College Boulevard Improvement Project
Environmental Impact Report

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NOVEMBER 2019

Printed on 30% post-consumer recycled material.

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EXECUTIVE SUMMARY

ES.1 INTRODUCTION

This Environmental Impact Report (EIR) has been prepared by the City of Oceanside as lead agency pursuant to the California Environmental Quality Act (CEQA) (Public Resources Code, Section 21000 et seq.) and the CEQA Guidelines (California Code of Regulations, Section 15000 et seq.) to evaluate the environmental effects of the proposed College Boulevard Improvement project.

ES.2 PURPOSE AND USES OF THIS EIR

An EIR is an informational document "which will inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternative to the project" (Section 15121 of the CEQA Guidelines). The purpose of this EIR is to analyze the potential physical environmental effects associated with the development and operation of the proposed College Boulevard Improvement project. This EIR is intended for use by both the decision makers and the public.

ES.3 PROJECT LOCATION

The proposed project is located in the County of San Diego within the city of Oceanside (see Figure 2-1 and Figure 2-2). Specifically, the proposed College Boulevard improvement corridor stretches from Waring Road north to Old Grove Road (a distance of approximately 2.41 miles see Figure 2-3).

ES.4 PROJECT DESCRIPTION

The proposed College Boulevard improvement corridor is classified as a six-lane Major Arterial from Waring Road to Old Grove Road in the City of Oceanside's General Plan Circulation Element. The approximate 2.41-mile improvement corridor is currently built with four (4)-lanes and posted speed limits are 40 to 50 miles per hour. A raised median is constructed throughout the length of the Project Area. In addition to street parking that is permitted north of Roselle Avenue and south of Thunder Drive, bicycle lanes are striped along most of the corridor with widths ranging from five (5) to nine (9) feet. Sidewalks are also provided on both sides of the street with widths ranging from four (4) to six (6) feet. Landscaped parkways are provided throughout the majority of the Project Area. The existing public right-of-way is located approximately ten (10) feet behind the face of the curb through most of the Project Area. Utilities including cable, television, phone, gas, sewer, water, storm drain and electrical power are located underground along the corridor. No overhead wires are present within the Project Area.

Within the Project Area, College Boulevard is proposed to be widened to a six (6)-lane major arterial from Olive Drive to Old Grove Road, which would be consistent with the City of

Oceanside's Circulation Element Year 2030 classification of College Boulevard. Along this section, the City proposes road and right-of-way improvements to the corridor to enhance existing and future traffic operations, provide congestion relief and reduce queue lengths, improve safety conditions for the unsignalized intersections and access points along the corridor, and provide safer travel routes for bicyclists and pedestrians.

Expansion of the existing College Boulevard right-of-way (ROW) to accommodate proposed improvements would require ROW acquisition along segments of the corridor. Additional ROW would be required on over 65 properties along the College Boulevard corridor.

Although College Boulevard has been under consideration for widening for several years, the roadway would be primarily maintained as a four (4)-lane major arterial from Waring Road to Olive Drive with the exception of minor right-of-way and traffic calming improvements. These improvements include the minor widening of the intersection of College Boulevard and Waring Road to convert the existing southbound and northbound right turn lanes into through/merge lanes to provide congestion relief and better truck access to Waring Road. At the intersection of College Boulevard and Marvin Street, improvements would include curb extensions to reduce the pedestrian crossing distance across the intersection and installing Americans with Disabilities Act (ADA) compliant pedestrian ramps at all corners of the intersection.

A General Plan Amendment (GPA) is required to revise the Year 2030 classification of College Boulevard from a six (6)-lane major arterial to a four (4)-lane major arterial from Waring Road to Olive Drive in the City of Oceanside's Circulation Element.

ES.4.1 Project Objectives

The California Environmental Quality Act (CEQA) requires that an environmental impact report (EIR) include a statement of the project objectives (see the CEQA Guidelines at 14 CCR 15124(b)). Objectives for the proposed project are described below:

1. Improve/enhance access and circulation along the College Boulevard corridor.
2. Accommodate existing and future traffic volumes on College Boulevard.
3. Implement the recommendations of the College Boulevard Project Study Report as it relates to College Boulevard.
4. Enhance the existing bicycle circulation network through extended bicycle lanes.
5. Improve pedestrian access at select intersections along the Project corridor through striping and traffic calming measures.
6. Obtain improved consistency with the adopted Circulation Element.

7. Provide opportunities for physical improvements to public infrastructure such sidewalks and intersections, and bike and pedestrian facilities
8. Implement green street design elements including the installation of low maintenance vegetation with irrigation in select medians (i.e., where the width of the median is wide enough) and construction of non-contiguous sidewalks where feasible.

ES.4.2 Discretionary Approvals

Consistent with the City's General Plan and Zoning Ordinance, the proposed project requires certain entitlements be submitted, reviewed, and approved by the City. Chief among these entitlements is a General Plan Amendment (GPA). A GPA is proposed as the proposed project deviates from the general six-lane expansion of College Boulevard from Old Grove Road to Waring Road as envisioned in the Circulation Element.

The City will use this EIR and associated documentation in its decision to approve or deny the required discretionary permits. Other responsible agencies can use this EIR and supporting documentation in their decision-making process to issue additional approvals. These additional approvals may include but are not limited to approval of a site-specific Stormwater Pollution Prevention Plan (SWPPP) and adoption of a mitigation monitoring and reporting program.

Other Agency Approvals

Approval of the proposed project's SWPPP may be required by the San Diego Regional Water Quality Control Board to ensure that Lom Alta Creek will be adequately protected during construction.

ES.5 AREAS OF CONTROVERSY

Responses to the initial NOP received during the initial public scoping period expressed concern about potential impacts to air quality, greenhouse gas emissions, noise, traffic and circulation. These concerns have been addressed in Sections 4.2 Air Quality, 4.7 Greenhouse Gas Emission, and 4.13, Transportation and Circulation. In addition, commenters expressed concern over the NOP notification process, consideration of construction of a highway interchange at Rancho Del Oro and State Route 78 (and related potential reduction of traffic on College Boulevard), and consideration of installation of a traffic signal at the intersection of College Boulevard and Aztec Street. The installation of additional traffic control devices along College Boulevard was also conveyed. Other comments received pertained to the use of heavy trucks on College Boulevard and road maintenance costs and one resident felt that there were too many traffic lights and stop signs on College Boulevard.

ES.6 EFFECTS NOT FOUND TO BE SIGNIFICANT OR LESS THAN SIGNIFICANT

Effects to CEQA-mandated environmental areas including aesthetics, agriculture and forestry resources, energy, hydrology and water quality, land use, mineral resources, population and housing, public services, recreation, and utilities and service systems were determined to be less than significant.

ES.7 IMPACTS DETERMINED TO BE SIGNIFICANT

Table ES-1 provides a summary of significant impacts of the project pursuant to the CEQA Guidelines, Section 15123(b)(1). Impacts associated with air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, noise, traffic and circulation, and tribal cultural resources were identified as significant. With the exception of air quality and greenhouse gas emissions, all identified significant impacts would be mitigated to a level below significance.

Table ES-1
College Boulevard Improvement Project Summary of Significant Environmental Impacts

Impact	Mitigation Measure	Level of Significance After Mitigation
Impact AQ-1: Conflict with or obstruct implementation of the applicable air quality plan and impacts would be potentially significant	**MM AQ-1**: Prior to the San Diego Air Pollution Control District's (SDAPCD's) next triennial review of the Regional Air Quality Strategy, the City of Oceanside (City) shall coordinate with SDAPCD to amend the vehicle miles traveled (VMT) and emissions assumptions using the proposed project's College Boulevard corridor revisions. This includes downgrading the future classification of College Boulevard between Olive Drive and Waring Road in the Circulation Element from a six-lane Major Arterial to a four-lane Major Arterial.	Less than significant
Impact AQ-2: Result in a cumulatively considerable net increase of attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors).	**MM-AQ-1**.	Significant and unavoidable.
Impact AQ-3: Expose sensitive receptors to substantial pollutant concentrations.	**MM-AQ-1**.	Significant and unavoidable.
Impact BIO-1: Have a substantial adverse effect, either directly or through	**MM-BIO-1**: Within 72 hours of ground-disturbing activities associated with	Less than significant.

Table ES-1
College Boulevard Improvement Project Summary of Significant Environmental Impacts

Impact	Mitigation Measure	Level of Significance After Mitigation
habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. (Direct Impacts)	construction activities during the nesting/breeding season of native bird species potentially nesting on the site (March 1 through September 15, starting January 1 for raptors), the City shall have surveys conducted by a qualified biologist to determine if active nests of bird species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code are present in the impact area or within 300 feet (500 feet for raptors) of the impact area. If active nests are found, the biological monitor shall establish an avoidance buffer at his/her discretion (typically 50 to 500 feet, depending on the species) until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers, and construction personnel shall be instructed on the sensitivity of nest areas. A biological monitor shall serve as a construction monitor during those periods when construction activities will occur near active nest areas to ensure that no inadvertent impacts to these nests occur.	
Impact BIO-2: 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 the California Department of Fish and Game or U.S. Fish and Wildlife Service. (Indirect Impacts)	**MM-BIO-1**.	Less than significant
Impact BIO-3: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS.	**MM-BIO-2**: To prevent inadvertent disturbance to areas outside the limits of grading, orange environmental fencing shall be installed to delineate the limits of grading, and all grading shall be monitored by a qualified biologist. A biologist shall be contracted to perform biological monitoring during all grading, clearing, grubbing,	Less than significant.

Table ES-1
College Boulevard Improvement Project Summary of Significant Environmental Impacts

Impact	Mitigation Measure	Level of Significance After Mitigation
	trenching, and construction activities. The project biologist shall perform the following duties: 1. Attend the preconstruction meeting/training with the contractor and other key construction personnel prior to clearing, grubbing, or grading to reduce conflict between the timing and location of construction activities with other mitigation requirements (e.g., seasonal surveys for nesting birds). At a minimum, the training shall include the general provisions of the MHCP and the need to adhere to the provisions of the MHCP. 2. Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas prior to clearing, grubbing, or grading. 3. Discuss procedures for minimizing harm to or harassment of wildlife encountered during construction with the contractor and other key construction personnel prior to clearing, grubbing, or grading. 4. Review and/or designate the construction area in the field with the contractor in accordance with the final grading plan prior to clearing, grubbing, or grading. 5. Conduct a field review of the staking to be set by the surveyor, and the subsequent installation of orange environmental fencing designating the limits of all construction activity prior to clearing, grubbing, or grading. 6. Be present during initial vegetation clearing, grubbing, and grading. The biologist shall prepare periodic construction monitoring reports and a post-construction	

Table ES-1
College Boulevard Improvement Project Summary of Significant Environmental Impacts

Impact	Mitigation Measure	Level of Significance After Mitigation
	report to document compliance. If dead or injured listed species are located, initial notification must be made in writing within 3 working days to the applicable jurisdiction. Any native, special-status habitat, including wetlands and non-wetland waters, destroyed that is not in the identified project footprint shall be disclosed immediately to the City of Oceanside and shall be compensated at a minimum ratio of 5:1. 7. Any unauthorized impacts to wetlands and non-wetland waters of the U.S. associated with Loma Alta Creek will require a stop-work notice and notification made to the City of Oceanside and regulatory resource agencies. 8. Flush special-status species (i.e., avian or other mobile species) from occupied habitat areas immediately prior to ground-disturbing activities. The project site shall be kept as clean of debris as possible. All food-related trash items shall be enclosed in sealed containers and regularly removed from the site. Pets of project personnel shall not be allowed on site.	
Impact CUL-1: Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.	**MM-CUL-1**: The following archaeological monitoring mitigation program shall be in place prior to the issuance of a grading permit: a) The Applicant/Owner shall enter into a pre-excavation agreement, otherwise known as a Tribal Cultural Resources Treatment and Tribal Monitoring Agreement with the "Traditionally and Culturally Affiliated (TCA) Native American Monitor associated with a TCA Luiseño Tribe". A copy of	Less than significant.

Table ES-1
College Boulevard Improvement Project Summary of Significant Environmental Impacts

Impact	Mitigation Measure	Level of Significance After Mitigation
	the agreement shall be included in the Grading Plan Submittals for the Grading Permit. The purpose of this agreement shall be to formalize protocols and procedures between the Applicant/Owner and the "Traditionally and Culturally Affiliated (TCA) Native American Monitor associated with a TCA Luiseño Tribe" for the protection and treatment of, including but not limited to, Native American human remains, funerary objects, cultural and religious landscapes, ceremonial items, traditional gathering areas and tribal cultural resources, located and/or discovered through a monitoring program in conjunction with the construction of the proposed project, including additional archaeological surveys and/or studies, excavations, geotechnical investigations, grading, and all other ground disturbing activities. b) The Applicant/Owner or Grading Contractor shall provide a written and signed letter to the City of Oceanside Planning Division stating that a Qualified Archaeologist and Luiseño Native American Monitor have been retained at the Applicant/Owner or Grading Contractor's expense to implement the monitoring program, as described in the pre-excavation agreement. c) The Qualified Archaeologist shall maintain ongoing collaborative consultation with the Luiseño Native American monitor during all ground disturbing activities. The requirement for the monitoring program shall be noted on all applicable construction documents including demolition plans, grading plans,	

Table ES-1
College Boulevard Improvement Project Summary of Significant Environmental Impacts

Impact	Mitigation Measure	Level of Significance After Mitigation
	etc. The Applicant/Owner or Grading Contractor shall notify the City of Oceanside Planning Division of the start and end of all ground disturbing activities. d) The Qualified Archaeologist and Luiseño Native American Monitor shall attend all applicable pre-construction meetings with the General Contractor and/or associated Subcontractors to present the archaeological monitoring program. The Qualified Archaeologists and Luiseño Native American Monitor shall be present on-site full-time during grubbing, grading, and/or other ground altering activities, including the placement of imported fill materials or fill used from other areas of the project site, to identify any evidence of potential archaeological or tribal cultural resources. All fill materials shall be absent of any and all tribal cultural resources. e) In order for potentially significant archaeological artifact deposits and/or cultural resources to be readily detected during mitigation monitoring, a written "Controlled Grade Procedure" shall be prepared by Qualified Archaeologist, in consultation with the Luiseño Native American monitor, the San Luis Rey Band, and the Applicant/Owner, subject to the approval of City representatives. The Controlled Grade Procedures shall establish requirements for any ground disturbing work with machinery occurring in and around areas the Qualified Archaeologist and Luiseño Native American monitor determine to be sensitive through the cultural resource mitigation monitoring process. The	

Table ES-1
College Boulevard Improvement Project Summary of Significant Environmental Impacts

Impact	Mitigation Measure	Level of Significance After Mitigation
	Controlled Grade Procedures shall include, but not be limited to, appropriate operating pace, increments of removal, weight and other characteristics of the earth disturbing equipment. A copy of the Controlled Grade Procedure shall be included in the Grading Plan Submittals for the Grading Permit. f) The Qualified Archaeologist or the Luiseño Native American monitor may halt ground disturbing activities if unknown tribal cultural resources, archaeological artifact deposits and/or cultural features are discovered. Ground disturbing activities shall be directed away from these deposits to allow a determination of potential importance. Isolates and clearly non-significant deposits will be minimally documented in the field, and before grading proceeds these items shall be given to the San Luis Rey Band so that they may be repatriated at the site on a later date. If the Qualified Archaeologist or the Luiseño Native American monitor determine that the unearthed tribal cultural resources, artifact deposits and/or cultural features are considered potential significant, the San Luis Rey Band shall be notified and consulted regarding the respectful and dignified treatment of those resources. The avoidance and protection of the significant tribal cultural resource and/or unique archaeological resources is the preferable mitigation. If, however, it is determined by the City that avoidance of the resource is infeasible, and it is determined that a data recovery plan is necessary by the City as the Lead	

Table ES-1
College Boulevard Improvement Project Summary of Significant Environmental Impacts

Impact	Mitigation Measure	Level of Significance After Mitigation
	Agency under CEQA, the San Luis Rey Band shall be notified and consulted regarding the drafting and finalization of any such recovery plan. For significant tribal cultural resources, artifact deposits or cultural features that are part of a data recovery plan, an adequate artifact sample to address research avenue previous identified for sites in the area will be collected using professions archaeological collection methods. The data recovery plan shall also incorporate and reflect the tribal values of the San Luis Rey Band. If the Qualified Archaeologists collects such resources, the Luiseño Native American monitor must be present during any testing or cataloging of those resources. Moreover, if the Qualified Archaeologists does not collect the tribal cultural resources that are unearthed during the ground disturbing activities, the Luiseño Native American monitor may, at their discretion, collect said resources and provide them to the San Luis Rey Band for respective and dignified treatment in accordance with the Tribe's cultural and spiritual traditions. Ground disturbing activities shall not result until the Qualified Archaeologist, in consultation with the Luiseño Native American monitoring, deems the cultural resources or features has been appropriately documented and/or protected. g) The landowner shall relinquish ownership of all tribal cultural resources unearthed during the cultural resources mitigation monitoring conducted during all	

Table ES-1
College Boulevard Improvement Project Summary of Significant Environmental Impacts

Impact	Mitigation Measure	Level of Significance After Mitigation
	ground disturbing activities, and from any previous archaeological studies or excavations on the project site to the San Luis Rey Band for respectful and dignified treatment and disposition, including reburial at a protected location on-site, in accordance with the Tribe's cultural and spiritual traditions. All cultural materials that are associated with burial and/or funerary goods will be repatriated to the Most Likely Descendants as determined by the Native American Heritage Commission per California Public Resources Code Section 5097.98. No tribal cultural resources shall be subject to curation. h) Prior to the release of the grading bond, a monitoring report and/or evaluation report, if appropriate, which describes the results, analysis and conclusions of the archaeological monitoring program (e.g., data recovery plan) shall be submitted by the Qualified Archaeologist, along with the Luiseño Native American monitor's notes and comments, to the City of Oceanside Planning Division for approval. i) As specified by California Health and Safety Code Section 7050.5, if human remains are found on the project site during construction or during archaeological work, the person responsible for the excavation, or his or her authorized representative, shall immediately notify the San Diego County Office of the Medical Examiner by telephone. No further excavation or disturbance of the site or any nearby areas reasonably suspected to overlie adjacent	

Table ES-1
College Boulevard Improvement Project Summary of Significant Environmental Impacts

Impact	Mitigation Measure	Level of Significance After Mitigation
	remains shall occur until the Medical Examiner has made the necessary findings as to origin and disposition pursuant to Public Resources Code 5097.98. If such a discovery occurs, a temporary construction exclusion zone shall be established surrounding the area of discover so that the area would be protected, and consultation and treatment could occur as prescribed by law. If suspected Native American remains are discovered, the remains shall be kept insitu, or in a secure location in close proximity to where they were found, and the analysis of the remains shall only occur on-site in the presence of a Luiseño Native American monitor. By law, the Medical Examiner will determine within two working days of being notified if the remains are subject to his or her authority. If the Medical Examiner identifies the remains to be of Native American ancestry, he or she shall consult the Native American Heritage Commission (NAHC) within 24 hours. The NAHC shall make a determination as to the Most Likely Descendent.	
Impact GEO-1: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	**MM-GEO-1**: Prior to commencement of any grading activity on-site, the applicant shall retain a qualified paleontologist, subject to the review and approval of the City's Building Official, or designee. The qualified paleontologist shall attend the preconstruction meeting and be on-site during all rough grading and other significant ground-disturbing activities in previously undisturbed Santiago Formation, if encountered. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontology monitor will temporarily halt and/or divert grading activity to allow recovery of	Less than significant.

Table ES-1
College Boulevard Improvement Project Summary of Significant Environmental Impacts

Impact	Mitigation Measure	Level of Significance After Mitigation
	paleontological resources. The area of discovery will be roped off with a 50-foot radius buffer. Once documentation and collection of the find is completed, the monitor will remove the rope and allow grading to recommence in the area of the find. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the proposed project. The PRIMP shall be consistent with the guidelines of the Society of Vertebrate Paleontology (SVP) (2010).	
Impact GEO-1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. (Operations).	No feasible mitigation measures identified.	Significant and unavoidable.
Impact GEO-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. (Operations)	**MM-GHG-1**: Prior to the City of Oceanside's next review and update of the City's Climate Action Plan (CAP), the City shall amend the estimate vehicle miles traveled (VMT) and greenhouse gas (GHG) inventory using the proposed project's College Boulevard corridor revisions. **MM-GHG-2**: Prior to the San Diego Association of Government's (SANDAG's) next update of the Regional Plan, the City of Oceanside (City) shall coordinate with SANDAG to amend the vehicle miles traveled (VMT) and emissions assumptions using the proposed project's College Boulevard corridor revisions.	Significant and unavoidable.
Impact HAZ-1: 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.	**MM-HAZ-1**: Air quality monitoring for volatile organic compounds (VOCs) shall be performed during grading, excavation, or other ground disturbing activities occurring within 1,000 feet of the identified sites of concern at 4181 Oceanside Boulevard, 3350 College Boulevard, and 1990 College Boulevard. Monitoring shall be overseen by the party/person responsible for general health and safety during the construction phase of the proposed project. Air quality measurements shall be taken approximately once every 15 minutes starting at the	Less than significant.

Table ES-1
College Boulevard Improvement Project Summary of Significant Environmental Impacts

Impact	Mitigation Measure	Level of Significance After Mitigation
	initiation of excavation and grading activities. If the air quality monitoring device reads 50 parts per million (PPM) or more for VOCs at a distance of no more than three inches from the soil, the soil should be segregated, stockpiled, and treated/removed for proper disposal within 30 days. **MM-HAZ-2:** A site mitigation plan (SMP) shall be developed and followed during construction and development activities. The SMP shall include strategies for identification and management of contaminated soil, if encountered during project development, and should outline mitigation measures should construction/development activities result in an accidental release of contaminants. In addition, construction workers will be trained on identification and reporting procedures for discovery of impacted soils. **MM-HAZ-3:** A comprehensive project-specific Health and Safety Plan (HASP) shall be developed, implemented, and followed during all construction-related activities. Copies of the HASP and SMP should be maintained on site during demolition, excavation, and construction of the proposed project. All workers on the project site should be familiar with these documents. Consistent with industry requirements the HASP shall include: • List of responsible personnel for the site; • Hazards analysis including physical hazards, industrial hazards, health hazards associated with demolition, excavation and construction, and biological hazards; • Medical surveillance requirements; • Hazards monitoring (air quality; see MM-HAZ-1);	

Table ES-1
College Boulevard Improvement Project Summary of Significant Environmental Impacts

Impact	Mitigation Measure	Level of Significance After Mitigation
	• Spill prevention and control measures; • Documentation of site safety orientation for employees, subcontractors and visitors; and • Emergency response; • List of hazardous substances brought to the workplace with accompanying materials safety data sheets; and • Job Safety Analysis.	
Impact HAZ-2: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as result, would is create a significant hazard to the public or the environment.	**MM-HAZ-1**. **MM-HAZ-2**. **MM-HAZ-3**.	Less than significant.
Impact NOI-1: Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	**MM-NOI-1**: The City and/or its construction contractor shall comply with the following measures during construction: 1. Construction activities shall not occur between the hours of 6:00 pm and 7:00 am Monday through Friday. In the event that construction is required to extend beyond these times, extended hours permits shall be required. 2. Pumps and associated equipment (e.g., portable generators etc.) shall be shielded from sensitive uses using local temporary noise barriers or enclosures or shall otherwise be designed or configured so as to minimize noise at nearby noise-sensitive receivers. 3. Staging of construction equipment shall not occur within 20 feet of any noise- or vibration-sensitive land uses. 4. All noise-producing equipment and vehicles using internal combustion engines shall be equipped with mufflers; air-inlet silencers where appropriate; and any other	

Table ES-1
College Boulevard Improvement Project Summary of Significant Environmental Impacts

Impact	Mitigation Measure	Level of Significance After Mitigation
	shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specification. Mobile or fixed "package" equipment (e.g., arc-welders, air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment. 5. All mobile or fixed noise-producing equipment used for the project that are regulated for noise output by a local, state, or federal agency shall be in compliance with regulations. 6. Idling equipment shall be kept to a minimum and moved as far as practicable from noise-sensitive land uses. 7. Electrically powered equipment shall be used instead of pneumatic or internal combustion powered equipment, where feasible. 8. Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors. 9. The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be used for safety warning purposes only. **MM-NOI-2**: Effective communication with local residents shall be maintained prior to and during construction. Specifically, the City shall inform local residents of the schedule, duration, and progress of the construction. Additionally, residents shall be provided contact information for noise- or vibration-related complaints.	
Impact TRAF-1: Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian	**MM-TRAF-1**: College Boulevard/Oceanside Boulevard and College Boulevard/Olive Drive. Prior to the issuance of the grading permit, the City shall optimize signals at the	Less than significant.

Table ES-1
College Boulevard Improvement Project Summary of Significant Environmental Impacts

Impact	Mitigation Measure	Level of Significance After Mitigation
facilities. (Exceedance of storage capacity/queue lengths at College Boulevard/Oceanside Boulevard intersection (NB left turn movement; AM peak hour)).	College Boulevard/Oceanside Boulevard and College Boulevard/Olive Drive intersections to reduce forecasted queues.	
Impact TRAF-2: Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. (Exceedance of storage capacity/queue lengths at College Boulevard/Olive Drive intersection (SB left turn movement; PM peak hour))	**MM-TRAF-1.** **MM-TRAF-2**: College Boulevard/Olive Drive. Prior to the issuance of the grading permit, the City shall restripe the southbound approach to the College Boulevard/Olive Drive intersection to provide for a “trap” outside left turn lane that extends the queue capacity by 550 feet more than the existing condition.	Less than significant.
Impact TCR-1: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	**MM-CUL-1**.	Less than significant.

ES.8 SIGNIFICANT AND UNAVOIDABLE IMPACTS

Potentially significant long-term impacts concerning (1) cumulatively considerable new increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (**Impact AQ-2**) and (2) exposure of sensitive receptors to substantial pollutant concentrations (**Impact AQ-3**) would remain significant and unavoidable.

Although **MM-GHG-1** and **MM-GHG-2** would result in updating the City's CAP and SANDAG's Regional Plan with consistent assumptions based on the proposed project, these plans do not have required timelines of revision. As such, the proposed project would not be consistent with the goals and assumptions in the City's CAP or SANDAG's Regional Plan for an indeterminate amount of time. Additionally, the proposed project would generate GHG emissions that may interfere with the implementation of GHG reduction goals for 2030 and 2050. Based on these considerations, the project's long-term impacts pertaining to GHG emissions (**Impact GHG-1**) and conflicts with plans, policies, or regulations adopted for the purpose of reducing GHG emissions (**Impact GHG-2**) would be significant and unavoidable.

ES.9 ANALYSIS OF ALTERNATIVES

Pursuant to the California Environmental Quality Act (CEQA) Guidelines, EIRs are required to "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives" (14 CCR 15126.6(a)). This EIR "must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation" (14 CCR 15126.6(a)). The alternatives discussion is required even if these alternatives "would impede to some degree the attainment of the project objectives, or would be more costly" (14 CCR 15126.6(b)).

ES.9.1 No Project Alternative

CEQA Guidelines Section 15126.6 requires the inclusion of a No Project Alternative to be analyzed. Per CEQA, a No Project Alternative would entail analysis of no build and no development beyond the existing conditions of the project site. The No Project Alternative assumes that College Boulevard would not be widened between Olive Drive and Old Grove Road and none of the improvements identified along College Boulevard between Waring Road and Marcella Street would occur and the roadway would remain in its present condition.

As described in Chapters 2 and 4 of this EIR, in its existing condition College Boulevard is currently constructed and classified as a four-lane Major Arterial from Waring Road to Old Grove Road. This configuration would remain unchanged under this alternative.

ES.9.2 General Plan Circulation Element Alternative

Under the General Plan Circulation Element Alternative, College Boulevard would be widened in accordance with the 2030 Master Transportation Roadway Plan as presented in the Circulation Element. Specifically, College Boulevard is designated as a six-lane Major Arterial from Lake Boulevard north to Old Grove Road. Therefore, this alternative would entail the construction and operation of College Boulevard as a six-lane Major Arterial from Waring Road/Barnard Drive to

Old Grove Road. Widening of the corridor to six-lanes would also entail sidewalk, curb and gutter, and intersection improvements associated with accommodating the new configuration of College Boulevard.

ES.9.3 College Boulevard Widening Alternative 1

Under the College Boulevard Widening Alternative, College Boulevard would be to six lanes between Olive Drive and Old Grove Road. No improvements south of Olive Drive would occur under this alternative. Therefore, this alternative would entail the construction and operation of College Boulevard as a six-lane Major Arterial from Olive Drive to Old Grove Road. Widening of the corridor to six-lanes would also entail sidewalk and curb and gutter improvements between Olive Drive and Old Grove Road.

ES.9.4 Environmentally Superior Alternative

As shown in Table 8-1, Comparative Summary of Alternatives Under Consideration and Proposed Project, implementation of the No Project Alternative would result in the greatest reduction in significant impacts when compared to the proposed project. Since the No Project Alternative would result in the least amount of impacts to the environment it would be the environmentally superior alternative. However, Section 15126.6(e)(2) of the CEQA Guidelines states that if the environmentally superior alternative is the no project alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

In this case, the environmentally superior alternative is the General Plan Circulation Element Alternative. However, it should be noted that the General Plan Circulation Element Alternative would result in greater temporary noise impacts and impacts to biological resources during construction and would require the acquisition of additional right-of-way through physically constrained residential neighborhoods.

ES.10 ISSUES TO BE RESOLVED BY THE LEAD AGENCY

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain a discussion of issues to be resolved. With respect to the proposed project, the key issues to be resolved include decisions by the City, as lead agency, as to the following:

- Whether this environmental document adequately describes the environmental impacts of the proposed project.
- Whether the recommended mitigation measures should be modified and/or adopted.
- Whether there are other mitigation measures or alternatives that should be considered for the proposed project besides those identified in the Draft EIR.

CHAPTER 1
INTRODUCTION

1.1 PURPOSE AND SCOPE OF THIS ENVIRONMENTAL IMPACT REPORT

An Environmental Impact Report (EIR) is an informational document “which will inform the public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project” (Section 15121 of the CEQA Guidelines (14 CCR 15000 et seq.)). The purpose of this EIR is to analyze the potential environmental effects associated with the development and operation of the proposed The College Boulevard Improvement project (project).

The College Boulevard Improvement EIR is a project-level EIR. As stated in CEQA Guidelines Section 15161 a project EIR “Should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project including planning, construction and operation.” Since specific project details, including details of overall planning, construction, and operation are known at this time, a project-specific level of analysis is appropriate. This EIR identifies and evaluates the potentially significant effects which would result from implementation of the proposed project. This EIR is intended for use by both decision makers and the public. It provides relevant information concerning the potential environmental effects associated with construction and operation of a proposed roadway widening development.

College Boulevard is proposed to be widened to a 6-lane major arterial from Olive Drive to Old Grove Road, which would be consistent with the City of Oceanside’s Circulation Element Year 2030 classification of College Boulevard. In addition to widening College Boulevard from 4 to 6lanes between Olive Drive and Old Grove Road, the proposed project would include curb/gutter improvements and relocation of utilities, as needed, as well as installation of retaining walls, raised landscaped medians, bike lanes, lighting, and sidewalks in various locations along College Boulevard between Waring Road/Barnard Drive and Marcella Street and between Olive Drive and Old Grove Road. Between Olive Drive and Waring Road, College Boulevard would remain a 4-lane roadway. Therefore, a General Plan Amendment would be required as the proposed project deviates from the general six-lane expansion of College Boulevard from Old Grove Road to Waring Road envisioned in the Circulation Element.

The proposed College Boulevard improvement corridor stretches from Waring Road north to Old Grove Road in the City of Oceanside's jurisdictional boundaries. As such, the lead agency for the proposed project is the City of Oceanside (City).

As the designated lead agency, the City has assumed responsibility for preparing this document. The decision to implement the proposed action is within the purview of the Oceanside City Council. When deciding whether to approve the proposed action, the Oceanside City Council will use the information provided in this EIR to consider potential impacts to the physical environment associated with the project. The Oceanside City Council will consider all written comments received on the Draft EIR during the 45-day public review period in making its decision to certify the EIR as complete and in compliance with CEQA and in making its determination whether to approve or deny the project. The project will be subject to additional review outside of CEQA in accordance with City policies and procedures at various stages of project design. This will likely involve planning, engineering and public works, and building and safety. In the final review of the document, environmental considerations and economic and social factors will be weighed to determine the most appropriate course of action.

Agencies other than the City will use this EIR. According to CEQA, responsible agencies are those agencies that have discretionary approval over one or more action involved with the development of the project. These include but are not limited to the San Diego Regional Water Quality Control Board. In addition, trustee agencies are state agencies having jurisdiction by law over natural resources that might be impacted by a project. Trustee agencies that would or may have involvement with this project include the U.S. Army Corps of Engineers and California Department of Fish and Wildlife.

Subsequent to certification of the Final EIR, agencies with permitting authority over all or portions of the project will use the Final EIR as the basis for their evaluation of environmental effects related to the project and approval or denial of applicable permits. This EIR will be used in considering the approval of the following discretionary actions necessary for the implementation of the proposed project, which include but are not limited to the following:

- The City of Oceanside will use the Final EIR and supporting documentation in its decision to issue discretionary permits.
- The San Diego Regional Water Quality Control Board will use the Final EIR to approve a stormwater pollution prevention plan.

Additional information regarding City and agency permits and approvals is detailed in Section 3.3, Discretionary Actions, of this EIR.

1.2 CEQA REQUIREMENTS

1.2.1 CEQA Compliance

CEQA (California Public Resources Code, Section 21000 et seq.) requires the preparation and certification of an EIR for any project that a lead agency determines may have a significant effect on the environment. According to Section 21002.1(a) of the CEQA statutes, "The purpose of an environmental impact report is to identify the significant effects on the environment of a project, to identify alternatives to the project and to indicate the manner in which those significant effects can be mitigated or avoided." CEQA also establishes mechanisms whereby the public and decision makers can be informed about the nature of the project being proposed, and the extent and types of impacts that the project and its alternatives would have on the environment if they were to be implemented.

This EIR has been prepared in compliance with all criteria, standards, and procedures of the CEQA Guidelines (14 CCR 15000 et seq.) and pursuant to the City of Oceanside's environmental review procedures. This document has been prepared as a project EIR pursuant to Section 15161 of the CEQA Guidelines and represents the independent judgment of the City as lead agency (14 CCR 15050).

1.2.2 Notice of Preparation and Scoping

CEQA establishes mechanisms whereby the public and decision makers can be informed about the nature of the project being proposed and the extent and types of impacts that the project and its alternatives would have on the environment should the project or alternatives be implemented. Pursuant to Section 15082 of the CEQA Guidelines, the City circulated a Notice of Preparation (NOP) for a road widening project titled "College Boulevard Improvement Project" which was assigned a State Clearinghouse Number (SCH) Number of 2003111115 by the State Clearinghouse at the California Office of Planning and Research. The project included different roadway characteristic than the updated College Boulevard Improvement Project and was never completed by the City. After conducting additional studies of the College Boulevard corridor, an updated College Boulevard Improvement Project was initiated by the City and on May 1, 2015, a NOP was circulated to interested agencies, organizations, and parties. Two NOPs were mistakenly sent to the State Clearinghouse and as a result, the updated College Boulevard Improvement Project was assigned two SCH numbers: 2003111115 and 2015051018. To avoid confusion with the 2003 project that was never completed and differs from the updated College Boulevard Improvement Project, the City sent a formal letter to the State Clearinghouse requesting that only SCH No. 2015051018 be assigned to this project. The State Clearinghouse granted the request and removed the 2003 SCH number from the updated College Boulevard Improvement Project.

A public scoping meeting was conducted on May 11, 2015 for the updated College Boulevard Improvement Project and the NOP public scoping period ended on June 2, 2015. Subsequent to the circulated NOP and May 11 scoping meeting, the City determined that the proposed widening limits of the updated College Boulevard Improvement Project should extend further than presented in the NOP that contemplates widening from 4 to 6 lanes between Olive Avenue and Avenida de la Plata. Therefore, the City circulated a second NOP for the current College Boulevard Improvement Project that contemplates widening from 4 to 6 lanes between Olive Drive and Old Grove Road on October 16 2015, to interested agencies, organizations, and parties. A scoping meeting for the current College Boulevard Improvement Project was held on November 5, 2015. The intent of the NOP is to encourage interagency and public communication regarding the proposed action so that agencies, organizations, and individuals are afforded an opportunity to respond with specific comments and/or questions regarding the scope and content of the EIR. The public scoping period for the current College Boulevard Improvement Project ended on November 17, 2015.

Comments received during the NOP public scoping period were considered during the preparation of this EIR. Based on the scope of the proposed action as described in the NOP, the following issues were determined to be potentially significant, and are therefore addressed in Chapter 4, Environmental Analysis, of this document:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use
- Noise
- Public Services
- Traffic and Circulation
- Utilities and Service Systems

Additional CEQA-mandated environmental areas such as Agriculture and Forestry Resources, Mineral Resources, Population and Housing, and Recreation were found not to be significant. These issues are addressed in Chapter 5, Effects Not Found to Be Significant, of this EIR. Other CEQA-mandated topics, such as cumulative impacts, growth inducement, alternatives, and significant irreversible changes are addressed in subsequent sections.

1.3 OVERVIEW OF EIR PROCESS

This EIR has been made available to members of the public, agencies, and interested parties for a 45-day public review in accordance with CEQA Guidelines Section 15105. Public review of the

Draft EIR is intended to focus "on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated" (14 CCR 15204). The Notice of Completion of the Draft EIR has been filed with the State Clearinghouse as required by CEQA Guidelines Section 15085.

In addition, the Notice of Availability of the Draft EIR has been distributed pursuant to CEQA Guidelines Section 15087. This EIR is available for review during the 45-day public review period at the following locations:

City of Oceanside
Development Services Department
300 North Coast Highway
Oceanside, California 92054

Oceanside Public Library
330 North Coast Highway
Oceanside, California 92054

Oceanside Public Library – Mission Branch
3861-B Mission Avenue
Oceanside, California 92508

During the public review period, the City will hold a meeting to provide the public an opportunity to comment on the Draft EIR. All members of the public and interested persons are welcome to attend and present their concerns. The address, date, and time of this meeting are as follows:

Date: January 9, 2020
Time: 6:00 p.m. to 8:00 p.m.
Place: El Corazon Senior Center, 3302 Senior Center Drive, Oceanside, California 92056

Once the 45-day public review period has concluded, the City will review all public comments on the Draft EIR, provide a written response to comments, and authorize revisions to the Draft EIR text, if necessary. The final Mitigation Monitoring and Reporting Program will be incorporated into the Final EIR, and will include monitoring team qualifications, specific monitoring activities, a reporting system, and criteria for evaluating the success of the mitigation measures. Mitigation measures contained in the EIR will be developed in consideration of future monitoring requirements and will be written in sufficient detail to address impacts of the proposed project, referencing the appropriate implementing permits such as grading permits, final maps, and landscape plans. The Final EIR will include all comment letters received, the final response to comments, a Final EIR preface, and if applicable, edits made to the EIR because of public review.

1.4 AREAS OF KNOWN CONTROVERSY

Responses to the NOP received during the public scoping period expressed concern about right of way acquisition on private property, potential impacts to air quality, greenhouse gas emissions, noise, increased traffic, and vehicular and pedestrian and bicycle safety along College Boulevard and adjacent residential areas. These concerns have been addressed in Chapter 3, Project Description, and Chapters 4.2 Air Quality, 4.6 Greenhouse Gas Emission, 4.7, Hazards and Hazardous Materials, 4.10, Noise, and 4.14, Traffic and Circulation. In addition, commenters expressed concern over the NOP notification process, consideration of construction of a highway interchange at Rancho Del Oro and State Route 78, and consideration of installation of a traffic signal at the intersection of College Boulevard and Aztec Street.

1.5 ORGANIZATION AND CONTENT OF THIS EIR

This EIR is organized to provide a comprehensive project analysis of the potentially significant environmental impacts, mitigation measures, and alternatives for the proposed project. In order to describe the direct, indirect, and cumulative impacts, mitigation measures, and alternatives for the proposed project, this EIR is organized as follows:

- An Executive Summary of the EIR is provided at the beginning of this document. This summary outlines the conclusions of the environmental analysis, as well as a summary of the project compared to the alternatives analyzed in the EIR. This section also includes a table summarizing all environmental impacts identified in this EIR along with the associated mitigation measures proposed to reduce or avoid each impact.
- Chapter 1, Introduction, serves as a forward to this EIR, introducing the project, the applicable environmental review procedures, and the format of the EIR.
- Chapter 2, Environmental Setting, describes the project location and physical environmental setting in and around which the proposed project is situated.
- Chapter 3, Project Description, provides a thorough description of the proposed project elements, the purpose and need for the project, project objectives, and required discretionary approvals.
- Chapter 4, Environmental Analysis, provides a project-level analysis of the potentially significant environmental impacts identified for the proposed project, as well as proposed mitigation measures to reduce or avoid any potentially significant impacts.
- Chapter 5, Effects Not Found to Be Significant, addresses environmental areas in which no significant impacts were identified.
- Chapter 6, Cumulative Effects, discusses the cumulative effects of the project in combination with the effects of other projects in the vicinity.

- Chapter 7, Other CEQA Considerations, addresses significant environmental effects that cannot be avoided, the significant irreversible environmental changes that would result from implementation of the proposed project, and growth-inducing impacts associated with the proposed project.
- Chapter 8, Alternatives, discusses alternatives to the proposed project, including a No Project Alternative.
- Chapter 9, References, provides full citations for all documents referred to in this EIR.
- Chapter 10, List of Preparers, gives names and contact information of those responsible for writing this EIR.
- Appendices include various technical studies and correspondence prepared for the proposed project, as listed in the Table of Contents.

The City, as the designated lead agency for the proposed project, is responsible for implementing mitigation measures as required by the proposed project. In addition, the City is responsible for enforcing and verifying that each mitigation measure is implemented as required.

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CHAPTER 2
ENVIRONMENTAL SETTING

In accordance with Section 15125 of the CEQA Guidelines (14 CCR 15000 et seq.), this chapter provides a description of the general environmental setting for the project area, including existing site conditions and land uses, and surrounding land uses at the time the Notice of Preparation was published. More detailed descriptions of the environmental setting for each environmental issue area are provided in the corresponding section in Chapter 4, Environmental Analysis, of this Environmental Impact Report (EIR).

2.1 PROJECT SETTING

2.1.1 Project Location

The proposed College Boulevard Improvement project (project) is located in northern San Diego County, within the City of Oceanside (Figure 2-1, Regional Map). The City of Oceanside is bordered by the U.S. Marine Corps Base Camp Pendleton to the north, unincorporated portions of County of San Diego and the City of Vista to the east, the Cities of Vista and Carlsbad to the south, and the Pacific Ocean to the west.

The proposed project corridor stretches for approximately 2.4 miles from Waring Road north to Old Grove Road. The project corridor is primarily bordered by residential uses to the east and west however; the corridor also borders commercial uses in the Del Oro Marketplace, Gateway Plaza, and Rancho Del Oro Plaza near the College Boulevard / Oceanside Boulevard intersection and educational uses, commercial properties, and industrial designated lands near Old Grove Road (Figure 2-2, Vicinity Map). The corridor also crosses the North County Transit District (NCTD) Sprinter track and spans Loma Alta Creek south of Oceanside Boulevard. The southern extent of the widening corridor is located within the northeast quarter of Section 27 (due to the length, the widening corridor is located in various Sections (i.e., one square–mile blocks of land), Township 11 South, Range 4 West of the San Luis Rey Quadrangle.

2.1.2 Existing Land Uses

On-Site Land Uses

College Boulevard is currently constructed and classified as a four-lane Major Arterial between Waring Road and Old Grove Road. The posted speed limits along this approximate 2.41 mile long corridor are 40 to 50 miles per hour. With the exception of intersections, a raised masonry or minimally landscaped median of varying width (the median tends to taper on the intersection approach) is constructed throughout the length of the corridor. Striped bicycle lanes are also installed along the majority of the corridor with widths ranging from five (5) to nine (9) feet. Sidewalks are also provided on both sides of the street with widths ranging from four (4) to six (6) feet and landscaped parkways are provided along the majority of the corridor. With the exception of the segment of College Boulevard between Roselle Avenue and Thunder Drive, on-street parking is not permitted along the corridor.

Storm drain curb inlets are regularly located along both travel lanes and sporadically along the median curbs. Overhead lighting is installed along the corridor at regular intervals. Utility boxes are occasionally located within or near the extent of the roadway right-of-way.

Surrounding and Regional Land Uses

From Waring Road north to Old Grove Road, College Boulevard passes through a primarily suburban setting and the roadway is surrounded by existing development. The approximate 2.41-mile long improvement corridor is predominantly bordered by single- and multi-family residential neighborhoods to the east and west between Waring Road and the NCTD Sprinter tracks however; north of the Sprinter tracks the corridor passes through a commercial area that includes the Del Oro Marketplace, Gateway Plaza, and Rancho Del Oro plaza near the College Boulevard / Oceanside Boulevard intersection. North of the commercial development and the Rancho Del Oro plaza, single- and multi-family residential is once again is the primarily land use bordering the corridor although industrial and institutional uses and undeveloped lands are located west of College Boulevard between Avenida De La Plata and Old Grove Road. The corridor also crosses NCTD Sprinter track and spans Loma Alta Creek south of Oceanside Boulevard. (Figure 2-3, Aerial Map).

San Diego County is located within the Peninsular Range Geomorphic Province, which is characterized by northwest-trending mountain ranges separated by fault zones. Located along the coast in northern San Diego County, the City of Oceanside contains approximately 42 square miles and is bordered by the cities of Vista and Carlsbad to the south, unincorporated County lands and the City of Vista to the east, and U.S. Marine Corps Base Camp Pendleton to the north. The City is traversed by several major roadway corridors including north-south Interstate 5 and east-west State Routes 78 and 76. A major transportation corridor, College Boulevard nearly traverses the entire extent of the City of Oceanside from north to south and more specifically, the roadway extends from approximately Lake Boulevard north to North River Road/Vandergrift Boulevard (approximately 5.5 miles) within the city limits.

2.1.3 Existing Zoning Designations

The project corridor is bordered by residential, commercial, and planned development zoned lands. Specifically, between Waring Drive and the NCTD Sprinter track, the corridor is bordered primarily by residential zoning designations as well as commercial and industrial (see Figure 2-4, Zoning). Included within these general designations are Single Family Residential (RS), Medium

Density Residential –A (RM-A), General Commercial – Planned Block Development (CG-PBD), General Commercial (CG), and Rancho Del Oro Planned Development (PD-1).

2.1.4 Existing General Plan Land Use Designations

The project corridor is bordered by residential, commercial, and industrial designated lands. Specifically, between Waring Drive and the NCTD Sprinter track, the corridor is bordered primarily by residential land use designations as well as commercial and industrial (see Figure 2-5, General Plan Land Use Designations). Included within these general designations are Single Family Detatched Residential (SFD-R), Medium Density – A Residential (MDA-R), Medium Density – B Residential (MDB-R), General Commercial, and Industrial (City of Oceanside n.d.).

2.2 APPLICABLE GENERAL PLANS AND REGIONAL PLANS

Section 15125(d) of the CEQA Guidelines requires that an EIR include a discussion of any inconsistencies between the proposed project and applicable general plans and regional plans. Chapter 4, Environmental Analysis, includes a thorough discussion of the proposed project's consistency with applicable local and regional plans and policies, which are summarized below.

2.2.1 City of Oceanside General Plan

The City of Oceanside General Plan is based on the community's vision for Oceanside and provides long-term planning and policy direction for future growth and development. It includes 10 elements that outline specific policies and programs to help guide decision makers in the development process (City of Oceanside 2002).

According to General Plan, the City's proposed 2030 Master Transportation Roadway Plan classifies the proposed College Boulevard improvement corridor (i.e., Waring Road to Old Grove Road) as a six-lane Major Arterial (City of Oceanside 2012) (see Figure 2-6, Circulation Element 2030 Master Transportation Roadway Plan). Furthermore, the reclassification as a six-lane Major Arterial from the current four-lane Major Arterial classification would be a "major" change to the circulation network. In addition, according to Table 3-3, Circulation Element Roadway Classification LOS & Capacity, the total curb-to-curb and right-of-way width of a Major Arterial is 104 and 124 feet, respectively (City of Oceanside 2012). Lastly, the General Plan recommends widening College Boulevard from four to six lanes to "accommodate forecast travel volumes" but cautions that "residents on certain sections of College Boulevard would be impacted" by widening the corridor (City of Oceanside 2012).

The Circulation Element establishes policies concerning the circulation network and support programs within Section 4.0, Transportation Design Management) through Section 9.0, Intelligent Transportation System Technologies. Applicable plans and associated policies will be discussed in the Land Use section of this EIR.

2.2.2 Zoning Ordinance

As stated in Article 1 of the City of Oceanside Zoning Ordinance, the purpose of the Zoning Ordinance is to protect and promote the public health, safety, and general welfare, and to implement the City of Oceanside General Plan policies (City of Oceanside 2019).

2.2.3 City of Oceanside Subarea Habitat Conservation Plan / Natural Communities Conservation Plan

The City of Oceanside is located within the North San Diego County Multiple Habitat Conservation Program (MHCP). The MHCP encompasses the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista. The program goals are to conserve approximately 19,000 acres of habitat, of which roughly 8,800 acres (46%) are already in public ownership and contribute toward the habitat preserve system or the protection of more than 80 rare, threatened, or endangered species (SANDAG 2003).

The MHCP Subregional Plan and Final EIS/EIR were adopted and certified by the San Diego Association of Governments (SANDAG) Board of Directors on March 28, 2003. Subarea plans for the cities are being prepared and must be adopted by each city council, and implementing agreements with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service must be signed before incidental take permits can be issued. The City of Oceanside (City) released a draft Oceanside Subarea Habitat Conservation Plan / Natural Communities Conservation Plan (Subarea Plan) in 2010 (City of Oceanside 2010). Although the City and the project site are not located within an approved habitat conservation plan or natural community conservation plan area, the project's relationship to the City's draft Subarea Plan is analyzed to ensure that approval of the project will not preclude adoption or implementation of a regional habitat conservation plan or natural community conservation plan.

With the exception of a narrow hillside located east of College Boulevard and north of residential lots fronting Marcella Street, lands adjacent to College Boulevard are designated Urban Developed on Figure 3-1, Vegetation Communities, of the Oceanside Subarea Plan (City of Oceanside 2010). The hillside extends west from College Boulevard and connects to a larger tract of undeveloped hillside and terrain that is more moderate designated Coastal Sage Scrub by the Oceanside Subarea Plan. Figure 4-1, Preserve Planning Map and Habitat Conservation Overlay Zones, of the Subarea Plan excludes the majority of lands adjacent to College Boulevard from preserve planning however; west and east of College Boulevard at the creek crossing the Loma Alta creek corridor is identified as a designated Hardline Preserve. Pursuant to Section 1, Introduction, of the Oceanside Subarea Plan, an objective of the Subarea Plan is to "conserve 90-100 percent of all hardline conservation areas" (City of Oceanside 2010). With the exception of necessary utility access roads specifically allowed by the Subarea Plan, roads or other transportation facilities are prohibited within Preserve Areas. Furthermore, all forms of development that remove native habitat are also prohibited within Preserve Areas.

2.2.4 Rancho Del Oro Planned Residential Development Master Plan

Prepared in 1985 for the Rancho Del Oro property, the purpose of the Planned Residential Development Master Plan is to ensure proper residential development and use of Rancho Del Oro and to enhance and protect its value, and that of adjoining properties and uses (City of Oceanside 1985). Development standards established by the Master Plan are intended to promote and preserve an efficient, attractive environment, to ensure the construction of improvements of proper design and materials, to secure and maintain proper setbacks from streets, and to create a sense of community through uniform streetscape elements that will identify the location as part of Rancho Del Oro. The residential portions of Rancho Del Oro are laid out in a series of twelve villages that are generally located north of Oceanside Boulevard and east of Old Grove Road. Within the project area, College Boulevard traverses the western border of Village I.

The Master Plan includes proposed street cross sections for roadways and intersections in the Master Plan area. Between Oceanside Boulevard and Avenida de la Plata, College Boulevard is identified as Street "E" with a 16' center median, 32' travel lanes, and 10' from back of curb to right-of-way line. North of Avenida de la Plata and Old Grove Road, College Boulevard is identified as Street "D" with a 16' center median, 32' travel lanes, and 18' from back of curb to right-of-way line (City of Oceanside 1985).

2.2.5 Regional Plans

San Diego Forward: The Regional Plan

The San Diego Association of Governments (SANDAG) is the regional planning agency for the County and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. SANDAG serves as the federally designated metropolitan planning organization for the County. With respect to air quality planning and other regional issues, SANDAG prepared the *San Diego Forward: The Regional Plan* (Regional Plan) for the San Diego region (SANDAG 2015). The Regional Plan combines the big-picture vision for how the region will grow over the next 35 years with an implementation program to help make that vision a reality. The Regional Plan, including its Sustainable Communities Strategy (SCS), is built on an integrated set of public policies, strategies, and investments to maintain, manage, and improve the transportation system so that it meets the diverse needs of the San Diego region through 2050. For additional information regarding the Regional Plan, refer to Sections 4.2, Air Quality; 4.6, Greenhouse Gas Emissions; 4.9, Land Use and Planning; and 4.12, Traffic and Circulation.

San Diego County Congestion Management Program

The Congestion Management Program was prepared by SANDAG as required by state law. The Congestion Management Program was developed as an integral and complementary part of the region's overall growth management strategy, air quality improvement, and transportation development programs. The plan establishes a process to help ensure that a balanced transportation system is developed that better relates population growth, traffic growth, and land use decisions to transportation and air quality improvement. The plan includes the setting of traffic level of service and transit performance standards, the development of both a trip reduction program and a land use impact analysis process, and the preparation of a 7-year capital improvement program (SANDAG 2008).

Regional Air Quality Plan

The San Diego Air Pollution Control District (SDAPCD) and the SANDAG are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the San Diego Air Basin. The Regional Air Quality Strategy (RAQS) for the San Diego Air Basin was initially adopted in 1991 and is updated on a triennial basis, most recently in 2016 (SDAPCD 2016). The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for O_3. The RAQS relies on information from the California Air Resources Control Board and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County and the cities in the County, to forecast future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. The California Air Resources Control Board mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by the County and the cities in the County as part of the development of the General Plans.

In December 2016, the SDAPCD adopted the revised RAQS for the County. Since 2007, the San Diego region reduced daily VOC emissions and NO_x emissions by 3.9% and 7.0%, respectively. The SDAPCD expects to continue reductions through 2035 (SDAPCD 2016). These reductions were achieved through implementation of six VOC control measures and three NO_x control measures adopted in the SDAPCD's 2009 RAQS (SDAPCD 2009). In addition, the SDAPCD is considering additional measures, including three VOC measures and four control measures to reduce 0.3 daily tons of VOC and 1.2 daily tons of NO_x, provided they are feasible region wide. In addition, SDAPCD has implemented nine incentive-based programs, worked with SANDAG to implement regional transportation control measures, and reaffirmed the state emission offset repeal. For additional information regarding air quality plans, refer to Section 4.3.

San Luis Rey Watershed Water Quality Improvement Plan

In November 2015, the Regional Water Quality Control Board (RWQCB) amended the then current regional municipal separate storm sewer system (MS4) permit (i.e., Order No. R9-2013-0001) applicable to local jurisdictions within San Diego, southern Orange, and southwestern Riverside Counties by Order No. R9-2015—001 and -0100. The region-wide National Pollutant Discharge Elimination System (NPDES) Permit (Regional MS4 Permit) sets the framework for municipalities, such as the City, to implement a collaborative watershed-based approach to restore and maintain the health of surface waters. The Regional MS4 Permit requires development of Water Quality Improvement Plans (WQIPs) that will allow the City (and other watershed stakeholders) to prioritize and address pollutants through an appropriate suite of best management practices (BMPs) in each watershed.

The City lies within the San Luis Rey Watershed Management Area and is one of the responsible municipalities for the watershed's WQIP. The San Luis Rey Watershed WQIP was accepted by the RWQCB on February 12, 2016, and finalized in March 2016.

The goal of the WQIP is to further the Clean Water Act's objective to protect, preserve, enhance, and restore water quality and beneficial uses. By prioritizing and addressing water quality conditions that are influenced by storm drain discharges, the Participating Agencies in the San Luis Rey Watershed will be able to use key resources to address the most important issues. Furthering the Clean Water Act's objective will be accomplished through an adaptive planning and management process. This process identifies the priority and highest priority water quality conditions linked to storm drain discharges and implements strategies through the jurisdictional runoff management programs. These strategies will be used to improve the quality of storm drain discharges that will, in turn, improve water quality in receiving waterbodies (City of Oceanside et al. 2016). For additional information regarding water quality plans, refer to Section 4.10.

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FIGURE 2-1

Regional Map

College Boulevard Improvement Project EIR

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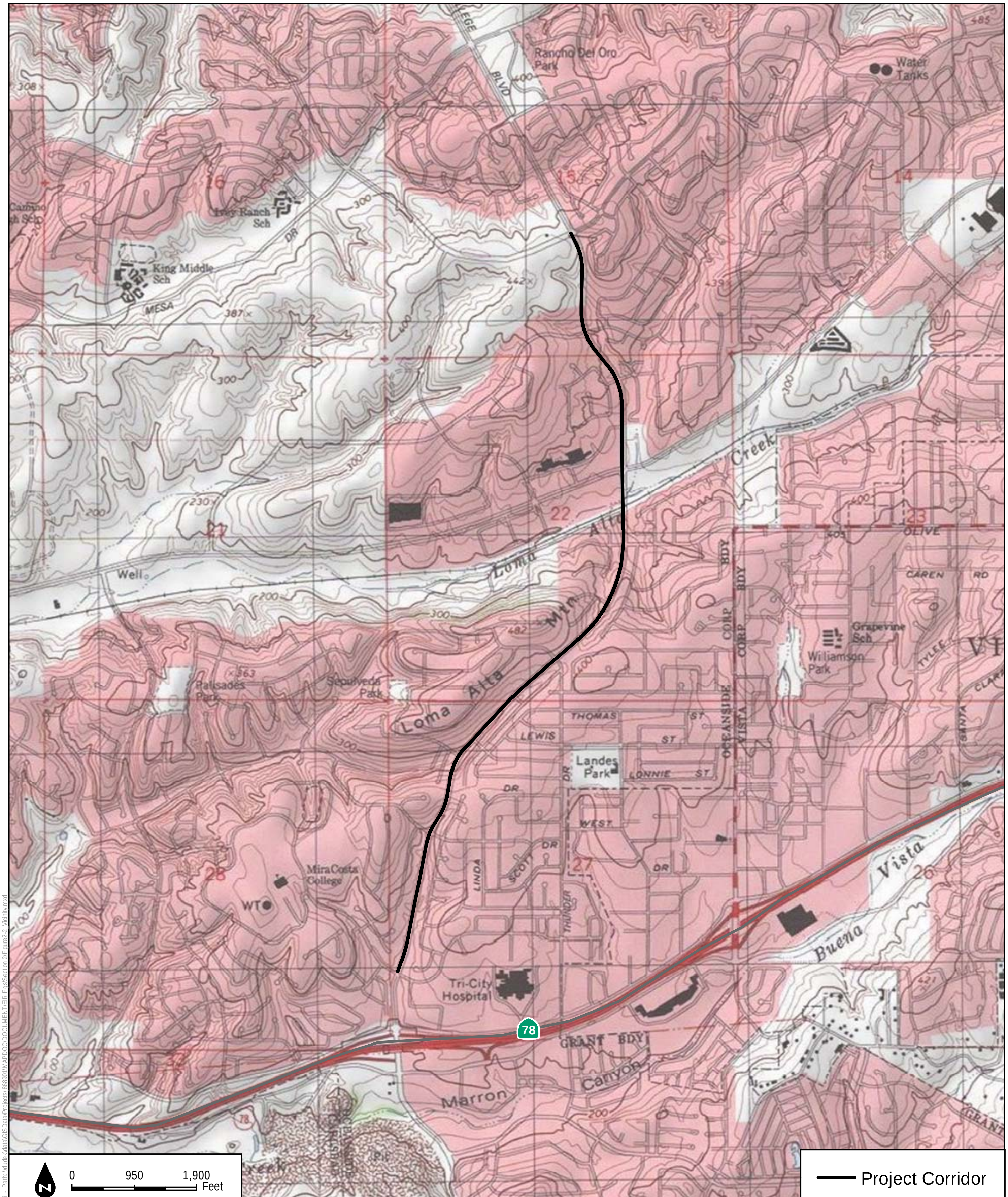

SOURCE: USGS 7.5-minute Series San Luis Rey Quadrangle

FIGURE 2-2

Vicinity Map

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College Boulevard Improvement Project EIR

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SOURCE: SANGIS 2017

FIGURE 2-3
Aerial Map

College Boulevard Improvement Project EIR

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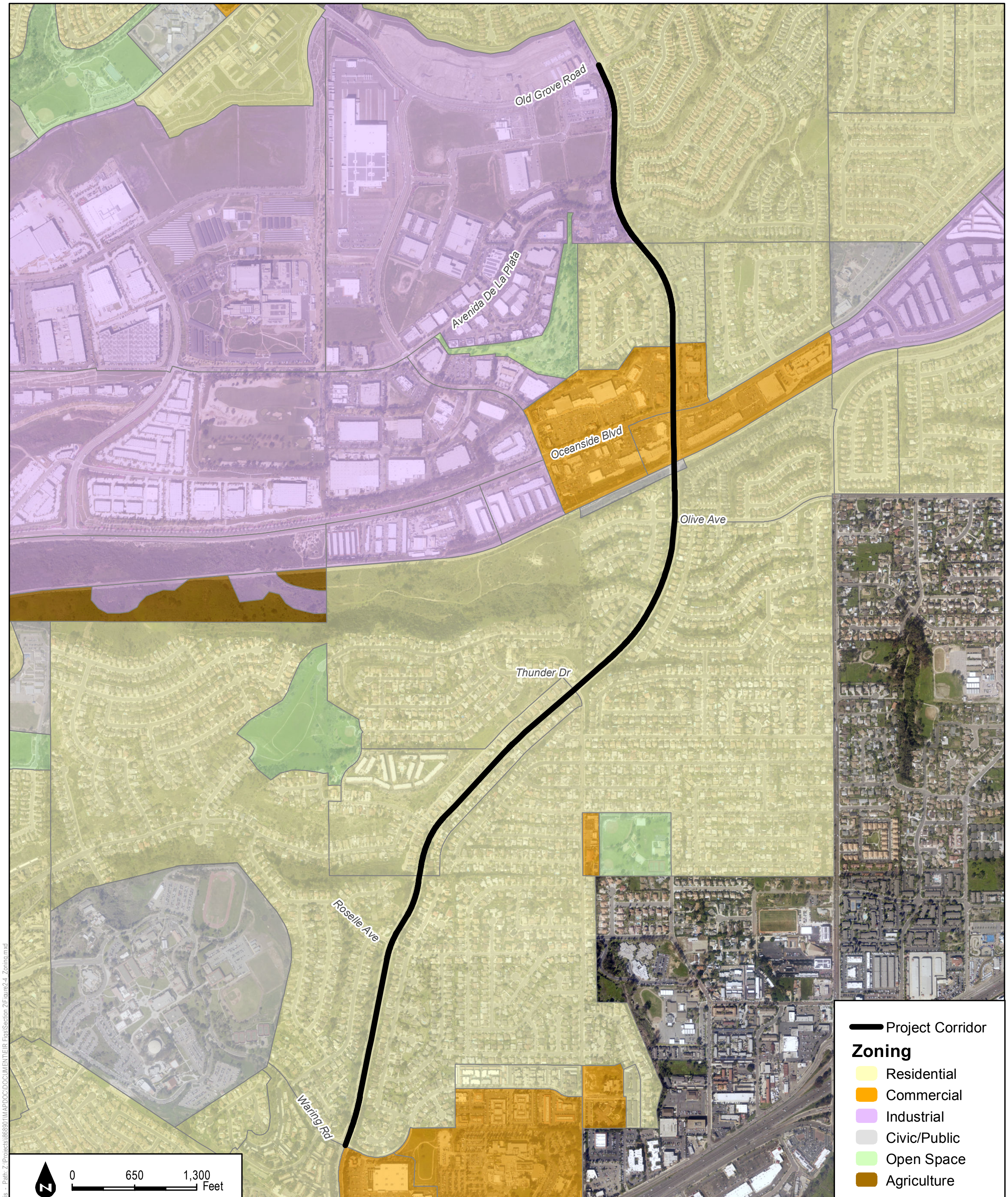

SOURCE: SANGIS 2017; City of Oceanside 2019

FIGURE 2-4

Zoning

College Boulevard Improvement Project EIR

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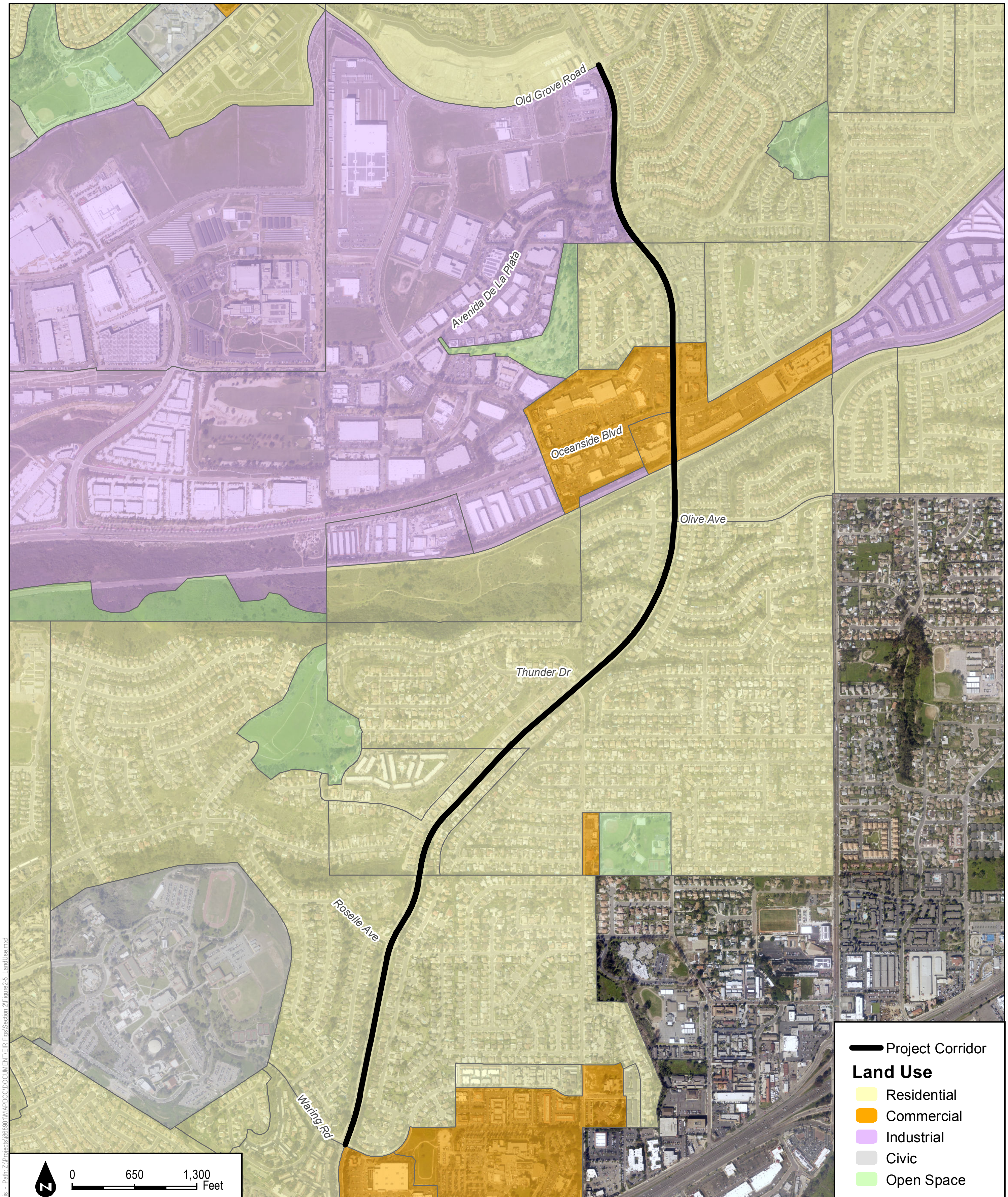

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SOURCE: SANGIS 2017; City of Oceanside 2019

FIGURE 2-5

General Plan Land Use Designations

College Boulevard Improvement Project EIR

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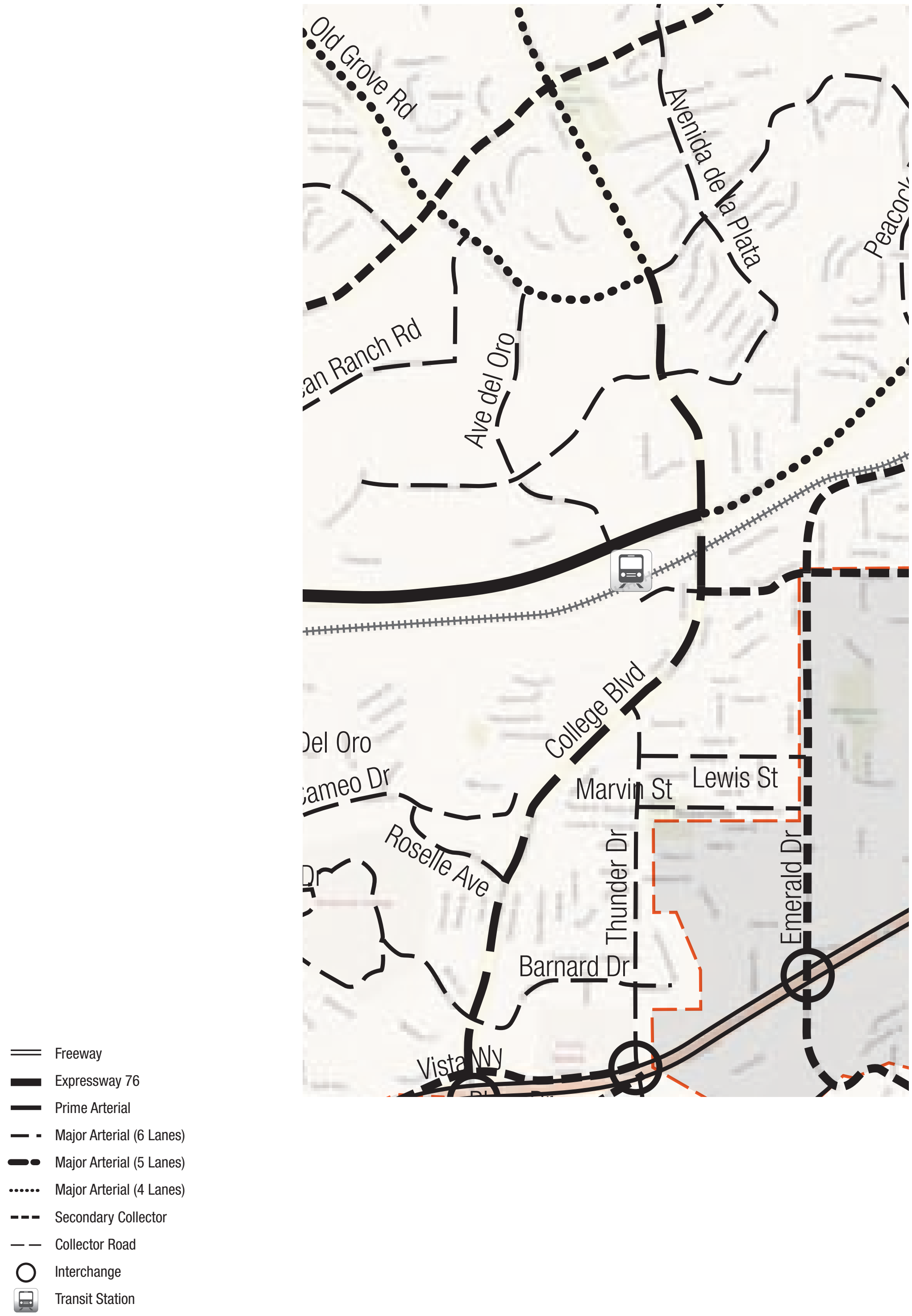

SOURCE: City of Oceanside 2012

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FIGURE 2-6

Circulation Element 2030 Master Transportation Roadway Plan

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CHAPTER 3
PROJECT DESCRIPTION

This chapter describes the purpose and objectives of the proposed College Boulevard Improvement project (proposed project) and provides a detailed description of the project's major components and various characteristics. This chapter also lists the discretionary actions required to implement the project.

3.1 PURPOSE OF THE PROJECT AND OBJECTIVES

Section 15124(b) of the CEQA Guidelines requires that an EIR include a statement of the project objectives. The purpose of the proposed project is to (1) widen College Boulevard in accordance with the General Plan Circulation Element and improve circulation (2) implement improvements to select intersections to improve truck access and pedestrian and bicycle mobility, guided by the following project objectives:

1. Improve/enhance access and circulation along the College Boulevard corridor.
2. Accommodate existing and future traffic volumes on College Boulevard.
3. Implement the recommendations of the College Boulevard Project Study Report as it relates to College Boulevard.
4. Enhance the existing bicycle circulation network through extended bicycle lanes.
5. Improve pedestrian access at select intersections along the Project corridor through striping and traffic calming measures.
6. Obtain improved consistency with the adopted Circulation Element.
7. Provide opportunities for physical improvements to public infrastructure such sidewalks and intersections, and bike and pedestrian facilities
8. Implement green street design elements including the installation of low maintenance vegetation with irrigation in select medians (i.e., where the width of the median is wide enough) and construction of non-contiguous sidewalks where feasible.

3.2 PROJECT BACKGROUND

College Boulevard is currently constructed and classified as a four-lane Major Arterial from Waring Road to Old Grove Road. However, the City's General Plan Circulation Element designates College Boulevard as a six-lane Major Arterial between these roadways. In early 2009, the City initiated several stakeholder workshops with the community to discuss and receive feedback on plans for College Boulevard. Specifically, the public was invited to attend and provide input on developing alternatives to widening the College Boulevard corridor from four to six lanes. In December 2009, RBF Consulting prepared a Project Study Report (PSR) for College Boulevard that analyzed four-road improvement/widening alternatives identified in part with community input provided during public workshops (RBF 2009). The four alternatives were as follows:

- No Build Alternative: Maintain College Boulevard as a four-lane facility with no improvements or changes to the existing conditions along the corridor.
- Alternative 1: Maintain College Boulevard as four lanes and provide intersection improvements at key locations to improve traffic flow. Separate alternatives were been developed for intersection improvements and modifications to parking from approximately Roselle Avenue to Thunder Drive.
- Alternative 2: Widen College Boulevard to provide five to six lanes from Avenida de la Plata to Olive Drive, and to provide five lanes (three southbound lanes, two northbound lanes) from Thunder Drive to Waring Road. This alternative includes modifications to parking from Roselle Avenue to Thunder Drive, and intersection improvements from Waring Road to Roselle Street, and Thunder Drive to Old Grove Road.
- Alternative 3: Widen College Boulevard according to its classification in the City’s Circulation Element as a six-lane Major Arterial (three travel lanes in each direction). New traffic signals would be provided at the alley access (i.e., north of Marvin Street and south of Thunder Drive) and at Aztec Street.

