and adopted Sea Level Rise Policy Guidance in 2015 that provides an overview of the best available science on SLR and a recommended methodology for addressing SLR in Coastal Commission planning and regulatory actions (California Coastal Commission 2015).

Specifically regarding SLR, the San Diego Bay Vulnerability Assessment conducted by ICLEI - Local Governments for Sustainability found that the greatest concern from SLR will be an increase in the nature of flooding that the region already experiences due to waves, storm surge, El Niño events, and exceptionally high tides. Furthermore, starting around mid-century, the San Diego Bay may become more susceptible to regularly occurring inundation of certain locations and assets, some of which are being planned and built today. As a result, this longer-term risk of inundation should be a concern in today's decision-making. The most vulnerable sectors in the community include stormwater management, wastewater collection, shoreline parks and public access, transportation facilities, commercial buildings, and ecosystems (ICLEI 2012).

Accordingly, a discussion of the issue has been provided below using the following criteria.

- Would the project place people or structures at substantial risk of harm due to predicted climate change effects, particularly sea level rise?

4.6.4.3 Project Impacts and Mitigation Measures

Threshold 1: For the years up to and including 2020, the project (1) would be consistent with the District CAP, including a 33 percent maritime-specific GHG emissions reduction target and reduction measures specified therein, and (2) would be in compliance with plans, policies, and regulatory programs outlined in the Scoping Plan and adopted by ARB or other California agencies for the purpose of reducing the emissions of GHGs.

Impact Discussion

The Demolition and Initial Rail Component is an initial project-level component of the TAMT plan. The Demolition and Initial Rail Component is expected to become operational in year 2020, after which the remaining components of the TAMT plan would be implemented as market conditions require. Therefore, because only the Demolition and Initial Rail Component would be operational in

[29]On March 21, 2012, the California Supreme Court denied case review and depublication requests submitted by several environmental organizations.

2020, construction and operation of the Demolition and Initial Rail Component is discussed here, while construction and operation of full TAMT plan buildout is discussed within Threshold 2 below.

Construction Emissions

Construction of the Demolition and Initial Rail Component would result in direct GHG emissions through the use of heavy-duty construction equipment, construction workers' vehicle trips, and truck haul and material delivery trips. Table 4.6-6 shows that project construction would generate approximately 752 $MTCO_2e$ over the projected 3-year construction period. This is equivalent to the emissions of 159 passenger vehicles for a single year (EPA 2015b). As described above, total construction emissions are conservatively amortized over a 20-year project life[30] and would equate to approximately 38 $MTCO_2e$ per year. On their own, construction GHG emissions are far too low to be considered significant; however, consistent with industry best practices, amortized emissions are added to operational emissions in Table 4.6-7 and Table 4.6-8.

[30] Full buildout of the TAMT plan is expected to occur in 2035, which is about 20 years out. Standard practice is to assume a 20-year project life.

Table 4.6-6. Estimate of Construction GHG Emissions (Total Metric Tons)

Construction Phase	CO_2e
Transit Shed #1	
Demolition of Roofing and Steel Frame	62
Demolition of Concrete Walls	98
Demolition of Asphalt, Foundation, and Pile Caps	32
Demolition and Removal of Asbestos/ Lead / Hazardous Waste	11
Earthwork & Grading	93
Paving	13
Utilities, Lighting, Misc.	19
Total - Transit Shed #1	**329**
Transit Shed #2	
Demolition of Roofing and Steel Frame	77
Demolition of Concrete Walls	134
Demolition of Asphalt, Foundation, and Pile Caps	45
Demolition and Removal of Asbestos/Lead/Hazardous Waste	11
Earthwork & Grading	114
Paving	16
Utilities, Lighting, Misc.	25
Total - Transit Shed #2	**421**
Rail Lubrication Install	3
Total Construction GHGs	**752**
Amortized Total	*38*

Source: Appendix F.
Note: Total construction emissions are amortized over a 20-year project life. Totals may not add up exactly due to rounding.

Operational Emissions

The Demolition and Initial Rail Component would increase operational uses at the project site relative to existing conditions. The level of GHG emissions from the project site would change as a result of the increased throughput, including increases in vessel activity, truck trips, locomotive activity, worker trips, CHE activity, refrigeration, and water and electricity consumption. A detailed description of the methodology and activity levels assumed in the analysis is presented in Section 4.6.4.1 above. Estimates of GHG emissions associated with the existing activity at the project site are shown in Table 4.6-4 above.

Estimates of GHG emissions associated with operation of the Demolition and Initial Rail Component in 2020 plus existing conditions are presented in Table 4.6-7. Emissions for Dry Bulk are not expected to change relative to baseline conditions because throughput would not change. Emissions associated with Liquid Bulk are expected to increase only marginally because tug and fuel barge calls associated with direct vessel fueling are expected to increase proportional to the increase in

OGV calls. Emissions associated with Refrigerated Container and Multi-Purpose General Cargo are expected to increase under the Demolition and Initial Rail Component as cargo throughput increases. As shown in Table 4.6-7, emissions would increase over baseline conditions that would not achieve the requisite emission reductions before mitigation (**Impact-GHG-1**). As shown in Table 4.2-7, after implementation of project-specific mitigation measures, GHG emissions would decline through the life of the project and GHG emissions would begin to trend downward, consistent with the need for deeper reductions post-2020 promulgated in EO B-30-15 and EO S-03-05 discussed in Threshold 2. Impacts would be less than significant after mitigation is incorporated.

Table 4.6-7. Estimate of Existing Plus Demolition and Initial Rail Component GHG Emissions in 2020 (Metric Tons of CO_2e per Year)

Operational Element	Project $MTCO_2e$ without Mitigation	Project $MTCO_2e$ With Mitigation
Dry Bulk (289,864 MT)		
Unmitigated Emissions		
Ocean-Going Vessels[1]	519	519
Assist Tugs	17	17
Fuel Tug and Barge	36	36
Trucks[2]	2,373	2,373
Worker Trips	352	352
Rail - Regional Line Haul	232	232
Rail - Switching between Terminal and Yard	~~37~~26	~~37~~26
Cargo Handling Equipment	~~337~~305	~~337~~305
Electricity	194	171
Water	57	53
Mitigated Reductions		
MM GHG-1 Idling[3]	--	*<-1*
MM-GHG-2 CAP Measures[4]	--	*-5*
MM-GHG-3 Electric CHE[4,5]	--	*-~~24~~56*
Dry Bulk Existing Plus Project Annual	**4,~~153~~110**	**4,~~098~~023**
Dry Bulk Existing Annual[5]	4,~~132~~110	4,~~132~~110
Net New over Existing	0	-~~55~~88
Reduction from Unmitigated	--	-~~55~~88
Percentage Reduction with Mitigation Measures	--	--
Refrigerated Containers (685,931 MT)		
Unmitigated Emissions		
Ocean-Going Vessels[1]	12,893	12,893
Shore Power	1,493	1,394
Assist Tugs	56	56
Fuel Tug and Barge	~~147~~121	~~147~~121
Trucks[2]	~~6096~~6,096	6,079
Worker Trips	974	946

Operational Element	Project $MTCO_2e$ without Mitigation	Project $MTCO_2e$ With Mitigation
Cargo Handling Equipment	~~794~~721	~~794~~721
Electricity	347	306
Water	137	128
Refrigerants	23	23
Mitigated Reductions		
MM GHG-1 Idling[3]	--	*<-1*
MM-GHG-2 CAP Measures[4]	--	*-3,730*
MM-GHG-3 Electric CHE[~~4~~5]	--	*-~~24~~56*
Refrigerated Containers Existing Plus Project Annual	**~~23,960~~22,860**	**~~19,013~~18,881**
Refrigerated Containers Existing Annual[~~5~~6]	~~15,059~~14,990	~~15,059~~14,990
Net New over Existing	7,~~901~~870	3,~~954~~890
Reduction from Unmitigated	--	-3,497~~9~~
Percentage Reduction with Mitigation Measures	--	*~~50~~51%*
Multi-Purpose General Cargo (124,078 MT)		
Unmitigated Emissions		
Ocean-Going Vessels[1]	1,446	1,446
Assist Tugs	43	43
Fuel Tug and Barge	~~98~~92	~~98~~92
Trucks[2]	591	584
Worker Trips	265	242
Rail - Regional Line Haul	169	169
Rail - Switching between Terminal and Yard	~~68~~40	~~68~~40
Cargo Handling Equipment	~~144~~130	~~144~~130
Water	25	23
Mitigated Reductions		
MM GHG-1 Idling[3]	--	*<-1*
MM-GHG-2 CAP Measures[4]	--	*-16*
MM-GHG-3 Electric CHE[~~4~~5]		*-~~24~~56*
Multi-Purpose General Cargo Existing Plus Project Annual	**2,~~848~~800**	**2,~~777~~697**
Multi-Purpose General Cargo Existing Annual[~~5~~6]	1,98~~5~~0	1,98~~5~~0
Net New over Existing	~~868~~850	~~798~~747
Reduction from Unmitigated	--	-~~71~~103
Percentage Reduction with Mitigation Measures	--	*~~8~~12%*

Operational Element	Project $MTCO_2e$ without Mitigation	Project $MTCO_2e$ With Mitigation
All Cargo Types		
All Cargo Types Daily Existing Plus Project Annual	**29,~~961~~770**	**25,~~888~~600**
All Cargo Types Daily Existing Annual[~~5~~6]	21,~~191~~050	21,~~191~~050
Net New over Existing	8,~~769~~720	4,~~697~~550
Reduction from Unmitigated	-	-4,~~073~~170
Percentage Reduction with Mitigation Measures	-	*~~46~~48%*
Reduction Target	-	33%[~~6~~7]

Source: Appendix F. Totals may not add up exactly due to rounding.

[1] Includes compliance with VSR similar to existing condition.

[2] Truck travel does not include the ~~proposed Phase 2 truck standards, which would improve truck fuel economy and reduce emissions by approximately 24% by 2030. This would translate to approximately 628 $MTCO_2e$ per year for the proposed project if implemented during the life of the project over what is shown above. EPA and NHTSA issued a Notice of Proposed Rulemaking for Phase 2 in June 2015 and Notice of Data Availability in March 2016, and are expected to issue a final rule by August 2016. Upon EPA's adoption of Phase 2, ARB staff plan to bring a proposed California Phase 2 program before the ARB Board, most likely in late 2016 or 2017. Once Phase 2 is adopted and implemented, GHG emissions from truck travel would be reduced, and the mitigation requirements would be reduced by this same amount.~~recently adopted Phase 2 truck standards because the standards would not take effect for most trucks until model year 2021. However, truck travel under mitigated scenarios does include reductions associated with Phase 1 truck standards.

[3] Reductions from idling are not quantified because reductions would be speculative, as it is not fully known whether long trucks currently idle at any given location.

[4] Includes VSR compliance with the CAP target of 80% (12 knot speed within 20 nautical miles of Point Loma) compliance with at-berth regulations for eligible vessels. Each Dole vessel will use shore power.

[~~5~~5] Reductions associated with electric CHE assume one yard truck per node.

[6] Existing annual emissions shown in Table 4.6-4.

[6] The District's CAP uses a "10% below existing levels" target, which translates into 28% below BAU in 2020 for the Port as a whole and 33% below BAU for maritime-related emissions in 2020.

2020 – Demolition and Initial Rail Component Consistency with CAP

Demolition and Initial Rail Component consistency with applicable CAP measures is discussed in Table 4.6-8. Before mitigation, the Demolition and Initial Rail Component would not be consistent with the CAP and would not achieve the required 33 percent reduction by 2020 (**Impact-GHG-1**). As shown in Table 4.6-8, the project would implement applicable measures in the CAP that would be enforced through mitigation measure MM-GHG-2 and that, correspondingly, would be consistent with State CEQA Guidelines Section 15183.5. The project would implement numerous CAP measures as shown in Table 4.6-8, several of which are carried out through **MM-GHG-1** through **MM-GHG-3**, and the Demolition and Initial Rail Component would be consistent with the CAP because it would achieve the required 33 percent reduction by 2020. Moreover, all of the project's mitigation measures and its features will be conditions of approval in the proposed CDP and included in any future agreements with the applicant. Impacts associated with GHG emissions through 2020 but would be less than significant with mitigation incorporated.

Table 4.6-8. Demolition and Initial Rail Component Consistency with Applicable Port CAP Measures for 2020

No.	Measure Description	Project Consistency Analysis
TA1	Support and promote the use of alternate fueled, electric or hybrid Port owned vehicles and vessels (also includes cargo handling equipment, terminal and stationary equipment).	**Consistent After Mitigation.** As a project feature, additional shore power infrastructure would be added to Berths 10-5/10-6, which would allow two vessels to cold iron simultaneously. Also, new refrigerated container OGVs would completely utilize shore power (minus idle time to clear customs). Accordingly, 100% of vessel calls would use shore power while at berth, which goes beyond the ARB requirement of 80% of vessel calls included in the CAP. Coupled with expanded RPS that reduces the carbon intensity of grid electricity, GHG emissions would be reduced along with criteria pollutant and TAC emissions. MM-GHG-3 includes the requirement for ~~Multi-Purpose Cargo~~ tenants to attempt to secure and operate one new electric CHE piece for each node (three total) by 2020 by working with ARB, CEC, and other agencies that can assist in providing funding and availability. Moreover, as a feature of the project, demolition of the transit sheds would allow for more efficient movement around the terminal.
TA2	Support and promote non-Port owned vehicles and vessels to achieve the lowest emissions possible, using a mix of alternative fueled, electric or hybrid technology.	**Consistent After Mitigation.** See also TA1. New, larger, and cleaner Tier 2 refrigerated container OGVs will start calling on TAMT in 2016.
TA3	Implement emissions reduction strategies at loading docks through electrification of docks or idling-reduction systems for use while at loading docks	**Consistent After Mitigation.** See TA1 and TA2. MM-GHG-1 requires all commercial vehicles, including delivery and drayage trucks, to limit idling times to 3 minutes, which is beyond that required by State law.
TE1	Use of technology and strategies to reduce fuel consumption.	**Consistent After Mitigation.** See TA1, TA2, and TA3. MM-GHG-1 requires all commercial vehicles, including delivery and drayage trucks, to limit idling times to 3 minutes. Electric CHE per MM-GHG-3 would reduce fuel consumption, which is directly tied to GHG emissions. Moreover, as a feature of the project, demolition of the transit sheds would allow for more efficient movement around the terminal.
TE2	Implement Vessel Speed Reduction for ocean going vessels.	**Consistent After Mitigation.** The project proponent's vessels comply with the District's voluntary VSR program, which targets 80% compliance. Vessels that call on TAMT are at 72%. The Port's VSR goes beyond State requirement because ARB has not formally adopted a VSR program. MM-GHG-2 requires the project proponent's vessels to achieve 80% compliance starting in 2020 in compliance with the CAP.

No.	Measure Description	Project Consistency Analysis
TE7	Support and promote the use of advanced technologies for rail locomotives: advanced technology diesel-fuel injectors; Tier 2 or Tier 3 locomotive engines; gen-set engines; and, hybrid or LNG locomotives.	**Consistent Prior to Mitigation.** BNSF's locomotives are not controlled by the project proponent and, therefore, the project proponent has limited influence over the ability to enact technological changes to BNSF's fleet. BNSF locomotives that serve the Port currently average between Tier 1 and Tier 2 standards, and the locomotive fleet will continue to turn over with more advanced technologies over time. By 2020, the BNSF fleet is expected to average Tier 2 or better.
TR2	Implement traffic and roadway management strategies to improve mobility and efficiency, and reduce associated emissions at maritime facilities.	**Consistent After Mitigation.** The project proponent would adhere to the designated haul route, which prohibits heavy trucks from traveling down Caesar Chavez Parkway, and which is required and enforced by local City ordinance and MM-GHG-2.
TR3	Vehicle Idling: Enforce state idling laws for commercial vehicles, including delivery and construction vehicles.	**Consistent After Mitigation.** MM-GHG-1 requires all commercial vehicles, including delivery and drayage trucks, to limit idling times to 3 minutes, which is beyond that required by State law.
TR4	Encourage rail freight utilization over trucks to reduce vehicle miles traveled.	**Consistent Prior to Mitigation.** As a feature of the project, the project would install an automatic rail lubricator system and air brake testing equipment, which would allow trains to bypass the stop at the adjacent railyard facility, which would reduce unnecessary rail idling at the BNSF yard and allow for more rail use at the project site. Moreover, the terminal currently distributes a portion of its cargo via rail; however, the nature of the operations dictates that the percentage remain fairly constant unless cargo types change. As market conditions allow, rail freight would be utilized because rail freight is more cost effective over long distances.
TL3	Restrict the location of drive-through businesses.	**Consistent Prior to Mitigation.** The project does not propose any drive-through uses and, therefore, would adhere to this measure.
EB6	Replace light fixtures in non-Port facilities with lower energy bulbs such as fluorescent, LEDs, or CFLs.	**Consistent After Mitigation.** The project proponent would install lower-energy lighting. See MM-GHG-2.
SW1	Increase the diversion of solid waste from landfill disposal.	**Consistent After Mitigation.** The project would comply with AB 939 and the City of San Diego's Recycling Ordinance by recycling at least 50% of solid waste. In addition, the proponent would be required to comply with the City of San Diego's Construction and Demolition Debris Deposit Ordinance by recycling at least 50% of all construction debris. See MM-GHG-2.

No.	Measure Description	Project Consistency Analysis
MP5	Require Port and encourage Port tenants to purchase goods and services that embody or create fewer GHG emissions.	**Consistent After Mitigation.** The project would facilitate use of new and more efficient vessels that would create fewer emissions per unit of activity by adding more shore power infrastructure and by maximizing the operational efficiency at the terminal by removing or upgrading outdated facilities.

Source: District 2013.

Notes:

TA: Transportation and Land Use CAP measures – Alternative Powered Vehicles; TE: Transportation and Land Use CAP measures – Alternative Technologies/Miscellaneous; TL: Transportation and Land Use CAP measures – Land Use; EB: Energy Conservation and Efficiency CAP measures – Building Energy Use; SW: Waste Reduction and Recycling; TR: Roadway System Management.

2020 – Demolition and Initial Rail Component Consistency with Regulations and Regulatory Programs Adopted by ARB or Other State Agencies

As shown in Table 4.6-9, the Demolition and Initial Rail Component would implement several applicable measures from the Scoping Plan, as well as other measures being implemented by ARB. However, without mitigation, the Demolition and Initial Rail Component would ultimately be inconsistent with some state measures (**Impact-GHG-1**). When coupled with features of the project that allow for more efficient terminal movements and increased shore power, along with mitigation measures (**MM-GHG-1** through **MM-GHG-43**), each of which are proposed to be incorporated as conditions of approval in the CDP for the project to ensure implementation and any future agreements with the applicant, the Demolition and Initial Rail Component would be consistent with AB 32's Scoping Plan and other ARB measures.

Table 4.6-9. Demolition and Initial Rail Component Consistency with AB 32 Scoping Plan and Other ARB Measures for 2020

No.	Measure Description	Project Consistency Analysis
Scoping Plan Measures		
T-1	Advanced Clean Cars	**Consistent Prior to Mitigation**. State program that requires no action at the local or project level. Benefits to project-related employee car travel will be realized.
T-2	Low Carbon Fuel Standard	**Consistent Prior to Mitigation.** State program that requires no action at the local or project level. Benefits will be realized.
T-4	Vehicle Efficiency Measures 1. Tire Pressure 2. Fuel Efficiency Tire Program 3. Low Friction Oil 4. Solar Reflective Automotive Paint and Window Glazing	**Consistent Prior to Mitigation.** State program that requires no action at the local or project level. Benefits to project-related car and truck travel will be realized.

No.	Measure Description	Project Consistency Analysis
T-5	Ship Electrification at Ports (Shore Power)	**Consistent and Above Compliance After Mitigation.** As a project feature, additional shore power infrastructure would be added to Berths 10-5/10-6, which would allow two vessels to cold iron simultaneously. MM-GHG-2 requires 80% of container vessels to utilize shore power (see MM-GHG-2). The analysis herein assumes that 100% of vessel calls would cold iron using the Port's shore power, which goes beyond this requirement of 80% of vessel calls. Coupled with expanded RPS that reduces the carbon intensity of grid electricity, emissions would reduce over time.
T-6	Goods Movement Efficiency Measures 1. Port Drayage Trucks 2. Transportation Refrigeration Units Cold Storage Prohibition 3. Cargo Handling Equipment, Anti-Idling, Hybrid, Electrification 4. Goods Movement System wide Efficiency Improvements 5. Commercial Harbor Craft Maintenance and Design Efficiency 6. Clean Ships 7. Vessel Speed Reduction	**Consistent After Mitigation.** Project trucks are compliant with ARB's Drayage Truck Rule and consistent with Scoping Plan measure T-6-1. MM-GHG-3 requires that the project proponent and the District work with ARB, CEC, and other related agencies and organizations to acquire new electric CHE (yard trucks and stackers), consistent with T-6-3 and T-6-4. Vessels that call at TAMT comply with the District's voluntary VSR program (72% compliance), and MM-GHG-2 requires 80% compliance (in 2020), consistent with the CAP. Thus, the project would be consistent with T-6-7. Measures T-6-2, T-6-4, and T-6-6 are now being considered in the Sustainable Freight Strategy and Action Plan instead of the Scoping Plan, while ARB is still evaluating the need to develop T-6-7. The project is consistent with T-6-4 and T-6-6 because it aims to improve the overall efficiency of the terminal and promotes growth in zero and near-zero technologies (T-6-4), and would require increased compliance with VSR (T-6-7).
T-7	Heavy-Duty Vehicle GHG Emission Reduction 1. Tractor-Trailer GHG Regulation 2. Heavy Duty Greenhouse Gas Standards for New Vehicle and Engines (Phase I)	**Consistent Prior to Mitigation.** State and federal programs that require no action at the local or project level. Benefits to project-related truck travel will be realized.
E-3	33 Percent Renewable Portfolio Standard	**Consistent Prior to Mitigation.** State program that requires no action at the local or project level. Benefits to project-related electricity consumption will be realized.
W-1	Water Use Efficiency	**Consistent Prior to Mitigation.** The project proposes only minimal water use associated with new employees. State program that requires no action at the local or project level. Benefits will be realized at the project level.
H-5	1. Low Global Warming Potential Refrigerants for New Motor Vehicle Air-Conditioning Systems 3. Refrigerant Recovery from Decommissioned Refrigerated Shipping Containers	**Consistent Prior to Mitigation.** State program that requires no action at the local or project level. Benefits will be realized independently.
Other ARB Measures		

No.	Measure Description	Project Consistency Analysis
-	Renewables Portfolio Standard (33% by 2020)	**Consistent Prior to Mitigation.** See E-3, above. State program that requires no action at the local or project level. Benefits to project-related electricity consumption (for lighting and water consumption) will be realized.
-	Pavley (AB 1493)	**Consistent Prior to Mitigation.** See T-1 and T-2. State program that requires no action at the local or project level. Benefits to project-related employee car travel will be realized.
-	Heavy Duty (Tractor-Trailer) GHG Regulation	**Consistent Prior to Mitigation.** See T-7. State and federal programs that require no action at the local or project level. Benefits to project-related truck travel will be realized.
-	OGV fuel switch regulation (to 0.1% sulfur fuel switch),	**Consistent Prior to Mitigation.** See T-6. State program that requires 0.1% sulfur fuel use for all vessel activity within California's Regulated Waters (24 nautical miles). Implementation started January 1, 2014.
-	1998 South Coast Locomotive Emissions Agreement	**Consistent Prior to Mitigation.** BNSF (and Union Pacific) entered into this agreement in 1998 that required the freight railroad fleet operating in the South Coast Air Basin to achieve average emissions equivalent to the NO_X emission standard established by EPA for Tier 2 locomotives by 2010 and maintain a Tier 2 average from 2010 to 2030. BNSF trains that operate in the South Coast Air Basin also operate in San Diego County and serve the Port of San Diego.
-	2005 Railroad Statewide Agreement	**Consistent Prior to Mitigation.** BNSF (and Union Pacific) entered into this agreement with ARB in 2005, which intended to reduce the emission impacts of railyard operations on local communities. The 2005 agreement includes a locomotive idling-reduction program, early introduction of lower-sulfur diesel fuel in interstate locomotives, and a visible emission reduction and repair program. This also included the preparation of emission inventories and health risk assessments at the 17 major railyards in the state (including San Diego Railyard).
-	Shore Power	**Consistent and Above Compliance After Mitigation.** See T-5. Refrigerated container vessels that call on TAMT would be using OGVs that completely utilize shore power. The analysis herein assumes that 100% of vessel calls would cold iron using the Port's shore power, which goes beyond this requirement of 80% of vessel calls. Coupled with expanded RPS that reduces the carbon intensity of grid electricity, emissions would reduce over time.

Source: ARB 2008; ARB 2014.

Notes:

T = Transportation Measures; E = Electricity Measures; W = Water Measures; H = High GWP Measures

Consistency with Other Regulations

The Clean Air Program, one of six key areas addressed by the District's Green Port Program, focuses on initiatives to reduce air pollution from Port operations and includes various strategies that the District is employing to reduce GHG emissions from its largest sources, including shore power, truck replacement/retrofits, replacement/retrofits of CHE, and the voluntary VSR program. The District, through its Green Port Program, will continue to implement actions to reduce GHG emissions in the future and the project would implement the relevant Green Port Program and Clean Air Program control measures, including drayage truck replacement and retrofits, replacement and retrofits of CHE, VSR, and shore power, as well as through implementation of the CAP. The project is consistent with the District's Green Port and Clean Air programs because it would comply with current and potential future ARB regulations developed and included as part of the Green Port Program and Clean Air Program and assumed in the CAP, including VSR compliance. Project-related trucks would have to comply with the Clean Truck Program. The project proponent would continue to utilize existing freight rail instead of trucks to the extent practicable, and construction of rail improvements would allow for greater rail use at the project site and reduced stopping at the yard. Therefore, the project would be consistent with both the overarching Green Port Program and the more specific Clean Air Program.

Impact Determination through 2020

The State is well on its way to reaching 2020 targets and is expected to meet the AB 32 targets in 2020 with recently adopted State regulations. While new projects, such as the proposed project, may add emissions, overall Port and California emissions need to be on a downward trend. The project would comply with and go beyond adopted regulations and regulatory programs, but would not achieve the requisite emission reductions before mitigation (**Impact-GHG-1**). With implementation of mitigation measures (**MM-GHG-1** through **MM-GHG-3**), the project would reduce its GHG emissions well beyond 33 percent below 2020 levels, pursuant to the maritime-specific target in the CAP, and would comply with plans, policies, and regulatory programs outlined in the Scoping Plan and adopted by ARB or other California agencies for the purpose of reducing the emissions of GHGs. Therefore, because reductions align with the maritime-specific target in the CAP and the project would comply with plans, policies, and regulations aimed at achieving reduction targets, impacts associated with GHG emissions through 2020 would be less than significant.

Level of Significance Prior to Mitigation

For the years up to and including 2020, the project would not be consistent with the District CAP, including a 33 percent maritime-specific GHG emissions reduction target and reduction measures specified therein, and would only partially comply with plans, policies, and regulatory programs outlined in the Scoping Plan and adopted by ARB or other California agencies for the purpose of reducing the emissions of GHGs. Potentially significant impact(s) include:

> **Impact-GHG-1: Project GHG Emissions through 2020.** Project GHG emissions during combined project construction and operational activities, before mitigation, would be inconsistent with the CAP's reduction target of 33 percent. Additionally, the proposed project would only partially comply with plans, policies, and regulatory programs outlined in the Scoping Plan and adopted by ARB or other California agencies for the purpose of reducing the emissions of GHGs.

Mitigation Measures

MM-GHG-1: Implement Diesel Emission-Reduction Measures During Construction and Operations of Future TAMT Plan Components. The District shall implement the following measures during project construction and operations, subject to verification by the District.

i. All project proponents shall limit all equipment, drayage, and delivery truck idling times by shutting down equipment when not in use and reducing the maximum idling time to less than 3 minutes. The project proponent shall install clear signage regarding the limitation on idling time at the delivery driveway and loading areas and shall submit quarterly reports of violators to the District. This measure shall be enforced by terminal supervisors, and repeat violators shall be subject to penalties pursuant to California airborne toxics control measure 13 California Code of Regulations Section 2485. The project proponent shall submit evidence of the use of diesel reduction measures to the District through annual reporting, with the first report due 1 year from the date of project completion and each report due exactly 1 year after, noting all violations with relevant identifying information of the vehicles and drivers in violation of these measures.

ii. The project proponent shall verify that all construction and operations equipment is maintained and properly tuned in accordance with manufacturers' specifications. Prior to the commencement of construction and operations activities using diesel-powered vehicles or equipment, the project proponent shall verify that all vehicles and equipment have been checked by a certified mechanic and determined to be running in proper condition prior to admittance into TAMT. The project proponent shall submit a report by the certified mechanic of the condition of the construction and operations vehicles and equipment to the District prior to commencement of their use.

MM-GHG-2: Comply with San Diego Unified Port District Climate Action Plan Measures. Prior to approval of all discretionary actions and/or Coastal Development Permits, the project proponent shall be required to implement the following measures to be consistent with the Climate Action Plan.

- Vessels shall comply with the District's voluntary vessel speed reduction program, which targets 80 percent compliance.
- Eligible vessels shall comply with ARB's at-berth regulation that requires shore power or alternative control technology regulation for 80 percent of eligible calls by 2020, minus idle time to clear customs consistent with California Air Resources Board regulations. This is a project feature made into a mitigation measure to ensure compliance.
- Designated truck haul routes shall be used, and the project proponent shall decrease onsite movements where practicable.
- No commercial drive-through shall be implemented.
- Compliance with Assembly Bill 939 and the City of San Diego's Recycling Ordinance shall be mandatory and shall include recycling at least 50 percent of solid waste; compliance with the City of San Diego's Construction and Demolition Debris Deposit Ordinance shall be mandatory and shall include recycling at least 50 percent of all construction debris. This measure shall be applied during construction and operation of the proposed project.

- Light fixtures shall be replaced with lower-energy bulbs such as fluorescent, Light-Emitting Diodes (LEDs), Compact Fluorescent Lights (CFLs), or the most energy-efficient lighting that meets required lighting standards and is commercially available.

Implementation of Climate Action Plan measures will be included as part of any discretionary actions and/or Coastal Development Permit(s) associated with this project. Evidence of implementation and compliance with this mitigation measure shall be provided to the District by the project proponent on an annual basis through 2035 (buildout of the TAMT plan).

MM-GHG-3: Electric Cargo-Handling Equipment Upgrades. ~~As a condition of any Coastal Development Permit, the project proponent, or the District, shall secure funding for and operate one piece of CHE associated with each node. Operation of such equipment on TAMT shall occur by January 1, 2020 through the expected operating life of the equipment, and evidence of operation shall be provided to the District upon request. Equipment shall be replaced if alternative technologies (i.e., advancements in electric equipment) are identified and determined to be feasible pursuant to MM-AQ-7. For purposes of the analysis, it was assumed that each node would operate one electric yard truck. This mitigation is similar to MM-AQ-6, and the number of CHE equipment required between the two mitigation measures does not aggregate to more than one piece of CHE per node.~~Prior to January 1, 2020, the San Diego Unified Port District shall ensure that at least three pieces of existing non-electric cargo-handling equipment (CHE) at the terminal are replaced by electric CHE, none of which were previously operating at the terminal during the 2013/2014 baseline year of the EIR analysis. Possible ways the electric CHE may be obtained include, but are not limited to, the following:

1. Purchased, leased, or otherwise acquired, in whole or in part, through funding provided to a tenant by the San Diego Unified Port District; or
2. Purchased, leased, or otherwise acquired, in whole or in part, through funding provided to a tenant by other sources; or
3. Purchased, leased, or otherwise acquired, in whole or in part, by the tenant in compliance with the condition of a discretionary approval issued by the San Diego Unified Port District.

Written evidence of the acquisition of the electric CHE equipment and the equipment it will replace and remove from further operation at the terminal must be provided to the San Diego Unified Port District. The San Diego Unified Port District shall further ensure that the electric CHE is in use at each of the three nodes throughout the expected operating life. This will be accomplished by requiring each tenant that employs electric CHE pursuant to this measure to report the equipment's annual number of hours of operation to the San Diego Unified Port District and by requiring the San Diego Unified Port District to monitor use of the electric CHE as part of the San Diego Unified Port District's TAMT equipment inventory.

The electric equipment employed pursuant to this mitigation measure may be replaced by other technologies or other types of CHE as long as the replacement equipment achieves the same or greater criteria pollutant, toxic air contaminant, and greenhouse gas emission reductions as compared to the equipment required by this mitigation measure.

Level of Significance after Mitigation

As indicated above, **Impact-GHG-1** would be less than significant after implementation of **MM-GHG-1** through **MM-GHG-3** because the project would reach its GHG reduction target of 33 percent by 2020 and would be consistent with the AB 32 Scoping Plan and other related programs designed to reduce project GHG emissions.

Threshold 2: For 2020–2040, the proposed project (1) would not parallel the State's overall reduction targets identified in EO S-03-05 and EO B-30-15, but (2) would be in compliance with plans, policies, and regulatory programs adopted by ARB or other California agencies for post-2020 for the purpose of reducing the emissions of GHGs.

Impact Discussion

As discussed in Threshold 1, the Demolition and Initial Rail Component is an initial project-level component of the TAMT plan. Once the Demolition and Initial Rail Component is operational, other components of the TAMT plan are anticipated to be constructed and operated through 2035. Therefore, Threshold 2 discusses the full TAMT plan buildout.

Consistency with Post-2020 Reduction Targets and "Substantial Progress"

Although the District's CAP and ARB's Scoping Plan mention some potential post-2020 strategies, as of the date this analysis was prepared, emission savings from these post-2020 strategies are not quantified. While there has been activity at the legislative, executive, and judicial levels, there are currently no adopted plans or measures that specifically prescribe how the ambitious post-2020 targets will be met. ~~Proposals at the State level such as the proposed~~ The state recently adopted SB 32~~ legislation (adopting~~, which adopts interim 2030 GHG targets consistent with EO B-30-15~~) have recently been considered~~; AB 197, which supports its implementation; and ~~are anticipated to be considered again in 2016~~SB 1383, which aims to reduce short-lived climate pollutants. Regardless, no plan to achieve these 2030 targets has been prepared and adopted by ~~the California legislature; however, to date they have not been adopted into law~~ARB. Various guidance and white paper documents are in circulation that discuss potential near- and long-term strategies to reduce emissions from all sources, including sources associated with the proposed project (e.g., electricity, OGVs, heavy-duty trucks, locomotives~~). The~~), and most recently ARB hosted workshops and released materials that present some paths and alternative approaches being considered for the 2030 Scoping Plan. Much of what ARB is considering is a continuation and further implementation of existing measures (for example, increase RPS 80% by 2050, increase low carbon fuels to 18% or 25% by 2030, etc.) as well Cap and Trade alternatives. However, because no 2030 Scoping Plan has been adopted, the District's CAP, ARB's Scoping Plan First Update, and other State programs (e.g., ARB's Sustainable Freight Strategy) are some recent and relevant examples that include proposed, recommended, or adopted actions that will reduce emissions over the long term.

2020 to 2040 – Consistency with the District CAP

As the District's CAP was completed in 2013, it does include some strategies and shows some progress toward meeting post-2020 statewide targets and does prescribe a 25 percent reduction goal (below 2006 levels) for 2035, but does not yet include prescribed reduction measures to achieve a post-2020 target. Because the CAP did not estimate reductions from these strategies beyond 2020, emphasis is placed on consistency with the overarching goals of the CAP (to reduce GHG emissions) rather than the specific reductions attached to each strategy. In this sense, it is not considered a qualifying plan for post-2020 purposes, as described in State CEQA Guidelines Section 15183.5; therefore, the post-2020 analysis does not rely on compliance with the CAP to determine whether the project's impacts would be cumulatively considerable for post-2020 GHG emissions. However, for informational purposes, the project's compliance with CAP measures post-2020 is provided below. Prior to mitigation, full TAMT plan buildout would not be entirely consistent with the post-2020 CAP measures (**Impact-GHG-2**). As noted in Table 4.6-11, however, once Mitigation Measures (**MM-GHG-1** through **MM-GHG-~~8~~9**) are incorporated, the project would be consistent with the CAP measures in the post-2020 period.

Table 4.6-10. Project Consistency with Port CAP Strategies Beyond 2020

No.	Strategy Description	Project Consistency Analysis
EA2	Implement on-site renewable energy generation policy for 2035 (solar power, wind power, methane recovery, wave power, etc.).	**Consistent After Mitigation.** The District has not yet developed an onsite renewable energy generation policy for 2035. However, MM-GHG-6 requires the project proponent to implement an onsite renewable energy project by 2025 and running through the remaining life of the project (i.e., 2040), unless the system cannot be built in light of structural and operational constraints, in which case an offsite project would be built or GHG reduction credits purchased.[31]
EA3	Implement on-site renewable energy generation policy for by 2050 (solar power, wind power, methane recovery, wave power etc.).	**Consistent After Mitigation.** See EA2. The District has not yet developed an onsite renewable energy generation policy for 2050. MM-GHG-6 requires the project proponent to implement an onsite renewable energy project by 2025 that would run through the life of the TAMT plan (i.e., 2035), unless the system cannot be built in light of structural and operational constraints, in which case an offsite project would be built or GHG reduction credits purchased.
EA11	Implement a program to install technologies for generating energy from renewable sources such as solar power, wind power, and/or wave power on Port Tidelands. Establish progressively more ambitious production goals the years 2020, 2035 and 2050.	**Consistent After Mitigation.** See EA2 and EA3. MM-GHG-6 requires the project proponent to implement a renewable energy project by 2025 that would run through the remaining life of the TAMT plan (i.e., 2035), unless the system cannot be built in light of structural and operational constraints, in which case an offsite project would be built or GHG reduction credits purchased.
MP6	Pursue off-site GHG mitigation strategies.	**Consistent After Mitigation.** MM-GHG-6 requires the project proponent to purchase offsite carbon credits or develop offsite renewable energy if renewable energy is not a feasible mitigation strategies. The resulting offset would be identical to use of renewable energy.

Source: District 2013.
Notes:
EA: Alternative Energy Generation; MP: Miscellaneous– Programs and Outreach

[31] Because there may be an insufficient amount of rooftop space to generate a meaningful amount of renewable energy from photovoltaic panels or structural issues could exist that would make such installation prohibitive and placing any renewable energy infrastructure on the ground within the TAMT could hinder cargo movements and take up critical cargo storage areas, an onsite renewable energy project may not be able to be developed to ensure the required offsets are achieved. The design should not occur until 2025 to best achieve the benefits associated with any advancements in technology and any additional regulations that take effect. Should it be determined that a renewable energy project cannot be built considering structural and operational constraints, the project proponent would still be required to reduce GHG emissions in the equivalent numerical amount through the purchase of carbon offsets. Specifically, MM-GHG-6 would require that the proponent purchase the equivalent GHG offsets that would come from developing renewable energy on site and begin its operation prior to January 1, 2025 and continuing through the life of the project.

2020 to 2040 – Consistency with the State's Overall Reduction Targets (Including EO S-03-05 and EO B-30-15)

There are a number of studies that discuss potential mechanisms for limiting California's economy-wide emissions to the equivalent of 40 percent below the 1990 level by 2030 and 80 percent below the 1990 level by 2050. For instance, ARB and other State agencies are developing GHG reduction scenarios for 2030 that would set the State on the course toward its 2050 GHG reduction goal (CEC 2015). Other studies include a report by the California Center for Science and Technology (2012), a California Department of Transportation report that discusses GHG emission reductions from the transportation sector alone (California Department of Transportation 2016), and a study published in *Science* that analyzes the changes that will be required to reduce GHG emissions to 80 percent below 1990 levels by 2050 (*Science* 2012). In general, these studies reach similar conclusions. Deep reductions in GHG emissions can be achieved only with significant changes in electricity production, transportation fuels, and industrial processes (e.g., decarbonizing electricity production, electrifying transportation, implementing widespread adoption of low-carbon or no-carbon transportation fuels, electrifying non-transportation direct fuel uses, increasing energy efficiency, avoiding waste emissions, increasing carbon sequestration, replacing high global warming potential gases, and other measures).

The systemic changes that will be required to achieve the 2030 and 2050 GHG reduction goals set forth by executive order will require significant policy, technical, and economic solutions. Decarbonization of the transportation fuel supply will require electric and plug-in hybrid electric vehicles to make up the vast majority of light-duty vehicles. Some changes, such as the use of biofuels to replace petroleum for aviation, cannot be accomplished without action by the federal government. Furthermore, achieving the 2050 GHG reduction goals will require California to increase the amount of electricity that is generated by renewable generation sources dramatically and, correspondingly, advance the deployment of energy storage technology and smart-grid strategies, such as price-responsive demand and the smart charging of vehicles. This would entail a significant redesign of California's electricity system.

In qualitatively evaluating the project's emissions for consistency with EO S-03-05 and EO B-30-15, it is important to note that some of these broad-scale shifts in how energy is produced and used are outside of the control of the project. The changes necessitated by the State's long-term climate policy will require additional policy and regulatory changes, which are unknown at this time. As a consequence, the extent to which the project's emissions and resulting impacts will be mitigated through implementation of such changes is not known. Furthermore, implementation of such additional policy and regulatory changes is in the jurisdiction of State-level agencies (e.g., ARB), not the District or the project. However, some of these measures (e.g., decarbonization, energy efficiency, and reduced fossil-fuel-based vehicle miles traveled) can be facilitated, at least to some extent, through implementation of specific GHG reduction measures for developments such as the proposed project. Under this same rationale, if the proposed project did not implement measures to maximize energy efficiency or utilize renewable energy, the reductions may not be sufficient for an individual project to meet the aggressive 2030 and 2050 cumulative reduction goals (**Impact-GHG-2**). Mitigation Measures **MM-GHG-1** through **MM-GHG-~~8~~9** are required to support progress toward the 2030 and 2050 GHG reduction goals of EO S-03-05 and EO B-30-15,[32] but project emissions

[32]It would be speculative to attempt to identify the exact amount of project-level mitigation needed to meet a 2030 goal without an updated AB 32 Scoping Plan for 2030 that identifies the state reductions.

would remain significant due to the lack of a known project-specific reduction target.

Estimates of GHG emissions associated with the existing activity at the project site are shown in Table 4.6-4 above. Estimates of GHG emissions associated with operation of the full TAMT plan buildout in 2035 plus existing conditions are presented in Table 4.6-11. As shown, full TAMT plan buildout in 2035 would not achieve the requisite emission reductions before mitigation (**Impact-GHG-2**). Emissions would decline through the life of the project, and GHG emissions would trend downward over time, consistent with the need for deeper reductions post-2020 promulgated in EO B-30-15 and EO S-03-05.

As discussed above, in order to demonstrate “substantial progress” toward long-term targets, the project would need to demonstrate that emissions would be consistent with the 48 percent performance benchmark (below 2020 levels) in 2030 and the 57 percent performance benchmark (below baseline levels) in 2035. As shown in Table 4.6-11, buildout of the TAMT plan would achieve the 2035 performance target. However, as mentioned in Section 4.6.4.2, the framework to achieve post-2020 targets (e.g., 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050) at the State level is unknown until ARB develops such a framework. The project and District as a whole cannot meet these long-term targets by themselves without statewide efforts. Further implementation of adopted statewide measures, particularly the RPS of 50 percent per SB 350, would reduce project-related electricity, as shown in Table 4.6-11. Proposed and recently adopted regulations and measures, including Phase 2 truck standards, will further reduce emissions in the post-2020 timeframe ~~once adopted.~~. Moreover, the Port has not yet adopted a framework to meet long-term (i.e., post-2020) reduction targets. As such, it is possible that the proposed project’s needed reductions would have to be even greater (or less) than the statewide targets in order to achieve the statewide targets. For example, an appropriate project target would need to take into account: (1) existing development that may not be able to achieve the deeper reductions and thus place a higher reduction burden on new development; (2) the level of reductions necessary for a maritime terminal project (as compared to other land use types such as residential, commercial, and institutional or other sectors such as agriculture, industrial point source emitters, etc.), which may be greater or less than other development projects or sectors, and (3) the project’s location, such as which regions or jurisdictions need to have greater reduction targets that are proportionate to their overall contribution to statewide GHG emissions.

Therefore, statewide reduction targets and the levels of effort required at the local levels to help the State meet these targets are uncertain and speculative at this point. Consequently, the impact would be significant and unavoidable.

Table 4.6-11. Estimate of Existing Plus Full TAMT Plan Buildout GHG Emissions in 2035 (Metric Tons of CO_2e per Year)

Operational Element	Plan $MTCO_2$e Without Mitigation	Plan $MTCO_2$e With Mitigation
Dry Bulk (2,650,000 MT)		
Unmitigated Emissions		
Ocean-Going Vessels[1]	5,033	5,033
Assist Tugs	164	164
Fuel Tug and Barge	350	350
Trucks[2]	20,893	~~18,290~~15,387
Worker Trips	1,219	946
Rail - Regional Line Haul	2,105	2,105
Rail - Switching between Terminal and Yard	233~~7~~	233~~7~~
Cargo Handling Equipment	~~3,104~~2,816	~~3,104~~2,816
Electricity	1,778	1,169
Water	237	165
Mitigated Reductions		
MM GHG-1 Idling[3]	--	*<-1*
MM-GHG-2 CAP Measures[4]	--	*-45*
MM-GHG-4 Electric CHE[5]	--	*-~~28~~564*
MM-GHG-5 VSR Beyond CAP[6]	--	*-755*
MM-GHG-6 PV[7]	--	*-~~13,340~~9,915*
MM-GHG-9 At-Berth Emissions Capture	--	*+214*
Dry Bulk Existing Plus Project Annual	**~~32,219~~34,826**	**17,~~495~~302**
Dry Bulk Existing Annual[5]	**4,~~153~~110**	**4,~~153~~110**
Net New over Existing	~~31,066~~30,716	13,~~342~~182
Reduction from Unmitigated	--	-17,~~7~~524
Percentage Reduction with Mitigation Measures	--	*57%*
Refrigerated Containers (2,288,000 MT)		
Unmitigated Emissions		
Ocean-Going Vessels[1]	30,943	30,943
Shore Power	3,582	2,498
Assist Tugs	135	135
Fuel Tug and Barge	288	288
Trucks[2]	18,560	~~16,826~~14,156
Worker Trips	1,153	1,034
Cargo Handling Equipment	2,~~680~~432	2,~~680~~432
Electricity	1,~~741~~020	~~1,299~~762
Water	210	147
Refrigerants	~~59~~54	~~59~~54
New Gantry Cranes	97	64

Operational Element	Plan MTCO$_2$e Without Mitigation	Plan MTCO$_2$e With Mitigation
Mitigated Reductions		
MM GHG-1 Idling[3]	--	*<-1*
MM-GHG-2 CAP Measures[4]	--	*-~~8,951~~7,733*
MM-GHG-4 Electric CHE[5]	--	*-~~28~~564*
MM-GHG-5 VSR Beyond CAP[6]		*-16*
MM-GHG-6 PV[7]	--	*-~~12,816~~10,493*
Refrigerated Containers Existing Plus Project Annual	**~~59,538~~58,563**	**~~34,161~~33,703**
Refrigerated Containers Existing Annual[8]	~~15,059~~14,990	~~15,059~~14,990
Net New over Existing	~~44,479~~43,573	~~19,102~~18,173
Reduction from Unmitigated	--	-~~25,377~~24,860
Percentage Reduction with Mitigation Measures	--	*57%*
Multi-Purpose General Cargo (977,400 MT)		
Unmitigated Emissions		
Ocean-Going Vessels[1]	11,926	11,926
Assist Tugs	351	351
Fuel Tug and Barge	750	750
Trucks[2]	2,953	2,597
Worker Trips	444	372
Rail - Regional Line Haul	1,265	1,265
Rail - Switching between Terminal and Yard	~~512~~301	~~512~~301
Cargo Handling Equipment	1,~~145~~039	1,~~145~~039
Water	90	63
New Gantry and Rubber Tired Cranes	486	471
Mitigated Reductions		
MM GHG-1 Idling[3]	--	*<-1*
MM-GHG-2 CAP Measures[4]	--	*-200*
MM-GHG-4 Electric CHE[5]	--	*-~~28~~564*
MM-GHG-5 VSR Beyond CAP[6]		*-1,616*
MM-GHG-6 PV[7]	--	*-7,~~888~~216*
MM-GHG-9 At-Berth Emissions Capture		*+440*
Multi-Purpose General Cargo Existing Plus Project Annual	**19,~~921~~604**	**9,685**
Multi-Purpose General Cargo Existing Annual[8]	1,9~~8~~50	1,9~~8~~50
Net New over Existing	17,~~941~~654	7,~~706~~582
Reduction from Unmitigated	--	-10,~~235~~072
Percentage Reduction with Mitigation Measures	--	*57%*

Operational Element	Plan $MTCO_2e$ Without Mitigation	Plan $MTCO_2e$ With Mitigation
All Cargo Types		
All Cargo Types Daily Existing Plus Project Annual	**~~114,677~~112,994**	**~~61,341~~60,537**
All Cargo Types Daily Existing Annual[8]	**21,~~191~~050**	**21,~~191~~050**
Net New over Existing	~~93,486~~91,944	~~40,150~~39,487
Reduction from Unmitigated	--	~~-53,336~~52,456
Percentage Reduction with Mitigation Measures	--	*57%*
Reduction Target	--	57%[7]

Source: Appendix F. Totals may not add up exactly due to rounding.

[1] Includes compliance with VSR similar to existing condition.

[2] Truck travel ~~does not~~ include the ~~proposed~~recently adopted Phase 2 truck standards, which would reduce improve truck fuel economy and reduce emissions ~~by approximately 24% by 2030. This would translate to approximately 628 $MTCO_2e$ per year for the proposed project if~~up 25% once fully implemented ~~during the life~~. For purposes of ~~the project over what is shown above. EPA and NHTSA issued a Notice of Proposed Rulemaking for Phase 2~~ reductions in ~~June 2015 and Notice of Data Availability in March 2016, and are expected to issue a final rule by August 2016. Upon EPA's adoption of Phase 2, ARB staff plan to bring a proposed California Phase 2 program before the ARB Board, most likely in late 2016 or 2017. Once Phase 2 is adopted and implemented,~~2035, it was estimated that GHG ~~emissions from truck travel~~emission factors would be reduced~~, and the mitigation requirements would be reduced by this same amount. However, truck travel under mitigated scenarios does include~~ approximately 16% related to the rates in EMFAC, which reductions associated with Phase 1 truck standards.

[3] Reductions from idling are not quantified because reductions would be speculative, as it is not fully known whether long trucks currently idle at any given location.

[4] Includes VSR compliance with the CAP target of 80% (12 knot speed within 20 nautical miles of Point Loma) compliance with at-berth regulations for eligible vessels. Each Dole vessel will use shore power.

[5] Reductions from electric CHE assumes ~~one electric loader for~~ the ~~Dry Bulk node, one container handler for the Refrigerated Container node, and one~~replacement of 36 pieces of diesel equipment with 36 pieces of electric equipment by 2030, including 20 new electric yard ~~truck for~~trucks by 2025 as well as 3 electric reach stackers and 10 electric forklifts by 2030. The reductions are split evenly between the three cargo nodes affected by the ~~Multi-Purpose General Cargo node~~proposed project.

[7] Includes VSR compliance of 90% (12 knot speed within 40 nautical miles of Point Loma). Reductions are shown relative to CAP compliance (MM-GHG-2).

[8] The reduction targets identified in the post-2020 period (i.e., 2035) is based on statewide reduction targets identified in EO S-3-2005 and EO B-30-2015. Because there are no project-specific targets based on location and project type as is the case in the 2020 period, these targets are used as a general guide for the level of reductions needed, but it is understood that the State will need to play a major role to meet these aggressive targets.

[8] Existing annual emissions shown in Table 4.6-4.

2020 to 2040 – Consistency with Regulations and Regulatory Programs Adopted by ARB or Other State Agencies

Specifically, at the State level, ARB's Scoping Plan and the Sustainable Freight Strategy provide insight into the strategies that will likely be included and adopted into long-term planning documents in the near future.

Post-2020 Scoping Plan Strategies

The Scoping Plan First Update discusses the fact that there are a number of strategies underway that have led to significant emission reductions and provides a summary of recommended actions the State could take to meet long-term reduction goals. For purposes of discussing post-2020 GHG emissions, the quantified unmitigated emissions presented in Table 4.6-11 only include the project features, adopted State measures, and proposed mitigation measures. For the consistency analysis, adopted measures (like SB 350) are reviewed in order to disclose the project's consistency with such regulations. For informational purposes only, the project's consistency with conceptual strategies under consideration but not yet adopted is also provided, but is not relied on in determining whether the project would have significant GHG emission impacts. The upcoming post-2020 Scoping Plan update will include a detailed roadmap by accelerating the focus on zero and near-zero technologies for moving freight, continued investment in renewables, greater use of low-carbon fuels including electricity and hydrogen, stronger efforts to reduce emissions of short-lived climate pollutants (methane, black carbon, and fluorinated gases), and further efforts to create walkable communities with expanded mass transit and other alternatives to traveling by car. Continuing the cap-and-trade program and ensuring that natural lands become carbon sinks provide additional emissions reductions and flexibility in meeting the target (ARB 2014). Project consistency with post-2020 Scoping Plan strategies is discussed in Table 4.6-12 and project consistency with anticipated regulations is discussed in Table 4.6-13. Project impacts before mitigation would be significant and, after implementation of Mitigation Measures **MM-GHG-1** through **MM-GHG-~~6~~9**, would remain significant and unavoidable.

Table 4.6-12. Project Consistency with AB 32 Scoping Plan Strategy Beyond 2020

No.	Strategy Description	Project Consistency Analysis
T-3	Regional Transportation-Related Greenhouse Gas Targets	**Consistent Prior to Mitigation.** State program that requires no action at the local or project level. Benefits to project-related employee car travel will be realized.
T-6	Goods Movement Efficiency 1. Port Drayage Trucks (2020 strategy) 2. Transportation Refrigeration Units Cold Storage Prohibition 3. Cargo Handling Equipment, Anti-Idling, Hybrid, Electrification 4. Goods Movement Systemwide Efficiency Improvements 5. Commercial Harbor Craft Maintenance and Design Efficiency 6. Clean Ships 7. Vessel Speed Reduction	**Consistent After Mitigation.** Project trucks are compliant with ARB's Drayage Truck Rule and consistent with Scoping Plan measure T-6-1. MM-GHG-3 requires that the project proponent purchase electric yard trucks, consistent with T-6-3 and T-6-4. Project proponent vessels comply with the District's voluntary VSR program (currently 72% compliance at TAMT), MM-GHG-2 requires 80% compliance, consistent with the CAP, and MM-GHG-5 requires compliance beyond the CAP (90%) at 40 nautical miles. Thus, the project is consistent with T-6-7. Measures T-6-2, T-6-4, and T-6-6 are now being considered in the Sustainable Freight Strategy instead of the Scoping Plan, while ARB is still evaluating the need to develop T-6-7. The project is consistent with T-6-4 and T-6-6 because it aims to improve the overall efficiency of the terminal and promotes growth in zero and near-zero technologies (T-6-4), and would require increased compliance with VSR (T-6-7).
E1 and CR1	1. Building Energy Efficiency – Electricity and Natural Gas	**Consistent Prior to Mitigation**. The project does not propose construction of buildings.

No.	Strategy Description	Project Consistency Analysis
W2	Water Recycling	**Consistent Prior to Mitigation.** The project proposes minimal water use associated with new employees. State program that requires no action at the local or project level. Benefits will be realized.
Recommended Transportation Action	Propose "Phase 2" heavy-duty truck GHG standard standards.	**Consistent Prior to Mitigation.** State program that requires no action at the local or project level. Benefits to project-related truck travel will be realized independently.
Recommended Transportation Action	Complete the first phase of the Sustainable Freight Strategy, which will identify and prioritize actions through 2020 to move California toward a sustainable freight system.	**Consistent After Mitigation.** See Table 4.6-13. The project would implement various strategies included in the draft Strategy, including MM-GHG-2 and MM-GHG-5 (CAP and VSR compliance), MM-GHG-3 and MM-GHG-4 (electric CHE), MM-GHG-7 (equipment inventory and periodic review of technologies), ~~and~~ MM-GHG-8 (~~sustainable leasing~~exhaust reduction program), and MM-GHG-9 (alternative at-berth reductions).

Source: ARB 2014.
Notes:
T = Transportation; E = Electricity; W = Water

Sustainable Freight Strategy

The Scoping Plan notes that many transportation strategies related to Goods Movement Efficiency (T-6-2 through T-6-7) are being implemented as part of the Sustainable Freight Initiative. Recently, ARB released the *Pathways to Zero and Near-Zero Emissions* (*Pathways*) discussion document that presents near- and long-term actions toward zero to near-zero emissions goods movement, which includes trucks, ships, locomotives, aircraft, harbor craft, and all types of equipment used to move freight at seaports, airports, railyards, warehouses, and distribution centers. ARB acknowledges that efforts in response to climate change (via executive orders, legislation, and judicial action) are ramping up the pressure for further progress in the 2030 and 2050 timeframes to accelerate the reduction of GHG and short-lived climate pollutants, like black carbon from diesel equipment. ARB's near-term strategies in *Pathways* are to be acted upon or implemented in the next few years, with most implementation occurring in or around 2020. Long-term *Pathways* strategies, known as "Vision for the Future," would be implemented after 2020 and are thus relevant beyond 2020, as discussed in the post-2020 analysis below and presented in Table 4.6-13. Both the near- and long-term strategies pertain to goods movement sources of emissions, most of which are present at the Port. The majority of these near- and long-term actions are regulatory in nature and require developing regulations or guidance or cooperating with and petitioning other agencies, including EPA (for trucks and locomotives) and the International Maritime Organization (for OGVs), to adopt rulemaking or new emission standards, and investigating usefulness of renewable fuels in OGVs (as part of LCFS). Many of these actions are beyond the scope of a project-level analysis or even the District to achieve by itself. However, there are strategies that ARB has drafted that can be applied or tailored at the project level. In particular, the action of recommending zero-emission demonstration projects is first presented in the near-term actions and further reiterated as a long-term vision.

Recently, ARB released the *Sustainable Freight Action Plan (Action Plan),* which provides high-level vision and broad direction to integrate investments, policies, and programs across several State agencies to help reach freight transport targets. The *Action Plan* includes recommendations on a long-term 2050 Vision and Guiding Principles for California's future freight transport system; targets for 2030 to guide the state toward meeting the vision; opportunities to leverage State freight transport system investments; actions to initiate over the next 5 years to make progress toward the targets and the vision; pilot projects to achieve on-the-ground progress in the near term; and additional concepts for further exploration and development, if viable. The *Action Plan* lays out various policy drivers, including the need to preserve existing freight infrastructure, and increase economic competitiveness and system efficiency and capacity while reducing air toxics and reaching climate goals. The full TAMT plan buildout would support the *Action Plan's* Guiding Principles of improving trade facilities and corridors to remain competitive while applying technologies to reduce air pollution and work toward zero and near-zero equipment.

ARB developed the existing at-berth regulation to capture the vessels where retrofitting vessels was most cost effective given the at-berth power requirements for container, refrigerated container, and passenger vessels. Moreover, container vessels tend to be frequent callers to California ports (i.e., call on California ports multiple times per year), thus making retrofits more cost effective. Given that the 2020 milestone under the existing regulation will soon pass, ARB is currently considering extending the at-berth regulation to all vessels (bulk carriers, general cargo, vehicle carriers, and tankers). Bulk carriers, general cargo, and vehicle carriers currently call on the project site and would presumably continue to do so in the future. If implemented, vessels that call on the project site would be subject to any new at-berth reductions, whether they turn off auxiliary engines and connect to a grid- or terminal-based source of power, or use alternative control technique(s) that achieve equivalent emission reductions. The TAMT plan would install infrastructure at the project site that would help facilitate additional cold ironing at Berths 10-5/10-6 at a future date. Over time, adoption of this regulation as well as development of infrastructure would help reduce emissions from vessel activities. Mitigation has been added to require the District to implement alternative control techniques in order to reduce health risk in the surrounding community. The alternative control technique assumed in the analysis is the mostly approved technology approved by ARB, which is the Advanced Marine Emissions Control System (AMECS) developed by Advanced Cleanup Technologies, Inc. The AMECS is equipped with barge-mounted Tier 4 auxiliary engines, which are smaller and require less energy than the previous ARB-approved technology. Based on a recent analysis by EPA (EPA 2016b) it is assumed that roughly 2 hours are necessary to install and remove the AMECS from a given vessel, during which time both the barge and ship auxiliary engines are operating and producing emissions. While the AMECS is designed to reduce criteria pollutant and TAC emissions, overall energy demand increases with use of the AMECS, resulting in increased GHG emissions. While the AMECS reduces dry bulk and multi-purpose general cargo at-berth emissions by approximately 77% for NO_X and 80% for DPM per call, CO_2 emissions are estimated to increase by approximately 36%. This increase is reflected in Table 4.6-11. Before mitigation, full TAMT plan buildout would not be completely consistent with the Sustainable Freight Strategy and Action Plan (**Impact-GHG-2**). As shown in Table 4.6-13, however, after incorporating Mitigation Measures **MM-GHG-1** through **MM-GHG-~~7~~9**, the project would implement technologies that help achieve the relevant strategies of the Sustainable Freight Strategy while supporting the guiding principles of the

Freight Action Plan. These mitigation measures would also be incorporated into the CDP and any real estate agreements between the District and the project proponent to ensure implementation.

Table 4.6-13. Project Consistency with Sustainable Freight Strategy and other ARB Strategies Post-2020

Strategy	Strategy Description	Project Consistency Analysis
Near-Term		
Incentive programs	Develop modifications to existing incentive programs to increase the emphasis on and support for zero and near-zero equipment used in freight operations, including introduction of truck engines certified to optional low-NO_X standards.	**Consistent After Mitigation.** Action was expected by ARB in 2015 and 2016 with implementation between 2016 and 2020, but action has not occurred. Operations associated with the proposed project include conventional freight equipment like yard trucks, forklifts, and cargo stackers. MM-GHG-4 requires the purchase and operation of electric equipment. MM-GHG-8 requires the District to incentivize tenant activities that utilize equipment and activities that reduce emissions.
Long-Term "Vision for the Future"		
Short haul—Heavy Duty (e.g., Drayage)	Provide incentives to demonstrate viability of zero emission technology and hybrids capable of zero emission miles.	**Consistent After Mitigation.** MM-GHG-4 would require zero-emissions electric CHE to be operated on site, and this equipment would continue to operate through full TAMT plan buildout.
Potential Incentives	Develop incentives to attract cleaner more efficient ships to California seaports by leveraging port and air agency funds.	**Consistent After Mitigation.** The project proponent would require VSR compliance (see MM-GHG-2 and MM-GHG-5~~).~~) as well as incentivize equipment and activities that reduce emissions (MM-GHG-8).
Cargo Handling Equipment	Support programs for technology demonstrations including battery electric, fuel cell, and pathway hybrids.	**Consistent After Mitigation.** Action was expected by ARB in 2015 and 2016 with implementation between 2016 and 2020, but action has not occurred. MM-GHG-3 and MM-GHG-4 require the project proponent to secure and operate electric CHE.
50 Percent Renewables Portfolio Standard	State program that requires large utilities to meet this 50% by 2030.	**Consistent Prior to Mitigation.** State program that requires no action at the local or project level. Benefits to project-related electricity consumption will be realized.
Phase 2 Truck Efficiency	~~Draft~~Final EPA and NHTSA program to reduce GHG emissions from heavy-duty vehicles starting in model year 2021.	**Consistent Prior to Mitigation.** State and federal program that requires no action at the local or project level. Benefits to project-related truck travel will be realized ~~once approved~~.

Source: ARB 2015c, 2016d

Impact Determination for 2020 to 2040

As discussed above, further implementation of major statewide measures (particularly RPS of 50 percent) along with mitigation measures for the project would reduce annual project operational GHG emissions. As shown in Table 4.6-11, project emissions would not align with substantial progress toward the statewide reductions set by EO B-30-15 and EO S-03-05 before mitigation. However, after mitigation, the proposed project's GHG emission reductions demonstrate substantial progress on a downward trajectory relative to unmitigated emissions. This downward trend over time would be consistent with the need for deeper reductions post-2020 consistent with long-term reduction targets promulgated in EO B-30-15 and EO S-03-05. However, because the project and District as a whole are reliant on the State to develop regulations and guidance, and to cooperate with and petition other agencies to reduce emissions from the largest sources, it is not certain if the project's post-2020 emissions through 2040 would meet the specific reduction targets required by the project in order to achieve the overall state targets promulgated in EO B-30-15 and EO S-03-05.

Therefore, post-2020 project GHG emission impacts are considered significant (**Impact-GHG-2**). As mentioned, after implementation of Mitigation Measures **MM-GHG-1** through **MM-GHG-~~8~~9**, project emissions would be substantially reduced and would be on a downward trajectory, but would remain significant because there is no certainty that the project's reduced emissions, after mitigation, would represent its fair share of the requisite reductions to achieve statewide post-2020 targets. Consequently, the project may not result in sufficient progress toward long-term local, regional, and statewide reduction targets and its contribution of GHG emissions to global climate change in the post-2020 period would still be considered cumulatively considerable after mitigation is incorporated.

Level of Significance prior to Mitigation

For the years between 2020–2040, the proposed project would not parallel the State's overall reduction targets identified in EO S-03-05 and EO B-30-15 and would not be in compliance with all plans, policies, and regulatory programs adopted by ARB or other California agencies for post-2020 for the purpose of reducing the emissions of GHGs. Potentially significant impact(s) include:

Impact-GHG-2: Project GHG Emissions Beyond 2020. Although proposed project emissions would be on a downward trajectory in the post-2020 period, the proposed project's reduction in GHG emissions during combined project construction and operational activities, before mitigation, may not contribute sufficiently to post-2020 progress toward statewide 2030 and 2050 reduction targets and would not always be in compliance with plans, policies, and regulatory programs adopted by ARB or other California agencies for post-2020 for the purpose of reducing the emissions of GHGs.

Mitigation Measures

Implement **MM-GHG-1** through **MM-GHG-3**.

MM-GHG-4: Electric Cargo-Handling Equipment Upgrades. ~~As a condition of any Coastal Development Permit, the project proponent, or the District, shall secure funding for and operate one piece of CHE associated with each node. Operation of such equipment on TAMT shall occur by January 1, 2030 through the expected operating life of the equipment, and evidence of operation shall be provided to the District upon request. Equipment shall be replaced if~~

~~alternative technologies (i.e., advancements in electric equipment) are identified and determined to be feasible pursuant to MM-AQ-7. For purposes of the analysis, it was assumed that each node would operate one electric yard truck. This mitigation is similar to MM-GHG-3, which requires a purchase by 2020, but the number of CHE equipment required by MM-GHG-4 is in addition to MM-GHG-3.~~In addition to the requirements in MM-GHG-3, this measure has multiple steps for compliance, as specified below.

A. Implement MM-GHG-3. The three electric cargo-handling equipment pieces required in MM-GHG-3 will continue to be operational through 2035.

B. Prior to January 1, 2025, the San Diego Unified Port District also shall ensure that no fewer than 20 non-electric yard trucks in operation are replaced at the TAMT by 20 electric yard trucks. Possible ways the electric yard trucks may be obtained include, but are not limited to, the following:

   1. Purchased, leased, or otherwise acquired, in whole or in part, through funding provided to a tenant by the San Diego Unified Port District; or

   2. Purchased, leased, or otherwise acquired, in whole or in part, through funding provided to a tenant by other sources; or

   3. Purchased, leased, or otherwise acquired, in whole or in part, by the tenant in compliance with the condition of a discretionary approval issued by the San Diego Unified Port District.

   Written evidence of the acquisition of the electric yard trucks, and the non-electric yard trucks they will replace and remove from further operation at the terminal, must be provided to the San Diego Unified Port District. The San Diego Unified Port District shall further ensure that the electric yard trucks are in use at the TAMT throughout the expected operating life of the equipment. Each tenant that employs electric trucks pursuant to this measure shall report the equipment's annual number of hours of operation to the San Diego Unified Port District and the San Diego Unified Port District shall monitor use of the electric trucks as part of the San Diego Unified Port District's TAMT equipment inventory.

C. Prior to January 1, 2030, the San Diego Unified Port District also shall ensure that no fewer than three existing non-electric reach stackers and ten non-electric forklifts in operation are replaced at the TAMT by three fully electric reach stackers and ten fully electric forklifts. Possible ways the electric reach stackers and forklifts may be obtained include, but are not limited to:

   1. Purchased, leased, or acquired, in whole or in part, through funding provided to the tenant by the San Diego Unified Port District; or

   2. Purchased, leased, or acquired, in whole or in part, through funding provided to the tenant by other sources; or

   3. Purchased, leased, or otherwise acquired, in whole or in part, by the tenant in compliance with a condition of a discretionary approval issued by the San Diego Unified Port District.

   Written evidence of the acquisition of the three electric reach stackers and ten electric forklifts and the conventional equipment they will replace and remove from further operation at the terminal must be provided to the San Diego Unified Port District. The San

Diego Unified Port District shall further ensure that the electric reach stackers and forklifts are in use at the TAMT throughout the expected operating life of the equipment. Each tenant that employs electric reach stackers or electric forklifts pursuant to this measure shall report the equipment's annual number of hours of operation to the San Diego Unified Port District and the San Diego Unified Port District shall monitor use of the electric reach stackers and forklifts as part of the San Diego Unified Port District's TAMT equipment inventory.

D. The electric equipment employed pursuant to paragraphs A, B, and/or C of this mitigation measure may be replaced by other technologies or other types of cargo-handling equipment as long as the replacement equipment achieves the same or greater criteria pollutant, toxic air contaminant, and greenhouse gas emission reductions as compared to the equipment required by paragraphs A, B, and/or C of this mitigation measure.

MM-GHG-5: Implement Vessel Speed Reduction Program Beyond Climate Action Plan Compliance for Future Operations Associated with the TAMT Plan. Every quarter following approval of the first discretionary action approval and/or issuance of the first Coastal Development Permit associated with a future project proposed under the TAMT plan, whichever occurs first, the project proponent shall provide a report of the annual vessel activity and throughput by cargo node to date and the projected total throughput for the previous 6 months to the San Diego Unified Port District's Planning & Green Port Department. Prior to the annual vessel calls reaching ~~52~~91 calls (~~37~~76 new calls over existing) for dry bulk, ~~77~~117 calls (~~20~~60 new calls over existing) for refrigerated containers, and ~~68~~96 calls (~~40~~68 new calls over existing) for multi-purpose general cargo under the MPC scenario, 79 calls (64 new calls over existing) for dry bulk, 98 calls (41 new calls over existing) for refrigerated containers, and 78 calls (50 new calls over existing) for multi-purpose general cargo under the STC Alternative, or beginning January 1, 2030 for all vessels irrespective of the number of calls occurring on an annual basis, whichever occurs first, the project proponent shall implement ~~VSR~~vessel speed reduction measures to reduce the project's criteria pollutant emissions. The program shall require that 90 percent of the vessels calling at the project site reduce their speeds to 12 knots starting at 40 nautical miles from Point Loma. Due to the international border to the south and ARB limit for rulemaking 24 nautical miles from the coastline, some vessel calls travel within the San Diego Air Basin for less than 40 nautical miles. For those vessel calls that travel within the San Diego Air Basin for less than 40 nautical miles, vessel operators are required to reduce their speeds to 12 knots at the point those vessels enter the San Diego Air Basin and maintain speeds of 12 knots over the entire distance to/from Point Loma. To be compliant with the vessel speed limit, the vessel's weighted average speed shall be 12 knots or less from the 40-nautical-mile latitude and longitude positions on each respective route to/from Point Loma.

Implementation of this ~~VSR~~vessel speed reduction program will be required as part of any discretionary action and/or Coastal Development Permit(s) associated with the TAMT plan. Evidence of implementation and compliance with this mitigation measure shall be provided to the San Diego Unified Port District's Planning & Green Port Department on ~~an annual~~a quarterly basis through 2035 (buildout of the TAMT plan). The San Diego Unified Port District will verify compliance through analysis of Automatic Identification System data or by requesting a vessel's Electronic Chart Display Identification System log from the captain.

MM-GHG-6: Implement a Renewable Energy Project or Purchase the Equivalent Greenhouse Gas Offsets from a California Air Resources Board Approved Registry or a Locally Approved Equivalent Program for Future Operations Associated with the TAMT Plan. Prior to the any discretionary approvals and/or issuance of a Coastal Development Permit(s), the project proponents of future components considered in the TAMT plan shall incorporate renewable energy within the TAMT or within ~~other~~/adjacent to areas of the San Diego Unified Port District's jurisdiction; otherwise, the project proponents shall purchase greenhouse gas reduction credits as specified herein to achieve requisite reductions to meet the 2035 reduction target. This requirement may include a micro-grid or similar type of energy management system to help distribute the loads and/or assist in energy storage. To meet the 2035 reduction target at full TAMT plan buildout (using full-buildout throughput numbers listed in Table 3-3 of Chapter 3, *Project Description*), the renewable energy project must offset ~~34,044~~27,625 metric tons of carbon dioxide equivalent ($MTCO_2e$) per year or ~~161,134~~130,751 megawatt-hours per year (MWh/year) or the equivalent amount of greenhouse gas offsets under the MPC scenario or 18,206 $MTCO_2e$ per year or 86,172 MWh/year or the equivalent amount of greenhouse gas offsets under the STC Alternative.

Because it is unknown if the full buildout will ever be achieved given it is based on market demand, the amount of greenhouse gas offsets (whether from renewable energy or purchasing of offsets) per project proposed under the TAMT plan must reduce its fair share of the full buildout GHG emissions amount (i.e., fair share of ~~34,044~~27,625 $MTCO_2e$ under the MPC scenario or 18,206 $MTCO_2e$ under the STC Alternative), which shall be calculated over the entire life of the project proponent's lease agreement with the District or (if no lease) over the life of the project. As such, a calculation of the greenhouse gas emissions that would be generated by a project proponent's project over the life of the lease at the TAMT or the project life is required to determine the sufficient amount of renewable energy mitigation or greenhouse gas offsets. This proportion shall be based on anticipated throughput of the project proposed under the TAMT plan and shall include all potential emission sources (e.g., trucks, vessels, employees, cargo handling equipment). Evidence shall be submitted to the District prior to the commencement of construction activities.

Because it is unknown how "solar ready" the available rooftop areas are within the TAMT, once at the design phase, the renewable energy project may be determined infeasible. Should this determination of infeasibility be made by the San Diego Unified Port District after considering evidence submitted by the project proponent related to any structural limitations (i.e., the rooftops cannot support a renewable energy system), then ~~two~~three additional options are available, listed here in order of priority. The San Diego Unified Port District shall either require the renewable energy project to be built off site ~~(i.e., at a location not within the TAMT but~~ within the San Diego Unified Port District's jurisdiction~~)~~, or within the adjacent community (City of San Diego), or shall require the proponent to purchase the equivalent amount of greenhouse gas offsets from ~~sources listed on the American Carbon Registry and/or the Climate Action Reserve (or any other such registry approved by the~~a California Air Resources Board~~).~~ approved registry, or a locally approved equivalent program. The selected option or a combination of the above-mentioned options must achieve a total annual reduction of ~~34,044~~27,625 $MTCO_2e$ at full TAMT plan buildout under the MPC scenario or 18,206 $MTCO_2e$ under the STC Alternative assuming throughput numbers are reached by this point in time. Otherwise, the reduction amount will be proportional to the growth experienced at the TAMT, achieve the same reductions noted in the analysis, and scaled to the actual growth that occurs.

MM-GHG-7: Annual Inventory Submittal and Periodic Technology Review. ~~To promote new emission control technologies, each tenant who seeks a discretionary action approval and/or Coastal Development Permit(s) shall perform an investigation into emerging zero and near-zero technologies and submit a report to the District on an annual basis, beginning on the date such construction, occupancy, or use commences and continuing through 2035 (buildout of the TAMT plan). The~~The San Diego Unified Port District regularly monitors technologies for reducing air emissions as part of its Climate Action Plan (CAP) and long-range sustainability goals, which ~~require~~encourages the San Diego Unified Port District and its tenants to use cleaner technologies over time as they become available and feasible. ~~The Annual Technology Review shall identify any~~As a condition of approval of any new or amended real estate agreement or Coastal Development Permit, the San Diego Unified Port District shall require the project proponent to submit to the San Diego Unified Port District an annual inventory of all equipment that generates criteria pollutant, toxic air contaminant, and greenhouse gas emissions operated by the project proponent at the TAMT throughout the life of the lease up to 2035 (buildout of the TAMT plan). The equipment inventory shall include the year, make, and model of the equipment that was used in the previous year, including annual hours of operation for each piece of equipment, including but not limited to heavy duty drayage and non-drayage trucks, yard equipment, assist and ocean going tugs, ocean going vessels, bulk material handling equipment, and/or any other type of cargo handling equipment. The purpose of the inventory is to track emissions and equipment at TAMT and to assist in technological reviews, as described below.

To promote new emission control technologies, the San Diego Unified Port District will perform a Periodic Technology Review (PTR) annually. The PTR will coincide with monitoring and reporting pursuant to the San Diego Unified Port District's CAP, and will include the following:

1. Develop and maintain an inventory of equipment in operation at the TAMT that generates criteria pollutant, toxic air contaminant, and greenhouse gas emissions, including the equipment model year, model name, and annual hours of operation, based on the annual tenant inventories submitted to the San Diego Unified Port District as described above.
2. Identify and assist with enforcement of changes to emission regulations for heavy-duty trucks, yard equipment, tugs, vessels, bulk handling equipment, and other equipment that generates criteria pollutant, toxic air contaminant, and greenhouse gas emissions.
3. Identify, and assist with implementation of, any feasible new emissions-reduction technologies that may reduce emissions at the project site, including technologies applicable to heavy-duty trucks, yard equipment, tugs, vessels, and bulk handling equipment.
4. Collaborate with the California Air Resources Board and San Diego Air Pollution Control District to ensure these technologies are available and to identify funding opportunities, including funding from the Prop 1B: Good Movement Emission Reduction Program, among others.
5. Prioritize older equipment in operation at the TAMT that generates the highest levels of criteria pollutant, toxic air contaminant, and greenhouse gas emissions to be replaced based on the level of emissions and cost effectiveness of the emissions reduction (i.e., biggest

reduction per dollar), and identify implementation mechanisms including, but not limited to, tenant-based improvements, grant programs, and/or a combination thereof, based on regulatory requirements and the feasibility analyses specified in paragraph 3 above. Utilize the Carl Moyer Program, or similar cost-effectiveness criteria, to assess the economic feasibility (e.g., cost effectiveness) of ~~zero and near-zero emissions~~the identified new technologies~~ for heavy-duty trucks, yard~~.

6. Ensure that any upgraded and/or retired equipment~~, tugs, vessels,~~ is accounted for as part of the San Diego Unified Port District's Maritime Emissions Inventory and ~~bulk handling equipment.~~ Climate Action Plan.

If ~~the Periodic Technology Review demonstrates the~~ PTR identifies new technology that will be effective in reducing emissions ~~and the~~compared to the equipment in operation at the time of the review, and the San Diego Unified Port District determines that installation or use of the technology is feasible, the ~~tenant~~San Diego Unified Port District shall require the use of such technology as a condition of any discretionary approval issued by the San Diego Unified Port District for any new, expanded, or extended operations at the TAMT. Furthermore, the District and/or project proponent must demonstrate that emissions of volatile organic compounds (VOCs) would be less than 75 pounds per day on a peak day once cargo throughput exceeds 4,000,000 metric tons annually. If technological advancements are unable to reduce VOC emissions to 75 pounds per day or less on a peak day, then the District shall limit the number of vessels allowed to no more than three on a peak day once total throughput exceeds 4,000,000 metric tons annually. These operational restrictions will ensure that VOC emissions do not exceed threshold standards established by the San Diego Air Pollution Control District. Verification of compliance with this measure is the responsibility of the District.

MM-GHG-8: Exhaust Emissions Reduction Program at the Tenth Avenue Marine Terminal. The San Diego Unified Port District shall implement ~~such technology within 12 months of the District's determination~~a program at the TAMT by January 1, 2020 to further reduce emissions from terminal-wide emissions sources. Furthermore, the District and/or Project Proponent must demonstrate that VOC emissions would be less than 75 pounds per day on a peak day once cargo throughput exceeds 4,000,000 metric tons annually. If technological advancements are unable to reduce VOC emissions to 75 pounds per day or less on a peak day, then the District shall limit the number of vessels allowed to no more than three on a peak day once total throughput exceeds 4,000,000 metric tons annually. These operational restrictions will ensure that VOC emissions do not exceed threshold standards established by the San Diego Air Pollution Control District.

A. ~~**MM-GHG-8: Implement a Sustainable Leasing Program.** The District shall work with tenants to develop and implement a policy incentive-based sustainable~~The program shall be implemented through the Coastal Development Permit process, the tenant leasing ~~program to achieve the District's goals to attract the cleanest ships, ships~~process, including the issuance of new, extended or amended leases, and other short-term real estate agreements at the TAMT.

B. The program shall be focused on incentives to reduce criteria pollutant, toxic air contaminant, and greenhouse gas emissions by attracting clean vessels, trucks, and equipment to the TAMT, including but not limited to vessels that utilize shore power while at berth, zero and near-zero emission cargo handling equipment technologies, energy efficiency measures and/or renewable energy, and by otherwise ~~incorporate technology~~incorporating technological and operational practices that reduce criteria pollutant ~~emissions. The~~ , toxic air contaminant, and greenhouse gas emissions from terminal operations beyond existing regulatory requirements. The program shall include specific incentives for existing and future tenants, which may include but is not limited to an extended lease term, expedited permit processing, reduced permit fees, and eligibility for grants or other financial assistance. The nature and extent of such incentives will be based on an emissions reduction schedule established by the San Diego Unified Port District for criteria pollutants, toxic air contaminants, and greenhouse gas emissions.

C. The program shall identify specific emission-reduction equipment and practices that may qualify for incentives, including but not limited to the following.

- Vessels: Demonstrate that at least 50% of annual vessel calls will be equipped with Tier II or better main and auxiliary engines, as defined by the International Convention for the Prevention of Pollution from Ships Annex VI 2008 regulations or other standards set forth by the International Convention for the Prevention of Pollution from Ships, the U.S. Environmental Protection Agency, and/or California Air Resources Board in the future.
- Vessel Hoteling: Demonstrate that vessel calls will utilize shore power or a California Air Resources Board-approved alternative emission capture and control system or install a shore power or California Air Resources Board-approved alternative emission capture and control system for the purpose of reducing ocean-going vessel hoteling emissions.
- Heavy-Duty Trucks: Demonstrate that at least 50% of annual cargo throughput will be transported with zero/near-zero emission trucks, hybrid trucks, and/or other alternative truck technologies. To qualify, the trucks must result in emission reductions greater than those required by state and federal regulatory agencies at the time of project approval.
- Switch and Line Haul Locomotives: Demonstrate that at least 50% of annual cargo will be transported with Tier 3 or above locomotive engines for line haul, as defined by the U.S. Environmental Protection Agency in 2008 (73 *Federal Register* 88 25098–25352), and a Tier 3 or above switcher or railcar mover for switching activity at both the terminal and yard.
- Terminal Infrastructure: Install electric charging stations and/or other terminal infrastructure and equipment that support and facilitate zero or near-zero emission technologies.

MM-GHG-9: Use of At-Berth Emission Capture and/or Control System to Reduce Vessel Hoteling Emissions. The San Diego Unified Port District shall require the use of an At-Berth Emission Capture and/or Control System (i.e., bonnet system) to reduce vessel hoteling emissions prior to terminal-related emissions reaching a cancer risk of 10 per million at the maximally exposed sensitive receptor location. Based on the Health Risk Assessment, located in Section 4.2 of the TAMT Redevelopment Plan Environmental Impact Report, an At-Berth Emission Capture and/or Control System shall be required prior to reaching an annual throughput of 691,418 metric tons for dry bulk assuming no growth in multi-purpose general cargo, or an annual throughput of 356,666 metric tons for multi-purpose general cargo (includes break bulk, neobulk, roll-on/roll-off, and other non-container, non-dry bulk cargo, and non-liquid bulk cargo) assuming no growth in dry bulk, or a combined annual throughput of 729,925 metric tons for the dry bulk and multi-purpose/general cargo nodes, whichever occurs first. The San Diego Unified Port District shall either install directly or enter into a contract with an entity that provides the Emission Capture and/or Control System or an equivalent alternative technology, to reduce emissions from vessels that are unable to cold iron at TAMT and/or are exempt from the California Air Resources Board's at-berth regulation. The San Diego Unified Port District may charge a fee for the use of an Emissions Capture and Control System (or an alternative at-berth system that reduces vessel hoteling emissions) based on the vessel type and the length of its stay. The system shall be a technology that has been approved by the California Air Resources Board, and meets the requirements set forth in the California Air Resources Board's at-berth regulations. If the San Diego Unified Port District determines the need for an Emissions Capture and Control System (or an alternative at-berth system that reduces vessel hoteling emissions) prior to, or later than, the throughput figures listed above, or if shore power or other future regulatory requirements are able to reduce vessel hoteling emissions, then the requirement for the At-Berth Emission Capture and/or Control System shall be updated and adjusted accordingly, at the San Diego Unified Port District's ~~Climate Action Plan identifies the development of a Sustainable Leasing Policy as one of the GHG reduction measures prioritized for implementation, and future components under the TAMT plan shall be subject to the Sustainable Leasing Policy~~discretion.

All vessels that are not shore-power equipped shall use the Emission Capture and Control System (or an alternative at-berth system that reduces vessel hoteling emissions at an equivalent level), provided there are no operational limitations and it is not being used by another vessel. If the Emission Capture and Control System is operationally unable to connect to an at-berth vessel, or if it is being used by another vessel, multi-purpose/general cargo and/or dry bulk vessels will be allowed to berth without it.

Level of Significance after Mitigation

Even after implementation of **MM-GHG-1** through **MM-GHG-~~8~~9**, **Impact–GHG-2** would remain significant due to the lack of a known project type and location-specific reduction target; therefore, it cannot be stated with certainty that the project would result in emissions that would represent a fair share of the requisite reductions to achieve post-2020 targets.

Mitigation Measure **MM-GHG-6** includes installation of solar panels on available rooftop space within the TAMT ~~or~~, off site but within the District's jurisdiction, or within the adjacent community. It is assumed that minimal construction activities would be required and would consist of installing poles or infrastructure on the rooftops to mount the solar arrays, electrical connections to the existing grid, potential minor upgrades to the existing onsite electrical system (pending consultation with SDG&E), possible minor structural improvements to the buildings and roofs, and a few associated material deliveries for the solar hardware. Once operational, the solar arrays would not create any glare issues because they are designed and coated to absorb light, not reflect it, require very little maintenance, and in general would not cause any significant impacts on the environment. Therefore, environmental impacts associated with the implementation of the solar option under **MM-GHG-6** would be less than significant.

Threshold 3: Implementation of the proposed project <u>would not</u> place people or structures at substantial risk of harm due to predicted climate change effects

Impact Discussion

CEQA currently does not require an analysis of how existing environmental conditions will affect a project's future users or residents (see *California Building Industry Assoc. v. Bay Area Air Quality Management District [Dec. 17, 2015] Cal.4th)*. However, the project site is within the Coastal Zone and, pursuant to EO S-13-08, the California Coastal Commission considers this issue in determining consistency with the Coastal Act. Therefore, the extent to which existing environmental conditions will affect a project's future users and infrastructure, particularly in terms of SLR, is provided herein.

As discussed above, several impacts on the environment are expected throughout California as a result of global climate change. The extent of these effects is still being defined as climate modeling tools become more refined. Regardless of the uncertainty in precise predictions, it is widely understood that substantial climate change is expected to occur in the future. Potential climate change impacts in the area include, but are not limited to, SLR, extreme heat events, increased water and energy consumption, and changes in species distribution and range.

Projected SLR as an effect of climate change is expected increase the number of areas that experience coastal flooding along San Diego Bay in the future. Coastal and low-lying areas, such as the project site, are particularly vulnerable to future SLR. More specifically, SLR is a concern for the future, particularly in combination with future storm events and coastal flooding. A scenario with 100-year flood flows that coincide with high tides, taking into account SLR over a 50- or 100-year horizon, would dramatically increase the risk of flooding in the project vicinity. The concern here is the impact on the project from SLR, as opposed to the impact of the project on SLR.

According to the National Oceanic and Atmospheric Administration's (NOAA) *Sea Level Rise and Coastal Flooding Impacts Viewer* (NOAA 2014), portions of the project site would be inundated at 5 and 6 feet of SLR. Historically in San Diego, the mean sea level trend was 2.08 millimeters/year with a 95% confidence interval of +/- 0.18 millimeters/year based on monthly mean sea level data from 1906 to 2014, which is equivalent to a change of 0.68 foot in 100 years. SLR is anticipated to accelerate over the next century. According to NOAA, there is very high confidence (greater than 90% chance) that global mean sea level will rise at least 8 inches (0.2 meter) and no more than 6.6 feet (2.0 meters) by 2100 (NOAA 2014). Furthermore, the June 2012 National Research Council report *Sea-Level Rise for the Coasts of California, Oregon, and Washington*, which was used in the California Coastal Commission's *Sea Level Rise Policy Guidance* (California Coastal Commission 2015), projects SLR south of Cape Mendocino to be 0.13 to 0.98 foot (4 to 30 centimeters) by 2030, 0.39 to 2.0 feet (12 to 61 centimeters) by 2050, and 1.38 to 5.48 feet (42 to 167 centimeters) by 2100, as shown in Table 4.6-14. Note that this report was updated in March 2013 but the projections did not change.

Based on the best available science, there is potential for project site inundation near the end of the century. Nevertheless, after mid-century, projections of SLR become more uncertain. These projections vary with future projections due in part to modeling uncertainties, but primarily due to uncertainties about future global GHG emissions and uncertainties associated with the modeling of land ice melting rates. Therefore, for projects with timeframes beyond 2050, it is especially important to consider adaptive capacity, impacts, and risk tolerance to guide decisions about whether to use the low or high end of the ranges presented.

In the foreseeable future the terminal is sufficiently above sea level (approximately 7–9 feet above existing mean sea level) to prevent any adverse effects from SLR. Table 4.6-14 shows project site elevation and SLR projections for the 2030, 2050, and 2100 timeframes; however, the life of the project is until 2050. As shown in Table 4.6-14, the project site would remain sufficiently above SLR projections until the upper end of the 2100 timeframe, which is well beyond the life of the project (2050). In 2100, inundation is projected to occur during mean high-tide conditions. When accounting for storm surge events (temporary inundation), the project site would remain sufficiently above SLR projections until the upper end of the 2050 and 2100 timeframes. Therefore, during the life of the TAMT plan, the project site would remain sufficiently above sea level (approximately 2.24–4.11 feet above projections by 2050 without storm surge) and no significant impacts would occur from SLR through the reasonably foreseeable life of the project. Note that the information, particularly projected SLR beyond the life of the project in 2050 and 2100, is presented in Table 4.6-14 and herein for informational purposes only.

Table 4.6-14. Sea Level Rise Elevation and Projections (feet)

	Existing Tidal Datum[1]		Sea Level Rise Projection[2]		Project Elevation Relative to Projection[3] – Permanent SLR		Project Elevation Relative to Projection[4] – plus Storm Surge	
Year	**Site Elevation above MSL**	**Mean Higher High Water Elevation above MSL**	**Lower End**	**Upper End**	**Lower End**	**Upper End**	**Lower End**	**Upper End**
2030	7.00	2.76	0.13	0.98	4.11	3.26	1.71	0.86
2050	7.00	2.76	0.39	2.00	3.85	2.24	1.45	-0.16
2100	7.00	2.76	1.38	5.48	2.86	-1.24	0.46	-3.64

MSL = mean sea level

[1] Mean Higher High Water Elevation above MSL calculated based on the difference between mean higher high water (5.64 feet) and MSL (2.89 feet). Obtained from: https://www.portofsandiego.org/maritime/check-port-and-harbor-conditions/424-tides-and-currents.html.

[2] Based on projections for south of Cape Mendocino. Obtained from: http://www.opc.ca.gov/webmaster/ftp/pdf/docs/2013_SLR_Guidance_Update_FINAL1.pdf.

[3] Based on the difference between site elevation, mean high water elevation above MSL, and SLR projects. For example, the lower end elevation for 2030 is calculated as follows: 7.00 – 2.76 – 0.13 = 4.11 feet.

[4] Based on the difference between permanent SLR above mean higher high water and 100-year (1% return probability) surge events. For example, the lower end elevation for 2030 is calculated as follows: 4.11 – 2.40 = 1.71 feet. Surge event obtained from: http://tidesandcurrents.noaa.gov/est/curves.shtml?stnid=9410170.

In addition to SLR, a range of other potential climate change impacts may affect the project, including increased temperatures, heat stress days, and water supply. However, implementation of the project would not lead to an increase in wildfires, onsite flooding, or a direct increase in surrounding temperatures. Moreover, although regional water supplies are subject to potential future climate change effects, the project does not propose any significant increase in water consumption, with consumption being limited to typical uses associated with additional employees (restroom use, drinking) and occasional site cleaning in compliance with water quality runoff standards. Therefore, the project would result in a less-than-significant impact related to subjecting persons or property to climate change effects.

Level of Significance Prior to Mitigation

Impacts from SLR through the life of the TAMT plan would be less than significant, and thus project-related impacts from SLR are considered less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

Impacts would be less than significant.

Section 4.7
Hazards and Hazardous Materials

4.7.1 Overview

This section characterizes existing conditions and applicable laws and regulations for hazards and hazardous materials within the proposed project area. This section also provides an analysis of the proposed project's potential to (1) create a significant hazard to the public or environment, (2) emit hazardous emissions or handle hazardous materials within 0.25 mile of a school, and (3) be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. All other potential hazards and hazardous materials impacts were determined to be less than significant in Section VIII of the Initial Study/Environmental Checklist (see Appendix A) and are not analyzed further herein. The analysis and conclusions regarding these impacts are also summarized in Section 6.4, *Effects Not Found to be Significant*, of Chapter 6. Air pollutants are discussed in Section 4.2, *Air Quality and Health Risks*, and water pollutants are discussed in Section 4.8, *Hydrology and Water Quality*, and not in this section.

Information on hazardous materials in this section is summarized from the *Soil Management Plan* and *Historical Summary of the 10th Avenue Marine Terminal* prepared by Tetra Tech EM, Inc. for the District (2010), found in Appendices J-1 and J-2, respectively, and the following reports by Ninyo & Moore.

- *Import Soil Evaluation for Transit Shed No. 1, Tenth Avenue Marine Terminal* (2015) (Appendix J-3)
- *Soil, Concrete, and Asphalt Sampling Analysis for Transit Shed No. 2 – Bays E and F of the Tenth Avenue Marine Terminal* (2014) (Appendix J-4)
- *Concrete/Asphalt Sampling for Transit Shed No. 1, Tenth Avenue Marine Terminal* (June 23, 2014) (Appendix J-5)
- *Hazardous Building Material Abatement Specifications for Warehouse C and Transit Shed No. 1, Tenth Avenue Marine Terminal* (2013) (Appendix J-6)
- *Pre-characterization Sampling – Transit Shed No. 1 and Warehouse C Demolition, Tenth Avenue Marine Terminal* (2013) (Appendix J-7)
- *Asbestos Survey Status Reports of District-Operated Facilities* (2015) (Appendix J-8)

Table 4.7-1 summarizes the significant impacts and mitigation measure in Section 4.7.4.3, *Project Impacts and Mitigation*.

Table 4.7-1. Summary of Significant Hazards and Hazardous Materials Impacts and Mitigation Measures

Summary of Potentially Significant Impact(s)	Summary Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-HAZ-1: Possible Onsite Soil Contamination.	**MM-HAZ-1:** Compliance with Soil Management Plan **MM-HAZ-2:** Implement Engineering Controls and Best Management Practices During Construction	Less than Significant	After mitigation, safeguards would be set into place to ensure upset and accident conditions do not occur.

4.7.2 Existing Conditions

4.7.2.1 Project Site History

The project site was constructed on fill material and reclaimed tidelands between 1953 and 1958. Historical activities in the area to the northeast include open burning of refuse from the early 1900s through the 1940s and storage of stockpiles of metal debris. A 1907 photograph indicates burning refuse (e.g., municipal solid waste) at what appears to be the immediate northeast portion of the project site. The burning in this areas that appears to extend easterly and southerly onto the project site is believed to be associated with the Eighth Avenue Tidelands Dump. A substantial amount of garbage and rubbish was reportedly accumulated and burned at the Eighth Avenue Tidelands Dump (Appendix J-2). To the southeast, historical activities include a sawmill and the creosote wood treatment facility of the Benson Lumber Company (Appendix J-1). These activities indicate possible subsurface metal and polycyclic aromatic hydrocarbon (PAH) contamination. Historical investigations have identified elevated concentrations of metals, including lead and copper, and debris such as asphalt and glass extending to the southeast that is likely associated with the former Eighth Avenue Tidelands Dump (Appendix J-1).

4.7.2.2 Present Day

The project site includes four berth locations that are capable of accommodating oceangoing vessels. Terminal infrastructure consists of Transit Sheds #1 and #2, Warehouses B and C, two bulk liquid storage facilities, a silo complex and conveyer system, on-dock rail tracks, and an entrance gate into the project site, with a security guard structure at the end of Crosby Road. The remaining areas within the project site are dedicated to grounded refrigerated container storage, limited stacked containers, and open space for the handling and staging of import and export cargo. Furthermore, the project site includes seven liquid bulk above-ground storage tanks located in the northern portion of the project site. Open space areas for the handling and staging of import and export cargo are located on asphalt-concrete and Portland cement concrete. The floors and loading platforms of Warehouse C and Transit Sheds #1 and #2 are paved with asphalt-concrete varying in thickness from 3 to 7 inches overlaying 9 inches of base material. The interior and exterior ramps that lead up to the warehouse pads are 6-inch-thick Portland cement concrete (Appendix J-1).

4.7.2.3 Onsite Hazardous Materials (Contamination)

The site is a known area of soil contamination due to the historical disposal and burning of municipal solid waste (Appendix J-2). Based on previous site assessments, hazardous materials within the project area identified through previous sampling actions may be present in the soil, including total petroleum hydrocarbons (TPH), benzene, toluene, PAHs, semi-volatile organic compounds (SVOCs), dioxins and furans, and metals (copper, zinc, and lead) (Appendix J-1). In addition, soil sampling was conducted by Ninyo & Moore in 2013, 2014, and 2015 for Transit Shed #1, Transit Shed #2, and Warehouse C. The hazardous material conditions of the subject buildings and their respective areas are as follows.

- **Transit Shed #1 – Concrete/Asphalt Sampling (June 23, 2014):** At Transit Shed #1, concrete and asphalt was evaluated for potential hazardous materials, which revealed that the concentrations of total polychlorinated biphenyls (PCBs) were not detected above the reporting limit analyzed by the synthetic precipitation leaching procedure, which simulates conditions if the material were to be reused on site. (Appendix J-5)
- **Transit Shed #1 – Import Soil Evaluation (2015):** Transit Shed #1 was constructed on an elevated building pad that was created using undocumented fill material. Ninyo & Moore performed soil sampling and analysis to evaluate the soil within the footprint of the planned removal area for constituents of potential concern (COPCs) that have been found during previous subsurface projects at the project site. The soil sampling revealed metals were the only COPCs detected in the soil samples, but were significantly lower than waste criteria and therefore suitable for reuse (Appendix J-3). This analysis was reviewed by the Regional Water Quality Control Board, which approved the reuse of the soil at the Chula Vista Bayfront parcels.
- **Transit Shed #1 and Warehouse C Demolition – Pre-Characterization Sampling (October 2, 2013):** Transit Shed #1 and Warehouse C soils were evaluated for potential hazardous materials. The evaluation revealed contaminants of concern present within the soil including lead, TPH-extended range C8-C40, and organochlorine pesticides. Assuming that the materials considered one waste stream, the concentrations of contaminants detected in the material would classify the material as a non-hazardous waste and may be suitable for reuse on site pending further testing of the soils. The concentration of total lead in one sample exceeded the trigger limit of 50 milligrams per kilogram for analysis of soluble lead for the state. However, the 80 percent upper confidence limit for all total lead was calculated as approximately 10.5 milligrams per kilogram, which is less than the 50 milligrams per kilogram required to be classified as California hazardous waste; therefore, the material is considered non-hazardous for lead. (Appendix J-7)
- **Transit Shed #2 (Bays E and F) – Soil, Concrete, and Asphalt Sampling and Analysis (June 24, 2014):** At Transit Shed #2, soil samples revealed that there were no COPCs detected. Furthermore, the concrete and asphalt samples detected arsenic, barium, chromium, cobalt, copper, lead, mercury, nickel, vanadium, and zinc, but not at concentrations at or exceeding their respective trigger limits for analysis by State or federal standards. Ninyo & Moore concluded

that the soil, asphalt, and concrete from Transit Shed #2, if reused on site or off site, would not pose a significant threat to human health or the environment. Furthermore, no PCBs were detected in the soil samples analyzed from Transit Shed #2. (Appendix J-4)

- **Warehouse C and Transit Shed #1 – Hazardous Material Abatement Specifications (October 29, 2013):** Surveys for asbestos in Warehouse C and Transit Shed #1 revealed the presence of asbestos-containing materials (ACMs), asbestos-containing construction materials (ACCMs), and lead-containing surfaces. (Appendix J-6)
- **Asbestos Survey Reports of District-Operated Facilities (January 28, 2015):** Surveys for asbestos were not completed for Transit Shed #2. However, as Transit Shed #2 was constructed at the same time as Transit Shed #1, it should be presumed that ACMs may be present. (Appendix J-8)

4.7.2.4 Onsite Hazardous Materials (Stored)

As described in Chapter 2, *Environmental Setting*, the proposed project does not identify any infrastructure improvements or operational efficiencies related to liquid bulk. Therefore, information on liquid bulk storage tanks (LBSTs) is provided for informational purposes only. In addition, in the northwestern corner of the project site, there are five LBSTs. Three of the LBSTs contain diesel fuel and bunker fuel (i.e., vessel fuel). Two of these LBSTs contain aviation turbine fuel, specifically Jet A grade fuel, which is a kerosene-type fuel made up of hundreds of different hydrocarbons.

A low flash point is generally indicative of the presence of highly volatile materials in the fuel. The Material Safety Data Sheet (MSDS) for diesel fuel indicates that the flashpoint for this fuel is 120 degrees Fahrenheit (49 degrees centigrade), while bunker fuel has a flash point of 140 degrees Fahrenheit (60 degrees centigrade).[1] The MSDS for Jet A fuel states that the flash point for this fuel is 100 degrees Fahrenheit (38 degrees centigrade). Each of these fuel types has a relatively high flash point, which indicates a stable material. Also, the vapor pressure for each is considered low, which indicates that the fuel is less volatile and has a lower susceptibility to explosion. Due to the physical properties of diesel, bunker, and Jet A fuel (e.g., low volatility and low explosion potential), there is a low probability of explosion from storage in LBSTs. These LBSTs are not considered acutely hazardous materials that pose a risk to personnel on site.

4.7.2.5 Hazardous Materials Database Results

Record searches using the California Department of Toxic Substances Control (DTSC) EnviroStor database and State Water Resources Control Board (SWRCB) Geotracker database were conducted on November 16, 2015. Figure 4.7-1 shows the location of known contaminated sites within 0.25 mile of the proposed project. Tables 4.7-2 and 4.7-3 list the onsite and offsite contamination sites, respectively. In addition, Tables 4.7-2 and 4.7-3 correspond with the identified site numbers on Figure 4.7-1.[2] No onsite contamination sites were identified in the EnviroStor database. However, seven onsite contamination sites were identified in the Geotracker database. Furthermore, 31 offsite

[1] The flash point is defined as the lowest temperature at which the vapor formed above a pool of liquid ignites in air at a pressure of one atmosphere.

[2] The site numbers within Tables 4.7-2 and 4.7-3 and Figure 4.7-1 are given for identification purposes only.

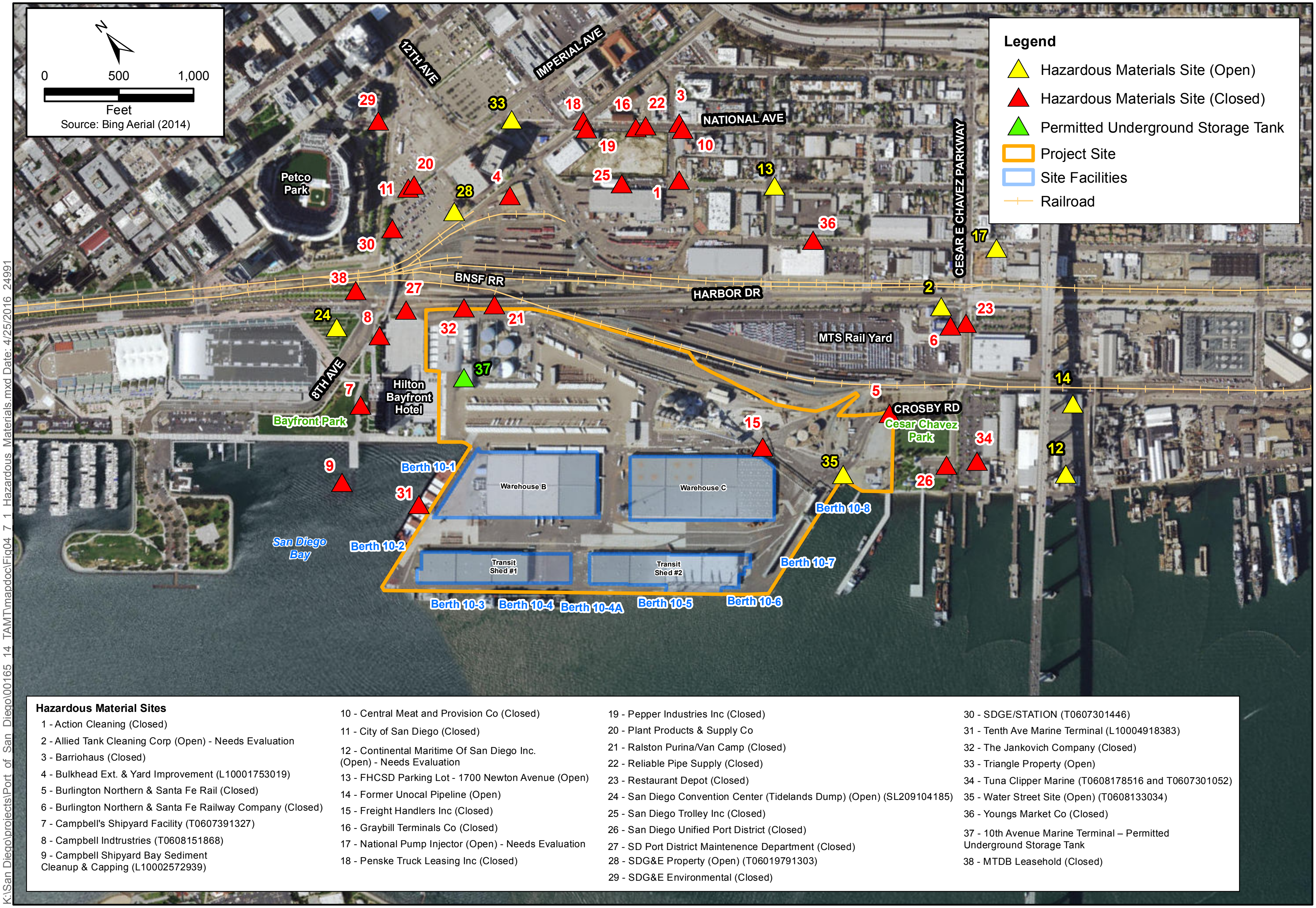

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Figure 4.7-1
Hazardous Materials Site Locations
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

contamination sites (28 in Geotracker and three in EnviroStor) were identified during the database search, with five of the sites listed as open cases, and three sites are currently being evaluated.

Table 4.7-2. Onsite Contamination Sites Listed on a Hazardous Materials Database

Site No.	Site Name	Address	Database Listings
37	10th Avenue Marine Terminal, San Diego, CA	920 Gull Street	Geotracker. Permitted Underground Storage Tank by the County of San Diego
5	Burlington Northern & Santa Fe Rail, San Diego, CA	1342 Crossby Street	Geotracker, LUST (Benzene and Gasoline) Clean up (Waste Oil/Motor/Hydraulic/Lubricating) (Closed)
15	Freight Handlers Inc.	1790 Water St	Geotracker, Clean-up Site (Closed)
21	Ralston Purina/Van Camp	1025 E Harbor Drive	Geotracker, Clean-up Program Site (Closed)
31	10th Ave Marine Terminal	Berths 10-1 & 10-2, San Diego, CA	Geotracker, Land Disposal Site (Closed)
32	The Jankovich Company	961 E Harbor Drive	Geotracker, Cleanup Program Site (Crude Oil) (Closed)
35	**Water Street Site**	**1875 Water Street**	**Geotracker, Program Clean-up (Diesel) Site (Open – Site Assessment)**

Notes:
LUST = Leaking Underground Storage Tank
BOLD = Open Sites

Table 4.7-3. Offsite Contamination Sites Listed on a Hazardous Materials Database

Site No.	Site Name	Address	Database Listings
1	Action Cleaning	1604 Newton Avenue	Geotracker. LUST Cleanup Site, Case Closed
2	**Allied Tank Cleaning Corp**	**1883 E Harbor Drive**	**Envirostor, Evaluation**
3	Barriohaus	1600 National Avenue	Geotracker, Cleanup Program Site, Case Closed
4	Bulkhead Ext. & Yard Improvement	San Diego, CA	Geotracker, Land Disposal Site, Case Closed
6	Burlington Northern & Santa Fe Railway Company	1340 Cesar Chavez Parkway	Geotracker, LUST Cleanup Site, Case Closed
7	Campbell's Shipyard Facility	501 Harbor Drive	Geotracker, LUST Cleanup Site, Case Closed
8	Campbell Industries	8th Avenue & Harbor Drive	Geotracker, Cleanup Program Site, Case Closed
9	Campbell Shipyard Bay Sediment Cleanup & Capping	San Diego Bay	Geotracker, Land Disposal Site, Case (Copper, Lead, Polychlorinated Biphenyls, Solvents, Zinc), Case Closed/with Monitoring
10	Central Meat and Provision	1603 National Avenue	Geotracker, LUST Cleanup Site, Case Closed

Site No.	Site Name	Address	Database Listings
11	City of San Diego	800 Imperial Avenue	Geotracker, Heating Oil/Fuel Oil Cleanup Site, Case Closed
12	**Continental Maritime of San Diego, Inc.**	**1995 Bay Front Street**	**Envirostor, Inactive, needs evaluation**
13	**FHCSD Parking Lot**	**1700 Newton Avenue**	**Geotracker, Cleanup Program Site, Case Open – Site Assessment**
14	**Former Unocal Pipeline**	**1995 Bay Front**	**Geotracker, Cleanup Program Site (Heating Oil/Fuel Oil), Case Open – Site Assessment**
16	Graybill Terminals Co	1531 National Avenue	Geotracker, Cleanup Program Site, Case Closed
38	MTDB Leasehold	93 8th Avenue	Geotracker, Cleanup Program Site, Case Closed
17	**National Pump Injector (Former)**	**1901 Main Street**	**Envirostor, Evaluation**
18	Penske Truck Leasing Inc	1402 Commercial Street	Geotracker, LUST Cleanup Site, Case Closed
19	Pepper Industries Inc	1501 National Avenue	Geotracker, Cleanup Program Site, Case Closed
20	Plant Products & Supply Co	822 Imperial Avenue	Geotracker, Cleanup Site, Case Closed
22	Reliable Pipe Supply	1430 National Avenue	Geotracker, Cleanup Program Site, Case Closed
23	Restaurant Depot	1335 Ceasar E Chavez Way	Geotracker, LUST Cleanup Site, Case Closed
24	**San Diego Convention Center (Tidelands Dump)**	**100 Harbor Drive (8th Avenue & Harbor Drive)**	**Geotracker, Cleanup Program Site (Dioxin/Furans, Lead, Polynuclear Aromatic Hydrocarbons, Zinc), Case Open – Verification Monitoring**
25	San Diego Trolley, Inc	1535 Newton Avenue	Geotracker, Cleanup Program Site, Case Closed
26	San Diego Unified Port District	1875 Water Street	Geotracker, LUST (Diesel) Cleanup Site, Case Closed
27	San Diego Unified Port District Maintenance Department	825 E. Harbor Drive	Geotracker, LUST Cleanup Site, Case Closed
28	**San Diego Gas & Electric Property (Petco parking lot north of railroad tracks)**	**0 Imperial Avenue**	**Gotracker, Cleanup Program Site (Gasoline, Heating Oil/Fuel Oil, Lead, Polynuclear Aromatic Hydrocarbons), Case Open – Site Assessment**
29	San Diego Gas & Electric Environmental	114 10th Avenue	Geotracker, Cleanup Program Site, Case Closed
30	San Diego Gas & Electric/Station	45 9th Avenue	Geotracker, LUST Cleanup Site, Case Closed
33	**The Triangle Property**	**65 13th Street**	**Geotracker, Cleanup Program Site, Case Open – Site Assessment**
34	Tuna Clipper Marine Sites 1 and 2	1444 Crosby Street	Geotracker, LUST Cleanup Site and Cleanup Program Site, Cases Closed
36	Youngs Market Co	1709 Main Street	Geotracker, LUST Cleanup Site, Case Closed

Notes:
LUST = Leaking Underground Storage Tank
BOLD = Open Sites

4.7.2.6 Proximity to Schools

The project site is approximately 0.21 mile west of Monarch K–12 School (1625 Newton Avenue, San Diego, CA 92113), and approximately 0.25 mile west of Perkins Elementary School (1770 Main Street, San Diego, CA 92113). Other schools nearby include Logan Elementary School approximately 0.93 mile to the east, Garfield High School approximately 1.05 miles to the north, San Diego High School approximately 1.1 miles north, and Washington Elementary School approximately 2.0 miles to the north.

4.7.3 Applicable Laws and Regulations

4.7.3.1 Federal

Federal Toxic Substances Control Act/Resource Conservation and Recovery Act/Hazardous and Solid Waste Act

The Federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program, which is administered by the Environmental Protection Agency (EPA), to regulate the generation, transport, treatment, storage, and disposal of hazardous waste. Under RCRA regulations, hazardous wastes must be tracked from the time of generation to the point of disposal. The RCRA program also establishes standards for hazardous waste treatment, storage, and disposal units, which are intended to have hazardous wastes managed in a manner that minimizes present and future threats to the environment and human health. At a minimum, each generator of hazardous waste must register and obtain a hazardous waste activity identification number. If hazardous wastes are stored for more than 90 days or treated or disposed of at a facility, any treatment, storage, or disposal unit must be permitted under the RCRA. The RCRA was amended in 1984 by the Hazardous and Solid Waste Act, which affirmed and extended the "cradle to grave" system of regulating hazardous materials.

Department of Transportation Hazardous Materials Regulations (49 CFR 100–185)

U.S. Department of Transportation (DOT) Hazardous Materials Regulations (CFR Title 49, Parts 100–185) cover all aspects of hazardous materials packaging, handling, and transportation. Parts 107 (Hazard Materials Program), 130 (Oil Spill Prevention and Response), 172 (Emergency Response), 173 (Packaging Requirements), 177 (Highway Transportation), 178 (Packaging Specifications), and 180 (Packaging Maintenance) would all apply to goods movement to and from the proposed project and/or surrounding uses.

Enforcement of these aforementioned DOT regulations is shared by each of the following administrations under delegations from the Secretary of the DOT.

- **Research and Special Programs Administration** is responsible for container manufacturers, reconditioners, and retesters and shares authority over shippers of hazardous materials.
- **Federal Highway Administration (FHWA**) enforces all regulations pertaining to motor carriers.

- **Federal Railroad Administration (FRA**) enforces all regulations pertaining to rail carriers.
- **Federal Aviation Administration (FAA**) enforces all regulations pertaining to air carriers.
- **U.S. Coast Guard (USCG)** enforces all regulations pertaining to shipments by water.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted in 1980 to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified. The corresponding regulation in 42 CFR 103 provides the general framework for response actions and managing hazardous waste.

Spill Prevention Control and Countermeasure Plans (40 CFR 112.7)

Spill Prevention Control and Countermeasure (SPCC) plans are required for facilities in which construction and removal operations involve oil in the vicinity of navigable waters or shorelines. SPCC plans ensure that facilities implement containment and other countermeasures that would prevent oil spills from reaching navigable waters. SPCC plans are regulations administered by the U.S. Environmental Protection Agency (EPA). Preparation of an SPCC Plan is required for projects that meet three criteria: (1) the facility must be non-transportation-related, or, for construction, the construction operations involve storing, using, transferring, or otherwise handling oil; (2) the project must have an aggregate aboveground storage capacity greater than 1,320 gallons or completely buried storage capacity greater than 42,000 gallons; and (3) there must be a reasonable expectation of a discharge into or upon navigable waters of the United States or adjoining shorelines. For construction projects, for criterion (1), 40 Code of Federal Regulations (CFR) 112 describes the requirements for implementing SPCC plans. The following three areas should clearly be addressed in a SPCC plan.

- Operating procedures that prevent oil spills
- Control measures installed to prevent a spill from reaching navigable waters
- Countermeasures to contain, clean up, and mitigate the effects of an oil spill that reaches navigable waters

United States Coast Guard 33 CFR and 46 CFR

USCG, through Title 33 (Navigation and Navigable Waters) and Title 46 (Shipping) of the CFR, is the federal agency responsible for vessel inspection, marine terminal operations safety, coordination of federal responses to marine emergencies, enforcement of marine pollution statutes, marine safety (such as navigation aids), and operation of the National Response Center for spill response, and is the lead agency for offshore spill response. USCG implemented a revised vessel-boarding program in 1994 designed to identify and eliminate substandard ships from U.S. waters. The program pursues this goal by systematically targeting the relative risk of vessels and increasing the boarding frequency on high risk (potentially substandard) vessels. The relative risk of each vessel is determined through the use of a matrix that factors the flag of the vessel, owner, operator, classification society, vessel particulars, and violation history. Vessels are assigned a boarding priority from I to IV, with priority I vessels being the potentially highest risk and priority IV having relatively low risk. USCG is also responsible for reviewing marine terminal Operations Manuals and issuing Letters of Adequacy upon approval.

Emergency Planning and Community Right-To-Know Act (42 U.S.C. 11001 et seq.)

The Emergency Planning and Community Right-to-Know Act was enacted by Congress as the national legislation on community safety in 1986, as Title III of the Superfund Amendments and Reauthorization Act. This law was designated to help local communities protect public health, safety, and the environment from chemical hazards. To implement this act, Congress required each state to appoint a State Emergency Response Commission. The State Emergency Response Commissions are required to divide their states into Emergency Planning Districts and to name a Local Emergency Planning Committee for each district. The act provides requirements for emergency release notification, chemical inventory reporting, and toxic release inventories for facilities that handle chemicals.

Occupational Safety and Health Act of 1970

The Occupational Safety and Health Act establishes the framework for safe and healthful working conditions for working men and women by authorizing enforcement of the standards developed under the act. The act also provides for training, outreach, education, and assistance related to establishing a safe working environment. Regulations defining safe standards have been developed for general industry, construction, maritime, recordkeeping, and agriculture. A major component of the act is the requirement that employers implement the Occupational Safety and Health Act Hazard Communication Standard to provide information to employees about the existence and potential risks of exposures to hazardous substances in the workplace. As part of the Hazard Communication Standard, employers must:

- Obtain material safety data sheets from chemical manufacturers that identify the types and handling requirements of hazardous materials used in given areas;
- Make the material safety data sheets available to their employees;
- Label chemical containers in the workplace;
- Develop and maintain a written hazard communication program; and
- Develop and implement programs to train employees about hazardous materials.

Occupational Safety and Health Administration standards specific to hazardous materials are listed in 29 CFR 1910 Subpart H. Safety and health regulations pertaining to construction are listed in 29 CFR 1926 Subpart H.

4.7.3.2 State

Cortese List

California Government Code 65962.5 (commonly referred to as the *Cortese List*) includes hazardous waste facilities and sites listed by DTSC, Department of Health Services lists of contaminated drinking water wells, sites listed by SWRCB as having underground storage tank leaks or a discharge of hazardous wastes or materials into the water or groundwater, and lists from local regulatory agencies of sites with a known migration of hazardous waste/material.

California Health and Safety Code (Hazardous Waste Control Act)

DTSC, a department of the California Environmental Protection Agency (Cal/EPA), is the primary agency in California for regulating hazardous waste, cleaning up existing contamination, and finding ways to reduce the amount of hazardous waste produced in California. DTSC regulates hazardous waste primarily under the authority of the federal RCRA and the California Health and Safety Code (primarily Division 20, Chapters 6.5 through 10.6, and Title 22, Division 4.5). Division 20, Chapter 6.5, of the California Health and Safety Code identifies hazardous waste control regulations pertaining to transportation, treatment, recycling, disposal, enforcement, and the permitting of hazardous waste. Division 20, Chapter 6.10, identifies regulations applicable to the cleanup of hazardous materials releases. Title 22, Division 4.5, contains environmental health standards for the management of hazardous waste, as well as standards for the identification of hazardous waste (Chapter 11), and standards that are applicable to transporters of hazardous waste (Chapter 13).

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (California Health and Safety Code Chapter 6.11, Sections 25404–25404.9)

This program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of environmental and emergency response programs and provides authority to the Certified Unified Program Agency (CUPA). The CUPA for San Diego County is the Department of Environmental Health's Hazardous Materials Division (HMD), which has responsibility and authority for implementing and enforcing the requirements listed in Chapter 6.5 (commencing with Section 25100), Chapter 6.67 (commencing with Section 25270), Chapter 6.7 (commencing with Section 25280), Chapter 6.95 (commencing with Section 25500), and Sections 25404.1 and 25404.2, including the following.

- **Aboveground Petroleum Storage Act Requirements for SPCC Plans.** Facilities with a single tank or cumulative aboveground storage capacities of 1,320 gallons or greater of petroleum-based liquid product (e.g., gasoline, diesel, lubricants) must develop an SPCC plan. An SPCC plan must be prepared in accordance with the oil pollution prevention guidelines in 40 CFR 112. This plan must describe the procedures, methods, and equipment needed at the facility to prevent discharges of petroleum from reaching navigable waters. A registered professional engineer must certify the SPCC plan, and a complete copy of the plan must be maintained on site.
- **California Accidental Release Prevention Program.** This program requires any business that handles more than threshold quantities of an extremely hazardous substance to develop a Risk Management Plan. The Risk Management Plan is implemented by the business to prevent or

mitigate releases of regulated substances that could have offsite consequences through hazard identification, planning, source reduction, maintenance, training, and engineering controls.