The PSR identified a recommended alternative that included pieces of the build alternatives. For example, for Waring Road to Roselle Street, Alternative 1 was recommended and for Thunder Drive to Old Grove Road, Alternative 2 was recommended.

Widening of College Boulevard is also addressed in the proposed 2030 Master Transportation Roadway Plan as presented in the City’s 2012 General Plan Circulation Element (City of Oceanside 2012). As discussed in the 2012 General Plan Circulation Element, the 2030 Master Transportation Roadway Plan was developed by the City to assess the existing circulation network and detail how it would respond to future 2030 traffic conditions. Eighteen network alternatives were developed, reviewed and narrowed down to five that were presented to City staff and the public to gather feedback and assistance in the selection of two alternatives that would be studied in detail in a traffic impact study. One of several pieces of the transportation network that changed from existing conditions to the proposed 2030 Master Transportation Road Plan was College Boulevard. Specifically, from Waring Road to Old Grove Road, College Boulevard is classified as a six-lane Major Arterial in the 2030 Master Transportation Roadway Plan. The existing four-lane segment of the roadway is identified for expansion to six lanes. According to the 2030 Master Transportation Roadway Plan, expansion of the roadway is needed address 2030 forecasted LOS E and F conditions that would occur if the existing number of lanes were maintained. Expansion of College Boulevard from four lanes (existing) to six lanes is considered in the 2030 Master Transportation Roadway Plan to be a "major change" to the City's circulation network (City of Oceanside 2012).

3.3 PROJECT OVERVIEW AND MAJOR COMPONENTS

The proposed College Boulevard improvement corridor is classified as a six-lane Major Arterial from Waring Road to Old Grove Road in the City of Oceanside's General Plan Circulation Element. The 2.41-mile corridor is currently built with four lanes and posted speed limits are 40 to 50 miles per hour. A raised median is constructed throughout the length of the corridor. In addition to street parking that is permitted north of Roselle Avenue and south of Thunder Drive, bicycle lanes are striped along most of the corridor with widths ranging from five (5) to nine (9) feet. Sidewalks are also provided on both sides of the street with widths ranging from four (4) to six (6) feet and landscaped parkways are provided in most sections. The existing right-of-way is located approximately ten (10) feet behind the face of curb through most of the corridor. Utilities are located underground along the corridor, which include cable television, phone, gas, sewer, water, storm drain and electrical. No overhead wires are present along the College Boulevard corridor.

College Boulevard is proposed to be widened to a 6-lane major arterial from Olive Drive to Old Grove Road, which would be consistent with the City of Oceanside's Circulation Element Year 2030 classification of College Boulevard. This segment of College Boulevard was included in Section 3 (Thunder Drive to Old Grove Road) of the College Boulevard improvement corridor analyzed in the 2009 PSR. Along this section, road and right-of-way improvements to the corridor are proposed to enhance existing and future traffic operations, provide congestion relief, and reduce queue lengths, improve safety conditions for the unsignalized intersections and access points along the corridor, and provide safer travel routes for bicyclists and pedestrians. In addition to widening of College Boulevard between Olive Drive and Old Grove Road, the proposed project would include curb/gutter improvements and relocation of utilities to accommodate the widened roadway segment, installation of retaining walls, and relocation of bike lanes, lighting, and sidewalks in various locations along College Boulevard between Waring Road/Barnard Drive and Marcella Street and between Olive Drive and Old Grove Road. The following improvements would occur on College Boulevard between Waring Road/Barnard Drive and Marcella Street:

- At the intersection of Waring Road/Barnard Drive increase the curb radius from 30 feet to 50 feet to improve truck access, construct a two-tier retaining wall system at the southeast corner of the Waring Road/Barnard Drive intersection with College Boulevard, and construct a five-foot tall, single tier retaining wall approximately 460 feet from the northeast corner;
- Widen approximately 600 feet of College Boulevard on the east side, north of Waring Road, to extend the bike lane and provide a third through lane and also construct multi-tier retaining walls on College Boulevard on the east side, north of Waring Road;

- Widen approximately 425 feet of College Boulevard on the west side, north of Barnard Drive, to extend bike lane and provide third through lane and also construct an approximately 5-foot high, 460 foot long single-tier retaining wall on College Boulevard on the west side, north of Barnard Drive;
- On both sides of College Boulevard, for an approximate distance of 3,000 feet, move the parkway adjacent to the curb and reconstruct the sidewalk adjacent to the right-of-way line and;
- Stripe new crosswalks at the College Boulevard/Roselle Avenue intersection and install traffic-calming chokers to narrow the travel way at approximately 600 feet north of Roselle Avenue;
- Lengthen the northbound left-turn pocket at the intersection with Marvin Street West and implement additional minor curb and striping improvements; and
- Lengthen the southbound left-turn pocket at the intersection with Thunder Drive.

An overview of proposed improvements along the College Boulevard corridor is provided on Figure 3-1, College Boulevard Improvement Corridor – Overview. Proposed improvements are detailed on Figures 3-2a through 3-2s.

Regarding retaining walls, the length and height of these features would wary, depending on the individual location. Further, while the specific details regarding the finishes of retaining walls has not be developed in preliminary plans prepared for the Project, the final improvement plans for the Project including all retaining walls and hardscape would be designed in accordance with San Diego Regional Standard Drawings and City of Oceanside Design Standards. Final improvement plans would also require review and approval of the City of Oceanside Department of Public Works.

3.3.1 Right-of-Way Acquisition

Expansion of the existing College Boulevard right-of-way (ROW) to accommodate proposed improvements would require ROW acquisition along segments of the corridor. Additional ROW would be required on over 65 properties. The permanent right-of-way that would be acquired as part of the project amounts to approximately 1.5 acres and is identified by APN, address, and acreage in Table 3-1.

Table 3-1
Right-of-Way Acquisition

APN	Acre (ac) (square feet)
162-381-0100	0.006 ac (287 sf)
162-381-0200	0.006 ac (286 sf)
162-381-0300	0.016 ac (714 sf)

Table 3-1
Right-of-Way Acquisition

APN	Acre (ac) (square feet)
162-381-0400	0.030 ac (1,335 sf)
162-381-0500	0.011 ac (495 sf)
162-241-0500 (NCTD corridor)	0.030 ac (1,338 sf)
162-241-4100	0.024 ac (1,060 sf)
162-241-1800	0.018 ac (785 sf)
162-240-4300	0.174 ac (7,605 sf)
162-413-0800	0.011 ac (502 sf)
162-413-0700	0.026 ac (1,139 sf)
162-413-0600	0.011 ac (520 sf)
162-413-0500	0.012 ac (557 sf)
162-413-0400	0.013 ac (589 sf)
162-413-0300	0.013 ac (579 sf)
162-413-0200	0.014 ac (615sf)
162-413-0100	0.014 ac (632 sf)
162-411-0100	0.018 ac (825 sf)
162-411-0200	0.014 ac (617 sf)
162-411-0300	0.013 ac (594 sf)
162-411-0400	0.012 ac (566 sf)
162-411-0500	0.011 ac (522 sf)
162-411-0600	0.013 ac (570 sf)
162-501-1200	0.073 ac (3,181 sf)
162-240-4200	0.080 ac (3,524 sf) + 0.128 ac (5,583 sf)
162-241-1000	0.071 ac (3,107 sf)
162-241-0800	0.054 ac (2,394 sf)
162-531-3500	0.054 ac (2,362 sf)
162-530-2500	0.026 ac (1,173 sf)
166-663-0100	0.010 ac (454 sf)
166-663-0200	0.009 ac (397 sf)
166-663-0300	0.008 ac (361 sf)
16-663-0400	0.008 ac (366 sf)
166-663-0500	0.008 ac (365 sf)
166-663-0600	0.008 ac (368 sf)
166-663-0700	0.007 ac (342 sf)
166-663-0800	0.008 ac (362 sf)
166-663-0900	0.008 ac (359 sf)
166-663-1000	0.007 ac (348 sf)
166-663-1100	0.008 ac (374 sf)
166-663-1200	0.08 ac (350 sf)
166-614-0800	0.008 ac (376 sf)
166-614-0700	0.007 ac (347 sf)

Table 3-1
Right-of-Way Acquisition

APN	Acre (ac) (square feet)
166-614-0600	0.007 ac (343 sf)
166-614-0500	0.008 sf (362 sf)
166-614-0400	0.008 sf (349 sf)
166-614-0300	0.008 sf (354 sf)
166-614-0200	0.008 ac (354 sf)
166-600-2600	0.008 ac (371 sf)
166-600-2500	0.009 ac (398 sf)
166-600-2400	0.008 ac (389 sf)
166-600-2300	0.008 ac (364 sf)
166-600-2200	0.009 ac (403 sf)
166-600-2100	0.01 ac (447 sf)
166-600-2000	0.01 ac (838 sf)
166-600-1900	0.03 ac (1,376 sf)
166-600-1200	0.01 ac (539 sf)
166-600-1100	0.04 ac (1,961 sf)
166-600-1000	0.02 ac (1,295 sf)
166-010-400	0.008 ac (383 sf)
165-502-1000	0.03 ac (1,592 sf)
165-502-1100	0.03 ac (1,591 ac)
165-502-1200	0.02 ac (1,141 sf)
166-502-1600	0.01 ac (743 sf)
166-502-1700	0.02 ac (1,041 sf)
165-502-1800	0.001 ac (48 sf)
166-644-1000	0.02 ac (874 sf)
166-644-0900	0.004 ac (206 sf)
Total	**1.52 ac (66,987 sf)**

3.3.2 Landscaping

As indicated in Section 3.1, the proposed project intends to implement green street design concepts including the installation of low maintenance vegetation with irrigation in portions of six medians along the widening corridor. Based on the preliminary engineering plans for College Boulevard Widening between Olive Drive and Old Grove Road (NV5 2016), low maintenance vegetation would be installed in medians located immediately north and south of the NCTD Sprinter railroad crossing, north of Oceanside Boulevard, north and south of Aztec Street, south of Avenida De La Plaza, and between Avenida De La Plaza and Old Grove Road. Proposed landscape medians are depicted on Figures 3-2k through 3-2s.

Landscape medians installed north and south of the NCTD Sprinter tracks would be widest (approximately 20-feet and 19-feet wide south and north of the tracks, respectively) adjacent to the tracks and would both taper accommodate two left turn pockets. South of the tracks, the 150-foot long landscape median would taper to a width of approximately 9-feet and would then transition to an entirely hardscape median (similar to existing conditions). The hardscape median would continue to taper until reaching its narrowest width of approximately 4 feet near the College Boulevard/Olive Drive intersection. North of the tracks, the approximately 19-foot wide landscape median would taper to a width of approximately 4-feet south of the tracks to accommodate two left turn pockets. The approximately 120-foot long landscape median would then transition to entirely hardscape (similar to existing conditions) and would display a consistent 4-foot width until reaching the College Boulevard/Oceanside Boulevard intersection.

Approximately 375 feet north of the College Boulevard/Oceanside Boulevard, the 4-foot wide hardscape median would transition to a landscape median that would display an ultimate width of approximately 18 feet. The 225-foot long landscape median would quickly taper from 18 feet to 4 feet in width to accommodate a southbound left turn pocket. Due to the proposed widening and lengthening of the existing median to accommodate landscaping, the existing northbound left turn pocket accommodating northbound College Boulevard access to the Rancho Del Oro plaza (i.e., access to the driveway north of Café de Thai and Sushi) would be removed. The southbound left turn pocket and southbound College Boulevard access to the CVS shopping center east of College Boulevard would be maintained. Also, the existing approximately 420-foot long landscape median located north of the southbound left turn pocket and south of Aztec Street would be reduced in length by approximately 266 feet by the Proposed Project.

The existing approximately 525-foot long landscape median located north of Aztec Street and south of Avenida de la Plata would be reduced in length by approximately 264 feet by the Proposed Project. The width of the 14-foot wide median would largely be maintained and similar to existing conditions; the median would taper on the approach to Aztec Street to the south and Avenida de la Plata to the north.

Lastly, the existing landscape median located north of Avenida de la Plata and south of Old Grove Road would be lengthened slightly (i.e., approximately 920 feet long to approximately 940 feet long). The width of the 14-foot wide median would largely be maintained and similar to existing conditions; the median would taper on the approach to Avenida de la Plata to the south and Old Grove Road to the north.

In addition to the medians described above, the Project includes new landscape parkways. Specifically, from Waring Road/Barnard Drive to approximately Roselle Street, five-foot wide parkways are proposed and would include new landscaping. A landscape plan would accompany the final improvement plans for the Project and would be prepared in accordance with the City's current Landscape Development Manual. In addition and consistent with Section 37.118 of the City's Municipal Code, no landscaping shall be installed for the Project without the approval of final landscape improvement plans that would include planting and irrigation plans compliant with Section 37.122 of the Municipal Code.

3.3.3 Stormwater/Drainage

In 2003, the City of Oceanside prepared a Master Plan of Drainage that assessed the current (as of 2003) drainage infrastructure in the city and where warranted, made recommendations for drainage infrastructure adjustments/improvements. Along the College Boulevard corridor, the City would implement one recommendation identified for Facility ID LAC-149 in the Master Plan of Drainage as part of the proposed project. Specifically, a 78-foot long segment of an existing 36-inch diameter cured-in place pipe (CIPP) between Olive Drive and Loma Alta and adjacent to the southbound travel lanes would be upsized to a 42-inch CIPP.

3.3.4 Utilities

Electric, gas, telephone, and cable lines within the footprint of the project area would be relocated, as appropriate.

3.3.5 Grading and Construction

Construction

Construction of the project would involve demolition, clearing and excavation, grading, trenching, paving and roadway construction. The majority of widening would occur between Olive Avenue and Old Grove Road.

Construction is anticipated to last for approximately six (6) months. Construction of the project would generally occur during daytime hours (7:00 a.m. to 5:00 p.m.) in accordance with the Oceanside Municipal Code however, select activities or tasks may require work during evening and nighttime hours.

Construction equipment used on the project would include, but is not limited to, graders, plate compactors, rough terrain forklifts, scrapers, tractors/loaders/backhoes, pavers and other paving equipment, rollers, air compressors, and generator sets. Concrete and delivery trucks would also be used. Construction equipment would be used intermittently depending on construction phase. Portable lighting units may also be used during necessary evening and/or nighttime work.

Prior to construction, the contractor would mobilize resources to staging areas. This would include transport of construction vehicles and equipment, as well as delivery and storage of construction materials. The contractor may also secure a trailer and portable sanitary facilities at certain areas. Several staging areas may be used to store construction materials and equipment during construction. Construction staging within and adjacent to City of Oceanside rights-of-way would likely occur along various portions of the alignment in areas where work was occurring. This type of staging would generally include short-term staging of construction equipment and materials. Notifications to adjacent residences would be provided in advance of construction and staging, and the contractor would be required to enter into an agreement with property owners for use of private property.

Site preparation would entail the installation of orange temporary construction fencing along the edges of all work areas that are adjacent to sensitive habitat to keep construction equipment, workers and related activities out of sensitive areas. Prior to the initiation of ground disturbing activities, a stormwater pollution prevention plan would be prepared to identify best management practices (BMPs) to minimize off-site sediment transport and address hazardous materials management for the duration of the project. In addition, the grading plans would be subject to City approval, and would require measures to comply with the City's municipal stormwater permit. BMPs required to comply with the City's permit include, but are not limited to, sandbag barriers, temporary desilting basins near inlets, gravel driveways, dust controls, and construction worker training.

The proposed project would use standard roadway construction methods, including clearing existing vegetation within the approved and permitted limits, preparing the ground to receive fill, and constructing cuts and placing fill with heavy earthmoving equipment.

During the demolition, clearing and grading phase of construction, existing roadway materials would be removed and hauled off-site. Demolition materials hauled off-site would include concrete (sidewalk, curb and gutter, median, retaining wall, private improvements). Materials found unsuitable for reuse or recycling would be disposed of at a regional landfill with adequate remaining capacity. In addition, existing street utilities including streetlights, fire hydrants, and signs would be removed and relocated.

During paving and roadway construction the regular import of construction materials would occur. Imported materials would include, but not necessarily be limited to, concrete, fill, aggregate base, pervious concrete, asphalt concrete, materials for retaining walls, and landscaping and irrigation materials. The number of construction-related vehicles traveling to and from the project site would vary on a daily basis. For the purposes of evaluation, it is anticipated up to 16 haul truck round trips could occur on a peak day. In addition to haul trucks, it is anticipated that construction crew trips could require up to 100 round trips per day.

The assume construction equipment mix, worker trips, water truck trips, and material haul truck trips are shown below in Table 3-2.

Table 3-2
Construction Scenario Assumptions

Construction Phase	One-way Vehicle Trips			Equipment		
	Average Daily Worker Trips	*Average Daily Water Truck Trips*	*Average Daily Haul Truck Trips*	*Equipment Type*	*Quantity*	*Usage Hours*
Grubbing/Land Clearing	20	10	6	Crawler Tractors	1	8
				Excavators	2	8
				Signal Boards	5	8
Grading/ Excavation	50	10	6	Crawler Tractors	1	8
				Excavators	3	8
				Graders	2	8
				Rollers	2	8
				Rubber-Tired Loaders	1	8
				Scrapers	2	8
				Signal Boards	5	8
				Tractors/Loaders/Backhoes	4	8
Drainage/Utilities/ Sub-Grade	38	10	8	Air Compressors	1	8
				Generator Sets	1	8
				Graders	1	8
				Plate Compactors	1	8
				Pumps	1	8
				Rough Terrain Forklifts	1	8
				Scrapers	1	8
				Signal Boards	5	8
				Tractors/Loaders/Backhoes	3	8
Paving	30	10	8	Pavers	1	8
				Paving Equipment	1	8
				Rollers	2	8
				Signal Boards	5	8
				Tractors/Loaders/Backhoes	3	8

Notes: See Appendix A to this EIR for details.

Roadway construction would also entail restriping of the roadway, traffic signal and railroad grade crossing modifications, and adjustment of sewer manholes, water and gas valves, and street light pillboxes to grade.

3.3.6 Project Design Features and Construction Measures

The City, through codes and standards, has incorporated numerous project design features and construction measures into the project that help to reduce the potential for environmental effects. Construction would be performed by qualified contractors, and contract documents, plans, and specifications would incorporate stipulations regarding standard legal requirements and acceptable construction practices including, but not limited to traffic control, geologic conditions, drainage and water quality improvements, and erosion and sedimentation control measures. These measures are included in Table 3-3 and referenced throughout the impact discussions in Chapter 4, Environmental Analysis, of this EIR.

Table 3-3
Summary of Project Design and Construction Measures

Subject Area	Design Feature or Construction Measure
Hydrology and Water Quality	**PDF-HYD-1:** A stormwater pollution prevention plan would be implemented during construction to reduce stormwater runoff to receiving waters during construction activities.
Traffic and Transportation	**PDF-TRAF-1:** In accordance with the California Vehicle Code, the project applicant would prepare a traffic control plan for use during construction. This plan would outline flagging procedures and delivery/movement timing so as to avoid peak traffic periods. The plan would also outline procedures for notifying the Oceanside Police and Fire Departments of forthcoming lane or roadway closures. This would allow the Police and Fire Departments to modify emergency response plans and notify other public service providers of closures. The traffic control plan would be approved by the City Engineering Department prior to issuance of a grading permit.
Geology & Soils	**PDF-GEO-1**: Construction activities will adhere to the general recommendations, soil and excavation recommendations, preliminary grading recommendations, site drainage and moisture protection recommendations, preliminary pavement recommendations, and grading plan review described in the Geotechnical Evaluation prepared by Ninyo & Moore (April 2014). Additionally, future geotechnical investigation recommendations, as stated in the Geologic Reconnaissance prepared by Geocon (Appendix F), will be integrated into construction plans.

3.4 DISCRETIONARY ACTIONS

Consistent with the City's General Plan and Zoning Ordinance, the proposed project requires certain entitlements be submitted, reviewed, and approved by the City. Chief among these entitlements is a General Plan Amendment (GPA). A GPA is proposed as the proposed project deviates from the general six-lane expansion of College Boulevard from Old Grove Road to Waring Road as envisioned in the Circulation Element.

The City will use this EIR and associated documentation in its decision to approve or deny the required discretionary permits. Other responsible agencies can use this EIR and supporting documentation in their decision-making process to issue additional approvals. These additional approvals may include but are not limited to approval of a site-specific Stormwater Pollution Prevention Plan (SWPPP) and adoption of a mitigation monitoring and reporting program.

Other Agency Approvals

Approval of the proposed project's SWPPP may be required by the San Diego Regional Water Quality Control Board to ensure that Lom Alta Creek will be adequately protected during construction activities. Additionally, the proposed project must acquire an Authority to Construct permit from the San Diego Air Pollution Control District (SDAPCD).

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SOURCE: SANDAG IMAGERY 2014

FIGURE 3-1
College Boulevard Improvement Corridor - Overview

College Boulevard Improvement Project EIR

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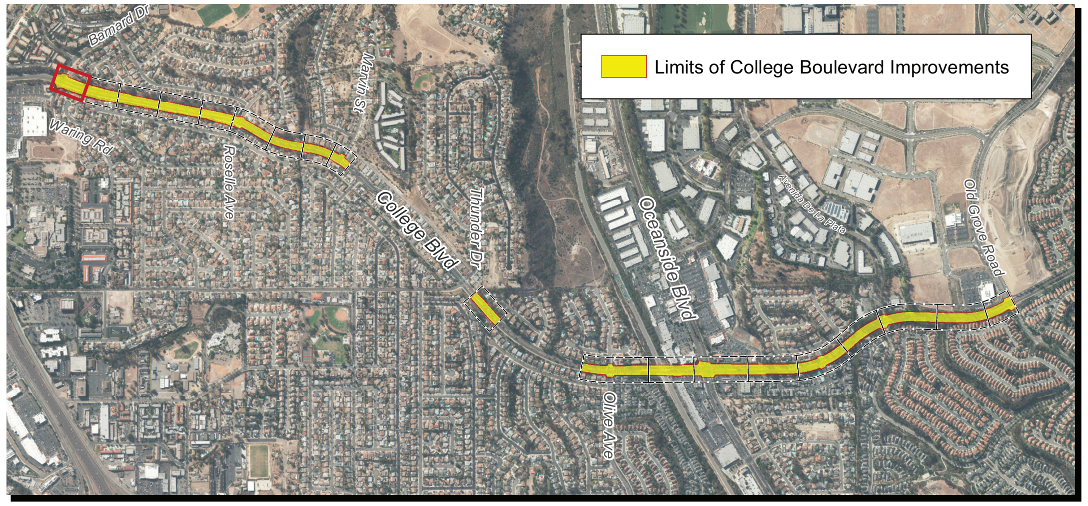

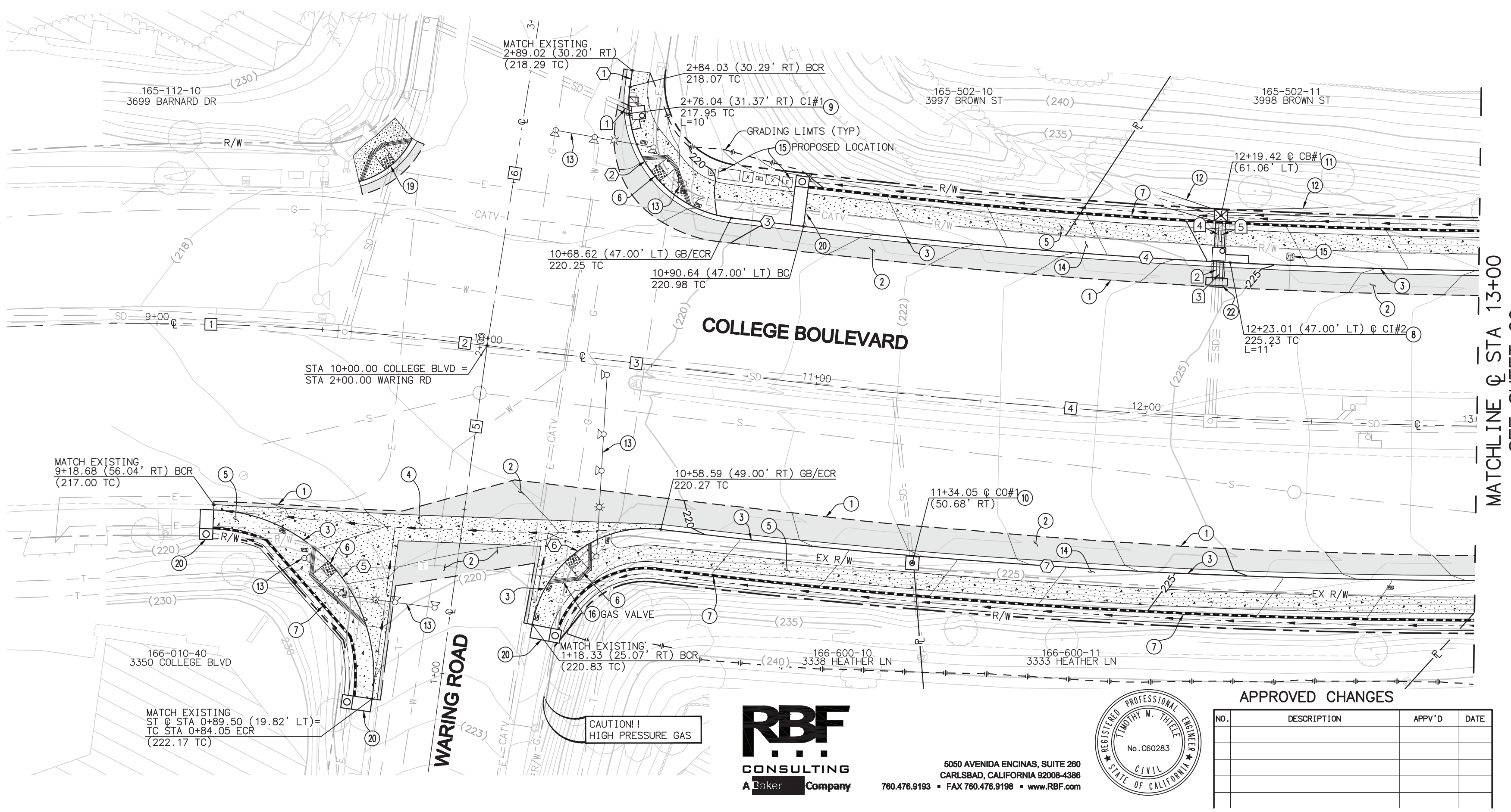

CONSTRUCTION NOTES

1. PAVEMENT JOINT PER DETAIL 2 ON SHEET 3.
2. CONSTRUCT 7" AC PAVEMENT OVER 10" CLASS II AGGREGATE BASE.
3. CONSTRUCT 8" CURB & GUTTER TYPE 'G' PER DETAIL 3 ON SHEET 3.
4. CONSTRUCT PCC CROSS GUTTER PER CITY OF OCEANSIDE STANDARD DRAWINGS M-8A & B.
5. CONSTRUCT 4" PCC SIDEWALK PER SDRSD G-7, G-9, AND G-10.
6. CONSTRUCT CURB RAMP TYPE 'A' PER SDRSD G-27 WITH DARK GRAY TRUNCATED DOMES.
7. CONSTRUCT RETAINING WALL PER RETAINING WALL PLANS.
8. CONSTRUCT CURB INLET TYPE 'B-1' PER SDRSD D-2. LENGTH PER PLAN.
9. CONSTRUCT CURB INLET TYPE 'B-2' PER SDRSD D-2. LENGTH PER PLAN.
10. CONSTRUCT STORM DRAIN CLEANOUT, TYPE 'A4', PER SDRSD D-9. CONNECT TO EXISTING STORM DRAIN.
11. CONSTRUCT CATCH BASIN, TYPE 'F', PER SDRSD D-7.
12. CONSTRUCT DRAINAGE DITCH, TYPE 'A', PER SDRSD D-75.
13. PROPOSED TRAFFIC SIGNAL LOCATION. SEE TRAFFIC SIGNAL PLANS.
14. PARKWAY PLANTING PER LANDSCAPE PLAN.
15. DRY UTILITIES TO BE RELOCATED BY OTHERS.
16. ADJUST TO GRADE.
19. CONSTRUCT CURB RAMP TYPE 'C' PER SDRSD G-29 WITH DARK GRAY TRUNCATED DOMES.
20. CONSTRUCT TYPE 'A' CURB OUTLET PER SDRSD D-25. CONNECT TO PROPOSED BROW DITCH.
22. CONNECT PROP RCP PIPE TO EX CMP PIPE WITH CONC PIPE COLLAR, PER SDRSD D-62.

SCALE: 1"=20'

20 10 0 20 40 60

SCALE: 1"=20'

BENCH MARK

Description: BRASS DISC STAMPED "C.O.S. B.M. D-22"
Location: WESTERLY TOP OF CURB OF CATCH BASIN, SOUTH SIDE OCEANSIDE BLVD, 275' WESTERLY OF INTERSECTION OF OCEANSIDE BLVD & BEVERLY GLEN
Record From: ROS 17271
Elev: 296.94 Datum: NGVD 29 (MSL)

WDID NO. N/A

SHEET 08	CITY OF OCEANSIDE ENGINEERING DIVISION	27 SHEETS

IMPROVEMENT PLAN FOR: CIP PROJECT NO. 11-00050

COLLEGE BOULEVARD
OCEANSIDE, CALIFORNIA
STA 9+18 TO STA 13+00

APPROVED

CITY ENGINEER SCOTT O. SMITH RCE 58655 DATE

ENGINEER OF WORK	CHECKED BY:	PLAN NUMBER
TIMOTHY M. THIELE R.C.E. 60283	APPROVAL DATE:	R14-00011

SOURCE: RBF and NV5

DUDEK

FIGURE 3-2a
College Boulevard Improvements

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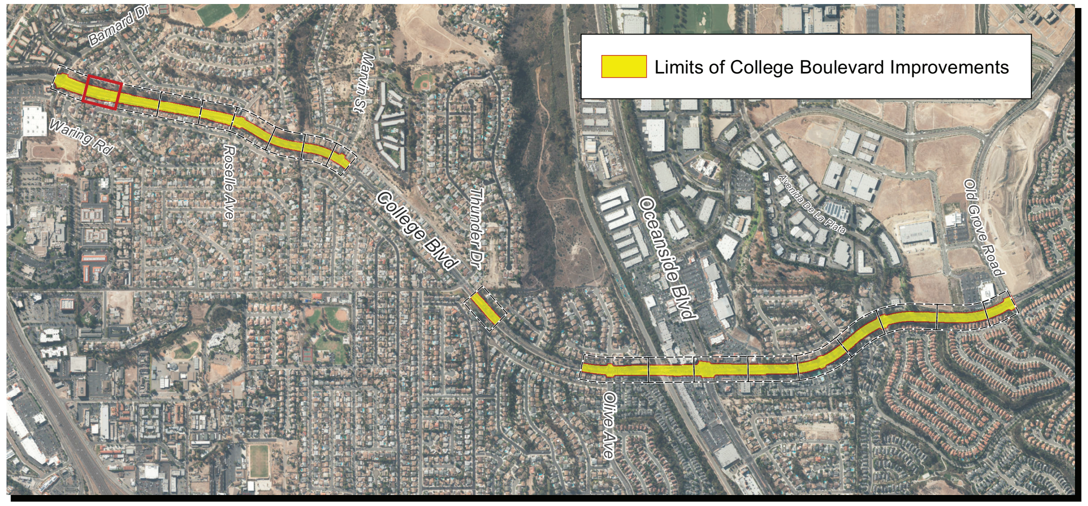

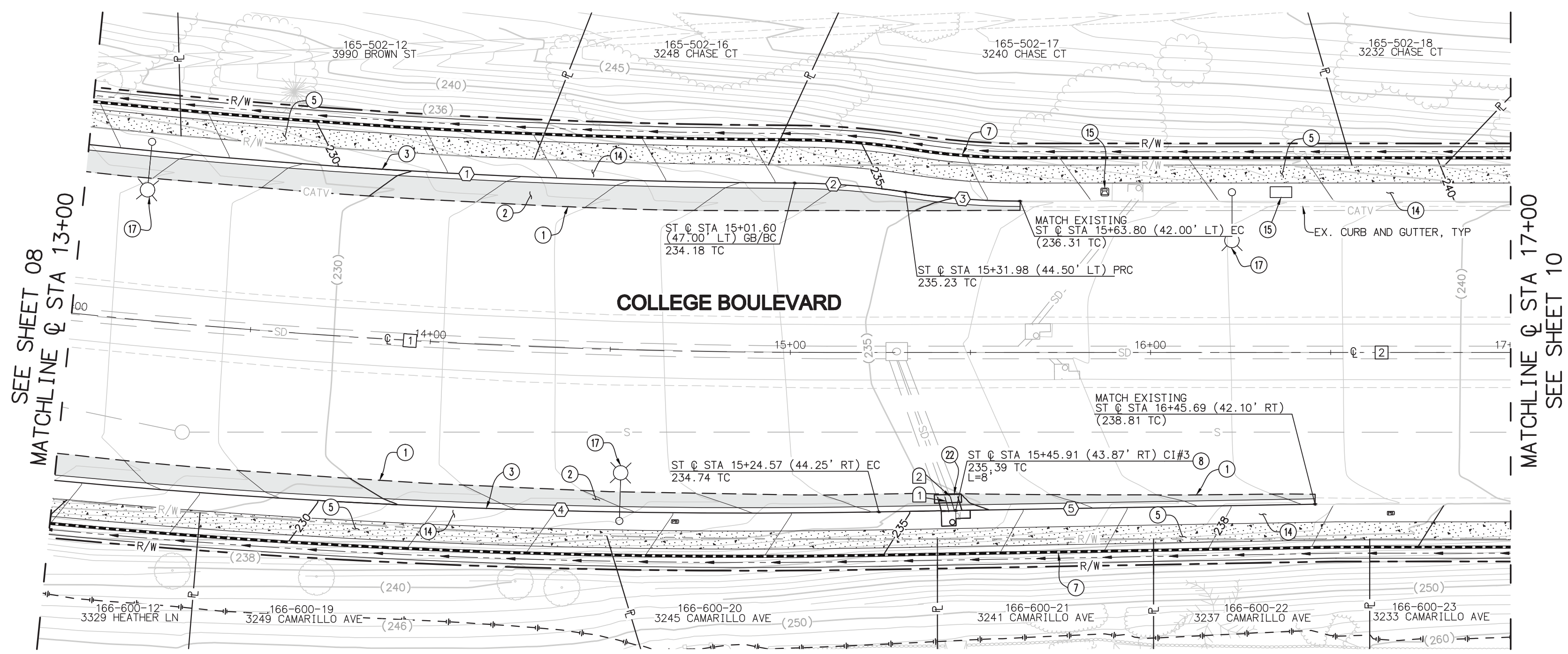

CONSTRUCTION NOTES

1. PAVEMENT JOINT PER DETAIL 2 ON SHEET 3.
2. CONSTRUCT 7" AC PAVEMENT OVER 10" CLASS II AGGREGATE BASE.
3. CONSTRUCT 8" CURB & GUTTER TYPE 'G' PER DETAIL 3 ON SHEET 3.
5. CONSTRUCT 4" PCC SIDEWALK PER SDRSD G-7, G-9, AND G-10.
7. CONSTRUCT RETAINING WALL PER RETAINING WALL PLANS.
8. CONSTRUCT CURB INLET TYPE 'B-1' PER SDRSD D-2. LENGTH PER PLAN.
14. PARKWAY PLANTING PER LANDSCAPE PLAN.
15. DRY UTILITIES TO BE RELOCATED BY OTHERS.
17. PROPOSED LIGHT POLE, CONSTRUCT PER SDRSD E-1.
22. CONNECT PROP RCP PIPE TO EX CMP PIPE WITH CONC PIPE COLLAR, PER SDRSD D-62.

RBF CONSULTING
A Baker Company

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760.476.9193 • FAX 760.476.9198 • www.RBF.com

REGISTERED PROFESSIONAL ENGINEER
TIMOTHY M. THIELE
No. C60283
CIVIL
STATE OF CALIFORNIA

APPROVED CHANGES

NO.	DESCRIPTION	APPV'D	DATE

SCALE: 1"=20'

20 10 0 20 40 60

SCALE: 1"=20'

BENCH MARK

Description: BRASS DISC STAMPED "C.O.S. B.M. D-22"
Location: WESTERLY TOP OF CURB OF CATCH BASIN, SOUTH SIDE OCEANSIDE BLVD, 275' WESTERLY OF INTERSECTION OF OCEANSIDE BLVD & BEVERLY GLEN
Record From: ROS 17271
Elev: 296.94 Datum: NGVD 29 (MSL)

WDID NO. N/A

SHEET 09 | CITY OF OCEANSIDE ENGINEERING DIVISION | 27 SHEETS

IMPROVEMENT PLAN FOR: CIP PROJECT NO. 11-00050

COLLEGE BOULEVARD
OCEANSIDE, CALIFORNIA
STA 13+00 TO STA 17+00

APPROVED

CITY ENGINEER SCOTT O. SMITH RCE 58655 DATE

ENGINEER OF WORK
TIMOTHY M. THIELE R.C.E. 60283
CHECKED BY:
APPROVAL DATE:
PLAN NUMBER
R14-00011

DUDEK

SOURCE: RBF and NV5

FIGURE 3-2b
College Boulevard Improvements

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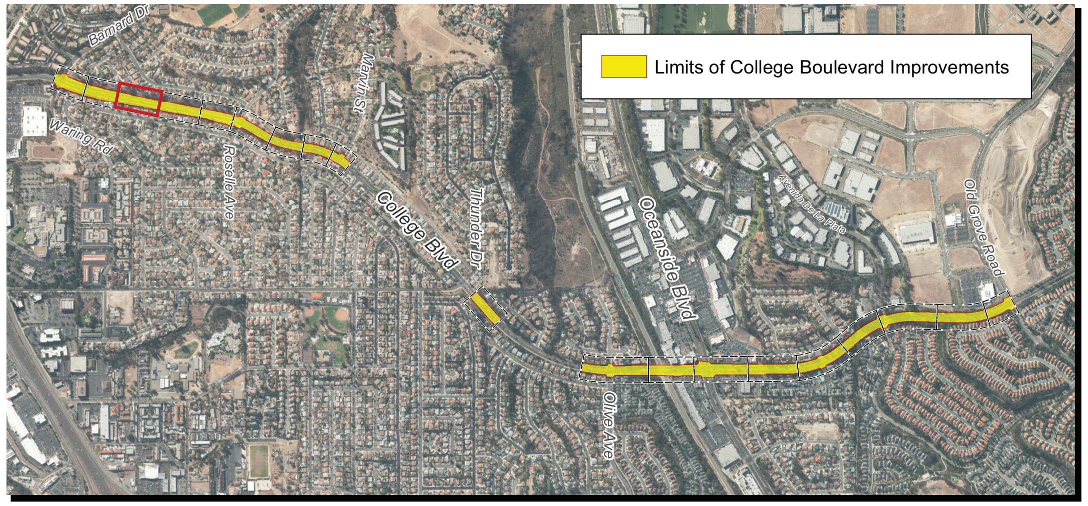

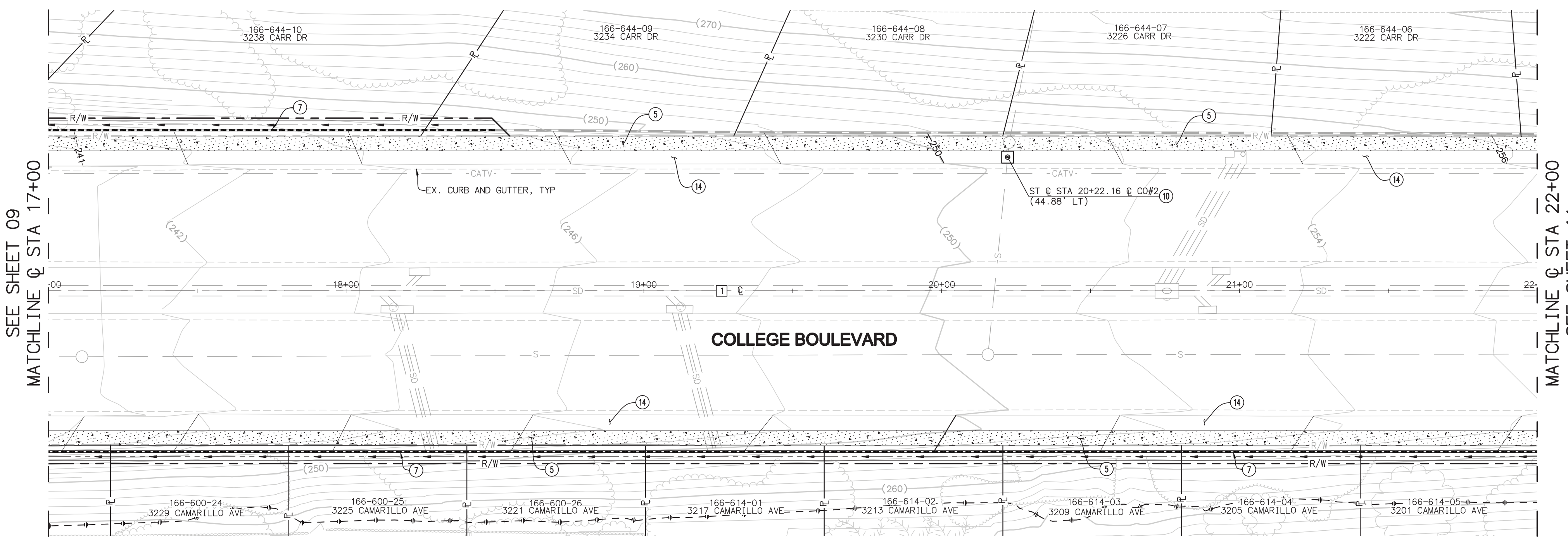

CONSTRUCTION NOTES

5. CONSTRUCT 4" PCC SIDEWALK PER SDRSD G-7, G-9, AND G-10.
7. CONSTRUCT RETAINING WALL PER RETAINING WALL PLANS.
10. CONSTRUCT STORM DRAIN CLEANOUT, TYPE 'A4', PER SDRSD D-9. CONNECT TO EXISTING STORM DRAIN.
14. PARKWAY PLANTING PER LANDSCAPE PLAN.

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APPROVED CHANGES

NO.	DESCRIPTION	APPV'D	DATE

BENCH MARK

Description: BRASS DISC STAMPED "C.O.S. B.M. D-22"
Location: WESTERLY TOP OF CURB OF CATCH BASIN, SOUTH SIDE OCEANSIDE BLVD, 275' WESTERLY OF INTERSECTION OF OCEANSIDE BLVD & BEVERLY GLEN
Record From: ROS 17271
Elev: 296.94 Datum: NGVD 29 (MSL)

WDID NO. N/A

SHEET 10 | CITY OF OCEANSIDE ENGINEERING DIVISION | 27 SHEETS

IMPROVEMENT PLAN FOR: CIP PROJECT NO. 11-00050

COLLEGE BOULEVARD
OCEANSIDE, CALIFORNIA
STA 17+00 TO STA 22+00

APPROVED

CITY ENGINEER SCOTT O. SMITH RCE 58655 DATE

ENGINEER OF WORK: TIMOTHY M. THIELE R.C.E. 60283
CHECKED BY:
APPROVAL DATE:
PLAN NUMBER R14-00011

SOURCE: RBF and NV5

FIGURE 3-2c
College Boulevard Improvements

DUDEK

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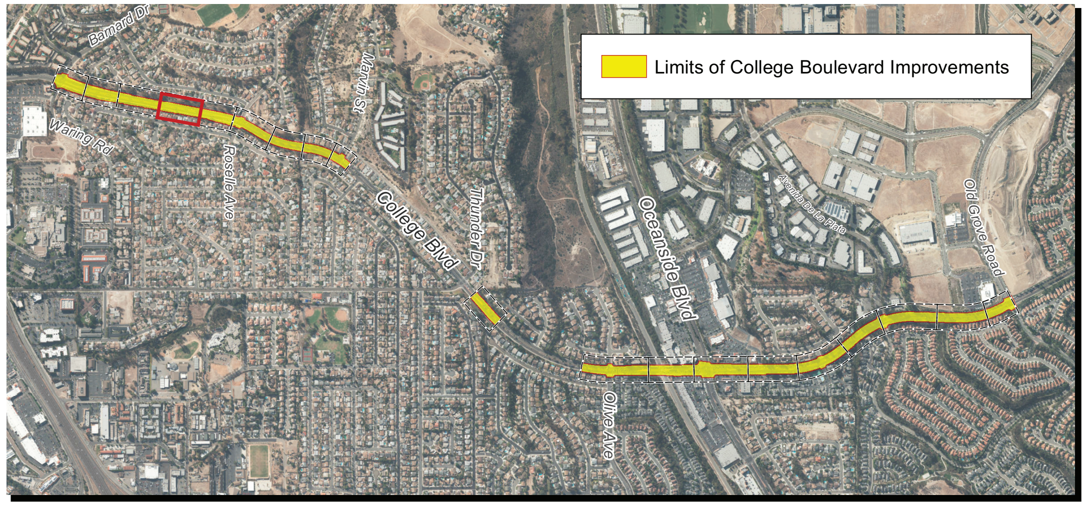

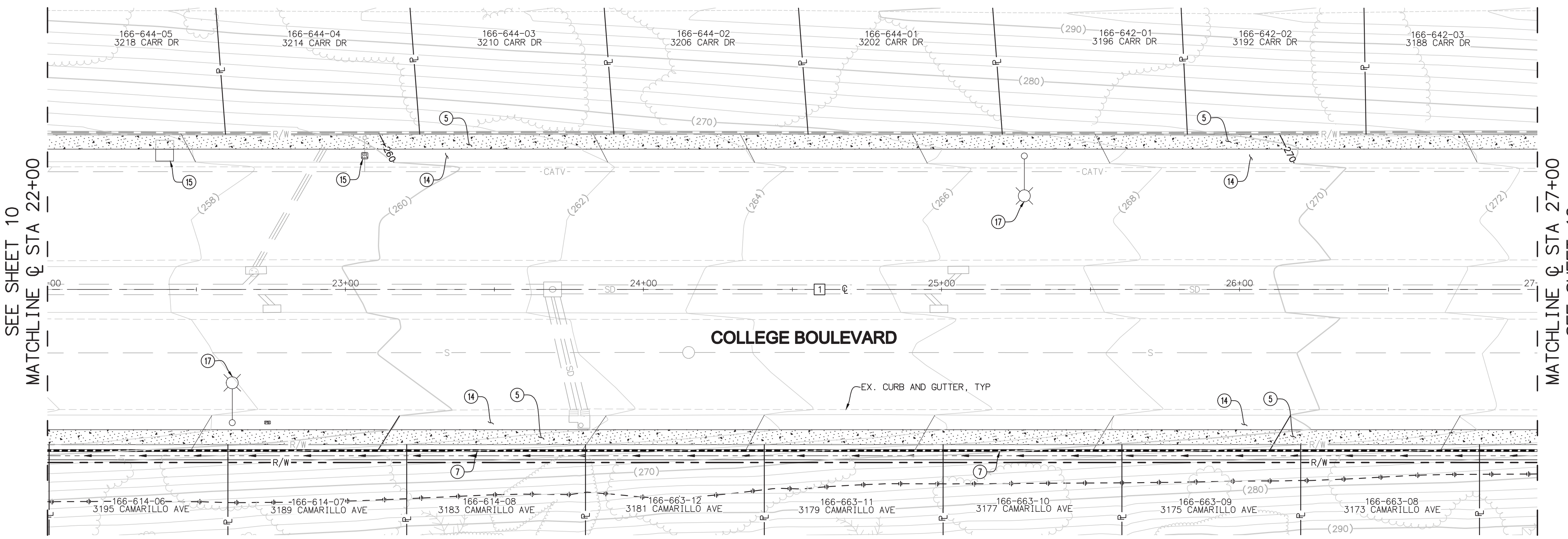

CONSTRUCTION NOTES

5 CONSTRUCT 4" PCC SIDEWALK PER SDRSD G-7, G-9, AND G-10.
7 CONSTRUCT RETAINING WALL PER RETAINING WALL PLANS.
14 PARKWAY PLANTING PER LANDSCAPE PLAN.
15 DRY UTILITIES TO BE RELOCATED BY OTHERS.
17 PROPOSED LIGHT POLE, CONSTRUCT PER SDRSD E-1.

SCALE: 1"=20'

20 10 0 20 40 60

SCALE: 1"=20'

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TIMOTHY M. THIELE
No. C60283
CIVIL
STATE OF CALIFORNIA

APPROVED CHANGES

NO.	DESCRIPTION	APPV'D	DATE

BENCH MARK

Description: BRASS DISC STAMPED "C.O.S. B.M. D-22"
Location: WESTERLY TOP OF CURB OF CATCH BASIN, SOUTH SIDE OCEANSIDE BLVD, 275' WESTERLY OF INTERSECTION OF OCEANSIDE BLVD & BEVERLY GLEN
Record From: ROS 17271
Elev: 296.94 Datum: NGVD 29 (MSL)

WDID NO. N/A

SHEET 11 | CITY OF OCEANSIDE ENGINEERING DIVISION | 27 SHEETS

IMPROVEMENT PLAN FOR: CIP PROJECT NO. 11-00050

COLLEGE BOULEVARD
OCEANSIDE, CALIFORNIA
STA 22+00 TO STA 27+00

APPROVED

CITY ENGINEER SCOTT O. SMITH RCE 58655 DATE

ENGINEER OF WORK
TIMOTHY M. THIELE R.C.E. 60283
CHECKED BY:
APPROVAL DATE:
PLAN NUMBER
R14-00011

SOURCE: RBF and NV5

DUDEK

FIGURE 3-2d
College Boulevard Improvements

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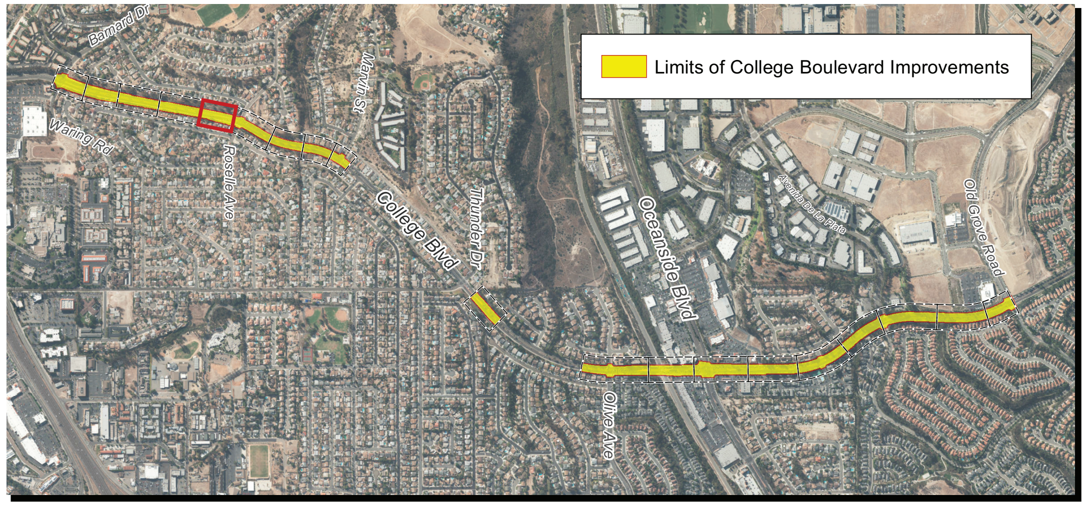

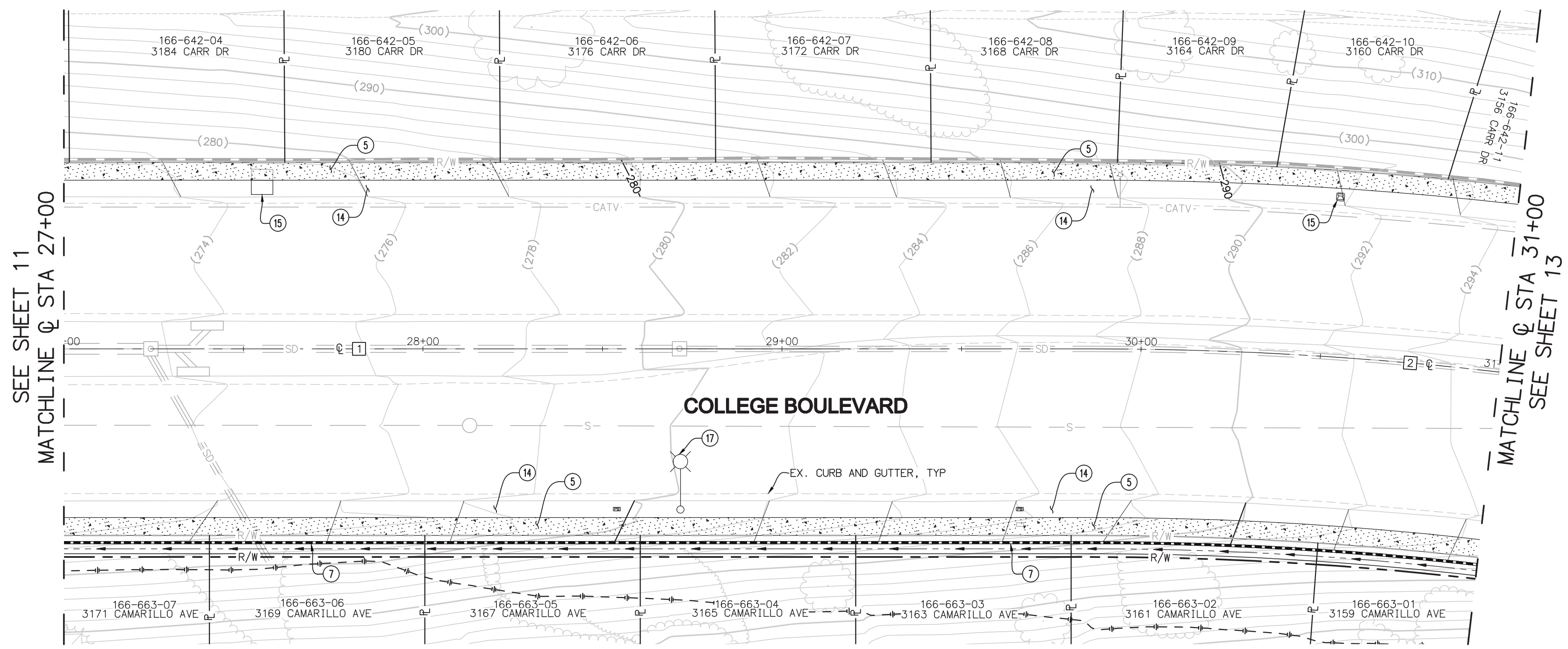

CONSTRUCTION NOTES

5. CONSTRUCT 4" PCC SIDEWALK PER SDRSD G-7, G-9, AND G-10.
7. CONSTRUCT RETAINING WALL PER RETAINING WALL PLANS.
14. PARKWAY PLANTING PER LANDSCAPE PLAN.
15. DRY UTILITIES TO BE RELOCATED BY OTHERS.
17. PROPOSED LIGHT POLE, CONSTRUCT PER SDRSD E-1.

SCALE: 1"=20'

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REGISTERED PROFESSIONAL ENGINEER TIMOTHY M. THIELE No. C60283 CIVIL STATE OF CALIFORNIA

APPROVED CHANGES

NO.	DESCRIPTION	APPV'D	DATE

BENCH MARK
Description: BRASS DISC STAMPED "C.O.S. B.M. D-22"
Location: WESTERLY TOP OF CURB OF CATCH BASIN, SOUTH SIDE OCEANSIDE BLVD, 275' WESTERLY OF INTERSECTION OF OCEANSIDE BLVD & BEVERLY GLEN
Record From: ROS 17271
Elev: 296.94 Datum: NGVD 29 (MSL)

WDID NO. N/A
SHEET 12 | CITY OF OCEANSIDE ENGINEERING DIVISION | 27 SHEETS
IMPROVEMENT PLAN FOR: CIP PROJECT NO. 11-00050
COLLEGE BOULEVARD
OCEANSIDE, CALIFORNIA
STA 27+00 TO STA 31+00
APPROVED
CITY ENGINEER SCOTT O. SMITH RCE 58655 DATE
ENGINEER OF WORK: TIMOTHY M. THIELE R.C.E. 60283
CHECKED BY:
APPROVAL DATE:
PLAN NUMBER R14-00011

SOURCE: RBF and NV5

DUDEK

FIGURE 3-2e
College Boulevard Improvements

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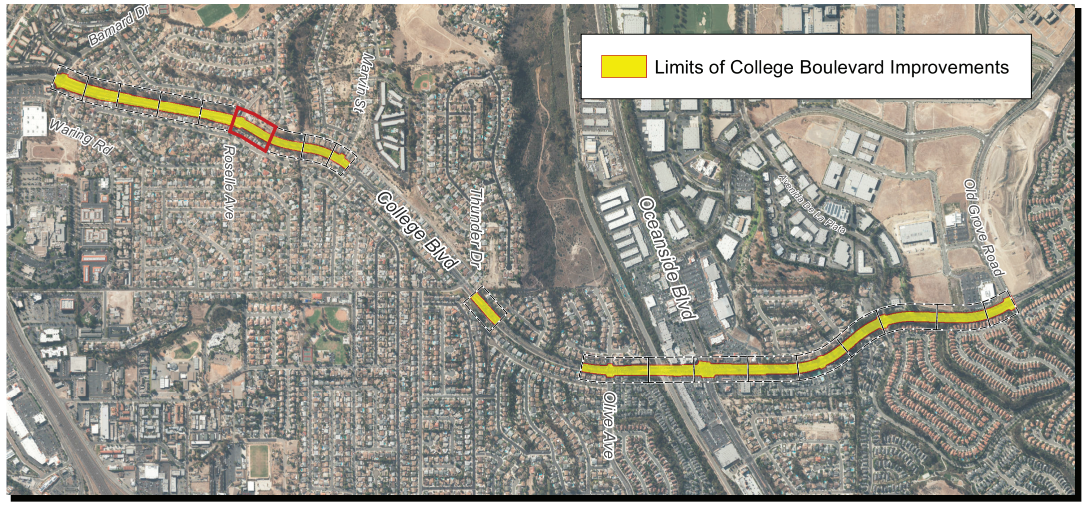
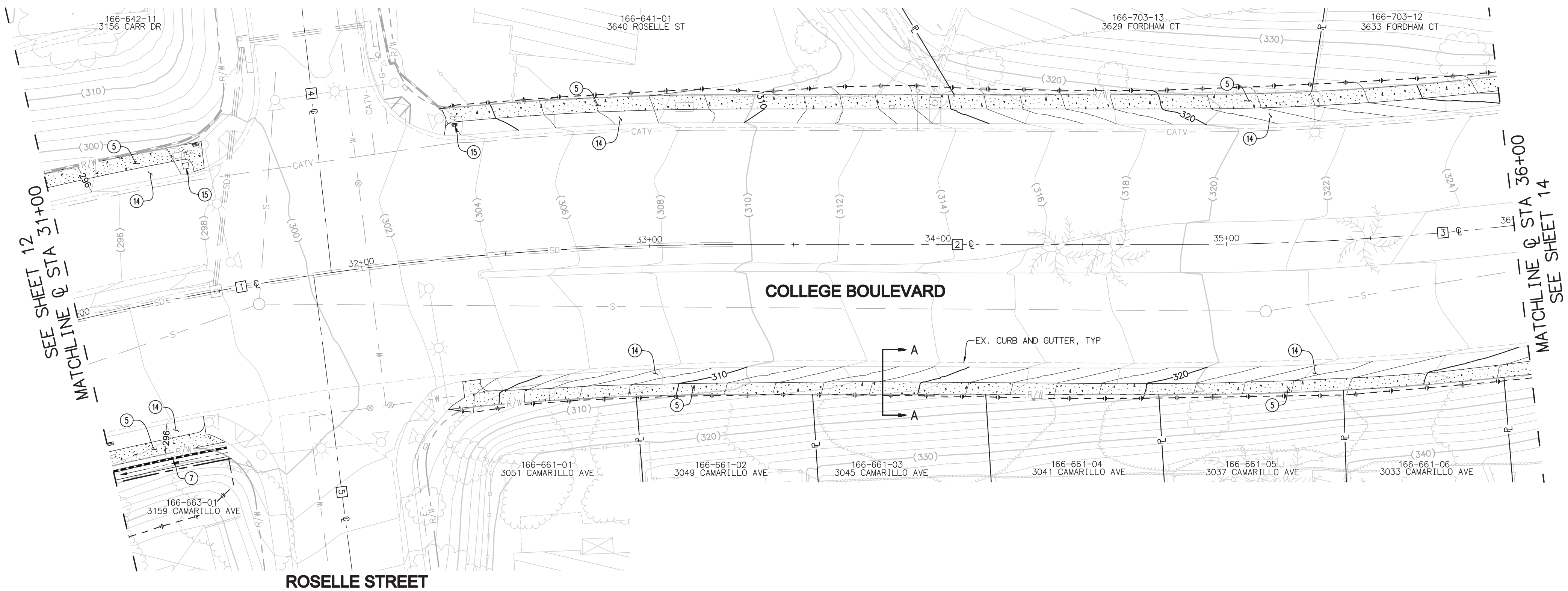
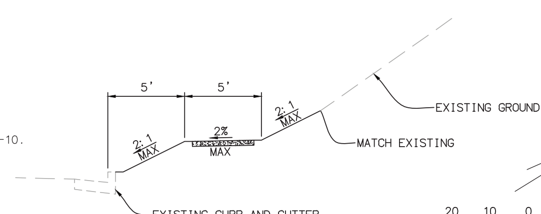




CONSTRUCTION NOTES

(5) CONSTRUCT 4" PCC SIDEWALK PER SDRSD G-7, G-9, AND G-10.
(7) CONSTRUCT RETAINING WALL PER RETAINING WALL PLANS.
(14) PARKWAY PLANTING PER LANDSCAPE PLAN.
(15) DRY UTILITIES TO BE RELOCATED BY OTHERS.



SECTION A-A

20 10 0 20 40 60
SCALE: 1"=20'

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REGISTERED PROFESSIONAL ENGINEER
TIMOTHY M. THIELE
No. C60283
CIVIL
STATE OF CALIFORNIA

APPROVED CHANGES

NO.	DESCRIPTION	APPV'D	DATE

BENCH MARK
Description: BRASS DISC STAMPED "C.O.S. B.M. D-22"
Location: WESTERLY TOP OF CURB OF CATCH BASIN, SOUTH SIDE OCEANSIDE BLVD, 275' WESTERLY OF INTERSECTION OF OCEANSIDE BLVD & BEVERLY GLEN
Record From: ROS 17271
Elev: 296.94 Datum: NGVD 29 (MSL)

WDID NO. N/A
SHEET 13
CITY OF OCEANSIDE ENGINEERING DIVISION
27 SHEETS
IMPROVEMENT PLAN FOR: CIP PROJECT NO. 11-00050
COLLEGE BOULEVARD
OCEANSIDE, CALIFORNIA
STA 31+00 TO STA 36+00
APPROVED
CITY ENGINEER SCOTT O. SMITH RCE 58655 DATE
ENGINEER OF WORK CHECKED BY: PLAN NUMBER
TIMOTHY M. THIELE R.C.E. 60283 APPROVAL DATE: R14-00011

SOURCE: RBF and NV5

DUDEK

FIGURE 3-2f
College Boulevard Improvements

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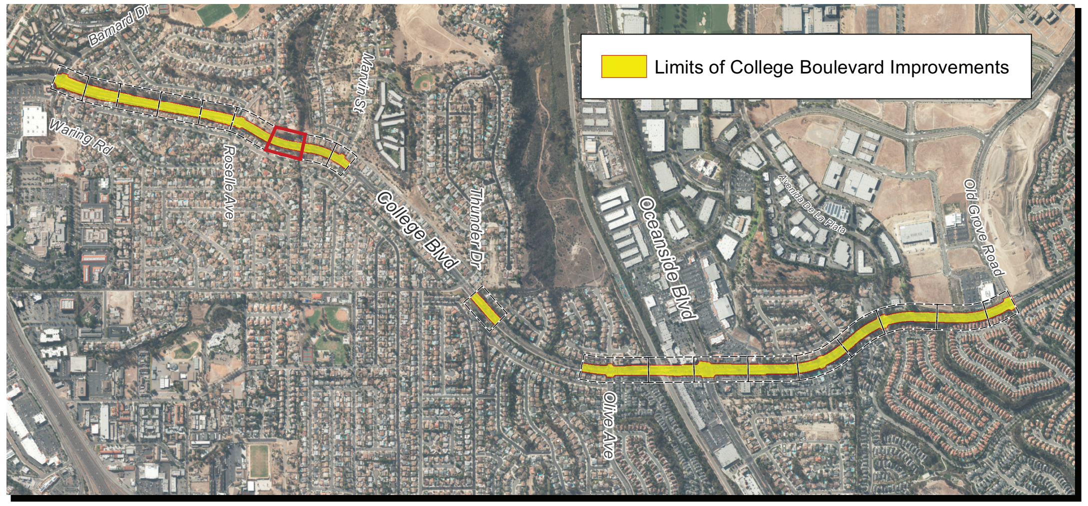
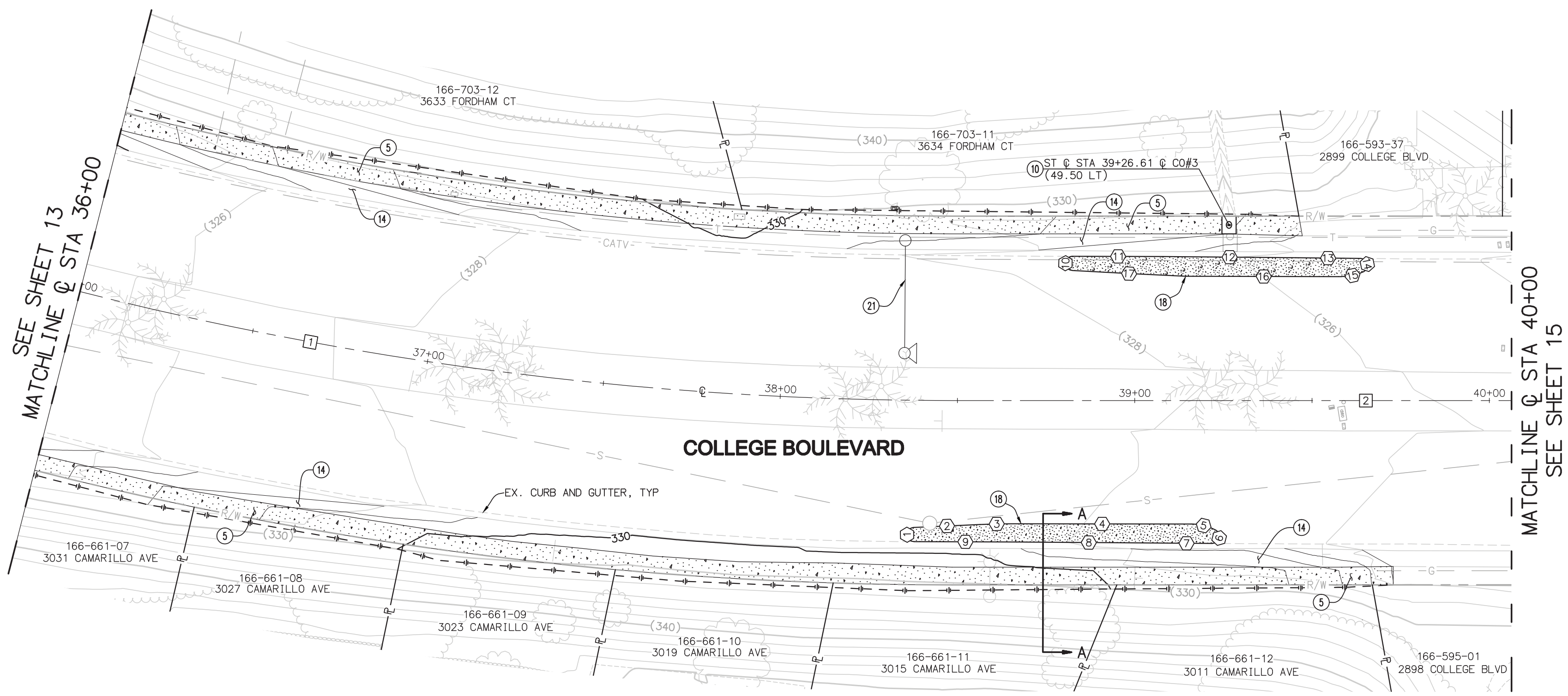
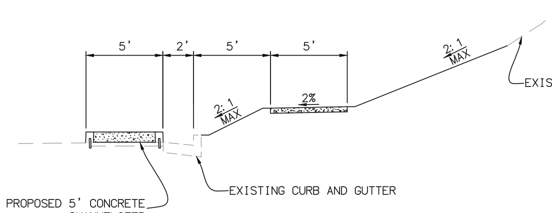




CONSTRUCTION NOTES

5. CONSTRUCT 4" PCC SIDEWALK PER SDRSD G-7, G-9, AND G-10.
10. CONSTRUCT STORM DRAIN CLEANOUT, TYPE "A4", PER SDRSD D-9. CONNECT TO EXISTING STORM DRAIN.
14. PARKWAY PLANTING PER LANDSCAPE PLAN.
18. CONSTRUCT 8" MEDIAN CURB PER DETAIL 4 ON SHEET 3.
21. PROPOSED POLE FOR W3-3 SIGN AND WARNING BEACONS.



SECTION A-A

SCALE: 1"=20'

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REGISTERED PROFESSIONAL ENGINEER
TIMOTHY M. THIELE
No. C60283
CIVIL
STATE OF CALIFORNIA

APPROVED CHANGES

NO.	DESCRIPTION	APPV'D	DATE

BENCH MARK

Description: BRASS DISC STAMPED "C.O.S. B.M. D-22"
Location: WESTERLY TOP OF CURB OF CATCH BASIN, SOUTH SIDE OCEANSIDE BLVD, 275' WESTERLY OF INTERSECTION OF OCEANSIDE BLVD & BEVERLY GLEN
Record From: ROS 17271
Elev: 296.94 Datum: NGVD 29 (MSL)

WDID NO. N/A

SHEET 14 | CITY OF OCEANSIDE ENGINEERING DIVISION | 27 SHEETS

IMPROVEMENT PLAN FOR: CIP PROJECT NO. 11-00050

COLLEGE BOULEVARD
OCEANSIDE, CALIFORNIA
STA 36+00 TO STA 40+00

APPROVED

CITY ENGINEER SCOTT O. SMITH RCE 58655 DATE

ENGINEER OF WORK: TIMOTHY M. THIELE R.C.E. 60283
CHECKED BY:
APPROVAL DATE:
PLAN NUMBER R14-00011

DUDEK

SOURCE: RBF and NV5

FIGURE 3-2g
College Boulevard Improvements

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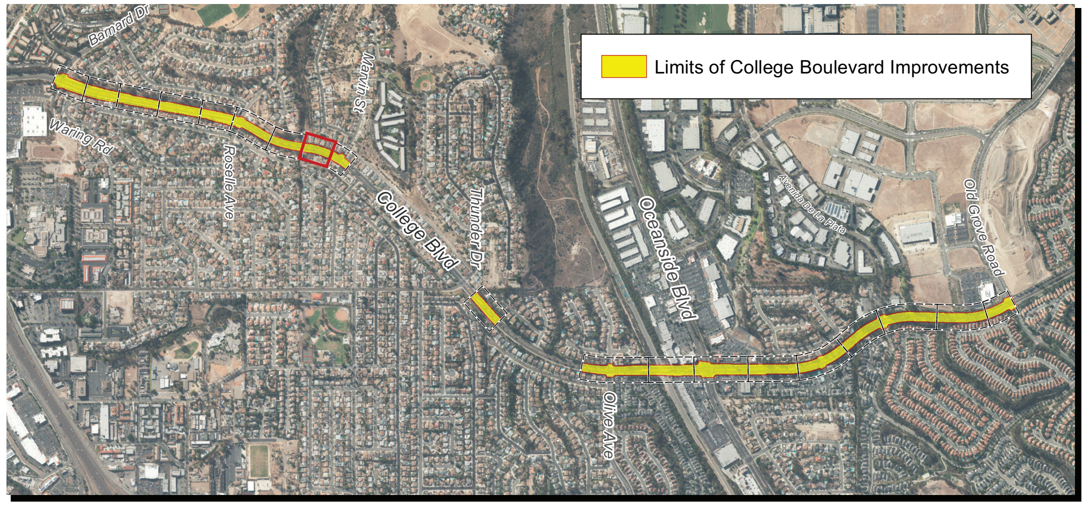
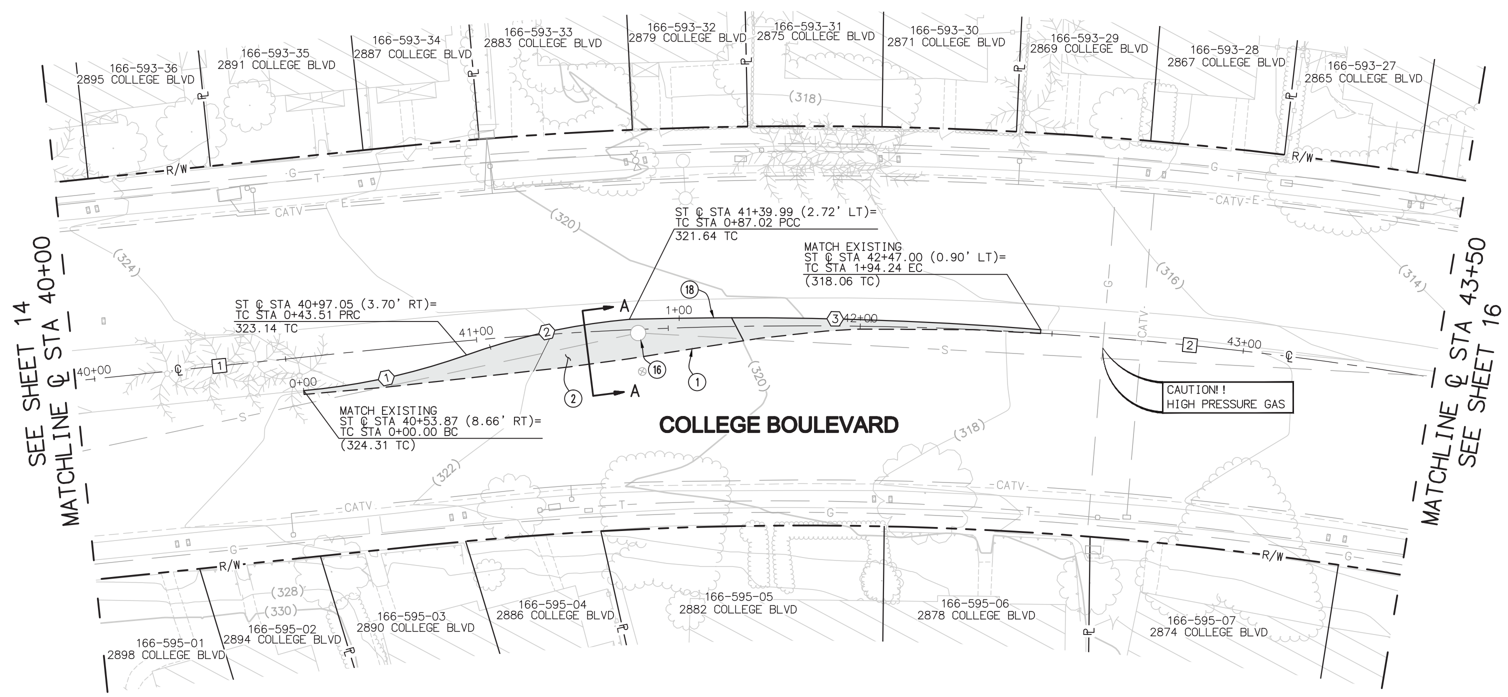
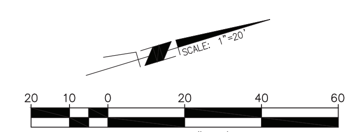
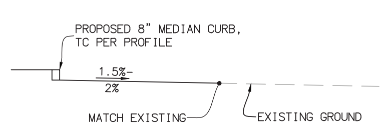






CONSTRUCTION NOTES

1. PAVEMENT JOINT PER DETAIL 2 ON SHEET 3.
2. CONSTRUCT 7" AC PAVEMENT OVER 10" CLASS II AGGREGATE BASE.
16. ADJUST TO GRADE.
18. CONSTRUCT 8" MEDIAN CURB PER DETAIL 4 ON SHEET 3.



SECTION A-A

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REGISTERED PROFESSIONAL ENGINEER
TIMOTHY M. THIELE
No. C60283
CIVIL
STATE OF CALIFORNIA

APPROVED CHANGES

NO.	DESCRIPTION	APPV'D	DATE

BENCH MARK

Description: BRASS DISC STAMPED "C.O.S. B.M. D-22"
Location: WESTERLY TOP OF CURB OF CATCH BASIN, SOUTH SIDE OCEANSIDE BLVD, 275' WESTERLY OF INTERSECTION OF OCEANSIDE BLVD & BEVERLY GLEN
Record From: ROS 17271
Elev: 296.94 Datum: NGVD 29 (MSL)

WDID NO. N/A

SHEET 15 | CITY OF OCEANSIDE ENGINEERING DIVISION | 27 SHEETS

IMPROVEMENT PLAN FOR: CIP PROJECT NO. 11-00050

COLLEGE BOULEVARD
OCEANSIDE, CALIFORNIA
STA 40+00 TO STA 43+50

APPROVED

CITY ENGINEER SCOTT O. SMITH RCE 58655 DATE

ENGINEER OF WORK: TIMOTHY M. THIELE R.C.E. 60283
CHECKED BY:
APPROVAL DATE:
PLAN NUMBER R14-00011

SOURCE: RBF and NV5

DUDEK

FIGURE 3-2h
College Boulevard Improvements

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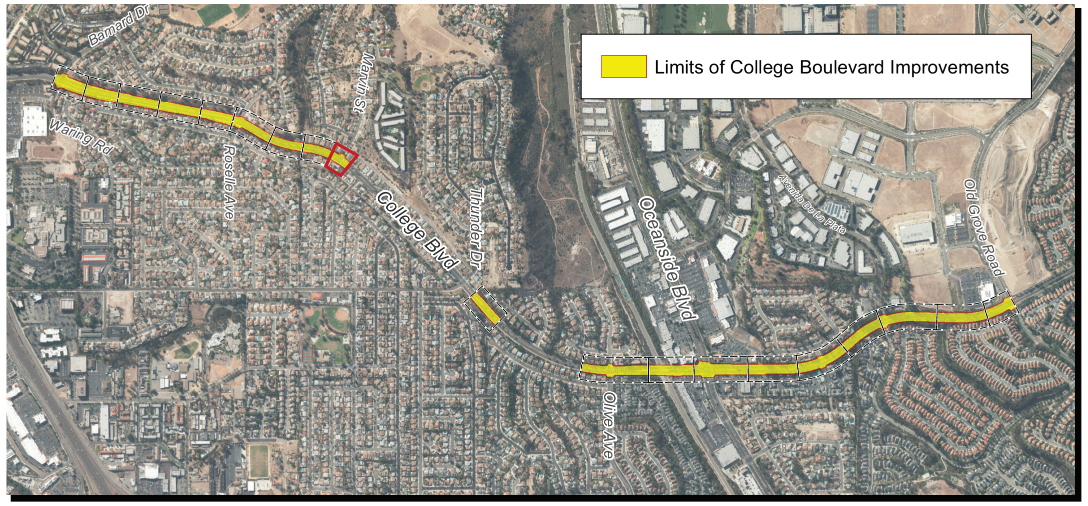

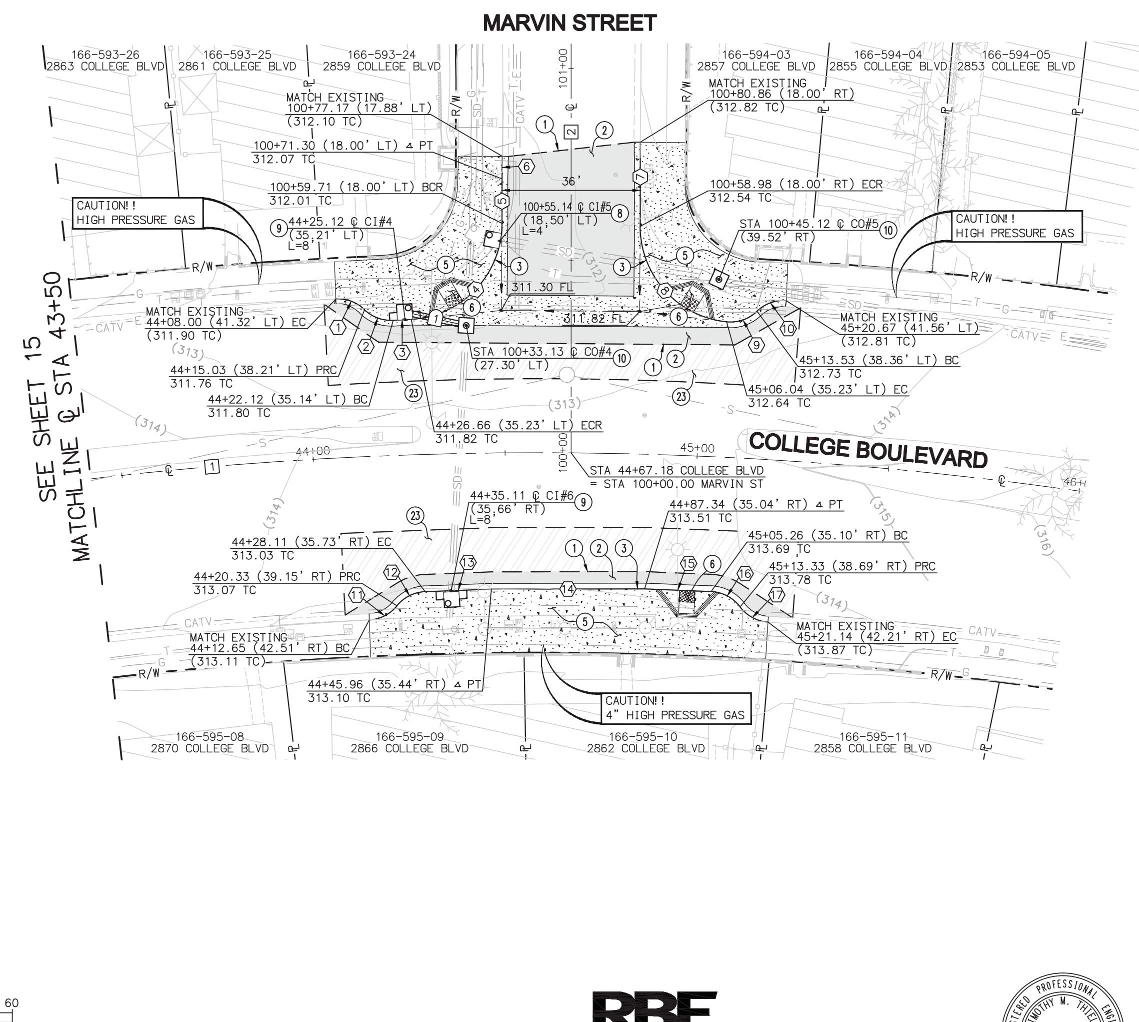

CONSTRUCTION NOTES

1. PAVEMENT JOINT PER DETAIL 2 ON SHEET 3.
2. CONSTRUCT 7" AC PAVEMENT OVER 10" CLASS II AGGREGATE BASE.
3. CONSTRUCT 6" CURB & GUTTER TYPE 'G' PER DETAIL 3 ON SHEET 3.
5. CONSTRUCT 4" PCC SIDEWALK PER SDRSD G-7, G-9, AND G-10.
6. CONSTRUCT CURB RAMP TYPE 'A' PER SDRSD G-27 WITH DARK GRAY TRUNCATED DOMES.
8. CONSTRUCT CURB INLET TYPE 'B-1' PER SDRSD D-2. LENGTH PER PLAN.
9. CONSTRUCT CURB INLET TYPE 'B-2' PER SDRSD D-2. LENGTH PER PLAN.
10. CONSTRUCT STORM DRAIN CLEANOUT, TYPE 'A4', PER SDRSD D-9. CONNECT TO EXISTING STORM DRAIN.
23. 2" GRIND AND CONFORM TO MATCH EXISTING PAVEMENT

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APPROVED CHANGES

NO.	DESCRIPTION	APPV'D	DATE

BENCH MARK
Description: BRASS DISC STAMPED "C.O.S. B.M. D-22"
Location: WESTERLY TOP OF CURB OF CATCH BASIN, SOUTH SIDE OCEANSIDE BLVD, 275' WESTERLY OF INTERSECTION OF OCEANSIDE BLVD & BEVERLY GLEN
Record From: ROS 17271
Elev: 296.94 Datum: NGVD 29 (MSL)

WDID NO. N/A
SHEET 16 — CITY OF OCEANSIDE ENGINEERING DIVISION — 27 SHEETS
IMPROVEMENT PLAN FOR: CIP PROJECT NO. 11-00050
COLLEGE BOULEVARD
OCEANSIDE, CALIFORNIA
STA 43+50 TO STA 46+00
APPROVED
CITY ENGINEER SCOTT O. SMITH RCE 58655 DATE
ENGINEER OF WORK: TIMOTHY M. THIELE R.C.E. 60283
CHECKED BY: APPROVAL DATE: PLAN NUMBER R14-00011

SOURCE: RBF and NV5

DUDEK

FIGURE 3-2i
College Boulevard Improvements

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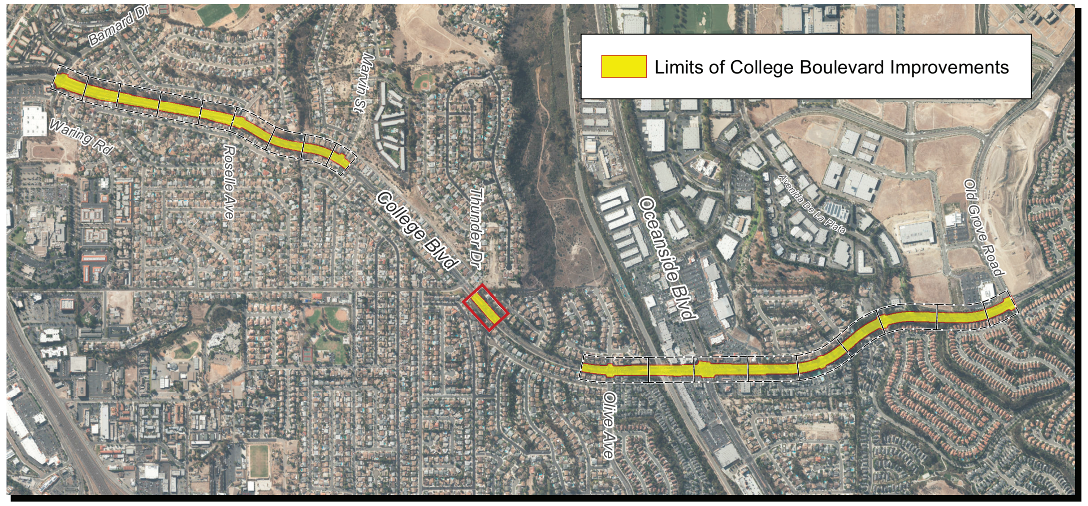
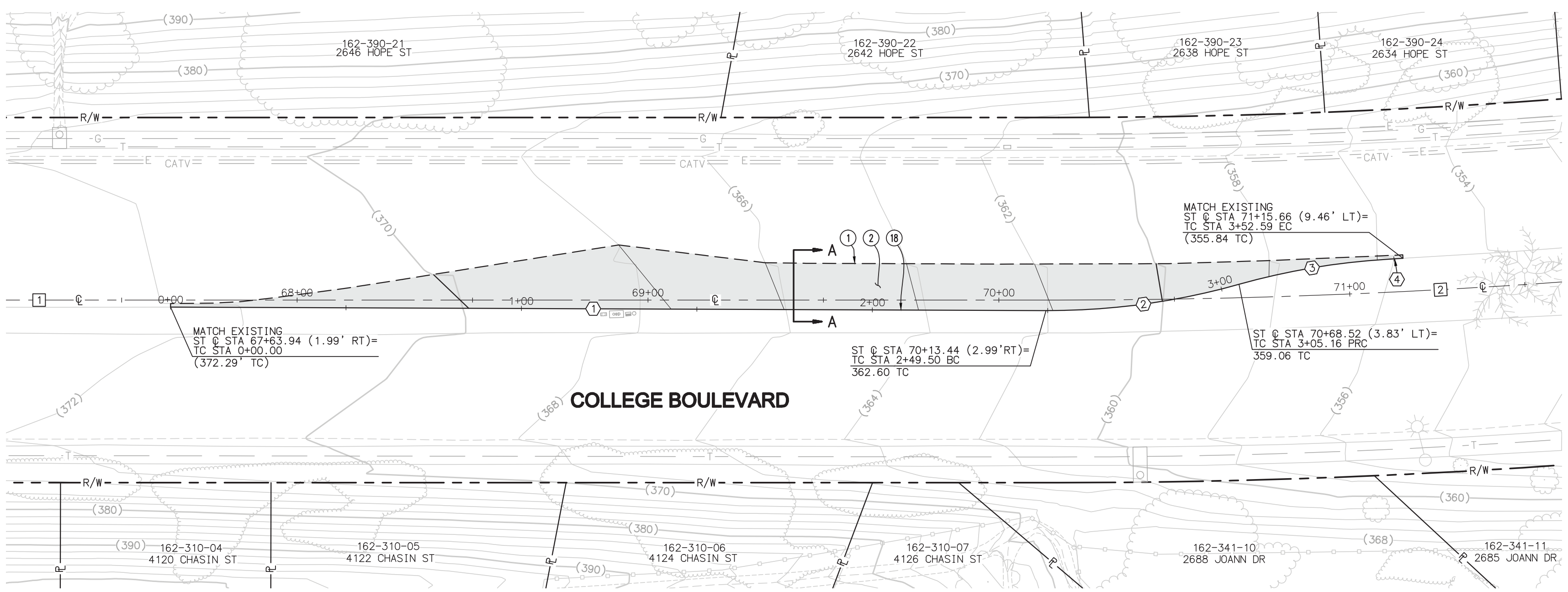
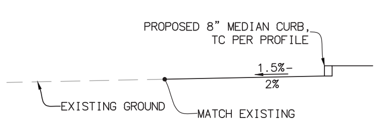




CONSTRUCTION NOTES

1. PAVEMENT JOINT PER DETAIL 2 ON SHEET 3.
2. CONSTRUCT 7" AC PAVEMENT OVER 10" CLASS II AGGREGATE BASE.
18. CONSTRUCT 8" MEDIAN CURB PER DETAIL 4 ON SHEET 3.



SECTION A-A

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A [redacted] Company

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REGISTERED PROFESSIONAL ENGINEER
TIMOTHY M. THIELE
No. C60283
CIVIL
STATE OF CALIFORNIA

APPROVED CHANGES

NO.	DESCRIPTION	APPV'D	DATE

SCALE: 1"=20'

BENCH MARK

Description: BRASS DISC STAMPED "C.O.S. B.M. D-22"
Location: WESTERLY TOP OF CURB OF CATCH BASIN, SOUTH SIDE OCEANSIDE BLVD, 275' WESTERLY OF INTERSECTION OF OCEANSIDE BLVD & BEVERLY GLEN
Record From: ROS 17271
Elev: 296.94 Datum: NGVD 29 (MSL)

WDID NO. N/A

SHEET 17 | CITY OF OCEANSIDE ENGINEERING DIVISION | 27 SHEETS

IMPROVEMENT PLAN FOR: CIP PROJECT NO. 11-00050

COLLEGE BOULEVARD
OCEANSIDE, CALIFORNIA
STA 67+00 TO STA 71+50

APPROVED

CITY ENGINEER SCOTT O. SMITH RCE 58655 DATE

ENGINEER OF WORK
TIMOTHY M. THIELE R.C.E. 60283
CHECKED BY:
APPROVAL DATE:
PLAN NUMBER R14-00011

SOURCE: RBF and NV5

DUDEK

FIGURE 3-2j
College Boulevard Improvements

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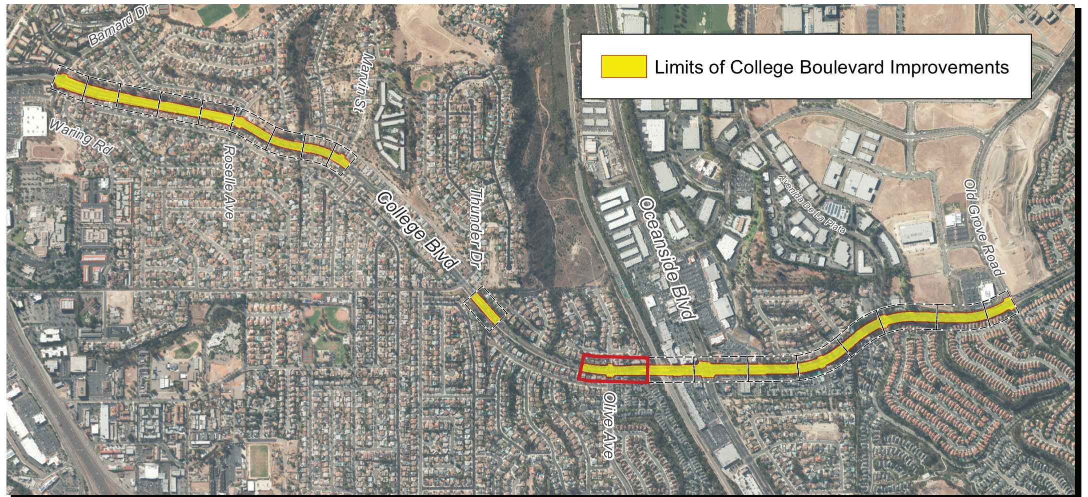
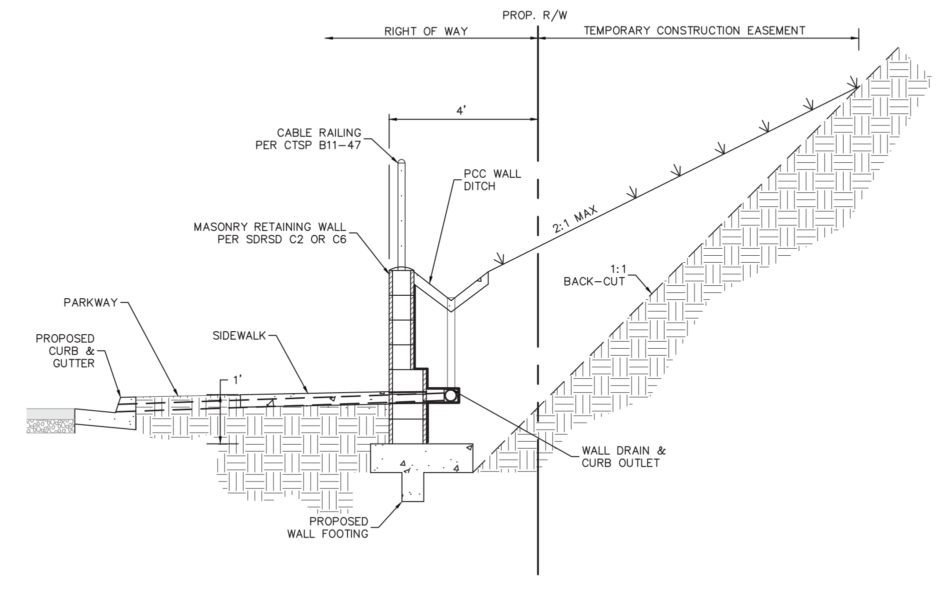
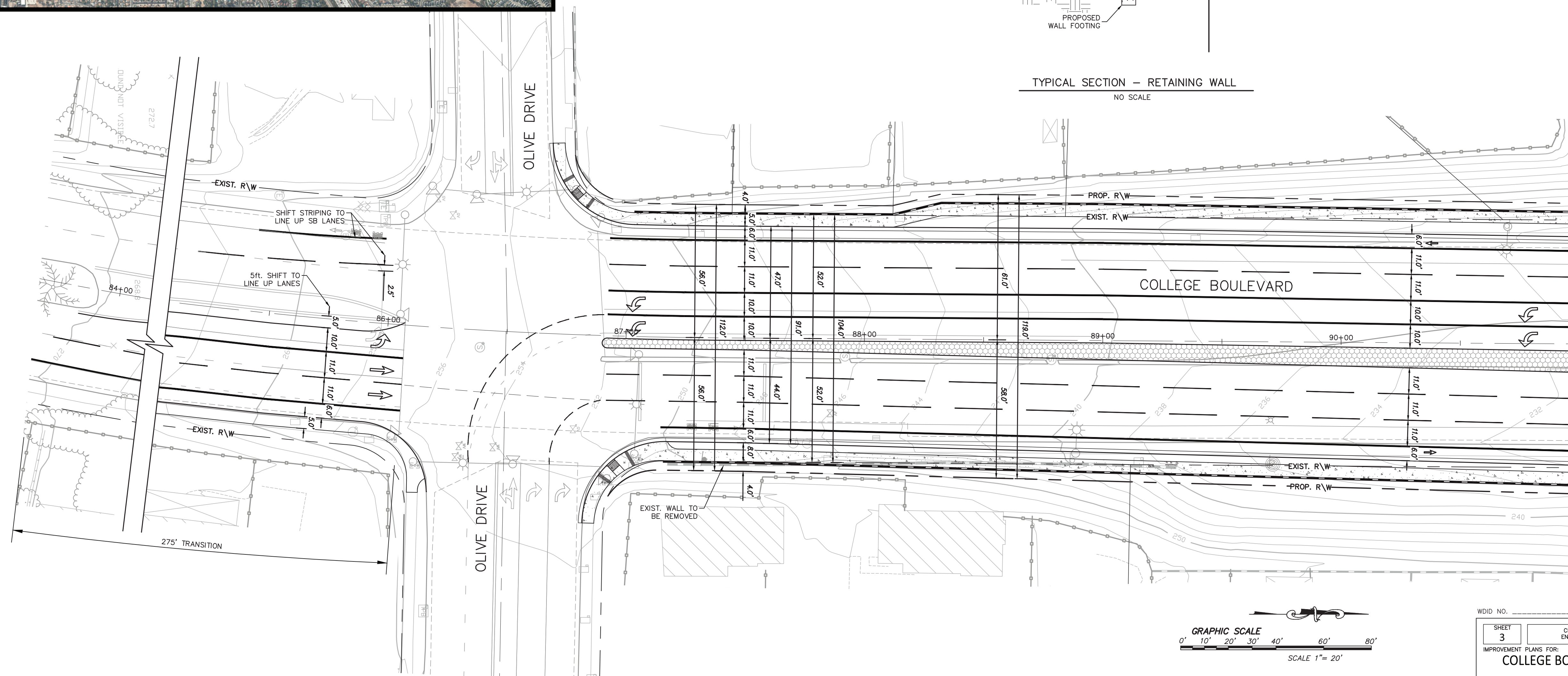




TYPICAL SECTION – RETAINING WALL

NO SCALE



GRAPHIC SCALE

SCALE 1"= 20'

WDID NO.	CIP NO. ##-00000
SHEET 3	CITY OF OCEANSIDE ENGINEERING DIVISION — 11 SHEETS

IMPROVEMENT PLANS FOR:

COLLEGE BOULEVARD WIDENING

IMPROVEMENT PLAN

STA 86+00 TO 91+00

APPROVED

CITY ENGINEER SCOTT O. SMITH R.C.E. 58655 DATE

ENGINEER OF WORK — PHIL R. KERN R.C.E.40831 EXP. 3/31/17

CHECKED BY: APPROVAL DATE: CIP JOB NO R-#####

APPROVED CHANGES:			
NO.	DESCRIPTION	APPV'D	DATE

BENCHMARK:
DESCRIPTION: TBD
LOCATION: TBD
TBD
RECORD FORM: CITY OF OCEANSIDE BM BOOK
ELEV: TBD DATUM: 1970 ADJ.

REGISTERED PROFESSIONAL ENGINEER PHILIP R. KERN 40831 CIVIL STATE OF CALIFORNIA

NV5
15092 AVENUE OF SCIENCE, SUITE 200 SAN DIEGO, CA. 92128 (858)385-0500

PRELIMINARY
NOT FOR CONSTRUCTION

SOURCE: RBF and NV5

DUDEK

FIGURE 3-2k
College Boulevard Improvements

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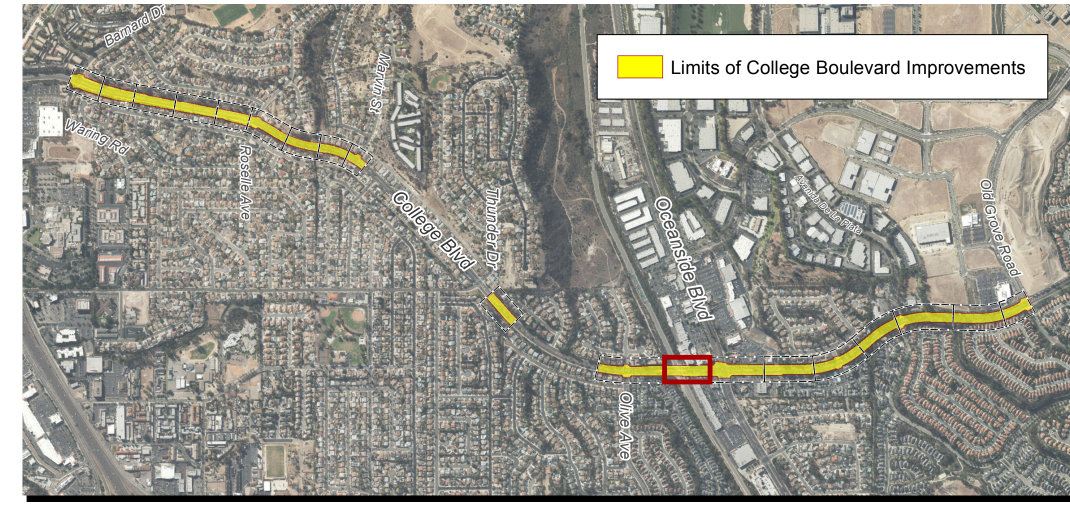

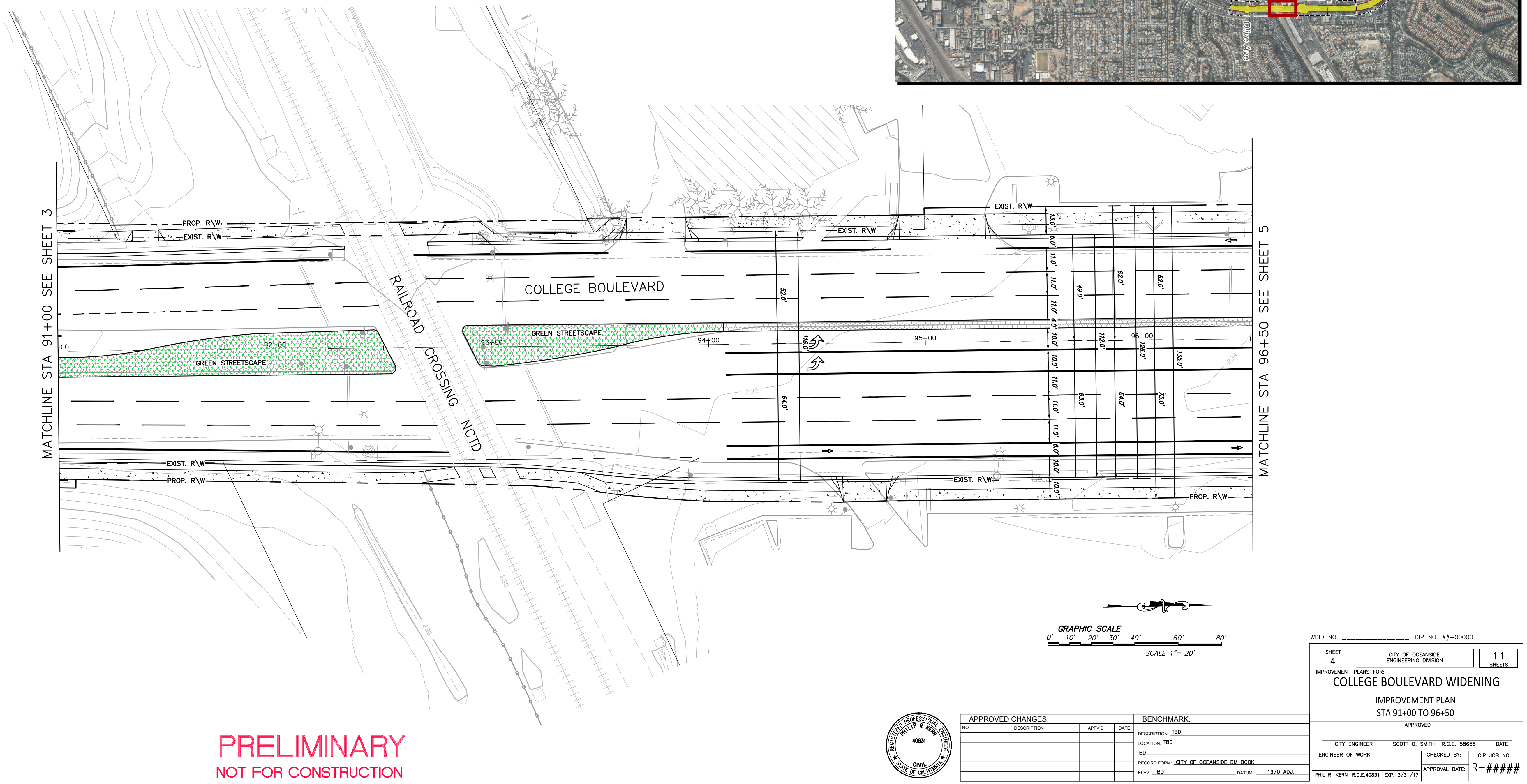

SOURCE: RBF and NV5

FIGURE 3-2I

College Boulevard Improvements

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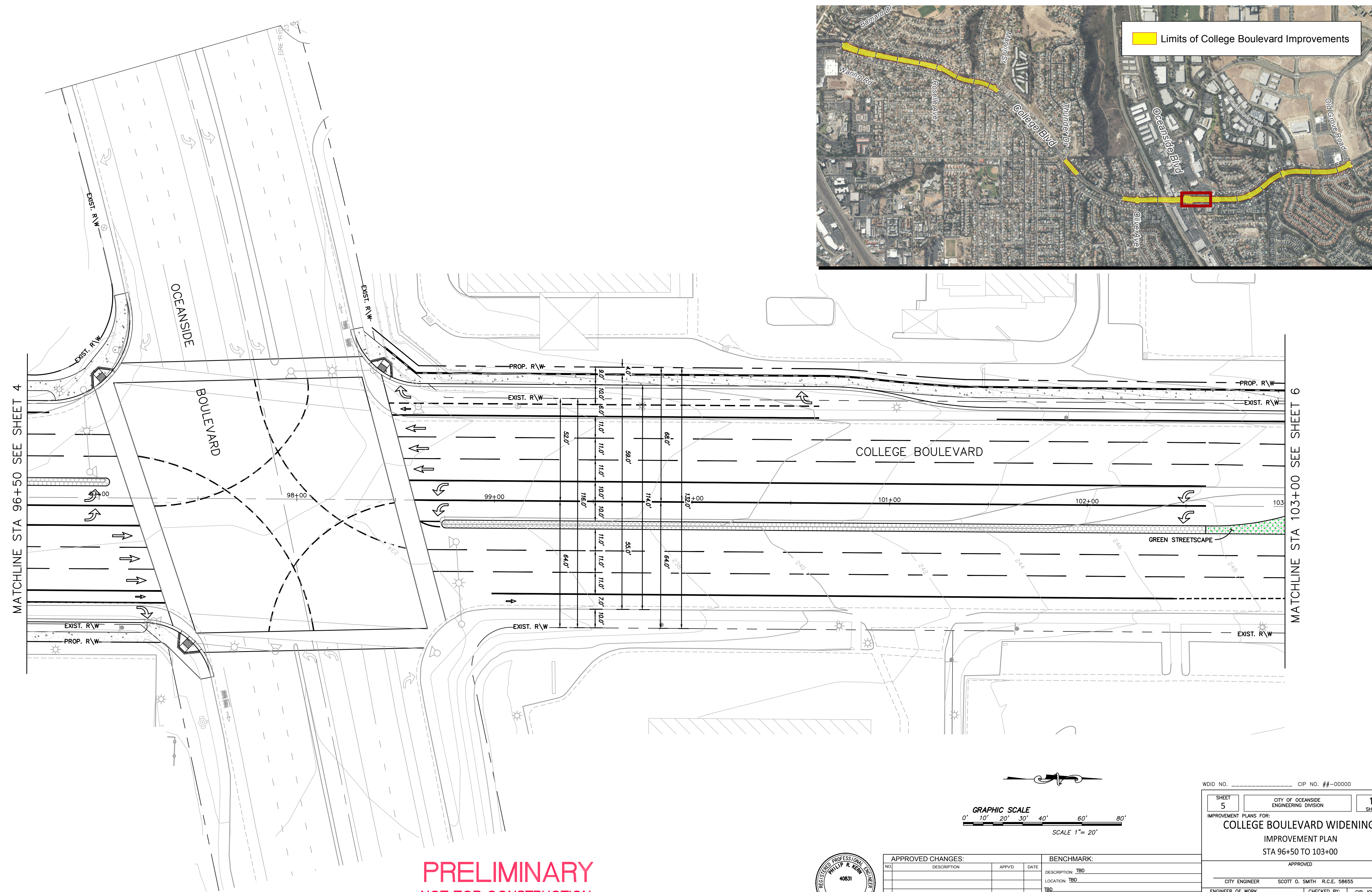

PRELIMINARY
NOT FOR CONSTRUCTION

WDID NO. CIP NO. ##-00000

SHEET 5	CITY OF OCEANSIDE ENGINEERING DIVISION	11 SHEETS

IMPROVEMENT PLANS FOR:
COLLEGE BOULEVARD WIDENING
IMPROVEMENT PLAN
STA 96+50 TO 103+00

APPROVED
CITY ENGINEER SCOTT O. SMITH R.C.E. 58655 DATE
ENGINEER OF WORK PHIL R. KERN R.C.E.40831 EXP. 3/31/17
CHECKED BY: APPROVAL DATE: CIP JOB NO R-#####

APPROVED CHANGES:

NO.	DESCRIPTION	APPVD	DATE

BENCHMARK:
DESCRIPTION: TBD
LOCATION: TBD
TBD
RECORD FORM: CITY OF OCEANSIDE BM BOOK
ELEV: TBD DATUM: 1970 ADJ.

REGISTERED PROFESSIONAL ENGINEER PHILIP R. KERN 40831 CIVIL STATE OF CALIFORNIA

NV5
15092 AVENUE OF SCIENCE, SUITE 200 SAN DIEGO, CA 92128 (858)385-0500

DUDEK

SOURCE: RBF and NV5

FIGURE 3-2m
College Boulevard Improvements

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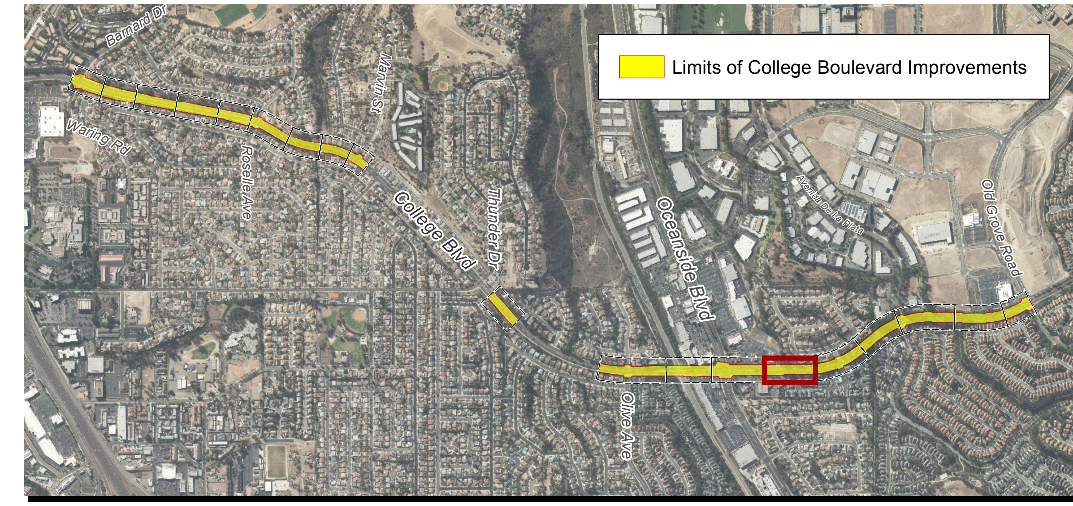

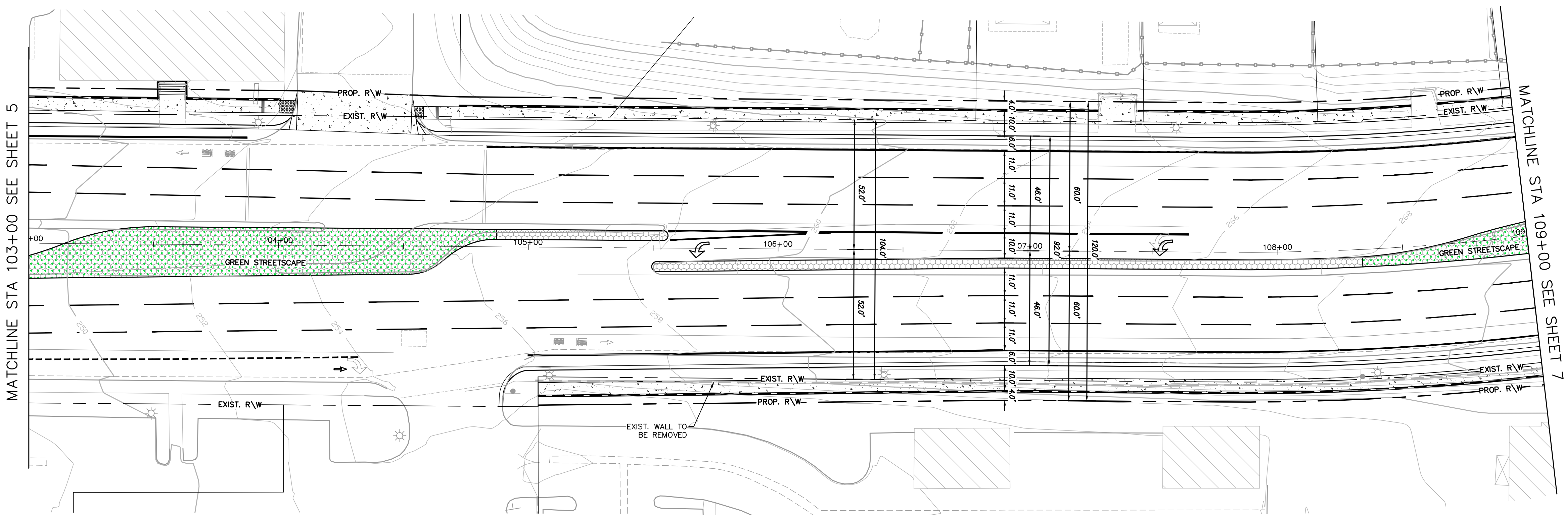

GRAPHIC SCALE

0' 10' 20' 30' 40' 60' 80'

SCALE 1"= 20'

WDID NO. ____________ CIP NO. ##-00000

SHEET 6	CITY OF OCEANSIDE ENGINEERING DIVISION	11 SHEETS

IMPROVEMENT PLANS FOR:

COLLEGE BOULEVARD WIDENING

IMPROVEMENT PLAN

STA 103+00 TO 109+00

APPROVED

CITY ENGINEER SCOTT O. SMITH R.C.E. 58655 DATE

ENGINEER OF WORK

PHIL R. KERN R.C.E.40831 EXP. 3/31/17

CHECKED BY: CIP JOB NO

APPROVAL DATE: R-#####

APPROVED CHANGES:

NO.	DESCRIPTION	APPV'D	DATE

BENCHMARK:

DESCRIPTION: TBD

LOCATION: TBD

TBD

RECORD FORM: CITY OF OCEANSIDE BM BOOK

ELEV: TBD DATUM: 1970 ADJ.

REGISTERED PROFESSIONAL ENGINEER PHILIP R. KERN 40831 CIVIL STATE OF CALIFORNIA

NV5

15092 AVENUE OF SCIENCE, SUITE 200
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PRELIMINARY
NOT FOR CONSTRUCTION

SOURCE: RBF and NV5

DUDEK

FIGURE 3-2n

College Boulevard Improvements

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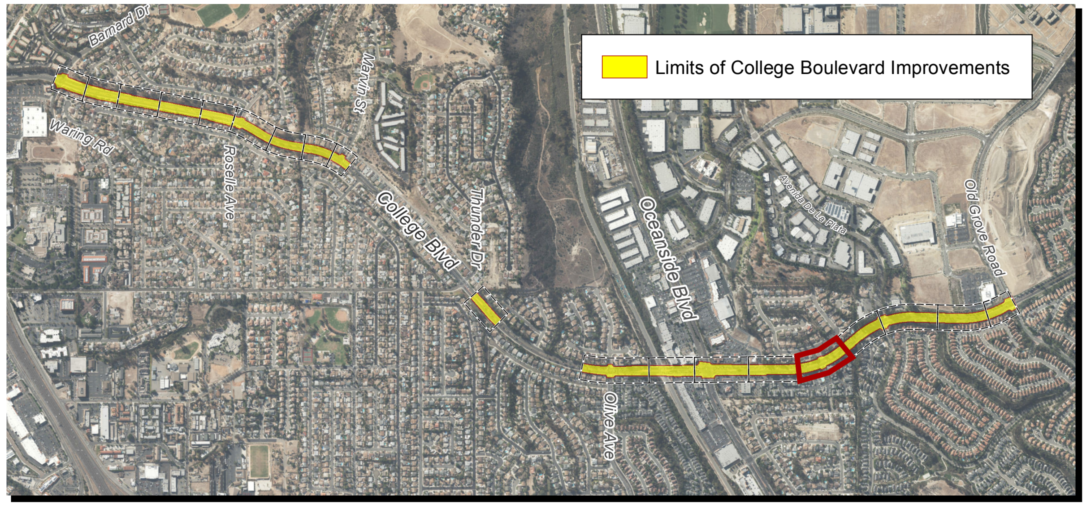

SHEET 7	CITY OF OCEANSIDE ENGINEERING DIVISION	11 SHEETS

WDID NO. CIP NO. ##-00000

IMPROVEMENT PLANS FOR:
COLLEGE BOULEVARD WIDENING
IMPROVEMENT PLAN
STA 109+00 TO 115+00

CITY ENGINEER SCOTT O. SMITH R.C.E. 58655 DATE
ENGINEER OF WORK PHIL R. KERN R.C.E.40831 EXP. 3/31/17
CIP JOB NO R-#####

BENCHMARK:
DESCRIPTION: TBD
LOCATION: TBD
RECORD FORM: CITY OF OCEANSIDE BM BOOK
ELEV: TBD DATUM: 1970 ADJ.

NV5
15092 AVENUE OF SCIENCE, SUITE 200
SAN DIEGO, CA 92128 (858)385-0500

PRELIMINARY
NOT FOR CONSTRUCTION

SOURCE: RBF and NV5

FIGURE 3-2o
College Boulevard Improvements

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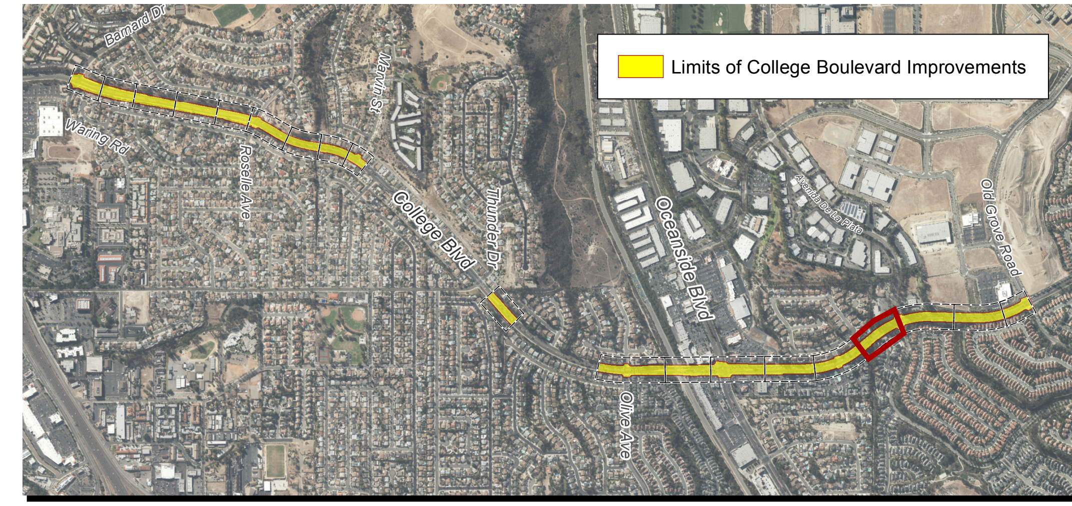

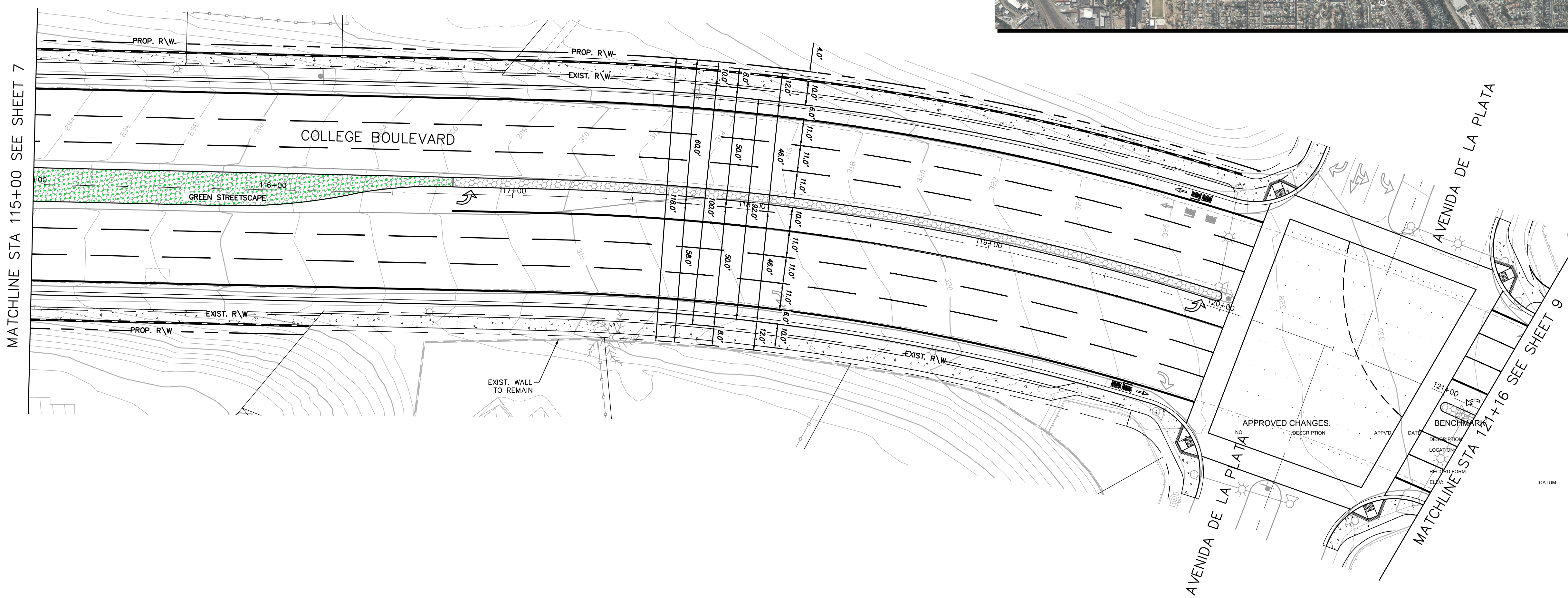

8

GRAPHIC SCALE
0' 10' 20' 30' 40' 60' 80'
SCALE 1"= 20'

WDID NO. ____________ CIP NO. ##-00000

SHEET 8	CITY OF OCEANSIDE ENGINEERING DIVISION	11 SHEETS

IMPROVEMENT PLANS FOR:
COLLEGE BOULEVARD WIDENING
IMPROVEMENT PLAN
STA 115+00 TO 121+16

APPROVED
CITY ENGINEER SCOTT O. SMITH R.C.E. 58655 DATE
ENGINEER OF WORK CHECKED BY: CIP JOB NO
PHIL R. KERN R.C.E.40831 EXP. 3/31/17 APPROVAL DATE: R-#####

REGISTERED PROFESSIONAL ENGINEER PHILIP R. KERN 40831 CIVIL STATE OF CALIFORNIA

APPROVED CHANGES:

NO.	DESCRIPTION	APPV'D	DATE

BENCHMARK:
DESCRIPTION: TBD
LOCATION: TBD
TBD
RECORD FORM: CITY OF OCEANSIDE BM BOOK
ELEV: TBD DATUM: 1970 ADJ.

NV5
15092 AVENUE OF SCIENCE, SUITE 200 SAN DIEGO, CA. 92128 (858)385-0500

PRELIMINARY

DUDEK

SOURCE: RBF and NV5

FIGURE 3-2p
College Boulevard Improvements

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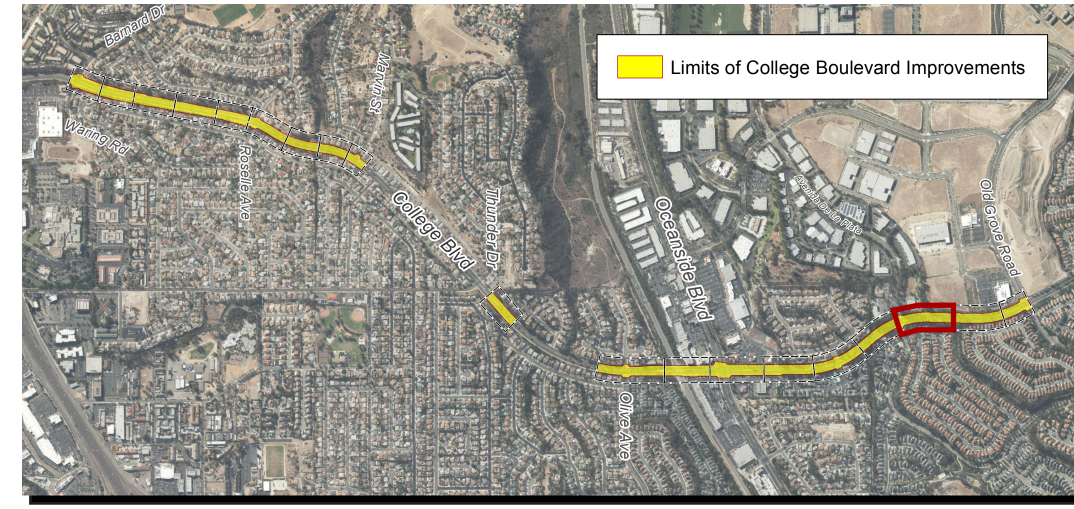

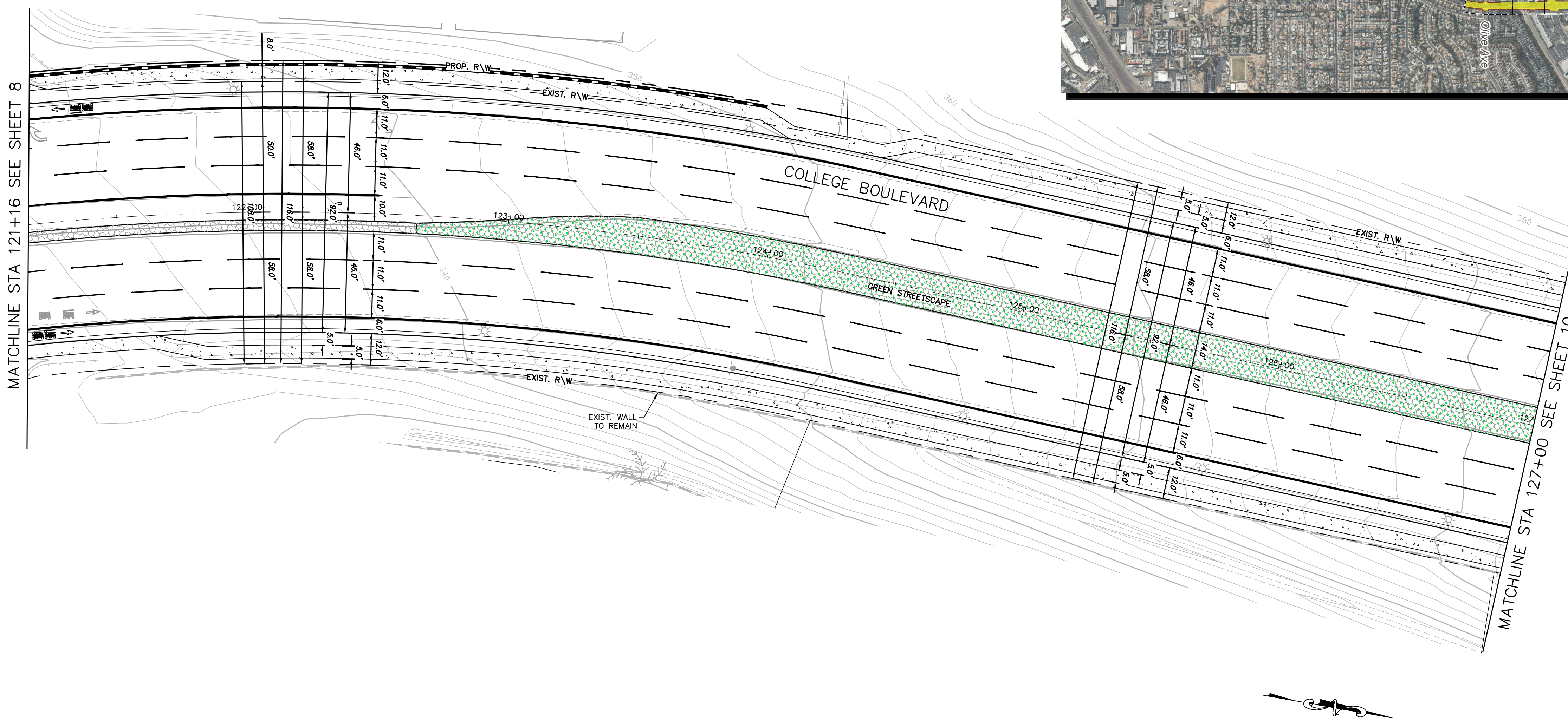

GRAPHIC SCALE
0' 10' 20' 30' 40' 60' 80'
SCALE 1"= 20'

WDID NO. CIP NO. ##-00000

SHEET 9 | CITY OF OCEANSIDE ENGINEERING DIVISION | 11 SHEETS

IMPROVEMENT PLANS FOR:

COLLEGE BOULEVARD WIDENING

IMPROVEMENT PLAN

121+16 - 127+00

APPROVED

CITY ENGINEER SCOTT O. SMITH R.C.E. 58655 DATE

ENGINEER OF WORK

PHIL R. KERN R.C.E.40831 EXP. 3/31/17

CHECKED BY: CIP JOB NO

APPROVAL DATE: R-#####

APPROVED CHANGES:

NO.	DESCRIPTION	APPVD	DATE

BENCHMARK:

DESCRIPTION: TBD
LOCATION: TBD
TBD
RECORD FORM: CITY OF OCEANSIDE BM BOOK
ELEV: TBD DATUM: 1970 ADJ.

REGISTERED PROFESSIONAL ENGINEER PHILIP R. KERN 40831 CIVIL STATE OF CALIFORNIA

NV5
15092 AVENUE OF SCIENCE, SUITE 200
SAN DIEGO, CA. 92128 (858)385-0500

PRELIMINARY
NOT FOR CONSTRUCTION

DUDEK

SOURCE: RBF and NV5

FIGURE 3-2q
College Boulevard Improvements

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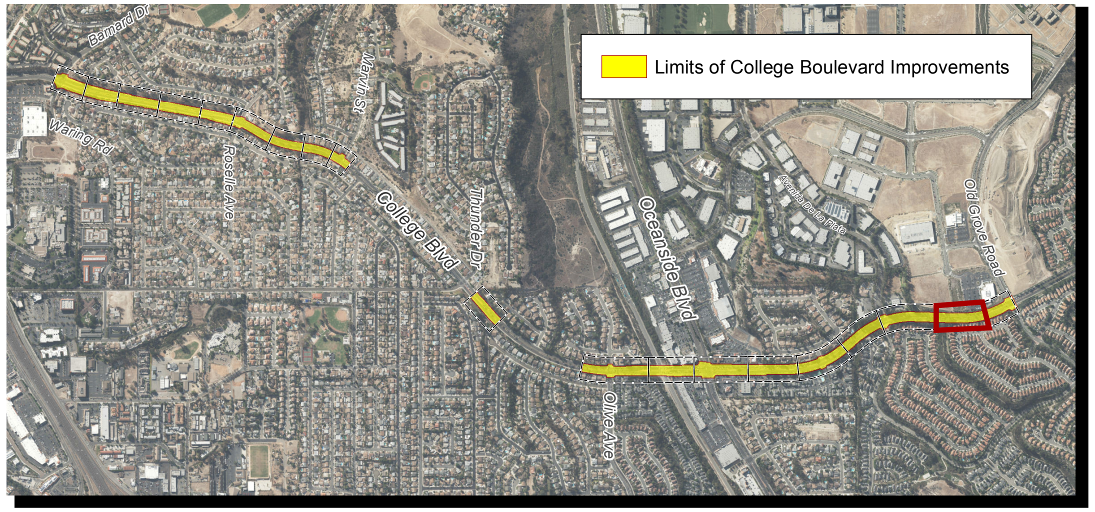

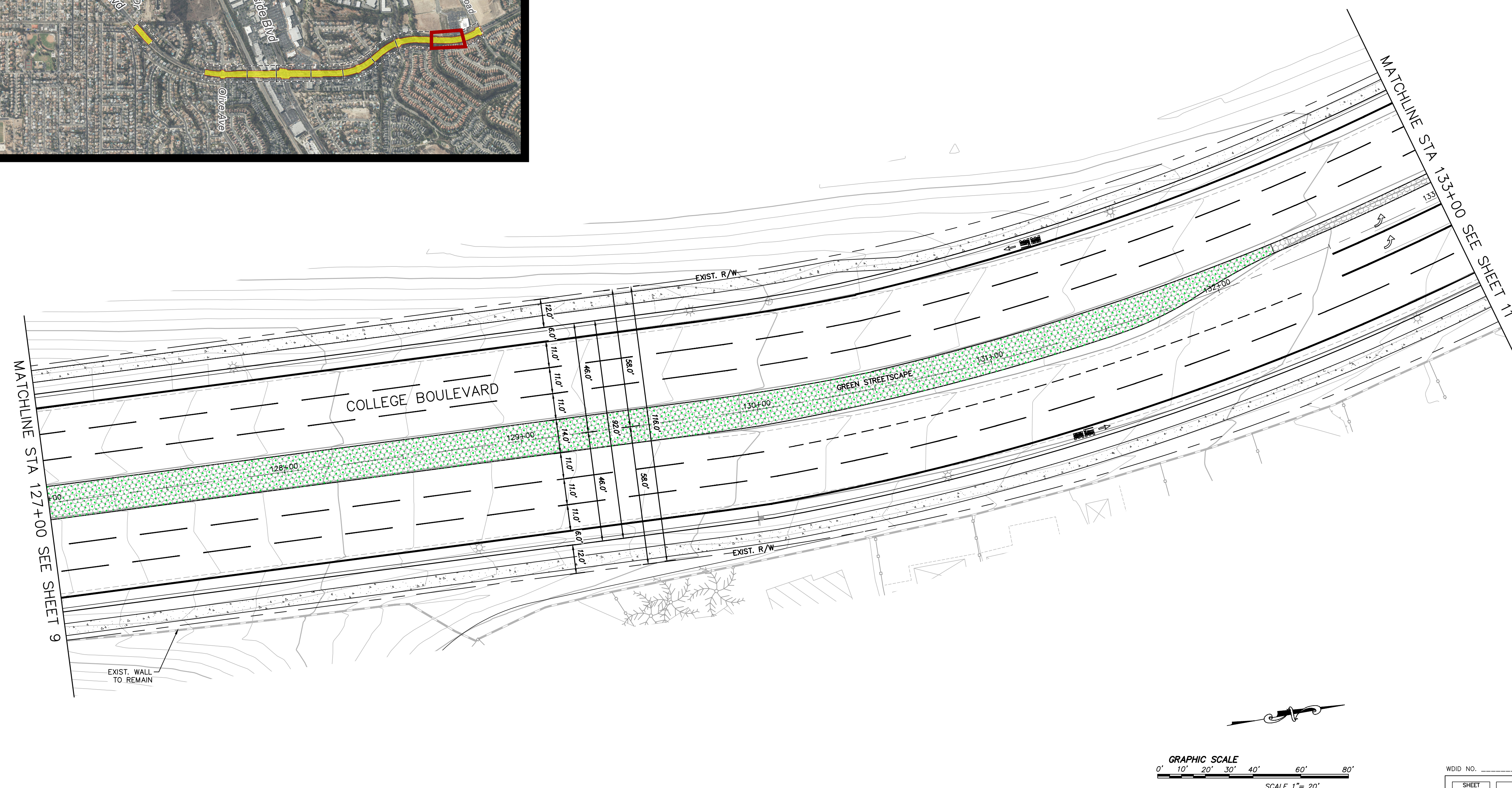

WDID NO. ______________ CIP NO. ##-00000

SHEET 10	CITY OF OCEANSIDE ENGINEERING DIVISION	11 SHEETS

IMPROVEMENT PLANS FOR:

COLLEGE BOULEVARD WIDENING

IMPROVEMENT PLAN

STA 127+00 TO 133+00

APPROVED

CITY ENGINEER SCOTT O. SMITH R.C.E. 58655 DATE

ENGINEER OF WORK: PHIL R. KERN R.C.E.40831 EXP. 3/31/17

CHECKED BY:

APPROVAL DATE:

CIP JOB NO R-#####

REGISTERED PROFESSIONAL ENGINEER PHILIP R. KERN 40831 CIVIL STATE OF CALIFORNIA

APPROVED CHANGES:

NO.	DESCRIPTION	APPV'D	DATE

BENCHMARK:
DESCRIPTION: TBD
LOCATION: TBD
TBD
RECORD FORM: CITY OF OCEANSIDE BM BOOK
ELEV: TBD DATUM: 1970 ADJ.

NV5
15092 AVENUE OF SCIENCE, SUITE 200
SAN DIEGO, CA. 92128 (858)385-0500

PRELIMINARY
NOT FOR CONSTRUCTION

DUDEK

SOURCE: RBF and NV5

FIGURE 3-2r
College Boulevard Improvements

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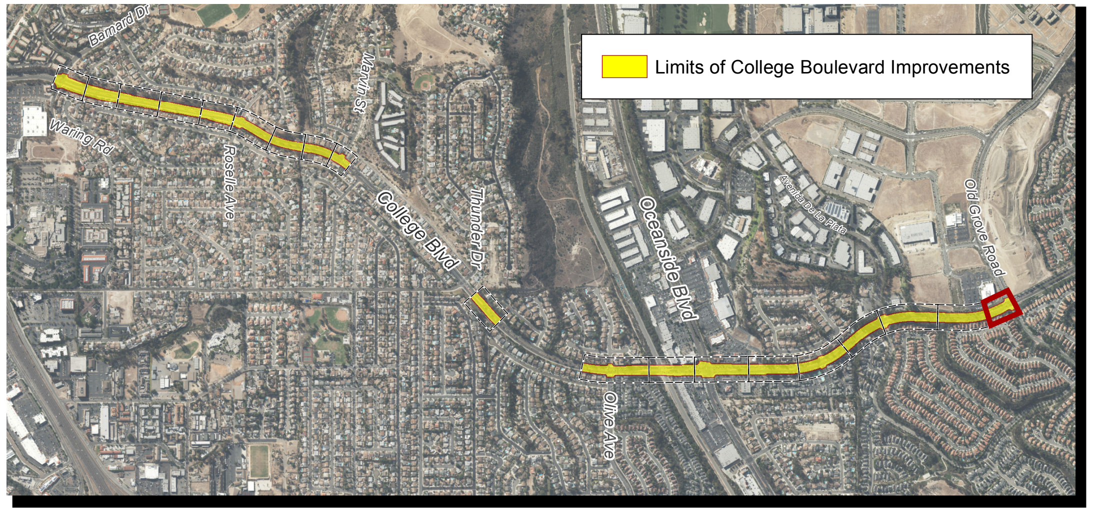

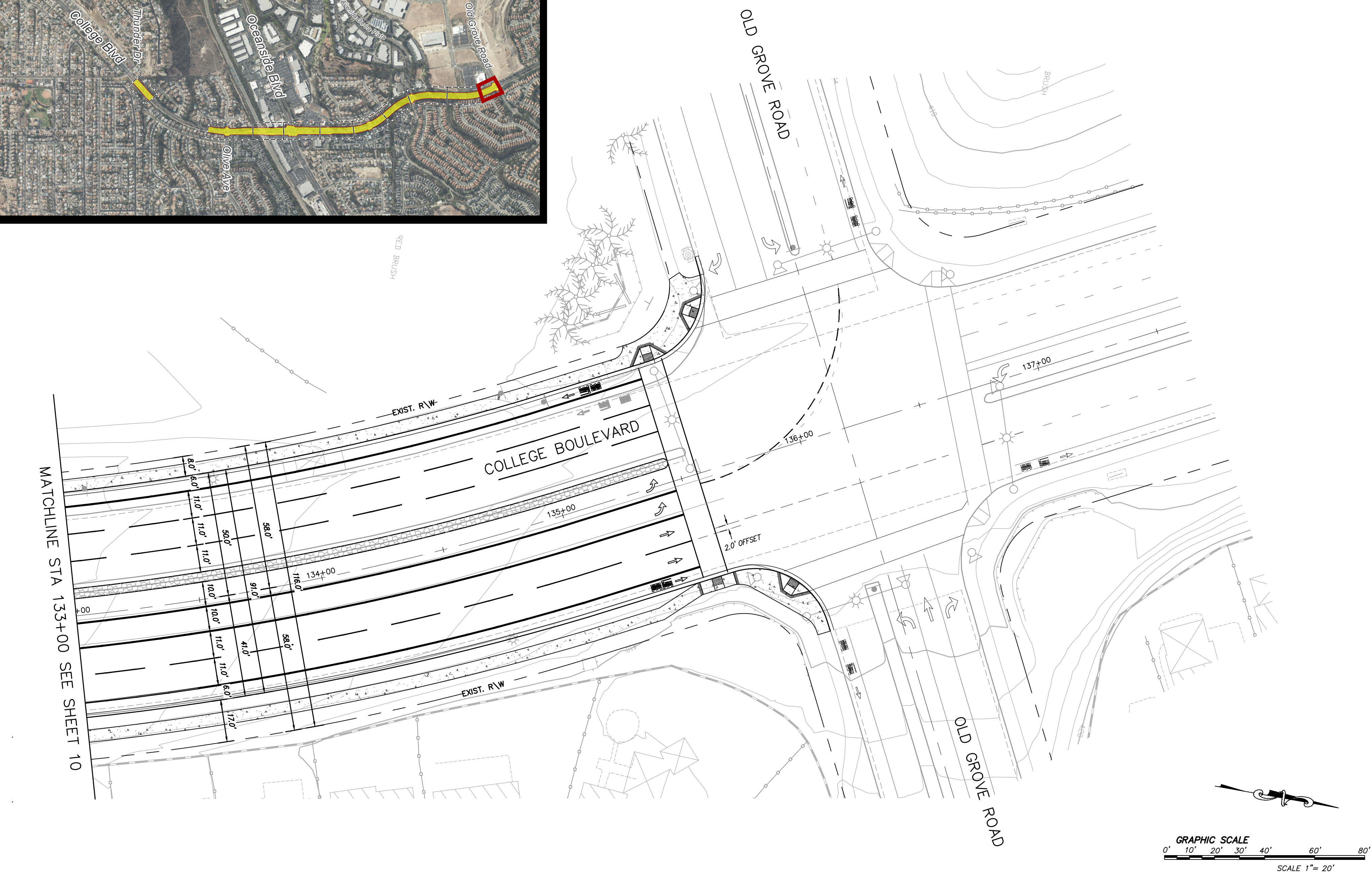

WDID NO. ____________ CIP NO. ##-00000

SHEET 11	CITY OF OCEANSIDE ENGINEERING DIVISION	11 SHEETS

IMPROVEMENT PLANS FOR:

COLLEGE BOULEVARD WIDENING

IMPROVEMENT PLAN

STA 133+00 TO OLD GROVE ROAD

APPROVED

CITY ENGINEER SCOTT O. SMITH R.C.E. 58655 DATE

ENGINEER OF WORK: PHIL R. KERN R.C.E.40831 EXP. 3/31/17

CHECKED BY: / APPROVAL DATE: / CIP JOB NO R-#####

REGISTERED PROFESSIONAL ENGINEER PHILIP R. KERN 40831 CIVIL STATE OF CALIFORNIA

APPROVED CHANGES:

NO.	DESCRIPTION	APPV'D	DATE

BENCHMARK:
DESCRIPTION: TBD
LOCATION: TBD
TBD
RECORD FORM: CITY OF OCEANSIDE BM BOOK
ELEV: TBD DATUM: 1970 ADJ.

NV5
15092 AVENUE OF SCIENCE, SUITE 200 SAN DIEGO, CA 92128 (858)385-0500

PRELIMINARY
NOT FOR CONSTRUCTION

SOURCE: RBF and NV5

DUDEK

FIGURE 3-2s
College Boulevard Improvements

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CHAPTER 4
ENVIRONMENTAL ANALYSIS

4.1 AESTHETICS

This section describes the existing visual setting of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project.

4.1.1 Project Overview

The proposed College Boulevard Improvement project (project) is located in northern San Diego County, within the City of Oceanside (Figure 2-1, Regional Map). The City of Oceanside is bordered by the U.S. Marine Corps Base Camp Pendleton to the north, unincorporated portions of County of San Diego and the City of Vista to the east, the Cities of Vista and Carlsbad to the south, and the Pacific Ocean to the west.

The proposed College Boulevard improvement corridor stretches from Waring Road north to Old Grove Road (a distance of approximately 2.41 miles). The improvement corridor is primarily bordered by residential uses to the east and west however; the corridor also borders commercial uses in the Del Oro Marketplace, Gateway Plaza, and Rancho Del Oro Plaza near the College Boulevard / Oceanside Boulevard intersection and educational uses, commercial properties, and industrial designated lands near Old Grove Road (Figure 2-2, Vicinity Map). The corridor crosses North County Transit District (NCTD) Sprinter track and spans Loma Alta Creek south of Oceanside Boulevard. The southern extent of the widening corridor is located within the northeast quarter of Section 27 (due to the length, the widening corridor is located in various Sections (i.e., one square –mile blocks of land), Township 11 South, Range 4 West of the San Luis Rey Quadrangle.

4.1.1.1 Existing Visual Resources

Scenic Vistas

While the City of Oceanside General Plan Environmental Resource Management Element does not identify scenic vistas, it does identify scenic areas within the City that it intends to preserve as visual open space (City of Oceanside 2002). College Boulevard and the adjacent landscape are not identified as visual open space and none of the features listed in Table ERM-2 as visual open space is within the viewshed of the proposed project corridor. As such, there are no designated scenic vistas located along the proposed project corridor. Due to descending terrain, views available to northbound motorists between Olive Avenue and Loma Alta Creek extend to approximately 0.5

mile to the north however; these views are not particularly long or broad such that they would be considered scenic vistas.

Scenic Highways

The California Department of Transportation (Caltrans) manages the State Scenic Highway Systems which includes a list of highways that are either eligible for designation as scenic highways or have been officially designated. Segments of State Route (SR-) 78 (officially designated), SR-76 (eligible), and I-5 (eligible) are designated by Caltrans as scenic highways. SR-78 is an officially designated scenic highway from the western to the eastern boundary of Anza Borrego State Park and SR-76 is an eligible scenic highway from I-5 near Oceanside to SR-79 near Lake Henshaw (Caltrans 2018). I-5 is an eligible scenic highway from approximately opposite Coronado to SR-74 near San Juan Capistrano (Caltrans 2018).