- **Hazardous Materials Business Plan/Hazardous Materials Inventory Statements.** Hazardous Materials Business Plans contain basic information regarding the location, type, quantity, and health risks of hazardous materials and/or waste. Each business must prepare a Hazardous Material Business Plan if that business uses, handles, or stores a hazardous material and/or waste or an extremely hazardous material in quantities greater than or equal to the following.
  - 55 gallons for a liquid
  - 500 pounds for a solid
  - 200 cubic feet for any compressed gas
  - Threshold planning quantities of an extremely hazardous substance
- **Hazardous Waste Generator Program**. This program regulates businesses that generate any amount of a hazardous waste. Proper handling, recycling, treating, storing, and disposing of hazardous waste are key elements to this program.
- **Tiered Permitting Program**. This program regulates the onsite treatment of hazardous waste.
- **Underground Storage Tank Program.** This program regulates the construction, operation, repair, and removal of underground storage tanks that store hazardous materials and/or waste.

Hazardous Waste Control Act (Health & Safety Code Section 25100 et seq.)

DTSC is responsible for the enforcement of the Hazardous Waste Control Act (California Health and Safety Code Section 25100 et seq.), which creates the framework under which hazardous wastes are managed in California. The Hazardous Waste Control Act requires a hazardous waste generator that stores or accumulates hazardous waste for periods greater than 90 days at an onsite facility or for periods greater than 144 hours at an offsite or transfer facility, which treats or transports hazardous waste, to obtain a permit to conduct such activities. The law provides for the development of a state hazardous waste program that administers and implements the provisions of the federal RCRA for a cradle-to-grave waste management system in California. It also provides for the designation of California-only hazardous waste and development of standards that are equal to or, in some cases, more stringent than federal requirements, such as mandating source-reduction planning and regulating the number of types of waste and waste management activities that are not covered by federal law with the RCRA.

Environmental Health Standards for the Management of Hazardous Waste

These standards (California Code of Regulations, Title 22, Division 4.5, Section 66001 et seq.) establish requirements for the management and disposal of hazardous waste in accordance with the provisions of the state Hazardous Waste Control Act and federal RCRA.

California Code of Regulations, Title 8—Industrial Relations

Title 8 of the California Code of Regulations, Section 1532.1 (8 California Code of Regulations 1532.1) is a rule developed by the federal Occupational Safety and Health Administration in 1993 and adopted by the State of California. This rule is comparable to the federal standards described above. Occupational safety standards exist in federal and state laws to minimize worker safety risks from both physical and chemical hazards in the workplace. The federal Occupational Safety and Health Administration and the California Division of Occupational Safety and Health (Cal/OSHA) are responsible for ensuring worker safety in the workplace. Cal/OSHA assumes primary responsibility for developing and enforcing standards for safe workplaces and work practices. These standards would be applicable to both construction and operation of the proposed project. Title 8 includes regulations pertaining to hazard control (including administrative and engineering controls), hazardous chemical labeling and training requirements, hazardous exposure prevention, hazardous material management, and hazardous waste operations.

Title 8 also specifies requirements for the removal and disposal of ACMs. In addition to providing information regarding how to remove ACMs, specific regulations limit the time of exposure, regulate access to work areas, require demarcation of work areas, prohibit certain activities in the presence of ACM removal activities, require the use of respirators, require monitoring of work conditions, require appropriate ventilation, and require qualified persons for ACM removal.

Title 8 also covers the removal of lead-based paint (LBP). Specific regulations cover the demolition of structures that contain LBP, the process associated with its removal or encapsulation, remediation of lead contamination, the transportation/disposal/storage/containment of lead or materials containing lead, and maintenance operations associated with construction activities involving lead, such as LBP. Similar to ACM removal, LBP removal requires proper ventilation, respiratory protection, and qualified personnel.

California Labor Code (Division 5, Parts 1 and 7)

California Labor Code regulations ensure appropriate training regarding the use and handling of hazardous materials and the operation of equipment and machines that use, store, transport, or dispose of hazardous materials. Division 5, Part 1, Chapter 2.5, ensures that employees who handle hazardous materials are appropriately trained and informed about the materials. Division 5, Part 7, ensures that employees who work with volatile flammable liquids are outfitted with appropriate safety gear and clothing.

State Water Resources Control Board Construction General Permit (2009-0009-DWQ)

Construction activities that disturb 1 acre or more of land must obtain coverage under the SWRCB Construction General Permit (Order 2009-0009-DWQ as amended by Order 2010-0014-DWQ, and Order 2012-006-DWQ). Under the terms of the permit, applicants must file a complete and accurate Notice of Intent and Permit Registration Documents with the SWRCB. Applicants must also demonstrate conformance with applicable construction Best Management Practices (BMPs) and prepare a construction Storm Water Pollution Prevention Plan containing a site map that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project site.

California Health and Safety Code, Chapter 6.67 (Aboveground Storage of Petroleum)

California Health and Safety Code, Chapter 6.67, regulates construction, installation, operation, and monitoring of aboveground petroleum storage tanks. This law is designed to prevent release of hazardous materials into the environment by either leakage from tanks and associated pipelines or from overfilling and spillage. As such, the program works to reduce the occurrence of hazardous material releases.

4.7.3.3 Regional

San Diego County Code, Title 6, Division 8

San Diego County Code of Regulatory Ordinances under Title 6, Division 8, Chapters 8 through 11 establish the HMD as the local CUPA. The HMD is responsible for the protection of public health, safety, and the environment and inspects businesses or facilities that handle or store hazardous materials, generate hazardous waste, generate medical waste, and own or operate underground storage tanks. HMD also administers the California Accidental Release Prevention Program and the Aboveground Petroleum Storage Act Program, and provides specialized instruction to small businesses through its Pollution Prevention Specialist. HMD has the authority under State law to inspect facilities with hazardous materials or hazardous waste and, in cases where a facility is in non-compliance with the applicable State law or regulations, take enforcement action.

Projects are required to notify HMD regarding the use, handling, release (spills), storage, and/or disposal of hazardous materials and hazardous waste in accordance with existing State law and County ordinance. The notification is the initial step in the HMD permitting process, which requires businesses that handle or store hazardous materials, are part of the California Accidental Release Prevention Program, generate or treat hazardous wastes, generate or treat medical waste, store at least 1,320 gallons of aboveground petroleum, or own and/or operate underground storage tanks to obtain and maintain a Unified Program Facility Permit. The online notification must be done using the State of California Environmental Reporting System by the applicant/permittee requesting a permit and submitted within 30 days.

If a building permit is required, Section 65850.2 of the California Government Code prohibits building departments from issuing a final Certificate of Occupancy unless a business or facility that handles hazardous materials has submitted and met the requirements of a Hazardous Materials Business Plan. The Hazardous Materials Business Plan contains detailed information on the storage of hazardous materials at regulated facilities and serves to prevent or minimize damage to public health, safety, and the environment from a release or threatened release of a hazardous material. The Hazardous Materials Business Plan also provides emergency response personnel with adequate information to help them better prepare and respond to chemical-related incidents at regulated facilities.

Operational Area Emergency Plan

The San Diego County Operational Area was formed to help the County and its cities develop emergency plans, implement such plans, develop mutual aid capabilities between jurisdictions, and improve communications between jurisdictions and agencies. The San Diego County Operational Area consists of the County and all jurisdictions within the County. The Operational Area Emergency Plan is for use by the County and all of the cities within the County to respond to major emergencies and disasters. It defines roles and responsibilities of all County departments and many city departments.

Cities within the County are encouraged to adopt the Operational Area Emergency Plan, with modifications that would be applicable to each city. The plan is updated once every 4 years by the OES and the UDC of the Unified San Diego County Emergency Services Organization.

4.7.3.4 Local

City of San Diego Solid Waste Local Enforcement Agency

The City's Solid Waste Local Enforcement Agency is responsible for enforcing federal and state laws and regulations for the safe and proper handling of solid waste. State law (Public Resources Code) requires that every local jurisdiction designate a solid waste Local Enforcement Agency (LEA) that is certified by the Department of Resources Recycling and Recovery to enforce federal and state laws and regulations for the safe and proper handling of solid waste.

Any development plan proposing to handle, process, transport, store, or dispose of solid wastes including household trash and garbage, construction debris, commercial refuse, sludge, ash, discarded appliances and vehicles, manure, landscape clippings, and other discarded wastes shall contact the LEA for determination of the need for a solid waste facility permit.

The City of San Diego Solid Waste LEA has approved the *Soil Management Plan for the 10th Avenue Marine Terminal* dated November 24, 2010. The plan applies to planned changes at Warehouse C and Transit Sheds #1 and #2 and is to be used for future demolition and construction projects at the TAMT. The LEA requires submittal of a community health and safety plan for each project at the TAMT for review and approval. In addition, the LEA requires a 48-hour notification prior to project commencement.

Jurisdictional Runoff Management Plan

Under Regional Water Quality Control Board Order No. R9-2013-0001, National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0109266, the 18 cities within San Diego County, along with the Port of San Diego, are required to prepare Jurisdictional Runoff Management Plans (JRMPs). Each jurisdictional plan must contain a component that addresses issues related to construction activities and a component that addresses issues related to existing development. As principal permittee, the County of San Diego prepares and submits an annual report on the unified JRMP that describes the progress of the programs and the strategies to reduce the discharge of pollutants of concern to the Municipal Separate Storm Sewer System (MS4) and receiving waters to the maximum extent practicable. Enforcement of the JRMP assists with preventing release of pollutants into the local storm drains and ultimately the San Diego Bay.

The District has developed a list of pollution prevention BMPs applicable to industrial and commercial facilities on District tidelands as required by the Municipal Permit. Because pollution prevention BMPs eliminate pollutants at their source, they are a preferred means of preventing discharge of priority pollutants into the receiving waters. The list of pollution prevention BMPs includes the following.

- Keep waste containers covered or lids closed (trash)
- Minimize outdoor storage (trash, metals)
- Capture, contain, and/or treat wash water (bacteria, metals)
- Conduct employee training (bacteria, trash, metals)

In addition, the JRMP provides an extensive list of minimum BMPs for commercial and industrial facilities. Categories of BMPs include general operations and housekeeping, non-stormwater management, waste handling and recycling, outdoor material storage, outdoor drainage from indoor activity, outdoor parking, vehicles and equipment, education and training, overwater activity, and outdoor activity and operation.

BMP Design Manual

In June 2015 the District adopted a jurisdiction-specific local BMP Design Manual to address the requirement of the Municipal Permit. This BMP Design Manual is applicable to projects carried out on District-managed tidelands. Pursuant to the Municipal Permit, the District began implementing the BMP Design Manual on February 16, 2016. The District's BMP Design Manual identifies updated post-construction stormwater requirements for both tenant- and District-sponsored major maintenance or capital improvement projects as required by the Municipal Permit.

The BMP Design Manual identifies BMP requirements for both standard projects and priority development projects (PDPs) as outlined in the permit. All new development and redevelopment projects are required to implement standard source control and site design BMPs to eliminate or reduce stormwater runoff pollutants. For PDPs, the BMP Design Manual also describes structural treatment controls that must be incorporated into the site design and, where applicable, addresses potential hydromodification impacts from changes in flow and sediment supply.

Project applicants must submit a Storm Water Quality Management Plan (SWQMP) accurately describing how the project will meet source control site design and pollutant control BMP requirements. District staff provide technical review of and approve SWQMP documents and drainage design plans to ensure that pollutant control BMP requirements are met. The SWQMP is evaluated for compliance with the Municipal Permit and with design criteria outlined in the District's BMP Design Manual. Once the approval process is complete, the project is able to commence and routine inspections are conducted throughout the duration of the project construction.

The proposed project is a PDP, and therefore an SWQMP and treatment control BMPs are required. Moreover, Chapter 7 of the JRMP lists the District's required BMPs for industrial operations.

San Diego Unified Port District, Article 10

The District's own Article 10, the Port Stormwater Management and Discharge Control Ordinance, prohibits the deposit or discharge of any chemicals or waste to the tidelands or San Diego Bay and makes it unlawful to discharge pollutants directly into non-stormwater or indirectly into the stormwater conveyance system. The proposed project would be obligated to abide by Article 10.

4.7.4 Project Impact Analysis

4.7.4.1 Methodology

The following impact analysis evaluates the effects from hazards and hazardous materials that may result with the implementation of the proposed project. The reports listed above under Section 4.7.1 and found in Appendices J-1 through J-8 were used to evaluate potential impacts relative to hazards and hazardous materials. Based upon the existing conditions described above, the impact analysis assesses the direct and indirect impacts related to hazards and hazardous materials and determines whether the proposed project would result in a significant impact pursuant to the thresholds listed below.

4.7.4.2 Thresholds of Significance

The following significance criteria are based on Appendix G of the State CEQA Guidelines and provide the basis for determining significance of impacts associated with hazards and hazardous materials resulting from the implementation of the proposed project. The determination of whether a hazards and/or hazardous materials impact would be significant is based on the thresholds described below and the professional judgment of the District as Lead Agency and the recommendations of qualified personnel at ICF, all of which is based on evidence in the administrative record.

Impacts are considered significant if the project would result in any of the following.

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
4. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.
5. Be located within an airport land use plan or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area.

6. Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area.
7. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
8. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including in areas where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

As discussed in the Initial Study/Environmental Checklist Section VIII (Appendix A), Thresholds 5 through 8 are not included in the analysis below, as it was determined that the proposed project would not result in significant impacts related to being within a hazards area indicated by the Airport Land Use Compatibility Plans or near a private airstrip, interfering with emergency response, or increasing the risk of wildfires. Those conclusions and the rationale that supports them are summarized in Chapter 6, *Additional Consequences of Project Implementation*. Therefore, only Thresholds 1 through 4 are discussed in the impact analysis that follows.

4.7.4.3 Project Impacts and Mitigation Measures

Threshold 1: Implementation of the proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Impact Discussion

Construction

Full buildout of the TAMT plan, which includes the Demolition and Initial Rail Component, would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Construction associated with full buildout of the TAMT plan, including the Demolition and Initial Rail Component, would potentially result in the demolition of onsite structures, such as Transit Sheds #1 and #2, Warehouse C, and the molasses tanks. During construction, the temporary use and disposal of hazardous materials, such as fuel, solvents, paints, oils, and grease, may occur. Such transport, use, and disposal would comply with applicable regulations, such as the RCRA, DOT Hazardous Materials Regulations, and the local CUPA regulations. Although small amounts of solvents, paints, oils, grease, and caulking may be transported, used, and disposed of during construction of the Demolition and Initial Rail Component and the other future components of the TAMT plan, these materials are typically used in construction projects and would not represent the transport, use, and disposal of acutely hazardous materials. No significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous waste during construction of the proposed project would occur. Impacts would be less than significant.

Operation

Full buildout of the TAMT plan, including the Demolition and Initial Rail Component, would allow for greater efficiency of the project site and, in turn, may result in the storage of increased cargo on site, including handling of dry bulk, refrigerated perishable commodities, and general cargo, all of which are currently handled at the project site. Although full buildout of the TAMT plan, including the Demolition and Initial Rail Component, may result in an increase in amounts of common types of hazardous materials typical for the terminal (e.g., fuel, cleaning products and solvents, paints, oils, and grease associated with equipment operation and maintenance), given the anticipated increase in throughput, such transport and use would comply with applicable regulations, such as the RCRA, DOT Hazardous Materials Regulations, and the local CUPA regulations, as summarized in Section 4.7.3 above. Hazardous waste would be disposed of in accordance with all applicable laws and regulations enforced by the LEA. Therefore, normal routine use of these products would not result in a significant hazard to residents or workers in the vicinity of the project site and compliance with existing laws and regulations would minimize the potential for a significant hazard to occur from routine transport, use, or disposal of hazardous materials. No significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous waste during operations of the full buildout of the TAMT plan or its Demolition and Initial Rail Component would occur. Impacts would be less than significant.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Implementation of the Demolition and Initial Rail Component would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Full TAMT Plan Buildout

Full buildout of the TAMT plan would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

No mitigation is required.

Level of Significance After Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

Impacts would be less than significant.

Threshold 2: Implementation of the proposed project <u>would not</u> create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Impact Discussion

Construction

Total earthwork associated with the Demolition and Initial Rail Component would consist of excavating approximately 18,500 cubic yards of soil at the site of Transit Shed #1, approximately 24,200 cubic yards at the site of Transit Shed #2, and approximately 9,136 cubic yards for the installation of an underground detention storage tank for stormwater drainage. Total excavation would be approximately 51,836 cubic yards. Approximately 47,036 cubic yards of soil would be exported off site (16,400 cubic yards from Transit Shed #1, 21,500 cubic yards from Transit Shed #2, and 9,136 cubic yards from the underground detention storage tank installation). It is anticipated that 4,800 square feet of fill materials would be balanced and re-compacted on site, while an additional 3,915 cubic yards of soil would be imported for the installation of the underground detention storage tank. No earthwork is estimated at this time for the other future components under the full TAMT plan buildout.

Contaminated Soils

Searches of GeoTracker and EnviroStor online records indicate that the project site has had a history of contamination from leaking underground storage tanks (LUSTs) and petroleum products. All occurrences were remediated and granted closure, except for the Water Street Site (T 0608133034), a diesel cleanup currently on site and in progress. No other open cases were noted.

In addition, refuse burning occurred within the northern portion of the site from approximately the early 1900s to the 1940s. Based on previous site assessments, hazardous materials that may be present beneath soils within portions of the project site include TPH, benzene, toluene, PAHs, SVOCs, and metals (copper, zinc, and lead) (Appendix J-1). The presence of an open case (diesel) discussed in the paragraph above, and the presence of soil contamination indicate that construction workers exposed to such soils could be adversely affected (**Impact-HAZ-1**). Therefore, soils excavated during any future demolition and grading at the site must be tested and, depending on the results, may require special handling considerations prior to implementation of any project-specific future components of the TAMT plan. Specifically, any future actions that would perform any earthwork such as grading, trenching, or soil removal would be required to comply with the Tenth Avenue Soil Management Plan and implement BMPs to educate and ensure the safety of all workers that could come in contact with soils (**MM-HAZ-1** and **MM-HAZ-2**). In addition to the mitigation measures required by the proposed project, the City of San Diego Solid Waste LEA has approved the *Soil Management Plan for the 10th Avenue Marine Terminal* dated November 24, 2010. As part of the Soil Management Plan, the LEA requires submittal of a community health and safety plan for each project at TAMT for review and approval. In addition, the LEA requires a 48-hour notification prior to project commencement. With mitigation, the exposure of construction personnel to contaminated soils would be minimized and the related impact would be reduced to a less-than-significant level.

If soils excavated as part of the Demolition and Initial Rail component are found appropriate for reuse, they may be exported to the Chula Vista Bayfront Harbor District area for use as fill material to raise surface elevations, provided the parcels are not classified as environmentally sensitive areas, including any sensitive habitat. Several Chula Vista Bayfront Harbor District parcels, as identified in the project description, have been cleared through the environmental review process to be used as streets and surface parking and to support subsequent development. These parcels have been identified as appropriate locations to receive soils deemed suitable for reuse. Some parcels have been identified for temporary storage of the soil (e.g., stockpiling), whereas other parcels have been identified for final reuse of the soil (permanent fill). However, in the event that the sites listed above are not able to receive the excavated soil amounts based on the project's construction schedule, all material would be disposed of in a nearby landfill or another fill site approved by the Regional Water Quality Control Board.

Construction-Related Hazardous Materials

Typical construction-related hazardous materials would be used during construction of the proposed project, including fuel, solvents, paints, oils, and grease. It is possible that limited quantities any of these substances could be released during construction activities. However, compliance with federal, state, and local regulations described under Section 4.7.3, in combination with construction BMPs described in Section 4.8, *Hydrology and Water Quality*, would minimize any impacts from the use of construction-related hazardous materials, and the potential impacts would be less than significant.

Asbestos-Containing Materials and Lead-Based Paint

Due to the known presence of ACM, ACCMs, and LBP in Transit Sheds #1 and #2 and the age of the other structures such as Warehouse C, it is likely ACM and/or LBP would be encountered during the demolition of Transit Sheds #1 and #2, Warehouse C, and possibly the molasses tanks. Any demolition or grading activities would be required to comply with Title 8, Industrial Relations, of the California Code of Regulations, which provides specific guidance on removal and disposal of ACM and LBP. As such, compliance would ensure that removal of any ACM and/or LBP would be conducted in a safe manner, including proper disposal in an approved facility.

Operations

Full buildout of the TAMT plan, which includes the Demolition and Initial Rail Component, is not expected to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. The continued operations of the project site with full buildout of the TAMT plan would involve storage space for marine terminal operations, including handling of dry bulk, refrigerated perishable commodities, and neo bulk/break bulk/general cargo. All materials would be stored and handled in accordance with federal, state, and local regulations and subject to inspection and requirements of HMD, the local CUPA. This is currently the requirement for onsite storage of commonly used hazardous materials and would continue with the proposed project.

The existing onsite storage of fuel and oil would continue under full buildout of the TAMT plan without any changes to infrastructure or storage capacity. As such, the storage of fuel and oil within those tanks would continue to comply with federal, state, and local regulations. However, as described above, none of the fuel types stored on site represent an acute hazard to the nearby structures and onsite personnel. While the fuels stored on site are flammable and hazardous in general, they do not have very low flashpoints, which, combined with being relatively stable (low vapor pressure), supports the conclusion that the potential hazardous risk to nearby structures and personnel would be minimal. Furthermore, there are specific regulations (e.g., 40 CFR 112.7) in place that require that the onsite facilities implement containment and other countermeasures that would prevent oil spills from reaching navigable waters as well as the creation and maintenance of Risk Management Plans and Hazardous Materials Business Plan (i.e., California Health and Safety Code Chapter 6.11, Sections 25404–25404.9). Because of the relatively low risk of accidents that may occur from onsite storage of hazardous materials and the monitoring and countermeasures in place to ensure that any accidents are quickly contained, the potential of creating a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment from project operations would be less than significant.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Implementation of the Demolition and Initial Rail Component potentially would create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Potentially significant impact(s) include:

> **Impact-HAZ-1: Possible Onsite Soil Contamination.** Historical information compiled from previous site assessments and database searches indicates that TPH, benzene, toluene, PAHs, SVOCs, metals (copper, zinc, and lead), and diesel may be encountered during construction activities on the project site. Construction and grading activities within the project site would potentially result in a release of hazardous materials and create a potentially significant hazard to workers, the public, and environment.

Full TAMT Plan Buildout

Implementation of the full TAMT plan buildout would potentially create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Potentially significant impact(s) include: **Impact-HAZ-1** (Possible Onsite Soil Contamination).

Mitigation Measures

Demolition and Initial Rail Component

> **MM-HAZ-1: Compliance with Soil Management Plan.** Prior to approval of the project grading plans and the commencement of any construction activities that would disturb the soil, the District or tenant, whichever is appropriate, and the contractor (collectively "Contractor") shall demonstrate compliance with the *10th Avenue Marine Terminal, San Diego, CA, Soil Management Plan, prepared by Tetra Tech EM, Inc., November 24, 2010* (Appendix J-1 of the Draft EIR) and consider the existing presence of the permitted underground storage tank on site (shown on Figure 4.7-1). Specifically, the Contractor shall demonstrate compliance with the following specific requirements of the plan including, but not limited to, the following.

Conduct Soil Testing. The Contractor shall comply with the excavated soil management techniques specified in the plan. The Contractor shall follow the soil sampling protocol and soil sampling objectives, and shall comply with the soil characterization methodology identified within the plan.

Prepare and Implement a Community Health and Safety Program. The Contractor shall develop and implement a site-specific Community Health and Safety Program (Program) that addresses the chemical constituents of concern for the project site. The guidelines of the Program shall be in accordance with the County of San Diego's Department of Environmental Health's Site Assessment and Mitigation Manual (2009) and Environmental Protection Agency~~California Code of Regulations Title 23, Division 3, Chapter 16 regulations~~. The Program shall include detailed plans on air monitoring and other appropriate construction means and methods to minimize the public's and site workers' exposure to the chemical constituents. The contractor shall utilize a Certified Industrial Hygienist with significant experience with chemicals of concern on the project site to approve the Program and actively monitor compliance with the Program during construction activities.

Complete Soil Disposal. Any soil disturbed by construction activities shall be profiled and disposed of in accordance with California Administrative Code, Title 22, Division 4.5 requirements. If soils are determined to be appropriate for reuse, they may be exported to Chula Vista Bayfront Harbor District area for use as fill material, provided the area is not previously developed and not classified as an environmentally sensitive area. Several Chula Vista Bayfront Harbor District parcels that have been cleared through the environmental review process to be used as streets and surface parking and to support subsequent development have been identified as appropriate locations to receive soils deemed suitable for reuse in Appendix J-3.

If soils are determined to be hazardous and not suitable for reuse, they shall be disposed of at a regulated Class I landfill. Soils shall be transported in accordance with the Soil Management Plan. Soils to be loaded into trucks for offsite disposal at a Class I landfill shall be moistened with a water spray or mist for dust control in accordance with Section 4.7, Dust Control, of the Soil Management Plan. If dust is visible, positive means shall be applied immediately to prevent airborne dust. Care shall be used to minimize the amount of water applied to soils that may contain elevated concentrations of contaminants.

Loaded truck beds shall be covered with a tarp or similar covering device during transportation to the disposal facility. The truck shall be decontaminated after the soil has been removed. The Contractor shall minimize excess water generated during truck decontamination to the extent possible and shall be responsible for proper disposal of any contaminated water generated during truck cleanout.

MM-HAZ-2: Implement Engineering Controls and Best Management Practices during Construction. Prior to construction, a site-specific Health and Safety Plan shall be prepared by the contractor and approved by a licensed California Certified Industrial Hygienist. The Health and Safety Plan shall be prepared per the requirements of 29 Code of Regulations 1910.120 and California Code of Regulations, Title 8, along with applicable federal, state, and local regulations and statutes. During construction, the contractor shall employ engineering controls and BMPs to minimize human exposure to potential contaminants, if encountered. Engineering controls and construction BMPs shall include but not be limited to the following.

- Where required by the Health and Safety Plan, the contractor employees working on site shall be certified in the Occupational Health and Safety Administration's 40-hour Hazardous Waste Operations and Emergency Response training.
- Contractor shall monitor the area around the construction site for fugitive vapor emissions with appropriate field screening instrumentation.
- Contractor shall monitor excavation through visual observation by a qualified hazardous materials specialist to look for readily noticeable evidence of contamination, such as staining or odor.
- Contractor shall water/mist soil as it is being excavated and loaded onto transportation trucks.
- Contractor shall place any stockpiled soil in areas shielded from prevailing winds and shall cover all stockpiles to prevent soil from eroding.
- Contactor shall thoroughly decontaminate all construction equipment that has encountered and/or handled lead-impacted soil prior to leaving the work site.

Full TAMT Plan Buildout

Implement **MM-HAZ-1** and **MM-HAZ-2**.

Level of Significance After Mitigation

Demolition and Initial Rail Component

With implementation of mitigation measures **MM-HAZ-1** and **MM-HAZ-2**, impacts related to the potential creation of a significant hazard to workers, the public, or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment would be less than significant because safeguards would be taken to ensure upset and accident conditions do not occur. Operational impacts would be less than significant because of existing regulations and regulatory agency oversight.

Full TAMT Plan Buildout

As with the Demolition and Initial Rail Component, mitigation measures **MM-HAZ-1** and **MM-HAZ-2** would reduce the potential creation of a significant hazard to workers, the public, or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment to less-than-significant levels because safeguards would be taken to ensure upset and accident conditions do not occur. Operational impacts would be less than significant because of existing regulations and regulatory agency oversight.

Threshold 3: Implementation of the proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

Impact Discussion

Monarch K–12 School at 1625 Newton Avenue, San Diego, CA 92113 is approximately 0.21 mile east of the project site and Perkins Elementary School at 1770 Main Street, San Diego, CA 92113 is approximately 0.25 mile east of the project site. No other schools are within 0.25 mile of the project site.

Construction

The full buildout of the TAMT plan, which includes the Demolition and Initial Rail Component, would involve hazardous materials typical of a construction project and would be required to operate in compliance with applicable federal, state, and local regulations described above in Section 4.7.3, *Applicable Laws and Regulations*. Construction of the proposed Demolition and Initial Rail Component and the future components described in the TAMT plan would not affect land uses within 0.25 mile of the project site, including Monarch K–12 and Perkins Elementary School, because there would be no construction or demolition activities taking place close enough to these schools. However, there is the potential to encounter soil contamination during construction activities associated with the Demolition and Initial Rail Component and other future components that, if not properly handled, could result in a release of hazardous materials into the environment. Implementation of **MM-HAZ-1** and **MM-HAZ-2** would ensure that impacts related to the emission or handling of hazardous materials would be less than significant.

Operation

Although full buildout of the TAMT plan, including the Demolition and Initial Rail Component, may result in increased amounts of common types of hazardous materials typical for the terminal (such as fuel, lubricants and grease, and solvents and cleaners), normal routine use of these products would not result in a significant hazard to students, residents, or workers in the vicinity of the project site. Such transport and use would comply with applicable regulations, such as the RCRA, DOT Hazardous Materials Regulations, and the local CUPA regulations. Therefore, compliance with applicable laws and regulations would ensure that implementation and operation of other future components proposed by the TAMT plan would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of a school. Impacts would be less than significant.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Implementation of the Demolition and Initial Rail Component would potentially emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Potentially significant impact(s) include: **Impact-HAZ-1** (Possible Onsite Soil Contamination).

Full TAMT Plan Buildout

Full buildout of the TAMT plan would potentially emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Potentially significant impact(s) include: **Impact-HAZ-1** (Possible Onsite Soil Contamination).

Mitigation Measures

Demolition and Initial Rail Component

Implement **MM-HAZ-1** and **MM-HAZ-2**.

Full TAMT Plan Buildout

Implement **MM-HAZ-1** and **MM-HAZ-2**.

Level of Significance After Mitigation

Demolition and Initial Rail Component

With implementation of mitigation measures **MM-HAZ-1** and **MM-HAZ-2**, impacts related to the potential for hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school would be less than significant because safeguards would be taken to ensure upset and accident conditions do not occur. Operational impacts would be less than significant because of existing regulations and regulatory agency oversight.

Full TAMT Plan Buildout

As with the Demolition and Initial Rail Component, mitigation measures **MM-HAZ-1** and **MM-HAZ-2** would reduce the potential emittance of hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school to less-than-significant levels because safeguards would be taken to ensure upset and accident conditions do not occur. Operational impacts would be less than significant because of existing regulations and regulatory agency oversight.

Threshold 4: The proposed project would be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 but <u>would not</u> create a significant hazard to the public or the environment.

Impact Discussion

As discussed in Section 4.7.2, *Existing Conditions*, project site records stored on the Geotracker database indicated that there have been seven onsite contamination sites and subsequent site cleanups. All cases were closed, except for a site assessment currently being conducted for diesel cleanup on the project site. In addition, as shown on Figure 4.7-1, 31 offsite contamination sites within 0.25 mile of the project site were identified in the comprehensive database search results (28 in Geotracker and three in EnviroStor). Five of the offsite contamination sites are open cases and three offsite contamination sites are currently being evaluated.

Full buildout of the TAMT plan, which includes the Demolition and Initial Rail Component, would involve hazardous materials typical of a construction project and would be required to operate in compliance with applicable federal, state, and local regulations described above in Section 4.7.3, *Applicable Laws and Regulations*. There is the potential to encounter soil contamination during construction activities that, if not properly handled, could result in a release of hazardous materials into the environment (**Impact-HAZ-1**). However, implementation of **MM-HAZ-1** and **MM-HAZ-2** would ensure that impacts related to emitting hazardous materials into the environment would be less than significant.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component would be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would potentially create a significant hazard to the public or the environment. Potentially significant impact(s) include: **Impact-HAZ-1** (Possible Onsite Soil Contamination).

Full TAMT Plan Buildout

Future components identified in the TAMT plan would be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would potentially create a significant hazard to the public or the environment. Potentially significant impact(s) include: **Impact-HAZ-1** (Possible Onsite Soil Contamination).

Mitigation Measures

Demolition and Initial Rail Component

Implement **MM-HAZ-1** and **MM-HAZ-2**.

Full TAMT Plan Buildout

Implement **MM-HAZ-1** and **MM-HAZ-2**.

Level of Significance After Mitigation

Demolition and Initial Rail Component

With implementation of mitigation measures **MM-HAZ-1** and **MM-HAZ-2**, impacts from the Demolition and Initial Rail Component related to the potential to create a significant hazard to the public or the environment as a result of being located on a list compiled by Government Code Section 65962.5 would be less than significant because safeguards would be taken to ensure upset and accident conditions do not occur. Operational impacts would be less than significant because of existing regulations and regulatory agency oversight.

Full TAMT Plan Buildout

As with the Demolition and Initial Rail Component, mitigation measures **MM-HAZ-1** and **MM-HAZ-2** would reduce the potential of the full buildout of the TAMT Plan of creating a significant hazard to the public or the environment as a result of being located on a list compiled by Government Code Section 65962.5 to less-than-significant levels because safeguards would be taken to ensure upset and accident conditions do not occur. Operational impacts would be less than significant because of existing regulations and regulatory agency oversight.

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Section 4.8
Hydrology and Water Quality

4.8.1 Overview

This section describes the existing conditions and applicable laws and regulations for hydrology and water quality, followed by an analysis of the proposed project's potential to: (1) violate water quality standards or waste discharge requirements, (2) substantially degrade water quality, and (3) place structures within a 100-year flood hazard area that would impede or redirect floodflows. All other hydrology and water quality issues were addressed in Section IX of the Initial Study/Environmental Checklist (Appendix A) and were determined to be less than significant, including impacts on groundwater supplies, erosion or siltation, storm drainage, and tsunamis, seiches, and mudflows. The analysis and conclusions regarding these impacts are also summarized in Section 6.4, *Effects Not Found to be Significant*, of Chapter 6.

Pursuant to the recent Supreme Court case decision in *California Building Industry Association v. Bay Area Air Quality Management District (2015)* 62 Cal. 4th 369, Case No. S213478, CEQA does not require an analysis of how the existing environmental conditions will affect a project's residents or users unless the project would exacerbate those conditions. Therefore, when discussing impacts of the environment on the project, such as how an area prone to flooding may affect a project, the analysis will first determine if there is a potential for the project to exacerbate the issue. If evidence indicates it would not, then the analysis will conclude by stating such. If it would potentially exacerbate the issue, then evidence is provided to determine if the exacerbation would or would not be significant.

Based on the analysis that follows, all impacts related to hydrology and water quality would be less than significant. No mitigation is required.

4.8.2 Existing Conditions

4.8.2.1 Surface Water Hydrology

The project site is located within the jurisdiction of the San Diego Regional Water Quality Control Board (RWQCB). The San Diego Region is divided into 11 hydrologic units (HUs) for administrative purposes. Each of the HUs flow from elevated regions in the east to lagoons, estuaries, or bays in the west and feature similar water quality characteristics and issues. The proposed project is adjacent to San Diego Bay, which is within the Pueblo San Diego HU, shown on Figure 4.8-1. Table 4.8-1 shows the hierarchical structure of HU, Hydrological Areas, and Hydrological Subarea. The Pueblo San Diego watershed is the smallest HU in San Diego County and covers approximately 60 square miles of predominantly urban landscape in the cities of San Diego, La Mesa, Lemon Grove, and National City. Approximately 75 percent of the watershed is developed (Project Clean Water 2015). The watershed drainage is composed of a group of small local creeks and pipe conveyances, many of which are concrete-lined and drain directly into San Diego Bay. The TAMT does not receive run-on from up gradient areas.

Table 4.8-1. Project Vicinity Hydrologic Unit, Hydrologic Areas, and Hydrologic Subareas

Hydrologic Unit	Hydrologic Areas	Hydrologic Subareas
Pueblo San Diego (908.00)	Point Loma (908.10)	N/A
	San Diego Mesa (908.20)	Lindbergh (908.21)
		Chollas (908.22)
	National City (908.30)	El Toyan (908.31)
		Paradise (908.32)

Source: San Diego Regional Water Quality Control Board 2011
Bold = Project sites.

4.8.2.2 Surface Water Quality

San Diego Bay is the receiving water body for the project site and is the location where shipping operations occur. Runoff from the site sheet flows directly into San Diego Bay or discharges into the bay via storm drains. Water quality in San Diego Bay is influenced by processes and activities that take place within the Pueblo San Diego watershed. Because of the industrial nature of the project vicinity, surface water quality in the project area is directly affected by stormwater runoff from adjacent streets and highways, oils and grease from heavy equipment, small spills from dry and liquid bulk exported/imported at the facility, rail lubricant used in rail operations, and other pollutants.

The San Diego RWQCB has region-wide and water body-specific beneficial uses, and has set numeric and narrative water quality objectives for several pollutants and parameters for specific surface waters in its region. The beneficial uses of surface waters with potential to be affected by the proposed project—Pueblo San Diego watershed and San Diego Bay—are shown in Table 4.8-2.

Table 4.8-2. Beneficial Uses for Surface Waters or Water Bodies with the Potential to Be Affected by the Project

Water Body	Designated Beneficial Uses
Pueblo San Diego Watershed	Contact (potential use) and non-contact recreation, warm freshwater habitat, and wildlife habitat
San Diego Bay	Industrial, navigation, contact recreation, non-contact recreation, commercial and sport fishing, preservation of biological habitats of special significance, estuarine habitat, wildlife habitat, preservation of rare and endangered species, marine habitat, fish migration, fish spawning, and shell fish harvesting

Source: San Diego Regional Water Quality Control Board 2011

The watershed drainage consists of a group of relatively small local creeks and pipe conveyances, many of which are concrete-lined and drain directly into San Diego Bay. The creeks in the watershed are highly affected by urban runoff, such as contaminants from roadways, industry, and other urban sources. As shown in Table 4.8-3, water bodies with 303(d) listed impairments with potential to be affected by the proposed project include the San Diego Bay shoreline at the project site and San Diego Bay, based on the 2010 California Integrated Report (State Water Resources Control Board 2011). San Diego Bay, near Coronado Bridge, receives surface water directly from the project site and the currents within San Diego Bay. In addition to the listed 303(d) impairments, five sites in San

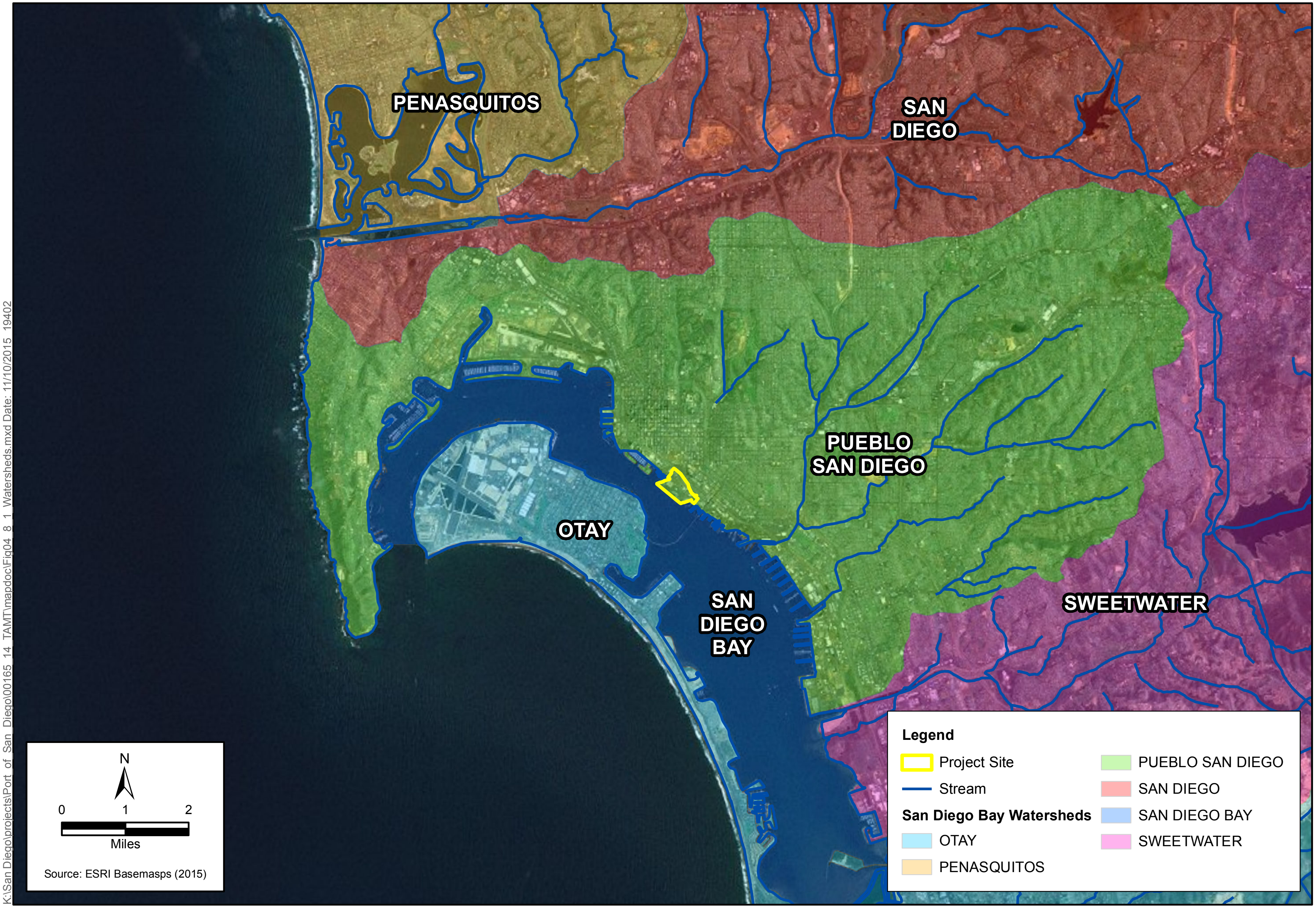

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Figure 4.8-1
Regional Watershed and Nearby Tributaries
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component

Diego Bay that are affected by runoff from the Pueblo San Diego watershed have been identified as hot spots by California's Bay Protection Toxic Cleanup Program (Project Clean Water 2015).

Table 4.8-3. 303(d)-Listed Impairments for Water Bodies within the Project Vicinity

Reach	303(d)-listed Impairments	Source	TMDL Completion Date
San Diego Bay Shoreline, near Coronado Bridge	Benthic Community Effects	Unknown Nonpoint Source, Unknown Point Source, Urban Runoff/Sewers	Est. 2019
	Sediment Toxicity	Unknown Nonpoint Source, Unknown Point Source, Urban Runoff/Sewers	Est. 2019
San Diego Bay	PCBs	Unknown	Est. 2019

Source: State Water Resources Control Board 2011
PCB = polychlorinated biphenyl
TMDL = total maximum daily load

The principal constituents of concern for surface water quality in the project area include coliform bacteria, sediment, salinity, toxic inorganics, and toxic organics. Stormwater runoff, urban runoff, and sewer spills have led to high concentrations of coliform bacteria, resulting in beach advisories in the Pueblo San Diego HU (Project Clean Water 2015).

4.8.2.3 Stormwater Quality

The water quality control features currently on site include Continuous Deflection Separation (CDS) units located throughout the project site (Harris & Associates 2016). The CDS units are hydrodynamic separators that collect stormwater runoff through one or multiple inlets; the inlet flumes guide the flow to the unit separation chamber where velocities create a swirling vortex that collects floatables to the center of the unit. Sediments collect at the bottom of the unit, and stormwater then continues through a hydrocarbon baffle that weirs and collects to be discharged through the outlet pipe. Based on ongoing water quality inspections and maintenance, the existing CDS treatment units typically meet water quality standards by removing suspended solids from the stormwater (Harris & Associates 2016). However, the units tend to lose efficiency in times of high tide. During a high tide event, units become inundated and do not allow for proper separation of suspended solids from the stormwater (Harris & Associates 2016). In addition, a media filter has been recently installed in a minor trench drain lateral located southeast of Transit Shed 1. Media filter best management practices (BMPs) treat urban runoff as it flows through a filtering medium, such as sand or an organic material, and are generally used on small drainage areas.

Per the requirements of the Industrial General Permit, the District conducts stormwater sampling at six locations throughout the project site. Stormwater samples are analyzed for pollutants of concern, identified based on the standard industrial classification (SIC) codes at the project site and site-specific pollutant assessment for industrial activities occurring on site. The analytical results from the stormwater samples are compared to Numeric Action Levels (NAL) identified in the Industrial General Permit. The samples taken thus far for the 2015–2016 reporting period have exceeded the NAL for copper, zinc, iron and aluminum. The Industrial General Permit requires the evaluation of additional Advanced BMPs (e.g., Structural Treatment Control) when the minimum BMPs are not sufficient to address the pollutants of concern; refer to Section 4.8.3.2, *SWRCB Industrial General Permit* subsection, for additional details.

4.8.2.4 Potential Flooding

Flood hazard areas on the Flood Insurance Rate Map (FIRM) are identified as a Special Flood Hazard Area. As shown in Figure 4.8-2, the majority of the project site is outside the Federal Emergency Management Agency (FEMA) 100-year floodplain. However, an area within the eastern portion of the project site is within 100-year Flood Zone A (ESRI 2015). A FEMA-identified Special Flood Hazard Area is an area subject to flooding during the 100-year storm event (1 percent annual chance of flooding). Zone A areas subject to inundation by the 1 percent annual chance flood event are generally determined using approximate methodologies.

4.8.3 Applicable Laws and Regulations

4.8.3.1 Federal

Federal Emergency Management Agency

FEMA administers the National Flood Insurance Program to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in floodplains. FEMA also issues FIRMs that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. The design standard for flood protection is established by FEMA. FEMA's minimum level of flood protection for new development is the 100-year flood event, also described as a flood that has a 1-in-100 chance of occurring in any given year.

Additionally, FEMA has developed requirements and procedures for evaluating earthen levee systems and mapping the areas affected by those systems. Levee systems are evaluated for their ability to provide protection from 100-year flood events, and the results of this evaluation are documented in the FEMA Levee Inventory System. Levee systems must meet minimum freeboard standards and must be maintained according to an officially adopted maintenance plan. Other FEMA levee system evaluation criteria include structural design and interior drainage.

Clean Water Act

The primary goals of the Clean Water Act (CWA) are to restore and maintain the chemical, physical, and biological integrity of the nation's waters and to make all surface waters fishable and swimmable. The U.S. Environmental Protection Agency (EPA) is the lead federal agency responsible for water quality management. The CWA of 1972 (33 USC 1251–1387) is the primary federal law that governs and authorizes water quality control activities by EPA as well as the states. The federal CWA of 1977 (33 USC Section 1251 et seq.), which amended the federal Water Pollution Control Act of 1972, established the basic structure for regulating discharges of pollutants into the waters of the United States (not including groundwater). Under the CWA, it is unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a National Pollutant Discharge Elimination System (NPDES) permit is obtained and implemented within compliance. In addition, the CWA requires the states to adopt water quality standards for receiving water bodies and to have those standards approved by EPA. Water quality standards consist of designated beneficial uses for a particular receiving water body (e.g., wildlife habitat, agricultural supply, fishing), along with water quality criteria necessary to support those uses.

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Figure 4.8-2
FEMA 100 and 500 Year Floodplains
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

Section 303: Impaired Water Bodies (303(d) list) and Total Maximum Daily Loads

Under Section 303(d) of the CWA, the State Water Resources Control Board (SWRCB) is required to develop a list of impaired water bodies that do not meet water quality standards (promulgated under the National Toxics Rule [NTR] or the California Toxics Rule [CTR]) after the minimum technology-based effluent limitations have been implemented for point sources. Lists are to be priority ranked for development of a total maximum daily load (TMDL). A TMDL is a calculation of the total maximum amount of a pollutant that a water body can receive on a daily basis and still safely meet water quality standards. The California Regional Water Quality Control Boards (RWQCBs) and EPA are responsible for establishing TMDL waste-load allocations and incorporating improved load allocations into water quality control plans, NPDES permits, and waste discharge requirements. Section 305(b) of the CWA requires that states assess the status of water quality conditions within the state in a report to be submitted every 2 years.

Both CWA requirements are being addressed through the development of a 303(d)/305(b) Integrated Report, which will address both an update to the 303(d) list and a 305(b) assessment of statewide water quality. The SWRCB developed a statewide 2010 California Integrated Report based upon the Integrated Reports from each of the nine RWQCBs. The 2010 California Integrated Report was approved by the SWRCB at a public hearing on August 4, 2010, and EPA issued its final decision and approval on October 11, 2011.

All of the 303(d) listed impaired waters with potential to be affected by the project will be evaluated as part of the project, and minimization measures would be implemented to protect waters from further impairment.

Section 402: National Pollutant Discharge Elimination System Permits

Section 402(p) of the CWA was amended in 1987 to require EPA to establish regulations for permitting of municipal and industrial (including active construction sites) stormwater discharges under the NPDES permit program. EPA published final regulations for industrial and municipal stormwater discharges on November 16, 1990. The NPDES program requires all industrial facilities and municipalities of a certain size that discharge pollutants into waters of the United States to obtain a permit. Stormwater discharges in California are commonly regulated through general and individual NPDES permits, which are adopted by the SWRCB or RWQCBs and are administered by the RWQCBs. EPA requires NPDES permits to be revised to incorporate waste-load allocations for TMDLs when the TMDLs are approved (40 Code of Federal Regulations [CFR] 122).

NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, or other activities.

Section 401: Water Quality Permits

Under Section 401 of the CWA, an applicant for a Section 404 permit to discharge dredged or fill material into waters of the United States must first obtain a certificate from the appropriate state agency stating that the fill is consistent with the state's water quality standards and criteria. In California, the authority to either grant water quality certification or waive the requirement is delegated by the SWRCB to the nine RWQCBs.

4.8.3.2 State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (embodied in the California Water Code) of 1969 (Porter Cologne Act) is California's statutory authority for the protection of water quality. Under the Porter-Cologne Act, the State must adopt water quality policies, plans, and objectives that protect its waters for the use and enjoyment of the people Under the California Water Code, the State of California is divided into nine regions governed by RWQCBs that, under the guidance and review of the SWRCB, implement and enforce provisions of the California Water Code and the CWA. The project site is located in Region 9, the San Diego Region, and governed by the San Diego RWQCB.

The Porter-Cologne Act also requires waste dischargers to notify the RWQCBs of their activities through the filing of Reports of Waste Discharge and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements, NPDES permits, Section 401 water quality certifications, or other approvals.

Section 13050 of the California Water Code defines what is considered pollution, contamination, or nuisance. Briefly defined, *pollution* means an alteration of water quality such that it unreasonably affects the beneficial uses of water. Contamination means an impairment of water quality to the degree that it creates a hazard to public health. Nuisance is defined as anything that is injurious to health, is offensive to the senses, or is an obstruction to property use, and which affects a considerable number of people.

SWRCB Construction General Permit (Order 2009-0009-DWQ)

Construction activities that disturb 1 acre or more of land must obtain coverage under the SWRCB Construction General Permit (Order 2009-0009-DWQ as amended by Order 2010-0014-DWQ and Order 2012-006-DWQ). Under the terms of the permit, applicants must file complete and accurate Notice of Intent and Permit Registration Documents with the SWRCB. Applicants must also demonstrate conformance with applicable construction BMPs and prepare a construction Storm Water Pollution Prevention Plan (SWPPP) containing a site map that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project site.

SWRCB Industrial General Permit (Order No. 2014-0057 DWQ)

Industrial facilities with specific SIC codes that discharge stormwater to waters of the United States must obtain coverage and comply with the requirements the General Permit for Stormwater Discharges Associated with Industrial Activities (Industrial General Permit) Order No. 2014-0057-DWQ (NPDES No. CAS000001) issued by the SWRCB. The SIC codes that apply to the project site include 4491: Marine Cargo Handling, 4412: Deep Sea Foreign Transport of Freight, 4222: Refrigerated Warehousing and Storage, 4225: General Warehousing and Storage, and 5171: Petroleum Bulk Stations and Terminals.

Under the Permit, dischargers must demonstrate conformance with applicable industrial BMPs and prepare an industrial SWPPP containing a site map that shows the site perimeter, areas where industrial activities occur, stormwater collection and discharge points, and drainage patterns across the site.

The Industrial General Permit includes required minimum BMPs, listed below, that shall be implemented and maintained at the project site to reduce or prevent pollutants in stormwater discharges. The BMPs include:

- Good Housekeeping
  - Observe all outdoor areas associated with industrial activity including stormwater discharge locations, drainage areas, conveyance systems, waste handling/disposal areas, and perimeter areas affected by off-facility materials or stormwater run-on to determine housekeeping needs. Any identified debris, waste, spills, tracked materials, or leaked materials will be cleaned and disposed of properly.
  - Minimize or prevent material tracking.
  - Minimize dust generated from industrial materials or activities.
  - Ensure that all facility areas affected by rinse/wash waters are cleaned as soon as possible.
  - Cover all stored industrial materials that can be readily mobilized by contact with stormwater.
  - Contain all stored non-solid industrial materials or wastes (e.g., particulates, powders, shredded paper) that can be transported or dispersed via by the wind or contact with stormwater.
  - Prevent disposal of any rinse/wash waters or industrial materials into the stormwater conveyance system.
  - Minimize stormwater discharges from non-industrial areas (e.g., stormwater flows from employee parking area) that contact industrial areas of the facility.
  - Minimize authorized non-storm water discharges from non-industrial areas (e.g., potable water, fire hydrant testing) that contact industrial areas of the facility.
- Preventive Maintenance
  - Identify all equipment and systems used outdoors that may spill or leak pollutants.
  - Observe the identified equipment and systems to detect leaks, or identify conditions that may result in the development of leaks.
  - Establish an appropriate schedule for maintenance of identified equipment and systems.
  - Establish procedures for prompt maintenance and repair of equipment, and maintenance of systems when conditions exist that may result in the development of spills or leaks.
- Spill and Leak Prevention and Response
  - Establish procedures and/or controls to minimize spills and leaks.
  - Develop and implement spill and leak response procedures to prevent industrial materials from discharging through the stormwater conveyance system. Spilled or leaked industrial materials will be cleaned promptly and disposed of properly.

- Identify and describe all necessary and appropriate spill and leak response equipment, location(s) of spill and leak response equipment, and spill or leak response equipment maintenance procedures.
- Identify and train appropriate spill and leak response personnel.

- Material Handling and Waste Management
  - Prevent or minimize handling of industrial materials or wastes that can be readily mobilized by contact with stormwater during a storm event.
  - Contain all stored non-solid industrial materials or wastes (e.g., particulates, powders, shredded paper) that can be transported or dispersed by the wind or contact with stormwater during handling.
  - Cover industrial waste disposal containers and industrial material storage containers that contain industrial materials when not in use.
  - Divert run-on and stormwater generated from within the facility away from all stockpiled materials.
  - Clean all spills of industrial materials or wastes that occur during handling in accordance with the spill response procedures (Industrial General Permit Section X.H.1.c).
  - Observe and clean as appropriate, any outdoor material or waste handling equipment or containers that can be contaminated by contact with industrial materials or wastes.
- Erosion and Sediment Controls
  - Implement effective wind erosion controls.
  - Provide effective stabilization for all disturbed soils and other erodible areas prior to a forecasted storm event.
  - Maintain effective perimeter controls and stabilize all site entrances and exits to sufficiently control discharges of erodible materials from discharging or being tracked off the site.
  - Divert run-on and stormwater generated from within the facility away from all erodible materials.
- Employee Training Program
  - Ensure that all team members implementing the various compliance activities of the SWPPP are properly trained in topics including but not limited to: BMP implementation, BMP effectiveness evaluations, visual observations, and monitoring activities.
  - Prepare or acquire appropriate training manuals or training materials.
  - Identify which personnel need to be trained, their responsibilities, and the type of training they will receive.
  - Provide a training schedule.
  - Maintain documentation of all completed training classes and the personnel that received training in the SWPPP.
- Quality Assurance and Record Keeping

- Develop and implement management procedures to ensure that appropriate staff implements all elements of the SWPPP, including the Monitoring Implementation Plan.
- Develop a method of tracking and recording the implementation of BMPs identified in the SWPPP.
- Maintain the BMP implementation records, training records, and records related to any spills and cleanup-related response activities for a minimum of 5 years (Industrial General Permit Section XXI.J.4).

In addition to the minimum BMPs, advanced BMPs, listed below, shall be implemented and maintained to the extent feasible and necessary to reduce or prevent discharges of pollutants in stormwater discharges.

- Exposure Minimization BMPs
  - Storm-resistant shelters that prevent the contact of stormwater with the industrial materials or activities
- Stormwater Containment and Discharge Reduction BMPs
  - BMPs that divert, infiltrate, reuse, contain, retain, or reduce the volume of stormwater runoff
- Treatment Control BMPs
  - The implementation of one or more mechanical, chemical, biologic, or any other treatment technology that will meet the treatment design standard. All new treatment control BMPs employed by the Discharger to comply with Advanced BMPs shall be designed to comply with design storm standards (volume or flow-based).
- Other Advanced BMPs
  - Any additional BMPs not described above that are necessary to meet the effluent limitations of the Industrial General Permit.

The Industrial General Permit requires implementation of a monitoring plan. The monitoring plan includes monthly visual observations and sampling event visual observations. The monitoring plan requires sampling and analyses of two stormwater samples from two qualifying storm events within the first half of each reporting year and two qualifying storm events within the second half of each reporting year, for four samples total. The discharges shall analyze all collected samples for total suspended solids, oil and grease, pH, and additional parameters identified in the SWPPP and/or by the RWQCB. Reported analytical results will be averaged automatically by Storm Water Multiple Application and Report Tracking System. A Discharger's Baseline status for any given parameter shall change to Level 1 status if sampling results indicate an NAL exceedance for that same parameter. A Level 1 Exceedance Response Action (ERA) Evaluation and Plan is required following an exceedance and requires a complete evaluation of the industrial pollutant sources at the facility that are or may be related to the NAL exceedance and identify the corresponding BMPs necessary to prevent future NAL exceedances. All drainage areas shall be evaluated. A Discharger's Level 1 status for a parameter will return to Baseline status once a Level 1 ERA report has been completed, all identified additional BMPs have been implemented, and results from four consecutive qualifying storm events that were sampled subsequent to BMP implementation indicate no additional NAL exceedances for that parameter. A Discharger's Level 1 status for any given parameter shall change to Level 2 status if sampling results indicate an NAL exceedance for that same parameter while the

Discharger is in Level 1. Dischargers with Level 2 status shall prepare a Level 2 ERA Plan that addresses each new Level 2 NAL exceedance. The ERA reports are required to be prepared by Qualified Industrial Storm Water Practitioner.

The District has filed a Notice of Intent with the SWRCB and has prepared a SWPPP as required by the Industrial General Permit. The TAMT Industrial SWPPP address the BMPs implemented at the project site to address the minimum BMP requirements of the Industrial General Permit, including the following.

- Good Housekeeping
- Preventive Maintenance
- Spill and Leak Prevention and Response
- Erosion and Sediment Controls
- Employee Training Program
- Quality Assurance and Record Keeping

The SWPPP includes a Site Monitoring Implementation Plan required by the Industrial General Permit, which describes the monthly dry weather visual observation, stormwater visual observation, and stormwater sampling at the project site.

The analytical results from the stormwater samples taken thus far for the 2015–2016 Industrial General Permit reporting period may ultimately exceed the annual NALs for copper, zinc, iron, and aluminum and thus elevate the District's discharge level status to Level 1 for those parameters. If this occurs, the District will review BMPs implemented at the site, identify new BMPs to address the exceedances, and implement those BMPs during the 2016–2017 reporting period. Should NAL exceedances continue to occur, the Industrial General Permit requires the evaluation of additional Advanced BMPs (e.g., structural treatment control) when the minimum BMPs are not sufficient to address the pollutants of concern.

The design standard for structural treatment controls required by the Industrial General Permit includes a volume-based treatment design that would treat the volume of runoff produced from an 85th percentile 24-hour storm event as determined from local, historical rainfall records. This design standard is consistent with the treatment control requirements that would be implemented as part of the project in order to meet redevelopment project BMP requirements of the Municipal Stormwater Permit and District BMP Design Manual discussed in Section 4.8.3.3 below. The installation of structural treatment controls would enable the site to treat the pollutants that are currently exceeding Industrial General Permit NALs and will be a proactive approach to addressing possible future exceedances. Structural treatment controls can be designed to treat the Municipal Stormwater Permit required design capture volume. Alternatively, another option to address future exceedances is to prevent pollutant any discharges from occurring by installing a full capture system.

Public Resources Code 71204.5 (Ballast Water Management)

Effective as of March 22, 2006, this is the State's Ballast Water Management regulation for vessels operating with the Pacific Coast Region, promulgated by the California State Lands Commission pursuant to Public Resources Code 71204.5. The new regulation establishes a Pacific Coast Region, defined essentially as coastal waters ranging from the Aleutian Islands to near the tip of Baja

California. Vessels taking ballast from ports within this region and traveling on coastal voyages must perform a coastal exchange at a minimum distance of 50 miles out and 200 meters depth prior to discharge in California. Vessels arriving from outside an Exclusive Economic Zone, and therefore outside of the Pacific Coast Region, are still required to perform a mid-ocean exchange (minimum 200 miles out and at a minimum of 2,000 meters depth) prior to discharging into California waters.

4.8.3.3 Local

San Diego Integrated Regional Water Management Plan

In the San Diego region, there is a complex array of water supply, water management, water quality protection, pollution prevention, habitat protection, flood protection, and recreational needs. Water management plans have been developed within the region to address these needs. However, jurisdictional and water management conflicts exist among the individual water management plans, and many challenges exist to identifying, addressing, and resolving water management issues. The Integrated Regional Water Management Plan (IRWMP) was developed in 2007 to bring stakeholders together and coordinate a regional approach to water management issues, pursuant to statewide IRWMP Guidelines established by the SWRCB and State of California Department of Water Resources in 2004, ~~and~~ updated in 2007, and again in 2013.

The 2013 IRWMP presents an overarching assessment of the San Diego Region's water supply, water quality, and ecosystem challenges and provides recommendations for sustainable answers. The Final Draft 2013 IRWMP was finalized on September 11, 2013 and was formally adopted by the Regional Water Management Group agencies on the following dates:

- San Diego County Water Authority Board of Directors: September 26, 2013
- City of San Diego City Council: October 8, 2013
- County of San Diego Board of Supervisors: October 9, 2013~~In addition, the 2013 Final Draft IRWMP is now available.~~

RWQCB Municipal Stormwater Permit (Order No. R9-2013-0001)

The Municipal Stormwater Permit (Order No. R9-2013-0001 as amended by Order Nos. R9-2015-001 and R9-2015-0100) is an NPDES permit issued that requires the owners and operators of municipal separate storm sewer systems (MS4s) within the San Diego Region to implement management programs to limit discharges of pollutants and non-stormwater discharges to and from their MS4 from all phases of development. The Municipal Stormwater Permit requires the District and other "copermittees" to develop watershed based Water Quality Improvement Plans (WQIPs). The Municipal Stormwater Permit emphasizes watershed program planning and program outcomes. The intent of the Permit is to enable each jurisdiction to focus its resources and efforts to:

- Reduce pollutants in stormwater discharges from its MS4;
- Effectively prohibit non-stormwater discharges to its MS4; and
- Achieve the interim and final [Water Quality Improvement Plan] numeric goals.

San Diego Bay Watershed Water Quality Improvement Plan

The Municipal Stormwater Permit requires the development of the San Diego Bay WQIP. The purpose of the WQIP is to guide the District and other Phase I Municipalities' Jurisdictional Runoff Management Plans (JRMPs) toward improving water quality in MS4 discharges and receiving waters. In the WQIP, priorities and goals are established and each jurisdiction identified strategies to assist in attaining the goals. This approach establishes the foundation that the District uses to develop and implement its JRMP. The District implements the WQIP in collaboration with other local agencies that have jurisdiction within the San Diego Bay Watershed Management Area, which comprises three hydrologic units: Pueblo San Diego, Sweetwater River, and Otay River.

Jurisdictional Runoff Management Plan

Under the Municipal Stormwater Permit, each jurisdiction is to prepare a JRMP. Each JRMP must contain a component that addresses issues related to construction activities and a component that addresses issues related to existing development. Additionally, each copermittee prepares and submits an annual report that describes the implementation of programs and strategies to reduce the discharge of pollutants of concern to the MS4 and receiving waters to the maximum extent practicable.

The District's JRMP serves as an informational document that provides an overall account of the program to be conducted by the District during the 5-year life of the Municipal Permit. The District's JRMP has been developed to meet the conditions of the Municipal Permit and to assist the District in achieving the goals identified in the WQIP. Port-specific WQIP based strategies have been incorporated into the JRMP. The JRMP program's focus is on controlling stormwater discharges to the MS4 with the overall goal of achieving receiving water quality improvements. The JRMP utilizes District-specific jurisdictional activities as well as watershed-based strategies. Enforcement of the JRMP helps to prevent stormwater pollutants from entering into the local storm drains and ultimately the San Diego Bay.

The District has developed a list of pollution prevention BMPs applicable to industrial and commercial facilities on District tidelands as required by the Municipal Permit. Because pollution prevention BMPs eliminate pollutants at their source, they are a preferred means of preventing discharge of priority pollutants into the receiving waters. The list of pollution prevention BMPs includes the following.

- Keep waste containers covered or lids closed (trash).
- Minimize outdoor storage (trash, metals).
- Capture, contain, and/or treat wash water (bacteria, metals).
- Conduct employee training (bacteria, trash, metals).

In addition, Table 7-4 of the JRMP provides an extensive list of minimum BMPs for commercial and industrial facilities. Categories of BMPs include general operations and housekeeping, non-stormwater management, waste handling and recycling, outdoor material storage, outdoor drainage from indoor activity, outdoor parking, vehicles and equipment, education and training, overwater activity, and outdoor activity and operation.

BMP Design Manual

In June 2015, the District adopted a jurisdiction-specific local BMP Design Manual to address the requirement of the Municipal Permit. This BMP Design Manual is applicable to projects carried out on District-managed tidelands. Pursuant to the Municipal Permit, the District is to begin implementing the BMP Design Manual by February 16, 2016. District's BMP Design Manual is consistent with the *Model BMP Design Manual* that was developed collectively with the other San Diego County jurisdictions. The District's BMP Design Manual identifies updated post-construction stormwater requirements for both tenant- and District-sponsored major maintenance or capital improvement projects as required by the Municipal Permit.

The BMP Design Manual identifies BMP requirements for both standard projects and priority development projects (PDPs) as outlined in the permit. All new development and redevelopment projects are required to implement standard source control and site design BMPs to eliminate or reduce stormwater runoff pollutants. For PDPs, the BMP Design Manual also describes pollutant control BMPs that must be incorporated into the site design and, where applicable, addresses potential hydromodification impacts from changes in flow and sediment supply.

The hierarchy for implementing pollutant control BMPs on a PDP is as follows: the standard for stormwater pollutant control is retention of the 24-hour 85th percentile stormwater volume, defined as the event that has a precipitation total greater than or equal to 85 percent of all daily storm events larger than 0.01 inch over a given period of record in the project area (design capture volume). For situations where onsite retention of the design capture volume is technically not feasible, biofiltration must be provided to satisfy specific standards. For situations where biofiltration is technically not feasible, flow-through treatment BMPs must be implemented on site and the developer must participate in an alternative compliance project.

Site design decisions may influence the ability of a PDP to meet applicable performance standards for pollutant control and hydromodification management BMPs. For example, the layout of the site drainage and reservation of areas for BMPs relative to areas of infiltrative soils may influence the feasibility of capturing and managing stormwater. Infiltration shall be avoided in areas with:

- Physical and chemical characteristics (e.g., appropriate cation exchange capacity, organic content, clay content, and infiltration rate) that are not adequate for proper infiltration durations and treatment of runoff for the protection of groundwater beneficial uses.
- Groundwater contamination and/or soil pollution, if infiltration could contribute to the movement or dispersion of soil or groundwater contamination or adversely affect ongoing cleanup efforts, either on site or down-gradient of the project.

If infiltration is under consideration for one of the above conditions, a site-specific analysis should be conducted to determine where infiltration-based BMPs can be used without adverse impacts.

The depth to seasonally high groundwater tables (normal high depth during the wet season) beneath the base of any infiltration BMP must be greater than 10 feet for infiltration BMPs to be allowed. The depth to groundwater requirement can be reduced from 10 feet at the discretion of the approval agency if the underlying groundwater basin does not support beneficial uses and the groundwater quality is maintained at the proposed depth.

Concentration of stormwater pollutants in runoff is highly dependent on the land uses and activities present in the area tributary to an infiltration BMP. Likewise, the potential for groundwater contamination due to the infiltration BMP is a function of pollutant abundance, concentration of pollutants in soluble forms, and the mobility of the pollutant in the subsurface soils. Therefore, infiltration BMPs must not be used for areas of industrial or light industrial activity unless source control BMPs to prevent exposure of high-threat activities are implemented, or runoff from such activities is first treated or filtered to remove pollutants prior to infiltration.

Project applicants must submit a Storm Water Quality Management Plan (SWQMP) accurately describing how the project will meet source control site design and pollutant control BMP requirements. District staff provides technical review of and approve SWQMP documents and drainage design plans to ensure that pollutant control BMP requirements are met. The SWQMP is evaluated for compliance with the Municipal Permit and with design criteria outlined in the District's BMP Design Manual. Once the approval process is complete, the project is able to commence and routine inspections are conducted throughout the duration of the project construction.

The proposed project is a PDP, and therefore a SWQMP and treatment control BMPs are required. Moreover, Chapter 7 of the JRMP lists the District's required BMPs for industrial operations.

Source Control and Site Design Requirements

The Municipal Stormwater Permit directs the District to require the development of a SWQMP during the planning process for all development projects. Both standard and PDP projects must implement source control and site design requirements.

General requirements for the BMPs to be included in the SWQMP include the following.

1. Onsite BMPs must be located so as to remove pollutants from runoff prior to its discharge to any receiving waters, and as close to the source as possible.
2. Structural BMPs must not be constructed within waters of the U.S.
3. Onsite BMPs must be designed and implemented with measures to avoid the creation of nuisance or pollution associated with vectors (e.g., mosquitos, rodents, flies).

Source control BMPs must be implemented at all development projects where applicable and feasible. Source control BMP requirements include the following.

1. Prevention of illicit discharges into the MS4
2. Storm drain system stenciling or signage
3. Protection of outdoor material storage areas from rainfall, run-on, runoff, and wind dispersal
4. Protection of materials stored in outdoor work areas from rainfall, run-on, runoff, and wind dispersal
5. Protection of trash storage areas from rainfall, run-on, runoff, and wind dispersal and
6. Use of any additional BMPs determined to be necessary by the Port to minimize pollutant generation at each project

Site Design BMPs must be implemented at all development projects where applicable and feasible. Site Design BMP requirements include the following.

1. Maintenance or restoration of natural storage reservoirs and drainage corridors (including topographic depressions, areas of permeable soils, natural swales, and ephemeral and intermittent streams)

2. Buffer zones for natural water bodies (where buffer zones are technically infeasible, project applicant is required to include other buffers such as trees, access restrictions, etc.)
3. Conservation of natural areas within the project footprint including existing trees, other vegetation, and soils
4. Construction of streets, sidewalks, or parking lot aisles to the minimum widths necessary, provided public safety is not compromised
5. Minimization of the impervious footprint of the project
6. Minimization of soil compaction to landscaped areas
7. Disconnection of impervious surfaces through distributed pervious areas
8. Landscaped or other pervious areas designed and constructed to effectively receive and infiltrate, retain, and/or treat runoff from impervious areas, prior to discharging to the MS4
9. Small collection strategies located at, or as close as possible to, the source (i.e., the point where stormwater initially meets the ground) to minimize the transport of runoff and pollutants to the municipal and receiving waters
10. Use of permeable materials for projects with low traffic areas and appropriate soil conditions
11. Landscaping with native or drought-tolerant species
12. Harvesting and using precipitation

Stormwater Pollutant Control Requirements for PDPs

Redevelopment projects that create or replace 2,500 square feet of impervious surface adjacent to an environmentally sensitive waterbody (i.e., San Diego Bay) and/or fit into a specific use category as identified in the District's BMP Design Manual are categorized as PDPs. In addition to the site design and source control BMPs discussed above, PDPs are required to implement stormwater pollutant control BMPs to reduce the quantity of pollutants in stormwater discharges. Stormwater pollutant control BMPs are engineered facilities that are designed to retain (i.e., intercept, store, infiltrate, evaporate, and evapotranspire), biofilter, and/or provide flow-through treatment of stormwater runoff generated on the project site. Table 4-5 of the JRMP identifies the PDP categories as defined by the Municipal Permit and outlined in the District's BMP Design Manual.

The Municipal Stormwater Permit prioritizes the use of retention BMPs either as "harvest and use" or though infiltration. Full infiltration would be potentially be determined to be infeasible due to high groundwater and historic soil contamination at the project site. When infiltration is infeasible, biofiltration must be considered and requires a BMP minimum footprint of 3 percent of the site area. If biofiltration is not feasible, then flow-through BMP plus participation in alternative compliance is the remaining option. Participation in alternative compliance requires construction of a BMP off site to treat an equivalent pollutant load.

Construction-Related Best Management Practices

The Municipal Permit directs the District to require minimum BMPs at all construction and grading projects. The minimum BMPs are required to ensure a reduction of potential pollutants from the project site to the maximum extent practicable and to effectively prohibit non-stormwater discharges from construction sites to the MS4. These BMPs also ensure that all construction and grading activities are in compliance with applicable District ordinances and other environmental laws and are supportive of the WQIP goals.

The required minimum BMPs fall into several major categories as outlined in the Municipal Permit, including project planning, good site management, non-stormwater management, erosion control, sediment control, run-on and runoff controls, and, where applicable, active/passive sediment treatment. The BMPs chosen to be implemented at a particular project must be site specific, seasonally appropriate, and construction phase appropriate. Notwithstanding seasonal variation, projects occurring during the dry season will be required to plan for and must be able to address rain events that may occur.

The District also chose to include minimum BMPs that support the WQIP priorities and integrate WQIP strategies PO-12 and PO-13.[1] Good Housekeeping BMPs prevent discharges of WQIP high-priority pollutants including metals, bacteria, and trash to the MS4. Additionally, pursuant to strategy PO-13, the District requires sites to cover construction material stockpiles that contain metals, such as treated timber during wet weather. Table 4.8-4 provides a list of the minimum BMPs for construction sites.

Table 4.8-4. Minimum BMPs For Construction Sites

BMP Category	BMP
Project Planning	Minimization of areas that are cleared and graded to only the portion of the site that is necessary for construction
	Develop and implement a SWPPP or Construction BMP Plan
	Contractor Training (formal training or District staff training)
Non-Stormwater Management	Water Conservation Practices (NS-1)
	Illicit Connection/Illegal Discharge Detection and Reporting (NS-6)
	Dewatering Operations (NS-2)
	Paving and Grinding Operations (NS-3)
	Potable Water/Irrigation (NS-7)
	Vehicle and Equipment Cleaning (NS-8)
	Vehicle and Equipment Fueling (NS-9)
	Vehicle and Equipment Maintenance (NS-10)
Good Housekeeping/ Waste Management	**Cover construction material stockpiles such as treated lumber during wet weather (WQIP Strategy PO-13)**
	Material delivery and storage (WM-1)
	Material Use (WM-2)
	Solid Waste Management (WM-5)
	Stockpile Management (WM-3)
	Spill Prevention and Control (WM-4)
	Hazardous Waste Management (WM-6)
	Contaminated Soil Management (WM-7)
	Concrete Waste Management (WM-8)
	Sanitary/Septic Waste Management (WM-9)
	Construction Road Stabilization (TC-2)

[1] PO-12 calls for the implementation of the Core JRMP Program to require and to oversee implementation of BMPs during the construction phase of land development. PO-13 calls for the addition of a construction BMP that requires covering construction materials (metals and treated wood) during wet weather.

BMP Category	BMP
	Stabilized Construction Entrances (TC-1)
	Entrance/Outlet Tire Wash (TC-3)
Erosion Control[a] (choose at least one or a combination based on site conditions)	Preservation of Existing Vegetation (EC-2)
	Minimization of Exposure Time of Disturbed Soil Areas
	Scheduling (EC-1)[b]
	Hydraulic Mulching (EC-3)
	Soil Binders – (EC-5)
	Straw Mulches (EC-6)
	Wood Mulching – (EC-8)
	Geotextiles and Mats (EC-7)
	Wind Erosion Control (WE-1)
	Soil Preparation/Roughening (EC-15)
	Preservation of Natural Hydrologic Features Where Feasible
	Permanent Revegetation or Landscaping as Early as Feasible
Sediment Control (choose at least one or a combination based on site conditions)	Silt Fence (SE-1)
	Street Sweeping and Vacuuming (SE-7)
	Sand Bag Barrier (SE-8)
	Storm Drain Inlet Protection (SE-10)
	Sediment Trap (SE-3)
	Sediment Basin (SE-2)
	Check Dams (SE-4)
	Fiber Rolls (SE-5)
	Gravel Bag Berms (SE-6)
	Compost Socks and Berms (SE-13)
Run-on and Runoff Control	Protect site perimeter to prevent run-on from entering the site and site runoff

BMPs in **bold** target WQIP priority pollutants including metals, trash, and bacteria.

[a] Erosion controls must be implemented in all inactive disturbed soil areas. An inactive disturbed soil area is where construction activities such as grading, clearing, excavation, or disturbances to ground are not occurring and those that have been active and are not scheduled to be re-disturbed for at least 14 days.

[b] Limitation of grading to a maximum disturbed area, determined by the District to be 5 acres during the rainy season and 17 acres during the non-rainy season, before either temporary or permanent erosion controls are implemented to prevent stormwater pollution (see Section 5.6.1 of the JRMP for additional information).

Source: Port of San Diego, Jurisdictional Runoff Management Program Document, Chapter 5 Construction Management, June 2015.

San Diego Unified Port District, Article 10

The District's own Article 10, the District Stormwater Management and Discharge Control Ordinance, prohibits the deposit or discharge of any chemicals or waste to the tidelands or San Diego Bay and makes it unlawful to discharge pollutants directly into non-stormwater or indirectly into the stormwater conveyance system. The proposed project would be obligated to abide by Article 10.

Where enforcement is required to maintain compliance, the District will use its enforcement authority established by Article 10. Article 10 of the Port Code enables the District, including District inspectors, to prohibit discharges and require BMPs so that discharges on tidelands do not cause or contribute to water quality problems. Article 10 establishes enforcement procedures to ensure that responsible dischargers are held accountable for their contributions and/or flows.

San Diego Harbor Safety Plan

The San Diego Harbor Safety Plan is designed to provide mariners using the waters of San Diego Bay an up-to-date guide to critical navigation issues that will enhance vessel safety, with the ultimate goal of pollution prevention and protection of the region's valuable resources. This plan has been developed by the San Diego Harbor Safety Committee as mandated in the California Oil Spill Prevention and Response Act of 1990 (OSPR Act) (Government Code Sections 8574.1 et seq.). The goals of the OSPR Act are to improve the prevention, removal, abatement, response, containment, clean up, and mitigation of oil spills in the marine waters of California. The OSPR Act and its implementing regulations (California Code of Regulations Title 14 Sections 800–802) created harbor safety committees for the major harbors of California to "plan for the safe navigation and operation of tankers, barges, and other vessels within each harbor" by preparing "a harbor safety plan, encompassing all vessel traffic within the harbor."

The plan sections include:

- Emergency Response Procedures
- Best Maritime Practices
- Geographic Boundaries. A detailed description of the geographical boundaries of the harbor.
- Harbor Conditions. A description of existing and expected conditions of weather, tidal ranges, and other factors.
- Aids to Navigation and Navigational Hazards. An evaluation and list of the aids to navigation in the harbor, and list of navigational hazards.
- Anchorage and Anchorage Management. A description of the existing anchorages and any limitations to those anchorages.
- Communications. A review and evaluation of the adequacy of current ship-to-ship and ship-to-shore communications used in the harbor area.
- Vessel Traffic Patterns. A description of the types of vessels that call on the ports or facilities within the harbor area, and an assessment of current safety issues.
- Tug Escort/Tug Assist. A description of the usage of tug escorts in the harbor, including a procedure for a case-by-case determination of need, based on specific criteria.
- Vessel Traffic Service. A description of the San Diego Marine Information Systems for the harbor area.
- Bridge Management Requirements. An assessment of the physical limitations affecting vertical and horizontal clearances.
- Competitive Aspects. An identification and discussion of the economic impacts of implementing the provisions of the plan.
- Project Funding.
- Enforcement. An analysis of enforcement, and suggested mechanisms to ensure that the provisions of the plan are fully and uniformly enforced with regularity.

- Harbor Safety Committee Recommendations and Accomplishments. Includes Recommendations and actions taken to implement recommendations.
- Implementation. Provides an overview of implementation avenues for the recommendations contained in the Harbor Safety Plan.
- Applicable Regulations and Guidelines. Includes Underkeel Clearance Guidelines, Non-Tank Oil Spill Contingency Plan regulations, and Tug Escort regulations.
- Miscellaneous. Pilotage Evaluation Report, Ballast Water Regulations, Limited Visibility Guidelines, and Underwater Pipelines.

4.8.4 Project Impact Analysis

4.8.4.1 Methodology

Impacts of the project on surface water quality were analyzed using available information on potential existing sources of pollution and water quality conditions in the project study area. These conditions were then compared to potential project-related sources of pollution during construction, such as sediments and other construction materials, and operation, such as operation and maintenance activities, trash, and storage of hazardous materials. The project was analyzed for potential impacts on beneficial uses and water quality objectives (i.e., pollutants of concern) of receiving waters. Receiving waters with CWA Section 303(d) impaired water quality were identified, along with the impairment (pollutant/stressor) and an indication of whether the impairment has the potential to be further affected by the proposed project.

4.8.4.2 Thresholds of Significance

As noted in Section 4.8.1, *Overview*, since the decision handed down by the California Supreme Court in *California Building Industry Assoc. v. Bay Area Air Quality Management District* (CBIA vs. BAAQMD case), there is no longer ambiguity as to whether CEQA documents must analyze the environment's potential impact on a project, including any residents or users that a project may newly introduce to an existing environmental condition. The exception occurs if the proposed project, by developing in an area with a known environmental condition, may exacerbate the condition. Examples of a project exacerbating an existing environmental condition specific to hydrology and water quality conditions may include constructing a structure within the floodway such that flood waters are diverted and cause damage to structures or harm people that would have otherwise not been affected. In this case, because the project would directly affect the existing environment, the conclusion is that the project would exacerbate the existing environmental condition. On the other hand, if the project would construct a structure within the floodway, but would not actually cause any diversion such that the potential to do greater harm to the existing environment is not present, then the project would not exacerbate the condition, even considering that by bringing new residents or users to the area, it may place more people and structures in harm's way. Therefore, the analysis below applies this same logic, consistent with the California Supreme Court's direction.

In light of the CBIA vs. BAAQMD case, the following significance criteria are based on Appendix G of the State CEQA Guidelines and modified to reflect the Supreme Court's recent guidance and provide the basis for determining significance of impacts associated with hydrology and water quality resulting from the proposed project. The determination of whether a hydrology and water quality impact would be significant is based on the thresholds described below and the professional judgment of the Port District as Lead Agency and the recommendations of qualified personnel at ICF, all of which is based on evidence in the administrative record.

Impacts are considered significant if the proposed project would result in any of the following.

1. Violate any water quality standards or waste discharge requirements.
2. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in substantial erosion or siltation on or off site.
4. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site, substantially affecting the existing environment.
5. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
6. Otherwise substantially degrade existing water quality.
7. Place housing within a 100-year flood hazard area such that the existing environment is substantially affected.
8. Place within a 100-year flood hazard area structures that would impede or redirect flood flows such that the existing environment is substantially affected.
9. Expose people who are already present or structures already in existence to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.
10. Contribute to inundation by seiche, tsunami, or mudflow.

As discussed in the Initial Study/Environmental Checklist Section IX (Appendix A), Thresholds 2 through 5, 7, 9, and 10 are not included in the analysis below, as it was determined that the proposed project would not result in significant impacts related to groundwater supplies, erosion or siltation, exceeding existing and planned stormwater drainage systems, housing being placed within flood hazard areas, people or structures being exposed to harm or damage from flooding as a result of the failure of a levee or dam, or inundation by seiche, tsunami, and mudflow. Those conclusions and the rationale that supports them are summarized in Chapter 6, *Additional Consequences of Project Implementation*. Therefore, only Thresholds 1, 6, and 8 are discussed in the impact analysis that follows.

4.8.4.3 Project Impacts and Mitigation Measures

Threshold 1: Implementation of the proposed project would not violate any water quality standards or waste discharge requirements.

Impact Discussion

Full buildout of the TAMT plan, which includes the Demolition and Initial Rail Component, could affect water quality during construction and operation as a result of several project features. The Demolition and Initial Rail Component would include the demolition of two transit sheds, grading and paving at the former transit shed locations, installation of pole lighting, relocation of an existing dry bulk tenant from Transit Shed #2, on-terminal rail upgrades that include a rail lubricator and compressed air system (with two 100-square-foot generator enclosures) for air brake testing, and installation of an outdoor equipment storage area (850 square feet), an electrical gear room, IT room, and restroom facility (782 square feet), a modular office with restroom facilities (3,600 square feet), and underground stormwater treatment systems that allows for infiltration or retention. Other future components of the TAMT plan could include demolition of Warehouse C and the existing molasses tanks, construction of up to 100,000 square feet of warehouse space or silos or domes with up to a 108,000-metric-ton capacity, installation of up to five gantry cranes, upgrade of the existing dry bulk conveyor system, replacement of the existing mechanical dry bulk discharge system with a pneumatic dry bulk discharge system capable of processing up to 200 metric tons per hour, additional backland paving, additional terminal equipment for unloading and loading activities, and additional stormwater treatment related structures. As discussed in Chapter 3, *Project Description*, construction activities for the Demolition and Initial Rail Component are anticipated to begin in approximately 2017 and be completed by approximately 2020. Construction of the other future components associated with the rest of the TAMT plan buildout could be constructed once market conditions suggest viability. Buildout of the other future components of the TAMT plan are assumed to occur by 2035.

Construction

The Demolition and Initial Rail Component would involve soil disturbance from activities such as excavation for replacement light poles and utility work as well as concrete removal, grading, material stockpiling, and repaving related to building demolition and construction. Total earthwork would consist of excavating approximately 18,500 cubic yards of soil in the area of Transit Shed #1 and approximately 24,200 cubic yards in the area of Transit Shed #2 and 9, 136 cubic yards of soil from the underground detention storage tank installation. Total excavation would be approximately 51,836 cubic yards. Approximately 47,036 cubic yards of soil would be exported off site (16,400 cubic yards from Transit Shed #1, 21,500 cubic yards from Transit Shed #2, and 9,136 cubic yards from the underground detention storage tank installation). It is anticipated that 4,800 cubic yards of fill materials would be balanced and re-compacted on site and 3,915 cubic yards would be imported. Demolition includes abatement associated with hazardous materials on site (soil contamination), removal of existing structures, removal of any concrete slabs, removal of any utilities, and repaving of the project site with asphalt concrete pavement. Implementation of the TAMT plan and its individual demolition and construction components would be required to comply with federal, state, and local hazardous material laws and regulations as applicable; refer to Section 4.7, *Hazards and Hazardous Materials*, for additional details.

The potential impacts of construction activities on water quality concern primarily sediments, turbidity, and pollutants associated with sediments. Construction-related activities that expose and mobilize soils are responsible primarily for sediment releases. Sediment transported directly to San Diego Bay as a result of project construction, or to local drainage facilities such as drainage inlets, culverts, and storm drains, could increase the amount of suspended solids contained in storm flows resulting from erosion of exposed soil during construction, could increase sediment loads along the San Diego coastline. It could also result in reduced storm flow capacity, resulting in localized ponding or flooding during storm events.

Other pollutants of concern that may be present during project construction are toxic chemicals (e.g., fuel, lubricants) from heavy equipment or construction-related materials. Heavy equipment would include excavators, loaders, forklifts and scissor lifts, water trucks, dump trucks, backhoes, dozers, saw cutting equipment, and air compressors. These pollutants can be transported with sediment loads or directly into waterways via spills or other means. Other contaminants that could enter runoff from the construction site include metals, petroleum products, and trash. Concrete, soap, trash, and sanitary wastes are other common sources of potentially harmful materials on construction sites. Wash water from equipment and tools and other waste dumped or spilled on the construction site can lead to seepage of pollutants into watercourses. Also, construction chemicals may be accidentally spilled into watercourses. The impact of toxic construction-related materials on water quality would vary, depending on the duration and timing of activities. All of these contaminants could contribute to the degradation of water quality.

The transit sheds, which would be demolished as part of the Demolition and Initial Rail Component, contain hazardous materials such as asbestos, lead, and polychlorinated biphenyls that would require careful removal and disposal at a hazardous waste facility prior to demolition of the structures, consistent with existing hazardous materials regulations described in Section 4.7, *Hazards and Hazardous Materials*. Soils would be contained during groundwork to ensure no contact with storm drains or the waterfront. After the completion of abatement, the aboveground structural elements (concrete walls, steel columns, and trusses) and the existing fire and electrical systems must be carefully dismantled to reduce the impact of potential debris on maritime operations and prevent dust and debris from entering the bay. Soils excavated during any future demolition and grading at the site must be tested and, depending on the results, may require special handling considerations prior to implementation of any project-specific full TAMT plan buildout. Specifically, any future actions that would perform any earthwork such as grading, trenching, or soil removal would be required to comply with the Tenth Avenue Soil Management Plan, obtain a letter of closure in the event that contaminated soils are found to be present, and implement BMPs to educate and ensure the safety of all workers that could come in contact with soils (**MM-HAZ-1** and **MM-HAZ-2**). With implementation of these mitigation measures, impacts related to the potential creation of a significant hazard to workers, the public, or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment would be less than significant. More information related to the applicable regulations associated with hazardous materials is provided in Section 4.7, *Hazards and Hazardous Materials*.

The Demolition and Initial Rail Component would disturb more than 1 acre of land. The other future components of the TAMT plan would be implemented in phases over several years, and several proposed actions, such as the demolition of Warehouse C and the molasses tanks and construction of up to 100,000 square feet of warehouse space, would disturb more than 1 acre of land. Therefore, compliance with the Construction General Permit would require development and implementation of a SWPPP by a Qualified SWPPP Developer, which would identify which construction BMPs would be implemented in order to protect stormwater runoff and include a monitoring plan for measuring BMP effectiveness. BMPs are required to be inspected regularly by a Qualified SWPPP Practitioner. The Qualified SWPPP Practitioner monitors the construction activities to ensure the BMPs listed in the SWPPP are implemented and performing as anticipated. At a minimum, BMPs would include practices to minimize the contact of construction materials, equipment, and maintenance supplies (e.g., fuels, lubricants, paints, solvents, adhesives) with stormwater. The construction SWPPP would specify properly designed, centralized storage areas that keep these materials out of the rain. When grading is conducted during the rainy season, the primary BMPs selected would focus on erosion control (i.e., keeping sediment in place) and then on sediment control (i.e., keeping sediment on site). Measures would include a range of stormwater control BMPs, such as installing erosion control such as silt fences, staked straw wattles, and geofabric to prevent silt runoff to storm drains or waterways. Topsoil and backfill would be stockpiled, protected, and replaced at the conclusion of construction activities. Disturbed soil would be revegetated as soon as possible with the appropriate selection and schedule for turf, plants, and other landscaping vegetation. Several of the minimum construction BMPs are listed in Table 4.8-4.

In addition to the SWPPP, the project applicant would be required to implement the construction BMPs identified in the District's JRMP. The SWPPP would specify construction BMPs to ensure that water quality standards or waste discharge requirements are not violated. BMPs selected would be designed to comply with the requirements of the District's JRMP and the Construction General Permit and would be subject to review and approval by the District. Construction-related measures would include BMPs from the following categories, and as listed in Table 4.8-4.

- Project Planning
- Non-Stormwater Management
- Good Housekeeping/Waste Management
- Erosion Control
- Sediment Control
- Run-on and Run-off Control

Aside from the above categories of BMPs that would be required, the District also limits grading to a maximum disturbed area of 5 acres during the rainy season (October 1–April 30) and 17 acres during the non-rainy season to prevent discharges of sediment. Such measures are routinely developed for construction sites and are proven to be effective in reducing pollutant discharges from construction activities. Implementation of the SWPPP during construction would minimize the potential for water quality objectives, standards, and wastewater discharge thresholds to be violated. The SWPPP would be prepared by a Qualified SWPPP Developer and approved by the District prior to commencement of construction activities. With SWPPP implementation, the District's stormwater requirements, local grading ordinances, and other related requirements, impacts from construction on water quality would be less than significant, and no mitigation is required.

Operation and Maintenance

The Demolition and Initial Rail Component could affect water quality during general facility operations, operation of a rail lubrication system on the existing track to improve rail operations, and the use of an outdoor equipment storage area (850 square feet). Manual lubrication would be eliminated and replaced with automated lubrication to accommodate a sharp curve in the existing track, increasing both the safety and efficiency of the rail movement. The automated lubrication is anticipated to have a positive impact on water quality because a more precise application of lubrication would be applied, eliminating potential spills from manual lubrication. Future components of the TAMT plan, such as the additional paving of backland areas and installation of a new bulk discharge system with a new or improved conveyor system, could also affect water quality during operation. Moreover, the increased loading and unloading of dry bulk cargo, break bulk cargo, and refrigerated containers as a result of the Demolition and Initial Rail Component and the other future components identified in the TAMT plan would result in additional marine and ground vehicle traffic that may have further adverse effects on water quality.

Potential pollutants that may be generated at the project site include gross pollutants (trash, debris/litter, other organic matter and floatables), metals, nutrients, oil and grease, organics, sediment, and trash (San Diego Unified Port District 2008). As part of the proposed project, cargo would continue to be kept outside on the terminal within containers (e.g., enclosed silos or domes for dry bulk; refrigerated containers for perishables), as most of the items are too large or otherwise too difficult logistically to store in existing terminal sheds. Under the current operations, break bulk cargos are stored outside because most of these items are too large to be handled inside the transit sheds. In some cases, however, large break bulk or neobulk items (such as windmill parts) cannot feasibly be covered or enclosed. Operations at the project site would also include routine maintenance activities; waste storage, handling, and disposal; outdoor parking; and vehicle and equipment storage, cleaning, and maintenance.

The District's Article 10 (Stormwater Management and Discharge Control Ordinance) and the JRMP include specific requirements for all development and redevelopment activities. Pursuant to the District's JRMP, post-construction BMPs are required for all projects falling under the State's Construction General Permit. Post-Construction BMPs are a subset of BMPs including structural and nonstructural controls that detain, retain, filter, or educate to prevent the release of pollutants to surface waters during the functional life of developments. Article 10 also specifically requires pollutant control BMPs for all PDPs. Stormwater pollutant control BMPs are engineered facilities that are designed to retain (i.e., intercept, store, infiltrate, evaporate, and evapotranspire), biofilter, and/or provide flow-through treatment of stormwater runoff generated on the project site. Minimum BMPs consistent with District BMP Design Manual require the use of site design BMPs and source control and pollutant control BMPs. Additionally, a post-construction SWQMP must be included for all PDPs. These requirements are discussed under Section 4.8.3, *Applicable Laws and Regulations*, and primarily under 4.8.3.3, *Local.* The Demolition and Initial Rail Component, along with several future components identified in the TAMT plan, would be considered PDPs and required to implement pollutant control BMPs, following the hierarchy described in the District's BMP Design Manual (retention, partial retention with biofiltration, biofiltration, or flow-through with participation in an Alternative Compliance Program). Operational BMPs such as containment and coverage of industrial material are required to comply with the Industrial General Permit.

In addition, the proposed project is required to comply with the Industrial General Permit, which requires dischargers to demonstrate conformance with applicable industrial BMPs and prepare an industrial SWPPP. The SWPPP identifies where industrial activities occur, stormwater collection and discharge points, and includes required minimum BMPs that shall be implemented and maintained at the project site to reduce or prevent pollutants in stormwater discharges. The SWPPP includes a Site Monitoring Implementation Plan required by the Industrial General Permit, which describes the monthly dry weather visual observation, stormwater visual observation, and stormwater sampling that must take place at the project site. Because the project site currently exceeds the NALs identified in the Industrial General Permit, advanced BMPs would be required to reduce the discharge of contaminants from the project site. Project operations would be required to implement operational BMPs consistent with the TAMT Industrial SWPPP and discharges would be monitored regularly for pollutants. Additional operational BMPs such as containment and coverage of industrial material are required to comply with the Industrial General Permit.

The construction of structural controls to meet the design capture volume as required in the Municipal Stormwater Permit and District BMP Design Manual will also meet the structural treatment BMP requirements in the Industrial General Permit. Although the site is not required to implement structural controls per the Industrial General Permit at this time, the installation of structural controls will enable the site to treat the pollutants that are currently exceeding NALs and will be a proactive approach to addressing possible future exceedances. One option that will be explored with the project is the installation of structural controls that include a below-ground stormwater treatment system that includes pollutant removal, retention, and infiltration of the design capture volume. This approach will focus on maximizing the use of pre-treatment pollutant removal and infiltration in areas that are suitable for infiltration and only use flow-through design BMPs in areas unsuitable for infiltration.

Given the Municipal Permit's redevelopment BMP hierarchy that starts with retention of the design capture volume and also to address possible future Industrial General Permit related NAL exceedances at the site, full capture of stormwater runoff is also an option that would comply with the Municipal Stormwater Permit, address the NAL exceedances, and not require construction of an offsite alternative compliance project. This is one option that will also be explored for the project. This option also requires associated infrastructure and permits to discharge to the sanitary sewer.

The following sections identify how future components of the TAMT plan, including the Demolition and Initial Rail Component, would be consistent with the District's JRMP, BMP Design Manual, and Industrial General Permit. The information is presented by the proposed nodes.

Dry Bulk Node

As discussed in Chapter 3, *Project Description*, at the Dry Bulk Node the existing conveyor system would be upgraded to handle multiple bulk commodities, a 5-acre open air storage space would be maintained, a new semi-permanent storage facility would be constructed, and a consolidated bulk discharge unloader would be installed for cementitious materials. The following commodities would be handled: soda ash, bauxite, and cement. The maximum throughput capacity would be increased to 2,650,000 metric tons from the existing 289,864 metric tons. Although the dry bulk storage area would not be covered with a roof, the Industrial General Permit requires that all stored non-solid industrial materials or wastes (e.g., particulates, powders) that can be transported or dispersed by the wind or contact with stormwater during handling are contained on site. The Industrial General Permit further requires industrial material storage containers to be covered when not in use. Otherwise, there is relatively low potential for the commodities stored at the Dry Bulk Node to adversely affect surface water quality under normal operations.

Soda ash is the common name for sodium carbonate, a chemical compound frequently used in manufacturing and industry; it is an essential raw material in glass, chemicals, detergents, and other important industrial products. Soda ash is mildly water soluble and does not adhere to soil/sediments. Soda ash is not classified as being flammable, explosive, or toxic and it is categorized as a GRAS (Generally Recognized As Safe) substance for use in foods, by the U.S. Food and Drug

Administration. As such, it is not expected to be toxic to the environment. A large quantity of soda ash would have a relatively strong base and could affect water pH, which could adversely affect vegetation and fish (General Chemical Industrial Products 2010). However, the Industrial General Permit requires implementation of spill prevention and response procedures to minimize impacts in the event of a spill. Spilled or leaked industrial materials shall be cleaned promptly and disposed of properly.

Bauxite, an aluminum ore, is the world's main source of aluminum. Bauxite is composed primarily of aluminum oxide compounds (alumina), silica, iron oxides, and titanium dioxide, which is toxic if consumed. While no specific test data is available regarding the ecological toxicity of this ore, it is essentially insoluble in water. Therefore, accidental spills or releases are unlikely to have adverse impacts on vegetation or aquatic life (Robex 2003), but may affect species if ingested. As previously mentioned, the Industrial General Permit requires implementation of spill prevention and response procedures to minimize impacts in the event of a spill. Spilled or leaked industrial materials shall be cleaned promptly and disposed of properly. TAMT stormwater discharges currently exceed the Industrial General Permit NAL for aluminum; following preparation of an ERA, TAMT will be required to implement additional structural and non-structural BMPs to reduce aluminum discharges and comply with the Industrial General Permit. Additional discharges of aluminum could result in continued exceedances of the Industrial General Permit aluminum NAL. As a result, reducing discharges of aluminum would likely require a combination of structural and non-structural BMPs to sufficiently reduce concentrations below the Industrial General Permit NAL.

Although the LC50 (median lethal concentration) aquatic toxicity rating for cement has not been determined; cement is highly alkaline (commonly exceeding pH of 10). As such, the addition of large quantities of cement to water will cause the pH to rise and may therefore be toxic to aquatic life. High pH effects on fish can include death; damage to gills, eyes and skin; and inability to dispose of metabolic wastes. As previously mentioned, the Industrial General Permit requires that all stored non-solid industrial materials or wastes (e.g., particulates, powders) that can be transported or dispersed by the wind or contact with stormwater during handling are contained on site. The Industrial General Permit further requires industrial material storage containers to be covered when not in use.

In addition to the throughput of commodities, heavy equipment would be used at the Dry Bulk Node. The use of heavy equipment has the potential to introduce oils and grease from drips and spills into stormwater. However, as discussed above, source control, site design, and pollutant control BMPs specified in the required Industrial General Permit SWPPP and post-construction SWQMP would also include good housekeeping practices (including practices regarding heavy equipment), non-stormwater management, proper waste handling, secondary containment for hazardous materials and waste, and education and training, as identified under Section 4.8.3, *Applicable Laws and Regulations*, and primarily under 4.8.3.3, *Local*). These source control, site design, and pollutant control BMPs, specified in the required Industrial General Permit SWPPP and post-construction SWQMP, would minimize the potential for adverse impacts on water quality from operations at the Dry Bulk Node, and potential impacts would be less than significant.

Liquid Bulk Node

Although throughput of liquid bulk cargo is expected to increase over time, no physical changes such as capacity or efficiency enhancements are proposed to the existing Liquid Bulk Node. Operations at this node will continue to comply with existing BMPs specified in the required SWPPP and JRMP, including good housekeeping practices (including practices regarding heavy equipment), non-stormwater management, proper waste handling, secondary containment for hazardous materials and waste, and education and training. These BMPs would continue to minimize the potential for adverse impacts on water quality from operations at the Liquid Bulk Node. Potential water quality impacts associated with operations on the Liquid Bulk Node would be less than significant.

Refrigerated Container Node

As discussed in Chapter 3, *Project Description*, the Refrigerated Container Node would increase its maximum throughput capacity from 637,931 metric tons to 2,288,000 metric tons. The type of refrigerated cargo is expected to be diverse and dictated by market conditions and as vessel schedules permit. The Refrigerated Container Node would include installation of electrical gantry cranes and would include an outdoor equipment storage area.

Similar to the Dry Bulk Node, heavy equipment would be used at the Refrigerated Node, and use of heavy equipment has the potential to introduce oils and grease from drips and spills into stormwater. Like the other nodes, source control, site design, and pollutant control BMPs specified in the required Industrial General Permit SWPPP and post-construction SWQMP would minimize the potential for adverse impacts on water quality from operations at the Refrigerated Bulk Node. Therefore, potential water quality impacts associated with operations on the Refrigerated Container would be less than significant.

Multipurpose General Cargo Node

As discussed in Chapter 3, *Project Description*, the Multipurpose General Cargo Node would increase its maximum throughput capacity from 85,131 metric tons to 977,400 metric tons. The type of cargo is expected to be diverse and dictated by market conditions and as vessel schedules permit.

The proposed project, as part of the Demolition and Initial Rail Component, would provide an onsite below-ground stormwater treatment system located between the existing Warehouses B and C to treat the design capture volume of pollutants or provide full capture of stormwater runoff from the Multipurpose General Cargo Node and a portion of the Refrigerated Container Node, including the areas draining the existing Transit Sheds #1 and #2 and portions of Warehouses B and C. This area accounts for drainage from nearly half of the project site. The design capture volume required for this area is 117,200 cubic feet, assuming a depth of 4 feet for a proposed BMP (Harris & Associates 2016). It is assumed that excavation and fill of the proposed infiltration area would take place to allow for the maximum infiltration possible. Infiltration media would be dependent on the site-specific geotechnical recommendations. Several proposed BMPs are under consideration, including concrete retention vaults, a high-density polyethylene pipe retention system, porous pavement with high rate media filter, concrete retention vaults with high rate media filter, or a combination thereof (Harris & Associates 2016). These proposed stormwater BMP options would incorporate a new system that would allow for settling time and capture of the project site's pollutants of concern, including aluminum, copper, iron, lead, and zinc. As a result, the proposed project would not result in additional pollutant discharges from this portion of the project site and in fact would reduce overall levels of contaminants discharging from the larger TAMT site, because the first flush of pollutants from nearly half of the TAMT would be captured for treatment. The installation of the underground stormwater treatment system would require the excavation of 9,136 cubic yards of soil, which would be transported off site to several Chula Vista Bayfront parcels as identified in Chapter 3, *Project Description*, if the soil is found appropriate for use as fill. However, in the event that the Chula Vista Bayfront parcels are not able to receive the excavated soils, the soils would be disposed of in a landfill. In addition, the installation of the underground stormwater treatment system would require the import of 3,915 cubic yards of soil.

Similar to the Dry Bulk and Refrigerated Container Nodes, heavy equipment would be used at the Multipurpose General Cargo Node, and use of heavy equipment has the potential to introduce oils and grease from drips and spills into stormwater. As discussed under the other nodes, source control, site design, and pollutant control BMPs specified in the required Industrial General Permit SWPPP and post-construction SWQMP would minimize the potential for adverse impacts on water quality from operations at the Multipurpose General Cargo Node. Moreover, the stormwater treatment system or full capture system would ensure pollutants are not released into the bay. Potential water quality impacts associated with operations on the Multipurpose General Cargo Node would be less than significant.

Increased Throughput of Rail, Trucks, and Commute Vehicles

Traffic through the site would increase due to the higher throughput of commodities and new Port employees. The proposed project is anticipated to generate 423 additional truckloads of cargo each day, and require an additional 524 employees each day at the project site, generating a total of 4,110 average daily trips more per day; refer to Section 4.10, *Transportation*, for additional details. Atmospheric deposition related to Port operational emissions may provide an increased impact on the local watersheds. The additional traffic has the potential to affect stormwater quality by introducing a higher concentration of pollutants from atmospheric dispersion and deposition from exhaust, sediment from tires, and heavy metals from brake wear. Pollutants associated with road traffic include cadmium, lead, and zinc (Fallah 2014). These particles accumulate during dry weather conditions and are later washed off during storm events.

Because of the dense urban nature of the surrounding area, aerial deposition of pollutants may be dominated by traffic of the surrounding area rather than the site itself because traffic volumes from freeways, commercial roads, and surface streets outweigh the transportation volumes from the Port operations alone, in which case the additional traffic at the site may not have a significant impact on pollutants associated with roads. For suspended zinc and copper pollutants from the proposed project site (tire and brake wear from equipment and trucks), direct impacts would not be expected to significantly affect water quality due to the likely limited and dispersed nature of direct deposition on harbor waters, and because direct aerial disposition would not allow for a significant buildup of these pollutants before entering harbor waters. Lastly, the Industrial SWPPP includes a Site Monitoring Implementation Plan required by the Industrial General Permit, which describes the monthly dry weather visual observation, stormwater visual observation, and stormwater sampling that must take place at the project site in order to monitor the water quality of discharges. Discharges must comply with the Industrial General Permit NAL values and BMPs must be amended if results are above the NAL values.

Rail operations at the project site are managed in partnership with the Class I rail provider. An increase in daily rail operations could release contaminants to stormwater, including metals, braking fluids and oil, and grease from track lubrication. However, the potential for contaminant release from rail operations is anticipated to be reduced from existing conditions by this project through the installation of an automatic rail lubrication system. The system is currently lubricated by hand (i.e., bucket and rag). The automated system would reduce the potential for human error (i.e., spills) and would limit over-application of lubrication that could spill off the track.

If a release of hazardous materials were to occur as a result of train car collision or derailment, the rail operator would implement emergency response and cleanup as required by Occupational Safety and Health Administration rules (29 CFR 1910.120) and reporting requirements per Federal Railroad Administration requirements. Emergency response and cleanup would stop the spill, contain spilled material, and clean up and dispose of any spilled material, thereby minimizing potential impacts on water quality.

As discussed above, source control, site design, and pollutant control BMPs specified in the required Industrial General Permit SWPPP and post-construction SWQMP, as identified under Section 4.8.3, *Applicable Laws and Regulations*, and primarily under 4.8.3.3, *Local*, would minimize the potential for adverse impacts on water quality from the increased throughput of trucks, other vehicles, and rail associated with project operations. Moreover, federal and state regulations would help to ensure impacts would be minimized and contained in the event of an upset condition. Potential impacts would be less than significant.

Increased Throughput of Marine Vessels

The District's San Diego Harbor Safety Plan, as mandated by the OSPR Act of 1990, is designed to provide mariners using the waters of San Diego Bay an up-to-date guide to critical navigation issues that will enhance vessel safety, with the ultimate goal of pollution prevention and protection of the region's valuable resources. Best Maritime Practices are accepted and agreed-upon methods to conduct vessel transits or operations that are necessary for or enhance the safety of vessels, personnel, dockside facilities, and marine resources. It is important to note that these Best Maritime Practices are not intended to be in conflict with or replace existing federal, state, and local regulations that are already in place. Nothing in these Best Maritime Practices precludes a master or pilot from taking necessary steps and prudent actions to avoid or mitigate unsafe conditions.

Marine traffic to the site would increase due to the higher throughput of commodities; the amount of vessel traffic at the proposed project site would increase up to a total of 586 annual ship calls by 2035 as compared to the baseline conditions of 100 vessels. Although the transport of commodities is not directly under the control or authority of the applicant, water quality could be indirectly affected as a result of the project. With international, federal, and state regulations in place, the increased vessel traffic and terminal operations associated with the proposed project are not anticipated to result in increased water discharge impacts from vessels. These impacts are summarized below.

- **Propeller wash.** Vessels produce propeller wash, which is the continuous current of fast-moving water generated by a ship's propeller. The propeller wash increases the potential for scour and erosion of the dredged slopes and bottom of the navigation channel, and subsequently increases turbidity. The project would result in increased vessels and propeller wash, and potentially in impacts on erosion and turbidity, particularly from larger vessels maneuvering near the terminal. Larger vessels are more likely to create turbulence that can erode bottom sediments because the large propellers on these ships are closer to the seafloor as they travel through San Diego Bay. The propeller wash from smaller vessels, such as tugboats, is nearer the surface so it has less of an erosional effect on bottom sediments. However, vessels maneuvering into berth at the TAMT would not result in adverse effects from propeller wash. The sea floor is at depths between -30 feet mean lower low water (MLLW) (Berths 10-1, 10-2) and -42 feet MLLW (Berth 10-7) (see Table 2-1 in Chapter 2, *Environmental Setting*), as established by part of the Central Channel Deepening Project conducted by the U.S. Army Corps of Engineers and the

District in 2005. Depths at the TAMT and surrounding vicinity are sufficient to accommodate smaller Panamax-sized vessels[2] without any excessive propeller wash, which would only be temporary as the vessel maneuvers into berth and then shuts down the propeller. Moreover, within the harbor, the Port's Tariffs and Regulations include regulation of vessel speed. In addition, Best Maritime Practices identified in the San Diego Harbor Safety Plan include guidelines related to safe vessel speed and wake management, which will also help to reduce erosion impacts from propeller wash when transiting along the main channel. Impacts would be less than significant.

- **Ballast water.** Vessels occasionally use ballast water to maintain stability during cargo operations. Ballast water does occasionally contain materials that can harm surface waters. Primary among these contaminants are invasive marine plants and animals, bacteria, and pathogens that can harm or displace native aquatic species. Although extremely rare for vessels calling at the project site, some older vessels store ballast water in the same tanks that they use for cargo (nonsegregated tanks), where it can come into contact with any residual materials left in these tanks. This contaminated water would then be discharged into San Diego Bay during commodities loading, where it could degrade water quality and harm aquatic organisms.

  While these situations could affect water quality in San Diego Bay, the likelihood of such occurrences is considered to be low. Discharge of ballast water into waters of the state is not allowed unless there has been an open sea exchange (replacing coastal water with open-ocean water to reduce the density of coastal organisms), or if the vessel has treated its ballast water to meet state and federal standards set by the U.S. Coast Guard, the CWA, or the International Maritime Organization. Moreover, discharges of polluted water (such as bilge water or gray water) or ballast water directly to the harbor are managed as Best Maritime Practices identified in the San Diego Harbor Safety Plan, which includes ballast water procedures and requirements. Specifically, vessels taking ballast from ports within the Pacific Coast Region and traveling on coastal voyages must perform a coastal exchange at a minimum distance of 50 miles out and 200 meters depth prior to discharge in California. Compliance with the plan and existing state and federal standards would ensure impacts would be less than significant.

- **Vessel rupture.** Impacts could occur if the cargo tanks on a vessel are ruptured during such events as a grounding or collision. A grounding is when the vessel makes contact with a seabed or channel bottom. The potential for a vessel rupture incident is low. The number of collisions, allisions, and groundings have significantly decreased since 2001, with only one reported in 2013 and five reported in 2014, compared to 17 reported cases approximately 7 years ago (San Diego Unified Port District 2015). Best Maritime Practices identified in the San Diego Harbor Safety Plan include accidents and pollution incidents procedures and requirements. Given the low potential of the proposed project to result in a vessel rupture, impacts would be less than significant.

In summary, implementation of the required construction and post-construction BMPs, subject to the District's review, would ensure that the project is consistent with the District's JRMP. Moreover, all components of the TAMT plan buildout would be required to obtain an Industrial General Permit from the RWQCB, further ensuring that stormwater quality does not affect local receiving waters

[2] The term "Panamax" is applied to ships of the maximum size: 965-foot overall length, 106-foot beam, and 39.5-foot draft. Any Panamax-sized ships would berth at Berths 10-3/10-4 and 10-5/10-6. It is anticipated that Panamax ships would be the largest sized vessel to call at the project site and the vast majority would be smaller than the dimensions described here.

and result in impacts on water quality. Moreover, as part of the Demolition and Initial Rail Component, an onsite underground detention tank would be installed to capture runoff within the area of Transit Sheds #1 and #2 and Warehouses B and C and prevent drainage into the bay. Finally, the District's San Diego Harbor Safety Plan would help to ensure a significant water quality impact from marine vessels does not occur. Therefore, impacts would be less than significant.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Implementation of the Demolition and Initial Rail Component would not violate any water quality standards or waste discharge requirements with compliance with the District's JRMP, District's BMP Design Manual, Construction and Industrial General Permits, and the San Diego Harbor Safety Plan, and would not degrade water quality; impacts would be less than significant.

Full TAMT Plan Buildout

Buildout of the TAMT plan would not violate any water quality standards or waste discharge requirements with compliance with the District's JRMP, District's BMP Design Manual, Construction and Industrial General Permits, and the San Diego Harbor Safety Plan and would not degrade water quality; impacts would be less than significant.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required for potential water quality impacts. However, MM-HAZ-1 and MM-HAZ-2, as required in Section 4.7, *Hazards and Hazardous Materials*, would ensure soil contamination, if present, would be handled and treated in accordance with best practices and in accordance with all applicable laws and regulations. This would also help to further prevent pollutants from entering the bay.

Full TAMT Plan Buildout

No mitigation is required for potential water quality impacts. However, MM-HAZ-1 and MM-HAZ-2, as required in Section 4.7, *Hazards and Hazardous Materials*, would ensure soil contamination, if present, would be handled and treated in accordance with best practices and in accordance with all applicable laws and regulations. This would also help to further prevent pollutants from entering the bay.

Level of Significance After Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

Impacts would be less than significant.

Threshold 6: Implementation of the proposed project would not otherwise substantially degrade water quality.

Impact Discussion

Construction and Operation

As described in Threshold 1 above, the proposed TAMT plan, including the Demolition and Initial Rail Component, would not result in any significant short-term construction or long-term operational impacts on water quality. Water quality impacts would be reduced through the implementation of BMPs, as required by state and District regulations (e.g., Construction General Permit, Industrial General Permit, JRMP, Article 10).

Both construction and post-construction BMPs would be required to address both project implementation and routine operation. Examples of these BMPs are discussed under Threshold 1 and under Section 4.8.3, *Applicable Laws and Regulations*. Due to the extensive number of BMPs that would be implemented with the project, which are specifically designed to minimize site runoff and contaminants, impacts would be less than significant. The project would be considered a PDP and required to implement pollutant control BMPs, following the hierarchy described in the BMP Design Manual (retention, partial retention with biofiltration, biofiltration, or flow-through with participation in an Alternative Compliance Program). Operational BMPs such as containment and coverage of industrial material are required to comply with the Industrial General Permit.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Implementation of the Demolition and Initial Rail Component would not substantially degrade water quality; impacts would be less than significant.

Full TAMT Plan Buildout

Full buildout of the proposed TAMT plan would not substantially degrade water quality; impacts would be less than significant.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

No mitigation is required.

Level of Significance After Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

Impacts would be less than significant.

Threshold 8: Implementation of the proposed project would not place within a 100-year flood hazard area structures that would impede or redirect flood flows such that the existing environment is substantially affected.

Impact Discussion

Pursuant to the recent Supreme Court case decision in the CBIA vs. BAAQMD case, CEQA does not require an analysis of how the existing environmental conditions will affect a project's residents or users unless the project would exacerbate those conditions. Therefore, when discussing impacts of the environment on the project, such as placing structures within a 100-year flood hazard area that would impede or redirect flood flows, the analysis will first determine if there is a potential for the project to exacerbate the issue. If evidence indicates it would not, then the analysis will conclude by stating such. If it would potentially exacerbate the issue, then evidence is provided to determine if the exacerbation would or would not be significant.

Construction

An approximately 17-acre portion of the project site is in a Zone A, a Special Flood Hazard Zone, as designated by FEMA on the FIRM (Figure 4.8-2). The only portion of the Demolition and Initial Rail Component that would be within Zone A is the rail lubrication system and potentially the modular office.

Flood elevations are not determined for Zone A; Zone A areas subject to inundation by the 1 percent annual chance flood event are generally determined using approximate methodologies. Given the history at the project site and the amount of fill that has been used to raise it over the years, the District will request a Letter or Map Change (LOMC) from FEMA. If approved, the LOMC would reflect an official revision/amendment to an effective FIRM. Because the timing of an approval of a LOMC is uncertain, the analysis of flood hazard impacts for the proposed project assumes that a portion of the site is within Zone A.

In addition to the Flood Hazard Zone on site, drainage from Switzer Creek is conveyed from the jurisdictional boundary to the discharge point in the harbor by a 13-foot by 8-foot double box culvert connected to a 60-foot top-width soils ditch at the boundary. The culvert conveys runoff under the TAMT site to San Diego Bay (Figure 4.8-2). The FIRM appears not to have included the record of the facility that conveys the Switzer Creek flows into the bay. The site's topographic elevations also indicate that local runoff and any 0.2% chance flows from Switzer Creek that are conveyed past the site will flow along Water Street adjacent to the proposed buildings.

During construction activities associated with the implementation of the TAMT plan, including the Demolition and Initial Rail Component, all construction equipment would be mobile and could move to higher ground if needed. Thus, the temporary presence of the construction-related equipment would not represent a permanent change to the floodplain, and would not impede or redirect flood flows. Any open excavation occurring associated with utilities or soil removal for foundation preparation may serve to capture stormwater and impede its flow if unprotected; however, BMPs would be in place to divert runoff away from the construction site and toward proper drainage locations. Therefore, because construction of the proposed project would not exacerbate the flooding potential of the project site or the effects of flooding on the existing environment, impacts during construction would be less than significant.

Operation

No permanent or semi-permanent structures associated with the Demolition and Initial Rail Component would be within Zone A except for the 100-square-foot rail lubrication system enclosure and potentially the 3,600-square-foot modular office. Given the programmatic level of the TAMT plan, additional features associated with future components of the TAMT plan may result in the construction of a permanent or semi-permanent structure within Flood Hazard Zone A. All permanent or semi-permanent structures proposed within Zone A that are part of the TAMT plan buildout, including the Demolition and Initial Rail Component, must be designed to ensure that the floor elevation is above the floodplain and meets the structural requirements of FEMA to avoid any damage to persons or structures as a result of a 100-year flood. Approval of all permanent structure design plans by the District's Engineering Department and the City of San Diego's Engineering Section (of the Development Services Department) is a standard requirement to issue a grading and building permit. As this process is mandatory, no mitigation is needed. Moreover, given the small sizes of the two structures proposed under the Demolition and Initial Rail Component, neither of these structures would divert floodwaters such that impacts would occur on the existing environment. Therefore, because the proposed project, during operation, would not exacerbate the flooding potential of the project site or the effects of flooding on the existing environment, impacts during operation would be less than significant.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Implementation of the proposed Demolition and Initial Rail Component would not place any structures within a 100-year flood hazard area that would impede or redirect flood flows.

Full TAMT Plan Buildout

Implementation of the proposed TAMT plan would not place any structures within a 100-year flood hazard area that would impede or redirect flood flows.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

No mitigation is required.

Level of Significance After Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

Impacts would be less than significant.

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Section 4.9
Noise and Vibration

4.9.1 Overview

This section describes the existing conditions and applicable laws and regulations governing project-related noise and vibration. The section also discusses the proposed project's potential to increase noise and vibration in the project vicinity during construction and operation. Impacts related to noise and vibration were analyzed by ICF International acoustical engineers and were considered significant if the proposed project would (1) expose persons to, or generate, noise levels in excess of established standards; (2) expose persons to, or generate, excessive groundborne vibration or groundborne noise levels; (3) result in a substantial permanent increase in ambient noise levels; or (4) result in a substantial temporary or periodic increase in ambient noise levels. All other noise and vibration issues, including impacts related to public and private airport/airstrips were analyzed in Section XII of the Initial Study/Environmental Checklist (Appendix A), which is incorporated here by this reference, and were determined to be insignificant. The analysis and conclusions regarding these impacts are included in Section 6.4, *Effects Not Found to be Significant*, of Chapter 6.

Table 4.9-1 summarizes the significant impacts and mitigation measures discussed in Section 4.9.4, *Project Impact Analysis*.

Table 4.9-1. Summary of Significant Noise and Vibration Impacts and Mitigation Measures

Summary of Potentially Significant Impact(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-NOI-1: Exceedance of an Adopted Noise Standard During Plan Operation	**MM-NOI-1:** Design and Implement Acoustical Treatments for Future Systems and Equipment to Reduce Operational Noise Levels at Nearby Noise-Sensitive Land Uses **MM-NOI-2:** Initiate and Maintain a Complaint and Response Tracking Program	Significant and Unavoidable	Mitigation measure **MM-NOI-1** would potentially reduce the effects of future operational noise compared to the unmitigated condition; however, application of the measure may be limited, due to the location and number of sources involved. Mitigation measure **MM-NOI-2** would be applied as a resource to the community and may result in additional noise reduction measures over the life of the TAMT plan as sources of future noise are identified. However, these measures would not necessarily reduce impacts to a less-than-significant level.

Summary of Potentially Significant Impact(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-NOI-2: Substantial Permanent Increase in Ambient Noise Levels in the Project Site Vicinity from Buildout of the TAMT Plan	Implement **MM-NOI-1** and **MM-NOI-2.**	Significant and Unavoidable	Mitigation measure **MM-NOI-1** would potentially reduce the effects of future operational noise compared to the unmitigated condition; however, application of the measure may be limited, due to the location and number of sources involved. Mitigation measure **MM-NOI-2** would be applied as a resource to the community and may result in additional noise reduction measures over the life of the TAMT plan as sources of future noise are identified. However, these measures would not necessarily reduce impacts to a less-than-significant level.
Impact-NOI-3: Substantial Temporary Increase in Ambient Noise Levels During Construction of the Demolition and Initial Rail Component	**MM-NOI-3:** Implement a Construction Noise Reduction Plan	Significant and Unavoidable	Although construction noise levels would be reduced by implementing **MM-NOI-3**, the exact level of noise reduction that would be obtained by the proposed measures is uncertain and noise levels may remain significant.
Impact-NOI-4: Substantial Temporary Increase in Ambient Noise Levels During Construction of the Full TAMT Plan Buildout	Implement **MM-NOI-3**	Significant and Unavoidable	Although construction noise levels would be reduced by implementing **MM-NOI-3**, the exact level of noise reduction that would be obtained by the proposed measures is uncertain and noise levels may remain significant.

4.9.1.1 Noise Fundamentals

Noise is often defined as sound that is disturbing or annoying. The objectionable nature of noise can be caused by its *pitch* or its *loudness*. Pitch is the height or depth of a tone or sound, depending on the relative rapidity (*frequency*) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. Loudness is the *amplitude* of sound waves combined with the reception characteristics of the ear. Amplitude may be compared with the height of an ocean wave. Technical acoustical terms commonly used in this section are defined in Table 4.9-2.

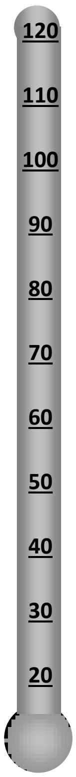
Table 4.9-2. Definitions of Acoustical Terms

Term	Definition
Decibel (dB)	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20 micro Pascals.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micro Pascals (or micro Newtons per square meter), where 1 Pascal is the pressure resulting from a force of 1 Newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micro Pascals in air). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency (Hertz [Hz])	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 and 20,000 Hz. Infrasonic sounds are below 20 Hz, and ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level (dBA)	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level (L_{eq})	The average A-weighted noise level during the measurement period. The hourly L_{eq} used for this report is denoted as dBA L_{eq}(h).
Community Noise Equivalent Level (CNEL)	The average A-weighted noise level during a 24-hour day, obtained after the addition of 5 dB to sound levels in the evening from 7 p.m. to 10 p.m. and after the addition of 10 dB to sound levels in the night between 10 p.m. and 7 a.m.
Day/Night Noise Level (L_{dn})	The average A-weighted noise level during a 24-hour day, obtained after the addition of 10 dB to levels measured in the night between 10 p.m. and 7 a.m.
L_1, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded 1, 10, 50, and 90% of the time during the measurement period.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, time of occurrence, and tonal or informational content as well as the prevailing ambient noise level.

Decibels and Frequency

Levels of sound are measured and expressed in decibels (dB). Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. Methods used to measure or quantify sound levels depend on the source, the receiver, and the reason for measurement. The most common metric is the overall A-weighted sound level measurement, which measures sound in a manner similar to the way a person perceives or hears sound, thus achieving a strong correlation for evaluating acceptable and unacceptable sound levels. A-weighted measurement of decibels (expressed as dBA) has been adopted by regulatory bodies worldwide. Table 4.9-3 shows typical A-weighted noise levels that occur in human environments.

Table 4.9-3. Typical Noise Levels in the Environment



Noise Level dBA	Extremes	Home Appliances	Speech at 3 Feet	Motor Vehicles at 50 Feet	General Type of Community Environment
	Jet aircraft at 500 feet				
		Chain saw			
		Power lawnmower		Diesel truck (not muffled)	
		Shop tools	Shout	Diesel truck (muffled)	
		Blender	Loud voice	Automobile at 70 mph	Major metropolis
		Dishwasher	Normal voice	Automobile at 40 mph	Urban (daytime)
		Air-conditioner	Normal voice (back to listener)	Automobile at 20 mph	Suburban (daytime)
		Refrigerator			Rural (daytime)
	Threshold of hearing				

Source: Harris Miller Miller & Hanson, Inc. 2003.
mph = miles per hour

Noise Descriptors

Ambient sound levels typically fluctuate over time. A-weighted sound levels are typically measured or presented as equivalent noise levels (L_{eq}), which is defined as the average sound level for a stated period of time. The L_{eq} is commonly used to measure steady-state sound that is usually dominant.

Statistical methods are used to capture the dynamics of a changing acoustical environment. These measurements are typically denoted by L_{xx}, where $_{xx}$ represents the percentage of time a sound level is exceeded. L_{90} represents the sound level that is exceeded during 90% of the measurement period. Similarly, L_{10} represents the sound level exceeded for 10% of the measurement period. Another sound level expression is L_{max}, which is the maximum sound pressure level over a defined period.

Another variable that is often considered in determining the effect of environmental noise is the difference in response that people have to daytime and nighttime noise levels. During the evening and at night, exterior background noises are generally lower than daytime levels. However, most household noise also decreases at night and exterior noise becomes more noticeable. Furthermore, most people sleep at night and are more sensitive to intrusive noises at that time. To account for human sensitivity to evening and nighttime noise levels, the Daytime-Nighttime Noise Level (abbreviated as L_{dn}) and California's Community Noise Equivalent Level (CNEL) were developed. L_{dn} is a noise metric that accounts for the greater annoyance of noise during nighttime hours (10 p.m. to 7 a.m.). CNEL is a noise index that accounts for the greater annoyance of noise during the evening hours (7 p.m. to 10 p.m.) and nighttime hours.

L_{dn} is calculated by averaging hourly L_{eq} sound levels for a 24-hour period and applying a weighting factor to the nighttime L_{eq} values. CNEL values are calculated similarly, except that a weighting factor is also added to evening L_{eq} values. The weighting factors, which reflect the increased sensitivity to noise during evening and nighttime hours, are added to each hourly L_{eq} sound level before the 24-hour L_{dn} or CNEL is calculated. For the purposes of assessing noise, the 24-hour day is divided into three time periods, with the following weightings.

- Daytime hours: 7 a.m. to 7 p.m. (12 hours)—weighting factor of 0 dBA.
- Evening hours (for CNEL only): 7 p.m. to 10 p.m. (3 hours)—weighting factor of 5 dBA.
- Nighttime hours (for both CNEL and L_{dn}): 10 p.m. to 7 a.m. (9 hours)—weighting factor of 10 dBA.

The adjusted time-period noise levels are then averaged to compute the overall L_{dn} or CNEL value. For a continuous sound source, the L_{dn} value is easily computed by adding 6.4 dBA to the overall 24-hour sound level (L_{eq}). For example, if the expected continuous sound level from a sound source is 60.0 dBA, the resulting L_{dn} from the source would be 66.4 dBA. Similarly, the CNEL for a continuous sound source is computed by adding 6.7 dBA to the overall 24-hour L_{eq}.

Human Response to Noise

Noise-sensitive receptors (also called "receivers") are locations where people reside or where the presence of unwanted sound may adversely affect the use of the land. Noise-sensitive receptors typically include residences, hospitals, schools, guest lodging, libraries, and certain types of passive recreational uses.

The effects of noise on people can be listed in three general categories.

- Subjective effects of annoyance, nuisance, dissatisfaction
- Interference with activities such as speech, sleep, learning
- Physiological effects such as startling and hearing loss

In most cases, effects from sounds typically found in the natural environment (compared to an industrial or an occupational setting) would be limited to the first two categories: creating an annoyance or interference with activities. No completely satisfactory method exists to measure the subjective effects of sound or the corresponding reactions of annoyance and dissatisfaction. This lack of a common standard arises primarily from the wide variation in individual thresholds of annoyance and habituation to sound. Therefore, an important way of determining a person's subjective reaction to a new sound is by comparing it to the existing or "ambient" environment to which that person has adapted. In general, the more the level or tonal (frequency) variations of a sound exceed the previously existing ambient sound level or tonal quality, the less acceptable the new sound will be, as judged by the exposed individual.

The general human response to changes in sound levels having similar frequency content (for example, comparing increases in continuous [L_{eq}] traffic sound levels) is summarized (FHWA 2011) as follows.

- A 3-dB change in sound level is considered a barely noticeable difference.
- A 5-dB change in sound level is considered discernible, or readily noticeable.
- A 10-dB change in sound level is considered to be a doubling in loudness.

Equipment and vehicle operation during nighttime hours can potentially result in noise events that disturb the sleep of people living in nearby residential areas. Interior noise levels between 50 and 55 dBA L_{max} during nighttime hours (10 p.m. to 7 a.m.) were found to result in sleep disturbance and annoyance (Nelson 1987).

Sound Propagation

When sound propagates over a distance, it changes in both level and frequency content. The manner in which noise is reduced with distance depends on the following important factors.

Geometric spreading. In the absence of obstructions, sound from a single source (i.e., a point source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates (or drops off) at a rate of 6 dBA for each doubling of distance. Highway noise is not a single stationary point source of sound. The movement of vehicles on a highway makes the source of the sound appear to emanate from a line (i.e., a line source) rather than from a point. This results in cylindrical spreading rather than the spherical spreading resulting from a point source. The change in sound level from a line source is 3 dBA per doubling of distance.

Ground absorption. Usually the noise path between the source and the observer is very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation because of geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is done for simplification only; for distances of less than 200 feet, prediction results based on this scheme are sufficiently accurate. For acoustically hard sites (i.e., sites with a reflective surface, such as a parking area or a smooth body of water, between the source and the receiver), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., sites with an absorptive ground surface, such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dBA per doubling of distance is normally assumed. When added to the geometric spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dBA per doubling of distance for a line source and 7.5 dBA per doubling of distance for a point source.

Atmospheric effects. Receptors located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can experience lowered noise levels. Sound levels can be increased at large distances from the highway (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence also can cause significant effects.

Shielding by natural or human-made features. A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by this shielding depends on the size of the object, proximity to the noise source and receiver, surface weight, solidity, and the frequency content of the noise source. Natural terrain features (such as hills and dense woods) and human-made features (such as buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receiver specifically to reduce noise. A barrier that breaks the line of sight between a source and a receiver will typically result in at least 5 dB of noise reduction. A higher barrier may provide as much as 20 dB of noise reduction.

4.9.1.2 Environmental Vibration Fundamentals

In contrast to airborne sound, groundborne vibration is not a phenomenon that most people experience every day. The background vibration velocity level in residential areas is usually much lower than the threshold of human perception. Most perceptible indoor vibration is caused by sources within buildings, such as mechanical equipment while in operation, people moving, or doors slamming. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. Dynamic construction equipment, such as pile drivers, can create vibrations that radiate along the surface and downward into the earth. These surface waves can be felt as groundborne vibration. Vibration can result in effects that range from annoyance to structural damage. Variations in geology and distance result in different vibration levels with different frequencies and displacements.

Groundborne vibration can be described in terms of peak particle velocity (PPV). PPV is defined as the maximum instantaneous positive or negative peak amplitude of the vibration velocity. The unit of measurement for PPV is inches per second (in/s).

4.9.2 Existing Conditions

Noise-sensitive land uses are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. As described above, noise-sensitive land uses typically include residences, hospitals, schools, libraries, and certain types of passive recreational uses. Guest lodging facilities, such as hotels, are not considered by the District to be sensitive to daytime noise from project construction or operation; however, they are considered to be sensitive to potential evening and nighttime noise (i.e., noise generated by project construction or operation between 7 p.m. and 7 a.m.).

Noise-sensitive land uses surrounding the project site include the following.

- Embarcadero Marina Park South
- Hilton Bayfront Hotel (sensitive to evening and nighttime noise only)
- Bayfront Park (adjacent to Hilton Bayfront Hotel)
- Cesar Chavez Park (south of the project site)
- Single- and multi-family residences
- Perkins Elementary School
- Monarch School

These locations are shown on Figure 4.9-1.

4.9.2.1 Long-term Noise Measurements

Long-term ambient noise measurements were conducted between April 6 and April 7, 2015, at two locations near the project site using Piccolo Type 2 sound level meters. Long-term measurement sites were selected to capture daily noise level patterns and statistics continuously over 1-hour intervals at a nearby location and across the bay. A minimum of 24 hours of continuous data were recorded. Daily noise levels in terms of CNEL were calculated from hourly sound level data. Table 4.9-4 summarizes the results of the long-term noise measurements. Long-term monitoring locations are shown on Figure 4.9-1.

Table 4.9-4. Long-term Noise Measurements

Site #	Location	CNEL	Range of Hourly L_{eq} Values
LT-1	Broadstone Coronado on the Bay Apartments	62.2	49.0–61.9 dBA (7 a.m. to 10 p.m.) 45.6–57.4 dBA (10 p.m. to 7 a.m.)
LT-2	Embarcadero Marina Park South	61.1	53.0–61.4 dBA (7 a.m. to 10 p.m.) 52.2–56.6 dBA (10 p.m. to 7 a.m.)

Source: Appendix K

The existing noise environment is characterized below based on noise monitoring conducted at sensitive land uses near the project site.

LT-1: Broadstone Coronado on the Bay Apartments

Equipment for long-term monitoring site LT-1 was mounted on a tree parallel to the façade of an apartment building facing the project site. The highest hourly noise level measured was 61.9 dBA hourly equivalent sound level (L_{eq}[h]) during the 11 a.m. hour. The measured CNEL value was 62.2 dBA.

LT-2: Embarcadero Marina Park South

Equipment for long-term monitoring site LT-2 was mounted on a tree next to the shoreline of the park facing the project site. The highest hourly noise level measured was 61.4 dBA L_{eq}(h) during the 6 p.m. hour. The measured CNEL value was 61.1 dBA.

4.9.2.2 Short-term Noise Measurements

Short-term measurement locations were selected to supplement long-term measurements at surrounding land uses. Short-term noise measurements were taken at three measurement sites (ST-1, ST-2, and ST-3) near the project site to establish the existing ambient noise environment in nearby neighborhoods. The measurements were taken on Monday, April 6, 2015, using a Larson Davis Model LxT Type 1 sound level meter. Each measurement lasted 15 minutes and was conducted with the meter mounted on a tripod with a wind screen to reduce the effects of wind-related interference. A Larson Davis CAL200 calibrator was used to calibrate the meter for each measurement. Noise metrics—including L_{eq}, minimum sound pressure level (L_{min}), L_{max}, L_{10}, L_{50}, and L_{90} noise descriptors—were recorded subsequent to the conclusion of each measurement.

Figure 4.9-1
Noise Measurement and Sensitive Receptor Locations
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component

Measurement data were collected at one site (ST-4) for 6 hours. The collected hourly data is presented in this section as extended short-term data. Hourly data from the measurement are shown in Table 4.9-5.

Noise measurements taken by ICF at two locations (ST-5 and ST-6) in the vicinity of the project in 2011 are included as background information to supplement noise measurement data obtained for the proposed project. These measurements are still relevant today given that the area conditions are currently similar to what they were 4 years ago; however, they primarily serve to simply provide a more well-rounded understanding of the existing noise environment. The results of the short-term measurements are shown in Table 4.9-5 and measurement locations are shown on Figure 4.9-1.

Noise conditions at the time of noise measurements are described below.

ST-1: Cesar Chavez Park

The noise environment within the park was defined primarily by traffic, rail, and industrial sources. Other sources present included children playing and people talking at picnic areas within the park. There is an approximately 6-foot-tall solid concrete block wall along the western boundary of the park.

ST-2: Mercado del Barrio Mixed-Use Residential/Commercial, Cesar E. Chavez Parkway

The noise environment was defined primarily by local traffic. Other sources present included aircraft noise and distant grade crossing bells.

ST-3: Perkins Elementary School, 1770 Main Street

The sound level meter at this location was installed just outside the schoolyard fence near the corner of Main Street and Beardsley Street. The noise environment was defined primarily by local traffic, rail, and aircraft sources.

ST-4: Residences, 1855/1861 Newton Avenue

An unattended measurement was taken at this location. A total of 6 hours of data were collected.

ST-5: Outside Patio of McCormick and Schmick's – Ground Floor of Omni San Diego Hotel

The noise environment outside of the McCormick and Schmick's restaurant outdoor eating area at the Omni San Diego Hotel was defined primarily by traffic along Harbor Drive. The L_{min} during the measurement was set by music speakers on the restaurant patio. Other noise sources included the bells from approaching trolleys.

ST-6: Crown Bay Condominiums, 350 K Street

The noise environment outside of the Crown Bay Condos was defined primarily by traffic along K Street in downtown San Diego. Other noise sources included military helicopters, the trolley passing to the south, and bells at the trolley station.

Table 4.9-5. Short-term Noise Measurements

Site	Location	Date	Time	Duration	Measured Noise Levels (dBA)					
					L_{eq}	L_{max}	L_{min}	L_{90}	L_{50}	L_{10}
ST-1	Cesar Chavez Park	April 6, 2015	2:13 p.m.	15 minutes	56.6	67.4	53.7	54.6	55.8	58.1
ST-2	Mercado del Barrio mixed-use residential/commercial, Cesar E. Chavez Parkway	April 6, 2015	2:49 p.m.	15 minutes	64.9	76.3	57.4	60.2	62.9	67.8
ST-3	Perkins Elementary School, 1770 Main Street	April 6, 2015	3:25 p.m.	15 minutes	64.0	77.2	51.9	54.3	59.5	67.8
ST-4	Residences, 1855/1861 Newton Avenue	April 6, 2015	11:00 a.m.	1 hour	54.0	74.9	47.7	49.0	50.0	54.0
			12:00 p.m.	1 hour	53.4	71.8	47.8	49.5	51.0	54.5
			1:00 p.m.	1 hour	60.2	86.3	48.4	50.0	52.5	60.5
			2:00 p.m.	1 hour	53.1	71.4	47.8	49.5	51.0	54.5
			3:00 p.m.	1 hour	53.1	68.6	47.4	49.0	50.5	54.0
			4:00 p.m.	1 hour	53.2	75.7	47.7	49.5	51.0	53.5
ST-5	Outside patio of McCormick and Schmick's – ground floor of Omni San Diego Hotel	March 16, 2011	11:10 a.m.	15 minutes	59.3	72.8	53.8	55.3	57.9	61.6
ST-6	Crown Bay Condominiums, 350 K Street	March 16, 2011	1:00 p.m.	15 minutes	57.5	68.1	49.6	52.8	56.6	60.0

4.9.3 Applicable Laws and Regulations

4.9.3.1 Federal Standards

The Federal Noise Control Act of 1972 (Public Law 92 574) established a requirement that all federal agencies administer their programs to promote an environment free of noise that would jeopardize public health or welfare. The U.S. Environmental Protection Agency (EPA) was given responsibility for the following.

- Providing information to the public regarding identifiable effects of noise on public health and welfare
- Publishing information on the levels of environmental noise that will protect the public health and welfare with an adequate margin of safety
- Coordinating federal research and activities related to noise control
- Establishing federal noise emission standards for selected products distributed in interstate commerce

As part of its responsibility, EPA published *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety* in 1974 (EPA 1974). This report identifies sound levels less than or equal to 55 L_{dn} as being appropriate outdoors for residential areas and other places in which quiet is a basis for uses to avoid annoyance and interference with outdoor activity (EPA 1974).

4.9.3.2 State Regulations

California requires each local government entity to perform noise studies and implement a noise element as part of its general plan. State land use guidelines for evaluating the compatibility of various land uses as a function of community noise exposure are presented in Section 4.9.3.3, *Local*, below.

California Code

Part 2, Title 24 of the California Code of Regulations, "California Noise Insulation Standards," establishes minimum noise insulation standards to protect people in new hotels, motels, dormitories, long-term care facilities, apartment houses, and dwellings other than single-family residences. Under this regulation, interior noise levels attributable to exterior noise sources cannot exceed 45 L_{dn} in any habitable room.

4.9.3.3 Local

Port of San Diego Port Master Plan

The proposed project is within the jurisdiction of the District. Key environmental policies in the Port Master Plan (PMP) are described below.

Planning Goals

Section II of the PMP sets forth goals and related policies for development and operation of land within the District's jurisdiction.

Goal VIII. The Port District will enhance and maintain the bay and tidelands as an attractive physical and biological entity.

Establish guidelines and standards facilitating the retention and development of an aesthetically pleasing tideland environment free of noxious odors, excessive noise, and hazards to the health and welfare of the people of California.

City of San Diego Municipal Code 59.5.0401 (Noise Ordinance)

The Noise Ordinance makes it unlawful for any person to cause noise by any means to the extent that the 1-hour average sound level exceeds the applicable limit given in Table 4.9-6 at any location in the City of San Diego on or beyond the boundaries of the property on which the noise is produced.

Table 4.9-6. Applicable City Noise Limits

Land Use	Time of Day	1-Hour Average Sound Level (dB)
Single Family Residential	7 a.m. to 7 p.m.	50
	7 p.m. to 10 p.m.	45
	10 p.m. to 7 a.m.	40
Multi-Family Residential (up to a maximum density of 1/2,000)	7 a.m. to 7 p.m.	55
	7 p.m. to 10 p.m.	50
	10 p.m. to 7 a.m.	45
All other Residential	7 a.m. to 7 p.m.	60
	7 p.m. to 10 p.m.	55
	10 p.m. to 7 a.m.	50
Commercial	7 a.m. to 7 p.m.	65
	7 p.m. to 10 p.m.	60
	10 p.m. to 7 a.m.	60
Industrial or Agricultural	Any time	75

Source: City of San Diego Municipal Code.

City of San Diego Municipal Code 59.5.0404 (Construction Noise)

The City's Noise Ordinance also regulates construction noise levels. Specifically, construction that creates disturbing, excessive, or offensive noise is prohibited between the hours of 7:00 p.m. of any day and 7:00 a.m. of the following day, and on legal holidays as specified in Section 21.04 of the San Diego Municipal Code, with the exception of Columbus Day and Washington's Birthday, and on Sundays unless a permit is granted by the Noise Abatement and Control Administrator. In granting a permit, the Administrator must consider whether the construction noise in the vicinity of the proposed work site would be less objectionable at night than during the daytime because of different population densities or different neighboring activities; whether obstruction and interference with traffic particularly on streets of major importance, would be less objectionable at night than during the daytime; whether the type of work to be performed emits noises at such a low level as to not cause significant disturbances in the vicinity of the work site; the character and nature of the neighborhood of the proposed work site; whether great economic hardship would occur if the work were spread over a longer time; whether proposed night work is in the general public interest; and he shall prescribe such conditions, working times, types of construction equipment to be used, and permissible noise levels as he deems to be required in the public interest. Except under special circumstances related to emergency work as detailed in the Noise Ordinance, construction activity that creates an average sound level greater than 75 dB during the 12-hour period from 7:00 a.m. to 7:00 p.m. at or beyond the property lines of any property zoned residential is prohibited by ordinance.

City of San Diego Significance Determination Thresholds

The City of San Diego has created guidance for determination of CEQA significance levels, including what would constitute a significant noise impact (*California Environmental Quality Act, Significance Determination Thresholds,* Development Services Department). These thresholds are used in the analysis and are listed under Section 4.9.4.2, *Thresholds of Significance*.

4.9.4 Project Impact Analysis

4.9.4.1 Methodology

Construction Noise and Vibration

The assessment of potential construction noise levels was based on methodology developed by the Federal Transit Administration (FTA) in its *Transit Noise and Vibration Impact Assessment* handbook (2006). Construction noise source levels for each type of equipment were determined at a distance of 50 feet from each source. Noise levels associated with project-related construction activities were evaluated by calculating the composite noise level of the loudest pieces of equipment that would operate on the project site (cranes, trucks, concrete saw). Noise levels of construction equipment expected to be used by the project are shown in Table 4.9-7. Equipment assumptions for each type of construction activity are included in Appendix K.

Table 4.9-7. Construction Equipment Noise Emission Levels

Equipment	Typical Noise Level (dBA) 50 Feet from Source
Backhoe	85
Loader	85
Grader	85
Dozer	85
Roller	74
Paver	85
Compactor	80
Large Crane	88
Truck	84
Pneumatic Tool	85
Generator	81
Pump	76
Pickup Truck	55

Sources: Federal Transit Administration 2006; Thalheimer 2000.
dBA = A-weighted decibel

Operational Noise

Operational noise from onsite vehicles and offloading operations was based on measured source levels. Propagation to sensitive receptor locations is based on FTA methods.

On-Terminal Operations

During the project site visit described above, noise monitoring was conducted to characterize intervals of peak cargo offloading activity.[1] During these operations, vessels were at berth and gantry cranes were used to move individual containers from a cargo vessel to waiting trucks in the yard. Gantry cranes were observed to produce distinct clanging and engine sounds during the process of latching on to containers and moving them off a ship. Noise from trucks driving within the yard was also noticeable during offloading. Data collected from measurements were normalized for distance, with a resultant level of 84.9 dBA L_{eq} at a distance of 50 feet for offloading operations. Noise monitoring results from the site visit are shown in Appendix K.

On-Terminal Railroad Operations

The analysis of noise associated with railroad operations was conducted using the Create Rail Noise Model (HMMH 2006), which is a spreadsheet noise model based on the general noise assessment methodologies of FTA's *Transit Noise and Vibration Impact Assessment* (FTA 2006). The analysis was based on operational information provided in the project description and data provided by the project proponent.

[1] These noise measurements reflect noise during offloading of Dole Fresh Fruit refrigerated containers.

Off-Terminal Traffic

The project-related increase in traffic noise levels was determined based on predicted traffic generation and data from the *Transportation Impact Analysis Report* prepared by Chen Ryan (Appendix K). Traffic noise emissions were developed from data tables based on noise prediction algorithms from the Federal Highway Administration Traffic Noise Model Version 2.5 (Federal Highway Administration 1998, 2004).

4.9.4.2 Thresholds of Significance

The following significance criteria are based on Appendix G of the State CEQA Guidelines and the City of San Diego's CEQA Significance Determination Thresholds and provide the basis for determining significance of impacts associated with noise and vibration resulting from the proposed project. The determination of whether a noise impact would be significant is based on the applicable noise thresholds and the professional judgment of the District as Lead Agency supported by the recommendations of qualified personnel at ICF and based wholly on the substantial evidence in the administrative record.

Impacts are considered significant if the project would result in any of the following.

1. Expose persons to or generate noise levels in excess of standards established in the City of San Diego's Significance Determination Thresholds and/or the City's Noise Ordinance.
2. Expose persons to or generate excessive groundborne vibration or groundborne noise levels.
3. Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
4. Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
5. Expose people residing or working in the project area within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, to excessive noise levels.
6. Expose people residing or working in the project area within the vicinity of a private airstrip to excessive noise levels.

The analysis of whether the proposed project would have a significant impact associated with noise and vibration under Thresholds 5 and 6 is provided in Section XII of the Initial Study/Environmental Checklist (Appendix A), which determined that the project would not result in significant impacts related to aircraft noise. The analysis and conclusions in Section XII of the Initial Study/Environmental Checklist are incorporated by reference in this section of the Draft EIR and are summarized in Chapter 6, *Additional Consequences of Project Implementation*. Therefore, only Thresholds 1 through 4 are discussed in the impact analysis that follows.

Supplemental Thresholds

City of San Diego

Because the District does not maintain significance criteria for noise impacts, the City of San Diego criteria mentioned in Section 4.9.3, *Applicable Laws and Regulations*, are used for determining CEQA significance levels, as summarized below.

Noise from Adjacent Stationary Uses (Noise Generators)

A project that would generate noise levels at the property line that exceed the City's Noise Ordinance Standards is considered potentially significant. The sound level limit along the boundary line between two zoning districts is the arithmetic mean of the respective limits for the two districts, ~~If a non-residential use, such as commercial, industrial, or school use, is proposed to abut an existing residential use, the decibel limit at the property line should be the arithmetic mean of the decibel levels allowed for each use~~ as set forth in Section 59.5.0401 of the Municipal Code. It is noted that, even if project noise levels comply with the arithmetic mean noise limits permitted by the City's Noise Ordinance Standards, it is still possible that daily noise levels could exceed 65 dBA CNEL at the residential property line, which could be considered a significant environmental impact. For the purposes of this analysis, hotels are considered a commercial use in the context of the City's noise ordinance.

Noise from Traffic

Traffic noise significance thresholds are shown in Table 4.9-8.

Table 4.9-8. Traffic Noise Significance Thresholds

Structure or Proposed Use that Would Be Affected by Traffic Noise	Interior Space (CNEL)	Exterior Usable Space[1] (CNEL)	General Indication of Potential Significance
Single-family Detached	45 dB	65 dB	Structure or outdoor usable area[2] is <50 feet from the center of the closest (outside) lane on a street with existing or future ADT >7,500
Multi-Family, Schools, Libraries, Hospitals, Day Care, Hotels, Motels, Parks, Convalescent Homes	Development Services Department ensures 45 dB pursuant to Title 24	65 dB	
Offices, Churches, Business, Professional Uses	N/A	70 dB	Structure or outdoor usable area is <50 feet from the center of the closest lane on a street with existing or future ADT >20,000
Commercial, Retail, Industrial, Outdoor Spectator Sports Uses	N/A	75 dB	Structure or outdoor usable area is <50 feet from the center of the closest lane on a street with existing or future ADT >40,000

Source: City of San Diego 2011.

[1] If a project is currently at or exceeds the significance thresholds for traffic noise described above and noise levels would result in less than a 3 dB increase, then the impact is not considered significant.

[2] Exterior usable areas do not include residential front yards or balconies, unless the areas (such as balconies) are part of the required usable open space calculation for multi-family units.

ADT = average daily traffic

N/A = not applicable

Temporary Construction Noise

Temporary construction noise that exceeds 75 dBA L_{eq} at a sensitive receptor would be considered significant. Construction noise levels measured at or beyond the property lines of any property zoned residential cannot exceed an average sound level greater than 75 dB L_{eq} during the 12-hour period from 7 a.m. to 7 p.m. In addition, construction activity is prohibited between the hours of 7 p.m. of any day and 7 a.m. of the following day, or on legal holidays as specified in Section 21.04 of the San Diego Municipal Code, with the exception of Columbus Day and Washington's Birthday, or on Sundays, that would create disturbing, excessive, or offensive noise unless a permit has been applied for and granted beforehand by the Noise Abatement and Control Administrator, in conformance with San Diego Municipal Code Section 59.5.0404.

Additionally, where temporary construction noise would substantially interfere with normal business communication, or affect sensitive receptors, such as daycare facilities, a significant noise impact may be identified.

Vibration

Because neither the District nor the City maintain regulatory standards for vibration sources, potential structural damage and human annoyance associated with vibration from construction activities were evaluated based on California Department of Transportation (Caltrans) vibration limits (see Table 4.9-9). A vibration level of 0.04 inch per second peak particle velocity (PPV) was used to evaluate impacts on nearby receptors because this is the level at which transient vibrations begin to become perceptible.

Table 4.9-9. Reaction of People Due to Groundborne Vibration

	Maximum PPV (inches/second)	
Human Response	**Transient Sources**	**Continuous/Frequent Intermittent Sources**
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.90	0.10
Severe	2.00	0.40

Source: Caltrans 2013.

4.9.4.3 Project Impacts and Mitigation Measures

Threshold 1: Implementation of the proposed project <u>would</u> expose persons to or generate noise levels in excess of standards established in the City of San Diego's Significance Determination Thresholds and/or the City's Noise Ordinance.

Impact Discussion

Demolition and Initial Rail Component

Construction

Demolition of Transit Sheds #1 and #2 and installation of utilities, pole lighting, repaving, rail components, IT room, outdoor storage, and modular office and restrooms would be completed between 2017 and 2020, with the demolition of Transit Sheds #1 and #2 requiring approximately 15 and 18 months, respectively. Equipment assumptions for each type of construction activity are included in Appendix K. Construction would take place during daytime and evening hours between 7 a.m. and 7 p.m. Noise from construction would be temporary and intermittent, and would cease once construction is complete.

Bayfront Park is the nearest sensitive outdoor use to the transit sheds, approximately 900 feet away from the project site. Outdoor noise levels during demolition of the transit sheds could reach a maximum level of approximately 63 dBA L_{eq}. This is below the City threshold of 75 dBA L_{eq} for temporary construction noise.

The nearest residential use is a row of residences at the corner of Newton Avenue and Cesar E. Chavez Parkway, approximately 2,000 feet away from the project site. Outdoor noise levels from construction of new facilities could reach a maximum level of approximately 52 dBA L_{eq}. This is also below the City threshold of 75 dBA L_{eq} for temporary construction noise. This impact is therefore considered less than significant.

Operation

On-Terminal Activities

Cargo offloading and bulk handling activities at the project site occur 24 hours a day, 7 days a week on an intermittent basis, as cargo is delivered to the project site by vessels, rail, and trucks. Although the Demolition and Initial Rail Component would allow for an increase in onsite activities by increasing the capacity for additional throughput, this component would not be entirely responsible for near-term noise in 2020 from sources such as these because such activities already take place at the site. The Demolition and Initial Rail Component would be responsible only for the additional noise caused by the expansion of existing operations, which includes new equipment such as the compressed air generator for two air brake testing locations, a rail lubrication system, and any other additional equipment use introduced. Under current conditions, vessel unloading noise could occur at any time during a 24-hour day, which would also be true under future conditions.

Noise levels from operation would involve the use of equipment installed for the Demolition and Initial Rail Component. The project would add a compressed air system, including a compressed air generator that would be housed in two 100-square-foot enclosures on the terminal. Compressed air would include piping to several rails in the terminal for air brake testing of rail vehicles. Air brake tests involve release of compressed air, which cycles on and off for about 7 minutes, with noise levels of up to 88 dBA L_{eq} at 50 feet (Wilkinson Murray 2010). This is assumed to occur once for each rail vehicle visiting the terminal (up to six times per day). Under existing conditions, air brake testing of vehicles is conducted at the adjacent Burlington Northern Santa Fe rail yard. The proposed test site would be farther from noise-sensitive receptors to the north of the project site. The noise-sensitive receptor receiving the highest noise levels during air brake testing would be Cesar Chavez Park, with a noise level of up to 59 dBA L_{eq}, accounting for utilization (up to 7 minutes in a given hour). Noise levels at other park, hotel, school, and residential receptors would be below 50 dBA L_{eq} (see Appendix K). These levels would be below the City noise ordinance standard of 60 dBA L_{eq} for park use.

An automatic rail lubricator, which is susceptible to high-frequency squeal noise from the wheel-rail interface of rail vehicles traveling over the curve, would be installed on a curved segment of track within the terminal. The lubricator would replace an existing manual process. Operation of the rail lubricator would result in reduced noise from occasional wheel squeal events due to rail vehicles moving within the terminal.

Noise levels associated with the increase in throughput from the Demolition and Initial Rail Component, once in operation, would be similar to the existing condition; however, the noise levels associated with operations would occur on a more frequent basis because of the more frequent onsite activity. As noted under the operational noise associated with full TAMT plan buildout, the main source of noise from the full buildout condition would be the use of up to five gantry cranes and the bulk loader pneumatic discharge system. Under the Demolition and Initial Rail component, these components from the TAMT plan full buildout would not yet be operational, and noise from these features would not contribute to near-term noise levels.

Therefore, noise levels from operation of the Demolition and Initial Rail Component would not result in an exceedance of City noise ordinance standards. Impacts would be less than significant.

Traffic Noise

Land uses that dominate along Harbor Drive are predominantly industrial in nature and include a significant amount of land dedicated to surface parking, marine-related industrial operations (primarily south of Harbor Drive), energy facilities, and general warehouse space. Land uses along 28th Street also include surface parking, warehouses, fast food (i.e., El Pollo Loco, Del Taco, Burger King, and McDonald's), and a gas station. Residential, institutional, park, and other sensitive land uses are not located within 50 feet of the center of the outermost lane along Harbor Drive or 28th Street. Therefore, the threshold that applies to traffic noise along these roadways is 75 dBA CNEL as indicated in Table 4.9-8. Existing traffic noise levels along Harbor Drive reach up to a range from 69–72 dBA CNEL depending on the portion of Harbor Drive considered, and reach up to 67 dBA CNEL along 28th Street.

Once the Demolition and Initial Rail Component is operational, the project is expected to generate up to 14 truck trips and 276 commuter vehicle trips per day. Under existing conditions, East Harbor Drive carries an average daily traffic volume of approximately 10,000 to 21,000 vehicles (Appendix G). The added traffic from the Demolition and Initial Rail Component would result in a traffic noise increase of less than 1 dB on Harbor Drive and adjacent roadways, as shown in Table 4.9-10. An increase of this magnitude would not be noticeable above the existing noise levels because it is less than 3 dBA. Therefore, the Demolition and Initial Rail Component's traffic-related noise impacts would be less than significant.

Table 4.9-10. Traffic Noise Levels with the Demolition and Initial Rail Component Operational

	Average Daily Traffic		CNEL (dBA)				
Roadway Segment	Existing	Demolition and Initial Rail Component Trip Generation	Existing	Demolition and Initial Rail Component Project	Existing Plus Demolition and Initial Rail Component	Increase (dB)	Significant?
Harbor Drive, west of Cesar E. Chavez Parkway	20,194	66 Autos, 5 Heavy Trucks	72	51	72	0	No
Harbor Drive, east of Cesar E. Chavez Parkway	12,050	144 Autos, 14 Heavy Trucks	69	53	69	0	No
28th Street, north of Harbor Drive	19,563	7 Heavy Trucks [1]	67	47	67	0	No

Source: Appendix G (traffic only); Appendix K (noise calculations)

[1] Based on proportional roadway distribution from Future Plan Year 2035 analysis.

Increase in Rail Capacity

Installation of intermodal rail facilities and increase in throughput is expected to allow for increased accommodation of rail traffic at the project site, although the ratio of trucks to rail use is expected to remain constant under the life of the TAMT plan due to distribution considerations specific to the cargo types.[2] Under existing conditions on a maximum day, one train is present for TAMT cargo, which is either dry bulk or multi-purpose general cargo.[3]

Dry bulk goods are routinely imported into the project site by rail. The throughput capacity added by the Demolition and Initial Rail Component would not target an increase in dry bulk operations because it would provide open surface storage for containers and general cargo, rather than enclosures for dry bulk. Consequently, the Demolition and Initial Rail Component is not expected to increase rail use in any significant way as it relates to dry bulk.

In addition, approximately 10% of general cargo/break bulk is exported by rail. This proportion is expected to stay fixed with the Demolition and Initial Rail Component. Thus, while there would be some increase in the amount of general cargo/break bulk that is exported by rail, the amount could be accommodated with the same number of trains, but with the addition of more rail cars if necessary. Therefore, because there would not be a need for more frequent train visits to the project site to accommodate the modest increase in general cargo/break bulk exported by rail, noise from rail under the Demolition and Initial Rail Component would be similar to the existing condition. This potential impact would be less than significant.

Full TAMT Plan Buildout

Construction

Construction activities associated with the buildout of the TAMT plan are anticipated to increase noise levels temporarily at nearby noise-sensitive locations. The magnitude of the increases would depend on the type of construction activity, the noise level generated by various pieces of construction equipment, shielding from intervening terrain or other structures, and the distance between the noise source and receiver.

Construction of facilities identified in the proposed TAMT plan is assumed to occur over a long-term period. The largest piece of construction equipment is a crane, which would be used continually during the construction period. Heavy trucks would be used for delivery of materials and removal of debris from demolition phases. Construction that would generate substantial noise would be limited to the daytime hours between 7 a.m. and 7 p.m. Noise from construction would be temporary and intermittent, and would cease once construction is complete.

Accounting for an equipment utilization factor of 20–50% in a given hour for each piece of equipment used, the worst-case combined construction noise level would be 89 dBA L_{eq} at a distance of 50 feet during facility construction phases of the program. Equipment noise from

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[2] For instance, Dole containers require distribution via truck because of the wide distribution throughout the entire Southern California region, the state, and the surrounding states, whereas break bulk cargo such as windmill parts may have a single destination in, for example, Texas, making rail not only feasible, but preferable.

[3] A total of 36 trains had business at the TAMT in the baseline year of July 2013–June 2014, which equates to approximately three trains per month. However, the maximum on any 1 day is only one train.

demolition and grading could reach levels up to 87 dBA L_{eq} at 50 feet. Noise levels from construction equipment at noise-sensitive receiver locations are shown in Appendix K.

The loudest TAMT plan-related construction activities would take place in the dry bulk area of the terminal, which includes the area closest to the community of Barrio Logan (as opposed to the transit shed demolition activities that are part of the Demolition and Initial Rail Component, which are closer to the bay). Within the dry bulk area, existing molasses tanks and Warehouse C would be demolished and a new bulk storage facility (100,000-square-foot warehouse and/or 108,000 metric tons of vertical storage) and pneumatic unloading system would be constructed. The nearest sensitive outdoor use to the dry bulk area is Cesar Chavez Park. Outdoor noise levels during construction of the storage facility could reach a maximum level of approximately 69 dBA L_{eq}. This is below the City threshold of 75 dBA L_{eq} for temporary construction noise.

The nearest residential use is a row of residences at the corner of Newton Avenue and Cesar E. Chavez Parkway. Outdoor noise levels from construction could reach a maximum level of approximately 52 dBA L_{eq}. The noise levels at the nearest school use (Monarch School) would be 56 dBA L_{eq} or lower. Construction noise at both of these locations would be below the City threshold of 75 dBA L_{eq} for temporary construction noise. This impact is therefore considered less than significant.

The nearest hotel is the Hilton Bayfront Hotel immediately north of the project site. However, as noted previously, hotels are only considered sensitive to nighttime noise. Therefore, because proposed construction would take place during daytime hours between 7 a.m. and 7 p.m., the impact at the hotel is considered less than significant.

Operation

On-Terminal Activities

Cargo offloading and bulk handling activities at the Port occur 24 hours a day, 7 days a week on an intermittent basis, as cargo is delivered to the project site by vessels, rail, and trucks. Although the buildout of the TAMT plan would lead to an indirect increase in noise associated with providing more capacity for an increase in throughput, it would not be entirely responsible for all the future noise from these sources because such activities already take place at the site. The buildout of the TAMT plan would be responsible only for the additional noise caused by the expansion of existing operations. Under current conditions, vessel unloading noise could occur at any time during a 24-hour day, which would also be true under future conditions.

Under the proposed buildout of the TAMT plan, up to five pier-side electrical gantry cranes would be added and the existing mechanical bulk discharge loader would be replaced by a quieter pneumatic consolidated bulk discharge unloader that requires less time to move dry bulk from ship to shore. To be conservative, the noise analysis assumes that the use and characteristics of the additional yard equipment to handle increased throughput would have a noise profile similar to existing equipment. Noise measurements taken during offloading of cargo from vessels at the terminal in April 2015 indicated that noise levels from cranes during offloading were in the range of 83 to 85 dBA L_{eq} (see Appendix K), and are the generally the loudest sources associated with terminal activities.

In addition, a dry bulk discharge unloading system would be installed in the eastern area of the site, which would utilize a 200-metric-ton-per-hour vacuum for conveyance of cementatious materials to new dry bulk storage tanks.

Noise levels from operation of additional cranes and unloading systems at noise-sensitive receptor locations nearest to the project site are listed in Table 4.9-11, and their locations are shown in Figure 4.9-1.

Table 4.9-11. Worst-case Noise Emissions from TAMT Plan Operations

Receptor Location	City Noise Ordinance Standard (dBA L_{eq})	Measured Existing Noise Level (dBA L_{eq})	Nearest Measured Location	TAMT Plan Noise Levels[7] (dBA L_{eq})	Significant?
Cesar Chavez Park	60 [1]	57 [5]	ST-1	69	**Yes**
Monarch School	62.5 [2]	64 [5]	ST-3	56	No
Residences – Newton Avenue	60 [3]	53 [5]	ST-4	52	No
Residences – Sigsbee Row	60 [3]	53 [5]	ST-4	52	No
Hilton Bayfront Hotel	67.5 [4]	53 [6]	LT-2	64	No
Bayfront Park	60 [1]	53 [6]	LT-2	63	**Yes**
Embarcadero Marina Park South	60 [1]	53 [6]	LT-2	60	No
Residences – Broadstone Coronado on the Bay Apartments	60 [3]	55 [6]	LT-1	56	No
Perkins Elementary School	62.5 [2]	64 [5]	ST-3	56	No
Residences – Mercado Apartments	60 [3]	53 [5]	ST-4	55	No

[1] Based on arithmetic mean of City noise ordinance standards of 75 dBA L_{eq} for industrial use and 45 dBA L_{eq} for single-family residential use (i.e., most stringent standard because there is no City Municipal Code standard for park use) and park closing hour of 10:00 p.m.

[2] Based on arithmetic mean of City noise ordinance standards of 75 dBA L_{eq} for industrial use and 50 dBA L_{eq} for single-family residential use (i.e., most stringent standard because there is no City Municipal Code standard for school use) and use of school during daytime hours.

[3] Based on arithmetic mean of City noise ordinance standards of 75 dBA L_{eq} for industrial use and 45 dBA L_{eq} for multi-family residential use during nighttime hours (between 10 p.m. and 7 a.m.)

[4] Based on arithmetic mean of City noise ordinance standards of 75 dBA L_{eq} for industrial use and 60 dBA L_{eq} for commercial use during nighttime hours (between 10 p.m. and 7 a.m.)

[5] Estimated based on short-term measurements taken in the vicinity of this location.

[6] Average L_{eq}, based on long-term measurements taken in the vicinity of this location (daytime and nighttime hours).

[7] The project contribution to noise levels at the receptor locations, as specified in ordinance 59.5.0401.

As shown in Table 4.9-11, noise levels from the program could reach an hourly-average level of up to 69 dBA L_{eq} at the nearest park use, up to 56 dBA L_{eq} at the nearest school, up to 56 dBA L_{eq} at the nearest residential use, and up to 64 dBA L_{eq} at the nearest hotel outdoor use. Noise levels would exceed the City noise ordinance standard of 60 dBA L_{eq} at two parks (**Impact-NOI-1**). This impact is therefore considered to be significant. Implementation of Mitigation Measure **MM-NOI-1** would reduce the effects of operational noise; however, application of the measure may be limited, due to the location and number of sources involved. Mitigation Measure **MM-NOI-2** would implement a noise complaint and response system for affected sensitive receivers, but **Impact-NOI-1** would remain significant and unavoidable.

Traffic Noise

As indicated under the Demolition and Initial Rail Component, land uses that dominate along Harbor Drive are predominantly industrial in nature and include a significant amount of land dedicated to surface parking, marine-related industrial operations (primarily south of Harbor Drive), energy facilities, and general warehouse space. Therefore, the threshold that applies to traffic noise along these roadways is 75 dBA CNEL as indicated in Table 4.9-8. Existing traffic noise levels along Harbor Drive reach up to a range from 69–72 dBA CNEL depending on the portion of Harbor Drive considered, and reach up to 67 dBA CNEL along 28th Street.

Buildout of the TAMT plan is anticipated to generate up to 846 truck trips per day and 1,572 commuter vehicle trips per day. Under existing conditions, East Harbor Drive carries an average daily traffic volume of approximately 10,000 to 21,000 vehicles (Appendix G). The added traffic from the TAMT plan would result in a traffic noise increase of 2 dB or less on Harbor Drive and adjacent roadways, as shown in Table 4.9-12. An increase of this magnitude would not be noticeable above the existing noise levels because it is less than 3 dBA. Therefore, the TAMT plan's traffic-related noise impacts would be less than significant.

Table 4.9-12. Traffic Noise Levels on TAMT Truck Routes

	Average Daily Traffic		CNEL (dBA)				
Roadway Segment	**Existing**	**TAMT Plan Buildout**	**Existing**	**TAMT Plan Buildout**	**Existing plus TAMT Plan Buildout**	**Increase (dB)**	**Significant?**
Harbor Drive, west of Cesar E. Chavez Parkway	20,194	377 Autos, 322 Heavy Trucks	72	64	73	+1	No
Harbor Drive, east of Cesar E. Chavez Parkway	12,050	817 Autos, 846 Heavy Trucks	69	67	71	+2	No
28th Street, north of Harbor Drive	19,563	448 Heavy Trucks	67	63	68	+1	No

Source: Appendix G (traffic only); Appendix K (noise calculations)

Increase in Rail Capacity

Installation of intermodal rail facilities and increase in throughput is expected to allow for increased accommodation of rail traffic at the project site, although the ratio of trucks to rail use is expected to remain constant under the life of the TAMT plan due to distribution considerations specific to the cargo types.[4] Under existing conditions on a maximum day, one train is present for TAMT cargo, which is either dry bulk or multi-purpose general cargo.[5] The throughput capacity added by the TAMT plan would also allow for increased import of dry bulk by rail and increased export of multipurpose general cargo such as breakbulk. The increased capacity is expected to result in a maximum of one additional train per day. The addition of one train per day would result in an increase of up to 1 dB CNEL, which would not be a noticeable noise increase. This impact is considered to be less than significant.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component would not expose persons to or generate noise levels in excess of standards established in the City of San Diego's Significance Determination Thresholds and/or the City's Noise Ordinance. Impacts would be less than significant.

Full TAMT Plan Buildout

The full TAMT plan buildout would expose persons to or generate noise levels in excess of standards established in the City of San Diego's Significance Determination Thresholds and/or the City's Noise Ordinance. Potentially significant impact(s) include:

Impact-NOI-1: Exceedance of an Adopted Noise Standard During Plan Operation. Noise levels from operation of the TAMT plan buildout would exceed the City of San Diego's noise ordinance standard of 60 dBA L_{eq} at two parks in the vicinity of the project site.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

The following mitigation measure(s) are required for Impact-NOI-1:

MM-NOI-1: Design and Implement Feasible Acoustical Treatments for Future Systems and Equipment to Reduce Operational Noise Levels at Nearby Noise-Sensitive Land Uses. Because the potential components described in the buildout condition may only be analyzed at a program level at this time, the District shall retain a qualified acoustical professional, which is defined as someone who is practiced in the science of noise transmission and abatement for a minimum of 5 years in a professional capacity, to evaluate and design acoustical treatments for project facilities once system design plans are available. This shall include design plans for any proposed cranes, dry bulk discharge system, conveying system, loading systems, and buildings

[4] For instance, Dole containers require distribution via truck because of the wide distribution throughout the entire Southern California region, the state, and the surrounding states, whereas break bulk cargo such as windmill parts may have a single destination in, for example, Texas, making rail not only feasible, but preferable.

[5] A total of 36 trains had business at the TAMT in the baseline year of July 2013–June 2014, which equates to approximately three trains per month.

added to the terminal under the TAMT plan. The acoustical professional shall evaluate acoustical treatment measures for each piece of equipment or system described herein, individually and in combination with one another (to the extent design plans are available for others), to determine feasibility and the potential to reduce overall noise levels at nearby noise-sensitive receptors. Measures that are available (but not necessarily feasible) include, but are not limited to, the following.

- Installing equipment inside of acoustical enclosures, where feasible
- Installing intake and/or exhaust silencers, where feasible
- Using low-noise motors
- Placing sound barriers around noise-generating equipment

Each of these measures will be designed and evaluated for design feasibility, achievable noise reduction, and economic feasibility at noise-sensitive receiver locations, all of which are to be determined by the District and not any tenants. If one or more acoustical treatments are incorporated into the facility design, verification noise monitoring shall be conducted at each affected location to determine the effectiveness of acoustical treatments, and to evaluate whether compliance with applicable noise standards is achieved.

MM-NOI-2: Initiate and Maintain a Complaint and Response Tracking Program. Prior to the commencement of operations of the TAMT plan, the District shall designate a noise disturbance coordinator. The coordinator will be responsible for responding to complaints regarding noise from project operations, will investigate the cause of the complaint, and will ensure that reasonable measures are implemented to correct the problem, where feasible. A contact telephone number for the noise disturbance coordinator will be conspicuously posted at the main entrance to the project site and in other reasonable locations, as appropriate, to ensure the contact information is easily obtained. This measure shall be implemented in combination with MM-NOI-1, which provides several examples of what type of noise attenuation measures may be feasible. The goal of this measure is to provide additional information regarding the sources of loud noises and to assist in the design and implementation of measures to reduce the noise to a level that would be at or below the applicable noise standards for the land use experiencing the excessive noise.

Level of Significance After Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

Mitigation measure **MM-NOI-1** would potentially reduce the effects of future operational noise compared to the unmitigated condition; however, application of the measure may be limited, due to the location and number of sources involved. Mitigation measure **MM-NOI-2** would be applied as a resource to the community and may result in additional noise-reduction measures over the life of the TAMT plan as sources of future noise are identified. Given the lack of project-level detail at this time, however, individual equipment and system design specifications are not currently available;

therefore, it is not known what noise reduction measures may be feasible and appropriate and, as such, it is not possible at this time to quantify the extent to which impacts may be reduced. Consequently, after mitigation, **Impact-NOI-1** would remain significant and unavoidable.

Threshold 2: Implementation of the proposed project would not expose persons to or generate excessive groundborne vibration or groundborne noise levels.

Impact Discussion

Demolition and Initial Rail Component

Demolition of transit sheds, grading, paving, installation of the modular offices and other small structures, and installation of the rail lubrication system and air brake testing locations would not require impact devices or other equipment that is typically associated with substantial vibrational impacts. Heavy-duty, non-impact construction equipment could generate intermittent localized groundborne vibration levels of up to 0.04 inch per second PPV within 50 feet of a construction site. Loaded heavy trucks during operation of the buildout condition associated with the TAMT plan may produce vibration levels up to 0.04 inch per second PPV within 40 feet of each truck. The nearest sensitive uses are over 100 feet from the Demolition and Initial Rail Component site. Therefore, groundborne vibration would not be perceptible at the nearest noise-sensitive uses, and impacts would be less than significant.

Full TAMT Plan Buildout

Construction and operation of the TAMT plan may intermittently result in perceptible levels of groundborne vibration in buildings immediately adjacent to or within 100 feet of vibration sources. Construction of any future components of the TAMT plan would not require impact devices or other equipment that is typically associated with substantial vibrational impacts. Heavy-duty, non-impact construction equipment could generate intermittent localized groundborne vibration levels of up to 0.04 inch per second PPV within 50 feet of a construction site. Loaded heavy trucks during operation of the buildout condition associated with the TAMT plan may produce vibration levels up to 0.04 inch per second PPV within 40 feet of each truck. All sensitive uses are over 100 feet from the project site. Vibration levels from construction and operation of the TAMT plan, including rail activity, would be well below 0.04 inch per second PPV at the nearest sensitive receptor locations. Therefore, groundborne vibration would not be perceptible at the nearest noise-sensitive uses, and impacts would be less than significant.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component would not expose persons to or generate excessive groundborne vibration or groundborne noise levels. Impacts would be less than significant.

Full TAMT Plan Buildout

The buildout of the TAMT plan would not expose persons to or generate excessive groundborne vibration or groundborne noise levels. Impacts would be less than significant.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

No mitigation is required.

Level of Significance After Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

Impacts would be less than significant.

Threshold 3: Implementation of the proposed project would result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Impact Discussion

Demolition and Initial Rail Component

A substantial permanent increase in noise levels may also be characterized as a readily perceptible increase in noise, or a 5 dB increase over existing ambient noise levels. A substantial permanent increase is not applicable to construction activities, and there would be no permanent sources of noise from transit shed demolition activities, utilities installation, grading, repaving, and modular office and other small structure installation. Noise associated with adding a modular office on site and restrooms would be the same or even less than existing conditions because they would replace an existing office and associated restrooms and would be smaller than the existing facility. Noise increases from air brake testing would be periodic and are discussed under Threshold 4. This impact would be less than significant.

As shown in Table 4.9-10, additional traffic generated by the Demolition and Initial Rail Component would not result in any perceptible traffic noise increase on Harbor Drive and adjacent roadways. Therefore, no traffic noise impacts would occur with the Demolition and Initial Rail Component.

Full TAMT Plan Buildout

Construction activities do not result in permanent ambient noise increases. Therefore, construction noise is discussed under Threshold 4 below. Noise levels from operation of the full TAMT plan buildout would be considered permanent increases and are discussed below.

As shown in Table 4.9-13, noise resulting from operation of the added cranes and unloading systems described in the TAMT plan would be up to 12 dB above existing levels at outdoor park uses (Cesar

Chavez Park, Embarcadero Marina Park, and Bayfront Park), and would increase existing levels by 11 dB at Hilton Bayfront Hotel. Therefore, noise levels would increase by 5 dB or more relative to existing conditions at these locations. This would be readily noticeable to park and hotel visitors, and would be considered significant (**Impact-NOI-2**). Mitigation measures (**MM-NOI-1** and **MM-NOI-2**) are required to help reduce the noise levels at this location; however, it is uncertain if the measures would reduce the noise level to a sufficiently low level and therefore this impact would remain significant and unavoidable.

As shown in Table 4.9-12, additional traffic generated by the TAMT plan would result in a traffic noise increase of up to 2 dB CNEL on Harbor Drive and adjacent roadways. This noise increase would not be perceptible and would be less than significant.

Table 4.9-13. Increase in Noise Levels during TAMT Plan Operation

Receptor Location	Measured Existing Noise Level (dBA L_{eq})	Nearest Measured Location	TAMT Plan Noise Levels[3] (dBA L_{eq})	Increase above Existing Levels (dB)	Significant?
Cesar Chavez Park	57 [1]	ST-1	69	+ 12	**Yes**
Monarch School	64 [1]	ST-3	56	- 12	No
Residences – Newton Avenue	53 [1]	ST-4	52	- 1	No
Residences – Sigsbee Row	53 [1]	ST-4	52	- 1	No
Hilton Bayfront Hotel	53 [2]	LT-2	64	+ 11	**Yes**
Bayfront Park	53 [2]	LT-2	63	+ 10	**Yes**
Embarcadero Marina Park South	53 [2]	LT-2	60	+ 7	**Yes**
Residences – Broadstone Coronado on the Bay Apartments	55 [2]	LT-1	56	+ 1	No
Perkins Elementary School	64 [5]	ST-3	56	-8	No
Residences – Mercado Apartments	53 [5]	ST-4	55	+2	No

[1] Estimated based on short-term measurements taken in the vicinity of this location.
[2] Average L_{eq}, based on long-term measurements taken in the vicinity of this location (daytime and nighttime hours).
[3] The project contribution to noise levels at the receptor locations, as specified in ordinance 59.5.0401.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Implementation of the Demolition and Initial Rail Component would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. Impacts would be less than significant.

Full TAMT Plan Buildout

Implementation of the proposed project would result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. Potentially significant impact(s) include:

Impact-NOI-2: Substantial Permanent Increase in Ambient Noise Levels in the Project Site Vicinity from Buildout of the TAMT Plan. The TAMT plan would result in a substantial permanent increase of 5 dB or more above average existing noise levels at Cesar Chavez Park, Bayfront Park, Embarcadero Marine Park, and Hilton Bayfront Hotel, due to added cranes and unloading systems under the TAMT plan buildout. This impact would be significant.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

The following mitigation measure(s) are required for Impact-NOI-2: **MM-NOI-1**, **MM-NOI-2**.

Level of Significance After Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

Mitigation measure **MM-NOI-1** would potentially reduce the effects of future operational noise compared to the unmitigated condition; however, application of the measure may be limited, due to the location and number of sources involved. Mitigation measure **MM-NOI-2** would be applied as a resource to the community and may result in additional noise-reduction measures over the life of the TAMT plan as sources of future noise are identified. Given the lack of project-level detail at this time, however, individual equipment and system design specifications are not currently available; therefore, it is not known what noise reduction measures may be feasible and appropriate and, as such, it is not possible at this time to quantify the extent to which impacts may be reduced. Consequently, after mitigation, **Impact-NOI-2** would remain significant and unavoidable.

Threshold 4: Implementation of the proposed project would result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

Impact Discussion

Demolition and Initial Rail Component

Construction

A substantial temporary increase in noise levels may also be characterized as a readily perceptible increase in noise, or a 5 dB increase over existing ambient noise levels.

As described under Threshold 1, project construction noise would be temporary and intermittent, and would cease once construction is complete. As shown in Table 4.9-14, outdoor noise levels from construction could reach an average hourly level of up to approximately 62 dBA L_{eq} at outdoor use areas at Bayfront Park, and 59 dBA L_{eq} at Embarcadero Marina Park, a 9 dB and 6 dB increase over existing levels, respectively. This would be more than 5 dB above existing ambient noise levels, which would be a temporarily noticeable increase. This impact is considered to be significant.

Table 4.9-14. Increase in Noise Levels from Demolition and Initial Rail Component Construction

Receptor Location	Measured Existing Noise Level (dBA L_{eq})	Nearest Measured Location	Project Construction Noise Levels (dBA L_{eq})	Increase above Existing Levels (dB)	Significant?
Cesar Chavez Park	57 [1]	ST-1	59	+2	No
Monarch School	64 [1]	ST-3	50	-14	No
Residences – Newton Avenue	53 [1]	ST-4	48	-5	No
Residences – Sigsbee Row	53 [1]	ST-4	48	-5	No
Hilton Bayfront Hotel	53 [2]	LT-2	63	+10	No [3]
Bayfront Park	53 [2]	LT-2	62	+9	**Yes**
Embarcadero Marina Park South	53 [2]	LT-2	59	+6	**Yes**
Residences – Broadstone Coronado on the Bay Apartments	55 [2]	LT-1	55	0	No
Perkins Elementary School	64 [5]	ST-3	50	-14	No
Residences – Mercado Apartments	53 [5]	ST-4	45	-8	No

[1] Estimated based on short-term measurements taken in the vicinity of this location.

[2] Average L_{eq} based on long-term measurements taken in the vicinity of this location (daytime and nighttime hours).

[3] Note that hotels are only considered noise sensitive during nighttime hours and would not be sensitive to daytime construction noise.

The nearest residential use is a row of multi-family residential buildings along National Avenue and Sigsbee Street. At this location, outdoor noise levels from construction could reach an average level of up to approximately 48 dBA L_{eq}. Under existing conditions, as shown in Table 4.9-14, traffic and urban ambient sources contribute to hourly noise levels of about 53 dBA L_{eq}. The project would not result in a perceptible increase in noise levels at this location.

The nearest school use is Monarch School. At this location, outdoor noise levels from construction could reach an average level of up to approximately 50 dBA L_{eq}. Under existing conditions, traffic and urban ambient sources contribute to hourly noise levels of about 64 dBA L_{eq}. The project would not result in a perceptible increase in noise levels at this location.

Operation

Air brake testing would be done on a periodic basis as rail vehicles enter the terminal for safety checks. The noise-sensitive receptor that would receive the highest noise levels during air brake testing would be Cesar Chavez Park. Instantaneous noise levels could be as high as 68 dBA L_{max} during testing, which would be perceived as a doubling of loudness. However, because testing is a very short-term event, it would not adversely affect outdoor activities at the park. Furthermore, the noise level over an average-hourly basis would be 59 dBA L_{eq}, accounting for utilization (up to 7 minutes in a given hour). This would be 2 dB above existing levels, which would not be a noticeable change in noise levels. Finally, air brake testing already occurs along the existing rail yard area immediately outside the project site boundaries and therefore would not represent a new noise source, but would only locate it farther away from noise-sensitive receptors by performing the testing on the project site instead.

Full TAMT Plan Buildout

Construction noise, and whether it would result in a substantial temporary increase in noise, is considered in the analysis below. All operational noise levels associated with the full buildout of the TAMT plan are considered under Threshold 3 because of their long-term presence, even though noise may fluctuate significantly when cargo unloading activities are underway compared to when they are not.

Construction

A substantial temporary increase in noise levels may also be characterized as a readily perceptible increase in noise, or a 5 dB increase over existing ambient noise levels. As described under Threshold 1, TAMT plan construction noise would be temporary and intermittent, and would cease once construction is complete. TAMT plan construction noise would take place over a long-term period. As shown in Table 4.9-15, outdoor noise levels from construction could reach an average hourly level of up to approximately 69 dBA L_{eq} at outdoor use areas at Cesar Chavez Park. Noise levels would increase by 5 dB or more above existing ambient noise levels at three parks (Cesar Chavez, Bayfront, and Embarcadero Marina Parks). This increase would be readily noticeable to park visitors (**Impact-NOI-4**). This impact would be significant.

Table 4.9-15. Increase in Noise Levels during TAMT Plan Construction

Receptor Location	Measured Existing Noise Level (dBA L_{eq})	Nearest Measured Location	Program Construction Noise Levels (dBA L_{eq})	Increase above Existing Levels (dB)	Significant?
Cesar Chavez Park	57 [1]	ST-1	69	+ 12	**Yes**
Monarch School	64 [1]	ST-3	54	- 10	No
Residences – Newton Avenue	53 [1]	ST-4	52	- 1	No
Residences – Sigsbee Row	53 [1]	ST-4	52	- 1	No
Hilton Bayfront Hotel	53 [2]	LT-2	64	+ 11	No[3]
Bayfront Park	53 [2]	LT-2	63	+ 10	**Yes**
Embarcadero Marina Park South	53 [2]	LT-2	61	+ 8	**Yes**
Residences – Broadstone Coronado on the Bay Apartments	55 [2]	LT-1	56	+ 1	No
Perkins Elementary School	64 [5]	ST-3	54	-10	No
Residences – Mercado Apartments	53 [5]	ST-4	56	+3	No

[1] Estimated based on short-term measurements taken in the vicinity of this location.

[2] Average L_{eq} based on long-term measurements taken in the vicinity of this location (daytime and nighttime hours).

[3] Note that hotels are only considered noise sensitive during nighttime hours and would not be sensitive to daytime construction noise.

The nearest residential use is a row of multi-family residential buildings along National Avenue and Sigsbee Street. At this location, outdoor noise levels from construction could reach an average level of up to approximately 52 dBA L_{eq}. Under existing conditions, as shown in Table 4.9-15, traffic and urban ambient sources contribute to hourly noise levels of about 53 dBA L_{eq}. The TAMT plan's implementation would not result in a perceptible increase in noise levels at this location.

The nearest school use is Monarch School. At this location, outdoor noise levels from construction could reach an average level of up to approximately 54 dBA L_{eq}. Under existing conditions, traffic and urban ambient sources contribute to hourly noise levels of about 64 dBA L_{eq}. The TAMT plan would not result in a perceptible increase in noise levels at this location.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Implementation of the Demolition and Initial Rail Component would result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. Potentially significant impact(s) include:

Impact-NOI-3: Substantial Temporary Increase in Ambient Noise Levels During Construction of the Demolition and Initial Rail Component. Construction of the Demolition and Initial Rail Component would result in a substantial temporary increase of 5 dB or more above average existing noise levels at two parks. This impact would be significant.

Full TAMT Plan Buildout

Implementation of the full TAMT plan buildout would result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. Potentially significant impact(s) include:

Impact-NOI-4: Substantial Temporary Increase in Ambient Noise Levels During Construction of the Full TAMT Plan Buildout. Construction of the other future components associated with the TAMT plan buildout would result in a substantial temporary increase of 5 dB or more above average existing noise levels at three parks. This impact would be significant.

Mitigation Measures

Demolition and Initial Rail Component

The following mitigation measure(s) are required for Impact-NOI-3:

MM-NOI-3: Implement a Construction Noise Reduction Plan. Prior to the commencement of demolition or construction activity, the District shall prepare and implement a noise reduction plan including best practices to reduce construction noise at noise-sensitive land uses, such that a temporary increase of more than 5 dB in noise levels does not occur at adjacent noise-sensitive uses. Measures to be included in the noise reduction plan to limit construction noise include the following.

- Locating stationary equipment (e.g., generators, compressors, rock crushers, cement mixers, idling trucks) as far as possible from noise-sensitive land uses

- Prohibiting gasoline or diesel engines from having unmuffled exhaust
- Requiring that all construction equipment powered by gasoline or diesel engines have sound-control devices that are at least as effective as those originally provided by the manufacturer and that all equipment be operated and maintained to minimize noise generation
- Preventing excessive noise by limiting idle times for vehicles or equipment to 3 minutes, consistent with MM-AQ-2
- Using noise-reducing enclosures around stationary noise-generating equipment
- Constructing temporary barriers between noise sources and noise-sensitive land uses or taking advantage of existing barrier features (e.g., terrain, structures) to block sound transmission to noise-sensitive land uses. The barriers shall be designed to obstruct the line of sight between the noise-sensitive land use and onsite construction equipment.

Full TAMT Plan Buildout

The following mitigation measure(s) are required for Impact-NOI-4: **MM-NOI-3**

Level of Significance After Mitigation

Demolition and Initial Rail Component

Although it is anticipated that construction noise levels would be reduced by implementing **MM-NOI-3**, the exact level of noise reduction that would be obtained by the proposed measures is uncertain and noise levels may remain significant. Because construction noise at the nearby parks would be significantly higher than existing ambient noise levels and it is uncertain if **MM-NOI-3** would reduce noise levels to insignificant levels, **Impact-NOI-3** would be significant and unavoidable.

Full TAMT Plan Buildout

Similar to the Demolition and Initial Rail Component, it is anticipated that construction noise levels would be reduced by implementing **MM-NOI-3**. However, the exact level of noise reduction that would be obtained by the proposed measures is uncertain and does not ensure that noise levels would be insignificant. Because construction noise at the nearby parks would be significantly higher than existing ambient noise levels and it is uncertain if **MM-NOI-3** would reduce noise levels to insignificant levels, **Impact-NOI-4** would be significant and unavoidable.

Section 4.10
Transportation, Circulation, and Parking

4.10.1 Overview

This section describes the existing conditions and applicable laws and regulations for transportation, circulation, and parking, followed by an analysis of the proposed project's potential to (1) conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system; (2) conflict with a county congestion management plan by exceeding a level-of-service (LOS) standard; (3) substantially increase hazards because of a design feature or incompatible uses; (4) conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities; or (5) result in an insufficient supply of parking to meet the project demand.

The information provided in this section is summarized from the *Tenth Avenue Marine Terminal Redevelopment Plan Transportation Impact Analysis* (TIA) prepared by Chen Ryan Associates in ~~June~~August 2016 (Appendix G). Table 4.10-1 summarizes the significant impacts and mitigation measures discussed in Section 4.10.4.3, *Project Impacts and Mitigation*.

Table 4.10-1. Summary of Significant Transportation Impacts and Mitigation Measures

Summary of Potentially Significant Impact(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-TRA-1: Construction-Related Impact on an Intersection: Norman Scott Road/32nd Street/Wabash Boulevard from Demolition and Initial Rail Component Construction	**MM-TRA-1:** Transportation Demand Management (TDM) Plan During ~~Construction During~~ Demolition and Initial Rail Component Construction	Significant and unavoidable	Implementation of a TDM Plan during construction would reduce potential impacts at the Norman Scott Road/32nd Street/ Wabash Boulevard intersection; however, it cannot be determined with certainty that the impacts would be reduced to less-than-significant levels.
~~**Impact-TRA-2:** Operation-Related Impact on an Intersection: Norman Scott Road/32nd Street/Wabash Boulevard from Demolition and Initial Rail Component Operations~~	~~**MM-TRA-2:** Westbound Right-Turn Overlap Phase at Norman Scott Road/32nd Street/Wabash Boulevard Intersection~~	~~Significant and unavoidable~~	~~Although mitigation is required that could reduce the impact to a less-than-significant level, timing and the implementation of the recommended improvements are uncertain because they are outside the jurisdiction of the District.~~
Impact-TRA-~~3~~2: Construction Traffic from Future TAMT Plan Construction Projects	**MM-TRA-~~3~~2:** Traffic Study and Transportation Demand Management (TDM) for Specific Construction Projects	Significant and unavoidable	Uncertainty of timing of future construction activities and the potential that projects may overlap; impacts may remain significant even after the adoption of all feasible mitigation measures
Impact-TRA-~~4~~3: Operation-Related Impact on a Roadway Segment: 28th Street between Boston Avenue and National Avenue from TAMT Plan Operations	**MM-TRA-~~4~~3:** Widen the Segment of 28th Street between Boston Avenue and National Avenue to a Four-Lane Major Arterial Classification Consistent with the Barrio Logan Community Plan	Significant and unavoidable	Although mitigation is required that could reduce the impact to a less-than-significant level, timing and the implementation of the recommended improvements are uncertain because they are outside the jurisdiction of the District.

Summary of Potentially Significant Impact(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Impact-TRA-~~5~~4: Operation-Related Impact on an Intersection: Norman Scott Road/32nd Street/Wabash Boulevard from TAMT Plan Operations	~~Implement **MM-TRA-2**~~**MM-TRA-4:** Westbound Right-Turn Overlap Phase at Norman Scott Road/32nd Street/Wabash Boulevard Intersection	Significant and Unavoidable	~~The District cannot ensure~~Although mitigation is required that ~~the improvements~~ would ~~be made when needed because the~~ reduce the impact to a less-than-significant level, timing and the implementation of the ~~necessary improvement is within~~recommended improvements are uncertain because they are outside the ~~exclusive~~ jurisdiction of ~~Caltrans, and not~~ the District.
Impact-TRA-~~6~~5: Insufficient Parking at Full TAMT Plan Buildout	**MM-TRA-5:** District Shall Inform All TAMT Workers to Park at the TAMT Facility or at an Authorized Offsite Parking Lot or Parking Garage **MM-TRA-6:** District to Maintain a Parking Inventory of TAMT **MM-TRA-7:** Proponents for Future Project Components, New Leases, or Lease Renewals Shall Prepare a Parking Management Plan	Less than significant	District would ensure sufficient parking would be available for all District staff, tenants, and their employees, as well as necessary dock workers to load/unload cargo vessels. At no point would TAMT employees be permitted to park outside of authorized locations. Either available parking would always be provided on the terminal or authorized parking locations would be identified and formalized through signed agreements with tenants.

4.10.2 Existing Conditions

4.10.2.1 Study Area

Transportation and circulation related to the proposed project would affect streets and intersections surrounding the project site. These streets and intersections are within the jurisdiction of the City of San Diego. As such, the study area was defined according to the City of San Diego's *Traffic Impact Study Manual* (July 1998) requirements. The *Traffic Impact Study Manual* requires that a study area include all roadway segments, intersections, and freeway segments where the project would contribute 50 or more peak hour trips in either direction. Figure 4.10-1 shows the project study area roadway segments and intersections, while Figure 4.10-2 shows the access points to the project site.

Roadway Corridors

There are three roadway corridors where the proposed project has the potential to add 50 or more peak hour trips. Each of these corridors is described below. The descriptions provide a general understanding of the local roadway corridors and identify the existing setting for the roadway segment analysis presented in this section.

East-West Facilities

Harbor Drive

Harbor Drive travels through downtown San Diego along its western and southern boundaries. Although Harbor Drive travels in a north/south orientation in some locations within downtown San Diego, near the project site it converts to a northwest/southeast orientation and links the project site to the 28th Street north/south corridor for freeway access.

Harbor Drive is a two-way road that is primarily four lanes wide with a raised median. Posted speed limits between Park Boulevard and Cesar Chavez Parkway and between Cesar Chavez Parkway and 32nd Street are 45 and 40 miles per hour (mph), respectively. Widths along Harbor Drive range from 85 to 110 feet. Parking is not allowed on either side of Harbor Drive between Beardsley Street and Sampson Street; however, it is allowed on both sides east of Sampson Street. Pedestrian facilities and a Class II bicycle lane are present on each side of the roadway. Two transit stations, the Barrio Logan Trolley Station and the Harborside Trolley Station, serve the San Diego Trolley's blue line along Harbor Drive.

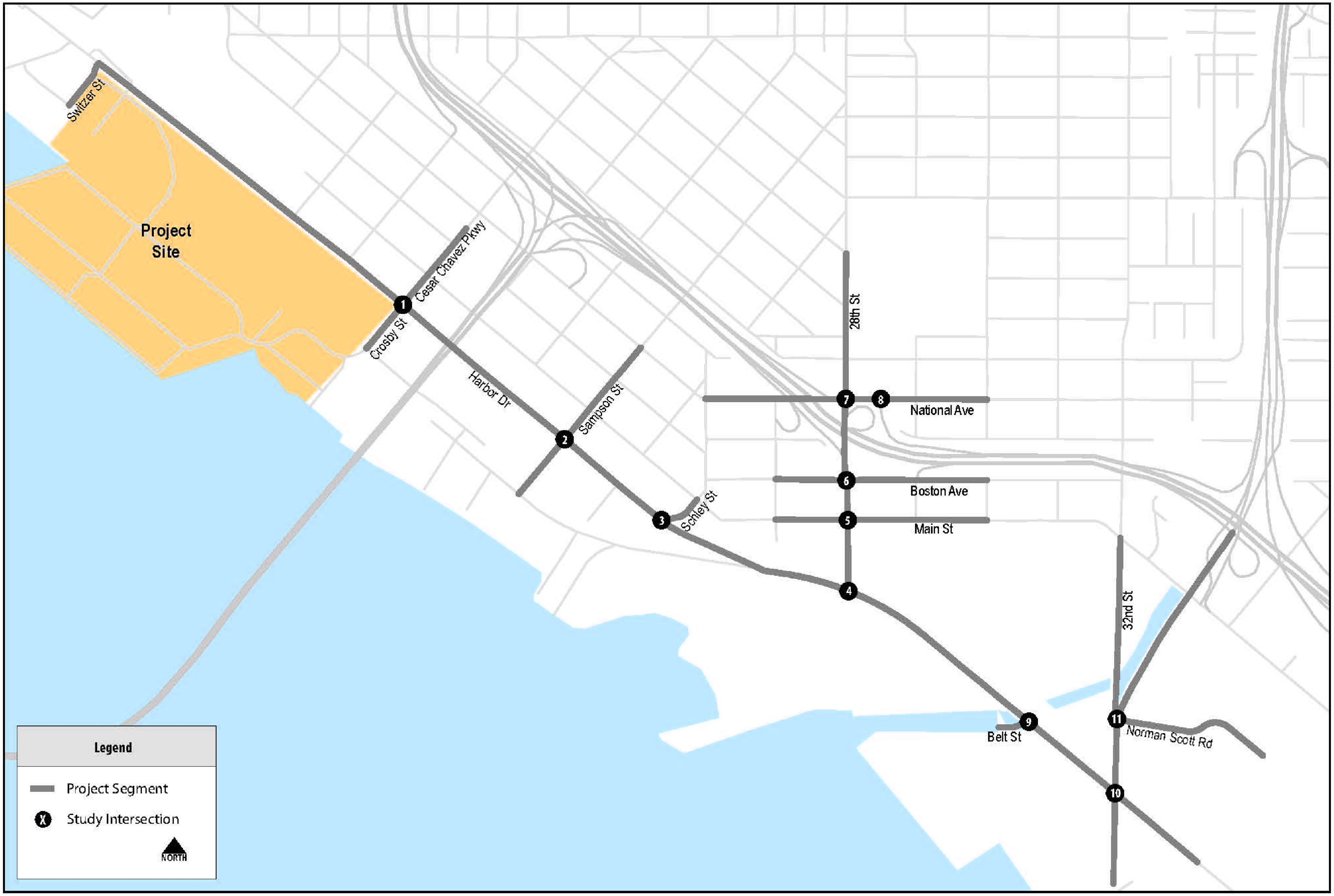
North-South Facilities

28th Street

Within the project study area, 28th Street is configured as:

- a four-lane raised median roadway between Harbor Drive and Main Street;
- a four-lane roadway with a continuous two-way left-turn lane between Main Street and Boston Avenue; and
- a three-lane roadway (two northbound and one southbound) with a continuous two-way left-turn lane between Boston Avenue and National Avenue.

Roadway width ranges from 64 to 76 feet, with a posted speed limit of 30 mph. Parking is allowed on both sides of the roadway between Harbor Drive and Main Street, but is prohibited between Main Street and National Avenue. Sidewalks are present on both sides of the roadway, but bicycle facilities are not. The Metropolitan Transit System (MTS) Bus Route 929, located at Main Street and Cesar Chavez, is a public transit stop within 0.3 mile of the project site. In addition, MTS Bus Route



Source: Chen Ryan Associates, 2015

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Figure 4.10-1
Transportation Study Area
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

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Source: Chen Ryan Associates, 2015

Figure 4.10-2
Project Site Access
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

11, located at the intersection of 28th Street and National Avenue, is the ~~only~~other public transit stop within the project study area.[1]

32nd Street

Within the project study area, 32nd Street is an 86-foot-wide, six-lane roadway with a raised median and a posted speed limit of 30 mph. The roadway does not support parking or bicycle facilities, but does contain sidewalks for pedestrians on both sides of the roadway. Access to Interstate (I)-15 from 32nd Street is reached by Wabash Boulevard, which intersects 32nd Street and functions as an on-/off-ramp.

Roadway Segments

The TIA's study area includes all freeway segments, roadway segments, and intersections where the proposed project would add 50 or more peak hour trips in either direction. The following key study area roadway segments were analyzed for the proposed project:

1. Harbor Drive between:
   a. Beardsley Street & Cesar Chavez Parkway
   b. Cesar Chavez Parkway & Sampson Street
   c. Sampson Street & Schley Street
   d. Schley Street & 28th Street
   e. 28th Street & Belt Street
   f. Belt Street & 32nd Street
2. 28th Street between:
   a. Harbor Drive & Main Street
   b. Main Street & Boston Avenue
   c. Boston Avenue & National Avenue
3. 32nd Street between:
   a. Harbor Drive & Norman Scott Road

Figure 4.10-3 shows the location of each of these segments.

Intersections

Intersections to which the proposed project would contribute more than 50 peak hour trips include the following 11 key study area intersections, which were analyzed for the proposed project. All intersections in the study area are signalized.

1. Harbor Drive/Cesar Chavez Parkway

[1] Although Cesar Chavez Boulevard provides freeway access from the project site, truck traffic is expressly prohibited from using this road. Therefore, 28th Street is the next closet roadway that provides access to Interstate 5 and is a designated truck route.

2. Harbor Drive/Sampson Street
3. Harbor Drive/Schley Street
4. Harbor Drive/28th Street
5. Main Street/28th Street
6. Boston Avenue/28th Street
7. National Avenue/28th Street
8. National Avenue/I-5 northbound off-ramp
9. Harbor Drive/Belt Street
10. Harbor Drive/32nd Street
11. Norman Scott Road/32nd Street/Wabash Boulevard

Figure 4.10-4 shows the location of each of these intersections.

Freeway Mainline Segments

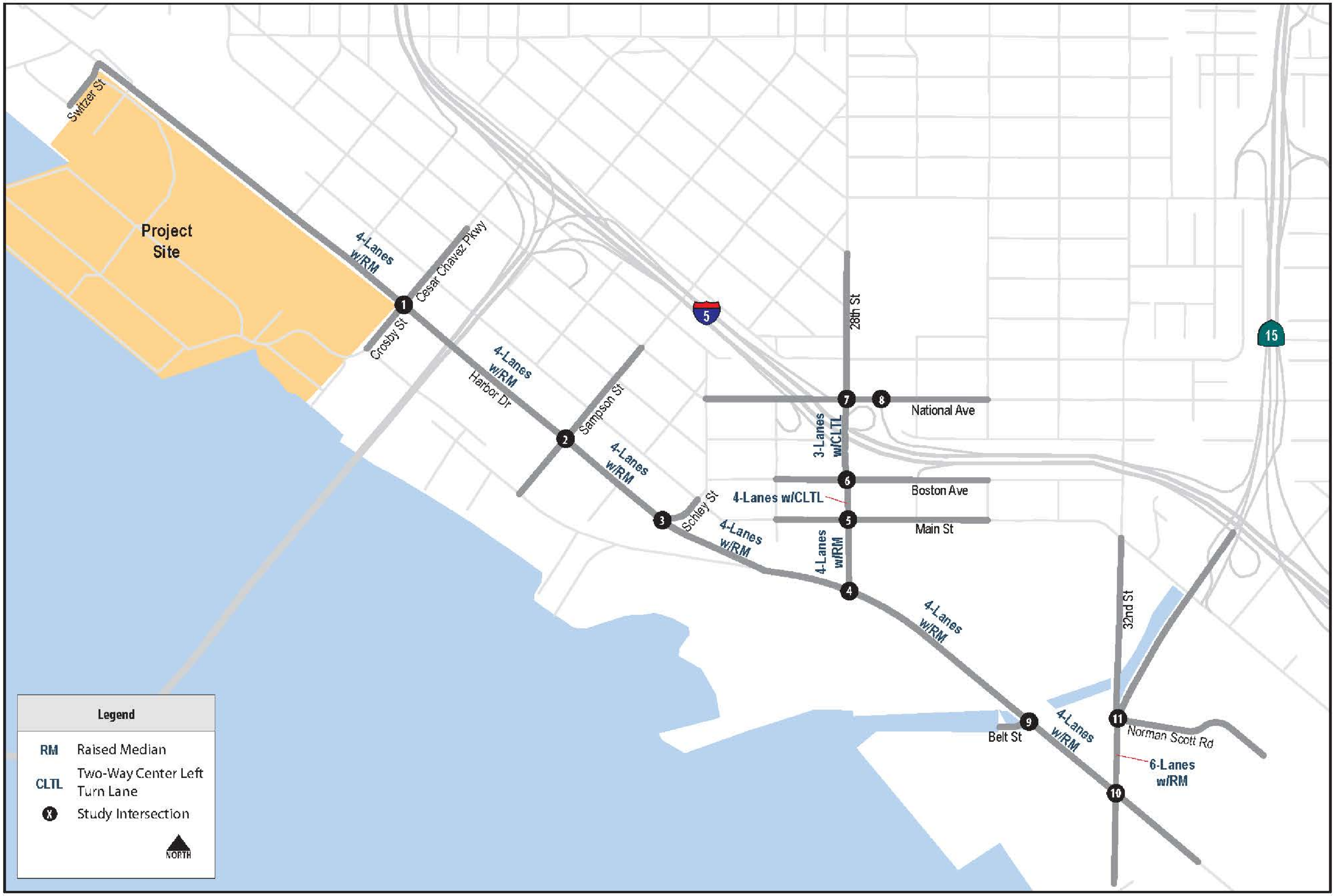
The TIA's study area includes freeway mainline segments to which the proposed project would contribute 50 or more peak hour trips. The following nine key freeway mainline segments were analyzed for the proposed project.

1. I-5 between SR-94 & Imperial Avenue
2. I-5 between Imperial Avenue & SR-75
3. I-5 between SR-75 & 28th Street
4. I-5 between 28th Street & SR-15
5. I-5 between SR-15 & Main Street
6. SR-15 between SR-94 & Market Street
7. SR-15 between Market Street & Ocean View Boulevard
8. SR-15 between Ocean View Boulevard & I-5
9. SR-15 between I-5 & Norman Scott Road

It should be noted that the Demolition and Initial Rail Component would not contribute more than 50 peak hour trips to I-5 or SR-15 in either the northbound or southbound directions. (Note that Figures 4.10-5 through 4.10-8 show the project trip distribution within the study area and demonstrate the project volumes that would access the freeways.) Therefore, freeway impact analyses were not conducted for the Demolition and Initial Rail Component in accordance with the criteria specified in the City of San Diego's *Traffic Impact Study Manual* (July 1998).

4.10.2.2 Existing Transportation Conditions

Traffic counts on existing roadways and intersections were conducted in July 2014 to establish the existing traffic baseline. Additional 24-hour roadway counts along Harbor Drive were taken in March 2015 to confirm that the July 2014 were counts were still applicable. The results indicated



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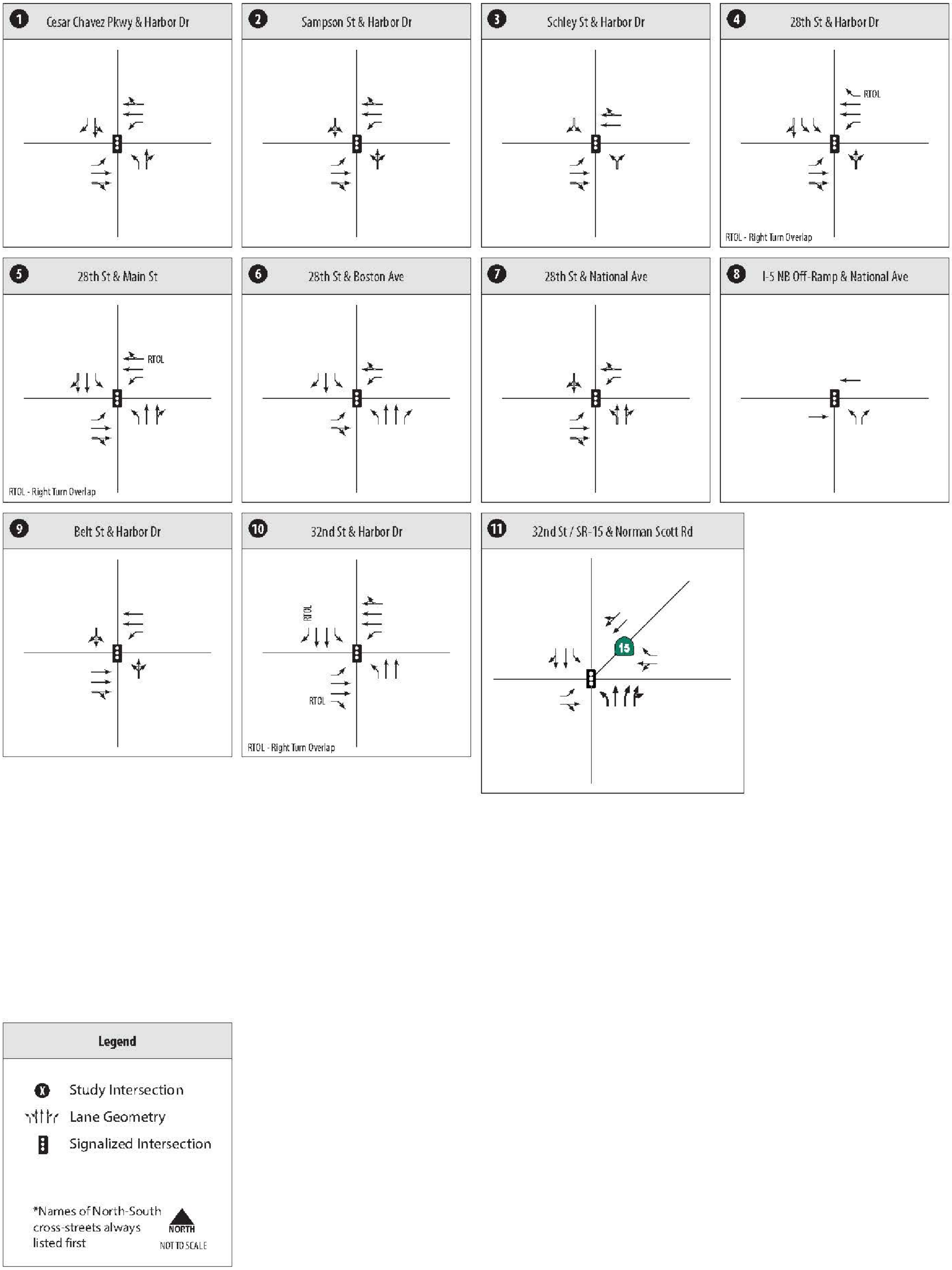
Source: Chen Ryan Associates, 2016

Figure 4.10-3
Study Area Roadway Segments
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR



Source: Chen Ryan Associates, 2016

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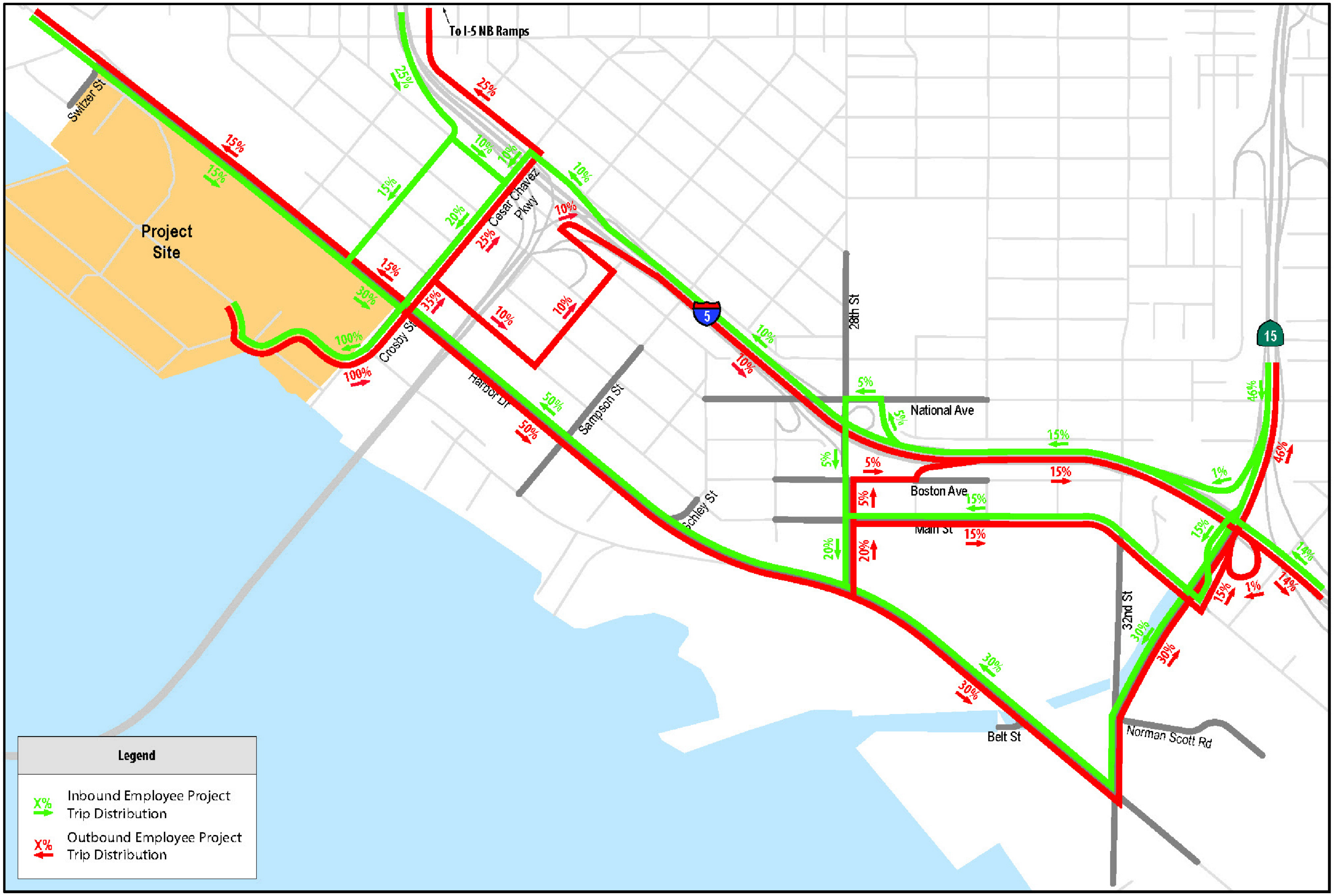
Figure 4.10-4
Study Area Intersections
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR



Source: Chen Ryan Associates, 2015

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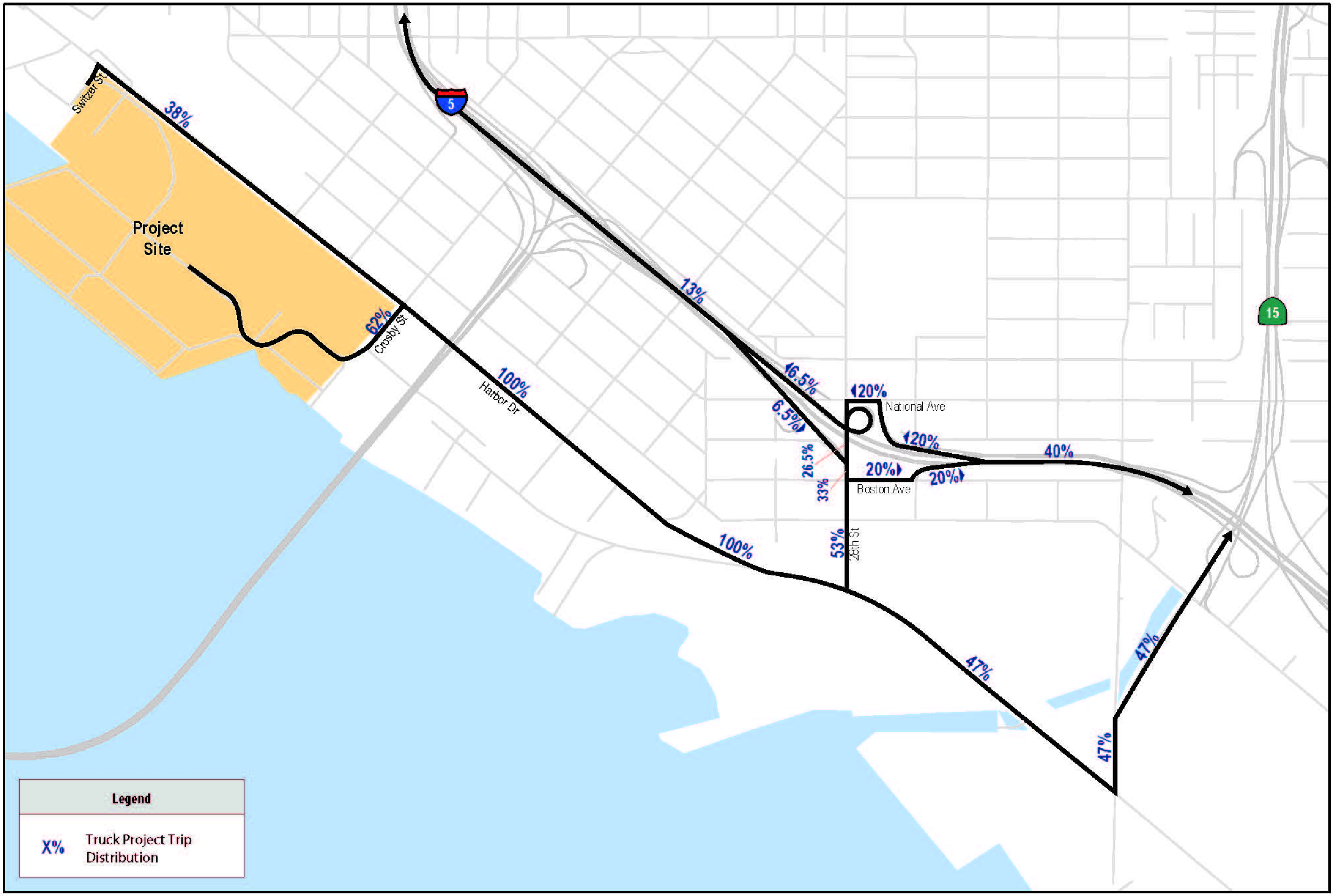
Figure 4.10-5
Project Trip Distribution - Employees
Tenth Avenue Marine Terminal Redevelopment Plan & Demolition and Initial Rail Component EIR



Source: Chen Ryan Associates, 2016

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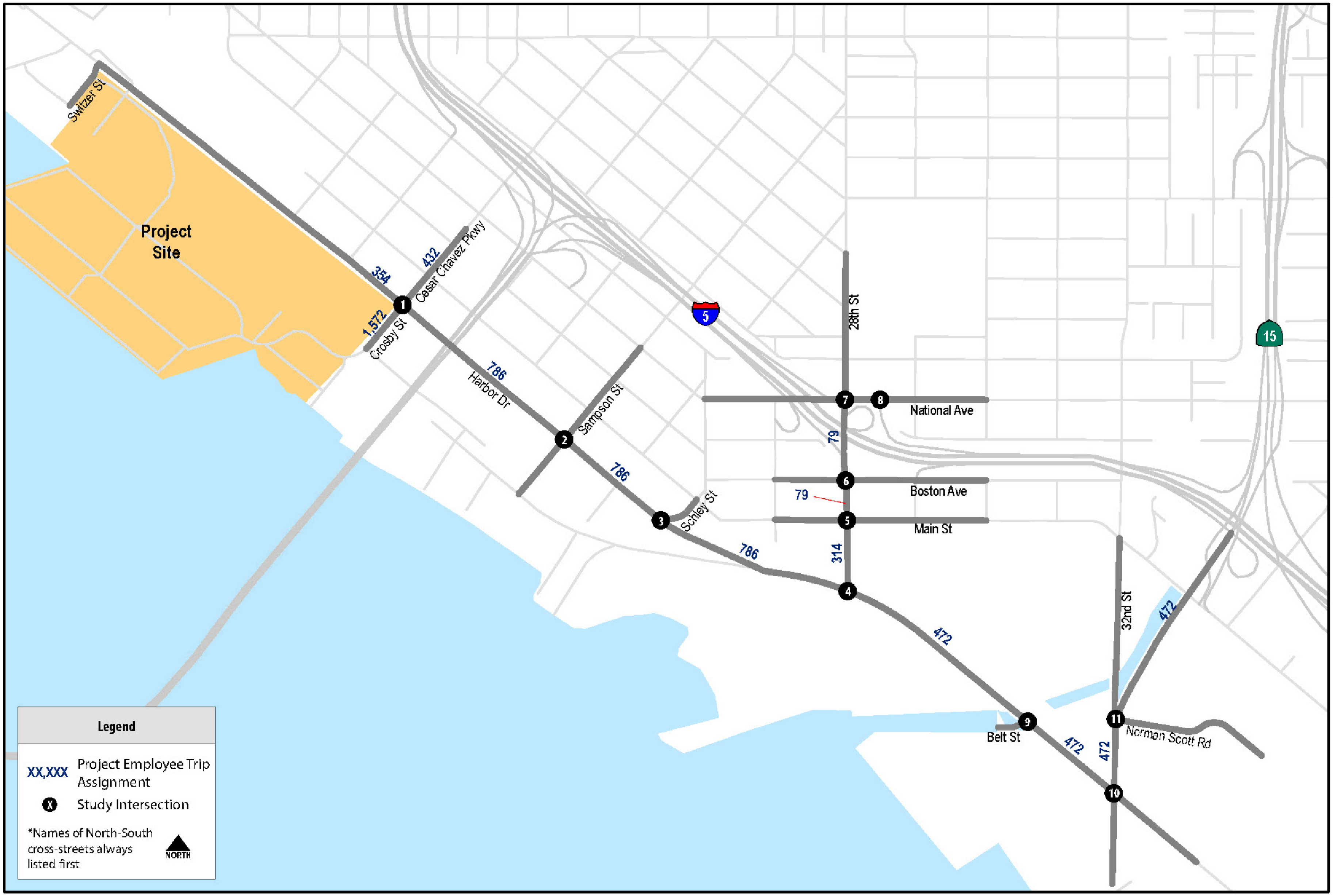
Figure 4.10-6
Project Trip Distribution - Trucks
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR



Source: Chen Ryan Associates, 2015

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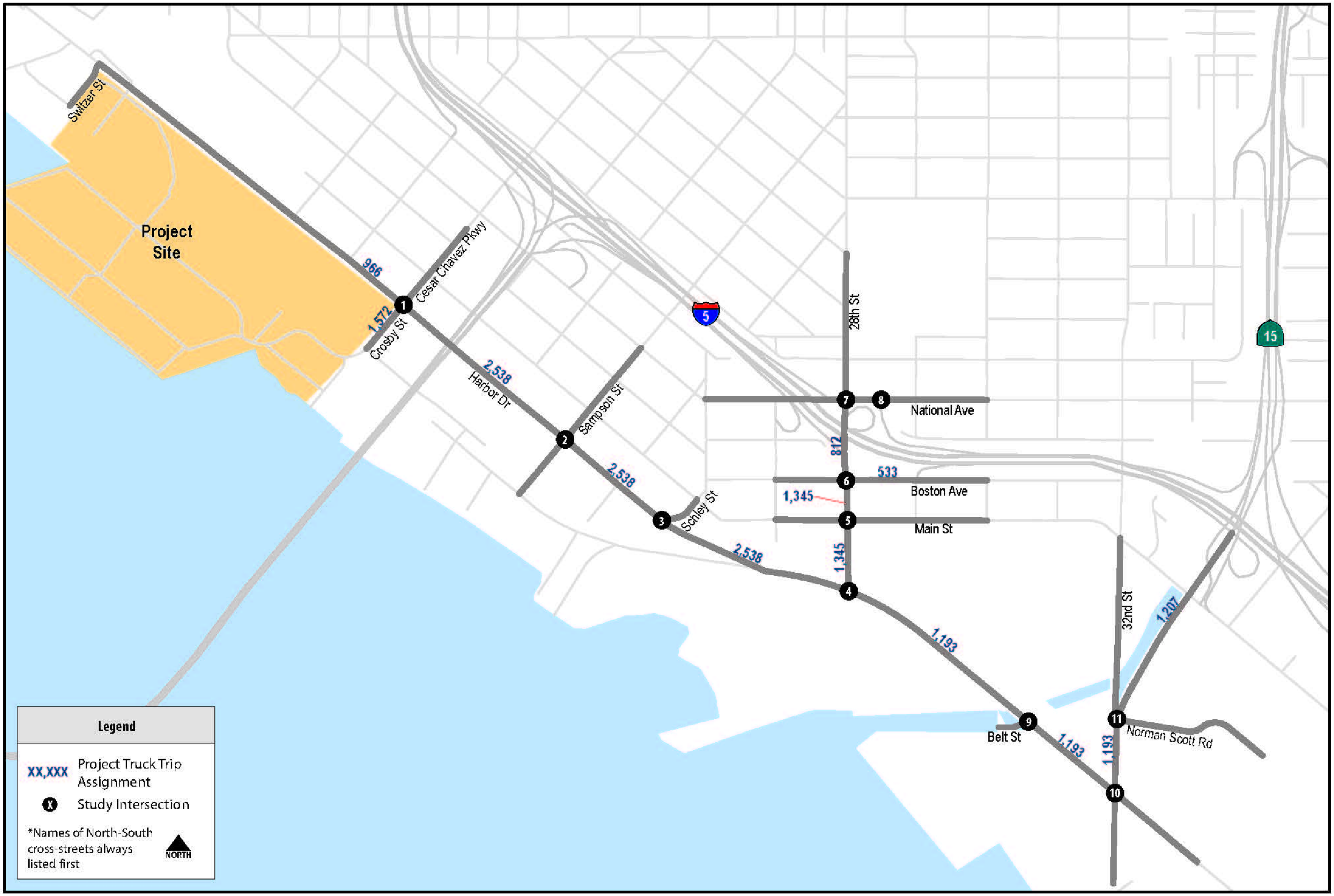
Figure 4.10-7
Project Trip Assignment – Employees
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR



Source: Chen Ryan Associates, 2016

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Figure 4.10-8
Project Trip Assignment – Trucks
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

that July 2014 counts were higher than March 2015 counts. Therefore, to provide for a conservative analysis, the July 2014 counts were used.

Roadway Segments

To determine if a roadway segment is operating effectively, an LOS grade is applied. LOS is an index used to quantitatively evaluate the operational quality of the roadway segments in the study area. LOS on roadway segments is determined by the ratio of the roadway's volume divided by its design capacity, a metric know as volume to capacity (V/C). LOS takes into account factors such as roadway geometries, signal phasing, speed, travel delay, freedom to maneuver, and safety; and expresses these conditions using a letter-graded scale, with "A" representing free flow and "F" representing considerable congestion and delay. Table 4.10-2 provides a more detailed explanation of varying LOS.

Table 4.10-2. Level of Service Definitions

LOS Category	Definition of Operation
A	This LOS represents a completely free-flow condition, where the operation of vehicles is virtually unaffected by the presence of other vehicles and only constrained by the geometric features of the highway and by driver preferences.
B	This LOS represents a relatively free-flow condition, although the presence of other vehicles becomes noticeable. Average travel speeds are the same as in LOS A, but drivers have slightly less freedom to maneuver.
C	At this LOS the influence of traffic density on operations becomes marked. The ability to maneuver within the traffic stream is clearly affected by other vehicles.
D	At this LOS, the ability to maneuver is notably restricted due to traffic congestion, and only minor disruptions can be absorbed without extensive queues forming and the service deteriorating.
E	This LOS represents operations at or near capacity. LOS E is an unstable level, with vehicles operating with minimum spacing for maintaining uniform flow. At LOS E, disruptions cannot be dissipated readily, thus causing deterioration down to LOS F.
F	At this LOS, forced or breakdown of traffic flow occurs; although operations appear to be at capacity, queues form behind these breakdowns. Operations within queues are highly unstable, with vehicles experiencing brief periods of movement followed by stoppages.

Source: Transportation Research Board 2010; Appendix G

Roadway segment capacity within the project study area is based on the City of San Diego's *Traffic Impact Study Manual* (July 1998), and provided as Table 4.10-3. The City considers LOS D an acceptable LOS for roadway operations.

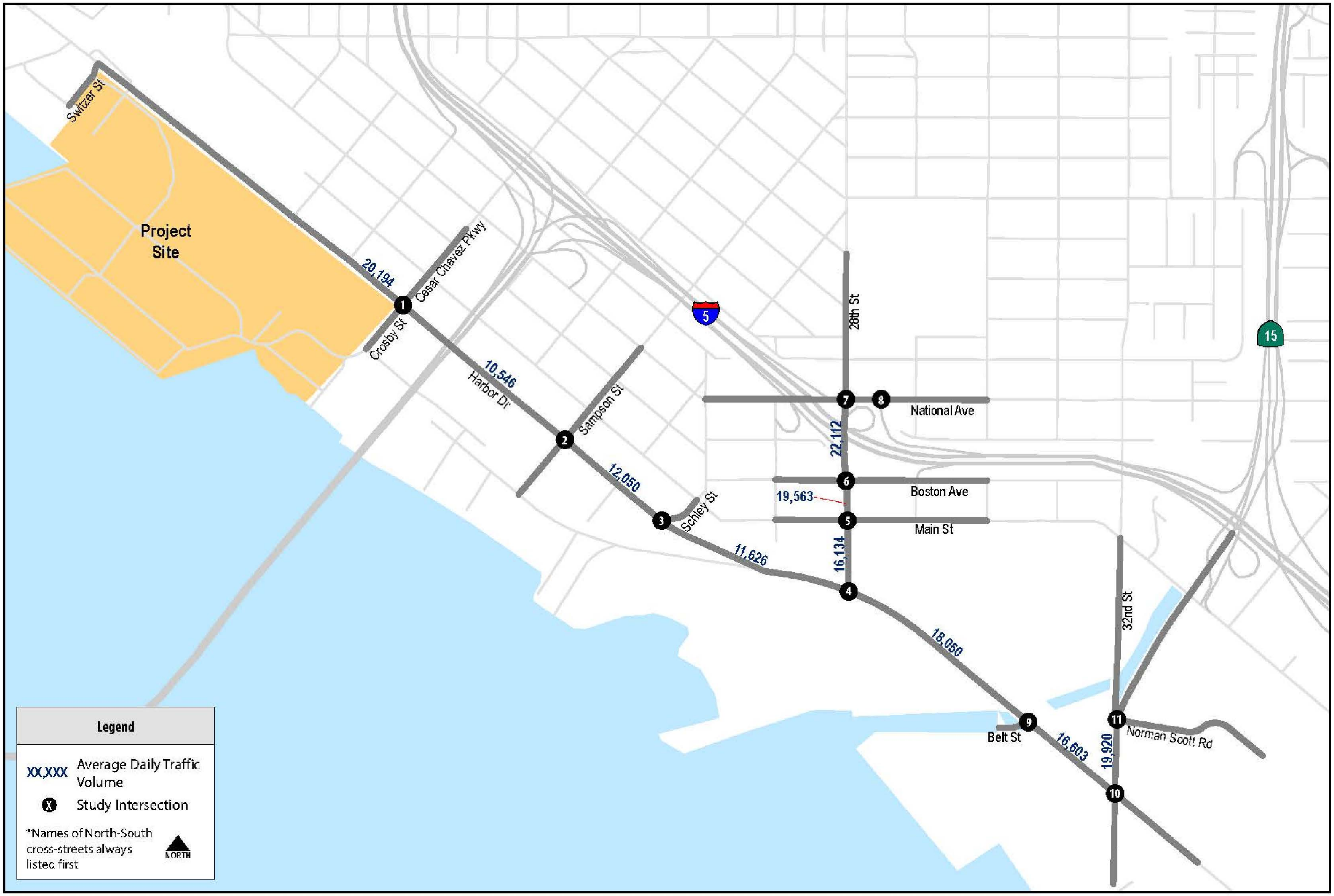
Table 4.10-3. Roadway Classifications and LOS Standards

Roadway Classification	LOS A	LOS B	LOS C	LOS D	LOS E
Expressway	30,000	42,000	60,000	70,000	**80,000**
Primer Arterial	25,000	35,000	50,000	55,000	**60,000**
Major Arterial (6-lane, divided)	< 20,000	< 28,000	< 40,000	< 45,000	**< 50,000**
Major Arterial (4-lane, divided)	< 15,000	< 21,000	< 30,000	< 35,000	**< 40,000**
Collector (4-lane w/ center lane)	< 10,000	< 14,000	< 20,000	< 25,000	**< 30,000**
Collector (4-lane w/o center lane)	< 5,000	< 10,000	< 13,000	< 15,000	**< 20,000**
Collector (2-lane w/ continuous left-turn lane)	< 5,000	< 10,000	< 13,000	< 15,000	**< 20,000**
Collector (2-lane no fronting property)	< 4,000	< 5,500	< 7,500	< 9,000	**< 10,000**
Collector (2-lane commercial-industrial fronting)	<2,500	< 3,500	< 5,000	< 6,500	**< 8,000**
Collector (2-lane multi-family)	<2,500	< 3,500	< 5000	< 6,500	**< 8,000**
Sub-Collector (2-lane single family)	-	-	2,200	-	-

Source: City of San Diego Traffic Impact Study Manual 1998; Appendix G.
Bold indicates unacceptable levels.
LOS = level of service

Existing roadway conditions were determined for three roadways split over ten segments. Figure 4.10-9 shows the existing traffic volumes at these ten segments. As summarized in Table 4.10-4, all study area segments currently operate at LOS C or better except for:

- 28th Street between Boston Avenue and National Avenue (LOS E)



Source: Chen Ryan Associates, 2016

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Figure 4.10-9
Study Area Roadways: Existing Volumes Only
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

Table 4.10-4. Existing Conditions at Study Area Roadway Segments

Roadway Segment	Segment	Cross-section	Threshold (LOS E)	ADT	V/C	LOS
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4 lanes w/RM	40,000	20,194	0.505	B
	Between Cesar Chavez Parkway and Sampson Street	4 lanes w/RM	40,000	10,546	0.264	A
	Between Sampson Street and Schley Street	4 lanes w/RM	40,000	12,050	0.301	A
	Between Schley Street and 28th Street	4 lanes w/RM	40,000	11,626	0.291	A
	Between 28th Street and Belt Street	4 lanes w/RM	40,000	18,050	0.451	B
	Between Belt Street and 32nd Street	4 lanes w/RM	40,000	16,603	0.415	B
28th Street	Between Harbor Drive and Main Street	4 lanes w/RM	40,000	16,134	0.403	B
	Between Main Street and Boston Avenue	4 lanes w/TWLT	30,000	19,563	0.652	C
	Between Boston Avenue and National Avenue	3 lanes w/TWLT	22,500[1]	22,112	0.983	**E**
32nd Street	Between Harbor Drive and Norman Scott Road	6 lanes w/RM	50,000	19,920	0.398	A

Source: Appendix G
Notes:
[1] Capacity is 75% of a 4-Lane Collector w/TWLT.
Bold letter indicates LOS E or F (i.e., unacceptable).
ADT = average daily trips; LOS = level of service; RM = raised median; TWLT = two-way left turn; V/C = volume to capacity ratio

Intersections

The *Highway Capacity Manual 2010* (Transportation Research Board 2010) defines LOS in terms of delay, or more specifically, average stopped delay per vehicle. Delay is a measure of driver and/or passenger discomfort, frustration, fuel consumption, and lost travel time. This technique uses 1,900 vehicles per hour per lane as the maximum saturation volume of an intersection. This saturation volume is adjusted to account for lane width, on-street parking, pedestrians, traffic composition (i.e., percentage of trucks), and shared lane movements (i.e., through and right-turn movements originating from the same lane). The LOS criteria used for signalized intersections is described in Table 4.10-5. The City considers LOS D or better during the AM and PM peak hours to be acceptable for intersection LOS.

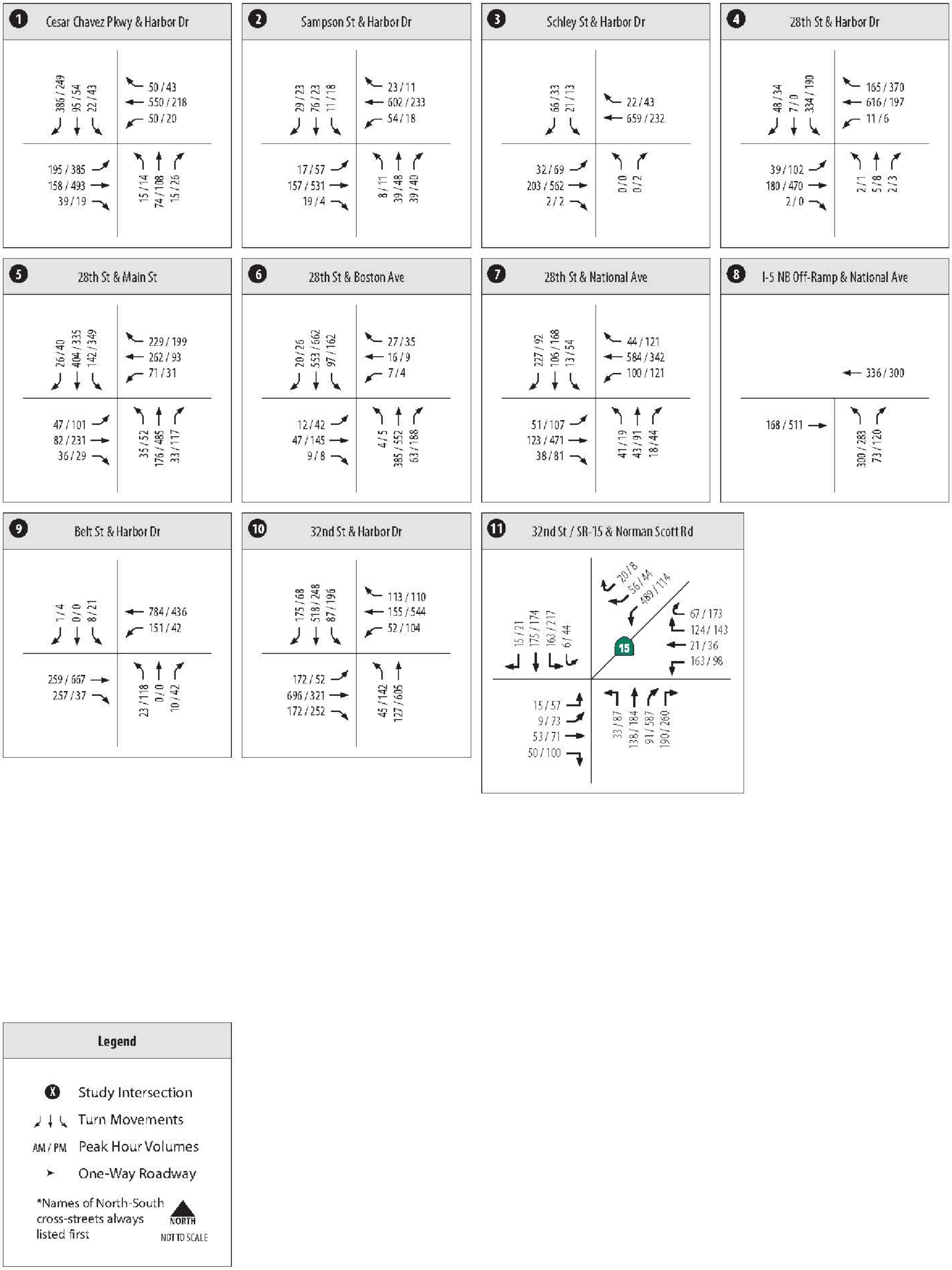
Table 4.10-5. Signalized Intersection LOS Criteria

Average Stopped Delay Per Vehicle (seconds)	Level of Service (LOS) Characteristics
<10.0	*LOS A* describes operations with very low delay. This occurs when progression is extremely favorable, and most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
10.1–20.0	*LOS B* describes operations with generally good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.
20.1–35.0	*LOS C* describes operations with higher delays, which may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
35.1–55.0	*LOS D* describes operations with high delay, resulting from some combination of unfavorable progression, long cycle lengths, or high volumes. The influence of congestion becomes more noticeable, and individual cycle failures are noticeable.
55.1–80.0	*LOS E* is considered the limit of acceptable delay. Individual cycle failures are frequent occurrences.
>80.0	*LOS F* describes a condition of excessively high delay, considered unacceptable to most drivers. This condition often occurs when arrival flow rates exceed the LOS D capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes to such delay.

Source: *Highway Capacity Manual 2010*.

Existing peak hour intersection conditions were determined for 11 intersections within the study area. LOS analysis focused on peak hour intersection operations, which is the time of the day when traffic is at its heaviest. Figure 4.10-10 shows the existing intersection volumes at peak times. As shown in Table 4.10-6, all study area intersections currently operate at LOS D or better, except for:

- Norman Scott Road/32nd Street/Wabash Boulevard (LOS F in the AM peak hour and LOS E in the PM peak hour).



Source: Chen Ryan Associates, 2016

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Figure 4.10-10
Study Area Intersections: Existing Volumes Only
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

Table 4.10-6. Existing Peak Hour Intersection Operations

#	Intersection	AM Peak Hour		PM Peak Hour	
		Avg. Delay (seconds)	LOS	Avg. Delay (seconds)	LOS
1	Harbor Drive/Cesar Chavez Parkway	36.8	D	33.3	C
2	Harbor Drive/Sampson Street	40.4	D	40.9	D
3	Harbor Drive/Schley Street	16.7	B	15.0	B
4	Harbor Drive/28th Street	23.1	C	20.3	C
5	Main Street/28th Street	21.4	C	34.8	C
6	Boston Avenue/28th Street	19.4	B	23.0	C
7	National Avenue/28th Street	42.3	D	29.6	C
8	National Avenue/I-5 Northbound Off-Ramp	14.9	B	14.7	B
9	Harbor Drive/Belt Street	18.6	B	17.1	B
10	Harbor Drive/32nd Street	28.6	C	39.9	D
11	Norman Scott Road/32nd Street/Wabash Boulevard	95.3	**F**	66.2	**E**

Source: Appendix G
LOS = level of service

Freeway Ramp Intersections

Consistent with California Department of Transportation (Caltrans) requirements, the signalized ramp intersection conditions of National Avenue/I-5 northbound off-ramp and Norman Scott Road/32nd Street/Wabash Boulevard were determined using Intersection Lane Volume (ILV) procedures as described in Topic 406 of the Caltrans *Highway Design Manual* (Caltrans 2015), which are summarized in Table 4.10-7. As shown in Table 4.10-8, the ramp intersections do not currently exceed their capacity. Neither Caltrans nor the City uses ILV results in determining significance of project impacts, but the analyses are included for informational purposes. No metered on-ramps are within the project study area.

Table 4.10-7. Traffic Flow Conditions at Ramp Intersections at Various Levels of Operation

ILV/hour Description
<1,200: (Under Capacity)
Stable flow with slight, but acceptable delay. Occasional signal loading may develop. Free midblock operations.
1,200–1500: (At Capacity)
Unstable flow with considerable delays possible. Some vehicles occasionally wait two or more cycles to pass through the intersection. Continuous backup occurs on some approaches.
>1,500: (Over Capacity)
Stop-and-go operation with severe delay and heavy congestion.[1] Traffic volume is limited by maximum discharges rates of each phase. Continuous backup in varying degrees occurs on all approaches. Where downstream capacity is restrictive, mainline congestion can impede orderly discharge through the intersection.