Visual Character

Project Study Area

The proposed College Boulevard improvement corridor is classified as a six-lane Major Arterial from Waring Road to Old Grove Road in the City of Oceanside's General Plan Circulation Element. The 2.41-mile corridor is currently built with four lanes and posted speed limits are 40 to 50 miles per hour. A raised median is constructed throughout the length of the corridor. In addition to street parking that is permitted north of Roselle Avenue and south of Thunder Drive, bicycle lanes are striped along most of the corridor with widths ranging from five (5) to nine (9) feet. Sidewalks are also provided on both sides of the street with widths ranging from four (4) to six (6) feet and landscaped parkways are provided in most sections. The existing right-of-way is located approximately ten (10) feet behind the face of curb through most of the corridor. Utilities are located underground along the corridor, which include cable television, phone, gas, sewer, water, storm drain and electrical. No overhead wires are present along the College Boulevard corridor.

From Waring Road to approximately 700 feet north of Roselle Street, the College Boulevard corridor landscape is marked by wide travel lanes, minimal median vegetation, adjacent ascending, generally vegetated slopes and single-family residential development. A raised center median (generally 20-feet wide but tapering to approximately 5 feet wide near intersections) separates north and southbound travel lanes and features patches of low palm trees and groundcover separated by 50-60 foot expanses of woodchips and/or exposed soil. Relatively wide bike lanes and sidewalks are provided on both sides of the roadway and are aligned adjacent to moderately to densely vegetated slopes that gradually ascend approximately 10 to 15 feet to backyard fence lines. Large eucalyptus trees are common on these slopes. Residential fencing at the top of the slopes is constructed of a variety of materials including wood, chain-link, and concrete. Lighting sources along this segment of the proposed project corridor includes tall, overhead streetlights, spillover lighting from the residential backyards, traffic signals at intersections, and vehicle headlights. Through this segment of the corridor, bicyclists and pedestrians may describe the landscape as enclosed due to the rising slopes to the east and west of the roadway.

From 700 feet north of Roselle Street to Thunder Drive, bike lanes are narrower, street parking is permitted, single-family residences front College Boulevard and are generally constructed at or near grade with the roadway surface. An approximately four (4) foot wide parkway extends along the majority of the length of the block and includes a limited number of breaks. The parkway is planted with carrot wood (*Cupaniopsis anacardioides*), palm, and other tree species and separates on-street parking from sidewalks. Many of the residents have constructed low concrete, chain-link, or wooden walls or fences to create a protected front yard. Similarly, the single-story single-family residences display a variety of colors and trims. The median along this segment of the corridor is raised and planted with patches of moderately tall (15-20 feet) palm trees and low groundcover separated by soil and/or woodchips. Lighting sources along this segment of the proposed project corridor includes tall, overhead streetlights, spillover lighting from the residential yards and exterior mounted security lighting, traffic signals at intersections, and vehicle headlights. Due to the proximity of residences to College Boulevard, interior residential lighting is also visible to passing motorists, cyclists, and pedestrians.

North of Thunder Drive the local terrain steadily falls towards a topographical low point at the NCTD Sprinter rail tracks and Loma Alta Creek. With the exception of slightly denser vegetation and more gradual slopes east and west of the roadway, the landscape along this segment of the proposed project corridor displays a similar character as that previously described between Waring Road and Roselle Street. North of Loma Alta Creek, development transitions from single-family residential to neighborhood and the landscape is marked several shopping centers featuring grocery stores, fast-food and sit-down restaurants, gas stations, and a variety of neighborhood serving uses. Median and parkway development is relatively uniform and appears to have occurred at the same time and according to single master plan. Conversely, shopping centers development appears staggered as evidenced by a variety of building exterior colors, treatments, and trims.

Approximately 600 feet north of the College Boulevard/Oceanside Boulevard intersection, commercial development ceases and development transitions to single- and multi-family residential. North of Oceanside Boulevard the local terrain begins to ascend toward Old Grove Road. The terrain also rises from east to west as the Aztec Road single-family residential neighborhood located west of College Boulevard is located upslope of the roadway surface. North of this neighborhood, the corridor is developed with limited office and industrial buildings and occasional vacant, undeveloped building pads west of College Boulevard, and single-family residences of the Rancho Del Oro Specific Plan area to the west. Roadway adjacent parkways are vegetated with maintained turf and are dotted with tall trees. Sidewalks are winding and adjacent gradual slopes to the west of the road are planted with manicured shrubs. Additionally, this segment of the corridor features a raised median typically vegetated with grass, low shrubs and groundcover. Similar to other segments of the corridor, the raised vegetated median transitions to concrete on the approach to intersections. Lighting sources along this segment of the proposed project corridor includes tall, overhead streetlights, spillover lighting from adjacent residences and limited businesses, traffic signals at intersections, and vehicle headlights.

Lighting and Glare

The proposed project corridor is located in an suburban setting primarily comprised of adjacent single- and multi-family residential development but also including commercial uses in the Del Oro Marketplace, Gateway Plaza, and Rancho Del Oro Plaza near the College Boulevard / Oceanside Boulevard intersection, and limited office and industrial development near Old Grove Road. As discussed above under Visual Character, existing sources of light and glare along proposed project corridor includes tall, overhead streetlights, commercial signage, spillover lighting from the residential yards, exterior mounted security lighting and interior residential lighting, traffic signals at intersections, and vehicle headlights. Area development is primarily constructed of wood and stucco exteriors and residential, commercial, and industrial structures feature glass windows. With the exception of glass and night lighting, sources of glare in the project area are limited.

4.1.2 Relevant Plans, Policies, and Ordinances

4.1.2.1 Federal

There are no federal plans, policies, or ordinances related to aesthetics that are specifically applicable to the Proposed Project.

4.1.2.2 State

Caltrans Scenic Highway Program

The California Scenic Highway Program was created in 1963 with the intent “to protect and enhance the natural scenic beauty of California highways and adjacent corridors, through special conservation treatment”. The state laws that govern the Scenic Highway Program are Sections 260 through 263 of the Streets and Highways Code. Highways that are eligible for state scenic designation consist of those listed in Section 263 of the Streets and Highways Code. If a highway is not listed in Section 263 of the Streets and Highway Code, it is the responsibility of local jurisdictions to apply for scenic highway eligibility and additions to Section 263 can only be made through legislative action (Caltrans 2008). The Scenic Highway Program includes both officially designated scenic highways and highways that are eligible for designation. A highway may be designated as scenic based upon aesthetic quality of viewable landscape, extent of views upon the natural landscape, and the degree to which development impedes these views.

Once a state route is in Streets and Highways Code Section 263, it may be nominated for official designation by the local governing body with jurisdiction over the lands adjacent to the proposed scenic highway. Preparation of a visual assessment and Scenic Highway Proposal (a proposal must include a letter of intent from the local governing body, topographic and zoning maps, and a narrative description of the scenic elements in the corridor that includes a discussion of any visual intrusions on scenic views) is required and must be submitted with the application to nominate eligible scenic highways for official designation (Caltrans 2008).

While SR-76 is an eligible state scenic highway, there are no officially designated State Scenic Highways within the immediate project area (Caltrans 2017).

4.1.2.3 Local

City of Oceanside General Plan Environmental Resources Management Element

The Environmental Resources Management Element is a program designed to conserve the City's natural resources, including recreation and scenic areas. With regard to scenic areas, the objective of the element is to encourage the preservation of significant visual open spaces when such preservation is in the best interest of the public health, safety, and welfare. In addition, the Environmental Resource Management Element includes an inventory of present open space and scenic areas (City of Oceanside 1975). The nearest inventoried area identified as visual open space, Mission San Luis Rey, is located more than 2 miles northwest of the project corridor.

City of Oceanside Municipal Code – Chapter 39 Light Pollution Regulations

Chapter 39 of the City's Municipal Code restricts the permitted use of certain light fixtures that emit undesirable light rays into the night sky. This section of the municipal code regulates the usage of lighting intended for general illumination (Class II lighting) and the usage of decorative lighting, including building façade and landscape lighting (Class III lighting). For general illumination of parking lots, roadways, and security, low-pressure sodium lights are permitted as are other lights of 4050 lumens or less (similar lamp types are permitted for Class III (decorative) lighting) (City of Oceanside Municipal Code Section 39.6). For all use types, permitted lighting shall be fully shielded where feasible and partially shielded in all other cases, and shall be focused to minimize light that would affect the night sky. Lastly, as stated in Section 39.8(c), all Class II lighting may remain illuminated all night and pursuant to Section 39.8(d), all Class III lighting shall be off between 11:00 p.m. and sunrise.

4.1.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to aesthetics was based on Appendix G of the 2019 California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.). According to Appendix G of the CEQA Guidelines, a significant impact related to aesthetics would occur because of project implementation if the project would:

1. Have a substantial adverse effect on a scenic vista.
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
3. In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?
4. Create a new source of substantial light or glare in the area.

4.1.4 Impacts Analysis

Would the project have a substantial adverse effect on a scenic vista?

As previously stated in Section 4.1.1, there are no designated scenic vistas located along the proposed corridor. Furthermore, views to the northern horizon available to northbound motorists between Olive Avenue and Loma Alta Creek are not particularly long or broad such that they would be considered scenic vistas. Because designated scenic vistas do not occur along the corridor and existing northerly views from the roadway are not considered scenic vistas, construction and operation of the proposed project would not have a substantial adverse effect on a scenic vista. With the exception of new landscaping, project components would largely consist of horizontal features (i.e., new roadway surfaces, new curb and gutters) that would not substantially obstruct existing views along the corridor. New retaining walls would display rectangular and vertical forms however, the scale of the walls would be relatively low and these features would not block views of particularly scenic features along the corridor. Regarding landscaping, new landscaped parkways (approximately five-feet wide) are proposed between Waring Road/Barnard Drive and Roselle Street and long and broad views are not generally available from this particular segment of the College Boulevard corridor. As such, new landscaping planted in proposed parkways would not have an adverse effect on as scenic vista. Lastly, because landscaping occurs throughout the corridor and street trees are commonplace within the center median and the roadway adjacent landscape, the removal and replacement of select landscaping with new plant materials would not substantially affect existing views. Therefore, impacts would be less than significant.

Would the project substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?

There are no designated state scenic highways in the immediate project vicinity. The segment of SR-78 within the project area is neither an eligible or officially designated state scenic highway and the City of Oceanside has not designated any segment of SR-78 within city limits as a scenic route. Although the segment of SR- 76 that lies approximately 1.65 miles north of the project area is an eligible for state scenic designation, it has not been designated by City of Oceanside as a scenic highway and the City has not applied for official state scenic designation from Caltrans.

Furthermore, there are no existing rock outcroppings or historic buildings located on the project site and due to intervening terrain, the proposed project corridor is not visible from SR-76. Because the proposed project corridor is not located within the viewshed of a state scenic highway, no impact to scenic resources within a state scenic highway would occur.

In nonurbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The proposed project is located in urbanized Oceanside and primarily entails the widening of a segment of an existing roadway (College Boulevard between Olive Drive and Old Grove Road) from a four-lane to a six-lane Major Arterial. As the proposed widening corridor is located within a developed urban setting and College Boulevard is an existing four-lane Major Arterial, proposed widening efforts, intersection improvements, and the relocation of existing utilities and roadway amenities (i.e., bike lanes, sidewalks, lighting, etc.) to accommodate the widened roadway would not substantially degrade the existing visually character or quality of the site and surroundings. Proposed improvements would not represent elements or features that would substantially contrast with the visual character of the existing roadway and associated right-of-way.

As previously discussed, several components of the proposed project entail relocation of existing features (bike lanes, sidewalks, and utilities, retaining walls) to accommodate the widened roadway surface. As such, these features are considered part of the existing visual character and they would largely be maintained in the visual landscape by the proposed project. As proposed, new vegetation installed within proposed parkways between Waring Road/Barnard Drive and Roselle Avenue, and in the College Boulevard median, may include different tree and shrub species than currently represented along the corridor under existing conditions. However, all installed landscaping would be subject to landscape plans and would be prepared in accordance with the City's current Landscape Development Manual. Furthermore, all landscape plans associated with the proposed project would be reviewed by City staff to ensure overall compatibility with the City's goals for landscape design that includes harmony with the natural landscape and continuity with surrounding existing development. The project would enhance the existing character of the College Boulevard corridor through the provision of new landscaped parkways and new median landscaping, decorative finishes on retaining walls, reconstructed sidewalks and new striping. Therefore, the Project not substantially degrade the existing visual character or quality of the project site or its surroundings, and impacts would be less than significant.

In addition and as described in Chapter 4.10, Land Use, College Boulevard is an existing roadway and the proposed widening of the roadway and implementation of planned improvements would not conflict with existing land use designations or planned development of adjacent lands. As described above, all final landscape plans would be prepared in accordance with the City's current Landscape Development Manual and Project landscaping would be consistent with the City's overall goals for landscape design including harmony with the natural landscape and continuity with surrounding existing development. Therefore, the proposed project would not conflict with the City's General Plan Land Use Element or with other regulations governing scenic quality.

Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The proposed project corridor is located within a suburban area supported by large commercial shopping centers located at the College Boulevard/Oceanside Boulevard intersection. Tall, overhead street lighting is currently installed along the College Boulevard corridor and in addition to commercial signage within and adjacent to shopping centers, interior and exterior residential lighting, traffic signals, and vehicle headlights are common sources of nighttime lighting in the proposed project area.

All construction activities associated with the proposed project would take place during hours permitted by the City of Oceanside General Plan Noise Element (i.e., 7:00 a.m. to 8:00 p.m. within residential zones). As such, temporary nighttime lighting is not generally anticipated to be needed during construction activities associated with the proposed project. However, if particular phases of construction occur within fall and/or winter months when daylight hours are fewer in number than during other times of the year, temporary nighttime lighting may be used. Use of nighttime lighting would be mobile (i.e., would not occur in a given area for a particularly long time) and lighting would be directed onto the active area of construction work. Furthermore, due to existing sources of nighttime lighting along the proposed project corridor and the project's location within a developed suburban setting, the temporary operation of limited mobile lighting sources would not adversely affect existing nighttime views in the area. Where necessary, existing streetlights and traffic signals located in the College Boulevard right-of-way would be relocated to accommodate the widened roadway and associated sidewalks. At this time the installation of additional lighting along the proposed project corridor is not anticipated to be necessary. While widening of College Boulevard may result in increased vehicle traffic on the roadway (i.e., as a result of increased capacity), the addition of vehicles to an existing roadway located in a developed suburban setting would not be considered a new source of substantial light and would not adversely affect nighttime views in the area. Lastly, the proposed project would not entail the introduction of elements and materials that are not currently installed along the corridor and/or elements and materials that are particularly reflective. Therefore, the amount of lighting and glare associated with the proposed project would not be substantially different than that associated with existing conditions, and impacts would be less than significant.

4.1.5 Mitigation Measures

All impacts would be less than significant and no mitigation measures are required.

4.1.6 Level of Significance After Mitigation

As stated in Section 4.1.4, the project as proposed would result in less than significant impacts on scenic vistas, scenic resources within a state scenic highway, the existing visual character and quality of the site and its surroundings, and light and glare. Therefore, impacts would be less than significant.

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4.2 AIR QUALITY

This section describes the projects impacts on air quality and contribution to regional air quality conditions, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the College Boulevard Improvement project. This section is based on the 2019 Air Quality and Greenhouse Gas Emissions Analysis Technical Report (AQ-GHG Technical Report) prepared by Dudek, which analyzed how the proposed project may impact existing and future air quality conditions within Oceanside and San Diego County. The methods used to generate specific impact calculations are contained in the AQ-GHG Technical Report, which is included as Appendix A to this EIR.

4.2.1 Existing Conditions

Climate and Topography

The weather of the San Diego region, as in most of Southern California, is influenced by the Pacific Ocean and its semi-permanent high-pressure systems that result in dry, warm summers and mild, occasionally wet winters. The average temperature ranges (in degrees Fahrenheit (°F)) from the mid-40s to the high 90s. Most of the region's precipitation falls from November to April, with infrequent (approximately 10%) precipitation during the summer. The average seasonal precipitation along the coast is approximately 10 inches; the amount increases with elevation as moist air is lifted over the mountains.

The topography in the San Diego region varies greatly, from beaches on the west to mountains and desert on the east; along with local meteorology, it influences the dispersal and movement of pollutants in the basin. The mountains to the east prohibit dispersal of pollutants in that direction and help trap them in inversion layers.

The interaction of ocean, land, and the Pacific High Pressure Zone maintains clear skies for much of the year and influences the direction of prevailing winds (westerly to northwesterly). Local terrain is often the dominant factor inland, and winds in inland mountainous areas tend to blow through the valleys during the day and down the hills and valleys at night.

Air Pollution Climatology

The proposed project site is within the San Diego Air Basin (SDAB or basin) and is subject to the SDAPCD guidelines and regulations. The SDAB is one of 15 air basins that geographically divide the State of California. The SDAB is currently classified as a federal nonattainment area for ozone (O_3) and a state nonattainment area for particulate matter less than or equal to10 microns (PM_{10}), particulate matter less than or equal to 2.5 microns ($PM_{2.5}$), and O_3.

The SDAB lies in the southwest corner of California and comprises the entire San Diego region, covering 4,260 square miles, and is an area of high air pollution potential. The basin experiences warm summers, mild winters, infrequent rainfalls, light winds, and moderate humidity. This usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds.

The SDAB experiences frequent temperature inversions. Subsidence inversions occur during the warmer months as descending air associated with the Pacific High Pressure Zone meets cool marine air. The boundary between the two layers of air creates a temperature inversion that traps pollutants. Another type of inversion, a radiation inversion, develops on winter nights when air near the ground cools by heat radiation and air aloft remains warm. The shallow inversion layer formed between these two air masses also can trap pollutants. As the pollutants become more concentrated in the atmosphere, photochemical reactions occur that produce O_3, commonly known as smog.

Light daytime winds, predominantly from the west, further aggravate the condition by driving air pollutants inland, toward the mountains. During the fall and winter, air quality problems are created due to carbon monoxide (CO) and oxides of nitrogen (NO_x) emissions. CO concentrations are generally higher in the morning and late evening. In the morning, CO levels are elevated due to cold temperatures and the large number of motor vehicles traveling. Higher CO levels during the late evenings are a result of stagnant atmospheric conditions trapping CO in the area. Since CO is produced almost entirely from automobiles, the highest CO concentrations in the basin are associated with heavy traffic. Nitrogen dioxide (NO_2) levels are also generally higher during fall and winter days.

Under certain conditions, atmospheric oscillation results in the offshore transport of air from the Los Angeles region to San Diego County. This often produces high O_3 concentrations, as measured at air pollutant monitoring stations within the county. The transport of air pollutants from Los Angeles to San Diego has also occurred within the stable layer of the elevated subsidence inversion, where high levels of O_3 are transported.

Sensitive Receptors

Reduced visibility, eye irritation, and adverse health impacts upon those persons termed sensitive receptors are the most serious hazards of existing air quality conditions in the area. Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution, as identified by the California Air Resources Board (CARB), include children, the elderly, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air pollution-sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses where air pollution-sensitive individuals are most likely to spend time include residential communities, schools and schoolyards, parks and playgrounds, child-care centers, nursing homes and. The SDAPCD identifies sensitive receptors as those who are especially susceptible to adverse health effects from exposure to toxic air contaminants (TACs), such as children, the elderly, and the ill. Sensitive receptors include schools (grades kindergarten through 12), child-care centers, nursing homes, retirement homes, health clinics, and hospitals. Sensitive receptors, including residences and several schools (i.e., the Coastal Academy and La Petit Academy) are located along the proposed project corridor.

Pollutants and Effects – Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include O_3, NO_2, CO, sulfur dioxide (SO_2), PM_{10}, $PM_{2.5}$, and lead. These pollutants are discussed below. In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants. A more detailed discussion of health effects of criteria air pollutants is provided in Appendix A.

Ozone. O_3 is a strong-smelling, pale blue, reactive, toxic chemical gas consisting of three oxygen atoms. It is a secondary pollutant formed in the atmosphere by a photochemical process involving the sun's energy and O_3 precursors. These precursors are mainly oxides of nitrogen (NO_x) and volatile organic compounds (VOCs). The maximum effects of precursor emissions on O_3 concentrations usually occur several hours after they are emitted and many miles from the source. Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during late spring, summer, and early autumn on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. O_3 exists in the upper atmosphere ozone layer as well as at the Earth's surface in the troposphere. The O_3 that the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) regulate as a criteria air pollutant is produced close to the ground level, where people live, exercise, and breathe. Ground-level O_3 is a harmful air pollutant that causes numerous adverse health effects and is thus considered "bad" O_3. Stratospheric, or "good," O_3 occurs naturally in the upper atmosphere, where it reduces the amount of ultraviolet light (i.e., solar radiation) entering the Earth's atmosphere. Without the protection of the beneficial stratospheric O_3 layer, plant and animal life would be seriously harmed.

O_3 in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes (EPA 2013). These health problems are particularly acute in sensitive receptors such as the sick, the elderly, and young children.

Nitrogen Dioxide. NO_2 is a brownish, highly reactive gas that is present in all urban atmospheres. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide, which is a colorless, odorless gas. NO_2 is a constituent of NO_x, which plays a major role, together with VOCs, in the atmospheric reactions that produce O_3. NO_x is formed from fuel combustion under high temperature or pressure. In addition, NO_x is an important precursor to acid rain and may affect both terrestrial and aquatic ecosystems. The two major emissions sources of NO_2 are transportation and stationary fuel combustion sources such as electric utility and industrial boilers. NO_2 can irritate the lungs and may potentially lower resistance to respiratory infections (EPA 2018a).

Carbon Monoxide. CO is a colorless, odorless gas formed by the incomplete combustion of hydrocarbon, or fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, such as the location of the proposed project, automobile exhaust accounts for the majority of CO emissions. CO is a nonreactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions, primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, which is a typical situation at dusk in urban areas from November to February. The highest levels of CO typically occur during the colder months of the year, when inversion conditions are more frequent.

In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, thereby reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions.

Sulfur Dioxide. SO_2 is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Main sources of SO_2 are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near large industrial complexes. 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. SO_2 is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. SO_2 can also yellow plant leaves and erode iron and steel.

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Fine particulate matter, or $PM_{2.5}$, is roughly 1/20 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., motor vehicles, power generation, and industrial facilities), residential fireplaces, and woodstoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides (SO_x), NO_x, and VOCs. Inhalable or coarse particulate matter, or PM_{10}, is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances, such as lead, sulfates, and nitrates, can cause lung damage directly or be absorbed into the blood stream, causing damage elsewhere in the body. Additionally, these substances can transport absorbed gases, such as chlorides or ammonium, into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissues. Suspended particulates also damage and discolor surfaces on which they settle, as well as producing haze and reducing regional visibility.

People with influenza, chronic respiratory or cardiovascular disease, and the elderly may suffer worsening illness and premature death as a result of breathing particulate matter. Premature mortality has been linked to $PM_{2.5}$ exposure even in otherwise healthy populations. People with bronchitis can expect aggravated symptoms from breathing in particulate matter. Children may experience a decline in lung function due to breathing in PM_{10} and $PM_{2.5}$ (EPA 2009).

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paint, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phase-out of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phase-out of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emission sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance including intelligence quotient performance, psychomotor performance, reaction time, and growth.

Sulfates. Sulfates are the fully oxidized form of sulfur, which typically occur in combination with metals or hydrogen ions. Sulfates are produced from reactions of SO_2 in the atmosphere. Sulfates can result in respiratory impairment, as well as reduced visibility.

Vinyl Chloride. Vinyl chloride is a colorless gas with a mild, sweet odor, which has been detected near landfills, sewage plants, and hazardous waste sites, due to the microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air can cause nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure through inhalation can cause liver damage, including liver cancer.

Hydrogen Sulfide. Hydrogen sulfide is a colorless and flammable gas that has a characteristic odor of rotten eggs. Sources of hydrogen sulfide include geothermal power plants, petroleum refineries, sewers, and sewage treatment plants. Exposure to hydrogen sulfide can result in nuisance odors, as well as headaches and breathing difficulties at higher concentrations.

Visibility-Reducing Particles. Visibility-reducing particles are any particles in the air that obstruct the range of visibility. Effects of reduced visibility can include obscuring the viewshed of natural scenery, reducing airport safety, and discouraging tourism. Sources of visibility-reducing particles are the same as for $PM_{2.5}$ described earlier in this section.

Volatile Organic Compounds. Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O_3 are referred to and regulated as VOCs (also referred to as reactive organic gases). Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

The primary health effects of VOCs result from the formation of O_3 and its related health effects. High levels of VOCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered TACs. There are no separate health standards for VOCs as a group.

Pollutants and Effects – Non-Criteria Air Pollutants

Toxic Air Contaminants. A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic noncancer health effects. A toxic substance released into the air is considered a toxic air contaminant (TAC). Examples of TACs include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources, such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources, such as automobiles; and area sources, such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced either on short-term (acute) or long-term (chronic) exposure to a given TAC.

Diesel Particulate Matter. Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. More than 90% of DPM is less than 1 micrometer in diameter (about 1/70 the diameter of a human hair), and thus is a subset of $PM_{2.5}$ (CARB n.d.). DPM is typically composed of carbon particles ("soot," also called black carbon) and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene (CARB n.d.). The CARB classified "particulate emissions from diesel-fueled engines" (i.e., DPM; 17 CCR 93000) as a TAC in August 1998. DPM is emitted from a broad range of diesel engines: on-road diesel engines of trucks, buses, and cars, and off-road diesel engines including locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70% of all airborne cancer risk in California is associated with DPM (CARB 2000). Because it is part of $PM_{2.5}$, DPM also contributes to the same non-cancer health effects as $PM_{2.5}$ exposure. These effects include premature death; hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma; increased respiratory symptoms; and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new allergies (CARB n.d.). Those most vulnerable to non-cancer health effects of DPM are children whose lungs are still developing and the elderly who often have chronic health problems.

Odorous Compounds. Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and is quite subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be perfectly acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. Known as odor fatigue, a person can become desensitized to almost any odor, and recognition may only occur with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

Valley Fever. Coccidioidomycosis, more commonly known as "Valley Fever," is an infection caused by inhalation of the spores of the *Coccidioides immitis* fungus, which grows in the soils of the southwestern United States. When fungal spores are present, any activity that disturbs the soil, such as digging, grading, or other earthmoving operations, can cause the spores to become airborne and thereby increase the risk of exposure. The ecologic factors that appear to be most conducive to survival and replication of the spores are high summer temperatures, mild winters, sparse rainfall, and alkaline sandy soils.

The County is not considered a highly endemic region for Valley Fever; the San Diego County Health and Human Services Agency listed having 4.4 cases per 100,000 people (HHSA 2017). The proposed project site is located within the 92056 zip code; the incidence of Coccidioidomycosis is either less than the average County rate or had too few cases to be reliably utilized to calculate a rate (Nelson 2018). For comparison, statewide incidences in 2016 were 13.7 per 100,000 people (CDPH 2017).

Even if present at a site, earthmoving activities may not result in increased incidence of Valley Fever. Propagation of *Coccidioides immitis* is dependent on climatic conditions, with the potential for growth and surface exposure highest following early seasonal rains and long dry spells. *Coccidioides immitis* spores can be released when filaments are disturbed by earthmoving activities, although receptors must be exposed to and inhale the spores to be at increased risk of developing Valley Fever. Moreover, exposure to *Coccidioides immitis* does not guarantee that an individual will become ill—approximately 60% of people exposed to the fungal spores are asymptomatic and show no signs of an infection (USGS 2000).

Local Air Quality

SDAB Attainment Designation

An area is designated in attainment when it is in compliance with the National Ambient Air Quality Standards (NAAQS) and/or California Ambient Air Quality Standards (CAAQS). These standards are set by the U.S. Environmental Protection Agency (EPA) or CARB for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or the public welfare.

Pursuant to the 1990 federal Clean Air Act amendments, the EPA classifies air basins (or portions thereof) as "attainment" or "nonattainment" for each criteria air pollutant, based on whether the NAAQS have been achieved. Generally, if the recorded concentrations of a pollutant are lower than the standard, the area is classified as "attainment" for that pollutant. If an area exceeds the standard, the area is classified as "nonattainment" for that pollutant. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated as "unclassified" or "unclassifiable." The designation of "unclassifiable/attainment" means that the area meets the standard or is expected to meet the standard despite a lack of monitoring data. Areas that achieve the standards after a nonattainment designation are re-designated as maintenance areas and must have approved Maintenance Plans to ensure continued attainment of the standards. The California Clean Air Act, like its federal counterpart, called for the designation of areas as "attainment" or "nonattainment," but based on CAAQS rather than the NAAQS. The criteria pollutants of primary concern that are considered in this analysis are O_3, NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$, Lead, Hydrogen Sulfide, Sulfates, Visibility-Reducing Particles, Vinyl Chloride. Although there are no ambient standards for VOCs or NO_x, they are important as precursors to O_3.

As previously stated, the proposed project site is located in the SDAB.

Table 4.2-1, SDAB Attainment Classification, summarizes the SDAB's federal and state attainment designations for each of the criteria pollutants.

Table 4.2-1
SDAB Attainment Classification

Pollutant	Federal Designation	State Designation
O_3 (1 hour)	Attainment[1]	**Nonattainment**
O_3 (8 hour – 1997) (8 hour – 2008)	Attainment (maintenance) **Nonattainment (Moderate)**	**Nonattainment**
NO_2	Unclassifiable/Attainment	Attainment
CO	Unclassifiable/attainment[2]	Attainment
PM_{10}	Unclassifiable[3]	**Nonattainment**
$PM_{2.5}$	Attainment	**Nonattainment**
NO_2	Unclassifiable/attainment	Attainment
SO_2	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	(No federal standard)	Attainment
Hydrogen sulfide	(No federal standard)	Unclassified
Visibility-reducing particles	(No federal standard)	Unclassified

Sources: EPA 2018b (Federal Designation); CARB 2018a (State Designation).

1 The federal 1-hour standard of 0.12 ppm was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in State Implementation Plans.

2 The western and central portions of the SDAB are designated attainment, while the eastern portion is designated unclassifiable/attainment.

3 At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated as unclassifiable.

In December 2016, the SDAPCD adopted an update to the Eight-Hour Ozone Attainment Plan for San Diego County. The plan indicates that local controls and state programs would allow the region to reach attainment of the federal 8-hour O3 standard (1997 O3 NAAQS) by 2018 (SDAPCD 2016a). In this plan, SDAPCD relies on the Regional Air Quality Strategy (RAQS) to demonstrate how the region will comply with the federal O3 standard. Also, as documented in the 2016 update to the Eight-Hour Ozone Attainment Plan for San Diego County, the County has a likely chance of obtaining attainment due to the transition to low-emission cars, stricter new source review rules, and continuing the requirement of general conformity for military growth and the San Diego International Airport (SDAPCD 2016a).

Air Quality Monitoring Data

The SDAPCD operates a network of ambient air monitoring stations throughout San Diego County that measure ambient concentrations of pollutants and help determine whether the ambient air quality meets the CAAQS and the NAAQS. The nearest SDAPCD-operated monitoring station is the Camp Pendleton monitoring station, which is located approximately 7 miles northeast of the proposed project site. This monitoring station was used to show the background ambient air quality for O_3 and NO_2. The closest monitoring site that measures PM_{10} and $PM_{2.5}$ is the Kearny Villa Road monitoring station located at 6125A Kearny Villa Road, San Diego, which is about 26 miles southeast of the site. The closest monitoring site that measures CO and SO_2 is the First Street monitoring station located at 533 First Street, El Cajon, which is about 35 miles southeast of the site. The most recent background ambient air quality data and number of days exceeding the ambient air quality standards from 2016 to 2018 are presented in Table 4.2-2, Ambient Air Quality Data.

Table 4.2-2
Local Ambient Air Quality Data

Averaging Time	Unit	Agency/Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
				2016	*2017*	*2018*	*2016*	*2017*	*2018*
Ozone (O_3) – Camp Pendleton									
Maximum 1-hour concentration	ppm	State	0.09	0.083	0.094	0.084	0	0	0
Maximum 8-hour concentration	ppm	State	0.070	0.073	0.082	0.069	5	5	0
		Federal	0.070	0.073	0.081	0.068	4	4	0
Nitrogen Dioxide (NO_2) – Camp Pendleton									
Maximum 1-hour concentration	ppm	State	0.18	0.072	0.063	0.048	0	0	0
		Federal	0.100	0.072	0.063	0.048	0	0	0
Annual concentration	ppm	State	0.030	0.006	0.006	—	—	—	—
		Federal	0.053	0.006	0.006	—	—	—	—
Carbon Monoxide (CO) – First Street									
Maximum 1-hour concentration	ppm	State	20	1.6	1.5	1.4	0	0	0
		Federal	35	1.6	1.5	1.4	0	0	0
Maximum 8-hour concentration	ppm	State	9.0	1.3	1.4	1.1	0	0	0
		Federal	9	1.3	1.4	1.1	0	0	0
Sulfur Dioxide (SO_2) – First Street									
Maximum 1-hour concentration	ppm	Federal	0.075	0.0006	0.0011	0.0035	0	0	0
Maximum 24-hour concentration	ppm	Federal	0.14	0.0002	0.0004	0.0004	0	0	0
Annual concentration	ppm	Federal	0.030	0.00008	0.00011	0.0001	0	0	0

Table 4.2-2
Local Ambient Air Quality Data

Averaging Time	Unit	Agency/Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
				2016	*2017*	*2018*	*2016*	*2017*	*2018*
Coarse Particulate Matter (PM_{10})[a] – Kearny Villa Road									
Maximum 24-hour concentration	μg/m³	State	50	35.0	47.0	38.0	—	0.0 (0)	0.0 (0)
		Federal	150	36.0	46.0	38.0	0.0 (0)	0.0 (0)	0.0 (0)
Annual concentration	μg/m³	State	20	—	17.6	18.4	—	—	—
Fine Particulate Matter ($PM_{2.5}$)[a] – Kearny Villa Road									
Maximum 24-hour concentration	μg/m³	Federal	35	19.4	27.5	32.2	0.0 (0)	0.0 (0)	0.0 (0)
Annual concentration	μg/m³	State	12	7.8	8.0	8.3	—	—	—
		Federal	12.0	7.5	7.9	8.3	—	—	—

Sources: CARB 2018b; EPA 2018c.
Notes: — = not available; μg/m³ = micrograms per cubic meter; ppm = parts per million.
Data taken from CARB iADAM (http://www.arb.ca.gov/adam) and EPA AirData (http://www.epa.gov/airdata/) represent the highest concentrations experienced over a given year.
Daily exceedances for particulate matter are estimated days because PM_{10} and $PM_{2.5}$ are not monitored daily. All other criteria pollutants did not exceed federal or state standards during the years shown. There is no federal standard for 1-hour O_3, annual PM_{10}, or 24-hour SO_2, nor is there a state 24-hour standard for $PM_{2.5}$.
Camp Pendleton monitoring station is located at 21441 West B Street, Camp Pendleton, California.
El Cajon monitoring station is located at 533 First Street, El Cajon, California.
San Diego–Kearny Villa Road monitoring station is located at 6125A Kearny Villa Road, San Diego, California.
[a] Measurements of PM_{10} and $PM_{2.5}$ are usually collected every 6 days and every 1 to 3 days, respectively. Number of days exceeding the standards is a mathematical estimate of the number of days concentrations would have been greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standard.

4.2.2 Relevant Plans, Policies, and Ordinances

Air quality is defined by ambient air concentrations of specific pollutants that are related to the health and welfare of the general public.

4.2.2.1 Federal

The federal Clean Air Act, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The EPA is responsible for implementing most aspects of the Clean Air Act, including the setting of NAAQS for major air pollutants, hazardous air pollutant (HAP) standards, approval of state attainment plans, motor vehicle emission standards, stationary source emission standards and permits, acid rain control measures, stratospheric O_3 protection, and enforcement provisions. NAAQS are established for "criteria pollutants" under the Clean Air Act, which are O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The NAAQS (other than for O_3, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O_3, NO_2, SO_2, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The Clean Air Act requires the EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a State Implementation Plan that demonstrates how those areas will attain the standards within mandated time frames.

4.2.2.2 State

The California Clean Air Act was adopted in 1988 and establishes the State's air quality goals, planning mechanisms, regulatory strategies, and standards of progress.

Under the Clean Air Act, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB is responsible for ensuring implementation of the California Clean Air Act, responding to the federal Clean Air Act, and regulating emissions from motor vehicles and consumer products. Pursuant to the authority granted to it, CARB has established CAAQS, which are generally more restrictive than the NAAQS.

The CAAQS for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM_{10}, and $PM_{2.5}$ and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. The NAAQS and CAAQS are presented in Table 4.2-3, Ambient Air Quality Standards.

Table 4.2-3
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	*Primary[c,d]*	*Secondary[c,e]*
O_3	1 hour	0.09 ppm (180 μg/m^3)	—	Same as primary standard[f]
	8 hours	0.070 ppm (137 μg/m^3)	0.070 ppm (137 μg/m^3)[f]	
NO_2[g]	1 hour	0.18 ppm (339 μg/m^3)	0.100 ppm (188 μg/m^3)	Same as primary standard
	Annual arithmetic mean	0.030 ppm (57 μg/m^3)	0.053 ppm (100 μg/m^3)	
CO	1 hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	—
	8 hours	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	
SO_2[h]	1 hour	0.25 ppm (655 μg/m^3)	0.075 ppm (196 μg/m^3)	—
	3 hours	—	—	0.5 ppm (1,300 μg/m^3)
	24 hours	0.04 ppm (105 μg/m^3)	0.14 ppm (for certain areas)[g]	—

Table 4.2-3
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	*Primary[c,d]*	*Secondary[c,e]*
	Annual	—	0.030 ppm (for certain areas)[g]	—
PM_{10}[i]	24 hours	50 μg/m³	150 μg/m³	Same as primary standard
	Annual arithmetic mean	20 μg/m³	—	
$PM_{2.5}$[i]	24 hours	—	35 μg/m³	Same as primary standard
	Annual arithmetic mean	12 μg/m³	12.0 μg/m³	15.0 μg/m³
Lead[j,k]	30-day Average	1.5 μg/m³	—	—
	Calendar quarter	—	1.5 μg/m³ (for certain areas)[k]	Same as primary standard
	Rolling 3-month average	—	0.15 μg/m³	
Hydrogen sulfide	1 hour	0.03 ppm (42 μg/m³)	—	—
Vinyl chloride[j]	24 hours	0.01 ppm (26 μg/m³)	—	—
Sulfates	24 hours	25 μg/m³	—	—
Visibility reducing particles	8 hour (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to the number of particles when the relative humidity is less than 70%	—	—

Source: CARB 2016.

Notes: — = no standards; μg/m³ = micrograms per cubic meter; CO = carbon monoxide; mg/m³= milligrams per cubic meter; NO_2 = nitrogen dioxide; O_3 = ozone; PM_{10} = particulate matter with an aerodynamic diameter less than or equal to 10 microns; $PM_{2.5}$ = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns; ppm = parts per million by volume; SO_2 = sulfur dioxide.

a California standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, suspended particulate matter (PM_{10}, $PM_{2.5}$), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

b National standards (other than O_3, NO_2, SO_2, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per 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 PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μg/m³ is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

d National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

e National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

f On October 1, 2015, the EPA Administrator signed the notice for the final rule to revise the primary and secondary NAAQS for O_3. The EPA is revising the levels of both standards from 0.075 ppm to 0.070 ppm and retaining their indicators (O_3), forms (fourth-highest daily maximum, averaged across 3 consecutive years), and averaging times (8 hours). The EPA is in the process of submitting the rule for publication in the Federal Register. The final rule will be effective 60 days after the date of publication in the Federal Register. The lowered national 8-hour standards are reflected in the table.

[g] To attain the national 1-hour standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[h] On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the national 1-hour standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

[i] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM_{10} standards (primary and secondary) of 150 $\mu g/m^3$ were also retained. The form of the annual primary and secondary standards is the annual mean averaged over 3 years.

[j] CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[k] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

Toxic Air Contaminants

The state Air Toxics Program was established in 1983 under Assembly Bill (AB) 1807 (Tanner). The California TAC list identifies more than 700 pollutants, of which carcinogenic and noncarcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. In accordance with AB 2728, the state list includes the (federal) HAPs. The Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) seeks to identify and evaluate risk from air toxics sources; however, AB 2588 does not regulate air toxics emissions. Rather, AB 2588 quantifies and prioritizes TAC emissions from individual facilities. "High-priority" facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines. The regulation is anticipated to result in an 80% decrease in statewide diesel health risk in 2020 compared with the diesel risk in 2000 (CARB 2000). Additional regulations apply to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-Road Diesel Vehicle Regulation, and the New Off-Road Compression-Ignition (Diesel) Engines and Equipment Program. All of these regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel powered equipment. Airborne Toxic Control Measures that reduce diesel emissions include In-Use Off-Road Diesel-Fueled Fleets (13 CCR 2449 et seq.) and In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025).

California Health and Safety Code, Section 41700

California Health and Safety Code, Section 41700 states that a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health, or safety of any of those persons or the public; or that cause, or have a natural tendency to cause, injury or damage to business or property. This section also applies to sources of objectionable odors.

4.2.2.3 Local

San Diego Air Pollution Control District

While CARB is responsible for the regulation of mobile emission sources within the state, local air quality management districts and air pollution control districts are responsible for enforcing standards and regulating stationary sources. The proposed project is located within the SDAB and is subject to the guidelines and regulations of the SDAPCD.

Federal Attainment Plans

In December 2016, the SDAPCD adopted an update to the *Eight-Hour Ozone Attainment Plan for San Diego County*. The plan indicates that local controls and state programs would allow the region to reach attainment of the federal 8-hour O_3 standard (1997 O_3 NAAQS) by 2018 (SDAPCD 2016a). In this plan, SDAPCD relies on the Regional Air Quality Strategy (RAQS) to demonstrate how the region will comply with the federal O_3 standard. The RAQS details how the region will manage and reduce O_3 precursors (i.e., NO_x and VOCs) by identifying measures and regulations intended to reduce these pollutants. The control measures identified in the RAQS generally focus on stationary sources; however, the emissions inventories and projections in the RAQS address all potential sources, including those under the authority of CARB and the EPA. Incentive programs for reduction of emissions from heavy-duty diesel vehicles, off-road equipment, and school buses are also established in the RAQS.

As documented in the 2016 update to the *Eight-Hour Ozone Attainment Plan for San Diego County*, the County has a likely chance of obtaining attainment due to the transition to low-emission cars, stricter new source review rules, and continuing the requirement of general conformity for military growth and the San Diego International Airport. The County will also continue emission control measures including ongoing implementation of existing regulations in ozone precursor reduction to stationary and area-wide sources, subsequent inspections of facilities and sources, and the adoption of laws requiring Best Available Retrofit Control Technology for control of emissions (SDAPCD 2016a).

State Attainment Plans

The 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 RAQS for the SDAB was initially adopted in 1991 and is updated on a triennial basis, most recently in 2016 (SDAPCD 2016b). The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for O_3. The RAQS relies on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County and the cities in the County, to forecast future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by the County and the cities in the County as part of the development of their general plans (SANDAG 2017, n.d).

In December 2016, the SDAPCD adopted the revised RAQS for the County. Since 2007, the San Diego region reduced daily VOC emissions and NO_x emissions by 3.9% and 7.0% respectively; the SDAPCD expects to continue reductions through 2035 (SDAPCD 2016b). These reductions were achieved through implementation of six VOC control measures and three NO_x control measures adopted in the SDAPCD's 2009 RAQS (SDAPCD 2009a). In addition, the SDAPCD is considering additional measures, including three VOC measures and four control measures to reduce 0.3 daily tons of VOC and 1.2 daily tons of NO_x, provided they are found to be feasible region-wide. SDAPCD has also implemented nine incentive-based programs, has worked with SANDAG to implement regional transportation control measures, and has reaffirmed the state emission offset repeal.

In regards to particulate matter emissions reduction efforts, in December 2005, the SDAPCD prepared a report titled "Measures to Reduce Particulate Matter in San Diego County" to address implementation of Senate Bill (SB) 656 in San Diego County; SB 656 required additional controls to reduce ambient concentrations of PM_{10} and $PM_{2.5}$ (SDAPCD 2005). In the report, SDAPCD evaluated implementation of source-control measures that would reduce particulate matter emissions associated with residential wood combustion; various construction activities including earthmoving, demolition, and grading; bulk material storage and handling; carryout and trackout removal and cleanup methods; inactive disturbed land; disturbed open areas; unpaved parking lots/staging areas; unpaved roads; and windblown dust (SDAPCD 2005).

SDAPCD Rules and Regulations

As stated earlier in this section, the SDAPCD is responsible for planning, implementing, and enforcing federal and state ambient standards in the SDAB. The following rules and regulations apply to all sources in the jurisdiction of SDAPCD, and would apply to the proposed project:

- **Regulations II: Permits; Rule 10: Permits Required.** Required permits include the Authority to Construct and the Permit to Operate. The Authority to Construct permit is required by any person building, erecting, altering, or placing any article, machine, equipment or other contrivance in which such activities would cause an issue regarding air contaminants. A separate Authority to Construct permit is required for each piece of equipment. A Permit to Operate is required before a person operates or uses any article, machine, or equipment subject under the Authority to Construct permit (SDAPCD 1996).
- **Regulation IV: Prohibitions; Rule 50: Visible Emissions.** Prohibits discharge into the atmosphere, from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than 3 minutes in any period of 60 consecutive minutes that is darker in shade than that designated as Number 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or of such opacity as to obscure an observer's view to a degree greater than does smoke of a shade designated as Number 1 on the Ringelmann Chart (SDAPCD 1997).
- **Regulation IV: Prohibitions; Rule 51: Nuisance.** Prohibits the discharge, from any source, of such quantities of air contaminants or other materials that cause or have a tendency to cause injury, detriment, nuisance, annoyance to people and/or the public, or damage to any business or property (SDAPCD 1976).
- **Regulation IV: Prohibitions; Rule 55: Fugitive Dust.** Regulates fugitive dust emissions from any commercial construction or demolition activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas, as well as trackout and carryout onto paved roads beyond a project site (SDAPCD 2009b).
- **Regulation IV: Prohibitions; Rule 67.0.1: Architectural Coatings.** Requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories (SDAPCD 2015).

San Diego Association of Governments

SANDAG is the regional planning agency for San Diego County, and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. SANDAG serves as the federally designated metropolitan planning organization for San Diego

County. With respect to air quality planning and other regional issues, SANDAG has prepared *San Diego Forward: The Regional Plan* (Regional Plan) for the San Diego region (SANDAG 2015). The Regional Plan combines the big-picture vision for how the region will grow over the next 35 years with an implementation program to help make that vision a reality. The Regional Plan, including its Sustainable Communities Strategy (SCS), is built on an integrated set of public policies, strategies, and investments to maintain, manage, and improve the transportation system so that it meets the diverse needs of the San Diego region through 2050.

In regard to air quality, the Regional Plan sets the policy context in which SANDAG participates in and responds to the air district's air quality plans, and builds off the air district's air quality plan processes that are designed to meet health-based criteria pollutant standards in several ways (SANDAG 2015). First, it complements air quality plans by providing guidance and incentives for public agencies to consider best practices that support the technology-based control measures in air quality plans. Second, the Regional Plan emphasizes the need for better coordination of land use and transportation planning, which heavily influences the emissions inventory from the transportation sectors of the economy. This also minimizes land use conflicts, such as residential development near freeways, industrial areas, or other sources of air pollution.

In September 2018, SANDAG's Board of Directors adopted the final *2018 Regional Transportation Improvement Program* (RTIP). The 2018 RTIP is a multi-billion dollar, multi-year program of projects for major transportation projects in the San Diego region. Transportation projects supported through federal, state, and TransNet (the San Diego transportation sales tax program) funds must be included in an approved RTIP. The programming of locally funded projects also may be programmed at the discretion of the agency. The 2018 RTIP covers 5 fiscal years and incrementally implements the Regional Plan (SANDAG 2018).

City of Oceanside General Plan

The following policies included in the City of Oceanside General Plan pertain to air quality (both directly and indirectly):

Land Use Element

- Air Quality
    - The City will continue to cooperate with the SDAPCD Board. This will include participation in the development of the RAQS through cooperation with the San Diego County Air Quality Planning Team.
- Energy
    - **Policy A:** The City shall encourage the design, installation, and use of passive and active solar collection systems.

- **Policy B:** The City shall encourage the use of energy efficient design, structures, materials, and equipment in all land developments or uses.

- Grading and Excavation
  - **Policy A**: Investigation and evaluation of affected areas will indicate the measures to be included, such as the following measures:
    1. Keep grading to a minimum; leave vegetation and soils undisturbed wherever possible.
    2. Plant bare slopes and cleared areas with appropriate vegetation immediately after grading.
    3. Chemically treat soils to increase resistance to erosion.
    4. Install retaining structures where appropriate.
    5. Construct drainage systems to direct and control rate of surface runoff.
    6. Construct silt traps and settling basins in drainage systems.
    7. Construct weirs and check dams on streams.

In addition, the City of Oceanside General Plan Circulation Element includes the following policies (City of Oceanside 2012). Applicable policies include the following:

Circulation Element

- Long Range Policy Direction
  - **Policy 2.5:** The City will strive to incorporate complete streets throughout the Oceanside transportation network which are designed and constructed to serve all users of streets, roads and highways, regardless of their age or ability, or whether they are driving, walking, bicycling, or using transit.
- Transportation Demand Management
  - **Policy 4.1:** The City shall encourage the reduction of vehicle miles traveled, reduction of the total number of daily and peak hour vehicle trips, and provide better utilization of the circulation system through development and implementation of TDM [transportation demand management] strategies. These may include, but not limited to, implementation of peak hour trip reduction, encourage staggered work hours, telework programs, increased development of employment centers where transit usage is highly viable, encouragement of ridesharing options in the public and private sector, provision for park-and-ride facilities adjacent to the regional transportation system, and provision for transit subsidies.

- **Policy 4.2:** Maintain and implement the policies and recommendations of the Bicycle Master Plan as part of the Recreational Trails Element. These facilities shall connect residential areas with schools, parks, recreation areas, major employment centers, and neighborhood commercial areas.
- **Policy 4.3:** Maintain and implement the policies and recommendations of the Pedestrian Master Plan as part of the Recreational Trails Element to ensure pedestrian access along streets and other locations throughout the City are properly maintained and provided.
- **Policy 4.9:** The City shall look for opportunities to incorporate TDM programs into their Energy Roadmap that contributes to state and regional goals for saving energy and reducing GHG emissions.

- Bicycle Facilities
  - **Policy 6.3:** Integrate bicycle and pedestrian planning and safety considerations more fully into the planning and design of the roadway network, transit facilities, public buildings, and parks.
  - **Policy 6.4:** Provide and maintain a safe, direct, and comprehensive bicycle network connecting neighborhoods, employment locations, public facilities, transit stations, parks and other key destinations.
  - **Policy 6.5:** Plan Class II bicycle lanes into all prime arterial, major arterials, and secondary collectors where safe and appropriate as determined by City staff.
- Pedestrian Facilities
  - **Policy 7.7:** Require the construction of a minimum five-foot wide sidewalk in all new developments and street improvements but will encourage sidewalk widths that go beyond the minimum five-foot ADA standards in areas with high pedestrian activity.

Policies from the Energy Climate Action Element relevant to air quality are as follows (City of Oceanside 2019):

Energy Climate Action Element

- Smart Growth and Multimodal Transportation
  - **Policy ECAE-2a-1:** In areas served by transit, promote land use intensities that increase transit ridership and, in turn, the quality and frequency of transit service.
  - **Policy ECAE-2a-2:** In the City's commercial corridors, promote a mix of land uses that contributes to a sense of place, creates synergies between local businesses, and affords residents the opportunity to live, work, and play within a walkable radius.

- **Policy ECAE-2f-3:** In partnership with the local business community, San Diego Gas and Electric, and other stakeholders, explore ways to reduce the cost of electric and other zero missions vehicles to Oceanside residents, specifically low-income households in proximity to air quality hot spots near I-5 and state highways.

- Urban Greening
  - **Policy ECAE-5b-1:** Integrate green infrastructures (i.e., natural areas that provide habitat, flood protection, stormwater filtration, and improved air quality) into capital improvement projects, to the extent feasible and appropriate).

4.2.3 Thresholds of Significance

Based on the significance criteria established by Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.) and the City of Oceanside, a significant impact related to air quality would generally occur as a result of project implementation if the proposed project would:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. Result in a cumulatively considerable net increase of attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
3. Expose sensitive receptors to substantial pollutant concentrations.
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) indicates that, where available, the significance criteria established by the applicable air quality management district or pollution control district may be relied upon to determine whether the proposed project would have a significant impact on air quality.

SPAPCD

As part of its air quality permitting process, the SDAPCD has established thresholds in Rule 20.2 requiring the preparation of Air Quality Impact Assessments for permitted stationary sources (SDAPCD 2016c). The SDAPCD sets forth quantitative emission thresholds below which a stationary source would not have a significant impact on ambient air quality. Although these trigger levels do not generally apply to mobile sources or general land development projects, for comparative purposes these levels may be used to evaluate the increased emissions that would be discharged to the SDAB from proposed land development projects (County of San Diego 2007).

Project-related air quality impacts estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in Table 4.2-4 are exceeded.

Table 4.2-4
SDAPCD Air Quality Significance Thresholds

Construction Emissions			
Pollutant	*Total Emissions (Pounds per Day)*		
Respirable particulate matter (PM_{10})	100		
Fine particulate matter ($PM_{2.5}$)	55		
Oxides of nitrogen (NO_x)	250		
Oxides of sulfur (SO_x)	250		
Carbon monoxide (CO)	550		
Volatile organic compounds (VOCs)	75*		
Operational Emissions			
Pollutant	*Total Emissions*		
	Pounds per Hour	*Pounds per Day*	*Pounds per Year*
Respirable particulate matter (PM_{10})	—	100	15
Fine particulate matter ($PM_{2.5}$)	—	55	10
Oxides of nitrogen (NO_x)	25	250	40
Sulfur oxides (SO_x)	25	250	40
Carbon monoxide (CO)	100	550	100
Lead and lead compounds	—	3.2	0.6
Volatile organic compounds (VOCs)	—	75*	13.7

Source: SDAPCD 1995, SDAPCD 2016c.
* VOC threshold based on the significance thresholds for VOCs from the South Coast Air Quality Management District for the Coachella Valley as stated in the San Diego County Guidelines for Determining Significance

The thresholds listed in Table 4.2-4 represent screening-level thresholds that can be used to evaluate whether project-related emissions could cause a significant impact on air quality. Emissions below the screening-level thresholds would not cause a significant impact. The emissions-based thresholds for O3 precursors are intended to serve as a surrogate for an "O3 significance threshold" (i.e., the potential for adverse O3 impacts to occur). This approach is used because O3 is not emitted directly (see the discussion of O_3 and its sources in Section 4.2.1, Pollutants and Effects –Criteria Air Pollutants) and the effects of an individual project's emissions of O3 precursors (VOC and NOx) on O3 levels in ambient air cannot be determined through air quality models or other quantitative methods. For nonattainment pollutants, if emissions exceed the thresholds shown in Table 4.2-4, the project would have the potential to result in a cumulatively considerable net increase in these pollutants and thus could have a significant impact on the ambient air quality.

With respect to odors, SDAPCD Rule 51 (Public Nuisance) prohibits emission of any material that causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of any person. A project that proposes a use that would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of off-site receptors.

4.2.4 Methodology and Impact Analysis

4.2.4.1 Methodology

Construction Emissions

Emissions from the construction phase of the proposed project were estimated using the Road Construction Emissions Model Version 9.0.0 (SMAQMD 2018).

For the purposes of modeling, it was assumed that construction of the proposed project would commence in January 2020 and would occur over a period of approximately 6 months. Based on the proposed project area, it was estimated that up to 7 acres would be disturbed. For material transport, a total of approximately 3,416 and 4,641 cubic yards of material (i.e., asphalt, aggregate base, and concrete) would be exported (during the grubbing/land clearing and grading/excavation phases) and imported (during the drainage/utilities/sub-grade and paving phases), respectively. The analysis contained herein is based on the default model assumptions outlined in Table 4.2-5 (duration of phases is approximate).

Table 4.2-5
Construction Phasing Assumptions

Proposed Project Construction Phase	Construction Start Month/Day/Year	Phase Duration (Months)
Grubbing/Land Clearing	01/01/2020	0.6
Grading/Excavation	01/20/2020	2.4
Drainage/Utilities/Sub-Grade	04/03/2020	2.1
Paving	06/06/2020	0.9

Source: See Appendix A for details.

The construction equipment mix, worker trips, water truck trips, and material haul truck trips used for estimating the construction emissions of the proposed project are based on model defaults and are shown in Table 4.2-6.

Table 4.2-6
Construction Scenario Assumptions

Construction Phase	One-way Vehicle Trips			Equipment		
	Average Daily Worker Trips	*Average Daily Water Truck Trips*	*Average Daily Haul Truck Trips*	*Equipment Type*	*Quantity*	*Usage Hours*
Grubbing/Land Clearing	20	10	6	Crawler Tractors	1	8
				Excavators	2	8
				Signal Boards	5	8
Grading/Excavation	50	10	6	Crawler Tractors	1	8
				Excavators	3	8
				Graders	2	8
				Rollers	2	8
				Rubber-Tired Loaders	1	8
				Scrapers	2	8
				Signal Boards	5	8
				Tractors/Loaders/Backhoes	4	8
Drainage/Utilities/Sub-Grade	38	10	8	Air Compressors	1	8
				Generator Sets	1	8
				Graders	1	8
				Plate Compactors	1	8
				Pumps	1	8
				Rough Terrain Forklifts	1	8
				Scrapers	1	8
				Signal Boards	5	8
				Tractors/Loaders/Backhoes	3	8
Paving	30	10	8	Pavers	1	8
				Paving Equipment	1	8
				Rollers	2	8
				Signal Boards	5	8
				Tractors/Loaders/Backhoes	3	8

Notes: See Appendix A for details.

For the analysis, it was assumed that heavy construction equipment would be operating for 8 hours per day, 5 days per week (22 days per month) during proposed project construction.

Construction of proposed project components would be subject to SDAPCD Rule 55 (Fugitive Dust Control). This rule requires that construction of proposed project components include steps to restrict visible emissions of fugitive dust beyond the property line (SDAPCD 2009b). Compliance with Rule 55 would limit fugitive dust (PM_{10} and $PM_{2.5}$) that may be generated during grading and construction activities.

A detailed depiction of the construction schedule and assumptions is included in Appendix A of this EIR.

Operational Emissions

The proposed project would include road and right-of-way improvements to the corridor to enhance existing and future traffic operations, provide congestion relief, reduce queue lengths, improve safety conditions for the unsignalized intersections and access points along the corridor, and provide safer travel routes for bicyclists and pedestrians. However, as described in the Transportation Impact Analysis (TIA) prepared for the proposed project (Appendix K), the 2035 daily vehicle miles traveled (VMT) estimated using the SANDAG Series 12 traffic model for the proposed project would be higher than for the City's current Circulation Element (102,604,488 miles versus 101,798,320 miles) (see Appendix K to this EIR). The higher cumulative VMT figure under the proposed project is due to a higher average trip length, which reflects changes in travel behavior patterns based on not widening a section of the College Boulevard study corridor (see Appendix K to this EIR). Since the proposed project would result in higher VMT, emissions associated with the net increase in VMT were estimated using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. The default number of trips and trip lengths in CalEEMod were adjusted to match the daily VMT increase of 806,168 miles (i.e., 102,604,488 miles minus 101,798,320 miles). Other CalEEMod default data, including variable start information, emissions factors, and fleet mix were conservatively used for the model inputs. Emission factors for year 2035 were used to estimate emissions associated with full buildout of the proposed project. CalEEMod output data are included in Appendix A of this EIR

4.2.4.2 Impact Analysis

Would the project conflict with or obstruct implementation of the applicable air quality plan?

The SDAPCD and 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 RAQS was initially adopted in 1991 and is updated every three years (most recently in 2016). The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for O_3. The SIP and RAQS rely on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in San Diego County and the cities in the County, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by San Diego County and the cities in the county as part of the development of their general plans.

While the SDAPCD and City do not provide guidance regarding the analysis of impacts associated with air quality plan conformance, the *County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements – Air Quality* does discuss conformance with the RAQS (County of San Diego 2007). The guidance indicates that if a proposed project, in conjunction with other projects, contributes to growth projections that would not exceed SANDAG's growth projections for the City, the project would not be in conflict with the RAQS (County of San Diego 2007). The proposed project would consist of roadway improvements and would not result in additional growth in the City. However, as identified in the TIA (see Appendix K), the proposed project would result in increased VMT associated with changes in travel behavior patterns based on not widening a section of the College Boulevard study corridor, as compared to the City's current Circulation Element. Because the VMT and emissions forecasts upon which the SIP and RAQS are based would be exceeded, the proposed project would conflict with or obstruct implementation of the applicable air quality plan and impacts would be potentially significant (**Impact AQ-1**).

Would the project result in a cumulatively considerable new increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the SDAPCD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are relevant in the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality.

Construction Emissions

Construction of the proposed project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment, soil disturbance, and VOC off-gassing) and off-site sources (worker vehicle trips). Construction emissions can vary substantially from one day to the next, depending on the level of activity, the specific type of operation, and for dust, the prevailing weather conditions. Criteria air pollutant emissions associated with construction activity were quantified using the Road Construction Emissions Model. Default values provided by the Road Construction Emissions Model were used where detailed proposed project information was not available. Construction phasing and scenario assumptions including information regarding phasing, equipment used during each phase, haul trucks, water trucks, and worker vehicles is included in Tables 4.2-5 and 4.2-6.

Implementation of the proposed project would generate air pollutant emissions from entrained dust, off-road equipment, vehicle emissions, and asphalt pavement application. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM_{10} and $PM_{2.5}$ emissions. The proposed project is subject to SDAPCD Rule 55, Fugitive Dust Control. This rule requires that the proposed project take steps to restrict visible emissions of fugitive dust beyond the property line.

Compliance with Rule 55 would limit fugitive dust (PM_{10} and $PM_{2.5}$) generated during grading and construction activities. To account for dust control measures in the calculations, it was assumed that the active sites would be watered sufficiently to result in an approximately 50% reduction of particulate matter.

Exhaust from internal combustion engines used by construction equipment, trucks, and worker vehicles would result in emissions of VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$.

Table 4.2-7, Estimated Maximum Daily Construction Criteria Air Pollutant Emissions, shows the estimated maximum daily construction emissions associated with the construction of the proposed project without mitigation. Complete details of the emissions calculations are provided in Appendix A of this document.

Table 4.2-7
Estimated Maximum Daily Construction Criteria Air Pollutant Emissions

Activities	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Grubbing/Land Clearing	1.51	16.17	12.08	0.03	1.30	0.74
Grading/Excavation	6.79	76.70	51.86	0.11	4.01	3.20
Drainage/Utilities/Sub-Grade	4.16	41.80	33.48	0.07	2.70	2.06
Paving	2.08	19.96	19.82	0.04	1.20	1.06
Maximum Daily Emissions	**6.79**	**76.70**	**51.86**	**0.11**	**4.01**	**3.20**
SDAPCD Threshold	*75*	*250*	*550*	*250*	*100*	*55*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: See Appendix A for detailed results.
Notes: CO = carbon monoxide; NO_x = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter; PM_{10} = coarse particulate matter; SDAPCD = San Diego Air Pollution Control District; SO_x = sulfur oxides; VOC = volatile organic compound.
The values shown are the maximum daily emissions results from the Road Construction Emission Model and reflect 50% fugitive dust reduction to account for compliance with SDAPCD Rule 55 (Fugitive Dust).

As shown in Table 4.2-7, daily construction emissions would not exceed the significance thresholds for any criteria air pollutant. Therefore, impacts during construction would be less than significant.

Operational Emissions

The proposed project would result in right-of-way improvements to the corridor to enhance existing and future traffic operations, provide congestion relief, reduce queue lengths, improve safety conditions for the unsignalized intersections and access points along the corridor, and provide safer travel routes for bicyclists and pedestrians. However, as described in the TIA (see Appendix K to this EIR), the regional 2035 daily VMT associated with the proposed project would be higher than for the Circulation Element Alternative (an increase of 806,168 miles) due to a higher average trip length, which reflects changes in travel behavior patterns based on not widening a section of the College Boulevard study corridor (see Appendix K). The incremental increase in VMT was modeled in CalEEMod to estimate increased emissions with the proposed project, which are summarized in Table 4.2-8. Complete details of the emissions calculations are provided in Appendix A to this EIR.

Table 4.2-8
Estimated Incremental Increase in Maximum Daily Operational Criteria Air Pollutant Emissions – Project vs Existing Circulation Element

Year 2035	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Incremental Increase in Daily Emissions from On-Road VMT	88.28	393.29	1,160.65	5.27	626.25	169.00
SDAPCD Threshold	*75*	*250*	*550*	*250*	*100*	*55*
Threshold Exceeded?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**

Source: See Appendix A for detailed results.
Notes: CO = carbon monoxide; NO_x = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter; PM_{10} = coarse particulate matter; SDAPCD = San Diego Air Pollution Control District; SO_x = sulfur oxides; VOC = volatile organic compound; VMT = vehicle miles traveled.
The values shown are the maximum summer or winter daily emissions results from CalEEMod.

As shown in Table 4.2-8, over the long-term, the incremental increase in regional VMT associated with the proposed project, as compared to future (2035) traffic operations assuming buildout of College Boulevard according to the existing Circulation Element, would result in a significant and unavoidable increase in emissions of VOC, NO_x, CO, PM_{10}, and $PM_{2.5}$.

The SDAB has been designated as a federal nonattainment area for O3 and a state nonattainment area for O_3, PM_{10}, and $PM_{2.5}$. The nonattainment status is the result of cumulative emissions from all sources of these air pollutants and their precursors within the basin. Projects that emit these pollutants or their precursors (i.e., VOCs and NO_x for O_3) potentially contribute to poor air quality. In analyzing cumulative impacts from a project, the analysis must specifically evaluate the project’s contribution to the cumulative increase in pollutants for which the basin is designated as nonattainment for the CAAQS and NAAQS. Since the proposed project would result in regional emissions of VOCs, NO_x, PM_{10}, and $PM_{2.5}$ that would exceed SDAPCD thresholds, the proposed project would result in a cumulatively considerable increase in these nonattainment pollutants. As described above in the analysis pertaining to violation of any air quality standard, since the City lacks the authority to mandate emission reductions for on-road vehicles, or to control driver behavior, no feasible mitigation measures have been identified to reduce these emissions. This cumulative impact would be significant and unavoidable (**Impact AQ-2**).

As discussed above, the proposed project would result in emissions that would exceed the SDAPCD thresholds for VOC, NO_x, CO, PM_{10}, and $PM_{2.5}$ exceedances during operations. Notably, since the emission-based thresholds used in this analysis were established to provide project-level estimates of criteria air pollutant quantities that the SDAB can accommodate without affecting the attainment dates for the ambient air quality standards, and since the EPA and CARB have established the ambient air quality standards at levels above which concentrations could be harmful to human health and welfare, with an adequate margin of safety, elevated levels of criteria air pollutants above adopted thresholds as a result of the proposed project's operation could cause adverse health effects associated with these pollutants. (The effects typically associated with unhealthy levels of criteria air pollutant exposure are described in Section 4.2-1, Pollutants and Effects – Criteria Air Pollutants, above.) However, as detailed in Appendix A to this EIR, there are numerous scientific and technological complexities associated with correlating criteria air pollutant emissions from an individual project to specific health effects or potential additional nonattainment days, and there are currently no modeling tools that could provide reliable and meaningful additional information regarding health effects from criteria air pollutants generated by individual projects.

In regards to long-term operations, the same roadway traffic volumes would occur along College Boulevard, with or without the proposed project. Operations would not increase emissions, and may result in reduced emissions by reducing congestion and idling times at project intersections, as well as by promoting alternative (i.e., non-vehicular) transportation via safer travel routes for pedestrians and bicyclists. This would be a less-than-significant impact.

Would the project expose sensitive receptors to substantial pollutant concentrations?

Air quality varies as a direct function of the amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions. Air quality problems arise when the rate of pollutant emissions exceeds the rate of dispersion. Reduced visibility, eye irritation, and adverse health impacts upon those persons termed "sensitive receptors" are the most serious hazards of existing air quality conditions in the area. Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. Sensitive receptors include residences, schools, playgrounds, child-care centers, athletic facilities, long-term health-care facilities, rehabilitation centers, convalescent centers, and retirement homes. Sensitive receptors, including residences and several schools (i.e., the Coastal Academy and La Petit Academy) are located along the proposed project corridor.

Health Impacts of Toxic Air Contaminants

In addition to impacts from criteria pollutants, project impacts may include emissions of pollutants identified by the state and federal government as TACs or hazardous air pollutants. State law has established the framework for California's TAC identification and control program, which is generally more stringent than the federal program, and is aimed at TACs that are a problem in California.

TACs (primarily diesel particulate matter) would be emitted in fuel combustion exhaust. "Incremental cancer risk" is the net increased likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 9-, 30-, and 70-year exposure period would contract cancer based on the use of standard OEHHA risk-assessment methodology (OEHHA 2015). In addition, some TACs have non-carcinogenic effects. According to the OEHHA, health risk assessments should be based on a 30-year exposure duration based on typical residency period; however, such assessments should be limited to the period/duration of activities associated with the project (OEHHA 2015). Notably, the proposed project alignment is linear and spans approximately 2.41 miles, whereby the duration of construction activities (and exposure of an individual receptor to pollutants) would be minimal at any one location. Thus, the duration of proposed construction activities would only constitute a small percentage of the total long-term exposure period and would not result in exposure of proximate sensitive receptors to substantial TACs. In addition, heavy-duty construction equipment and diesel trucks are subject to CARB Airborne Toxics Control Measures to reduce diesel particulate emissions. After construction is completed, there would be no long-term source of TAC emissions during operation. Based on these considerations, sensitive receptors would not be exposed to substantial TAC concentrations and this impact would be less than significant.

Valley Fever Exposure

As discussed in Section 4.2.1, Pollutants and Effects - Non-Criteria Air Pollutants, Valley Fever is not highly endemic to San Diego County. The incidence rate of Coccidioidomycosis within the proposed project area is below the County average, as well as the statewide average. The proposed project would be consistent with SDAPCD Rule 55, which limits the amount of fugitive dust generated during construction, and would thereby control the release of the *Coccidioides immitis* fungus from construction activities. Based on the low incidence rate of Coccidioidomycosis in the vicinity of the proposed project site and in greater San Diego County, as well as the proposed project's implementation of dust control strategies, it is not anticipated that earthmoving activities during proposed project construction would result in exposure of nearby sensitive receptors to Valley Fever. Therefore, the proposed project would have a less than significant impact with respect to Valley Fever exposure to sensitive receptors.

Health Impacts of Carbon Monoxide

Regionally, traffic adds to regional trip generation and increases the vehicle miles traveled within the local airshed and the SDAB. Locally, traffic adds to the City's roadway system, and if such traffic occurs during periods of poor atmospheric ventilation, consists of a large number of vehicles "cold-started" and operating at pollution-inefficient speeds, and operates on roadways already crowded with non-project traffic, there is a potential for the formation of microscale CO "hotspots" in the area immediately around points of congested traffic. Because of continued improvement in mobile emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the basin is steadily decreasing.

Projects contributing to adverse traffic impacts may result in the formation of CO hotspots. As the City does not have CO hotspots guidelines, the County's CO hotspot screening guidance (County of San Diego 2007) was followed to determine if the proposed project would require a site-specific hotspot analysis. The County recommends that a local CO hotspot analysis be conducted if the intersection meets one of the following criteria: (1) the project causes road intersections to operate at level of service (LOS) E or worse and where peak-hour trips exceeds 3,000 trips, or (2) the project causes road intersections to operate at LOS E or worse and under cumulative conditions when the addition of peak-hour trips from the project and the surrounding projects exceed 2,000 trips. As indicated in the TIA, the proposed project would not cause peak hour intersection LOS operations to degrade to deficient levels (LOS E or LOS F) (Fehr and Peers 2019). The proposed improvements along College Boulevard under the proposed project provide an increase in capacity; however, the increased traffic demand under 2035 conditions would result in deficient peak hour roadway operating conditions along portions of the corridor. Of note, the roadway segment with the greatest average daily traffic (ADT) in 2035 (College Boulevard between Oceanside Boulevard and Olive Drive) would also have deficient LOS F under the proposed project, as well as the Circulation Element Alternative. However, CO concentrations along this roadway segment, as well as other roadway segments with higher ADT, were assessed in the *Oceanside Circulation Element Update Appendix B: Combined Impact Analysis, Acoustical/Air Quality/Greenhouse Gas* (Investigative Science and Engineering, Inc. 2011), which determined that no CO hotspots would occur along the corridor. Therefore, impacts would be less than significant to sensitive receptors with regard to potential CO hotspots resulting from project contribution to cumulative traffic-related air quality impacts.

Health Impacts of Other Criteria Air Pollutants

Construction and operation of the proposed project would not result in emissions that exceed the SDAPCD's emission thresholds for any criteria air pollutants. However, operation of the proposed project would result in emissions that would exceed the SDAPCD thresholds for criteria air pollutants including VOC, NO_x, CO, PM_{10}, and $PM_{2.5}$. VOCs and NO_x are precursors to O_3, for which the SDAB is designated as nonattainment with respect to the NAAQS and CAAQS (the SDAB is designated by the EPA as a nonattainment area for the 2008 8-hour O_3 NAAQS). As discussed in Section 4.2.1, Pollutants and Effects- Criteria Air Pollutants, the health effects associated with O_3 are generally associated with reduced lung function. The contribution of VOCs and NO_x to regional ambient O_3 concentrations is the result of complex photochemistry. The increases in O_3 concentrations in the SDAB due to O_3 precursor emissions tend to be found downwind from the source location to allow time for the photochemical reactions to occur. However, the potential for exacerbating excessive O_3 concentrations would also depend on the time of year that the VOC emissions would occur, because exceedances of the NAAQS and CAAQS for O_3 tend to occur between April and October when solar radiation is highest. The holistic effect of a single project's emissions of O_3 precursors is speculative due to the lack of quantitative methods to assess this impact. Nonetheless, because the VOC and NO_x emissions associated with proposed project operations would exceed the SDAPCD mass daily thresholds, it could minimally contribute to regional O_3 concentrations and the associated health impacts.

Health effects that result from NO_2 (which is a constituent of NO_x) include respiratory irritation. Although the proposed project operation would generate NO_x emissions that would exceed the SCAQMD mass daily thresholds, operation of the proposed project is not anticipated to contribute to exceedances of the NAAQS and CAAQS for NO_2 because the SDAB is designated as in attainment of the NAAQS and CAAQS for NO_2 and the existing NO_2 concentrations in the area are well below the NAAQS and CAAQS standards. Nonetheless, because there are nearby receptors to be affected by operational sources of NO_x, the proposed project could result in potential health effects associated with NO_2.

CO tends to be a localized impact associated with congested intersections. The associated potential for CO hotspots were discussed previously and are determined to be a less-than-significant impact. However, operation of the proposed project would generate CO emissions that would exceed the SDAPCD thresholds. Therefore, the proposed project's CO emissions could potentially contribute to significant health effects associated with this pollutant.

Operation of the proposed project would exceed thresholds for PM_{10} or $PM_{2.5}$. As such, the proposed project would potentially contribute to exceedances of the NAAQS and CAAQS for particulate matter or would obstruct the SDAB from coming into attainment for these pollutants. Because the proposed project has the potential to contribute particulate matter that exceeds SDAPCD mass daily thresholds during operations, the proposed project could result in associated health effects.

In summary, because operation of the proposed project could result in exceedances of the SDAPCD significance thresholds for VOC, NO_x, CO, PM_{10}, and $PM_{2.5}$, the potential health effects associated with criteria air pollutants are considered potentially significant. Notably, there are numerous scientific and technological complexities associated with correlating criteria air pollutant emissions from an individual project to specific health effects or potential additional nonattainment days, and there are currently no modeling tools that could provide reliable and meaningful additional information regarding health effects from criteria air pollutants generated by individual projects. These subjects are discussed further in Appendix A. Overall, since the regional VMT increase is based on driver behavior changes from not widening a portion of College Boulevard under the proposed project, and since the City lacks the authority to mandate emission reductions for on-road vehicles, or to control driver behavior, no feasible mitigation measures have been identified to reduce these emissions. This impact would be significant and unavoidable (**Impact AQ-3**).

Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The California Health and Safety Code, Division 26, Part 4, Chapter 3, Section 41700; SDAPCD Rule 51; and City of Oceanside Municipal Code Section 13.16, commonly referred to as public nuisance law, prohibit emissions from any source whatsoever in such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to the public health or damage to property. Projects required to obtain permits from SDAPCD are evaluated by SDAPCD staff for potential odor nuisance, and conditions may be applied (or control equipment required) where necessary to prevent occurrence of public nuisance.

SDAPCD Rule 51 (Public Nuisance) also prohibits emission of any material that causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of any person. A project that proposes a use that would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of off-site receptors. Odor issues are very subjective by the nature of odors themselves and due to the fact that their measurements are difficult to quantify. As a result, this guideline is qualitative, and will focus on the existing and potential surrounding uses and location of sensitive receptors.

The occurrence and severity of potential odor impacts depends on numerous factors. The nature, frequency, and intensity of the source; the wind speeds and direction; and the sensitivity of receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying and cause distress among the public and generate citizen complaints.

Odors would be potentially generated from vehicles and equipment exhaust emissions during construction of the proposed project. Potential odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment. Such odors would disperse rapidly from the proposed project site and generally occur at magnitudes that would not affect substantial numbers of people. In regards to long-term operations, the proposed project consists of roadway improvements that would not result in objectionable odors. Therefore, impacts associated with odors during construction and operations would be less than significant**.**

4.2.5 Mitigation Measures

M-AQ-1 Prior to the San Diego Air Pollution Control District's (SDAPCD's) next triennial review of the Regional Air Quality Strategy, the City of Oceanside (City) shall coordinate with SDAPCD to amend the vehicle miles traveled (VMT) and emissions assumptions using the proposed project's College Boulevard corridor revisions. This includes downgrading the future classification of College Boulevard between Olive Drive and Waring Road in the Circulation Element from a six-lane Major Arterial to a four-lane Major Arterial.

4.2.6 Level of Significance After Mitigation

With implementation of MM-AQ-1, potentially significant impacts concerning project conflicts with or obstruction of implementation of the applicable air quality plan (**Impact AQ-1**) would be reduced to a less than significance level.

As discussed earlier, since the City lacks the authority to mandate emission reductions for on-road vehicles, or to control driver behavior, no feasible mitigation measures have been identified to reduce these emissions or potentially significant long-term impacts concerning (1) cumulatively considerable new increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (**Impact AQ-2**); and (2) exposure of sensitive receptors to substantial pollutant concentrations (**Impact AQ-3**).

Potentially significant long-term impacts concerning (1) cumulatively considerable new increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (**Impact AQ-2**); and (3) exposure of sensitive receptors to substantial pollutant concentrations (**Impact AQ-3**) would remain significant and unavoidable.

4.3 BIOLOGICAL RESOURCES

This section describes the existing biological resources of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed College Boulevard Improvement project.

The information provided in this section is based on the Biological Resources Technical Report, prepared by Dudek in 2018 (see Appendix B). The methods used to survey the on-site biological resources and make the enclosed resource significance determinations are contained therein.

4.3.1 Existing Conditions

Vegetation Communities/Land Cover Types

One land cover type, urban/developed, was identified and mapped within the proposed project corridor. The acreage of the mapped area is presented in Table 4.3-1, the spatial distribution is presented on Figure 4.3-1, Biological Resources Map. The land cover type is described in detail below. Also included in Table 4.3-1 is the designation of vegetation community sensitivity, based on rarity and ecological importance, as identified by Section 4 of the Multiple Habitat Conservation Plan (MHCP) and the City's Subarea Plan (SANDAG 2003; City of Oceanside 2010).

Table 4.3-1
Existing Vegetation Communities and Land Covers Within the Project Corridor

Vegetation Community/Land Cover	MHCP Habitat Group Designation	Acreage
Urban/Developed	None	26.69
	Total	**26.69**

Urban/Developed Land (DEV)

According to Oberbauer et al. (2008), urban/developed represents areas that have been built on or otherwise physically altered to an extent that native vegetation communities are not supported. This land cover type generally consists of semi-permanent structures, homes, parking lots, pavement or hardscape, roads, sidewalks, and landscaped areas that require maintenance and irrigation (e.g., ornamental greenbelts). Typically, this land cover type is unvegetated or supports a variety of ornamental plants and landscaping.

Within the project corridor, urban/developed land includes College Boulevard and associated pedestrian sidewalks, and various planted ornamental landscaping found within the project boundaries.

Urban/developed land is not regulated by the environmental resource agencies, and is often considered a disturbed category. Additionally, urban/developed land is not a habitat group as defined in the Oceanside Subarea Plan, indicating that it has little to no habitat value and impacts do not require mitigation.

Special-Status and Regulated Resources

Special-Status Vegetation Communities

There are no special-status vegetation communities present in the project corridor. The project area is dominated by urban/developed land consisting of paved roads, ornamental slopes and greenbelts, and previously developed landscapes supporting buildings, parking lots, and associated infrastructure. This land cover type is not considered sensitive and impacts to this land cover type do not require mitigation.

Special-Status Plant Species

No special-status plant species were identified during the general biological surveys. Due to the extent of developed and disturbed lands in the project corridor and the lack of native soils and habitats in the area, there is no potential for special-status plant species to occur. As such, no focused surveys for special-status plants were conducted.

A search of CNPS (2018) and CNDDB (2018) records was utilized to develop a matrix of special-status plant species that may have potential to occur in the project corridor due to the presence of suitable habitat (taking into consideration vegetation communities, soils, elevation, and geographic range, life form/blooming period, etc.). This matrix of special-status plants (i.e., federally, state, or locally listed species), their favorable habitat conditions, and their potential to occur on site based on the findings of the field investigations is presented in Appendix B. Species considered special-status under the City's Subarea Plan (Subarea Plan Tables 3-3 and 3-4), are included in the matrix (City of Oceanside 2010). Eleven special-status plant species were recorded within two miles of the project corridor as illustrated on Figure 4.3-2, CNDDB Special-Status Species Occurrences Map (CNDDB 2018): the federally and state endangered thread-leaved brodiaea (*Brodiaea filifolia*), CRPR List 1B.1; Blochman's dudleya (*Dudleya blochmaniae* ssp. *blochmaniae*), CRPR List 1B.1; Nuttall's scrub oak (*Quercus dumosa*), CRPR List 1B.1; federally endangered San Diego ambrosia (*Ambrosia pumila*), CRPR List 1B.1; federally threatened and state endangered San Diego thornmint (*Acanthomintha ilicifolia*), CRPR List 1B.1; Wiggans' cryptantha (*Cryptantha wigginsii*), CRPR List 1B.1; cliff spurge (*Euphorbia misera*), CRPR List 2B.2; sea dahlia (*Coreopsis maritima*), CRPR List 2B.2; south coast saltscale (*Atriplex pacifica*), CRPR List 1B.2; and summer holly (*Comarostaphylis diversifolia* (Parry) Greene ssp. *diversifolia*), CRPR List 1B.2.

Due to the extent of developed lands and lack of native habitats and substrate, the special-status plant species listed above and outlined in Appendix B are not expected to occur in the project corridor.

Special-Status Wildlife

Appendix B lists special-status wildlife species reported in the USGS 7.5-minute San Luis Rey quad and the surrounding seven topographic quadrangles (CDFW 2018), as well as species listed in Tables 3-3 and 3-4 of the Final Oceanside Subarea Habitat Conservation Plan/Natural Communities Conservation Plan (City of Oceanside 2010). Appendix B also analyzes each of these special-status species' occurrence or potential to occur based on known range, habitat associations, geographic range, and elevation. Where applicable, a distinction is made between foraging and breeding habitat available in the project corridor.

Eight special-status wildlife species were recorded within two miles of the project corridor as illustrated on Figure 4.3-2 (CDFW 2018): the federally threatened coastal California gnatcatcher (*Polioptila californica californica*); the federally and state endangered least Bell's vireo (*Vireo bellii pusillus*); the federally and state endangered southwestern willow flycatcher (*Empidonax traillii extimus*); the federally endangered and state threatened Stephens' kangaroo rat (*Dipodomys stephensi*); yellow warbler (Setophaga petechial), a USFWS Bird of Conservation Concern (BCC) (USFWS 2008); yellow-breasted chat (*Icteria virens*), a California Species of Special Concern; white-tailed kite (*Elanus leucurus*), a California Fully Protected Species; and vernal pool fairy shrimp – either the federally endangered San Diego fairy shrimp (*Branchinecta sandiegonensis*) or Riverside fairy shrimp (*Streptocephalus woottoni*).

No special-status wildlife species were detected in the project corridor during any of the biological resource surveys and due to the extent of developed lands and lack of native habitat in the project corridor, none are expected to occur. However, one single red-tailed hawk (*Buteo jamaicensis*) individual was observed in flight over College Boulevard near Waring Road. Hawks, also referred to as "birds of prey", are a valuable resource to the State of California, and therefore are protected under Sections 3503, 3503.5, 3505 and 3513 of the California Fish and Game Code, and California Code of Regulation, Title 14, Sections 251.1, 652 and 783-786.6. Despite the roadway traffic and general human presence in the project corridor, red-tailed hawks and other more urban-adapted raptor species including, but not limited to, red-shouldered hawk (*Buteo lineatus*) have a moderate potential to nest within the taller eucalyptus and ornamental trees along College Boulevard.

Jurisdictional Wetlands Delineation

Within the project corridor, no jurisdictional wetlands or non-wetland waters of the U.S. were observed during the surveys. Evidence of hydrology and vegetation were evaluated throughout the project corridor but, because no potential wetland sites or non-wetland waters of the U.S.

(i.e., natural drainages/channels) were identified, no data station pits were dug, and no formal wetland determination data forms were recorded. The project corridor crosses Loma Alta Creek, an east-west trending perennial, vegetated stream. However, the proposed improvements are limited to the existing road right-of-way in this area and will not encroach into the adjacent wetland and non-wetland waters of the U.S. associated with this waterway.

Ultimately, due to the lack of any indicators detected on site, no wetlands, waters, or other potential jurisdictional resources were mapped in the project corridor, and are not discussed further in this analysis.

Wildlife Corridors and Habitat Linkages

Wildlife movement typically occurs in wildlife corridors and habitat linkages that provide space and connectivity to other suitable habitat areas. Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Wildlife corridors contribute to population viability by ensuring continual exchange of genes between populations, providing access to adjacent habitat areas for foraging and mating, and providing routes for recolonization of habitat after local extirpation or ecological catastrophes (e.g., fires).

Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation. Habitat linkages provide a potential route for gene flow and long-term dispersal of plants and animals, and may also serve as primary habitat for smaller animals such as reptiles and amphibians. Habitat linkages may be continuous habitat or discrete habitat islands that function as stepping stones for dispersal.

To function effectively, a wildlife corridor must link two or more patches of habitat for which connectivity is desired, and it must be suitable for the focal target species to achieve the desired demographic and genetic exchange between populations.

The approximate 26.69-acre project corridor is not expected to provide for considerable wildlife movement or serve as an important habitat linkage. The project is centered on College Boulevard, a busy, north-south, four-lane major arterial roadway. The project corridor is extensively developed and is surrounded by existing, high-density commercial and residential development and industrial uses. Because of regular human activity and considerable vehicle traffic in and surrounding the project corridor, predominantly urban-adapted wildlife species are expected to occur in this area, such as raccoons (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), and brush rabbits (*Sylvilagus* spp.).

Moreover, the City's Subarea Plan identifies regional corridors and local corridors. According to the Subarea Plan (City of Oceanside 2010), a regional corridor runs north/south and is vital to linking core California gnatcatcher populations in Carlsbad to populations in Camp Pendleton.

Local corridors, or east/west "feeder" corridors, connect with the larger, more extensive regional corridors. The project corridor is not located in either a California gnatcatcher regional corridor or a local corridor; the nearest local corridor is located west of the project corridor and west of Old Grove Road.

4.3.2 Relevant Plans, Policies, and Ordinances

4.3.2.1 Federal

Federal Endangered Species Act

The federal Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 et seq.), provides for listing of endangered and threatened species of plants and animals and designation of critical habitat for listed animal species. The ESA also prohibits all persons subject to U.S. jurisdiction from "taking" endangered species, which includes any harm or harassment. Section 7 of the ESA requires that federal agencies, prior to project approval, consult U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service to ensure adequate protection of listed species that may be affected by the project.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703 et seq.) is a federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The number of bird species covered by the MBTA is extensive and is listed in 50 CFR 10.13. The MBTA protects over 800 species of birds. Two species of eagles that are native to the United States, the bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*), were granted additional protection within the United States under the Bald and Golden Eagle Protection Act (16 U.S.C. 668–668d) to prevent the species from becoming extinct. The regulatory definition of "migratory bird" is broad and includes any mutation or hybrid of a listed species and includes any part, egg, or nest of such bird (50 CFR 10.12). Migratory birds are not necessarily federally listed endangered or threatened birds under the ESA. The MBTA, which is enforced by USFWS, makes it unlawful "by any means or in any manner, to pursue, hunt, take, capture, [or] kill" any migratory bird or attempt such actions, except as permitted by regulation. The applicable regulations prohibit the take, possession, import, export, transport, sale, purchase, barter, or offering of these activities, except under a valid permit or as permitted in the implementing regulations (50 CFR 21.11).

4.3.2.2 State

California Department of Fish and Wildlife

Under Section 1602 of the California Fish and Game Code, the California Department of Fish and Wildlife (CDFW) regulates activities that will divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. CDFW has jurisdiction over riparian habitats (e.g., southern willow scrub) associated with watercourses. Jurisdictional waters are delineated by the outer edge of riparian vegetation or at the top of the bank of streams or lakes, whichever is wider. CDFW jurisdiction does not include tidal areas or isolated resources.

California Endangered Species Act

The CDFW administers the California Endangered Species Act, which prohibits the “take” of plant and animal species designated by the Fish and Wildlife Commission as endangered or threatened in the state of California. The California Endangered Species Act authorizes the taking of threatened, endangered, or candidate species if take is incidental to otherwise lawful activity and if specific criteria are met. These provisions also require CDFW to coordinate consultations with USFWS for actions involving federally listed species that are also state-listed species.

Regional Water Quality Control Board

The Regional Water Quality Control Boards (RWQCBs) administer Section 401 permits and provides certification. The RWQCBs also play a role in review of water quality and wetland issues, including avoidance and minimization of impacts. Section 401 certification is required prior to the issuance of a Section 404 permit. Permits requiring Section 401 certification include ACOE Section 404 permits and National Pollutant Discharge Elimination System (NPDES) permits issued by the Environmental Protection Agency (EPA) under Section 402 of the Clean Water Act. NPDES permits are issued by the applicable RWQCB. The City of Oceanside is within the jurisdiction of the San Diego RWQCB (Region 9).

4.3.2.3 Local

North County Multiple Habitat Conservation Program

The North County Multiple Habitat Conservation Program (MHCP) is a long-term regional conservation plan established to protect sensitive species and habitats in northern San Diego County. The MHCP encompasses the Cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista. The program goals are to conserve approximately 19,000 acres of habitat, of which roughly 8,800 acres (46%) are already in public ownership and contribute toward the habitat preserve system for the protection of more than 80 rare, threatened, or endangered species (SANDAG 2003).

The City of Carlsbad is the only city under the MHCP that has an approved and permitted subarea plan (i.e., the City of Carlsbad Habitat Management Plan (HMP)). A draft City of Oceanside Subarea Habitat Conservation Plan/Natural Communities Conservation Plan (Subarea Plan) has been prepared and is used as a guidance document for development project in the City of Oceanside.

The MHCP sets forth general and subarea conditions of coverage that must be met for each covered species in order for the Cities to obtain take authorization. These conditions can be found in Appendix A of the City of Oceanside's Subarea Plan.

Oceanside Subarea Plan

The project area is located within the Oceanside Subarea Plan, which is part of the North County MHCP (SANDAG 2003). The purpose of the Oceanside Subarea Plan is to address how the City "will conserve natural biotic communities and sensitive plant and wildlife species pursuant to the California Natural Community Conservation Planning Act (NCCP Act) and the U.S. Endangered Species Act (ESA)" (City of Oceanside 2010). One of the functions of the Oceanside Subarea Plan is to allow the City to construct infrastructure projects dictated by the City's Capital Improvement Program (City of Oceanside 2010).

The goals of the Oceanside Subarea Plan include the following:

- Conserve 90% to 100% of all hardline conservation areas per the details of the Subarea Plan.
- Conserve a minimum of 2,511 acres of existing native habitats as biological Preserve in the City.
- Conserve a net 100% of aquatic and wetland habitats by 98% preservation and compensatory replacement of acreage, function, and values for an estimated 2% of wetlands impacts.
- Conserve a minimum of 95% of Rare and Narrow Endemic Species populations within the Preserve, and a minimum of 80% throughout the City as a whole.
- Restore a minimum of 164 acres of coastal sage scrub habitat within the City, of which 145 acres will be within the Wildlife Corridor Planning Zone.
- Prepare a comprehensive open space monitoring and management plan for the City's Preserve.

- Minimize the need for consultations with the Wildlife Agencies on a project-by-project approach for approval and mitigation requirements.
- Develop a tracking database and submit annual monitoring reports to the Wildlife Agencies that will document that conservation of habitat is occurring in rough-step to development of habitat.
- Ensure that mitigation is directed to the Wildlife Corridor Planning Zone and Preapproved Mitigation Areas such that the high-quality habitats and critical linkage areas become incorporated into the City's Preserve, while allowing development in lower-quality habitat areas.
- Implement local regulatory actions as specified in Section 5.3.3 in the MHCP Vol. I.
- Provide adequate funding for management and monitoring of the City's Preserve, including Priority 1 lands acquired by the Wildlife Agencies and excluding Wildlife Agency-owned lands, according to MHCP standards.

The project area is located outside of the coastal zone within the urban/developed part of the Oceanside Subarea Plan area and includes, but is not limited to, the following designated land uses: single-family residential, multi-family residential, regional and community shopping, transportation, and extractive industry (City of Oceanside 2010, Figure 2-3). Furthermore, according to the Oceanside Subarea Plan the project corridor is not located within any of the City's pre-approved mitigation areas, softline preserve areas, or hardline preserve areas (City of Oceanside 2010, Figure 4-1). However, the project is adjacent to a hardline preserve area on the east and west side of College Boulevard where the road crosses Loma Alta Creek (see Figure 4.3-3, Oceanside Subarea Plan Preserves).

The project area is not located within any of the Biological Core and Linkage Areas identified in the North County MHCP (SANDAG 2003, Figure 2-4).

<u>Oceanside Municipal Code</u>

Chapter 31A, Street Trees and Other Vegetation, of the Oceanside Municipal Code contains regulations with regard to planting and maintaining trees, plants, hedges, and shrubs. The City's Superintendent of the Parks and Recreation Department has jurisdiction and supervision over all street trees and other vegetation growing in streets, public areas and parkways in the city and has authority to inspect vegetation to determine hazards and impediments.

The Municipal Code also contains regulations with regard to the installation of water-efficient landscaping.

4.3.3 Thresholds of Significance

Based on the significance criteria established by Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.) and the City of Oceanside, a significant impact related to biological resources would generally occur as a result of project implementation if the project would:

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 the California Department of Fish and Game (CDFG)[1] or the U.S. Fish and Wildlife Service (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 the CDFG or USFWS.
3. Have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) 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 local policies or ordinances protecting biological resources, such as tree preservation policy/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.

4.3.4 Impacts Analysis

Would the project 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 the California Department of Fish and Game or U.S. Fish and Wildlife Service?

[1] As of January 2013, the California Department of Fish and Game (CDFG) has officially changed its name to the California Department of Fish and Wildlife (CDFW). In this document, references to documents and guidance predating the official name change use CDFG, whereas references postdating this change use CDFW.

Direct Impacts

Special-Status Plant Species

No special-status plant species were observed during the biological surveys and due to the extensively developed and disturbed context of the site and based on the results of the extensive literature review, special-status plants are not expected to occur in the project corridor (Appendix B). Therefore, no direct impacts to special-status plants are expected to occur as a result of the project.

Special-Status Wildlife Species

No special-status wildlife species were observed during the biological resource surveys with the exception of a single red-tailed hawk (*Buteo jamaicensis*) observed in flight over College Boulevard near Waring Road.

No special-status bird species are expected to be directly impacted by the proposed project; however, if vegetation removal or other vegetation- or ground-disturbing activities associated with construction occur during the breeding season (typically March 1 through September 15, starting January 1 for raptors), nesting birds protected under the Migratory Bird Treaty Act (MBTA) could be directly impacted. Vegetation removal or other disturbances in active nesting habitat during the breeding season could cause direct injury or mortality, or the loss of nests, eggs, and fledglings of species protected under the MBTA. As such, direct construction impacts to special-status wildlife species and more specifically, nesting birds protected under the MBTA, are considered potentially significant (**Impact BIO-1**).

Indirect Impacts

Special-Status Plant Species

No special-status plant species were observed within the project corridor during biological surveys and due to the extensively developed and disturbed context of the project corridor special-status plant species are not expected to occur. In addition, no special-status species have a moderate or high potential to occur on site (see Appendix B). Thus, no indirect impacts to special-status plant species are anticipated.

Special-Status Wildlife Species

Potential temporary indirect impacts to wildlife species include dust, noise, lighting, and increased human presence. Nesting birds protected under the MBTA, including red-tailed hawk, can be significantly affected by short-term construction-related noise, resulting in decreased reproductive success or abandonment of an area as nesting habitat.

Commonly urban-adapted passerine and raptor species (e.g., house finch, mourning dove, red-tailed hawk) likely use the ornamental shrubs and trees on or adjacent to the project corridor for nest construction and foraging. Indirect impacts from construction-related noise may occur to bird species if construction occurs during the typical breeding season (i.e., March 1 through September 15, starting January 1 for raptors) and as such, are considered potentially significant, absent mitigation (**Impact BIO-2**). Indirect impacts from dust are not expected to impact birds because they are highly mobile and on-site dust control measures (routine spraying areas with a water truck) will be implemented during earthwork activities. Please refer to Section 3, Project Description (see Table 3-3) for full list of project design features that would be implemented during construction of the Proposed Project. Artificial lighting is not expected because work will occur during the day. Further, because College Boulevard is currently exposed to lights at night from street lamps, headlights, building lights, house/property lights, stop lights, etc., the incorporation of improved lighting along College Boulevard is not expected to result in an adverse effect to special-status wildlife species. Therefore, indirect impacts to wildlife species due to artificial lighting would be less than significant.

Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

The proposed project would result in direct permanent impacts to 26.69 acres of urban/developed land due to the proposed roadway improvements, as discussed in Section 4.3.1 and as illustrated on Figure 4.3-1.

Direct permanent impacts to urban/developed land are not considered significant. However, clearing, trampling, or grading of vegetation outside of the authorized limits of work could occur where College Boulevard crosses Loma Alta Creek or if the authorized limits of work are improperly marked or identified. Such temporary direct impacts to vegetation outside of the approved work limits would be considered a significant impact, absent mitigation (**Impact BIO-3**).

Would the project have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No jurisdictional wetlands or non-wetland waters of the U.S. were observed during the surveys conducted for proposed project. Because no potential wetland sites or non-wetland waters of the U.S. (i.e., natural drainages/channels) were identified, no data station pits were dug, and no formal wetland determination data forms were recorded. The project corridor crosses Loma Alta Creek, an east-west trending perennial, vegetated stream, however, the proposed improvements are limited to the existing road right-of-way in this area and will not encroach into the adjacent wetland and non-wetland waters of the U.S. associated with this waterway. As such, no impacts to wetlands would occur.

Would the project 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?

Implementation of the proposed project is not expected to preclude the long-term use of habitat adjacent to the roadway improvements or hinder its suitability as a corridor for local wildlife movement or habitat linkage. Although increased human presence and noise during construction could temporarily affect the use of habitat areas adjacent to the project corridor, particularly where College Boulevard crosses Loma Alta Creek, species that are expected to occur and move locally, such as rabbits, raccoons, and occasionally coyotes, are primarily nocturnal, and their use of adjacent habitat areas during and after construction would not be substantially affected. Therefore, there would be no significant impacts to habitat linkages or wildlife corridors as a result of the proposed project.

Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

With the exception of the Oceanside Subarea Plan (discussed in the threshold below), the City of Oceanside does not have any policies or ordinances pertaining to the protection of biological resources of local concern. Oceanside Municipal Code Chapter 31A, Street Trees and Other Vegetation, provides regulations pertaining to planting and maintaining trees, plants, hedges, shrubs, and grassy areas as well as installation of water efficient landscaping.

Existing trees within the project limits are generally limited to eucalyptus (*Eucalyptus* sp.) and other ornamentally planted trees along College Boulevard. Roadway widening efforts would result in the several eucalyptus trees along the College Boulevard corridor. While the City's Street Trees and Other Vegetation Ordinance provides regulations for the maintenance, treatment, and removal of street trees and other vegetation, it does not contain regulations prohibiting the removal of street trees or other vegetation. As proposed, the City of Oceanside would install landscaped parkways and new low maintenance vegetation in select medians along the College Boulevard corridor. All trees and other vegetation selected for installation would comply with existing City regulations regarding water efficient landscaping and the City would be responsible for ongoing maintenance of new street trees and other landscaping. As such, the proposed project would not conflict with any local policies or ordinances protecting biological resources, such as tree preservation policies/resources. Therefore, impacts would be less than significant.

Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The project area is located within the urban/developed part of the Oceanside Subarea Plan area and includes, but is not limited to, the following designated land uses: single-family residential, multi-family residential, regional and community shopping, transportation, and extractive industry. According to the Oceanside Subarea Plan, the project corridor is not located within any of the City's pre-approved mitigation areas, softline preserve areas, or hardline preserve areas (City of Oceanside 2010, Figure 4-1). The project is adjacent to a hardline preserve area on the east and west side of College Boulevard where the road crosses Loma Alta Creek, however; proposed roadway improvements are limited to the existing road right-of-way in this area and would not encroach into the hardline preserve area. As such, proposed improvements would not conflict with the Oceanside Subarea Plan and no impacts would occur.

The project area is not located within any of the Biological Core and Linkage Areas identified in the North County MHCP (SANDAG 2003, Figure 2-4).

4.3.5 Mitigation Measures

MM-BIO-1 Within 72 hours of ground-disturbing activities associated with construction activities during the nesting/breeding season of native bird species potentially nesting on the site (March 1 through September 15, starting January 1 for raptors), the City shall have surveys conducted by a qualified biologist to determine if active nests of bird species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code are present in the impact area or within 300 feet (500 feet for raptors) of the impact area.

If active nests are found, the biological monitor shall establish an avoidance buffer at his/her discretion (typically 50 to 500 feet, depending on the species) until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers, and construction personnel shall be instructed on the sensitivity of nest areas. A biological monitor shall serve as a construction monitor during those periods when construction activities will occur near active nest areas to ensure that no inadvertent impacts to these nests occur.

The following measure would mitigate potential direct and permanent impacts to vegetation (urban/developed land) (**Impact BIO-3**) to a less than significant level.

MM-BIO-2 To prevent inadvertent disturbance to areas outside the limits of grading, orange environmental fencing shall be installed to delineate the limits of grading, and all grading shall be monitored by a qualified biologist. A biologist shall be contracted to perform biological monitoring during all grading, clearing, grubbing, trenching, and construction activities.

The project biologist shall perform the following duties:

1. Attend the preconstruction meeting/training with the contractor and other key construction personnel prior to clearing, grubbing, or grading to reduce conflict between the timing and location of construction activities with other mitigation requirements (e.g., seasonal surveys for nesting birds). At a minimum, the training shall include the general provisions of the MHCP and the need to adhere to the provisions of the MHCP.
2. Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas prior to clearing, grubbing, or grading.
3. Discuss procedures for minimizing harm to or harassment of wildlife encountered during construction with the contractor and other key construction personnel prior to clearing, grubbing, or grading.
4. Review and/or designate the construction area in the field with the contractor in accordance with the final grading plan prior to clearing, grubbing, or grading.
5. Conduct a field review of the staking to be set by the surveyor, and the subsequent installation of orange environmental fencing designating the limits of all construction activity prior to clearing, grubbing, or grading.
6. Be present during initial vegetation clearing, grubbing, and grading. The biologist shall prepare periodic construction monitoring reports and a post-construction report to document compliance. If dead or injured listed species are located, initial notification must be made in writing within 3 working days to the applicable jurisdiction. Any native, special-status habitat, including wetlands and non-wetland waters, destroyed that is not in the identified project footprint shall be disclosed immediately to the City of Oceanside and shall be compensated at a minimum ratio of 5:1.
7. Any unauthorized impacts to wetlands and non-wetland waters of the U.S. associated with Loma Alta Creek will require a stop-work notice and notification made to the City of Oceanside and regulatory resource agencies.

8. Flush special-status species (i.e., avian or other mobile species) from occupied habitat areas immediately prior to ground-disturbing activities. The project site shall be kept as clean of debris as possible. All food-related trash items shall be enclosed in sealed containers and regularly removed from the site. Pets of project personnel shall not be allowed on site.

4.3.6 Level of Significance After Mitigation

With implementation of **MM-BIO-1** and **MM-BIO-2**, potential impacts to special-status wildlife species; specifically, nesting birds protected under the MBTA (**Impact BIO-1** and **BIO-2**) and vegetation communities (**Impact BIO-3**) would be reduce to a less significant level. All other impacts were determined to be less than significant.

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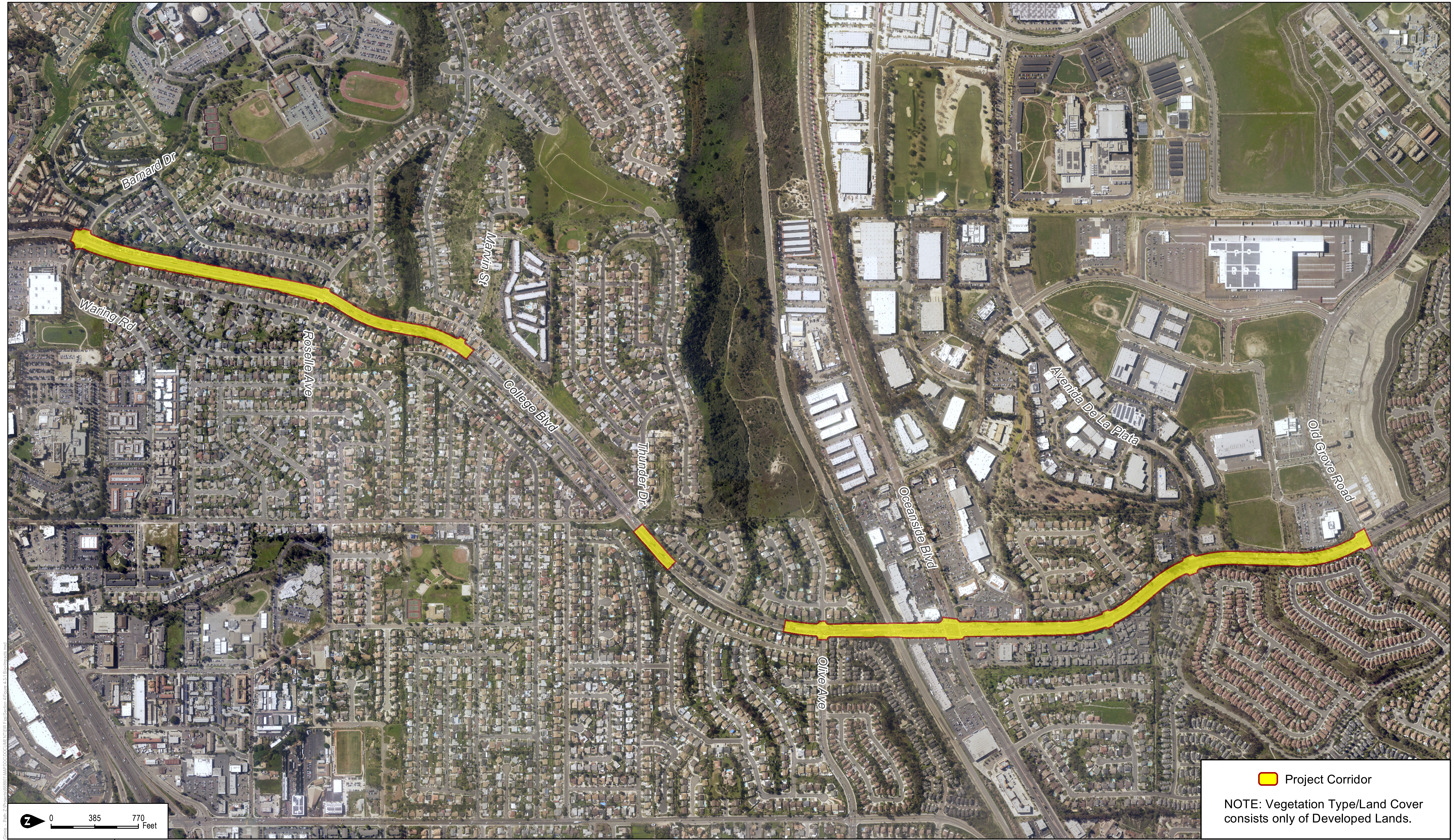

SOURCE: SANGIS 2017

DUDEK

FIGURE 4.3-1

Biological Resources Map

College Boulevard Improvements Project EIR

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SOURCE: SANGIS 2017; CNDDB 2018

FIGURE 4.3-2

CNDDB Special-Status Species Occurences Map

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College Boulevard Improvements Project EIR

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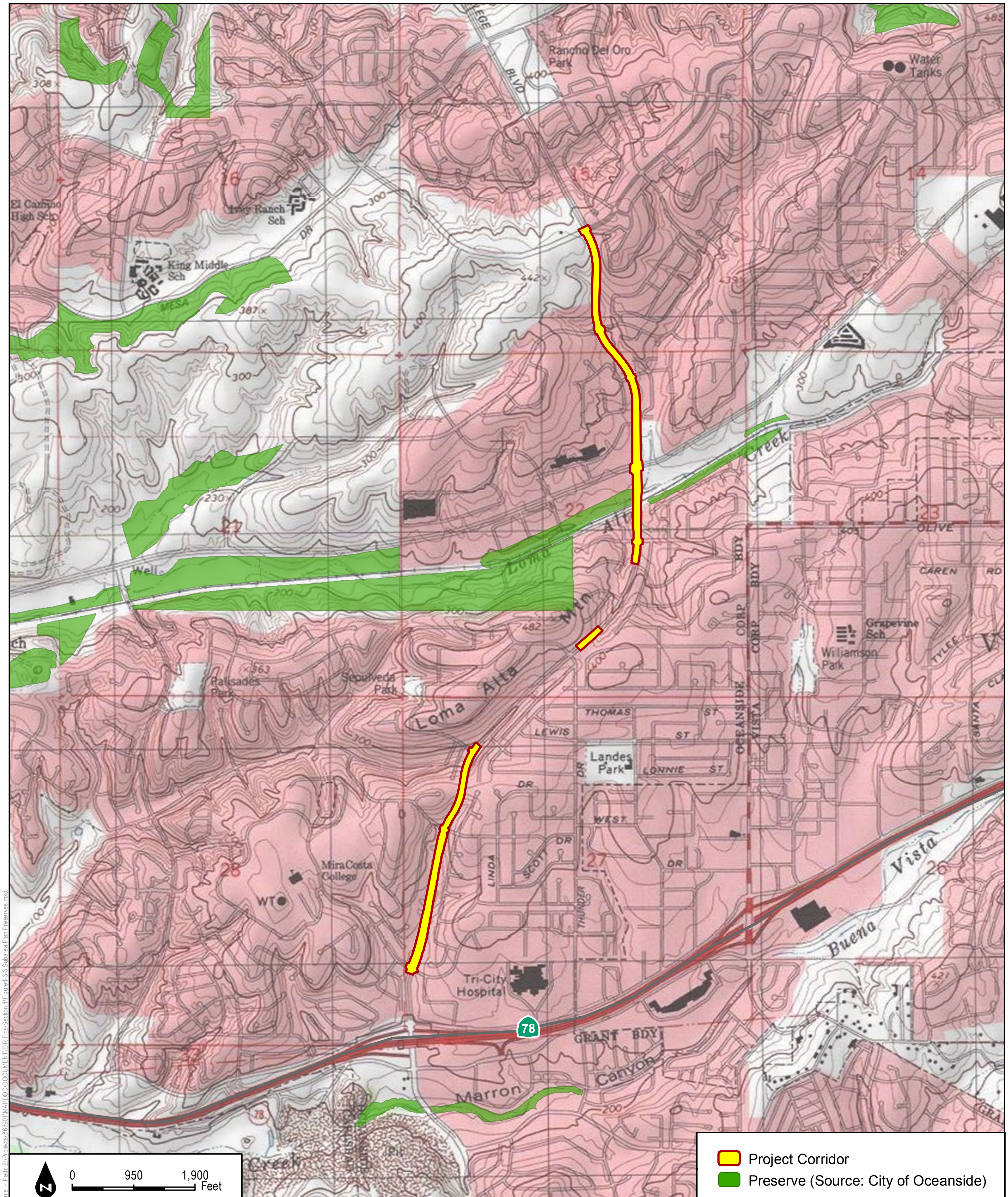

SOURCE: USGS 7.5-minute Series San Luis Rey Quadrangle

FIGURE 4.3-3

Oceanside Subarea Plan Preserves

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College Boulevard Improvements Project EIR

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4.4 CULTURAL RESOURCES

This section describes the existing cultural and paleontological resources of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed College Boulevard Improvement project (proposed project). This analysis is based on the Negative Phase I Findings Update Report (see Appendix C to this EIR). In addition, information pertaining to geologic formations underlying the project site was gathered from the Preliminary Geotechnical Reconnaissance prepared by Geocon (see Appendix F to this EIR).

The Negative Phase I Findings Update Report prepared by Dudek was based on a records search, reconnaissance survey, and Native American consultation.

The following discussion focuses on the project's relationship to existing cultural and paleontological resources, potential impacts to these resources, and mitigation measures required to reduce these impacts to below a level of significance. In accordance with California Environmental Quality Act (CEQA) Guidelines Section 15120(d), information about the precise location of archaeological sites is not included in this EIR due to the sensitivity of archaeological resources.

4.4.1 Existing Conditions

Background – Cultural Setting

Archaeological investigations have revealed a variety of human occupation along the southern California coast, ranging from the early Holocene period to the Ethnohistoric period (Becker and Iversen 2009). More specifically, the prehistory of San Diego County can be broken down into three spans: the Paleo-Indian, the Archaic, and the Late Prehistoric. The Paleo-Indian Period occurred from 11,500 Before Present (BP) to 8,500/7,500 BP; the Archaic Period from 8,500 BP to 1,300/800 BP; and the Late Prehistoric Period from 1,300/800 BP to 200 BP. Although there may have been human occupation on the Southern California coast before the Paleo-Indian Period, no sites have been dated to earlier than 10,000 BP (Becker and Iversen 2009).

The Late Prehistoric Period is, in general, paradigmatically linked with the ethnohistoric record of local Native Americans. It is also generally characterized by the appearance of ceramics, the replacement of burials with cremations, the appearance of small, pressure-flaked projectile points indicative of bow and arrow technology, and an emphasis on inland plant food collection and processing (Becker and Iversen 2009). The Luiseño/Juaneño, of the Shoshonean language group, inhabited the northern parts of San Diego County during this time.

It was the Franciscian friars who called the Shoshonean inhabitants of northern San Diego County Luiseños. These friars also named the San Luis Rey River and established the Mission

San Luis Rey in 1798. The Mission was situated in the heart of Luiseño territory, which roughly encompassed an area from Agua Hedionda on the coast, east to Lake Henshaw, north into Riverside County, and west through San Juan Capistrano to the coast (Becker and Iversen 2009).

The Luiseño were hunter-gatherers, and as such their settlement patterns were heavily influenced by subsistence factors. It appears that these settlement patterns were flexible and rarely took the form of year-round sedentary villages. Instead, they exploited the seasonal fluctuations in resources through annual movements of populations from mountain slopes and highlands to valley floors and coastal strips. Communities utilized one to three camps per year, with the duration and location of settlement camps varying with the availability of plant and animal resources. The Luiseño diet comprised both plant and animal foods and their hunting was accomplished by individuals and groups using bows and arrows (Becker and Iversen 2009).

By the early 1820s California had come under Mexico's rule, and in 1834 the missions were secularized. California became a sovereign state in 1850.The City of Oceanside was incorporated in 1888; however, the community's European history began nearly a century before its incorporation with the establishment of the San Luis Rey Mission (City of Oceanside 2002). The Oceanside General Plan identifies three significant historical sites within its jurisdictional boundary, including the San Luis Rey Mission, Rancho Guajome, and the Grave of Francisco de Ulloa. In addition, the General Plan states that archaeological sites have been reported in the Fire Mountain area and in the Guajome Lake region. None of these historical or archaeological sites are located within the immediate project area.

Record Search – Archaeological Resources

A records search for the proposed project area and a surrounding half-mile was completed by a Dudek archaeologist at the SCIC on May 27, 2016 (Appendix C). This search included their collection of mapped prehistoric, historical and built-environment resources, Department Parks and Recreation (DPR) Site Records, technical reports, archival resources, and ethnographic references. Additional consulted sources included the National Register of Historic Places (NRHP), California Inventory of Historical Resources/CRHR and listed OHP Archaeological Determinations of Eligibility, California Points of Historical Interest, California Historical Landmarks, and Caltrans Bridge Survey information.

A records search for the proposed project area and a surrounding half-mile was completed by a Dudek archaeologist at the SCIC on May 27, 2016 (Appendix C). This search included their collection of mapped prehistoric, historical and built-environment resources, Department Parks and Recreation (DPR) Site Records, technical reports, archival resources, and ethnographic references. Additional consulted sources included the National Register of Historic Places (NRHP), California Inventory of Historical Resources/CRHR and listed OHP Archaeological

Determinations of Eligibility, California Points of Historical Interest, California Historical Landmarks, and Caltrans Bridge Survey information.

SCIC records indicate that 28 previous cultural resources investigations have been conducted within a half-mile of the proposed project area. Of these, six studies have been conducted within portions of the project area. Clowery-Moreny and Smith (2008) and Stropes and Smith (2014) were previously conducted for the College Boulevard widening project, however only a portion of the present APE was included. Based on SCIC records reviewed during the preparation of the Negative Phase I Findings Update Report (Appendix C), no additional studies have been conducted in the current project area since Stropes and Smith (2014).

Clowery-Moreny and Smith 2008 and Stropes and Smith 2014

Clowery-Moreny and Smith (2008) conducted the initial records search and survey of the widening of College Boulevard. The 2008 records search did not identify any previously recorded resources within the project area and the survey did not identify any new cultural resources. Clowery-Moreny and Smith (2008) determined that the construction corridor was completely developed or previously disturbed and recommended that no further cultural resource management was required. Stropes and Smith (2014) was an assessment update of Clowery-Moreny and Smith (2008). The records search identified no resources within the project corridor and the survey determined that the construction corridor was completely developed and void of cultural resources. The updated records search recommended that no further cultural resource management was required.

Previously Identified Cultural Resources

SCIC records indicate that no cultural resources have been previously identified within the proposed project area. Four prehistoric archaeological sites (P-37-000632, P-37-004979, P-37-010445, and P-37-010446) and one historic address have been previously recorded within a half-mile of the Project. P-37-000632 and P-37-004979 both consists of darkened, possibly midden, soil and shell. A mano fragment was identified at P-37-000632 but no formal artifacts were identified at P-37-004979. P-37-010445 and P-37-010446 both consists of prehistoric artifact scatters that include ceramic fragments, lithic flakes, mano fragments, and metate fragments. All of these prehistoric sites are located at least 1,000 feet from the Project. The historic residence is located at 317 Cedar Road, a half mile east of the project alignment (Confidential Appendix A to the Negative Phase I Findings Update Report; Appendix C to this EIR).

Reconnaissance Survey

Dudek archaeologist Matthew DeCarlo conducted a survey of the proposed project area on July 5, 2016. Due to the substantial development of project area, the survey methodology consisted of driving the project route to identify any undeveloped areas that could be subject to pedestrian survey. A pedestrian survey would have been conducted using formal transects at 10-meter intervals however, the vehicular survey of the project area proved that there were no undeveloped areas. As such, a pedestrian survey was not conducted. The vehicular survey identified no built environment resources, and a review of historic aerial maps confirmed that College Boulevard and the surrounding built environment were constructed within the modern era.

Native American Heritage Commission Sacred Lands File Search

Dudek requested a Native American Heritage Commission (NAHC) search of their Sacred Lands File on May 25, 2016 for the proposed project area. The NAHC provided results on May 27, 2016. This search failed to indicate the presence of Native American traditional cultural place(s) within this area, or the surrounding half-mile buffer (Appendix B to the Negative Phase I Findings Update Report (i.e., Appendix C to this EIR)). The NAHC additionally provided a list of Native American tribes and individuals/organizations that might have knowledge of cultural resources in or near the project area.

Following the NAHC response, letters were sent on June 13 to the listed tribal representatives with the intent of requesting information, opinions or concerns relating to the proposed project impacts (Appendix C). The letters contained a brief description of the planned project and a reference map. Follow up calls were made on June 27th. To date, representatives from Viejas Band of Kumeyaay Indians (correspondence received June 21, 2016) and Pala Tribal Historic Preservation Office (correspondence received June 27, 2016) have responded to Dudek outreach letters; both requesting that a Native American monitor be present during ground disturbance and to remain updated on any future findings.

4.4.2 Relevant Plans, Policies, and Ordinances

4.4.2.1 State

The California Register of Historical Resources

In California, the term "historical resource" includes "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (Public Resources Code (PRC) Section 5020.1(j)). In 1992, the California legislature established the California Register of Historical Resources (CRHR) "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Section 5024.1(a)). The criteria for listing resources on the CRHR, enumerated in the following text, were developed to be in accordance with previously established criteria developed for listing in the NRHP. According to PRC Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains "substantial integrity," and (ii) meets at least one of the following criteria:

1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2) Is associated with the lives of persons important in our past;
3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values;
4) Has yielded, or may be likely to yield, information important in prehistory or history.

To understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than 50 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (see 14 CCR 4852(d)(2)).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP, and properties listed or formally designated as eligible for listing in the NRHP are automatically listed in the CRHR, as are state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

<u>California Environmental Quality Act</u>

As described further in the following text, the following CEQA statutes and CEQA Guidelines are of relevance to the analysis of archaeological, historic, and tribal cultural resources:

- PRC Section 21083.2(g) defines "unique archaeological resource."
- PRC Section 21084.1 and CEQA Guidelines Section 15064.5(a) define "historical resources." In addition, CEQA Guidelines Section 15064.5(b) defines the phrase "substantial adverse change in the significance of an historical resource." It also defines the circumstances when a project would materially impair the significance of a historical resource.
- PRC Section 21074(a) defines "tribal cultural resources."

- PRC Section 5097.98 and CEQA Guidelines Section 15064.5(e) set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.

Commission (NAHC) to resolve disputes regarding the disposition of such remains. In addition, the Native American Historic Resource Protection Act makes it a misdemeanor, punishable by up to 1 year in jail, to deface or destroy a Native American historic or cultural site that is listed or may be eligible for listing in the CRHR.

<u>California Health and Safety Code Section 7050.5</u>

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. California Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains can occur until the County Coroner has examined the remains (Section 7050.5b). PRC Section 5097.98 also outlines the process to be followed in the event that remains are discovered. If the County Coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the California NAHC within 24 hours (Section 7050.5c). The NAHC will notify the Most Likely Descendant. With the permission of the landowner, the Most Likely Descendant may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the Most Likely Descendant by the NAHC. The Most Likely Descendant may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

PRC Sections 21083.2(b)–(c) and CEQA Guidelines Section 15126.4 provide information regarding the mitigation framework for archaeological and historic resources, including examples of preservation-in-place mitigation measures; preservation-in-place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context, and may also help avoid conflict with religious or cultural values of groups associated with the archaeological site(s).

Under CEQA, a project may have a significant effect on the environment if it may cause “a substantial adverse change in the significance of an historical resource” (PRC Section 21084.1; CEQA Guidelines Section 15064.5(b)). If a site is either listed or eligible for listing in the CRHR, or if it is included in a local register of historic resources, or identified as significant in a historical resources survey (meeting the requirements of PRC Section 5024.1(q)), it is a “historical resource” and is presumed to be historically or culturally significant for purposes of CEQA (PRC Section 21084.1; CEQA Guidelines Section 15064.5(a)). The lead agency is not precluded from determining that a resource is a historical resource, even if it does not fall within this presumption (PRC Section 21084.1; CEQA Guidelines Section 15064.5(a)).

A "substantial adverse change in the significance of an historical resource" reflecting a significant effect under CEQA means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (CEQA Guidelines Section 15064.5(b)(1); PRC Section 5020.1(q)). In turn, the significance of a historical resource is materially impaired when a project does any of the following:

(1) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or

(2) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the PRC or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the PRC, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

(3) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA [CEQA Guidelines Section 15064.5(b)(2)].

Pursuant to these sections, the CEQA inquiry begins with evaluating whether a project site contains any "historical resources," then evaluates whether that project will cause a substantial adverse change in the significance of a historical resource such that the resource's historical significance is materially impaired.

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (Section 21083.2(a), (b), and (c)).

Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

(1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information

(2) Has a special and particular quality such as being the oldest of its type or the best available example of its type

(3) Is directly associated with a scientifically recognized important prehistoric or historic event or person

Impacts to nonunique archaeological resources are generally not considered a significant environmental impact (PRC Section 21083.2(a); CEQA Guidelines Section 15064.5(c)(4)). However, if a nonunique archaeological resource qualifies as tribal cultural resource (PRC 21074(c); 21083.2(h)), further consideration of significant impacts is required.

CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. As described in the following text, these procedures are detailed in PRC Section 5097.98.

Native American Historic Cultural Sites

State law (PRC Section 5097 et seq.) addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and established the Native American Heritage Commission (NAHC).

In the event that Native American human remains or related cultural material are encountered, Section 15064.5(e) of the CEQA Guidelines (as incorporated from PRC Section 5097.98) and California Health and Safety Code Section 7050.5 define the subsequent protocol. In the event of the accidental discovery or recognition of any human remains, excavation or other disturbances shall be suspended of the site or any nearby area reasonably suspected to overlie adjacent human remains or related material. Protocol requires that a county-approved coroner be contacted in order to determine if the remains are of Native American origin. Should the coroner determine the remains to be Native American, the coroner must contact the NAHC within 24 hours. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98 (14 CCR 15064.5(e)).

4.4.2.2 Local

City of Oceanside General Plan

Cultural resources are identified and discussed in the Environmental Resources Management Element of the City of Oceanside General Plan. For example, in regards to cultural resources, the City "encourages the conservation and protection of significant cultural resources for future scientific, historic, and educational purposes (City of Oceanside 2002). As previously stated in Section 4.4.1, the General Plan identifies three significant historical sites (the San Luis Rey Mission, Rancho Guajome, and the Grave of Francisco de Ulloa) within its jurisdictional boundary. Furthermore, the General Plan states that archaeological sites have been identified by the San Diego Museum of Man in the Fire Mountain area, near San Francisco Peak, and in the Guajome Lake region. While none of these historical resources is near the immediate project area, the General Plan reports that the cultural survey of Oceanside is incomplete and that identification and excavation of present and future site should be completed by trained, scientific personnel.

4.4.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to cultural resources are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to cultural resources would occur if the project would:

1. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5.
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.
3. Disturb any human remains, including those interred outside of formal cemeteries.

4.4.4 Impacts Analysis

Would the project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?

No archaeological or built environment resources were observed during a reconnaissance-level site survey performed by Dudek. SCIC records indicate that no archaeological have been recorded within the project area, however, four prehistoric sites and one historic addresses have been recorded within a half-mile. None of these resources will be impacted by the Project. The historic residence is located at 317 Cedar Road, a half mile east of the project alignment (Confidential Appendix A to the Negative Phase I Findings Update Report; Appendix C to this EIR) and the prehistoric sites are located greater than 1,000 feet from Project alignment. Therefore, implementation of the Proposed Project would not cause a substantial adverse change in the significance of a historical resource. Impacts would be less than significant.

Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

Dudek's Phase I cultural resources inventory of the project area suggests that there is low potential for the inadvertent discovery of cultural resources during ground disturbing construction activities. Also, the NAHC Sacred Lands File search did not indicate the presence of Native American cultural resources in the vicinity of the project and to date, no tribal correspondence has suggested that any cultural resources are located within the project area (Native American monitoring has however been requested by the Viejas Band of Kumeyaay Indians and the Pala Tribal Historic Preservation Office). Furthermore, no archaeological or built environment resources were observed during a reconnaissance-level site survey and SCIC records indicated that no archaeological resources have been recorded within the project area. Four prehistoric sites and one historic address have been recorded within a half-mile however, none of these resources will be impacted by the Project as they are located more than 1,000 feet from the proposed alignment and work area. Despite the results of the Phase I cultural resources inventory, the NAHC Sacred Lands File search, the reconnaissance-level field survey, and the SCIC records search, construction activities could potentially impact previously unknown archaeological resources during earth moving activities. While unlikely and not anticipated, potential impacts to previously unknown and unidentified archaeological resources are considered a potentially significant impact **(Impact CUL-1)**.

Would the project disturb any human remains, including those interred outside of formal cemeteries?

The project site is an existing developed road and no evidence of human remains were discovered during preparation of cultural resource reports. Nonetheless, construction of the project shall comply with Section 7050.5 of the California Health and Safety Code, which requires the County Coroner to be notified within 24 hours of any human remain discoveries and a stop work until the Coroner has determined the appropriate treatment and disposition of the human remains. If the remains are determined to be Native American, this regulation also requires the Coroner to notify the NAHC in Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the MLD from the deceased Native American. The MLD shall complete their inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains. As such, the project would have no impact to human remains. None-the-less, it is noted that the archaeological monitoring mitigation program (**MM-CUL-1**) provided to address **Impact CUL-1** includes a provision to address any unforeseen discovery of human remains as well and reinforces the implementation of these mandated regulations, consistent with California Health and Safety Code Section 7050.5.

4.4.5 Mitigation Measures

MM-CUL-1 The following archaeological monitoring mitigation program shall be in place prior to the issuance of a grading permit:

a) The Applicant/Owner shall enter into a pre-excavation agreement, otherwise known as a Tribal Cultural Resources Treatment and Tribal Monitoring Agreement with the "Traditionally and Culturally Affiliated (TCA) Native American Monitor associated with a TCA Luiseño Tribe". A copy of the agreement shall be included in the Grading Plan Submittals for the Grading Permit. The purpose of this agreement shall be to formalize protocols and procedures between the Applicant/Owner and the "Traditionally and Culturally Affiliated (TCA) Native American Monitor associated with a TCA Luiseño Tribe" for the protection and treatment of, including but not limited to, Native American human remains, funerary objects, cultural and religious landscapes, ceremonial items, traditional gathering areas and tribal cultural resources, located and/or discovered through a monitoring program in conjunction with the construction of the proposed project, including additional archaeological surveys and/or studies, excavations, geotechnical investigations, grading, and all other ground disturbing activities.

b) The Applicant/Owner or Grading Contractor shall provide a written and signed letter to the City of Oceanside Planning Division stating that a Qualified Archaeologist and Luiseño Native American Monitor have been retained at the Applicant/Owner or Grading Contractor's expense to implement the monitoring program, as described in the pre-excavation agreement.

c) The Qualified Archaeologist shall maintain ongoing collaborative consultation with the Luiseño Native American monitor during all ground disturbing activities. The requirement for the monitoring program shall be noted on all applicable construction documents including demolition plans, grading plans, etc. The Applicant/Owner or Grading Contractor shall notify the City of Oceanside Planning Division of the start and end of all ground disturbing activities.

d) The Qualified Archaeologist and Luiseño Native American Monitor shall attend all applicable pre-construction meetings with the General Contractor and/or associated Subcontractors to present the archaeological monitoring program. The Qualified Archaeologists and Luiseño Native American Monitor shall be present on-site full-time during grubbing, grading, and/or other ground altering activities, including the placement of imported fill materials or fill used from other areas of the project site, to identify any evidence of potential archaeological or tribal cultural resources. All fill materials shall be absent of any and all tribal cultural resources.

e) In order for potentially significant archaeological artifact deposits and/or cultural resources to be readily detected during mitigation monitoring, a written "Controlled Grade Procedure" shall be prepared by Qualified Archaeologist, in consultation with the Luiseño Native American monitor, the San Luis Rey Band, and the Applicant/Owner, subject to the approval of City representatives. The Controlled Grade Procedures shall establish requirements for any ground disturbing work with machinery occurring in and around areas the Qualified Archaeologist and Luiseño Native American monitor determine to be sensitive through the cultural resource mitigation monitoring process. The Controlled Grade Procedures shall include, but not be limited to, appropriate operating pace, increments of removal, weight and other characteristics of the earth disturbing equipment. A copy of the Controlled Grade Procedure shall be included in the Grading Plan Submittals for the Grading Permit.

f) The Qualified Archaeologist or the Luiseño Native American monitor may halt ground disturbing activities if unknown tribal cultural resources, archaeological artifact deposits and/or cultural features are discovered. Ground disturbing activities shall be directed away from these deposits to allow a determination of potential importance. Isolates and clearly non-significant deposits will be minimally documented in the field, and before grading proceeds these items shall be given to the San Luis Rey Band so that they may be repatriated at the site on a later date. If the Qualified Archaeologist or the Luiseño Native American monitor determine that the unearthed tribal cultural resources, artifact deposits and/or cultural features are considered potential significant, the San Luis Rey Band shall be notified and consulted regarding the respectful and dignified treatment of those resources. The avoidance and protection of the significant tribal cultural resource and/or unique archaeological resources is the preferable mitigation. If, however, it is determined by the City that avoidance of the resource is infeasible, and it is determined that a data recovery plan is necessary by the City as the Lead Agency under CEQA, the San Luis Rey Band shall be notified and consulted regarding the drafting and finalization of any such recovery plan. For significant tribal cultural resources, artifact deposits or cultural features that are part of a data recovery plan, an adequate artifact sample to address research avenue previous identified for sites in the area will be collected using professions archaeological collection methods. The data recovery plan shall also incorporate and reflect the tribal values of the San Luis Rey Band. If the Qualified Archaeologists collects such resources, the Luiseño Native American monitor must be present during any testing or cataloging of those resources. Moreover, if the Qualified Archaeologists does not collect the tribal cultural resources that are unearthed during the ground disturbing activities, the Luiseño Native American monitor may, at their discretion, collect said resources and provide them to the San Luis Rey Band for respective and dignified treatment in accordance with the Tribe's cultural and spiritual traditions. Ground disturbing activities shall not result until the Qualified Archaeologist, in consultation with the Luiseño Native American monitoring, deems the cultural resources or features has been appropriately documented and/or protected.

g) The landowner shall relinquish ownership of all tribal cultural resources unearthed during the cultural resources mitigation monitoring conducted during all ground disturbing activities, and from any previous archaeological studies or excavations on the project site to the San Luis Rey Band for respectful and dignified treatment and disposition, including reburial at a protected location on-site, in accordance with the Tribe's cultural and spiritual traditions. All cultural materials that are associated with burial and/or funerary goods will be repatriated to the Most Likely Descendants as determined by the Native American Heritage Commission per California Public Resources Code Section 5097.98. No tribal cultural resources shall be subject to curation.

h) Prior to the release of the grading bond, a monitoring report and/or evaluation report, if appropriate, which describes the results, analysis and conclusions of the archaeological monitoring program (e.g., data recovery plan) shall be submitted by the Qualified Archaeologist, along with the Luiseño Native American monitor's notes and comments, to the City of Oceanside Planning Division for approval.

i) As specified by California Health and Safety Code Section 7050.5, if human remains are found on the project site during construction or during archaeological work, the person responsible for the excavation, or his or her authorized representative, shall immediately notify the San Diego County Office of the Medical Examiner by telephone. No further excavation or disturbance of the site or any nearby areas reasonably suspected to overlie adjacent remains shall occur until the Medical Examiner has made the necessary findings as to origin and disposition pursuant to Public Resources Code 5097.98. If such a discovery occurs, a temporary construction exclusion zone shall be established surrounding the area of discover so that the area would be protected, and consultation and treatment could occur as prescribed by law. If suspected Native American remains are discovered, the remains shall be kept insitu, or in a secure location in close proximity to where they were found, and the analysis of the remains shall only occur on-site in the presence of a Luiseño Native American monitor. By law, the Medical Examiner will determine within two working days of being notified if the remains are subject to his or her authority. If the Medical Examiner identifies the remains to be of Native American ancestry, he or she shall consult the Native American Heritage Commission (NAHC) within 24 hours. The NAHC shall make a determination as to the Most Likely Descendent.

4.4.6 Level of Significance After Mitigation

With implementation of **MM CUL-1**, potential impacts to archaeological resources (**Impact CUL-1**) would be reduced to a less than significant level. Potential impacts to historic resources and human remains were determined to be less than significant and as such, no mitigation is required.

4.5 ENERGY

This section describes the existing energy resources of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project. Specifically, this section discusses the regulatory framework and discloses estimated energy use during the construction and operational phases of the proposed project. This analysis considers the electricity, natural gas, and transportation fuel (petroleum) demand of the proposed project, as well as potential service delivery impacts.

4.5.1 Existing Conditions

The environmental setting for the proposed project related to electricity, natural gas, and petroleum, including associated service providers, supply sources, and estimated consumption, is discussed below.

Electricity

According to the U.S. Energy Information Administration (EIA), California used approximately 257,268 gigawatt hours (GWh) of electricity in 2017 (EIA 2019a). Electricity usage in California for differing land uses varies substantially by the type of uses in a building, type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building. Due to the state's energy efficiency building standards and efficiency and conservation programs, California's electricity use per capita in the residential sector is lower than any other state except Hawaii (EIA 2018).

San Diego Gas & Electric (SDG&E) provides electric services to 3.6 million customers through 1.4 million electric meters located in a 4,100-square-mile service area that includes the San Diego County (County) and southern Orange County (SDG&E 2016). SDG&E is a subsidiary of Sempra Energy and would provide electricity to the proposed project. According to SDG&E, customers consumed approximately 10,757 million kilowatt-hours (kWh) of electricity in 2016 (SDG&E 2017).

SDG&E receives electric power from a variety of sources. According to CPUC's 2016 Biennial Renewable Portfolio Standard (RPS) Program Update, 43.2% of SDG&E's power came from eligible renewable energy sources in 2016, including biomass/waste, geothermal, small hydroelectric, solar, and wind sources (CPUC 2017a). This is an improvement from the 36.4% that SDG&E maintained in 2014 (CPUC 2016).

Based on recent energy supply and demand projections in California, statewide annual peak electricity demand is projected to grow an average of 890 megawatts per year for the next decade, or 1.4% annually, and consumption per capita is expected to remain relatively constant at 7,200–7,800 kWh per person (CEC 2015).

In the County, SDG&E reported an annual electrical consumption of approximately 10.8 billion kWh in 2016, with 5.8 billion kWh for non-residential use and 4.9 billion kWh for residential use (SDG&E 2017).

Natural Gas

According to the EIA, California used approximately 2,110,829 million cubic feet of natural gas in 2017 (EIA 2019b). CPUC regulates natural gas utility service for approximately 10.8 million customers who receive natural gas from Pacific Gas & Electric (PG&E), Southern California Gas (SoCalGas), SDG&E, Southwest Gas, and several smaller natural gas utilities. CPUC also regulates independent storage operators Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage (CPUC 2017b). SDG&E provides natural gas service to the Counties of San Diego and Orange and would provide natural gas to the proposed project. SDG&E is a wholesale customer of SoCalGas and currently receives all of its natural gas from the SoCalGas system (CPUC 2017b).

The majority of California's natural gas customers are residential and small commercial customers (core customers). These customers accounted for approximately 32% of the natural gas delivered by California utilities in 2012. Large consumers, such as electric generators and industrial customers (noncore customers), accounted for approximately 68% of the natural gas delivered by California utilities in 2012 (CPUC 2017b).

CPUC regulates California natural gas rates and natural gas services, including in-state transportation over transmission and distribution pipeline systems, storage, procurement, metering, and billing. Most of the natural gas used in California comes from out-of-state natural gas basins. California gas utilities may soon also begin receiving biogas into their pipeline systems (CPUC 2017b).

In 2012, California customers received 35% of their natural gas supply from basins located in the Southwest, 16% from Canada, 40% from the Rocky Mountains, and 9% from basins located within California (CPUC 2017b). Natural gas from out-of-state production basins is delivered into California through the interstate natural gas pipeline system. The major interstate pipelines that deliver out-of-state natural gas to California are the Gas Transmission Northwest Pipeline, Kern River Pipeline, Transwestern Pipeline, El Paso Pipeline, Ruby Pipeline, Southern Trails, and Mojave Pipeline. The North Baja–Baja Norte Pipeline takes gas off the El Paso Pipeline at the California/Arizona border and delivers it through California into Mexico. The Federal Energy Regulatory Commission regulates the transportation of natural gas on interstate pipelines, and CPUC often participates in Federal Energy Regulatory Commission regulatory proceedings to represent the interests of California natural gas consumers (CPUC 2017b).

Most of the natural gas transported through interstate pipelines, as well as some California-produced natural gas, is delivered through the PG&E and SoCalGas intrastate natural gas transmission pipeline systems (commonly referred to as California's "backbone" natural gas pipeline system). Natural gas on the backbone pipeline system is then delivered into local transmission and distribution pipeline systems or to natural gas storage fields. Some large noncore customers take natural gas directly off the high-pressure backbone pipeline system, and some core customers and other noncore customers take natural gas off the utilities' distribution pipeline systems. CPUC has regulatory jurisdiction over 150,000 miles of utility-owned natural gas pipelines, which transported 82% of the natural gas delivered to California's gas consumers in 2012 (CPUC 2017b).

PG&E and SoCalGas own and operate several natural gas storage fields that are located in Northern and Southern California. These storage fields and four independently owned storage utilities—Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage—help meet peak-season natural gas demand and allow California natural gas customers to secure natural gas supplies more efficiently (CPUC 2017b).

California's regulated utilities do not own any natural gas production facilities. All natural gas sold by these utilities must be purchased from suppliers and/or marketers. The price of natural gas sold by suppliers and marketers was deregulated by the Federal Energy Regulatory Commission in the mid-1980s and is determined by market forces. However, CPUC decides whether California's utilities have taken reasonable steps to minimize the cost of natural gas purchased on behalf of its core customers (CPUC 2017b).

As indicated in the preceding discussion, natural gas is available from a variety of in-state and out-of-state sources and is provided throughout the state in response to market supply and demand. Complementing available natural gas resources, biogas may soon be available through existing delivery systems, thereby increasing the availability and reliability of resources.

Petroleum

According to the EIA, California used a total of approximately 683 million barrels of petroleum in 2017, with the majority (585 million barrels) used for the transportation sector (EIA 2019c). This total annual consumption equates to a daily use of approximately 1.9 million barrels of petroleum. There are 42 U.S. gallons in a barrel, so California consumes approximately 78.6 million gallons of petroleum per day, adding up to an annual consumption of 28.7 billion gallons of petroleum. In California, petroleum fuels refined from crude oil are the dominant source of energy for transportation sources. Petroleum usage in California includes petroleum products such as motor gasoline, distillate fuel, liquefied petroleum gases, and jet fuel.

Petroleum currently accounts for the majority of California's transportation energy consumption. However, technological advances, market trends, consumer behavior, and government policies could result in significant changes in fuel consumption by type and in total. At the federal and state levels, various policies, rules, and regulations have been enacted to improve vehicle fuel efficiency, promote the development and use of alternative fuels, reduce transportation-source air pollutants and greenhouse gas (GHG) emissions, and reduce vehicle miles traveled (VMT).

4.5.2 Regulatory Setting

Federal, state, and local agencies regulate energy use and consumption through various means and programs. On the federal level, the U.S. Department of Transportation, the U.S. Department of Energy, and the U.S. Environmental Protection Agency are three federal agencies with substantial influence over energy policies and programs. On the state level, CPUC and CEC are two agencies with authority over different aspects of energy. Relevant federal, state, and local energy-related regulations are summarized below.

4.5.2.1 Federal

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Federal Energy Policy and Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the National Highway Traffic Safety Administration is responsible for establishing additional vehicle standards. In 2012, new fuel economy standards for passenger cars and light trucks were approved for model years 2017 through 2021 (77 FR 62624–63200). Fuel economy is determined based on each manufacturer’s average fuel economy for the fleet of vehicles available for sale in the United States.

Intermodal Surface Transportation Efficiency Act of 1991

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) promoted the development of intermodal transportation systems to maximize mobility and address national and local interests in air quality and energy. ISTEA contained factors that metropolitan planning organizations were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, metropolitan planning organizations adopted policies defining the social, economic, energy, and environmental values guiding transportation decisions.

Transportation Equity Act for the 21st Century

The Transportation Equity Act for the 21st Century was signed into law in 1998 and builds on the initiatives established in the ISTEA legislation (discussed above). The act authorizes highway, highway safety, transit, and other efficient surface transportation programs. The act continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of transportation decisions. The act also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of intelligent transportation systems to help improve operations and management of transportation systems and vehicle safety.

Energy Independence and Security Act of 2007

On December 19, 2007, the Energy Independence and Security Act of 2007 (EISA) was signed into law. In addition to setting increased Corporate Average Fuel Economy standards for motor vehicles, the EISA includes the following other provisions related to energy efficiency:

- Renewable Fuel Standard (RFS) (Section 202)
- Appliance and Lighting Efficiency Standards (Sections 301–325)
- Building Energy Efficiency (Sections 411–441)

This federal legislation requires ever-increasing levels of renewable fuels (the RFS) to replace petroleum (EPA 2015). The U.S. Environmental Protection Agency is responsible for developing and implementing regulations to ensure that transportation fuel sold in the United States contains a minimum volume of renewable fuel. The RFS program regulations were developed in collaboration with refiners, renewable fuel producers, and many other stakeholders.

The RFS program was created under the Energy Policy Act of 2005 and established the first renewable fuel volume mandate in the United States. As required under the act, the original RFS program (RFS1) required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the EISA, the RFS program was expanded in several key ways that lay the foundation for achieving significant reductions in GHG emissions from the use of renewable fuels, reducing imported petroleum, and encouraging the development and expansion of the renewable fuels sector in the United States. The updated program is referred to as "RFS2" and includes the following:

- EISA expanded the RFS program to include diesel, in addition to gasoline.
- EISA increased the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022.
- EISA established new categories of renewable fuel, and set separate volume requirements for each one.
- EISA required the U.S. Environmental Protection Agency to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces.

Additional provisions of the EISA address energy savings in government and public institutions, research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green" jobs.

4.5.2.2 State

The discussion below focuses primarily on those policies, regulations, and laws that directly pertain to energy-related resources. Refer to Section 4.8, Greenhouse Gas Emissions, of this EIR, which addresses various policies, regulations, and laws targeted to the reduction of GHG emissions that are expected to achieve co-benefits in the form of reduced demand for energy-related resources and enhanced efficiencies in the consumption of energy-related resources.

Warren-Alquist Act

The California Legislature passed the Warren-Alquist Act in 1974. The Warren-Alquist Act created the CEC. The legislation also incorporated the following three key provisions designed to address the demand side of the energy equation:

- It directed the CEC to formulate and adopt the nation's first energy conservation standards for both buildings constructed and appliances sold in California.
- The act removed the responsibility of electricity demand forecasting from the utilities, which had a financial interest in high demand projections, and transferred it to a more impartial CEC.
- The CEC was directed to embark on an ambitious research and development program, with a particular focus on fostering what were characterized as non-conventional energy sources.

State of California Energy Action Plan

The CEC and CPUC approved the first State of California Energy Action Plan in 2003. The plan established shared goals and specific actions to ensure that adequate, reliable, and reasonably priced electrical power and natural gas supplies are provided, and identified policies, strategies, and actions that are cost-effective and environmentally sound for California's consumers and taxpayers. In 2005, a second Energy Action Plan was adopted by the CEC and CPUC to reflect various policy changes and actions of the prior 2 years.

At the beginning of 2008, the CEC and CPUC determined that it was not necessary or productive to prepare a new energy action plan. This determination was based in part on a finding that the state's energy policies have been significantly influenced by the passage of Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006 (discussed below). Rather than produce a new energy action plan, the CEC and CPUC prepared an “update” that examines the state’s ongoing actions in the context of global climate change.

Senate Bill 1078 (2002)

This bill established the California RPS Program and required that a retail seller of electricity purchase a specified minimum percentage of electricity generated by eligible renewable energy resources as defined in any given year, culminating in a 20% standard by December 31, 2017. These retail sellers include electrical corporations, community choice aggregators, and electric service providers. The bill relatedly required the CEC to certify eligible renewable energy resources, design and implement an accounting system to verify compliance with the RPS by retail sellers, and allocate and award supplemental energy payments to cover above-market costs of renewable energy.