Source: Caltrans Highway Design Manual, Topic 406

Note:

[1] The amount of congestion depends on how much the ILV/hour value exceeds 1,500. Observed flow rates will normally not exceed 1,500 ILV/hour, and the excess will be delayed in a queue.

ILV = intersection lane volume

Table 4.10-8. Existing Ramp Intersection Capacity Analysis

#	Intersection	Peak Hour	ILV/Hour	Description
8	National Avenue/I-5 NB Off-Ramp	AM	636	Under Capacity
		PM	794	Under Capacity
11	Norman Scott Road/32nd Street/Wabash Boulevard	AM	956	Under Capacity
		PM	1,028	Under Capacity

Source: Appendix G

ILV = intersection lane volume; NB = northbound

Freeway Mainline Segment Operations

Freeway LOS analysis is based upon procedures developed by Caltrans. The procedure for calculating freeway LOS involves estimating a peak hour V/C ratio. Peak hour volumes are estimated from the application of design hour ("K"), directional ("D"), and truck ("T") factors to average daily traffic volumes. The base capacities for I-5 were assumed to be 2,350 passenger-cars per hour per main lane (pc/h/ln) and 1,410 pc/h/ln (60% of the main lane capacity) for auxiliary lane, respectively.

The resulting V/C ratio is then compared to acceptable ranges of V/C values corresponding to the various LOS for each facility classification, as shown in Table 4.10-9. The corresponding LOS represents an approximation of existing or anticipated future freeway operating conditions in the peak direction of travel during the peak hour. LOS D or better is considered acceptable freeway operations.

Table 4.10-9. Freeway Segment LOS Criteria

LOS	V/C	Congestion/Delay	Traffic Description
Used for freeways, expressways and conventional highways			
A	<0.30	None	Free flow.
B	0.31–0.50	None	Free to stable flow, light to moderate volumes.
C	0.51–0.71	None to minimal	Stable flow, moderate volumes, freedom to maneuver noticeably restricted.
D	0.71–0.89	Minimal to substantial	Approaches unstable flow, heavy volumes, very limited freedom to maneuver.
E	0.90–1.00	Significant	Extremely unstable flow, maneuverability and psychological comfort extremely poor.
Used for conventional highways			
F	>1.00	Considerable	Forced or breakdown flow. Delay measured in average travel speed (miles per hour). Signalized segments experience delays >60.0 seconds/vehicle.

Source: Appendix G
LOS = level of service; V/C = volume to capacity ratio

Existing peak hour freeway conditions were determined for nine mainline freeway segments within the study area. LOS analysis focused on peak hour freeway segment operations, which is the time of the day when traffic is at its heaviest. Table 4.10-10 displays the existing freeway segment annual average daily traffic volumes, which were obtained from Caltrans' *2014 Traffic Volumes on California State Highways*. As shown, all study freeway segments currently operate at LOS D or better with the exception of the following.

- I-5 northbound between 28th Street & I-15 (LOS F)
- I-5 northbound between SR-15 & Main Street (LOS E)
- I-5 southbound between SR-15 & Main Street (LOS E)

Table 4.10-10. Existing Freeway Mainline LOS Analysis Results

Freeway	Segment	ADT[a]	Direction	# of Lanes	Capacity[b]	D[c]	K[d]	HVF[e]	Peak Hour Volume	V/C	LOS
I-5	SR-94 & Imperial Avenue	180,000	NB	4M+1A	10,810	62.2%	8.1%	4.0%	9,600	0.89	D
			SB	4M+1A	10,810	53.2%	8.3%	4.0%	8,400	0.78	C
	Imperial Avenue & SR-75	170,000	NB	4M+1A	10,810	62.2%	8.1%	3.8%	9,100	0.84	D
			SB	4M+1A	10,810	57.7%	8.2%	3.8%	8,400	0.78	C
	SR-75 & 28th Street	167,000	NB	4M+2A	12,220	70.4%	8.4%	5.0%	10,400	0.85	D
			SB	4M+1A	10,810	57.7%	8.2%	5.0%	8,300	0.77	C
	28th Street & SR-15	165,000	NB	4M	9,400	70.4%	8.4%	5.0%	10,300	1.10	**F**
			SB	4M	9,400	57.7%	8.2%	5.0%	8,200	0.87	D
	SR-15 & Main Street	195,000	NB	4M+2A	12,220	70.4%	8.4%	5.0%	12,100	0.99	**E**
			SB	5M	11,750	65.4%	8.7%	5.0%	11,600	0.99	**E**
SR-15	SR-94 & Market Street	126,000	NB	3M+1A	8,460	59.5%	8.1%	5.1%	6,400	0.76	C
			SB	3M+1A	8,460	55.2%	9.7%	5.1%	7,100	0.84	D
	Market Street & Ocean View Boulevard	114,000	NB	3M	7,050	61.2%	8.1%	5.1%	5,900	0.84	D
			SB	3M	7,050	55.2%	9.6%	5.1%	6,400	0.91	D
	Ocean View Boulevard & I-5	103,000	NB	3M+1A	8,460	61.2%	7.0%	5.1%	4,600	0.54	B
			SB	4M+1A	10,810	55.2%	7.8%	5.1%	4,700	0.43	B
	I-5 & Norman Scott Road	7,300	NB	2M	4,700	61.2%	7.0%	5.1%	300	0.06	A
			SB	2M	4,700	54.4%	7.5%	5.1%	300	0.06	A

Source: Appendix G.

Bold letter indicates LOS E or F.

M = mainline; A = auxiliary lane; ADT = average daily trips; NB = northbound; SB = southbound; V/C = volume to capacity ratio; LOS = level of service

[a] Traffic volumes provided by Caltrans (see Appendix G).

[b] The capacity is calculated as 2,350 ADT per main lane and 1,410 ADT (60% of the main lane capacity) per auxiliary lane.

[c] D = Directional split

[d] K = Peak hour %

[e] HV = Heavy vehicle %

Public Transportation Services

Regional public transportation serving the downtown area includes the COASTER commuter train, the San Diego Trolley, and local bus lines. Planned public transportation services are based on the San Diego Association of Governments' (SANDAG) adopted Regional Transportation Plan (RTP), which identifies planned transit improvements that improve access in the San Diego downtown area and surrounding communities through the year 2050.

COASTER Commuter Train

The COASTER commuter train travels over a 41-mile route along the San Diego coastline, carrying about 5,700 boardings each weekday, totaling 1.7 million trips annually (NCTD 2015). The nearest COASTER station to the project site is at the Santa Fe Depot, approximately 1 mile north of the project site. COASTER riders (i.e., work commuters) can either transfer to the Orange Line Trolley at this location or walk/bike to the project site. Per SANDAG's 2050 RTP, the COASTER commuter rail service is anticipated to be extended from its current terminus at Santa Fe Depot to a new Bayside station, providing direct access to Petco Park, San Diego Convention Center, and the project site, with service anticipated to begin in 2018.

San Diego Trolley

The San Diego Trolley serves over 32 million annual passengers, with an average weekday ridership of 97,401 (MTS 2013). Each train consists of between one and four cars depending on need. Each car can hold between 96 and 104 passengers during commute times and up to 200 passengers during special events (referred to as *crush load*). This equates to between 384 passengers and up to 800 passengers during special events. As an average, it is assumed each train typically has three cars and operates at car commute capacity, or approximately 300 passengers per rush hour train.

Blue Line

The MTS Blue Line was the first light-rail line constructed in San Diego and was the start of the MTS Trolley System. In operation since 1981, the Blue Line began with service between downtown San Diego and the San Ysidro Port-of-Entry. Blue Line service has been expanded four times since its inception and now provides service between the San Ysidro Port-of-Entry to the south and the Old Town Transit Center to the north. In all, it services 15.4 miles and includes 18 stations.

The Blue Line currently runs at 7- to 8-minute headways during peak periods and 15-minute headways in off-peak periods. Existing ridership along the Blue Line is estimated at 145 and 151 passengers per train during the AM and PM peak hours, respectively, or about half of the current capacity of 300 passengers per train. The Blue Line stops at the Barrio Logan Trolley Station, which is approximately 0.3 mile walking distance from the project site, and the 12th and Imperial Station, which is approximately 0.4 mile walking distance from the north access point to the project site.

Orange Line

The MTS Orange Line was the second light-rail line implemented as part of the San Diego Trolley system. Service began in 1986, with the line operating between downtown San Diego and Euclid Avenue to the east. Since its inception, the Orange Line has undergone four expansions, allowing service to now run between downtown San Diego in the west and Gillespie Field (El Cajon) in the east. In all it services 18 miles and includes 19 stations.

In the downtown area, the Orange Line operates along Park Boulevard, C Street, and the Bayside alignment. The Orange Line currently runs at 15-minute headways during peak periods and 30-minute headways in off-peak times. Existing ridership along the Orange Line is estimated at 76 and 80 passengers per train during the AM and PM peak hours, respectively, which is roughly 25 percent of the current capacity of 300 passengers per train. Per SANDAG's 2050 RTP, the frequency of the Orange Line is expected to double, reducing the peak period headways to 7.5 minutes during peak periods and 15 minutes in off-peak times by the year 2030. The Orange Line operates along the Bayside alignment (rail line just north of Harbor Drive) and provides access to the project site via the 12^{th} and Imperial Transit Center, which is approximately 0.4 mile walking distance from the north access point to the project site.

Green Line

The MTS Green Line was the third light-rail line implemented as part of the San Diego Trolley system. In the downtown area, the Green Line operates along the Bayside alignment. The Green Line operates a 15-minute service Monday through Saturday and a 30-minute service on weekend mornings, Sundays, and evenings. In all, the Green Line services 23.6 miles and includes 27 stations.

Service began in 2005, when the 5.9-mile gap between Mission San Diego and Grossmont Transit Center was connected and operations began between Santee Town Center and Old Town. Additionally, the northern terminus of the Blue Line was reestablished at the Old Town Transit Center, and the Orange Line's eastern terminus was modified to serve the Gillespie Field Station. In September 2012, the Green Line was extended through Old Town and now terminates at 12^{th} and Imperial via the Seaport Village, Convention Center, and Gaslamp Quarter stations. The Green Line stops at the 12^{th} and Imperial Station, which is approximately 0.4 mile walking distance from the north access point to the project site.

Local/Express Bus Services

There ~~is one~~are two bus routes that currently make~~s~~ stops within the project study area: MTS Bus Routes 929 and 11. The MTS Bus Route ~~11.~~929 stop is at the corner of Main Street and Cesar Chavez Boulevard, approximately 0.3 mile from the project site. The MTS Bus Route 11 stop is at the corner of 28^{th} Street and National Avenue, approximately 1 mile from the project site.

Pedestrian and Bicycle Facilities

Harbor Drive and 28^{th} Street

Harbor Drive and 28^{th} Street currently have sidewalk facilities on both sides of the roadway within the project study area. Designated crossings are located at project study intersections.

Bayshore Bikeway

The Bayshore Bikeway path is a 24-mile bicycle facility that runs along the San Diego Bay. Bicycle facilities in the project study area consist of Class II Bicycle Lanes in each direction along Harbor Drive as a part of the Bayshore Bikeway facility. These bicycle lanes are designated and signed.

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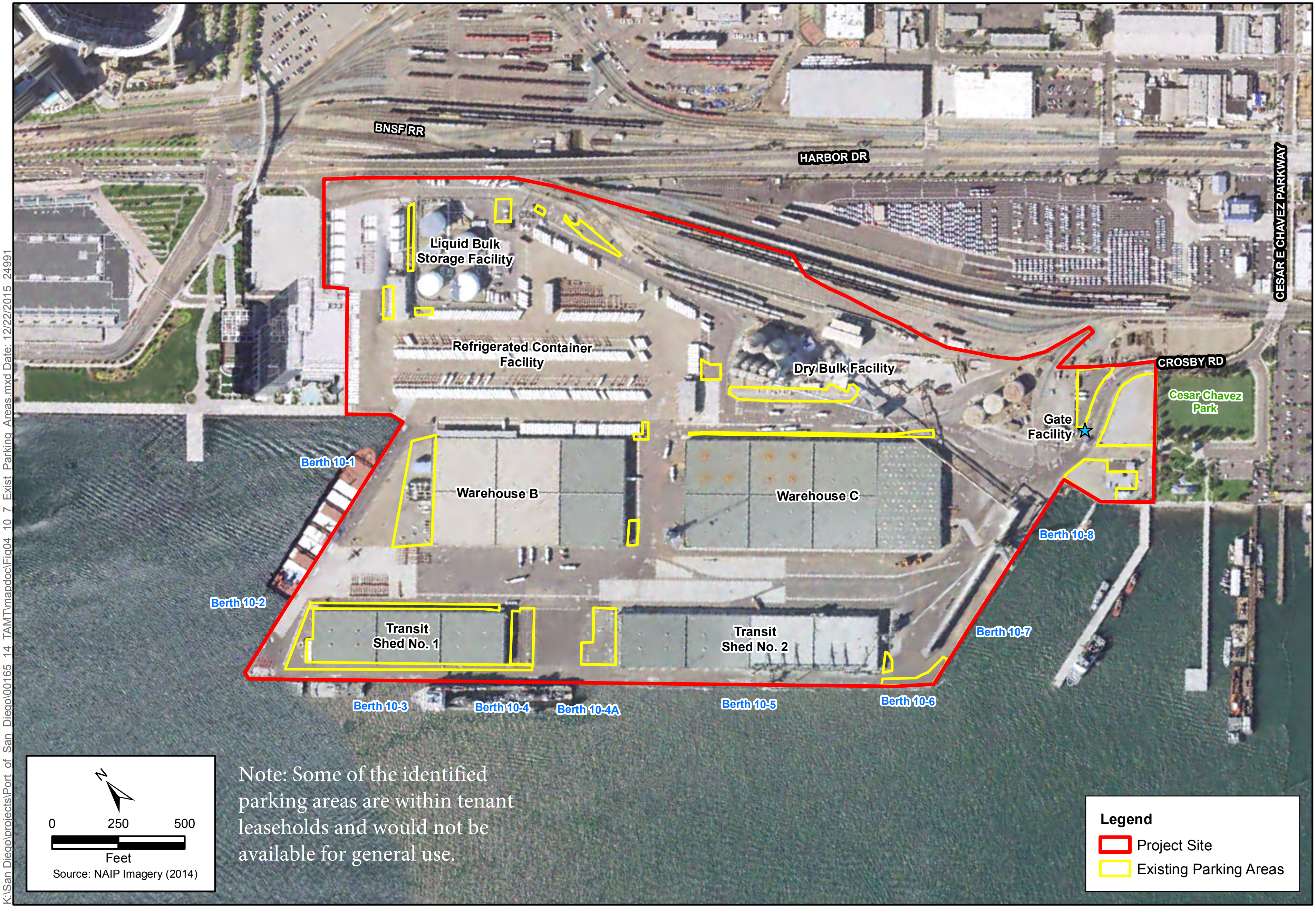

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Figure 4.10-11
Existing Typical Parking Areas
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

Parking Conditions

A number of parking spaces are available within the terminal grounds; however, a majority of these parking spaces are not marked in order to provide maximum flexibility for existing TAMT operations. Dock workers responsible for loading and unloading shipments are directed by marine terminal supervisors on where to park on the terminal in order to avoid areas designated and marked as no parking zones and ensure that parking does not interfere with marine-related operations. Typically, dock workers park in an approved area closest to where they have been assigned to work for a particular shift.

Parking in areas without marked spaces can accommodate up to approximately 150 spaces per acre (University of Tennessee 2014).[2] The majority of parking is provided near the main entrance gate of the project site. The 0.35-acre parking lot to the north of the entry gate is able to accommodate up to approximately 50 spaces if needed. The 1-acre dirt lot to the south of the entry gate, just before entering the project site, can accommodate up to 150 spaces. The 0.60-acre partial paved/dirt lot just inside the project site and south of the entry gate can accommodate up to 90 spaces.

Moving west across the project site, the area immediately east adjacent to Warehouse C could accommodate up to 85 passenger vehicles. The dry bulk cargo area supports approximately 35 spaces that run along the edge of the silos, whereas parking for the Dry Bulk tenants near Transit Shed #2 includes up to 35 spaces. Parking for Warehouse B includes approximately 17 spaces on the east end, most of which are striped, and room for approximately 40 parking spaces on the west side of Warehouse B. Parking within the liquid bulk area includes approximately 29 striped spaces. Within the refrigerated cargo areas, authorized visitors and employees associated with administrative operations can park in roughly 13 spaces in the immediate vicinity of Dole's main office, which is in the northeastern/central quadrant of its leasehold, and at the entry gate to the Dole leasehold, where there is room for approximately 15 cars. Moreover, at the north area of the project site, where the route follows along the perimeter of the Dole leasehold and liquid bulk area, there is parking for up to 22 spaces near the truck scanning area and 3 marked spaces across the internal intersection. In addition, 65 striped parking spaces are located in front of Transit Shed #1, while Transit Shed #2 has 56 striped parking spaces, which includes parking for the existing headhouse. In total, available parking spaces amount to 705 for an average of approximately 315 employees per day, only a portion of which would be present during the 8-hour day shift. Parking areas are illustrated in Figure 4.10-11.

[2] The University of Tennessee's article *Estimating the Number of Parking Spaces Per Acre* (May 2014) notes that while there is probably not a standard-sized parking space, many parking lots are designed with parking spaces that are 10 feet by 18 feet (180 square feet). Each acre of land contains 43,560 square feet; a simple mathematical computation shows if each parking space requires 180 square feet, 1 acre of land would accommodate 242 parking spaces. This assumes no turning lanes and that all parking spaces are right next to each other. If an area that is 180 feet by 242 feet (approximately 1 acre) is designed with six rows of parking spaces with each parking space being approximately 10 feet by 18 feet and with traffic lanes 24 feet wide, approximately 150 spaces can be designed.

4.10.3 Applicable Laws and Regulations

4.10.3.1 State

California Department of Transportation

Caltrans has jurisdiction over the state highway system and is divided into 12 districts. Caltrans establishes acceptable freeway and on- and off-ramp operations based on the Transportation Research Board's *Highway Capacity Manual 2010* (Transportation Research Board 2010).

Signalized intersections at freeway ramps are required to be analyzed using ILV procedures as described in Topic 406 of the *Highway Design Manual* (Caltrans 2015). This methodology is based on an assessment of each intersection as an isolated unit, without consideration of the effects from adjacent intersections. For this reason, the ILV analysis is used to provide additional validation of signalized ramp intersection operations derived from the *Highway Capacity Manual 2010* methodology.

4.10.3.2 Regional

San Diego Association of Government's San Diego Forward: The Regional Plan

San Diego Forward: The Regional Plan (Regional Plan) was adopted by the SANDAG Board of Directors on October 9, 2015, to establish a long-range blueprint for the San Diego region's growth and development through the year 2050. The Regional Plan was developed in close partnership with the region's 18 cities and the County government, and aims to provide innovative mobility choices and planning to support a sustainable and healthy region, a vibrant economy, and an outstanding quality of life for all. The Regional Plan integrates both the 2004 Regional Comprehensive Plan and the 2050 RTP and Sustainable Communities Strategy (SCS) into one unified plan. By incorporating the SCS, the Regional Plan is in compliance with Senate Bill (SB) 375, which identifies how the region will address greenhouse gas emissions to meet State-mandated levels and focuses on land use planning and transportation issues in an attempt to develop sustainable growth patterns on a regional level.

California State Proposition 111, passed by voters in 1990, established a requirement that urbanized areas prepare and regularly update a Congestion Management Program (CMP). The requirements within the state CMP were developed to monitor the performance of the transportation system, develop programs to address near-term and long-term congestion, and better integrate transportation and land use planning. SANDAG provided regular updates for the state CMP from 1991 through 2008. In October 2009, the San Diego region elected to be exempt from the state CMP, and, since this decision, SANDAG has been abiding by 23 Code of Federal Regulations (CFR) 450.320 to ensure the region's continued compliance with the federal congestion management process. The Regional Plan is the region's long-range transportation plan and SCS, and meets the requirements of 23 CFR 450.320 by incorporating the following federal congestion management process: performance monitoring and measurement of the regional transportation system, multimodal alternatives and non-single occupant vehicle analysis, land use impact analysis, the provision of congestion management tools, and integration with the regional transportation improvement program process.

Riding to 2050, the San Diego Regional Bike Plan

The San Diego Regional Bike Plan (SANDAG 2010) was developed to support the 2004 Regional Comprehensive Plan and the 2050 RTP in implementing the regional strategy for utilizing the bicycle as a valid form of everyday travel. The bike plan, as a part of the SCS mandated by SB 375, provides for a detailed Regional Bike Network, as well as the programs that are necessary to support it. Implementation of the Regional Bike Plan would help the region meet goals for reducing greenhouse gas emissions and improve mobility.

4.10.3.3 Local

The project site is within the land use jurisdiction and control of the District. However, because the streets and intersections serving the project site are within the City's jurisdiction, the following local laws, regulations, and plans were taken into account in the analysis of the proposed project's impacts on transportation, circulation, and parking.

City of San Diego Traffic Impact Study Manual

The City's *Traffic Impact Study Manual*, approved in 1998, was created to establish a procedure for determining the type of traffic impact study necessary and to address and establish certain requirements for preparing traffic impact analyses. The manual provides guidance on establishing a study area, deciding how extensive a traffic study should be, setting project phasing, using background information, and adjusting or compensating for transit stations or mixed-use developments. The manual also provides City thresholds for acceptable roadway and intersection operations and further guidance on the City's internal review process, to aid consultants in traffic study preparation.

City of San Diego Street Design Manual

The City's *Street Design Manual* (City of San Diego 2002) provides information and guidance for the design of public right-of-way that accommodates a variety of potential users, including motorists, pedestrians, and bicyclists. The *Street Design Manual* is divided into six sections: Roadway Design, Pedestrian Design, Traffic Calming, Street Lighting, Parkway Configurations, and Design Standards. The guidelines are focused on the development of new or undeveloped areas as well as redeveloping areas and are not intended to supersede other guidelines developed in other local planning documents, such as community plans, specific plans, and RTPs.

City of San Diego Bicycle Master Plan

The City of San Diego Bicycle Master Plan (2002) and Bicycle Master Plan Update (2013) provide a framework for making cycling a more practical and convenient transportation option for San Diegans at different riding purposes and skill levels. The Bicycle Master Plan is a 20-year policy document that guides the development and maintenance of San Diego's bicycle network. The bicycle network includes all roadways that bicyclists have the legal right to use, support facilities, and non-infrastructure programs. The plan includes direction for policymakers on the expansion of the existing bikeway network, connecting gaps, addressing constrained areas, improving intersections, providing for greater local and regional connectivity, and encouraging more residents to bicycle more often. The 2013 update builds on the 2002 version by updating bicycling needs by addressing changes to the bicycle network and overall infrastructure.

City of San Diego Pedestrian Master Plan

The Pedestrian Master Plan (City of San Diego 2006) provides guidelines to the City that will enhance neighborhood quality and mobility options through the facilitation of pedestrian improvement projects. The Pedestrian Master Plan both identifies and prioritizes pedestrian improvement projects through technical analysis and community input programs, which are typically grant-funded.

4.10.4 Project Impact Analysis

4.10.4.1 Methodology

Potential transportation and circulation impacts associated with the proposed project are summarized below from Appendix G. Methods used to determine project-related impacts are taken from the City of San Diego's *Traffic Impact Study Manual* and the City of San Diego's CEQA Significance Determination Thresholds, as last amended in January 2011. For more details related to the methods used, please see Appendix G, Chapter 2.0.

Roadway Segments, Intersections, Freeway Segments, and Ramp Metering

The City of San Diego *Traffic Impact Study Manual* defines project impact thresholds by facility type, which are provided in Table 4.10-11 below. These thresholds are generally based upon an acceptable increase in the V/C ratio for roadway and freeway segments, and upon increases in vehicle delays for intersections and ramps.

In the City of San Diego, LOS D is considered acceptable for roadway and intersection operations. A project is considered to have a significant impact if it degrades the operations of a roadway or intersection from an acceptable LOS (D or better) to an unacceptable LOS (E or F), or if it adds additional delay to a facility already operating an unacceptable level.

Table 4.10-11. City of San Diego Measure of Significant Project Traffic Impacts

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

Source: City of San Diego, Significance Determination Thresholds, January 2011
LOS = level of service; mph = miles per hour; V/C = volume to capacity ratio

Note that the proposed project would not add 50 or more peak hour trips to the I-5 or I-15 within the project study area. In addition, there are no metered ramps within the study area.

Freeway Ramp Intersection

Freeway ramp intersections were based on ILV per Topic 406 of the Caltrans *Highway Design Manual*. The ILV assesses each intersection as an isolated unit, apart from the effects of the adjacent intersections. The ILV analysis serves as an additional validation of signalized ramp intersection operations from the *Highway Capacity Model 2010* methodology.

Public Transit

Impacts on transit circulation would occur if the proposed project would substantially increase hazards due to a design feature or would conflict with the adopted policies, plans, or programs that support public transit. Existing light rail transit stops in the project study area include the Barrio Logan, Harborside, and Pacific Fleet Stations. While not in the traffic study area, the 12th and Imperial Transit Center is approximately 1,000 feet northeast of the project site, adjacent to Petco Park.

Pedestrian and Bicycle Facilities

Impacts on the pedestrian and bicycle circulation system were considered through a review of the project site plan and a field visit. Impacts relating to pedestrian and bicycle circulation would occur if the proposed project would substantially increase hazards due to a design feature or would conflict with the adopted policies, plans, or programs that support these alternative modes of transportation.

Parking

A significant parking impact would occur if insufficient parking was provided, which would occur if dock workers or tenant employees were required to park outside the terminal on surrounding roadways and in offsite parking areas not designated for terminal parking overflow. If a parking space deficiency is identified, which would be based on the availability of spaces for existing workers and visitors plus new workers and visitors associated with the proposed project, then an evaluation of the potential physical impacts associated with insufficient parking would be conducted, and a determination as to the level of significance would be made.

Trip Generation

Operation

Aside from the planned Demolition and Initial Rail Component, the timing of implementation of the proposed TAMT plan is unknown because the TAMT plan would be implemented as the market requires improvements to the terminal. Table 4.10-12 provides the data from existing throughput and the estimates associated with the Demolition and Initial Rail Component. Table 4.10-13 provides the data from existing throughput and the estimates associated with the near-term improvements and the buildout of the TAMT plan along with the projected increase that is associated with the proposed project.

Table 4.10-12. Existing Terminal Throughput Compared to Demolition and Initial Rail Throughput

Type	Existing Throughput (MT)	Existing + Demolition and Initial Rail Component Throughput (MT)	Projected Increase in Existing Throughput (MT)
Improvements and Capacity Enhancements Proposed in TAMT Plan			
Dry Bulk	289,864	289,864	0
Refrigerated Containers	637,931	685,931	48,000
Multi-Purpose General Cargo	85,131	124,078	38,947
No Improvements or Capacity Enhancements Proposed in TAMT Plan			
Liquid Bulk	31,520[a]	31,520	0
Total	**1,044,446**	**1,131,393**	**86,947**

Source: District 2014, Appendix G.
Note:
[a] Note that approximately 31,520 MT were processed between July 2013 and June 2014. However, only 15,887 MT used trucks, with the remaining 15,633 MT being transported by barge and not generating truck traffic.
MT = metric tons of cargo

Table 4.10-13. Existing Terminal Throughput Compared to Projected Maximum Practical Capacity Under Buildout of the TAMT Plan

Type	Existing Throughput (MT)	Maximum Practical Capacity with TAMT Plan Buildout (MT)	Projected Increase in Throughput (MT)
Improvements and Capacity Enhancements Proposed in TAMT Plan			
Dry Bulk	289,864	2,650,000	2,360,136
Refrigerated Containers	637,931	2,288,000	1,650,069
Multi-Purpose General Cargo	85,131	977,400	892,269
No Improvements or Capacity Enhancements Proposed in TAMT Plan			
Liquid Bulk	31,520[a]	239,017	207,497[a]
Total	**1,044,446**	**6,154,417**	**5,109,971**

Source: District 2014, Appendix G
Note:
[a] Approximately 31,520 MT were processed between July 2013 and June 2014. However, only 15,887 MT used trucks, with the remaining 15,633 MT being transported by barge and not generating truck traffic.
MT = metric tons of cargo

There are two main trip generators associated with the proposed project: freight movement (trucks) and employees. Increases in trucking activities under the Demolition and Initial Rail Component as well as the full buildout of the TAMT plan conditions were developed based on existing ratios for cargo throughput per truck by cargo type. To develop this ratio, cargo throughput and the number of trucks accessing the project site were collected between July 2013 and June 2014. In regard to existing employment, there are a total of 315 daily employees at the project site.

Table 4.10-14 displays the existing number of trucks that currently access the project site. Table 4.10-15 displays the truck ratios by cargo type.

Table 4.10-14. Existing Trucks Accessing the TAMT Annually

Cargo Type	Existing Throughput (MT)	Trucks
Dry Bulk	289,864	9,995
Liquid Bulk	31,520	292
Refrigerated Containers	637,931	21,998
Multi-Purpose General Cargo	85,131	1,064
Total	*1,044,446*	*33,349*

Source: District 2014, Appendix G
Note: To reach the daily number of truck trips, divide the annual trucks by 360 days.
MT = metric tons of cargo

Table 4.10-15. Existing Cargo to Truck Ratios

Cargo Type	Average Throughput per Truck
Dry Bulk	29 MT/Truck
Liquid Bulk	108 MT/Truck
Refrigerated Containers	29 MT/Truck
Multi-Purpose General Cargo	80 MT/Truck

Source: Appendix G
Note that the average throughput per truck does not refer to how many MT are carried per truck, but provides the average amount of throughput that occurs at about the point one truck is used. For example, liquid bulk is mostly conveyed through underground pipes, whereas liquid bulk trucks handle between 20–30 MT per haul. Therefore, approximately 68–78 MT of every 108 MT is transported by pipeline or barge.
MT = metric tons of cargo

To determine the increase in trucking activities associated with the proposed project, the cargo throughput ratios noted in Table 4.10-15 were applied to the anticipated annual growth in cargo throughput, as noted in Table 4.10-12 and Table 4.10-13. Table 4.10-16 displays the anticipated annual increase in truck activities associated with the Demolition and Initial Rail Component. Table 4.10-17 displays the anticipated annual increase in truck activities associated with the full TAMT plan buildout. The TAMT operates 7 days a week and closes on very few holidays. Therefore, to determine the increase in daily truck activities, it was assumed that the TAMT operates 360 days a year.

Table 4.10-16. Increase in Truck Activity with Demolition and Initial Rail Component

Type	Projected Increase in Throughput (MT)	New Trucks/Year[1]	New Trucks/Day[2]
Improvements and Capacity Enhancements Proposed in TAMT Plan			
Dry Bulk	0	0	0
Refrigerated Containers	48,000	1,655	5
Multi-Purpose General Cargo	38,947	487	2
No Improvements or Capacity Enhancements Proposed in TAMT Plan			
Liquid Bulk[3]	0	0	0
Total	**86,947**	**2,142**	**7**

Source: Appendix G
Notes:
[1] Projected increase in throughput/throughput per truck (see Table 4.10-15)
[2] New trucks per year/360 operational days per year
[3] The analysis conservatively includes liquid bulk in the traffic analysis; however, the proposed TAMT plan does not recommend any physical changes to the Liquid Bulk Node.
MT = metric tons of cargo

Table 4.10-17. Increase in Truck Activity with TAMT Plan Buildout

Type	Projected Increase in Throughput (MT)	New Trucks/Year[1]	New Trucks/Day[2]
Improvements and Capacity Enhancements Proposed in TAMT Plan			
Dry Bulk	2,360,136	81,384	227
Refrigerated Containers	1,650,069	56,899	159
Multi-Purpose General Cargo	892,269	11,153	31
No Improvements or Capacity Enhancements Proposed in TAMT Plan			
Liquid Bulk[3]	207,497	1,921	6
Total	**5,109,971**	**153,592**	**423**

Source: Appendix G
Notes:
[1] Projected increase in throughput/throughput per truck (see Table 4.10-15)
[2] New trucks per year/360 operational days per year
[3] The analysis conservatively includes liquid bulk in the traffic analysis; however, the proposed TAMT plan does not recommend any physical changes to the Liquid Bulk Node.
MT = metric tons of cargo

In regard to employment, the District anticipates that the additional cargo throughput associated with the Demolition and Initial Rail Component would require 92 new employees, including 10 new permanent administrative employees and 82 dock workers. Once full TAMT plan buildout has occurred, the District anticipates that 524 new employees, which include the 92 new employees associated with the Demolition and Initial Rail Component, would be required to move the additional cargo throughput and perform administrative functions.

The traffic impact analysis includes the following assumptions.

- The percentage of the total cargo shipped via rail and barge from the project site would remain the same; therefore, the cargo to truck and employee ratios would remain the same at buildout.
- Trucking would be active 24 hours a day.
- New administrative employees would work daily from 8:00 a.m. 5:00 p.m.
- New dock workers would be spread between three shifts:
    - Day shift (8:00 a.m. to 5:00 p.m.)
    - Evening shift (5:00 p.m. to 3:00 a.m.)
    - Night shift (3:00 a.m. to 8:00 a.m.)
- New employees would drive a personal vehicle to the project site and no carpooling would occur.

Table 4.10-18 provides the estimated average daily trips (ADT) that would be generated as a part of the Demolition and Initial Rail Component. The trip generation used for the impact analysis considered 7 additional truckloads of cargo on a daily basis and 92 additional employees on a daily basis, which equates to 318 new trips per day, including 71 trips during the AM peak hour and 71 trips during the PM peak hour.

Table 4.10-19 provides the estimated ADT that would be generated as a part of the proposed project at buildout. The trip generation used for the impact analysis considered 423 additional truckloads of cargo on a daily basis and 524 additional employees on a daily basis, which equates to 4,110 new trips per day, including 477 trips during the AM peak hour and 477 trips during the PM peak hour.

Table 4.10-18. Demolition and Initial Rail Component Trip Generation

					AM Peak Hour			PM Peak Hour		
Type	**Units**	**Rate**	**PCE**	**ADT**	**Total**	**In**	**Out**	**Total**	**In**	**Out**
Trucks	7	2/Truck	3	42	2	1	1	2	1	1
Dock Workers	82	3/Employee	1	246	59	35	24	59	24	35
Administrative	10	3/Employee	1	30	10	10	0	10	0	10
Total				**318**	**71**	**46**	**36**	**71**	**36**	**46**

Source: Appendix G
Rate = number of daily trips per truck or employee
ADT = average daily trips; PCE = Passenger Car Equivalent, based on industry standards

Table 4.10-19. Full TAMT Plan Buildout Trip Generation

					AM Peak Hour			PM Peak Hour		
Type	**Units**	**Rate**	**PCE**	**ADT**	**Total**	**In**	**Out**	**Total**	**In**	**Out**
Trucks	423	2/Truck	3	2,568	108	54	54	108	54	54
Dock Workers	461	3/Employee	1	1,383	308	154	154	308	154	154
Administrative	63	3/Employee	1	189	63	63	0	63	0	63
Total				**4,110**	**477**	**270**	**207**	**477**	**207**	**270**

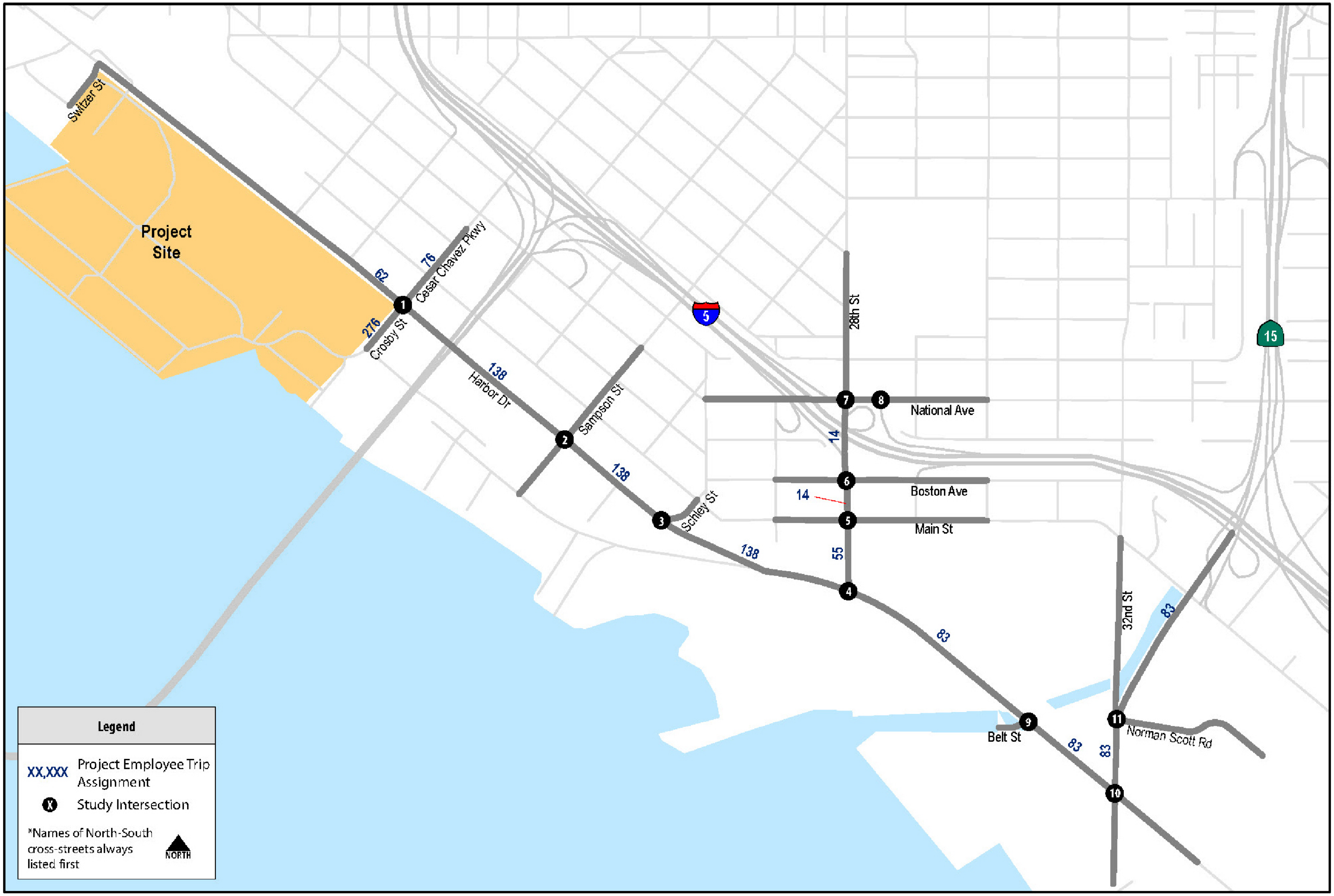
Source: Appendix G
Rate = number of daily trips per truck or employee
ADT = average daily trips; PCE = Passenger Car Equivalent, based on industry standards

While the timing of full implementation of the proposed TAMT plan is unknown, implementation of the Demolition and Initial Rail Component would occur in the near term, with construction anticipated to begin in 2017 and be completed by 2020.

Construction

Several components of the TAMT plan, particularly the Demolition and Initial Rail Component, include construction and demolition activities that would generate vehicle trips. The Demolition and Initial Rail Component includes demolition of Transit Sheds #1 and #2, replacement of pole lighting, subsurface conduit and electrical improvements to allow for future electrification and/or shore power capabilities, installation of a building with a gear room, IT room, and restrooms, installation of an outdoor storage area, installation of a 3,600-square-foot modular office space, installation of air brake testing equipment with two 100-foot enclosures, and a rail lubrication system. These physical improvements would generate additional trips at the early stage of the TAMT plan's implementation that are associated with construction activities and are analyzed as temporary impacts. In addition, demolition of the existing molasses tanks and Warehouse C are also included as future, long-term components of the proposed TAMT plan.

The greatest intensity of construction activity would occur with the demolition of Transit Sheds #1 and #2. Moreover, it was assumed that demolition of these sheds would partially overlap to provide a worst-case construction scenario. Consequently, demolition of these sheds would generate the greatest amount of construction traffic at a single point in time, with construction of any subsequent improvements associated with TAMT plan buildout anticipated to generate similar or reduced levels of construction traffic. As indicated in Table 4.10-20, approximately 79 haul trucks and 50 construction workers would access the project site daily during this time. It was also assumed that all construction workers would drive individual vehicles to the project site and that material deliveries and construction workers would arrive and depart during the AM and PM peak hours. With these conservative estimates, the proposed project construction trip generation is anticipated to be approximately 624 daily trips, including 113 trips during both the AM and PM peak hours.



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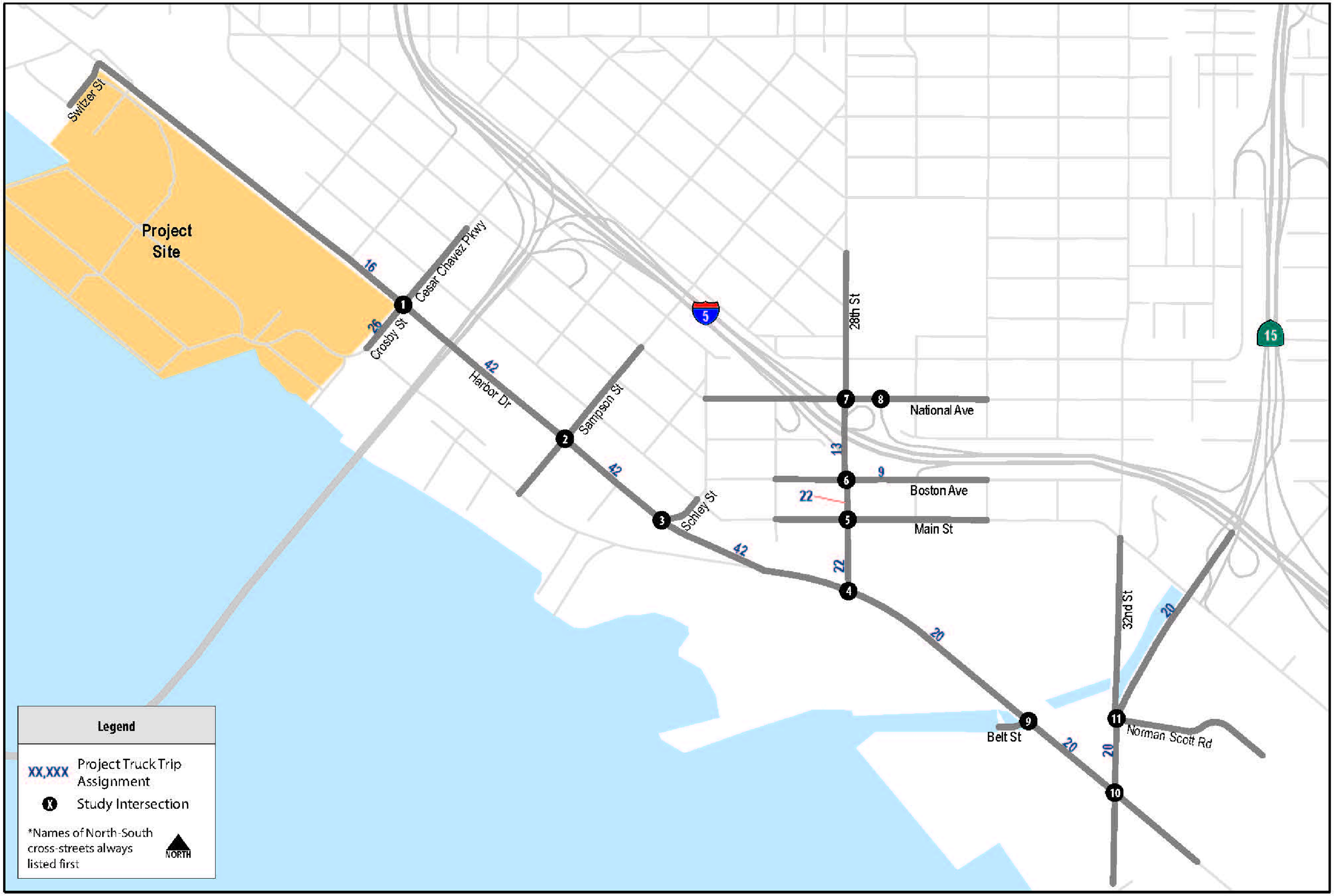
Source: Chen Ryan Associates, 2015

Figure 4.10-12
Demolition and Initial Rail Component Trip Assignment - Employees
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR



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Source: Chen Ryan Associates, 2016

Figure 4.10-13
Demolition and Initial Rail Component Trip Assignment - Trucks
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

Table 4.10-20. Construction Trip Generation for Demolition and Initial Rail Component

Use	Units	Vehicle Conversion Rate	Rate	Daily Vehicle Trips	AM Peak Hour			PM Peak Hour		
					Total	In	Out	Total	In	Out
Construction Worker	50	1	3/Worker	150	50	50	0	50	0	50
Construction Truck	79	3	2/Truck	474	63	32	31	63	31	32
Total				**624**	**113**	**82**	**31**	**113**	**31**	**82**

Source: Appendix G

Trip Distribution and Assignment

Project trip distribution for trucks was determined based on the *Port Access Projects – 10th Avenue Marine Terminal Truck O-D Study* (CH2M Hill 2011) and existing truck routes. This study analyzed both existing truck trip generation and distribution associated with trucks entering and leaving the project site. Project trip distribution for employees was based on SANDAG's San Diego Region Major Statistical Areas ~~and~~, as well as maritime operations staff input. Based on the assumed project trip distribution, daily and AM/PM peak hour project trips were assigned to the adjacent roadway network. Both studies are included as appendices to Appendix G. Figures 4.10-12 and 4.10-13 show the estimated employee and truck trip assignments used for the Demolition and Initial Rail Component, whereas Figures 4.10-5 through 4.10-8, as shown above, display the estimated employee and truck trip distributions and assignments for the full TAMT plan buildout.

4.10.4.2 Thresholds of Significance

The following significance criteria are based on Appendix G of the State CEQA Guidelines and provide the basis for determining significance of impacts associated with existing transportation, circulation, and parking conditions as a result of the proposed project's implementation. The determination of whether a transportation impact would be significant is based on the thresholds described below and the professional judgment of the District as Lead Agency and the recommendations of qualified personnel at ICF and Chen Ryan Associates, all of which is based on evidence in the administrative record. Impacts are considered significant if the project would result in any of the following.

1. Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
2. Conflict with applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
3. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

4. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
5. Result in inadequate emergency access.
6. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.
7. Result in an insufficient supply of parking to meet the project demand.

As discussed in the Initial Study/Environmental Checklist Section XVI (Appendix A), Thresholds 3 and 5 are not included in the analysis below, as it was determined that the proposed project would not result in any impacts related to changes in air traffic patterns or inadequate emergency access. Those conclusions and the rationale that supports them are summarized in Chapter 6, *Additional Consequences of Project Implementation*. As such, only Thresholds 1, 2, 4, 6, and 7 are discussed in the impact analysis that follows.

The proposed TAMT plan includes a variety of infrastructure investments that may be undertaken over the long term to accommodate an increase of the project site's capabilities and capacity. The TAMT plan would allow the project site to accommodate medium- to long-range cargo opportunities, based on a business and marketing strategy with a planning horizon of 2035, thereby ensuring future growth and sustainability for the District's maritime cargo operation. The individual improvements identified in proposed TAMT plan include the installation of up to five gantry cranes, additional and consolidated dry bulk storage capacity (which may include a new 100,000-square-foot dry bulk structure or an equivalent vertical storage facility), enhancements to the existing conveyor system, demolition of the molasses tanks and Warehouse C, additional open storage space, on-dock intermodal rail facilities, a centralized gate facility, and the Demolition and Initial Rail Component. Because the Demolition and Initial Rail Component would affect all three nodes along the western portion of the project site boundary, including the dry bulk node, the refrigerated container node, and the multi-purpose cargo node, it has been identified as critical project component necessary to implement the various improvements identified in the proposed TAMT plan. As a result, the Demolition and Initial Rail Component is the near-term component of the TAMT plan with sufficient detail for a full evaluation, and therefore is analyzed at the project-level.

Given the market-driven nature of the proposed TAMT plan, construction of the individual improvements identified within the plan would occur periodically over the next 20 years as market conditions dictate. The exact construction phasing in which each of these individual project components would be implemented is currently unknown. As such, the future long-term components of the proposed TAMT plan are analyzed at a programmatic level.

Accordingly, the environmental impact analysis below has generally been separated into two categories and focuses on the Demolition and Initial Rail Component, which is analyzed at the project level, followed by the full buildout of the TAMT plan, which is analyzed at the program level.

4.10.4.3 Project Impacts and Mitigation Measures

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

Impact Discussion

Demolition and Initial Rail Component

Construction

As mentioned in Section 4.10.4.1, several components of the TAMT plan include construction and demolition activities that would generate vehicle trips. As indicated in Table 4.10-20, approximately 79 haul trucks and 50 construction workers would access the project site daily during this time. It was also assumed that all construction workers would drive individual vehicles to the project site and that material deliveries and construction workers would arrive and depart during the AM and PM peak hours. With these conservative estimates, the proposed project construction trip generation is anticipated to be approximately 624 daily trips, including 113 trips during both the AM and PM peak hours.

In addition, as indicated in Chapter 3, *Project Description*, export of up to 47,100 cubic yards of excavated soil and 17,300 cubic yards of asphalt and concrete would be hauled to the Chula Vista Bayfront parcels[3] to be used as fill during the 33-month construction phase. These truck trips would include only five haul trips during the each of the peak AM and PM hours and, as such, would have no effect on roadways or intersections beyond the project study area.

Existing Conditions Plus Demolition and Initial Rail Component

Roadways

Table 4.10-21 below shows that the roadway segments in the project study area would operate at LOS D or better during the peak of Demolition and Initial Rail Component construction, with the exception of 28th Street between Boston Avenue and National Avenue, which would operate at LOS E with or without project construction traffic. However, the project's change to the V/C ratio on 28th Street between Boston Avenue and National Avenue would be 0.007, which is less than the City's threshold of 0.02. All other surrounding roadways would continue to operate an acceptable LOS even with the addition of the project's construction traffic, as indicated in Table 4.10-21. Therefore, impacts from construction on study area roadway segments would be less than significant, and no mitigation is required.

[3] The possible fill locations are identified in Appendix D.

Intersections

As indicated in Table 4.10-22, intersections in the study area would all operate at LOS D or better during the peak of project construction, with the exception of Norman Scott Road/32nd Street/ Wabash Boulevard, which would operate at LOS F during the AM peak hour and LOS E during the PM peak hour with or without the addition of project construction traffic. The Demolition and Initial Rail Component's construction-related traffic would worsen the existing delay at this intersection by 8.7 seconds in the AM peak hour and by 4.2 seconds in the PM peak hour. As such, construction traffic associated with the Demolition and Initial Rail Component would add more than 1 second of delay at this intersection during both the AM and PM peak hours, and therefore would result in a significant impact (**Impact TRA-1**). Mitigation in the form of a transportation demand management (TDM) plan during construction is required to reduce the significant impact by limiting the number of construction worker trips through the affected intersection during peak periods (**MM-TRA-1**). Implementation of a TDM plan during construction would help to reduce potential impacts at the Norman Scott Road/32nd Street/Wabash Boulevard intersection; however, it cannot be determined with certainty that the impacts would be reduced to less-than-significant levels. Construction of the Demolition and Initial Rail Component would not cause a significant delay or cause the LOS of any other study area intersections to worsen. Therefore, all other study area intersections would continue to operate at their current LOS with addition of the project's construction traffic, as evidenced in Table 4.10-22.

Table 4.10-21. Daily Roadway Segment Level of Service Results: Existing Plus Demolition and Initial Rail Component Construction

Roadway Segment	Segment	Cross-section	Threshold (LOS E)	Existing + Project Construction			Existing Condition			Change in V/C	S?
				ADT	V/C	LOS	ADT	V/C	LOS		
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4 lanes w/RM	40,000	20,230	0.506	B	20,194	0.505	B	0.001	No
	Between Cesar Chavez Parkway and Sampson Street	4 lanes w/RM	40,000	11,098	0.277	A	10,546	0.264	A	0.014	No
	Between Sampson Street and Schley Street	4 lanes w/RM	40,000	12,602	0.315	A	12,050	0.301	A	0.014	No
	Between Schley Street and 28th Street	4 lanes w/RM	40,000	12,178	0.304	A	11,626	0.291	A	0.014	No
	Between 28th Street and Belt Street	4 lanes w/RM	40,000	18,351	0.459	B	18,050	0.451	B	0.008	No
	Between Belt Street and 32nd Street	4 lanes w/RM	40,000	16,904	0.423	B	16,603	0.415	B	0.008	No
28th Street	Between Harbor Drive and Main Street	4 lanes w/RM	40,000	16,385	0.410	B	16,134	0.403	B	0.006	No
	Between Main Street and Boston Avenue	4 lanes w/TWLT	30,000	19,814	0.660	C	19,563	0.652	C	0.008	No
	Between Boston Avenue and National Avenue	3 lanes w/TWLT	22,500[1]	22,264	0.989	**E**	22,112	0.983	**E**	0.007	No
32nd Street	Between Harbor Drive and Norman Scott Road	6 lanes w/RM	50,000	20,221	0.404	B	19,920	0.398	A	0.006	No

Source: Appendix G
Notes:
[1] Capacity is 75% of a 4-Lane Collector w/TWLT.
Bold letter indicates LOS E or F.
ADT = average daily trips; LOS = level of service; RM = raised median; S? = significant impact; TWLT = two-way left turn; V/C = volume to capacity ratio

Table 4.10-22. Peak Hour Intersection Level of Service Results: Existing Plus Demolition and Initial Rail Component Construction

		AM Peak Hour				PM Peak Hour				Change in Delay			
		Existing + Project Construction		Existing Condition		Existing + Project Construction		Existing Condition		AM Peak Hour		PM Peak Hour	
#	Intersection	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Change	S?	Change	S?
1	Harbor Drive/Cesar Chavez Parkway	37.3	D	36.8	D	35.2	D	33.3	C	0.5	No	1.9	No
2	Harbor Drive/Sampson Street	40.5	D	40.4	D	41.3	D	40.9	D	0.1	No	0.4	No
3	Harbor Drive/Schley Street	16.7	B	16.7	B	15.0	B	15.0	B	0.0	No	0.0	No
4	Harbor Drive/28th Street	24.6	C	23.1	C	20.9	C	20.3	C	1.5	No	0.6	No
5	Main Street/28th Street	21.6	C	21.4	C	35.2	D	34.8	C	0.2	No	0.4	No
6	Boston Avenue/28th Street	19.4	B	19.4	B	23.1	C	23.0	C	0.0	No	0.1	No
7	National Avenue/28th Street	42.3	D	42.3	D	29.8	C	29.6	C	0.0	No	0.2	No
8	National Avenue/I-5 NB Off-Ramp	15.2	B	14.9	B	15.0	B	14.7	B	0.3	No	0.3	No
9	Harbor Drive/Belt Street	18.6	B	18.6	B	17.2	B	17.1	B	0.0	No	0.1	No
10	Harbor Drive/32nd Street	28.8	C	28.6	C	47.5	D	39.9	D	0.2	No	7.6	No
11	Norman Scott Road/32nd Street/Wabash Boulevard	104.0	**F**	95.3	**F**	70.4	**E**	66.2	**E**	8.7	**Yes**	4.2	**Yes**

Source: Appendix G

Notes:

Bold letter indicates LOS E or F.

LOS = level of service; NB = northbound; S? = significant impact

Ramp Intersections

Consistent with Caltrans requirements, the signalized ramp intersections at National Avenue/I-5 northbound and Norman Scott Road/32nd Street/Wabash Boulevard were analyzed using ILV procedures. ILV analysis results are displayed in Table 4.10-23 and analysis worksheets for proposed project conditions are provided in Appendix G (see Appendix D of Appendix G). As shown in the table, the signalized National Avenue/I-5 northbound and Norman Scott Road/32nd Street/Wabash Boulevard ramp intersections are projected to operate at "Under Capacity" during both the AM and PM peak hours during construction of the Demolition and Initial Rail Component. Therefore, project construction impacts on study area ramp intersections would be less than significant, and no mitigation is required.

Table 4.10-23. Ramp Intersection Capacity Analysis: Existing Plus Demolition and Initial Rail Component Construction

		Existing Condition			Existing Condition + Project Construction		
#	Intersection	Peak Hour	ILV/ Hour	Description	Peak Hour	ILV/ Hour	Description
8	National Avenue/I-5 NB Off-Ramp	AM	636	Under Capacity	AM	649	Under Capacity
		PM	794	Under Capacity	PM	806	Under Capacity
11	Norman Scott Road/32nd Street/Wabash Boulevard	AM	956	Under Capacity	AM	1,005	Under Capacity
		PM	1,028	Under Capacity	PM	1,063	Under Capacity

Source: Appendix G
Note: less than 1,200 ILV/Hour indicates operation is Under Capacity.
ILV = intersection lane volume; NB = northbound

In sum, all potential impacts on roadway segments and ramp intersections would be less than significant during construction of the Demolition and Initial Rail Component. However, construction-related traffic would add more than 1 second of delay to the intersection of Norman Scott Road/32nd Street/Wabash Boulevard, which is currently failing, during the AM and PM peak hours, and therefore would result in a significant impact on this intersection. Consequently, construction of the Demolition and Initial Rail Component has the potential to conflict with applicable plans, ordinances, and policies related to the performance of the circulation system, and impacts would be significant.

Operation

Implementation of the Demolition and Initial Rail Component would result in operational impacts on the surrounding transportation network from increased throughput and trucking operations facilitated by the various project improvements included in this initial phase. It should be noted that there would be no increase in throughput capacity for Dry Bulk or Liquid Bulk with implementation of the Demolition and Initial Rail Component. As a result of the increased throughput capacity of the terminal, the Demolition and Initial Rail Component is anticipated to generate 7 additional truckloads of cargo each day and require an additional 92 employees each day at the project site. This would result in a total of 318 ADT. The discussion below details the impacts that additional throughput and employees would have on existing roadway segments and intersections within the project study area.

Existing Conditions Plus Demolition and Initial Rail Component

Roadway Segments

Table 4.10-22 shows existing and existing plus Demolition and Initial Rail Component LOS conditions for the roadway segments in the project study area, while Figure 4.10-14 illustrates the existing plus Demolition and Initial Rail Component volumes on study area roadways. As shown, all roadway segments operate at level LOS D or better under existing conditions, except 28th Street between Boston Avenue and National Avenue, which currently operates at LOS E. With the addition of Demolition and Initial Rail Component traffic, operations at this segment would remain at LOS E and the project would not result in an increase in V/C ratio from existing conditions. Therefore, a less-than-significant impact would occur, and no mitigation is required.

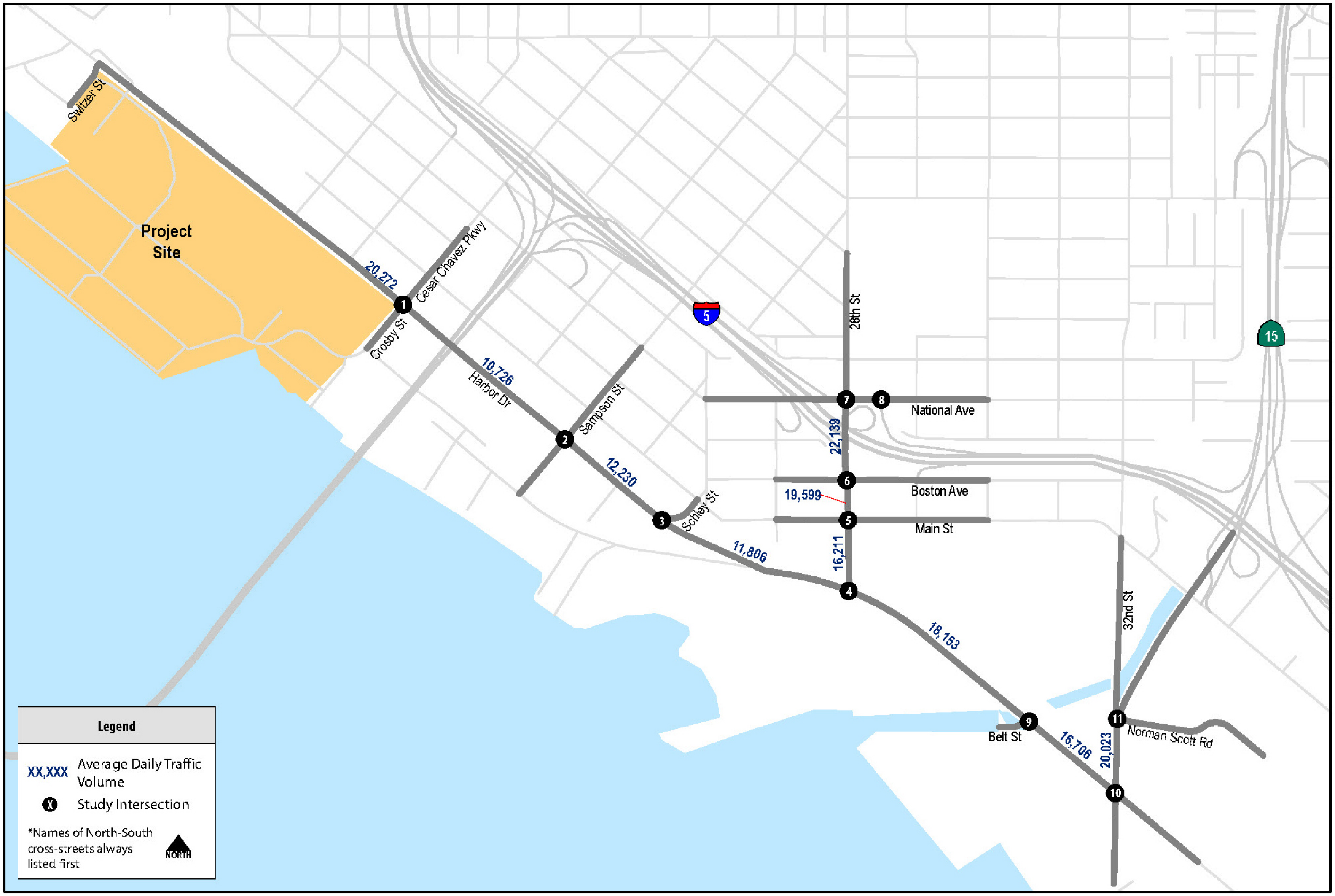
Intersections

Table 4.10-25 shows existing and existing plus Demolition and Initial Rail Component peak hour LOS conditions for the intersections in the project study area, while Figure 4.10-15 illustrates the existing plus Demolition and Initial Rail Component volumes on study area intersections. As indicated, all intersections in the project study area operate at LOS D or better under existing conditions with the exception of Norman Scott Road/32nd Street/Wabash Boulevard, which currently operates at LOS F in the AM peak hour and LOS E in the PM peak hour. With the addition of Demolition and Initial Rail Component traffic, operations at this intersection would remain at LOS F and E in the AM and PM peak hour, respectively, and the project would not result in an increase in delay that would exceed the City's thresholds. Therefore, a less-than-significant impact would occur, and no mitigation is required.

~~Once operational, the Demolition and Initial Rail Component's traffic at this intersection would worsen the existing delay by 4.8 seconds in the AM peak hour and by 2.3 seconds in the PM peak hour. Because the threshold is 1.0 second of additional delay for intersections operating at LOS F and 2.0 seconds of additional delay for intersections operating at LOS E, impacts at the Norman Scott Road/32nd Street/Wabash Boulevard intersection would be significant (**Impact-TRA-2**). The Demolition and Initial Rail Component's impact on the Norman Scott Road/32nd Street/Wabash Boulevard intersection would be mitigated by adding a westbound right-turn overlap phase (**MM-TRA-2**). This would reduce the unmitigated delay associated with the project by 6.0 seconds during the AM peak hour and by 12.8 seconds during the PM peak hour and would effectively reduce delay at this intersection to below current levels.~~

Ramp Intersection Capacity

The signalized ramp intersections of National Avenue/I-5 northbound off-ramp and Norman Scott Road/32nd Street/Wabash Boulevard were analyzed under ILV procedures. Both signalized ramp intersections would continue to operate "Under Capacity" with implementation of the Demolition and Initial Rail Component (Table 4.10-26). Therefore, impacts on signalized ramp intersections at the National Avenue/I-5 northbound off-ramp and Norman Scott Road/32nd Street/Wabash Boulevard would be less than significant, and no mitigation is required.



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Source: Chen Ryan Associates, 2016

Figure 4.10-14
Study Area Roadways Existing + Demolition and Initial Rail Component Volumes
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

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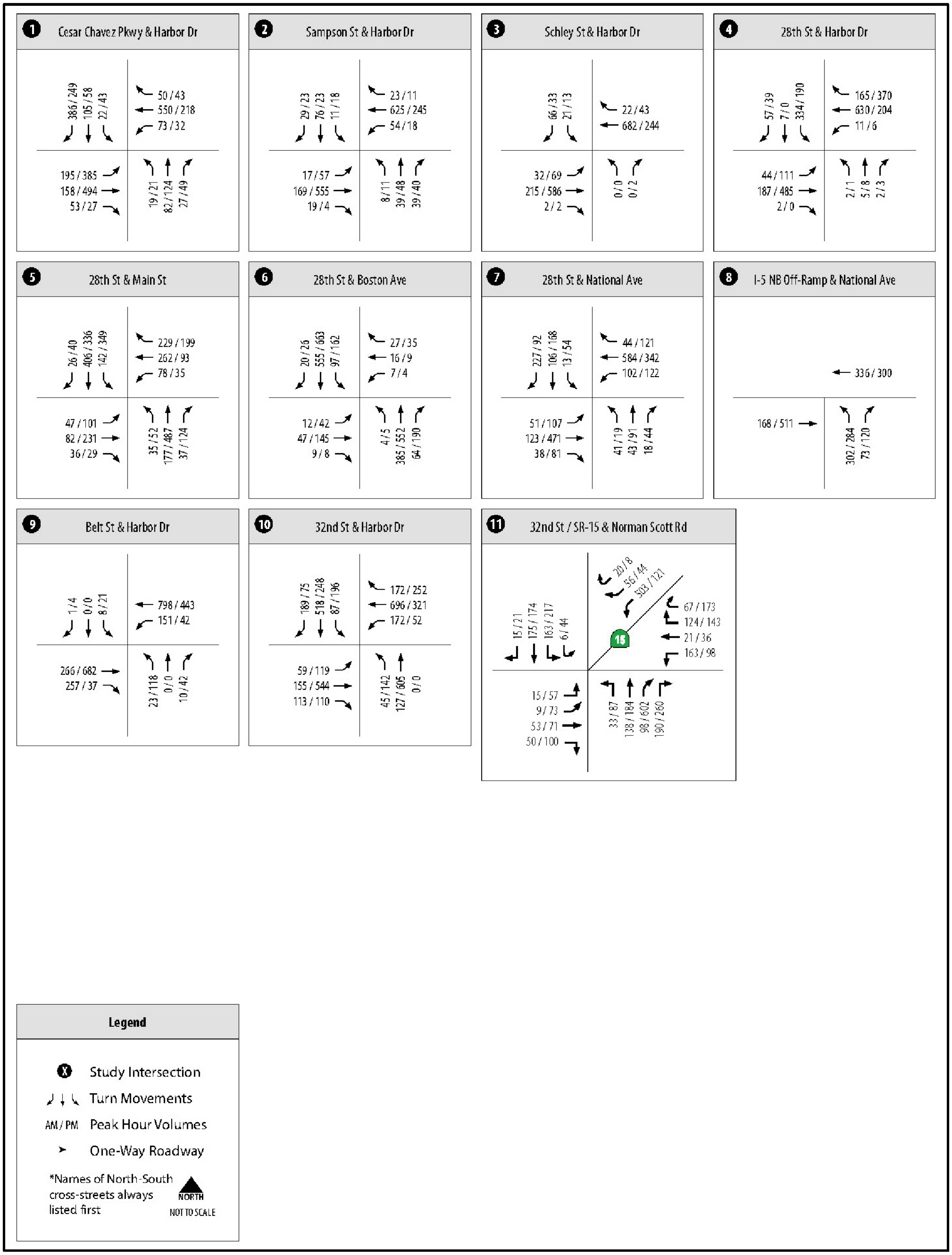

Source: Chen Ryan Associates, 2015

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Figure 4.10-15
Study Area Intersections Existing and Demolition and Initial Rail Component
Tenth Avenue Marine Terminal Redevelopment Plan & Demolition and Initial Rail Component EIR

Table 4.10-24. Peak Hour Roadway Segment LOS Results – Existing Plus Demolition and Initial Rail Component

Roadway	Segment	Cross-Section	Threshold (LOS E)	Existing + Demolition and Initial Rail Component			Existing				
				ADT	V/C	LOS	ADT	V/C	LOS	Δ	S?
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4 lanes w/RM	40,000	20,27~~6~~2	0.507	B	20,194	0.505	B	0.002	N
	Between Cesar Chavez Parkway and Sampson Street	4 lanes w/RM	40,000	10,7~~3~~26	0.268	A	10,546	0.264	A	0.00~~4~~5	N
	Between Sampson Street and Schley Street	4 lanes w/RM	40,000	12,23~~6~~0	0.306	A	12,050	0.301	A	0.005	N
	Between Schley Street and 28th Street	4 lanes w/RM	40,000	11,~~812~~806	0.295	A	11,626	0.291	A	0.00~~4~~5	N
	Between 28th Street and Belt Street	4 lanes w/RM	40,000	18,~~2~~153	0.45~~5~~4	B	18,050	0.451	B	0.00~~4~~3	N
	Between Belt Street and 32nd Street	4 lanes w/RM	40,000	16,706~~6~~	0.41~~9~~8	B	16,603	0.415	B	0.00~~4~~3	N
28th Street	Between Harbor Drive and Main Street	4 lanes w/RM	40,000	16,~~156~~211	0.404~~5~~	B	16,134	0.403	B	0.00~~1~~2	N
	Between Main Street and Boston Avenue	4 lanes w/TWLT	30,000	19,~~585~~599	0.653	C	19,563	0.652	C	0.001	N
	Between Boston Avenue and National Avenue	3 lanes w/TWLT	22,500[1]	22,~~125~~139	0.98~~3~~4	**E**	22,112	0.983	**E**	0.00~~0~~1	N
32nd Street	Between Harbor Drive and Norman Scott Road	6 lanes w/RM	50,000	20,0~~8~~23	0.40~~2~~0	B	19,920	0.398	A	0.00~~3~~2	N

Source: Appendix G

Notes:

[1] Capacity is 75% of a 4-Lane Collector w/TWLT.

Bold letter indicates a significant impact.

ADT = average daily trips; LOS = level of service; RM = raised median; S? = Indicates if change in V/C ratio is significant; TWLT = two-way left turn; V/C = volume to capacity ratio; Δ = change in V/C ratio.

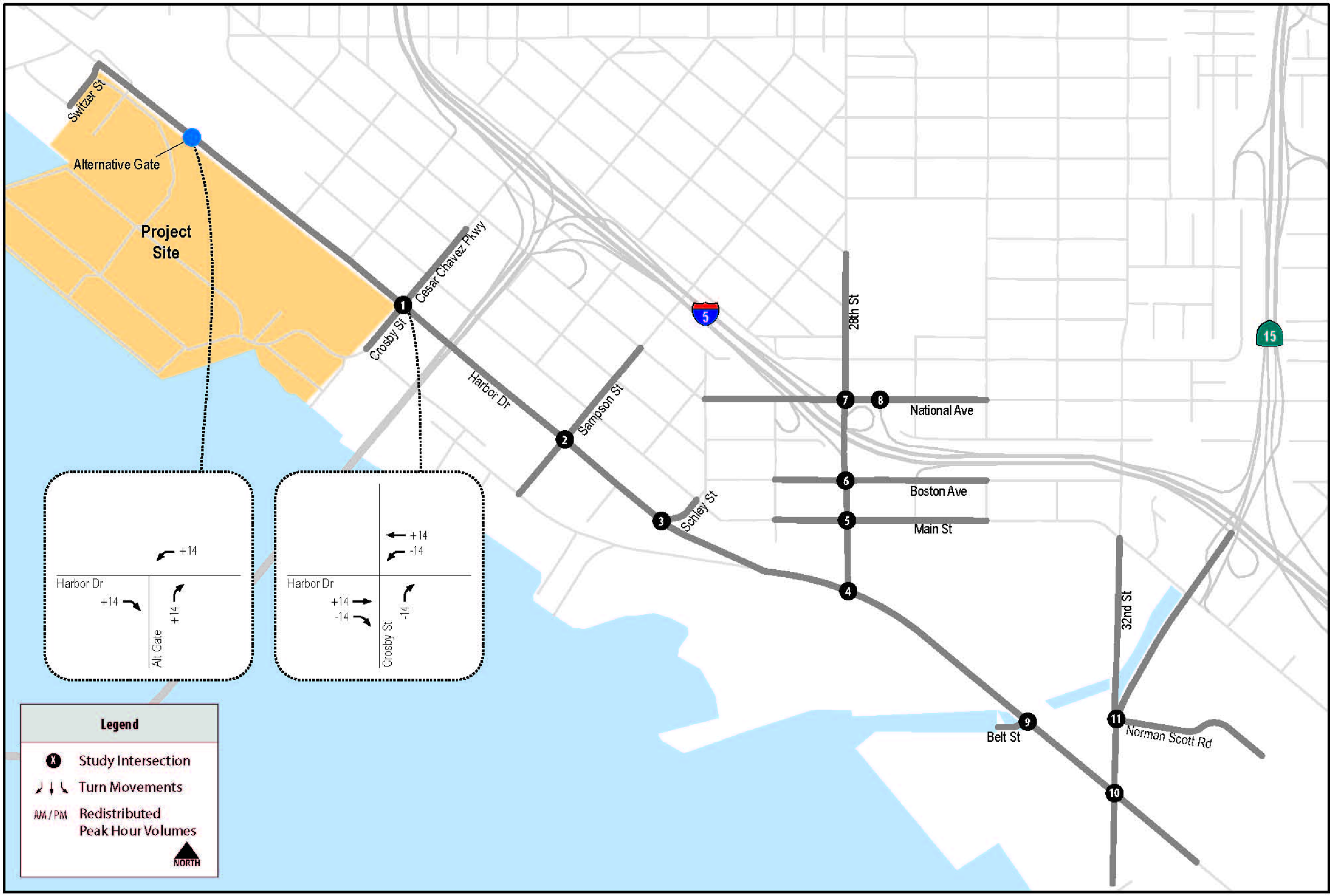
Table 4.10-25. Peak Hour Intersection LOS Results – Existing Plus Demolition and Initial Rail Component

		AM Peak Hour		PM Peak Hour					
#	Intersection	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Delay w/o Demolition and Initial Rail Component (sec.) AM/PM	LOS w/o Demolition and Initial Rail Component AM/PM	Change in Delay (sec.)	S?
1	Harbor Drive/Cesar Chavez Parkway	36.8	D	34.6	C	36.8/33.3	D/C	0.0/1.3	N
2	Harbor Drive/Sampson Street	40.4	D	41.~~1~~0	D	40.4/40.9	D/D	0.0/0.~~2~~1	N
3	Harbor Drive/Schley Street	16.7	B	~~15.0~~16.7	B	16.7/15.0	B/B	0.0/~~0.0~~1.7	N
4	Harbor Drive/28th Street	23.~~5~~6	C	20.~~3~~5	C	23.1/20.3	C/C	0.~~4~~5/0.~~0~~2	N
5	Main Street/28th Street	21.~~4~~5	C	~~34.8~~35.1	~~C~~D	21.4/34.8	C/C	0.1/0~~/0.0~~.3	N
6	Boston Avenue/28th Street	19.4	B	23.0	C	19.4/23.0	B/C	0.0/0.0	N
7	National Avenue/28th Street	42.3	D	29.6	C	42.3/29.6	D/C	0.0/0.0	N
8	National Avenue/I-5 NB Off-Ramp	14.9	B	14.8	B	14.9/14.7	B/B	0.0/0.1	N
9	Harbor Drive/Belt Street	18.6	B	17.1	B	18.6/17.1	B/B	0.0/0.0	N
10	Harbor Drive/32nd Street	28.~~8~~7	C	41.~~9~~6	D	28.6/39.9	C/D	0.~~2/2.0~~1/1.7	N
11	Norman Scott Road/32nd Street/Wabash Boulevard	~~100.1~~ 95.5	**F**	~~68.5~~67.4	**E**	95.3/66.2	**F/E**	~~4.8/~~0.2~~.3~~/1.2	~~**Y**~~N

Source: Appendix G

Bold letter indicates a significant impact.

LOS = level of service; NB = northbound; S? = Indicates significant impact



Source: Chen Ryan Associates, 2016

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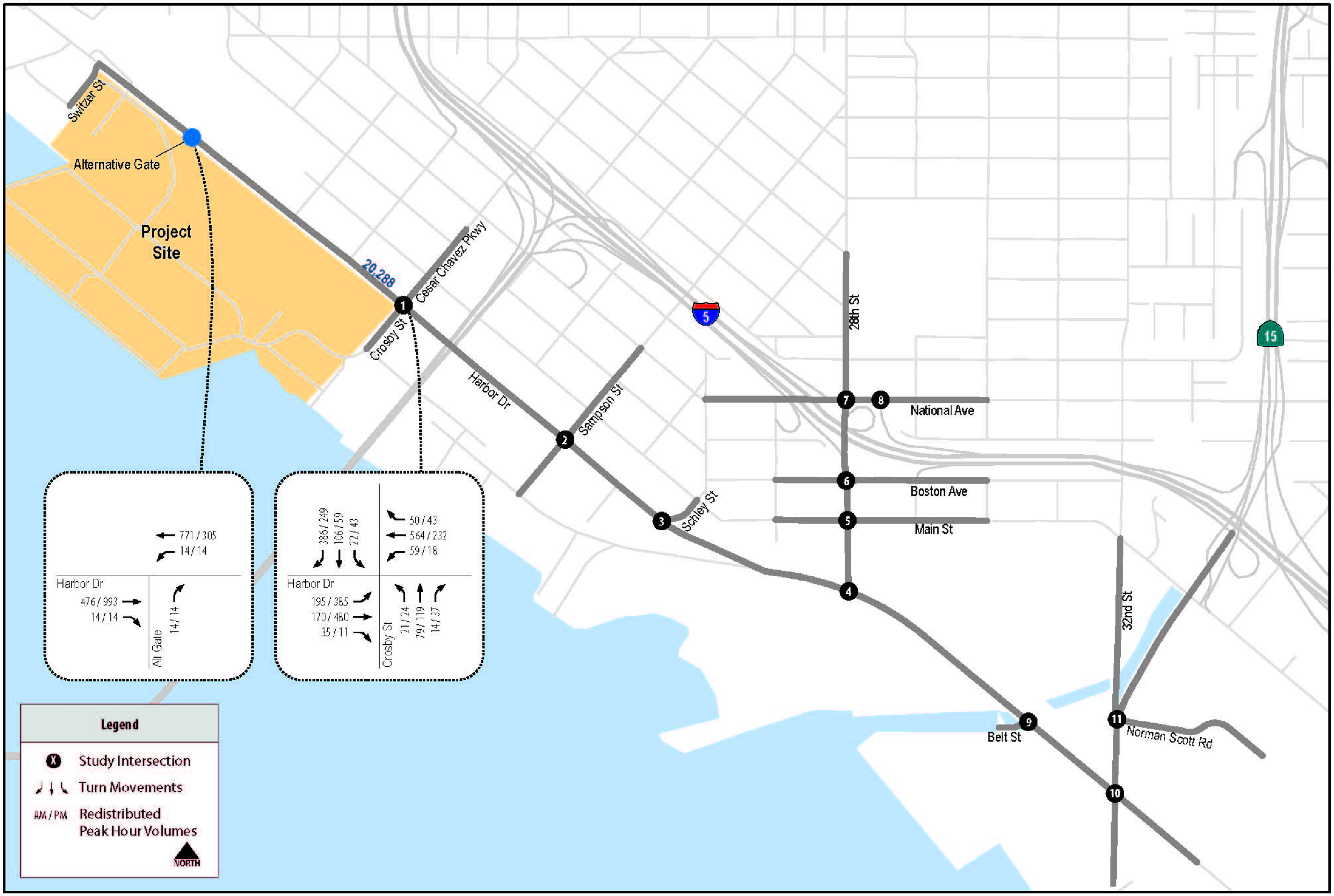
Figure 4.10-16
Truck Traffic Redistribution: Existing + Demolition and Initial Rail Component - Alternative Gate Scenario
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR



Source: Chen Ryan Associates, 2016

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Figure 4.10-17
Traffic Volumes: Existing + Demolition and Initial Rail Component - Alternative Gate Scenario
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

Table 4.10-26. Peak Hour Ramp Intersection Capacity Analysis – Existing Plus Demolition and Initial Rail Component

#	Intersection	Peak Hour	ILV/Hour		Description
			Existing	Existing + Demolition and Initial Rail Component	
8	National Avenue/I-5 NB Off-Ramp	AM	636	63~~6~~8	Under Capacity
		PM	794	794~~~~5	Under Capacity
11	Norman Scott Road/32nd Street/ Wabash Boulevard	AM	956	~~986~~974	Under Capacity
		PM	1,028	1,~~053~~042	Under Capacity

Source: Appendix G.
Note: less than 1,200 ILV/Hour indicates operation is Under Capacity.
NB = southbound; ILV = intersection lane volume

In sum, all potential impacts on roadway segments, intersections, and ramp intersections would be less than significant during operation of the Demolition and Initial Rail Component. ~~However, operational traffic would add more than 1 second of delay to the intersection of Norman Scott Road/32nd Street/Wabash Boulevard during the AM and PM peak hours, and therefore would result in a significant direct impact on this intersection.~~ Consequently, operation of the Demolition and Initial Rail Component ~~has the potential to~~would not conflict with applicable plans, ordinances, and policies related to the performance of the circulation system, and impacts would be less than significant.

Existing Plus Demolition and Initial Rail Component – Alternative Gate Scenario

The proposed TAMT plan identifies an alternative gate location that would serve as the primary entry and exit location for the Refrigerated Container node and the Multi-Purpose General Cargo node. As such, implementation of the alternative gate scenario would result in a redistribution of both existing and proposed project truck traffic from these nodes. The alternative gate would be located in the northeast corner of the project site and would provide access directly onto Harbor Drive. According to the proposed TAMT plan, the Dry Bulk and Liquid Bulk nodes would continue to utilize the existing gate off Cesar Chavez Parkway, particularly for domestic bulk shipments. It is also assumed that employee traffic would continue to use the existing Crosby Street gate under this scenario. In the event the alternative gate concept is selected for implementation, the exact timing of implementation is unknown at this time. Therefore, to provide a conservative analysis, it has been assumed that the alternative gate scenario could be implemented in the near term concurrently with the Demolition and Initial Rail Component.

Implementation of the proposed alternative gate would result in a redistribution of both existing and proposed project truck traffic from the Refrigerated Container and Multi-Purpose General Cargo nodes. Figure 4.10-16 displays the assumed redistribution of both existing and Demolition and Initial Rail Component truck traffic between the two gate locations, while Figure 4.10-17 displays the anticipated traffic volumes at both gates and along Harbor Drive.

Roadway Segments

Based on the assumed redistribution of truck trips, Harbor Drive between Beardsley Street and Cesar Chavez Parkway is the only study roadway segment that is anticipated to experience a change in ADT due to the alternative gate location. As shown in Table 4.10-27, the roadway segment of Harbor Drive between Beardsley Street and Cesar Chavez Parkway is anticipated to operate at LOS B with the addition of Demolition and Initial Rail Component traffic utilizing the alternative gate location.

Table 4.10-27. Peak Hour Roadway Segment LOS Results – Existing Plus Demolition and Initial Rail Component Alternative Gate Scenario

				Existing + Demolition and Initial Rail			Existing				
Roadway	**Segment**	**Cross-Section**	**Threshold (LOS E)**	**ADT**	**V/C**	**LOS**	**ADT**	**V/C**	**LOS**	**Δ**	**S?**
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4 lanes w/RM	40,000	20,28~~8~~4	0.507	B	20,194	0.505	B	0.002	N

Source: Appendix G

Notes:

ADT = average daily trips; LOS = level of service; RM = raised median; S? = Indicates if change in V/C ratio is significant; V/C = volume to capacity ratio; Δ = change in V/C ratio

Based on the City of San Diego's Significance Criteria, the redistribution of project traffic due to the alternative gate location would not cause any roadways segments to operate at LOS E or F. Therefore, implementation of the proposed alternative gate location would not result in any roadway segment impacts.

Intersections

Based on the assumed redistribution of truck trips, the Harbor Drive/Cesar Chavez Parkway intersection (Main Gate) is the only study intersection that is anticipated to experience a change in peak hour volumes due to the alternative gate. All other key study intersections are anticipated to operate at the same conditions as under the existing plus Demolition and Initial Rail Component conditions. Table 4.10-28 shows intersection LOS and average vehicle delay resulting from implementation of the Demolition and Initial Rail Component with the alternative gate location.

Table 4.10-28. Peak Hour Intersection LOS Results – Existing Plus Demolition and Initial Rail Component Alternative Gate Scenario

#	Intersection	AM Peak Hour		PM Peak Hour		Delay without Demolition and Initial Rail (sec.) AM/PM	LOS without Demolition and Initial Rail AM/PM	Change in Delay (sec.)	S?
		Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS				
1	Harbor Drive/ Cesar Chavez Parkway	37.~~6~~5	D	34.6	C	36.8/33.3	D/C	0.~~8~~7/1.3	N
12	Harbor Drive/ Alternative Gate	18.2	B	24.2	C	N/A	N/A	18.2/24.2	N

Source: Appendix G
LOS = level of service; N/A = not applicable; S? = Indicates a significant impact

Based on the City of San Diego's Significance Criteria, the redistribution of project traffic due to the alternative gate location would not cause any intersections to operate at LOS E or F. Therefore, implementation of the proposed alternative gate location would not result in any intersection impacts.

Full TAMT Plan Buildout

Construction

For purposes of this analysis, it is assumed that full buildout of the proposed TAMT plan would occur by 2035. One of the primary construction projects proposed within the TAMT plan is the Demolition and Initial Rail Component, which includes demolition of Transit Sheds #1 and #2, as well as other various improvements. The construction of this component is analyzed under the *Demolition and Initial Rail Component* subheading above. Additional future components proposed under the TAMT plan include demolition of Warehouse C, demolition of the existing molasses tanks, construction of an up to 100,000-square-foot semi-permanent building, installation of up to five gantry cranes, improvements to the centralized gate, and additional improvements to the Dry Bulk node to improve storage and conveyance efficiencies. However, due the programmatic and market driven nature of the TAMT plan, the timing, potential for overlap, and specific construction plans associated with these future components, unlike those associated with the Demolition and Initial Rail Component, are unknown at the time of this analysis. Given the life of the plan (approximately 20 years) and considering each of these improvements would only be initiated once market demand suggests support for them,[4] it would be speculative to analyze the construction of these elements in any specific detail. As currently proposed, the greatest intensity of construction activity would likely occur with implementation of the Demolition and Initial Rail Component, particularly when conservatively assuming the demolition of Transit Sheds #1 and #2 as overlapping activities. Consequently, it is probable that the amount of construction-related traffic generated by the Demolition and Initial Rail Component would represent the worst-case construction-related traffic

[4] The market has already indicated support for the Demolition and Initial Rail Component. Therefore, the timing and details of demolition and construction associated with this component are known at this time.

impacts for the entire TAMT plan buildout, and any subsequent improvements would therefore generate similar or reduced levels of construction traffic.

As discussed in the construction impact analysis for the Demolition and Initial Rail Component, construction-related traffic associated with this phase has the potential to result in a significant direct impact on the Norman Scott Road/32nd Street/Wabash Boulevard intersection. Consequently, any construction activities associated with full TAMT plan buildout with a similar intensity as the Demolition and Initial Rail Component have the potential to result in impacts on this intersection. Additionally, given the lack of construction and schedule details at this time and, most importantly, the potential, if somewhat unlikely, overlap of construction for several of the projects such as the demolition of Warehouse C and the molasses tanks, installation of gantry cranes and/or the dry bulk nodes improvements (i.e., conveyor and bulk discharge system), construction of all the components of the full TAMT plan buildout could result in a significant traffic impact on study area roadway facilities (**Impact-TRA-~~3~~2**). Mitigation in the form of a project-specific traffic study and construction traffic control plan is required to reduce the significant impact (**MM-TRA-~~3~~2**); without specific details, however, it cannot be determined with certainty that the impacts would be reduced to less-than-significant levels. Therefore, impacts associated with the project's potential to conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system would be significant and unavoidable.

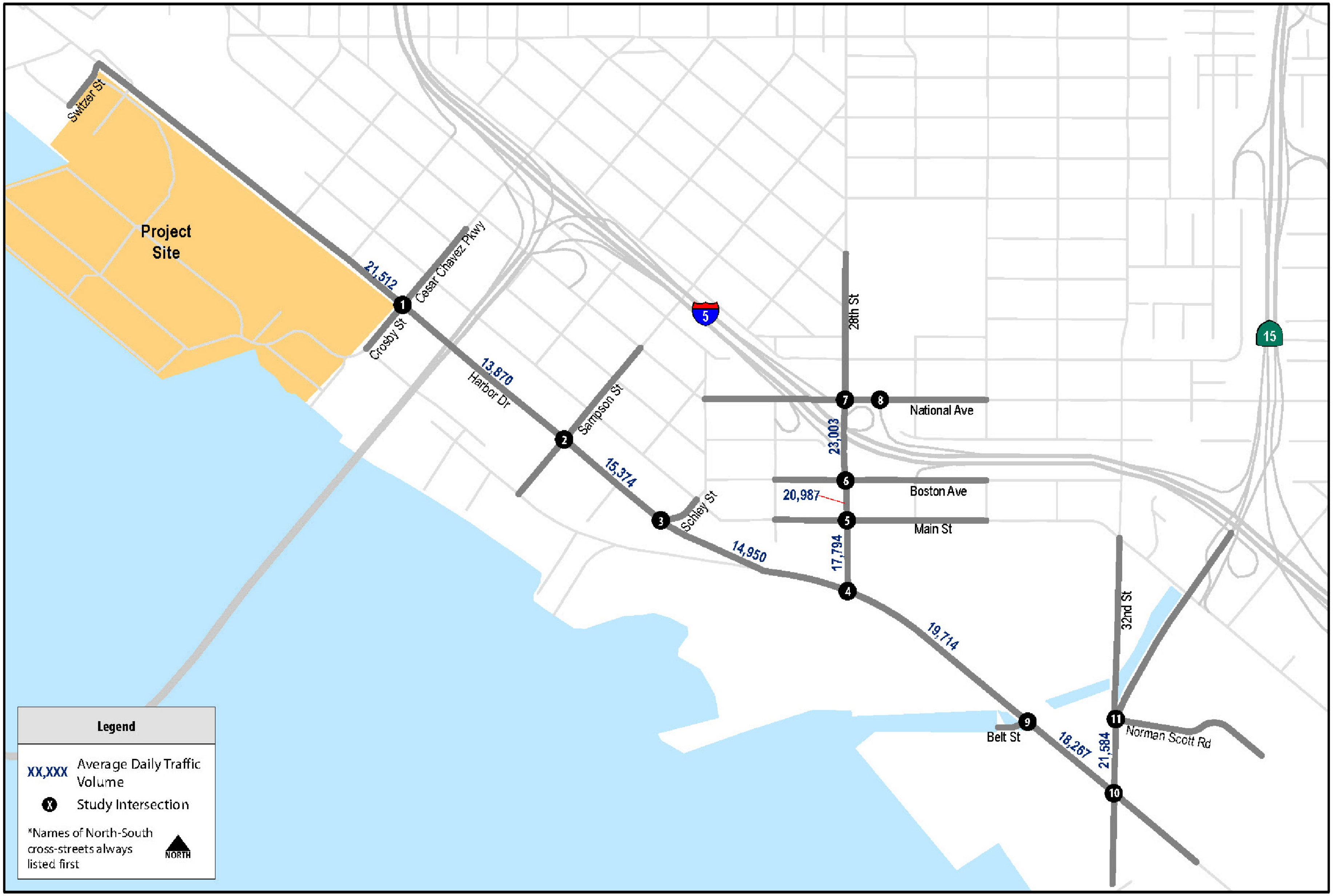
Operation

Operational impacts associated with full buildout of the proposed TAMT plan, including increased throughput that results from the use of up to five gantry cranes, new storage areas such as warehouse buildings that total up to 100,000 square feet, additional and consolidated dry bulk storage capacity, enhanced conveyor system, and an improved entry gate facility can be reasonably forecasted and analyzed at this time. The Demolition and Initial Rail Component is the initial project-level component necessary to implement all other future components of the TAMT plan and would be operational by 2020. As a result, the analysis for full buildout looks at the combined effect of operations associated with full buildout of the proposed TAMT plan, which includes the Demolition and Initial Rail Component and other future components. These improvements would substantially increase the terminal's overall throughput capacity. As a result, the proposed project is anticipated to generate 423 additional truckloads of cargo each day and require an additional 524 employees each day at the project site. This results in a total of 4,110 ADT. The discussion below details the impacts that additional throughput and employees would have on existing roadway segments and intersections within the project study area.

Existing Conditions Plus TAMT Plan Buildout

Roadway Segments

Table 4.10-29 shows existing and existing plus TAMT plan buildout LOS conditions for the roadway segments in the project study area, while Figure 4.10-18 illustrates the existing plus TAMT plan buildout volumes on study area roadways. As shown, all roadway segments operate at LOS D or better under existing conditions, except 28th Street between Boston Avenue and National Avenue, which currently operates at LOS E. With the addition of TAMT plan buildout traffic, this segment would worsen to LOS F and increase the V/C ratio by 0.~~036~~040 (**Impact-TRA-~~4~~3**). Therefore, this impact would be significant and mitigation is required.



Source: Chen Ryan Associates, 2016

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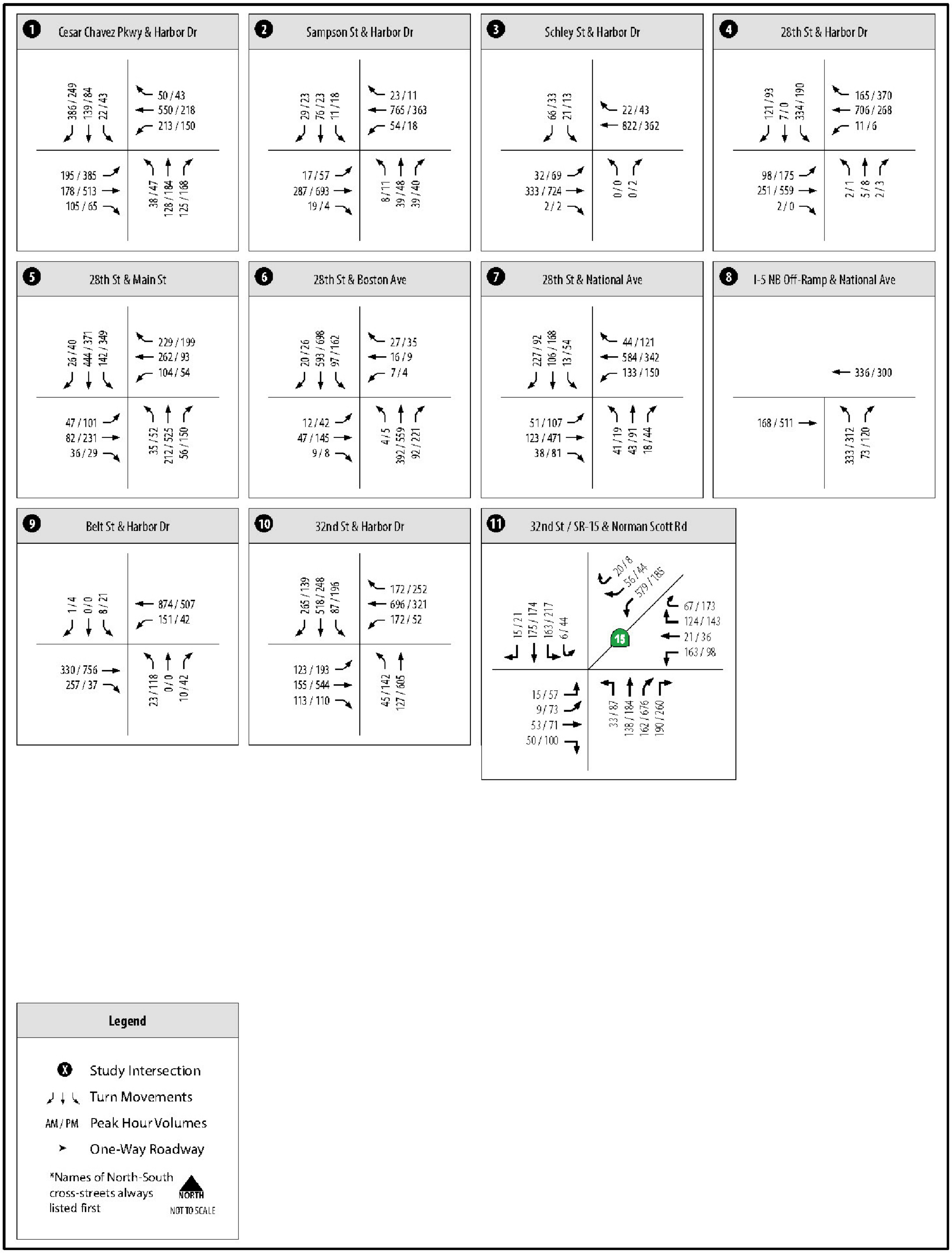
Figure 4.10-18
Study Area Roadways Existing and Project Volumes
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR



Source: Chen Ryan Associates, 2016

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Figure 4.10-19
Study area Intersections Existing and Project Volumes
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

This section of 28th Street is currently constructed as a three-lane collector with a daily capacity of 22,500 trips. The draft Barrio Logan Community Plan classifies this section of 28th Street as a "Four-Lane Major Arterial" with a daily capacity of 40,000 trips. Improving the roadway to its ultimate classification as a Four-Lane Major Arterial would improve the traffic operations at this affected segment to LOS C, reducing the impact to a less-than-significant level. Based on a comparison of the project traffic added to the roadway segment (~~838~~891 daily trips) to the traffic projected to be on this segment under existing plus TAMT plan buildout conditions (~~22,924~~23,003 daily trips), the project would be responsible for a ~~3.7%~~ fair-share contribution of the cost to widen the roadway to a Four-Lane Major Arterial classification. (Note, the MPC scenario would be responsible for 3.9% and the STC Alternative would be responsible for 2.9%.)

The project's impact would occur when the project generates ~~1,175~~161 new ~~daily~~truck trips~~, which would occur at approximately 29% of the TAMT plan's buildout~~. This is the point at which the project would add more than 0.01 V/C to the failing segment. To reduce impacts to a less-than-significant level, the proposed project would be responsible for a ~~3.7%~~ fair-share contribution of the cost to widen the roadway to a Four-Lane Major Arterial classification (**MM-TRA-~~4~~**~~).~~ **3**). (Note, the MPC scenario would be responsible for 3.9% and the STC Alternative would be responsible for 2.9%.)

Intersections

Table 4.10-30 shows existing and existing plus TAMT plan buildout peak hour LOS conditions for the intersections in the project study area, while Figure 4.10-19 illustrates the existing plus TAMT plan buildout volumes on study area intersections. As indicated, all intersections in the project study area operate at LOS D or better under existing conditions with the exception of Norman Scott Road/32nd Street/Wabash Boulevard, which currently operates at LOS F in the AM peak hour and LOS E in the PM peak hour.

At full buildout, the proposed project's operation at this intersection would worsen the existing delay by ~~32.6~~19.1 seconds in the AM peak hour and by ~~13.3~~7.8 seconds in the PM peak hour, where a threshold of 1.0 second of additional delay applies to LOS F and a threshold of 2.0 seconds of additional delay applies to LOS E (**Impact-TRA-~~5~~4**). The initial impact is anticipated to occur ~~at 7% buildout, or~~ when ~~276~~195 new daily trips are being generated, at which point the proposed project would contribute more than 1.0 second of delay in the AM peak hour period. Therefore, impacts on the Norman Scott Road/32nd Street/Wabash Boulevard study area intersection segment would be significant and mitigation is required.

The proposed project's impact on the Norman Scott Road/32nd Street/Wabash Boulevard intersection would be mitigated by adding a westbound right-turn overlap phase (**MM-TRA-~~2~~4**). This would reduce the unmitigated delay associated with the project by ~~33.0~~20.8 seconds during the AM peak hour and by ~~23.6~~19.9 seconds during the PM peak hour and would effectively reduce delay at this intersection to below current levels.

Notably, Caltrans is currently working on a truck access improvement study that will identify several potential improvements to this intersection, including a potential grade separation. It is recommended that the District coordinate with Caltrans as the TAMT plan is implemented to determine if the proposed mitigation measure is relevant at the time of implementation or if the District can participate in a larger improvement program for the intersection.

Ramp Intersection Capacity

As discussed, the signalized ramp intersections of National Avenue/I-5 northbound off-ramp and Norman Scott Road/32nd Street/Wabash Boulevard were analyzed under ILV procedures. Both signalized ramp intersections would continue to operate "~~At~~Under Capacity" ~~or better~~ during both the AM and PM peak hours with implementation of the proposed project, as shown in Table 4.10-31. Therefore, impacts on signalized ramp intersections at the National Avenue/I-5 northbound off-ramp and Norman Scott Road/32nd Street/Wabash Boulevard would be less than significant, and no mitigation is required.

Freeway Mainline Segments

Table 4.10-32 shows existing and existing plus TAMT plan buildout peak hour LOS conditions for the freeway mainline segments in the project study area. As indicated, all freeway segments within the project study area operate at LOS D or better under existing conditions, except for the following.

- I-5 northbound between 28th Street and SR-15 (LOS F)
- I-5 northbound between SR-15 and Main Street (LOS E)
- I-5 southbound between SR-15 and Main Street (LOS E)

The addition of TAMT plan buildout traffic would not result in a change in V/C ratio greater than 0.01 for freeway segments operating at LOS E or 0.005 for those operating at LOS F at any key study area freeway mainline segment. Therefore, impacts would be less than significant, and no mitigation is required.

Table 4.10-29. Peak Hour Roadway Segment LOS Results – Existing Plus TAMT Plan Buildout

Roadway	Segment	Cross-Section	Threshold (LOS E)	Existing + TAMT Plan Buildout			Existing				
				ADT	V/C	LOS	ADT	V/C	LOS	Δ	S?
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4 lanes w/RM	40,000	21,~~536~~512	0.538	C	20,194	0.505	B	0.03~~4~~3	N
	Between Cesar Chavez Parkway and Sampson Street	4 lanes w/RM	40,000	13,~~901~~870	0.34~~8~~7	A	10,546	0.264	A	0.08~~4~~3	N
	Between Sampson Street and Schley Street	4 lanes w/RM	40,000	15,~~405~~374	0.38~~5~~4	B	12,050	0.301	A	0.08~~4~~3	N
	Between Schley Street and 28th Street	4 lanes w/RM	40,000	14,~~981~~950	0.37~~5~~4	A	11,626	0.291	A	0.08~~4~~3	N
	Between 28th Street and Belt Street	4 lanes w/RM	40,000	~~20,060~~19,714	0.~~502~~493	B	18,050	0.451	B	0.~~050~~042	N
	Between Belt Street and 32nd Street	4 lanes w/RM	40,000	18,~~613~~267	0.4~~6~~57	B	16,603	0.415	B	0.~~050~~042	N
28th Street	Between Harbor Drive and Main Street	4 lanes w/RM	40,000	17,4794	0.~~437~~445	B	16,134	0.403	B	0.0~~3~~41	N
	Between Main Street and Boston Avenue	4 lanes w/TWLT	30,000	20,9~~0~~87	0.~~697~~700	D	19,563	0.652	C	0.04~~5~~7	N
	Between Boston Avenue and National Avenue	3 lanes w/TWLT	22,500[1]	~~22,924~~23,003	1.~~019~~022	**F**	22,112	0.983	**E**	0.~~036~~040	**Y**
32nd Street	Between Harbor Drive and Norman Scott Road	6 lanes w/RM	50,000	21,~~930~~584	0.43~~9~~2	B	19,920	0.398	A	0.~~040~~033	N

Source: Appendix G

Notes:

[1] Capacity is 75% of a 4-Lane Collector w/TWLT.

Bold letter indicates a significant impact.

ADT = average daily trips; LOS = level of service; RM = raised median; S? = Indicates if change in V/C ratio is significant; TWLT = two-way left turn; V/C = volume to capacity ratio; Δ = change in V/C ratio

Table 4.10-30. Peak Hour Intersection LOS Results – Existing Plus TAMT Plan Buildout

#	Intersection	AM Peak Hour Avg. Delay (sec.)	AM Peak Hour LOS	PM Peak Hour Avg. Delay (sec.)	PM Peak Hour LOS	Delay w/o TAMT Plan Buildout (sec.) AM/PM	LOS w/o TAMT Plan Buildout AM/PM	Change in Delay (sec.)	S?
1	Harbor Drive/Cesar Chavez Parkway	~~50.4~~49.3	D	~~45.4~~43.8	D	36.8/33.3	D/C	~~13.6/~~12.~~1~~5/10.5	No
2	Harbor Drive/Sampson Street	41.~~2~~1	D	42.~~5~~4	D	40.4/40.9	D/D	0.~~8~~7/1.~~6~~5	No
3	Harbor Drive/Schley Street	16.7	B	15.2	B	16.7/15.0	B/B	0.0/0.2	No
4	Harbor Drive/28th Street	~~26.5~~32.4	C	~~22.2~~23.3	C	23.1/20.3	C/C	9.3~~.4/1.9~~/3.0	No
5	Main Street/28th Street	21.~~6~~9	C	~~35.6~~38.0	D	21.4/34.8	C/C	0.5/3.2~~/0.8~~	No
6	Boston Avenue/28th Street	19.4	B	23.~~1~~2	C	19.4/23.0	B/C	0.0/0.~~1~~2	No
7	National Avenue/28th Street	42.~~3~~4	D	30.~~1~~4	C	42.3/29.6	D/C	0.1/0~~/0.5~~.8	No
8	National Avenue/I-5 NB Off-Ramp	15.4~~7~~	B	15.~~2~~4	B	14.9/14.7	B/B	0.~~5~~8/0.~~5~~7	No
9	Harbor Drive/Belt Street	~~19.1~~18.9	B	17.4~~2~~	B	18.6/17.1	B/B	0.~~5~~3/0.~~3~~1	No
10	Harbor Drive/32nd Street	~~38.7~~32.1	D	~~49~~47.4	D	28.6/39.9	C/D	~~10.1/9~~3.5/7.5	No
11	Norman Scott Road/32nd Street/Wabash Boulevard	~~127.9~~114.4	**F**	~~79.5~~74.0	**E**	95.3/66.2	**F/E**	~~32.6/13.3~~ 19.1/7.8	**Yes**

Source: Appendix G

Bold letter indicates a significant impact.

LOS = level of service; NB = northbound; S? = Indicates a significant impact

Table 4.10-31. Peak Hour Ramp Intersection Capacity Analysis – Existing Plus TAMT Plan Buildout

#	Intersection	Peak Hour	ILV/Hour Existing	ILV/Hour Existing + TAMT Plan Buildout	Description
8	National Avenue/I-5 NB Off-Ramp	AM	636	~~658~~669	Under Capacity
		PM	794	~~815~~823	Under Capacity
11	Norman Scott Road/32nd Street/Wabash Boulevard	AM	956	1,~~148~~083	Under Capacity
		PM	1,028	1,~~202~~143	~~At~~Under Capacity

Source: Appendix G.

Note: less than 1,200 ILV/Hour indicates operation is "Under Capacity" and 1,200 to 1,500 ILV/Hour indicates "At Capacity."

ILV = intersection lane volume; NB = southbound

Table 4.10-32. Freeway Mainline LOS Analysis – Existing Plus TAMT Plan Buildout

Freeway	Segment	ADT	Direction	Peak Hour Volume	With Project V/C	With Project LOS	Base V/C	Base LOS	Δ V/C	S?
I-5	SR-94 & Imperial Avenue	180,700	NB	9,600	0.890	D	0.890	D	0.000	N
			SB	8,400	0.780	C	0.780	C	0.000	N
	Imperial Avenue & SR-75	170,700	NB	9,100	0.840	D	0.840	D	0.000	N
			SB	8,500	0.790	C	0.780	C	0.010	N
	SR-75 & 28th Street	167,600	NB	10,400	0.850	D	0.850	D	0.000	N
			SB	8,300	0.770	C	0.770	C	0.000	N
	28th Street & SR-15	166,200	NB	10,300	1.100	F	1.100	F	0.000	N
			SB	8,300	0.880	D	0.870	D	0.010	N
	SR-15 & Main Street	196,200	NB	12,200	1.000	E	0.990	E	0.010	N
			SB	11,700	1.000	E	0.990	E	0.010	N
SR-15	SR-94 & Market Street	128,000	NB	6,500	0.770	C	0.760	C	0.010	N
			SB	7,200	0.850	D	0.840	D	0.010	N
	Market Street & Ocean View Boulevard	116,000	NB	6,~~1~~000	0.8~~7~~50	D	0.840	D	0.0~~3~~10	N
			SB	6,500	0.920	D	0.910	D	0.010	N
	Ocean View Boulevard & I-5	105,000	NB	4,700	0.560	B	0.540	B	0.020	N
			SB	4,800	0.440	B	0.430	B	0.010	N
	I-5 & Norman Scott Road	9,300	NB	400	0.090	A	0.060	A	0.030	N
			SB	400	0.090	A	0.060	A	0.030	N

Notes:

The capacity, Directional split, Peak hour % and Heavy vehicle % are assumed to be the same as Existing conditions.

Bold letter indicates substandard LOS E or F.

ADT = average daily traffic; LOS = level of service; NB = northbound; SB = southbound; V/C = volume to capacity ratio; Δ = change in V/C ratio; S? = Indicates if change in V/C ratio is significant

In sum, the operations associated with the buildout of the TAMT plan would result in a significant impact along the roadway segment of 28th Street between Boston Avenue and National Avenue (**Impact-TRA-~~4~~3**) and at the intersection of Norman Scott Road/32nd Street/Wabash Boulevard during the peak hours (**Impact-TRA-~~5~~4**). All other potential impacts on roadway segments, intersections, ramp intersections, and freeway mainline segments would be less than significant from project operation.

Existing Conditions Plus TAMT Plan Buildout – Alternative Gate Scenario

As mentioned, the proposed TAMT plan identifies an alternative gate concept that would serve as the primary entry and exit location for the Refrigerated Container node and the Multi-Purpose General Cargo node. The alternative gate would be located in the northeast corner of the project site and would provide access directly onto Harbor Drive. According to the proposed TAMT plan, the Dry and Liquid Bulk nodes would continue to utilize the existing gate off Caesar Chavez Parkway, particularly for domestic bulk shipments. It is also assumed that employee traffic would continue to use the existing Crosby Street gate.

Implementation of the alternative gate concept would result in a redistribution of both existing and proposed project truck traffic from the Refrigerated Container and Multi-Purpose General Cargo nodes. Figure 4.10-20 displays the assumed redistribution of both existing and project truck traffic between the two gate locations, while Figure 4.10-21 displays the anticipated traffic volumes at both gates and along Harbor Drive.

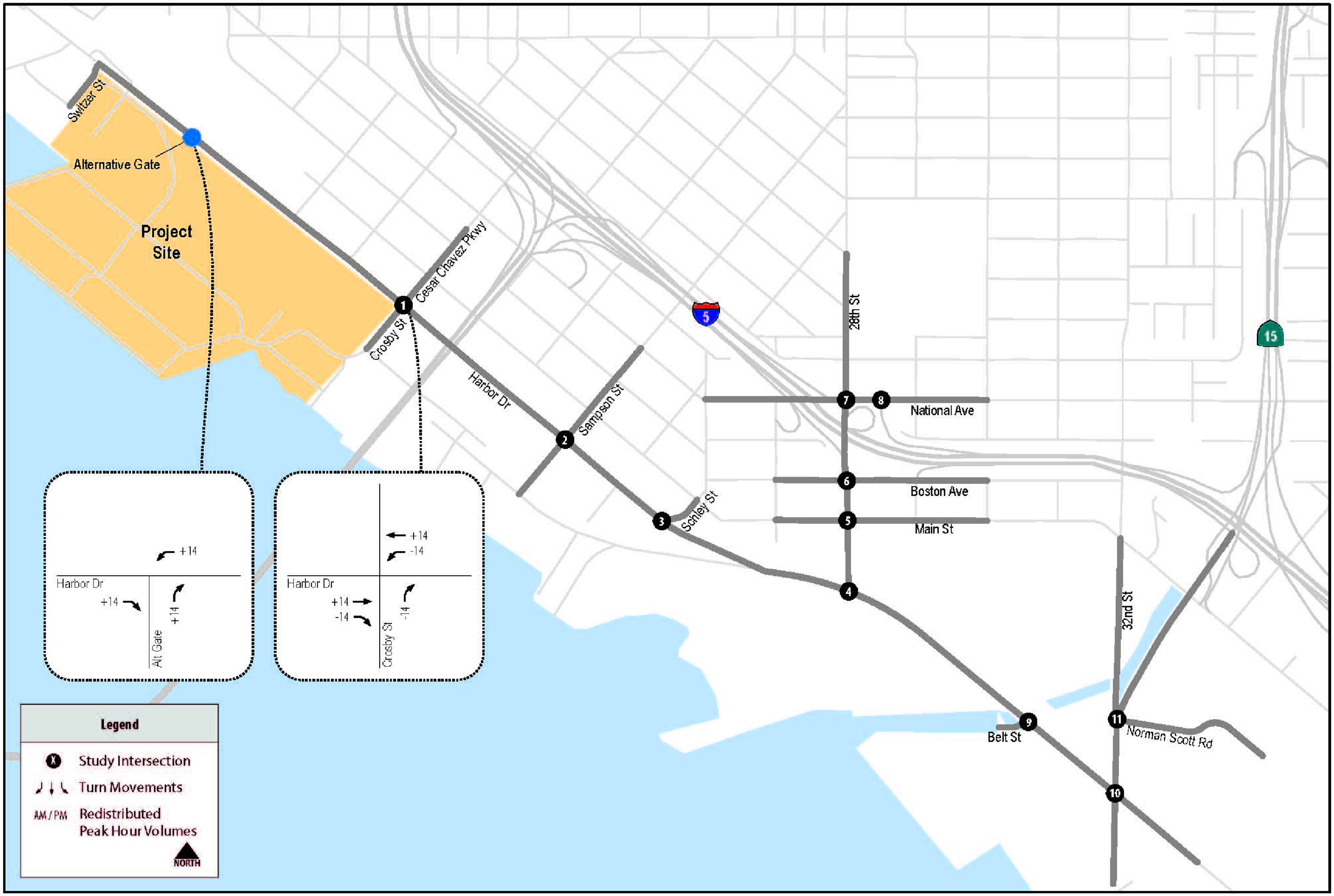
Roadway Segments

Based on the assumed redistribution of truck trips, Harbor Drive between Beardsley Street and Cesar Chavez Parkway is the only study roadway segment that is anticipated to experience a change in ADT due to the alternative gate location. As shown in Table 4.10-33, the roadway segment of Harbor Drive between Beardsley Street and Cesar Chavez Parkway is anticipated to operate at LOS C with the addition of the TAMT plan buildout traffic utilizing the alternative gate location.

Table 4.10-33. Peak Hour Roadway Segment LOS Results – Existing Plus TAMT Plan Buildout Alternative Gate Scenario

				Existing + TAMT Plan Buildout			Existing				
Roadway	**Segment**	**Cross-Section**	**Threshold (LOS E)**	**ADT**	**V/C**	**LOS**	**ADT**	**V/C**	**LOS**	**Δ**	**S?**
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4 lanes w/RM	40,000	22,~~246~~ 223	0.556	C	20,194	0.505	B	0.051	N

Source: Appendix G
Notes:
ADT = average daily trips; LOS = level of service; RM = raised median; S? = Indicates if change in V/C ratio is significant; V/C = volume to capacity ratio; Δ = change in V/C ratio



Source: Chen Ryan Associates, 2016

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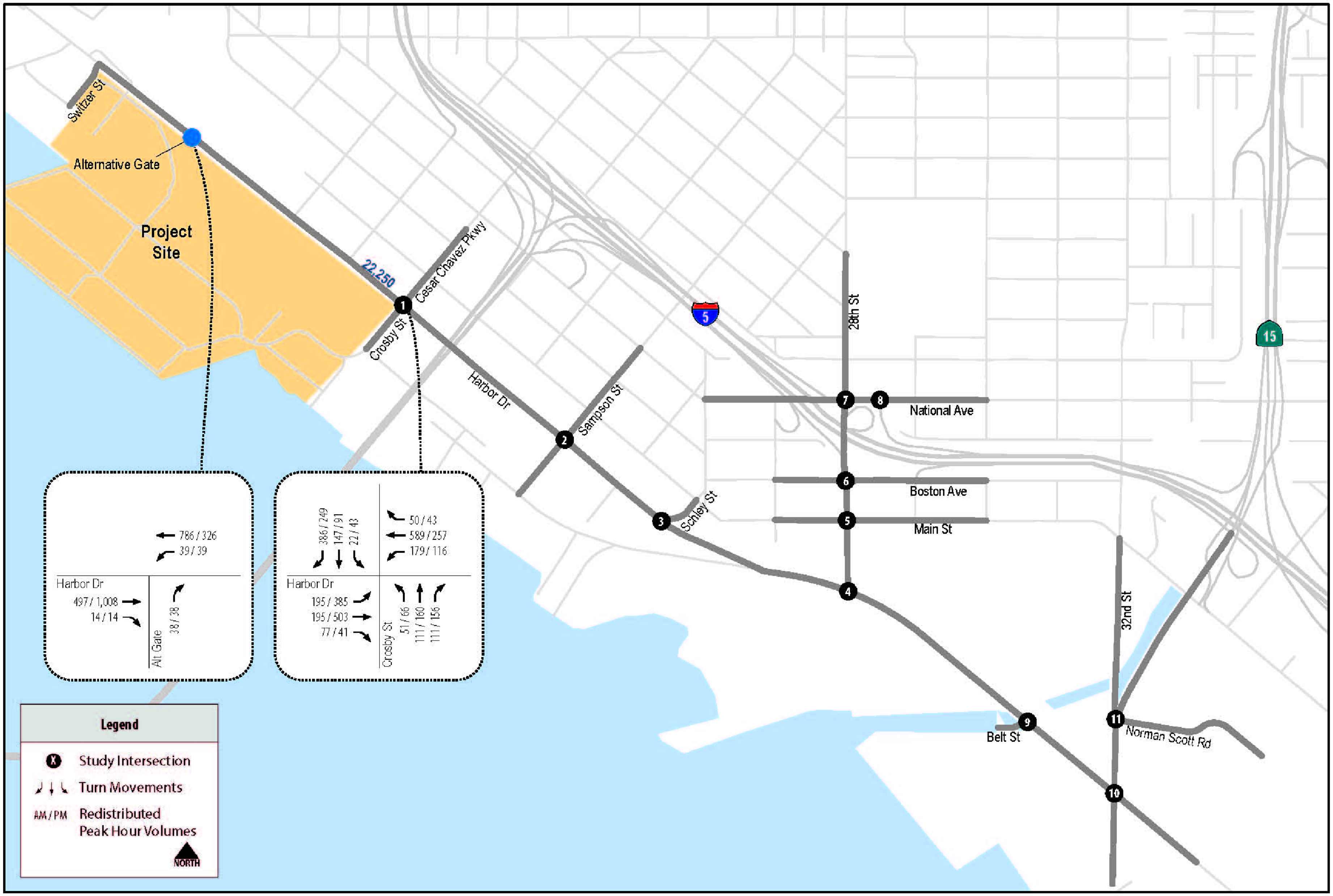
Figure 4.10-20
Truck Traffic Redistribution: Existing + Project - Alternative Gate Scenario
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR



Source: Chen Ryan Associates, 2016

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Figure 4.10-21
Traffic Volumes: Existing + Project - Alternative Gate Scenario
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

Based on the City of San Diego's Significance Criteria, the traffic associated with the proposed alternative gate would not cause any additional roadways segments to operate at LOS E or F. Therefore, implementation of the proposed alternative gate location would not result in any roadway segment impacts.

Intersections

Based on the assumed redistribution of truck trips, the Harbor Drive/Cesar Chavez Parkway intersection (Main Gate) is the only study intersection that is anticipated to experience a change in peak hour volumes due to the alternative gate. All other key study intersections are anticipated to operate at the same conditions as under the existing plus TAMT plan buildout conditions. Table 4.10-34 shows intersection LOS and average vehicle delay resulting from implementation of full TAMT plan buildout with the alternative gate location.

Table 4.10-34. Peak Hour Intersection LOS Results – Existing Plus TAMT Plan Buildout Alternative Gate Scenario

		AM Peak Hour		PM Peak Hour					
#	Intersection	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Delay w/o TAMT Plan Buildout (sec.) AM/PM	LOS w/o TAMT Plan Buildout AM/PM	Change in Delay (sec.)	S?
1	Harbor Drive/Cesar Chavez Parkway	~~38.4~~ 37.9	D	40.~~3~~4	D	36.8/33.3	D/C	1.~~6~~1/7.~~0~~1	N
12	Harbor Drive/ Alternative Gate	19.~~7~~8	B	26.5	C	N/A	N/A	19.~~7~~8/ 26.5	N

Source: Appendix G
LOS = level of service; N/A = not applicable; S? = Indicates significant impact

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Construction and operation of the Demolition and Initial Rail Component would have the potential to conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. Potentially significant impact(s) include:

Impact-TRA-1: Construction-Related Impact on an Intersection: Norman Scott Road/32nd Street/Wabash Boulevard from Demolition and Initial Rail Component Construction. Construction activities associated with the Demolition and Initial Rail Component, particularly during demolition of Transit Sheds #1 and #2, would generate construction-related traffic that would worsen the existing delay experienced at the Norman Scott Road/32nd Street/Wabash Boulevard intersection by 8.7 seconds in the AM peak hour and by 4.2 seconds in the PM peak hour. The increase in delay at this intersection would exceed the threshold of 1.0 second of additional delay for intersections operating at LOS F and threshold of 2.0 seconds of additional delay for intersections operating at LOS E, resulting in a significant construction-related traffic impact.

~~**Impact-TRA-2: Operation-Related Impact on an Intersection: Norman Scott Road/32nd Street/Wabash Boulevard from Demolition and Initial Rail Component Operations.**~~ ~~Operation of the Demolition and Initial Rail Component would worsen the existing delay experienced during the peak hours at the Norman Scott Road/32nd Street/Wabash Boulevard intersection by 4.8 seconds in the AM peak hour and by 2.3 seconds in the PM peak hour, where a threshold of 1.0 second of additional delay applies to LOS F and a threshold of 2.0 seconds of additional delay applies to LOS E. Therefore, impacts would be significant.~~

Full TAMT Plan Buildout

Construction and operation of the full buildout of the TAMT plan would have the potential to conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. Potentially significant impact(s) include:

Impact-TRA-~~3~~2: Construction Traffic from Future TAMT Plan Construction Projects. Because the timing and details of future construction projects are not yet known, it is possible that two or more construction projects may overlap (the timing of which depends on market need). Because it is not known if the overlap would generate a sufficient number of peak hour trips to result in a significant impact, a worst case is conservatively assumed that several construction projects could occur at the same time, resulting in temporary but significant traffic congestion in the project study area.

Impact-TRA-~~4~~3: Operation-Related Impact on a Roadway Segment: 28th Street between Boston Avenue and National Avenue from TAMT Plan Operations. The proposed project would add approximately ~~847~~891 daily trips (647 daily trips for STC Alternative) to the roadway segment of 28th Street between Boston Avenue and National Avenue within the project study area, which would degrade the operations of a roadway segment that is already operating at an unacceptable level under existing conditions (LOS E) to LOS F by increasing volume to capacity ratio by 0.~~036.~~040 (0.029 for STC Alternative). The initial impact is anticipated to occur ~~at 29% of the TAMT plan buildout, or~~ when ~~1,175~~161 new daily truck trips are being generated, at which point the proposed project would result in a change in V/C ratio greater than 0.01 along the roadway segment of 28th Street between Boston Avenue and National Avenue. Therefore, impacts would be significant.

Impact-TRA-~~5~~4: Operation-Related Impact on an Intersection: Norman Scott Road/32nd Street/Wabash Boulevard from TAMT Plan Operations. The proposed project would worsen the existing delay experienced during the peak hours at the Norman Scott Road/32nd Street/Wabash Boulevard intersection by ~~32.6~~19.1 seconds in the AM peak hour (17.7 seconds for STC Alternative) and by ~~13.3~~7.8 seconds in the PM peak hour~~,~~ (7.2 seconds for STC Alternative), where a threshold of 1.0 second of additional delay applies to LOS F and a threshold of 2.0 seconds of additional delay applies to LOS E. The initial impact is anticipated to occur ~~at 7% of the TAMT plan buildout, or when 276~~when 195 new daily trips are being generated, at which point the proposed project would contribute more than 1.0 second of delay in the AM peak hour period at the Norman Scott Road/32nd Street/Wabash Boulevard study area intersection. Therefore, impacts would be significant.

Mitigation Measures

Demolition and Initial Rail Component

For Impact-TRA-1:

MM-TRA-1: Transportation Demand Management (TDM) Plan During Demolition and Initial Rail Component Construction. Prior to commencing construction activities associated with the Demolition and Initial Rail Component, the District shall prepare a TDM plan to reduce potential significant temporary construction-related transportation and parking impacts at the intersection of Norman Scott Road/32nd Street/Wabash Boulevard. The TDM plan shall be implemented during construction to reduce congestion at the Norman Scott Road/32nd Street/Wabash Boulevard intersection by limiting the number of construction worker trips that travel through the affected intersection during peak hours. The TDM plan shall incorporate TDM strategies to be implemented during construction, including, but not limited to, the following.

- Implementation of a ride-sharing program to encourage carpooling among workers.
- Adjusting work schedules so workers do not access the site during the peak hours.
- Provide offsite parking locations for workers outside of the area with shuttle services to bring them on site.
- Provide subsidized transit passes for construction workers.
- Coordinate with the City of San Diego (which may also include coordination with the local planning group) for additional ideas.

~~For Impact-TRA-2:~~

~~**MM-TRA-2: Westbound Right-Turn Overlap Phase at Norman Scott Road/32nd Street/ Wabash Boulevard Intersection.** The District currently has an established program to track the number of trucks that enter and exit the terminal each year associated with TAMT operations. Prior to generating an additional 276 new daily trips, the District shall coordinate with Caltrans to determine the District's fair share payment to fund the addition of a westbound right-turn overlap phase to the intersection of Norman Scott Road/32nd Street/Wabash Boulevard, a Caltrans-controlled intersection, to improve the delay caused by the proposed project. This would reduce the delay associated with the project by 6.0 seconds during the AM peak hour and by 12.8 seconds during the PM peak hour compared to unmitigated conditions, and would effectively reduce delay at this intersection to below current levels. In order to ensure the significant impact does not occur before the District has paid its fair share to Caltrans, the District shall initiate payment once approximately 200 new daily trips are reached under the proposed project. The trigger will be determined by the District by examining the ADT over a 1-month timeframe and comparing the ADT to the baseline of 93 daily trucks generating 186 trips per day (33,349 trucks per year divided by 360 days multiplied by 2 trips for each truck) and 935 daily employee trips (315 existing employees multiplied by 3 trips per day). At the District's discretion, the District may seek reimbursement from tenants that would contribute new daily trips in proportion to their contribution.~~

Full TAMT Plan Buildout

For Impact-TRA-~~3~~2:

MM-TRA-~~3~~2: Traffic Study and Transportation Demand Management (TDM) for Specific Construction Projects. Prior to the approval of any construction activities associated with future components of the TAMT plan, the District shall retain a qualified traffic engineer to prepare a traffic study to analyze the potential transportation impacts associated with the specific construction project. The report shall consider any overlapping construction projects on the TAMT. If the traffic study determines that the proposed construction activity may have a significant impact, the traffic study shall recommend mitigation measures to avoid or reduce the potential impact.

The traffic study shall specifically consider if a TDM plan is required to address potential temporary traffic impacts from construction vehicles and equipment. If determined necessary, the TDM plan shall incorporate TDM strategies to be implemented during construction, including, but not limited to, the following.

- Implementation of a ride-sharing program to encourage carpooling among workers.
- Adjusting work schedules so workers do not access the site during the peak hours.
- Provide offsite parking locations for workers outside of the area with shuttle services to bring them on site.
- Provide subsidized transit passes for construction workers.
- Coordinate with the City of San Diego (which may also include coordination with the local planning group) for additional ideas.

For Impact-TRA-43:

MM-TRA-43: Widen the Segment of 28th Street between Boston Avenue and National Avenue to a Four-Lane Major Arterial Classification Consistent with the Barrio Logan Community Plan. The District currently has an established program to track the number of trucks that enter and exit the terminal each year associated with TAMT operations. Prior to generating an additional ~~1,175~~161 new daily truck trips~~ (approximately 29% of buildout of the TAMT plan),~~, the District shall pay a fair-share contribution (MPC would be responsible for 3.~~7~~9% and STC would be responsible for 2.9%) of the cost to widen the roadway segment of 28th Street between Boston Avenue and National Avenue to a Four-Lane Major Arterial classification. The improvement is identified within the draft Barrio Logan Community Plan, and therefore would be paid to the City of San Diego in accordance with Section 142.0640 of the San Diego Municipal Code. Payment of the District's fair share shall be completed prior to reaching ~~1,175~~161 new daily truck trips. In order to ensure the significant impact does not occur before the District has paid its fair share to the City, the District shall initiate payment once approximately ~~1,000~~150 new daily truck trips are reached under the proposed project. The trigger will be determined by the District by examining the ADT over a 1-month timeframe and comparing the ADT to the baseline of 93 daily trucks generating 186 trips per day (33,349 trucks per year divided by 360 days multiplied by 2 trips for each truck)~~ and 935 daily employee trips (315 existing employees multiplied by 3 trips per day)~~. At the District's discretion, the

District may seek reimbursement from tenants that would contribute new daily trips in proportion to their contribution.

For Impact-TRA-4:

MM-TRA-4: Westbound Right-Turn Overlap Phase at Norman Scott Road/32nd Street/ Wabash Boulevard Intersection. The San Diego Unified Port District currently has an established program to track the number of trucks that enter and exit the terminal each year associated with TAMT operations. Prior to generating an additional 195 new daily trips, the San Diego Unified Port District shall coordinate with the California Department of Transportation to determine the San Diego Unified Port District's fair share payment to fund the addition of a westbound right-turn overlap phase to the intersection of Norman Scott Road/32nd Street/Wabash Boulevard, a California Department of Transportation–controlled intersection, to improve the delay caused by the proposed project. This would reduce the delay associated with the project by 20.8 seconds during the AM peak hour and by 19.9 seconds during the PM peak hour compared to unmitigated conditions, and would effectively reduce delay at this intersection to below current levels. (Note, for the STC Alternative, this mitigation measure would reduce the unmitigated delay associated with this alternative by 19.4 seconds during the AM peak hour and by 19.3 seconds during the PM peak hour.) In order to ensure the significant impact does not occur before the San Diego Unified Port District has paid its fair share to the California Department of Transportation, the San Diego Unified Port District shall initiate payment once approximately 150 new daily trips are reached under the proposed project. The trigger will be determined by the San Diego Unified Port District by examining the average daily trips over a 1-month timeframe and comparing the average daily trips to the baseline of 93 daily trucks generating 186 trips per day (33,349 trucks per year divided by 360 days multiplied by 2 trips for each truck) and 935 daily employee trips (315 existing employees multiplied by 3 trips per day). At the San Diego Unified Port District's discretion, the San Diego Unified Port District may seek reimbursement from tenants that would contribute new daily trips in proportion to their contribution.

~~**For Impact-TRA-5:**~~

~~Implement **MM-TRA-2**~~.

Level of Significance after Mitigation

Demolition and Initial Rail Component

Mitigation measure **MM-TRA-1** would reduce construction-related traffic impacts by requiring the District to prepare and implement a TDM plan during construction of the Demolition and Initial Rail Component. Implementation of a TDM plan during construction would reduce potential impacts at the Norman Scott Road/32nd Street/Wabash Boulevard intersection; however, it cannot be determined with certainty that the impacts would be reduced to less-than-significant levels. Consequently, **Impact-TRA-1** may remain significant even after **MM-TRA-1** has been implemented.

~~Mitigation measure **MM-TRA-2** would reduce project impacts at the intersection of Norman Scott Road/32nd Street/Wabash Boulevard by providing the District's fair-share contribution toward the cost of the addition of a westbound right-turn overlap phase. With the added westbound right-turn overlap phase, the change in delay with the project would be a net negative, as shown in Table 4.10-~~

~~35. However, because the timing and implementation of the necessary improvement is within the exclusive jurisdiction of Caltrans, and not the District, the District cannot ensure that the improvements would be made when needed. Therefore, while mitigation is required that could reduce the impact to a less-than-significant level, the uncertainty regarding the timing and implementation of the recommended improvement to the intersection of Norman Scott Road/32nd Street/Wabash Boulevard means **Impact-TRA-2** is considered significant and unavoidable.~~

~~Table 4.10-35. Peak Hour Intersection LOS – Mitigated Intersection Existing Plus Demolition and Initial Rail Component Conditions~~

		~~AM Peak Hour~~		~~PM Peak Hour~~					
~~#~~	~~Intersection~~	~~Avg. Delay (sec.)~~	~~LOS~~	~~Avg. Delay (sec.)~~	~~LOS~~	~~Delay w/o Project (sec.) AM/PM~~	~~LOS w/o Project AM/PM~~	~~Change in Delay (sec.)~~	~~S?~~
~~11~~	~~Norman Scott Road/32nd Street/Wabash Boulevard~~	~~94.1~~	~~F~~	~~55.7~~	~~E~~	~~95.3/66.2~~	~~F/E~~	~~-1.2/-10.5~~	~~N~~

~~Source: Appendix G~~
~~LOS = level of service; S? = Indicates a significant impact~~

Full TAMT Plan Buildout

Mitigation measure **MM-TRA-~~3~~2** would reduce construction-related traffic impacts by requiring project-specific mitigation (if needed), including a construction traffic control plan if needed. However, given the uncertainty of timing of future construction activities and the fact that it is unknown if projects may overlap, **Impact-TRA-~~3~~2** may remain significant even after **MM-TRA-~~3~~2** has been implemented.

Mitigation measure **MM-TRA-~~4~~3** would reduce the project's impact on 28th Street between Boston Avenue and National Avenue by ensuring that the District's fair share contribution to improving the roadway segment from a three-lane to a four-lane road (as identified in the draft Barrio Logan Community Plan) is provided prior to the impact occurring. The added lane would improve LOS from F to C, which, if implemented, would reduce this impact to a less-than-significant level. However, because the timing and implementation of the necessary improvement is within the exclusive jurisdiction of the City of San Diego, and not the District, the District cannot ensure that the improvements would be made when needed. Therefore, while mitigation is required that could reduce the impact to a less-than-significant level, the uncertainty regarding the timing and implementation of the recommended improvement to 28th Street between Boston Avenue and National Avenue means **Impact-TRA-~~4~~3** is considered significant and unavoidable.

To address **Impact-TRA-~~5~~4**, mitigation measure **MM-TRA-~~2~~4** would reduce project impacts at the intersection of Norman Scott Road/32nd Street/Wabash Boulevard by providing the District's fair-share contribution toward the cost of the addition of a westbound right-turn overlap phase. With the added westbound right-turn overlap phase, the change in delay with the project would be a net negative, as shown in Table 4.10-35. However, because the timing and implementation of the necessary improvement is within the exclusive jurisdiction of Caltrans, and not the District, the

District cannot ensure that the improvements would be made when needed. Therefore, while mitigation is required that could reduce the impact to a less-than-significant level, the uncertainty regarding the timing and implementation of the recommended improvement to the intersection of Norman Scott Road/32nd Street/Wabash Boulevard means **Impact-TRA-~~5~~4** is considered significant and unavoidable.

Table 4.10-~~36~~35. Peak Hour Intersection LOS – Mitigated Intersection Existing Plus Project Conditions

#	Intersection	AM Peak Hour Avg. Delay (sec.)	AM Peak Hour LOS	PM Peak Hour Avg. Delay (sec.)	PM Peak Hour LOS	Delay w/o Project (sec.) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec.)	S?
11	Norman Scott Road/32nd Street/Wabash Boulevard	~~94.9~~93.6	F	~~55.9~~54.1	~~E~~D	95.3/66.2	F/E	~~-0.4/-10.3~~1.7/-12.1	N

Source: Appendix G
LOS = level of service; S? = Indicates a significant impact

Threshold 2: Implementation of the proposed project would not conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.

Impact Discussion

As described in Section 4.10.3.2, *Regional*, SANDAG is the lead agency for congestion management compliance for the San Diego region. In 2009, the San Diego region elected to be exempt from the state CMP and, since this decision, SANDAG has been abiding by 23 CFR 450.320 to ensure the region's continued compliance with the federal congestion management process. The Regional Plan, the region's RTP and SCS, meets the requirements of 23 CFR 450.320.

Therefore, to determine if the proposed project would conflict with an applicable congestion management program, the proposed TAMT plan was reviewed for consistency with the Regional Plan, which is a land use and transportation planning document that discusses land use policy at a very general level. The Regional Plan mostly incorporates the land use policies of local jurisdictions and focuses on transportation infrastructure and management programs to support those policies. No directly applicable land use policies were identified that pertain to the proposed project because the project is not proposing changes in land use designations of the project site. Additionally, aside from potential improvements associated with mitigation measures, the proposed project would not result in any changes to the existing transportation infrastructure outside of the terminal. Moreover, the proposed project would not interfere with the policies or projects identified in the Regional Plan. Therefore, the proposed project, which includes the Demolition and Initial Rail Component, would not conflict with an applicable congestion management program, and impacts would be less than significant.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Implementation of the Demolition and Initial Rail Component would not conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways. Impacts would be less than significant.

Full TAMT Plan Buildout

Full buildout of the TAMT plan would not conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways. Impacts would be less than significant.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

No mitigation is required.

Level of Significance after Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

Impacts would be less than significant.

Threshold 4: Implementation of the proposed project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Impact Discussion

The proposed project, which includes the Demolition and Initial Rail Component, does not propose physical changes to internal terminal roadways that could result in an increase in design hazards. Improvements to the centralized gate would potentially be implemented to further enhance entry to and exit from the terminal. However, nothing related to the existing gate suggests its operation causes or contributes to a hazard from its design, and additional trucks accessing the project site at the existing gate are not anticipated to create a new hazard or exacerbate an existing one. For example, the existing gate is located sufficiently away from the at-grade rail crossing to prevent queuing at the crossing.

Moreover, onsite operations at the project site are well organized and traffic and parking areas are managed by onsite marine terminal supervisors. Speeds are limited to 15 mph and parking is placed in areas that ensure that it will not interfere with onsite operations. With the project, several buildings currently on the terminal would be demolished and replaced with open storage areas, which would further improve visibility on the terminal. Thus, onsite operations with the project would continue to be highly organized and regulated, would follow safe speed limits, and would not create or substantially increase design hazards such as sharp curves or dangerous intersections.

Off site, the railroad crossing of BNSF Railway Company at Cesar Chavez Parkway, identified in federal records as DOT #026882V, is approximately 0.6 mile east of the project location. Under buildout of the TAMT plan, all trucks would approach the project site along Harbor Drive and would enter from the main gate located south of the Harbor Drive/Cesar Chavez Parkway intersection. Additionally, the refrigerated trucks would exit the project site via another gate located on Switzer Street, to the north of the Harbor Drive and Cesar Chavez Parkway intersection. From there, all trucks would proceed along Harbor Drive prior to accessing I-5 via 28th Street or I-15 via 32nd Street.

The proposed TAMT plan also identifies a potential alternative entrance gate location in the northeast corner of the terminal that would provide access directly onto Harbor Drive. The alternative gate would serve as a point of access for all refrigerated container and multi-purpose general cargo traffic that would enter and exit at this gate location. This would result in fewer trucks entering at the Crosby Street Gate under the buildout scenario than compared to the scenario without the alternative gate. The alternative gate would be designed to take into account project site distance and traffic queuing at all approaches, and it is anticipated that a new signalized intersection would be created along Harbor Drive. As discussed in the impact analysis under Threshold 1, the alternative gate location intersection would operate at LOS C or better under both existing plus Demolition and Initial Rail Component and full TAMT plan buildout conditions. Additionally, the redistribution of traffic due to the alternative gate location would not cause any intersections or roadway segments to operate at LOS E or F under either existing plus Demolition and Initial Rail Component or existing plus full TAMT plan buildout conditions. Consequently, implementation of the alternative gate location would not contribute to traffic congestion along study area roadways or intersections that could result in new safety hazards.

Under either scenario, no truck traffic would queue along the BNSF railroad crossing at Cesar Chavez Parkway, either entering or exiting the project site, and therefore no potential safety hazards associated with vehicle queuing would result. Although this crossing has been identified by the California Public Utilities Commission as needing improvements for pedestrian safety, the proposed project would not contribute a significant number of additional pedestrians because parking would be provided on the terminal and immediately adjacent at the lot just outside the main gate (see the discussion under Threshold 7 below). In addition, the peak hour would be the busiest times in the area and the project would contribute 18 peak hour truck trips each way in the AM and PM peak hours. This would amount to approximately one truck per every 3.3 minutes. In addition, the project would contribute 154 peak hour employee/visitor vehicles each way in the AM and PM peak hours. This would amount to approximately one personal vehicle per every 23 seconds. Combined, this would represent approximately one car or one truck every 21 seconds during the peak hour, which would not cause any additional queuing at the main gate because there would be sufficient time to process vehicles or have cars divert to parking just outside the main gate. Assuming licensed TAMT truck drivers and employees in personal vehicles obey traffic laws related to speed limits and all employees stop at the crossing when the crossing arms are in the down position, the project would not cause or contribute to a safety hazard at this crossing location. Therefore, the proposed project would not result in any safety hazards due to a design feature, nor would any incompatible uses be introduced as a result of project implementation.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Implementation of the Demolition and Initial Rail Component would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). Impacts would be less than significant.

Full TAMT Plan Buildout

Full buildout of the TAMT plan would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). Impacts would be less than significant.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

No mitigation is required.

Level of Significance After Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

Impacts would be less than significant.

Threshold 6: Implementation of the proposed project <u>would not</u> conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Impact Discussion

Impacts on pedestrian, bicycle, and transit facilities were considered by evaluating the project site plan and conducting a field visit. An impact on these facilities would occur if the proposed project would substantially increase hazards due to a design feature or would conflict with the adopted policies, plans, or programs that support public transit. The project site is an operating marine terminal with restricted access. There are no pedestrian, bicycle, or transit facilities within the project site. Existing light rail transit stops in the project study area include the Barrio Logan, Harborside, and Pacific Fleet Stations. While not in the traffic study area, the 12th and Imperial Transit Center is approximately 1,000 feet northeast of the project site, adjacent to Petco Park. The project's TIA assumed that all worker commute trips would be via personal vehicles to be conservative for the traffic impact results because currently nearly 100% of TAMT employees, including dock workers, commute by personal vehicle. However, even if up to 20 percent of workers arrived by mass transit, the effect on transit would only be an additional 105 people split over 3 shifts under full TAMT plan buildout. Therefore, the proposed project would not contribute a significant number of new transit riders such that trolley service would be unable to accommodate the increase. Moreover, no changes are proposed to the existing pedestrian, bicycle, and transit facilities outside of the project site that could result in impacts on the existing public transportation system. Therefore, the project would not conflict with the Regional Plan, the San Diego Regional Bike Plan, or the City's Pedestrian Master Plan and Bicycle Master Plan. As such, impacts on pedestrian, bicycle, and transit facilities would be less than significant, and no mitigation is required.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Implementation of the Demolition and Initial Rail Component would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. Impacts would be less than significant.

Full TAMT Plan Buildout

Full buildout of the TAMT plan would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. Impacts would be less than significant.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

No mitigation is required.

Level of Significance After Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

Impacts would be less than significant.

Threshold 7: Implementation of the proposed project would not result in inadequate parking supply.

Impact Discussion

Demolition and Initial Rail Component

Under existing conditions, the project site typically supports up to 315 workers during a 24-hour period. On a few occasions, the 8-hour day shift has reached a maximum of 309 workers during the busiest 8-hour shift.[5] The anticipated increase in employment associated with the Demolition and Initial Rail Component is estimated to be approximately 92 new daily employees, with no increase in the number of visitors. This assumes up to 10 new permanent employees and up to 82 new dock-workers daily. Assuming all new permanent employees worked the day shift, and an additional 41 dock workers (i.e., half of the estimated workers during the 24-hour period) also worked during the day shift, there would be 51 new workers as a result of the Demolition and Initial Rail Component during the peak time. Therefore, the Demolition and Initial Rail Component, combined with the existing condition, could reach up to 360 workers at the project site during the busiest 8-hour shift.

The 94-acre project site has sufficient area to accommodate 360 workers. Parking in areas without marked spaces can accommodate up to approximately 150 spaces per acre (University of Tennessee 2014). The majority of parking is provided near the main entrance gate of the project site. The 0.35-acre parking lot to the north of the entry gate is able to accommodate up to approximately 50 spaces if needed. The 1-acre dirt lot to the south of the entry gate, just before entering the project site, can accommodate up to 150 spaces. The 0.60-acre partial paved/dirt lot just inside the project site and south of the entry gate can accommodate up to 90 spaces.

Moving west across the terminal, the area immediately east adjacent to Warehouse C could accommodate up to 85 passenger vehicles. The dry bulk cargo area supports approximately 35 spaces that run along the edge of the silos, whereas parking for the Dry Bulk tenants near Transit Shed #2 includes up to 35 spaces. Parking for Warehouse B includes approximately 17 spaces on the east end, most of which are striped, and room for approximately 40 parking spaces on the west side of Warehouse B. Parking within the liquid bulk area includes approximately 29 striped spaces. Within the refrigerated cargo areas, authorized visitors and employees associated with administrative operations can park in roughly 13 spaces in the immediate vicinity of Dole's main office, which is in the northeastern/central quadrant of its leasehold, and at the entry gate to the Dole leasehold, where there is room for approximately 15 cars. Moreover, at the north area of the project site, where the route follows along the perimeter of the Dole leasehold and liquid bulk area, there is parking for up to 22 spaces near the truck scanning area and 3 marked spaces across the internal intersection.

However, the 65 striped parking spaces in front of Transit Shed #1 and the 56 striped parking spaces in front of Transit Shed #2 would be lost. To offset the parking need for the headhouse, an

[5] The terminal's most intensive 8-hour shift is the day shift, and peak parking demand occurred during the months of January 2014 and April 2014 and resulted in the need to accommodate 144 dock workers. When added to the terminal's 165 full-time equivalent employees, the total number of terminal workers during the highest point is 309. This provides a conservative estimate of the total number of workers who worked at the TAMT during the busiest 8-hour shift under existing conditions.

additional 15 spaces would be provided at the proposed 3,600-square-foot modular office building. In total, there would be 599 available parking spaces for 360 workers, a surplus of 239 parking spaces on even the busiest days.

During construction of the Demolition and Initial Rail Component, it is estimated that there would be no more than 50 construction workers present on the project site at any one time.[6] The majority of these workers would park between the two transit sheds, where there are currently 121 marked spaces. While these spaces are not accounted for during the operational phase, they would be available during much of the construction phase and some of the additional space created could be used for parking, provided the Maritime Superintendents determine that parking would not interfere with various cargo operations for that particular shift. Moreover, there would be up to an additional 239 spaces that would be available for permanent use even if the spaces at the transit sheds could not be used. Thus, the number of parking spaces would be sufficient for the peak construction days even if all construction workers drove personal vehicles to the site and no carpooling occurred.

As such, an adequate number of parking spaces exists on the project site to accommodate the increased number of employees and workers associated with the Demolition and Initial Rail Component, during both the construction and operational phases. Therefore, the Demolition and Initial Rail Component's potential impacts on the parking supply would be less than significant, and no mitigation is required.

Full TAMT Plan Buildout

The highest peak shift for existing operations at the project site consists of 165 office employees and 144 dockworkers. Full buildout of the TAMT plan would result in approximately 524 new workers, which includes the 92 additional employees added during the Demolition and Initial Rail Component. This estimate assumes there would be 63 new permanent employees at TAMT plan buildout and up to 461 new dockworkers for a maximum of 611 dockworkers (existing + TAMT plan buildout) during a 24-hour period at buildout.[7] When these figures are added to the project's

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[6] To ensure minimal disruption to ongoing operations, construction of the Demolition and Initial Rail Component is estimated to take 15 months for Transit Shed #1 and 18 months for Transit Shed #2, with only a few weeks of overlap between the two phases if needed. Given the estimated 33-month construction period, and considering that the bulk of the work would be demolition work as opposed to new construction, the District's Engineering Department estimates that no more than 50 construction workers would be needed during any single shift.

[7] The maximum number of daily workers at the project site is based on the permanent number of full-time employees (or full-time equivalents) and the total number of dockworkers that would be needed for a 24-hour period in 2035. The full-time employee estimate is based on long-term opportunities identified in the TAMT plan, which identifies the Maximum Practical Capacity at the project site and considers potential growth for each of the three cargo nodes (or cargo types). Growth projections take into account existing tenants, new tenants, and additional spot cargo. Approximately 63 new permanent office employees were estimated, which comes to about 3 new employees per year for the next 21 years. The maximum number of dockworkers for a 24-hour period is based on berthing capacity. Assuming that four vessels are berthed simultaneously at the project site in 2035, the maximum number of dock workers to service the most intensive cargo within a 24-hour period would be 611, which would be in total (existing + the TAMT plan buildout addition). This is a highly conservative estimate, as the terminal would not be able to sustain all available berths being occupied, along with the associated terminal cargo handling equipment in operation, for long periods of time. The reality is that even with full buildout, the highest number of workers and employees that would be on site would be approximately 75% of the theoretical maximum practical capacity. The lower number is known as the sustainable throughput capacity.

2013/2014 baseline condition of 315 workers, there would be a total of 839 workers at the project site in 2035.

Assuming that all 63 new office employees would work during the day shift (e.g., busiest 8-hour shift), which would be combined with the existing 165 office workers, up to 228 office employees could be present at the project site during the day.[8] Berthing capacity, however, would limit the number of dock workers to no more than 154 additional dock workers during an 8-hour period, which would amount to a high of up to 298 dock workers during the busiest 8-hour shift. This yields a total of 526 workers (e.g., 228 permanent employees + 298 dock workers) that could be at the project site during the busiest 8-hour shift once buildout of the TAMT plan is reached.

As noted under the analysis of the Demolition and Initial Rail Component, after demolition of the two transit sheds, available parking would be reduced to 599 spaces. In addition, long-term buildout of the TAMT plan calls for the demolition of Warehouse C, which would effectively eliminate 85 parking spaces located along the northeast side of Warehouse C, resulting in a reduced total of 514 spaces. Still, even with the reduction of the spaces along Warehouse C, there would nearly be enough available parking spaces to accommodate the maximum number of workers at the project site during any one shift. While this would result in a net deficit of up to 12 spaces, the parking could be accommodated in areas of the project site that are not as heavily traveled, such as along the north area around the dry bulk facility.

However, should any of the future components identified in the TAMT plan remove any additional parking, there could be a much greater deficit such that on-terminal parking could not be accommodated. This deficit in parking could be accommodated through a number of different ways. For example, many tenants may provide parking within their leaseholds. The 514 parking spaces noted above do not take into account parking requirements that may be required by the District of future tenants.

Additionally, the TAMT facility needs to remain fluid to meet the dynamic nature of cargo operations. Currently, dock workers responsible for loading and unloading shipments are allowed to park anywhere on the project site, provided the area is not permanently designated as a “no parking zone” by markings on the asphalt, or the area has not been temporarily restricted for parking by one of the Maritime Superintendents. Typically, dock workers park nearest to where they have been assigned for a particular shift, provided the parked cars do not obstruct terminal operations. This is currently done and is not anticipated to change with the project, even given the increase in throughput, because the berthing space constraints will only allow a maximum of four ocean-going vessels at one time (i.e., Berths 10-1/10-2, 10-3/10-4, 10-5/10-6, and 10-7/10-8).

However, because of the fluid nature of cargo terminal operations and the flexibility generally needed for onsite parking, the lack of absolute certainty that sufficient parking would be provided would be considered a significant impact (**Impact-TRA-~~6~~5**). Mitigation measures **MM-TRA-5** through **MM-TRA-7** are required to ensure that the TAMT plan, in the long term, would not exacerbate parking issues in the surrounding community.

[8] 165 existing office employees plus the additional 63 permanent office employees.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Implementation of the Demolition and Initial Rail Component of the TAMT plan would not result in an inadequate parking supply, either on site or off site. Impacts would be less than significant.

Full TAMT Plan Buildout

Full buildout of the TAMT plan may result in an inadequate parking supply. Potentially significant impact(s) include:

Impact-TRA-~~6~~5: Insufficient Parking at Full TAMT Plan Buildout. Full buildout of the TAMT plan may result in a long-term parking shortage, which could increase if future components are implemented in areas that currently serve as parking.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

The following mitigation measure(s) are required for **Impact-TRA-~~6~~5**:

MM-TRA-5: District Shall Inform All TAMT Workers to Park at the TAMT Facility or at an Authorized Offsite Parking Lot or Parking Garage. All TAMT workers, employees, and contractors are prohibited from using on-street parking or from parking at the neighboring Cesar Chavez Park. If no parking is available on the project site, the District's marine terminal supervisors shall inform all dock workers that they shall park within a parking garage or surface parking lot.

MM-TRA-6: District to Maintain a Parking Inventory of TAMT. The inventory shall be initiated once the District's maritime operations staff identifies that an average of 475 employees are present at the project site during any single 8-hour shift, or the inventory shall be initiated if any future components of the TAMT plan remove any of the parking areas identified within the EIR to come within 50 parking spaces of an onsite parking deficit. The inventory of the parking supply and demand at the TAMT shall be created and maintained by the District. The inventory shall include the following considerations and requirements:

i. The inventory shall include all existing tenants, including tenant-specific parking lots or parking spaces identified in their lease and all non-exclusive parking spaces available at the TAMT.

ii. The inventory shall include any parking required by the District's existing operations.

iii. Once the trigger to prepare an inventory occurs, the inventory shall be updated for each new project component, new lease, or lease renewal where additional parking is required.

iv. The inventory shall account for both construction- and operation-related parking supply and demand, but shall update the inventory once construction is completed and construction parking is no longer necessary.

v. A determination of the surplus or deficit of parking on TAMT.

MM-TRA-7: Proponents for Future Project Components, New Leases, or Lease Renewals Shall Prepare a Parking Management Plan. Prior to approval of any new project component or any new lease/lease renewal at TAMT, the project proponent (e.g., tenant) shall submit a Parking Management Plan to the District for review and approval, demonstrating that there would be adequate parking to accommodate all projected operational parking within their tenant's leasehold or within an area available for use as parking.

The Parking Management Plan shall consider the following.

i. The identification of areas within the tenant's leasehold to accommodate the new project component's, new lease's, or renewed lease's parking needs.

ii. Reserved parking spaces outside the tenants leasehold at the TAMT, as authorized by the District through formal agreement signed by the District's Director of Maritime or his/her designee.

iii. Alternative transportation options to reduce parking demand such as subsidized transit passes, bicycle racks, employee vanpools, or other carpooling incentive programs.

iv. Preferential parking for carpools/vanpools.

v. Employee shuttles to/from the union hall at shift changes, as feasible.

vi. Reserved parking spaces with an offsite parking provider at either a parking garage or parking lot for the duration of the tenant's lease, which shall include a shuttle program. The offsite parking spaces shall be authorized through a formal agreement with a parking provider and is subject to approval by the District.

vii. Employer Coordination with SANDAG's iCommute Program.

The TAMT Parking Management Plan requires review and approval from the District's Director of Maritime, which shall be based on consultation with the TAMT Superintendent. All TAMT Parking Management Plans shall be enforced by the TAMT Superintendent.

Level of Significance After Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

With implementation of **MM-TRA-5** through **MM-TRA-7**, the District would ensure sufficient parking would be available for all District staff, tenants, and their employees, as well as necessary dock workers to load/unload cargo vessels. At no point would TAMT employees be permitted to park outside of authorized locations—on-terminal or off. Specifically, parking would always be provided on the terminal or authorized parking locations (such as nearby parking garages and surface parking lots), would otherwise be identified and formalized through signed agreements with tenants.

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4.11.1 Overview

This section describes the existing utility and energy systems that serve the project site as well as the applicable regulations that govern their use, supply and distribution, and performance. This section also discusses the proposed project's potential to exceed the existing or planned infrastructure and treatment capacities for these utilities and service systems.

Impacts on utilities and energy would be significant if the proposed project were to (1) violate wastewater treatment requirements; (2) result in insufficient water supplies being available to serve the proposed project; (3) result in the need for new or expanded water, wastewater, stormwater, or energy system infrastructure, the construction of which would result in significant physical impacts; (4) result in insufficient landfill space, or (5) result in the wasteful, inefficient, or unnecessary use of energy. All other project-related impacts on utilities and service systems—including impacts from the potential of having inadequate wastewater treatment capacity, and non-compliance with federal, state, and local regulations related to solid waste—were analyzed in Section XVII of the Initial Study/Environmental Checklist (Appendix A), which is incorporated here by reference, and were determined to be insignificant. The analysis and conclusions regarding these impacts are summarized in Section 6.4, *Effects Not Found to be Significant*, of Chapter 6.

Based on the analysis provided below, the proposed project would result in no significant impacts. No mitigation is necessary.

4.11.2 Existing Conditions

The utility providers that service the project site are listed in Table 4.11-1. Each service and utility is described in further detail below.

Table 4.11-1. Utility Service Providers

Utility Service	Provider
Wastewater	City of San Diego Public Utilities Department (Wastewater Branch)
Water	City of San Diego Public Utilities Department (Water Branch)
Stormwater	Port of San Diego; City of San Diego
Solid Waste	City of San Diego Franchise Waste Hauler (Allied Waste)/Miramar and Sycamore Landfills
Electricity and Natural Gas	San Diego Gas and Electric (SDG&E)

4.11.2.1 Wastewater

Wastewater treatment service is provided to the project site by the Metropolitan Sewerage System, which is owned by the City of San Diego and operated by the City of San Diego's Public Utilities Department's (PUD) Wastewater Branch. The Metropolitan Sewerage System serves the Greater San Diego population of 2.2 million from 16 cities and districts generating approximately 180 million gallons per day (mgd) of wastewater. Planned improvements will increase wastewater treatment capacity to serve an estimated population of 2.9 million through the year 2050. Nearly 340 mgd of wastewater will be generated by that year (PUD 2016a).

The Point Loma Wastewater Treatment Plant (PLWTP) currently treats the wastewater generated by the project site, and the quality of wastewater discharge is regulated by National Pollutant Discharge Elimination System (NPDES) Permit No. CA0107409 (PUD 2016b). The permit allows treatment of approximately 240 mgd. At present, the PLWTP meets the wastewater discharge requirements of the NPDES Permit and treats an average of 175 mgd, leaving an available capacity of approximately 65 mgd. Wastewater at the PLWTP is treated to an advanced primary level, at which point it is discharged to the ocean through a 4.5-mile-long ocean outfall.

Sewer infrastructure currently serving the project site includes a network of underground collector pipes that convey wastewater to the South Metro Interceptor sewer pipeline, which is connected to Pump Station 1 and Pump Station 2 (PUD 2016b). This infrastructure supports restroom facilities in various locations throughout the project site. On a maximum day, there are currently up to 315 daily employees working at the project site, with an existing wastewater generation of 15,048 gallons per day (gpd).

4.11.2.2 Water

Water service is provided to the project site by the City PUD's Water Branch through agreements with the San Diego County Water Authority, which is a member agency of the Metropolitan Water District. The PUD serves more than 1.3 million people, delivering more than 200,000 million acre-feet of water annually for an approximately 330-square-mile service area. The PUD maintains and operates three water treatment plants, more than 3,302 miles of water lines, 49 water pump plants, 90-plus pressure zones, and more than 294 mgd of potable water storage capacity in 32 standpipes, elevated tanks, and concrete and steel reservoirs (PUD 2016d). The City relies heavily on imported water, as approximately 85 to 90 percent of its water sources are imported from the Colorado River, State Water Project, and local sources (PUD 2014).

Future water demand and supply projections are required to be updated every 5 years with the adoption of an Urban Water Management Plan (UWMP). The City's 2010 UWMP projects the estimated demand and supply of potable water resources until the year 2035 based on regional housing planning projections, including municipal and industrial sector demand projections. Table 4.11-2 shows the City's water demand and estimated supply between 2015 and 2035, including normal years, single dry years, and multiply dry years. As shown, future demand would be met by the supply in each 5-year increment through 2035.

The City is currently in the process of updating the UWMP to project water supply and demand through 2040. A draft UWMP was completed and circulated for public review in April 2016. In the Draft 2015 UWMP, water demand and supply projections are reduced compared to the projections anticipated in the 2010 UWMP due largely to the City's ongoing implementation of conservation measures. For example, the draft 2015 UWMP projects that normal year supply and demand for 2035 will be 273,748 acre-feet per year (AFY) as opposed to the 298,860 AFY projected in the 2010 UWMP (PUD 2016c). Estimated supply and demand for 2040 would remain the same as 2035. It is important to note, however, that because this is a draft document, these numbers may be adjusted before a final UWMP is adopted.

Table 4.11-2. Normal, Single-, and Multiple-Year Dry Water Supply and Demand (2015–2035) (AFY)

	2015	2020	2025	2030	2035
Normal Year					
Supply	240,472	260,211	276,375	288,481	298,860
Demand	240,472	260,211	276,375	288,481	298,860
Difference	0	0	0	0	0
Single-Year Dry					
Supply	255,040	276,526	293,895	307,230	318,586
Demand	255,040	276,526	293,895	307,230	318,586
Difference	0	0	0	0	0
Multiple-Year Dry (First Year)					
Supply	257,587	278,451	296,319	309,230	320,382
Demand	257,587	278,451	296,319	309,230	320,382
Difference	0	0	0	0	0
Multiple-Year Dry (Second Year)					
Supply	267,323	288,723	306,726	320,467	332,038
Demand	267,323	288,723	306,726	320,467	332,038
Difference	0	0	0	0	0
Multiple-Year Dry (Third Year)					
Supply	281,466	303,004	322,166	334,720	346,823
Demand	281,466	303,004	322,166	334,720	346,823
Difference	0	0	0	0	0

Source: City of San Diego PUD 2010, Urban Water Management Plan, Tables 6-1 through 6-3.

Current water use at the project site is accounted for in the City's UWMP. The existing project site includes terminal infrastructure consisting of two transit sheds and a headhouse, two warehouses, two bulk liquid storage facilities each with multiple tanks, a dry bulk silo complex and conveyer system, on-dock rail tracks, and an entrance gate into the terminal, with a security guard structure at the end of Crosby Road. In addition, small offices are located at some of the leaseholds such as Dole and San Diego Refrigerated Services (refrigerated containers), Jankovich (liquid bulk), and Cemex and Searles Valley (dry bulk). The remaining areas within the project site are dedicated to grounded refrigerated container storage and open space for the handling and staging of import and export cargo. Existing water use at the project site, which includes employee use and vessel restocking, is approximately 18,042 gpd.

4.11.2.3 Storm Drainage

The project site is within the Pueblo Watershed, San Diego County's smallest and most densely populated hydrologic unit. This hydrologic unit encompasses San Diego Bay and approximately 60 square miles of predominantly urbanized land (75 percent developed) that drains into the Bay (Project Clean Water 2016). In addition to bay waters, the main hydrologic features of the watershed near the project site are the Chollas and Paleta creeks. Switzer Creek runs underground along the northern portion of the project site. No rivers, streams, or other surface drainages exist on site. Currently, drainage from the site discharges into the bay via storm drains (see Section 4.8, *Hydrology and Water Quality*). Neither the Chollas or Paleta creeks would receive any stormwater flows from the proposed project.

The District and City both own stormwater infrastructure on the project site. The City's property includes the Switzer Creek conveyance near the eastern boundary and the Water Street storm drain near the southern boundary.

4.11.2.4 Solid Waste

Solid waste generated at the project site is collected by a City of San Diego franchised waste hauler (Allied Waste) and transported to a local landfill. The waste hauler must be City-approved per San Diego Municipal Code Section 66.0101. City-approved waste haulers are allowed to dispose of municipal solid waste at any of the landfills in San Diego County. Currently, there are 12 companies that provide waste removal on behalf of the City (City of San Diego 2016).

San Diego County has four active landfills that accept solid waste: Miramar, Sycamore, Otay Annex, and Borrego Springs landfills. Table 4.11-3 shows the landfills' permitted remaining capacities and estimated remaining site lives. Remaining landfill capacities are based on design limits specific to each landfill site. Site capacity and the maximum daily permitted rate of disposal specific to each site determine the estimated closure dates.

Table 4.11-3. Nearby Active San Diego County Municipal Solid Waste Landfills

Solid Waste Facility	Permitted Remaining Capacity	Estimate of Remaining Site Life
Miramar Landfill	11,600,000 tons	2030
Sycamore Canyon Landfill	39,608,998 cubic yards	2042
Otay Annex Landfill	24,514,904 cubic yards	2028

Source: CalRecycle 2016; City of San Diego 2016

Because the Miramar Landfill is nearest to the project site, has remaining capacity, and would be the least expensive in terms of transportation costs, it is assumed that the majority of solid waste generated at the project site is currently disposed of at Miramar Landfill. The disposal rate at the Miramar Landfill is approximately 910,000 tons of solid waste per year, and it is projected to reach full capacity in 2030. Other large municipal landfills within the County include Sycamore Canyon with a remaining capacity of 39,608,998 cubic yards and Otay Annex Landfill with a remaining capacity of 24,514,904 cubic yards. Solid waste collection would be rerouted to either of these landfills once Miramar Landfill is closed.

In an effort to develop and evaluate options for managing solid waste disposal needs in San Diego through the year 2045, the City initiated the Long-Term Resource Management Options Strategic Plan (LRMOSP) in 2007. Phase II of the LRMOSP concluded that maximizing the capacity at Miramar Landfill and extending its useful life by approximately 24 additional years would provide revenue streams for the longest period of time (BAS Team 2012; City of San Diego ESD 2012). The implementation phase, Phase III of the LRMOSP, will evaluate which of the system configurations or derivative of the configurations identified within Phase II of the LRMOSP will be pursued.

Diversion rates are used to report solid waste disposal in the City and to address Assembly Bill (AB) 939 recycling goals, which requires each city in the state to divert at least 50 percent of its solid waste from landfill disposal through measures such as source reduction, recycling, and composting (see Section 4.11.3, below). According to CalRecycle's 2014 Jurisdiction Diversion/Disposal Rate Detail for San Diego, the City meets its target employment disposal rate of 15.8 pounds per person per day with an annual rate of 10.4 pounds per person per day (CalRecycle 2013). The project site's existing solid waste generation totals 2,813 pounds per day, or approximately 506.3 tons per year (i.e., 360 working days).[1]

4.11.2.5 Energy

California has a diverse portfolio of energy resources that produced 2,335.5 trillion British thermal units[2] (BTUs) in 2012.[3] Excluding offshore areas, the state ranked third in the nation in crude oil production in 2012, producing the equivalent of 1,143.8 trillion BTUs. The state also ranked fourth in the nation in conventional hydroelectric generation (23,755 megawatt hours [MWh]) and first in the nation for net electricity generation from renewable resources. Other energy sources in the state include natural gas (277.7 trillion BTUs), nuclear (193.9 trillion BTUs), and biofuels (24.3 trillion BTUs) (U.S. Energy Information Administration 2014).[4]

According to the U.S. Energy Information Administration (2014), California consumed approximately 7,612 trillion BTUs of energy in 2012. Per capita energy consumption (i.e., total energy consumption divided by the population) in California is among the lowest in the country, with 201 million BTU in 2012, which ranked 49th among all states. Natural gas accounted for the majority of energy consumption (32 percent), followed by motor gasoline (22 percent), distillate and jet fuel (14 percent), interstate electricity (11 percent), and nuclear and hydroelectric power (6 percent), with the remaining 15 percent coming from a variety of other sources (U.S. Energy Information Administration 2014). The transportation sector consumed the highest quantity of energy (38.5 percent), followed by the industrial and commercial sectors.

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[1] As described in Section 4.11.4.1, *Methodology*, solid waste generation from employees is estimated using an 8.93 pounds per employee per day generation ratio as recommended in the City of Los Angeles CEQA Thresholds Guide (2006). Because the City of San Diego does not have its own solid waste generation ratio defined in its CEQA Guidelines, the City of Los Angeles's CEQA Thresholds Guide was used because it represents solid waste generation factors for a major municipality.

[2] One BTU is the amount of energy required to heat 1 pound of water by 1°F at sea level. BTU is a standard unit of energy that is used in the United States and is on the English system of units (foot-pound-second system).

[3] Note that 2012 data are the most recent available at the U.S. Energy Information Administration website, at http://www.eia.gov/state/seds/sep_prod/pdf/P5.pdf. Accessed July 25, 2015.

[4] No coal production occurs in California.

Per capita energy consumption, in general, is declining due to improvements in energy efficiency and design. However, despite this reduction in per capita energy use, the state's total overall energy consumption (i.e., non-per capita energy consumption) is expected to increase over the next several decades due to growth in population, jobs, and vehicle travel. For example, electricity usage is anticipated to grow about 9 to 15 percent over the next decade (2015–2025) (CEC 2014).

San Diego County is served by San Diego Gas and Electric (SDG&E), which provides energy service to over 3.4 million customers (i.e., 1.4 million accounts) in the county and portions of southern Orange County. The utility has a diverse power production portfolio, composed of a variety of renewable and non-renewable sources. Energy production typically varies by season and by year. Regional electricity loads also tend to be higher in the summer because the higher summer temperatures drive increased demand for air-conditioning. In contrast, natural gas loads are higher in the winter because the colder temperatures drive increased demand for natural gas heating.

In 2014 (most recent year for which California Renewables Portfolio Standard [RPS] data are available) more than 36 percent of the electricity SDG&E supplied was from renewable sources, compared to less than 1 percent in 2002 (CPUC 2016). Over the last 3 years, SDG&E customers have reduced their electricity use by more than 911 million kilowatt hours (kWh) and their gas usage by more than 1.8 million therms (Sempra Energy Company 2014).

4.11.3 Applicable Laws and Regulations

4.11.3.1 Federal

Energy

Energy Policy Act of 2005

The Energy Policy Act of 2005 was intended to establish a comprehensive, long-term energy policy and is implemented by the U.S. Department of Energy. The Energy Policy Act addresses energy production in the U.S., including oil, gas, coal, and alternative forms of energy, and energy efficiency and tax incentives. Energy efficiency and tax incentive programs include credits for the construction of new energy-efficient homes, production or purchase of energy-efficient appliances, and loan guarantees for entities that develop or use innovative technologies that avoid the production of greenhouse gases (GHGs).

4.11.3.2 State

Water

California Water Code Section 10910 (Senate Bill 610)

California Water Code Section 10910 requires cities and counties to request that water purveyors prepare water supply assessments for certain projects (as defined in Water Code Section 10912) subject to CEQA, including projects that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling-unit residential project. The primary issue for the water supply assessment to determine is whether the projected supply for the next 20 years—based on normal, single dry, and multiple dry water years—would meet the demand projected for a proposed project plus the existing and planned future uses, including agricultural and manufacturing uses. Because the District is not a city or county government, California Water Code Section 10910 does not apply to the proposed project.

Solid Waste

California Integrated Waste Management Act

In response to reduced landfill capacity, the State of California passed the California Integrated Waste Management Act in 1989. This legislation (generally known by the name of its enacting bill, AB 939) requires cities and counties to reduce the amount of solid waste entering existing landfills through recycling, reuse, and waste prevention efforts. The purpose of AB 939 is to "reduce, recycle, and re-use solid waste generated in the state to the maximum extent feasible." AB 939 requires jurisdictions to utilize "integrated waste management"—a variety of waste management practices to safely and effectively handle the municipal solid waste stream with the least adverse impact on human health and the environment.

When first enacted, AB 939 required every city and county in the state to prepare a Source Reduction and Recycling Element in its Solid Waste Management Plan to identify how each jurisdiction planned to meet mandatory State waste diversion goals of 25 percent by the year 1995 and 50 percent by the year 2000. AB 939 also established the California Integrated Waste Management Board, the State agency designated to oversee, manage, and track California's solid waste generation each year. In order to further the goals of AB 939, statewide strategies to achieve a 75 percent reduction goal by 2020 were established with the adoption of AB 341 in May 2012, the main component of which implemented mandatory commercial recycling by certain businesses and public entities. See Section 4.11.3.3, below, for a discussion about how San Diego is implementing the requirements of AB 939.

Energy

Senate Bill 350 (2015)

Senate Bill (SB) 350 (De Leon, also known as the "Clean Energy and Pollution Reduction Act of 2015") was approved by the California legislature in September 2015 and signed by Governor Brown in October 2015. Its key provisions are to require the following by 2030: (1) an RPS of 50 percent and (2) a doubling of efficiency for existing buildings.

Assembly Bill 1493, Pavley Rules (2002, Amendments 2009, 2012)

Known as Pavley I, AB 1493 provided the nation's first GHG standards for automobiles. AB 1493 required the California Air Resources Board (ARB) to adopt vehicle standards that will lower GHG emissions from new light-duty autos to the maximum extent feasible beginning in 2009. Additional strengthening of the Pavley standards (referred to previously as *Pavley II* and now referred to as the *Advanced Clean Cars* [ACC] measure) was adopted for vehicle model years 2017–2025 in 2012. Together, the two standards are expected to increase average fuel economy to roughly 54.5 miles per gallon in 2025. The increase in fuel economy will help lower the demand for fossil fuels.

Assembly Bill 2076, Reducing Dependence on Petroleum

The California Energy Commission (CEC) and ARB are directed by AB 2076 (passed in 2000) to develop and adopt recommendations for reducing dependence on petroleum. A performance-based goal is to reduce petroleum demand to 15 percent less than 2003 demand by 2020.

Senate Bills 1078/107/X 1-2, Renewables Portfolio Standard and Renewable Energy Resources Act (2002, 2006, 2011)

SBs 1078 and 107, California's RPS, obligated investor-owned utilities, energy service providers, and Community Choice Aggregations to procure an additional 1 percent of retail sales per year from eligible renewable sources until 20 percent is reached by 2010. The California Public Utilities Commission and CEC are jointly responsible for implementing the program. SB X 1-2, called the California Renewable Energy Resources Act, obligates all California electricity providers to obtain at least 33 percent of their energy from renewable resources by 2020. As of 2013, SDG&E's renewable procurement was 23.6 percent. As noted above, SB 350 increased the RPS to 50 percent for 2030.

California Code of Regulations, Title 20 and Title 24, Part 6

New buildings constructed in California must comply with the standards contained in CCR Title 20, Energy Building Regulations, and Title 24, Energy Conservation Standards. Title 20 contains standards ranging from power plant procedures and siting to energy efficiency standards for appliances to ensuring reliable energy sources are provided and diversified through energy efficiency and renewable energy resources.

Energy Conservation Standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission in June 1977 and most recently revised in 2008 (24 CCR 6). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code (24 CCR). Part 11 establishes voluntary standards that became mandatory in the 2010 edition of the code, including planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.

California Energy Code

Title 24, Part 6 of the California Code of Regulations (24 CCR 6) describes California's energy efficiency standards for residential and nonresidential buildings. These standards were established in 1978 in response to a legislative mandate to reduce California's energy consumption and have been updated periodically to include new energy efficiency technologies and methods. The California Energy Code requires compliance with energy-efficient standards for all new construction, including new buildings, additions, alterations, and, in nonresidential buildings, repairs.

State CEQA Guidelines, Appendix F

Appendix F of the State CEQA Guidelines contains energy conservation measures that promote the efficient use of energy for projects. In order to ensure that energy impacts are considered in project decisions, CEQA requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. The analysis in this section considers the expected energy use of the proposed project, as well as measures that will help to reduce the project's energy consumption.

The goal outlined in Appendix F of the State CEQA Guidelines is to conserve energy through the wise and efficient use of energy. The means of achieving this goal include the following.

- Decreasing the overall per capita energy consumption;
- Decreasing reliance on natural gas and oil; and
- Increasing reliance on renewable energy sources.

ARB Regulation to Reduce Emissions from Diesel Auxiliary Engines on Ocean-Going Vessels While at Berth at a California Port

As discussed in Section 4.2, *Air Quality and Health Risk*, ARB has adopted at-berth regulations that require that auxiliary diesel engines on ocean-going vessels (OGVs) (while at berth for container, passenger cruise, and refrigerator cargo vessels) be shut down for specified percentages of a fleet's visits and also for the fleet's at-berth auxiliary engine power generation to be reduced by the same percentages. Vessels can either plug into the electrical grid (i.e., shore power, otherwise known as cold-ironing or alternative maritime power) or use an alternative emission control device. The law sets compliance percentages that phase in over time. By 2014, vessel operators were required to shut down their auxiliary engines at berth for 50 percent of the fleet's vessel visits and also reduce their onboard auxiliary engine power generation by 50 percent. The specified percentages will increase to 70 percent in 2017 and 80 percent in 2020. Vessel operators can also choose an emissions reduction equivalency alternative; the regulation requires a 10 percent reduction in OGV hoteling emissions starting in 2010, increasing to an 80 percent reduction requirement by 2020 (ARB 2007). Note that in developing the at-berth regulation, ARB weighed three main factors in evaluating a vessel category: the frequency with which a vessel visited a port; the time a vessel stays in port; and the power usage while docked. Based on these criteria, the At-Berth Regulation affects only container ships, passenger ships, and refrigerated-cargo ships at Los Angeles, Long Beach, Oakland, San Diego, San Francisco, and Hueneme (ARB 2013).

ARB Sustainable Freight Transport

As discussed in Section 4.2, *Air Quality*, ARB is working on various strategies to improve freight efficiency, transition to zero-emission technologies, and increase the competitiveness of California's freight system. The integrated action plan, called the California Sustainable Freight Action Plan, will also identify State policies, programs, and investments to achieve these targets. The plan will be informed by existing State agency strategies, including the *California Freight Mobility Plan*, *Sustainable Freight: Pathways to Zero and Near-Zero Emissions Discussion Document*, and *Integrated Energy Policy Report*, as well as broad stakeholder input. Specifically, the *Sustainable Freight: Pathways to Zero and Near-Zero Emissions Discussion Document* sets out ARB's vision of a clean freight system, together with the immediate and near-term steps that ARB will take to support use of zero and near-zero emission technology to improve air quality and help the State meet its GHG reduction targets. The added benefit will be a move toward clean, renewable energy and away from fossil fuels.

4.11.3.3 Local

All Utilities

Green Port Program and Green Port Policy (BPC Policy No. 736)

The Board of Port Commissioners adopted the Green Port Policy in 2007. This policy establishes guiding principles to achieve long-term environmental, societal, and economic benefits through resource conservation, waste reduction, and pollution prevention. The policy provides the overall framework for the Green Port Program. The Green Port Program is an umbrella program designed to achieve the Port's environmental sustainability goals in six key areas: water, energy, air, waste management, sustainable development, and sustainable business practices. It was established in early 2008 to achieve the objectives outlined in the Port's Green Port Policy. Policy objectives include the following.

- Minimize, to the extent practicable, environmental impacts directly attributable to operations on San Diego Bay and the tidelands.
- Strengthen the District's financial position by maximizing the long-term benefits of energy and resource conservation.
- Prevent pollution and improve personal, community, and environmental health.
- When possible, exceed applicable environmental laws, regulations, and other industry standards.
- Ensure a balance of environmental, social, and economic concerns are considered during planning, development, and operational decisions.
- Define and establish performance-driven environmental sustainability objectives, targets, and programs.
- Monitor key environmental indicators and consistently improve performance.
- Foster socially and environmentally responsible behavior through communications with employees, tenants, stakeholders, and the community.
- Collaborate with tenants to develop an integrated, measurable, Bay-wide environmental sustainability effort.

At present, the Green Port Program primarily focuses on things the Port can do to be more environmentally sustainable, such as using less water and being more energy efficient in its own operations. In the future, the Port will work with its tenants (businesses that lease bayfront land from the Port), local environmental groups, and others around San Diego Bay to identify ways they can support the Green Port Program.

Wastewater

City of San Diego Sewer Design Guide

When planning and designing wastewater facilities, the City Wastewater Branch follows the guidance and design policies of the *Sewer Design Guide* (2004), which summarizes and outlines relevant City policies, applicable codes, and engineering and operational practices and procedures necessary to establish a safe and efficient wastewater collection system. This document provides guidance for the City to design and maintain sewer facilities such as pump stations, gravity sewers, force mains, and associated wastewater appurtenances.

Water

City of San Diego's 2010 Urban Water Management Plan

The California Urban Water Management Planning Act requires that each urban water supplier providing water for municipal purposes to more than 3,000 customers, or supplying more than 3,000 acre-feet of water annually, shall prepare, update, and adopt a UWMP at least once every 5 years. This law applies to the City of San Diego, which is a member agency of the San Diego County Water Authority. The intent of a UWMP is to present information on water supply, water usage, recycled water, and water use efficiency programs in a respective water district's service area. A UWMP also serves as a resource for planners and policy makers over a 25-year timeframe. The City updates its demand forecasts and supply needs based on the most recent San Diego Association of Governments forecast approximately every 5 years. The most current supply and demand projections are contained in the 2010 UWMP, updated in June 2011. The 2010 UWMP states that all future water demands will have available water supplies for the predicted service areas during normal, dry-year, and multiple-dry water year scenarios. The City is currently in the process of updating its UWMP; as of April 2016, the draft UWMP was available for public review.

Solid Waste

San Diego County Integrated Waste Management Plan

The San Diego County Integrated Waste Management Plan was adopted in January 2005 to meet the requirements of the California Integrated Waste Management Act (see above). The plan includes goals and policies as well as a summary of integrated waste management issues in San Diego County. It summarizes waste management programs that local jurisdictions are using to meet the 50 percent waste reduction mandate. It also suggests steps needed to cooperatively implement and administer specific programs regionally or countywide. The plan consists of a Countywide Siting Element, a Countywide Summary Plan, and three elements from each jurisdiction:

- Source Reduction and Recycling Element, which analyzes the local waste stream, and presents diversion programs and funding;
- Household Hazardous Waste Element, which includes programs to encourage safe management of household toxic waste and provide framework for recycling, treatment, and proper disposal; and
- Non-Disposal Facility Element, which lists existing and planned facilities.

Long-Term Resource Management Options Strategic Plan

The LRMOSP is a planning process initiated by the City of San Diego in 2007 to develop and evaluate options for managing solid waste disposal needs in San Diego through the year 2045. Miramar Landfill, the City of San Diego's only landfill, is anticipated to close under current conditions and projections in 2021. The LRMOSP assesses the City's current disposal system capabilities, projects future solid waste management demands, and presents long-term options for consideration by City staff and elected officials.

The LRMOSP is a three-phase process. Phase I consisted of a system analysis, regional demand and capacity analysis, and identification and screening of options. Phase II provides a review of the City's existing diversion programs and disposal system, and an update of future disposal demands; evaluates options to meet disposal demand after diversion programs; identifies potential system configurations; evaluates potential City roles in future solid waste management systems; provides a financial analysis for maintaining the status quo or implementing various system configurations; identifies potential revenue opportunities; and provides implementation strategies for each of the five identified system configurations. Phase III will recommend a specific strategy and configuration system, including a detailed implementation plan.

City Council Policy 900-16

Although the project site is within the District's jurisdiction, solid waste is collected and processed by the City of San Diego franchised waste haulers. Consequently, City policies would apply to the collection and processing of solid waste generated by the proposed project.

Construction waste makes up approximately 35 percent of the waste entering the Miramar Landfill. A majority of this waste comprises recyclable or reusable materials. In 2004, San Diego's Mayor and City Council enacted Council Policy 900-16, Construction & Demolition (C&D) Material Recycling, expressing the City's commitment to recycling C&D waste as an integral part of the City's comprehensive solid waste management strategy. The policy outlines the following principles for private industry.

1. Businesses, organizations, and contractors are encouraged to facilitate as much waste diversion from landfills as possible through recycling, waste reduction, and reuse.
2. Demolition, construction, and renovation project proponents should evaluate the potential for maximizing waste diversion through recycling, waste reduction, and reuse. Diversion plans should be adequately communicated with all contractors and subcontractors.
3. Diversion goals should be 100 percent diversion of inert materials (concrete, rock, asphalt, dirt, etc.) and at least 50 percent diversion of all remaining materials by weight if mixed C&D recycling facilities are available, or as much as feasible through source separation of recyclable materials if a mixed C&D facility is not available.
4. Businesses, organizations, and contractors should purchase products made from recycled materials to the maximum extent possible.

City of San Diego Construction and Demolition Debris Deposit Ordinance

On July 1, 2008, the C&D Debris Deposit Ordinance took effect. The ordinance requires that the majority of construction, demolition, and remodeling projects requiring building, combination, and demolition permits pay a refundable C&D Debris Recycling Deposit and divert at least 50 percent of their debris by recycling, reusing, or donating usable materials. The ordinance is designed to keep C&D materials out of local landfills and ensure they get recycled.

4.11.4 Project Impact Analysis

4.11.4.1 Methodology

Impacts on utilities (wastewater, water, stormwater, solid waste, and energy) as a result of implementation of the proposed project were assessed utilizing varying methods dependent on the utility service, generally including a comparison of the project-generated demand against existing supply and storage capacities. Any need for physical improvements to the existing infrastructure would be considered part of the proposed project and is evaluated within this section and the other applicable resource sections. Existing employment at the project site is estimated at 315 employees per day. Long-term employment under the proposed TAMT plan buildout is anticipated to reach a total of 839 jobs on site, with 524 jobs being attributed to the TAMT plan. Jobs in the interim after implementation of the Demolition and Initial Rail Component are anticipated to reach a total of 407 jobs on site, with 92 jobs being attributed to the Demolition and Initial Rail Component. Specific methods for analysis of each utility service are provided below.

Wastewater

Impact assessments on wastewater systems or sewers generally include the comparison of the project-related wastewater flow generation to the existing and projected wastewater treatment capacity of the treatment plant, in this case the PLWTP. Project wastewater generation was calculated based on water use data at the project site and the existing number of employees. The factor that was generated by this equation was then applied to the anticipated number of future employees estimated for both the Demolition and Initial Rail Component and the overall TAMT plan buildout. The wastewater demand was calculated by using the water demand generated by the project and applying a 95 percent return factor to account for water use that would not be returned as sewer flow. Table 4.11-4 shows the existing and forecasted wastewater generation with the project.

Table 4.11-4. Existing and Forecasted Daily Wastewater Demand with the Proposed Project

	Existing	Demolition and Initial Rail Component Only	TAMT Plan Buildout Only[1]
Employees	15,048 gpd	4,395 gpd	25,032 gpd

1 Includes Demolition and Initial Rail Component, which is part of the TAMT plan buildout

Water

Impacts related to future water demand of the proposed project were estimated using the current water demand at the project site and deriving a water use per employee factor. In addition, water use from visiting vessels that draw water from the project for restocking purposes (i.e., potable use) is separated out from the employee use and extrapolated based on the anticipated future vessel calls. The resulting demand factor was 50 gpd of water per employee. Annual vessel use from July 2013–June 2014 was approximately 29,296 gallons per refrigerated cargo vessel (24 vessels used water) and 22,370 gallons per multi-purpose general cargo vessel (4 vessels used water). No dry bulk or liquid bulk-related vessels drew potable water while at berth in the baseline year. Table 4.11-5 lists the existing and forecasted daily water demand with the proposed project.

The projected water estimate for the TAMT plan buildout, which includes the Demolition and Initial Rail Component, is considered conservative because it does not account for additional water conservation restrictions that have been in effect since the baseline year and does not take into account the likelihood that water use restrictions may get more severe or conservation technologies will improve by the TAMT plan buildout year of 2035.

Table 4.11-5. Existing and Forecasted Daily Water Demand with the Proposed Project

	Existing	Demolition and Initial Rail Component Only	TAMT Plan Buildout Only[2]
Employees	15,840 gpd	4,626 gpd	26,349 gpd
Vessels at berth	2,202 gpd	261 gpd	7,657 gpd
Equivalent to # of Single Family Homes[1]	72	19	135

[1] In San Diego, one single-family home has a daily water demand of approximately 252 gpd (City of San Diego 2010, Table 3-3)

[2] Includes Demolition and Initial Rail Component, which is part of the TAMT plan buildout

Storm Drainage

The proposed project is required to comply with the Jurisdictional Runoff Management Plan (JRMP), Municipal Permit, and Industrial General Permit. The evaluation considers if the proposed project would propose or require improvements to ensure compliance. The environmental effects of any infrastructure upgrades are evaluated.

Solid Waste

Impacts associated with solid waste generally involve an estimation of construction- and operations-related solid waste generation compared to the capacity of the landfills serving the project area. Solid waste generation from employees was estimated using an 8.93 pounds per employee per day generation ratio as dictated by the City of Los Angeles CEQA Thresholds Guide (2006). The City of Los Angeles CEQA Thresholds Guide was deferred to because specific solid waste generation rates are not available from the City of San Diego. The solid waste generation methodology is considered conservative because it does not factor in several solid waste reduction measures that would be implemented to achieve the goals of the Port's Green Port Program. Table 4.11-6 provides the estimated and forecasted solid waste generation at the project site.

Table 4.11-6. Estimated and Forecasted Solid Waste Demand with the Proposed Project

	Existing (Estimated)	Demolition and Initial Rail Component Only	TAMT Plan Buildout Only[2]
Employees	315	92	524
Waste Generated[1] (pounds)	2,813	822	4,679

[1] Assumes 8.93 pounds per employee per day (City of Los Angeles CEQA Thresholds Guide 2006)
[2] Includes Demolition and Initial Rail Component, which is part of the TAMT plan buildout

Energy

The energy analysis for the project evaluates the following sources of energy consumption associated with existing conditions and the proposed project.

- Short-term construction—gasoline and diesel consumed by vehicles and off-road construction equipment.
- Operational power—electricity consumed by buildings, lighting, and shore power.
- Operational on-road vehicles—gasoline and diesel consumed by personal automobiles and heavy-duty trucks.
- Operational off-road equipment—diesel consumed by cargo handling equipment and transport refrigeration units
- Operational marine vessels—diesel consumed by marine vessels.
- Operational locomotives—diesel consumed by BNSF locomotives both on-port and regionally.

Energy use associated with fuel consumption during construction and operations (OGVs, trucks, locomotives, worker trips) was calculated by converting GHG emissions predicted by the GHG analysis using the rate of carbon dioxide emissions per gallon of combusted gasoline (8.78 kilograms/gallon) and diesel (10.21 kilograms/gallon) (Climate Registry 2015). The estimated fuel consumption was converted to BTUs, assuming an energy intensity of 113,927 BTUs per gallon of gasoline and 129,488 per gallon of diesel (Argonne 2015).

Operational electricity consumption under the Demolition and Initial Rail Component and full TAMT plan buildout (2035) was drawn from the modeling performed to support the GHG analysis (see Section 4.6, *Greenhouse Gas Emissions and Climate Change*). For ease of comparison, electricity consumption was converted to BTUs assuming an energy intensity of 3,416 BTU per kWh (Argonne 2015).

4.11.4.2 Thresholds of Significance

The following significance criteria are based on Appendix G of the State CEQA Guidelines and provide the basis for determining the significance of impacts associated with the demand placed on and expansions associated with utilities and service systems resulting from the implementation of the proposed project. The determination of whether a utilities and service systems impact would be significant is based on the professional judgment of the District as Lead Agency supported by the recommendations of qualified personnel at ICF and is based on the evidence in the administrative record.

Impacts are considered significant if the project would result in any of the following:

1. Wastewater: (a) Exceed wastewater treatment requirements of the Regional Water Quality Control Board (RWQCB); (b) Result in a determination by the San Diego PUD that there is inadequate wastewater treatment capacity to serve the project's projected demand in addition to the PUD's existing commitments; (c) Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
2. Water: (a) Result in insufficient water supplies from existing entitlements and resources, necessitating new or expanded entitlements; (b) Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
3. Stormwater: Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
4. Solid Waste: (a) Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs; (b) Not comply with federal, state, and local statutes and regulations related to solid waste.
5. Energy: (a) Result in the wasteful, inefficient, or unnecessary use of energy; (b) Require or result in the construction of new energy system infrastructure or the expansion of existing infrastructure, the construction of which could cause significant environmental effects.

The District does not currently have specific criteria for quantifying impacts related to solid waste generation and disposal. Solid waste is collected and processed by the City of San Diego franchised waste haulers; therefore, City policies would apply to the collection and processing of solid waste generated by the proposed project. Consequently, the following City criterion is used to evaluate solid waste impacts related to Threshold 4 above:

- Projects that include the construction, demolition, or renovation of 1,000,000 square feet or more of building space that would generate approximately 1,500 tons of waste or more per year are considered to have direct impacts on solid waste facilities.

The analysis of whether the proposed project would have a significant impact related to utilities and energy under Threshold 4b is provided in Section XVII of the Initial Study/Environmental Checklist (Appendix A), which determined that the project would comply with federal, state, and local statutes and regulations related to solid waste. The analysis and conclusions in Section XVII of the Initial Study/Environmental Checklist are incorporated here by reference in this section of the Draft EIR and are summarized in Chapter 6, *Additional Consequences of Project Implementation*. Therefore, only Thresholds 1a–c, 2 a–b, 3, 4a, and 5a–b are discussed in the impact analysis that follows.

4.11.4.3 Project Impacts and Mitigation Measures

Threshold 1: Implementation of the proposed project would
a) <u>Not</u> exceed wastewater treatment requirements of the RWQCB;
b) <u>Not</u> result in a determination by the San Diego PUD that there is inadequate wastewater treatment capacity to serve the project's projected demand in addition to the PUD's existing commitments;
c) <u>Not</u> require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Impact Discussion

Throughout implementation of the TAMT plan buildout, the proposed site would be fully connected to the sanitary sewer system, where wastewater would be processed and sanitized at the PLWTP. As discussed under Section 4.11.2.1, the PLWTP currently meets the wastewater discharge requirements of its NPDES Permit. Wastewater treatment requirements for the proposed TAMT plan would be based on all applicable State and federal regulations and policies including the NPDES Permit, and include limitations on effluent discharge and receiving water. In general, effluent discharge requirements include specifications for adequate disinfection treatment and limitations on radioactivity, pollutant concentrations, sediments, pH, temperature, and toxicity. The proposed project would increase throughput and add facilities to handle the increased throughput, but would not introduce new elements that would generate wastewater that would contain harmful levels of toxins. As such, implementation of the TAMT plan would result in less-than-significant impacts related to wastewater treatment requirements of the RWQCB. Furthermore, as detailed below, the proposed project would not exceed the treatment capacity of the PLWTP.

Finally, the project would not require or result in the construction of new wastewater treatment facilities or the expansion of existing facilities. Therefore, there is no potential of the project having an adverse impact on the environment from the construction of any such facility.

Construction

The project site is currently connected to the sanitary sewer system. During construction activities associated with implementation of the proposed TAMT plan buildout, including the Demolition and Initial Rail Component, existing restroom facilities may be relocated, temporarily closed, and/or unavailable for construction workers. Therefore, during construction, portable temporary restroom facilities would be brought to the site for construction workers. Wastewater generated at the portable restroom facilities would not be disposed of at the project site, but would be hauled away and the waste disposed at an appropriate facility in accordance with RWQCB regulations. No wastewater treatment facilities, infrastructure improvements, or other expansions would be required during project construction.

Operation

Implementation of the Demolition and Initial Rail Component would result in an additional 4,395 gpd of wastewater from the introduction of 92 permanent employees. Implementation of the

TAMT plan buildout would result in an additional 25,032 gpd of wastewater from adding up to 524 new employees. The PLWTP has a wastewater treatment capacity of 240,000,000 gpd, with approximately 65,000,000 gpd capacity remaining. The additional amount of 25,032 gallons per day associated with full TAMT plan buildout represents 0.04 percent of the PLWTP's remaining daily treatment capacity, which is an insignificant amount relative to the remaining treatment capacity of 65,000,000 gpd. Therefore, the proposed TAMT plan buildout's projected wastewater flow, which includes the Demolition and Initial Rail Component, would not exceed the capacity of the PLWTP. Because wastewater generated by the proposed project would be treated within the permitted capacity of the PLWTP, new wastewater treatment facilities or the expansion of existing treatment facilities would not be required due to the implementation of the proposed project. Therefore, impacts related to this criterion would be less than significant.

The proposed near-term improvements would require installation of a new sewer line within the project site to accommodate the proposed restroom facilities within the new modular office. However, these underground installations, the impacts of which are analyzed throughout this Draft EIR, would connect to the existing infrastructure within the project site, and no additional upgrades beyond the project site boundaries are anticipated. Therefore, with sufficient capacity to treat wastewater at the PLWTP and the appropriate upgrades to the conveyance infrastructure, implementation of the proposed project would not violate the wastewater treatment requirements of the San Diego RWQCB. No construction of new wastewater treatment facilities or expansion of existing treatment facilities that could cause significant environmental effects would be required.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component would not exceed wastewater treatment requirements of the RWQCB, nor result in a determination by the PUD that there is inadequate wastewater treatment capacity to serve the project's projected demand in addition to the PUD's existing commitments, and would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Impacts would be less than significant.

Full TAMT Plan Buildout

Buildout of the TAMT plan would not exceed wastewater treatment requirements of the RWQCB, nor result in a determination by the PUD that there is inadequate wastewater treatment capacity to serve the project's projected demand in addition to the PUD's existing commitments, and would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Impacts would be less than significant.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

No mitigation is required.

Level of Significance After Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

Impacts would be less than significant.

Threshold 2: Implementation of the proposed project would:
a) <u>Not</u> result in insufficient water supplies from existing entitlements and resources, resulting in the need for new or expanded entitlements;
b) <u>Not</u> require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Impact Discussion

The proposed project would not construct or require the construction of any new or expanded water treatment facilities. Therefore, the analysis below focuses on the project's water demand compared with the projected supply. Section 15155 of the State CEQA Guidelines defines a water-demand project as a project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling-unit residential project. According to the City's 2010 UWMP, one single-family home has a daily water demand of approximately 252 gallons per day (City of San Diego 2010, Table 3-3). This factor was used to determine the equivalent number of single-family homes that would be generated by both the Demolition and Initial Rail Component and full TAMT plan buildout, based on their respective water usage.

Construction

Water would be required during construction of the proposed TAMT plan buildout for activities such as dust suppression, including dust suppression for demolition, the mixing of concrete, light washing of equipment and tools consistent with water quality regulations, and for drinking water for construction workers. Water usage during construction would be temporary and it is possible that reclaimed water could be used for dust suppression, equipment washing, etc., which would reduce the quantity of potable water required. Construction water usage would result in a less-than-significant impact.

Operation

Implementation of Demolition and Initial Rail Component improvements would introduce up to 92 new employees, which would require an additional 4,626 gpd. Additionally, refrigerated container and multipurpose general cargo are anticipated to increase by 8 percent and 46 percent, respectively. Based on the existing vessel water demand of 703,114 gallons for refrigerated containers and 89,480 gallons for multipurpose general cargo, water demand under the Demolition and Initial Rail Component would increase to 756,019 gallons and 130,417 gallons for refrigerated container and multipurpose general cargo vessels, respectively.[5] In total, operation of the Demolition and Initial Rail Component would require approximately 4,887 gpd of water, which equates to approximately 19 single-family homes in the City of San Diego. As such, implementation of the Demolition and Initial Rail Component would not be considered a water demand project.

Implementation of the full TAMT plan buildout by 2035 would introduce up to 524 new employees, which would require an additional 26,349 gpd. Additionally, refrigerated container and multipurpose general cargo are anticipated to increase by 36 percent and 115 percent, respectively.[6] Based on the existing vessel water demand of 703,114 gallons for refrigerated containers and 89,480 gallons for multipurpose general cargo, the water demand under the full buildout of the TAMT plan would increase to 2,521,785 gallons and 1,027,331 gallons for refrigerated container and multipurpose general cargo vessels, respectively. In total, operation of full TAMT plan buildout would require approximately 34,006 gpd of water, which equates to approximately 135 single-family homes. As such, implementation of full TAMT plan buildout would not exceed the threshold of 500 single-family homes to be considered a water demand project.

The total estimated water demand resulting from operation of full TAMT plan buildout, including the Demolition and Initial Rail Component, would be accommodated by the City's anticipated demand of 298,860 AFY in year 2035. An additional increase of 37.57 AFY represents 0.0126 percent of the City's total water demand in year 2035, which is an insignificant amount of water compared to the available supply. Thus, the proposed project would not result in a substantial increase in water demand that would exceed the water supplies available from existing entitlements and resources.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component would not result in insufficient water supplies or require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Impacts would be less than significant.

Full TAMT Plan Buildout

Buildout of the TAMT plan would not result in insufficient water supplies or require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Impacts would be less than significant.

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[5] Note that dry bulk and liquid bulk vessels did not consume any water during the baseline year. Therefore, it is anticipated that they would not require water in the future years with the proposed project.

[6] See footnote #5.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

No mitigation is required.

Level of Significance After Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

Impacts would be less than significant.

Threshold #3: The proposed project would not result in or require the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effect.

Impact Discussion

The Demolition and Initial Rail Component would include a comprehensive update to the existing storm drainage under the proposed Multi-Purpose General Cargo node, where Transit Sheds #1 and #2 are currently located. In order to comply with the new Industrial General Permit, the proposed project would install a subsurface stormwater tank that would provide complete capture and detention of all runoff in this area of the project site. Stormwater would be treated and either released into the bay assuming testing indicated it was sufficiently cleansed or would be discharged to the sanitary sewer, in which case it would need to meet the RWQCB's requirements.

Excavation and haul trips associated with the stormwater tank are analyzed in applicable sections, including Section 4.2, *Air Quality and Health Risk*, 4.6, *Greenhouse Gas Emissions and Climate Change*, 4.7, *Hazards and Hazardous Materials*, 4.8, *Hydrology and Water Quality*, and 4.10, *Transportation, Circulation, and Parking*. Impacts associated with its installation and operation would be less than significant in isolation, though as a whole the TAMT plan buildout would have significant air quality, GHG, and transportation impacts.

Aside from the major upgrades associated with the Demolition and Initial Rail Component, no other stormwater improvements are planned at this time. As components become ready for construction, the proposed project would be required to comply with the current District JRMP, Municipal Permit, and Industrial General Permit, which may have specific improvements required that are not known at this time. Should any such improvements have the potential to result in a significant impact on the environment, CEQA compliance would be required and the subsequent document could be tiered from this programmatic Draft EIR. However, at this time and as mentioned, no major stormwater upgrades are known with the exception of the installation of the stormwater tank at the Multi-

Purpose General Cargo node. Impacts associated with its installation and operation would be less than significant.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component would not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Impacts would be less than significant.

Full TAMT Plan Buildout

Buildout of the TAMT plan would not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Impacts would be less than significant.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

No mitigation is required.

Level of Significance After Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

Impacts would be less than significant.

Threshold #4: Implementation of the proposed project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.

Impact Discussion

Construction

During construction of the Demolition and Initial Rail Component, the vast majority of construction and demolition debris would be recycled either on site or at local recycling facilities in accordance with the City's C&D Debris Deposit Ordinance. Material that would be recycled on site includes crushed concrete and existing aggregate, which could be considered for new aggregate base assuming hazardous materials testing indicates it is suitable for reuse. Approximately 47,100 cubic yards of soil would be exported off site (16,400 cubic yards from Transit Shed #1, 21,500 cubic yards from Transit Shed #2, and 9,136 cubic yards from the underground detention storage tank installation). The intent is to reuse the soil at the Chula Vista Bayfront Harbor District. In addition, approximately 17,300 cubic yards of remaining concrete, asphalt concrete, and miscellaneous demolition debris would be transported to the Chula Vista Bayfront or another project site within the Port of San Diego jurisdiction to use as fill material. If the concrete and asphalt are found unsuitable to use as fill material, they would be recycled at one of several construction recycling centers in San Diego, which are identified in the City's 2015 Certified C&D Recycling Facility Directory. Materials that are not recyclable would be taken to Miramar Landfill. Miramar has a permitted remaining capacity of 11,600,000 tons or 13,688,000,000 cubic yards.[7] Assuming at least 50 percent of construction debris would be recycled per the C&D Debris Deposit Ordinance, the project's contribution of construction debris would be 0.0000235 percent of the landfill's remaining capacity, which is small in comparison to the remaining capacity.

Construction of facilities identified in the proposed TAMT plan buildout would occur over a mid- to long-term period and has the potential to generate solid waste, including wood, cardboard, metals, plastics, concrete, and other building materials. The proposed TAMT plan describes infrastructure development that is market driven and customer dependent. Therefore, specific amounts of construction and demolition debris are unavailable. However, construction of the proposed TAMT plan would be required to comply with applicable waste diversion requirements, including the C&D Debris Deposit Ordinance and City Council Policy 900-16, which mandate that projects requiring building and demolition permits pay a refundable construction and demolition debris recycling deposit, and divert at least 50 percent of their debris by recycling, reusing, or donating usable materials. Compliance with these applicable regulations would ensure that solid waste generated by construction activities occurring under the proposed TAMT plan buildout would be less than significant.

Therefore, because a substantial majority of the construction and demolition materials would be recycled or reused on site or at the Chula Vista Bayfront site, instead of being disposed of in a local landfill, and the local landfill has available capacity for the remaining solid waste, impacts on existing landfills from construction materials would be less than significant.

Operation

Solid waste generation estimates for the Demolition and Initial Rail Component assume that the project site would operate at its maximum practical capacity during the near-term planning horizon (year 2020) and all potential improvements associated with this phase would be developed. Once operational, the Demolition and Initial Rail Component would introduce up to 92 new employees, which would result in a generation of approximately 295,762 pounds, or 148 tons, of solid waste per year.

Solid waste generation estimates for the TAMT plan buildout, which includes the Demolition and Initial Rail Component, assumes that the project site would operate at its maximum practical capacity during the long-term planning horizon and all potential structures that are identified in the TAMT plan would be developed. Long-term employment is anticipated to increase by a total of 524 new jobs, which would result in the generation of approximately 1,684,555 pounds, or 842 tons, of

[7] The conversion is based on a density of 1,180 cubic yards per ton (page 3-2 of Chapter 3 of the City of San Diego's LRMOSP [2008])

solid waste per year. Miramar Landfill is closest to the project site, and as shown in Table 4.11-3, has a permitted remaining capacity of 11,600,000 tons. The proposed TAMT plan buildout's annual contribution of solid waste would be 0.01 percent of the landfill's remaining capacity. This represents a conservative estimate because the Port would be required to comply with applicable waste diversion requirements. However, Miramar Landfill is currently projected to close in 2030. As discussed above in Section 4.11.2.4, as part of Phase III of the LRMOSP, the City would evaluate whether the capacity and useful life of Miramar Landfill would be extended by approximately 24 years. Extension of the landfill would further accommodate solid waste disposal needs from the proposed TAMT plan buildout. In the event that Miramar Landfill's capacity is not extended, solid waste generated at the project site would be routed to Sycamore Canyon Landfill, which has a remaining capacity of 39,608,998 cubic yards, or Otay Annex Landfill, which has a remaining capacity of 24,514,904 cubic yards. Both of these landfills have a greater amount of remaining capacity than Miramar Landfill and could sufficiently accommodate solid waste generated under the proposed plan.

Because solid waste is collected and processed by the City of San Diego franchised waste haulers, City policies would apply to the collection and processing of solid waste generated by the proposed project. Therefore, the District has elected to use the City's threshold that considers projects that would generate more than 1,500 tons of waste to have a significant effect on the available landfill capacity. For projects that meet this threshold, a waste management plan is required to reduce impacts to less-than-significant levels. As noted above, the project would generate approximately 148 tons per year during operation of the Demolition and Initial Rail Component and 842 tons during operation associated with the buildout of the TAMT plan. Both of these figures would not reach the threshold of 1,500 tons per year; therefore, impacts would be less than significant.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Implementation of the Demolition and Initial Rail Component would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs. Impacts would be less than significant.

Full TAMT Plan Buildout

Buildout of the TAMT plan would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs. Impacts would be less than significant.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

No mitigation is required.

Level of Significance After Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

Impacts would be less than significant.

Threshold 5: Implementation of the proposed project would:
a) Not result in the wasteful, inefficient, or unnecessary use of energy;
b) Not require or result in the construction of new energy system infrastructure or the expansion of existing infrastructure, the construction of which could cause significant environmental effects.

Impact Discussion

Wasteful, Inefficient, or Unnecessary Use of Energy

This impact analysis follows the guidance put forth by Appendix F of the State CEQA Guidelines. As noted in that appendix, the means of achieving the goal of conserving energy include the following.

1. Decreasing overall per capita energy consumption
2. Decreasing reliance on fossil fuels such as coal, natural gas, and oil
3. Increasing reliance on renewable energy sources

CEQA requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. Both construction and operation are addressed below.

Construction

Project construction would primarily consume diesel through operation of heavy-duty construction equipment, material deliveries, and debris hauling. As indicated in Table 4.11-7, energy use associated with project construction is estimated to result in the short-term consumption of 9,450 million BTUs. This represents a small demand on local and regional fuel supplies that would be easily accommodated. Moreover, this demand for fuel would have no noticeable effect on peak or baseline demands for energy. Therefore, construction of the project would not result in a wasteful, inefficient, and unnecessary usage of direct or indirect energy.

Table 4.11-7. Estimated Construction Energy Consumption

Source	Million BTUs/year[a] Net New with Project
Diesel	
Truck Travel	2,555
Equipment	6,705
Total Diesel	*9,259*
Gasoline	
Worker Commute	191
Total	**9,450**

Source: Appendix F

[a] Energy is provided in million BTU for comparison purposes.

Totals may not add due to rounding

BTUs can be converted to gallons of gasoline and diesel using the following formulas: 113,927 BTU/1 gallon of gasoline; 129,488 BTU/1 gallon of diesel

Operations

The primary components of the proposed project include increased storage capacity and associated throughput, which would increase the number of vessel calls, locomotive activity, cargo handling, and truck activity. In addition, new lighting, buildings, and shore power would be implemented. Thus, once operational, the project would require more energy than the existing condition. Table 4.11-8 summarizes estimated incremental increases in operational energy consumption for both the near-term Demolition and Initial Rail Component and the full TAMT plan buildout.

Table 4.11-8. Estimated Annual Operational Energy Consumption (Million BTUs/year[a])

Source	Existing	No Measures: Existing Plus Demolition and Initial Rail	No Measures: Existing Plus TAMT Plan Buildout	With Measures: Existing Plus Demolition and Initial Rail	With Measures: Existing Plus TAMT Plan Buildout
Electricity[b]					
Lighting	16,138	17,198	69,398	17,198	51,790
Total Electricity	*16,138*	*17,198*	*69,398*	*17,198*	*51,790*
Diesel					
Ocean-Going Vessels	103,216	193,526	633,555	145,954	486,608
Locomotives	5,636	6,417	53,524	6,417	53,524
Cargo Handling Equipment	15,264	16,545	89,942	16,473	89,858
Truck Travel	107,505	133,297	556,354	127,561	465,345
Total Diesel	*231,621*	*349,785*	*1,333,375*	*296,404*	*1,095,335*
Gasoline					
Worker Commute	15,974	19,988	30,075	16,731	16,276
Total Gasoline	*15,974*	*19,988*	*30,075*	*16,731*	*16,276*
Total	**263,733**	**386,971**	**1,432,848**	**330,333**	**1,163,401**
Net Reduction w/Measures				**-15%**	**-19%**

[a] Energy is provided in million BTU for comparison purposes. However, electricity use can be converted to kWh by multiplying 1 million BTUs by 293.1 kWh.
[b] Because MM-GHG-5 include the option to purchase GHG offsets in place of installing renewable energy on site, reductions associated with renewable energy are not included.
BTUs can be converted to gallons of gasoline and diesel using the following formulas: 113,927 BTU/1 gallon of gasoline; 129,488 BTU/1 gallon of diesel
Source: Appendix F

As shown in Table 4.11-8, with conservation and renewable energy State measures and the mitigation measures[8] provided to ensure consistency with the District's Climate Action Plan and related State GHG emission-reduction regulations, the proposed project would reduce the amount of fuel consumed and energy required for the net new demand by 15 percent for the Demolition and Initial Rail Component and by 19 percent for the full TAMT plan buildout. Note that this reduction does not include savings associated with statewide measures that would reduce the carbon intensity, and associated energy consumption, of transportation fuels and electricity. This reduction is consistent with strategies being implemented by the District and the State via the Energy Policy Act and AB 2076 to reduce energy consumption, and the project would be consistent with these strategies.

Table 4.11-9 provides a consistency analysis with questions raised in Appendix F of the State CEQA Guidelines.

[8] Mitigation measures that would reduce energy demand or provide additional sources of clean renewable energy include MM-GHG-1 through MM-GHG-8.

Table 4.11-9. Proposed Project Comparison to State CEQA Guidelines Appendix F

Project Impact Considerations from Appendix F	Project Applicability and Analysis
Energy requirements and energy use efficiencies by amount and fuel type for each stage of the project.	**Applies.** See Tables 4.11-7 and 4.11-8, both of which break down energy use by amount and fuel type. As indicated, the project would increase the use of electricity and the need for fossil fuels such as diesel fuel compared to existing conditions.
Effects on local and regional energy supplies and the need for additional capacity	**Applies.** There would be no adverse effects on local or regional energy supplies. Nearly all project-related energy demands would be accommodated by existing infrastructure without the need to expand capacity. However, the project, because it is a long-term plan, would include installation of conduit to provide additional electrification at the terminal, including up to five gantry cranes, additional shore power, and potentially future installation of charging areas for electric yard equipment.
Effects of the project on peak and base period demands for electricity and other forms of energy	**Applies.** Energy load would vary over this time, but current supply and infrastructure would be able to accommodate the additional demand without interruption or issues to existing customers and without the need for new infrastructure. The project does not propose demand that would affect peak and base-period demand.
Degree to which the project complies with existing energy standards	**Applies.** The proposed project would be fully compliant with all existing energy standards, including the Energy Policy Act and AB 2076. The project would include energy-efficient lighting within the project sites and would reduce the use of fossil fuels by increasing electricity use.
Effects of the project on energy resources	**Applies.** The proposed project would not result in an adverse impact on energy resources. There are sufficient energy resources to accommodate the additional project energy demand and the project would potentially include renewable energy.
Projected transportation energy use requirements and overall use of efficient transportation alternatives	**Applies.** The proposed project would increase the need for fossil fuels and electricity compared to baseline conditions because it would substantially increase throughput over time, but with its project features and mitigation, the project would decrease the need for fossil fuels compared to the unmitigated condition by reducing vessel speeds and incorporating the infrastructure for the future expansion of shore power and use of electric gantry cranes. Thus, the project would reduce the amount of fossil fuels needed compared to typical vessel transit and terminal operation.

In summary, the proposed project would assist with energy conservation goals because it would (1) decrease reliance on fossil fuels and (2) would increase reliance on renewable energy sources via the electrical grid, which includes RPS targets of 33 percent by 2020 and 50 percent by 2030. Impacts would be less than significant.

Construction or Expansion of Energy Infrastructure

The Demolition and Initial Rail Component would install conduit throughout the project site, primarily in the areas where the existing transit sheds are located. The aim is to upgrade and ready the project site for additional electrification, including adding shore power at Berths 10-5/10-6, which would service future general cargo and container vessels. The use of additional shore power would help offset running auxiliary engines while vessels are hoteling, resulting in few emissions and significantly less fossil fuel use. Moreover, the proposed project would add up to five electric gantry cranes, which would help reduce and potentially even eliminate the need for diesel cranes for many current operations. Finally, future charging stations for electric yard equipment would potentially be constructed and would have immediate access to electrical connections in the area. This would potentially lead to further reductions in fossil fuel use.

Excavation and haul trips associated with the trenching required to lay the conduit are analyzed in applicable sections, including Section 4.2, *Air Quality and Health Risk*, 4.6, *Greenhouse Gas Emissions and Climate Change*, and 4.10, *Transportation, Circulation, and Parking*. Impacts associated with its installation and operation would be less than significant in isolation, though as a whole the TAMT plan buildout would have significant air quality, GHG, and transportation impacts.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

Implementation of the Demolition and Initial Rail Component would not result in the wasteful, inefficient, or unnecessary use of energy, nor would it result in the construction of new energy system infrastructure or the expansion of existing infrastructure, the construction of which could cause significant environmental effects. Impacts would be less than significant.

Full TAMT Plan Buildout

Buildout of the TAMT plan would not result in the wasteful, inefficient, or unnecessary use of energy, nor would it result in the construction of new energy system infrastructure or the expansion of existing infrastructure, the construction of which could cause significant environmental effects. Impacts would be less than significant.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required, but MM-GHG-1 through MM-GHG-8 would further reduce the project's energy demand and reduce fossil fuel use.

Full TAMT Plan Buildout

No mitigation is required, but MM-GHG-1 through MM-GHG-8 would further reduce the project's energy demand and reduce fossil fuel use.

Level of Significance After Mitigation

Demolition and Initial Rail Component

Impacts would be less than significant.

Full TAMT Plan Buildout

Impacts would be less than significant.

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Chapter 5
Cumulative Impacts

5.1 Overview

This chapter considers the cumulative effects of past, present, and reasonably foreseeable future projects and the proposed project's contribution to these effects. Past projects are defined as those that were recently completed and are now operational. Present projects are defined as those that are under construction but not yet operational. Reasonably foreseeable future projects are defined as those for which a development application has been submitted or credible information is available to suggest that project development is a probable outcome at the time the NOP was issued (March–April 2015).

Demolition and Initial Rail Component

With incorporation of mitigation measures, the implementation of the Demolition and Initial Rail Component would result in less than cumulatively considerable contributions to impacts from past, present, and reasonably foreseeable future projects for the following resources.

- Greenhouse Gas Emissions (up to 2020)
- Utilities and Energy (solid waste generation)

However, even with mitigation incorporated, implementation of the Demolition and Initial Rail Component would result in cumulatively considerable and unavoidable contributions to impacts for the following resources.

- ~~Greenhouse Gas Emissions (post-2020)~~
- Transportation, Circulation, and Parking (construction~~ and operation~~)

The Demolition and Initial Rail Component's contribution to all other cumulative impacts would not be cumulatively considerable.

Full TAMT Plan Buildout

With incorporation of mitigation measures, the full buildout of the TAMT plan would result in less than cumulatively considerable contributions to impacts from past, present, and reasonably foreseeable future projects for the following resources.

- ~~Greenhouse Gas Emissions (up to 2020)~~
- Utilities and Energy (solid waste generation)
- Air Quality (operational VOC, NO_X, CO, SO_X, PM10, and PM2.5)

However, even with mitigation incorporated, implementation of the full buildout of the TAMT plan would result in cumulatively considerable and unavoidable contributions to impacts for the following resources.

- Air Quality (~~operational VOC, NO_X, CO, SO_X, PM10, and PM2.5 and~~ operational health risk)

- Greenhouse Gas Emissions (post-2020)
- Noise (operations)
- Transportation, Circulation, and Parking (construction and operation)

The full buildout of the TAMT plan's contribution to all other cumulative impacts would not be cumulatively considerable.

Table 5-1 summarizes the significant cumulative impacts and mitigation measures discussed in Section 5.3, *Cumulative Impact Analysis*, below.

Table 5-1. Summary of Significant Cumulative Impacts and Mitigation Measures

Summary of Potentially Significant Impact(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Air Quality and Health Risk			
Impact-C-AQ-1: Emissions in Excess of Cumulative Thresholds During Full TAMT Plan Buildout Construction	**MM-AQ-1:** Implement Best Management Practices During Construction of Future TAMT Plan Components	Cumulatively Considerable and Unavoidable	Mitigation would reduce project-related emissions, but emissions would remain above cumulative thresholds during construction.
Impact-C-AQ-2: Emissions in Excess of Cumulative Thresholds During Full TAMT Plan Buildout Operations	**MM-AQ-2:** Implement Diesel-Reduction Measures During Construction and Operations of Future TAMT Plan Components **MM-AQ-3:** Comply with San Diego Unified Port District Climate Action Plan Measures **MM-AQ-4:** Implement Best Available Control Technologies for Conveyor System and Bulk Discharge Unloader for Future Dry Bulk Operations associated with the TAMT Plan **MM-AQ-5:** Implement Vessel Speed Reduction Program Beyond Climate Action Plan Compliance for Future Operations Associated with the TAMT Plan **MM-AQ-6:** Electric Cargo Handling Equipment Upgrades **MM-AQ-7:** Annual Inventory Submittal and Periodic Technology Review	Less than Cumulatively Considerable ~~and Unavoidable~~	Mitigation would reduce project-related operational ~~emissions, but~~ VOC, NO_X, CO, SO_X, PM10, and PM2.5 emissions ~~would remain above~~to below thresholds.

Summary of Potentially Significant Impact(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
	MM-AQ-8: Implement ~~a Sustainable Leasing~~an Exhaust Emissions Reduction Program~~.~~ at the Tenth Avenue Marine Terminal **MM-AQ-9:** Use of At-Berth Capture and/or Control System to Reduce Vessel Emissions		
Impact-C-AQ-3: Cumulative Health Risk Emissions During Full TAMT Plan Buildout Operations	Implement **MM-AQ-1** through **MM-AQ-~~8~~9**	Cumulatively Considerable and Unavoidable	Mitigation would reduce operational health risk but risk would remain above thresholds.
Greenhouse Gas Emissions and Climate Change			
Impact-C-GHG-1: Demolition and Initial Rail Component GHG Emissions through 2020	**MM-GHG-1:** Implement Diesel-Reduction Measures During Construction and Operations of Future TAMT Plan Components **MM-GHG-2:** Comply with San Diego Unified Port District Climate Action Plan Measures **MM-GHG-3:** Electric Cargo Handling Equipment Upgrades	Less than Cumulatively Considerable	Demolition and Initial Rail Component GHG emissions achieve the CAP's reduction target for maritime projects (33%) and the project would comply with plans, policies, and regulatory programs outlined in the Scoping Plan and adopted by ARB or other California agencies for the purpose of reducing the emissions of GHGs.
Impact-C-GHG-2: Full TAMT Plan Buildout GHG Emissions Beyond 2020	Implement **MM-GHG-1 through MM-GHG-3** **MM-GHG-4:** Electric Cargo Handling Equipment Upgrades **MM-GHG-5:** Implement Vessel Speed Reduction Program Beyond Climate Action Plan Compliance for Future Operations Associated with the TAMT Plan **MM-GHG-6:** Implement a Renewable Energy Project or Purchase the Equivalent Greenhouse Gas Offsets from a California Air Resources Board Approved Registry or	Cumulatively Considerable and Unavoidable	Based on available science and the current regulatory scheme, reduction targets that would enable the full TAMT plan buildout to reduce its fair share of post-2020 GHG emission are unknown at this time. In addition, there is no statewide guidance document to indicate how to achieve the deep reductions set by EO S-03-05 and EO B-30-15.

Summary of Potentially Significant Impact(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
	a Locally Approved Equivalent Program for Future Operations Associated with the TAMT Plan **MM-GHG-7**: ~~Implement a Sustainable Leasing Program~~Annual Inventory Submittal and Periodic Technology Review ~~**MM-GHG-8**: Periodic Technology Review~~**MM-GHG-8:** Implement an Exhaust Emissions Reduction Program at the Tenth Avenue Marine Terminal **MM-GHG-9:** Use of At-Berth Capture and/or Control System to Reduce Vessel Emissions		
Noise and Vibration			
Impact-C-NOI-1: Cumulative Contribution to Cumulative Operational Noise	**MM-NOI-1**: Design and Implement Acoustical Treatments for Future Systems and Equipment to Reduce Operational Noise Levels at Nearby Noise-Sensitive Land Uses **MM-NOI-2**: Initiate and Maintain a Complaint and Response Tracking Program	Cumulatively Considerable and Unavoidable	Given the lack of project-level detail at this time, individual equipment and system design specifications are not currently available; therefore, it is not known what noise reduction measures may be feasible and appropriate and, as such, it is not possible at this time to quantify the extent to which impacts may be reduced.
Transportation, Circulation, and Parking			
Impact-C-TRA-1: Construction-Related Impact on an Intersection: Norman Scott Road/32nd Street/Wabash Boulevard from Demolition and Initial Rail Component Construction	**MM-TRA-1:** Transportation Demand Management (TDM) Plan During Demolition and Initial Rail Component Construction	Cumulatively Considerable and Unavoidable	Implementation of a TDM Plan during construction would reduce potential impacts at the Norman Scott Road/32nd Street/ Wabash Boulevard intersection; however, it cannot be determined with certainty that the cumulative impacts would be reduced to less than

Summary of Potentially Significant Impact(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
			cumulatively considerable.
~~**Impact-C-TRA-2:** Contribute to an Unacceptable Level of Operation at an Intersection: Norman Scott Road/32nd Street/Wabash Boulevard from Demolition and Initial Rail Component Operations~~	~~**MM-TRA-2:** Westbound Right-Turn Overlap Phase at Norman Scott Road/32nd Street/ Wabash Boulevard Intersection~~	~~Cumulatively Considerable and Unavoidable~~	~~Although mitigation is required that could reduce the impact to a less-than-significant level, timing and the implementation of the recommended improvements are uncertain because they are outside the jurisdiction of the District.~~
Impact-C-TRA-~~3~~2: Contribute to Temporary Traffic Congestion from Construction of Full TAMT Plan Buildout	**MM-TRA-~~3~~2:** Traffic Study and Transportation Demand Management (TDM) for Specific Construction Projects	Cumulatively Considerable and Unavoidable	Uncertainty of timing of future construction activities and the potential that projects may overlap; impacts may remain significant even after the adoption of all feasible mitigation measures.
Impact-C-TRA-~~4~~3: Contribute to an Unacceptable Level of Operation at a Roadway Segment: 28th Street between Boston Avenue and National Avenue from Full TAMT Plan Buildout	**MM-TRA-~~4~~3:** Widen the Segment of 28th Street between Boston Avenue and National Avenue to a Four-Lane Major Arterial Classification Consistent with the Barrio Logan Community Plan	Cumulatively Considerable and Unavoidable	Although mitigation is required that could reduce the impact to a less-than-significant level, timing and the implementation of the recommended improvements are uncertain because they are outside the jurisdiction of the District.
Impact-C-TRA-~~5~~4: Contribute to an Unacceptable Level of Operation at an Intersection: Norman Scott Road/32nd Street/Wabash Boulevard from Full TAMT Plan Buildout	~~Implement **MM-TRA-2**~~**MM-TRA-4:** Westbound Right-Turn Overlap Phase at Norman Scott Road/32nd Street/Wabash Boulevard Intersection	Cumulatively Considerable and Unavoidable	The District cannot ensure that the improvements would be made when needed because the timing and implementation of the necessary improvement is within the exclusive jurisdiction of Caltrans, and not the District.
Impact-C-TRA-~~6~~5: Contribute to an Unacceptable Level of Operation at Four Freeway Segments from Full TAMT Plan Buildout	**MM-C-TRA-1:** Construct Managed Lanes on I-5 and ~~I~~SR-15	Cumulatively Considerable and Unavoidable	Improvements to the affected freeway segments are within the exclusive jurisdiction of Caltrans, and SANDAG is responsible for their planning. The District cannot ensure that the improvements would be made when needed.

Summary of Potentially Significant Impact(s)	Summary of Mitigation Measure(s)	Level of Significance After Mitigation	Rationale for Finding After Mitigation
Utilities and Energy			
Impact-C-UTIL-1: The Demolition and Initial Rail Component would Generate Solid Waste that Would Exceed the City Threshold	**MM-C-UTIL-1**: Prepare a Waste Management Plan	Less than Cumulatively Considerable	MM-C-UTIL-1 would ensure the project limits its solid waste to a minimum and is fully compliant with all solid waste laws.
Impact-C-UTIL-2: The TAMT Plan would Generate Solid Waste that Would Exceed the City Threshold	Implement **MM-C-UTIL-1**	Less than Cumulatively Considerable	MM-C-UTIL-1 would ensure the project limits its solid waste to a minimum and is fully compliant with all solid waste laws.

5.2 Cumulative Methodology

According to Section 15130(b) of the State CEQA Guidelines, cumulative impact analysis may be conducted using one of two methods: the List Method, which includes "a list of past, present, and probable activities producing related or cumulative impacts"; or the Plan Method, which uses "a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact." The cumulative analysis that follows for near-term conditions for the majority of issue areas uses the List Method. However, because the Project Transportation Impact Analysis bases the 2035 future year conditions on what is forecasted in the San Diego Association of Governments (SANDAG) Series 12 traffic model, the cumulative analyses for long-term transportation impacts as well as long-term traffic-related impacts associated with air quality GHG emissions, and noise and vibration use the Plan Method.

5.2.1 Cumulative Project Lists

Based on information provided by the District and the City of San Diego, 18 cumulative projects were identified for this analysis. The projects listed in the proposed project's study area have had applications submitted or have been approved, are under construction, or have recently been completed. The cumulative projects identified in the study area are listed in Table 5-2 below (project numbering corresponds to numbers shown on Figure 5-1). Generally speaking, the geographic scope of the area affected by cumulative effects varies according to the issue area. The study area for each issue area is described further under the respective resource headings that follow.

In addition, the District has been discussing general growth projections with the U.S. Navy related to the Navy's Pacific Rebalance of Assets. Specifically, the U.S. Navy anticipates a 46 percent increase in both naval vessels (24 vessels) and active duty military and dependents (15,880) between Fiscal Years 2015–2020 reporting to Naval Base San Diego. Naval Base San Diego is approximately

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Source: NAIP Aerial (2014)

Figure 5-1
Cumulative Project Locations
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

1.6 miles south of the proposed project. This potential increase in personnel reporting to the base in the general project vicinity is being disclosed for consideration by the decision-makers and indicates that the cumulative impact **Impact-C-TRA-1**, identified below in Section 5.3.11, could be more severe than current traffic projections indicate. However, the exact level will not be known until SANDAG makes the Series 13 Traffic Model (which accounts for this growth) available for general use or detailed plans are made available.

Table 5-2. Cumulative Projects List

Project #	Name	Location	Description	Status
1	Shipyard Sediment Remediation Project	San Diego Bay between Sampson Street extension to the north and Schley Street to the south from the shoreline to the U.S. Pierhead Line to the west and a portion of British Aerospace Systems facility.	This project consists of dredging sediment adjacent to shipyards in the San Diego Bay; the dewatering, and possible solidification of the dredged material on-shore; potential treatment of decanted water; and the transport of the removed material to an appropriate landfill for disposal.	Underway
2	Mitsubishi Cement Corporation	Tenth Avenue Marine Terminal	This project involves improvements to Warehouse C at the TAMT to import up to 500,000 metric tons of cement per year. Based on the facility throughput, the annual number of customer truck trips is estimated to be 20,000, which averages less than 55 trucks per day of operation. Based on the maximum loading capabilities, the maximum number of trucks visiting the site will be 192 per day (average of eight trucks per hour). It is anticipated that construction of the proposed project would begin after the completion of the CEQA process, estimated at 12 months; the total construction period is estimated at approximately 9 months. Construction activities will occur Monday through Friday, in approximately five 8-hour shifts per day.	Proposed, not entitled
3	Pier 1 Drydock	Sampson and Dewey Streets	This project proposes the construction of a new drydock facility on the north side of Pier 1 at the British Aerospace Systems facility at 2205 and 400 East Belt Street. The project also involves removal of subsurface cooling tunnels and associated real estate agreements.	Project approval and certification of EIR anticipated in late 2015/early 2016. Construction anticipated in 2016.

Project #	Name	Location	Description	Status
4	Metro Center Project	West side of National Avenue between Commercial and 16th streets	This project consists of 160,600 square feet of regional shopping center uses, 163,300 square feet of retail space, and a 152,000-square-foot lumber store.	Not established yet
5	San Diego Continuing Education – Cesar Chavez Campus	Intersection of National Avenue and Cesar E. Chavez Parkway	The new Cesar E. Chavez Campus will be a 67,924-square-foot school facility with 22 classrooms to serve 720 students. The facility will include a multi-purpose room and administrative offices.	Completed
6	Jack in the Box	Northwest corner of 29th Street and National Avenue.	The project proposes to construct a 2,588-square-foot fast food restaurant with drive-thru on the existing vacant pad.	Approved by Planning Commission on February 9, 2015
7	Ballpark Village Parcel C	On the block bounded by Park Boulevard to the west and north, the trolley tracks/12th Avenue alignment to the east, and Imperial Avenue to the south.	The project site is currently occupied by a surface parking lot. The project proposes the removal of the existing surface parking lot and the development of 646 residential units (including 280 condominiums and 366 apartments) and 41,505 square feet of gross retail space.	In construction from 2015–2018
8	Ballpark Village Parcel D	Southwest corner of the 11th Avenue/Imperial Avenue intersection.	The project would include 1,800 hotel rooms with meeting space.	In construction from 2015–2018
9	Park and G	South side of G Street between Park Boulevard and 13th Street	The project proposes to construct 5,500 square feet of retail space and 208 mid-rise and ground level apartments. In addition, the building will include common areas for residents at the ground floor and a rooftop deck.	Completed, spring 2015
10	Pinnacle Towers	15th Street and Island Streets	This project will be located on the block bounded by 14th Street, 15th Street, Island Avenue, and J Street in downtown San Diego. The project includes 442 apartments, 451 condos, and 17,100 square feet of commercial space.	First tower is complete; second is under construction; anticipated completion –2019

Project #	Name	Location	Description	Status
11	San Diego Convention Center Phase III Expansion and Hilton Bayfront Hotel Expansion	Harbor Drive and 8th Avenue	This project consists of approximately 220,150 square feet of prime exhibit hall, approximately 101,500 square feet of meeting rooms, and approximately 78,470 square feet of ballroom space. The project would also add approximately 26,000 square feet of retail and a 5-acre rooftop park. The adjacent Hilton Bayfront Hotel would add an additional 500-room tower to the current configuration.	Uncertain
12	Sprint Cell Tower	224 Marina Park Way	The project proposes to construct, operate, and maintain an unmanned wireless telecommunications facility and equipment room located at Embarcadero Marina Park South.	Completed
13	Dole Fresh Fruit Refrigerated Rack Improvements Project	850 Water Street within the Tenth Avenue Marine Terminal, Port of San Diego	This project would involve installation of five new refrigerated racks with 94 new electrical outlets to support the refrigerated cargo of the Dole Fresh Fruit leasehold.	Construction anticipated to begin and end in late 2016
14	National City Marine Terminal Tank Farm Paving and Street Project	Quay Avenue, between 24th and 28th Streets	This project would grade and pave the former tank farm parcel at the National City Marine Terminal and proposes closure of Quay Avenue between Bay Marina Drive and 28th Street, 28th Street between Quay Avenue and the National City Marine Terminal, and 32nd Street west of Tidelands Avenue in order to provide additional space for marine terminal operations, which primarily include import, export, handling, and storage of motor vehicles.	Construction anticipated to begin and end in late 2016

Project #	Name	Location	Description	Status
15	San Diego Marriott Marquis & Marina Expansion	333 W. Harbor Drive	This project would demolish the existing 131,500-square-foot Marriott Hall at 333 W. Harbor Drive to accommodate a new facility containing 71,800 square feet of ballroom and meeting space. The proposed new Marriott Hall would increase the gross building area from 131,500 square feet to 169,400 square feet, and the total building footprint would increase from 60,900 square feet to 80,400 square feet.	In construction from early 2015 to late 2016
16	COMM22	Southeast corner of Commercial and 22nd Streets	A master-planned development located on a 4-acre parcel at the southeast corner of Commercial and 22nd Streets. 130 affordable family apartments and 70 senior affordable apartments have been developed. Additional development includes community-serving commercial and retail space, office space, market rate live/work lofts, and for-sale townhomes. The lofts will be housed in a rehabilitated warehouse building, with the remainder of the development consisting of new construction.	Affordable housing complete; remaining phases depend on market conditions
17	Pier 12 Replacement and Dredging at Naval Base San Diego	Pier 12 at Naval Base San Diego	Demolition of an inadequate existing pier (Pier 12), dredging in berthing and approach areas for a new pier, dredged material disposal at an approved ocean disposal site and permitted upland landfill, construction of a new pier and associated pier utilities, including upgrades to the electrical infrastructure at the adjacent Pier 13, and reuse of demolition concrete to create fish enhancement structures (artificial reefs). The purpose of the proposed action is to address the current and impending shortfall at Naval Base San Diego of pier infrastructure necessary to support modern Navy ship classes with deep draft-power intensive or power intensive requirements.	The project construction phase started in 2011 and be is expected to be completed in 2016

Project #	Name	Location	Description	Status
18	Pier 8 Replacement Naval Base San Diego	Pier 8 at Naval Base San Diego	Demolition of the inadequate existing Pier 8; construction of a replacement Pier 8; provision of associated pier utilities. The purpose of the proposed action is to address the current and impending shortfall at Naval Base San Diego of pier infrastructure necessary to support modern Navy ship classes with deep-draft and power-intensive requirements.	The construction period is estimated to be approximately 10 months and would take place between 2018 and 2019

5.3 Cumulative Impact Analysis

The discussion below evaluates the potential for the Demolition and Initial Rail Component and full TAMT plan buildout to contribute to a cumulative adverse impact on the environment. For each resource area, an introductory statement is made regarding what would amount to a significant cumulative impact in a particular resource area.

The analysis that follows considers two separate impacts: the significance of the cumulative effect from past, present, and reasonably foreseeable projects; and, in the event a cumulative effect is identified, the proposed project's incremental contribution to the identified cumulative effect. If it is determined that the proposed project's contribution to the cumulative effect is considerable, a cumulatively significant impact is identified, and mitigation is imposed.

A cumulative analysis was provided in the Initial Study/Environmental Checklist (Appendix A), which determined that the proposed project's contribution to cumulative impacts for several resource topics would not be cumulatively considerable. The checklist determined that implementation of full TAMT plan buildout, including the Demolition and Initial Rail Component, would not contribute to cumulative agriculture and forestry resources, land use and planning, or mineral resources impacts. Correspondingly, no additional cumulative analysis is warranted for these three resource topics. Furthermore, given that the TAMT plan buildout, including the Demolition and Initial Rail Component, would have no impact on agriculture and forestry resources or mineral resources, it was determined that the proposed project would have no potential to result in cumulative impacts related to these resource areas. Therefore, the cumulative analysis below addresses the incremental contribution of the Demolition and Initial Rail Component, followed by the TAMT plan buildout, to cumulative impacts associated with aesthetics and visual resources; air quality and health risk; biological resources; cultural resources; geologic hazards and soils; greenhouse gas emissions and climate change; hazards and hazardous materials; hydrology and water quality; noise and vibration; public services and recreation; transportation, circulation, and parking; and utilities and energy.

Because the timing of construction of the Demolition and Initial Rail Component is known, a project-level cumulative analysis was completed. This analysis also addresses what is reasonably foreseeable to occur under the TAMT plan buildout—namely throughput operating at its maximum practical capacity by 2035 with all potential components described in Chapter 3, *Project Description*, implemented. However, for construction, which is dependent on a schedule, phasing, detailed construction equipment, hours of operation, and, critically, any potential overlaps with other potential construction projects, the demolition of the two transit sheds (including a designed overlap for purposes of considering a worst-case impact analysis) is likely to be the construction activity resulting in the most impacts that occurs through the life of the TAMT plan, and therefore is also considered for the TAMT plan analysis.

5.3.1 Aesthetics and Visual Resources

A cumulatively considerable impact on aesthetics and visual resources would result if the TAMT plan buildout, including the Demolition and Initial Rail Component, would contribute to a significant cumulative impact related to a substantial and adverse change in the overall character of the area or cumulative view blockage that would affect the overall scenic quality of a resource, develop structures that substantially differ from the character of the vicinity, or result in the addition of a substantial cumulative amount of light and/or glare.

Geographic Scope

The geographic scope of analysis for cumulative aesthetics and visual resources impacts to which the proposed project may contribute includes the set of viewsheds described in Section 4.1.2.3, *Other Public Views to the Project Site*, and the resultant Key Observation Points from which views into the proposed project are available, whether as part of a single view or a series of related views (e.g., a scenic route), and the general downtown area. As such, the visual impact analysis area generally encompasses public viewing sites along the Coronado Bayfront and San Diego Bayfront, view corridors within the downtown San Diego community, and motorists' views from the San Diego–Coronado Bay Bridge.

Cumulative Effects

Past development projects have changed the land in and around the San Diego Bayfront and surrounding downtown area from a natural and undeveloped setting to an urban setting defined by high-rise structures with varying architectural finishes and ornamental landscaping seen today. In addition, past projects such as the San Diego Continuing Education – Cesar Chavez Campus (#5), Park and G Mixed Use (#9), Pinnacle Towers (#10), and COMM22 (#16), along with present and future projects, have and continue to include development at or near the waterfront that has cumulatively contributed to blocking some inland views. However, these cumulative projects have and would continue to be generally consistent with the visual character, size, scale, and bulk of the past development projects due to existing design and viewshed regulations provided in the District's Port Master Plan (PMP), Civic San Diego's design guidelines and Downtown Community Plan, and the City of San Diego's Land Development Code. Compliance with these applicable plans and regulations would also limit future glare and light impacts.

Therefore, although cumulative projects have continued to change the bayfront and downtown area to more urbanized settings, and reasonably foreseeable future projects would continue this path of development, changes from past, present, and reasonably foreseeable future projects have been and will continue to be designed in accordance with the existing viewshed regulations and design guidelines. Consequently, a cumulatively significant impact from past, present, and reasonably foreseeable future projects is not present.

Project Contribution

Demolition and Initial Rail Component

The Demolition and Initial Rail Component would result in less-than-significant impacts on aesthetics and visual resources. No features associated with the Demolition and Initial Rail Component, such as the demolition of the transit sheds or the installation of the modular office and restrooms, would be sufficient to create a cumulatively significant impact where one does not currently exist. Therefore, the Demolition and Initial Rail Component's small contribution to the less-than-significant cumulative impacts would not rise to a level of being cumulatively considerable.

Full TAMT Plan Buildout

The installation of up to five gantry cranes under the proposed full TAMT plan buildout would result in a significant adverse change to the existing visual character and quality of the project site from Key Observation Points surrounding the project site. However, because other past, present, and reasonably foreseeable future projects identified in Table 5-2 have not resulted in a significant aesthetic and visual resources impact and a cumulatively significant impact does not exist, full buildout of the TAMT plan would not result in an impact such that a cumulatively significant impact would be created, and the TAMT plan buildout's contribution to aesthetics and visual resources would be less than cumulatively considerable.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component's contribution to cumulative aesthetics and visual resources impacts would be less than cumulatively considerable.

Full TAMT Plan Buildout

The TAMT plan buildout's contribution to cumulative aesthetics and visual resources impacts would be less than cumulatively considerable.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

No mitigation is required.

Level of Significance After Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component's incremental contribution to cumulative aesthetics and visual resources impacts would not be cumulatively considerable and would be less than significant.

Full TAMT Plan Buildout

The full buildout of the TAMT plan's incremental contribution to cumulative aesthetics and visual resources impacts would not be cumulatively considerable and would be less than significant.

5.3.2 Air Quality and Health Risk

Potential cumulative air quality impacts would result when cumulative projects' emissions would combine to degrade air quality conditions below attainment levels for the San Diego Air Basin (SDAB), delay attainment of air quality standards, affect sensitive receptors, or subject surrounding areas to objectionable odors. Neither the District nor the San Diego Air Pollution Control District (SDAPCD) has established quantitative thresholds to determine whether a project's incremental contribution to emissions would be cumulatively considerable. Therefore, the County of San Diego screening level thresholds (SLTs) for cumulative air quality impacts, based on the SDAPCD Rule 20.1 for non-major stationary sources, are used for the analysis of impacts related to emissions for proposed project construction and operations evaluated within the context of past, present, and reasonably foreseeable future projects. The substantial evidence for using the County's and SDAPCD's threshold levels for this project is contained within Section 4.2.4.2 of this Draft EIR.

Geographic Scope

The SDAB, which covers 4,260 square miles of Southern California and is contiguous with San Diego County, represents the cumulative geographic scope for air quality impacts related to consistency with air quality plans and air quality threshold levels because plans and thresholds are established at the air basin-wide level to attain air quality standards that are assigned for the entire air basin, which in this case is the entire County. Cumulative impacts on sensitive receptors and odors are considered at a more localized level due to the more limited area of dispersion, and include the surrounding neighborhoods and areas close to the source of the emission and odor sources, respectively.

Cumulative Effects

Past projects within the SDAB have involved the emissions of ozone precursors (reactive organic gases [ROG] and nitrogen oxides [NO_X]), particulate matter 10 microns or less in diameter (PM10), and particulate matter 2.5 microns or less in diameter (PM2.5), resulting in nonattainment status for 8-hour ozone under National Ambient Air Quality Standards (NAAQS) and nonattainment status for ozone, PM10, and PM2.5 under California Ambient Air Quality Standards (CAAQS). Therefore, the emissions of concern within the SDAB are ozone precursors (ROG and NO_X), PM10, and PM2.5. The nonattainment status for the entire County is a consequence of past and present projects and is subject to continued nonattainment status by the cumulative contribution of reasonably foreseeable future projects within the County, such as those listed in Table 5-2. The reasonably foreseeable future projects that could contribute cumulative impacts on localized air quality conditions generally include construction related to the following nearby projects: Mitsubishi Cement (cumulative project #2), Ballpark Village Parcel C (cumulative project #7), Ballpark Village Parcel D (cumulative project #8), San Diego Convention Center Phase III Expansion and Hotel (cumulative project #11), Dole Fresh Fruit Refrigerated Rack Improvements Project (cumulative project #13), and San Diego Marriott Marquis & Marina Expansion (cumulative project #15). Construction of one or more of these projects, including cumulative project #2 and cumulative project #13 on TAMT, would potentially overlap with the construction of the proposed Demolition and Initial Rail Component, which is scheduled to be completed by the end of 2020. However, because past and present projects have resulted in the current nonattainment status for ozone (ROG and NO_X), PM10, and PM2.5, and reasonably foreseeable future projects would continue to contribute to the nonattainment status and potentially affect sensitive receptors, impacts related to the cumulative contribution of nonattainment pollutants (ozone precursors, PM10, and PM2.5) and the exposure of sensitive receptors to substantial pollutant concentrations would be considered cumulatively significant.