Senate Bills 107 (2006), X1-2 (2011), and 350 (2015)

Senate Bill (SB) 107 (2006) accelerated the RPS established by SB 1078 by requiring that 20% of electricity retail sales be served by renewable energy resources by 2010 (not 2017). Additionally, SB X1-2 (2011) requires all California utilities to generate 33% of their electricity from eligible renewable energy resources by 2020. Specifically, SB X1-2 sets a three-stage compliance period: by December 31, 2013, 20% shall come from renewables; by December 31, 2016, 25% shall come from renewables; and by December 31, 2020, 33% shall come from renewables.

SB 350 (2015) requires retail seller and publicly owned utilities to procure 50% of their electricity from eligible renewable energy resources by 2030, with interim goals of 40% by 2024 and 45% by 2027.

Consequently, utility energy generation from non-renewable resources is expected to be reduced based on implementation of the 33% RPS in 2020 and the 50% RPS in 2030. Therefore, the proposed project’s reliance on non-renewable energy sources would also be reduced.

Assembly Bill 1007 (2005)

AB 1007 (2005) required the CEC to prepare a statewide plan to increase the use of alternative fuels in California (State Alternative Fuels Plan). The CEC prepared the plan in partnership with the California Air Resources Board (CARB) and in consultation with the other state, federal, and local agencies. The plan assessed various alternative fuels and developed fuel portfolios to meet California’s goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Assembly Bill 32 (2006) and Senate Bill 32 (2016)

In 2006, the Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020. In 2016, the Legislature enacted SB 32, which extended the horizon year of the state's codified GHG reduction planning targets from 2020 to 2030, requiring California to reduce its GHG emissions to 40% below 1990 levels by 2030. In accordance with AB 32 and SB 32, CARB prepares scoping plans to guide the development of statewide policies and regulations for the reduction of GHG emissions. Many of the policy and regulatory concepts identified in the scoping plans focus on increasing energy efficiencies and the use of renewable resources and reducing the consumption of petroleum-based fuels (such as gasoline and diesel). As such, the state's GHG emissions reduction planning framework creates co-benefits for energy-related resources.

California Building Standards

Part 6 of Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. Part 6 establishes energy efficiency standards for residential and non-residential buildings constructed in California to reduce energy demand and consumption. Part 6 is updated periodically to incorporate and consider new energy efficiency technologies and methodologies. The 2016 Title 24 building energy efficiency standards, which became effective on January 1, 2017, further reduce energy used in the state. In general, single-family homes built to the 2016 standards are anticipated to use approximately 28% less energy for lighting, heating, cooling, ventilation, and water heating than those built to the 2013 standards, and non-residential buildings built to the 2016 standards will use an estimated 5% less energy than those built to the 2013 standards (CEC 2015).

Title 24 also includes Part 11, the California's Green Building Standards (CALGreen). The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, and state-owned buildings, as well as schools and hospitals. The 2016 CALGreen standards became effective on January 1, 2017. The mandatory standards require the following:

- 20% mandatory reduction in indoor water use
- 50% diversion of construction and demolition waste from landfills
- Mandatory inspections of energy systems to ensure optimal working efficiency

Integrated Energy Policy Report

CEC is responsible for preparing integrated energy policy reports, which identify emerging trends related to energy supply, demand, conservation, public health and safety, and maintenance of a healthy economy. The CEC's 2015 Integrated Energy Policy Report discusses the state's policy goal to require that new residential construction be designed to achieve zero net energy (ZNE) standards by 2020 and that new non-residential construction be designed to achieve ZNE standards by 2030, which is relevant to this EIR. Refer to Section 4.8 of this EIR for additional information on the state's ZNE objectives and how the state's achievement of its objectives would serve to beneficially reduce the proposed project's GHG emissions profile and energy consumption.

State Vehicle Standards

In a response to the transportation sector accounting for more than half of California's carbon dioxide (CO_2) emissions, AB 1493 was enacted in 2002. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles whose primary use is noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. The 2009–2012 standards resulted in a reduction in approximately 22% GHG emissions compared to emissions from the 2002 fleet, and the 2013–2016 standards resulted in a reduction of approximately 30%.

In 2012, CARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards called Advanced Clean Cars. By 2025, when the rules would be fully implemented, new automobiles would emit 34% fewer global warming gases and 75% fewer smog-forming emissions (CARB 2011).

Although the focus of the state's vehicle standards is on the reduction of air pollutants and GHG emissions, one co-benefit of implementation of these standards is a reduced demand for petroleum-based fuels.

Sustainable Communities Strategy

The Sustainable Communities and Climate Protection Act of 2008, or SB 375, coordinates land use planning, regional transportation plans, and funding priorities to help California meet its GHG emissions reduction mandates. As codified in California Government Code, Section 65080, SB 375 requires metropolitan planning organizations (San Diego Association of Governments) to include a sustainable communities strategy in its regional transportation plan. The main focus of the sustainable communities strategy is to plan for growth in a fashion that will ultimately reduce GHG emissions, but the strategy is also a part of a bigger effort to address other development issues within the general vicinity, including transit and VMT, which influence the consumption of petroleum-based fuels.

4.5.2.3 Local

SDG&E Long-Term Procurement Plan

In 2009, CPUC approved SDG&E's Long-Term Procurement Plan (LTPP), which identifies how SDG&E will meet the future energy needs of customers in SDG&E's service area (SDG&E 2009). The LTPP identifies several energy demand reduction targets (i.e., conservation) and goals for increasing renewable energy supplies, new, local power generation, and increased transmission capacity.

The LTPP sets a standard for acquiring 20% of SDG&E's energy mix from renewables by 2010 and 33% by 2020. The LTPP also calls for greater use of in-region energy supplies, including renewable energy installations. The LTPP states that, by 2020, SDG&E intends to achieve and maintain the capacity to generate 75% of summer peak demand energy with in-County generation. The LTPP also identifies 44% of its renewables to be generated and distributed in-region by 2020.

City of Oceanside's General Plan

The City of Oceanside's (City's) General Plan (City's General Plan) takes steps to address energy by including policies for improving energy efficiency, reducing waste, recycling, and managing water use. The City's General Plan also seeks to reduce energy consumption through minimizing VMT; creating increased opportunities for transit, pedestrians, and bicycles; and encouraging and approving green building and land development conservation initiatives. The following policies identified in the City's General Plan are applicable to the proposed project (City of Oceanside 1975, 2002, 2012):

Circulation Element

- **Policy 2.5:** The City will strive to incorporate complete streets throughout the Oceanside transportation network which are designed and constructed to serve all users of streets, roads and highways, regardless of their age or ability, or whether they are driving, walking, bicycling, or using transit.
- **Policy 2.6:** The City will strive to stay up-to-date with legislation and emerging technologies as it relates to complete streets and multimodal analysis.
- **Policy 4.1:** The City shall encourage the reduction of vehicle miles traveled, reduction of the total number of daily and peak hour vehicle trips, and provide better utilization of the circulation system through development and implementation of TDM strategies. These may include, but not limited to, implementation of peak hour trip reduction, encourage staggered work hours, telework programs, increased development of employment centers where transit usage is highly viable, encouragement of ridesharing options in the public

and private sector, provision for park-and-ride facilities adjacent to the regional transportation system, and provision for transit subsidies.

- **Policy 4.9:** The City shall look for opportunities to incorporate TDM [transportation demand management] programs into their Energy Roadmap that contributes to state and regional goals for saving energy and reducing greenhouse gas emissions.

The Circulation Element also includes the Bicycle Master Plan and Pedestrian Master Plan included as Appendices A and B to the element, respectively.

Land Use Element

- **Bicycle Facilities**
  - **Policy A**: Development shall provide Class II Bikeways (Bike Lanes) on all secondary, major, and prime arterials.
  - **Policy D**: The use of land shall integrate the Bicycle Circulation System with auto, pedestrian, and transit systems:
    1. Development shall provide short-term bicycle parking and long-term bicycle storage facilities such as bicycle racks, pedestal posts, and rental bicycle lockers.
    2. Development shall provide safe and convenient bicycle access to high activity land uses, such as schools, parks, shopping, employment, and entertainment centers.
- **Pedestrian**
  - **Policy A**: The construction of five (5) foot wide sidewalks adjacent to the curb shall be required in all new developments and street improvements.
- **Transit System**
  - **Policy A**: The City shall coordinate and encourage the existing bus system to serve newly developed areas.
- **Energy**
  - **Policy A:** The City shall encourage the design, installation, and use of passive and active solar collection systems.
  - **Policy B**: The City shall encourage the use of energy efficient design, structures, materials, and equipment in all land developments or uses.
  - **Policy C:** The City shall encourage the use of long-term lower cost energy sources.

Environmental Resource Management Element

- The City will continue to cooperate with the SDAPCD Board. This will include participation in the development of the Regional Air Quality Strategy (RAQS) through cooperation with the San Diego County Air Quality Planning Team.

The proposed project's consistency with applicable General Plan policies is evaluated in Chapter 4.10, Land Use and Planning, of this EIR.

4.5.3 Thresholds of Significance

The CEQA Guidelines provide no specific thresholds for impacts associated with energy consumption. However, Appendix F of the CEQA Guidelines (14 CCR 15000 et seq.) provides guidance for evaluating whether a development project may result in significant impacts with regard to energy. Based on Appendix F of the CEQA Guidelines, a project could have a significant impact on energy conservation if the proposed project would:

1. Result in wasteful, inefficient, or unnecessary consumption of energy.
2. Conflict with existing energy standards and regulations.
3. Place a significant demand on local and regional energy supplies or require a substantial amount of additional capacity.

4.5.4 Impacts Analysis

Would the project result in wasteful, inefficient, or unnecessary consumption of energy?

Electricity

Construction Use

Temporary electric power for as-necessary lighting and electronic equipment (such as computers inside temporary construction trailers and heating, ventilation, and air conditioning) would be provided by SDG&E. The amount of electricity used during construction would be minimal. In addition to electrically powered hand tools, typical demand would stem from the potential use of a construction trailer by managerial staff during the hours of construction activities. The majority of the energy used during construction would be from petroleum. The electricity used for construction activities would be temporary and minimal; therefore, impacts would be less than significant.

Operational Use

Once construction activities are complete, operation of College Boulevard would not result in the direct use of electricity. The project would not generate trips and the majority of the energy used during operations for roadway maintenance activities be from petroleum. The electricity used for operation and maintenance of College Boulevard would be minimal; therefore, impacts would be less than significant.

Natural Gas

Construction Use

Natural gas is not anticipated to be required during construction of the proposed project. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed under the subsection Petroleum. Any minor amounts of natural gas that may be consumed as a result of proposed project construction would be temporary and negligible and would not have an adverse effect; therefore, impacts would be less than significant.

Operational Use

Once construction activities are complete, operation of College Boulevard would not generate additional demand for natural gas. The project would not generate trips and the majority of the energy used during operations for roadway maintenance activities be from petroleum. Therefore, impacts would be less than significant.

Petroleum

Construction Use

Petroleum would be consumed throughout construction of the proposed project. Fuel consumed by construction equipment would be the primary energy resource expended over the course of construction, and VMT associated with the transportation of construction materials and construction worker commutes would also result in petroleum consumption. Heavy-duty construction equipment associated with construction activities, as well as haul trucks involved in moving dirt around the project site, would rely on diesel fuel. Construction workers would travel to and from the project site throughout the duration of construction. It is assumed that construction workers would travel to and from the project site in gasoline-powered vehicles.

Heavy-duty construction equipment of various types would be used during each phase of construction. CalEEMod was used to estimate construction equipment usage, and results are included in Appendix A. Based on that analysis, over all phases of construction, diesel-fueled construction equipment would operate for an estimated 16,752 hours, as summarized in Table 4.5-1.

Table 4.5-1
Hours of Operation for Construction Equipment

Construction Phase	Hours of Equipment Use
Grubbing/Land Clearing	832
Grading/Excavation	8,480
Drainage/Utilities/Sub-Grade	5,520
Paving	1,920
Total	**16,752**

Source: Appendix A.

Fuel consumption from construction equipment was estimated by converting the total CO_2 emissions from each construction phase to gallons using conversion factors for CO_2 to gallons of gasoline or diesel. Construction is estimated to occur over a 6-month schedule based on assumptions used to calculation air quality emissions. The conversion factor for gasoline is 9.13 kilograms per metric ton CO_2 per gallon, and the conversion factor for diesel is 10.35 kilograms per metric ton CO_2 per gallon (The Climate Registry 2016). The estimated diesel fuel use from construction equipment is shown in Table 4.5-2.

Table 4.5-2
Construction Equipment Diesel Demand

Phase	Pieces of Equipment	Equipment CO_2 (MT)	kg CO_2/Gallon	Gallons
Grubbing/Land Clearing	8	12.25	10.21	1,199.51
Grading/Excavation	20	221.31	10.21	21,675.58
Drainage/Utilities/Sub-Grade	0	111.56	10.21	10,926.20
Paving	0	22.97	10.21	2,249.75
			Total	**36,051.04**

Sources: Appendix A (pieces of equipment and equipment CO_2); The Climate Registry 2016 (kg/CO_2/gallon).
CO_2 = carbon dioxide; kg = kilogram; MT = metric ton

Fuel consumption from worker and vendor trips is estimated by converting the total CO_2 emissions from each construction phase to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. Worker vehicles are assumed to be gasoline fueled, and vendor/hauling vehicles are assumed to be diesel fueled. Calculations for total worker, vendor, and hauler fuel consumption are provided in Tables 4.5-3, 4.5-4, and 4.5-5.

Table 4.5-3
Construction Worker Gasoline Demand

Phase	Trips	Vehicle CO_2 (MT)	kg CO_2/Gallon	Gallons
Grubbing/Land Clearing	260	1.95	8.78	222.15
Grading/Excavation	2,650	19.50	8.78	2,221.47
Drainage/Utilities/Sub-Grade	1,748	12.96	8.78	1,476.50

Table 4.5-3
Construction Worker Gasoline Demand

Phase	Trips	Vehicle CO_2 (MT)	kg CO_2/Gallon	Gallons
Paving	600	4.39	8.78	500.09
			Total	**4,420.20**

Sources: Appendix A (construction worker CO_2); The Climate Registry 2016 (kg/CO_2/gallon).
CO_2 = carbon dioxide; kg = kilogram; MT = metric ton

Table 4.5-4
Construction Vendor Truck Diesel Demand

Phase	Trips	Vehicle CO_2 (MT)	kg/CO_2/Gallon	Gallons
Grubbing/Land Clearing	65	0.99	10.21	96.85
Grading/Excavation	265	3.97	10.21	389.17
Drainage/Utilities/Sub-Grade	230	3.47	10.21	340.31
Paving	100	1.49	10.21	145.72
			Total	**972.05**

Sources: Appendix A (construction worker CO_2); The Climate Registry 2016 (kg/CO_2/gallon).
CO_2 = carbon dioxide; kg = kilogram; MT = metric ton

Table 4.5-5
Construction Haul Truck Diesel Demand

Phase	Trips	Vehicle CO_2 (MT)	kg CO_2/Gallon	Gallons
Grubbing/Land Clearing	78	2.23	10.21	218.58
Grading/Excavation	318	8.94	10.21	875.20
Drainage/Utilities/Sub-Grade	368	10.42	10.21	1,020.92
Paving	160	4.46	10.21	437.15
			Total	**2,551.85**

Sources: Appendix A (construction worker CO_2); The Climate Registry 2016 (kg/CO_2/gallon).
CO_2 = carbon dioxide; kg = kilogram; MT = metric ton

As shown in Tables 4.5-3 through 4.5-5, the proposed project is estimated to consume 43,995.13 gallons of petroleum during the construction phase. By comparison, approximately 10.4 billion gallons of petroleum would be consumed in California over the course of the project's construction phase based on the California daily petroleum consumption estimate of approximately 78.6 million gallons per day (EIA 2019c). The proposed project would be required to comply with CARB's Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to 5 minutes. Therefore, because petroleum use during construction would be temporary and minimal and would not be wasteful or inefficient, impacts would be less than significant.

Operational Use

VMT is a measure of the distance that people will travel in a light duty truck or passenger automobile. The VMT generated by the proposed project is measured for analyzing greenhouse gas and criteria pollutants generated by the transportation infrastructure project. Additionally, the VMT generated by buildout of the existing Circulation Element as it relates to College Boulevard was also measured for comparison purposes and to determine the change in travel patterns due to not widening a section of the College Boulevard study corridor. The VMT was calculated by multiplying the number of daily trips by the trip length obtained from the SANDAG Series 12 traffic model runs for each of the two future scenarios; however, the resulting VMT for this assessment are very high-level in that they represent the model-wide VMT (i.e., the link length multiplied by the corresponding ADT traversing the link for all links in the SANDAG model).

Calculations for annual mobile-source fuel consumption associated with the increase in future regional annual VMT with the proposed project when compared to the future regional annual VMT associated with buildout of the existing General Plan are provided in Table 4.5-6.

Table 4.5-6
Mobile Source Fuel Consumption – Regional Increase in VMT[1]

Fuel	Vehicle MT CO_2	kg CO_2/Gallon	Gallons
Gasoline	46,143.87	8.78	5,255,565.85
Diesel	39,654.13	10.21	3,883,852.27
		Total	**9,139,418.13**

Sources: Appendix A (mobile source CO_2); The Climate Registry 2019 (kg/CO_2/gallon).
CO_2 = carbon dioxide; kg = kilogram; MT = metric ton
1 Calculations for annual mobile-source fuel consumption associated with the proposed project's increase in future regional annual VMT when compared to the future regional annual VMT associated with buildout of the existing City's Circulation Element. The assessment is very high level and does not isolate project effects.

As shown in Table 4.5-6, mobile sources from the regional SANDAG Series 12 traffic model run including the proposed project would result in approximately 5,255,565.85 gallons of gasoline per year and 3,883,852.27 gallons of diesel. This fuel consumption would occur region wide and is not solely associated with the widened segment of College Boulevard. By comparison, California as a whole consumed approximately 28.7 billion gallons of petroleum in 2017 (EIA 2019c).

Once construction activities are complete, operation of College Boulevard would generate minimal demand for petroleum and would primarily consist of fuel usage of as-needed maintenance vehicles and equipment. Use associated with maintenance would be a small fraction of the statewide use. Given these considerations and the nature of the project, petroleum consumption associated with the proposed project would not be considered inefficient or wasteful and impacts would be less than significant.

Would the project conflict with existing energy standards and regulations?

The proposed project would follow applicable energy standards and regulations during the construction phase. The proposed project would be constructed in accordance with all existing, applicable energy standard and regulations. For the reasons stated, the proposed project would not conflict with existing energy standards or regulations, and impacts would be less than significant.

Would the project place a significant demand on local and regional energy supplies or require a substantial amount of additional capacity?

Electricity

As described previously, the proposed project would involve minimal use of electricity during construction. Implementation of the proposed project would not result in substantial amounts of local or regional energy supplies compared to existing conditions. The resultant temporary increase in energy demand would not exceed the available capacity of SDG&E servicing infrastructure to the site or beyond. Therefore, impacts would be less than significant.

Natural Gas

As described previously, the proposed project would use a minimal amount of natural gas during construction. The proposed project would not directly in increased annual natural gas per year during operations. In 2015, SDG&E supplied 464.5 million therms of natural gas to customers (CEC 2016a). In summary, the proposed project's demand would not have a significant impact on the local utility; therefore, impacts would be less than significant.

Petroleum

During construction, the proposed project is anticipated to use 43,995.13 gallons of petroleum over the approximately 6-month construction period. By comparison, Countywide total petroleum use by vehicles is expected to be 2.0 million gallons per year by 2020 (Caltrans 2008).

During operation, the proposed project is anticipated to generate minimal demand for petroleum and would primarily consist of fuel usage of as-needed maintenance vehicles and equipment. In addition, even without the project, College Boulevard requires as-needed maintenance and therefore generates similar usage of petroleum.

Although the proposed project would see an increase in petroleum use during construction, the use is a small fraction of the regional use. Operational consumption of petroleum is primarily associated with vehicle usage of the road that is an existing feature. Therefore, the petroleum consumption associated with the proposed project would not be considered a substantial demand on local or regional supply; therefore, impacts would be less than significant.

4.5.5 Mitigation Measures

Impacts would be less than significant, and no mitigation measures are required.

4.5.6 Level of Significance After Mitigation

The proposed project would comply with regulatory requirements. As such, the proposed project would not result in the wasteful or inefficient use of electricity, and impacts would be less than significant.

Additionally, the proposed project would not conflict with an applicable plan, policy, or regulation adopted for reducing energy consumption, including the City's General Plan policies. As a result, impacts would be less than significant.

4.6 GEOLOGY AND SOILS

This section describes the existing geological setting of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project.

The discussion within this section summarizes applicable information within the following reports:

- Paleontological Resources Memorandum (Dudek 2019) (Appendix D)
- Geotechnical Evaluation for the College Boulevard Improvement Project, Oceanside, California (Ninyo & Moore 2014) (Appendix E)
- Preliminary Geotechnical Reconnaissance, College Boulevard Widening Between Olive Avenue and Old Grove Road (Station 87+00 to 136+00) (Geocon 2016) (Appendix F)

4.6.1 Existing Conditions

Site History

The project area of College Boulevard is a four-lane Major Arterial roadway between Olive Avenue and Old Grove Road in Oceanside, California. The roadway was originally developed in the 1970's with surrounding residential and commercial development continuing into the 1980's. The commercial development is concentrated around the Oceanside Boulevard intersection with residential development to the north and south. There is a railroad crossing approximately 500 feet south of Oceanside Boulevard. The project site is situated on graded cuts and fills, exposing, or overlying the Santiago Formation.

Regional Geologic Setting

The project area is situated in the coastal foothill section of the Peninsular Ranges Geomorphic Province. This geomorphic province encompasses an area that extends approximately 900 miles from the Transverse Ranges and the Los Angeles Basin south to the southern tip of Baja California (see Appendix E). In general, the province consists of rugged mountains under-lain by Jurassic metavolcanic and metasedimentary rocks, and Cretaceous igneous rocks of the southern California batholith. The portion of the province in San Diego County that includes the project area, is underlain by Tertiary age sedimentary rock.

The Peninsular Ranges Province is traversed by a group of sub-parallel faults and fault zones trending roughly northwest. The Elsinore, San Jacinto, and San Andreas faults are active fault systems located northeast of the project area and the Newport-Inglewood, Rose Canyon, Coronado Bank, San Diego Trough, and San Clemente faults are active faults located west of the project area. The Newport-Inglewood Fault Zone, the nearest active fault system, has been mapped approximately 8 miles west of the project site. Major tectonic activity associated with these and other faults within this regional tectonic framework consists primarily of right-lateral, strike-slip movement. Further discussion of faulting relative to the site is provided in the Geologic Hazards section of this report.

Site Geology

The project site consists of an approximately 2.4-mile long corridor that is currently built out as a four lane Major Arterial roadway. The geologic units underlying the project corridor include fill, alluvial, and Santiago Formation materials (Appendix F). Generalized descriptions of the geology types encountered along the project corridor are provided below and illustrated on Figure 4.6-1, Surficial Geology.

Soil and Geologic Conditions

Compacted Fill

Compacted fill soils have been placed in portions of the roadway during the original site grading in the 1970's to achieve the current grades. The fill soils most likely consist of clayey sands, silty sands, silty clays and sandy clays and can exhibit a "low to high" expansion potential. During initial site investigations, fill associated with the construction of College Boulevard was encountered in borings B-1, B-2, and B-4 to depths of up to 5 feet (Appendix E). The fill consists of damp to wet, loose to medium dense, clayey and silty sand.

Alluvium

A limited area is likely underlain by alluvial soils, however, the thickness of the alluvium is unknown for the entire length of the roadway. These stream deposits generally consist of loose silty sands and clayey sands, and soft silty and sandy clays.

Santiago Formation

The existing alignment is generally underlain by Santiago Formation, or compacted fill over Santiago Formation (see Figure 4.6-1). Santiago Formation material was encountered from the surface in boring B-2, and beneath fill in borings B-1, B-3, and B-4 to the depths explored (see Appendix E). As encountered, the Santiago Formation generally consisted of damp to wet, poorly to moderately cemented, silty and clayey fine-grained sandstone. While not encountered in geotechnical borings, scattered strongly cemented zones or "concretions" are anticipated within the Santiago Formation in the project area. These cemented zones may result in excavation difficulty during grading and construction of proposed project site improvements.

Geologic Hazards

In general, hazards associated with seismic activity include strong ground motion, ground surface rupture, and liquefaction. These considerations and other geologic hazards such as landsliding are discussed in the following sections.

Faulting and Seismicity

Based on the commonly accepted definition provided by the California Mining and Geology Board, an active fault is a fault that has had surface displacement within Holocene time (approximately the last 11,000 years). The state geologist has defined a potentially active fault as any fault considered to have been active during Quaternary time (the last 1.6 million years). These definitions are used in delineating earthquake fault zones as mandated by the Alquist-Priolo Earthquake Fault Zone Act. The intent of this act is to ensure that any urban development planned on or near traces of active faults is planned in accordance with seismic safety considerations, thereby reducing potential damage due to fault surface rupture.

The project area is considered to be seismically active. Based on review of the referenced geologic maps as well as on geologic field mapping, the subject site is not underlain by known active or potentially active faults (i.e., faults that exhibit evidence of ground displacement in the last 11,000 years and 2,000,000 years, respectively).

Additionally, the project site is not located within a State of California Earthquake Hazard Zone. However, the site is located in a seismically active area, as is the majority of southern California, and the potential for strong ground motion is considered significant during the design life of the proposed structures.

In the Preliminary Geotechnical Reconnaissance prepared for the proposed project (Appendix F to this EIR), the computer program *EZ-FRISK* (Version 7.65) was used to determine the distance of known faults to the project site and to estimate ground accelerations at the site for the maximum anticipated seismic event. According to the results, ten known active faults are located within a search radius of 50 miles from the site. The nearest known active fault is the Newport Inglewood Fault, with a maximum earthquake event of Magnitude 7.5, located approximately 8 miles west of the project site (see Appendices E and F). The estimated maximum peak site acceleration was calculated to be 0.28g. Table 4.6-1 lists earthquake events and calculated peak site accelerations for the faults most likely to subject the site to significant ground shaking.

Table 4.6-1
Earthquake Events and Calculated Peak Site Accelerations

Fault Name	Distance from Site (miles)	Maximum Earthquake Magnitude (Mw)	Peak Ground Acceleration*		
			Boore-Atkinson 2008 (g)	*Campbell-Bozorgnia 2008 (g)*	*Chiou-Youngs 2008 (g)*
Newport-Inglewood	9	7.5	0.28	0.23	0.29
Rose Canyon	10	6.9	0.22	0.19	0.21
Elsinore	18	7.85	0.22	0.15	0.21
Coronado Bank	26	7.4	0.15	0.11	0.12
Palos Verde Connected	26	7.7	0.17	0.12	0.15
San Joaquin Hills	35	7.1	0.10	0.10	0.09
Palos Verdes	37	7.3	0.11	0.08	0.08
Earthquake Valley	40	6.8	0.08	0.06	0.05
San Jacinto	42	7.88	0.12	0.09	0.11
Chino	45	6.8	0.07	0.05	0.04

* acceleration attenuation relationships developed by Boore-Atkinson (2008) NGA USGS 2008, Campbell-Bozorgnia (2008) NGA USGS 2008, and Chiou-Youngs (2007) NGA USGS 2008

Table 4.6-1 lists the estimated maximum earthquake magnitude and peak ground acceleration for faults in relationship to the site location calculated for Site Class D as defined by Table 1613.3.2 of the 2013 California Building Code (CBC) (see Appendix F). The CBC recommends that the design of structures be based on the horizontal peak ground acceleration having a 1 percent probability of exceedance in 50 years, which is defined as the Maximum Considered Earthquake (MCE).

Liquefaction

Liquefaction is the phenomenon in which loosely deposited granular soils with silt and clay contents of less than approximately 35 percent and non-plastic silts located below the water table undergo rapid loss of shear strength when subjected to strong earthquake-induced ground shaking. Ground shaking of sufficient duration results in the loss of grain-to-grain contact due to a rapid rise in pore water pressure, and causes the soil to behave as a fluid for a short period of time. Liquefaction is known generally to occur in saturated or near-saturated cohesionless soils at depths shallower than 50 feet below the ground surface. Factors known to influence liquefaction potential include composition and thickness of soil layers, grain size, relative density, groundwater level, degree of saturation, and both intensity and duration of ground shaking.

The County of San Diego Hazard Mitigation Plan (Reference No. 3) identifies zones of high risk for liquefaction in areas throughout the county. The subject roadway alignment does not lie in a high risk zone.

Expansive Soils

Certain types of clay soils expand when they are saturated and shrink when dried. These are called expansive soils and can pose a threat to the integrity of improvements that are built on them without proper engineering. Expansive soils are derived primarily from weathering of feldspar minerals and volcanic ash.

The proposed project area is generally underlain by Santiago Formation, which consists of relatively flat-laying claystone, siltstone, and sandstone. This geologic unit can possess a "medium to high" expansion potential with a moderate to low shear strength (see Appendix F). In addition to the Santiago Formation, compacted fill and alluvial soils potentially exist within the project site, with fill soils most likely exhibiting a "low to high" expansion potential.

Tsunamis and Seiches

A tsunami is a series of long-period waves generated in the ocean by a sudden displacement of large volumes of water. Causes of tsunamis include underwater earthquakes, volcanic eruptions, or offshore slope failures. The County of San Diego Hazard Mitigation Plan identifies zones of high risk for tsunami run-up for coastal areas throughout the county. The proposed project alignment is not included in the high risk hazard area.

Seiches are caused by the movement of an inland body of water due to the movement from seismic forces. The County of San Diego Hazard Mitigation Plan identifies zones of high risk for dam inundation areas throughout the county. The proposed project alignment is not included in the high risk hazard area.

Landslides

Landslides include a wide range of ground movement, such as rock falls, deep failure of slopes, and shallow debris flows. Landslide hazard areas are generally considered to exist when substantial slopes are located on or immediately adjacent to a subject property. While gravity is the main factor in causing a landslide to occur, the original slope stability is also a contributing factor.

No evidence of landsliding was noted during preliminary geotechnical reconnaissance (see Appendix F) or previous investigation completed by Ninyo & Moore (see Appendix E), and no landslides are known to exist along the proposed alignment or at a location that would impact the proposed project. Based on review of published maps, landslides are mapped in close proximity of the project site and specifically, west of the project site near Olive Drive (see Appendix E). However, based on review of aerial photographs and field observations, the mapped landslides do not underlie the project area.

Groundwater

Groundwater is water found below the land surface in aquifers, pore spaces, and unconsolidated sediments, and as soil moisture. Groundwater flows to the surface naturally at springs and seeps and can pool in depressions on the land surface. It may also be tapped artificially by digging wells for beneficial uses such as drinking water and irrigation. Sandy soils are expected to cave below groundwater.

Groundwater was not encountered during subsurface exploration of the proposed project site conducted by Ninyo & Moore in 2014 (see Appendix E). However, seepage due to perched water was encountered in borings B-1, B-3, and B-4 near the contact between fill and the underlying Santiago Formation. Typically, groundwater is expected at a depth of more than 10 feet but it should be noted that fluctuations in groundwater typically occur due to variations in precipitation, ground surface topography, subsurface stratification, irrigation, and groundwater pumping and other factors. Although additional investigation shall be conducted in the future, the depth to groundwater is estimated to be approximately 5 feet below ground surface in the proposed project area (see Appendix F).

Paleontological Resources

The majority of project alignment is underlain by mapped deposits of the Eocene age Santiago Formation (Appendix F; Kennedy et al. 2007; Wilson 1972). and late Holocene-age alluvial flood plain deposits within east-west trending drainages (e.g., Loma Alta Creek). Based on preliminary geotechnical studies by Geocon and the records search results obtained from the San Diego Natural History Museum, minor amounts of late Holocene-age alluvial flood plain deposits associated with east-west trending drainages (e.g., Loma Alta Creek and a drainage south of Loma Alta Mountain) underlie the southern portion of the project alignment, south of Oceanside Boulevard (see Appendices D and F). The Santiago Formation is known to produce scientifically significant paleontological resources throughout northern San Diego County. These marine, estuarine, and fluvial deposits have yielded plant, invertebrate, and vertebrate fossils. Of particular note, a new genus and species of extinct, rhino-like brontothere (*Parvicornus occidentalis*) was recovered from these same age deposits north of the project area, during grading of the Ocean Ranch development (Mihlbachler and Deméré 2009). These middle Eocene age deposits have high paleontological resource sensitivity according to the County of San Diego (2007) guidelines. The limited Holocene-age alluvial flood plain deposits underlying the alignment are given a low paleontological sensitivity due to their young age (Deméré and Walsh 1993; County of San Diego 2007).

A records search for fossil localities within a one mile radius of the proposed project alignment was completed by the San Diego Natural History Museum at the behest of Dudek on July 13, 2016 (Appendix D). This search included published geological reports and San Diego Natural History Museum recorded fossil localities.

According to the records search, there are a total of eighty-seven fossils localities documented by the SDNHM (2016) within a one-mile radius of the project alignment. All but one of these localities were discovered within the Santiago Formation. Fossils recovered include trace fossils, plant impressions, marine invertebrates, and marine and terrestrial vertebrates (see Appendix D). The single, additional locality is recorded from the Pleistocene age Bay Point Formation, which is not mapped within the alignment, and is not anticipated to be impacted during construction (see Appendix D). Uniquely fossiliferous and diverse assemblages recovered from bone beds nearby, such as the Rancho Del Oro development and Jeff's Discovery – Caltrans Quarry site, have produced local faunas assignable to the Uintan North American Land Mammal Age (see Appendix D).

4.6.2 Relevant Plans, Policies, and Ordinances

4.6.2.1 Federal

Occupational Safety and Health Administration Regulations

Excavation and trenching are among the most hazardous construction activities. The Occupational Safety and Health Administration (OSHA) Excavation and Trenching Standard, Title 29 of the Code of Federal Regulations, Part 1926, Subpart P, et seq. covers requirements for excavation and trenching operations. OSHA requires that all excavations in which employees could potentially be exposed to cave-ins be protected by sloping or benching the sides of the excavation, supporting the sides of the excavation, or placing a shield between the side of the excavation and the work area.

4.6.2.2 State

California Geologic Survey

The California Geologic Survey (CGS) provides guidance with regard to seismic hazards. The California Geologic Survey's Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California (CGS 2008), provides guidance for evaluation and mitigation of earthquake-related hazards for projects within designated zones of required investigation.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 (California Public Resources Code, Sections 2621–2630) regulates development and construction of buildings intended for human occupancy to avoid the hazard of surface fault rupture. The act helps define areas where fault rupture is most likely to occur. The act groups faults into categories of active, potentially active, and inactive. Historic and Holocene age faults are considered active. Late Quaternary and Quaternary age faults are considered potentially active and pre-Quaternary age faults are considered inactive. These classifications are qualified by the conditions that a fault must be shown to be sufficiently active and well defined by detailed site-specific geologic explorations in order to determine whether building setbacks should be established. Cities and counties affected by the zones must regulate certain development projects within the zones. They must withhold development permits for sites within the zones until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting. According to the Preliminary Geotechnical Reconnaissance conducted for the Project, the project site is not located within a State of California Earthquake Fault Zone (see Appendix F).

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (California Public Resources Code Sections 2690–2699.6) addresses earthquake hazards from non-surface fault rupture, including liquefaction, landslides, strong ground shaking, and other earthquake and geologic hazards. The Seismic Hazards Mapping Act also specifies that the lead agency for a project may withhold development permits until geologic or soils investigations are conducted and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

4.6.2.3 Local

City of Oceanside General Plan

State of California Law requires that each city prepare and adopt an approved General Plan that provides comprehensive, long-term guidance for the City's future. General Plans are also required to contain specific elements regarding different areas of planning; relevant elements include Land Use, Environmental Resource Management, and Public Safety. While each element outlines policies, plans, and goals that guide the City to maintaining and improving each area of development, the Public Safety Element specifically addresses seismic hazards and geologic conditions. This element includes the following objectives:

1. Consider seismic and geologic hazards when making land use decisions particularly in regard to critical structures.
2. Minimize the risk of occupancy of all structures from seismic and geologic occurrences.
3. Provide to the public all available information about existing seismic and geologic conditions.

The Public Safety Element includes the Public Safety Plan that includes definitions, maps, and mitigation information for seismic and geologic hazards that exist within the City of Oceanside.

4.6.3 Thresholds of Significance

Based on the significance criteria established by Appendix G of the 2019 California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.) and the City of Oceanside, a significant impact from geology and soils would generally occur as a result of project implementation if the project would:

1. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:
    a. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist, or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42);
    b. Strong seismic ground shaking;
    c. Seismic-related ground failure, including liquefaction; or
    d. Landslides.
2. Result in substantial soil erosion or the loss of topsoil.
3. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
4. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risk to life or property.
5. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.
6. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

4.6.4 Impacts Analysis

Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: 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 based on other substantial evidence of as known fault. (Refer to Division of Mines and Geology Special Publication 42); strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides?

No active earthquakes have been identified as occurring on or directly adjacent to the project site and the project site is not located within an Alquist-Priolo Earthquake Fault Zone (see Appendix

F). Although there are no known active faults crossing the subject site, and the potential for ground rupture due to faulting or lateral spreading is considered low, surface ground cracking related to shaking from distant events is considered a hazard (see Appendix E). According to the Preliminary Geotechnical Reconnaissance (see Appendix F), the project alignment could be subjected to moderate to severe ground shaking in the event of an earthquake along any of the faults listed in Table 4.6-1 or other faults in the southern California/ northern Baja California region. However, the improvements do not possess any greater seismic risk than that of the surrounding developments. Despite this determination, seismic design of the structures shall be evaluated in accordance with the CBC guidelines or those currently adopted by the City of Oceanside in future geotechnical evaluations.

Based on the proximity of several dominant active faults capable of generating earthquakes, as well as the historical seismic record, the area of the proposed project site is considered subject to relatively high seismicity. The nearest active fault is the Newport–Inglewood Fault, located approximately 8 miles west of the project site, respectively. Because the site is located in an area of high seismicity, nearby faults are most likely to subject the site to significant ground shaking (see Appendix F). With incorporation of the geotechnical recommendations (PDF-GEO-1; se Chapter 3, Project Description) provided in the project's Preliminary Geotechnical Reconnaissance and adherence to the California Building Code requiring specific performance standards to address geologic hazards, impacts relating to faulting and seismicity would remain below a level of significance.

Liquefaction typically occurs when a site is subjected to strong seismic shaking, on-site soils are cohesionless, groundwater is encountered within 50 feet of the surface, and soil relative densities are less than approximately 70%. Groundwater could have a significant influence on construction depending on the location of any underground utilities if proposed. Stabilization and/or dewatering techniques will likely be necessary for excavations greater than approximately 5 below existing grades in this area. It should also be noted that groundwater elevations may vary seasonally. Per the geotechnical investigation, the project alignment is not within in a high risk zone for liquefaction as described in the County of San Diego Hazard Mitigation Plan (Reference No. 3) (see Appendix F). Despite being outside of the liquefaction high risk zone, alluvial soils within the on-site drainage may be prone to liquefaction if the conditions described above are present. However, as previously described, due to the relatively dense nature of the soils underlying the project alignment, liquefaction is unlikely to occur. Therefore, impacts associated with liquefaction due to static and seismic conditions would remain below a level of significance.

According to the City's General Plan (Figure PS-3 of the Public Safety Element; City of Oceanside 1975), the project site is located in an area identified as "Most Susceptible To Land Slides." However, no evidence of landsliding was noted during the site reconnaissance or previous geotechnical investigations that were reviewed by Geocon, and no landslides are known at locations that would impact the proposed project (see Appendix F). According to Ninyo & Moore (see Appendix E), landslides are mapped in close proximity west of the project alignment near Olive Drive however; these landslides do not underlie the project area. As such, the potential for substantial adverse effects to people or property from landslides would be less than significant.

Would the project result in substantial soil erosion or the loss of topsoil?

The project site is currently built out with four lanes of public roadway and has been previously graded and cleared. During construction, the potential for erosion would increase as soils underlying the roadway are exposed by surface disturbing activities. For example, during excavation and grading, erosion could occur if exposed soils are left bare and unprotected from water and wind. In addition to potential soil erosion resulting from earthmoving activities, laboratory test results of borings and Caltrans criteria consider the soils present on the project site to be corrosive (see Appendix E) and therefore, underlying soils may weaken the roadway and reduce the expected lifespan of roadway materials. Temporary construction impacts associated with potential erosion and loss of topsoil would be reduced through adherence to the erosion control standards established by the City's Grading Ordinance, as well as implementation of **PDF-GEO-1** (refer to Chapter 3, Project Description), a Storm Water Pollution Prevention Plan (**PDF-HDY-1**) and best management practices during construction. Construction impacts related to erosion would be less than significant.

During the operational phase of the project, exposed soils along the project corridor would be limited to those located in existing and new landscape medians throughout the project site. Plant material within medians would stabilize soils and reduce the potential for erosion to occur. Due to the increase of impervious area along the College Boulevard resulting from widening of the roadway, the proposed project would increase the amount of surface runoff through the corridor. As stated in Section 4.8, Hydrology and Water Quality, the increased amount of surface runoff attributed to the proposed project would not substantially alter the existing drainage pattern of the area such that substantially off-site erosion would occur. Please see Chapter 4.9, Hydrology and Water Quality for additional detail. Therefore, the project would not result in substantial soil erosion or loss of topsoil during operations and impacts would be less than significant.

Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

The project area is generally underlain by Santiago Formation, or compacted fill over Santiago Formation. As described in Threshold 1, the project site is not underlain by known active or potentially active faults or is susceptible to landsliding or liquefaction. However, the alluvial soils within the site drainage may be prone to liquefaction if the conditions described previously are present. Based on the relatively dense nature of the soils underlying the project alignment, liquefaction is not anticipated to be an impact and as such, is not a design consideration. Additionally, the project site is currently a functioning four-lane roadway surrounded by residential and commercial development which has not shown evidence of subsidence or collapse. Although it is unlikely that the proposed roadway improvements would substantially increase the likelihood of on- or off-site ground instability, further geologic investigation shall be conducted to evaluate the long-term settlement of the current roadway. With adherence to the CBC requiring specific performance standards would ensure that geologic hazard impacts relating to on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse would be less than significant.

Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

According to the Preliminary Geotechnical Reconnaissance, materials derived from the Santiago Formation underlying the project site can possess a "medium to high" expansion potential (see Appendix F). Furthermore, the compacted fill soils present on site most-likely consist of clayey sands, silty sands, silty clays and sandy clays and can exhibit a "low to high" expansion potential. The expansive potential of alluvium soils underlying the fill materials present in the area of Station 91+50 to 95+50 is unknown (see Appendix F). Additionally, the exact thickness and location of expansive soils requires additional study and shall be explored further in future investigations. If present, the expansion and compression potential of the alluvial materials shall be evaluated during future geotechnical studies. Groundwater may also be present within the alluvium. The potential for this condition shall also be evaluated during future studies conducted as a component of final design.

While the City of Oceanside proposes to widen an existing developed roadway, soils underlying College Boulevard in the project area exhibit a low to high expansion potential which could potentially create risks to the integrity of the roadway and roadway materials. However, through the incorporation of geotechnical recommendations identified in geotechnical reports (i.e., PDF-GEO-1; see Chapter 3, Project Description) prepared for the proposed project, potential risks associated with expansive soils would be addressed and impacts would remain below a level of significance.

Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The project proposed roadway improvements include widening of the roadway, landscaped medians, bike lanes, and sidewalks. No septic tanks or wastewater disposal systems are proposed. Therefore, impacts related to septic tanks or wastewater disposal systems would not occur.

Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The project alignment is underlain by mapped deposits of the Eocene age Santiago Formation and late Holocene-age alluvial flood plain deposits within east-west trending drainages (e.g., Loma Alta Creek). According to the County of San Diego, Middle Eocene age Santiago Formation deposits have high paleontological resource sensitivity and Holocene-age alluvial flood plain deposits underlying the alignment have low paleontological sensitivity (County of San Diego 2007). Any fossil material found in either artificial fill of Holocene alluvial are ex-situ deposits is likely to be modern to sub-fossil and would not be considered scientifically significant, or unique.

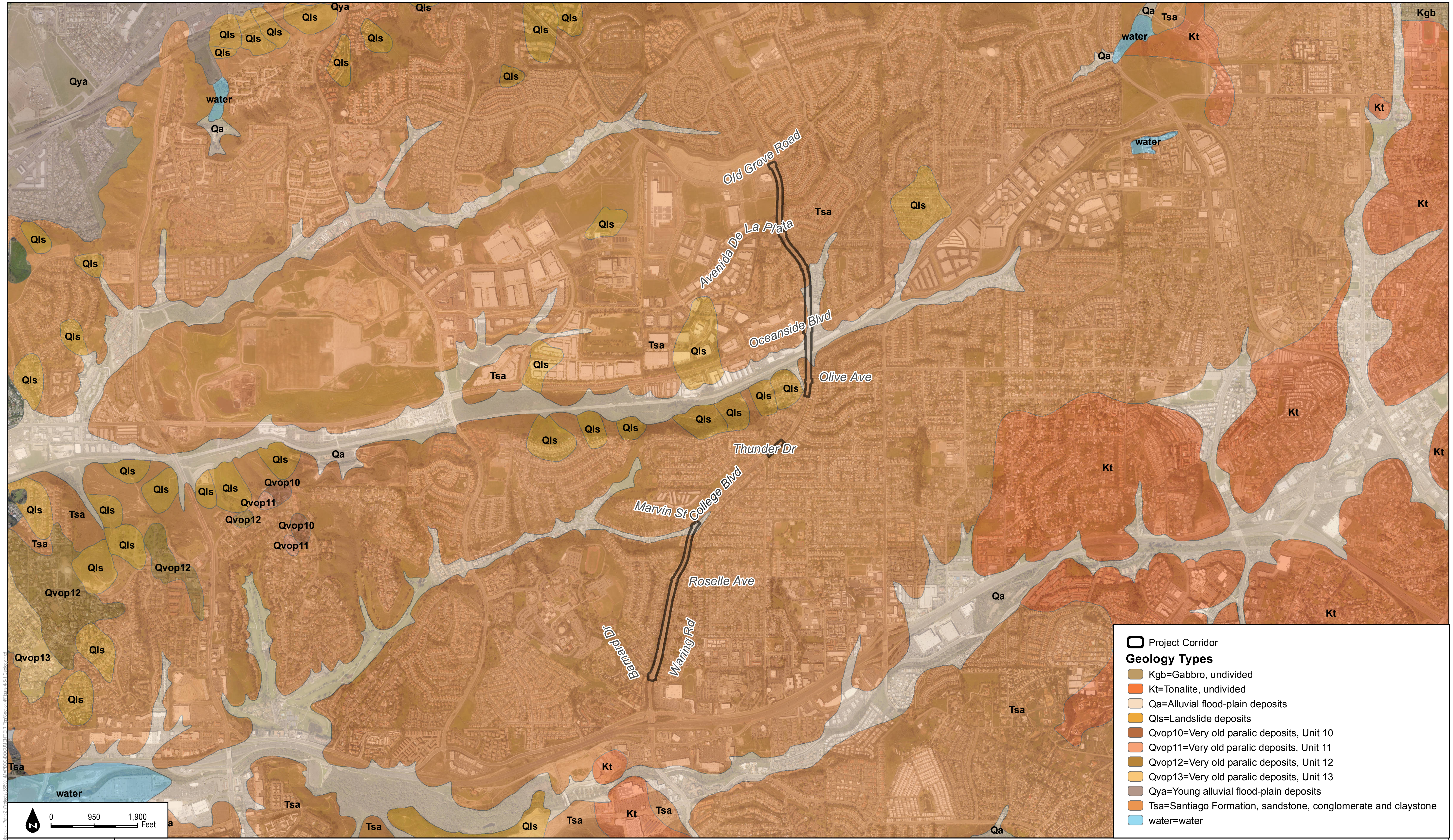
No paleontological resources were identified within the project alignment because of the institutional records search and desktop geological review. It is not anticipated that paleontological resources will be impacted given the limited and relatively shallow construction excavation planned within the existing roadway. However, intact paleontological resources may be encountered at depth, or along the periphery of the project, for improvements including, but not limited to, excavation into previously undisturbed sedimentary deposits of the Santiago Formation, such as construction of retaining walls. It is likely that high sensitivity formational would be encountered at the surface on the periphery of the alignment, with the potential for impacting the Santiago Formation at depths of 5 feet or greater within the existing roadway Given the proximity of past fossil discoveries in the area and the underlying paleontologically sensitive deposits, the project site has the potential to yield scientifically significant paleontological resources. In the event that intact paleontological resources are located on the project site, ground-disturbing activities associated with construction of the proposed project, such as grading during site preparation, have the potential to destroy a unique paleontological resource or site. Without mitigation, the potential damage to paleontological resources during construction would be a potentially significant impact **(Impact GEO-1)**.

4.6.5 Mitigation Measures

MM-GEO-1 Prior to commencement of any grading activity on-site, the applicant shall retain a qualified paleontologist, subject to the review and approval of the City’s Building Official, or designee. The qualified paleontologist shall attend the preconstruction meeting and be on-site during all rough grading and other significant ground-disturbing activities in previously undisturbed Santiago Formation, if encountered. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontology monitor will temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery will be roped off with a 50-foot radius buffer. Once documentation and collection of the find is completed, the monitor will remove the rope and allow grading to recommence in the area of the find. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the proposed project. The PRIMP shall be consistent with the guidelines of the Society of Vertebrate Paleontology (SVP) (2010).

4.6.6 Level of Significance After Mitigation

Through implementation of project design features outlined in Table 3-3, Summary of Project Design and Construction Measures, and **MM-GEO-1,** potential impacts associated with geology, soils, and paleontological resources would be less than significant.



SOURCE: SANGIS 2017; CA Geological Survey 2018

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FIGURE 4.6-1

Surficial Geology

College Boulevard Improvements Project EIR

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4.7 GREENHOUSE GAS EMISSIONS

This section describes the existing setting of the project site related to greenhouse gas emissions and climate change, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project.

This section is based on the 2019 Air Quality and Greenhouse Gas Emissions Analysis Technical Report (AQ-GHG Technical Report) prepared by Dudek (see Appendix A). The purpose of the GHG emissions analysis is to estimate and evaluate the potential GHG impacts associated with implementation of the proposed project. The City of Oceanside has not established thresholds of significance for GHG emissions. Therefore, in the absence of such guidance, the County of San Diego's guidance has been followed for this analysis. The analysis includes a quantitative analysis of project-related GHG emissions resulting from construction and operation of the proposed project. The complete report is included as Appendix A of this EIR.

4.7.1 Existing Conditions

Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind patterns, lasting for an extended period (decades or longer). The Earth's temperature depends on the balance between energy entering and leaving the planet's system. Many factors, both natural and human, can cause changes in Earth's energy balance, including variations in the Sun's energy reaching Earth, changes in the reflectivity of Earth's atmosphere and surface, and changes in the greenhouse effect, which affects the amount of heat retained by Earth's atmosphere (EPA 2017).

The greenhouse effect is the trapping and build-up of heat in the atmosphere (troposphere) near the Earth's surface. The greenhouse effect traps heat in the troposphere through a threefold process as follows: Short-wave radiation emitted by the Sun is absorbed by the Earth; the Earth emits a portion of this energy in the form of long-wave radiation; and GHGs in the upper atmosphere absorb this long-wave radiation and emit it into space and toward the Earth. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature and creates a pleasant, livable environment on the Earth. 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 causing the Earth's surface temperature to rise.

The scientific record of the Earth's climate shows that the climate system varies naturally over a wide range of time scales and that in general, climate changes prior to the Industrial Revolution in the 1700s can be explained by natural causes, such as changes in solar energy, volcanic eruptions, and natural changes in GHG concentrations. Recent climate changes, in particular the warming observed over the past century, however, cannot be explained by natural causes alone. Rather, it is extremely likely that human activities have been the dominant cause of warming since the mid-20th century, and is the most significant driver of observed climate change (IPCC 2013; EPA 2017). Human influence on the climate system is evident from the increasing GHG concentrations in the atmosphere, positive radiative forcing, observed warming, and improved understanding of the climate system (IPCC 2013). The atmospheric concentrations of GHGs have increased to levels unprecedented in the last 800,000 years, primarily from fossil fuel emissions and secondarily from emissions associated with land use changes (IPCC 2013).

Contributions to Greenhouse Gas Emissions

Per the EPA's *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2017*, total U.S. GHG emissions were approximately 6,457 MMT CO_2e in 2017 (EPA 2019). The largest source of CO_2, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 93.2% of CO_2 emissions in 2017 (4,912.0 MMT CO_2e). Relative to the 1990 emissions level, gross U.S. GHG emissions in 2017 were 1.3% higher; however, the gross emissions are down from a high of 15.7% above the 1990 level that occurred in 2007. GHG emissions decreased from 2016 to 2017 by 0.5% (35.5 MMT CO_2e) and, overall, net emissions in 2017 were 13% below 2005 levels (EPA 2019).According to the California Greenhouse Gas Emission Inventory—2018 Edition, California emitted 429.4 MMT CO_2e in 2016, including emissions resulting from out-of-state electrical generation (CARB 2018c). The sources of GHG emissions in California include transportation, industrial uses, electric power production from both in-state and out-of-state sources, commercial and residential uses, agriculture, high-GWP substances, and recycling and waste. The California GHG emission source categories (as defined in CARB 2008) and their relative contributions in 2016 are presented in Table 4.7-1.

Table 4.7-1
Greenhouse Gas Emissions Sources in California

Source Category	Annual GHG Emissions (MMT CO_2e)	Percent of Total[a]
Transportation	169.38	41%
Industrial uses	89.61	23%
Electricity generation[b]	68.58	16%
Residential and commercial uses	39.36	12%
Agriculture	33.84	8%
High global warming potential substances	19.78	4%
Recycling and waste	8.81	2%
Totals	**429.4**	**100%**

Source: CARB 2018c.
Notes: GHG = greenhouse gas; MMT CO_2e = million metric tons of carbon dioxide equivalent.
Emissions reflect 2016 California GHG inventory.
[a] Percentage of total has been rounded and total may not sum due to rounding.
[b] Includes emissions associated with imported electricity, which account for 26.28 MMT CO_2e.

Potential Effects of Climate Change

According to CARB, some of the potential impacts in California of global warming may Globally, climate change has the potential to affect numerous environmental resources through uncertain impacts related to future air temperatures and precipitation patterns. The *Climate Change 2014: Synthesis Report* indicated that warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. Signs that global climate change has occurred include warming of the atmosphere and ocean, diminished amounts of snow and ice, and rising sea levels (IPCC 2014).

In California, climate change impacts have the potential to affect sea level rise, agriculture, snowpack and water supply, forestry, wildfire risk, public health, and electricity demand and supply (CCCC 2006). The primary effect of global climate change has been a 0.2°C rise in average global tropospheric temperature per decade, determined from meteorological measurements worldwide between 1990 and 2005. Scientific modeling predicts that continued emissions of GHGs at or above current rates would induce more extreme climate changes during the twenty-first century than were observed during the twentieth century. A warming of about 0.2°C (0.36°F) per decade is projected, and there are identifiable signs that global warming could be taking place.

Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting California. The average temperatures in California have increased, leading to more extreme hot days and fewer cold nights; shifts in the water cycle have been observed, with less winter precipitation falling as snow, and both snowmelt and rainwater running off earlier in the year; sea levels have risen; and wildland fires are becoming more frequent and intense due to dry seasons that start earlier and end later (CAT 2010).

An increase in annual average temperature is a reasonably foreseeable effect of climate change. Observed changes over the last several decades across the western United States reveal clear signals of climate change. Statewide average temperatures increased by about 1.7°F from 1895 to 2011, and warming has been greatest in the Sierra Nevada (CCCC 2012). By 2050, California is projected to warm by approximately 2.7°F above 2000 averages, a threefold increase in the rate of warming over the last century. By 2100, average temperatures could increase by 4.1°F to 8.6°F, depending on emissions levels. Springtime warming—a critical influence on snowmelt—will be particularly pronounced. Summer temperatures will rise more than winter temperatures, and the increases will be greater in inland California, compared to the coast. Heat waves will be more frequent, hotter, and longer. There will be fewer extremely cold nights (CCCC 2012). Over the next 100 years, scientists predict a decline of 30% to as much as 90% in Sierra snowpack, which accounts for approximately half of the surface water storage in California and much of the state's water supply (CAT 2010).

Model projections for precipitation over California continue to show the Mediterranean pattern of wet winters and dry summers with seasonal, year-to-year, and decade-to-decade variability. For the first time, however, several of the improved climate models shift toward drier conditions by the mid-to-late twenty-first century in central and, most notably, Southern California. By late-century, all projections show drying, and half of them suggest 30-year average precipitation will decline by more than 10% below the historical average (CCCC 2012).

4.7.2 Relevant Plans, Policies, and Ordinances

4.7.2.1 Federal

Massachusetts vs. EPA. On April 2, 2007, in *Massachusetts v. EPA*, the Supreme Court directed the Environmental Protection Agency (EPA) Administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the EPA Administrator is required to follow the language of Section 202(a) of the Clean Air Act (CAA). On December 7, 2009, the Administrator signed a final rule with two distinct findings regarding GHGs under Section 202(a) of the CAA:

- The Administrator found that elevated concentrations of GHGs—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations. This is referred to as the "endangerment finding."
- The Administrator further found the combined emissions of GHGs—CO_2, CH_4, N_2O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is referred to as the "cause or contribute finding."

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the CAA.

Energy Independence and Security Act. The Energy Independence and Security Act of 2007, among other key measures, would do the following, which would aid in the reduction of national GHG emissions:

1. Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
2. Set a target of 35 miles per gallon (mpg) for the combined fleet of cars and light trucks by model year 2020 and directs National Highway Traffic Safety Administration (NHTSA)

to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.

3. Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

EPA and NHTSA Joint Final Rules for Vehicle Standards. In 2007, in response to the *Massachusetts v. EPA* U.S. Supreme Court ruling, the Bush Administration issued Executive Order (EO) 13432 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011; and, in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016 (75 FR 25324–25728).

In 2010, President Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams/mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021 (77 FR 62624–63200), and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6%–23% over the 2010 baselines (76 FR 57106–57513).

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types of sizes of buses and work trucks. The final standards are expected to lower carbon dioxide emissions by approximately 1.1 billion MT and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program (EPA and NHTSA 2016).

In August 2018, EPA and NHTSA proposed to amend certain fuel economy and GHG standards for passenger cars and light trucks and establish new standards for model years 2021 through 2026. Compared to maintaining the post-2020 standards now in place, the 2018 proposal would increase U.S. fuel consumption by about half a million barrels per day (2%–3% of total daily consumption, according to the Energy Information Administration) and would impact the global climate by 3/1000th of one degree Celsius by 2100 (EPA and NHTSA 2018). California and other states have stated their intent to challenge federal actions that would delay or eliminate GHG reduction measures and have committed to cooperating with other countries to implement global climate change initiatives. Thus, the timing and consequences of the 2018 federal proposal are speculative at this time.

4.7.2.2 State

Climate Change Targets

EO S-3-05. EO S-3-05 (June 2005) established the following statewide goals: GHG emissions should be reduced to 2000 levels by 2010; GHG emissions should be reduced to 1990 levels by 2020; and GHG emissions should be reduced to 80% below 1990 levels by 2050.

AB 32 and CARB's Climate Change Scoping Plan. In furtherance of the goals established in EO S-3-05, the Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020.

Under AB 32, CARB is responsible for and is recognized as having the expertise to carry out and develop the programs and requirements necessary to achieve the GHG emissions reduction mandate of AB 32. Under AB 32, CARB must adopt regulations requiring the reporting and verification of statewide GHG emissions from specified sources. This program is used to monitor and enforce compliance with established standards. CARB also is required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 relatedly authorized CARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted.

In 2007, CARB approved a limit on the statewide GHG emissions level for year 2020 consistent with the determined 1990 baseline (427 million metric tons (MMT) CO_2e). CARB's adoption of this limit is in accordance with Health and Safety Code Section 38550.

Further, in 2008, CARB adopted the *Climate Change Scoping Plan: A Framework for Change* (Scoping Plan) in accordance with Health and Safety Code Section 38561. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions for various emission sources/sectors to 1990 levels by 2020. The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction features by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program. The key elements of the Scoping Plan include the following (CARB 2008):

1. Expanding and strengthening existing energy efficiency programs, as well as building and appliance standards.
2. Achieving a statewide renewable energy mix of 33%.
3. Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85% of California's GHG emissions.
4. Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets.
5. Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard.
6. Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.

The Scoping Plan also identified local governments as essential partners in achieving California's goals to reduce GHG emissions because they have broad influence and, in some cases, exclusive authority over activities that contribute to significant direct and indirect GHG emissions through their planning and permitting processes, local ordinances, outreach and education efforts, and municipal operations. Specifically, the Scoping Plan encouraged local governments to adopt a reduction goal for municipal operations and for community emissions to reduce GHGs by approximately 15% from then levels (2008) by 2020. Many local governments developed community-scale local GHG reduction plans based on this Scoping Plan recommendation.

In 2014, CARB adopted the *First Update to the Climate Change Scoping Plan: Building on the Framework* (First Update). The stated purpose of the First Update is to "highlight California's success to date in reducing its GHG emissions and lay the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80% below 1990 levels by 2050" (CARB 2014). The First Update found that California is on track to meet the

2020 emissions reduction mandate established by AB 32. It also noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80% below 1990 levels by 2050 if the state realizes the expected benefits of existing policy goals.

In conjunction with the First Update, CARB identified "six key focus areas comprising major components of the state's economy to evaluate and describe the larger transformative actions that will be needed to meet the state's more expansive emission reduction needs by 2050" (CARB 2014). Those six areas are: (1) energy, (2) transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure), (3) agriculture, (4) water, (5) waste management, and (6) natural and working lands. The First Update identifies key recommended actions for each sector that will facilitate achievement of EO S-3-05's 2050 reduction goal.

CARB's research efforts presented in the First Update indicate that it has a "strong sense of the mix of technologies needed to reduce emissions through 2050" (CARB 2014). Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies.

As part of the First Update, CARB recalculated the state's 1990 emissions level using more recent GWPs identified by the IPCC. Using the recalculated 1990 emissions level (431 MMT CO_2e) and the revised 2020 emissions level projection identified in the 2011 Final Supplement, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 15% (instead of 28.5% or 16%) from the Business-As-Usual conditions.

In December 2017, CARB adopted California's 2017 Climate Change Scoping Plan (2017 Scoping Plan*)* for public review and comment (CARB 2017). The 2017 Scoping Plan builds on the successful framework established in the initial Scoping Plan and First Update, while identifying new, technologically feasible and cost-effective strategies that will serve as the framework to achieve the 2030 GHG target as established by SB 32 and define the state's climate change priorities to 2030 and beyond. The strategies' known commitments include implementing renewable energy and energy efficiency (including the mandates of SB 350), increasing stringency of the LCFS, implementing measures identified in the Mobile Source and Freight Strategies, implementing measures identified in the proposed Short-Lived Climate Pollutant Plan, and increasing stringency of SB 375 targets. To fill the gap in additional reductions needed to achieve the 2030 target, it recommends continuing the Cap-and-Trade Program and a measure to reduce GHGs from refineries by 20%.

For local governments, the 2030 Scoping Plan replaced the initial Scoping Plan's 15% reduction goal with a recommendation to aim for a community-wide goal of no more than 6 MT CO_2e per capita by 2030 and no more than 2 MT CO_2e per capita by 2050, which are consistent with the state's long-term goals. These goals are also consistent with the Under 2 MOU (Under 2 2019) and the Paris Agreement, which are developed around the scientifically based levels necessary to limit global warming below 2°C. The 2030 Scoping Plan recognized the benefits of local government GHG planning (e.g., through climate action plans (CAPs)) and provide more information regarding tools CARB is working on to support those efforts. It also recognizes the CEQA streamlining provisions for project-level review where there is a legally adequate CAP.[1] The Second Update was approved by CARB's Governing Board on December 14, 2017.

The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32, SB 32, and the EOs and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. A project is considered consistent with the statutes and EOs if it meets the general policies in reducing GHG emissions to facilitate the achievement of the state's goals and does not impede attainment of those goals. As discussed in several cases, a given project need not be in perfect conformity with each and every planning policy or goals to be consistent. A project would be consistent, if it will further the objectives and not obstruct their attainment.

EO B-30-15. EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing statewide GHG emissions to 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing statewide GHG emissions to 80% below 1990 levels by 2050 as set forth in S-3-05. To facilitate achievement of this goal, EO B-30-15 calls for an update to CARB's Scoping Plan to express the 2030 target in terms of MMT CO_2e. The EO also calls for state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets. EO B-30-15 does not require local agencies to take any action to meet the new interim GHG reduction target.

SB 32 and AB 197. SB 32 and AB 197 (enacted in 2016) are companion bills that set new statewide GHG reduction targets, make changes to CARB's membership and increase legislative oversight of CARB's climate change-based activities, and expand dissemination of GHG and other air quality-related emissions data to enhance transparency and accountability. More specifically, SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030.

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1 *Sierra Club v. County of Napa* (2004) 121 Cal.App.4th 1490; *San Francisco Tomorrow et al. v. City and County of San Francisco* (2015) 229 Cal.App.4th 498; *San Franciscans Upholding the Downtown Specific Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656; *Sequoyah Hills Homeowners Assn. V. City of Oakland* (1993) 23 Cal.App.4th 704, 719.

AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, in order to provide ongoing oversight over implementation of the state's climate policies. AB 197 also added two members of the Legislature to CARB as nonvoting members; requires CARB to make available and update (at least annually via its website) emissions data for GHGs, criteria air pollutants, and TACs from reporting facilities; and, requires CARB to identify specific information for GHG emissions reduction measures when updating the Scoping Plan.

SB 605 and SB 1383. SB 605 (2014) requires CARB to complete a comprehensive strategy to reduce emissions of SLCPs in the state; and SB 1383 (2016) requires CARB to approve and implement that strategy by January 1, 2018. SB 1383 also establishes specific targets for the reduction of SLCPs (40% below 2013 levels by 2030 for CH_4 and HFCs, and 50% below 2013 levels by 2030 for anthropogenic black carbon), and provides direction for reductions from dairy and livestock operations and landfills. Accordingly, and as mentioned above, CARB adopted its *Short-Lived Climate Pollutant Reduction Strategy* in March 2017, which establishes a framework for the statewide reduction of emissions of black carbon, CH_4 and fluorinated gases.

EO B-55-18. EO B-55-18 (September 2018) establishes a statewide policy for the state to achieve carbon neutrality no later than 2045, and achieve and maintain net negative emissions thereafter. The goal is an addition to the existing statewide targets of reducing the state's GHG emissions. CARB will work with relevant state agencies to ensure that future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal.

Building Energy

Title 24, Part 6. Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically establishes Building Energy Efficiency Standards that are designed to ensure new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. These energy efficiency standards are reviewed every few years by the Building Standards Commission and the California Energy Commission (CEC) (and revised if necessary) (California Public Resources Code, Section 25402(b)(1)). The regulations receive input from members of industry, as well as the public, with the goal of "reducing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy" (California Public Resources Code, Section 25402). These regulations are carefully scrutinized and analyzed for technological and economic feasibility (California Public Resources Code, Section 25402(d)) and cost effectiveness (California Public Resources Code, Sections 25402(b)(2) and (b)(3)). These standards are updated to consider and incorporate new energy-efficient technologies and construction methods. As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

Title 24, Part 11. In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (CALGreen) establishes minimum mandatory standards, as well as voluntary standards, pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, and state-owned buildings, schools, and hospitals. The CALGreen 2016 standards became effective on January 1, 2017. The CALGreen 2019 standards will continue to improve upon the 2016 CALGreen standards, and will go into effect on January 1, 2020. The mandatory standards require the following (24 CCR Part 11):

- Mandatory reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings.
- Mandatory reduction in outdoor water use through compliance with a local water efficient landscaping ordinance or the California Department of Water Resources' Model Water Efficient Landscape Ordinance.
- Diversion of 65% of construction and demolition waste from landfills.
- Mandatory inspections of energy systems to ensure optimal working efficiency.
- Inclusion of electric vehicle charging stations or designated spaces capable of supporting future charging stations.
- Low-pollutant emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particle boards.

The CALGreen standards also include voluntary efficiency measures that are provided at two separate tiers and implemented at the discretion of local agencies and applicants. CALGreen's Tier 1 standards call for a 15% improvement in energy requirements, stricter water conservation, 65% diversion of construction and demolition waste, 10% recycled content in building materials, 20% permeable paving, 20% cement reduction, and cool/solar-reflective roofs. CALGreen's more rigorous Tier 2 standards call for a 30% improvement in energy requirements, stricter water conservation, 75% diversion of construction and demolition waste, 15% recycled content in building materials, 30% permeable paving, 25% cement reduction, and cool/solar-reflective roofs.

Title 20. Title 20 of the California Code of Regulations requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. Performance of appliances must be certified through the CEC to demonstrate compliance with standards. New appliances regulated under Title 20 include refrigerators, refrigerator–freezers, and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwashers; clothes washers and dryers; cooking products; electric motors; low-voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems. Title 20 presents protocols for testing for each type of appliance covered under the regulations, and appliances must meet the standards for energy performance, energy design, water performance and water design. Title 20 contains three types of standards for appliances: federal and state standards for federally regulated appliances, state standards for federally regulated appliances, and state standards for non-federally regulated appliances.

SB 1. SB 1 (2006) established a $3 billion rebate program to support the goal of the state to install rooftop solar energy systems with a generation capacity of 3,000 megawatts through 2016. SB 1 added sections to the Public Resources Code, including Chapter 8.8 (California Solar Initiative), that require building projects applying for ratepayer-funded incentives for photovoltaic systems to meet minimum energy efficiency levels and performance requirements. Section 25780 established that it is a goal of the state to establish a self-sufficient solar industry in which solar energy systems are a viable mainstream option for both homes and businesses within 10 years of adoption, and to place solar energy systems on 50% of new homes within 13 years of adoption. SB 1, also termed "GoSolarCalifornia," was previously titled "Million Solar Roofs."

AB 1470. This bill established the Solar Water Heating and Efficiency Act of 2007. The bill makes findings and declarations of the Legislature relating to the promotion of solar water heating systems and other technologies that reduce natural gas demand. The bill defines several terms for purposes of the act. The bill requires the commission to evaluate the data available from a specified pilot program, and, if it makes a specified determination, to design and implement a program of incentives for the installation of 200,000 solar water heating systems in homes and businesses throughout the state by 2017.

AB 1109. Enacted in 2007, AB 1109 required the CEC to adopt minimum energy efficiency standards for general purpose lighting, to reduce electricity consumption 50% for indoor residential lighting and 25% for indoor commercial lighting.

Renewable Energy and Energy Procurement

SB 1078. SB 1078 (2002) established the Renewables Portfolio Standard (RPS) program, which requires an annual increase in renewable generation by the utilities equivalent to at least 1% of sales, with an aggregate goal of 20% by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20% of their power from renewable sources by 2010.

SB 1368. SB 1368 (2006) requires the CEC to develop and adopt regulations for GHG emission performance standards for the long-term procurement of electricity by local publicly owned utilities. These standards must be consistent with the standards adopted by the California Public Utilities Commission. This effort will help protect energy customers from financial risks associated with investments in carbon-intensive generation by allowing new capital investments in power plants whose GHG emissions are as low as or lower than new combined-cycle natural gas plants by requiring imported electricity to meet GHG performance standards in California and by requiring that the standards be developed and adopted in a public process.

SB X1 2. SB X1 2 (2011) expanded the RPS by establishing that 20% of the total electricity sold to retail customers in California per year by December 31, 2013, and 33% by December 31, 2020, and in subsequent years, be secured from qualifying renewable energy sources. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other specified requirements with respect to its location. In addition to the retail sellers previously covered by the RPS, SB X1 2 added local, publicly owned electric utilities to the RPS.

SB 350. SB 350 (2015) further expanded the RPS by establishing that 50% of the total electricity sold to retail customers in California per year by December 31, 2030, be secured from qualifying renewable energy sources. In addition, SB 350 includes the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the California Public Utilities Commission, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal.

SB 100. SB 100 (2018) increased the standards set forth in SB 350 establishing that 44% of the total electricity sold to retail customers in California per year by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California. This bill requires that the achievement of 100% zero-carbon electricity resources do not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling.

Mobile Sources

AB 1493. In a response to the transportation sector accounting for more than half of California's CO_2 emissions, AB 1493 was enacted in July 2002. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the State Board to be vehicles that are primarily used for noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. When fully phased in, the near-term (2009–2012) standards will result in a reduction of about 22% in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term (2013–2016) standards will result in a reduction of about 30%.

EO S-1-07. EO S-1-07 (2007) sets a declining Low Carbon Fuel Standard for GHG emissions measured in CO_2e grams per unit of fuel energy sold in California. The target of the LCFS is to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020. The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. CARB adopted the implementing regulation in April 2009. The regulation is expected to increase the production of biofuels, including those from alternative sources, such as algae, wood, and agricultural waste.

SB 375. SB 375 (2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 required CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035. Regional metropolitan planning organizations are then responsible for preparing a SCS within their Regional Transportation Plan (RTP). The goal of the SCS is to establish a forecasted development pattern for the region that, after considering transportation measures and policies, will achieve, if feasible, the GHG reduction targets. If an SCS is unable to achieve the GHG reduction target, a metropolitan planning organization must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Pursuant to Government Code Section 65080(b)(2)(K), an SCS does not: (1) regulate the use of land; (2) supersede the land use authority of cities and counties; or (3) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

In 2010, CARB adopted the SB 375 targets for the regional metropolitan planning organizations. The targets for SANDAG are a 7% reduction in emissions per capita by 2020 and a 13% reduction by 2035.

SANDAG completed and adopted its *2050 Regional Transportation Plan/Sustainable Communities Strategy* (2050 RTP/SCS) in October 2011 (SANDAG 2011). In November 2011, CARB, by resolution, accepted SANDAG's GHG emissions quantification analysis and determination that, if implemented, the 2050 RTP/SCS would achieve CARB's 2020 and 2035 GHG emissions reduction targets for the region.

After SANDAG's 2050 RTP/SCS was adopted, a lawsuit was filed by the Cleveland National Forest Foundation and others. The case was decided in July 2017, and the court found that the environmental impact report (EIR) did not have to use EO S-3-05's 2050 goal of an 80% reduction in GHG emissions from 1990 levels as a threshold because the EIR sufficiently informed the public of the potential impacts.

Although the EIR for SANDAG's 2050 RTP/SCS is pending before the California Supreme Court, in 2015, SANDAG adopted the next iteration of its RTP/SCS in accordance with statutorily mandated timelines, and no subsequent litigation challenge was filed. More specifically, in October 2015, SANDAG adopted *San Diego Forward: The Regional Plan*. Like the 2050 RTP/SCS, this planning document meets CARB's 2020 and 2035 reduction targets for the region (SANDAG 2015). In December 2015, CARB, by resolution, accepted SANDAG's GHG emissions quantification analysis and determination that, if implemented, the SCS would achieve CARB's 2020 and 2035 GHG ***emissions*** reduction targets for the region.