Project Contribution

Demolition and Initial Rail Component

As discussed under Threshold 2 of Section 4.2, *Air Quality and Health Risk*, and shown in Table 4.2-13 and Table 4.2-15, the Demolition and Initial Rail Component would contribute emissions to the cumulative condition. Equipment and vehicles used during construction (on-road motor vehicles and construction equipment) and operations (ocean-going vessels, trucks, locomotives, bulk processing, and terminal equipment) would result in a net increase in criteria pollutant emissions over existing conditions. During construction activities, criteria pollutant emissions would be below County of San Diego SLTs and SDAPCD trigger levels for all pollutants. Although the effects from past, present, and reasonably foreseeable future projects are considered cumulatively significant, the proposed project's incremental contribution from construction emissions would not result in a net increase in nonattainment pollutants, as it would not exceed the SDAB's cumulative impact thresholds during project construction. Consequently, the proposed project's incremental contribution to this cumulative air quality impact would not be cumulatively considerable.

Additionally, as discussed under Threshold 2 of Section 4.2 and shown in Table 4.2-15, operations-related emissions would be below threshold levels for all pollutants. As with the construction phase, the effects from past, present, and reasonably foreseeable future projects are considered cumulatively significant, and the proposed project's incremental contribution from operational emissions would not result in a net increase in nonattainment pollutants. Consequently, the proposed project's incremental contribution to cumulative air quality impacts during its operational stage would be less than cumulatively considerable.

As discussed under Threshold 1 of Section 4.2, the Demolition and Initial Rail Component does not propose any new land uses and is therefore deemed consistent with the most recent San Diego Regional Air Quality Strategy (RAQS) and State Implementation Plan (SIP), which are designed to bring the SDAB into attainment status for State and federal ozone standards. Therefore, although there is a cumulative impact from past, present, and reasonably foreseeable future projects resulting in nonattainment status for some criteria pollutants in the air basin, the proposed project's incremental contribution to cumulative air emissions would not conflict with progress toward attainment of the air quality standards described in the RAQS and SIP.

Full TAMT Plan Buildout

As discussed under Threshold 2 of Section 4.2, construction-related emissions associated with the full TAMT plan buildout would be significant due to the unknowns regarding construction activities before mitigation (**Impact-C-AQ-1**). With Mitigation Measure **MM-AQ-1**, construction-related impacts would remain significant and unavoidable.

As discussed under Threshold 2 of Section 4.2 and shown in Table 4.2-15, operations-related emissions associated with the full TAMT plan buildout would be above threshold levels for volatile organic compounds (VOC), NO_X, carbon monoxide (CO), sulfur oxides (SO_X), PM10, and PM2.5 before mitigation (**Impact-C-AQ-~~1~~2**). As shown in Table 4.2-16, with Mitigation Measures **MM-AQ-~~1~~2** through **MM-AQ-~~8~~9**, operations-related emissions would ~~remain above~~be below threshold levels for VOC, NO_X, CO, SO_X, PM10, and PM2.5. As ~~with the construction phase,~~such, although the effects from past, present, and reasonably foreseeable future projects are considered cumulatively significant,

~~and~~ the proposed project's incremental contribution from operational emissions would ~~result in a net increase in nonattainment pollutants, as VOC, NO_X, CO, SO_X, PM10, and PM2.5 would exceed the SDAB's cumulative impact thresholds after mitigation. Consequently, the proposed project's incremental contribution to cumulative air quality impacts during its operational stage would~~ be less than cumulatively considerable after mitigation is incorporated.

As discussed under Threshold 1 of Section 4.2, full TAMT plan buildout does not propose any new land uses and is therefore deemed consistent with the most recent RAQS and SIP, which are designed to bring the SDAB into attainment status for State and federal ozone standards. Therefore, although there is a cumulative impact from past, present, and reasonably foreseeable future projects resulting in nonattainment status for some criteria pollutants in the air basin, the proposed project's incremental contribution to cumulative air emissions would not conflict with progress toward attainment of the air quality standards described in the RAQS and SIP.

As discussed under Threshold 4 and shown in Table 4.2-18 of Section 4.2, operation of full TAMT plan buildout at maximum practicable throughput would result in long-term health risks at nearby sensitive receptor locations that exceed incremental risk thresholds primarily due to vessel hoteling, diesel-powered activity at the project site, and truck travel through the region~~.~~ (**Impact-C-AQ-3**). The effects from past, present, and reasonably foreseeable future projects are considered cumulatively significant~~, and the proposed project's incremental contribution from operational emissions would result in a net increase in toxic air contaminants that contribute to existing air quality conditions in the area after mitigation.~~. After mitigation, **Impact-C-AQ-3** would remain significant for residential receptors under the MPC scenario, but would be less than cumulatively considerable for the STC Alternative. Consequently, the proposed project's incremental contribution to cumulative health impacts during its operational stage under the MPC scenario would be cumulatively considerable after mitigation is incorporated.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component's incremental contribution to cumulative impacts related to air quality and health risk would not be cumulatively considerable.

Full TAMT Plan Buildout

The full TAMT plan buildout's incremental contribution to cumulative impacts related to air quality and health risk would be cumulatively considerable prior to mitigation. Potentially cumulatively considerable impact(s) include the following.

Impact-C-AQ-1: Emissions in Excess of Cumulative Thresholds During Construction. Emissions during construction of full TAMT plan buildout would exceed the cumulative San Diego County SLTs.

Impact-C-AQ-2: Emissions in Excess of Cumulative Thresholds During Operations. Emissions during operations would exceed the cumulative San Diego County SLTs for NO_X at maximum capacity primarily of the full TAMT plan buildout due to vessel, train, and truck activity and bulk processing.

Impact-C-AQ-3: Cumulative Health Risk Emissions During Operations. Emissions during operations would exceed the incremental risk thresholds associated with long-term operation up to maximum capacity primarily due to vessel, terminal equipment, and truck activity.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

For **Impact-C-AQ-1:**

Implement **MM-AQ-1: Implement Best Management Practices During Construction of Future TAMT Plan Components**, as described in Section 4.2, *Air Quality and Health Risk*.

For **Impact-C-AQ-2 and Impact-C-AQ-3:**

Implement **MM-AQ-2: Implement Diesel-Reduction Measures During Construction and Operations of Future TAMT Plan Components**, as described in Section 4.2, *Air Quality and Health Risk*.

Implement **MM-AQ-3**: **Comply with San Diego Unified Port District Climate Action Plan Measures**, as described in Section 4.2, *Air Quality and Health Risk*.

Implement **MM-AQ-4: Implement Best Available Control Technologies for Conveyor System and Bulk Discharge Unloader for Future Dry Bulk Operations associated with the TAMT Plan**, as described in Section 4.2, *Air Quality and Health Risk.*

Implement **MM-AQ-5: Implement Vessel Speed Reduction Program Beyond Climate Action Plan Compliance for Future Operations Associated with the TAMT Plan**, as described in Section 4.2, *Air Quality and Health Risk*.

Implement **MM-AQ-6: Electric Cargo Handling Equipment Upgrades**, as described in Section 4.2, *Air Quality and Health Risk.*

Implement **MM-AQ-7: Annual Inventory Submittal and Periodic Technology Review**, as described in Section 4.2, *Air Quality and Health Risk.*

Implement **MM-AQ-8: Implement ~~a Sustainable Leasing~~an Exhaust Emissions Reduction Program at the Tenth Avenue Marine Terminal**, as described in Section 4.2, *Air Quality and Health Risk.*

Implement **MM-AQ-9: Use of At-Berth Capture and/or Control System to Reduce Vessel Emissions**, as described in Section 4.2, *Air Quality and Health Risk.*

Level of Significance After Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component's incremental contribution to cumulative air quality impacts would be less than cumulatively considerable.

Full TAMT Plan Buildout

~~The~~After mitigation, the full TAMT plan buildout's incremental contribution to cumulative air quality impacts during construction (**Impact-C-AQ-1**~~),~~) would be cumulatively considerable, while operational criteria pollutants (**Impact-C-AQ-2**~~), and~~) would be reduced to a level considered less than cumulatively considerable. Finally, operational health risk (**Impact-C-AQ-3**) would be cumulatively considerable and would be considered significant~~ after implementation of Mitigation Measures **MM-AQ-1** through **MM-AQ-8** because project-related emissions could remain above cumulative thresholds during construction, and project-related VOC, NO_X, CO, SO_X, and PM10, and PM2.5 as well as risk levels would remain above cumulative thresholds during operations.~~.

5.3.3 Biological Resources

A significant cumulative impact on biological resources would result if the proposed project would contribute to cumulative impacts related to sensitive habitat or species, sensitive habitat/natural communities, federally protected wetlands, or wildlife movement corridors.

Geographic Scope

The geographic area for terrestrial biological resources to which the proposed project may contribute includes the southern downtown area, the Barrio Logan community, and the industrial waterfront. The geographic area for marine biological resources is limited to areas adjacent to, or otherwise linked to, the San Diego Bay. Present and reasonably foreseeable future projects that could contribute to cumulative impacts on terrestrial and aquatic biological resources include projects with grading, paving, landscaping, road, and building construction of undeveloped land or otherwise with habitat present. Marine organisms could be directly affected by construction and/or operation activities in or along the water, including dredging, filling, and wharf demolition/ construction. Untreated runoff from construction or operation activities on land into harbor waters via storm drains or sheet runoff also has the potential to contribute to cumulative impacts.

Cumulative Effects

The project site and surrounding areas within present-day downtown San Diego continue to see an increase in urban density and intensity from recent past and present projects, and future projects appear to continue the area's urbanization along this portion of the San Diego Bay. These projects include the Metro Center Project (cumulative project #4), the Ballpark Village Parcels C and D (cumulative projects #7 and #8, respectively), and the San Diego Convention Center Phase III Expansion and Hotel (cumulative project #11); however, the vast majority of sensitive habitat in downtown is no longer present. Therefore, there is little to no potential for cumulative projects to degrade terrestrial habitat downtown. Present and future projects would be required to be consistent with the City's Multiple Species Conservation Program Subarea Plan (if within the City's jurisdiction) and the Port of San Diego's and U.S. Navy's Integrated Natural Resources Management Plan, which identify important sensitive species and habitats in San Diego and in the San Diego Bay. Moreover, present and future projects also would comply with requirements of the Migratory Bird Treaty Act, which contains regulations for the take of any migratory birds, including feathers, nests, or eggs, and would require that present and future projects avoid and/or mitigate potential impacts on any nesting birds. Finally, only two of the cumulative projects listed in Table 5-2 propose any in-water work, such as dredging and fill.

Present and future projects do have the potential to further degrade water quality within the area and thus the existing marine habitat. However, specific regulations such as the Municipal Permit and the Industrial General Permit are in place that would minimize continued degradation of the existing marine habitat. For example, projects over 1 acre in size are required to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP), while projects smaller than 1 acre are still required to comply with the City of San Diego's water quality regulations and the District's Jurisdictional Runoff Management Plan (JRMP), depending on the jurisdiction within which the project would be located. The SWPPPs would identify short-term, project-specific best management practices (BMPs) for each project to minimize pollutants and/or sediments traveling via runoff, and long-term BMPs would be implemented based on the required Water Quality Control Plans using a combination of Site Design BMPs, Source Control BMPs, and Treatment Control BMPs. Implementation of both construction and operational BMPs would minimize harm to marine habitat from water runoff.

Therefore, cumulative biological resource impacts from past, present, and future projects are considered less than cumulatively significant in the cumulative study area.

Project Contribution

The TAMT plan buildout, including the Demolition and Initial Rail Component, would not affected federally protected wetlands or environmentally sensitive areas of the San Diego Bay due to the lack of any dredging activities and adherence to the District's stormwater requirements required by the JRMP. In addition, shading from additional vessels calling at Berths 10-1 and 10-2 would continue to be similar to existing conditions. The project site is also absent of any natural habitat and is not within the City of San Diego Multi-Habitat Planning Area or a wildlife corridor and would not contribute to any cumulative impacts. Impacts on biological resources within the geographic scope were determined to be less than cumulatively significant, and any potential project impacts described in the Initial Study/Environmental Checklist would be less than significant. The contribution to cumulative biological impacts associated with the buildout of the TAMT plan, including the Demolition and Initial Rail Component, would not be cumulatively considerable.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component's incremental contribution to cumulative biological resources impacts would not be cumulatively considerable.

Full TAMT Plan Buildout

The TAMT plan buildout's incremental contribution to cumulative biological resources impacts would not be cumulatively considerable.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

No mitigation is required.

Level of Significance After Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component's incremental contribution to cumulative biological resource impacts would not be cumulatively considerable and would be less than significant.

Full TAMT Plan Buildout

The full buildout of the TAMT plan's incremental contribution to cumulative biological resource impacts would not be cumulatively considerable and would be less than significant.

5.3.4 Cultural Resources

A significant cumulative impact on cultural resources would result if the proposed project would contribute to cumulative impacts on significant historical, archaeological, and/or paleontological resources.

Geographic Scope

The geographic scope of analysis for cumulative cultural resource impacts depends on the type of resource, but generally includes the downtown area. For instance, prehistoric and paleontological resources could be located within any natural landforms surrounding the project site, including areas within the harbor waters that may be submerged as a result of rising sea levels and/or dredging activities. Historical archaeological resources could be present within the surrounding artificial soils and fill. Impacts on buried archaeological and paleontological resources generally occur from ground-disturbing activities, such as grading and dredging, while impacts on the historic built environment typically result from modification, relocation, and demolition of existing structures.

Cumulative Effects

Past projects within the geographic scope have resulted in urban development as seen today. As discussed in Section 4.4, *Cultural Resources*, there are 53 historic period archaeological sites and one prehistoric archaeological site previously recorded within 0.5 mile of the project site. No archaeological resources have been recorded within the project site; however, the potential for subsurface resources in the southeastern section of the study area exists due to the presence of an extensive prehistoric resource located nearby. In addition, there are no historic resources in the study area.

Present and reasonably foreseeable future projects within the downtown area such as the Metro Center Project (#4), Ballpark Village Parcel C (#7), and Ballpark Village Parcel D (#8) could result in impacts on important archaeological artifacts during construction activities that could disturb soils where there is potential to encounter isolated archaeological deposits or other items of historic value. Therefore, cumulative development in the project area could result in the loss and/or degradation of cultural resources. However, the City of San Diego's CEQA Significance Criteria identify extensive archaeological monitoring based on the location of sensitive cultural resources. Therefore, because all cumulative projects in the City of San Diego, including within Civic San Diego's planning area, would implement detailed mitigation designed to avoid the destruction of any sensitive archaeological resources, the cumulative impacts of the projects listed in Table 5-2 on cultural resources would be less than significant.

Project Contribution

Demolition and Initial Rail Component

No archaeological resources or potential human remains have been identified or recorded in the areas that would be subject to ground-disturbing activities as part of the proposed Demolition and Initial Rail Component. Because these areas of the project site were previously within bay waters and filled during the first half of the twentieth century, it is highly unlikely that the fill material in these areas contains subsurface deposits of potentially significant archaeological resources. For these reasons, the Demolition and Initial Rail Component does not have the potential to result in an adverse change in the significance of an archaeological resource and would not result in a cumulatively considerable impact.

Full TAMT Plan Buildout

Current archaeological and historical investigations for the project did not identify any archaeological or historical resources or human remains within project boundaries. However, implementation of the TAMT plan would potentially result in impacts on archaeological resources and human remains due to an unknown boundary associated with a prehistoric cultural site to the east of the project, which could intrude into the eastern portion of the project site (see Figure 4.4-1). However, mitigation required at the project level (**MM-CUL-1**) would ensure the project's potential impact on this cultural site would be less than significant. When combined with the cumulative projects listed in Table 5-2, which would also implement cultural mitigation in areas of sensitivity pursuant to the City's CEQA Significance Criteria, cumulative impacts would be less than significant and the project's contribution to the cumulative impact would not be considerable.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component's incremental contribution to cumulative cultural impacts would not be cumulatively considerable.

Full TAMT Plan Buildout

Mitigation (**MM-CUL-1**) is required for project-specific impacts (**Impact-CUL-1**), as discussed in Section 4.4, *Cultural Resources*. With this mitigation, impacts on cultural resources would be avoided. Therefore, buildout of the TAMT plan would not result in a cumulatively considerable contribution to cumulative cultural resources impacts.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

No mitigation is required at the cumulative level. However, the proposed project would implement **MM-CUL-1** to reduce a project-specific impact (**Impact-CUL-1**) to a less-than-significant level.

Level of Significance After Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component's incremental contribution to cumulative cultural resources impacts would not be cumulatively considerable and would be less than significant.

Full TAMT Plan Buildout

Mitigation measure MM-CUL-1 is required for project-related impacts. However, once implemented it would also avoid a potential cumulatively considerable contribution by reducing the potential of damaging unknown buried archaeological resources that may be present in the eastern portion of the project area. In addition, should an unexpected discovery of human remains be made, California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.98 would apply. Therefore, cumulative impacts related to archaeological resources and human remains would be reduced to less than cumulatively significant.

5.3.5 Geologic Hazards and Soils

A significant cumulative impact on geology and soils would result if the proposed project would contribute to cumulative impacts related to exacerbating the potential of a fault rupture, strong seismic ground shaking, ground failure, unstable soils, lateral spreading, subsidence, liquefaction, or collapse. The proposed project would not result in impacts on landslides, soil erosion, soil expansion, or the use or installation of septic tanks or alternative wastewater disposal systems, and cumulative impacts related to these issues are not evaluated.

Geographic Scope

The geographic scope for cumulative impacts varies for geological resources and depends on the geologic issue. The geographic scope with respect to seismicity includes the San Diego Bayfront area and extends to adjacent areas, including downtown San Diego. An earthquake capable of creating substantial damage or injury at the project site could cause substantial damage or injury throughout this area of bay deposits and undocumented fill, which are prone to liquefaction and differential settlement. However, CEQA is concerned with a project's potential to exacerbate an existing condition and, with a few exceptions, does not consider the existing conditions' effects on the project to fall within its scope.

There is no potential for landslides, mudflows, and modification of topography or prominent geologic features because the project area is generally flat, not subject to slope instability, and contains no unique geologic features.

Cumulative Effects

Past dredging and filling throughout the Bayfront area has resulted in the increased potential for liquefaction following seismic ground shaking. Past, present, and reasonably foreseeable future projects identified in Table 5-2 have and will remove soils unsuitable for structure construction and replace them with soils that are suitable consistent with engineering regulations (i.e., City grading requirements) and best practices (i.e., recommendations from geotechnical investigations).

Past and present development has also increased the infrastructure, structural improvements, and number of people working and living on site in the San Diego Bayfront area and downtown San Diego community, which has placed commercial, industrial, and residential structures, their occupants, and associated infrastructure in areas that are susceptible to fault rupture and seismic ground shaking that could result in damage to people and property. All of the present and reasonably foreseeable future projects listed in Table 5-2 would also result in increased infrastructure, structures, and number of people working on site in the cumulative geographic scope. However, none of these projects would be capable of exacerbating the potential for a fault rupture, earthquake, or soil liquefaction given their limited impact on the underlying geologic foundations and the requirement to grade and compact soils to local and State standards designed to prevent soil hazards from occurring. Moreover, specific regulations that address worker safety that would be in place if a seismic event were to occur, helping to avoid any harm to people or extensive damage to structures. Consequently, the impacts of past, present, and reasonably foreseeable future projects as they relate to fault rupture, seismic ground shaking, and liquefaction would be less than cumulatively significant.

Project Contribution

The project would not exacerbate the potential for fault rupture, strong seismic ground shaking, or liquefaction, either during construction or operation. The project would include grading and excavation at the project site, but such activities would have no influence on the potential of a fault rupture or earthquake. In addition, the grading that would occur on site would be conducted in accordance with the City's local grading ordinance, subject to review and compliance with the California Building Code, and would generally lessen the potential of liquefaction occurring at the project site. Therefore, the proposed project's contribution to cumulative geologic impacts would not be cumulatively considerable.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component's incremental contribution to cumulative geologic impacts would not be cumulatively considerable.

Full TAMT Plan Buildout

The TAMT plan buildout's incremental contribution to cumulative geologic impacts would not be cumulatively considerable.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

No mitigation is required.

Level of Significance After Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component's incremental contribution to cumulative geologic impacts would not be cumulatively considerable and would be less than significant.

Full TAMT Plan Buildout

The full buildout of the TAMT plan's incremental contribution to cumulative geologic impacts would not be cumulatively considerable and would be less than significant.

5.3.6 Greenhouse Gas Emissions and Climate Change

There would be the potential for a cumulatively considerable greenhouse gas (GHG)-related impact if the project would be inconsistent with the District's Climate Action Plan (CAP) reduction targets; non-compliant with regulatory programs outlined in the Scoping Plan and adopted by the California Air Resources Board (ARB) or other California agencies to reduce GHG emissions in 2020; inconsistent with the post-2020 reduction targets set forth through California Executive Order (EO) S-03-05 and EO B-30-15; or non-compliant with plans, policies, and regulations promulgated to reduce GHG emissions post-2020. There would be the potential for a cumulatively considerable climate change impact if the project would expose property and persons to the physical effects of climate change including, but not limited to, flooding, public health risk, wildfire risk, or other impacts resulting from climate change. Finally, there would be the potential for a cumulatively considerable energy use–related impact if the project would contribute to a cumulatively significant impact related to the wasteful, inefficient, and unnecessary usage of direct or indirect energy.

Geographic Scope

Climate change is a cumulative issue, and the geographic scope for cumulative GHG emission impacts is global. Because climate change is the result of cumulative global emissions, no single project, when taken in isolation, can cause climate change—a single project's emissions are insufficient to change the radiative balance of the atmosphere. Because climate change is the result of GHG emissions, and GHGs are emitted by innumerable sources worldwide, cumulative GHG emissions that contribute to global climate change will have a significant cumulative impact on the natural environment as well as on human development and activity. The global increase in GHG emissions that has occurred and will occur in the future is the result of the actions and choices of individuals, businesses, local governments, states, and nations. Furthermore, although climate change impacts will likely vary by geography and intensity, the impacts that will result from cumulative global emissions will be felt worldwide. The GHG and climate change analysis within Section 4.6, *Greenhouse Gas Emissions and Climate Change*, is inherently a cumulative analysis. However, a summary of the discussion is provided below. Energy use is a regional issue and the geographic scope includes the service area of San Diego Gas and Electric (SDG&E).

Cumulative Effects

Past, present, and reasonably foreseeable future projects throughout the region, state, nation, and world, including but not limited to those projects listed in Table 5-2, have contributed to and will continue to contribute to the cumulative impacts of global climate change. As with the proposed project, all the projects in Table 5-2, along with all other projects within the county, state, and region, would be required to comply with all applicable federal, state, and local policies and regulations regarding GHG emission reductions (e.g., Assembly Bill [AB] 32, Pavley 1, Advanced Clean Cars, Renewables Portfolio Standard, Senate Bill [SB] 350) and adapting to climate change (e.g., sea level rise). However, changes from past, present, and reasonably foreseeable future projects have contributed to and will continue to contribute to a cumulatively significant impact in the project vicinity.

Project Contribution

Demolition and Initial Rail Component

As discussed under Threshold 1 of Section 4.6, *Greenhouse Gas Emissions and Climate Change*, the proposed Demolition and Initial Rail Component would contribute GHG emissions to the cumulative condition. Equipment and vehicles used during construction (on-road motor vehicles and construction equipment) and operations (ocean-going vessels, harbor craft, trucks, locomotives, terminal equipment, electricity and water consumption, refrigerants, and worker trips) would result in a net increase in GHG emissions over existing conditions. Before mitigation, the proposed project would impede implementation of the District's CAP and statewide plans and strategies, as the project would exceed the CAP's reduction goal for 2020 for maritime activities (**Impact-C-GHG-1**), as shown in Tables 4.6-6 and 4.6-7 in Section 4.6. With Mitigation Measures **MM-C-GHG-1** through

MM-C-GHG-3 and compliance with State reduction measures, the proposed project would be consistent with the CAP's reduction goal for 2020 and, therefore, would be consistent with the CAP and statewide plans and strategies.

Full TAMT Plan Buildout

As discussed under Threshold 1 of Section 4.6, *Greenhouse Gas Emissions and Climate Change*, the proposed full TAMT plan buildout would contribute GHG emissions to the cumulative condition. Equipment and vehicles used during construction (on-road motor vehicles and construction equipment) and operations (ocean-going vessels, harbor craft, trucks, locomotives, terminal equipment, electricity and water consumption, refrigerants, and worker trips) would result in a net increase in GHG emissions over existing conditions. Before mitigation, the proposed project would not fully demonstrate substantial progress along a downward trajectory beyond 2020 toward 2030 and 2050 reduction targets, given the uncertainty of statewide plans to achieve these targets and the amount of GHG emissions the project needs to achieve to contribute its fair share of reduction (**Impact-C-GHG-2**), as shown in Table 4.6-11 in Section 4.6. With Mitigation Measures **MM-C-GHG-1** through **MM-C-GHG-~~8~~9** and further implementation of State measures by 2035, project GHG emissions demonstrate a downward trajectory and would be generally consistent with known statewide strategies to date, but the State has no framework (e.g., post-2020 Scoping Plan) to achieve these targets. Therefore, while project emissions are generally in line with statewide targets and would help facilitate, rather than impede, local and statewide efforts to achieve the post-2020 targets in EO S-3-05 and EO B-30-15, the uncertainty of statewide target implementation at the local level, and the level of effort that will be required at the Port level to achieve these targets, is unknown at this time. Therefore, after mitigation, the proposed project would result in cumulatively considerable impacts related to GHG emissions because it may still impede the achievement of long-term State reduction targets.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component's incremental contribution to cumulative impacts related to GHGs would be cumulatively considerable prior to mitigation. Potentially cumulatively considerable impact(s) include the following.

Impact-C-GHG-1: Demolition and Initial Rail Component GHG Emissions through 2020. Demolition and Initial Rail Component GHG emissions during combined project construction and operational activities, before mitigation, would not achieve the CAP's reduction target of 33 percent below unmitigated levels in 2020 and would only partially comply with plans, policies, and regulatory programs outlined in the Scoping Plan and adopted by ARB or other California agencies for the purpose of reducing the emissions of GHGs.

Full TAMT Plan Buildout

The full TAMT plan buildout's incremental contribution to cumulative impacts related to GHGs would be cumulatively considerable prior to mitigation. Potentially cumulatively considerable impact(s) include the following.

Impact-C-GHG-2: Full TAMT Plan Buildout GHG Emissions Beyond 2020. Although full TAMT plan buildout emissions would be on a downward trajectory in the post-2020 period, the proposed project's reduction in GHG emissions during combined project construction and operational activities, before mitigation, may not contribute sufficiently to post-2020 progress toward statewide 2030 and 2050 reduction targets and would be in non-compliance with plans, policies, and regulatory programs adopted by ARB or other California agencies for post-2020 for the purpose of reducing the emissions of GHGs.

Mitigation Measures

Demolition and Initial Rail Component

For **Impact-C-GHG-1:**

Implement **MM-GHG-1: Implement Diesel-Reduction Measures During Construction and Operations of Future TAMT Plan Components**, as described in Section 4.6, *Greenhouse Gas Emissions and Climate Change*.

Implement **MM-GHG-2: Comply with San Diego Unified Port District Climate Action Plan Measures**, as described in Section 4.6, *Greenhouse Gas Emissions and Climate Change*.

Implement **MM-GHG-3: Electric Cargo Handling Equipment Upgrades**, as described in Section 4.6, *Greenhouse Gas Emissions and Climate Change*.

Full TAMT Plan Buildout

For **Impact-C-GHG-2:**

Implement **MM-GHG-1: Implement Diesel-Reduction Measures During Construction and Operations of Future TAMT Plan Components**, as described in Section 4.6, *Greenhouse Gas Emissions and Climate Change*.

Implement **MM-GHG-2: Comply with San Diego Unified Port District Climate Action Plan Measures**, as described in Section 4.6, *Greenhouse Gas Emissions and Climate Change*.

Implement **MM-GHG-4: Electric Cargo Handling Equipment Upgrades**, as described in Section 4.6, *Greenhouse Gas Emissions and Climate Change*.

Implement **MM-GHG-5: Implement Vessel Speed Reduction Program Beyond Climate Action Plan Compliance for Future Operations Associated with the TAMT Plan**, as described in Section 4.6, *Greenhouse Gas Emissions and Climate Change*.

Implement **MM-GHG-6: Implement a Renewable Energy Project or Purchase the Equivalent Greenhouse Gas Offsets from a California Air Resources Board Approved Registry or a Locally Approved Equivalent Program for Future Operations Associated with the TAMT Plan**, as described in Section 4.6, *Greenhouse Gas Emissions and Climate Change*.

Implement **MM-GHG-7: Annual Inventory Submittal and Periodic Technology Review at the Tenth Avenue Marine Terminal**, as described in Section 4.6, *Greenhouse Gas Emissions and Climate Change*.

Implement **MM-GHG-8: Implement ~~a Sustainable Leasing~~an Exhaust Emissions Reduction Program**, as described in Section 4.6, *Greenhouse Gas Emissions and Climate Change*.

Implement **MM-GHG-9: Use of At-Berth Capture and/or Control System to Reduce Vessel Emissions**, as described in Section 4.6, *Greenhouse Gas Emissions and Climate Change.*

Level of Significance after Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component's incremental contribution to cumulative impacts related to consistency with the CAP, its reduction targets, and statewide reduction plans for 2020 (**Impact-C-GHG-1**) would not be cumulatively considerable after implementation of Mitigation Measures **MM-GHG-1** through **MM-GHG-3** because project GHG emissions would achieve the CAP's reduction target for maritime projects (33 percent) and the project would comply with plans, policies, and regulatory programs outlined in the Scoping Plan and adopted by ARB or other California agencies for the purpose of reducing the emissions of GHGs.

The project's contribution to cumulative climate change (including sea level rise) impacts would not be cumulatively considerable.

Full TAMT Plan Buildout

The full TAMT plan buildout's incremental contribution to cumulative impacts related to GHG emissions and reduction targets and plans for post-2020 (**Impact-C-GHG-2**) would be cumulatively considerable after implementation of Mitigation Measures **MM-GHG-1** through **MM-GHG-~~8~~9** because there are no known reduction targets that apply to the project based on its location and development type. In addition, there is no statewide guidance document to indicate how to achieve the deep reductions set by EO S-03-05 and EO B-30-15.

The project's contribution to cumulative climate change (including sea level rise) impacts would not be cumulatively considerable.

5.3.7 Hazards and Hazardous Materials

A significant cumulative impact on hazards and hazardous materials would result if the proposed project were to contribute to impacts related to the routine transport, use, or disposal of hazardous materials; the release or emission of hazardous materials; safety hazards related to airport operations; or interference with an adopted emergency response plan when evaluated within the context of past, present, and reasonably foreseeable future projects.

Geographic Scope

The hazards and hazardous materials geographic scope consists of the areas that could be affected by proposed project activities as well as areas affected by other projects whose activities could directly or indirectly affect the proposed activities on the project site. In general, projects occurring within 0.25 mile of the project site were considered in this analysis due to the localized nature of potential impacts associated with the release of hazardous materials into the environment.

Cumulative Effects

There are several areas within 0.25 mile of the project site that involve the storage and/or use of hazardous materials. As discussed in Section 4.7, *Hazards and Hazardous Materials*, record searches using the California Department of Toxic Substances Control (DTSC) EnviroStor database and State Water Resources Control Board (SWRCB) Geotracker database were conducted. There are 31 recorded contamination sites (28 in Geotracker and three in EnviroStor) within 0.25 mile of the project site. Five sites are listed as open cases that are undergoing assessments, and three sites are currently being evaluated; the rest are reported as closed. Simply the presence of these hazardous materials within the cumulative study area is necessary but not sufficient to determine that a cumulatively significant impact is present. Evidence must suggest that the contamination has resulted in a cumulative condition to which other projects are contributing. This evidence was not encountered during the database research. Therefore, because the sites are either under assessment or being evaluated, impacts from past cumulative projects are not cumulatively significant.

Present and reasonably foreseeable future projects within the cumulative study area could disrupt or result in the exposure of hazardous materials during construction activities; however, the risk for exposure to hazardous materials would be analyzed during project development. For projects having the potential to disrupt or result in the exposure of hazardous materials, mitigation measures during construction would be included to reduce potential impacts to a level below significance. These projects, like the proposed project, are required to comply with all federal, State, and local policies regarding hazards and hazardous materials, including the Resource Conservation and Recovery Act of 1976 (RCRA), the Department of Transportation Hazardous Materials Regulations, and the local Certified Unified Program Agency (CUPA) regulations, which would reduce potential releases of hazardous materials into the environment. Because the eight cumulative projects with potential to expose hazardous materials during construction within 0.25 mile of the project site—and present and reasonably foreseeable future projects—would be subject to federal, State, and local hazardous materials laws, cumulative effects related to hazardous materials from past, present, and reasonably foreseeable future projects would be less than cumulatively significant.

Project Contribution

The TAMT plan buildout, including the Demolition and Initial Rail Component, would not have a cumulatively considerable contribution to cumulative hazards and hazardous materials impacts. Construction activities would only occur at the project site. There is one open contamination site located on the project site, the Water Street Site, which is an open site assessment for program diesel cleanup. There is a potential to encounter hazardous materials while excavation is occurring on the project site. In addition, there is the known presence of asbestos-containing materials and lead-based paint in some of existing sheds and warehouses on the project. However, if any previously identified or unidentified contamination is discovered, additional site assessment and cleanup would be required, pursuant to the existing laws summarized under Section 4.7.3, *Applicable Laws and Regulations*, of Section 4.7, *Hazards and Hazardous Materials*. In addition, the District and tenant would be required to comply with the *10th Avenue Marine Terminal, San Diego, CA, Soil Management* Plan prior to grading and construction as Mitigation Measure **MM-HAZ-**1. In addition, the contractor would be required to implement engineering controls and BMPs during construction as Mitigation Measure **MM-HAZ-2.**

Typical construction-related hazardous materials would be used during construction of the Demolition and Initial Rail Component and the overall TAMT plan buildout, including fuel, solvents, paints, oils, and grease. It is possible that any of these substances could be released during construction activities. However, compliance with federal, State, and local regulations described under Section 4.7.3, in combination with construction BMPs, would minimize any impacts. Consequently, TAMT plan buildout is not expected to create a significant hazard to the public or the environment through upset and accident conditions because no new acutely hazardous materials would be introduced at the project site.

Although implementation of the TAMT plan may result in minimal increased amounts of common types of hazardous materials typical for the project site (such as fuel, lubricants and grease, solvents, and cleaners), normal routine use of these products would not result in a significant hazard to students, residents, or workers in the vicinity of the project site. Such transport and use would comply with applicable regulations, such as the RCRA, Department of Transportation Hazardous Materials Regulations, and local CUPA regulations. Therefore, compliance with applicable laws and regulations would ensure that implementation and operation would not result in hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste. This is currently the requirement for onsite use of common types of hazardous materials typical for the project site, which would continue with the proposed project.

Hazardous materials impacts from project construction or operational activities would be minimized through existing regulations, limited use of hazardous materials, and incorporation of BMPs and oversight by the local CUPA. Therefore, when combined with past, present, and reasonably foreseeable future projects' hazardous material impacts, the TAMT plan's small contribution, which includes the Demolition and Initial Rail Component, would be less than significant.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component's incremental contribution to cumulative impacts related to hazards and hazardous materials would not be cumulatively considerable.

Full TAMT Plan Buildout

The full buildout of the TAMT plan's incremental contribution to cumulative impacts related to hazards and hazardous materials would not be cumulatively considerable.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

No mitigation is required.

Level of Significance After Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component's incremental contribution to cumulative hazards and hazardous materials impacts would not be cumulatively considerable and would be less than significant.

Full TAMT Plan Buildout

The full buildout of the TAMT plan's incremental contribution to cumulative hazards and hazardous materials impacts would not be cumulatively considerable and would be less than significant.

5.3.8 Hydrology and Water Quality

A significant cumulative impact on hydrology and water quality would result if the proposed project were to contribute to impacts related to water quality standard violations, depletion of groundwater supplies or interference with recharge, increased runoff in excess of available capacity, and alterations to drainage patterns leading to erosion or flooding, evaluated within the context of past, present, and reasonably foreseeable future projects. Impacts are not expected to result related to groundwater recharge, exceedance of storm drainage capacity, the placement of housing within a 100-year flood hazard area, exposure of people or structures to flooding risk from levee or dam failure, or inundations by seiche or tsunami, or mudflow, and, as such, cumulative impacts related to these issues are not evaluated.

Geographic Scope

The geographic scope of analysis for cumulative impacts on hydrology and water quality includes the Pueblo San Diego watershed, which includes all of the projects listed in Table 5-2.

Cumulative Effects

Past projects within the Pueblo San Diego watershed have contributed pollutants to the San Diego Bay, as evidenced by the Clean Water Act Section 303(d) List of Water Quality Limited Segments Requiring Total Maximum Daily Loads. Current and future projects would be subject to State and local regulatory standards that must be achieved during construction and operation to reduce or avoid polluted runoff to the maximum extent practicable. These current and reasonably foreseeable future projects also could contribute pollutants such as oil and grease, suspended solids, metals, gasoline, pesticides, and pathogens into the stormwater conveyance system and receiving waters. Some of the projects listed in Table 5-2 would involve at least 1 acre of grading, such as the Metro Center Project (cumulative project #4), the Ballpark Village Parcels C and D (cumulative projects #7 and #8, respectively), and the San Diego Convention Center Phase III Expansion and Hilton Bayfront Hotel (cumulative project #11). These projects would be required to comply with the National Pollution Discharge Elimination System Construction General Permit, which requires preparation of a SWPPP by a Qualified SWPPP Developer and implementation of BMPs by a Qualified SWPPP Practitioner to ensure runoff from individual projects meet current water quality standards. For the project under 1 acre, the Municipal Permit requires minimum BMPs at all construction and grading projects. The minimum BMPs are required to ensure a reduction of potential pollutants from the project site to the maximum extent practicable and to effectively prohibit non-stormwater discharges from construction sites to the Municipal Separate Storm Sewer System. Also, present and reasonably foreseeable future projects would be subject to regulations that require compliance with water quality standards, including State and local water quality regulations and the District's JRMP and local BMP Design Manual (for projects within the District's jurisdiction) and the City of San Diego's Storm Water Management and Discharge Control Ordinance, which identifies water quality BMP requirements (for projects within the City's jurisdiction). For projects in the City, the Storm Water Management and Discharge Control Ordinance requires implementation of measures to reduce the risk of non-stormwater discharges and pollutant discharges through the use of BMPs. However, because the San Diego Bay is currently an impaired water body and has been for some time, the cumulative effect of past, present, and reasonably foreseeable future projects may result in a cumulatively significant water quality impact.

Project Contribution

A cumulatively significant impact on hydrology and water quality presently exists because of the San Diego Bay's status as an impaired water body and the potential for present and future projects to further degrade the water body. The proposed project would involve land-disturbing activities that would expose soils and, as such, would require compliance with the Construction General Permit. Compliance with the Construction General Permit would require development and implementation of a SWPPP by a Qualified SWPPP Developer, which would list BMPs that would be implemented by a Qualified SWPPP Practitioner to protect stormwater runoff and include a monitoring plan for measuring BMP effectiveness. At a minimum, BMPs would include practices to minimize the contact of construction materials, equipment, and maintenance supplies (e.g., fuels, lubricants, paints, solvents, adhesives) with stormwater. The SWPPP would specify properly designed, centralized storage areas that keep these materials out of the rain. If grading must be conducted during the rainy season, the primary BMPs selected would focus on erosion control (i.e., keeping sediment in place) followed by sediment control (i.e., keeping sediment on the site). In addition to the SWPPP, implementation of construction BMPs identified in the District's JRMP and BMP Manual would be required, which would reduce impacts on water quality.

The full buildout of the TAMT plan, including the Demolition and Initial Rail Component, would result in an increase in impervious surface areas and may increase the volume of runoff. Operations and maintenance activities would involve increased loading and unloading of cargo, which would also result in additional marine and terrestrial vehicle traffic. In addition, potential pollutants that may be generated at the project site include gross pollutants (trash, debris/litter, other organic matter, and floatables), metals, nutrients, oil and grease, organics, sediment, and trash. The District's Article 10 (Stormwater Management and Discharge Control Ordinance) and the JRMP include specific requirements for all development and redevelopment activities (for projects within the District's jurisdiction). Pursuant to the District's JRMP, post-construction BMPs are required for the proposed project. Article 10 also specifically requires structural treatment control BMPs for the proposed project. Additionally, a post-construction Storm Water Quality Management Plan must be included for the proposed project. The proposed project would implement BMPs consistent with the District's JRMP and BMP Design Manual to further ensure that water quality standards or wastewater discharge requirements are not violated and impacts on water quality would be less than significant. In addition, the Demolition and Initial Rail Component would install a subsurface stormwater detention tank that would eliminate a significant amount of direct runoff into the bay by capturing runoff, treating it, and then either releasing the cleaned water into the bay if it meets RWQCB requirements or sending it to the sanitary sewer, where it also would be required to meet the basic RWQCB requirements.

Therefore, the Demolition and Initial Rail Component or the full buildout of the TAMT plan's incremental contribution to significant cumulative water quality impacts from past, present, and reasonably foreseeable future projects would be less than cumulatively considerable.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component's incremental contribution to cumulative impacts related to hydrology and water quality would not be cumulatively considerable.

Full TAMT Plan Buildout

The full buildout of the TAMT plan's incremental contribution to cumulative impacts related to hydrology and water quality would not be cumulatively considerable.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT PLAN Buildout

No mitigation is required.

Level of Significance After Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component's incremental contribution to cumulative impacts related to hydrology and water quality would not be cumulatively considerable and therefore would be less than significant.

Full TAMT PLAN Buildout

The full buildout of the TAMT plan's incremental contribution to cumulative impacts related to hydrology and water quality would not be cumulatively considerable and therefore would be less than significant.

5.3.9 Noise and Vibration

A significant cumulative impact on noise and vibration would result if the proposed project were to contribute to impacts related to exceedances of noise standards, groundborne vibration, or ambient noise levels when evaluated within the context of past, present, and reasonably foreseeable future projects. Air traffic noise was determined to have no impact at the project level and, as such, cumulative impacts related to air traffic noise are not evaluated.

Geographic Scope

The study area for the cumulative noise impacts analysis is defined as areas within a 1,000-foot radius of the Port. Projects at the Port that are expected to occur concurrently with the TAMT plan and its Demolition and Initial Rail Component include the Mitsubishi Cement Project (#2) and Ballpark Village Parcels C and D (#7 and #8). In addition, because the operational traffic noise analysis considers both near-term (opening year) and future conditions with and without the project, cumulative noise impacts are considered along all the analyzed roadway segments that would serve project-related traffic.

Cumulative Effects

Noise and vibration from cumulative projects may increase future noise levels at the receptors nearest to the project site. However, any effects would be limited to simultaneously occurring projects close to or within the project site. The cumulative projects most likely to occur concurrently with the TAMT plan are within (Mitsubishi Cement Project) and adjacent to (San Diego Convention Center Phase III Expansion and Hilton Bayfront Hotel Expansion) the project site. The National City Marine Terminal is over 2 miles from the project site, so there would be no meaningful cumulative noise effects from any potential concurrent construction and operation activities at the project site and the National City Marine Terminal site (such as project #14).

Although there could be an increase in noise levels at these receptors as a result of construction activity from projects within and adjacent to the project site, it is highly unlikely that the cumulative increase in noise from concurrent construction would result in noise at nearby receptors exceeding the 75 A-weighted decibels (dBA) City construction noise threshold. Accordingly, construction noise from past, present, and reasonably foreseeable future projects would not be cumulatively significant.

Construction vibration effects are highly localized because groundborne vibration levels diminish rapidly with distance from the source. Cumulative projects identified above would be more than 100 feet apart and would generally be more than 100 feet from sensitive receptors. Accordingly, vibration effects from past, present, and reasonably foreseeable future projects would not be cumulatively significant.

Cumulative traffic noise levels under near-term (Year 2021) conditions are summarized in Table 5-3 for the year the Demolition and Initial Rail Component is fully operational. The results indicate that cumulative projects would increase noise levels by up to 2 decibels (dB) in the project cumulative study area. The range would increase from between 67–72 dBA Community Noise Equivalent Level (CNEL) to 67–73 dBA CNEL. An increase of 2 dB to the existing CNEL would not be perceptible, and cumulatively the overall noise levels would remain under the 75 dBA CNEL threshold.

Cumulative traffic noise levels under future year (2035) conditions are summarized in Table 5-4. The results indicate that cumulative projects would increase traffic noise levels by up to 2 dB. An increase of 2 dB to the existing CNEL would not be perceptible, and cumulatively the overall noise levels would remain under the 75 dBA CNEL threshold.

Therefore, traffic noise from past, present, and reasonably foreseeable future projects is not considered to be cumulatively significant.

Table 5-3. Near-Term (2021) Traffic Noise Levels with the Demolition and Initial Rail Component (Interim Project)

	Average Daily Traffic		CNEL (dBA)								
Roadway Segment	**Near-term Base**	**Interim Project[1]**	**Existing**	**Near-term**	**Interim Project**	**Near-term with Interim Project**	**Near-term Increase over Baseline (dB)**	**Incremental Project Increase over Near-term (dB)**	**Applicable Threshold (dBA CNEL)**	**Perceptible Change?**	**S?**
Harbor Drive, west of Cesar E. Chavez Parkway	24,460	66 Autos, 5 Heavy Trucks	72	73	51	73	+1	**0**	**75**	No	No
Harbor Drive, east of Cesar E. Chavez Parkway	15,744	144 Autos, 14 Heavy Trucks	69	71	53	71	+2	**0**	**75**	No	No
28th Street, north of Harbor Drive	20,613	7 Heavy Trucks [1]	67	67	47	67	0	**0**	**75**	No	No

[1] Based on project vehicle distributions in the project traffic study.

Source: Appendix G (traffic only); Appendix K (noise calculations)

S? = indicates a significant impact

Table 5-4. Future Year (2035) Traffic Noise Levels with the Proposed TAMT Plan Buildout (Program)

Roadway Segment	Average Daily Traffic: Future Year Base	Average Daily Traffic: Program[1]	CNEL (dBA): Existing	CNEL (dBA): Future Year	CNEL (dBA): Program	CNEL (dBA): Future Year with Program	Long-term Increase over Baseline (dB)	Incremental Project Increase over Future Year (dB)	Applicable Threshold (dBA CNEL)	Perceptible Change?	S?
Harbor Drive, west of Cesar E. Chavez Parkway	25,050	377 Autos, 322 Heavy Trucks	72	73	64	73	+1	**0**	**75**	No	No
Harbor Drive, east of Cesar E. Chavez Parkway	18,800	817 Autos, 846 Heavy Trucks	69	71	67	73	+2	**+2**	**75**	Yes	No
28th Street, north of Harbor Drive	20,220	448 Heavy Trucks	67	67	63	69	+0	**+2**	**75**	No	No

[1] Based on project vehicle distributions in the project traffic study.

Source: Appendix G (traffic only); Appendix K (noise calculations)

Project Contribution

Demolition and Initial Rail Component

The project site would be a source of intermittent construction and increased operational activities associated with increased onsite activities by facilitating additional throughput and increased rail capacity. The Demolition and Initial Rail Component's construction noise levels at nearby receptors are predicted to be at least 12 dB below the impact threshold of 75 dBA. Although there could be a cumulative increase in noise at these receptors as a result of construction activity from projects within and adjacent to the project site, it is highly unlikely that the cumulative increase in noise from concurrent construction would result in noise at nearby receptors exceeding the 75 dBA threshold. Accordingly, the project is not expected to result in a cumulatively considerable contribution to construction noise impacts.

Construction vibration effects are highly localized because groundborne vibration levels diminish rapidly with distance from the source. No significant construction vibration impacts are predicted. Because of this and the highly localized nature of construction vibration, the project is not expected to result in a cumulatively considerable contribution to construction vibration effects.

As shown in Table 5-3, the Demolition and Initial Rail Component would not increase noise levels above the cumulative noise levels within the study area. Therefore, noise from operational traffic associated with the Demolition and Initial Rail Component would not be perceptible and the incremental contribution would not be cumulatively considerable.

As discussed in Section 4.9, *Noise and Vibration*, the Demolition and Initial Rail Component would not expose persons to or generate noise levels in excess of standards established in the City of San Diego's Significance Determination Thresholds and/or the City's Noise Ordinance.

Full TAMT Plan Buildout

The project site would be a source of intermittent construction and increased operational activities over the next several decades. Predicted TAMT plan construction noise levels at nearby receptors are predicted to be at least 6 dB below the impact threshold of 75 dBA. Although there could be a cumulative increase in noise at these receptors as a result of construction activity from projects within and adjacent to the project site, it is highly unlikely that the cumulative increase in noise from concurrent construction operations would result in noise at nearby receptors exceeding the 75 dBA threshold. Accordingly, the project is not expected to result in a cumulatively considerable contribution to construction noise impacts.

Construction vibration effects are highly localized because groundborne vibration levels diminish rapidly with distance from the source. No significant construction vibration impacts are predicted. Because of this and the highly localized nature of construction vibration, the project is not expected to result in a cumulatively considerable contribution to construction vibration effects.

Table 4.9-11 summarizes worst-case operational noise levels from the TAMT plan buildout. Worst-case operational noise from TAMT plan buildout is predicted to result in noise that exceeds City standards at two parks (**Impact-NOI-1**). As discussed in Section 4.9, *Noise and Vibration*, implementation of Mitigation Measure **MM-NOI-1** would reduce the effects of operational noise;

however, application of the measure may be limited due to the location and number of sources involved. Mitigation Measure **MM-NOI-2** would implement a noise complaint and response system for affected sensitive receivers, but **Impact-NOI-1** would remain significant and unavoidable. Therefore, the incremental operational noise contribution from the proposed project combined with operational noise from cumulative projects would result in an exceedance of City standards (**Impact-C-NOI-1**). Accordingly, even with the implementation of **MM-NOI-1** and **MM-NOI-2**, full buildout of the TAMT plan is expected to result in a cumulatively considerable contribution to operational noise impacts.

As shown in Table 5-4, full buildout of the TAMT plan would increase traffic noise levels along Harbor Drive east of Cesar E. Chavez Parkway by up to 2 dBA CNEL under 2035 conditions. An increase of 2 dB or more in CNEL would not be perceptible. In addition, the overall cumulative noise levels would remain under the 75 dBA CNEL threshold. Therefore, because the full buildout of the TAMT plan would not cause the traffic noise to exceed the applicable traffic noise threshold and its own noise would not be perceptible, the project's incremental contribution to cumulative traffic noise would not be cumulatively considerable.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component's incremental contribution to cumulative noise impacts would not be cumulatively considerable.

Full TAMT Plan Buildout

The full TAMT plan buildout's incremental contribution to cumulative impacts related to noise and vibration would be cumulatively considerable prior to mitigation. Potentially cumulatively considerable impact(s) include the following.

Impact-C-NOI-1: Cumulative Contribution to Cumulative Operational Noise. The incremental operational noise contribution from the proposed project combined with operational noise from cumulative projects would result in an exceedance of City standards.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

For **Impact-C-NOI-1:**

Implement **MM-NOI-1: Design and Implement Acoustical Treatments for Future Systems and Equipment to Reduce Operational Noise Levels at Nearby Noise-Sensitive Land Uses**, as described in Section 4.9, *Noise and Vibration*.

Implement **MM-NOI-2: Initiate and Maintain a Complaint and Response Tracking Program**, as described in Section 4.9, *Noise and Vibration*.

Level of Significance After Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component's incremental contribution to cumulative impacts related to noise would not be cumulatively considerable and therefore would be less than significant.

Full TAMT Plan Buildout

As discussed in Section 4.9, *Noise and Vibration*, mitigation measure **MM-NOI-1** would potentially reduce the effects of future operational noise compared to the unmitigated condition; however, application of the measure may be limited due to the location and number of sources involved. Mitigation measure **MM-NOI-2** would be applied as a resource to the community and may result in additional noise-reduction measures over the life of the TAMT plan as sources of future noise are identified. Given the lack of project-level detail at this time, however, individual equipment and system design specifications are not currently available; therefore, it is not known what noise reduction measures may be feasible and appropriate and, as such, it is not possible at this time to quantify the extent to which impacts may be reduced. Consequently, after mitigation, **Impact-C-NOI-1** would remain cumulatively considerable.

5.3.10 Public Services and Recreation

Cumulative impacts on public services and recreation—including fire and emergency services, police protection, and parks—could result when past, present, and reasonably foreseeable future projects combine to increase demand on public services and recreation facilities such that additional facilities must be constructed to maintain acceptable levels of service, and the construction of such facilities would result in a physical impact on the environment. No impacts are anticipated for schools or other public facilities at the project level, and, therefore, cumulative impacts on schools or other public facilities are not discussed below.

Geographic Scope

Cumulative impacts for public services and recreation are based on a list of projects that are currently underway, approved, or proposed and likely to be implemented in the downtown area and more generally within the service areas of the service providers that operate in the project area. Therefore, the cumulative setting for public services and recreation includes all of the projects listed in Table 5-2.

Cumulative Effects

Past projects have required new and expanded facilities as demand for public services has increased. Present and reasonably foreseeable future projects will continue to increase demand on public service providers and the need for new and expanded facilities. The reasonably foreseeable future projects listed in Table 5-2 involve similar uses that already exist throughout the cumulative study area; however, development of the projects listed in Table 5-2 could result in over 1,000,000 square feet of commercial space (including meeting and convention space) and a significant number of residential units, hotel rooms, commercial space, and institutional uses.

According to the City of San Diego General Plan, new fire stations are planned for the downtown area on the north side of Broadway between 13th and 14th Streets and the southeast corner of Cedar Street and Pacific Highway (City of San Diego 2008) to meet the increased demand that has resulted from past and present projects within the cumulative study area and to provide adequate fire protection services for reasonably foreseeable future projects. In addition, the City of San Diego requires that new residential and non-residential development pay development impact fees to fund expansion of public facilities in order to maintain existing levels of service.

Police protection services would increase as present and future projects come online. However, unlike fire services where specific facilities are needed to house equipment and vehicles and response personnel to adequately respond to fires and emergencies, police services use patrol cars that do not need to have facilities in the immediate vicinity of specific projects. Thus, although there may be a need to increase personnel and equipment, there would not be the similar need to increase physical facilities in the cumulative study area.

As such, fire protection services would potentially require additional facilities, the construction of which could have significant environmental impacts. Police services would not. Therefore, cumulative fire protection impacts from cumulative projects throughout the downtown and Barrio Logan community areas would potentially be significant, whereas cumulative police protection impacts from cumulative projects would not be significant.

Potential cumulative park and recreational impacts would result when projects combine to place limitations on existing recreational facilities, or substantially increase demand on existing recreational facilities such that expansion of those facilities would be necessary and the expansion would result in a physical impact. The PMP identifies construction of parks, plazas, public shoreline access, and vista points to enhance the recreational experience around San Diego Bay, and calls for the provision of "a variety of public access and carefully selected active and passive recreational facilities suitable for all age groups including families with children throughout all seasons of the year." Because of its heavily urbanized setting, the sufficient allocation of parkland within the downtown area has been a challenge for many years; however, reasonably foreseeable future projects within the City of San Diego are expected to provide parkland or to pay in lieu fees in accordance with the Quimby Act that will be used to improve existing parkland or purchase additional parkland. Therefore, impacts related to parkland and recreational facilities from past, present, and reasonably foreseeable future projects that are identified in the PMP and Downtown Community Plan would not be cumulatively significant.

Project Contribution

A project's contribution to a cumulative public service or recreation impact is relative to the additional demand a project would place on a public service or recreational resource for which a cumulatively considerable impact has been identified.

The proposed project would result in expanded cargo throughput and additional truck traffic to and from the project site and would increase the number of temporary construction workers and permanent employees to the site. However, the project would not include new residents at the site and would not result in the physical expansion of the terminal's boundaries. Therefore, the proposed project's demand on public services and recreation would be similar to existing conditions, and its incremental contribution to police service, recreational resource, and fire facility cumulative impacts related to past, present, and reasonably foreseeable future projects would not be cumulatively considerable.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component's incremental contribution to cumulative impacts related to public services and recreation would not be cumulatively considerable.

Full TAMT Plan Buildout

The full buildout of the TAMT plan's incremental contribution to cumulative impacts related to public services and recreation would not be cumulatively considerable.

Mitigation Measures

Demolition and Initial Rail Component

No mitigation is required.

Full TAMT Plan Buildout

No mitigation is required.

Level of Significance After Mitigation

Demolition and Initial Rail Component

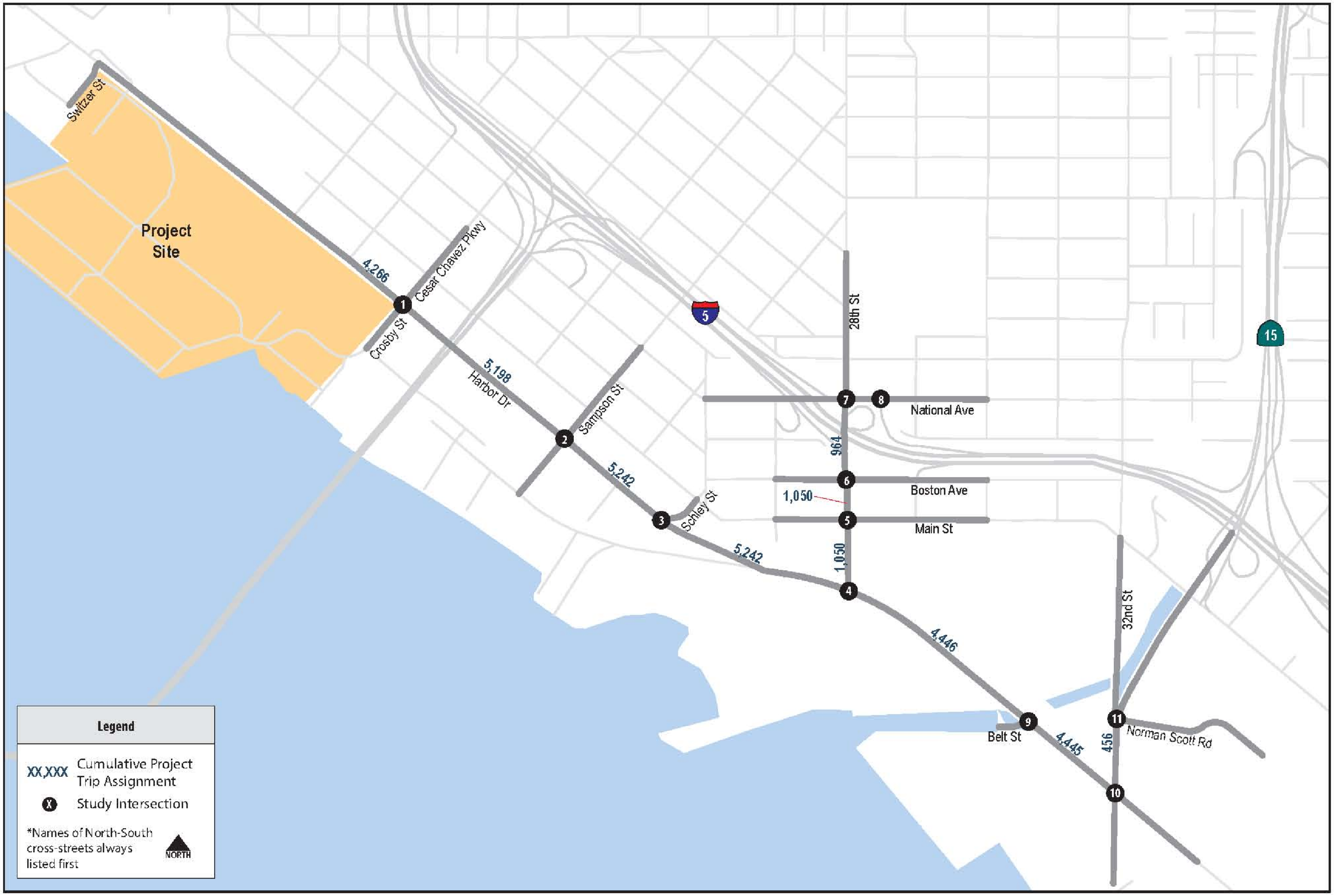
The Demolition and Initial Rail Component's incremental contribution to cumulative public services and recreation impacts would not be cumulatively considerable and would be less than significant.

Full TAMT Plan Buildout

The full buildout of the TAMT plan's incremental contribution to cumulative public services and recreation impacts would not be cumulatively considerable and would be less than significant.

5.3.11 Transportation, Circulation, and Parking

Cumulative impacts on transportation, circulation, and parking could result when past, present, and reasonably foreseeable future projects combine to result in unacceptable roadway, intersection, or freeway ramp operations; inadequate pedestrian or bicycle facilities; or inadequate mass transit capacity and lowered service. A significant impact on roadway segment or intersection operations would occur if the proposed project caused a segment or intersection to degrade to level of service (LOS) E or LOS F. Additionally, impacts on segments, intersections, or freeways would occur if any of the criteria in Table 5-5 are exceeded. Impacts on alternative transportation modes are considered, which include determining if there is sufficient pedestrian, bicycling, and mass transit facilities. Finally, cumulative parking impacts are also analyzed below based on whether there is sufficient supply to meet the projected demand.



Source: Chen Ryan Associates, 2016

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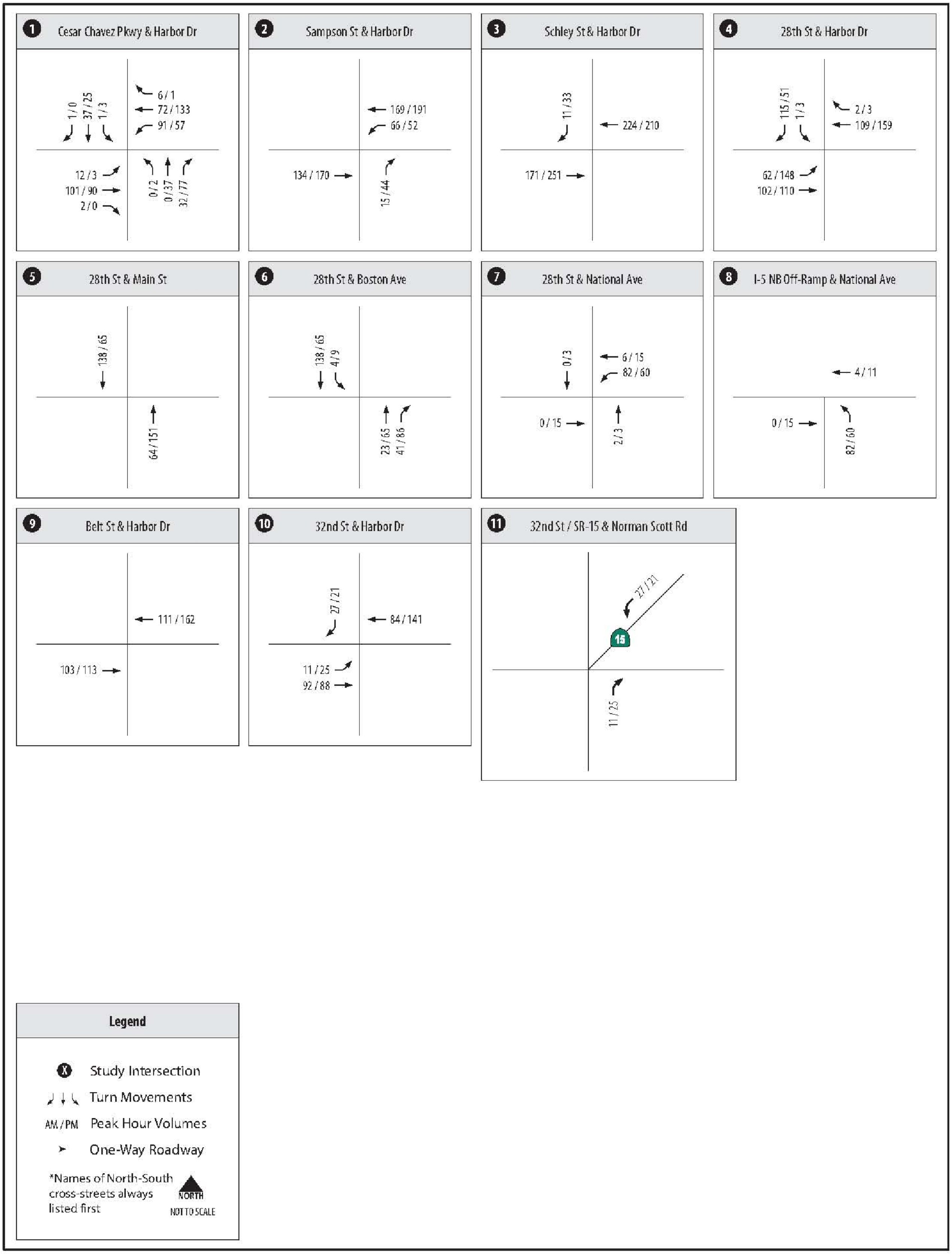
Figure 5-2
Cumulative Project Trip Assignment - Roadways
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR



Source: Chen Ryan Associates, 2016

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Figure 5-3
Cumulative Projects Trip Assignment - Intersections
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

Table 5-5. City of San Diego Measure of Significant Project Traffic Impacts

	Allowable Change Due to Impact					
	Freeways		Roadway Segments		Intersections	Ramp Metering
LOS with Project	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec)	Delay (min)
E (or ramp meter delays above 15 min)	0.01	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

Source: City of San Diego 2011.
LOS = level of service; min = minutes; mph = miles per hour; sec = seconds; V/C = volume to capacity ratio.

Geographic Scope

The geographic scope for cumulative transportation, circulation, and parking impacts includes all intersections and roadway segments to which the project would contribute 50 or more peak hour trips.

Cumulative Effects

Near-Term Year 2020 was selected because it represents the cumulative condition during the opening year of the Demolition and Initial Rail Component. The District and City of San Diego identified 14 near-term cumulative projects close to the project site that could potentially contribute traffic to the transportation network within the project study area. Near-Term Year 2020 Base daily roadway and peak hour intersection volumes were developed by adding the near-term cumulative project traffic volumes to existing traffic volumes. The trip generation, distribution, and assignment for the various cumulative projects were obtained from their respective traffic impact analyses, as shown in Table 5-6. Figures 5-2 and 5-3 display the total assignment of the near-term cumulative project trips to the study area roadways and intersections.

Future Year 2035 was selected because it is the year in which full buildout of the TAMT plan would occur. Future Year 2035 Base daily roadway volumes were derived from the SANDAG Series 12 Future Year 2035 Regional Forecast Model as well as from the Barrio Logan Community Plan Update and the Southeastern Community Plan Update. Peak hour intersection turning movements were developed by comparing existing daily roadway segment volumes to the forecasted Future Year 2035 daily volumes contained in the SANDAG model. Based on this comparison, the Future Year 2035 growth rates were applied to existing peak hour intersection approach and departure volumes. Manual adjustments were also made to ensure that traffic volumes among adjacent intersections are reasonably balanced. In addition, future year turning movement volumes developed for the Southeastern San Diego Community Plan were used where applicable.

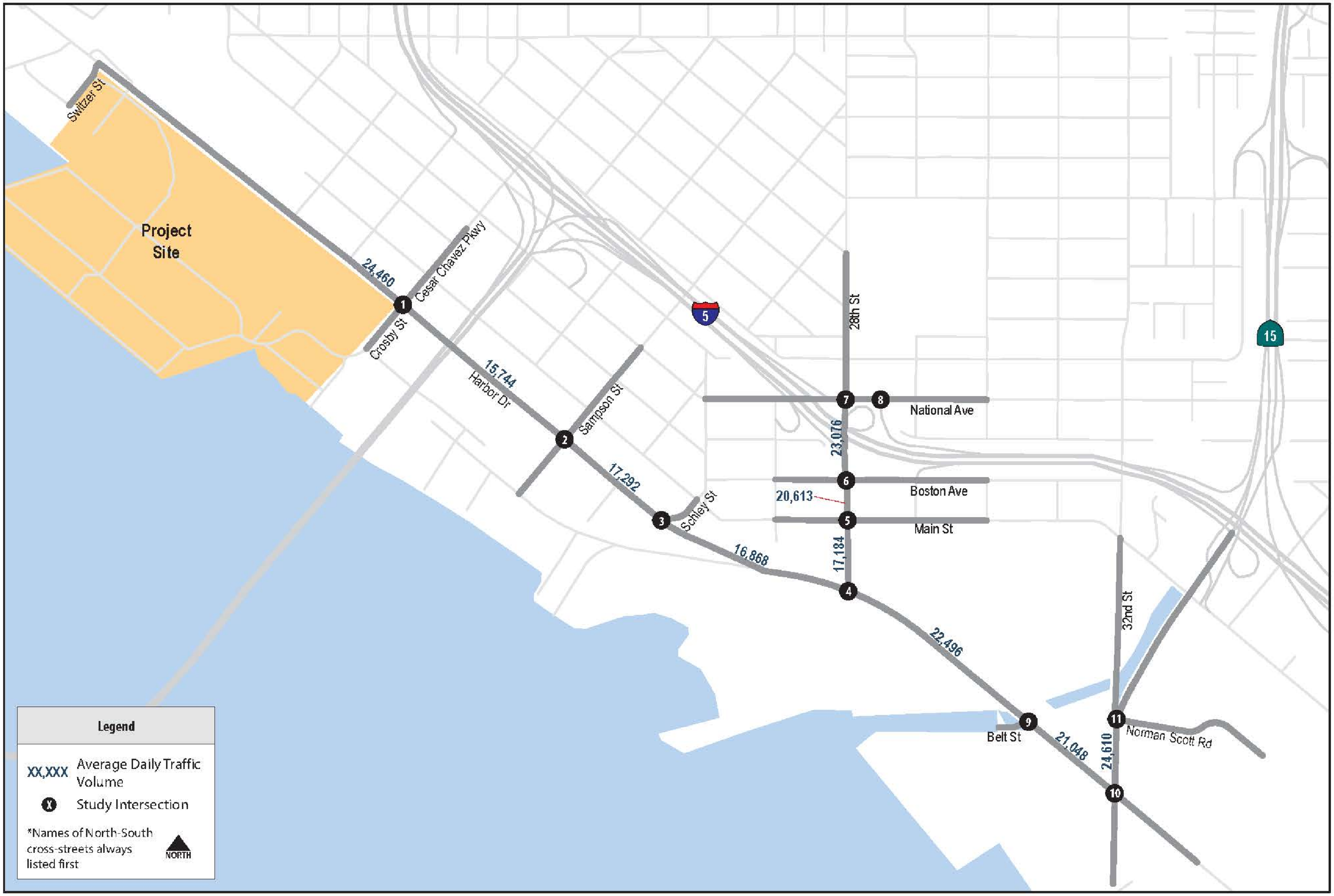
Table 5-6. Cumulative Projects Vehicular Trip Generation

#	Project	ADT	AM Peak Hour		PM Peak Hour	
			In	Out	In	Out
1	Shipyard Sediment Remediation Project[1]	348	44	15	15	44
2	San Diego Refrigerated Services (SDRS)[2]	148	16	8	8	16
3	Pier 1N Drydock Project[3]	149	0	0	0	0
4	Metro Center Project[4]	12,350	287	171	555	555
5	San Diego Continuing Education – Cesar Chavez Campus[4]	1,152	124	14	28	64
6	Jack in the Box[5]	1,812	43	29	73	72
7	Ballpark Village Parcel C[6]	3,622	52	173	217	103
8	Ballpark Village Parcel D[6]	16,200	583	389	778	518
9	Park and G[6]	931	15	56	63	30
10	15th and Island[6]	3,620	65	236	270	125
11	San Diego Convention Center Phase III Expansion and Hotel[7]	7,590	835	298	461	848
12	Sprint Cell Tower	0	0	0	0	0
13	Dole Fresh Fruit Refrigerated Rack Improvement Project[8]	580	53	15	51	53
14	Mitsubishi Cement Corporation[9]	450	15	9	9	15
Total		**48,952**	**2,132**	**1,413**	**2,528**	**2,443**

Source: Appendix G.
ADT = average daily traffic; TIA = Transportation Impact Analysis
[1] Trip Generation obtained from *Shipyard Sediment Remediation Project – TIA by LSA Associates, Inc.*
[2] Trip Generation obtained from *SDRS Negative Declaration - Traffic Analysis Memorandum by LLG, Engineers*
[3] Trip Generation obtained from *BAE Systems Pier 1N Drydock - TIA by LSA Associates, Inc.*
[4] Trip Generation obtained from *Cesar Chavez Campus – TIA by Kimley-Horn and Associates, Inc.*
[5] Trip Generation obtained from *Jack in the Box – TIA by Darnell and Associates, Inc.*
[6] Trip Generation obtained from *Ballpark Village Parcel C – TIA by Fehr & Peers, Inc.*
[7] Trip Generation obtained from *SDCC Phase III Expansion and Expansion Hotel – TIA by Fehr & Peers, Inc.*
[8] Trip Generation obtained from Dole Fresh Fruit Refrigerated Rack Improvement – TIA by Chen Ryan Associates
[9] Trip Generation provided by the District

The following cumulative traffic scenarios were analyzed and are described below.

- Near-Term Year 2020 Base Conditions
- Future Year 2035 Base Conditions
- Near-Term Year 2020 Base Plus Demolition and Initial Rail Component Conditions
- Near-Term Year 2020 Base Plus Demolition and Initial Rail Component – Alternative Gate Scenario
- Future Year 2035 Base Plus Full TAMT Plan Buildout Conditions
- Future Year 2035 Base Plus Full TAMT Plan Buildout – Alternative Gate Scenario



Source: Chen Ryan Associates, 2016

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Figure 5-4
Study Area Roadways: Near-Term Year 2020 Traffic Volumes
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

Near-Term Year 2020 Base Conditions

Roadway and intersection geometrics under Near-Term Year 2020 Base conditions were assumed to be identical to existing conditions. It should be noted that all intersection signal timing plans were assumed to be optimized under Near-Term Year 2020 Base conditions. This may result in better signal operations at some intersections when compared to existing conditions. LOS analysis for the Near-Term Year 2020 Base conditions was conducted using the methodologies described in Section 4.10, *Transportation, Circulation, and Parking*, of this Draft EIR.

Roadway Segments

Figure 5-4 shows the daily traffic volumes along study area roadway segments with the near-term cumulative projects in operation, while Table 5-7 displays the LOS analysis results for key roadway segments under the Near-Term Year 2020 Base conditions. As shown in Table 5-7, all key study area roadway segments are projected to operate at LOS D or better under Near-Term Year 2020 Base conditions, with the exception of 28th Street, between Boston Avenue and National Avenue (LOS F). Therefore, the cumulative effect on 28th Street between Boston Avenue and National Avenue from past, present, and reasonably foreseeable future projects in 2020 would be cumulatively significant; all other near-term cumulative impacts on study area roadway segments would not be cumulatively significant.

Table 5-7. Roadway Segment LOS Results: Near-Term Year 2020 Base Conditions

Roadway	Segment	Classification	Threshold (LOS E)	ADT	V/C	LOS
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4-Lanes w/RM	40,000	24,460	0.612	C
	Between Cesar Chavez Parkway and Sampson Street	4-Lanes w/RM	40,000	15,744	0.394	B
	Between Sampson Street and Schley Street	4-Lanes w/RM	40,000	17,292	0.432	B
	Between Schley Street and 28th Street	4-Lanes w/RM	40,000	16,868	0.422	B
	Between 28th Street and Belt Street	4-Lanes w/RM	40,000	22,496	0.562	C
	Between Belt Street and 32nd Street	4-Lanes w/RM	40,000	21,048	0.526	C
28th Street	Between Harbor Drive and Main Street	4-Lanes w/RM	40,000	17,184	0.430	B
	Between Main Street and Boston Avenue	4-Lanes w/TWLT	30,000	20,613	0.687	D
	Between Boston Avenue and National Avenue	3-Lanes w/TWLT	22,500[1]	23,076	1.026	F
32nd Street	Between Harbor Drive and Norman Scott Road	6-lanes w/RM	50,000	24,610	0.492	B

Source: Appendix G

ADT = average daily trips; LOS = level of service; RM = raised median; TWLT = two-way left turn; V/C = volume to capacity ratio

Intersections

Figure 5-5 shows the peak hour traffic volumes at study area intersections with the near-term cumulative projects in operation, while Table 5-8 displays intersection LOS and average vehicle delay results under Near-Term Year 2020 Base conditions. All intersections are signalized unless otherwise noted.

Table 5-8. Peak Hour Intersection LOS Results: Near-Term Year 2020 Base Conditions

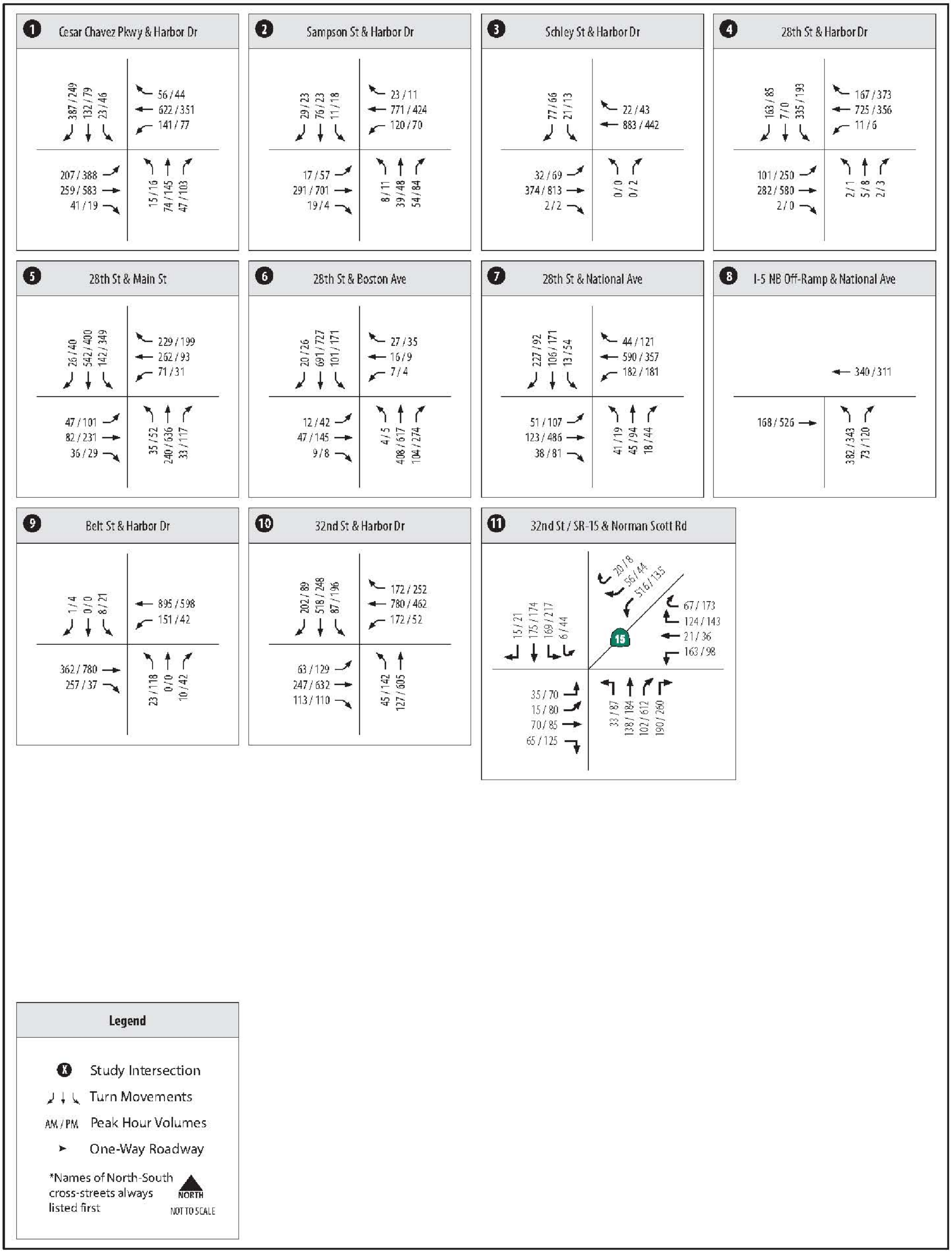
		AM Peak Hour		PM Peak Hour	
#	**Intersection**	**Avg. Delay (sec.)**	**LOS**	**Avg. Delay (sec.)**	**LOS**
1	Harbor Drive/Cesar Chavez Parkway	41.0	D	38.0	D
2	Harbor Drive/Sampson Street	43.8	D	44.9	D
3	Harbor Drive/Schley Street	16.3	B	15.7	B
4	Harbor Drive/28th Street	28.2	C	26.6	C
5	Main Street/28th Street	22.2	C	38.8	D
6	Boston Avenue/28th Street	19.1	B	23.9	C
7	National Avenue/28th Street	42.6	D	31.5	C
8	National Avenue/I-5 NB Off-Ramp	17.4	B	14.8	B
9	Harbor Drive/Belt Street	18.8	B	17.0	B
10	Harbor Drive/32nd Street	29.3	C	43.3	D
11	Norman Scott Road/32nd Street/Wabash Boulevard	103.2	**F**	69.6	**E**

Source: Appendix G

As shown in Table 5-8, all key study intersections are projected to operate at LOS D or better during the peak hours under Near-Term Year 2020 Base conditions with the exception of the Norman Scott Road/32nd Street/Wabash Boulevard intersection, which would operate at LOS F during the AM peak hour and LOS E during the PM peak hour. Therefore, the cumulative effect on the Norman Scott Road/32nd Street/Wabash Boulevard intersection from past, present, and reasonably foreseeable future projects in 2020 would be cumulatively significant; all other near-term cumulative impacts on study area intersections would not be cumulatively significant.

Ramp Intersection Capacity Analysis

Consistent with California Department of Transportation (Caltrans) requirements, the signalized ramp intersections of National Avenue/I-5 northbound off-ramp and Norman Scott Road/32nd Street/Wabash Boulevard were analyzed using Intersection Lane Volume (ILV) procedures, as described in Section 4.10. ILV analysis results are displayed in Table 5-9 and analysis worksheets for Near-Term Year 2020 Base conditions are provided in Appendix G.



Source: Chen Ryan Associates, 2016

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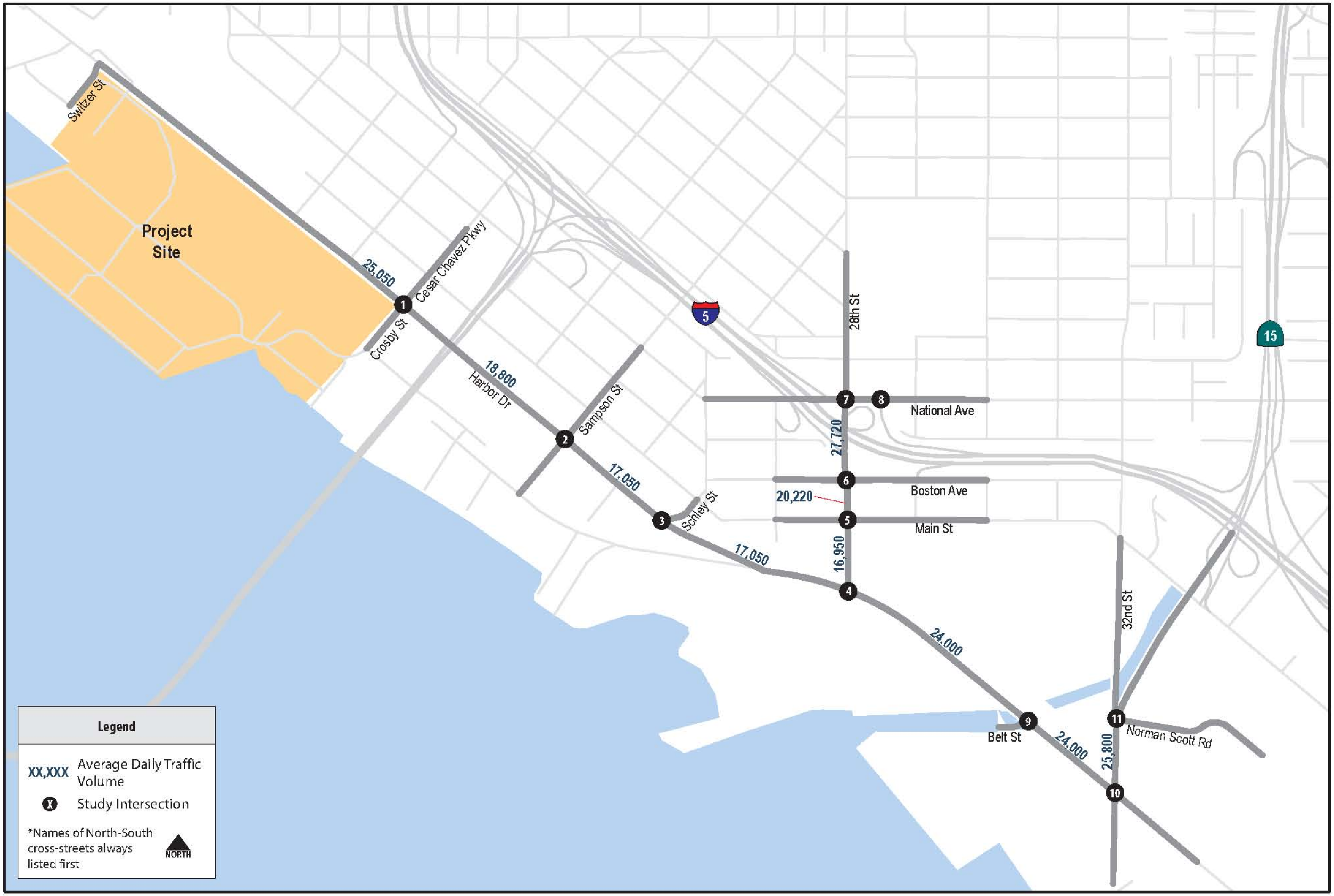
Figure 5-5
Study Area Intersections: Near-Term Year 2020 Traffic Volumes
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR



Source: Chen Ryan Associates, 2016

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Figure 5-6
Study Area Roadways: Future Year 2035 Traffic Volumes
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

Table 5-9. Ramp Intersection Capacity Analysis: Near-Term Year 2020 Base Conditions

#	Intersection	Peak Hour	ILV/Hour	Description
8	National Avenue/I-5 NB Off-Ramp	AM	722	Under Capacity
		PM	869	Under Capacity
11	Norman Scott Road/32nd Street/Wabash Boulevard	AM	995	Under Capacity
		PM	1,061	Under Capacity

Source: Appendix G
ILV = Intersection Lane Volume; NB = northbound

As shown, the key study signalized ramp intersections are projected to operate at "Under Capacity" during both the AM and PM peak hours under Near-Term Year 2020 Base conditions. Therefore, impacts on ramp intersections from past, present, and reasonably foreseeable future projects would not be cumulatively significant.

Future Year 2035 Base Conditions

Roadway and intersection geometrics under Future Year 2035 Base conditions were assumed to be identical to existing conditions. It should be noted that because the project is a long-range redevelopment plan, the timing of its implementation will be based on ongoing market conditions and, therefore, the timing of its implementation and phasing is unknown. As such, no mitigation measures identified under existing plus full TAMT plan buildout conditions were carried forward into future year conditions because it is unknown when they will actually be implemented at this time. LOS analysis for Future Year 2035 Base conditions was conducted using the methodologies described in Section 4.10, *Transportation, Circulation, and Parking*, of this Draft EIR.

Roadway Segments

Figure 5-6 shows the daily traffic volumes along study area roadway segments under Future Year 2035 Base conditions. Table 5-10 displays the LOS analysis results for key roadway segments under the Future Year 2035 Base conditions. As shown in Table 5-10, all key study area roadway segments are projected to operate at LOS D or better under Future Year 2035 Base conditions, with the exception of 28th Street, between Boston Avenue and National Avenue (LOS F). Therefore, the effect on 28th Street between Boston Avenue and National Avenue from past, present, and reasonably foreseeable future projects in 2035 would be cumulatively significant; all other long-term cumulative impacts on study area roadway segments would not be cumulatively significant.

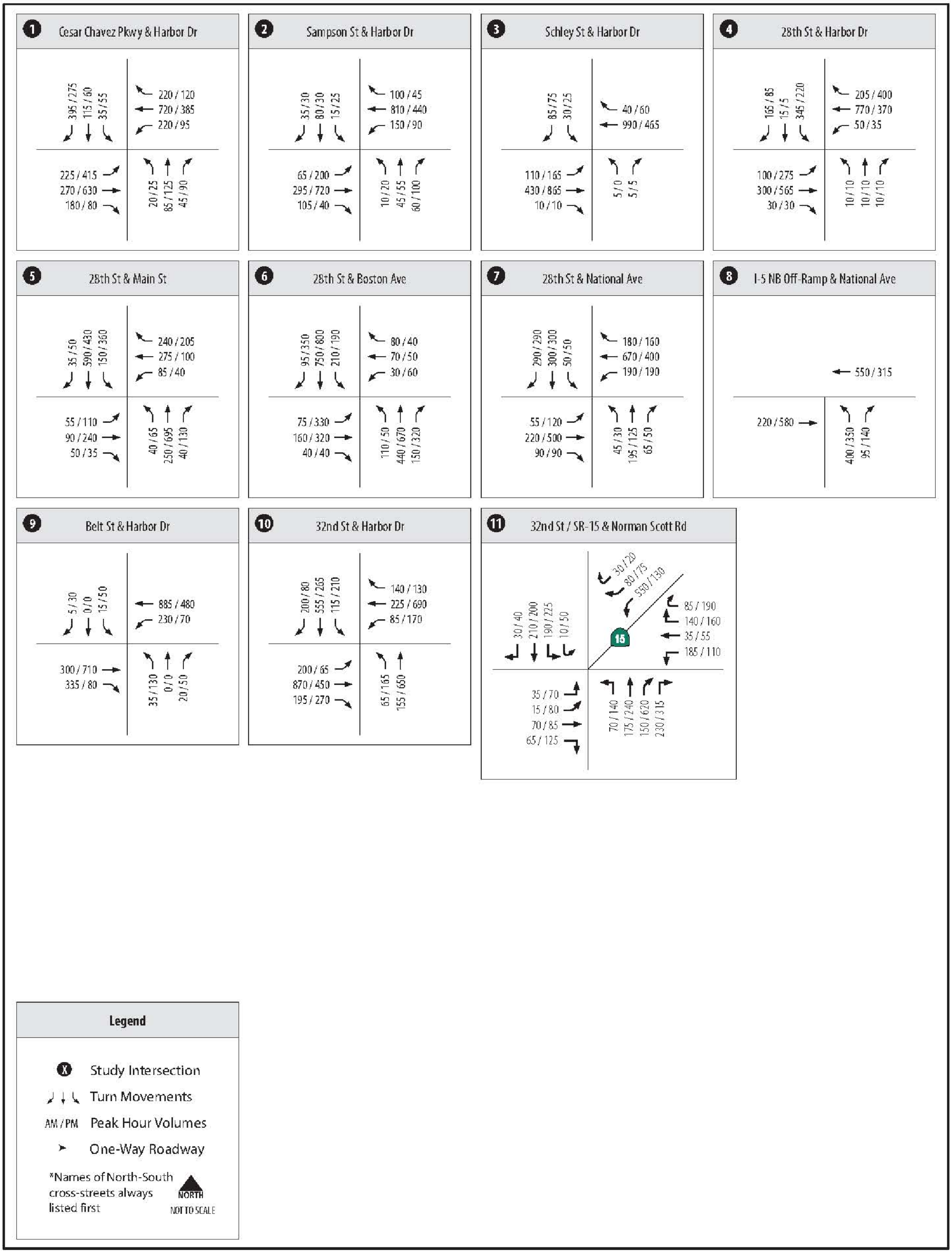
Table 5-10. Roadway Segment LOS Results: Future Year 2035 Base Conditions

Roadway	Segment	Classification	Threshold (LOS E)	ADT	V/C	LOS
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4-Lane Major	40,000	25,050	0.626	C
	Between Cesar Chavez Parkway and Sampson Street	4-Lane Major	40,000	18,800	0.470	B
	Between Sampson Street and Schley Street	4-Lane Major	40,000	17,050	0.426	B
	Between Schley Street and 28th Street	4-Lane Major	40,000	17,050	0.426	B
	Between 28th Street and Belt Street	4-Lane Major	40,000	24,000	0.600	C
	Between Belt Street and 32nd Street	4-Lane Major	40,000	24,000	0.600	C
28th Street	Between Harbor Drive and Main Street	4-Lane Major	40,000	16,950	0.424	B
	Between Main Street and Boston Avenue	4-Lane Collector w/TWLT	30,000	20,220	0.674	D
	Between Boston Avenue and National Avenue	3-Lane Collector w/TWLT	22,500	27,720	1.232	F
32nd Street	Between Harbor Drive and Norman Scott Road	6-Lane Major	50,000	25,800	0.516	B

Source: Appendix G
ADT = average daily trips; LOS = level of service; TWLT = two-way left turn; V/C = volume to capacity ratio

Intersections

Figure 5-7 shows the peak hour traffic volumes at study area intersections under Future Year 2035 Base conditions. Table 5-11 displays intersection LOS and average vehicle delay results under Future Year 2035 Base conditions. All intersections are currently signalized. It should be noted that all intersection signal timing plans were assumed to be optimized under Future Year 2035 conditions. This may result in better signal operations at some intersections when compared to existing conditions.



Source: Chen Ryan Associates, 2016

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Figure 5-7
Study Area Intersections: Future Year 2035 Traffic Volumes
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

Table 5-11. Peak Hour Intersection LOS Results: Future Year 2035 Base Conditions

#	Intersection	AM Peak Hour Avg. Delay (sec.)	AM Peak Hour LOS	PM Peak Hour Avg. Delay (sec.)	PM Peak Hour LOS
1	Harbor Drive/Cesar Chavez Parkway	50.6	D	39.6	D
2	Harbor Drive/Sampson Street	50.9	D	53.0	D
3	Harbor Drive/Schley Street	23.2	C	19.4	B
4	Harbor Drive/28th Street	28.8	C	28.2	C
5	Main Street/28th Street	22.2	C	39.2	D
6	Boston Avenue/28th Street	27.7	C	37.4	D
7	National Avenue/28th Street	122.5	**F**	71.4	**E**
8	National Avenue/I-5 NB Off-Ramp	18.9	B	17.5	B
9	Harbor Drive/Belt Street	22.3	C	19.1	B
10	Harbor Drive/32nd Street	32.3	C	44.2	D
11	Norman Scott Road/32nd Street/Wabash Boulevard	81.5	**F**	67.2	**E**

Source: Appendix G
LOS = level of service; NB = northbound

As shown in Table 5-11, all key study intersections are projected to operate at LOS D or better during both the peak hours under Future Year 2035 Base conditions, with the exception of the following two intersections.

- National Avenue/28th Street – LOS F during AM peak hour and LOS E during PM peak hour
- Norman Scott Road/32nd Street/Wabash Boulevard – LOS F during AM peak hour and LOS E during PM peak hour

Therefore, the cumulative effect on National Avenue and 28th Street and Norman Scott Road/32nd Street/Wabash Boulevard from past, present, and reasonably foreseeable future projects in 2035 would be cumulatively significant; all other long-term cumulative impacts on study area intersections would not be cumulatively significant.

Ramp Intersection Capacity Analysis

Consistent with Caltrans requirements, the signalized ramp intersections of National Avenue/I-5 northbound off-ramp and Norman Scott Road/32nd Street/Wabash Boulevard were analyzed using ILV procedures, as described in Section 4.10. ILV analysis results are displayed in Table 5-12 and analysis worksheets for Future Year 2035 Base conditions are provided in Appendix G.

Table 5-12. Ramp Intersection Capacity Analysis: Future Year 2035 Base Conditions

#	Intersection	Peak Hour	ILV/Hour	Description
8	National Avenue/I-5 NB Off-Ramp	AM	950	Under Capacity
		PM	930	Under Capacity
11	Norman Scott Road/32nd Street/Wabash Boulevard	AM	1,095	Under Capacity
		PM	1,083	Under Capacity

Source: Appendix G
ILV = Intersection Lane Volume; NB = northbound

As shown, the key study signalized ramp intersections are projected to operate at "Under Capacity" during both the AM and PM peak hours under Future Year 2035 Base conditions. Therefore, impacts on ramp intersections from past, present, and reasonably foreseeable future projects would not be cumulatively significant.

Freeway Segment Analysis

Table 5-13 displays freeway segment LOS under Future Year 2035 Base conditions. As shown, all study freeway segments are projected to operate at LOS D or better under Future Year 2035 Base conditions, except for the following segments.

- I-5 southbound between SR-94 & Imperial Avenue (LOS E)
- I-5 northbound between Imperial Avenue & SR-75 (LOS E)
- I-5 northbound between SR-75 & 28th Street (LOS F)
- I-5 southbound between SR-75 & 28th Street (LOS E)
- I-5 northbound between 28th Street & SR-15 (LOS F)
- I-5 northbound between SR-15 & Main Street (LOS F)
- I-5 southbound between SR-15 & Main Street (LOS F)
- SR-15 northbound between Market Street & Ocean View Boulevard (LOS E)
- SR-15 northbound between Market Street & Ocean View Boulevard (LOS F)

Table 5-13. Freeway Mainline Segment LOS Analysis: Future Year 2035 Base Conditions

Freeway	Segment	ADT[(a)]	Direction	# of Lanes	Capacity[(b)]	D[(c)]	K[(d)]	HVF[(e)]	Peak Hour Volume	V/C	LOS
I-5	SR-94 & Imperial Avenue	218,400	NB	4M+1A	10,810	0.0%	8.1%	4.0%	11,600	1.07	**F**
			SB	4M+1A	10,810	0.0%	8.3%	4.0%	10,200	0.94	**E**
	Imperial Avenue & SR-75	195,700	NB	4M+1A	10,810	0.0%	8.1%	3.8%	10,400	0.96	**E**
			SB	4M+1A	10,810	0.0%	8.2%	3.8%	9,700	0.90	D
	SR-75 & 28th Street	191,100	NB	4M+2A	12,220	0.0%	8.4%	5.0%	11,900	0.97	**E**
			SB	4M+1A	10,810	0.0%	8.2%	5.0%	9,500	0.88	D
	28th Street & SR-15	176,800	NB	4M	9,400	0.0%	8.4%	5.0%	11,000	1.17	**F**
			SB	4M	9,400	0.0%	8.2%	5.0%	8,800	0.94	E
	SR-15 & Main Street	220,300	NB	4M+2A	12,220	0.0%	8.4%	5.0%	13,700	1.12	**F**
			SB	5M	11,750	0.0%	8.7%	5.0%	13,200	1.12	**F**
SR-15	SR-94 & Market Street	120,800	NB	3M+1A	8,460	0.0%	8.1%	5.1%	6,100	0.72	C
			SB	3M+1A	8,460	0.0%	9.7%	5.1%	6,800	0.80	D
	Market Street & Ocean View Boulevard	129,100	NB	3M	7,050	0.0%	8.1%	5.1%	6,700	0.95	**E**
			SB	3M	7,050	0.0%	9.6%	5.1%	7,200	1.02	**F**
	Ocean View Boulevard & I-5	122,000	NB	3M+1A	8,460	0.0%	7.0%	5.1%	5,500	0.65	C
			SB	4M+1A	10,810	0.0%	7.8%	5.1%	5,500	0.51	B
	I-5 & Norman Scott Road	30,400	NB	2M	4,700	0.0%	7.0%	5.1%	1,400	0.30	A
			SB	2M	4,700	0.0%	7.5%	5.1%	1,300	0.28	A

Source: Appendix G

Bold letter indicates LOS E or F.

M = mainline; A = auxiliary lane; ADT = average daily trips; NB = northbound; SB = southbound; V/C = volume to capacity ratio; LOS = level of service

[a] Traffic volumes provided by Caltrans (see Appendix G).

[b] The capacity is calculated as 2,350 ADT per main lane and 1,410 ADT (60% of the main lane capacity) per auxiliary lane.

[c] D = Directional split

[d] K = Peak hour %

[e] HV = Heavy vehicle %

Project Contribution

Near-Term Year 2020 Plus Demolition and Initial Rail Component Conditions

Construction

As mentioned in Section 4.10.4.1, several components of the TAMT plan include construction and demolition activities that would generate vehicle trips. The greatest intensity of construction activity would occur with the demolition of Transit Sheds #1 and #2, which are included in the Demolition and Initial Rail Component. Moreover, it was assumed that demolition of these sheds would partially overlap to provide a worst-case construction scenario. Consequently, demolition of these sheds would generate the greatest amount of construction traffic at a single point in time. Approximately 79 haul trucks and 50 construction workers would access the project site daily during this time. It was also assumed that all construction workers would drive individual vehicles to the project site and that material deliveries and construction workers would arrive and depart during the AM and PM peak hours. With these conservative estimates, the proposed project construction trip generation is anticipated to be approximately 624 daily trips, including 113 trips during both the AM and PM peak hours.

Roadways

Table 5-14 below shows that the roadway segments in the project study area would operate at LOS D or better during the peak of project construction, with the exception of 28th Street between Boston Avenue and National Avenue, which is projected to operate at LOS F with or without the addition of project construction traffic. However, the project's change to the volume to capacity (V/C) ratio on 28th Street between Boston Avenue and National Avenue would be 0.006, which is less than the City's threshold of 0.01. Therefore, all surrounding roadways would continue to operate at their projected near-term LOS even with the addition of the project's construction traffic, as indicated in Table 5-14. Impacts from construction on study area roadway segments would be less than significant, and no mitigation is required.

Intersections

As indicated in Table 5-15, intersections in the study area would all operate at LOS D or better during the peak of project construction, with the exception of Norman Scott Road/32nd Street/ Wabash Boulevard, which is projected to operate at LOS F during the AM peak hour and LOS E during the PM peak hour with or without the addition of project construction traffic. However, the Demolition and Initial Rail Component's construction-related traffic would worsen the delay at this intersection by 7.3 seconds during the AM peak hour and 2.6 seconds during the PM peak hour. As such, construction traffic associated with the Demolition and Initial Rail Component would add more than 1 second of delay at the Norman Scott Road/32nd Street/Wabash Boulevard intersection during both the AM and PM peak hours, and therefore would result in a cumulatively significant construction impact (**Impact-C-TRA-1**). Mitigation in the form of a transportation demand management (TDM) plan during construction is required to reduce the significant impact by limiting the number of construction worker trips through the affected intersection during peak periods (**MM-TRA-1**). Implementation of a TDM plan during construction would reduce potential impacts at the Norman Scott Road/32nd Street/Wabash Boulevard intersection; however, it cannot be determined with certainty that the impacts would be reduced to less-than-significant levels. Construction of the Demolition and Initial Rail Component would not cause a significant delay or cause the LOS of any other study area intersections to worsen. Therefore, all other study area intersections would continue to operate at their projected near-term LOS with addition of the project's construction traffic, as evidenced in Table 5-15.

Table 5-14. Daily Roadway Segment Level of Service Results: Near-Term Year 2020 Base Plus Demolition and Initial Rail Component Construction

Roadway Segment	Segment	Cross-section	Threshold (LOS E)	Near-Term + Demolition and Initial Rail Construction			Near-Term Year 2020 Base			Change in V/C	S?
				ADT	V/C	LOS	ADT	V/C	LOS		
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4 lanes w/RM	40,000	24,496	0.612	C	24,460	0.612	C	0.000	No
	Between Cesar Chavez Parkway and Sampson Street	4 lanes w/RM	40,000	16,296	0.407	B	15,744	0.394	B	0.013	No
	Between Sampson Street and Schley Street	4 lanes w/RM	40,000	17,844	0.446	B	17,292	0.432	B	0.014	No
	Between Schley Street and 28th Street	4 lanes w/RM	40,000	17,420	0.436	B	16,868	0.422	B	0.014	No
	Between 28th Street and Belt Street	4 lanes w/RM	40,000	22,797	0.570	C	22,496	0.562	C	0.008	No
	Between Belt Street and 32nd Street	4 lanes w/RM	40,000	21,349	0.534	C	21,048	0.526	C	0.008	No
28th Street	Between Harbor Drive and Main Street	4 lanes w/RM	40,000	17,435	0.436	B	17,184	0.430	B	0.006	No
	Between Main Street and Boston Avenue	4 lanes w/TWLT	30,000	20,864	0.695	D	20,613	0.687	D	0.008	No
	Between Boston Avenue and National Avenue	3 lanes w/TWLT	22,500[1]	23,228	1.032	**F**	23,076	1.026	**F**	0.006	No
32nd Street	Between Harbor Drive and Norman Scott Road	6 lanes w/RM	50,000	24,911	0.498	B	24,610	0.492	B	0.006	No

Source: Appendix G

Notes:

[1] Capacity is 75% of a 4-Lane Collector w/TWLT.

Bold letter indicates LOS E or F.

To be conservative, the construction analysis includes all cumulative projects through 2020.

ADT = average daily trips; LOS = level of service; RM = raised median; S? = significant impact; TWLT = two-way left turn; V/C = volume to capacity ratio

Table 5-15. Peak Hour Intersection Level of Service Results: Near-Term Year 2020 Base Plus Demolition and Initial Rail Component Construction

		AM Peak Hour				PM Peak Hour				Change in Delay			
		Near-Term + Demolition and Initial Rail Construction		Near-Term Year 2020 Base		Near-Term + Demolition and Initial Rail Construction		Near-Term Year 2020 Base		AM Peak Hour		PM Peak Hour	
#	Intersection	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Change	S?	Change	S?
1	Harbor Drive/Cesar Chavez Parkway	41.6	D	41.0	D	42.5	D	38.0	D	0.6	No	4.5	No
2	Harbor Drive/Sampson Street	44.2	D	43.8	D	46.0	D	44.9	D	0.4	No	1.0	No
3	Harbor Drive/Schley Street	16.4	B	16.3	B	15.7	B	15.7	B	0.1	No	0.0	No
4	Harbor Drive/28th Street	29.4	C	28.2	C	27.4	C	26.6	C	1.2	No	0.8	No
5	Main Street/28th Street	22.3	C	22.2	C	39.4	D	38.8	D	0.2	No	0.5	No
6	Boston Avenue/28th Street	19.1	B	19.1	B	24.1	C	23.9	C	0.0	No	0.1	No
7	National Avenue/28th Street	42.6	D	42.6	D	31.8	C	31.5	C	0.0	No	0.3	No
8	National Avenue/I-5 NB Off-Ramp	18.0	B	17.4	B	16.7	B	14.8	B	0.6	No	1.8	No
9	Harbor Drive/Belt Street	18.8	B	18.8	B	17.3	B	17.0	B	0.0	No	0.3	No
10	Harbor Drive/32nd Street	30.4	C	29.3	C	46.1	D	43.3	D	1.1	No	2.8	No
11	Norman Scott Road/32nd Street/Wabash Boulevard	110.5	**F**	103.2	**F**	72.2	**E**	69.6	**E**	7.3	**Yes**	2.6	**Yes**

Source: Appendix G

Notes:

Bold letter indicates LOS E or F.

To be conservative, the construction analysis includes all cumulative projects through 2020.

LOS = level of service; S? = significant impact

Ramp Intersections

Consistent with Caltrans requirements, the signalized ramp intersections at National Avenue/I-5 northbound off-ramp and Norman Scott Road/32nd Street/Wabash Boulevard were analyzed using ILV procedures. ILV analysis results are displayed in Table 5-16 and analysis worksheets for proposed project conditions are provided in Appendix G (see Appendix D of Appendix G). As shown in the table, the signalized National Avenue/I-5 northbound and Norman Scott Road/32nd Street/Wabash Boulevard ramp intersections are projected to operate at "Under Capacity" during both the AM and PM peak hours during construction of the Demolition and Initial Rail Component. Therefore, project construction impacts on study area ramp intersections would be less than significant, and no mitigation is required.

Table 5-16. Ramp Intersection Capacity Analysis: Near-Term Year 2020 Base Plus Demolition and Initial Rail Component Construction

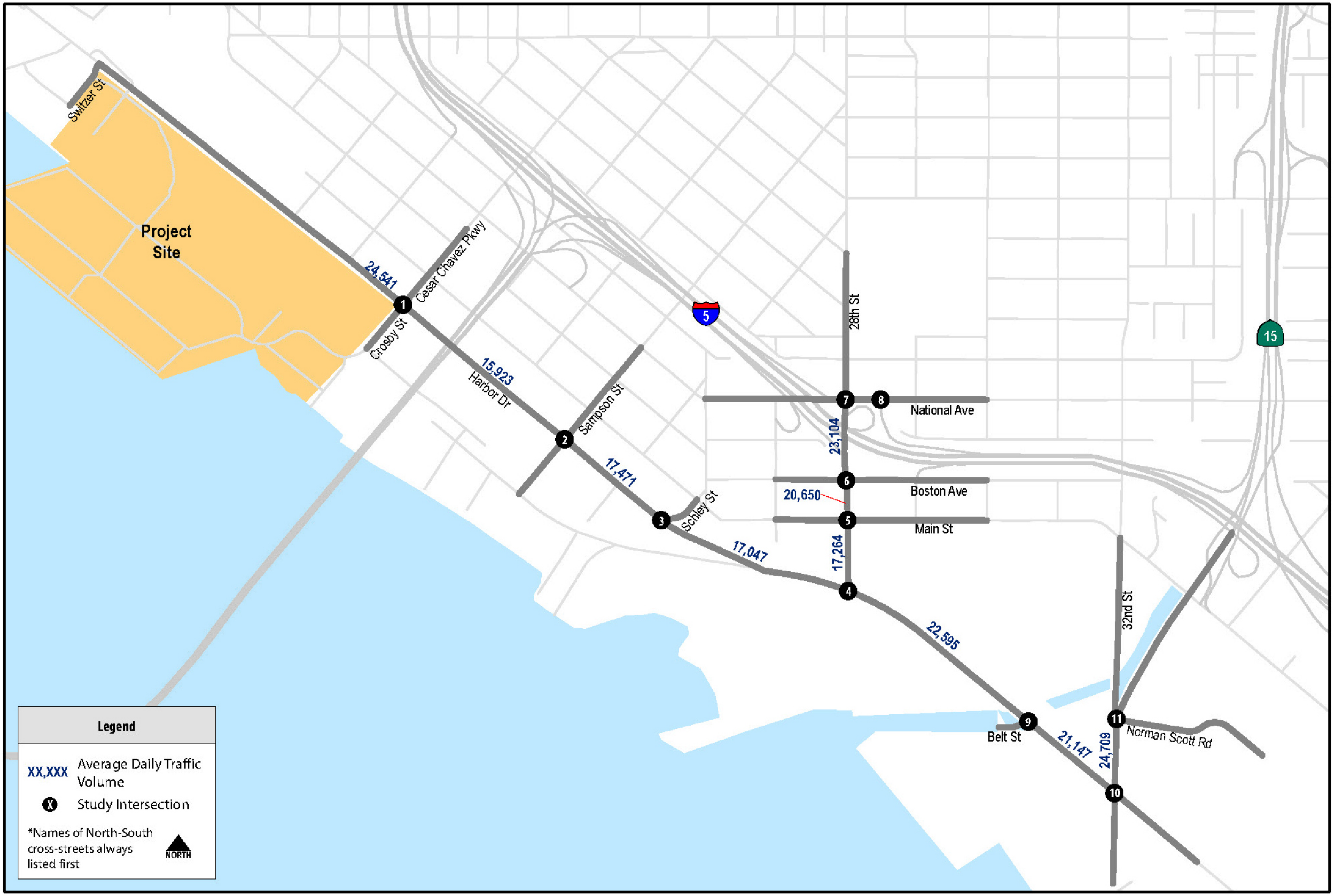
		Near-Term Year 2020 Base			Near-Term + Demolition and Initial Rail Construction		
#	Intersection	Peak Hour	ILV/ Hour	Description	Peak Hour	ILV/ Hour	Description
8	National Avenue/I-5 NB Off-Ramp	AM	722	Under Capacity	AM	735	Under Capacity
		PM	869	Under Capacity	PM	881	Under Capacity
11	Norman Scott Road/32nd Street/Wabash Boulevard	AM	995	Under Capacity	AM	1,044	Under Capacity
		PM	1,061	Under Capacity	PM	1,097	Under Capacity

Source: Appendix G
ILV = Intersection Lane Volume; NB = northbound

In sum, all potential impacts on roadway segments and ramp intersections would be less than significant during construction of the Demolition and Initial Rail Component. Moreover, construction of the project would not change existing transit, pedestrian, or bicycle facilities, require their redesign, or result in demand that would create insufficient capacity. However, construction-related traffic would add more than 1 second of delay to the intersection of Norman Scott Road/32nd Street/Wabash Boulevard during the AM and PM peak hours, and therefore would result in a cumulatively significant impact on this intersection (**Impact-C-TRA-1**). Consequently, construction of the Demolition and Initial Rail Component has the potential to conflict with applicable plans, ordinances, and policies related to the performance of the circulation system, and impacts would be cumulatively significant.

Operation

The Demolition and Initial Rail Component is the first component of the TAMT plan and would be implemented in the near term. Construction of this component is anticipated to begin in 2017 and be completed by 2020, with operations beginning once construction is complete. As mentioned, the District and City of San Diego identified 14 near-term cumulative projects close to the project site that could potentially contribute traffic to the transportation network within the project study area. It is anticipated that these near-term cumulative projects would be implemented within the same



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Source: Chen Ryan Associates, 2016

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Figure 5-8
Study Area Roadways: Near-Term Year 2020 and Demolition and Initial Rail Component Volumes
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

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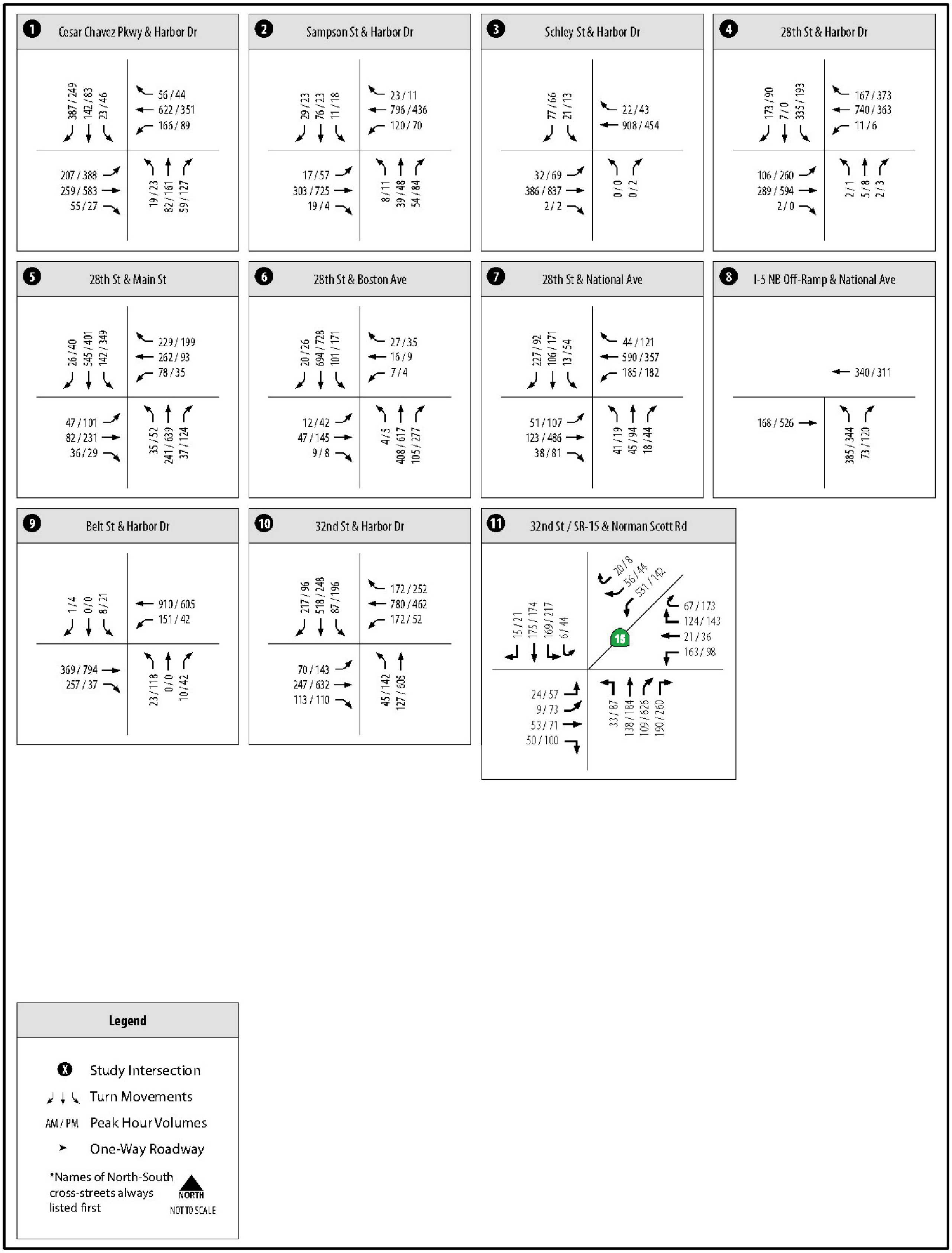

Source: Chen Ryan Associates, 2016

Figure 5-9
Study Area Intersections: Near-Term Year 2020 and Demolition and Initial Rail Component Volumes
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

timeframe as the Demolition and Initial Rail Component. As such, these projects were included in the Near-Term Year 2020 Base plus Demolition and Initial Rail Component conditions scenario to provide an accurate background for comparing traffic impacts associated with the Demolition and Initial Rail Component. Implementation of these near-term cumulative projects would result in a combined total of 48,952 average daily trips (ADT).

Implementation of the Demolition and Initial Rail Component would result in operational impacts on the surrounding transportation network from increased throughput and trucking operations facilitated by the various project improvements included in this initial phase. It should be noted that there would be no increase in throughput capacity for Dry Bulk or Liquid Bulk with implementation of the Demolition and Initial Rail Component. The Demolition and Initial Rail Component is anticipated to generate 7 additional truckloads of cargo each day as well as require 92 additional employees to be at the project site each day. This would result in a total of 318 ADT, including 71 trips during the AM peak hour and 71 trips during the PM peak hour. The discussion below details the impacts that additional throughput and employees would have on existing roadway segments and intersections within the project study area.

Roadway Segments

Roadway segment geometrics under Near-Term Year 2020 Base plus Demolition and Initial Rail Component conditions were assumed to be identical to existing conditions. Near-Term Year 2020 Base plus project traffic volumes were derived by combining the Near-Term Year 2020 Base traffic volumes and the Demolition and Initial Rail Component trip assignment volumes. Table 5-17 shows Near-Term Year 2020 Base and Near-Term Year 2020 Base plus Demolition and Initial Rail Component LOS conditions for the roadway segments in the project study area, while Figure 5-8 illustrates the Near-Term Year 2020 Base plus Demolition and Initial Rail Component volumes on study area roadways. As shown, all roadway segments are projected to operate at LOS D or better under Near-Term Year 2020 Base plus Demolition and Initial Rail Component conditions, except 28th Street between Boston Avenue and National Avenue, which would operate at LOS F.

The traffic associated with the Demolition and Initial Rail Component would not result in an increase in V/C ratio or further deterioration in LOS along the roadway segment of 28th Street between Boston Avenue and National Avenue, and therefore would not exceed the City of San Diego's Significance Criteria outlined in Table 5-5. Therefore, impacts on roadway segments would be less than significant, and no mitigation is required.

Intersections

Intersection geometrics under Near-Term Year 2020 Base plus Demolition and Initial Rail Component conditions were assumed to be identical to existing conditions. Table 5-18 shows Near-Term Year 2020 Base and Near-Term Year 2020 Base plus Demolition and Initial Rail Component peak hour LOS conditions for the intersections in the project study area, while Figure 5-9 illustrates the Near-Term Year 2020 Base plus Demolition and Initial Rail Component volumes on study area intersections. As indicated, all intersections in the project study area are projected to operate at LOS D or better during both peak hours under Near-Term Year 2020 Base plus Demolition and Initial Rail Component conditions, except the Norman Scott Road/32nd Street/Wabash Boulevard intersection, which would operate at LOS F in the AM peak hour and LOS E in the PM peak hour. <u>With the addition of Demolition and Initial Rail Component traffic, operations at this intersection</u>

would remain at LOS F and E in the AM and PM peak hour, respectively, and the project would not result in an increase in delay that would exceed the City's thresholds. Therefore, a less-than-significant impact would occur, and no mitigation is required.

~~The traffic associated with the Demolition and Initial Rail Component would worsen the delay at this intersection by 1.9 seconds during the AM peak hour and 0.8 second during the PM peak hour. Based on the City of San Diego's Significance Criteria, which identify a threshold of 1.0 second of additional delay for intersections operating at LOS F and 2.0 seconds of additional delay for intersections operating at LOS E, impacts at the Norman Scott Road/32nd Street/Wabash Boulevard intersection would be cumulatively significant during the AM peak hour (**Impact-C-TRA-2**). The Demolition and Initial Rail Component's impact on the Norman Scott Road/32nd Street/Wabash Boulevard intersection would be mitigated by adding a westbound right-turn overlap phase (**MM-TRA-2**). This would reduce the unmitigated delay associated with the project by 5.0 seconds during the AM peak hour and by 10.3 seconds during the PM peak hour and would effectively reduce delay at this intersection to below current levels. The addition of Demolition and Initial Rail Component traffic would not cause any other intersections to operate at LOS E or F under Near-Term Year 2020 Base plus Demolition and Initial Rail Component conditions or cause an increase in delay of greater than 1.0 second at any other failing intersections.~~

Ramp Intersection Capacity

As discussed, the signalized ramp intersections of National Avenue/I-5 northbound off-ramp and Norman Scott Road/32nd Street/Wabash Boulevard were analyzed under ILV procedures. Both signalized ramp intersections would continue to operate "Under Capacity" with implementation of the Demolition and Initial Rail Component, as shown in Table 5-19. Therefore, impacts on signalized ramp intersections at the National Avenue/I-5 northbound off-ramp and Norman Scott Road/32nd Street/Wabash Boulevard would be less than significant, and no mitigation is required.