Advanced Clean Cars Program. In January 2012, CARB approved the Advanced Clean Cars program, a new emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package. The package includes elements to reduce smog-forming pollution and GHG emissions, promote clean cars, and provide the fuels for clean cars (CARB 2012). To improve air quality, CARB has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that in 2025, cars will emit 75% less smog-forming pollution than the average new car sold before 2012. To reduce GHG emissions, CARB, in conjunction with the EPA and the NHTSA, has adopted new GHG standards for model year 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34% in 2025. The Zero-Emissions Vehicle (ZEV) program will act as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles in the 2018 to 2025 model years. The Clean Fuels Outlet regulation will ensure that fuels such as electricity and hydrogen are available to meet the fueling needs of the new advanced technology vehicles as they come to the market.

EO B-16-12. EO B-16-12 (2012) directs state entities under the governor's direction and control to support and facilitate development and distribution ZEVs. This EO also sets a long-term target of reaching 1.5 million ZEVs on California's roadways by 2025. On a statewide basis, EO B-16-12 also establishes a GHG emissions reduction target from the transportation sector equaling 80% less than 1990 levels by 2050. In furtherance of this EO, the governor convened an Interagency Working Group on ZEVs that has published multiple reports regarding the progress made on the penetration of ZEVs in the statewide vehicle fleet.

AB 1236. AB 1236 (2015) as enacted in California's Planning and Zoning Law, requires local land use jurisdictions to approve applications for the installation of EV charging stations, as defined, through the issuance of specified permits, unless there is substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. The bill provides for appeal of that decision to the planning commission, as specified. The bill requires local land use jurisdictions with a population of 200,000 or more residents to adopt an ordinance by September 30, 2016, that creates an expedited and streamlined permitting process for EV charging stations, as specified. Prior to this statutory deadline, in August 2016, the County Board of Supervisors adopted Ordinance No. 10437 (N.S.), thereby adding a section to its County Code related to the expedited processing of EV charging station permits consistent with AB 1236.

SB 350. In 2015, SB 350—the Clean Energy and Pollution Reduction Act—was enacted into law. As one of its elements, SB 350 establishes a statewide policy for widespread electrification of the transportation sector, recognizing that such electrification is required for achievement of the state's 2030 and 2050 reduction targets (see Public Utilities Code, Section 740.12).

EO B-48-18. EO B-48-18 (January 2018) launches an eight-year initiative to accelerate the sale of EVs through a mix of rebate programs and infrastructure improvements. The order also sets a new EV target of five million EVs in California by 2030. EO B-48-18 includes funding for multiple state agencies including the CEC to increase EV charging infrastructure and CARB to provide rebates for the purchase of new EVs and purchase incentives for low-income customers.

Solid Waste

AB 939 and AB 341. In 1989, AB 939, known as the Integrated Waste Management Act (Public Resources Code, Sections 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board, which oversees a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25% by 1995 and 50% by the year 2000.

AB 341 (2011) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75% of solid waste generated be source-reduced, recycled, or composted by the year 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the state's policy goal. CalRecycle has conducted multiple workshops and published documents that identify priority strategies that it believes would assist the state in reaching the 75% goal by 2020.

Water

EO B-29-15. In response to the ongoing drought in California, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have since become permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the California Department of Water Resources has modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

Other State Regulations and Goals

SB 97. SB 97 (Dutton) (August 2007) directed the Governor's Office of Planning and Research to develop guidelines under CEQA for the mitigation of GHG emissions. In 2008, the Office of Planning and Research issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents. The advisory indicated that the lead agency should identify and estimate a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities (OPR 2008). The advisory further recommended that the lead agency determine significance of the impacts and impose all mitigation measures necessary to reduce GHG emissions to a level that is less than significant. The California Natural Resources Agency (CNRA) adopted the CEQA Guidelines amendments in December 2009, which became effective in March 2010.

Under the amended CEQA Guidelines, a lead agency has the discretion to determine whether to use a quantitative or qualitative analysis, or apply performance standards to determine the significance of GHG emissions resulting from a particular project (14 CCR 15064.4(a)). The Guidelines require a lead agency to consider the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)). The Guidelines also allow a lead agency to consider feasible means of mitigating the significant effects of GHG emissions, including reductions in emissions through the implementation of project features or off-site measures. The adopted amendments do not establish a GHG emission threshold, but instead allow a lead agency to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts. The CNRA also acknowledges that a lead agency may consider compliance with regulations or requirements implementing AB 32 in determining the significance of a project's GHG emissions (CNRA 2009a).

With respect to GHG emissions, the CEQA Guidelines state in Section 15064.4(a) that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. The CEQA Guidelines note that an agency may identify emissions by either selecting a "model or methodology" to quantify the emissions or by relying on "qualitative analysis or other performance based standards" (14 CCR 15064.4(a)). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment: (1) the extent a project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)).

EO S-13-08. EO S-13-08 (November 2008) is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. Therefore, the EO directs state agencies to take specified actions to assess and plan for such impacts. The final *2009 California Climate Adaptation Strategy* report was issued in December 2009 (CNRA 2009a), and an update, *Safeguarding California: Reducing Climate Risk*, followed in July 2014 (CNRA 2014). To assess the state's vulnerability, the report summarizes key climate change impacts to the state for the following areas: agriculture, biodiversity and habitat, emergency management, energy, forestry, ocean and coastal ecosystems and resources, public health, transportation, and water. Issuance of the *Safeguarding California: Implementation Action Plans* followed in March 2016 (CNRA 2016). Presently, the *Safeguarding California Plan: 2018 Update* was developed to communicate current and needed actions that state government should take to build climate change resiliency (CNRA 2018).

4.7.2.3 Local

City of Oceanside General Plan

The City's General Plan includes various goals and policies designed to reduce GHG emissions within the City. Policies addressing climate change are integrated throughout the City's General Plan. Many GHG emissions reduction strategies result in co-benefits with reducing criteria air pollutant emissions and vice versa.

Oceanside Climate Action Plan and Energy and Climate Action Element

The City has held public workshops on the City's General Plan Update, which includes development of a Climate Action Plan (CAP) and a policy framework to the Energy and Climate Action Element (E-CAP). The E-CAP proactively supports statewide efforts to cut GHG emissions by expanding local renewable energy generation, reducing energy use, promoting recycling and reuse, facilitating active transportation, and encouraging other sustainable practices. As part of this effort to ensure a sustainable future, the City prepared a GHG emissions inventory and a CAP, both of which inform the E-CAP. The City's Final CAP was adopted on May 8, 2019. The City is currently in process of developing the CAP Consistency Checklist; thus, the City has established efficiency metric thresholds, which projects are to use to evaluate impacts from GHG emissions, in order to help the City to meet state reduction targets for 2020 and 2030. Projects are required to meet an efficiency metric threshold of 4.0 MT CO_2e per service population per year (MT CO_2e/SP/yr) for year 2020 and an efficiency metric threshold of 3.0 MT CO_2e/SP/yr for year 2030 (City of Oceanside 2019). Projects that meet these thresholds would be considered consistent with the City's CAP.

4.7.3 Thresholds of Significance

The significance criteria used to evaluate the proposed project's GHG emissions impacts are based on the recommendations provided in Appendix G of the CEQA Guidelines. For the purposes of this GHG emissions analysis, the proposed project would have a significant environmental impact if it would (14 CCR 15000 et seq.):

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

As stated in the CEQA Guidelines, Section 15064.4(b)(1)-(3), "a lead agency should consider the following factors, among others, when assessing the significance of impacts from GHG emissions on the environment: (1) the extent to which a project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether project emissions exceed a threshold of significance that the lead agency determines applies to the project; and, (3) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions."

Section 15064(h)(3) of the CEQA Guidelines also states that: "A lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located."

The CEQA Guidelines do not prescribe specific methodologies for performing an assessment, do not establish specific quantitative thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA (CNRA 2009b).

According to the California Governor's Office of Planning and Research Technical Advisory on CEQA and Climate Change, "public agencies are encouraged but not required to adopt thresholds of significance for environmental impacts. Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact" (OPR 2008). Furthermore, the advisory document indicates that, "in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a 'significant impact,' individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice."

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. There are currently no established quantitative thresholds for assessing whether the GHG emissions of a project, such as the proposed project, would be considered a cumulatively considerable contribution to global climate change; however, all reasonable efforts should be made to minimize a project's contribution to global climate change. In addition, while GHG impacts are recognized exclusively as cumulative impacts (CAPCOA 2008), GHG emissions impacts must also be evaluated on a project-level under CEQA.

Local Guidance

As the lead agency, the City has the discretion to choose the significance threshold for discretionary projects. The City has established efficiency metric thresholds, which land use development projects can use to evaluate impacts from GHG emissions. However, since the proposed project consists of roadway improvements and would not result in an increase in service population (i.e., residents or employees), the efficiency metric threshold would not be appropriate for the proposed project. Instead, the proposed project will utilize a 900 MT CO_2e per year threshold consistent with the California Air Pollution Control Officers Association interim screening level as discussed below. This is also consistent with recent projects certified by the City.

The analysis for compliance with regulatory programs only applies to the individual area addressed by the regulatory program. If the proposed project is determined to have GHG emissions less than 900 MT CO_2e per year, then the proposed project's cumulative contribution of GHG emissions would be considered less than significant.[2]

4.7.3.1 Approach and Methodology

Construction

The Road Construction Emission Model was used to estimate potential project-generated GHG emissions during construction. Construction of the proposed project would result in GHG emissions primarily associated with the use of off-road construction equipment, on-road hauling and water trucks, and worker vehicles. All details for construction criteria air pollutants discussed in Section 4.2.4.1 are also applicable for the estimation of construction-related GHG emissions. As such, see Section 4.2.4.1 for a discussion of construction emissions calculation methodology and assumptions.

Operations

The proposed project would include road and right-of-way improvements to the corridor to enhance existing and future traffic operations, provide congestion relief, reduce queue lengths, improve safety conditions for the unsignalized intersections and access points along the corridor, and provide safer travel routes for bicyclists and pedestrians. However, as described in the TIA prepared for the proposed project (Appendix K), the 2035 daily VMT estimated using the SANDAG Series 12 traffic model for the proposed project would be higher than for the Circulation Element Alternative (approximate increase of 806,168 miles) (Appendix K). The higher cumulative VMT figure under the proposed project is due to a higher average trip length, which reflects changes in travel behavior patterns based on not widening a section of the College

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2 Thresholds of significance must be backed by substantial evidence, which is defined in the CEQA statute to mean "facts, reasonable assumptions predicated on facts, and expert opinion supported by facts" (14 CCR 15384(b)). Substantial evidence can be in the form of technical studies, agency staff reports or opinions, expert opinions supported by facts, and prior CEQA assessments and planning documents. The 900 MT CO_2e per year screening threshold is supported by expert opinion (i.e., CAPCOA 2008), agency guidance (e.g., County of San Diego 2015), and prior environmental impact reports (e.g., ESA 2017), at a minimum.

Boulevard study corridor (Appendix K). Since the proposed project would result in higher VMT, GHG emissions associated with the net increase in VMT were estimated using CalEEMod. CalEEMod output data are included in Appendix A of this EIR.

4.7.4 Impacts Analysis

Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction

Table 4.7-2 shows the estimated annual GHG construction emissions by phase associated with the proposed project for year 2019.

Table 4.7-2
Estimated Annual Construction GHG Emissions

Year 2019	CO_2e
	Metric Tons per Phase
Grubbing/Land Clearing	17.55
Grading/Excavation	256.02
Drainage/Utilities/Sub-Grade	139.35
Paving	33.54
Total	**446.45**

Notes: Totals may not sum due to rounding.CO2e = carbon dioxide equivalent
See Appendix A to this EIR for complete results.

As shown in Table 4.7-2, estimated total proposed project-generated construction GHG emissions would be approximately 447 MT CO_2e. The amortized construction GHG emissions over the lifetime of the proposed project (30 years) would be approximately 15 MT CO_2e per year.

Operations

As described in the TIA, the regional 2035 daily VMT associated with the proposed project would be higher than for the Circulation Element Alternative (an increase of 806,168 miles) due to a higher average trip length, which reflects changes in travel behavior patterns based on not widening a section of the College Boulevard study corridor (see Appendix K). The incremental increase in VMT was modeled in CalEEMod to estimate increased emissions with the proposed project for year 2035, which are summarized in Table 4.7-3. Complete details of the emissions calculations are provided in Appendix A to this EIR.

Table 4.7-3
Estimated Annual Operational GHG Emissions

Year 2035	CO_2e Metric Tons per Year
Incremental increase in annual GHGs from on-road VMT	85,898.95
Amortized construction emissions	14.88
Total operational + amortized construction GHGs	**85,913.83**

Notes: Totals may not sum due to rounding.CO2e = carbon dioxide equivalent; VMT = vehicle miles traveled
See Appendix A to this EIR for complete results.

As shown in Table 4.7-3, the incremental increase in annual GHG emissions with the proposed project, as compared to buildout of College Boulevard in accordance with the existing Circulation Element, would be approximately 85,899 MT CO_2e per year because of the increase in regional VMT. After accounting for amortized proposed project construction emissions, total GHGs generated by the proposed project would be approximately 85,914 MT CO_2e per year. As such, annual operational GHG emissions with amortized construction emissions would exceed the applied threshold of 900 MT CO_2e per year. Therefore, the proposed project's long-term GHG contribution would be cumulatively considerable and is potentially significant without mitigation (**Impact GHG-1**).

Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Consistency with the City's CAP, the Scoping Plan, the Regional Plan, and future GHG reduction goals are described below.

Project's Consistency with the City's CAP

The City developed a CAP to reduce GHG emissions within the City and thereby reduce the City's contribution to global climate change concerns. The City CAP includes GHG reduction strategies in the sectors of energy and buildings, water and wastewater, solid waste, transportation and land use, and agriculture and forestry to reach the City's GHG reduction targets (City of Oceanside 2019). The proposed project would result in roadway improvements along the College Boulevard corridor. As indicated in the TIA, implementation of the proposed project, as compared to the improvements assessed in the Circulation Element, would result in a regional increase in daily VMT of approximately 806,168 miles in year 2035. This increase in VMT would result in an approximate increase in annual GHGs of approximately 85,899 MT CO_2e per year, as described above. Since the proposed project would result in a substantial increase in GHG emissions, the proposed project would not be consistent with the GHG reduction goals of the City's CAP (**Impact GHG-2**).

Project's Consistency with the Scoping Plan

The Scoping Plan, approved by CARB on December 12, 2008, provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. As such, the Scoping Plan is not directly applicable to specific projects. In the *Final Statement of Reasons for Regulatory* Action, the CNRA observed that "[t]he [Scoping Plan] may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA 2009b). Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, high-GWP GHGs in consumer products) and changes to the vehicle fleet (i.e., hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., low carbon fuel standard), among others. The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32 and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. The proposed project would comply with all applicable regulations adopted in furtherance of the Scoping Plan to the extent required by law.

Project's Consistency with SANDAG's Regional Plan

At the regional level, SANDAG's Regional Plan has been adopted for the purpose of reducing GHG emissions attributable to passenger vehicles and light-duty trucks in the San Diego region. Like the 2050 RTP/SCS, the Regional Plan meets CARB's 2020 and 2035 reduction targets for the region. The Regional Plan does not regulate land use or supersede the exercise of land use authority by SANDAG's member jurisdictions, whereas the 2050 RTP/SCS is a relevant regional reference document for purposes of evaluating the intersection of land use and transportation patterns and the corresponding GHG emissions. Typically, a project would be consistent with the RTP/SCS if the project does not exceed the underlying growth assumptions within the RTP/SCS. As identified in the TIA, the proposed project would result in increased VMT (and thus GHGs) associated with changes in travel behavior patterns based on not widening a section of the College Boulevard study corridor, as compared to the current Circulation Element. As such, the proposed project would potentially conflict with the goals of the Regional Plan (**Impact GHG-2**).

Project's Consistency with SB 32 and EO S-3-05

The proposed project would potentially impede the attainment of the GHG reduction goals for 2030 or 2050, as identified in EO S-3-05 and SB 32. EO S-3-05 establishes the following goals: GHG emissions should be reduced to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050. SB 32 establishes a statewide GHG emissions reduction target whereby CARB, in adopting rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions, shall ensure that statewide GHG emissions are reduced to at least 40% below 1990 levels by December 31, 2030. This analysis evaluates whether the GHG emissions trajectory after proposed project completion would impede the attainment of the 2030 and 2050 GHG reduction goals identified in EOs B-30-15 and S-3-05.

To begin, CARB has expressed optimism with regard to both the 2030 and 2050 goals. It states in the First Update to the Climate Change Scoping Plan that "California is on track to meet the near-term 2020 GHG emissions limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32" (CARB 2014). With regard to the 2050 target for reducing GHG emissions to 80% below 1990 levels, the First Update to the Climate Change Scoping Plan states the following (CARB 2014):

> This level of reduction is achievable in California. In fact, if California realizes the expected benefits of existing policy goals (such as 12,000 megawatts of renewable distributed generation by 2020, net zero energy homes after 2020, existing building retrofits under AB 758, and others) it could reduce emissions by 2030 to levels squarely in line with those needed in the developed world and to stay on track to reduce emissions to 80% below 1990 levels by 2050. Additional measures, including locally driven measures and those necessary to meet federal air quality standards in 2032, could lead to even greater emission reductions.

In other words, CARB believes that the state is on a trajectory to meet the 2030 and 2050 GHG reduction targets set forth in AB 32, EO B-30-15, and EO S-3-05. This is confirmed in the 2017 Scoping Plan, which states (CARB 2017):

> The Scoping Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while identifying new, technologically feasible and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities.

As discussed earlier, total incremental increased GHG emissions under the proposed project, including operation and amortized construction, would be approximately 85,914 MT CO_2e per year. As such, the proposed project would generate GHG emissions that may interfere with the implementation of GHG reduction goals for 2030 and 2050. In addition, the proposed project would not be consistent with the goals of the City's CAP or Regional Plan of reducing VMT and GHG emissions. Therefore, the proposed project would potentially conflict with plans, policies, or regulations adopted for reducing GHG emissions, and impacts are considered potentially significant without mitigation. However, since the City lacks the authority to mandate GHG emission reductions for on-road vehicles, or to control driver behavior, no feasible mitigation measures have been identified to reduce these emissions. This impact would be significant and unavoidable (**Impact GHG-2**).

4.7.5 Mitigation Measures

As stated earlier, City lacks the authority to mandate GHG emission reductions for on-road vehicles, or to control driver behavior. However, the following mitigation measures have been identified for consistency with the City's CAP and

MM-GHG-1 Prior to the City of Oceanside's next review and update of the City's Climate Action Plan (CAP), the City shall amend the estimate vehicle miles traveled (VMT) and greenhouse gas (GHG) inventory using the proposed project's College Boulevard corridor revisions.

MM-GHG-2 Prior to the San Diego Association of Government's (SANDAG's) next update of the Regional Plan, the City of Oceanside (City) shall coordinate with SANDAG to amend the vehicle miles traveled (VMT) and emissions assumptions using the proposed project's College Boulevard corridor revisions.

No other feasible mitigation measures have been identified to reduce the long-term operational GHG emissions forecasted under Future (2035) With Project conditions compared to Future (2035) General Plan Buildout conditions.

4.7.6 Level of Significance After Mitigation

Although **MM-GHG-1** and **MM-GHG-2** would result in updating the City's CAP and SANDAG's Regional Plan with consistent assumptions based on the proposed project, these plans do not have required timelines of revision. As such, the proposed project would not be consistent with the goals and assumptions in the City's CAP or SANDAG's Regional Plan for an indeterminate amount of time. Additionally, the proposed project would generate GHG emissions that may interfere with the implementation of GHG reduction goals for 2030 and 2050. Based on these considerations, the project's long-term impacts pertaining to GHG emissions (**Impact GHG-1**) and conflicts with plans, policies, or regulations adopted for the purpose of reducing GHG emissions (**Impact GHG-2**) would be significant and unavoidable.

4.8 HAZARDS AND HAZARDOUS MATERIALS

This section describes the existing hazardous materials within the vicinity of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project.

This section is based on the Hazards Assessment prepared by Dudek for the proposed project (see Appendix G of this EIR). The hazards assessment consisted of a review and summary of the following data: regulatory agency records, historical aerial photographs, and records on or near the project site listed in GeoTracker and EnviroStor (online databases maintained by the Regional Water Quality Control Board and Department of Toxic Substances Control, respectively).

4.8.1 Existing Conditions

Historic and Existing Uses

Historical aerial photographs from 1938, 1946, 1953, 1964, 1967, 1980, 1989, 1994, 1997, 2002, 2003, 2005, 2009, 2010, and 2012 were reviewed to characterize historic uses along the corridor. The project site, located at the 2.41-mile corridor from Waring Road to Old Grove Road in the City of Oceanside, California, was originally undeveloped land from at least 1938 until 1967. Surrounding land uses consisted primarily of undeveloped land until about 1964. Residential and commercial land use continued to grow after 1964, and the project site and surrounding areas have remained relatively unchanged since then.

Historic aerial photograph observations by year are presented below. For purposes of this discussion, College Boulevard is broken up into three sections: Section 1 is from Waring Road to Roselle Avenue; Section 2 is from Roselle Avenue to Thunder Drive; and Section 3 is from Thunder Drive to Old Grove Road.

- 1938 Aerial: The project site and most of the surrounding areas appear to be undeveloped and/or vacant land. Several small streams are visible near the southern portion of section 1 of the project site. A small building is visible east of section 2. Agricultural land is present east of sections 2 and 3. College Boulevard has not been built, but an unimproved road crosses near the middle of section 3.
- 1946 Aerial: The project site and surrounding areas appear to be similar to the 1938 photograph.
- 1953 Aerial: A pond is visible north of a dirt road that crosses section 3 (presently the light rail system). Another pond is visible approximately 800 feet east of the pond located north of the road that crosses section 3. Large areas of grading are present in the surrounding area.

- 1964 Aerial: Two subdivisions are visible east of sections 1 and 2. More grading is present in the surrounding areas. Several structures are visible southeast and west of section 1.
- 1967 Aerial: Highway 78 located south of the project site is being constructed. More residential housing is present east of sections 1 and 2. A small section of College Boulevard has been build; it extends from Highway 78 to Waring Road.
- 1980 Aerial: College Boulevard has been expanded, and now extends from Waring Road to Avenida De La Plata. Residential housing surrounds College Boulevard in sections 1 and 2. Some agricultural land is present along the eastern, northern. , And western portion of sections 3.
- 1989 Aerial: College Boulevard now extends from North River Road to Lake Boulevard. The agricultural land that was present east and north of section 3 is no longer visible. More residential housing surrounds College Boulevard. Commercial buildings are visible on the corner of College Boulevard and Oceanside Boulevard.
- 1994 Aerial: The project site appears to be similar to the 1989 photograph. Residential housing is visible north of section 3.
- 1997 Aerial: The project site appears to be similar to the 1994 photograph. Grading is present west of section 3.
- 2002, 2003, and 2005 Aerials: The project site and surround areas appear to be similar to the 1997 photograph.
- 2009, 2010, and 2012 Aerials: The project site appears to be similar to the 2005 photograph.

Environmental Database Records

A search of regulatory records was conducted by Environmental Risk Information Service (ERIS) on April 29, 2016. The search was conducted according to the American Society for Testing and Materials (ASTM) E 1527-13 using standard search radii, which are listed in the ERIS report (see Appendix G). The ERIS report gives a listing of sites within an approximately 1-mile radius of the project site that are known to be chemical handlers, hazardous waste generators, or polluters.

The project site was not listed in any of the regulatory databases search by ERIS. However, fifty-five sites were identified within the ASTM-specified search distances of the project site. Furthermore, of the 55 sites, 37 were listed in regulatory databases associated with permitting for underground storage tanks or aboveground storage tanks, or generating, transporting, storing, treating, and/or disposing of hazardous waste.

Public and Private Airports

Oceanside Municipal Airport is located at 480 Airport Road in Oceanside and approximately 3.5 miles west of the proposed project corridor at Old Grove Road. Located at 2198 Palomar Airport Road in Carlsbad, the McClellan-Palomar Airport is located approximately 6 miles south of the proposed project corridor. Other airports in the surrounding area include Fallbrook Community Airpark (approximately 10 miles northeast), Blackinton Airport in Valley Center (approximately 11 miles east) and Mcolf Camp Pendleton (Red Beach) Airport (approximately 11 miles northwest). Oceanside Municipal Airport, McClellan-Palomar Airport, and Fallbrook Community Airpark are public use airports. Blackinton Airport and Mcolf Camp Pendleton (Red Beach) Airport are private use airports and require permission prior to landing.

Schools

The nearest school, Empresa Elementary School, is located at 4850 Avenida Empresa and is approximately 0.4 mile northeast of the northernmost segment of the proposed project corridor at Old Grove Road. Located at 260 Cedar Road in Vista, the Casita Center for Technology, Science, and Math is situated approximately 0.5 mile east of the proposed project corridor. Grapevine Elementary School (630 Grapevine Road, Vista) and Ivey Ranch Elementary School (4275 Voa Rancho Road, Oceanside) are also in the surrounding area and are located approximately 0.61 mile east and 0.73 mile northwest, respectively of the proposed project corridor.

Lastly, the main campus of MiraCosta College is located approximately 0.30 mile northwest of the intersection of College Boulevard and Barnard Drive/Waring Road.

Emergency Evacuation

The City of Oceanside General Plan (City of Oceanside 2002) was designed to permit the City to respond to earthquakes, tsunamis, flood, fire, accidents, civil disturbance, storm, pollution and epidemic. The purpose of this document was to provide a basis for the conduct and coordination of operations and the management of critical resources during emergencies. The Public Safety Element of this General Plan (City of Oceanside 1975) provides a basis for incorporating emergency organization of non-governmental agencies and organizations having resources necessary to meet foreseeable emergency requirements.

Wildland Fire

According to the CAL FIRE, within the City of Oceanside canyons and San Luis Rey river corridor generally located east of Interstate 5, west of Benet Road, and north of State Route (SR) 76 are recommended as Very High Fire Hazard Severity Zones (CALFIRE 2009). These areas comprise the majority of recommended Very High Fire Hazard Severity Zones in the city. The project corridor and immediate surrounding area are identified as Non-Very High Fire Hazard Severity Zones (CALFIRE 2009).

4.8.2 Relevant Plans, Policies, and Ordinances

4.8.2.1 Federal

Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984

Federal hazardous waste laws are generally promulgated under the Resource Conservation and Recovery Act of 1976 (RCRA). These laws provide for the "cradle to grave" regulation of hazardous wastes. Any business, institution, or other entity that generates hazardous waste is required to identify and track its hazardous waste from the point of generation until it is recycled, reused, or disposed.

The U.S. Environmental Protection Agency (EPA) has the primary responsibility for implementing RCRA, but individual states are encouraged to seek authorization to implement some or all of RCRA's provisions. California received authority to implement the RCRA in August 1992. The California Department of Toxic Substances Control is responsible for implementing RCRA and California's own hazardous waste laws, which are collectively known as the Hazardous Waste Control Law. Under the Certified Unified Program Agency, the California Department of Toxic Substances Control delegated enforcement authority to the Health and Human Services Agency.

Hazardous Materials Transportation Act

The U.S. Department of Transportation regulates hazardous materials transportation under Title 49 of the Code of Federal Regulations. State agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and the California Department of Transportation. These agencies also govern permitting for hazardous materials transportation.

Comprehensive Environmental Response, Compensation, and Liability Act and the Superfund Amendments and Reauthorization Act of 1986

Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as "Superfund," on December 11, 1980. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous substances at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified. The

Superfund Amendments and Reauthorization Act (SARA) amended CERCLA on October 17, 1986. SARA stressed the importance of permanent remedies and innovative treatment technologies in cleaning up hazardous waste sites, required Superfund actions to consider the standards and requirements found in other state and federal environmental laws and regulations, provided new enforcement authorities and settlement tools, increased state involvement in every phase of the Superfund program, increased the focus on human health problems posed by hazardous waste sites, encouraged greater citizen participation in making decisions on how sites should be cleaned up, and increased the size of the trust fund to $8.5 billion.

Emergency Planning Community Right-to-Know Act

The Emergency Planning Community Right-to-Know Act (EPCRA), also known as SARA Title III, was enacted in October 1986. This law requires any infrastructure at the state and local levels to plan for chemical emergencies. Reported information is then made publicly available so that interested parties may become informed about potentially dangerous chemicals in their community. EPCRA Sections 301 through 312 are administered by the EPA's Office of Emergency Management. The EPA's Office of Information Analysis and Access implements the EPCRA Section 313 program. In California, SARA Title III is implemented through the California Accidental Release Prevention Program.

Uniform Fire Code

The Uniform Fire Code (UFC), created by the National Fire Protection Association, is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The UFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The UFC and the International Building Code use a hazard classification system to determine what measures are required to protect against structural fires. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, UFC employs a permit system based on hazard classification. The UFC is updated every 3 years.

U.S. Environmental Protection Agency, Region 9 Regional Screening Levels

Regional Screening Levels are risk-based concentrations that are intended to assist risk assessors and others in initial evaluations.

4.8.2.2 State

The California Health and Safety Code, Hazardous Materials Release Response Plans and Inventory

Two programs found in the California Health and Safety Code Chapter 6.95 are directly applicable to the California Environmental Quality Act issue of risk due to hazardous substance release. In San Diego County, these two programs are referred to as the Hazardous Materials Business Plan program and the California Accidental Release Prevention program. The County of San Diego DEH Hazardous Materials Division is responsible for implementation of the Hazardous Materials Business Plan program and the California Accidental Release Prevention program in San Diego County. The Hazardous Materials Business Plan and California Accidental Release Prevention Program provide threshold quantities for regulated hazardous substances. When the indicated quantities are exceeded, a Hazardous Materials Business Plan or Risk Management Program is required pursuant to the regulation. Congress requires EPA Region 9 to make Risk Management Program information available to the public through EPA's Envirofacts Warehouse (http://www.epa.gov/enviro/).

California Health and Safety Code, Hazardous Waste Control

The Hazardous Waste Control Act regulates the generation, treatment, storage, and disposal of hazardous waste. Hazardous waste is any material or substance that is discarded, relinquished, disposed of, or burned, or for which there is no intended use or reuse, and the material or substance causes or significantly contributes to an increase in mortality or illness, or the material or substance poses a substantial present or potential hazard to human health or the environment. These materials or substances include spent solvents and paints (oil and latex), used oil, used oil filters, used acids and corrosives, and unwanted or expired products (e.g., pesticides, aerosol cans, cleaners). If the original material or substance is labeled danger, warning, toxic, caution, poison, flammable, corrosive, or reactive, the waste is very likely to be hazardous.

California Human Health Screening Levels

The California Human Health Screening Levels (CHHSLs) are concentrations of 60 hazardous chemicals in soil or soil gas that the California EPA considers to be below thresholds of concern for risks to human health. The CHHSLs were developed by the Office of Environmental Health Hazard Assessment on behalf of the California EPA, and are contained in the report entitled Human-Exposure-Based Screening Numbers Developed to Aid Estimation of Cleanup Costs for Contaminated Soil. The thresholds of concern used to develop the CHHSLs are an excess lifetime cancer risk of 1 in 1 million, and a hazard quotient of 1.0 for non-cancer health effects. The CHHSLs were developed using standard exposure assumptions and chemical toxicity values published by the federal EPA and California EPA.

The CHHSLs can be used to screen sites for potential human health concerns where releases of hazardous chemicals to soils have occurred. Under most circumstances, the presence of a chemical in soil, soil gas, or indoor air at concentrations below the corresponding CHHSLs can be assumed to not pose a significant health risk to people who may live (residential CHHSLs) or work (commercial/industrial CHHSLs) at the site.

California Fire Code

The California Fire Code (CFC) is Chapter 9 of Title 24 of the California Code of Regulations (CCR). It was created by the California Building Standards Commission and is based on the International Fire Code created by the International Code Council. It is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The CFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The CFC and the California Building Code use a hazard classification system to determine what protective measures are required to protect fire and life safety. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the CFC employs a permit system based on hazard classification. The CFC is updated every 3 years and was most recently updated in 2013.

Title 14 Division 1.5 of the California Code of Regulations

CCR, Title 14, Division 1.5 establishes the regulations for CAL FIRE and is applicable in all State Responsibility Areas—areas where CAL FIRE is responsible for wildfire protection. Most of the unincorporated area of San Diego County is a State Responsibility Area, and any development in State Responsibility Areas must comply with these regulations. Among other things, Title 14 Section 1270, et seq. establishes minimum standards for emergency access, fuel modification, setback to property line, signage, and water supply. San Diego County's most recent adoption of the Consolidated Fire Code (2014) was certified by the State Board of Forestry, indicating that its code requirements meet or exceed Title 14 Section 1270, et seq., and with that certification, the County Consolidated Fire Code supersedes Title 14 Section 1270, et seq. in the unincorporated areas of the County.

California Health and Safety Code, State Fire Regulations

State fire regulations are set forth in Section 13000, et seq. of the California Health and Safety Code, which include regulations concerning building standards (as also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training. The State fire marshal enforces these regulations and building standards in all state-owned buildings, state-occupied buildings, and state institutions throughout California.

4.8.2.3 Local

San Diego County Emergency Plan

The San Diego County Emergency Plan is a comprehensive emergency management system that provides for a planned response to disaster situations associated with natural disasters, technological incidents and nuclear defense operations (County of San Diego 2018). The Plan includes operational concepts relating to various emergency situations, identifies components of the Emergency Management Organization and describes the overall responsibilities for protecting life and property and assuring the overall well-being of the population. The plan also identifies the sources of outside support that might be provided (through mutual aid and specific statutory authorities) by other jurisdictions, state and federal agencies and the private sector.

San Diego County Multi-Jurisdiction Hazard Mitigation Plan

The San Diego County Multi-Jurisdiction Hazard Mitigation Plan was prepared to meet federal and state requirements for disaster preparedness to make the county eligible for funding and technical assistance from state and federal hazard mitigation programs. The plan includes a risk assessment to enable local jurisdictions to identify and prioritize appropriate mitigation actions that will reduce losses from potential hazards, including flooding, earthquakes, fires, and man-made hazards. To address potential hazards, the plan then incorporates mitigation goals and objectives, mitigation actions and priorities, an implementation plan, and documentation of the mitigation planning process for each of the twenty-one participating jurisdictions, including the City of Oceanside (County of San Diego 2017).

California Disaster and Civil Defense Master Mutual Aid Agreement

As provided for in the California Emergency Services Act, this agreement was developed in 1950 and adopted by all 58 California counties. This statewide mutual aid system is designed to ensure that adequate resources, facilities, and other support is provided to jurisdictions whenever their own resources prove to be inadequate to cope with a given situation. San Diego County is located in Mutual Aide Region 6 of the state system, which also includes Imperial, Riverside, San Bernardino, Inyo, and Mono counties.

Oceanside Municipal Airport Land Use Compatibility Plan

The San Diego County Regional Airport Authority develops and adopts Airport Land Use Compatibility Plans (ALUCPs) for each public use and military airport within its jurisdiction. The Oceanside Municipal ALUCP, as amended in December 2010, provides policies to ensure compatibility with the airport and surrounding land uses. These policies span various topics including noise, overflight zones, and safety. The ALUCP is based upon the FAA approved Airport Layout Plan.

City of Oceanside General Plan

The Hazardous Waste Management Element of the General Plan (City of Oceanside 1990) serves as primary guidelines for policies as they relate to effective management of hazardous materials within the City of Oceanside's influence. This element emphasizes policies that minimize hazardous waste within the City and contains siting criteria for specified hazardous waste facilities.

The Public Safety Element of the General Plan (City of Oceanside 1975) identifies hazards, such as earthquakes, fires, and tsunamis, and provides guidelines for proper mitigation measures, such as evacuation routes, to ensure safety. Along with long range policies regarding seismic, flooding, and fire hazards, this element also includes a Public Safety Plan. The Public Safety Plan includes maps of indicating areas that have increased susceptibility to these hazards and relocation routes during emergency evacuations.

4.8.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts related to hazards and hazardous materials are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to hazards and hazardous material would occur if the project would:

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 which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as result, would is create a significant hazard to the public or the environment.
5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area.

6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
7. Expose people or structures to a significant risk of loss, injury or death involving wildland fires.

4.8.4 Impacts Analysis

Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

In addition to the use of asphalt to seal the completed roadway, construction of the proposed project would involve the routine transport of gasoline, oils, and other lubricants to and from the project site. Construction vehicles and equipment would also utilize gasoline, oils, and other lubricants during operations. The transport, use, and disposal of all hazardous materials used during construction would be in accordance with all federal, state, and local laws regulation the management and use of such material. In addition, as outlined in Section 4.8, Hydrology and Water Quality, best management practices would be implemented during the construction period to prevent illicit discharges of hazardous and other construction materials into the municipal separate storm sewer system (MS4). Therefore, significant risk to the areas surrounding the College Boulevard corridor is not anticipated during construction. The project would not involve the routine transport, use, or disposal of hazardous material during long term operations. Therefore, the project would not result in any permanent impacts related to routine transport, use or disposal of such hazards. As the use, transport, and disposal of hazardous materials during construction would be in accordance with all federal, state, and local laws regulation the management and use of such material, impacts would be less than significant.

Would the project 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 potential environmental concerns associated with the proposed project construction, demolition, and excavation was determined based on the ERIS Hazards Assessment (ERIS 2016). This hazards assessment included research and review of regulatory agency records and historical source information to determine if there have been any impacts to the project site due to current of past hazardous materials storage or use.

Of the 55 listed sites located within a 1-mile radius of the project corridor, the ERIS Hazards Assessment (see Appendix G) considered three to be sites of concern. Figure 4.8-1, Sites of Concern, depicts the location of the three sites and their relationship to the proposed project corridor. Two of the sites (4181 Oceanside Boulevard and 3350 College Boulevard; both sites are located adjacent to the proposed project corridor) are closed former leaking tank sites and the third site (1990 College

Boulevard; site of the existing Mobil gas station at the College Boulevard/Oceanside Boulevard intersection) had a reported off-site disposal of contaminated soil. These sites are considered sites of concern due to the potential for residual contaminants in the soil and their proximity to the proposed project corridor. Furthermore, ground disturbing construction activities in the vicinity of these sites have the potential to create upset or accidental conditions involving the release of hazardous materials and more specifically, the exposure of contaminated soils. As such, construction impacts are considered potentially significant (**Impact HAZ-1**).

Mitigation Measures **MM-HAZ-1, MM-HAZ-2, and MM-HAZ-3** have been provided to mitigate these construction impacts and would entail implementation of air quality monitoring when actively working near three identified site of concern, a site mitigation plan and a health and safety plan. Therefore, with implementation of **MM-HAZ-1**, **MM-HAZ-2**, and **MM-HAZ-3**, the project would not create a significant hazard to the public or the environment and impacts would be less than significant.

During operation, use of potentially hazardous materials would generally be limited to landscaping fertilizers and paint for curbs and lane striping. Use of these materials would be limited to an as needed basis and would be handled by city personnel in a responsible and professional manner. Furthermore, the project would be required to comply with all federal, state, and local laws regulating the management and use of common hazardous materials. The project's compliance with existing regulations would ensure that the project would not create a potential hazard to the public through the release of hazardous materials into the environment during operations. Therefore, impacts would be less than significant.

Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The proposed project is not located within 0.25 mile of an existing or proposed school. The nearest school, Empresa Elementary School, is located at 4850 Avenida Empressa and approximately 0.4 mile northeast of the northern extent of the proposed project corridor at Old Grove Road. In addition, the main campus of MiraCosta College is located approximately 0.30 mile northwest of the intersection of College Boulevard and Barnard Drive/Waring Road.

As no school is located within 0.25 mile of the proposed project corridor, impacts would be less than significant.

Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as result, would it create a significant hazard to the public or the environment?

The Hazards Assessment prepared by Dudek (see Appendix G) considered three listed sites (4181 Oceanside Boulevard, 3350 College Boulevard, and 1990 College Boulevard) within a 1-

mile radius of the project corridor to be sites of concern that could introduce hazards to the public or the environment if they were to be disturbed by construction activities. Because the project would entail ground disturbance during construction, construction activities could potentially create a hazard through disturbance of identified sites of concern (**Impact HAZ-2**). As discussed earlier, **MM-HAZ-1, MM-HAZ-2, and MM-HAZ-3,** which would entail implementation of air quality monitoring when actively working near three identified site of concern, a site mitigation plan, and a health and safety plan and would mitigate these construction impacts. Therefore, with implementation of **MM-HAZ-1**, **MM-HAZ-2**, and **MM-HAZ-3,** the project would not create a significant hazard to the public or the environment and impacts would be less than significant.

For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

The proposed project is not located within the planning area of an airport land use plan, nor is it within 2 miles of a public airport. The nearest public airport, Oceanside Municipal Airport, is located approximately 3.5 miles west of the proposed project site at Old Grove Road. There are no public or public use airports within two miles of the proposed project corridor and construction activities, and continued use of the alignment as a roadway corridor, would not result in an air navigation safety hazard for people residing or working in the project area. As such, impacts would be less than significant.

Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The City of Oceanside's General Plan Public Safety Element describes an "Oceanside Emergency Plan" which identifies evacuation routes, emergency facilities, and city personnel and equipment available to effectively deal with emergency situations (City of Oceanside 1975). Figure PS-11, Relocation Routes & Refugee Centers, identifies the main through streets and highways within the city that would be the primary relocation routes for people who are forced from their homes during a disaster event. Refugee centers consist of the elementary, junior high, and senior high school facilities within the City of Oceanside and its sphere of influence. Major streets within the project area identified as "relocation routes" include Interstate 5, Oceanside Boulevard, SR-76, SR-78, and El Camino Real. The proposed project corridor is a north-south road located between SR-76 and SR-78, with Oceanside Boulevard crossing the project corridor near Loma Alta Creek.

Construction of the proposed project could temporarily interfere with emergency response and access in the event that appropriate traffic control measures are not implemented during construction. For example, construction-related lane closures on College Boulevard could temporarily reduce access along the roadway by reducing available travel lanes. Furthermore, grading and excavation activities could result in impaired access to driveways if the active area of disturbance where to occur in front of driveway. However, as identified in Section 3, Project Description (see Table 3-2), the City would implement a traffic control plan during construction to safely permit the contractor to work within the right of way and maintain a safe, uniform flow of traffic. In addition and consistent with City of Oceanside traffic control plan requirements, minimum 12 foot travel lanes would be maintained during construction to ensure continued access to emergency service providers, access will be maintained at all driveways (unless other arrangements are made) and in the event of a necessary road closure, emergency service providers would be notified. Implementation of the traffic control plan would ensure that the project would not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, impacts would be less than significant.

Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires?

The proposed project is located in an urbanized area and is surrounded by existing development. The project would comply with the City of Oceanside Code of Ordinances, Chapter 11, Fire Protection, which provides regulations for fire prevention measures including landscape restrictions. Therefore, the project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. Impacts would be less than significant.

4.8.5 Mitigation Measures

The following mitigation measures would reduce potentially significant impacts associated with the release or discovery of hazardous materials during construction activities:

MM-HAZ-1 Air quality monitoring for volatile organic compounds (VOCs) shall be performed during grading, excavation, or other ground disturbing activities occurring within 1,000 feet of the identified sites of concern at 4181 Oceanside Boulevard, 3350 College Boulevard, and 1990 College Boulevard. Monitoring shall be overseen by the party/person responsible for general health and safety during the construction phase of the proposed project. Air quality measurements shall be taken approximately once every 15 minutes starting at the initiation of excavation and grading activities. If the air quality monitoring device reads 50 parts per million (PPM) or more for VOCs at a distance of no more than three inches from the soil, the soil should be segregated, stockpiled, and treated/removed for proper disposal within 30 days.

MM-HAZ-2 A site mitigation plan (SMP) shall be developed and followed during construction and development activities. The SMP shall include strategies for identification and management of contaminated soil, if encountered during project development, and should outline mitigation measures should construction/development activities result in an accidental release of contaminants. In addition, construction workers will be trained on identification and reporting procedures for discovery of impacted soils.

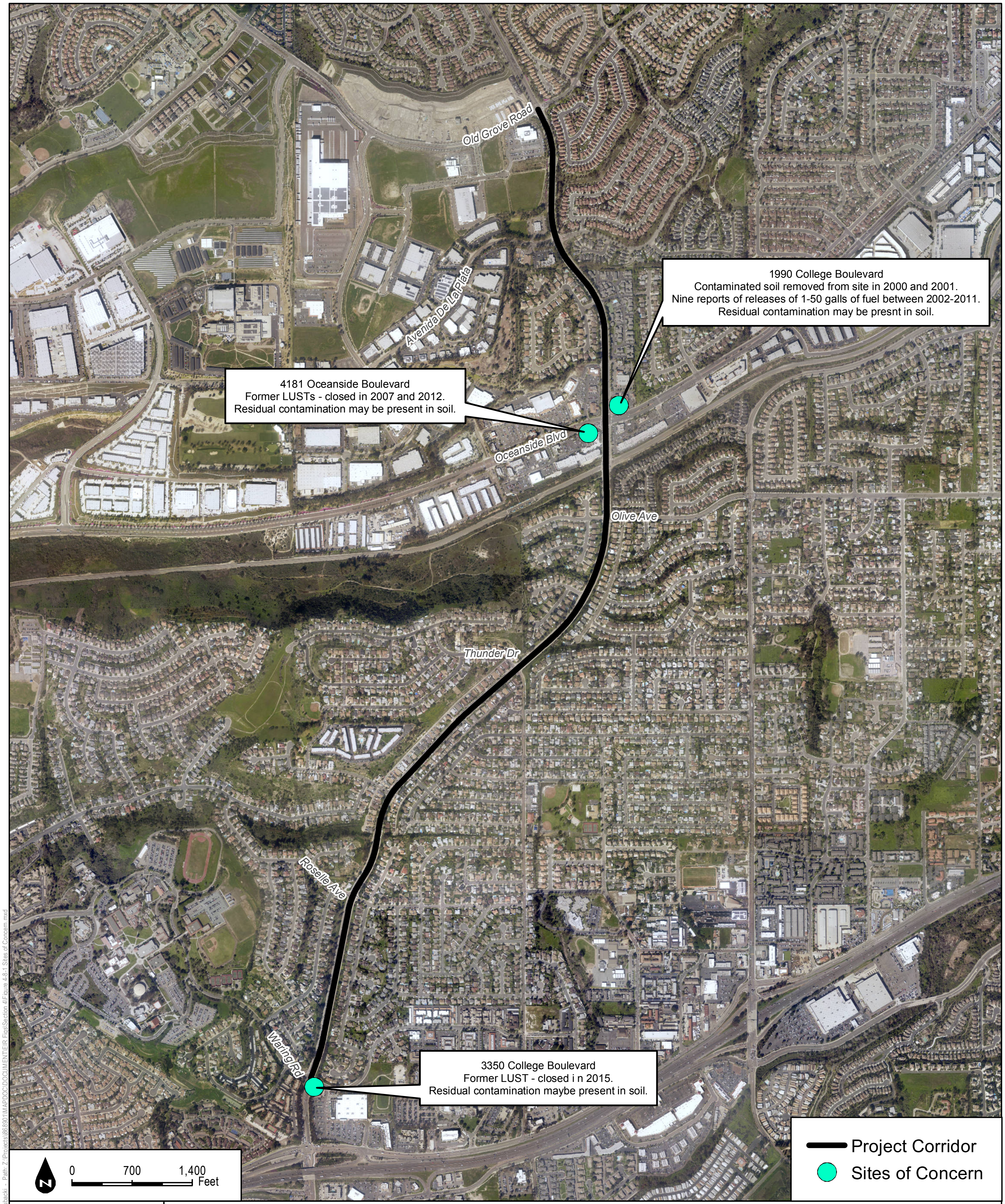
MM-HAZ-3 A comprehensive project-specific Health and Safety Plan (HASP) shall be developed, implemented, and followed during all construction-related activities. Copies of the HASP and SMP should be maintained on site during demolition, excavation, and construction of the proposed project. All workers on the project site should be familiar with these documents.

Consistent with industry requirements the HASP shall include:

- List of responsible personnel for the site;
- Hazards analysis including physical hazards, industrial hazards, health hazards associated with demolition, excavation and construction, and biological hazards;
- Medical surveillance requirements;
- Hazards monitoring (air quality; see MM-HAZ-1);
- Spill prevention and control measures;
- Documentation of site safety orientation for employees, subcontractors and visitors; and
- Emergency response;
- List of hazardous substances brought to the workplace with accompanying materials safety data sheets; and
- Job Safety Analysis.

4.8.6 Level of Significance After Mitigation

Implementation of the mitigation measures as described in Section 4.8.5 would ensure that **Impact HAZ-1 and Impact HAZ-2** would be reduced to a less than significant level. All other potential impacts were determined to be less than significant.



SOURCE: SANGIS 2017

DUDEK

FIGURE 4.8-1

Sites of Concern

College Boulevard Improvement Project EIR

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4.9 HYDROLOGY AND WATER QUALITY

4.9.1 Introduction

This section describes the existing hydrology and water quality of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed College Boulevard Improvement project (proposed project).

The quantitative analysis of the existing and proposed hydrologic, groundwater, and water quality conditions on the project site is based on the Stormwater Quality and Hydrology Technical Report prepared by Dudek (Appendix H to this EIR). The Stormwater Quality and Hydrology Technical Report identifies storm water quality and hydrologic impacts as a result of the development of the proposed project. Furthermore, the report includes identification of potential storm water pollutants associated with the proposed project, a preliminary Storm Water Quality Management Plan (SWQMP), and quantification of off-site and on-site runoff discharging onto and from the Project for pre-development and post-development conditions.

Furthermore and as described in the Green Streets Priority Exemption Project Technical Memorandum for the College Boulevard Improvement Project, the Project meets the requirements to qualify as a Green Streets Project (see Appendix I to this EIR). As further described in the technical memorandum, design elements from the Environmental Protection Agency's (EPA's) Municipal Handbook titled *Managing Wet Weather with Green Infrastructure* have been incorporated into the design of road widening between Olive Drive and Old Grove Road wherever practical and technically feasible.

Peak runoff calculations were performed for the 2-year, 10-year and 100-year storm events in accordance with the Modified Rational Method (MRM) as described in the 2003 San Diego County Hydrology (SDCHM). The SDCHM's MRM is a hydrologic surface flow model that uses the Rational Method (RM) model to estimate peak discharge at the confluence of two or more basins (County of San Diego 2003). The RM uses mathematical functions to produce a peak discharge rate from a given area for a specific rainfall event. Development of the individual components for this model requires model areas and subareas, flow path lengths and types (including channel roughness coefficient), slopes, soil and land use covers, and rainfall depths. Steps in creating the MRM model for the proposed project are provided in Appendix H.

4.9.2 Existing Conditions

Regional Hydrology

As identified in Table 4.9-1, the proposed project falls within the Loma Alta Hydrologic Subarea (HSA) and the El Salto HSA located within the Carlsbad hydrologic unit. The hydrologic unit, hydrologic area, and HSA information was obtained from the San Diego Hydrologic Basin Planning Area map (Region No. 9), prepared by the San Diego Regional Water Quality Control Board (SDRWQCB 1995) and approved by the State Water Resources Control Board on April 4, 2011.

Table 4.9-1
Proposed Project Hydrologic Characteristics

Hydrologic Unit (HU)	Hydrologic Area (HA)	Hydrologic Subarea (HSA)
Carlsbad (904.00)	Loma Alta (904.10)	Loma Alta (904.10)
Carlsbad (904.00)	Buena Vista Creek (904.20)	El Salto (904.21)

Figure 4.9-1, Project Location in relation to Loma Alta and El Salto HSAs, shows the location of the Project with reference to the Loma Alta and El Salto HSAs. A comparison of the Project area with respect to the acreage of the Loma Alta and El Salto HSAs is presented in Table 4.9-2, Project Contribution to Hydrologic Subarea.

Table 4.9-2
Project Contribution to Hydrologic Subarea

Hydrologic Subarea (HSA)	Area (Acres)	Approximate Proposed Project Area (Acres)	Estimated Project Contribution (Percent)
Loma Alta (904.10)	6277.3	16.4	0.3%
El Salto (904.21)	7455.4	10.3	0.1%

As shown in table 4.9-2 above, the proposed Project area comprises less than 0.3% of the area encompassed by the Loma Alta and El Salto HSAs.

Floodplains

Federal Emergency Management Agency (FEMA) Fire Insurance Rate Maps (FIRMs) identify flood hazard zones and areas that are susceptible to 100-year and 500-year floods. The proposed project site crosses Loma Alta Creek approximately 600 feet south of the College Boulevard/Oceanside Boulevard intersection. The extent of the proposed project that falls within the 100-year and 500-year floodplains for Loma Alta Creek is shown on Figure 4.9-2, Floodplains.

Precipitation

The preliminary hydrologic analysis for the proposed project was conducted following the SDCHM's MRM for the 2-year, the 10-year, and the 100-year return frequency rainfall events. The rainfall isopluvial values for the 6-hour (P_6) and 24-hour (P_{24}) rainfall events with the above return frequencies were obtained from the SDCHM, and are provided in Table 4.9-3, Rainfall Events Used in Hydrologic Analysis, below.

Table 4.9-3
Rainfall Events Used in the Hydrologic Analysis

Annual Return Frequency	Rainfall Depth (Inches)		P_6/P_{24}
	6-Hour (P6)	*24-Hour (P_{24})*	
2-Year	1.4	2.2	63%
10-Year	2.0	3.5	57%`
100-Yer	3.1	5.4	57%

Per the SDCHM, P6 for the selected storm event should be between 45% and 65% of P24. This criterion was met as the P6 for all three return frequencies falls within the specified range.

Groundwater

A groundwater basin is defined as a hydrogeologic unit containing one large aquifer as well as several connected and interrelated aquifers. The proposed project corridor is located within two smaller watersheds that do not have a groundwater basin identified in the California Department of Water Resources (DWR) Bulletin 118. Groundwater has been identified in the alluvial floodplain deposits of the two watersheds. The two watershed basins, Loma Alta and El Salto, consist of an outcropping of the Santiago Formation with alluvial deposits that run through the center stream valley (Kennedy 2007). Temporary monitoring wells for leaking underground storage tank cleanup sites were located adjacent to the project site (see Appendix G). The depth to groundwater was measured at 12 to 19 feet below ground surface (bgs) at the southern end of the project area and 7 to 10 feet bgs near College and Oceanside Boulevards. Boring logs from these monitoring wells and well completion reports from the California Department of Water Resources for a couple of wells 2.5 miles east of the proposed project area suggest that the underlying material for the area is composed of a mix of sand, silty sand, sandy silt, and sandy clay up to at least 70 feet bgs, with underlying degraded granite. Runoff from the proposed project area percolates into the alluvial material, flow west, and discharge to the ocean.

Water Quality

Per the Water Quality Control Plan for the San Diego Basin (9), beneficial uses are defined as the uses of water necessary for the survival or well-being of man, plants, and wildlife. These uses of water serve to promote the tangible and intangible economic, social, and environmental goals of mankind. Once beneficial uses are designated, appropriate water quality objectives can be established and programs that maintain or enhance water quality can be implemented to ensure the protection of beneficial uses.

The designation of beneficial uses must satisfy all of the applicable requirements of the California Water Code, Division 7, and the federal Clean Water Act. California Water Code, Division 7, is also known as the Porter-Cologne Water Quality Control Act. The act establishes a comprehensive program for the protection of beneficial uses of the waters of the state. California Water Code Section 13050(f) describes the beneficial uses of surface and ground waters that may be designated by the State Water Resources Control Board or Regional Water Quality Control Board for protection as follows:

> Beneficial uses of the waters of the state that may be protected against quality degradation include, but are not necessarily limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves

To comply with the Clean Water Code, surface and ground waters within the project-related basins have been assigned the following beneficial uses in the Water Quality Control Plans for the San Diego Basin (9) as shown in Table 4.9-4, Surface Water Beneficial Uses, and Table 4.9-5, Groundwater Beneficial Uses, below.

Table 4.9-4
Surface Water Beneficial Uses

Surface Water Body	Hydrologic Unit Basin Number	Beneficial Use											
		MUN	*AGR*	*IND*	*PROC*	*REC1*	*REC2*	*BIOL*	*EST*	*WARM*	*WILD*	*RARE*	*MAR*
Loma Alta Creek	4.10	+				○	●			●	●		
Loma Alta Slough	4.10					●	●		●		●	●	●
Buena Vista Creek	4.22	+	●	●		●	●			●	●		
Buena Vista Creek	4.21	+	●	●		●	●			●	●	●	
Buena Vista Lagoon	4.21					●	●	●	○	●	●	●	●

● Existing beneficial uses.
○ Potential beneficial uses.
+ Excepted from MUN (see text).

Table 4.9-5
Groundwater Beneficial Uses

Groundwater Body	Hydrologic Unit Basin Number	Beneficial Use					
		MUN	*AGR*	*IND*	*PROC*	*FRSH*	*GWR*
Loma Alta	4.10	+		●			
El Salto	4.21	●	●	○			
Vista	4.22	●	●	●			

● Existing beneficial uses.
○ Potential beneficial uses.
+ Excepted from MUN (see text).

Definitions of the beneficial uses mentioned in Tables 4.9-4 and 4.9-5 are as follows:

Municipal and Domestic Supply (MUN) – Includes uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply.

Agricultural Supply (AGR) – Includes uses of water for farming, horticulture, or ranching including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.

Industrial Service Supply (IND) – Includes uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well re-pressurization.

Industrial Process Supply (PROC) – Includes uses of water for industrial activities that depend primarily on water quality.

Contact Water Recreation (REC-1) – Includes uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and SCUBA diving, surfing, white water activities, fishing, or use of natural hot springs.

Non-contact Water Recreation (REC-2) – Includes the uses of water for recreational activities involving proximity to water, but not normally involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.

Preservation of Biological Habitats of Special Significance (BIOL) – Includes uses of water that support designated areas or habitats, such as established refuges, parks, sanctuaries, ecological reserves, or Areas of Special Biological Significance (ASBS), where the preservation or enhancement of natural resources requires special protection.

Estuarine Habitat (EST) – Includes uses of water that support estuarine ecosystems including, but not limited to, preservation or enhancement of estuarine habitats, vegetation, fish, shellfish, or wildlife (e.g., estuarine mammals, waterfowl, shorebirds).

Warm Freshwater Habitat (WARM) – Includes uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish or wildlife, including invertebrates.

Wildlife Habitat (WILD) – Includes uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.

Rare, Threatened, or Endangered Species (RARE) – Includes uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant of animal species established under state of federal law as rare, threatened or endangered.

Marine Habitat (MAR) – Includes uses of water that support marine ecosystems including, but not limited to, preservation or enhancement of marine habitats, vegetation such as kelp, fish, shellfish, or wildlife (e.g., marine mammals, shorebirds).

303(d) Listed Water Bodies

Run-on and runoff from the proposed project will discharge to Loma Alta Creek and Buena Vista Creek. Both creeks are listed as impaired water bodies according to the 2010 Integrated Report (Clean Water Act Section 303(d) List/305(b) Report) published by the State Water Resources Control Board (SWRCB 2011). The Buena Vista Lagoon, downstream from the proposed project's discharge points, is also listed as an impaired water body.

To comply with the federal Clean Water Act, water quality objectives must be met to maintain listed 303(d) primary pollutants at target levels. Table 4.9-6 shows the listed 303(d) pollutants for the three water bodies.

Table 4.9-6
PDP 303(d) Water Bodies – 2010 303(d) List of Water Quality Segments

Hydrologic Area	Receiving Water Body	Listed 303(d) Pollutants	Distance From Proposed Project Corridor (miles)
Carlsbad Hydrologic Unit (904.00)	Loma Alta Creek	Selenium Toxicity	< 1.0
Carlsbad Hydrologic Unit (904.00)	Buena Vista Creek	Sediment Toxicity Selenium	<1.0
Carlsbad Hydrologic Unit (904.00)	Buena Vista Lagoon	Indicator Bacteria Nutrients Sedimentation/Siltation	2.5

PDP = Priority Development Project

4.9.3 Relevant Plans, Policies, and Ordinances

4.9.3.1 Federal

Clean Water Act

The U.S. Environmental Protection Agency (EPA) regulates water quality under the Clean Water Act (CWA) (also known as the Federal Water Pollution Control Act). Enacted in 1972, and significantly amended in subsequent years, the CWA is designed to restore and maintain the chemical, physical, and biological integrity of waters of the United States. The CWA provides the legal framework for several water quality regulations, including the National Pollutant Discharge Elimination System (NPDES), effluent limitations, water quality standards, pretreatment standards, anti-degradation policy, non-point source discharge regulation, and wetlands protection.

The CWA requires NPDES permits for the discharge of pollutants to waters of the United States from any point source. In 1987, the CWA was amended to require that the EPA establish regulations for permitting of municipal and industrial stormwater discharges under the NPDES permit program. The EPA published final regulations regarding stormwater discharges on November 16, 1990. The regulations require that municipal separate storm sewer system (MS4) discharges to surface waters be regulated by an NPDES permit. Surface runoff from the project site is permitted under the municipal NPDES permit issued to San Diego County and co-permittees, which includes the City of Oceanside.

The EPA has delegated its responsibility for administration of portions of the CWA to state and regional agencies. The CWA requires states to adopt water quality standards for receiving water bodies and to have those standards approved by the 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. Water quality criteria are prescribed concentrations or levels of constituents, such as lead, suspended sediment, and fecal coliform bacteria, or narrative statements that represent the quality of water that supports a particular use.

National and State Safe Drinking Water Acts

The Federal Safe Drinking Water Act was established in 1974 and sets drinking water standards throughout the country; it is administered by EPA. The drinking water standards established in the act, as set forth in the Code of Federal Regulations (CFR), are referred to as the National Primary Drinking Water Regulations (40 CFR 141, Primary Standards), and the National Secondary Drinking Water Regulations (40 CFR 143, Secondary Standards). According to the EPA, the Primary Standards are legally enforceable standards that apply to public water systems.

The Secondary Standards are non-enforceable guidelines regulating contaminants that may cause cosmetic or aesthetic effects in drinking water. The EPA recommends the Secondary Standards for water systems but does not require systems to comply. California passed its own Safe Drinking Water Act in 1986 that authorizes the state's Department of Health Services to protect the public from contaminants in drinking water by establishing maximum contaminants levels (as set forth in the California Code of Regulations (CCR), Title 22, Division 4, Chapter 15) that are at least as stringent as those developed by the EPA, as required by the Federal Safe Drinking Water Act.

Federal Antidegradation Policy

The Federal Antidegradation Policy (40 CFR 131.12) requires states to develop statewide antidegradation policies and identify methods for implementing them. Pursuant to this policy, state antidegradation policies and implementation methods shall, at a minimum, protect and maintain: (1) existing in-stream water uses; (2) existing water quality where the quality of the waters exceeds levels necessary to support existing beneficial uses, unless the state finds that allowing lower water quality is necessary to accommodate economic and social development in the area; and (3) water quality in waters considered an outstanding national resource. State permitting actions must be consistent with the Federal Antidegradation Policy.

4.9.3.2 State

California Toxics Rule

Because of gaps in California's regulations, the EPA promulgated the California Toxics Rule (40 CFR 131.38), which established numeric water quality criteria for certain toxic substances in California surface waters. The California Toxics Rule establishes acute (i.e., short-term) and chronic (i.e., long-term) standards for water bodies that are designated by the San Diego RWQCB as having beneficial uses protective of aquatic life or human health. The California Toxics Rule criteria are applicable to the receiving waters from the project site.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) established the principal California legal and regulatory framework for water quality control. The Porter-Cologne Water Quality Control Act is embodied in the California Water Code. The California Water Code authorizes the State Water Resources Control Board (SWRCB) to implement the provisions of the CWA.

California is divided into nine regions governed by RWQCBs. The RWQCBs implement and enforce provisions of the California Water Code and the CWA under the oversight of the

SWQCB. The project site is located in Region 9, also known as the San Diego Region, and is governed by the San Diego RWQCB.

Each RWQCB must formulate and adopt a water quality control plan for its region. The San Diego RWQCB has adopted and periodically amends a water quality control plan titled Water Quality Control Plan for the San Diego Basin (Basin Plan). The San Diego RWQCB Basin Plan must conform to the policies set forth in the Porter-Cologne Act as established by the SWQCB in its state water policy. The Porter-Cologne Act also provides the RWQCBs with authority to include within their basin plans water discharge prohibitions applicable to particular conditions, areas, or types of waste.

Section 303(d) – TMDLs

The CWA requires states to publish, every 2 years, an updated list of streams and lakes that are not meeting their designated uses because of excess pollutants (i.e., impaired water bodies). The list, known as the Section 303(d) list, is based on violations of water quality standards. Once a water body has been deemed impaired, a TMDL must be developed for the impairing pollutant(s). A TMDL is an estimate of the total load of pollutants from point, non-point, and natural sources that a water body may receive without exceeding applicable water quality standards (plus a "margin of safety"). Once established, the TMDL allocates the loads among current and future pollutant sources to the water body. Targets utilized in the TMDL do not establish new water quality objectives and are not enforceable against dischargers. Allocations made to point sources are implemented primarily through NPDES permits, particularly the MS4 permit as well as the General Industrial Permit and Construction General Permit. Additionally, once a TMDL is developed and adopted into a basin plan, the water body is removed from the Section 303(d) list.

States are required to submit the Section 303(d) list and TMDL priorities to the EPA for approval. The 2010 Section 303(d) list is the most recently adopted list. The 2010 Section 303(d) list was adopted by the SWRCB and approved by the EPA on October 11, 2011.

NPDES Permits

In California, the SWRCB and its RWQCBs administer the NPDES permit program. The NPDES permits cover all construction and subsequent drainage improvements that disturb 1 acre or more, industrial activities, and municipal separate storm drain systems. Construction and industrial activities are typically regulated under statewide general permits that are issued by the SWRCB. The SWRCB also issued a statewide general small MS4 stormwater NPDES permit for public agencies that fall under that Phase II NPDES regulations.

The NPDES permit system was established in the CWA to regulate both point source discharges (a municipal or industrial discharge at a specific location or pipe) and nonpoint source discharges (diffused runoff of water from adjacent land uses) to surface waters of the United States. For point source discharges, each NPDES permit contains limits on allowable concentrations and mass emission of pollutants contained in the discharge. For nonpoint source discharges, the NPDES program establishes a comprehensive stormwater quality program to manage urban stormwater and minimize pollution of the environment to the maximum extent practicable. The NPDES program consists of characterizing receiving water quality, identifying harmful constituents, targeting potential sources of pollutants, and implementing a comprehensive stormwater management program.

The reduction of pollutants in urban stormwater discharge to the maximum extent practicable through the use of structural and nonstructural BMPs is one of the primary objectives of the water quality regulations for MS4s. BMPs typically used to manage runoff water quality include controlling roadway and parking lot contaminants by installing filters with oil and grease absorbents at storm drain inlets, cleaning parking lots on a regular basis, incorporating peak-flow reduction and infiltration features (e.g., grass swales, infiltration trenches, and grass filter strips) into landscaping, and implementing educational programs.

4.9.3.3 Local

Regional Municipal Separate Storm Sewer System Permit

On May 8, 2013, the RWQCB approved a regional municipal separate storm sewer system (MS4) permit for San Diego Copermitees (Order No. R9-2013-0001). The MS4 permit was subsequently amended in February 2015 (Order No. R9-2015-0001) and again in November 2015 (Order No. R9-2015-0100) to extend coverage to Orange and Riverside County Copermitees. The region-wide National Pollutant Discharge Elimination System (NPDES) Permit (commonly referred to as the Regional MS4 Permit) sets the framework for municipalities, such as the City of Oceanside, to implement a collaborative watershed-based approach to restore and maintain the health of surface waters. The Regional MS4 Permit requires development of Water Quality Improvement Plans (WQIPs) that will allow the City Oceanside (and other watershed stakeholders) to prioritize and address pollutants through an appropriate suite of best management practices (BMPs) in each watershed.

While the City of Oceanside lies within the San Luis Rey Watershed Management Area and the Carlsbad Watershed Management Area, the proposed project corridor is located in the Carlsbad Watershed Management Area. The City of Oceanside is one of the responsible municipalities for the watershed's WQIP. The Carlsbad Watershed WQIP was updated to include revisions and a hydromodification exemption for Escondido Creek. The final, updated Carlsbad Watershed WQIP was finalized in May 2018 (MOE 2018).

Per the approved Carlsbad Watershed WQIP, development is subject to the prior RWQCB Municipal Storm Water Permit, Order No. R9-2013-0001. Requirements of Order No. R9-2013-0001 include:

- **Low Impact Development (LID) BMP Requirements:** Project applicants with Priority Development Projects would be required to implement LID BMPs which would collectively minimize directly connected impervious areas and promote infiltration. The LID BMP requirements are described in Section D.1.d.(4) of Order No. R9-2007-0001.
- **Hydromodification:** Limitations on Increases of Runoff Discharge Rates and Durations: Under Section D.1.g of Order No. R9-2007-0001, the Co-permittees would be required to prepare a Hydromodification Management Plan (HMP) and incorporate its requirements into their SUSMPs. Hydromodification refers to changes in a watershed's runoff characteristics resulting from development, together with associated morphological changes to channels receiving the runoff, such as changes in sediment transport characteristics and the hydraulic geometry (width, depth, slope) of channels. These changes result in streambank erosion and sedimentation, leading to habitat degradation due to loss of overhead cover and loss of instream habitat structures.

San Diego Basin Plan

The Basin Plan sets forth water quality objectives for constituents that could potentially cause an adverse effect or impact on the beneficial uses of water. Specifically, the San Diego Basin Plan is designed to accomplish the following:

- Designate beneficial uses for surface water and groundwater
- 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
- Describe implementation programs to protect the beneficial uses of all waters within the region
- Describe surveillance and monitoring activities to evaluate the effectiveness of the Basin Plan.

The Basin Plan incorporates by reference all applicable SWRCB and RWQCB plans and policies.

City of Oceanside General Plan

The City's General Plan Community Facilities Element (City of Oceanside 1990) contains plans, policies, objectives, and goals related to stormwater system management. The overall objective for managing the City's drainage and stormwater system is as follows:

- **Objective:** To provide adequate stormwater management facilities and services for the entire community in a timely and cost effective manner, while mitigation the environmental impacts or construction of the storm drainage system as well as stormwater runoff.

The City works to achieve this objective through the following nine policies:

- **Policy 6.1:** The Master Drainage Plan for the City of Oceanside shall establish standards for citywide drainage. Within each major watercourse addressed by the Plan, the City and/or developers shall assure that adequate drainage improvements and facilities are provided to handle runoff when the drainage basin is fully developed to the intensity proposed by the Land Use Element of the General Plan.
- **Policy 6.2:** All new development in the City of Oceanside shall pay drainage impact fees to defray that development's proportionate share of drainage facilities serving the basin where the new development is located.
- **Policy 6.3:** The City shall continue to participate in the National Flood Insurance Program. Any development application for construction within the 100-year floodplain shall be reviewed to ensure that the project complies with flood protection measures required by the National Flood Insurance Program. For existing developed areas within the 100-year floodplain, these same measures and standards shall be applied if City approval of substantial improvements or upgrades is sought.
- **Policy 6.4:** To the degree that it is economically feasible and consistent with sound engineering practices and maintenance criteria, the City shall discourage disruption of the natural landform and encourage the maximum use of natural drainage ways in new development. Non-structural flood protection methods, which avoid major construction programs such as channels and favor vegetative measures to protect and stabilized land areas, should be considered as an alternative to constructing concrete channels where feasible.
- **Policy 6.5:** The City shall locate and/or design new critical facilities to minimize potential flood damage from the 100-year flood. Such facilities include those that provide emergency response (hospitals, fire stations, police stations, civil defense headquarters, utility lines, ambulance services, and sewage treatment plants). Such facilities also include those that do not provide emergency response but attract large numbers of people, such as schools, theaters, and other public assembly facilities.

- **Policy 6.6:** The City shall maintain public flood control channels and storm drains through dredging, repair, desilting, and clearing as needed to prevent any loss in effective use.
- **Policy 6.7:** The City shall require appropriate and sufficient screening, fencing, landscaping, open space setbacks, or other permanent mitigation or buffering measures between drainage way corridors and adjacent and surrounding land uses. The employed measures shall be of sufficient scope to minimize, to the maximum extent possible, negative impacts to adjacent surrounding land uses from the particular drainage way corridor.
- **Policy 6.8:** The City of Oceanside shall integrate required drainage planning efforts with linear open space amenities and trail corridors throughout the community, while addressing the issues of life safety, attractive nuisances, and long-term maintenance responsibility and costs.
- P**olicy 6.9:** The City shall comply with the sections of the federal CWA in regard to stormwater drainage.

City of Oceanside Municipal Code

Chapter 40 of the City of Oceanside Municipal Code is known as the Urban Runoff Management and Discharge Control Ordinance. The overall intent of this ordinance is to "protect the health, safety and general welfare of Oceanside residents; to protect water resources and to improve water quality; to cause the use of management practices by the city and its citizens that will reduce the adverse effects of polluted runoff discharges on waters of the state; to secure benefits from the use of stormwater as a resource; and to ensure the city is compliant with applicable state and federal law" (City of Oceanside 2002). General provisions of the Urban Management and Discharge Control Ordinance include compliance with the current and applicable RWQCB discharge permits, requirements for discretionary approvals subject to discharge control, development of Urban Runoff Standards Manuals, and designations for permitted use of collected stormwater.

4.9.4 Thresholds of Significance

The significance criteria used to evaluate the proposed project impacts to hydrology and water quality are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to hydrology and water quality would occur if the proposed project would:

1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river in a manner which would result in substantial erosion or siltation on or off site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows.
4. In flood, tsunami, or seiche zones, risk release of pollutants during to project inundation.
5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

4.9.5 Impacts Analysis

Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

The potential for erosion would increase during construction because of vehicles, heavy equipment, and general earth work accelerating the erosion process. Wind erosion could occur on bare soils or where vehicles and equipment cause dust. Fuels, oils, lubricants, other hazardous substances and waste used/generated during construction could be released and impact water quality.

Pollutants associated with grading and construction can degrade water quality if they are washed into surface waters. Sediment is often the most common pollutant associated with construction sites because of the associated earth-moving activities and areas of exposed soil. As required by the SWRQB's Construction General Permit, the proposed project would prepare and implement a SWPPP and would employ numerous erosion control, sediment control, tracking control, materials and waste management, and inspection and maintenance BMPs to minimize the potential for erosion, sedimentation, and water quality impacts related to the grading and construction process. Prior to obtaining a grading permit, the proposed project would be required to prepare the SWPPP, which must describe and depict in detail the various grading and construction-related BMPs necessary to minimize the proposed project's impacts, and to obtain a Waste Discharge Identification Number from the RWQCB. This process includes completing a risk assessment for the proposed project's potential water quality risk. Sediment and erosion control BMPs included in the SWPPP may include, but are not limited to, silt fencing, desilting basins, sediment traps and check dams, street sweeping, storm drain inlet protection, sandbag barriers, straw bale barriers, gravel bag berms, and fiber rolls.