Table 5-17. Peak Hour Roadway Segment LOS Results: Near-Term Year 2020 Base Plus Demolition and Initial Rail Component Conditions

Roadway	Segment	Cross-Section	Threshold (LOS E)	Near-Term + Demolition and Initial Rail Component			Near-Term Year 2020 Base		
				ADT	V/C	LOS	ADT/V/C/LOS	Δ	S?
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4 lanes w/RM	40,000	24,54~~3~~1	0.614	C	24,460/0.612/C	0.002	N
	Between Cesar Chavez Parkway and Sampson Street	4 lanes w/RM	40,000	15,923~~0~~	0.398	B	15,744/0.394/B	0.004	N
	Between Sampson Street and Schley Street	4 lanes w/RM	40,000	17,47~~8~~1	0.437	B	17,292/0.432/B	0.005	N
	Between Schley Street and 28th Street	4 lanes w/RM	40,000	17,0~~5~~47	0.426	B	16,868/0.422/B	0.004	N
	Between 28th Street and Belt Street	4 lanes w/RM	40,000	22,~~660~~595	0.56~~6~~5	C	22,496/0.562/C	0.0043	N
	Between Belt Street and 32nd Street	4 lanes w/RM	40,000	21,~~212~~147	0.~~530~~529	C	21,048/0.526/C	0.0043	N
28th Street	Between Harbor Drive and Main Street	4 lanes w/RM	40,000	17,2~~0~~64	0.43~~0~~2	B	17,184/0.430/B	0.00~~0~~2	N
	Between Main Street and Boston Avenue	4 lanes w/TWLT	30,000	20,6~~3~~50	0.688	D	20,613/0.687/D	0.001	N
	Between Boston Avenue and National Avenue	3 lanes w/TWLT	22,500[1]	23,~~090~~104	1.02~~6~~7	**F**	23,076/1.026/**F**	0.00~~0~~1	N
32nd Street	Between Harbor Drive and Norman Scott Road	6 lanes w/RM	50,000	24,~~774~~709	0.49~~5~~4	B	24,610/0.492/B	0.00~~3~~2	N

Source: Appendix G

Notes:

[1] Capacity is 75% of a 4-Lane Collector w/TWLT.

Bold letter indicates a significant impact.

ADT = average daily trips; LOS = level of service; RM = raised median; S? = Indicates if change in V/C ratio is significant; TWLT = two-way left turn; V/C = volume to capacity ratio; Δ = change in V/C ratio

Table 5-18. Peak Hour Intersection LOS Results: Near-Term Year 2020 Base Plus Demolition and Initial Rail Component Conditions

#	Intersection	AM Peak Hour Avg. Delay (sec.)	AM Peak Hour LOS	PM Peak Hour Avg. Delay (sec.)	PM Peak Hour LOS	Delay w/o Project (sec.) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec.)	S?
1	Harbor Drive/Cesar Chavez Parkway	41.0	D	39.~~6~~7	D	41.0/38.0	D/D	0.0/1.~~6~~7	No
2	Harbor Drive/Sampson Street	44.0	D	45.5	D	43.8/44.9	D/D	0.2/0.6	No
3	Harbor Drive/Schley Street	16.4	B	15.7	B	16.3/15.7	B/B	0.1/0.0	No
4	Harbor Drive/28th Street	28.~~4~~6	C	~~26.7~~27.0	C	28.2/26.6	C/C	0.~~2~~4/0.~~1~~4	No
5	Main Street/28th Street	22.2	C	~~38.8~~39.3	D	22.2/38.8	C/D	0.0/0.~~0~~5	No
6	Boston Avenue/28th Street	19.1	B	~~23.9~~24.0	C	19.1/23.9	B/C	0.0/0.~~0~~1	No
7	National Avenue/28th Street	42.6	D	31.5	C	42.6/31.5	D/C	0.0/0.0	No
8	National Avenue/I-5 NB Off-Ramp	17.~~4~~6	B	16.4	B	17.4/14.8	B/B	0.~~0~~2/1.6	No
9	Harbor Drive/Belt Street	18.~~9~~8	B	17.~~2~~1	B	18.8/17.0	B/B	0.0/0.1~~/0.2~~	No
10	Harbor Drive/32nd Street	~~30.2~~29.7	C	~~44.4~~43.5	D	29.3/43.3	C/D	0.~~9/1.1~~4/0.2	No
11	Norman Scott Road/32nd Street/Wabash Boulevard	~~105.1~~103.6	**F**	~~70.4~~69.6	**E**	103.2/69.6	**F/E**	~~1.9/~~0.~~8~~4/0.0	~~**Yes**~~ No

Source: Appendix G
Bold letter indicates a significant impact.
LOS = level of service; NB = northbound; S? = indicates a significant impact

Source: Chen Ryan Associates, 2016

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Figure 5-10
Truck Traffic Redistribution: Near-Term Year 2020 + Demolition and Initial Rail Component - Alternative Gate Scenario
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

Source: Chen Ryan Associates, 2016

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Figure 5-11
Traffic Volumes: Near-Term Year 2020 + Demolition and Initial Rail Component - Alternative Gate Scenario
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

Table 5-19. Peak Hour Ramp Intersection Capacity Analysis: Near-Term Year 2020 Base Plus Demolition and Initial Rail Component Conditions

#	Intersection	Peak Hour	ILV/Hour		Description
			Near-Term Base	Near-Term + Demolition and Initial Rail Component	
8	National Avenue/I-5 NB Off-Ramp	AM	722	72~~3~~5	Under Capacity
		PM	869	~~869~~870	Under Capacity
11	Norman Scott Road/32nd Street/ Wabash Boulevard	AM	995	1,~~026~~014	Under Capacity
		PM	1,061	1,~~086~~075	Under Capacity

Source: Appendix G.
NB = northbound; ILV = Intersection Lane Volume

In sum, all potential impacts on roadway segments, intersections, and ramp intersections would be less than significant during operation of the Demolition and Initial Rail Component. ~~Moreover, the project would not change existing transit, pedestrian, or bicycle facilities, require their redesign, or result in demand that would create insufficient capacity. However, operational traffic would add more than 1 second of delay to the intersection of Norman Scott Road/32nd Street/Wabash Boulevard during the AM peak hour, and therefore would result in a significant cumulative impact on this intersection (**Impact-C-TRA-2**). Consequently, operation of the Demolition and Initial Rail Component has the potential to~~Consequently, operation of the Demolition and Initial Rail Component would not conflict with applicable plans, ordinances, and policies related to the performance of the circulation system, and impacts would be ~~cumulatively~~less than significant.

Near-Term Year 2020 Plus Demolition and Initial Rail Component – Alternative Gate Scenario

The proposed TAMT plan also identifies an alternative gate concept that would serve as the primary entry and exit location for the Refrigerated Container and Multi-Purpose General Cargo nodes. The alternative gate would be potentially sited in the northeast corner of the project site and would provide access directly onto Harbor Drive. According to the proposed TAMT plan, the Dry and Liquid Bulk nodes would continue to utilize the existing gate off Caesar Chavez Parkway, particularly for domestic bulk shipments. In the event the alternative gate concept is selected for implementation, the exact timing that implementation would occur is unknown at this time. Therefore, to provide a conservative analysis, it has been assumed that the alternative gate scenario could be implemented in the near term concurrently with the Demolition and Initial Rail Component.

Implementation of the proposed alternative gate location would result in a redistribution of both near-term and proposed project truck traffic from the Refrigerated Container and Multi-Purpose General Cargo nodes. It is assumed that employee traffic would continue to use the existing Crosby street gate. Figures 5-10 and 5-11 display the assumed redistribution of both Near-Term Year 2020 Base and Demolition and Initial Rail Component truck traffic between the two gate locations and the anticipated traffic volumes at both gates and along Harbor Drive.

Roadway Segments

Based on the assumed redistribution of truck trips, Harbor Drive between Beardsley Street and Cesar Chavez Parkway is the only study roadway segment that is anticipated to experience a change in ADT due to the proposed alternative gate. As shown in Table 5-20, the roadway segment of Harbor Drive between Beardsley Street and Cesar Chavez Parkway is anticipated to operate at LOS C with the addition of Demolition and Initial Rail Component traffic utilizing the alternative gate location.

Table 5-20. Roadway Segment LOS Results: Near-Term Year 2020 Base Plus Demolition and Initial Rail Component – Alternative Gate Scenario

				Near-Term + Alternative Gate			Existing		
Roadway	Segment	Cross-Section	Threshold (LOS E)	ADT	V/C	LOS	ADT/V/C/LOS	Δ	S?
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4 Lanes w/RM	40,000	24,550	0.614	C	24,460/0.612/C	0.002	N

Source: Appendix G

Notes:

ADT = average daily trips; LOS = level of service; RM = raised median; S? = Indicates if change in V/C ratio is significant; V/C = volume to capacity ratio; Δ = change in V/C ratio

Based on the City of San Diego's Significance Criteria, outlined in Table 5-5, the traffic associated with the Demolition and Initial Rail Component would not cause any roadways segments to operate at LOS E or F. Therefore, implementation of the proposed alternative gate location would not result in any additional impacts on roadway segment operations not previously identified under Near-Term Year 2020 Base plus Demolition and Initial Rail Component conditions.

Intersections

Based on the assumed redistribution of truck trips, the Harbor Drive/Cesar Chavez Parkway intersection (Main Gate) is the only study intersection that is anticipated to experience a change in peak hour volumes due to the alternative gate. All other key study intersections are anticipated to operate at the same conditions as under the Near-Term Year 2020 Base plus Demolition and Initial Rail Component conditions identified in Table 5-18 above. Table 5-21 displays intersection LOS and average vehicle delay resulting from implementation of the Demolition and Initial Rail component with the alternative gate location. As shown in Table 5-21, both affected intersections are anticipated to operate at LOS D or better under the Near-Term Year 2020 Base plus Demolition and Initial Rail Component – Alternative Gate Scenario.

Table 5-21. Peak Hour Intersection LOS Results: Near-Term Year 2020 Base Plus Demolition and Initial Rail Component – Alternate Gate Scenario

		AM Peak Hour		PM Peak Hour					
#	Intersection	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Delay w/o Project (sec.) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec.)	S?
1	Harbor Drive/ Cesar Chavez Parkway	41.9	D	38.~~8~~<u>7</u>	D	41.0/38.0	D/D	0.9/0.~~8~~<u>7</u>	No
12	Harbor Drive/ Alternative Gate	21.~~7~~<u>8</u>	C	~~33.9~~<u>34.4</u>	C	N/A	N/A	21.~~7/33.9~~<u>8/34.4</u>	No

Source: Appendix G
Bold letter indicates a significant impact.
LOS = level of service; S? = indicates a significant impact

Based on the City of San Diego's Significance Criteria, outlined in Table 5-5, the traffic associated with this scenario would not cause any intersections to operate at LOS E or F. Therefore, implementation of the proposed alternative gate location would not result in any additional impacts on intersection operations not previously identified under Near-Term Year 2020 Base plus Demolition and Initial Rail Component conditions.

Future Year 2035 Plus Full TAMT Plan Buildout Conditions

Construction

Full buildout of the TAMT plan includes demolition of Warehouse C, demolition of the existing molasses tanks, construction of an up to 100,000-square-foot semi-permanent building, installation of up to five gantry cranes, improvements to the centralized gate, and additional improvements to the Dry Bulk node to improve storage and conveyance efficiencies. Due the programmatic and market-driven nature of the TAMT plan, the timing, potential for overlap, and specific construction plans associated with these future components, unlike those associated with the Demolition and Initial Rail Component, are unknown at the time of this analysis.

Consequently, given the lack of construction and schedule details at this time, construction activities associated with the full TAMT plan buildout could result in a cumulatively considerable traffic impact when combined with construction traffic from past, present, and reasonably foreseeable future projects (**Impact-C-TRA-~~3~~<u>2</u>**). As discussed in Section 4.10, *Transportation, Circulation, and Parking*, without specific construction details, it cannot be determined with certainty that the project-level traffic impacts would be reduced to less-than-significant levels with the incorporation of mitigation such as a project-specific traffic study and construction traffic control plan (**MM-TRA-3**). Therefore, the full TAMT plan buildout's incremental contribution to temporary construction-related traffic congestion would be cumulatively considerable after mitigation is incorporated.

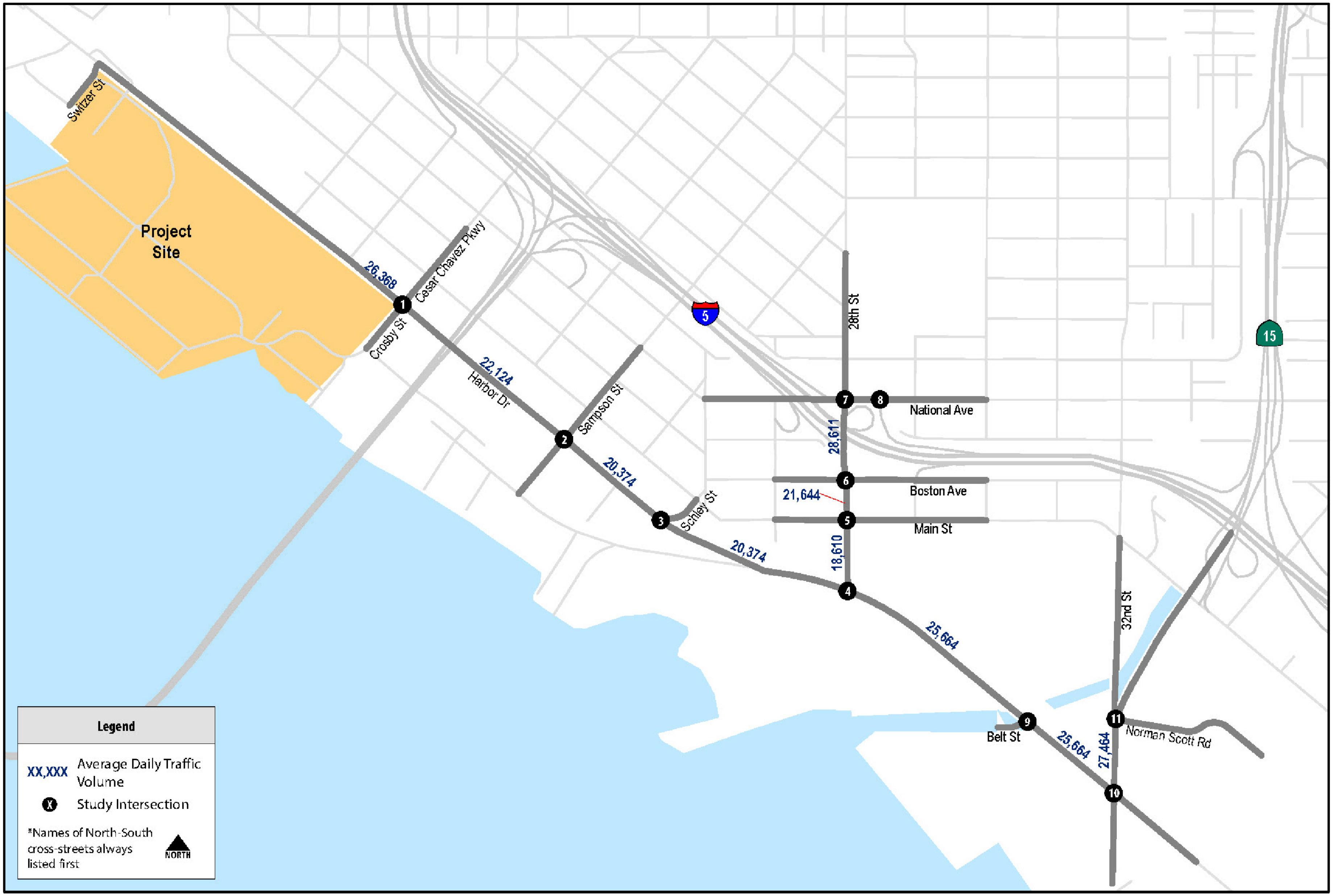
Operation

The Future Year 2035 scenario evaluates potential operational traffic impacts associated with the full buildout of the proposed TAMT plan, including the Demolition and Initial Rail Component.

Future Year 2035 plus project traffic volumes were derived by combining the Future Year 2035 Base traffic volumes and the full TAMT plan buildout trip assignment volumes.

Roadway Segments

Roadway segment geometrics under Future Year 2035 plus full TAMT plan buildout conditions were assumed to be identical to existing conditions. Table 5-22 shows Future Year 2035 Base and Future Year 2035 plus full TAMT plan buildout LOS conditions for the roadway segments in the project study area, while Figure 5-12 illustrates the Future Year 2035 plus full TAMT plan buildout volumes on study area roadways. As shown, all key study roadway segments are projected to operate at acceptable LOS D or better under Future Year 2035 plus full TAMT plan buildout conditions, except 28th Street between Boston Avenue and National Avenue, which would operate at LOS F. Based on the City of San Diego's criteria, outlined in Table 5-5 above, the addition of TAMT plan buildout traffic to this roadway segment would increase the V/C ratio by 0.~~036~~040 where the threshold is 0.01 for roadway segments operating at LOS F, resulting in a cumulatively significant impact (**Impact-C-TRA-4~~3~~**). Therefore, impacts would be cumulatively significant and mitigation is required.



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Source: Chen Ryan Associates, 2016

Figure 5-12
Study Area Roadways: Future Year 2035 and Full TAMT Plan Buildout Volumes
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Table 5-22. Roadway Segment LOS Results: Future Year 2035 Base Plus Full TAMT Plan Buildout Conditions

Roadway	Segment	Classification	Threshold (LOS E)	Future Year 2035 + Full TAMT Plan Buildout			Future Year 2035 Base	Δ	S?
				ADT	V/C	LOS	ADT/V/C/LOS		
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4-Lane Major	40,000	26,~~392~~368	0.~~660~~659	C	25,050/0.626/C	0.03~~4~~3	No
	Between Cesar Chavez Parkway and Sampson Street	4-Lane Major	40,000	22,~~155~~124	0.55~~4~~3	C	18,800/0.470/B	0.08~~4~~3	No
	Between Sampson Street and Schley Street	4-Lane Major	40,000	20,~~405~~374	0.5~~1~~09	B	17,050/0.426/B	0.08~~4~~3	No
	Between Schley Street and 28th Street	4-Lane Major	40,000	20,~~405~~374	0.5~~1~~09	B	17,050/0.426/B	0.08~~4~~3	No
	Between 28th Street and Belt Street	4-Lane Major	40,000	~~26,010~~25,664	0.~~650~~642	C	24,000/0.600/C	0.~~050~~042	No
	Between Belt Street and 32nd Street	4-Lane Major	40,000	~~26,010~~25,664	0.~~650~~642	C	24,000/0.600/C	0.~~050~~042	No
28th Street	Between Harbor Drive and Main Street	4-Lane Major	40,000	18,~~295~~610	0.465~~7~~	B	16,950/0.424/B	0.0~~3~~41	No
	Between Main Street and Boston Avenue	4-Lane Collector w/TWLT	30,000	21,~~565~~644	0.721~~9~~	D	20,220/0.674/D	0.04~~5~~7	No
	Between Boston Avenue and National Avenue	3-Lanes Collector w/TWLT	22,500	28,~~532~~611	1.~~268~~272	**F**	27,720/1.232/**F**	0.~~036~~040	**Yes**
32nd Street	Between Harbor Drive and Norman Scott Road	6-Lane Major	50,000	27,~~810~~464	0.~~556~~549	B	25,800/0.516/B	0.~~040~~033	No

Source: Appendix G

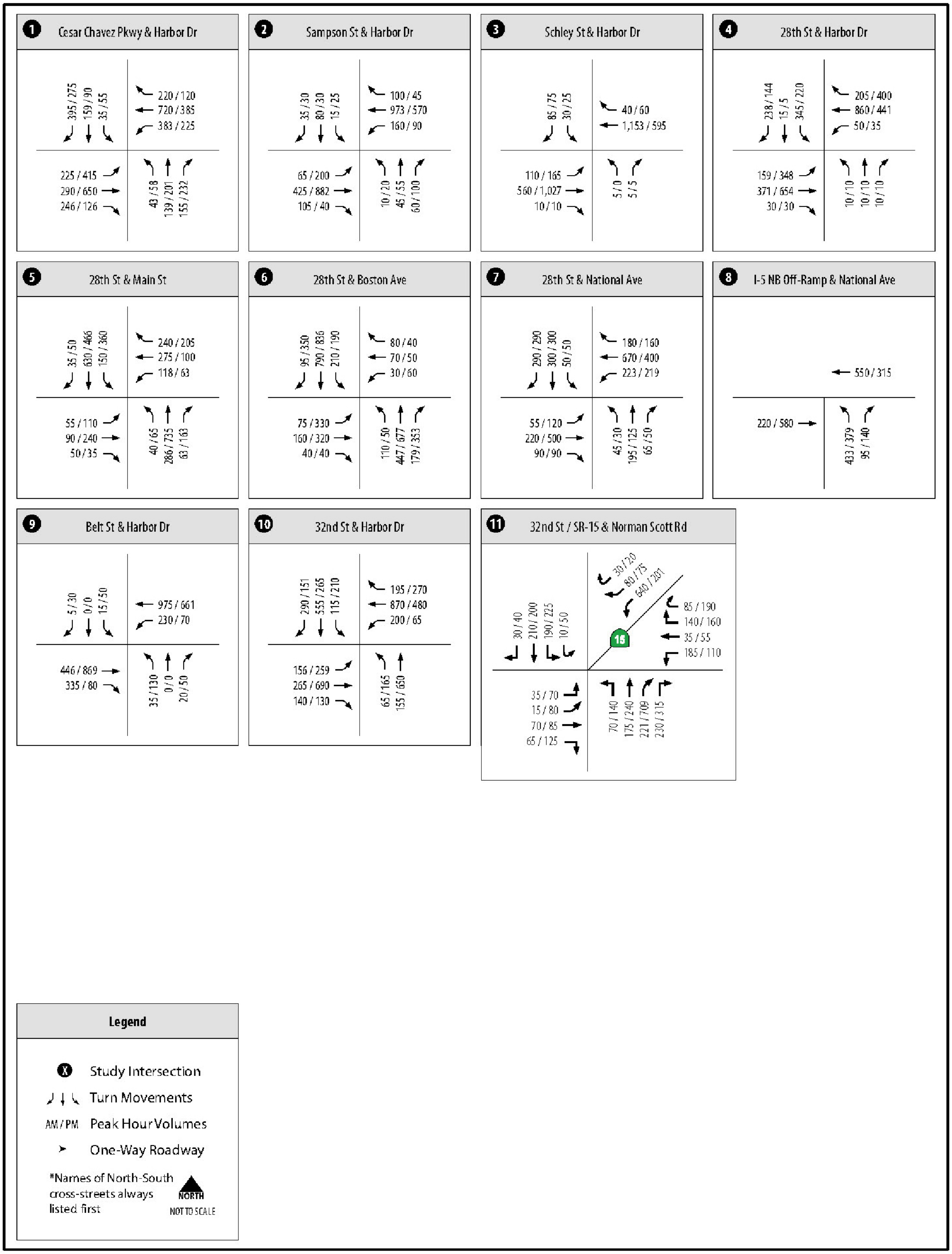
ADT = average daily trips; LOS = level of service; S? = Indicates if change in V/C ratio is significant; TWLT = two-way left turn; V/C = volume to capacity ratio; Δ = change in V/C ratio.

Intersections

Intersection geometrics under Future Year 2035 plus full TAMT plan buildout conditions were assumed to be identical to existing conditions. Table 5-23 shows Future Year 2035 and Future Year 2035 plus TAMT plan buildout peak hour LOS conditions for the intersections in the project study area, while Figure 5-13 illustrates the Future Year 2035 plus TAMT plan buildout volumes on study area intersections. As shown, all key study intersections are projected to operate at LOS D or better under Future Year 2035 plus full TAMT plan buildout conditions, except the following two intersections.

- National Avenue and 28th Street – LOS F during AM peak hour and LOS E during PM peak hour
- Norman Scott Road/32nd Street/Wabash Boulevard – LOS F during AM peak hour and LOS E during PM peak hour

Based on the City of San Diego's criteria, the traffic associated with the proposed project would not worsen the delay by more than 1 second or result in further deterioration in peak hour intersection LOS at the intersection of National Avenue and 28th Street. However, the traffic associated with the proposed project would worsen the delay at the Norman Scott Road/32nd Street/Wabash Boulevard intersection by ~~25.0~~17.5 seconds during the AM peak hour and ~~14~~8.2 seconds during the PM peak hour, where a threshold of 1.0 second of additional delay applies to LOS F and a threshold of 2.0 seconds of additional delay applies to LOS E. Additionally, the addition of TAMT plan buildout traffic would cause intersection operations to degrade from LOS E to LOS F during the AM and PM peak hours. Therefore, the project would have a significant cumulative impact at the Norman Scott Road/32nd Street/Wabash Boulevard intersection (**Impact-C-TRA-~~5~~4**).



Source: Chen Ryan Associates, 2016

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Figure 5-13
Study Area Intersections: Future Year 2035 and Full TAMT Plan Buildout Volumes
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Table 5-23. Peak Hour Intersection LOS Results: Future Year 2035 Base Plus Full TAMT Plan Buildout Conditions

#	Intersection	AM Peak Hour		PM Peak Hour		Delay w/o Project (sec) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec)	Significant Impact?
		Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS				
1	Harbor Drive/Cesar Chavez Parkway	53.~~5~~9	D	~~52.4~~53.0	D	50.6/39.6	D/D	~~2.9/12.8~~3.3/13.4	No
2	Harbor Drive/Sampson Street	53.~~7~~6	D	53.~~1~~0	D	50.9/53.0	D/D	2.~~8~~7/0.~~1~~0	No
3	Harbor Drive/Schley Street	26.6	C	20.4	C	23.2/19.4	B/B	3.4/1.0	No
4	Harbor Drive/28th Street	32.~~4~~7	C	~~30.1~~32.9	C	28.8/28.2	C/C	3.~~6/1.~~9/4.7	No
5	Main Street/28th Street	22.~~4~~7	C	~~39.9~~42.5	D	22.2/39.2	C/D	0.~~2/0.7~~5/3.3	No
6	Boston Avenue/28th Street	28.~~0~~1	C	~~38.7~~39.2	D	27.7/37.4	C/D	0.~~3~~4/1.~~3~~8	No
7	National Avenue/28th Street	122.5	**F**	72.~~0~~3	**E**	122.5/71.4	**F/E**	0.0/0.~~6~~9	No
8	National Avenue/I-5 NB Off-Ramp	~~19.7~~20.1	B	18.~~2~~5	B	18.9/17.5	B/B	1.2/1.0~~.8/0.7~~	No
9	Harbor Drive/Belt Street	~~23.2~~22.9	C	~~20.1~~19.8	C	22.3/19.1	C/B	0.~~9/1.~~6/0.7	No
10	Harbor Drive/32nd Street	~~41.8~~36.6	C	~~53.8~~51.7	D	32.3/44.2	C/D	~~9~~4.3/7.5~~/9.6~~	No
11	Norman Scott Road/32nd Street/Wabash Boulevard	~~106.5~~99.0	**F**	~~81~~75.4	**F**	81.5/67.2	**E/E**	~~25.0/14~~17.5/8.2	**Yes**

Source: Appendix G

LOS = level of service; NB = northbound

Ramp Intersection Capacity

Consistent with Caltrans requirements, the signalized ramp intersections of National Avenue/I-5 northbound off-ramp and Norman Scott Road/32nd Street/Wabash Boulevard were analyzed using ILV procedures. As shown in Table 5-24, these signalized ramp intersections are projected to operate at "At Capacity" or better during both the AM and PM peak hours under Future Year 2035 plus TAMT plan buildout conditions. Therefore, impacts from past, present, and reasonably foreseeable future projects would not be cumulatively significant.

Table 5-24. Ramp Intersection Capacity Analysis: Future Year 2035 Base Plus Full TAMT Plan Buildout Conditions

#	Intersection	Peak Hour	ILV/Hour: Future Year 2035 Base	ILV/Hour: Future Year 2035 Base + Full TAMT Plan Buildout	Description
8	National Avenue/I-5 NB Off-Ramp	AM	950	~~972~~983	Under Capacity
		PM	930	95~~1~~9	Under Capacity
11	Norman Scott Road/32nd Street/Wabash Boulevard	AM	1,095	1,~~286~~221	At Capacity
		PM	1,083	1,~~257~~198	~~At~~Under Capacity

Source: Appendix G
ILV = Intersection Lane Volume; NB = northbound

Freeway Mainline Segments

Table 5-25 shows Future Year 2035 Base and Future Year 2035 plus full TAMT plan buildout peak hour LOS conditions for the freeway mainline segments in the project study area. As indicated, all freeway segments within the project study area are projected to operate at LOS D or better, except for the following.

- I-5 northbound between SR-94 & Imperial Avenue (LOS F)
- I-5 southbound between SR-94 & Imperial Avenue (LOS E)
- I-5 northbound between Imperial Avenue & SR-75 (LOS E)
- I-5 northbound between SR-75 & 28th Street (LOS E)
- I-5 northbound between 28th Street & SR-15 (LOS F)
- I-5 southbound between 28th Street & SR-15 (LOS E)
- I-5 northbound between SR-15 & Main Street (LOS F)
- I-5 southbound between SR-15 & Main Street (LOS F)
- SR-15 northbound between Market Street & Ocean View Boulevard (LOS E)
- SR-15 southbound between Market Street & Ocean View Boulevard (LOS F)

Table 5-25. Freeway Mainline Segments: Future Year 2035 Base Plus Full TAMT Plan Buildout Conditions

Freeway	Segment	ADT	Direction	Peak Hour Volume	With Project V/C	With Project LOS	Base V/C	Base LOS	Δ	S?
I-5	SR-94 & Imperial Avenue	219,100	NB	11,700	1.080	**F**	1.070	**F**	0.010	**Y**
			SB	10,200	0.940	**E**	0.940	**E**	0.000	N
	Imperial Avenue & SR-75	196,400	NB	10,500	0.970	**E**	0.960	**E**	0.010	N
			SB	9,700	0.900	D	0.900	D	0.000	N
	SR-75 & 28th Street	191,600	NB	11,900	0.970	**E**	0.970	**E**	0.000	N
			SB	9,500	0.880	D	0.880	D	0.000	N
	28th Street & SR-15	178,000	NB	11,100	1.180	**F**	1.170	**F**	0.010	**Y**
			SB	8,800	0.940	**E**	0.940	**E**	0.000	N
	SR-15 & Main Street	221,500	NB	13,800	1.130	**F**	1.120	**F**	0.010	**Y**
			SB	13,200	1.120	**F**	1.120	**F**	0.000	N
SR-15	SR-94 & Market Street	122,800	NB	6,200	0.730	C	0.720	C	0.010	N
			SB	6,900	0.820	D	0.800	D	0.020	N
	Market Street & Ocean View Boulevard	131,200	NB	6,800	0.960	**E**	0.950	**E**	0.010	N
			SB	7,4300	1.0~~5~~40	**F**	1.020	**F**	0.0~~3~~20	**Y**
	Ocean View Boulevard & I-5	124,000	NB	5,600	0.660	C	0.650	C	0.010	N
			SB	5,600	0.520	B	0.510	B	0.010	N
	I-5 & Norman Scott Road	32,400	NB	1,400	0.300	A	0.300	A	0.000	N
			SB	1,400	0.300	A	0.280	A	0.020	N

ADT = average daily trips; LOS = level of service; NB = northbound; SB = southbound; S? = Indicates a significant impact; V/C = volume to capacity ratio; Δ = change in V/C ratio

The addition of full TAMT plan buildout traffic onto Future Year 2035 Base conditions would result in a change in V/C ratio greater than 0.005 for freeway segments operating at LOS F at the following key study area freeway segments.

- I-5 northbound between SR-94 & Imperial Avenue (LOS F)
- I-5 northbound between 28th Street & SR-15 (LOS F)
- I-5 northbound between SR-15 & Main Street (LOS F)
- SR-15 southbound between Market Street & Ocean View Boulevard (LOS F)

Based on the City of San Diego's Significance Criteria, the traffic associated with full TAMT plan buildout would exceed the allowable threshold of a 0.005 V/C ratio increase for freeway segments operating at LOS F, and therefore would result in a cumulatively significant impact (**Impact-C-TRA-~~6~~5**).

Future Year 2035 Plus Full TAMT Plan Buildout – Alternative Gate Scenario

As mentioned, the proposed TAMT plan also identifies an alternative gate concept for the Refrigerated Container and Multi-Purpose General Cargo nodes. The alternative gate would be potentially sited in the northeast corner of the project site and would provide access directly onto Harbor Drive. It would serve as the primary entry and exit location for the Refrigerated Container node and the Multi-Purpose General Cargo node. According to the proposed TAMT plan, the Dry and Liquid Bulk nodes would continue to utilize the existing gate off Caesar Chavez Parkway, particularly for domestic bulk shipments. Because the exact timing of when, if at all, the alternative gate scenario would be implemented, it has been assumed that implementation would occur in the near term concurrently with the Demolition and Initial Rail Component. Consequently, the alternative gate scenario would be fully operational in the Future Year 2035 along with full buildout of the TAMT plan.

Implementation of the proposed alternative gate location would result in a redistribution of both Future Year 2035 Base and proposed project truck traffic from the Refrigerated Container and Multi-Purpose General Cargo nodes. It is assumed that employee traffic would continue to use the existing Crosby street gate. Figures 5-14 and 5-15 display the assumed redistribution of both Future Year 2035 and full TAMT plan buildout truck traffic between the two gate locations and the anticipated traffic volumes at both gates and along Harbor Drive.

Roadway Segments

Based on the assumed redistribution of truck trips, Harbor Drive between Beardsley Street and Cesar Chavez Parkway is the only study roadway segment that is anticipated to experience a change in ADT due to the proposed alternative gate. As shown in Table 5-26, the roadway segment of Harbor Drive between Beardsley Street and Cesar Chavez Parkway is anticipated to operate at LOS C with the addition of Demolition and Initial Rail Component traffic utilizing the alternative gate location.

Table 5-26. Roadway Segment LOS Results: Future Year 2035 Plus Full TAMT Plan Buildout – Alternative Gate Scenario

Roadway	Segment	Cross-Section	Threshold (LOS E)	Future Year 2035 + Alternative Gate			Future Year 2035 Base	Δ	S?
				ADT	V/C	LOS	ADT/V/C/LOS		
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4 Lanes w/RM	40,000	27,~~102~~ 079	0.67~~8~~7	C	25,050/0.626/C	0.05~~2~~1	N

Source: Appendix G

Notes:

ADT =- average daily trips; LOS = level of service; RM = raised median; S? = Indicates if change in V/C ratio is significant; V/C = volume to capacity ratio; Δ = change in V/C ratio

Source: Chen Ryan Associates, 2016

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Figure 5-14
Truck Traffic Redistribution: Future Year 2035 + Full TAMT Plan Buildout - Alternative Gate Scenario
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

Source: Chen Ryan Associates, 2016

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Figure 5-15
Traffic Volumes: Future Year 2035 + Full TAMT Plan Buildout - Alternative Gate Scenario
Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR

Based on the City of San Diego's Significance Criteria, outlined in Table 5-5, the traffic associated with this scenario would not cause any roadways segments to operate at LOS E or F. Therefore, implementation of the proposed alternative gate location would not result in any additional impacts on roadway segment operations not previously identified under Future Year 2035 Base plus full TAMT plan buildout conditions.

Intersections

Based on the assumed redistribution of truck trips, the Harbor Drive/Cesar Chavez Parkway intersection (Main Gate) is the only study intersection that is anticipated to experience a change in peak hour volumes due to the alternative gate. All other key study intersections are anticipated to operate at the same conditions as under Future Year 2035 Base plus full TAMT plan buildout conditions identified in Table 5-23 above. Table 5-27 displays intersection LOS and average vehicle delay resulting from implementation of the full TAMT plan buildout with the alternative gate location. As shown in Table 5-27, both affected intersections are anticipated to operate at LOS D or better under the Future Year 2035 Base plus Full TAMT Plan Buildout – Alternative Gate Scenario.

Table 5-27. Peak Hour Intersection LOS Results: Future Year 2035 Plus Full TAMT Plan Buildout – Alternative Gate Scenario

		AM Peak Hour		PM Peak Hour					
#	Intersection	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Delay w/o Project (sec.) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec.)	S?
1	Harbor Drive/Cesar Chavez Parkway	53.4	D	50.~~6~~1	D	50.6/39.6	D/D	2.8/~~11.0~~10.5	No
12	Harbor Drive/ Alternative Gate	~~33.2~~ 34.1	C	37.~~0~~7	D	N/A	N/A	~~33.2~~34.1/ 37.~~0~~7	No

Source: Appendix G
Bold letter indicates a significant impact.
LOS = level of service; S? = indicates a significant impact

Based on the City of San Diego's Significance Criteria, outlined in Table 5-5, the traffic associated with this scenario would not cause any intersections to operate at LOS E or F. Therefore, implementation of the proposed alternative gate location would not result in any additional impacts on intersection operations not previously identified under Future Year 2035 Base plus full TAMT plan buildout conditions.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component's incremental contribution to cumulative transportation impacts would be cumulatively considerable prior to mitigation. Potential cumulatively considerable impacts include the following.

Impact-C-TRA-1: Construction-Related Impact on an Intersection: Norman Scott Road/32nd Street/Wabash Boulevard from Demolition and Initial Rail Component. Construction activities associated with the Demolition and Initial Rail Component, particularly during demolition of Transit Sheds #1 and #2, would generate construction-related traffic that would worsen the existing delay experienced at the Norman Scott Road/32nd Street/Wabash Boulevard intersection by 7.3 seconds in the AM peak hour and 2.6 seconds in the PM peak hour. The increase in delay at this intersection would exceed the threshold of 1.0 second of additional delay for intersections operating at LOS F and threshold of 2.0 seconds of additional delay for intersections operating at LOS E. Because construction-related traffic for the Demolition and Initial Rail Component would cause greater than a 1-second delay at the intersection of Norman Scott Road/32nd Street/Wabash Boulevard within the project study area, the Demolition and Initial Rail Component would result in a cumulatively considerable significant impact on this intersection.

~~**Impact-C-TRA-2: Contribute to an Unacceptable Level of Operation at an Intersection: Norman Scott Road/32nd Street/Wabash Boulevard from Demolition and Initial Rail Component.** Operation of the Demolition and Initial Rail Component would worsen the delay experienced during the peak hours at the Norman Scott Road/32nd Street/Wabash Boulevard intersection by 1.9 seconds in the AM peak hour and 0.8 second in the PM peak hour under near-term cumulative conditions, where a threshold of 1.0 second of additional delay applies to intersections operating at LOS F and a threshold of 2.0 seconds of additional delay applies to intersections operating at LOS E. Because the addition of Demolition and Initial Rail Component traffic would cause greater than a 1-second delay at the intersection of Norman Scott Road/32nd Street/Wabash Boulevard within the project study area, the Demolition and Initial Rail Component would result in a cumulatively considerable significant impact on this intersection during the AM peak hour.~~

Full TAMT Plan Buildout

The full TAMT plan buildout's incremental contribution to cumulative transportation impacts would be cumulatively considerable prior to mitigation. Potential cumulatively considerable impacts include the following.

Impact-C-TRA-~~3~~2: Contribute to Temporary Traffic Congestion from Construction of Full TAMT Plan Buildout. Given the lack of construction and schedule details at this time, it is not known if construction of the full TAMT plan buildout would overlap with construction of cumulative projects in the project study area. As a result, it is unknown whether construction associated with full TAMT plan buildout, when combined with construction traffic from past, present, and reasonably foreseeable future projects, would result in temporary but cumulatively considerable traffic congestion in the project study area.

Impact-C-TRA-~~4~~3: Contribute to an Unacceptable Level of Operation at a Roadway Segment: 28th Street between Boston Avenue and National Avenue from TAMT Plan Buildout. Operation of the full TAMT plan buildout would result in a considerable contribution to the cumulative impact at the roadway segment of 28th Street between Boston Avenue and National Avenue within the project study area, which would degrade the operations of a roadway segment that would already operate at an unacceptable level under cumulative conditions (LOS F). The proposed project would increase the V/C ratio by 0.~~036~~040, which exceeds the City's threshold of 0.01 for roadway segments operating at LOS F. Therefore, full TAMT plan buildout would result in a cumulatively considerable significant impact on this roadway segment.

Impact-C-TRA-~~5~~4: Contribute to an Unacceptable Level of Operation at an Intersection: Norman Scott Road/32nd Street/Wabash Boulevard from TAMT Plan Buildout. Operation of the full TAMT plan buildout would worsen the delay experienced during the peak hours at the Norman Scott Road/32nd Street/Wabash Boulevard intersection by ~~25.0~~17.5 seconds in the AM peak hour and by ~~14~~8.2 seconds in the PM peak hour under Future Year 2035 cumulative conditions, where a threshold of 1.0 second of additional delay applies to intersections operating at LOS F and a threshold of 2.0 seconds of additional delay applies to intersections operating at LOS E. Because the proposed project would cause greater than a 1-second delay on the intersection of Norman Scott Road/32nd Street/Wabash Boulevard within the project study area, full buildout of the TAMT plan would result in a cumulatively considerable significant impact on this intersection.

Impact-C-TRA-~~6~~5: Contribute to an Unacceptable Level of Operation at Four Freeway Segments from TAMT Plan Buildout. Operation of the full TAMT plan buildout would result in a considerable contribution to the cumulative impact at the freeway segments of I-5 northbound between SR-94 and Imperial Avenue, I-5 northbound between 28th Street and I-15, I-5 northbound between I-15 and Main Street, and I-15 southbound between Market Street and Ocean View Boulevard, which are projected to operate at LOS F. Operation of the full TAMT plan buildout would result in a change in V/C ratio greater than 0.005 for freeway segments operating at LOS F, and therefore would result in cumulatively considerable significant impact on these freeway segments.

Mitigation Measures

Demolition and Initial Rail Component

For **Impact-C-TRA-1:**

Implement **MM-TRA-1: Transportation Demand Management (TDM) Plan During Construction**, as described in Section 4.10, *Transportation, Circulation, and Parking*.

~~For **Impact-C-TRA-2:**~~

~~Implement **MM-TRA-2: Westbound Right-Turn Overlap Phase at Norman Scott Road/32nd Street/Wabash Boulevard Intersection**, as described in Section 4.10, *Transportation, Circulation, and Parking*.~~

Full TAMT Plan Buildout

For **Impact-C-TRA-~~3~~2:**

Implement **MM-TRA-~~3~~2: Traffic Study and Transportation Demand Management (TDM) for Specific Construction Projects**, as described in Section 4.10, *Transportation, Circulation, and Parking*.

For **Impact-C-TRA-~~4~~3:**

Implement **MM-TRA-~~4~~3: Widen the Segment of 28th Street between Boston Avenue and National Avenue to a Four-Lane Major Arterial Classification Consistent with the Barrio Logan Community Plan**, as described in Section 4.10, *Transportation, Circulation, and Parking*.

For **Impact-C-TRA-~~5~~4:**

Implement **MM-TRA-~~2~~4: Westbound Right-Turn Overlap Phase at Norman Scott Road/32nd Street/Wabash Boulevard Intersection**, as described in Section 4.10, *Transportation, Circulation, and Parking*.

For **Impact-C-TRA-~~6~~5:**

MM-C-TRA-1: Construct Managed Lanes on I-5 and I-15. SANDAG currently has plans to construct two managed lanes (one in each direction) on I-5 between I-15 and Palomar Street by the year 2030 as well as two additional multi-purpose lanes and two managed lanes on SR-15 between I-5 and SR-94 by the year 2050. The District shall coordinate with SANDAG and Caltrans to determine the proposed project's fair share contribution. Because this mitigation measure is far into the future, the exact amount will need to be determined at a future date and prior to the project's contribution to the affected freeway mainline sections reaching 0.005 change in V/C ratio. The following fair-share percentages under the MPC scenario analyzed for the proposed project, per affected freeway facility, should serve as guidance to the amount the District should pay toward a program or plan for the aforementioned freeway facility improvements to be constructed.

- I-5 northbound between SR-94 & Imperial Avenue: 5 percent of the total cost for improvements to this segment.
- I-5 northbound between 28th Street & SR-15: ~~7~~13 percent of the total cost for improvements to this segment.
- I-5 northbound between ~~I~~SR-15 & Main Street: ~~14~~6 percent of the total cost for improvements at this segment.
- SR-15 southbound between Market Street & Ocean View Boulevard: ~~25~~11 percent of the total cost for improvements to this segment.

The following fair-share percentages under the STC Alternative scenario, per affected freeway facility, should serve as guidance to the amount the District should pay toward a program or plan for the aforementioned freeway facility improvements to be constructed.

- I-5 northbound between SR-94 & Imperial Avenue: 5 percent of the total cost for improvements to this segment.
- I-5 northbound between SR-15 & Main Street: 6 percent of the total cost for improvements at this segment.
- SR-15 southbound between Market Street & Ocean View Boulevard: 11 percent of the total cost for improvements to this segment.

Level of Significance After Mitigation

Demolition and Initial Rail Component

Mitigation measure **MM-TRA-1** would reduce construction-related traffic impacts by requiring the District to prepare and implement a TDM plan during construction of the Demolition and Initial Rail Component. Implementation of a TDM plan during construction would reduce potential impacts at the Norman Scott Road/32nd Street/Wabash Boulevard intersection; however, it cannot be determined with certainty that the cumulative impacts would be reduced to less than cumulatively considerable. Consequently, **Impact-C-TRA-1** may remain cumulatively significant and unavoidable even after **MM-TRA-1** has been implemented.

~~Mitigation measure **MM-TRA-2** would reduce the Demolition and Initial Rail Component's incremental contribution to significant cumulative traffic impacts at the intersection of Norman Scott Road/32nd Street/Wabash Boulevard to less than cumulatively considerable (**Impact-C-TRA-2**). However, as discussed further in Section 4.10, *Transportation, Circulation, and Parking*, because the timing and implementation of the necessary improvements to the intersection of Norman Scott Road/32nd Street/Wabash Boulevard is within the exclusive jurisdiction of Caltrans, the District cannot ensure that the improvements would be made when needed. Therefore, while mitigation is required that could reduce the Demolition and Initial Rail Component's cumulatively considerable traffic impacts to a less-than-significant level, the uncertainty regarding the timing and implementation of the recommended improvement to the intersection of Norman Scott Road/32nd Street/Wabash Boulevard is considered cumulatively significant and unavoidable.~~

Full TAMT Plan Buildout

Mitigation measure **MM-TRA-~~3~~2** would reduce construction-related traffic impacts by requiring project-specific mitigation (if needed), including a construction traffic control plan if needed. However, given the uncertainty of timing of future construction activities and the fact that it is unknown if full TAMT plan buildout and cumulative projects would overlap, **Impact-C-TRA-~~3~~2** would be cumulatively considerable and would be considered cumulatively significant and unavoidable after implementation of Mitigation Measure **MM-TRA-~~3~~2**.

Implementation of Mitigation Measures **MM-TRA-~~4~~3** and **MM-TRA-~~5~~4** would reduce the full TAMT plan buildout's incremental contribution to significant cumulative traffic impacts to less than cumulatively considerable. However, as discussed further in Section 4.10, *Transportation, Circulation, and Parking*, because the timing and implementation of the necessary improvements to the roadway segment of 28th Street between Boston Avenue and National Avenue and the intersection of Norman Scott Road/32nd Street/Wabash Boulevard is within the exclusive jurisdiction of the City of San Diego and Caltrans, respectively, the District cannot ensure that the improvements would be made when needed.

Additionally, implementation of Mitigation Measure **MM-C-TRA-1** would reduce the project's incremental contribution to significant cumulative traffic impacts on freeway segments of I-5 northbound between SR-94 and Imperial Avenue, I-5 northbound between 28th Street and I-15, I-5 northbound between I-15 and Main Street, and I-15 southbound between Market Street and Ocean View Boulevard to less than cumulatively considerable (**Impact-C-TRA-~~6~~5**). However, there is no program in place into which the District would pay its fair-share contribution toward the cost of the improvements to these freeway facilities. Consequently, because these freeway segments are within the exclusive jurisdiction of Caltrans and SANDAG is responsible for planning the improvements, the District cannot ensure that the improvements would be made when needed.

Therefore, while mitigation has been identified that could reduce the full TAMT plan buildout's cumulatively considerable traffic impacts to a less-than-significant level, the uncertainty regarding the timing and implementation of the recommended improvements to these roadway facilities is considered cumulatively significant and unavoidable.

5.3.12 Utilities and Energy

Cumulative impacts on utilities and service systems may occur when projects combine to increase demand such that additional services must be provided or additional facilities constructed. This usually would result from the incremental addition of people occupying an area or incremental demand requiring construction of new or larger buildings requiring the provision of utilities. However, if the environmental conditions would essentially be the same with or without the proposed project's contribution, then the effect on the environment would not be significant.

Geographic Scope

The geographic scope of cumulative impacts for utilities and service systems is based on a mix of the List Method and the Plan Method. A significant cumulative impact would result if the proposed project were to contribute to impacts that exceeded the planned use and capacity of the project's wastewater, water, and solid waste service providers, which project future supply and demand based on current land use and development projections within the service area. Therefore, the cumulative setting for utilities and service systems includes all of the projects listed in Table 5-2 and all of the growth assumptions provided in regional planning documents such as the Urban Water Management Plan (UWMP).

Cumulative Effects

As discussed in Section 4.11, *Utilities and Energy*, wastewater services for the proposed TAMT plan are provided by the City of San Diego Public Utilities Department, which operates the Point Loma Wastewater Treatment Plant (PLWTP) in Point Loma. As a result of past development, increases in wastewater facility demands have occurred. However, because the PLWTP operates at 73 percent of permitted capacity and is anticipated to meet the projected needs of the service area through the year 2020 per the City's General Plan, impacts from past, present, and reasonably foreseeable future projects would not be cumulatively significant.

For water services, the City has prepared a 2010 UWMP as required by the California Water Code to identify treated water supply for projected future growth through 2035.[1] Projected population and growth projections are based on SANDAG estimates to determine future water demand and plan future water supplies until the year 2035. The City's 2010 UWMP was prepared in coordination with the City's wholesale water supplier, the San Diego County Water Authority, and demonstrates how water would be available for the planned growth in the service area. Most of the cumulative projects

[1] The City is currently in the process of creating a 2015 UWMP that would project water demand through 2040.

identified in Table 5-2 are covered by planning documents maintained by Civic San Diego, consistent with the growth projections of the Downtown Community Plan, which includes projects in the District's jurisdiction, consistent with the designations of the PMP. Moreover, for cumulative projects not consistent with or anticipated in the Downtown Community Plan or the PMP, the 2010 UWMP includes additional water supplies to account for "Accelerated Forecasted Growth."[2] Water supplies to meet Accelerated Forecasted Growth range from 2,224 acre-feet per year (AFY) in 2015 to 10,948 AFY in 2035, and were accounted for in the City's projected water supplies. This additional amount set aside for unforeseen growth offsets any potential shortfalls. Therefore, impacts on water services from past, present, and reasonably foreseeable future projects would not be cumulatively significant.

The cumulative projects listed in Table 5-2 would result in the redevelopment of urbanized sites that are currently served by SDG&E, and the development of the cumulative projects would not result in an expansion of SDG&E's service area. However, the cumulative projects would result in increases in energy demand compared to existing conditions, especially for those projects on an undeveloped site that would result in new energy demand. As required by the California Public Utilities Commission (CPUC), California utilities, including SDG&E, are required to file long-term energy resources plans with the CPUC. SDG&E's most recent long-term procurement plan was filed in May 2014 and includes plans and strategies to meet the future energy demands of its customers, including a plan addressing the closure of the San Onofre Nuclear Generating Station. SDG&E would continue to import electricity and natural gas to meet regional demand; however, an increase in imported energy to meet demand could result in high energy prices and unreliable supply. SANDAG adopted a Regional Energy Strategy (RES) in 2009 to specifically address regional energy supply. The RES includes proposed Early Actions to promote long-term energy efficiency and availability in the region. If the cumulative projects would not support the implementation of applicable Early Actions from the RES, a cumulative impact could occur. The cumulative projects would be required to comply with the Title 24 energy efficiency standards, which promote energy efficiency and reduce inefficient, wasteful, and unnecessary consumption of energy. However, Title 24 does not require additional measures to support the other RES Early Actions, including supporting alternative transportation to reduce transportation energy use, reducing GHG emission from energy use, and limiting water use to reduce indirect energy use for water transport. Therefore, impacts from past, present and reasonably foreseeable future projects would be cumulatively significant.

According to the City of San Diego's CEQA Significance Determination Thresholds (City of San Diego 2011), projects that include the construction, demolition, or renovation of 40,000 square feet or more of building space that would generate approximately 60 tons of solid waste or more per year and are considered to have a significant cumulative impact on solid waste facilities. Many of the cumulative projects listed in Table 5-2 would meet these thresholds, including the Metro Center Project (cumulative project #4), the San Diego Continuing Education – Cesar Chavez Campus (cumulative project #5), the Ballpark Village Parcel C project (cumulative project #7), the San Diego Convention Center Phase III Expansion and Hilton Bayfront Hotel Expansion project (cumulative project #11), and the San Diego Marriott Marquis & Marina Expansion (cumulative project #15). As

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[2] More information on Accelerated Forecasted Growth is available in the San Diego County Water Authority's 2010 UWMP. Available: http://www.sdcwa.org/sites/default/files/files/water-management/2010UWMPfinal.pdf

such, impacts on solid waste services from past, present, and reasonably foreseeable future projects would be cumulatively significant.

Project Contribution

As described above, impacts from past, present, and reasonably foreseeable future projects on water and wastewater infrastructure and water supply are less than cumulatively significant. Moreover, the proposed project's contribution, which was determined to be less than significant at the project level, would not be cumulatively considerable because there is available capacity to provide water and wastewater treatment and the proposed project is not a water demand project as defined by the California Water Code.

As discussed in Section 4.11 of this Draft EIR, the TAMT plan would generate an additional 842 tons of solid waste per year, while the Demolition and Initial Rail Component would generate up 148 tons per year. The City's threshold indicates that projects that include the construction, demolition, and/or renovation of 40,000 square feet or more of building space may generate approximately 60 tons of waste or more per year, and are considered to have cumulative impacts on solid waste facilities. Therefore, the project would exceed the City's cumulative threshold for solid waste and, prior to mitigation, would result in a cumulatively considerable contribution to cumulative solid waste impacts (**Impact-C-UTIL-1**).

While impacts from past, present, and reasonably foreseeable future projects on energy are cumulatively significant, the proposed project is consistent with the Energy Policy Act and AB 2076 to reduce energy consumption. Moreover, SDG&E continues to increase its Renewables Portfolio Standard and the proposed project would implement several measures to decrease reliance on fossil fuels and increase its use of electricity; therefore, the use of non-renewable energy would decrease as a proportion of the project's energy needs. Therefore, the proposed project would support regional efforts to ensure long-term energy supply and would not result in a cumulatively considerable contribution to a cumulative impact.

Consequently, the proposed project's contribution to cumulative impacts on wastewater, water, and energy systems would be less than cumulatively considerable, while impacts on solid waste would be cumulatively considerable (**Impact-C-UTIL-1**) and mitigation is required to reduce this impact to a level considered less than cumulatively considerable.

Level of Significance Prior to Mitigation

Demolition and Initial Rail Component

The Demolition and Initial Rail Component's incremental contribution to cumulative impacts related to utilities and energy would be cumulatively considerable prior to mitigation. Potentially cumulatively considerable impact(s) include the following.

Impact-C-UTIL-1: The Demolition and Initial Rail Component would Generate Solid Waste that Would Exceed the City Threshold. The Demolition and Initial Rail Component would exceed an annual generation of 60 tons of solid waste, which would exceed the City's cumulative solid waste threshold. Therefore, this is considered to be a significant cumulative impact.

Full TAMT Plan Buildout

The full TAMT plan buildout's incremental contribution to cumulative impacts related to utilities and energy would be cumulatively considerable prior to mitigation. Potentially cumulatively considerable impact(s) include the following.

Impact-C-UTIL-2: The TAMT Plan would Generate Solid Waste that Would Exceed the City Threshold. The TAMT plan would exceed an annual generation of 60 tons of solid waste, which would exceed the City's cumulative solid waste threshold. Therefore, this is considered to be a significant cumulative impact.

Mitigation Measures

Demolition and Initial Rail Component

MM-C-UTIL-1: Prepare a Waste Management Plan. Prior to issuance of the construction permits, a waste management plan shall be prepared by the Applicant and submitted to the City's Environmental Services Department for approval. The plan shall address the demolition, construction, and operation phases of the proposed project as applicable, and shall include the following.

1. A timeline for each of the main phases of the proposed plan and near-term improvements (construction and operation).
2. Tons of waste anticipated to be generated (construction and operation).
3. Type of waste to be generated (construction and operation).
4. Description of how the proposed project will reduce the generation of construction and demolition (C&D) debris.
5. Description of how C&D material will be reused on site.
6. The name and location of recycling, reuse, and landfill facilities where recyclables and waste will be taken if not reused on site.
7. Description of how the C&D waste will be separated if a mixed C&D facility is not used for recycling.
8. Description of how the waste reduction and recycling goals will be communicated to subcontractors.
9. Description of how a "buy recycled" program for green construction products will be incorporated into the proposed project.
10. Description of any ISO[3] or other certification, if any.

Full TAMT Plan Buildout

Implement **MM-C-UTIL-1**.

[3] ISO certification means there has been a commitment to reduce ongoing waste.

Level of Significance After Mitigation

Demolition and Initial Rail Component

Implementation of Mitigation Measure MM-C-UTIL-1 would reduce the Demolition and Initial Rail Component's incremental contribution to cumulative solid waste impacts (**Impact-C-UTIL-1**) to a less than cumulatively considerable level by ensuring the project limits its solid waste to a minimum and is fully compliant with all solid waste laws. Therefore, the Demolition and Initial Rail Component's incremental contribution to cumulative impacts related to water, wastewater, solid waste, and energy would be less than cumulatively considerable and would be less than significant.

Full TAMT Plan Buildout

Implementation of Mitigation Measure **MM-C-UTIL-1** would reduce the TAMT plan's incremental contribution to cumulative solid waste impacts (**Impact-C-UTIL-2**) to a less than cumulatively considerable level by ensuring the project limits its solid waste to a minimum and is fully compliant with all solid waste laws. Therefore, the TAMT plan's incremental contribution to cumulative impacts related to water, wastewater, solid waste, and energy would be less than cumulatively considerable and would be less than significant.

Chapter 6
Additional Consequences of Project Implementation

6.1 Introduction

This chapter addresses the potential for additional consequences related to the implementation of the proposed project, pursuant to State CEQA Guidelines 15126.2(c), (d),[1] and 15128. Specifically, this chapter (1) addresses significant irreversible changes to the environment that would result from implementation of the proposed project; (2) discusses growth-inducing impacts of the proposed project, which pertain to ways in which the proposed project could promote either direct or indirect growth; and (3) discusses the environmental effects of the project that were determined not to be significant during the initial environmental review process.

6.2 Significant Irreversible Environmental Changes

The proposed project would involve adoption of a plan and, therefore, pursuant to State CEQA Guidelines Section 15127, the EIR is required to comply with State CEQA Guidelines Section 15126.2(c). Section 15126.2 (c) requires that the EIR identify any significant irreversible environmental changes resulting from the proposed project.

The proposed project involves adoption of the TAMT plan that includes a variety of long-term infrastructure investments to accommodate an increase of the project site's capabilities and capacity. These include up to five gantry cranes, additional and consolidated dry bulk storage capacity (which may include a new semi-permanent 100,000-square-foot dry bulk structure or an equivalent vertical storage facility), enhancements to the existing conveyor system, demolition of the molasses tanks and Warehouse C, additional open storage space, and improvements associated with a centralized gate facility. The project also includes the Demolition and Initial Rail Component, which would involve demolition of Transit Shed #1 and Transit Shed #2, on-terminal rail upgrades that include a rail lubricator and compressed air system for air brake testing, subsurface conduit and electrical improvements to allow for future electrification and/or shore power capabilities prior to resurfacing, and a new electrical gear room, restroom facilities, information technology room, and outdoor storage facility where Transit Shed #1 was formerly located.

Most of the components proposed in the TAMT plan, including installation of the gantry cranes, modular structures, and semi-permanent dry bulk structure; enhancements to the existing conveyor system; and rail improvements, would all be reversible once any of these components are no longer needed or are outdated long into the future. However, the proposed demolition activities are irreversible changes and, as such, the demolition of the molasses tanks, Warehouse C, and Transit Sheds #1 and #2 would be an irreversible change.

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[1] The requirements of State CEQA Guidelines Section 15126.2(a) and (b) are met in Chapter 4, *Environmental Analysis*, under each resource discussion.

In addition, implementation of the proposed project would require a permanent commitment of non-renewable natural resources primarily from the direct consumption of fossil fuels. These fossil fuels would be consumed during both construction and operation in the form of diesel and gasoline used in construction and yard equipment, commute vehicles, trucks, and vessels.

Electricity would also be consumed during construction and operation from power tools, electric equipment, and lighting during evening and night operations, although not all of it would be from non-renewable sources. The portion of electricity generated from fossil fuels such as natural gas, however, would be irretrievable and irreversible.

In addition, as discussed within Chapter 4, *Environmental Analysis*, and Chapter 5, *Cumulative Impacts*, implementation of the proposed project would result in significant irreversible environmental changes related to air quality and health risk, greenhouse gas (GHG) emissions, noise, and transportation.[2] As discussed in Section 4.2, *Air Quality and Health Risk*, nitrogen oxide (NO_X) emissions and toxic air contaminants would be significant under the TAMT plan buildout. Over time these emissions would decrease from the use of advanced technologies and emission controls, although impacts would be significant and, for purposes of this analysis, irreversible.

GHG emissions associated with the TAMT plan buildout would be significant in both the 2020 year and the post-2020 years, while GHG emissions for the Demolition and Initial Rail Component would be significant in the post-2020 years, as discussed in Section 4.6, *Greenhouse Gas Emissions and Climate Change*. GHGs remain in the atmosphere long after they are emitted from a source; thus, even after mitigation, these impacts would be significant and irreversible.

As discussed in Section 4.9, *Noise and Vibration*, noise associated with the TAMT plan buildout would, at times, exceed adopted noise standards and represent a substantial increase over the baseline conditions. In addition, construction activities associated with both the TAMT plan and the Demolition and Initial Rail component would have noise levels that at times would be considered substantial at nearby sensitive receptors. Construction noise would not be considered an irreversible condition, but the permanent increase in noise levels would be.

Although the project would use non-recoverable materials and energy during construction and operation activities, the amounts needed would be accommodated by existing supplies and infrastructure. Therefore, the project's potential to result in irreversible environmental changes is primarily related to the use of fossil fuels for construction and operation. However, as discussed in Section 4.11, *Utilities and Energy*, impacts on energy would not be significant.

6.3 Growth-Inducing Impacts

State CEQA Guidelines Section 15126.2(d) requires that an EIR discuss the ways in which a proposed project could directly or indirectly foster economic development, population growth, or additional housing, and how that growth would affect the surrounding environment. Direct growth inducement would result if a project, for example, involved construction of new housing. Indirect

[2] There would also be significant and unavoidable impacts related to aesthetics that would change the existing views due to gantry cranes. However, the gantry cranes would not be irreversible if there was no longer a need for them in the future and could be dismantled and resold or reused elsewhere.

growth might occur if a project were to establish substantial new permanent employment opportunities that would stimulate the need for additional housing, utilities, and public services.

Similarly, a project would indirectly induce growth if it would remove an obstacle to additional development, such as removing a constraint on a required public service or utility. A project proposing to expand water supply capabilities in an area where limited water supply has historically restrained growth would be considered growth-inducing.

This section discusses the characteristics and consequences of the proposed project that may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. However, the following analysis does not assume that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment (State CEQA Guidelines 15126.2(d)). Rather, Chapter 4, *Environmental Analysis*, and Chapter 5, *Cumulative Analysis,* discuss the adverse impacts on resources, including any impacts that would be caused by cumulative conditions.

6.3.1 Economic Growth

One criterion by which growth inducement can be measured involves economic growth. Economic growth considerations include a demand for temporary and permanent employees, which the proposed project would foster through the creation of new jobs. In addition, the project would result in indirect job growth and economic benefits through the additional throughput supply chain of additional truck drivers servicing final destinations of products stored at the project site.

6.3.1.1 Economic Growth through New Jobs

In the short term, construction of the proposed project would induce economic growth by introducing temporary employment opportunities associated with construction and operation of the project. It is assumed that the proposed project would result in temporary employment opportunities for up to 295 construction workers during the near-term construction period and up to 92 new permanent jobs. In addition to the direct short-term employment, these workers would likely patronize businesses in the project area and in the larger San Diego region, resulting in indirect economic benefits as well.

In the long term, operation of the project would induce economic growth by creating long-term employment opportunities. The proposed project would directly add 524 permanent jobs. This compares to a projected number of 1.911 million jobs in the overall area of influence by 2050 (SANDAG 2015).

As such, the proposed project would create new employment opportunities, many of which would be high-paying unionized jobs, ultimately contributing to economic growth of the San Diego region.

6.3.1.2 Economic Growth through More Terminal Throughput, Support Services, and Increased Business and Tax Revenues

Implementation of the proposed project would increase cargo throughput at the project site, which would create demand for up to 160 additional indirect and induced jobs such as additional truckers to haul cargo to destinations throughout the region and beyond. The additional throughput would also spur economic growth in the form of increased business and tax revenue and indirectly result in increased patronage of surrounding businesses and businesses in the larger San Diego region through the addition of new jobs. It has been estimated that implementation of the proposed project would raise $700,000 in the opening year in savings from congestion reduction, amounting to $900,000 over the project lifecycle (HDR 2014). As such, project implementation would result in a substantial increase in business and local sales tax. This increase in yearly revenue could spur additional growth in other areas because it would provide the District and City with additional funds on a yearly basis. Therefore, the project would stimulate additional economic growth indirectly as a result of the increase in terminal throughput.

6.3.2 Population Growth

The proposed project would not involve the development of housing, which would increase the City of San Diego's permanent population. The proposed project would, however, result in the creation of both temporary and permanent employment opportunities to support the construction and operation of the proposed project. However, although the 524 additional permanent jobs would have a positive impact on the economy, the additional permanent employment created by the proposed project would not increase the City's population because future employees (and their families) are anticipated to be drawn from existing residents of the City and surrounding area. Therefore, construction and operation of the proposed project would little to no effect on the inducement of population growth.

6.3.3 Construction of Additional Housing

The proposed project does not call for the construction of housing, which is prohibited on District property under the Public Trust Doctrine, nor would it increase the City's population in a manner that would necessitate the construction of additional housing. However, the approximately 524 new permanent jobs may allow current residents to upgrade their existing housing. For these reasons, while the project would not result in the direct construction of additional housing, it may result in the indirect construction of housing. Therefore, the project may indirectly stimulate the construction of some housing due to the increase in permanent and unionized jobs.

6.3.4 Removal of Obstacles to Population Growth

As stated above, a project would indirectly induce growth if it would remove a constraint on a required public service or utility. A project would also indirectly induce growth if it would establish a precedent-setting action (e.g., an innovation, a change in zoning, a general plan amendment approval). The proposed project would not require infrastructure upgrades beyond the boundaries of the TAMT project site, and therefor would not result in the removal of obstacles to growth, as described below.

6.3.4.1 Infrastructure Upgrades

The proposed project would not extend infrastructure such as roadways, water, gas, or electricity into previously undeveloped areas because the project site is within the District's jurisdiction in an area that is identified in the Port Master Plan (PMP) for the development of marine-related industrial uses, which the site currently supports. Existing roadways, water, and wastewater services already serve the project site and surrounding area. As such, the proposed project would not remove obstacles to growth.

6.3.5 Summary of Growth-Inducing Impacts

The proposed project is expected to foster economic growth via continuation and intensification of cargo operations at the project site, consistent with the PMP. In addition, the proposed project would provide new jobs in the San Diego area and may generate a modest demand for move-up housing due to the high-paying jobs that would be created. However, the proposed project would not directly induce population growth or directly cause the construction of new housing in the region. Overall, the project would have a modest but measureable effect on regional growth.[3]

6.4 Effects Found Not to Be Significant

Early in the environmental scoping process it was determined that one or more effects related to aesthetics; agriculture and forestry resources; biological resources; cultural resources; geology and soils; hazards and hazardous materials; hydrology and water quality; land use and planning; mineral resources; noise and vibration; population and housing; public services; recreation; transportation, circulation, and parking; and utilities and service systems would not be significant. In accordance with State CEQA Guidelines Section 15128, a brief explanation indicating the reasons that the effects on these resources would not be significant is provided under each subheading below.

6.4.1 Aesthetics

6.4.1.1 Scenic Vistas

The project site is within Planning District 4 (TAMT) of the PMP and does not contain any designated vista areas. The nearest designated vista areas are in Planning District 3 (Centre City/Embarcadero) and Planning District 6 (Coronado Bayfront). Within Planning District 3, there is a designated vista area near the San Diego Convention Center that faces west, toward the harbor and Coronado. The project site is south of this designated vista area. No views of the project site exist, and none would be affected by the proposed project. Impacts would not occur.

6.4.1.2 Scenic Resources

The San Diego–Coronado Bay Bridge (State Route [SR] 75) is a California State-designated scenic highway, located just south of the project area, that spans the Bay, connecting the City of San Diego to the City of Coronado. Existing long-distance views of the project site and the downtown area from the San Diego–Coronado Bay Bridge are dominated by a mix of high-rise residential, commercial, and urban developments as well as a variety of maritime industrial facilities (such as storage structures, large vessels, docks, piers, cranes, trucks, and other large pieces of shipping equipment). From SR-75, the project site appears in front of the downtown skyline of San Diego and behind the

[3] Note that the potentially significant environmental effects of the project are analyzed in Chapters 4 and 5 of this EIR.

water of San Diego Bay. Implementation of the project is not anticipated to damage scenic resources along a scenic highway, such as trees or rock outcroppings, because there are no such resources at the project site. Visual changes associated with the project would include internal terminal reconfiguration, including up to five new gantry cranes, and increased cargo throughput. The increased cargo throughput would include additional vessel, rail, and truck operations. Although these visual changes would be visible from portions of SR-75, they would not be striking or noticeable because of the distance between the site and SR-75. Furthermore, motorists' northerly views while traveling westbound or eastbound would not be prolonged, and viewer sensitivity to the proposed changes would be low. Therefore, the impact on designated scenic highways would be less than significant.

6.4.2 Agriculture and Forestry Resources

6.4.2.1 Important Farmland

The project site is in an urbanized area that does not support any agricultural uses. The California Department of Conservation's Farmland Mapping and Monitoring Program designates areas of prime soils and soils of statewide importance based on soil characteristics and agricultural use. The project site does not contain Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency (California Department of Conservation 2015). As such, there is no potential for any actions to convert Farmland resources to a nonagricultural use and no impacts would occur.

6.4.2.2 Williamson Act Contracts or Agricultural Zoning

The project site is not zoned for agricultural use, nor is there a Williamson Act contract for the site. Therefore, the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and no impacts related to agricultural resources would occur.

6.4.2.3 Conflict with Forest Land Zoning

The project site is located in an urbanized area that does not support any forestry uses. No land that has been zoned as forest land or timberland exists within the boundaries of the project site. Therefore, implementation of the proposed project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production; therefore, no impact would occur.

6.4.2.4 Conversion of Forest Land to Non-Forest Use

The project sites do not contain any forest lands as defined in Public Resources Code Section 12220(g); therefore, the project would not result in the loss or conversion of forest land to a non-forest use. In addition, the project is not in the vicinity of offsite forest resources. Therefore, no impact would occur.

6.4.2.5 Conversion of Farmland to Non-Agricultural Use

No agricultural land use, forest land, or timberland exists in the vicinity of the project site. The project would not result in conversion of important farmland or conversion of other agricultural resources to a non-agricultural use because the project site and the surrounding area are developed land that is mostly used for industrial purposes. Therefore, the proposed project would not involve a change to the existing environment that, because of its location or nature, would result in the conversion of Farmland to non-agricultural use or forest land to non-forest use, and no impact would occur.

6.4.3 Biological Resources

6.4.3.1 Sensitive Natural Community

The project site consists entirely of developed land; there are no sensitive vegetation communities or areas of riparian habitat on site. Eelgrass beds are not known to occur in the area of the bay where the project would occur, and the depth of the bay at the project site significantly reduces the potential for growth. As such, no riparian or other sensitive natural community would be affected by project activities.

6.4.3.2 Federally Protected Wetlands

No federally protected wetlands, as identified under Sections 401 and 404 of the Clean Water Act or the California Coastal Act, are located within or immediately adjacent to the project site. Construction and operations at the TAMT would adhere to Stormwater Pollution Prevention Plans and Urban Stormwater Management Programs, as required, and no dredging, fill, or other waterside construction would occur within the bay. As such, no federally protected wetlands would be affected by project activities.

6.4.3.3 Wildlife Movement Areas

Native plant species on site are limited to those that commonly occur in heavily developed areas. Such species would not be substantially affected by the proposed project. Additionally, the site is not a wildlife corridor or a nursery site. Therefore, the project site does not serve as a corridor or nursery site for any native resident wildlife species, and no impact would occur.

6.4.3.4 Local Policies or Ordinances Protecting Biological Resources

The City of San Diego's Multiple Species Conservation Program and Multi-Habitat Planning Area do not apply to projects within the jurisdiction of the District. Additionally, the project site is several miles outside the boundary of the Multi-Habitat Planning Area, which is a planned habitat preserve within the Multiple Species Conservation Program subarea. Therefore, the proposed project would not conflict with any local policies or ordinances to protect biological resources, such as a tree preservation policy or ordinance. No impact would occur. The project area is not within the jurisdiction of any other adopted habitat conservation plan. As such, no impact would occur.

6.4.3.5 Local, Regional, or State Habitat Conservation Plan

The District and the U.S. Navy coauthored the *San Diego Bay Integrated Natural Resources Management Plan* (INRMP), which is a long-term strategy that provides direction and planning guidance for good stewardship of the natural resources within San Diego Bay. The INRMP does not carry regulatory authority, but rather establishes a baywide plan for natural resource management that has been vetted by the primary agencies with land use authority over the bay and a broad spectrum of stakeholders. Because the proposed project would be entirely within the TAMT and would not involve any in-water work or affect natural resources along the bay, the project would not conflict with any of the strategies or recommendations identified in the INRMP and there would be no impact.

6.4.4 Cultural Resources

6.4.4.1 Paleontological Resources

The project area rests on the Bay Point Formation, which is a nearshore marine sedimentary deposit that dates from the late to middle Pleistocene, roughly 10,000 to 600,000 years ago. A tremendous variety of invertebrate and vertebrate fossils have been found in this deposit, including both marine and terrestrial animals, with mammoth and whale remains being some of the most significant. The formation is assigned high resource sensitivity by the City of San Diego; accordingly, the City's CEQA Significance Determination Thresholds state that potential significant impacts on the Bay Point Formation could occur if project-related activities reach depths greater than 10 feet and remove more than 1,000 cubic yards of soil. Utility work near the transit sheds would occur between 5 and 10 feet below the ground; no other project-related activities would affect areas beneath the terminal surface. Digging and trenching activities on the project site are not anticipated to go deeper than 10 feet, and the project would not directly destroy a unique paleontological resource, site, or unique geologic feature. As such, the impact on paleontological resources would be less than significant.

6.4.5 Geology and Soils

6.4.5.1 Exposure of People or Structures to Potential Substantial Adverse Effects, Including:

1. *Landslides*

Landslide activity generally occurs in areas that lack vegetation and have steep slopes. The project site occurs on fill areas that are flat and completely developed. No portion of the project site would be susceptible to landslides. Therefore, impacts related to landslides are not anticipated.

6.4.5.2 Substantial Soil Erosion or Loss of Topsoil

The project site is an existing paved marine terminal that was constructed on artificial fill in the mid-twentieth century. None of the actions associated with the proposed project would disrupt any native soil or topsoil. Therefore, no impact related to soil erosion would occur as a result of construction or operations at the project site.

6.4.5.3 Expansive Soil

The majority of surficial soils throughout the project site are silty sands that have a low potential for expansion, as defined by Table 18-1-B of the Uniform Building Code. Therefore, construction of the proposed project would not result in substantial risks to life or property from being located on expansive soils. Impacts would be less than significant.

6.4.5.4 Septic Tanks or Alternative Wastewater Disposal Systems

No septic tanks or alternative wastewater disposal systems are proposed. Therefore, there would be no impact associated with the soils on site being incapable of supporting a septic tank or wastewater disposal system.

6.4.6 Hazards and Hazardous Materials

6.4.6.1 Airport Land Use Plans

The project site is about 2 miles south of San Diego International Airport (SDIA). The site is within Review Area 2 of the Airport Influence Area, per the Airport Land Use Compatibility Plan (ALUCP) for this airport (SDIA 2014). It is not anticipated that the project would result in a safety hazard for people residing or working in the area; however, the Federal Aviation Administration (FAA) would be notified prior to construction because of the proximity of the site to a navigation facility. Although a final determination has not been made by FAA, this impact is anticipated to be less than significant. In the event that FAA requires changes to the project, the changes would be reflected in Chapter 3, *Project Description*, of the EIR, thereby ensuring that impacts related to a safety hazard for people residing or working in the project area would not occur. There are no other airports or ALUCPs in the vicinity of the project site. The impact would be less than significant.

6.4.6.2 Private Airstrip

The project is not within the vicinity of a private airstrip. No hazard impacts related to private airstrips would occur with implementation of the proposed project.

6.4.6.3 Emergency Response Plan or Emergency Evacuation Plan

The proposed project would be required to comply with applicable requirements set forth by the County of San Diego Office of Emergency Services Operational Area Emergency Plan, the City of San Diego Police Department, and the City of San Diego Fire Department. The Office of Emergency Services coordinates emergency response at the local level in the event of a disaster, including fires. This emergency response coordination is facilitated by the Operational Area Emergency Operations Center and responding agencies to the proposed project site, the City of San Diego Police and Fire Departments and San Diego Harbor Police Department. Impacts would be less than significant.

6.4.6.4 Wildland Fires

There are no wildlands or heavily vegetated areas in proximity to the project site and, as such, the proposed project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. No impacts would occur.

6.4.7 Hydrology and Water Quality

6.4.7.1 Groundwater Supplies

Although the proposed project would involve demolition and repaving of existing impervious surfaces, it would result in no change to the amount of impervious area. Given the depth of grading and trenching anticipated, dewatering is not likely. Should dewatering activities be necessary, such activities would be short term and require only minimal volumes of water for the installation of underground utility lines. Because of the proximity to the bay, groundwater at the project site is saline from saltwater intrusion and, therefore, it is not used for drinking water and consequently would not affect drinking water. Impacts related to lowering the groundwater table and groundwater recharge would be less than significant.

6.4.7.2 Erosion or Siltation On Site or Off Site

Topography at the project site is flat or sloping slightly downward from east to west to the point where it meets the existing wharf. The existing storm drain system includes catch basins that have been equipped with filter inserts and a water treatment system on the main 36-inch-diameter storm drain discharge lines. The proposed project would most likely require additional storm drains as a result of the transit sheds' removal; the additional storm drains would be appropriately sized and able to carry stormwater during a rain event, thereby preventing onsite drainage issues. Because of the largely impervious nature of the site, erosion and siltation are unlikely. As a result, impacts related to changes in the drainage pattern, including erosion and/or siltation, would be less than significant.

6.4.7.3 Surface Runoff in a Manner that Would Result in Flooding On Site or Off Site

The existing drainage patterns would be left intact; no streams or rivers exist on site. As a result, no substantial changes in drainage patterns would occur, and the project would not cause surface runoff to result in flooding on or off site. Therefore, impacts would be less than significant.

6.4.7.4 Stormwater Drainage Systems

The proposed project would not result in an increase in the volume of runoff water that would exceed the capacity of the existing or planned stormwater drainage system. The proposed project would include additional storm drains, the design and placement of which would be subject to the District's engineering review, and would be evaluated for compliance with the District Jurisdictional Runoff Management Program in accordance with the requirements of the San Diego Regional Water Quality Control Board Order No. R9-2013-0001, as amended by Order No. R9-2015-0001 (National Pollutant Discharge Elimination System Permit #CAS0109266, Municipal Permit). The drains would be appropriately sized and able to carry stormwater during a rain event, thereby preventing onsite drainage issues. Consequently, the project would not contribute additional sources of polluted runoff during operation. Therefore, the proposed project would not create runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Impacts would be less than significant.

6.4.7.5 100-Year Flood Hazard Areas (Placement of Housing)

The majority of the project site is outside of the 100-year floodplain; a small area north of the project site is within 100-year Flood Zone A. However, no housing is proposed on the project site. Therefore, no impacts would occur.

6.4.7.6 Dam or Levee Failure

The project site is not identified within a risk zone of a potential dam failure (County of San Diego 2010). Therefore, it is highly unlikely that the proposed project would expose people or structures to a significant risk of loss, injury, or death involving flooding as a result of the failure of a levee or dam. Impacts would be less than significant.

6.4.7.7 Inundation by Seiche, Tsunami, or Mudflow

Although the project site is within a designated high-risk zone for a tsunami, the likelihood that an event would occur during the 29-week construction period is low. If such an event were to occur, the likelihood that it would affect the project site is also low. The project site is located on the Bayfront but approximately 2 miles from the Pacific Ocean. Coronado is between the site and the ocean. Moreover, the project site is approximately 10 feet above mean lower low-water tide. Therefore, considering the distance from the ocean, the buffering provided by landmass, and the height above sea level, the potential for hazards associated with direct wave action in the event of a storm surge, tsunami, or seiche is low. Conditions under the proposed project would be similar to the existing conditions and would not increase the potential of site inundation. Although inundation from a tsunami or seiche is possible, it is unlikely; if it were to occur, damage would most likely be limited to ground-floor water damage. People would be given sufficient warning to evacuate the project site by the West Coast and Alaska Tsunami Warning Center, which monitors earthquakes and issues tsunami warnings when a tsunami is forecast to occur. Consequently, although inundation from a tsunami or seiche is reasonably foreseeable, any associated impacts would be less than significant.

The potential for large-scale slope instability at the site that could lead to mudflow is not present at the project site. The project site is on flat topography. Impacts would be less than significant.

6.4.8 Land Use and Planning

6.4.8.1 Physically Divide an Established Community

The proposed project would redevelop an existing marine terminal on San Diego Bay but would not expand the physical boundaries of the terminal or develop areas outside of its current boundaries. Therefore, the project would not physically divide an established community, and impacts would not occur.

6.4.8.2 Conflict With Land Use Plan, Policy or Regulation

The PMP is the guiding land use policy document for all areas under the District's jurisdiction. The proposed project is within Planning District 4, which has been identified as the only area in the entire San Diego region with an established waterfront industrial shipping operation, which cannot be easily created or replaced. However, the TAMT is experiencing a shortage of space. The proposed project would result in the adoption of near-term improvements and a redevelopment plan for the TAMT site. This would allow the project site to continue its present use as a marine terminal but would not result in any changes in land use. Project approval would be consistent with the provisions of the California Coastal Act. The project site, which has been used for industrial shipping operations since the early 1900s, exists for the benefit of water-dependent commerce, which is consistent with the California Coastal Act and the Public Trust Doctrine. Project-related actions would involve the removal and demolition of existing structures and the rearrangement of existing and future tenants at the project site. None of the project-related actions would present new barriers or obstacles related to coastal access. The project site would continue to be unavailable to the general public, and no new impacts or changes regarding coastal access would result upon project implementation. Furthermore, implementation of the proposed TAMT plan would occur entirely within the existing boundaries of the TAMT and would not conflict with the transition zone, which extends to the northern boundary of the TAMT, south to the Sweetwater Channel, and east from the Port tidelands to the adjacent residential neighborhoods. As such, the proposed project would not conflict with the PMP, California Coastal Act, the Public Trust Doctrine, the Port's Transition Zone Policy (Resolution No. 2008-112), or any other land use document adopted for the purpose of avoiding or mitigating an environmental effect. Impacts would not occur.

6.4.8.3 Habitat Conservation Plan or Natural Community Conservation Plan

The proposed project would occur outside the boundaries of the City of San Diego's Multiple Species Conservation Program and Multi-Habitat Planning Area. Therefore, the proposed project would not conflict with a habitat conservation plan or natural community conservation plan.

6.4.9 Mineral Resources

6.4.9.1 Known Mineral Resource

The project site, an area characterized by industrial marine-related activities, does not contain any known mineral resources. In addition, the project site is underlain by artificial fill material. No commercial mining operations exist on the project site or in the immediate vicinity. The project site and the surrounding area are not designated or zoned as land with the availability of mineral resources. In addition, the project site does not contain aggregate resources and is not in a mineral resource zone that contains important resources, as designated by the California Department of Conservation Division of Mines and Geology. Therefore, the proposed project would not result in a loss of known mineral resources.

6.4.9.2 Important Mineral Resource

The project site is underlain by artificial fill material. The PMP does not identify any mineral resources in the area or designated plans for mineral resource extraction. The project site and the surrounding area do not contain locally important mineral resources. Therefore, implementation of the project would not result in the loss of availability of a locally important mineral resource recovery site, and no impact would occur.

6.4.10 Noise

6.4.10.1 Airport Land Use Plan Area

The proposed project would not construct any habitable structures and would not attract large numbers of people to the project site. In addition, the project site is not within the Forecast Noise Exposure areas identified in Exhibit 2-1 of the SDIA ALUCP (SDIA 2014). Therefore, the project would not expose people residing or working in the project area to excessive airport noise levels. No impact would occur.

6.4.10.2 Private Airstrip

The project site is not within the vicinity of a private airstrip. Therefore, no impacts related to private airstrips would occur with implementation of the proposed project.

6.4.11 Population and Housing

6.4.11.1 Population Growth

The proposed project would not construct any homes or businesses or extend roads; however, additional employees and construction workers are anticipated to work at the TAMT as a result of near-term optimization improvements and future redevelopment activities. Approximately 232 jobs (direct, indirect, and induced) would be created during the near-term construction period, and a total of 450 long-term (through the life of the plan) direct and indirect jobs would be created as a result of the proposed TAMT plan.

Although implementation of the proposed project would require up to 450 new employees and temporarily increase the number of construction workers in the area, the introduction of additional employees would not result in a significant increase in the local population and would not induce substantial population growth. The additional jobs are expected to be filled by residents who currently live in the San Diego region. Furthermore, the permanent jobs would occur over an extended period of time, and the workers could be accommodated with existing housing stock. The jobs would not result in the relocation of any population. Therefore, the proposed project would not directly or indirectly induce substantial population growth through the creation of new homes or businesses in the San Diego region. Impacts would be less than significant.

6.4.11.2 Displacement of Housing

No housing would be displaced with implementation of the proposed project. The project site is a working marine terminal on San Diego Bay and does not include residential housing. Proposed project actions are concerned with redevelopment of the marine terminal to accommodate market-driven cargo operations. No impacts would occur.

6.4.11.3 Displacement of People

The project site is a working marine terminal on San Diego Bay and does not include residential housing. Proposed project actions are concerned with redevelopment of the marine terminal to accommodate market-driven cargo operations. It would not displace people or require the construction of replacement housing elsewhere. No impact would occur.

6.4.12 Public Services

6.4.12.1 Fire

The project site is served by the City of San Diego Fire-Rescue Department and by the San Diego Harbor Police Department for fireboat operations. Under the proposed project, a new redevelopment plan, which would provide for future improvements at the TAMT, would be adopted. Proposed operations at the TAMT site would be similar to existing operations in terms of the need for fire protection services. Therefore, the proposed project would not result in increased demand that would require new or physically altered fire protection facilities; impacts would be less than significant.

6.4.12.2 Police

The Harbor Police Department is the primary responder to calls for police protection services at the project site; the San Diego Police Department is a secondary responder. The proposed project would adopt a new redevelopment plan that would include various improvements to the terminal. Although operations would increase under the proposed project, the TAMT is a monitored environment that has controlled access and active security. Operations under the proposed project would be similar to operations under existing conditions in terms of the need for police protection services, given the restricted access and the available security services. Therefore, the proposed project would not result in increased demand that would require new or physically altered police protection facilities; impacts would be less than significant.

6.4.12.3 Schools

The proposed project would not result in adverse impacts on schools. Physical impacts on school facilities and services are usually associated with in-migration and population growth, which increase the demand for schools and result in the new for new or expanded facilities. The proposed project would have no effect on population growth and school demand. Therefore, the proposed project would not result in increased demand that would require the need for new or physically altered school facilities. No impact would occur.

6.4.12.4 Parks

The project site does not contain any parks. Although the proposed project would have a negligible effect on population growth, it is possible that use of recreational facilities in the vicinity of the project site could increase slightly due to the increase in employees, particularly at lunch breaks. However, this insignificant increase in use would result in very light use of the park (e.g., sitting at benches eating lunch) and would not substantially degrade the existing facilities. Therefore, the proposed project would not result in an increased demand requiring the need for new or physically altered park facilities, and any related impact would be less than significant.

6.4.12.5 Other Public Facilities

The proposed project would not result in adverse impacts on other public facilities. As discussed above, physical impacts on public services are usually associated with in-migration and population growth, which increase the demand for public services and facilities. The proposed project would not increase the local population. Although additional employees are anticipated during construction and operation, they are not expected to increase the use of existing public facilities. Therefore, the proposed project would not result in increased demand that would require the need for new or physically altered public facilities. No impact would occur.

6.4.13 Recreation

6.4.13.1 Physical Deterioration of Facilities

An increase in the use of existing parks and recreational facilities typically results from an increase in the number of housing units or residents in an area. The proposed project would not result in an increase in the number of housing units or residents in the vicinity. Although additional employees are anticipated during construction and operation, they are not expected to heavily use the existing neighborhood or regional parks or any other recreational facilities. Impacts would be less than significant.

6.4.13.2 Construction or Expansion of Recreational Facilities

The proposed project would not require construction or expansion of recreational facilities that might have an adverse physical effect on the environment. As a result, impacts related to recreation would be less than significant.

6.4.14 Transportation and Traffic

6.4.14.1 Air Traffic Patterns

The project site is about 2 miles south of SDIA. The site is within Review Area 2 of the Airport Influence Area, per the ALUCP (SDIA 2014). FAA would be notified at least 45 days prior to construction because of the proximity of the site to a navigation facility. Although a final determination has not been made by FAA, this impact is anticipated to be less than significant. In the unlikely event that FAA requires changes to the project (e.g., height restrictions), the changes would be reflected in Chapter 3, *Project Description*, of the EIR, thereby ensuring that impacts related to a safety hazard for people residing or working in the project area would not occur. There are no other airports or ALUCPs in the vicinity of the project site. Impacts would be less than significant.

6.4.14.2 Emergency Access

Existing access to the project site is from an entrance gate on Crosby Road, near the southeastern portion of the project site. Traffic arriving at the entrance gate is inspected by security personnel prior to admittance. Under the proposed project, an updated gate complex would be installed as part of the TAMT plan. Final plans would be reviewed for safety and would comply with fire access regulations, which ensure adequate access in the event of an emergency. Approval of the emergency access plans would be required by the Harbor Police and the City's police and fire departments. As such, no impact would occur.

6.4.15 Utilities and Service Systems

6.4.15.1 Solid Waste

Assembly Bill (AB) 939 requires each city and county in the state to divert at least 50% of its solid waste from landfill disposal through measures such as source reduction, recycling, and composting. AB 939 mandates the reduction of solid waste disposal in landfills and a minimum 50% diversion goal, and also requires cities and counties to prepare Source Reduction Recycling Elements in their General Plans. Concrete and building materials associated with demolition of the transit sheds and any other demolition that would occur during the life of the TAMT plan would be exported to and recycled at one of several approved facilities in San Diego County. During operations, the project would generate waste associated with the additional employees, which would consist primarily of food and beverage packaging that would be disposed of on site in appropriate waste and recycling receptacles. Therefore, the proposed project would have a less-than-significant impact related to compliance with federal, state, and local statutes and regulations related to solid waste.

Chapter 7
Alternatives to the Proposed Project

7.1 Overview

This chapter describes and analyzes a range of reasonable alternatives that could feasibly attain most of the basic project objectives while avoiding or substantially lessening one or more of the significant effects of the proposed project. The primary purpose of this chapter is to ensure that the comparative analysis provides sufficient detail to foster informed decision-making and public participation in the environmental process.

~~Four~~Five alternatives to the proposed project are analyzed in this chapter and discussed in terms of their merits relative to the proposed project.

- Alternative 1 – No Project/No Build Alternative
- Alternative 2 – 2008 Maritime Business Plan Buildout Alternative
- Alternative 3 – Reduced Project Alternative
- Alternative 4 – Full Refrigerated and Dry Container Buildout Alternative[1]
- Alternative 5 – Sustainable Terminal Capacity Alternative

Based on the analysis below, Alternative 3, the Reduced Project Alternative, would be the environmentally superior alternative.

7.2 Requirements for Alternatives Analysis

The State CEQA Guidelines require that an EIR present a range of reasonable alternatives to a project, or to the location of a project, that could feasibly attain a majority of the basic project objectives, but that would avoid or substantially lessen one or more significant environmental impacts of the project. The range of alternatives required in an EIR is governed by a "rule of reason" that requires an EIR to set forth only those alternatives necessary to permit a reasoned choice. An EIR need not consider every conceivable alternative to a project. Alternatives may be eliminated from detailed consideration in the EIR if they fail to meet most of the basic project objectives, are not feasible, or do not avoid or substantially lessen any significant environmental effects (State CEQA Guidelines, Section 15126.6(c)).

[1] This alternative was considered in the TAMT plan and would be similar to the Full Dry Container Buildout except with slightly less throughput and fewer modifications to the existing condition (e.g., refrigerated containers are already a major portion of the terminal and the infrastructure would not have to be removed under the Full Refrigerated and Dry Container Buildout Alternative). Neither of these alternatives are consistent with the District maritime operations, however, because they would break away from a longstanding commitment of handling neo bulk, break bulk, and roll-on/roll-off cargos and the benefits of cargo diversification. They are considered in this chapter because they were mentioned in the TAMT plan.

In addition to the requirements described above, CEQA requires the evaluation of a No Project Alternative, which analyzes the environmental effects that would occur if the project were not to proceed (State CEQA Guidelines Section 15126.6(e)). Moreover, the EIR is required to identify the environmentally superior alternative. The environmentally superior alternative cannot be the No Project Alternative.

7.3 Selection of Alternatives

In developing alternatives that meet the requirements of CEQA, the starting point is the proposed project's objectives. The proposed project includes the following objectives.

1. Enhance the District's competitive position by increasing throughput capabilities by:
    a) Improving onsite infrastructure and operational capacity for three distinct but flexible operating nodes for dry bulk, multi-purpose general cargo, and refrigerated container cargo types, as well as a centralized gate facility; and
    b) Establishing an expanded on-dock rail facility to broaden certain cargo customer access to rail in the long term.
2. Maintain and promote the District's longstanding commitment to dry bulk, liquid bulk, refrigerated containers, and multi-purpose general cargo.
3. Ensure benefits to existing project site tenants by implementing a series of short-term infrastructure improvements, which are designed to accommodate a variety of cargos and vessels within 1 to 5 years.
4. Maintain and expand the District's ability to support military deployment activities during a military contingency or national emergency in the District's capacity as a commercial Strategic Port as designated by the U.S. Department of Defense.
5. Enhance the efficiency, productivity, and long-term success of the TAMT by identifying potential infrastructure needs, decreasing intra-terminal transfer time, simplifying terminal layout patterns, and making internal traffic flows more predictable, all while remaining flexible and responsive to future market conditions.
6. Optimize the use of land and waterways and provide deep-water and water-dependent facilities in a manner that is consistent with the Port Master Plan and the California Coastal Act.
7. Balance the critical need of staying economically competitive with maintaining environmental sustainability and stewardship by supporting the cleanest feasible technology and infrastructure for terminal upgrades and by maintaining consistency with California's Sustainable Freight Strategy and the District's Climate Action Plan, Clean Air Program, and Jurisdictional Runoff Management Program.

CEQA also requires that alternatives be feasible. Feasible is defined in CEQA as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors" (PRC Section 21061.1). The State CEQA Guidelines elaborate that factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, other plans or regulatory limitations, and jurisdictional boundaries and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (State CEQA Guidelines Section 15126.6).

Finally, the alternatives should also avoid or substantially lessen one or more significant environmental impacts that would occur under the proposed project. Table 7-1 summarizes the proposed project's significant impacts, which have been identified to assist with focusing the analysis of alternatives in Section 7.5.

Table 7-1. Summary of Significant Effects of the Proposed Project

Resource Impact	Significant and Unavoidable	Less than Significant with Mitigation
Section 4.1, Aesthetics and Visual Resources		
Visual impacts from installation of gantry cranes identified in TAMT plan buildout	X	
Section 4.2, Air Quality and Health Risk		
Exceed VOC~~, NO_X, CO, SO_X, PM10, and PM2.5~~ emissions thresholds from TAMT plan buildout construction and operations	X	
Toxic air contaminants above thresholds from TAMT plan buildout construction and operations	~~X~~	X
Section 4.3, Biological Resources		
Potential destruction of Migratory Bird Treaty Act protected nests		X
Disturbance of active bat roosts		X
Section 4.4, Cultural Resources		
Potential disturbance of archaeological resources during ground-disturbing activities		X
Potential disturbance of human remains during ground-disturbing activities		X
Section 4.5, Geology and Soils		
N/A	N/A	N/A
Section 4.6, Greenhouse Gas Emissions and Climate Change		
Exceed GHG emissions thresholds from Demolition and Initial Rail Component construction and operations through 2020		X
Exceed GHG emissions thresholds from TAMT plan construction and operations and operations beyond 2020	X	
Section 4.7, Hazards and Hazardous Materials		
Possible soil contamination		X
Section 4.8, Hydrology and Water Quality		
N/A	N/A	N/A
Section 4.9, Noise and Vibration		
Exceedance of adopted noise standards during TAMT plan buildout operational activities	X	
Substantial permanent increase in ambient noise levels in the project vicinity from buildout of the TAMT plan	X	

Resource Impact	Significant and Unavoidable	Less than Significant with Mitigation
Substantial temporary increase in ambient noise levels during construction of the Demolition and Initial Rail Component	X	
Substantial temporary increase in ambient noise levels during construction of the full TAMT plan buildout	X	
Section 4.10, Transportation, Circulation, and Parking		
Construction-Related Impact on an Intersection: Norman Scott Road/32nd Street/Wabash Boulevard from Demolition and Initial Rail Component Construction	X	
~~Operation-Related Impact on an Intersection: Norman Scott Road/32nd Street/Wabash Boulevard from Demolition and Initial Rail Component Operations~~	~~X~~	
Construction Traffic from Future TAMT Plan Construction Projects	X	
Operation-Related Impact on a Roadway Segment: 28th Street between Boston Avenue and National Avenue from TAMT Plan Operations	X	
Operation-Related Impact on an Intersection: Norman Scott Road/32nd Street/Wabash Boulevard from TAMT Plan Operations	X	
Insufficient Parking at Full TAMT Plan Buildout		X
Section 4.11, Utilities and Energy		
N/A	N/A	N/A

7.4 Alternatives Considered

A total of ~~eight~~nine alternatives were initially considered for evaluation. Based on the criteria described in Section 7.3, in addition to evaluating the No Project Alternative scenario, ~~three~~four other alternatives were carried forward. The other alternatives that were considered, but rejected, included an alternate location alternative, a full dry container buildout scenario, relocation of the cruise ship terminal, and use of cleanest feasible technologies. Table 7-2 summarizes the buildout scenarios for the ~~four~~five alternatives that were carried forward.

Table 7-2. Comparison of Proposed Project and Alternative Buildout Scenarios

	Dry Bulk	Liquid Bulk	Refrigerated Containers	Multi-Purpose General Cargo[2]	Total Cargo Throughput
Proposed Project	2,650,000	239,017	2,288,000	977,400	**6,154,417**
Alternative 1 – No Project/No Build	400,000	239,017	700,000	100,000	**1,439,017**
Alternative 2 – 2008 Maritime Business Plan Buildout	2,250,000	239,017	730,000	1,670,000	**4,889,017**
Alternative 3 – Reduced Project Alternative (<29% Buildout)	400,000	60,000	800,000	220,000	**1,480,000**
Alternative 4 – Full Refrigerated and Dry Container Buildout Alternative	2,650,000	239,017	2,960,840[1]	0	**5,849,857**
Alternative 5 – Sustainable Terminal Capacity Alternative	1,987,500	239,017	1,716,000	733,050	**4,675,567**

[1] For this alternative, the number includes both refrigerated and dry containers.
[2] This category is specific to neo bulk, break bulk, and other miscellaneous non-containerized cargo.

7.4.1 Alternatives Considered but Rejected

7.4.1.1 Alternate Location Alternative

The alternate location alternative was rejected as infeasible due to the lack of other feasible locations for the proposed project. The project requires access to the ocean, as cargo is brought in by marine vessel. Therefore, any alternative sites would have to be situated at the waterfront, with appropriate breakwater, water depth, and landside infrastructure to load and off-load vessels. In addition, the TAMT is one of two working terminals within the Port of San Diego. The other, the National City Terminal, is approximately 3.5 miles south of the project site. The proposed TAMT plan is specific to the project site as it proposes to modernize and adjust the existing terminal configuration to increase flexibility and better accommodate existing and future cargo market opportunities. This could not be accommodated at the National City Marine Terminal or elsewhere within the District's boundaries. Therefore, an alternate site alternative was rejected from consideration.

7.4.1.2 Full Dry Container Buildout Alternative

The Full Dry Container Buildout Alternative would reconfigure the cargo space at the project site such that space dedicated to container cargo would increase to 3,155,840 metric tons, but would eliminate all space dedicated for multi-purpose general cargo. This alternative was rejected from consideration because it would result in a similar configuration of cargo space that is considered under Alternative 4, Full Refrigerated and Dry Container Buildout Alternative, and would reduce the total maximum practical capacity (MPC) buildout when compared to the proposed project. However, a Full Dry Container Buildout Alternative would not avoid or substantially lessen any significant environmental effects when compared to Alternative 4, nor would it advance any additional project objectives that could not already be achieved under Alternative 4, Full Refrigerated and Dry Container Buildout Alternative. Therefore, because this alternative would consider a scenario that is similar to another alternative being analyzed, it was rejected from further consideration.

7.4.1.3 Relocation of Cruise Ship Terminal Alternative

The Relocation of Cruise Ship Terminal Alternative would relocate the San Diego Cruise Ship Terminal from the B Street Pier in downtown San Diego to the project site. This alternative was rejected from consideration because it would not meet any of the project objectives and because it would be infeasible to relocate all existing operations of the TAMT to another location (see Section 7.4.1.1, above).

7.4.1.4 Cleanest Feasible Technologies Alternative

The Cleanest Feasible Technologies Alternative was considered because a scoping letter received on the Notice of Preparation suggested it. This alternative would involve buildout of the proposed project as detailed in Chapter 3, *Project Description*, but would incorporate into the project design all existing and emerging technologies related to reducing the air pollution and greenhouse gas (GHG) impacts of the proposed project through the implementation of zero and near-zero technologies for vehicles and equipment that would serve the proposed project as well as installing the necessary infrastructure to support zero emission and near-zero emission technologies. These technologies include battery electric or fuel cell electric forklifts; electrified rail-mounted gantry cranes; battery electric/hybrid electric medium-duty trucks; shore power at the berths designed to accommodate changes in vessel sizes and berthing configurations; all-electric, plug-in transport refrigeration systems; hydrogen fuel cell transport refrigeration; cryogenic transport refrigeration; and an electronic gate system at the centralized common gate. During construction of this alternative, the District would prohibit idling of diesel-powered equipment and tools and instead provide electric hookups to support that equipment.

This alternative was rejected from further consideration because the project design already provides many of these technologies as project features (e.g., electrified rail-mounted gantry cranes; shore power at the berths designed to accommodate changes in vessel sizes and berthing configurations; plug-in transport refrigeration systems; potential for a future electronic gate system) and includes mitigation measures for others (e.g., electric forklifts, electric medium-duty trucks) to move toward zero or near-zero emission technology. In addition, beyond the recommendations contained within the scoping letter, the project would run conduit and improve the electrical system to allow for future shore power at Berths 10-5/10-6 and to support continued electrification of the terminal; new pole lighting that uses light-emitting diodes (LEDs); more energy-efficient buildings to replace older, less efficient buildings; and a new, cleaner dry bulk conveyance and discharge system to reduce air emissions and increase throughput. In addition, per the policies of the District's Green Port Program, the District would continue to incorporate the cleanest technologies as they become commercially available and feasible for use at the project site. However, the District is not certain that an electronic gate system at the centralized common gate is feasible at this time; therefore, it is a possible future component of the TAMT plan. In addition, the District's existing tenants will need to determine if hydrogen fuel cell transport refrigeration and cryogenic transport refrigeration are feasible, as they would have to be integrated into their current or future business operations, which may not be feasible. However, as mentioned above, the TAMT plan (and a current cumulative project—the Dole Refrigerated Racks Improvement Project) demonstrates that the terminal intends to move toward the use of plug-in transport refrigeration systems. Consequently, the proposed project already includes all of the cleanest feasible technologies and has mitigation measures designed to incorporate clean technology as it continues to improve and become commercially available. Because this alternative does not provide any distinction from the proposed project, it has been rejected from further consideration.

7.4.2 Alternatives Selected for Analysis

7.4.2.1 Alternative 1 – No Project/No Build Alternative

The No Project Alternative is required by CEQA to discuss and analyze potential impacts that would occur if the proposed project was not implemented. Under the No Project/No Build Alternative, adoption of the proposed TAMT plan would not occur, nor would the demolition of Transit Sheds #1 and #2, Warehouse C, or the molasses tanks. No gantry cranes or additional dry bulk facility improvements (e.g., new conveyor system and bulk discharger, 100,000 square feet of warehouse space) would be added and no changes would occur to the entry gate or weigh station. Upgrades to the rail infrastructure, including installation of a rail lubricator and a compressed air system for testing of train air brakes, would also not occur. New utility lines, a modular office, a gear and IT building, and outdoor storage would not be installed. Onsite lighting would remain as it currently stands. Growth at the project site would occur in an ad hoc manner, and due to the existing capacity constraints, the maximum annual cargo throughput would only reach approximately 1,439,017 million metric tons. Most of the increase in throughput would come from liquid bulk given the existing capacity already available (see Table 7-2, above). Under this alternative, the District would not be able to respond to projected market demands of multi-purpose general cargo and, as such, the No Project Alternative would not meet the project objectives.

7.4.2.2 Alternative 2 – 2008 Maritime Business Plan Buildout Alternative

The 2008 Maritime Business Plan Buildout Alternative would involve implementation of the Maritime Business Plan that was adopted in 2008. Under this alternative, the TIGER Grant would not be awarded. Transit Shed #1 would remain and would continue to provide general cargo storage space at a cost of loss of flexibility and inability to maximize the storage area. The molasses tanks, Warehouse C, and half of Transit Shed #2 would be demolished to accommodate increased laydown area for break bulk cargo and to allow more efficient access between the berths and other areas of the project site. Office space currently in Transit Shed #2 would be located off site. The dry bulk facility could be expanded to accommodate a much higher dry bulk throughput; however, the refrigerated cargo area, an area that the District projects to see significant growth opportunities, would be limited to the existing facilities. Upgrades to the rail infrastructure—including installation of a rail lubricator and compressed air system for train air brake testing, replacement of existing lighting, installation of new utility lines, and construction of a gear and IT building, a new entry gate, and a weigh station are not in the 2008 Maritime Business Plan and would not be constructed. Finally, installation of gantry cranes would not occur under this alternative. Total MPC under the 2008 Maritime Business Plan Buildout Alternative would equal 4,889,017 metric tons.

7.4.2.3 Alternative 3 – Reduced Project Alternative

Under this alternative, the MPC of the proposed project would be reduced by approximately 345 percent and would result in a total throughput of 1,480,000 metric tons annually. This alternative was developed to avoid the significant roadway segment impact at 28th Street between Boston Avenue and National Avenue, which would occur once the project reaches 1,175 new daily trips.

It is also assumed that all components of the Demolition and Initial Rail Component would occur under this alternative, including demolition of Transit Sheds #1 and #2; conduit and electrical improvements; installation of a subsurface stormwater detention tank; replacement of existing lighting; upgrades to the on-terminal rail infrastructure, including installation of a rail lubricator and compressed air system for train air brake testing; construction of a 3,600-square-foot modular office; construction of an approximately 782-square-foot electrical gear room, restroom facility and IT building; and construction of an approximately 850-square-foot outdoor equipment storage area. The demolition of the transit sheds would increase the area for multi-purpose general cargo and refrigerated cargo and improve circulation within the project site. Warehouse C would be retained and would be used to accommodate the modest increase in dry bulk cargo, as necessary. Installation of gantry cranes or the consolidated dry bulk facility improvements (e.g., new conveyor system and bulk discharger, 100,000 square feet of warehouse space) is not assumed under this alternative. However, because certain improvements would not occur, specifically demolition of Warehouse C, installation of gantry cranes, and the improvement to the dry bulk facility, the TAMT would retain a modest increase in overall throughput that, in order to avoid a significant impact at 28th Street between Boston Avenue and National Avenue, would not allow throughput to increase beyond 1,480,000 MT annually or an approximately 42 percent increase over the existing throughput.

7.4.2.4 Alternative 4 – Full Refrigerated and Dry Container Buildout Alternative[2]

The Full Refrigerated and Dry Container Buildout Alternative would implement one of the two scenarios discussed in the TAMT plan that were not being considered by the District because they would limit the flexibility of the terminal and the District's commitment to handling neo bulk, break bulk, and roll-on/roll-off cargos as indicated in Objective #1 of the proposed project. The second of these two scenarios, the Full Dry Container Buildout Alternative, was rejected from consideration as a fully evaluated alternative for the reasons cited above under Section 7.4.1.2. Under this alternative, increased space for multi-purpose general cargo would be eliminated from the project site and area dedicated to both refrigerated and dry containers would be maximized. The MPC for the cargo types would be as follows.

- Dry bulk: 2,650,000 metric tons
- Liquid bulk: 239,017 metric tons
- Refrigerated and dry containers: 2,960,840 metric tons

Total MPC under this alternative would equal 5,849,857. Other improvements under this alternative would be similar to those occurring under the proposed project, including demolition of Transit Sheds #1 and #2 and Warehouse C and upgrades to the rail infrastructure, including installation of a rail lubricator and compressed air system for train air brake testing; replacement of existing

[2] This alternative was considered in the TAMT plan and would be similar to the Full Dry Container Buildout except with slightly less throughput and fewer modifications to the existing condition (e.g., refrigerated containers are already a major portion of the terminal and the infrastructure would not have to be removed under the Full Refrigerated and Dry Container Buildout Alternative). Neither of these alternatives are seriously considered because they would fail to meet one of the central project objectives (Objective #1). They are considered in this chapter because they were mentioned in the TAMT plan.

lighting; installation of new utility lines; construction of a gear and IT building, a new entry gate, and a weigh station a new modular office; installation of up to 5 additional gantry cranes; and additional dry bulk facility improvements (e.g., new conveyor system and bulk discharger, 100,000 square feet of warehouse space).

7.4.2.5 Alternative 5 – Sustainable Terminal Capacity Alternative

The Sustainable Terminal Capacity (STC) Alternative was added to the Final EIR in response to comments received by the California Air Resources Board (ARB), the San Diego Air Pollution Control District, and the Environmental Health Coalition about the MPC scenario's significant and unavoidable impacts associated with criteria pollutants and health risk. Extensive coordination between the District's Maritime business and operations staff, Real Estate staff, and Planning and Green Port staff occurred in an effort to develop an alternative that would reduce criteria pollutants and toxic air contaminants further while still achieving the basic project objectives and remaining feasible.

The STC Alternative represents what the TAMT could handle on a regular basis without having to maximize all facilities concurrently as under the MPC scenario. Under this alternative, the throughput that could be reached under the MPC scenario of the proposed project would be reduced by 25 percent for each of the three cargo nodes that are proposed for changes under the TAMT plan (i.e., Dry Bulk, Refrigerated Containers, and Multipurpose General Cargo). Total annual throughput would be limited to 4,675,567 MT. These throughput limits would be enforced throughout the life of the plan.

An estimated throughput breakdown by node includes:

- Dry Bulk: 1,987,500 MT
- Refrigerated Containers: 1,716,000 MT
- Multi-Purpose/General Cargo 733,050 MT
- Liquid Bulk (No Change): 239,017

If adopted, this alternative would not allow throughput to exceed a total of 4,675,567 MT without analyzing the environmental effects of additional throughput, consistent with State law.

7.5 Analysis of Alternatives

This section discusses each of the project alternatives and determines whether each alternative would avoid or substantially reduce any of the significant impacts of the proposed project. This section also identifies any additional impacts resulting from the alternatives that would not result from the proposed project and considers the alternatives' respective relationships to the proposed project's basic objectives. A summary comparison of the impacts of the proposed project and the alternatives under consideration is included as Table 7-~~3~~24 at the end of this chapter.

7.5.1 Analysis of Alternative 1 – No Project/No Build Alternative

7.5.1.1 Aesthetics and Visual Resources

The existing visual character on the site is defined by shipping trucks, stacks of containers, longshoremen, and miscellaneous equipment related to typical port operations. Under the No Project/No Build Alternative, cargo capacity at the project site would increase over existing conditions, which would increase the presence of trucks and container ships. However, the cargo shipping operations that occur at the project site are dynamic, and these, as well as other, components of the project site are in constant flux. As port operations occur, the locations and activities would change, stacks of containers would be relocated, trucks and ships would arrive and leave, and other miscellaneous equipment would be relocated as needed. This aspect of the project site would be similar under the No Project/No Build Alternative as it is under existing conditions. In addition, permanent components of the project site that contribute to the visual character of the site, including Transit Sheds #1 and #2 and Warehouse C, would remain and gantry cranes, which would result in significant and unavoidable impacts on aesthetics under the proposed project, would not be added to the project site. Therefore, observable visual changes to the project site from key viewpoints would be minimal and impacts on aesthetics and visual resources would be less than significant under the No Project/No Build Alternative. Furthermore, daytime glare and nighttime lighting from motor vehicles traveling to and from the project site would remain similar to the existing condition. Overall, this alternative would result in less-than-significant impacts related to visual resources. Therefore, the No Project/No Build Alternative would result in a substantially reduced impact on aesthetics and visual resources when compared to the proposed project.

7.5.1.2 Air Quality and Health Risk

Alternative 1 would not include any construction that would result in air pollutants. Alternative 1 would result in approximately double the air pollutants currently generated from the terminal, associated with vessel and truck traffic moving approximately 1,439,017 metric tons of throughput, which is an increase of approximately 38 percent of the existing throughput. This would result in a substantial increase in air pollutant emissions over the existing condition. While the throughput would be much lower than the project, the No Project/No Build Alternative would also not include any specific air pollutant reduction measures and may not incorporate emission reduction technologies such as laying conduit for the future electrification of the terminal, electric gantry cranes, and an additional shore power connection at Berths 10-5/10-6. Therefore, air pollutants under Alternative 1 would be reduced when compared to the proposed project, but the alternative would incorporate fewer clean technology improvements.

7.5.1.3 Biological Resources

Under Alternative 1, minimal changes would occur at the project site and demolition of existing structures would not occur. As such, construction activities would be minimal, and no potential impact on nesting birds (pursuant to the Migratory Bird Treaty Act [MBTA]), or on roosting bats, which are California Department of Fish and Wildlife-designated sensitive resources, would occur. With the proposed project, mitigation would be required to avoid impacts on nesting birds and roosting bats, resulting in less-than-significant impacts. Therefore, because Alternative 1 would have no impacts and the proposed project would have less-than-significant impacts, impacts on biological resources under Alternative 1 would be slightly reduced compared to the proposed project.

7.5.1.4 Cultural Resources

The No Project/No Build Alternative would not demolish or otherwise alter any of the existing buildings on the project site and, therefore, would not affect any potentially historic resources. However, the historic resources evaluation conducted for the proposed project did not identify any historic resources on the project site and, as such, determined that the proposed project would not result in impacts on any historic resources. Therefore, Alternative 1 would result in similar impacts related to historic resources as the proposed project. However, Alternative 1 would not result in any ground-disturbing activities and would not disturb potential prehistoric archaeological resources or human remains that may exist in the eastern portion of the project site. Although the proposed project would mitigate any potential impacts on prehistoric archaeological resources or human remains, Alternative 1 would have no potential to affect these cultural resources. Therefore, impacts on cultural resources occurring under Alternative 1 would be slightly reduced compared to the proposed project.

7.5.1.5 Geology and Soils

The project site is prone to geologic hazards associated with seismic activity, including ground rupture and liquefaction. Under the No Project/No Build Alternative, minimal changes would occur at the project site and demolition of existing structures would not occur. Transit Shed #2 and Warehouse C, which are above the Silver Strand Fault, would remain in situ and may continue to pose a risk to people or structures related to fault rupture. However, as discussed in Section 4.5, *Geology and Soils*, influencing faults would require deep and significant intrusion, such as from the creation of reservoirs and the pumping of fluids in deep wells, to increase the potential for a rupture to occur. Given the shallow grading and foundation depths of the existing buildings, they would not exacerbate the rupture of existing faults in the area. In addition, geotechnical evaluations prepared for the project site indicate that existing soils at the project comprise water-saturated hydraulic fill and bay deposits, which may be susceptible to liquefaction during seismic events. Similarly, the No Project/No Build Alternative would not exacerbate the potential for liquefaction to occur. Liquefaction typically occurs when a site is in a zone with seismic activity, onsite soils are cohesionless, groundwater is encountered within 50 feet of the surface, and soils' relative densities are less than about 70 percent. The No Project/No Build Alternative would not increase any of these characteristics and would not exacerbate the potential for liquefaction. Therefore, the No Project/No Build Alternative would result in less-than-significant impacts related to geology and soils, similar to the proposed project. However, it should be noted that under the No Project/No Build Alternative, buildings would still be situated over the Silver Strand Fault, whereas under the proposed project, all proposed structures would be sited at least 50 feet away from the active fault in accordance with the Alquist-Priolo Act. Because CEQA does not consider the environment's effect on a project (with some exceptions), the No Project/No Build Alternative would result in similar impacts related to geology and soils when compared with the proposed project.

7.5.1.6 Greenhouse Gas Emissions

Alternative 1 would not include any construction that would result in GHG emissions. Alternative 1 would result in approximately double the GHG emissions currently generated from the terminal, associated with vessel and truck traffic moving approximately 1,439,017 metric tons of throughput, which is an increase of approximately 38 percent of the existing throughput. This would result in a substantial increase in GHG emissions over the existing condition. While the throughput would be much lower than the project, the No Project/No Build Alternative would also not include any specific GHG reduction measures and may not incorporate emission reduction technologies such as laying conduit for the future electrification of the terminal, an additional shore power connection at Berths 10-5/10-6, electric gantry cranes, or more energy-efficient offices. Therefore, GHG emissions under Alternative 1 would be reduced when compared to the proposed project, but the alternative would incorporate fewer clean technology improvements.

7.5.1.7 Hazards and Hazardous Materials

Under the No Project/No Build Alternative, there would be no ground-disturbing activities and there would be no potential to encounter possible soil contamination present at the project site. Although the proposed project would mitigate any potential impacts from encountering hazardous materials during construction and excavation activities to below a level of significance, Alternative 1 would have no potential to exacerbate an existing hazardous materials condition. Therefore, the No Project/No Build Alternative would result in slightly reduced hazards and hazardous materials impacts compared to the proposed project.

7.5.1.8 Hydrology and Water Quality

Under the No Project/No Build Alternative, minimal changes would occur at the project site and cargo throughput would increase marginally over existing conditions. Like the proposed project, any construction activities occurring under the No Project/No Build Alternative, which would likely involve minor improvements to the existing facilities, could expose soils or involve the use of toxic chemicals that could affect water quality in the San Diego Bay or local drainage facilities. Construction activities would be required to comply with a General Construction Permit and the District's Jurisdictional Runoff Management Program (JRMP). Compliance with these regulations would involve implementation of best management practices (BMPs) that would control any runoff generated from construction activities and, as such, impacts on water quality from construction activities under the No Project/No Build Alternative would be less than significant, similar to the proposed project.

In addition, operational conditions under the No Project/No Build Alternative would be similar to existing conditions with minor increases in cargo throughput with associated increases in terrestrial and marine vehicle traffic. These activities would continue to comply with any BMPs specified in the required Stormwater Pollution Prevention Plan (SWPPP) and JRMP, including good housekeeping practices (including practices regarding heavy equipment), non-stormwater management, proper waste handling, secondary containment for hazardous materials and waste, and education and training. Continued implementation of these BMPs would ensure impacts related to water quality under the No Project/No Build Alternative would be less than significant and similar to the proposed project. However, the proposed project would include installation of a stormwater retention system. Therefore, the No Project/No Build Alternative would result in slightly greater impacts related to water quality than the proposed project.

Furthermore, the No Project/No Build Alternative would not involve any changes to the project site that would place additional structures beyond the existing entrance gate and security guard structure and liquid storage facility within a 100-year flood hazard area that would exacerbate flood hazards and, similar to the proposed project, impacts related to flood hazards would be less than significant.

7.5.1.9 Noise and Vibration

The No Project/No Build Alternative would not result in any significant impacts on noise and vibration and would result in reduced noise impacts when compared with the proposed project. While there could be an increase in cargo capacity under the No Project/No Build Alternative, this increase would be significantly lower than what would occur under the proposed project because no efficiency or capacity enhancements would take place. As such, construction noise would be significantly reduced compared to the proposed project. Compliance with noise standards established in the City's Municipal Code as it relates to noise would ensure that noise increases associated with the No Project/No Build Alternative would remain less than significant. Furthermore, the significant and unavoidable impacts related to operational noise resulting from the addition of new equipment, such as gantry cranes or a dry bulk discharge unloading system, would not occur under the No Project/No Build Alternative. Therefore, the No Project/No Build Alternative would result in reduced impacts related to noise on the existing environment when compared with the proposed project.

7.5.1.10 Transportation, Circulation, and Parking

Under the No Project/No Build Alternative, capacity for accommodating increased cargo throughput would reach around 1,480,000 metric tons per year, which is 38% of throughput under existing conditions. Construction activities would be minor and would not result in significant and unavoidable construction-related traffic impacts. In addition, the decrease in cargo throughput would result in a reduction of average daily trips at study area street segments and intersections under operational conditions. Traffic impacts at the roadway segment of 28th Street between Boston and National avenues would not occur under the No Project/No Build Alternative because the throughput is lower than 29% buildout of the proposed project (which is where the significant impact occurs at this segment), but the significant impact would still occur at the intersection of Norman Scott Road/32nd Street/Wabash Avenue and would require mitigation. Because this alternative would reduce the significant impacts of the proposed project, impacts on transportation under this alternative, while still significant, would be substantially reduced when compared to the proposed project because one significant impact would be avoided.

7.5.1.11 Utilities and Energy

Under the No Project/No Build Alternative, demand for water and the generation of wastewater would rise above existing conditions. However, the increase would not be substantial because throughput growth on the terminal would be limited due to the presence of the transit sheds, Warehouse C, and the molasses tanks, which would continue to limit terminal throughput growth and contribute to less efficient operations. Energy use would also be higher over time compared to baseline conditions, but would not represent a wasteful, inefficient, or unnecessary use of energy. However, compared to the project, Alternative 1 would have lower energy demand, but would also do less to convert more energy from fossil fuels to renewable electricity use. Overall, Alternative 1's impact on utilities and energy would be less than significant and would be reduced compared to the proposed project.

7.5.1.12 Relationship to Project Objectives

The No-Project/No Build Alternative would not meet Objectives #1, #2, #5, #6, or #7. This alternative would not enhance the District's competitive edge by improving onsite infrastructure or operational capacity for distinct but flexible operating nodes, and would not expand on-dock rail facilities; while it would maintain the commitment to dry bulk, liquid bulk, refrigerated container, and multi-purpose cargo, it would not promote it; it would not provide benefits to existing tenants with short-term infrastructure improvements; it would not enhance the efficiency, productivity, or long-term success of the TAMT; it would not optimize the use of land and waterways; and it would not balance the need of staying economically competitive while maintaining environmental sustainability and stewardship because it would not create the opportunity for the District to incorporate elements from the Climate Action Plan. The No-Project/No Build Alternative would partially meet Objective #3 because it would continue to maintain, but would not expand, the District's ability to support military deployment activities.

7.5.2 Analysis of Alternative 2 – 2008 Maritime Business Plan Buildout

7.5.2.1 Aesthetics and Visual Resources

Under Alternative 2, visually noticeable changes to the project site from surrounding viewpoints would include the partial demolition of Transit Shed #2 and the demolition of Warehouse C. Transit Shed #1 would remain under this alternative. Upgrades to the rail infrastructure, including installation of a rail lubricator and compressed air system for train air brake testing, would also occur, but these changes would not be noticeable to viewers from key viewpoints surrounding the project site. The analysis for the proposed project, which would result in greater visually noticeable changes to the project site than Alternative 2, identified significant impacts related to installation of gantry cranes, which would not occur under this alternative. As such, impacts on aesthetics and visual resources under Alternative 2 would remain less than significant and would be substantially reduced when compared to the proposed project.

7.5.2.2 Air Quality and Health Risk

Alternative 2 would result in both construction and operational emissions similar to the proposed project and the emissions would be well above baseline conditions. The impacts of this alternative on the existing condition would be significant. However, unlike the project, the 2008 Maritime Business Plan Buildout Alternative would not incorporate air quality mitigation such as implementation of CAP measures, vessel speed reduction, reduction of truck idling, ~~and cleaner~~zero-emissions cargo-handling equipment (CHE), and at-berth emissions capture for vessels that do not cold iron. Therefore, while the throughput under Alternative 2 would be slightly lower than the project, it is likely that air emissions would be significantly greater~~.~~ and result in greater air quality and health risk levels when compared to the proposed project.

7.5.2.3 Biological Resources

The 2008 Maritime Business Plan Buildout Alternative would not avoid or substantially reduce the significant impacts assessed for the proposed project because, like the proposed project, Alternative 2 would result in demolition of storage space, which could affect nesting birds (pursuant to the MBTA) or disturb active bat roosts. As such, impacts on biological resources under Alternative 2 would potentially result in a significant impact because no mitigation is proposed to avoid impacts on nesting birds or active bat roosts as with the proposed project (MM-BIO-1 and MM-BIO-2). Thus, impacts would be slightly greater when compared with the proposed project's impacts on biological resources.

7.5.2.4 Cultural Resources

The project site does not contain any historic resources and, therefore, the 2008 Maritime Business Plan Buildout Alternative would not result in impacts on historic resources, similar to the proposed project. The 2008 Maritime Business Plan Buildout Alternative would involve ground-disturbing activities in the eastern portion of the project site where potential prehistoric archaeological resources and human remains may be located. As such, Alternative 2 could adversely affect archaeological resources and human remains, and impacts on cultural resources would be potentially significant. Compared with the proposed project, which has mitigation required (i.e., Mitigation Measure MM-CUL-1), Alternative 2 would have the potential to have greater impacts on buried cultural resources.

7.5.2.5 Geology and Soils

Under the 2008 Maritime Business Plan Buildout Alternative, a portion of Transit Shed #2 and all of Warehouse C, which are located above the Silver Strand Fault, would be demolished and replaced with open storage area, which would reduce risks associated with rupture of the Silver Strand Fault that runs under these structures. In addition, other improvements that would occur under the 2008 Maritime Business Plan Buildout Alternative would be susceptible to risks associated with liquefaction. As with the proposed project, structures constructed under this alternative would involve shallow grading and foundation depths that would not exacerbate the rupture of existing faults in the area and would be offset by 50 feet from the fault line. In addition, the 2008 Maritime Business Plan Buildout Alternative would not include features that would exacerbate liquefaction conditions at the project. Preparation of geotechnical reports would be required under this alternative to ensure that new structures address geologic hazards by incorporating recommendations for earthwork condition and preparation, building/structure foundations, and all other geotechnical engineering BMPs, similar to the proposed project. As such, the 2008 Maritime Business Plan Buildout Alternative would result in similar impacts related to geology and soils.

7.5.2.6 Greenhouse Gas Emissions

Alternative 2 would result in both construction and operational emissions similar to the proposed project and the emissions would be well above baseline conditions. The GHG impacts of this alternative on the existing condition would be significant. However, unlike the project, the 2008

Maritime Business Plan Buildout Alternative would not incorporate GHG mitigation such as Climate Action Plan measures and renewable energy projects or GHG offsets. Therefore, while the throughput under Alternative 2 would be slightly lower than the project, it is likely that GHG emissions would be significantly greater.

7.5.2.7 Hazards and Hazardous Materials

The 2008 Maritime Business Plan Buildout Alternative would involve demolition of existing structures, regrading and paving of surface areas, and construction activities, which would require ground disturbance and could result in the exposure of potential soil contamination. Mitigation in the form of the implementation of a soil management plan would be required. As such, the 2008 Maritime Business Plan Buildout Alternative would result in similar impacts related to hazards and hazardous materials as the proposed project.

7.5.2.8 Hydrology and Water Quality

The 2008 Maritime Business Plan Buildout Alternative would involve similar construction and operational activities as those that would occur under the proposed project. Like the proposed project, these activities would be subject to a General Construction Permit, with required implementation of a SWPPP and BMPs, and the BMPs contained within the District's JRMP. However, unlike the proposed project, this alternative would not include installation of a stormwater detention system, which would detain runoff before cleaning and discharging into the bay or releasing into the sanitary sewer system. Any permanent structures constructed under this alternative would comply with Federal Emergency Management Agency (FEMA) structural design requirements for permanent structures within Flood Hazard Zone A, subject to District Engineering Department Approval. Therefore, impacts related to hydrology and water quality occurring from implementation of the 2008 Maritime Business Plan Buildout Alternative would be less than significant, similar to the proposed project, but potentially would not include an additional stormwater detention system.

7.5.2.9 Noise and Vibration

The 2008 Maritime Business Plan Buildout Alternative would substantially increase operations at the project site over existing conditions. Construction activities, which would involve demolition of existing transit sheds and warehouses and development of new open laydown areas, among other activities, would occur and would result in substantial temporary construction noise impacts that would be significant and unavoidable. Therefore, construction noise impacts under this alternative would be similar to those occurring under the proposed project. The analysis for the proposed project identified significant and unavoidable noise impacts related to the operation of additional cranes and a dry bulk discharge unloading system. This alternative would not include additional gantry cranes or a dry bulk discharge unloading system; therefore, the significant and unavoidable impacts related to operation of that equipment would not occur and noise impacts would be reduced compared to the proposed project. However, cranes on vessels and the mobile crane would still have similar noise effects. In addition, while traffic noise would increase under this alternative as compared to existing conditions, the analysis for the proposed project, which would result in greater traffic generation than this alternative, did not identify any significant impacts related to traffic noise. Overall, this alternative would result in similar noise impacts compared to the proposed project.

7.5.2.10 Transportation, Circulation, and Parking

Under the 2008 Maritime Business Plan Buildout Alternative, total cargo capacity would increase to approximately 4.9 million metric tons per year. This alternative would reduce trip generation as compared to the proposed project; however, direct impacts at the street segment of 28th Street between Boston Avenue and National Avenue and at the intersection of Norman Scott Road/32nd Street/Wabash Avenue would still occur under Alternative 2, and would require mitigation. In addition, like the proposed project, development under this alternative would occur based on market demand and could involve construction activities that overlap, which may result in a significant and unavoidable impact if the overlap generated a sufficient number of peak hour trips. As such, similar to the proposed project, this alternative would result in significant and unavoidable impacts. Impacts on transportation occurring under this alternative would be similar compared to the proposed project.

7.5.2.11 Utilities and Energy

Under the 2008 Maritime Business Plan Buildout Alternative, demand for water and the generation of wastewater would increase well above existing conditions and nearly to the level of the proposed project. However, no new facilities would be needed, the construction of which could have an impact on the environment. In addition, similar to the proposed project, Alternative 2 would not require additional water entitlements or result in a determination that the City of San Diego is unable to accommodate the additional wastewater generated by the alternative. Energy use would also be higher over time compared to baseline conditions, but would not represent a wasteful, inefficient, or unnecessary use of energy because all energy would be used for highly coordinated goods movement on and off the terminal. Compared to the project, Alternative 2 would have slightly lower energy demand, but would also do less to convert more energy from fossil fuels to renewable electricity use. Overall, Alternative 2's impact on utilities and energy would be less than significant and would be similar to the proposed project because it would have lower throughput and overall energy use, but would not do as much to transition from primarily fossil fuels to a greater reliance on renewable energy sources.

7.5.2.12 Relationship to Project Objectives

The 2008 Maritime Business Plan Buildout Alternative would not meet Objectives #1, #5, or #6. This alternative would increase the productivity of the terminal by implementing some infrastructure needs, but the site configuration that would be developed under this alternative would not simplify, to the extent feasible, the terminal layout patterns, and thus would not maximize the flexibility and storage capacity of the terminal. With the retention of Transit Shed #1 and a portion of Transit Shed #2, as well as the omission of other infrastructure updates such as gantry cranes, this alternative would also not allow the District to attract new business opportunities or enhance its competitive edge related to the recent changes in cargo markets.

7.5.3 Analysis of Alternative 3 – Reduced Project Alternative

7.5.3.1 Aesthetics and Visual Resources

The project components of Alternative 3 would be similar to the proposed project, but with a reduction in size of the proposed TAMT plan by approximately 345 percent. Changes to the project site would include all elements of the Demolition and Initial Rail Component, which may be visually noticeable from key viewpoints. However, these changes would be consistent with the industrial character of the working bayfront and would not substantially alter the overall views of the project site. In addition, this alternative would not involve the installation of gantry cranes. Therefore, no potentially significant impacts related to designated vista areas, scenic resources, visual quality, or glare affecting nighttime views would occur under this alternative. As such, impacts on aesthetics and visual quality impacts under Alternative 3, which would reduce the size and scale of the proposed development, would remain less than significant and would be substantially reduced compared to the proposed project.

7.5.3.2 Air Quality and Health Risk

Alternative 3 would result in both construction and operational emissions at about one-third the level of the proposed project, although the same level of mitigation would result in emissions ~~would still be well above~~below baseline conditions. Thus, the air quality and health risk impacts of this alternative on the existing condition would likely be less than significant. While this alternative would not include the improvements to the dry bulk facility, which would help reduce the ~~PM10 and PM2.5~~particulate matter 10 microns or less in diameter (PM10) and particulate matter 2.5 microns or less in diameter (PM2.5) emissions of TAMT operations, this alternative would result in substantially fewer truck traffic trips, and would reduce nitrogen oxide (NO_X) and PM2.5 emissions compared to the same sources under project conditions. In addition, unlike the project, the Reduced Project Alternative would not need to reduce its air emissions as significantly as the proposed project and could result in less-than-significant ~~NO_X~~volatile organic compound (VOC) emissions after mitigation was incorporated. Therefore, while the throughput would be significantly lower than the project, it is likely that air emissions, after mitigation, would also be significantly lower than the proposed project.

7.5.3.3 Biological Resources

The Reduced Project Alternative would not avoid or substantially reduce the significant impacts associated with the proposed project because, like the proposed project, Alternative 3 would result in the demolition of the transit sheds, which could affect nesting birds (pursuant to the MBTA) or disturb active bat roosts. Therefore, impacts on biological resources under Alternative 3 would be less than significant after mitigation (i.e., Mitigation Measures MM-BIO-1 and MM-BIO-2), similar to the proposed project.

7.5.3.4 Cultural Resources

The project site does not contain any historic resources and, therefore, the Reduced Project Alternative would not result in impacts on historic resources, similar to the proposed project. The Reduced Project Alternative could involve ground-disturbing activities in the eastern portion of the project site where potential prehistoric archaeological resources and human remains may be located. As such, Alternative 3 could adversely affect archaeological resources and human remains, but impacts on cultural resources would be less than significant with mitigation incorporated (i.e., Mitigation Measure MM-CUL-1), similar to the proposed project.

7.5.3.5 Geology and Soils

Under the Reduced Project Alternative, Transit Shed #2, which is located above the Silver Strand Fault, would be demolished and replaced with open storage area, which would reduce risks associated with rupture of the Silver Strand Fault that runs under this structure. In addition, other improvements that would occur under the Reduced Project Alternative would be susceptible to risks associated with liquefaction. As with the proposed project, structures constructed under this alternative would involve shallow grading and foundation depths that would not exacerbate the rupture of existing faults in the area and would be offset by 50 feet from the fault line. In addition, the Reduced Project Alternative would not include features that would exacerbate liquefaction conditions at the project site. Preparation of geotechnical reports would be required under this alternative to ensure that new structures address geologic hazards by incorporating recommendations for earthwork condition and preparation, building/structure foundations, and all other geotechnical engineering best management practices, similar to the proposed project. As such, the Reduced Project Alternative would result in similar impacts related to geology and soils when compared with the proposed project, and impacts would be less than significant.

7.5.3.6 Greenhouse Gas Emissions

Alternative 3 would result in both construction and operational GHG emissions at about half the level of the proposed project, although GHG emissions would still be well above baseline conditions. Thus, the GHG impacts of this alternative on the existing condition would be significant. However, the Reduced Project Alternative would not need to reduce its GHG emissions as significantly as the proposed project. Still, with the uncertainty surrounding post-2020 thresholds, it is likely that even if Alternative 3 reached the state reduction target, impacts of the project would still be significant. Therefore, while the throughput and GHGs associated with this alternative would be significantly lower than the project, it is likely that GHG emissions, after mitigation, would remain significant and similar to the proposed project.

7.5.3.7 Hazards and Hazardous Materials

The Reduced Project Alternative would involve demolition of existing structures, regrading and paving of surface areas, and construction activities, which would require ground disturbance and could result in the exposure of potential soil contamination. Mitigation in the form of the implementation of a soil management plan would be required. As such, the Reduced Project Alternative would result in similar impacts related to hazards and hazardous materials as the proposed project.

7.5.3.8 Hydrology and Water Quality

The Reduced Project Alternative would involve similar construction and operational activities as those that would occur under the proposed project, although at a reduced scale. Like the proposed project, construction and operation of this alternative would be subject to a General Construction Permit, with required implementation of a SWPPP and BMPs, and the BMPs contained within the District's JRMP. In addition, like the proposed project, this alternative would include installation of a stormwater retention system. Furthermore, any permanent structures constructed under this alternative would comply with FEMA structural design requirements for permanent structures within Flood Hazard Zone A, subject to District Engineering Department Approval. Therefore, impacts related to hydrology and water quality occurring from implementation of the Reduced Project Alternative would be less than significant, similar to the proposed project.

7.5.3.9 Noise and Vibration

The Reduced Project Alternative would increase operations at the TAMT over existing conditions. Construction activities, which would involve demolition of existing transit sheds and warehouses and development of new open laydown areas, among other activities, would occur and would result in substantial temporary construction noise impacts that would remain significant and unavoidable even with incorporation of mitigation measures. Therefore, construction noise impacts under this alternative would be similar to those occurring under the proposed project. The analysis for the proposed project identified significant and unavoidable noise impacts related to the operation of additional cranes and a dry bulk discharge unloading system. This alternative would not include additional gantry cranes or a dry bulk discharge unloading system, but would still use vessel-mounted cranes and terminal mobile cranes; therefore, the significant and unavoidable impacts related to operation of that equipment would be reduced under this alternative compared to the proposed project, but may still be significant. In addition, while traffic noise would increase under this alternative compared to existing conditions, it would be reduced compared to traffic noise generated under the proposed project, which would result in greater traffic generation than this alternative but would not result in any significant impacts related to traffic noise. Overall, this alternative would result in reduced noise impacts compared to the proposed project.

7.5.3.10 Transportation, Circulation, and Parking

Under the Reduced Project Alternative, total cargo capacity would increase to approximately 1,480,000 metric tons per year. The proposed project would result in direct impacts at the street segment of 28th Street between Boston Avenue and National Avenue at approximately 29 percent buildout, or at 435,554 metric tons per year over existing conditions. Thus, this alternative was designed to avoid the impact at 28th Street between Boston Avenue and National Avenue. In addition, like the proposed project, development under this alternative would occur based on market demand and could involve construction activities that overlap, which may result in a significant and unavoidable impact if the overlap generated a sufficient number of peak hour trips. Overall, impacts on transportation occurring under this alternative would be significantly reduced compared to the proposed project during the operational phase because it would avoid a significant impact compared to the project.

7.5.3.11 Utilities and Energy

Under the Reduced Project Alternative, demand for water and the generation of wastewater would increase over existing conditions, but only to about one-third the level of the proposed project. Aside from the subsurface stormwater detention tank, which would have no significant impacts on the environment, no other new facilities would be needed, the construction of which could have an impact on the environment. In addition, similar to the proposed project, Alternative 3 would not require additional water entitlements or result in a determination that the City of San Diego is unable to accommodate the additional wastewater generated by the alternative. Energy use would also be higher over time compared to baseline conditions, but would not represent a wasteful, inefficient, or unnecessary use of energy because all energy would be used for highly coordinated goods movement on and off the terminal. Compared to the project, Alternative 3 would have a fairly significant lower energy demand, but would also do much less to convert more energy from fossil fuels to renewable electricity use, such as the use of up to five electric gantry cranes that would replace diesel cranes in many cases. Overall, Alternative 3's impact on utilities and energy would be less than significant and would be similar to the proposed project because it would have lower throughput and overall energy use, but would not do as much to transition from primarily fossil fuels to a greater reliance on renewable energy sources.

7.5.3.12 Relationship to Project Objectives

The Reduced Project Alternative would not meet Objectives #1, #2, #5, or #6. This alternative would increase the productivity of the terminal by implementing some infrastructure needs, but the site configuration that would be developed under this alternative would not simplify, to the extent feasible, the terminal layout patterns, and thus would not maximize the flexibility and storage capacity of the terminal. This alternative would also not promote the District's longstanding commitment to dry bulk and liquid bulk, and would only partially promote the increase of multipurpose cargo and refrigerated container cargo because an artificial limit on throughput would be required to maintain the relatively low throughput numbers. With the removal of infrastructure updates such as gantry cranes and a consolidated dry bulk facility, this alternative would also not allow the District to attract new business opportunities or enhance its competitive edge related to the recent changes in cargo markets. Finally, it would not optimize the land at the terminal consistent with the Port Master Plan and the California Coastal Act because it would artificially limit marine-based economic activity.

7.5.4 Analysis of Alternative 4 – Full Refrigerated and Dry Container Buildout Alternative

7.5.4.1 Aesthetics and Visual Resources

Visually noticeable changes that would occur to the project site under Alternative 4 would be similar to those occurring under the proposed project, including demolition of Transit Sheds #1 and 2, Warehouse C, and the molasses tanks; construction of new storage structures, domes, and/or silos near the existing silos; the addition of mobile harbor cranes and gantry cranes along the western edge of the project site; and additional dry bulk facility improvements (e.g., new conveyor system and bulk discharger, 100,000 square feet of warehouse space). Effects on visual resources and viewsheds due to these changes would be similar to those identified for the proposed project, including significant and unavoidable impacts on the visual character of the site and surrounding area resulting from the installation of the gantry cranes. Therefore, impacts related to aesthetics would be significant and unavoidable under this alternative, similar to the proposed project.

7.5.4.2 Air Quality and Health Risk

Alternative 4 would result in both construction and operational emissions at a similar level to the proposed project and, similarly, emissions would be well above baseline conditions. Thus, the air quality and health risk impacts of this alternative on the existing condition would be significant. The Full Refrigerated and Dry Container Buildout Alternative would need to reduce its air emissions as significantly as the proposed project and would still likely result in significant ~~NO_X emissions after mitigation was incorporated.~~VOC emissions and health risk after mitigation was incorporated. The benefit of Alternative 4 would be that container and refrigerated container vessels are subject to ARB's at-berth regulation, so vessel-related hoteling emissions would likely be reduced compared to the proposed project. However, dry container and refrigerated container vessels are larger and have much larger engines, which tend to generate more emissions than other vessels during transit, maneuvering, and berthing. Alternative 4 would require the District to immediately install enough shore power infrastructure to handle multiple vessels simultaneously. Therefore, with a similar throughput to the project, it is likely that air emissions under Alternative 4, after mitigation, would also be similar to the proposed project, which would be significant and unavoidable.

7.5.4.3 Biological Resources

The Full Refrigerated and Dry Container Buildout Alternative would not avoid or substantially reduce the significant impacts assessed for the proposed project because, like the proposed project, Alternative 4 would result in the demolition of Transit Sheds #1 and 2 and Warehouse C, which is storage space that is potentially used by nesting birds (pursuant to the MBTA) and roosting bats. Therefore, impacts on biological resources under Alternative 4 would be less than significant after mitigation (i.e., Mitigation Measures MM-BIO-1 and MM-BIO-2), similar to the proposed project.

7.5.4.4 Cultural Resources

The project site does not contain any historic resources and, therefore, the Full Refrigerated and Dry Container Buildout Alternative would not result in impacts on historic resources, similar to the proposed project. This alternative would involve ground-disturbing activities in the eastern portion of the project site where potential prehistoric archaeological resources and human remains may be located. As such, Alternative 4 could adversely affect archaeological resources and human remains, but impacts on cultural resources would be less than significant with mitigation incorporated (i.e., Mitigation Measure MM-CUL-1), similar to the proposed project.

7.5.4.5 Geology and Soils

Under the Full Refrigerated and Dry Container Buildout Alternative, Transit Sheds #1 and #2 and Warehouse C, which are located above the Silver Strand Fault, would be demolished and replaced with open storage area, which would reduce risks associated with rupture of the Silver Strand Fault that runs under these structures. In addition, other improvements that would occur under the Full Refrigerated and Dry Container Buildout Alternative would be susceptible to risks associated with liquefaction. As with the proposed project, structures constructed under this alternative would involve shallow grading and foundation depths that would not exacerbate the rupture of existing faults in the area and would be offset by 50 feet from the fault line. In addition, the Full Refrigerated and Dry Container Buildout Alternative would not include features that would exacerbate liquefaction conditions at the project site. Preparation of geotechnical reports would be required under this alternative to ensure that new structures address geologic hazards by incorporating recommendations for earthwork condition and preparation, building/structure foundations, and all other geotechnical engineering best management practices, similar to the proposed project. As such, the Full Refrigerated and Dry Container Buildout Alternative would result in similar impacts related to geology and soils as the proposed project.

7.5.4.6 Greenhouse Gas Emissions

Alternative 4 would result in both construction and operational GHG emissions at a similar level to the proposed project and, similarly, GHG emissions would be well above baseline conditions. Thus, the GHG impacts of this alternative on the existing condition would be significant. The Full Refrigerated and Dry Container Buildout Alternative would need to reduce its GHG emissions as significantly as the proposed project. Therefore, with a similar throughput to the project, it is likely that GHG emissions under Alternative 4, after mitigation, would also be similar to the proposed project, which would be significant and unavoidable.

7.5.4.7 Hazards and Hazardous Materials

The Full Refrigerated and Dry Container Buildout Alternative would involve demolition of existing structures, regrading and paving of surface areas, and construction activities, which would require ground disturbance and could result in the exposure of potential soil contamination. Mitigation in the form of the implementation of a soil management plan would be required. As such, the Full Refrigerated and Dry Container Buildout Alternative would result in similar impacts related to hazards and hazardous materials as the proposed project.

7.5.4.8 Hydrology and Water Quality

The Full Refrigerated and Dry Container Buildout Alternative would involve similar construction and operational activities as those that would occur under the proposed project, although cargo throughput and the associated terrestrial and marine vehicle traffic would be slightly greater. However, construction and operation of this alternative would be subject to a General Construction Permit, with required implementation of a SWPPP and BMPs, and the BMPs contained within the District's JRMP. In addition, like the proposed project, this alternative would include installation of a stormwater retention system, which would clean runoff before discharge into the bay or the sanitary sewer system. Furthermore, any permanent structures constructed under this alternative would comply with FEMA structural design requirements for permanent structures within Flood Hazard Zone A, subject to District Engineering Department Approval. Therefore, impacts related to hydrology and water quality occurring from implementation of the Full Refrigerated and Dry Container Buildout Alternative would be less than significant, similar to the proposed project.

7.5.4.9 Noise and Vibration

The Full Refrigerated and Dry Container Buildout Alternative would result in similar construction activities as the proposed project, including demolition of transit sheds and warehouses and construction of new laydown areas. These construction activities would result in temporary significant impacts, which would remain significant and unavoidable even with incorporation of mitigation measures. In addition, this alternative would the installation of new equipment, such as gantry cranes, that would result in permanent increases in ambient noise levels at nearby sensitive resources, such as Cesar Chavez Park, Bayfront Park, and Embarcadero Marine Park, which, even with the implementation of mitigation measures, would remain significant and unavoidable. Noise impacts occurring under this alternative would be similar to those of the proposed project.

7.5.4.10 Transportation, Circulation, and Parking

Under the Full Refrigerated and Dry Container Buildout Alternative, total cargo capacity would increase to approximately 5,849,857 metric tons per year, which is similar to the proposed project, and would result in direct impacts at the street segment of 28th Street between Boston Avenue and National Avenue and at the intersection of Norman Scott Road/32nd Street/Wabash Avenue. In addition, like the proposed project, development under this alternative would occur based on market demand and could involve construction activities that overlap, which may result in a significant and unavoidable impact if the overlap generated a sufficient number of peak hour trips. Impacts on transportation occurring under this alternative would be similar compared to the proposed project.

7.5.4.11 Utilities and Energy

Under the Full Refrigerated and Dry Container Buildout Alternative, demand for water and the generation of wastewater would increase over existing conditions and to about the same level of the proposed project. Aside from the subsurface stormwater detention tank, which would have no significant impacts on the environment, no other new facilities would be needed, the construction of which could have an impact on the environment. In addition, similar to the proposed project, Alternative 4 would not require additional water entitlements or result in a determination that the City of San Diego is unable to accommodate the additional wastewater generated by the alternative. Energy use would also be higher over time compared to baseline conditions, but would not represent a wasteful, inefficient, or unnecessary use of energy because all energy would be used for highly coordinated goods movement on and off the terminal. Compared to the project, Alternative 4 would potentially have a higher energy demand due to the focus on refrigerated (and dry) containers over multi-purpose general cargo, but would involve similar efforts to convert more energy use from the current fossil fuels to renewable electricity. Overall, Alternative 4's impact on utilities and energy would be less than significant and would be similar to the proposed project because it would have roughly the same throughput and slightly higher energy use and would take similar steps to transition from primarily fossil fuels to a greater reliance on renewable energy sources.

7.5.4.12 Relationship to Project Objectives

The Full Refrigerated and Dry Container Buildout Alternative would not meet Objective #1 because it would not accommodate multi-purpose general cargo, which would be a necessary component to enhance the District's competitive position in the current and projected marine terminal market. It would also not meet Objective #2 because it would limit the cargo types. This alternative would meet all other objectives.

7.5.5 Analysis of Alternative 5 – Sustainable Terminal Capacity Alternative

7.5.5.1 Aesthetics and Visual Resources

The project components of the STC Alternative would be similar to the proposed project, but throughput would be limited to approximately 75% of the throughput proposed under the MPC scenario discussed under the proposed project. Changes to the project site would include all elements of the Demolition and Initial Rail Component, which may be visually noticeable from key viewpoints. However, these changes would be consistent with the industrial character of the working bayfront and would not substantially alter the overall views of the project site. In addition, like the proposed project, this alternative would include the potential installation of up to five gantry cranes. Therefore, significant impacts related to visual quality would occur. However, for the same reasons discussed under the MPC scenario analysis, the STC Alternative would not result in any significant impacts associated with designated vista areas, scenic resources, or glare affecting nighttime views. As such, impacts on aesthetics and visual quality under the STC Alternative, which would propose the same components as the MPC but would limit throughput to 75 percent of the MPC, would be significant and unavoidable due to the gantry cranes being highly visible. This impact would be similar to the MPC scenario analyzed under the proposed project.

7.5.5.2 Air Quality and Health Risk

The STC Alternative would result in construction emissions similar to the MPC scenario and operational emissions at a level below the MPC scenario analyzed for the proposed project. Under the STC Alternative, the throughput anticipated under the proposed project, which uses the MPC scenario, would be reduced by 25 percent for each of the three cargo nodes that are proposed for changes under the TAMT plan (i.e., Dry Bulk, Refrigerated Containers, and Multipurpose General Cargo), thereby reducing activity on a daily and annual basis. A quantitative analysis was performed to estimate the degree to which air quality and health risk impacts would change relative to the proposed project.

Methodology

The methodology used to estimate air quality and health risk impacts under the STC Alternative is similar to the proposed project but the associated operational activity would change based on the lower throughput. Key assumptions in determining the level of activity on a daily and annual basis are provided below.

- The Draft EIR estimated that the proposed project would result in up to four vessel calls on the peak day. Similarly, it was assumed that the STC Alternative would result in up to four vessel calls on the peak day because four vessel calls is the berth capacity and berth capacity would not change under the STC Alternative. Based on this, assist tug and ocean-going tug activity would be similar to the proposed project because tug activity is tied to vessel calls. However, on an annual basis, vessels that call on TAMT are based on throughput capacity; as such, the number of annual vessel calls would decrease along with throughput. Under the STC Alternative, annual vessel calls would decrease from an estimated 579 calls under the proposed project to 433 calls under the STC Alternative, while assist tug and ocean-going tug activity would decrease linearly along with vessel calls under the STC Alternative.
- The Draft EIR assumed the proposed project would increase annual rail activity from 72 trains per year under existing conditions to up to 684 trains per year due to the increase in dry bulk and multi-purpose general cargo, and that maximum daily visitation would increase from one trip on the peak day to two trips. Under the STC Alternative, annual train activity would decrease to 513 trains per year based on the change in throughput, while daily activity (two trains on a peak day) would be the same as the proposed project.

- The Draft EIR assumed the proposed project would add 423 new one-way truck trips per day. Because truck activity is averaged out over the year, and annual truck activity would change with throughput, daily truck activity would also change with throughput. It was assumed the STC Alternative would add 296 new one-way truck trips per day.
- The Draft EIR assumed the proposed project would result in 524 new workers (the sum of dock workers and managers) per day over existing conditions. Because daily worker activity is dictated (and limited) by berthing capacity, and because the maximum number of vessels that could call on or berth at TAMT on a given day would not change under the STC Alternative, the number of workers on a given day would not change relative to the proposed project.
- The Draft EIR assumed that baseline CHE activity would increase along with throughput. CHE emissions from the District's Air Emissions Inventory (District 2014) were scaled up linearly with throughput and daily activity was assumed to be equal to annual activity averaged over the year. Because CHE activity is averaged out over the year, and annual CHE activity would change with throughput, daily CHE activity associated with the STC Alternative would also change with throughput.
- The Draft EIR assumed that bulk material handling for dry bulk cargo would increase along with throughput. Because bulk material handling is averaged out over the year, and annual bulk material handling associated with the STC Alternative would change with throughput, daily bulk material handling would also change with dry bulk throughput.

Consistency with Air Quality Plan

Similar to the proposed project, the STC Alternative would replace the existing 2008 Maritime Business Plan (2008 Plan) to provide greater flexibility and meet current and future market conditions at the project site. While the STC Alternative would include the same infrastructure investments (e.g., gantry cranes, additional and consolidated dry bulk storage capacity), the STC Alternative would cap throughput by 25 percent for each of the three cargo nodes. Similar to the proposed project, full buildout of the STC Alternative would result in no changes in land use, nor would it result in incompatible land uses. The STC Alternative would include the same features, infrastructure, and mitigation measures as the proposed project, but throughput and associated activity would be lower and result in fewer emissions. Similar to the proposed project, the STC Alternative would be consistent with statewide and local strategies to reduce emissions, including proposed new State Implementation Plan control measures (e.g., related to shore power), the District's Green Port and Clean Air Programs, and San Diego Air Pollution Control District rules and regulations. Thus, similar to the proposed project, the STC Alternative buildout would not hinder, conflict with, or obstruct the implementation of the applicable air quality plan. This impact is considered less than significant.

Violation of Air Quality Standard

Construction

Construction associated with the STC Alternative would result in the temporary generation of emissions of ozone precursors (reactive organic gases, NO_X), CO, and particulate matter exhaust emissions that could result in short-term impacts on ambient air quality. The various components of the TAMT plan that are described in detail in Section 3.4.1 of the Draft EIR would also be constructed as part of the STC Alternative. Emissions and related impacts would be similar to the proposed project; however, as with the proposed project, the specifics regarding timing and exact activities are unknown, and therefore it is unknown if individual project components would result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation. Therefore, similar to the proposed project, construction activities associated with the STC Alternative are assumed to be significant (**Impact-AQ-1**) and mitigation is required. **Impact-AQ-1** would remain significant after implementation of **MM-AQ-1** and **MM-AQ-2** because it is unknown if construction of individual project components would result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation and to what extent mitigation would reduce the effects. Consequently, construction impacts associated with buildout of the STC Alternative on air quality standards (**Impact-AQ-1**) would be considered significant and unavoidable. Because the STC Alternative would construct the same features as the proposed project, construction-related effects and impacts would be similar to those of the proposed project.

Operations

Table 7-3 shows the anticipated criteria pollutant emissions associated with operation of STC Alternative buildout relative to existing conditions. Existing conditions are shown in Table 4.2-6 of the Draft EIR. As shown in Table 7-3, emissions during STC Alternative buildout are anticipated to exceed San Diego County's screening-level thresholds (SLTs) for multiple cargo types for VOC, NO_X, PM10, and PM2.5 (**Impact-AQ-2**). The VOC and NO_X exceedances would primarily be due to fossil fuel combustion from ocean-going vessels, trucks, fuel tugs, and rail activities, while the PM10 and PM2.5 exceedances would primarily be due to bulk loading and material handling, and in particular to the uncontrolled nature of current soda ash and bauxite handling at the project site. These impacts are similar to but slightly lower than those of the proposed project. Therefore, **Impact-AQ-2** would be significant and mitigation is required.

Full buildout of the STC Alternative would require similar mitigation as required for the proposed project. Implementation of **MM-AQ-2** through **MM-AQ-9** described in Section 4.2, *Air Quality and Health Risk*, would be required to mitigate VOC, NO_X, PM10, and PM2.5 emissions. As shown in Table 7-4, **Impact-AQ-2** would be less than significant after implementation of **MM-AQ-2** through **MM-AQ-9**. Implementation of **MM-AQ-2** through **MM-AQ-9** would succeed in reducing emissions of VOC, NO_X, CO, sulfur oxides (SO_X), PM10, and PM2.5 below San Diego County SLTs. In fact, mitigation would reduce emissions of NO_X, PM10, and PM2.5 to levels below existing conditions. As such, operation of the STC Alternative would not violate an air quality standard or contribute substantially to an existing or projected air quality standard during operation. Operation of the STC Alternative would not violate an air quality standard or contribute substantially to an existing or projected air quality standard during operation for all criteria pollutants (VOC, NO_X, CO, SO_X, PM10, and PM2.5) after mitigation.

It is worth noting that while annual criteria pollutant emissions are not generally analyzed within CEQA documents, the STC Alternative would result in greater reductions in emissions compared to the proposed project over the course of the year rather than on just the peak day, given that the peak day is based on berth capacity but annual activity is based on the average activity, which would decrease by about 25 percent for every emission source.

Table 7-3. Estimate of Operational Emissions under Existing plus Sustainable Terminal Capacity Alternative Unmitigated Conditions (pounds per day)

Operational Element	VOC	NO_X	CO	SO_X	PM10	PM2.5
Dry Bulk (1,987,500 MT)						
Project Daily						
Ocean-Going Vessels	39	706	58	21	13	12
Assist Tugs	2	13	13	<1	<1	<1
Tugs and Fuel Barges	22	221	166	<1	8	7
Trucks	6	160	30	1	13	4
Worker Trips	1	2	18	<1	6	2
Rail - Regional Line Haul	5	142	13	3	3	1
Rail - Switching between Terminal and Yard	1	33	3	1	1	<1
Cargo Handling Equipment	8	85	45	<1	2	2
Bulk Loading	-	-	-	-	4,450	1,249
Dry Bulk Existing plus Project Daily	**82**	**1,360**	**345**	**26**	**4,496**	**1,279**
Dry Bulk Existing Daily[1]	53	1,007	181	17	608	192
Net New Over Existing	29	354	164	9	3,888	1,086
Exceed Significant Threshold?	*No*	***Yes***	*No*	*No*	***Yes***	***Yes***
Refrigerated Containers (1,716,000 MT)						
Project Daily						
Ocean-Going Vessels	188	2,785	318	124	72	66
Assist Tugs	5	42	40	<1	1	1
Tugs and Fuel Barges	18	181	136	<1	6	6
Trucks	6	236	27	1	12	4
Worker Trips	1	3	27	<1	5	2
Cargo Handling Equipment	7	73	38	<1	2	2
Refrigerated Containers Existing plus Project Daily	**225**	**3,320**	**588**	**125**	**98**	**81**
Refrigerated Containers Existing Daily[1]	207	4,064	651	110	87	77
Net New Over Existing	18	-744	-64	15	11	4
Exceed Significant Threshold?	*No*	*No*	*No*	*No*	*No*	*No*
Multi-Purpose General Cargo (733,050 MT)						
Project Daily						
Ocean-Going Vessels	95	1,742	148	57	34	31
Assist Tugs	4	32	30	<1	1	1
Tugs and Fuel Barges	47	473	356	<1	17	16
Trucks	1	20	4	<1	2	1
Worker Trips	<1	1	6	<1	2	1
Rail - Regional Line Haul	8	249	23	5	5	2
Rail - Switching between Terminal and Yard	3	63	3	1	1	<1
Cargo Handling Equipment	3	31	16	<1	1	1

Operational Element	VOC	NO_X	CO	SO_X	PM10	PM2.5
Multi-Purpose General Cargo Existing plus Project Daily	**161**	**2,610**	**587**	**64**	**62**	**52**
Multi-Purpose General Cargo Existing Daily[1]	85	1,463	281	34	33	31
Net New Over Existing	75	1,146	306	31	29	21
Exceed Significant Threshold?	***Yes***	***Yes***	*No*	*No*	*No*	*No*
All Cargo Types (4,675,567 MT)						
All Cargo Types Existing plus Project Daily Total	**468**	**7,290**	**1,520**	**215**	**4,656**	**1,411**
All Cargo Types Existing Daily Total[1]	346	6,534	1,113	161	728	300
Net New Over Existing	122	756	407	54	3,928	1,111
Exceed Significant Threshold?	***Yes***	***Yes***	*No*	*No*	***Yes***	***Yes***
Significance Thresholds	75	75	250	550	150	100

[1] Existing daily emissions shown in Table 4.2-6.
Notes: Totals may not add exactly due to rounding.
Source: Appendix F.

Table 7-4. Estimate of Operational Emissions under Existing plus Sustainable Terminal Capacity Alternative Mitigated Conditions (pounds per day)

Operational Element	VOC	NO_X	CO	SO_X	PM10	PM2.5
Dry Bulk (1,987,500 MT)						
Unmitigated Emissions						
Ocean-Going Vessels	39	706	58	21	13	12
Assist Tugs	2	13	13	<1	<1	<1
Tugs and Fuel Barges	22	221	166	<1	8	7
Trucks	6	160	30	1	13	4
Worker Trips	1	2	18	<1	6	2
Rail - Regional Line Haul	5	142	13	3	3	1
Rail - Switching between Terminal and Yard	1	33	3	1	1	<1
Cargo Handling Equipment	8	85	45	<1	2	2
Bulk Loading	-	-	-	-	4,450	1,249
Mitigated Reductions						
MM-AQ-2 Idling[1]	*<-1*	*<-1*	*<-1*	*<-1*	*<-1*	*<-1*
MM-AQ-3 CAP Measures[2]	*-1*	-11	*-1*	*<-1*	*<-1*	*<-1*
MM-AQ-4 Dry Bulk BACT[3]	*-*	*-*	*-*	*-*	*-4,236*	*-1,178*
MM-AQ-5 VSR Beyond CAP[4]	*-5*	-97	*-7*	*-2*	*-2*	*-2*
MM-AQ-6 Electric CHE	*-5*	*-84*	*-53*	*<-1*	*-3*	*-3*
MM-AQ-9 At-Berth Capture	*-1*	*-25*	*<-1*	*-1*	*-1*	*<-1*

Operational Element	VOC	NO_X	CO	SO_X	PM10	PM2.5
Dry Bulk Existing Plus Project Daily	**71**	**1,143**	**285**	**23**	**255**	**95**
Dry Bulk Existing Daily	*53*	*1,007*	*181*	*17*	*608*	*192*
Net New Over Existing	18	137	104	6	-353	-97
Exceed Significant Threshold?	*No*	*No*	*No*	*No*	*No*	*No*
Refrigerated Containers (1,716,000 MT)						
Unmitigated Emissions						
Ocean-Going Vessels	188	2,785	318	124	72	66
Assist Tugs	5	42	40	≤1	1	1
Tugs and Fuel Barges	18	181	136	≤1	6	6
Trucks	6	236	27	1	12	4
Worker Trips	1	3	27	≤1	5	2
Cargo Handling Equipment	7	73	38	≤1	2	2
Mitigated Reductions						
MM-AQ-2 Idling[1]	*≤-1*	*≤-1*	*≤-1*	*≤-1*	*≤-1*	*≤-1*
MM-AQ-3 CAP Measures[2]	*-1*	*-11*	*-1*	*≤1*	*≤1*	*≤1*
MM-AQ-5 VSR Beyond CAP[4]	*-1*	*-16*	*-1*	*≤-1*	*≤-1*	*≤-1*
MM-AQ-6 Electric CHE	*-5*	*-84*	*-53*	*≤-1*	*-3*	*-3*
Refrigerated Containers Existing Plus Project Daily	**219**	**3,209**	**533**	**124**	**95**	**78**
Refrigerated Containers Existing Daily[5]	207	4,064	651	110	87	77
Net New Over Existing	12	-855	-118	14	8	1
Exceed Significant Threshold?	*No*	*No*	*No*	*No*	*No*	*No*
Multi-Purpose General Cargo (733,050 MT)						
Unmitigated Emissions						
Ocean-Going Vessels	95	1,742	148	57	34	31
Assist Tugs	4	32	30	≤1	1	1
Tugs and Fuel Barges	47	473	356	≤1	17	16
Trucks	1	20	4	≤1	2	1
Worker Trips	≤1	1	6	≤1	2	1
Rail - Regional Line Haul	8	249	23	5	5	2
Rail - Switching between Terminal and Yard	3	63	3	1	1	≤1
Cargo Handling Equipment	3	31	16	≤1	1	1
Mitigated Reductions						
MM-AQ-2 Idling[1]	*≤-1*	*≤-1*	*≤-1*	*≤-1*	*≤-1*	*≤-1*
MM-AQ-3 CAP Measures[2]	*-4*	*-74*	*-5*	*-1*	*-1*	*-1*
MM-AQ-5 VSR Beyond CAP[4]	*-14*	*-266*	*-19*	*-6*	*-4*	*-4*
MM-AQ-6 Electric CHE	*-5*	*-84*	*-53*	*≤-1*	*-3*	*-3*
MM-AQ-9 At-Berth Capture	*-4*	*-97*	*0*	*-3*	*-2*	*-2*

Operational Element	VOC	NO_X	CO	SO_X	PM10	PM2.5
Multi-Purpose General Cargo Existing Plus Project Daily	**135**	**2,088**	**510**	**54**	**52**	**42**
Multi-Purpose General Cargo Existing Daily[5]	85	1,463	281	34	33	31
Net New Over Existing	50	625	229	20	19	11
Exceed Significant Threshold?	*No*	***Yes***	*No*	*No*	*No*	*No*
All Cargo Types (4,675,567 MT)						
All Cargo Types Daily Existing Plus Project Total	**425**	**6,441**	**1,328**	**200**	**402**	**216**
All Cargo Types Existing Daily Total[5]	346	6,534	1,113	161	728	300
Net New Over Existing	75[6]	-93	215	40	-326	-84
Exceed Significant Threshold?	*No*	*No*	*No*	*No*	*No*	*No*
Significance Thresholds	75	250	550	150	100	55

Source: Appendix F. Totals may not add exactly due to rounding.

[1] Reductions from idling are not quantified because reductions would be speculative, as it is not fully known whether long trucks currently idle at any given location.

[2] Includes VSR compliance with the CAP target of 80% (12 knot speed within 20 nautical miles of Point Loma) and 80% compliance with at-berth regulations.

[3] Dry Bulk BACT reductions assume 95% reduction with controls. Any concrete handling will require an APCD permit, which may require up to 99% reduction.

[4] Includes VSR compliance of 90% (12 knot speed within 40 nautical miles of Point Loma).

[5] Existing daily emissions shown in Table 4.2-6.

[6] Net new daily emissions will not exceed 75 pounds on a peak day at TAMT plan buildout under the STC because MM-AQ-7 requires the use of advanced technologies to limit VOC emissions to no more than 75 pounds on a peak day once throughput exceeds 4,000,000 MT annually, ***OR*** to limit the number of vessels to no more than three vessels on a peak-day once throughput exceeds 4,000,000 metric tons annually, if advanced technologies are not available.

Cumulatively Considerable Increase in Nonattainment Pollutants

As shown in Table 7-3, operation of the STC Alternative at buildout would exceed thresholds for nonattainment pollutants (ozone precursors [VOC and NO_X], PM10, and PM2.5). Therefore, when combined with cumulative projects (see Chapter 5, *Cumulative Impacts*), operation of the STC Alternative at buildout would exceed the thresholds for non-attainment pollutants including VOC, NO_X, PM10, and PM2.5 (**Impact-AQ-3**). As such, full buildout of the STC Alternative is expected to result in a cumulatively considerable net increase in a nonattainment pollutant. As shown in Table 7-4 with mitigation measures **MM-AQ-2** through **MM-AQ-9** incorporated, VOC, NO_X, PM10, and PM2.5 emissions would be reduced below County SLTs. Therefore, after mitigation, similar to the proposed project, STC Alternative operational air quality impacts would be less than significant. The STC Alternative, which would reduce throughput for each of the three cargo nodes that are proposed for changes under the TAMT plan by 25 percent, would be less than significant with mitigation incorporated and would be only marginally reduced compared to the proposed project on a peak day (**Impact-AQ-3**).

Pollutant Concentrations

Health Risk

Section 4.2, *Air Quality and Health Risk*, of the Draft EIR provides a discussion of the health risk associated with full buildout of the proposed project, which uses the MPC scenario to estimate impacts. Similarly, operation of the STC Alternative would increase activity that results in diesel particulate matter and other toxic air contaminant emissions generated from vessel transit through the Bay, vessel hoteling at the terminal, truck traffic on neighboring roads, locomotive switching activity between the yard and project site, and CHE activity at the project site. Similar to the criteria pollutant analysis above, the STC Alternative would result in emissions that could result in health risk in neighboring communities but at a lower magnitude due to the lower throughput.

As shown in Table 7-5, maximum risk at nearby receptors associated with the STC Alternative would increase to approximately 170 cases per million at maximally exposed residences, 18 per million at maximally exposed parks, and 30 per million at maximally exposed schools. Relative to existing conditions, this represents an increase of 132 cases per million at maximally exposed residences, 14 cases per million at maximally exposed parks, and 24 cases per million at maximally exposed schools, levels that are well above the cancer risk threshold of 10 cases per million, and mitigation is required (**Impact-AQ-4**).

Table 7-5 presents the contributions from each emission source to the maximum unmitigated health effects impacts for the STC Alternative. The greatest contributors to unmitigated cancer risk at the maximally exposed residential, park, and school receptors are terminal equipment, vessel hoteling, and (to a lesser extent) rail activity. The maximally exposed residential areas, parks (namely Cesar Chavez Park), and school receptor locations (namely Perkins Elementary School and Monarch School) are all close to the terminal and the railyard. Receptor locations farther away from the terminal show dramatically lower health risk values.

Full buildout of the STC Alternative would require similar mitigation as required for the proposed project. Implementation of **MM-AQ-2** through **MM-AQ-9** described in Section 4.2, *Air Quality and Health Risk*, would be required to mitigate health risk impacts at nearby receptor locations. As shown in Table 7-5, relative to existing conditions, maximum risk at nearby receptors associated with the mitigated STC Alternative would increase by approximately 8 cases per million at maximally exposed residences, 1 per million at maximally exposed parks, and 2 per million at maximally exposed schools. These levels are below the project-level cancer risk threshold of 10 cases per million after full mitigation. It is worth noting that while the STC Alternative would allow for lower throughput than the proposed project, the requirements prescribed in each mitigation measure, in particular the number of electric CHE pieces required in **MM-AQ-6**, would be the same for the STC Alternative and the proposed project. As shown, after full mitigation, cancer risk at the maximally exposed residential, park, and school locations would be reduced to below the cancer risk threshold relative to existing conditions. Therefore, this impact is considered less than significant and lower than the fully mitigated health risk associated with the proposed project using the MPC scenario.

Table 7-5. Estimate of Health Risk at Nearby Receptors during Existing Plus Sustainable Terminal Capacity Alternative Operations

	Sustainable Terminal Capacity Alternative (unmitigated)			Net Over Existing[1]			Sustainable Terminal Capacity Alternative (mitigated)			Net Over Existing[1]		
Receptor Type	Cancer Risk Per Million	Chronic Hazard Index	Acute Hazard Index	Cancer Risk Per Million	Chronic Hazard Index	Acute Hazard Index	Cancer Risk Per Million	Chronic Hazard Index	Acute Hazard Index	Cancer Risk Per Million	Chronic Hazard Index	Acute Hazard Index
Dry Bulk												
Residential	50	0.02	<0.01	**43**	0.02	<0.01	20	0.02	<0.01	**13**	0.02	<0.01
Park	6	0.03	<0.01	5	0.03	<0.01	3	0.03	<0.01	2	0.03	<0.01
School	9	0.03	<0.01	8	0.02	<0.01	4	0.03	<0.01	2	0.02	<0.01
Refrigerated Containers												
Residential	102	0.03	<0.01	**75**	0.02	<0.01	17	0.01	<0.01	-11	0.01	<0.01
Park	9	0.05	<0.01	6	0.03	<0.01	2	0.03	<0.01	-1	0.01	<0.01
School	16	0.04	<0.01	**11**	0.02	<0.01	3	0.02	<0.01	-2	0.01	<0.01
Multi-Purpose General Cargo												
Residential	27	0.01	<0.01	**24**	0.01	<0.01	11	0.01	<0.01	8	0.01	<0.01
Park	3	0.02	<0.01	3	0.02	<0.01	1	0.02	<0.01	1	0.02	<0.01
School	5	0.02	<0.01	4	0.02	<0.01	2	0.02	<0.01	1	0.02	<0.01
Total for all cargo												
Residential	**170**	0.01	<0.01	**132**	0.05	<0.01	**46**	0.05	<0.01	8	0.03	<0.01
Park	**18**	0.02	<0.01	**14**	0.07	<0.01	6	0.08	<0.01	1	0.06	<0.01
School	**30**	0.02	<0.01	**24**	0.06	<0.01	8	0.06	<0.01	2	0.05	<0.01
Threshold	--	--	--	*10*	*1.0*	*1.0*	--	--	--	*10*	*1.0*	*1.0*
Exceed Threshold?	--	--	--	***Yes***	*No*	*No*	--	--	--	*No*	*No*	*No*

Source: Appendix F.

Note that risk for the various receptor types is not additive and the risk is not the sum of all the risks shown here; rather, the risk at each receptor type is already the sum of emissions.

Bold = exceedance.

[1] Existing health risk is shown in Table 4.2-8.

Carbon Monoxide Hot-spots

The STC Alternative would decrease the throughput identified by the proposed project by approximately 25 percent. As described in the STC Alternative traffic memorandum provided by the traffic engineer (Appendix G-1), worker vehicle trips would be similar to those under the proposed project on a daily and peak-hour basis but truck trips would be 25 percent lower than those under the proposed project. In the Draft EIR, CO concentrations were modeled at the intersection with the most congestion and highest volumes, Harbor Drive and 32nd Street. As noted in Table 4.2-24 of the Draft EIR, CO concentrations were estimated to be minor and far below thresholds. CO concentrations at the intersection with the most congestion and highest volumes under the STC Alternative would be lower than that analyzed for the proposed project, which uses the MPC scenario. Therefore, impacts related to CO concentrations occurring from implementation of the STC Alternative would be less than significant, similar to those of the proposed project, and no mitigation is required.

Criteria Air Pollutants

As shown in Table 7-4, Impact-AQ-2 would remain significant after implementation of **MM-AQ-2** through **MM-AQ-9** because VOC emissions would remain in excess of San Diego County SLTs during operation of the STC Alternative. The incremental contribution of the STC Alternative to specific health outcomes related to criteria pollutant emissions would be limited and any effects thereof would be below any health-based significance threshold (e.g., National and California Ambient Air Quality Standards). However, because the project would result in emissions above health-based thresholds (San Diego Air Pollution Control District Trigger Levels and County SLTs) for VOC emissions after mitigation, operation of the STC Alternative at buildout would result in adverse health effects associated with criteria pollutant emissions (**Impact AQ-3**). Because of the slightly lower emissions on the peak day, the STC Alternative would remain significant for VOC emissions after mitigation but would be marginally reduced compared to the proposed project.

Odors

Similar to the proposed project, odor impacts would be limited to the circulation routes, parking areas, and areas immediately adjacent to terminal operations. Although such brief exhaust odors occurring from implementation of the STC Alternative may be considered adverse, they would not affect a substantial number of people and any odor-related impacts would be less than significant, similar to those of the proposed project, and no mitigation is required.

Cumulative Impacts

In addition, as noted in Chapter 5, *Cumulative Impacts*, cumulatively significant air quality and health risk impacts resulting from past, present, and reasonably foreseeable future projects were identified. Because the STC Alternative would construct the same features as the proposed project, construction-related effects and impacts would be similar to those of the proposed project (**Impact-C-AQ-1**). Mitigation Measure **MM-AQ-1** would reduce the effects, but construction-related impacts would remain cumulatively considerable and of similar magnitude as those of the proposed project.

As shown in Table 7-3, operations-related emissions associated with the STC Alternative buildout would be above threshold levels for VOC, NO_X, CO, SO_X, PM10, and PM2.5 before mitigation (**Impact-**

C-AQ-2). As shown in Table 7-4, with mitigation measures **MM-AQ-2** through **MM-AQ-9**, operations-related emissions would remain above threshold levels for VOC emission but below threshold levels for NO_X, CO, SO_X, PM10, and PM2.5 emissions. Consequently, the STC Alternative's incremental contribution to cumulative air quality impacts (i.e., for VOCs) during its operational stage would be cumulatively considerable after mitigation is incorporated but would be marginally reduced compared to the proposed project.

As shown in Table 7-5, the STC Alternative would result in long-term health risks at nearby sensitive receptor locations that exceed incremental risk thresholds primarily due to vessel hoteling, diesel-powered activity at the project site, and truck travel through the region (**Impact-C-AQ-3**). However, mitigation measures **MM-AQ-2** through **MM-AQ-9** would reduce the maximum incremental cancer risk at all residential, park, and school receptors below thresholds. Therefore, while the effects from past, present, and reasonably foreseeable future projects are considered cumulatively significant, the proposed project's incremental contribution from operation of the STC Alternative would not result in a net increase in toxic air contaminants that contribute to existing air quality conditions in the area after mitigation. Consequently, the STC Alternative's incremental contribution to cumulative health impacts during its operational stage would be less than cumulatively considerable after mitigation is incorporated. This is a reduction of a cumulatively considerable impact (**Impact-C-AQ-3**) identified under the MPC scenario analyzed for the proposed project.

7.5.5.3 Biological Resources

The STC Alternative would not avoid or substantially reduce the significant impacts associated with the proposed project because, like the proposed project, this alternative would result in the demolition of the transit sheds, which could affect nesting birds (**Impact-BIO-1**) or disturb active bat roosts (**Impact-BIO-2**). Incorporation of **MM-BIO-1** and **MM-BIO-2**, both of which are described in Section 4.3, *Biological Resources*, would reduce these two impacts to less-than-significant levels. Therefore, impacts on biological resources under the STC Alternative would be less than significant after mitigation and would be similar to those of the proposed project.

7.5.5.4 Cultural Resources

The project site does not contain any historic resources and, therefore, the STC Alternative would not result in impacts on historic resources, similar to the proposed project. The STC Alternative could involve ground-disturbing activities in the eastern portion of the project site where potential prehistoric archaeological resources and human remains may be located (**Impact-CUL-1** and **Impact-CUL-2**, respectively). As such, the STC Alternative could adversely affect archaeological resources and human remains; however, these two impacts would be reduced to less-than-significant levels with the incorporation of **MM-CUL-1** as described in Section 4.4, *Cultural Resources*. Therefore, impacts on cultural resources under the STC Alternative would be less than significant after mitigation and would be similar to those of the proposed project.

7.5.5.5 Geology and Soils

Under the STC Alternative, Transit Sheds #1 and #2 and Warehouse C, which are located above the Silver Strand Fault, would be demolished and replaced with an open storage area, which would reduce risks associated with rupture of the Silver Strand Fault that runs under these structures. In addition, other improvements that would occur under the STC Alternative would be susceptible to risks associated with liquefaction. As with the proposed project, structures constructed under this alternative would involve shallow grading and foundation depths that would not exacerbate the rupture of existing faults in the area and would be offset by 50 feet from the fault line. In addition, the STC Alternative would not include features that would exacerbate liquefaction conditions at the project site. Preparation of geotechnical reports would be required under this alternative to ensure that new structures address geologic hazards by incorporating recommendations for earthwork condition and preparation, building/structure foundations, and all other geotechnical engineering best management practices, similar to the proposed project. As such, the STC Alternative would have less than significant geology and soils impacts and would result in geology and soil impacts similar to those of the proposed project's MPC scenario.

7.5.5.6 Greenhouse Gas Emissions

The STC Alternative would result in construction-related GHG emissions similar to the MPC scenario and operational GHG emissions at a level below the MPC scenario analyzed for the proposed project. Under the STC Alternative, the throughput anticipated under the proposed project, which uses the MPC scenario, would be reduced by 25 percent for each of the three cargo nodes that are proposed for changes under the TAMT plan (i.e., Dry Bulk, Refrigerated Containers, and Multipurpose General Cargo), thereby reducing activity on a daily and annual basis. A quantitative analysis was performed to estimate the degree to which GHG impacts would change relative to the proposed project.

Methodology

The methodology used to estimate GHG impacts under the STC Alternative is similar to that used for the proposed project but the associated operational activity would change based on the lower throughput. Key assumptions in determining the level of activity on an annual basis is provided within the *Air Quality and Health Risk* analysis above in Section 7.5.5.2. In addition to those items, emission sources that are specific to GHG emissions include the following.

- The Draft EIR assumed that electricity consumption (mainly to power equipment, bulk loading, and lighting) and water consumption (mainly for employee consumption and vessel restocking) would increase along with the increase in throughput associated with the MPC scenario. Similarly, electricity consumption would increase along with the increase in throughput associated with the STC Alternative. Emissions were estimated using the same energy intensity factors and San Diego Gas & Electric emission rates used in the Draft EIR.

GHG Impacts in 2020

The Demolition and Initial Rail Component is an initial project-level component of the TAMT plan. The Demolition and Initial Rail Component is expected to be constructed between 2017 and 2020 and become operational in year 2020, after which the remaining components of the TAMT plan would be implemented as market conditions require. The Demolition and Initial Rail Component would remain unchanged under the STC Alternative. Consequently, similar to the proposed project, the STC Alternative buildout would conflict with the CAP and GHG reduction plans, policies, and regulations (**Impact GHG-1**). After implementation of **MM-GHG-1** through **MM-GHG-3,** this impact would be reduced to less-than-significant levels. Because the STC Alternative would not change the Demolition and Initial Rail Component, impacts would be similar to those of the proposed project.

GHG Impacts beyond 2020

As discussed in Section 4.6, *Greenhouse Gas Emissions and Climate Change*, there are currently no adopted plans or measures that specifically prescribe how the ambitious post-2020 targets will be met, and the District's CAP, ARB's Scoping Plan First Update, and other State programs (e.g., ARB's Sustainable Freight Strategy) include proposed, recommended, or adopted actions that will reduce emissions over the long term.

The first test is consistency with CAP Strategies beyond 2020. The analysis regarding consistency with CAP Strategies beyond 2020 is the same as shown in Table 4.6-10 of the Draft EIR. Similar to the analysis of the proposed project, implementation of the STC Alternative would not be entirely consistent with the post-2020 CAP measures (**Impact-GHG-2**).

The second test is consistency with the State's overall reduction targets set forth in EO S-03-05 and EO B-30-15, and recently adopted in SB 32. As shown in Table 7-6, prior to mitigation, the STC Alternative buildout would not be entirely consistent with the post-2020 CAP measures (**Impact-GHG-2**). Similarly, Mitigation Measures **MM-GHG-1** through **MM-GHG-9** are required to support progress toward the 2030 and 2050 GHG reduction goals of EO S-03-05 and EO B-30-15, but project emissions would remain significant due to the lack of a known project-specific reduction target.

The third test is consistency with other regulations and regulatory programs adopted by ARB or other State agencies, including post-2020 measures in the Scoping Plan and the Sustainable Freight Strategy. Similar to the analysis for the proposed project, before mitigation, STC Alternative buildout would not be completely consistent with the Sustainable Freight Strategy and Action Plan (**Impact-GHG-2**). Similar to the analysis shown in Table 4.6-13 of the Draft EIR, after incorporating mitigation measures **MM-GHG-1** through **MM-GHG-9**, the STC Alternative would implement technologies that help achieve the relevant strategies of the Sustainable Freight Strategy while supporting the guiding principles of the Freight Action Plan. These mitigation measures would also be incorporated into the Coastal Development Permit and any real estate agreements between the District and the project proponent to ensure implementation.

Therefore, even after implementation of **MM-GHG-1** through **MM-GHG-9**, **Impact-GHG-2** would remain significant due to the lack of a known project type and location-specific reduction target; as such, it cannot be stated with certainty that the project would result in emissions that would represent a fair share of the requisite reductions to achieve post-2020 targets.

The STC Alternative, which would reduce throughput for each of the three cargo nodes that are proposed for changes under the TAMT plan by 25 percent, would remain significant for GHG emissions but would be reduced compared to the proposed project given the lower throughput and associated emissions.

Table 7-6. Estimate of Existing Plus STC Alternative Buildout GHG Emissions in 2035 (Metric Tons of CO_2e per Year)

Operational Element	Plan $MTCO_2$e Without Mitigation	Plan $MTCO_2$e With Mitigation
Dry Bulk (1,987,500 MT)		
Unmitigated Emissions		
Ocean-Going Vessels[1]	3,750	3,750
Assist Tugs	122	122
Fuel Tug and Barge	260	260
Trucks[2]	15,672	11,612
Worker Trips	1,219	946
Rail - Regional Line Haul	1,579	1,579
Rail - Switching between Terminal and Yard	175	175
Cargo Handling Equipment	2,140	2,140
Electricity	1,333	877
Water	177	124
Mitigated Reductions		
MM GHG-1 Idling[3]	*--*	*<-1*
MM-GHG-2 CAP Measures[4]	*--*	*-33*
MM-GHG-4 Electric CHE[5]	*--*	*-564*
MM-GHG-5 VSR Beyond CAP[6]	*--*	*-563*
MM-GHG-6 PV[7]	*--*	*-6,937*
MM-GHG-9 At-Berth Emissions Capture	*--*	*+209*
Dry Bulk Existing Plus Project Annual	**26,425**	**13,694**
Dry Bulk Existing Annual[5]	4,110	4,110
Net New over Existing	22,315	9,584
Reduction from Unmitigated	--	-12,731
Percentage Reduction with Mitigation Measures	*--*	*57%*
Refrigerated Containers (1,716,000 MT)		
Unmitigated Emissions		
Ocean-Going Vessels[1]	23,207	23,207
Shore Power	2,687	1,873
Assist Tugs	101	101
Fuel Tug and Barge	214	214
Trucks[2]	14,163	10,912
Worker Trips	1,153	1,034
Cargo Handling Equipment	1,847	1,847
Electricity	765	571
Water	158	110
Refrigerants	40	40
New Gantry Cranes	73	48

Operational Element	Plan $MTCO_2e$ Without Mitigation	Plan $MTCO_2e$ With Mitigation
Mitigated Reductions		
MM GHG-1 Idling[3]	--	<-1
MM-GHG-2 CAP Measures[4]	--	-5,800
MM-GHG-4 Electric CHE[5]	--	-564
MM-GHG-5 VSR Beyond CAP[6]	--	-12
MM-GHG-6 PV[7]	--	-5,957
Refrigerated Containers Existing Plus Project Annual	**44,408**	**27,624**
Refrigerated Containers Existing Annual[8]	14,990	14,990
Net New over Existing	29,418	12,634
Reduction from Unmitigated	--	-16,784
Percentage Reduction with Mitigation Measures	--	57%
Multi-Purpose General Cargo (733,050 MT)		
Unmitigated Emissions		
Ocean-Going Vessels[1]	8,936	8,936
Assist Tugs	263	263
Fuel Tug and Barge	558	558
Trucks[2]	2,300	1,713
Worker Trips	444	337
Rail - Regional Line Haul	949	949
Rail - Switching between Terminal and Yard	226	226
Cargo Handling Equipment	789	789
Water	90	63
New Gantry and Rubber Tired Cranes	364	353
Mitigated Reductions		
MM GHG-1 Idling[3]	--	<-1
MM-GHG-2 CAP Measures[4]	--	-150
MM-GHG-4 Electric CHE[5]	--	-564
MM-GHG-5 VSR Beyond CAP[6]	--	-1,209
MM-GHG-6 PV[7]	--	-5,170
MM-GHG-9 At-Berth Emissions Capture	--	+432
Multi-Purpose General Cargo Existing Plus Project Annual	**14,896**	**7,510**
Multi-Purpose General Cargo Existing Annual[8]	1,950	1,950
Net New over Existing	12,947	5,561
Reduction from Unmitigated	--	-7,386
Percentage Reduction with Mitigation Measures	--	57%

Operational Element	**Plan $MTCO_2e$ Without Mitigation**	**Plan $MTCO_2e$ With Mitigation**
All Cargo Types		
All Cargo Types Daily Existing Plus Project Annual	**85,729**	**48,829**
All Cargo Types Daily Existing Annual[8]	21,050	21,050
Net New over Existing	64,679	27,779
Reduction from Unmitigated	--	-36,900
Percentage Reduction with Mitigation Measures	--	*57%*
Reduction Target	--	57%[7]

Source: Appendix F. Totals may not add up exactly due to rounding.

[1] Includes compliance with VSR similar to existing condition.

[2] Truck travel include the recently-adopted Phase 2 truck standards, which would reduce improve truck fuel economy and reduce emissions up 25% once full implemented. For purposes of reductions in 2035, it was estimated that GHG emission factors would be reduced approximately 16% related to the rates in EMFAC, which e reductions associated with Phase 1 truck standards.

[3] Reductions from idling are not quantified because reductions would be speculative, as it is not fully known whether long trucks currently idle at any given location.

[4] Includes VSR compliance with the CAP target of 80% (12 knot speed within 20 nautical miles of Point Loma) compliance with at-berth regulations for eligible vessels. Each Dole vessel will use shore power.

[5] Reductions from electric CHE assumes the replacement of 36 pieces of diesel equipment with 36 pieces of electric equipment by 2030, including twenty new electric yard trucks by 2025 as well as three electric reach stackers and ten electric forklifts by 2030. The reductions are split evenly between the three cargo nodes affected by the proposed project.

[7] Includes VSR compliance of 90% (12 knot speed within 40 nautical miles of Point Loma). Reductions are shown relative to CAP compliance (MM-GHG-2).

[8] The reduction targets identified in the post-2020 period (i.e., 2035) is based on statewide reduction targets identified in EO S-3-2005 and EO B-30-2015. Because there are no project-specific targets based on location and project type as is the case in the 2020 period, these targets are used as a general guide for the level of reductions needed, but it is understood that the State will need to play a major role to meet these aggressive targets.

[8] Existing annual emissions shown in Table 4.6-4.

Climate Change Effects on the Project

Similar to under the proposed project, the project site would remain sufficiently above sea level (approximately 2.24–4.11 feet above projections by 2050 without storm surge) and no significant impacts would occur from sea-level rise through the reasonably foreseeable life of the STC Alternative (2050). The STC Alternative would result in the same development as the proposed project. Impacts would be less than significant and the same as analyzed for the proposed project.

Cumulative Impacts

In addition, as noted in Chapter 5, *Cumulative Impacts*, cumulatively significant GHG impacts resulting from past, present, and reasonably foreseeable future projects were identified. First, the Demolition and Initial Rail Component in 2020 (**Impact-C-GHG-1**) would remain unchanged under the STC Alternative; impacts would therefore remain unchanged.

Beyond 2020, the STC Alternative's incremental contribution to this cumulatively significant impact would be cumulatively considerable (**Impact-C-GHG-2**), and mitigation measures **MM-GHG-1** through **MM-GHG-9** would be incorporated to reduce emissions, similar to the proposed project. However, while project emissions are generally in line with statewide targets and would help facilitate, rather than impede, local and statewide efforts to achieve the post-2020 targets in EO S-3-05 and EO B-30-15, the uncertainty of statewide target implementation at the local level, and the level of effort that will be required at the Port level to achieve these targets, is unknown at this time. Impacts would remain significant and unavoidable but at a lower magnitude due to the lower throughput and associated emissions.

7.5.5.7 Hazards and Hazardous Materials

The STC Alternative would involve demolition of existing structures, regrading and paving of surface areas, and construction activities, which would require ground disturbance and could result in the exposure of potential soil contamination (**Impact-HAZ-1**). Mitigation in the form of the implementation of a soil management plan (**MM-HAZ-1**, as described in Section 4.7, *Hazards and Hazardous Materials*) and the required implementation of engineering controls and best management practices during construction (**MM-HAZ-2**, as described in Section 4.7, *Hazards and Hazardous Materials*) would be required. After mitigation is incorporated, **Impact-HAZ-1** would be reduced to less-than-significant levels. As such, the STC Alternative would result in similar impacts related to hazards and hazardous materials as those of the proposed project.

7.5.5.8 Hydrology and Water Quality

The STC Alternative would involve similar construction and operational activities as those that would occur under the proposed project, although cargo throughput and the associated terrestrial and marine vehicle traffic would be lower. Like with the proposed project, construction and operation of this alternative would be subject to a General Construction Permit, with required implementation of a SWPPP and BMPs, and the BMPs contained within the District's JRMP. In addition, like the proposed project, this alternative would include installation of a stormwater retention system, which would clean runoff before discharge into the bay or the sanitary sewer system. Furthermore, any permanent structures constructed under this alternative would comply with FEMA structural design requirements for permanent structures within Flood Hazard Zone A, subject to District Engineering Department Approval. Therefore, impacts related to hydrology and water quality occurring from implementation of the STC Alternative would be less than significant, similar to those of the proposed project, and no mitigation is required.

7.5.5.9 Noise and Vibration

The STC Alternative would decrease the MPC throughput identified by the proposed project by approximately 25 percent. However, this alternative would still involve operation of additional gantry cranes, mobile cranes, and a bulk discharge unloading system that would be added from buildout of the STC Alternative. As such, operations under this alternative would result in noise impacts similar to those of the proposed project. Specifically, the STC Alternative would have the potential to result in an exceedance of the applicable noise ordinance and guidelines during operational activities (**Impact-NOI-1**) and, more generally, would potentially result in a substantial permanent increase in noise from these operational activities (**Impact-NOI-2**). Mitigation measures would be required to reduce these impacts and would include acoustical treatments (**MM-NOI-1**, as described in Section 4.9, *Noise and Vibration*) and a complaint and response tracking program (**MM-NOI-2**, as described in Section 4.9, *Noise and Vibration*). Yet, even with these measures, because the specifics of these future operations are not known at this time, it cannot be concluded with certainty that these impacts would be reduced to levels below significance. Therefore, **Impact-NOI-1** and **Impact-NOI-2** would remain significant and unavoidable after mitigation is incorporated.

In addition, as noted in Chapter 5, *Cumulative Impacts*, a cumulatively significant operational noise impact resulting from past, present, and reasonably foreseeable future projects was identified. The STC Alternative's incremental contribution to this cumulatively significant impact would be cumulatively considerable (**Impact-C-NOI-1**), and while mitigation measures **MM-NOI-1** and **MM-NOI-2** would be incorporated, this cumulative noise impact would remain significant and unavoidable.

Construction activities would be roughly the same as what is anticipated under the proposed project. Construction activities would involve the elements associated with the Demolition and Initial Rail Component, such as the demolition of existing transit sheds, on-terminal rail upgrades that include a rail lubricator for more efficient rail movement and three compressed air systems for air brake testing on the terminal rather than its current off-terminal testing, subsurface conduit and electrical improvements to allow for future electrification and/or shore power capabilities prior to resurfacing, and stormwater drainage improvements. Construction activities associated with the plan-level components of the STC Alternative could include installation of up to five gantry cranes, additional and consolidated dry bulk storage capacity (which may include a new 100,000-square-foot dry bulk structure or an equivalent vertical storage facility), enhancements to the existing conveyor system, demolition of the molasses tanks and Warehouse C, additional open storage space, establishment of an on-dock rail facility, and a centralized gate facility. These construction activities associated with both the near-term project and the future program level components would result in a substantial increase in ambient noise levels over a short-term period (**Impact-NOI-3** and **Impact-NOI-4**, respectively). Mitigation in the form of a construction noise reduction plan would be required (**MM-NOI-3**, as described in Section 4.9, *Noise and Vibration*). However, because it is not certain if the noise reduction plan would reduce construction noise levels to less-than-significant levels, **Impact NOI-3** and **Impact-NOI-4** would remain significant and unavoidable. Temporary construction noise impacts under this alternative would be similar to those occurring under the proposed project, as described in Section 4.9 of this EIR.

Trip generation under the STC Alternative would see a reduction of approximately 25 percent of the trip generation under the MPC scenario analyzed for the proposed project. As such, the noise analysis for this alternative assumes that traffic volumes on adjacent roadways would be 75 percent of MPC buildout volumes. As a result, traffic noise levels would increase under this alternative relative to existing conditions, but traffic noise levels would be somewhat lower than under the proposed project. As with the proposed project, impacts related to traffic noise would be less then significant and no mitigation would be needed. Traffic noise levels on truck routes under this alternative are shown in Table 7-7.

Cumulative traffic noise levels under future year (2035) conditions, including with the addition of the STC Alternative, are summarized in Table 7-8. The results indicate that traffic would increase noise levels by up to 2 decibels (dB) due to the STC Alternative. An increase of less than 3 dB to the existing Community Equivalent Noise Level (CNEL) would not be perceptible. In addition, cumulative overall noise levels would remain under the 75 A-weighted decibels (dBA) CNEL threshold. Therefore, traffic noise from past, present, and reasonably foreseeable future projects in combination with this alternative is not considered to be cumulatively significant.

Table 7-7. Traffic Noise Levels on TAMT Truck Routes: Existing Plus STC Alternative

	Average Daily Traffic		CNEL (dBA)				
Roadway Segment	**Existing**	**Sustainable Terminal Capacity Buildout** [1]	**Existing**	**STC Plan Buildout**	**Existing plus STC Plan Buildout**	**Increase (dB)**	**Significant?**
Harbor Drive, west of Cesar E. Chavez Parkway	20,194	354 Autos, 322 Heavy Trucks	72	63	73	0	No
Harbor Drive, east of Cesar E. Chavez Parkway	12,050	786 Autos, 846 Heavy Trucks	69	67	71	+2	No
28th Street, north of Harbor Drive	19,563	79 Autos, 448 Heavy Trucks	67	63	68	+1	No

[1] Based on project vehicle distributions in the project traffic study.
Source: Appendix G-1

Table 7-8. Traffic Noise Levels on TAMT Truck Routes: Future Year 2035 Base Plus STC Alternative

	Average Daily Traffic		CNEL (dBA)								
Roadway Segment	Future Year Base	Sustainable Terminal Capacity Buildout [1]	Existing	Future Year (Includes Cumulative Projects	STC Plan	Future Year with STC Plan	Future Year Increase over Baseline (dB)	Incremental STC Plan Increase over Future Year (dB)	Applicable Threshold (dBA CNEL)	Perceptible Change?	S?
Harbor Drive, west of Cesar E. Chavez Parkway	25,050	354 Autos, 322 Heavy Trucks	72	73	63	73	+1	**0**	**75**	No	No
Harbor Drive, east of Cesar E. Chavez Parkway	18,800	786 Autos, 846 Heavy Trucks	69	71	67	73	+2	**+2**	**75**	No	No
28th Street, north of Harbor Drive	20,220	79 Autos, 448 Heavy Trucks	67	67	63	69	+0	**+2**	**75**	No	No

[1] Based on project vehicle distributions in the project traffic study.

Source: Appendix G-1

7.5.5.10 Transportation, Circulation, and Parking

Under the STC Alternative, the MPC of the proposed project would be reduced by 25 percent for each of the three cargo nodes that are proposed for changes under the TAMT plan (i.e., Dry Bulk, Refrigerated Containers, and Multipurpose General Cargo) and would result in a total annual throughput of 4,675,567 MT. Construction activities, which would involve demolition of existing transit sheds and warehouses and development of new open laydown areas, among other activities, would occur and would result in significant construction-related traffic impacts (**Impact-TRA-1** and **Impact-C-TRA-1; Impact-TRA-2** and **Impact-C-TRA-2**). Similar to those of the proposed project, construction-related traffic impacts would be reduced with the implementation of a Transportation Demand Management Plan during construction, as required by **MM-TRA-1** and **MM-TRA-2,** respectively, as described in Section 4.10, *Transportation, Circulation, and Parking*, and Chapter 5, *Cumulative Impacts*. However, given the uncertainty of the timing of future construction activities and the fact that it is unknown if projects may overlap, construction-related traffic impacts may remain significant even after mitigation has been implemented. Therefore, similar to the proposed project, the STC Alternative would result in significant and unavoidable construction-related traffic impacts.

Operational trip generation associated with the STC Alternative would reach approximately 75 percent of the total trips that would be generated by the MPC scenario associated with the full TAMT plan buildout. As a result of the increased throughput capacity of the terminal, the STC Alternative is anticipated to generate 296 additional truckloads of cargo each day and require an additional 524 total employees each day at the project site. The total projected trip generation from both trucks and employees that would access the TAMT under the STC Alternative is provided in Table 7-9 below.

Table 7-9. Project Trip Generation

					AM			PM		
Type	**Units**	**Rate**	**PCE**	**ADT**	**Total**	**In**	**Out**	**Total**	**In**	**Out**
Trucks	296	2/Truck	3	1,776	74	37	37	74	37	37
Dock Workers	461	3/Employee	1	1,383	308	154	154	308	154	154
Administrative	63	3/Employee	1	189	63	63	0	63	0	63
			Total	3,348	445	254	191	445	191	254

Source: Appendix G-1.
Rate = number of daily trips per truck or employee
ADT = average daily trips; PCE = Passenger Car Equivalent, based on industry standards

As shown, the STC Alternative would generate 3,348 new Passenger Car Equivalent trips, including 445 trips (254 in/191 out) during the AM peak hour and 445 trips (191 in/254 out) during the PM peak hour. The same distribution for truck and employee trips assumed for the proposed project was assumed under this alternative. The analysis below assumes full buildout of the STC Alternative and details the impacts that additional throughput and employees would have on existing roadway segments, intersections, freeway ramp intersections, and freeway segments within the project study area.

Existing Plus Sustainable Terminal Capacity Alternative

The transportation analyses for this alternative were conducted using the same methodologies described in Section 4.10, *Transportation, Circulation, and Parking*, of this EIR. Roadway segment analysis, intersection level of service (LOS) analysis, freeway ramp Intersection Lane Volume (ILV) analysis, and freeway analysis results are discussed below.

Roadway Segment Analysis

Table 7-10 shows existing and existing plus STC Alternative LOS conditions for the roadway segments in the project study area. As shown, all roadway segments operate at LOS D or better under existing conditions, except 28th Street between Boston Avenue and National Avenue, which currently operates at LOS E. With the addition of traffic generated by the STC Alternative, this segment would worsen to LOS F and increase the volume to capacity (V/C) ratio by 0.029 (**Impact-TRA-3**), which would exceed the City of San Diego's threshold for allowable increase in V/C ratio of 0.01 for roadway segments operating at LOS F. Therefore, similar to the proposed project, the STC Alternative would result in a significant impact at this roadway segment and mitigation would be required.

Similar to under the proposed project, the STC Alternative's impact on 28th Street between Boston Avenue and National Avenue would be mitigated with implementation of mitigation measure **MM-TRA-3,** as described in Section 4.10, *Transportation, Circulation, and Parking***.** This mitigation measure requires the District to pay a fair-share contribution of the cost to widen this roadway to a Four-Lane Major Arterial classification. Based on the traffic added to the roadway segment by the STC Alternative (647 daily trips) to the projected volume of 22,759 daily trips, the District would be responsible for a fair-share contribution of 2.8 percent. The significant impact on 28th Street between Boston Avenue and National Avenue would occur when the STC Alternative is generating a total of 161 new truck trips. This is the point at which operational vehicle trips generated under the STC Alternative would add more than 0.01 V/C to this failing roadway segment.

The added lane would improve LOS from F to C, which, if implemented, would reduce this impact to a less-than-significant level. However, because the timing and implementation of the necessary improvement are within the exclusive jurisdiction of the City of San Diego, and not the District, the District cannot ensure that the improvements would be made when needed. Therefore, while mitigation is required that could reduce the impact to a less-than-significant level, the uncertainty regarding the timing and implementation of the recommended improvement to 28th Street between Boston Avenue and National Avenue means the STC Alternative's impact on this roadway segment would remain significant and unavoidable, similar to that of the proposed project.

Table 7-10. Peak Hour Roadway Segment LOS Results – Existing Plus Sustainable Terminal Capacity Alternative

Roadway	Segment	Cross-Section	Threshold (LOS E)	Existing + TAMT Plan Buildout ADT	Existing + TAMT Plan Buildout V/C	Existing + TAMT Plan Buildout LOS	Existing ADT	Existing V/C	Existing LOS	Δ	S?
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4 lanes w/RM	40,000	21,223	0.531	C	20,194	0.505	B	0.026	N
	Between Cesar Chavez Parkway and Sampson Street	4 lanes w/RM	40,000	13,108	0.328	A	10,546	0.264	A	0.064	N
	Between Sampson Street and Schley Street	4 lanes w/RM	40,000	14,612	0.365	B	12,050	0.301	A	0.064	N
	Between Schley Street and 28th Street	4 lanes w/RM	40,000	14,188	0.355	A	11,626	0.291	A	0.064	N
	Between 28th Street and Belt Street	4 lanes w/RM	40,000	19,356	0.484	B	18,050	0.451	B	0.033	N
	Between Belt Street and 32nd Street	4 lanes w/RM	40,000	17,909	0.448	B	16,603	0.415	B	0.033	N
28th Street	Between Harbor Drive and Main Street	4 lanes w/RM	40,000	17,390	0.435	B	16,134	0.403	B	0.032	N
	Between Main Street and Boston Avenue	4 lanes w/TWLT	30,000	20,583	0.686	D	19,563	0.652	C	0.034	N
	Between Boston Avenue and National Avenue	3 lanes w/TWLT	22,500[1]	22,759	1.012	**F**	22,112	0.983	**E**	0.029	**Y**
32nd Street	Between Harbor Drive and Norman Scott Road	6 lanes w/RM	50,000	21,226	0.425	B	19,920	0.398	A	0.027	N

Source: Appendix G-1

Notes:

[1] Capacity is 75% of a 4-Lane Collector w/TWLT.

Bold letter indicates a significant impact.

ADT = average daily trips; LOS = level of service; RM = raised median; S? = Indicates if change in V/C ratio is significant; TWLT = two-way left turn; V/C = volume to capacity ratio; Δ = change in V/C ratio

Intersection Analysis

Table 7-11 shows existing and existing plus STC Alternative peak hour LOS conditions for the intersections in the project study area. As indicated, all intersections in the project study area operate at LOS D or better under existing conditions with the exception of Norman Scott Road/32nd Street/Wabash Boulevard, which currently operates at LOS F in the AM peak hour and LOS E in the PM peak hour. At full buildout, operation of the STC Alternative would worsen the existing delay at this intersection by 17.7 seconds during the AM peak hour and by 7.2 seconds during the PM peak hour, where a threshold of 1.0 second of additional delay applies to LOS F and a threshold of 2.0 seconds of additional delay applies to LOS E (**Impact-TRA-4**). The initial impact is anticipated to occur when 195 new daily trips are being generated, at which point this alternative would contribute more than 1.0 second of delay in the AM peak hour period. Therefore, similar to the proposed project, the STC Alternative would result in a significant impact at this intersection and mitigation would be required.

Similar to under the proposed project, the STC Alternative's impact on the Norman Scott Road/32nd Street/Wabash Boulevard intersection would be mitigated with implementation of mitigation measure **MM-TRA-4,** as described in Section 4.10, *Transportation, Circulation, and Parking*. This mitigation measure includes the addition of a westbound right-turn overlap phase at the Norman Scott Road/32nd Street/Wabash Boulevard intersection. As shown in Table 7-12, this would reduce the unmitigated delay associated with this alternative by 19.4 seconds during the AM peak hour and by 19.3 seconds during the PM peak hour and would effectively reduce delay at this intersection to below current levels.

However, because the timing and implementation of the necessary improvement are within the exclusive jurisdiction of the California Department of Transportation (Caltrans), and not the District, the District cannot ensure that the improvements would be made when needed. Therefore, while mitigation is required that could reduce the impact to a less-than-significant level, the uncertainty regarding the timing and implementation of the recommended improvement to the intersection of Norman Scott Road/32nd Street/Wabash Boulevard means the STC Alternative's impact on this intersection would remain significant and unavoidable, similar to that of the proposed project.

Table 7-11. Peak Hour Intersection LOS Results – Existing Plus Sustainable Terminal Capacity Alternative

		AM Peak Hour		PM Peak Hour					
#	**Intersection**	**Avg. Delay (sec.)**	**LOS**	**Avg. Delay (sec.)**	**LOS**	**Delay w/o STC Alternative (sec.) AM/PM**	**LOS w/o STC Alternative AM/PM**	**Change in Delay (sec.)**	**S?**
1	Harbor Drive/Cesar Chavez Parkway	45.4	D	43.6	D	36.8/33.3	D/C	8.6/10.3	No
2	Harbor Drive/Sampson Street	41.0	D	42.2	D	40.4/40.9	D/D	0.6/1.3	No
3	Harbor Drive/Schley Street	16.7	B	15.1	B	16.7/15.0	B/B	0.0/0.1	No
4	Harbor Drive/28th Street	30.1	C	22.8	C	23.1/20.3	C/C	7.0/2.5	No
5	Main Street/28th Street	21.9	C	37.5	D	21.4/34.8	C/C	0.5/2.7	No
6	Boston Avenue/28th Street	19.4	B	23.2	C	19.4/23.0	B/C	0.0/0.2	No
7	National Avenue/28th Street	42.4	D	30.2	C	42.3/29.6	D/C	0.1/0.6	No
8	National Avenue/I-5 NB Off-Ramp	15.5	B	15.3	B	14.9/14.7	B/B	0.6/0.6	No
9	Harbor Drive/Belt Street	18.8	B	17.2	B	18.6/17.1	B/B	0.2/0.1	No
10	Harbor Drive/32nd Street	31.1	C	47.3	D	28.6/39.9	C/D	2.5/7.4	No
11	Norman Scott Road/32nd Street/Wabash Boulevard	113.0	**F**	73.4	**E**	95.3/66.2	**F/E**	17.7/7.2	**Yes**

Source: Appendix G-1

Bold letter indicates a significant impact.

LOS = level of service; NB = northbound; S? = Indicates a significant impact

Table 7-12. Peak Hour Intersection LOS – Mitigated Intersection Existing Plus Sustainable Terminal Capacity Alternative Conditions

		AM Peak Hour		PM Peak Hour					
#	Intersection	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Delay w/o Project (sec.) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec.)	S?
11	Norman Scott Road/32nd Street/Wabash Boulevard	93.6	F	54.1	D	95.3/66.2	F/E	-1.7/-12.1	N

Source: Appendix G-1
LOS = level of service; S? = Indicates a significant impact

Ramp Intersection Capacity Analysis

Consistent with Caltrans requirements, the signalized ramp intersections of National Avenue/I-5 northbound off-ramp and Norman Scott Road/32nd Street/Wabash Boulevard were analyzed under ILV procedures. Both signalized ramp intersections would continue to operate "Under Capacity" during both the AM and PM peak hours under the STC Alternative, as shown in Table 7-13. Therefore, impacts on signalized ramp intersections at the National Avenue/I-5 northbound off-ramp and Norman Scott Road/32nd Street/Wabash Boulevard would be less than significant, which is similar to the proposed project.

Table 7-13. Peak Hour Ramp Intersection Capacity Analysis: Existing Plus Sustainable Terminal Capacity Alternative

			ILV/Hour		
#	Intersection	Peak Hour	Existing	Existing + Sustainable Terminal Capacity	Description
8	National Avenue/I-5 NB Off-Ramp	AM	636	662	Under Capacity
		PM	794	817	Under Capacity
11	Norman Scott Road/32nd Street/Wabash Boulevard	AM	956	1,071	Under Capacity
		PM	1,028	1,132	Under Capacity

Source: Appendix G-1
Note: Less than 1,200 ILV/Hour indicates operation is "Under Capacity."
ILV = intersection lane volume; NB = southbound

Freeway Mainline Segment Analysis

Table 7-14 shows existing and existing plus STC Alternative peak hour LOS conditions for the freeway mainline segments in the project study area.

Table 7-14. Freeway Mainline LOS Analysis – Existing Plus Sustainable Terminal Capacity Alternative

Freeway	Segment	ADT	Direction	Peak Hour Volume	With Project V/C	With Project LOS	Base V/C	Base LOS	Δ V/C	S?
I-5	SR-94 & Imperial Avenue	180,500	NB	9,600	0.890	D	0.890	D	0.000	N
			SB	8,400	0.780	C	0.780	C	0.000	N
	Imperial Avenue & SR-75	170,500	NB	9,100	0.840	D	0.840	D	0.000	N
			SB	8,500	0.790	C	0.780	C	0.010	N
	SR-75 & 28th Street	167,400	NB	10,400	0.850	D	0.850	D	0.000	N
			SB	8,300	0.770	C	0.770	C	0.000	N
	28th Street & SR-15	165,900	NB	10,300	1.100	**F**	1.100	**F**	0.000	N
			SB	8,200	0.870	D	0.870	D	0.000	N
	SR-15 & Main Street	195,900	NB	12,200	1.000	**E**	0.990	**E**	0.010	N
			SB	11,700	1.000	**E**	0.990	**E**	0.010	N
SR-15	SR-94 & Market Street	127,400	NB	6,500	0.770	C	0.760	C	0.010	N
			SB	7,200	0.850	D	0.840	D	0.010	N
	Market Street & Ocean View Boulevard	115,400	NB	6,000	0.850	D	0.840	D	0.010	N
			SB	6,500	0.920	D	0.910	D	0.010	N
	Ocean View Boulevard & I-5	104,400	NB	4,700	0.560	B	0.540	B	0.020	N
			SB	4,700	0.430	B	0.430	B	0.000	N
	I-5 & Norman Scott Road	8,700	NB	400	0.090	A	0.060	A	0.030	N
			SB	400	0.090	A	0.060	A	0.030	N

Notes:
The capacity, directional split, peak hour %, and heavy vehicle % are assumed to be the same as existing conditions.
Bold letter indicates substandard LOS E or F.
ADT = average daily trips; LOS = level of service; NB = northbound; SB = southbound; V/C = volume to capacity ratio; Δ = change in V/C ratio; S? = Indicates if change in V/C ratio is significant

As indicated, all freeway segments within the project study area operate at LOS D or better under existing conditions, except for the following.

- I-5 northbound between 28th Street and SR-15 (LOS F)
- I-5 northbound between SR-15 and Main Street (LOS E)
- I-5 southbound between SR-15 and Main Street (LOS E)

The addition of traffic generated by this alternative would not result in a change in V/C ratio greater than 0.01 for freeway segments operating at LOS E or 0.005 for those operating at LOS F at any key study area freeway mainline segment. Therefore, impacts would be less than significant, which is similar to the proposed project.

Existing Plus Sustainable Terminal Capacity Alternative – Alternative Gate Scenario

The proposed TAMT plan identifies an alternative gate concept that would serve as the primary entry and exit location for the Refrigerated Container node and the Multi-Purpose General Cargo node. The alternative gate would be located in the northeast corner of the project site and would provide access directly onto Harbor Drive. According to the proposed TAMT plan, the Dry and Liquid Bulk nodes would continue to utilize the existing gate off Caesar Chavez Parkway, particularly for domestic bulk shipments. It is also assumed that employee traffic would continue to use the existing Crosby Street gate. The same distribution for truck and employee trips assumed for the TAMT Plan Buildout – Alternative Gate Scenario and analyzed in Section 4.10, *Transportation, Circulation, and Parking*, was assumed for the STC Alternative – Alternative Gate Scenario.

Roadway Segment Analysis

Based on the assumed redistribution of truck trips, Harbor Drive between Beardsley Street and Cesar Chavez Parkway is the only study area roadway segment that is anticipated to experience a change in average daily traffic due to the alternative gate location. As shown in Table 7-15, the roadway segment of Harbor Drive between Beardsley Street and Cesar Chavez Parkway is anticipated to operate at LOS C with the addition of the STC Alternative traffic utilizing the alternative gate location.

Table 7-15. Peak Hour Roadway Segment LOS Results: Existing Plus Sustainable Terminal Capacity Alternative – Alternative Gate Scenario

				Existing + Sustainable Terminal Capacity Alternative			Existing				
Roadway	Segment	Cross-Section	Threshold (LOS E)	ADT	V/C	LOS	ADT	V/C	LOS	Δ	S?
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4 lanes w/ RM	40,000	21,743	0.544	C	20,194	0.505	B	0.039	N

Source: Appendix G-1

Notes:

ADT = average daily trips; LOS = level of service; RM = raised median; S? = Indicates if change in V/C ratio is significant; V/C = volume to capacity ratio; Δ = change in V/C ratio

Based on the City of San Diego's Significance Criteria, the traffic associated with the proposed alternative gate would not cause any additional roadways segments to operate at LOS E or F. Therefore, similar to the proposed project, implementation of the proposed alternative gate location under the STC Alternative would not result in any roadway segment impacts and no mitigation would be required.

Intersection Analysis

Based on the assumed redistribution of truck trips, the Harbor Drive/Cesar Chavez Parkway intersection (Main Gate) is the only existing study intersection that is anticipated to experience a change in peak hour volumes due to the alternative gate. All other key study intersections are anticipated to operate at the same conditions as under the existing plus STC Alternative conditions. Table 7-16 shows intersection LOS and average vehicle delay resulting from implementation of the STC Alternative with the alternative gate location.

Table 7-16. Peak Hour Intersection LOS Results: Existing Plus Sustainable Terminal Capacity Alternative – Alternative Gate Scenario

		AM Peak Hour		PM Peak Hour					
#	**Intersection**	**Avg. Delay (sec.)**	**LOS**	**Avg. Delay (sec.)**	**LOS**	**Delay w/o STC Alt (sec.) AM/PM**	**LOS w/o STC Alt AM/PM**	**Change in Delay (sec.)**	**S?**
1	Harbor Drive/Cesar Chavez Parkway	37.5	D	38.1	D	36.8/33.3	D/C	0.7/4.8	N
12	Harbor Drive/ Alternative Gate	19.4	B	25.5	C	N/A	N/A	19.4/25.5	N

Source: Appendix G-1
LOS = level of service; N/A = not applicable; S? = Indicates significant impact

Based on the City of San Diego's Significance Criteria, the traffic associated with the proposed alternative gate would not cause any additional intersections to operate at LOS E or F. Therefore, similar to the proposed project, implementation of the proposed alternative gate location under the STC Alternative would not result in any intersection impacts and no mitigation would be required.

Future Year 2035 Base Plus Sustainable Terminal Capacity Alternative

The cumulative transportation analyses for this alternative were conducted using the same methodologies described in Section 5.3.11, *Cumulative Impacts*. Roadway segment analysis, intersection LOS analysis, freeway ramp ILV analysis, and freeway analysis results are discussed below.

Roadway Segment Analysis

Roadway segment geometrics under Future Year 2035 plus STC Alternative conditions were assumed to be identical to existing conditions. Table 7-17 shows Future Year 2035 Base and Future Year 2035 plus STC Alternative LOS conditions for the roadway segments in the project study area. As shown, all key study roadway segments are projected to operate at acceptable LOS D or better under Future Year 2035 plus full STC Alternative conditions, except 28th Street between Boston Avenue and National Avenue, which would operate at LOS F. Based on the City of San Diego's criteria, the addition of STC Alternative traffic to this roadway segment would increase the V/C ratio by 0.029, which would exceed the City's threshold for allowable increase in V/C ratio of 0.01 for roadway segments operating at LOS F (**Impact-C-TRA-3**). Therefore, similar to the proposed project, the STC Alternative would result in a cumulatively significant impact at this roadway segment and mitigation would be required.

Similar to the proposed project, the STC Alternative's cumulatively significant impact on 28th Street between Boston Avenue and National Avenue would be mitigated with implementation of mitigation measure **MM-TRA-3** as described in Section 4.10, *Transportation, Circulation, and Parking*. This mitigation measure requires the District to pay a fair-share contribution (2.8 percent) of the cost to widen this roadway to a Four-Lane Major Arterial classification. Implementation of mitigation measure **MM-TRA-3** would reduce this alternative's incremental contribution to significant cumulative traffic impacts to a level less than cumulatively considerable. However, because the timing and implementation of the necessary improvements to the roadway segment of 28th Street between Boston Avenue and National Avenue are within the exclusive jurisdiction of the City of San Diego, the District cannot ensure that the improvement would be made when needed. Therefore, while mitigation has been identified that could reduce the STC Alternative's cumulatively considerable traffic impacts to a less-than-significant level, the uncertainty regarding the timing and implementation of the recommended improvements to this roadway segment is considered cumulatively significant and unavoidable.

Table 7-17. Roadway Segment LOS Results: Future Year 2035 Base Plus Sustainable Terminal Capacity Alternative

Roadway	Segment	Classification	Threshold (LOS E)	Future Year 2035 + Sustainable Terminal Capacity Alternative			Future Year 2035 Base	Δ	S?
				ADT	V/C	LOS	ADT/V/C/LOS		
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4-Lane Major	40,000	26,079	0.652	C	25,050/0.626/C	0.026	No
	Between Cesar Chavez Parkway and Sampson Street	4-Lane Major	40,000	21,362	0.534	C	18,800/0.470/B	0.064	No
	Between Sampson Street and Schley Street	4-Lane Major	40,000	19,612	0.490	B	17,050/0.426/B	0.064	No
	Between Schley Street and 28th Street	4-Lane Major	40,000	19,612	0.490	B	17,050/0.426/B	0.064	No
	Between 28th Street and Belt Street	4-Lane Major	40,000	25,306	0.633	C	24,000/0.600/C	0.033	No
	Between Belt Street and 32nd Street	4-Lane Major	40,000	25,306	0.633	C	24,000/0.600/C	0.033	No
28th Street	Between Harbor Drive and Main Street	4-Lane Major	40,000	18,206	0.455	B	16,950/0.424/B	0.031	No
	Between Main Street and Boston Avenue	4-Lane Collector w/TWLT	30,000	21,240	0.708	D	20,220/0.674/D	0.034	No
	Between Boston Avenue and National Avenue	3-Lanes Collector w/TWLT	22,500	28,367	1.261	**F**	27,720/1.232/**F**	0.029	**Yes**
32nd Street	Between Harbor Drive and Norman Scott Road	6-Lane Major	50,000	27,106	0.542	B	25,800/0.516/B	0.026	No

Source: Appendix G-1

ADT = average daily trips; LOS = level of service; S? = Indicates if change in V/C ratio is significant; TWLT = two-way left turn; V/C = volume to capacity ratio; Δ = change in V/C ratio.

Intersection Analysis

Intersection geometrics under Future Year 2035 plus STC Alternative conditions were assumed to be identical to existing conditions. Table 7-18 shows Future Year 2035 and Future Year 2035 plus STC Alternative peak hour LOS conditions for the intersections in the project study area. As shown, all key study intersections are projected to operate at LOS D or better under Future Year 2035 plus STC Alternative conditions, except the following two intersections.

- National Avenue and 28th Street – LOS F during AM peak hour and LOS E during PM peak hour
- Norman Scott Road/32nd Street/Wabash Boulevard – LOS F during AM peak hour and LOS E during PM peak hour

Based on the City of San Diego's criteria, the traffic associated with the proposed project would not worsen the delay by more than 1 second or result in further deterioration in peak hour intersection LOS at the intersection of National Avenue and 28th Street. However, the traffic associated with this alternative would worsen the delay at the Norman Scott Road/32nd Street/Wabash Boulevard intersection by 16.1 seconds during the AM peak hour and 7.4 seconds during the PM peak hour, where a threshold of 1.0 second of additional delay applies to LOS F and a threshold of 2.0 seconds of additional delay applies to LOS E (**Impact-C-TRA-4**). The addition of STC Alternative traffic would also cause intersection operations to degrade from LOS E to LOS F during the AM and PM peak hours. Therefore, similar to the proposed project, the STC Alternative would have a significant cumulative impact at the Norman Scott Road/32nd Street/Wabash Boulevard intersection and mitigation would be required.

Similar to that of the proposed project, the STC Alternative's cumulatively significant impact on the Norman Scott Road/32nd Street/Wabash Boulevard intersection would be mitigated with implementation of mitigation measure **MM-TRA-4** as described in Section 4.10, *Transportation, Circulation, and Parking*. This mitigation measure includes the addition of a westbound right-turn overlap phase at the Norman Scott Road/32nd Street/Wabash Boulevard intersection. As shown in Table 7-19, this would reduce the unmitigated delay associated with this alternative by 18.1 seconds during the AM peak hour and by 17.4 seconds during the PM peak hour and would effectively reduce delay at this intersection to below future cumulative baseline levels. Implementation of mitigation measure **MM-TRA-4** would reduce the STC Alternative's incremental contribution to significant cumulative traffic impacts to a level less than cumulatively considerable. However, because the timing and implementation of the necessary improvements to the intersection of Norman Scott Road/32nd Street/Wabash Boulevard are within the exclusive jurisdiction of Caltrans, the District cannot ensure that the improvement would be made when needed. Therefore, while mitigation has been identified that could reduce the STC Alternative's cumulatively considerable traffic impacts to a less-than-significant level, the uncertainty regarding the timing and implementation of the recommended improvements to this intersection is considered cumulatively significant and unavoidable.

Table 7-18. Peak Hour Intersection LOS Results: Future Year 2035 Base Plus Sustainable Terminal Capacity Alternative

#	Intersection	AM Peak Hour		PM Peak Hour		Delay w/o STC Alternative (sec) AM/PM	LOS w/o STC Alternative AM/PM	Change in Delay (sec)	Significant Impact?
		Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS				
1	Harbor Drive/Cesar Chavez Parkway	53.2	D	51.7	D	50.6/39.6	D/D	2.6/12.1	No
2	Harbor Drive/Sampson Street	53.2	D	53.0	D	50.9/53.0	D/D	2.3/0.0	No
3	Harbor Drive/Schley Street	26.7	C	20.3	C	23.2/19.4	B/B	3.5/0.9	No
4	Harbor Drive/28th Street	32.0	C	32.0	C	28.8/28.2	C/C	3.2/3.8	No
5	Main Street/28th Street	22.6	C	42.0	D	22.2/39.2	C/D	0.4/2.8	No
6	Boston Avenue/28th Street	28.0	C	38.8	D	27.7/37.4	C/D	0.3/1.4	No
7	National Avenue/28th Street	122.5	**F**	72.1	**E**	122.5/71.4	**F/E**	0.0/0.7	No
8	National Avenue/I-5 NB Off-Ramp	19.8	B	18.3	B	18.9/17.5	B/B	0.9/0.8	No
9	Harbor Drive/Belt Street	22.8	C	19.8	C	22.3/19.1	C/B	0.5/0.7	No
10	Harbor Drive/32nd Street	35.8	C	51.6	D	32.3/44.2	C/D	3.5/7.4	No
11	Norman Scott Road/32nd Street/Wabash Boulevard	97.6	**F**	74.6	**F**	81.5/67.2	**E/E**	16.1/7.4	**Yes**

Source: Appendix G-1
LOS = level of service; NB = northbound

Table 7-19. Peak Hour Intersection LOS – Mitigated Intersection Future Year 2035 Base Plus Sustainable Terminal Capacity Alternative

		AM Peak Hour		PM Peak Hour					
#	Intersection	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Delay w/o Project (sec.) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec.)	S?
11	Norman Scott Road/32nd Street/Wabash Boulevard	79.5	F	57.2	E	81.5/67.2	F/E	-2.0/-10.0	N

Source: Appendix G-1
LOS = level of service; S? = Indicates a significant impact

Ramp Intersection Capacity Analysis

Consistent with Caltrans requirements, the signalized ramp intersections of National Avenue/I-5 northbound off-ramp and Norman Scott Road/32nd Street/Wabash Boulevard were analyzed using ILV procedures. As shown in Table 7-20, these signalized ramp intersections are projected to operate at "Under Capacity" or "At Capacity" during both the AM and PM peak hours under Future Year 2035 plus STC Alternative conditions. Therefore, impacts from past, present, and reasonably foreseeable future projects would not be cumulatively significant.

Table 7-20. Ramp Intersection Capacity Analysis: Future Year 2035 Base Plus Sustainable Terminal Capacity Alternative Conditions

			ILV/Hour		
#	Intersection	Peak Hour	Future Year 2035 Base	Future Year 2035 Base + STC Alternative	Description
8	National Avenue/I-5 NB Off-Ramp	AM	950	976	Under Capacity
		PM	930	953	Under Capacity
11	Norman Scott Road/32nd Street/Wabash Boulevard	AM	1,095	1,210	At Capacity
		PM	1,083	1,187	Under Capacity

Source: Appendix G-1
ILV = Intersection Lane Volume; NB = northbound

Freeway Mainline Segment Analysis

Table 7-21 shows Future Year 2035 Base and Future Year 2035 plus STC Alternative peak hour LOS conditions for the freeway mainline segments in the project study area. As indicated, all freeway segments within the project study area are projected to operate at LOS D or better, except for the following.

- I-5 northbound between SR-94 & Imperial Avenue (LOS F)

- I-5 southbound between SR-94 & Imperial Avenue (LOS E)
- I-5 northbound between Imperial Avenue & SR-75 (LOS E)
- I-5 northbound between SR-75 & 28th Street (LOS E)
- I-5 northbound between 28th Street & SR-15 (LOS F)
- I-5 southbound between 28th Street & SR-15 (LOS E)
- I-5 northbound between SR-15 & Main Street (LOS F)
- I-5 southbound between SR-15 & Main Street (LOS F)
- SR-15 northbound between Market Street & Ocean View Boulevard (LOS E)
- SR-15 southbound between Market Street & Ocean View Boulevard (LOS F)

Table 7-21. Freeway Mainline Segments: Future Year 2035 Base Plus Sustainable Terminal Capacity Alternative Conditions

Freeway	Segment	ADT	Direction	Peak Hour Volume	With Project V/C	With Project LOS	Base V/C	Base LOS	Δ	S?
I-5	SR-94 & Imperial Avenue	218,900	NB	11,700	1.080	**F**	1.070	**F**	0.010	**Y**
			SB	10,200	0.940	**E**	0.940	**E**	0.000	N
	Imperial Avenue & SR-75	196,200	NB	10,500	0.970	**E**	0.960	**E**	0.010	N
			SB	9,700	0.900	D	0.900	D	0.000	N
	SR-75 & 28th Street	191,400	NB	11,900	0.970	**E**	0.970	**E**	0.000	N
			SB	9,500	0.880	D	0.880	D	0.000	N
	28th Street & SR-15	177,700	NB	11,000	1.170	**F**	1.170	**F**	0.000	N
			SB	8,800	0.940	**E**	0.940	**E**	0.000	N
	SR-15 & Main Street	221,200	NB	13,800	1.130	**F**	1.120	**F**	0.010	**Y**
			SB	13,200	1.120	**F**	1.120	**F**	0.000	N
SR-15	SR-94 & Market Street	122,200	NB	6,200	0.730	C	0.720	C	0.010	N
			SB	6,900	0.820	D	0.800	D	0.020	N
	Market Street & Ocean View Boulevard	130,600	NB	6,800	0.960	**E**	0.950	**E**	0.010	N
			SB	7,300	1.040	**F**	1.020	**F**	0.020	**Y**
	Ocean View Boulevard & I-5	123,400	NB	5,500	0.650	C	0.650	C	0.000	N
			SB	5,600	0.520	B	0.510	B	0.010	N
	I-5 & Norman Scott Road	31,900	NB	1,400	0.300	A	0.300	A	0.000	N
			SB	1,400	0.300	A	0.280	A	0.020	N

ADT = average daily trips; LOS = level of service; NB = northbound; SB = southbound; S? = Indicates a significant impact; V/C = volume to capacity ratio; Δ = change in V/C ratio

The addition of STC Alternative traffic onto Future Year 2035 Base conditions would result in a change in V/C ratio greater than 0.005 for freeway segments operating at LOS F at the following key study area freeway segments (**Impact-C-TRA-5**).

- I-5 northbound between SR-94 & Imperial Avenue (LOS F)
- I-5 northbound between SR-15 & Main Street (LOS F)
- SR-15 southbound between Market Street & Ocean View Boulevard (LOS F)

Based on the City of San Diego's Significance Criteria, the traffic associated with the STC Alternative would exceed the allowable threshold of a 0.005 V/C ratio increase for freeway segments operating at LOS F. Therefore, although the STC Alternative would result in slightly reduced freeway segment impacts compared to the proposed project, which would result in a cumulatively significant impact at four freeway segments, this alternative would result in a cumulatively significant impact at three freeway segments and mitigation would be required.

Implementation of mitigation measure **MM-C-TRA-1** as described in Chapter 5, *Cumulative Impacts*, would reduce the STC Alternative's incremental contribution to significant cumulative traffic impacts on the freeway segments of I-5 northbound between SR-94 and Imperial Avenue, I-5 northbound between I-15 and Main Street, and I-15 southbound between Market Street and Ocean View Boulevard to a level less than cumulatively considerable. It should be noted that the STC Alternative would only be responsible for implementing the portion of **MM-C-TRA-1** that is directly related to the alternative's cumulative impacts on the three aforementioned freeway segments. However, there is no program in place into which the District would pay its fair-share contribution toward the cost of the improvements to these freeway facilities. Consequently, because these freeway segments are within the exclusive jurisdiction of Caltrans, and the San Diego Association of Governments is responsible for planning the improvements, the District cannot ensure that the improvements would be made when needed. Therefore, while mitigation has been identified that could reduce the STC Alternative's cumulatively considerable traffic impacts to a less-than-significant level, the uncertainty regarding the timing and implementation of the recommended improvements to these freeway segments means that **Impact-C-TRA-1** would be considered cumulatively significant and unavoidable even with payment of the project's fair-share contribution.

Future Year 2035 Base Plus Sustainable Terminal Capacity Alternative – Alternative Gate Scenario

As mentioned, the proposed TAMT plan identifies an alternative gate concept that would serve as the primary entry and exit location for the Refrigerated Container node and the Multi-Purpose General Cargo node. The alternative gate would be located in the northeast corner of the project site and would provide access directly onto Harbor Drive. According to the proposed TAMT plan, the Dry and Liquid Bulk nodes would continue to utilize the existing gate off Caesar Chavez Parkway. It is also assumed that employee traffic would continue to use the existing Crosby Street gate. The same distribution for truck and employee trips assumed for the TAMT Plan Buildout – Alternative Gate Scenario and analyzed in Section 4.10, *Transportation, Circulation, and Parking*, was assumed for the STC Alternative – Alternative Gate Scenario.

Roadway Segment Analysis

Based on the assumed redistribution of truck trips, Harbor Drive between Beardsley Street and Cesar Chavez Parkway is the only study roadway segment that is anticipated to experience a change in average daily traffic due to the alternative gate location. As shown in Table 7-22, the roadway segment of Harbor Drive between Beardsley Street and Cesar Chavez Parkway is anticipated to operate at LOS C with the addition of the STC Alternative traffic utilizing the alternative gate location.

Table 7-22. Peak Hour Roadway Segment LOS Results: Future Year 2035 Base Plus Sustainable Terminal Capacity Alternative – Alternative Gate Scenario

				Future Year 2035 + Sustainable Terminal Capacity Alternative			Future Year 2035				
Roadway	**Segment**	**Cross-Section**	**Threshold (LOS E)**	**ADT**	**V/C**	**LOS**	**ADT**	**V/C**	**LOS**	**Δ**	**S?**
Harbor Drive	Between Beardsley Street and Cesar Chavez Parkway	4 lanes w/ RM	40,000	26,599	0.665	C	25,050	0.626	C	0.039	N

Source: Appendix G-1

ADT = average daily trips; LOS = level of service; RM = raised median; S? = Indicates if change in V/C ratio is significant; V/C = volume to capacity ratio; Δ = change in V/C ratio

Based on the City of San Diego's Significance Criteria, the traffic associated with this scenario would not cause any roadways segments to operate at LOS E or F. Therefore, similar to the proposed project, implementation of the proposed alternative gate location under the STC Alternative would not result in any additional impacts on roadway segment operations not previously identified under Future Year 2035 Base plus STC Alternative conditions.

Intersection Analysis

Based on the assumed redistribution of truck trips, the Harbor Drive/Cesar Chavez Parkway intersection (Main Gate) is the only existing study intersection that is anticipated to experience a change in peak hour volumes due to the alternative gate. All other key study intersections are anticipated to operate at the same conditions as under Future Year 2035 Base plus STC Alternative conditions identified in Table 7-22 above. Table 7-23 displays intersection LOS and average vehicle delay resulting from implementation of the STC Alternative with the alternative gate location. As shown, both affected intersections are anticipated to operate at LOS D or better under the Future Year 2035 Base plus STC Alternative – Alternative Gate Scenario.

Table 7-23. Peak Hour Intersection LOS Results: Future Year 2035 Plus Sustainable Terminal Capacity Alternative – Alternative Gate Scenario

		AM Peak Hour		PM Peak Hour					
#	**Intersection**	**Avg. Delay (sec.)**	**LOS**	**Avg. Delay (sec.)**	**LOS**	**Delay w/o Project (sec.) AM/PM**	**LOS w/o Project AM/PM**	**Change in Delay (sec.)**	**S?**
1	Harbor Drive/Cesar Chavez Parkway	52.7	D	49.4	D	50.6/39.6	D/D	2.1/9.8	No
12	Harbor Drive/ Alternative Gate	33.2	C	37.0	D	N/A	N/A	33.2/37.0	No

Source: Appendix G-1
Bold letter indicates a significant impact.
LOS = level of service; S? = indicates a significant impact

Based on the City of San Diego's Significance Criteria, the traffic associated with this scenario would not cause any intersections to operate at LOS E or F. Therefore, similar to the proposed project, implementation of the proposed alternative gate location under the STC Alternative would not result in any additional impacts on intersection operations not previously identified under Future Year 2035 Base plus STC Alternative conditions.

Parking

Parking impacts under the STC Alternative would be similar to those under the MPC scenario analyzed under the proposed project. Specifically, because of the fluid nature of cargo terminal operations and the flexibility generally needed for onsite parking, the lack of absolute certainty that sufficient parking would be provided in the buildout year would be considered a significant impact (**Impact-TRA-5**). Mitigation measures **MM-TRA-5**, **MM-TRA-6**, and **MM-TRA-7** would be required, as with the proposed project, to ensure parking does not occur off-terminal in undesignated locations, that a District-maintained parking inventory is implemented, and that parking management plans are prepared for future components and real estate leases. As with the proposed project, after mitigation is incorporated, parking impacts from the buildout of the STC Alternative would be less than significant.

7.5.5.11 Utilities and Energy

Under the STC Alternative, demand for water and the generation of wastewater would increase over existing conditions, but would be slightly less than the level of the proposed project. Aside from the subsurface stormwater retention tank, which would have no significant impacts on the environment, no other new facilities would be needed, the construction of which could have an impact on the environment. In addition, similar to the proposed project, the STC Alternative would not require additional water entitlements or result in a determination that the City of San Diego is unable to accommodate the additional wastewater generated by the alternative. Energy use would also be higher over time compared to baseline conditions, but would not represent a wasteful, inefficient, or unnecessary use of energy because all energy would be used for highly coordinated goods movement on and off the terminal. Compared to the project, the STC Alternative would have a slightly lower energy demand because it would not reach the MPC throughput projections. Overall, the STC Alternative's impact on utilities and energy would be less than significant and would be similar to that of the proposed project because it would have lower throughput (approximately 25 percent less) and a similar reduction of overall energy use, particularly related to fuel use from trucks and vessels. No mitigation related to utilities and energy would be required under this alternative; however, mitigation required to reduce GHG emissions (as discussed under 7.5.5.6) would significantly reduce energy use compared to projections without the mitigation.

Under cumulative conditions, the STC Alternative, like the proposed project, would exceed the City of San Diego's threshold for solid waste by generating more than 60 tons annually (**Impact-C-UTIL-1** and **Impact-C-UTIL-2**) and as such would be required to prepare a waste management plan under **MM-C-UTIL-1**, as described in Chapter 5, *Cumulative Impacts*.

7.5.5.12 Relationship to Project Objectives

The STC Alternative would meet all the central project objectives. Specifically, it would (1) enhance the District's competitive position by increasing throughput capabilities, (2) maintain and promote the District's longstanding commitment to dry bulk, liquid bulk, refrigerated containers, and multi-purpose general cargo, (3) ensure benefits to existing project site tenants by implementing a series of short-term infrastructure improvements, (4) maintain and expand the District's ability to support military deployment activities during a military contingency or national emergency, (5) enhance the efficiency, productivity, and long-term success of the TAMT by identifying potential infrastructure needs, decreasing intra-terminal transfer time, simplifying terminal layout patterns, and making internal traffic flows more predictable, (6) optimize the use of land and waterways and provide deep-water and water-dependent facilities in a manner that is consistent with the Port Master Plan and the California Coastal Act, and (7) balance the critical need of staying economically competitive with maintaining environmental sustainability and stewardship by supporting the cleanest feasible technology and infrastructure for terminal upgrades and by maintaining consistency with California's Sustainable Freight Strategy and the District's Climate Action Plan, Clean Air Program, and Jurisdictional Runoff Management Program.

~~7.5.5~~7.5.6 Environmentally Superior Alternative

Pursuant to CEQA, the EIR is required to identify the environmentally superior alternative. Although the No Project/No Build Alternative reduces the greatest number of significant impacts, CEQA requires that when the environmentally superior alternative is the No Project Alternative, another alternative should be identified. Therefore, as indicated in Table 7-~~3~~24, the Reduced Project Alternative would be the environmentally superior alternative. The Reduced Project Alternative would reduce significant impacts on air quality and health risk, GHGs, noise, and transportation by eliminating components such as the gantry cranes and other efficient technologies and strategies that would otherwise help the terminal increase its throughput. The reduced throughput would mean less activity on the project site and fewer vessel and truck trips; however, to achieve these reduced impacts, an artificial limit may need to be placed on throughput. More importantly, though, is the fact that the Reduced Project Alternative would not meet several of the central project objectives, including Objectives #1, #2, #5, or #6 as described in Section 7.5.3.12.

However, based on feedback received during public review of the Draft EIR, notably from ARB, the San Diego Air Pollution Control District, and the Environmental Health Coalition, about the MPC scenario's significant and unavoidable impacts associated with criteria pollutants and health risk, the District organized multiple working sessions with the District's Maritime business and operations staff, Real Estate staff, and Planning and Green Port staff in an effort to develop an alternative that would reduce criteria pollutants and toxic air contaminants further while still achieving the basic project objectives and remaining feasible. In addition, the District met with ARB, the San Diego Air Pollution Control District, and the Environmental Health Coalition to discuss feasible solutions to reduce air quality impacts. The result was the STC Alternative (Alternative 5). The STC Alternative would reduce throughput by 25 percent from the MPC scenario proposed under the project, but would still allow the District to accommodate realistic market forecasts without severely harming the port's and TAMT's economic competitiveness. As such, the STC Alternative is considered feasible, and would reduce significant health risk impacts and several impacts associated with the emission of criteria pollutants while still achieving the basic project objectives. As a result, District staff supports approval of the STC Alternative in place of the proposed project that is based on the MPC scenario.

Table 7-~~3~~24. Summary Impact Comparison of Proposed Project Alternatives

Environmental Resource	Proposed Project Determination	No Project/ No Build (~~Alternative~~ Alt 1)	2008 Maritime Business Plan Buildout (~~Alternative~~ Alt 2)	Reduced Project (~~Alternative~~ Alt 3)	Full Refrigerated and Dry Container Buildout (~~Alternative~~ Alt 4)	Sustainable Terminal Capacity (Alt 5)
Aesthetics and Visual Resources	Significant and Unavoidable	-2	-2	-2	0	0
Air Quality and Health Risk	Significant and Unavoidable	-1	+2	-~~1~~2	0	-2
Biological Resources	Less Than Significant w/Mitigation	-1	+1	0	0	0
Cultural Resources	Less Than Significant w/Mitigation	-1	+1	0	0	0
Geology and Soils	Less Than Significant	0	0	0	0	0
Greenhouse Gas Emissions and Climate Change	Significant and Unavoidable	-1	+2	-1	0	-1
Hazards and Hazardous Materials	Less Than Significant w/Mitigation	-1	0	0	0	0
Hydrology and Water Quality	Less Than Significant	+1	+1	0	0	0
Noise and Vibration	Significant and Unavoidable	-2	0	-2	0	-1
Transportation, Circulation, and Parking	Significant and Unavoidable	-2	0	-2	+1	-1
Utilities and Energy	Less Than Significant	-2	+1	-1	+1	-1
Total[1]	**--**	**-12**	**+4**	**-~~9~~10**	**+2**	**-6**

Legend:
-2= Substantially Reduced
-1= Slightly Reduced
0 = Similar
+1 = Slightly Greater
+2 = Substantially Greater
[1] Lowest score is environmentally superior

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Chapter 8
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State of California, Governor's Office of Planning and Research, State Clearinghouse and Planning Unit (SCH)	N/A
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I hereby certify that the statements furnished above present the data and information required for this report to the best of my ability, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Signature: Charlie Richmond ____________ Date: ~~June 29~~December 2, 2016

Charlie Richmond, Principal, ICF International

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Chapter 9
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