The City's Urban Runoff Management and Discharge Control Ordinance also requires compliance with the SWRQB's Construction General Permit and preparation of a SWPPP and for the SWPPP to be available at all time at the construction site. The City requires that land disturbance actives (such as construction) install, implement, and maintain BMPs to reduce pollutant discharges in urban runoff from site to the maximum extent practicable. BMPs must be site specific, seasonally appropriate, and construction phase appropriate, and implemented at the site year-round (City of Oceanside 2018). BMPs are not limited to and must be implemented in the following categories: (1) project planning; (2) good site management, including waste; (3) non-stormwater management; (4) erosion control; (5) sediment control, including but not limited to dust control and off-site tracking; (6) run-on and runoff control; and (7) active/passive sediment treatment systems, where applicable (City of Oceanside 2018).

The proposed project would be required to comply with San Diego Air Pollution Control District (SDAPCD) Rule 55, Fugitive Dust Control, which would control for erosion potential through the watering of active construction sites multiple times a day.

Similarly, compliance with the federal, state, and local requirements for the handling, storage, transport, and disposal of construction-related hazardous materials and waste would minimize potential for accidental release, reducing adverse effects to water quality. Such requirements may include but are not limited to storage of materials in designated areas with secondary containment measures (such as liners and covers), locating stockpiled materials away from drainage areas, and proper collection and disposal of debris. Refer to Section 4.9, Hazards and Hazardous Materials, for additional discussion.

Lastly, the proposed improvement of the stormwater conveyance system between Olive Avenue and Loma Alta Creek would result in reduced flooding south of Loma Alta Creek along College Boulevard, thus reducing the potential for capturing additional pollutants (e.g., trash, sediment) and carrying them into Loma Alta Creek. Further, potential construction-related water quality impacts of the proposed project would be eliminated or substantially reduced by the requirements of the statewide General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (SWRCB 2013), which the Project contractor is required to comply with prior to construction.

Therefore, the proposed project would comply with all applicable water quality and discharge requirements during construction. The provision of BMPs (construction and post-construction) in compliance with SWRQB's Construction General Permit and the Regional MS4 Permit would minimize degradation of water quality to the extent practicable and consistent with permit requirements. Therefore, impacts would be less than significant.

Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Construction of the proposed project would result in a temporary increase in water usage but would not rely on groundwater supplies. Therefore, the proposed project would not substantially deplete groundwater or interfere with groundwater recharge during construction. As proposed, the Project contractor would import and periodically apply water for general dust control during ground disturbing construction activities. Infiltration characteristics within the Project area would not change because of the Project; therefore, the existing exchange between surface water and groundwater within the Project site would be maintained. Impacts to groundwater resources and recharge because of the proposed project would be less than significant.

Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river in a manner which would result in substantial erosion or siltation on or off site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows

The proposed project does not include alteration or impediment of existing drainage patterns within the project watershed, and does not require work/infrastructure within Loma Alta Creek. The proposed project does include drainage infrastructure improvements that were identified in the City of Oceanside's Master Plan of Drainage (City of Oceanside 2013); the proposed storm drain upgrade would result in improved conveyance of water through the watersheds. This new system would reduce the potential for surface flows to concentrate outside of the established stormwater conveyance system, thereby reducing the potential to induce local scouring/erosion and increase downstream pollutant loading.

The two modifications to the existing hydrology of the proposed project area consist of the 0.18% modeled increase in discharge from Basin 1 and the drainage improvement between Olive Avenue and Loma Alta Creek. The minor increase in discharge from Basin 1 is considered less than significant. Furthermore, the addition of the drainage improvement would increase the capacity of the existing stormwater conveyance system and should result in reduced on-site flooding and transport of pollutants to downstream waters.

Compliance with the City's Urban Runoff Management and Discharge Control Ordinance, SWRQB's Construction General Permit, and preparation of a SWPPP would require the implementation of pollutant control BMPs to be implemented to minimize polluted runoff to the maximum extent practicable.

Regarding flood flows, the proposed project site crosses Loma Alta Creek approximately 600 feet south of the College Boulevard/Oceanside Boulevard intersection. The extent of the proposed project that falls within the 100-year and 500-year floodplains for Loma Alta Creek is shown on Figure 4.9-2. No new structures would be placed in and no alteration to the existing Alta Loma Creek channel or box culverts crossing beneath the roadway would be altered.

Based on the earlier analysis pertaining to waste discharge requirements and the analysis above, impacts to the existing drainage pattern would be less than significant.

Would the project risk release of pollutants during to project inundation in flood, tsunami, or seiche zones?

The proposed project site is not located in a flood zone prone to seiches or tsunamis. There would be no impact associated with seiche, tsunami, or mudflows. The 500-year floodplain identified on Figure 4.9-2 does overlay Loma Alta Creek that is spanned by College Boulevard however, the proposed project does not propose work in the floodplain in this area that would impede flows nor generate pollutants beyond the existing potential pollutants related to roadways. Proposed project impacts related to inundation and release of pollutants would be less than significant.

Would the project risk conflict with or obstruct implementation of a water control plan or sustainable groundwater management plan?

Recently amended on May 17, 2016, the San Diego Basin Plan sets forth water quality objectives for Region 9. Specifically, the Basin Plan is designed to accomplish the following: (1) designate beneficial uses for surface and groundwater, (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 SWRCB and the San Diego RWQCB (San Diego Water Board) plans and policies.

The project site is located within the Carlsbad Watershed Water Quality Improvement Plan (WQIP) area. The ultimate goal of the WQIP (MOE 2018) is to assist the responsible agencies in establishing and implementing priorities, goals and strategies for their individual jurisdictional runoff management programs to make improvements to the overall water quality within the watershed management area (WMA). Each hydrologic area within the WMA also identifies interim and final goals that generally include the protection, preservation, enhancement, and restoration of the water quality of receiving water bodies. The project is consistent with these goals by complying with the regulations as described below.

The Sustainable Groundwater Management Act has enacted sustainable groundwater management requirements. In San Diego County, four basins meet the criteria as medium-priority and are subject to this regulation. These basins are the Borrego Valley, San Diego River Valley, San Luis Rey Valley and San Pasqual Valley. The project site is not located in the San Luis Rey Valley or the other basins listed above. Currently there is no adopted sustainable groundwater management plan applicable to the project area. In addition, the project would not use groundwater or affect groundwater levels or quality, as discussed above. Thus, the project would not conflict with a sustainable groundwater management plan.

The project would be required to adhere to a SWPPP during construction, which would satisfy the requirements set forth by NPDES State Water Resources Control Board Construction General Permit Order No. 2009-0009-DWQ. Overall, the project would comply the Water Quality Control Plan for the San Diego Basin and impacts would be **less than significant**.

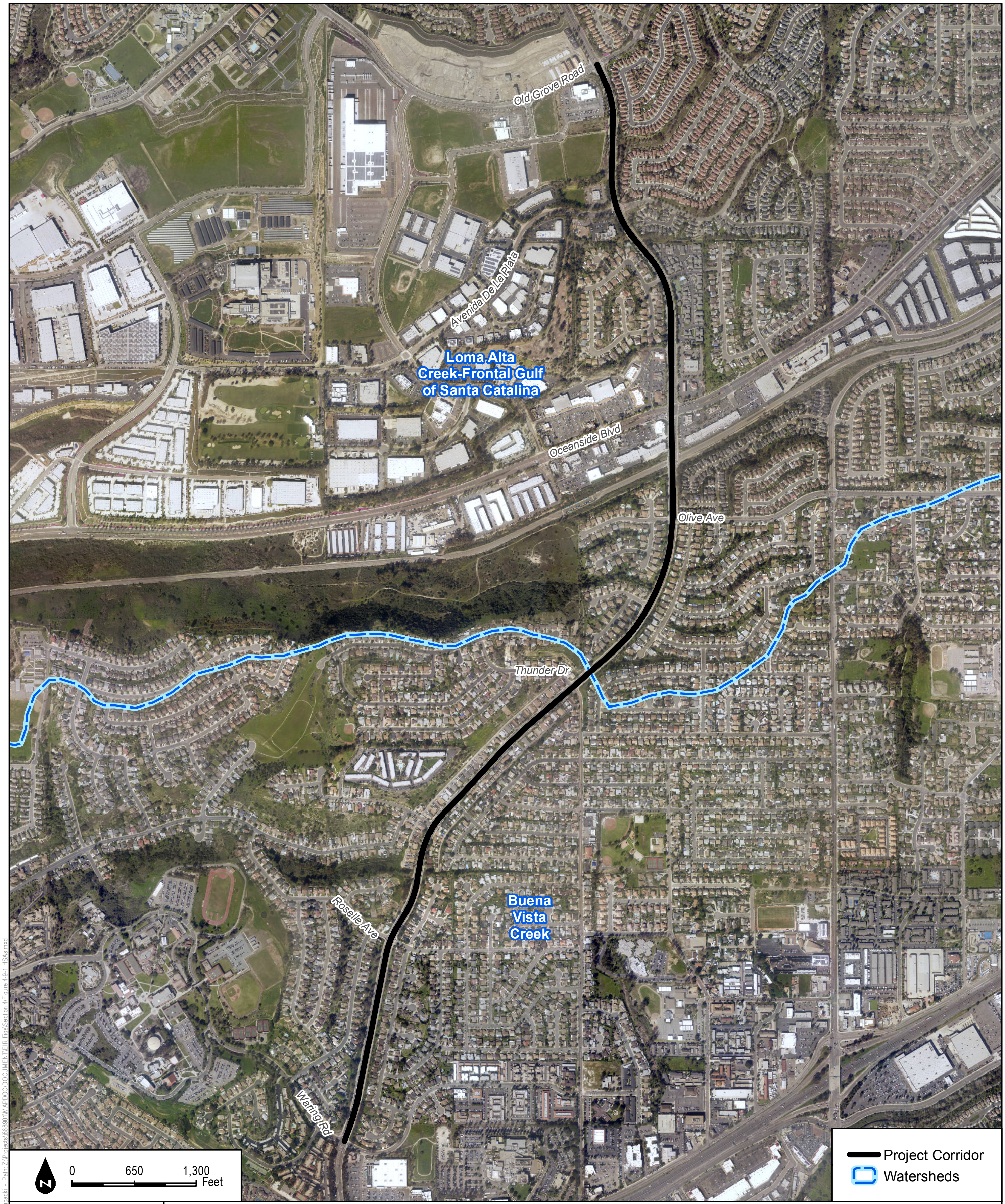
4.9.6 Mitigation Measures

Impacts would be less than significant, and no mitigation measures are required.

4.9.7 Level of Significance After Mitigation

Potential impacts related to hydrology and water quality would less than significant. As such, no mitigation is required.

While construction and operation of the proposed project would introduce new sources of pollutants and increase the amount of impervious area within the project site, provision of BMPs (construction and post-construction) in compliance with SWRCB's Construction General Permit and the Regional MS4 Permit would minimize degradation of water quality to the extent practicable and consistent with permit requirements. Impacts related to water quality would be less than significant.



SOURCE: SANGIS 2017, 2018

DUDEK

FIGURE 4.9-1

Project Location in Relation to Loma Alta and El Salto HSAs

College Boulevard Improvement Project EIR

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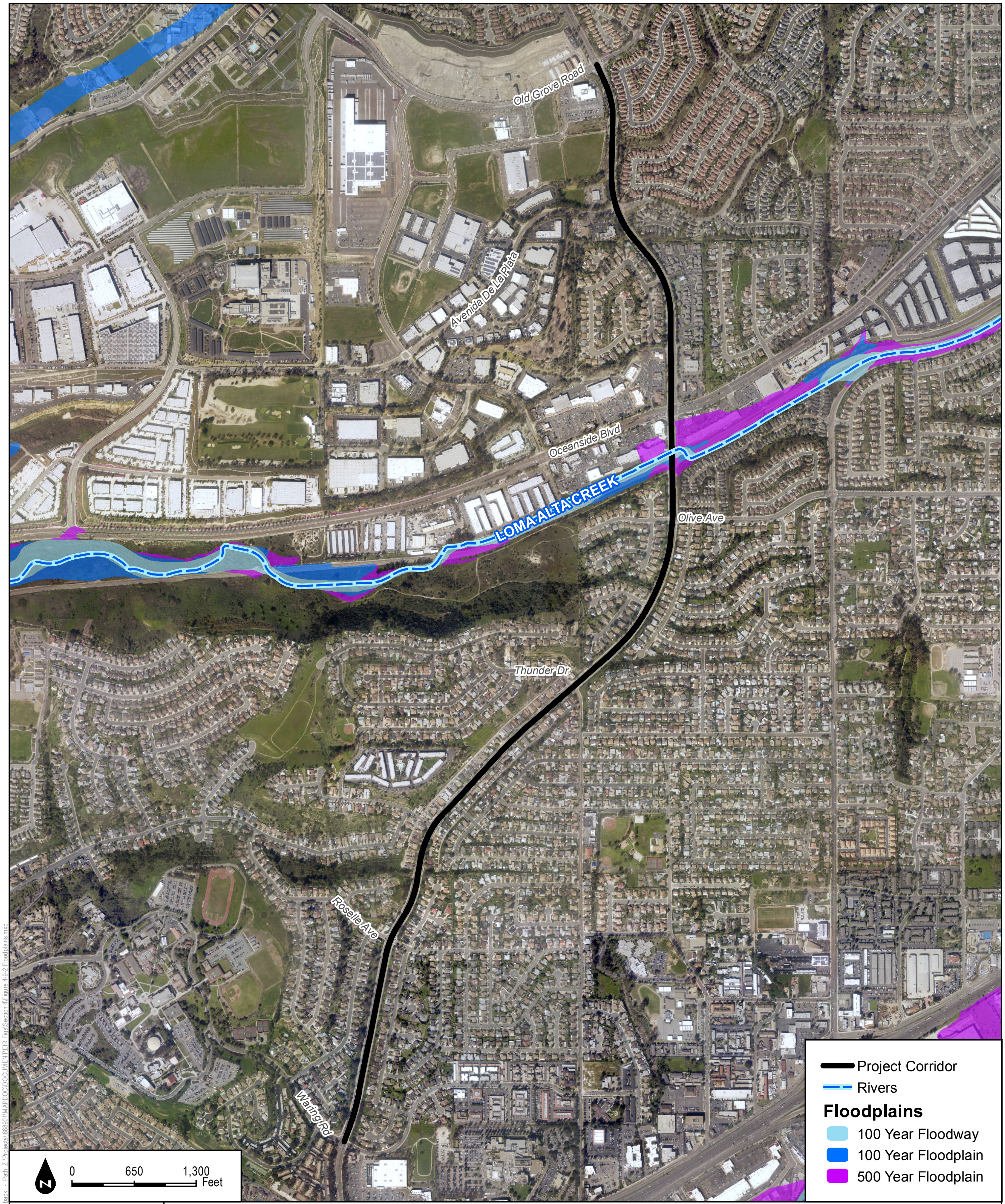

SOURCE: SANGIS 2017, 2018

FIGURE 4.9-2

Floodplains

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College Boulevard Improvement Project EIR

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4.10 LAND USE AND PLANNING

This section describes the existing land use and planning setting of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed College Boulevard Improvement project (proposed project).

The existing land uses were analyzed based on a review of aerial photographs and site visits. In order to analyze potential compatibility impacts to planning documents and policies, research into each applicable plan and policy was conducted.

4.10.1 Existing Conditions

Site Location and Corridor Characteristics

The proposed College Boulevard improvement corridor extends from Waring Road north to Old Grove Road (a distance of approximately 2.4 miles). Along the improvement corridor, College Boulevard is currently constructed and classified as a four-lane Major Arterial. The posted speed limits along the corridor are 40 to 50 miles per hour. With the exception of intersections, a raised masonry or minimally landscaped median of varying width (the median tends to taper on the intersection approach) is constructed throughout the length of the corridor. Striped bicycle lanes are also installed along the majority of the corridor with widths ranging from five (5) to nine (9) feet. Sidewalks are also provided on both sides of the street with widths ranging from four (4) to six (6) feet, and landscaped parkways are provided along the majority of the corridor. With the exception of the segment of College Boulevard located north of Roselle Avenue and south of Thunder Drive, on-street parking is not permitted along the corridor. Storm drain curb inlets are regularly located along both travel lanes and sporadically along the median curbs. Overhead lighting is installed along the corridor at regular intervals. Utility boxes are occasionally located within or near the extent of the roadway right-of-way.

Surrounding Areas

From Waring Road north to Old Grove Road, College Boulevard passes through a primarily suburban setting and the roadway is surrounded by existing development. The approximate 2.41-mile-long improvement corridor is bordered by single- and multi-family residential neighborhoods to the east and west between Waring Road and the NCTD Sprinter tracks; however, north of the Sprinter tracks, the corridor passes through a commercial area. The Del Oro Marketplace, Gateway Plaza, and Rancho Del Oro Plaza are located near the College Boulevard / Oceanside Boulevard intersection and retail stores, restaurants, gas stations, and banks comprise some of the businesses that border the corridor north of the Sprinter tracks and south of Aztec Street. North of the Rancho Del Oro Plaza, single- and multi-family residential uses once again border the corridor (single-family residences are located west of the corridor and both single-family residences and the

Boulevard Apartments complex are located to the east). Further to the north, industrial and institutional uses and undeveloped lands are located west of College Boulevard between Avenida De La Plata and Old Grove Road, and single-family residences are located to the west (Figure 2-3, Aerial Map). The corridor also spans Loma Alta Creek south of Oceanside Boulevard. Per the Final Oceanside Subarea Plan (City of Oceanside 2010), Loma Alta Creek is a Hardline Preserve and Pre-approved Mitigation Area. Hardline Preserve are areas already preserved to Subarea Plan standards and Pre-approved Mitigation Areas are areas specifically targeted for future preservation through application of Subarea Plan standards and policies (City of Oceanside 2010).

Zoning designations adjacent to the College Boulevard improvement corridor include Single-Family Residential (RS), Medium Density Residential A (RM-A), Public & Semipublic (PS), General Commercial (CG), Medium Density Residential B (RM-B), and Planned Development – Rancho Del Oro (PD-1) (see Figure 2-4, Zoning).

Several residential and commercial land use designations and well as land planned for industrial development border the College Boulevard improvement corridor. Between Waring Road and the NCTD Sprinter tracks at Loma Alta Creek, the corridor is bordered by Single –Family Detached Residential (SFD-R) and Medium Density – A Residential (MDA-R) land use designations. North of the NCTD Sprinter tracks, commercial shopping centers designated General Commercial (GC) are located east and west of College Boulevard. With the exception of industrially designated lands located west of College Boulevard from Avenida De La Plata north to Old Grove Road, the remaining segment of the improvement corridor (generally from Aztec Street north to Old Grove Road) is located adjacent SFD-R and MBD-R land use designations. General Plan land use designations surrounding the improvement corridor are illustrated on Figure 2-5, General Plan Land Use Designations.

4.10.2 Relevant Plans, Policies, and Ordinances

4.10.2.1 Federal

There are no relevant federal plans, policies, and ordinances related to land use and the proposed project.

4.10.2.2 State

There are no relevant state plans, policies, and ordinances related to land use and the proposed project.

4.10.2.3 Local

City of Oceanside General Plan

The State of California requires each city to have a General Plan to guide its future, and mandates that the plan be updated periodically to assure relevance and utility. The City's General Plan is the primary source of long-range planning and policy direction that is used to guide development within the City and serves as a policy guide for determining the appropriate physical development and character of Oceanside. The City's General Plan is founded on the community's vision for the City and expresses the community's long-range goals. The document was last reformatted in 2002 to rearrange the text and include introductory material.

The City's General Plan contains 10 elements: Land Use (amended 1989), Circulation (updated in 2012), Recreational Trails (adopted 1996), Housing (2013–2021 Housing Element adopted in April 2013), Environmental Resource Management (adopted 1975), Public Safety (adopted 1975), Noise (adopted 1974), Community Facilities (adopted 1990), Hazardous Waste Management (adopted 1990), and Military Reservation (adopted 1981).

Each of the City's General Plan elements contains goals for the future of the City. In addition, the City's General Plan contains a Land Use Map (last amended March 2009), which depicts the planned land uses within the City, and the land use designations are described through policies.

Land Use Element

The Land Use Element (City of Oceanside 1986) and City's Land Use and Zoning Map Viewer (http://oceansidefiles.com/uploads/Water/PlanningViewer/index.html) identify the type of land uses that have been planned for within the City. The purpose of the Land Use Element is to describe present and planned land use activity that has been designed to achieve the community's long-range objectives for the future.

The Land Use Element and Land Use and Zoning Map Viewer identify the proposed general distribution, location, and extent of land uses such as industrial, commercial, residential, institutional, agricultural, open space, and community facilities. The element contains goals, objectives, policies, and implementation programs, along with maps and diagrams that outline the future land uses within the City. The element also provides direction related to how future development will occur, such as the intensity/density and character of new development.

Circulation Element

The purpose of the Circulation Element is to ensure that the City's Master Transportation Plan and its implementation policies and programs will safely and efficiently accommodate the growth envisioned in the Land Use Element. The City's Master Transportation Plan has been incorporated as a subsection to the Circulation Element and serves as the main policy tool, designating future road improvements, extensions, and special intersection design treatments.

While the College Boulevard improvement corridor is currently constructed and designated as a four-lane Major Arterial, the road is planned as a six-lane Major Arterial from Old Grove Road to

Waring Road in the City's Master Transportation Roadway Plan (see Table 3-6 of the Circulation Element). According to the Circulation Element, expansion to six-lane would accommodate forecasted travel volumes (City of Oceanside 2012).

Recreational Trails Element

The Recreational Trails Element, a sub-element to the Circulation Element, provides provisions and maintenance of pedestrian, bicycle, and equestrian trail systems throughout the City (City of Oceanside 1995). The purpose of the Recreational Trails Element is to provide goals and objectives that would improve the operation and design of the City's trail system for bicycles, pedestrians, and equestrians.

Housing Element

The Housing Element (City of Oceanside 2013) is intended to identify and analyze the City's housing needs; establish reasonable goals, objectives, and policies based on those needs; and set forth a comprehensive five-year program of actions to achieve the identified goals and objectives.

Environmental Resources Management

The Environmental Resource Management Element City of Oceanside 1975a) is a program designed to conserve natural resources and preserve open space. The Environmental Resource Management Element contains goals, objectives, and implementation strategies related to water, soil, erosion, and drainage; coastal preservation; minerals; vegetation and wildlife habitats; air quality; agricultural resources; cultural sites; and recreation and scenic areas.

Public Safety Element

The purpose of the Public Safety Element (City of Oceanside 1975b) is to serve as a safety guide in the planning process to reduce loss of life, injury, property damage, and economic and soils dislocation resulting from fire hazards, flooding hazards, seismic and geologic hazards, and civil disaster preparedness.

Noise Element

The Noise Element (City of Oceanside 1974) is composed of goals, objectives, and policies that serve as guides for reducing or avoiding adverse noise effects on residents. Policies and plans in the Noise Element are designed to protect existing and planned land uses identified in the Land Use Element from excessive noise.

Community Facilities Element

The purpose of the Community Facilities Element (City of Oceanside 1990a) is to provide overall direction for the provision of adequate public facilities necessary to serve the existing and future developed areas of the City in a coordinated and cost effective manner. The Element provides a comprehensive and current inventory of the City's community facilities and a system of objectives, policies, and standards to be used by the City for programming its primary public facilities.

Hazardous Waste Management Element

The Hazardous Waste Management Element (City of Oceanside 1990b) provides health and safety measures that are necessary to protect citizens from the siting of hazardous waste facilities as required by the California Health and Safety Code, Section 25199 et seq., in coordination with the San Diego County Hazardous Waste Management Plan, and to reduce the need for such facilities through the minimization of hazardous materials and wastes.

Military Reservation

The purpose of the Military Reservation Element (City of Oceanside 1981) is to acknowledge the direct physical, soil, and economic linkages between Oceanside and Camp Pendleton and to proposed policies that would strengthen the bond between the community and the Base.

Economic Development Element

The Economic and Development Element (EDE) was adopted in April 2019 and was prepared in conjunction with the Energy and Climate Action Element (City of Oceanside 2019a). The EDE establishes goals and policies to inform actions affecting the City's fiscal resources and the local economy. It is intended to assist the City for the next 15 to 20 years of economic growth by promoting goals and policies that 1) build upon the City's key assets, 2) take advantage of emerging trends, 3) mitigate those factors that continue to hamper local economic development, and 4) provide for on-course corrections as circumstances warrant.

Energy and Climate Action Element

The Energy and Climate Action Element (ECAE) was adopted in May 2019 and was prepared in conjunction with the Economic and Development Element. The purpose of the ECAE is to address energy consumption and other activities in the City that may contribute to adverse environmental impacts, with particular emphasis on those activities associated with human-induced climate change (City of Oceanside 2019b). Organizing themes for the ECAE's goals and policies include energy efficiency and renewable energy, smart growth and multimodal transportation, zero waste, water conservation, urban greening, local agriculture, and sustainable consumption.

City of Oceanside Zoning Ordinance

The City's Zoning Ordinance provides a guide to physical development within the City consistent with the Land Use Element of the City's General Plan. Article 17 of the Zoning Ordinance provides land use and development regulations for Planned Development Districts in the City.

Oceanside Draft Subarea Habitat Conservation Plan/Natural Communities Conservation Plan

The City of Oceanside is located within the North San Diego County Multiple Habitat Conservation Program (MHCP). The MHCP encompasses the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista. The program goals are to conserve approximately 19,000 acres of habitat, of which roughly 8,800 acres (46%) are already in public ownership and contribute toward the habitat preserve system or the protection of more than 80 rare, threatened, or endangered species (SANDAG 2003).

The MHCP Subregional Plan and Final Environmental Impact Statement/Environmental Impact Report (EIS/EIR) were adopted and certified by the San Diego Association of Governments (SANDAG) Board of Directors on March 28, 2003. Subarea plans for the cities are being prepared and must be adopted by each city council, and implementing agreements with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) must be signed before incidental take permits can be issued. In 2010, the City of Oceanside released the Final Oceanside Subarea Habitat Conservation Plan/Natural Communities Conservation Plan (City of Oceanside 2010). The Subarea Plan has yet to be finalized and approved by the city council; incidental take authority has therefore not been transferred to the city from CDFW and USFWS.

Although the city does not have an approved habitat conservation plan or natural community conservation plan area, College Boulevard is an existing major transportation corridor through the City. and with the exception of Loma Alta Creek which is identified as a Hardline Preserve and a Pre-approved Mitigation Area on the City of Oceanside's Preserve Planning Map and Habitat conservation Overlay Zones (City of Oceanside 2010), lands adjacent to the College Boulevard improvement corridor are not designated as components of preserve planning or habitat conservation areas. Nevertheless, the project's relationship to the City's draft subarea plan is analyzed to ensure that approval of the project would not preclude adoption or implementation of a regional habitat conservation plan or natural community conservation plan.

SANDAG Regional Transportation Plan and Sustainable Communities Strategy

The San Diego Association of Governments' (SANDAG's) *San Diego Forward: The Regional Plan* (Regional Plan) combines the region's two most important existing planning documents—the Regional Comprehensive Plan (RCP) and the Regional Transportation Plan and its Sustainable Communities Strategy (RTP/SCS). The RCP, adopted in 2004, laid out key principles for managing the region's growth while preserving natural resources and limiting urban sprawl. The plan covered eight policy areas, including urban form, transportation, housing, healthy environment, economic prosperity, public facilities, our borders, and social equity. These policy areas were addressed in the 2050 RTP/SCS and are now fully integrated into the Regional Plan.

On October 9, 2015, the SANDAG Board of Directors adopted the Final Regional Plan was adopted by the SANDAG Board of Directors on October 9, 2015 (SANDAG 2015). In 2011, SANDAG approved the 2050 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS). This approval marked the first time SANDAG's RTP included a sustainable communities strategy, consistent with the Sustainable Communities and Climate Protection Act of 2008, also known as Senate Bill 375. This RTP/SCS provided a blueprint to improve mobility, preserve open space, and create communities, all with transportation choices to reduce greenhouse gas emissions and meet specific targets set by the California Air Resources Board (CARB) as required by the 2008 Sustainable Communities Act. In 2010, CARB established targets for each region in California governed by a metropolitan planning organization. SANDAG is the metropolitan planning organization for the San Diego region.

The SANDAG target, as set by CARB, is to reduce the region's per capita emissions of greenhouse gas emissions from cars and light-duty trucks by 7% by 2020, compared with a 2005 baseline. By 2035, the target is a 13% per capita reduction. There is no target set beyond 2035. To achieve the 2020 and 2035 targets, SANDAG and other metropolitan planning organizations are required to develop a Sustainable Communities Strategy (SCS) as an element of its RTP. The SANDAG SCS integrates land use and transportation plans to achieve reductions in greenhouse gas emissions and meet the CARB-required targets.

4.10.3 Thresholds of Significance

Based on the significance criteria established by Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.) and the City of Oceanside, a significant impact related to land use and planning would generally occur as a result of project implementation if the project would:

1. Physically divide an established community.
2. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

4.10.4 Impacts Analysis

Would the project physically divide an established community?

The proposed project would entail widening of College Boulevard from four to six-lanes between Olive Drive and Old Grove Road to accommodate forecast traffic volumes. In addition, targeted intersection, right-of-way, striping, and landscaping improvements along College Boulevard from Waring Road to Marcella Street are also proposed as a component of the proposed project. As College Boulevard is an existing roadway envisioned to be widened from four to six lanes in the proposed 2030 Master Transportation Roadway Plan as presented in the City's General Plan Circulation Element, the proposed project is an implementation of planned improvements to an existing roadway and would not physically divide an established community. As such, **no impact** would result.

During the construction phase, short-term impacts to traffic and circulation may occur due to the presence of construction vehicles, equipment, and workers along College Boulevard. Temporary lane closures may also occur because of widening and/or improvement activities. Please refer to Chapter 4.13, Traffic and Circulation, for an analysis of potential impacts to traffic and circulation during construction of the proposed project.

Would the project cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

City of Oceanside General Plan

The proposed project's consistency with applicable General Plan goals and policies is presented in Table 4.10-1, included at the end of this section.

College Boulevard is an existing roadway and the proposed widening of the roadway and implementation of planned improvements would not conflict with existing land use designations or planned development of adjacent lands. Therefore, the proposed project would not conflict with the City's General Plan Land Use Element.

Table 3-6 of the City's Circulation Element identifies College Boulevard as a six-lane Major Arterial between Old Grove Road and Waring Road (see also Figure 2-6, Circulation Element 2030 Master Transportation Roadway Plan). However, Section 3.7.3 of the Circulation Element identifies widening of the following segments of College Boulevard as being infeasible due to significant land use or environmental impacts: SR 76 to Mesa Drive, Oceanside Boulevard to Olive Drive, Waring Road to Vista Way, Vista Way to Plaza Drive, and Lake Boulevard to the southern City limits (City of Oceanside 2012). The proposed project would entail widening of College Boulevard from four to six lanes from Old Grove Road to Olive Drive (a distance of approximately 0.95 mile) and the implementation of other improvements along the same segment. In addition to proposed curb/gutter improvements, general corridor improvements between Waring Road and Marcella Street would include relocation of utilities, installation of retaining walls, and relocation of bike lanes, lighting, and sidewalks. In addition, pedestrian improvements such as installation of crosswalk striping and traffic calming chokers are proposed.

Thus, while the project would include widening of the segment of College Boulevard between Old Grove Road and Olive Drive, the project would not widen the full length of College Boulevard as envisioned in the City's Circulation Element. This would require an amendment to the General Plan's Circulation Element to change the proposed number of lanes for the segment of College Boulevard between Olive Drive and Waring Road from six to four. The General Plan Amendment is proposed as part of the project and would be processed concurrently with approval of the proposed project. Any physical environmental effects resulting from the General Plan Amendment and implementation of the proposed project, including effects to the roadway network and operating conditions, and air quality and greenhouse gas emissions, are disclosed throughout this EIR.

With future approval and adoption of the General Plan Amendment by the City Council, the proposed project would not conflict with the Circulation Element of the General Plan. Therefore, impacts would be **less than significant**.

San Diego Forward – The Regional Plan

The Regional Plan includes a set of policy objectives related to habitat and open space preservation, regional economic prosperity, environmental stewardship, mobility choices, partnerships/collaboration, and healthy and complete communities. The proposed project's consistency with applicable policy objectives are shown in Table 4.10-2, included at the end of this section. As shown in Table 4.10-2, the proposed project would not conflict with the applicable policy objectives of the Regional Plan. Therefore, impacts would be **less than significant**.

4.10.5 Mitigation Measures

Impacts would be less than significant and no mitigation measures are required.

4.10.6 Level of Significance After Mitigation

No mitigation measures are required impacts would be less than significant.

Table 4.10-1
City of Oceanside General Plan Policy Consistency Evaluation

Policy Number	Policy Text	Consistency Analysis
	Land Use Element	
1.14G	Any proposed changes to the Land Use and Circulation Elements of the General Plan shall require review and consideration of the potential impacts on noise levels.	**Consistent**. An amendment to the Circulation Element of the General Plan is proposed as part of the project, as the proposed project deviates from the general six-lane expansion of College Boulevard from Old Grove Road to Waring Road as envisioned in the Circulation Element. A detailed analysis of the project's potential impacts on noise levels is provided in Chapter 4.11 of this EIR.
2.71 Circulation Objective	To provide for a circulation system which incorporates all modes of transportation for the safe and efficient movement of people and goods within and through the City of Oceanside.	**Consistent**. This objective and policies therein, direct the City in the development of the Circulation Element of the General Plan. The project would increase capacity of College Boulevard, which is identified as a Major Arterial through the City, which would, thereby, increase the capacity and efficiency of movement of people and goods. One of the project objectives is also to enhance the existing bicycle circulation network and improve pedestrian access at select intersections, which the project would accomplish through sidewalk improvements including uniformly incorporating a 5-foot wide landscaped parkway and meandering sidewalk to provide a buffer for pedestrians, crosswalk striping, traffic calming measures along the College Boulevard corridor. In addition, the project proposes to extend bike lanes near the Waring Road intersection.
2.711 Master Street Plan Objective	To provide a balanced circulation system to serve the growing transportation demands within and through the community.	**Consistent**. This objective and policies therein direct the City in the development of the Circulation Element of the General Plan. The project would widen a segment of College Boulevard from Olive Drive to Old Grove Road to accommodate existing and future traffic volumes on the roadway.
2.712 Non-Motorized Transportation Objective	To enhance environmental and social benefits for the citizens of Oceanside by provision of an integrated system of bicycle and pedestrian networks with associated facilities for the safe and efficient movement of people in and through the City of Oceanside.	**Consistent**. The proposed project includes improvements to sidewalks and bike lanes along the College Boulevard corridor to enhance pedestrian and bicycle mobility.
2.7121 Bicycle Facilities Objective	To provide an integrated Bicycle Circulation System and Bicycle Facilities to promote the environmental and social benefits of commuter and recreational bicycling. The Bicycle Circulation System and Bicycle Facilities shall provide mobility and safety to all persons and areas within the City of Oceanside.	**Consistent**. The project would include improvements to existing bike facilities along College Boulevard, including extensions of bike lanes.
2.7121D	The use of land shall integrate the Bicycle Circulation System with auto, pedestrian, and transit systems.	**Consistent**. The project would include improvements to bike lanes and sidewalks along College Boulevard in addition to widening the roadway to increase capacity.

Table 4.10-1
City of Oceanside General Plan Policy Consistency Evaluation

Policy Number	Policy Text	Consistency Analysis
2.7122 Pedestrian Objective	1. Provide for safe pedestrian circulation throughout the City, including sidewalks, pedestrian access to the beach, pedestrian malls, and hiking trails.	**Consistent**. The project would include improvements to existing sidewalks along College Boulevard, as well as pedestrian improvements such as crosswalk striping and traffic calming measures.
2.7122A	The construction of five (5) foot wide sidewalks adjacent to the curb shall be required in all new developments and street improvements.	**Consistent**. Existing sidewalks along College Boulevard range in width from 4 to 6 feet; the project would include reconstruction of sidewalks to a minimum of 5 feet in width.
Circulation Element		
Long Range Policy Direction		
Goal 1	A multimodal transportation system, which allows for the efficient and safe movement of all people and goods and which meets current demands and future needs of the population and projected land uses with minimal impact to the environment.	**Consistent**. See Land Use Element 2.71 Circulation Objective and 2.711 Master Street Plan Objective.
Goal 2	Alternative modes of transportation to reduce the dependence on the automobile.	**Consistent**. Bicycle and pedestrian improvements would be made along the College Boulevard corridor to enhance pedestrian and bicycle access. The NCTD provides transit service to the project area. More specifically, the Sprinter light rail crosses the project corridor at Loma Alta Creek and Breeze Routes 315 and 325 run on College Boulevard.
Goal 3	Alternative transportation strategies designed to reduce traffic volumes and improve traffic flow.	**Consistent**. See Long Range Policy Direction Goal 2.
Goal 4	A citywide transportation system that integrates with the regional transportation system.	**Consistent**. The project would construct improvements to accommodate existing and future traffic volumes on College Boulevard, a Major Arterial that provides intra-city and sub-regional service and connects to regional circulation facilities.
Goal 5	A multimodal transportation system that creates a balance with preserving community values and maintaining public acceptance.	**Consistent**. See Land Use Element 2.71 Circulation Objective and 2.711 Master Street Plan Objective.
Objective i.	Implement a circulation system that provide a high level of mobility, efficiency, access, safety, and environmental consideration that accommodates all modes of travel such as vehicular, truck, transit, bicycle, pedestrian, and rail.	**Consistent**. See Land Use Element 2.71 Circulation Objective, Land Use Element 2.711 Master Street Plan Objective, and Long Range Policy Direction Goal 2.
Policy 2.4	The City's circulation system shall promote efficient intra- and inter-city travel with minimum disruption to established and planned residential neighborhoods.	**Consistent**. The project would include widening and improvements along an existing roadway, which would minimize disruptions to residential land uses while increasing the capacity and efficiency of movement of people and goods.

Table 4.10-1
City of Oceanside General Plan Policy Consistency Evaluation

Policy Number	Policy Text	Consistency Analysis
Policy 2.5	The City will strive to incorporate complete streets throughout the Oceanside transportation network which are designed and constructed to serve all users of streets, roads and highways, regardless of their age or ability, or whether they are driving, walking, bicycling, or using transit.	**Consistent**. See Land Use Element 2.71 Circulation Objective, Land Use Element 2.711 Master Street Plan Objective, and Long Range Policy Direction Goal 2.
Master Transportation Roadway Plan		
Goal 1	A transportation network that supports safe and efficient travel for all modes of transportation.	**Consistent**. See Land Use Element 2.71 Circulation Objective, Land Use Element 2.711 Master Street Plan Objective, and Long Range Policy Direction Goal 2.
Goal 2	A transportation network that is designed to accommodate the existing and future growth of the City of Oceanside.	**Consistent**. The project would construct improvements to accommodate existing and future traffic volumes on College Boulevard.
Objective i.	Aim for an acceptable Level of Service (LOS) D or better on all Circulation Element roadways on an average daily basis and at intersections during the AM and PM peak periods.	**Consistent**. The project would increase capacity on College Boulevard to accommodate (to the extent feasible) existing and future traffic volumes. As detailed in the Traffic Impact Analysis prepared for the project, existing segments of College Boulevard operating at LOS E or LOS F would continue to do so under future (2035) operating conditions. Unlike traditional development projects, the project would not generate trips. Rather, the project consists of select roadway improvements that would be implemented by the City. Existing development and proposed development would contribute to existing and future deficient operating conditions.
Objective ii.	Ensure that all streets within the City achieve the City's mobility goals and design standards as highlighted throughout [Chapter 3 of the Circulation Element].	**Consistent**. The Planning Commission and City Council would review the proposed project to ensure that all City-required standards and goals are met. Design parameters include street widths, access improvements, landscape standards, streetlights, etc.
Policy 3.3	All streets within the City shall be designed in accordance with the adopted City of Oceanside design standards. Typical cross-sections and design criteria for the various street classifications are shown in the City Engineers Design and Processing Manual.	**Consistent**. See Master Transportation Roadway Plan Objective ii.
Policy 3.6	The City shall institute street access guidelines consistent with the street classifications. These shall be applied where feasible to all new developments. The following guidelines shall be used to define appropriate access:	**Consistent**. See Master Transportation Roadway Plan Objective ii.

Table 4.10-1
City of Oceanside General Plan Policy Consistency Evaluation

Policy Number	Policy Text	Consistency Analysis
	• The City shall prohibit driveway access to prime arterials. • Driveway access to major arterials shall not be permitted unless there is no other reasonable means of access to the public street system. Where access to major arterials or secondary collectors must be allowed, it shall be limited through the use of medians and/or access controls to maintain street capacity. • Along major arterials, access spacing shall be a standard distance of 1,200 feet or more. Under special circumstances this distance may be reduced to a minimum of 600 feet where access is limited to right-in and right-out only. The above measurements shall be made from the ends of curb returns. Along secondary collectors, the corresponding access spacing shall be 600 feet for the standard distance and a minimum of 300 feet for special circumstances where access is limited to right-in and right-out only. The above measurements shall be made from the ends of curb returns.	
Policy 3.7	The City shall adopt specific alignment plans when "standard equal-sided" widening is not adequate for future needs or when special conditions exist that require a detailed implementation plan. When necessary, specific alignment plans shall be prepared prior to the formal submittal of a development proposal. The need for such plans will be indicated by the following: • Variable terrain or other sensitive areas that may preclude straightforward preparation of street improvement plans. • Alignments that are necessary because of existing street designs and/or land use configurations.	**Consistent**. Since 2009, the City has analyzed various road improvement/widening alternatives for College Boulevard. The Planning Commission, City Council, and City's traffic engineer would also review the proposed project to ensure that any special conditions are addressed.

Table 4.10-1
City of Oceanside General Plan Policy Consistency Evaluation

Policy Number	Policy Text	Consistency Analysis
	• Development proposals that must deal with extraordinary physical or environmental features.	
Policy 3.9	The City shall review all project applications and reduce or eliminate residential driveways on all collector and busier streets. Access to commercial projects shall be designed to meet the City's standards and limited to the extent feasible. The City shall routinely review existing collector and higher streets to determine, as feasible, the closing, combining, or relocation of existing driveways.	**Consistent**. The Planning Commission, City Council, and City's traffic engineer would also review the proposed project to ensure that all City-required standards are met, including those pertaining to driveway access.
Objective iii.	Construct the roadway in phases consistent with the needs and growth of the community.	**Consistent**. The project would include widening and improvements along a 2.41-mile segment of the College Boulevard corridor from Waring Road to Old Grove Road to accommodate existing and future traffic volumes.
Policy 3.10	The City shall require dedication and improvement of necessary rights-of-way along Master Transportation Roadway Plan streets. This usually will occur in fulfillment of a condition of approval for a tentative map or as a condition of approval for a building permit, whichever occurs first.	**Consistent**. Expansion of the existing College Boulevard right-of-way to accommodate the proposed improvements would require right-of-way acquisition along segments of the corridor, which is included as part of the project.
Policy 3.11	The City shall assure that each addition to the circulation system is a useable link on the total system and that new routes and links are coordinated with existing routes to ensure that each new and existing roadway continues to function as it was intended.	**Consistent**. Proposed roadway improvements would meet the needs of existing and future traffic volumes and thereby enhance the functionality of the total system, including the roadway, bicycle, and pedestrian network.
Policy 3.12	The City shall require or provide adequate traffic safety measures on all new and existing roadways. These measures may include, but are not limited to, appropriate levels of maintenance, proper street design, traffic control devices (signs, signals, and striping), street lighting, and coordination with the school districts to provide school crossing signs and protection.	**Consistent**. The Planning Commission, City Council, and City's traffic engineer would also review the proposed project to ensure that all City-required traffic safety measures are met.
Policy 3.16	The City shall approve and build streets as per City of Oceanside Engineering Manual Specifications.	**Consistent**. The Planning Commission, City Council, and City's traffic engineer would also review the proposed project to

Table 4.10-1
City of Oceanside General Plan Policy Consistency Evaluation

Policy Number	Policy Text	Consistency Analysis
		ensure that all City-required standards are met, per City-adopted design and engineering manuals.
Policy 3.17	The City shall require additional right-of-way width and additional improvements of major arterials where required for turning movements or to provide access to adjacent properties whenever access is not feasible from a lower classification street system.	**Consistent**. The project would require expansion of the existing College Boulevard right-of-way to accommodate proposed improvements along the corridor to enhance access.
Policy 3.21	The City shall require that those responsible for street improvements replant, replace, or install new landscaping pursuant to existing City policy along all new roadways or on those that have been redesigned and reconstructed.	**Consistent**. The project would implement green street design elements, including the installation of low-maintenance vegetation with irrigation in portions of six medians along the widening corridor.
Policy 3.22	Prior to approving any street widening project, the City shall explore all alternatives to adding additional lanes or acquiring additional right-of-way.	**Consistent**. The City began exploring road improvement alternatives for College Boulevard in 2009, including a No Build Alternative that would maintain College Boulevard as a four-lane facility with no improvements or changes to the existing conditions along the corridor, and four build alternatives which explored intersection improvements as an alternative to widening, as well as different widening configurations along the corridor. From this alternatives analysis, the recommended alternative included a combination of each of the build alternatives for different segments of the corridor. The City also analyzed 18 potential alternatives to its existing transportation network in development of the 2030 Master Transportation Roadway Plan that ultimately identified widening of College Boulevard as a proposed change from the existing transportation network.
Bicycle Facilities		
Goal 1	Provide a safe, interconnected network of bicycle facilities within Oceanside for recreational and commuter users.	**Consistent**. As described in Chapter 3, Project Description, one of the project's objectives is to provide enhanced access for bicyclists. Please refer to 2.71 Circulation Objective (Land Use Element) above.
Policy 6.3	The City shall integrate bicycle and pedestrian planning and safety considerations more fully into the planning and design of the roadway network, transit facilities, public buildings, and parks.	**Consistent**. As described in Chapter 3, Project Description, one of the project's objectives is to provide enhanced access for bicyclists and pedestrians.
Policy 6.5	The City shall plan Class II bicycle lanes into all prime arterial, major arterials, and secondary collectors where safe and appropriate as determined by City staff.	**Consistent**. The project would maintain and extend existing Class II bike lanes on College Boulevard, which is designated as a Major Arterial.

Table 4.10-1
City of Oceanside General Plan Policy Consistency Evaluation

Policy Number	Policy Text	Consistency Analysis
	Pedestrian Facilities	
Goal 1	Develop and maintain a safe pedestrian network that is free of barriers and hazards; that has sufficient lighting, signs, signals, street crossings, and buffers from vehicular traffic in order to create a sense of security for the pedestrian. Utilize corrective measures through engineering, education, and enforcement.	**Consistent**. As described in Chapter 3, Project Description, one of the project's objectives is to provide enhanced access for pedestrians. The project would include pedestrian improvements such as new crosswalk striping and installation of traffic-calming chokers.
Goal 3	Develop a complete pedestrian network that provides continuous and convenient access to transit, employment centers, retail, neighborhoods, schools, beaches, parks, public places and other essential pedestrian destinations.	**Consistent**. As described in Chapter 3, Project Description, one of the project's objectives is to provide enhanced access for pedestrians and reconstructed sidewalks where widening is proposed on College Boulevard.
Goal 4	Ensure that pedestrian facilities meet local, State and federal access requirements. Utilize "Universal Access" principles that go beyond the minimum standards, since all pedestrians benefit from this approach.	**Consistent**. As described in Chapter 3, Project Description, one of the project's objectives is to provide enhanced access for pedestrians. The Planning Commission, City Council, and City's traffic engineer would also review the proposed project to ensure that all required standards are met.
Objective i.	Support projects, improvements, and programs that create a safer pedestrian walking environment.	**Consistent**. As described in Chapter 3, Project Description, one of the project's objectives is to provide enhanced access for pedestrians. The project would include pedestrian improvements such as new crosswalk striping and installation of traffic-calming chokers.
Policy 7.2	The City shall encourage pedestrian facility improvements such as signs, signals, streets crossings, and proper lighting especially in areas where there is high pedestrian activity and/or safety issues.	**Consistent**. Please refer to Policy 7.2, above.
Policy 7.7	The City shall require the construction of a minimum five-foot wide sidewalk in all new developments and street improvements but will encourage sidewalk widths that go beyond the minimum five-foot ADA standards in areas with high pedestrian activity.	**Consistent**. Existing sidewalks along College Boulevard range in width from 4 to 6 feet; the project would include reconstruction of sidewalks to a minimum of 5 feet in width along the length of the corridor proposed for widening.
	Traffic Calming	
Goal 1	Improve street safety, promote community character, and enhance the quality of life in Oceanside neighborhoods.	**Consistent.** Please refer to 2.71 Circulation Objective (Land Use Element) above.

Table 4.10-1
City of Oceanside General Plan Policy Consistency Evaluation

Policy Number	Policy Text	Consistency Analysis
Policy 8.3	The City shall, where feasible, integrate traffic calming features into the roadway design of local streets in new development areas.	**Consistent**. Please refer to Objective i. above.
Policy 8.4	The City shall locate traffic calming devices in new, in-fill, or redevelopment areas in order to minimize the potential for cut-through or high speed traffic.	**Consistent**. Please refer to Objective i. above.
Policy 8.5	The City shall consider pedestrian enhancements at intersections with high pedestrian activity.	**Consistent**. Please refer to Objective i. above.
Energy Climate Action Element		
Smart Growth and Multimodal Transportation		
GOAL ECAE-2a	THE CITY WILL ACCOMMODATE FUTURE POPULATION, EMPLOYMENT, AND HOUSING GROWTH WITHIN ALREADY URBANIZED AREAS.	**Consistent**. See 2.71 Circulation Objective Land Use Element, 2.711 Master Street Plan Objective.
Policy ECAE-2c-6	Where appropriate, implement "complete street" right-of-way improvements such as those recommended in the Coast Highway Vision and Strategic Plan.	**Consistent**. See Land Use Element 2.71 Circulation Objective, Land Use Element 2.711 Master Street Plan Objective, and Long Range Policy Direction Goal 2.
Water Conservation		
Policy ECAE-4a-10	Promote the expansion of the City's tree canopy, on both private property and within the public right-of-way, as means of reducing stormwater runoff, evapotranspiration, heat gain, and other phenomena that impact water supply and demand.	**Consistent.** According to Section 4.1, Aesthetics, the proposed project would install tree and shrub species currently represented in the median. The new vegetation would consist of low-maintenance, drought tolerant species that would conceivably lower irrigation water use.
Urban Greening		
GOAL ECAE-5a	BY 2035, THE CITY WILL EXPAND ITS TREE CANOPY TO AT LEAST 25 PERCENT COVERAGE CITYWIDE.	**Consistent.** See Policy ECAE-4a-10.
GOAL ECAE-5b	THE CITY WILL INCREASE PERMEABLE AND PLANTED SURFACE WITHIN DEVELOPED AREAS.	**Consistent.** See Policy ECAE-4a-10.
GOAL ECAE-5c	IN THE DEVELOPMENT REVIEW PROCESS, THE CITY WILL CONTINUE TO RECOGNIZE LANDSCAPE AS AN INTEGRAL COMPONENT OF SITE DESIGN.	**Consistent.** See Policy ECAE-4a-10.

Table 4.10-1
City of Oceanside General Plan Policy Consistency Evaluation

Policy Number	Policy Text	Consistency Analysis
Economic Development Element		
Quality of Life		
Policy EDE-1a-2	Encourage enhancement of the visual quality of the City, including quality design and expansion of the City's tree canopy, particularly at gateway locations and along commercial corridors where feasible.	**Consistent.** According to Section 4.1, Aesthetics, the proposed project would not substantially degrade the visual character of the site or the surroundings and impacts would be less than significant. The proposed project has been planned to provide visual and functional compatibility with adjacent residential neighborhoods, other nearby land uses, development, and natural features. See Policy ECAE-4a-10.

Table 4.10-2
San Diego Associated Governments (SANDAG) Regional Plan Consistency Evaluation

Policy Objectives	Consistency Analysis
Habitat and Open Space Preservation	
Focus growth in areas that are already urbanized, allowing the region to set aside and restore more open space in our less developed areas.	**Consistent**. The proposed project is located in an urbanized area. The proposed project site is not zoned as open space, therefore, the proposed project would not convert open space land to a different land use.
Protect and restore our region's urban canyons, coastlines, beaches, and water resources.	The policy objectives related to urban canyons, coastlines, and beaches are not applicable, because the proposed project is not located near these resources. Potential impacts to Loma Alta Creek where it intersects with College Boulevard would be fully mitigated (Section 4.3, Biological Resources).
Healthy and Complete Communities	
Connect communities through a variety of transportation choices that promote healthy lifestyles, including walking and biking.	**Consistent.** The proposed project would include new striped crosswalks and would widen College Boulevard in order to extend bike lanes. The proposed project would provide a variety of travel choices, including walking and biking, and adequate roadways for automobiles and rapid transit.

4.11 NOISE

This section describes the existing noise setting of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed College Boulevard Improvement project (proposed project).

A Noise Technical Report, dated August 2019, was prepared by Dudek to analyze the existing noise environment in the project area and to determine the potential noise impacts of the proposed project. This section includes a summary of the analysis and findings of the Noise Technical Report (see Appendix J).

4.11.1 Existing Conditions

Noise Definitions and Criteria

Sound is mechanical energy transmitted by pressure waves in a compressible medium, such as air. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired. The sound-pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. The unit of measurement of sound pressure is a decibel (dB). Under controlled conditions in an acoustics laboratory, the trained, healthy human ear is able to discern changes in sound levels of 1 dB when exposed to steady, single-frequency signals in the mid-frequency range. Outside such controlled conditions, the trained ear can detect changes of 2 dB in normal environmental noise. It is widely accepted that the average healthy ear, however, can barely perceive noise level changes of 3 dB. A change of 5 dB is readily perceptible, and a change of 10 dB is perceived as twice or half as loud. A doubling of sound energy results in a 3 dB increase in sound, which means that a doubling of sound energy (e.g., doubling the volume of traffic on a road) would result in a barely perceptible change in sound level.

Since the human ear is not equally sensitive to all sound frequencies within the entire spectrum, noise levels at maximum human sensitivity are factored more heavily into sound descriptions in a process called “A-weighting,” the measurement of which is expressed as dBA. Hourly average noise levels are usually expressed as dBA L_{eq}, or the equivalent noise level over that period of time. Therefore, all sound levels discussed in this section are A-weighted. Because community receptors are more sensitive to noise intrusion during the evening and at night, state law requires that an artificial A-weighted decibel increment be added to quiet-time noise levels in a 24-hour noise descriptor called the community noise equivalent level (CNEL).

Groundborne vibration is a small, rapidly fluctuating motion transmitted through the ground, and can be described in terms of displacement, velocity, or acceleration. Displacement is the distance that a point on a surface moves away from its original static position; vibration velocity is the instantaneous speed that a point on a surface moves; and acceleration is the velocity’s rate of change. Each of these descriptors can be used to correlate vibration to environmental effects such as human response and building damage. Several basic measurement units are commonly used to describe the intensity of ground vibration. The peak particle velocity (PPV) or the root mean square (RMS) velocity is usually used to describe vibration amplitudes. PPV is defined as the maximum instantaneous peak of the vibration signal and RMS is defined as the square root of the average of the squared amplitude of the signal. PPV is more appropriate for evaluating potential building damage, whereas RMS is typically more suitable for evaluating human response. The units for PPV and RMS velocity are normally inches per second (in/sec). Often, vibration is presented and discussed in dB units. In this study, all PPV and RMS velocity levels are in in/sec and all vibration levels are in dB relative to one microinch per second (abbreviated as VdB).

Existing Noise Measurements

Noise measurements were conducted on and near the project site in September 2016 to characterize the existing noise environment. The daytime, short-term (1 hour or less) attended sound level measurements were taken with a Rion NL-52 sound-level meter. This sound-level meter meets the current American National Standards Institute (ANSI) standard for a Type 1 precision sound-level meter. The calibration of the sound level meter was verified before and after the measurements were taken, and the measurements were conducted with the microphone positioned approximately five feet above the ground.

Noise measurements were conducted at six locations, as shown in Figure 4.11-1, Noise Measurement and Modeling Locations. The noise measurements were conducted on September 7, 2016. The measurements were conducted with the measurement microphone positioned 5 feet above the ground. The measured average noise levels ranged from approximately 56 dBA L_{eq} at ST5 to 67 dBA L_{eq} at ST6. The primary noise sources at the measurement locations consisted of traffic along the adjacent roads. The measured average (L_{eq}) and maximum (L_{max}) noise levels are provided in Table 4.11-1, Measured Noise Levels.

Table 4.11-1
Measured Noise Levels

Receptors	Location/Address	Date	Time	L_{eq}[1] (dBA)	L_{max}[2] (dBA)
ST1	Side yard of residence at 3253 Camarillo Avenue	September 7, 2016	11:25 a.m.–11:35 a.m.	57.7	68.1
ST2	Rear yard of residence at 3193 Carr Drive	September 7, 2016	11:05 a.m.–11:15 a.m.	59.1	66.1
ST3	Front yard of residence at 2834 College Boulevard	September 7, 2016	10:43 a.m.–10:53 a.m.	64.2	74.8
ST4	Rear yard of residence at 2618 Hope Street	September 7, 2016	10:20 a.m.–10:30 a.m.	60.6	74.2

Table 4.11-1
Measured Noise Levels

Receptors	Location/Address	Date	Time	L_{eq}[1] (dBA)	L_{max}[2] (dBA)
ST5	Adjacent to residences at 1904 College Boulevard	September 7, 2016	9:50 a.m.–10:02 a.m.	56.3	67.7
ST6	Adjacent to Coastal Academy High School, 4183 Avenida De La Plata	September 7, 2016	9:30 a.m.–9:40 a.m.	67.3	80

Source: Noise Technical Report (Appendix J).
Notes:
1. Equivalent Continuous Sound Level (Time-Average Sound Level). L_{max} = Maximum Sound Level.

4.11.2 Relevant Plans, Policies, and Ordinances

4.11.2.1 Federal

Occupational Safety and Health Administration

With regard to noise exposure and workers, the federal Occupational Safety and Health Administration (OSHA) establishes regulations to safeguard the hearing of workers exposed to occupational noise (29 Code of Federal Regulations, Section 1910.95). OSHA specifies that sustained noise that is louder than 85 dBA (8-hour time-weighted average) can be a threat to workers' hearing, and, if worker exposure exceeds this amount, the employer must develop and implement a monitoring program (29 Code of Federal Regulations, Section 1910.95(d)(1)).

Federal Aviation Administration Standards

Enforced by the Federal Aviation Administration (FAA), Code of Federal Regulations (CFR) Title 14, Part 150 prescribes the procedures, standards and methodology governing the development, submission, and review of airport noise exposure maps and airport noise compatibility programs, including the process for evaluating and approving or disapproving those programs. Title 14 also identifies those land uses which are normally compatible with various levels of exposure to noise by individuals. The FAA has determined that interior sound levels up to 45 dBA Ldn (or CNEL) are acceptable within residential buildings. The FAA also considers residential land uses to be compatible with exterior noise levels at or less than 65 dBA Ldn (or CNEL).

Federal Highway Administration Standards

CFR Title 23, Part 772 sets procedures for the abatement of highway traffic noise and construction noise. Title 23 is implemented by the Department of Transportation Federal Highway Administration (FHWA). The purpose of this regulation is to provide procedures for noise studies and noise abatement measures to help protect the public health and welfare, to supply noise abatement criteria, and to establish requirements for information to be given to local officials for use in the planning and design of highways. All highway projects which are developed in conformance with this regulation shall be deemed to be in conformance with the Department of Transportation FHWA Noise Standards. Title 23 establishes 67 dBA as the worst-case hourly average noise level standard for impacts of federal highway projects to land uses including residences, recreational uses, hotels, hospitals, and libraries.

Federal Transit Administration Standards and Federal Railroad Administration Standards

Although the Federal Transit Administration (FTA) standards are intended for federally funded mass transit projects, the impact assessment procedures and criteria included in the FTA Transit Noise and Vibration Impact Assessment Manual (FTA 2018) are routinely used for projects proposed by local jurisdictions. The FTA and Federal Railroad Administration have published guidelines for assessing the impacts of groundborne vibration associated with rail projects, which have been applied by other jurisdictions to other types of projects. The FTA measure of the threshold of architectural damage for conventional sensitive structures from groundborne vibration is 0.2 inches/second PPV.

4.11.2.2 State

California Noise Control Act of 1973

Pursuant to Sections 46000 through 46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973, the State Legislature finds and declares that excessive noise is a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also finds that there is a continuous and increasing bombardment of noise in urban, suburban, and rural areas. As also declared in the California Noise Control Act, the State has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the State to provide an environment for all Californians that is free from noise that jeopardizes their health or welfare.

As with federal standards, State regulations (8 California Code of Regulations, Section 5095) address worker exposure noise levels. These regulations limit worker exposure to noise levels of 85 dBA or lower over an 8-hour period. The State has not established noise levels for non-work-related environments.

California Noise Insulation Standards (California Code of Regulations, Title 24)

Title 24 establishes an interior noise standard of 45 dBA for multi-family residential structures. The State Department of Health Services has developed guidelines for outdoor community noise acceptability for use by local agencies (OPR 2003). Selected relevant levels are listed below:

- Below 60 dBA CNEL: normally acceptable for low-density residential use
- 50 to 70 dBA: conditionally acceptable for low-density residential use
- Below 65 dBA CNEL: normally acceptable for high-density residential use
- 60 to 70 dBA CNEL: conditionally acceptable for high-density residential, transient lodging, churches, educational and medical facilities

California Department of Health Services Guidelines

The State Department of Health Services has developed guidelines of community noise acceptability for use by local agencies (OPR 2003). Selected relevant levels are listed here:

- Below 60 dBA CNEL: normally acceptable for low-density residential use
- 50 to 70 dBA: conditionally acceptable for low-density residential use
- Below 65 dBA CNEL: normally acceptable for high-density residential use and transient lodging
- 60 to 70 dBA CNEL: conditionally acceptable for high-density residential, transient lodging, churches, educational, and medical facilities.

4.11.2.3 Local

City of Oceanside General Plan Noise Element

The Noise Element of the City’s General Plan (City of Oceanside 1974) establishes noise guidelines for various land uses. The Noise Element provides the following limitations on construction noise:

1. It should be unlawful for any person within any residential zone of 500 feet there from to operate any pile driver, power shovel, pneumatic, power hoist, or other construction equipment between 8:00 p.m. and 7:00 a.m. generating an ambient noise levels of 50 dBA at any property line unless an emergency exists.
2. It should be unlawful for any person to operate any construction equipment at a level in excess of 85 dBA at 100 feet from the source.

3. It should be unlawful for any person to engage in construction activities between 6:00 p.m. and 7:00 a.m. when such activities exceed the ambient noise level by 5 dBA. A special permit may be granted by the Director of Public Works if extenuating circumstances exist.

In addition, the Noise Element addresses nuisance noise and states that it should be unlawful for any person to make or continue any loud, unnecessary noise that causes annoyance to any reasonable person of normal sensitivity.

The City's Noise Element establishes a policy for exterior sensitive areas to be protected from high noise levels. The Noise Element sets 65 dBA CNEL for the outdoor areas and interior noise levels of less than 45 dBA CNEL as the "normally acceptable" level.

For interior noise, the Noise Element also establishes 45 dBA CNEL as the maximum acceptable level for habitable rooms when exterior noise levels are 60 dBA CNEL or more. If windows and doors are required to be closed to meet this standard, then mechanical ventilation (i.e., air conditioning) shall be included in the project design.

Noise Element Policies

- Noise levels shall not be so loud as to cause danger to public health in all zones except manufacturing zones where noise levels may be greater.
- Noise shall be controlled at the source where possible.
- Noise shall be intercepted by barriers or dissipated by space where other controls fail or are impractical.
- Noise levels shall be considered in any change to the Land Use and Circulation Elements of the General Plan.
- Noise levels of City vehicles, construction equipment, and garbage trucks shall be reduced to acceptable levels.

City of Oceanside Noise Ordinance

Chapter 38 of the Oceanside Municipal Code governs operational noise and contains the maximum one-hour average sound levels for various land uses for operational noise (Table 4.11-2, City of Oceanside Exterior Noise Standards) generated by sources within or affecting each land use zone. The Noise Ordinance sets an allowed level for single-family and medium-density residential areas to 50 dBA L_{eq} from 7:00 a.m. to 9:59 p.m., and 45 dBA L_{eq} from 10:00 p.m. to 6:59 a.m. High density residential areas are limited to 55 dBA L_{eq} from 7:00 a.m. to 9:59 p.m. and 50 dBA L_{eq} form 10:00 p.m. to 6:59 a.m. In commercial zones, noise generation is limited to

65 dBA L_{eq} from 7:00 a.m. to 9:59 p.m. and 60 dBA L_{eq} form 10:00 p.m. to 6:59 a.m. Where two land use zones abut one another, the more restrictive noise limit is enforced along the common boundary between the two land uses.

Table 4.11-2
City of Oceanside Exterior Noise Standards

Zone	Applicable Limit (decibels) [1]	Time Period
Residential Estate, Single-Family Residential, Medium Density Residential, Agricultural, Open Space	50 45	7:00 a.m. to 9:59 p.m. 10:00 p.m. to 6:59 a.m.
High Density, Residential Tourist	55 50	7:00 a.m. to 9:59 p.m. 10:00 p.m. to 6:59 a.m.
Commercial	65 60	7:00 a.m. to 9:59 p.m. 10:00 p.m. to 6:59 a.m.
Industrial	70 65	7:00 a.m. to 9:59 p.m. 10:00 p.m. to 6:59 a.m.
Downtown	65 55	7:00 a.m. to 9:59 p.m. 10:00 p.m. to 6:59 a.m.

[1] One-hour average sound level.
Source: Oceanside Municipal Code, Section 38.12

Construction activities are subject to Section 38.17 of the Noise Ordinance, which specifically prohibits the operation of any pneumatic or air hammer, pile driver, steam shovel, derrick, steam, or electric hoist, parking lot cleaning equipment or other appliance, the use of which is attended by loud or unusual noise, between the hours of 10:00 p.m. and 7:00 a.m..

Section 38.16 prohibits nuisance noise as recommended in the General Plan Noise Element. It is unlawful for any person to make, continue or cause to be made or continued, within the limits of the City of Oceanside, any disturbing, excessive, or offensive noise which causes discomfort or annoyance to reasonable persons of normal sensitivity.

City of Oceanside Engineers Design and Processing Manual

Construction noise in Oceanside is governed by the City's Engineers Design and Processing Manual (City of Oceanside 2004). Construction is normally limited to the hours between 7:00 a.m. and 6:00 p.m., Monday through Friday.

Vibration Standards

Numerous public and private organizations and governing bodies have provided guidelines to assist in the analysis of groundborne noise and vibration. To date, the City has not adopted a threshold for groundborne vibration impacts. However, Caltrans has adopted vibration standards to evaluate potential impacts related to construction activities. Information from Caltrans indicates that continuous vibrations with a peak particle velocity of approximately 0.1 inches/second begin to cause annoyance. For purposes of this analysis, the Caltrans threshold of 0.1 inches/second is used to evaluate the vibrational construction-related and operational impacts of the proposed project. For engineered concrete and masonry buildings, 0.3 inches/second PPV is a limit where building damage is possible. For non-engineered timber and masonry building, the building damage vibration limit is 0.2 inches/second PPV (Caltrans 2013). Hence, the use of the 0.1 inches/second vibration annoyance threshold is also meant to be very conservative in avoiding damage to existing structures in the project vicinity.

4.11.3 Thresholds of Significance

Based on the significance criteria established by Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.) and the City of Oceanside, a significant impact related to noise would generally occur as a result of project implementation if the project would result in:

1. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
2. Exposure of persons to excessive groundborne vibration or groundborne noise levels.
3. For a project located within the vicinity of a private airstrip or an airport land use plan or where such a plan has not been adopted within two miles of a public airport or public use airport, result in the exposure of people residing or working in the project area to excessive noise levels.

4.11.3.1 Methodology

Ambient noise measurements were conducted to characterize the existing noise environment at locations in the project vicinity. The assessment of direct and indirect noise impacts of the project also used criteria established in the noise regulations as summarized in Section 3.2, State. Calculated traffic noise levels at adjacent noise-sensitive land uses with the proposed project were compared to the noise element limits, while short-term construction noise was compared to the Noise Ordinance and City’s Engineers Design and Processing Manual.

The noise levels associated with roadway traffic for each of the three project alternatives (as discussed in Section 1.3, Project Description) were determined based on data obtained from the traffic impact analysis (TIA) (see Appendix K) for the proposed project. The Federal Highway Administration’s Traffic Noise Model (TNM), Version 2.5 (FHWA 2004) noise modeling software was used to model the traffic noise that would result from the roadway traffic volumes identified in the TIA. Field noise measurements and manual traffic counts were used to calibrate the model to ensure model assumptions and inputs accurately reflect existing conditions, and that the model will reliably calculate traffic noise levels from predicted future traffic volumes.

Noise levels resulting from the proposed construction activities were calculated using the Federal Highway Administration (FHWA) Roadway Construction Noise Modeling software (FHWA 2008).

4.11.4 Impacts Analysis

Would the project result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction Noise Impacts

Construction noise is a temporary phenomenon. Construction noise levels will vary from hour to hour and day to day, depending on the equipment in use, the operations being performed, and the distance between the source and receptor.

Construction is expected to include demolition, clearing and excavation, grading, trenching, paving and roadway construction. Construction equipment with substantially higher noise-generation characteristics (such as pile drivers, rock drills, blasting equipment) would not be necessary. Once initiated, construction is anticipated to last for approximately six (6) months. Construction of the project would generally occur during daytime hours (7:00 a.m. to 5:00 p.m.) in accordance with the Oceanside Municipal Code however, select activities or tasks may require work during evening and nighttime hours.

The Federal Highway Administration (FHWA) has developed the Roadway Construction Noise Model (RCNM) software, which can be used to evaluate construction noise from any major construction proposal. RCNM contains a large database of construction equipment, including noise generation level and load factor (percentage of time each piece of equipment is active on a typical construction site). The RCNM was used to assess construction noise impacts of the proposed project.

Construction noise is difficult to quantify because of the many variables involved, including the specific equipment types, size of equipment used, percentage of time in use, condition of each piece of equipment, and number of pieces of equipment that will actually operate on site. The construction vehicle assemblage would include standard equipment such as dozers, tractors, loaders, backhoes, excavators, graders, scrapers, trenchers, lifts, paving equipment, rollers, compressors, and miscellaneous trucks. Specified and measured noise level ranges for various pieces of construction equipment at a distance of 50 feet are presented in Table 4.11-3, Typical Construction Equipment Noise Levels. The noise values presented are used as reference noise data for respective equipment in RCNM. The construction equipment is expected to be spread out over the entire site, with some equipment operating along the perimeter of the site while the rest of the equipment may be located several hundred feet further away from the noise sensitive receptors.

Table 4.11-3
Typical Construction Equipment Noise Levels

Equipment Description	Acoustical Use Factor (%)	Measured L_{max} @50ft (dBA, slow)
All Other Equipment > 5 HP (spec)	50	85
Auger Drill Rig	20	84
Backhoe	40	78
Compactor (ground)	20	83
Compressor (air)	40	78
Concrete Saw	20	90
Crane	16	81
Dozer	40	82
Dump Truck	40	76
Excavator	40	81
Flat Bed Truck	40	74
Front End Loader	40	79
Generator	50	81
Generator (<25KVA, VMS signs)	50	73
Gradall	40	83
Grader *(spec)	40	85
Man Lift	20	75
Paver	50	77
Pickup Truck	40	75
Pneumatic Tools	50	85
Pumps	50	81
Roller	20	80
Scraper	40	84
Tractor *(spec)	40	84
Warning Horn	5	83
Welder / Torch	40	74

* (spec) indicates that the L_{max} is based on common specifications for this equipment, not measured data.
Source: FTA 2018.

Based upon Table 4.11-3, construction equipment noise levels are not anticipated to exceed 85 dBA at 100 feet. The piece of equipment with the highest noise level shown in Table 4.11-3 is the concrete saw with a maximum level of 90 dBA at 50 feet. At 100 feet, the expected maximum noise level would drop to approximately 84 dBA. Thus, all of the expected construction equipment would comply with the limitation on construction noise in the City Noise Element.

Construction would primarily occur during the City's allowable hours of construction activities. The City's Engineers Design and Processing Manual states that construction can occur Monday through Friday from 7:00 a.m. to 6:00 p.m.

Table 4.11-4, Typical Construction Equipment Noise Levels, shows the anticipated equipment use by phase for the construction of the project.

Table 4.11-4
Typical Construction Equipment Noise Levels

Construction Phase Name	Equipment	Number of pieces of Equipment
Drainage / Utilities / Subgrade	Air compressors	1
	Generator sets	1
	Graders	1
	Plate compactors	1
	Pumps	1
	Forklifts	1
	Scrapers	1
	Signal boards	5
	Tractors / loaders / backhoes	3
Paving	Pavers	1
	Paving equipment	1
	Rollers	2
	Signal Boards	5
	Tractors/loaders/backhoes Forklifts	3

Table 4.11-5, Summary of Construction Noise Modeling Results, shows the calculated noise levels at nearby noise-sensitive receptors (i.e., the residential property lines to the southwest of the project site) during construction phases for the project, employing the RCNM software and based on construction equipment listed in Table 4.11-4. The noise levels shown in Table 4.11-5 take into account operation of multiple pieces of construction equipment simultaneously for the L_{eq} results.

Worst-case conditions occur when construction is happening near the project boundary closest to the noise sensitive receptors (such as the closest residence).Typical conditions represent noise levels if construction were being conducted near but not directly adjacent to the receiver, as listed in the right-hand column in Table 4.11-5.

Table 4.11-5
Summary of Construction Noise Modeling Results

Construction Phase	L_{eq} (dBA)	
	Nearest Source-Receiver Distance (Within approximately 30 feet)	*Typical Source-Receiver Distance (Within Approximately 250 feet)*
Drainage / Utilities / Subgrade	90	76
Paving	87	75

Source: Appendix J

As the table shows, the highest noise levels are expected to occur during the Drainage / Utilities / Subgrade Phase. Construction-related noise levels could reach up to 90 dBA L_{eq} at residential properties for the relatively brief periods (at any one location) when construction work takes place at or near the closest project work area. More typically (i.e., when construction takes place in the vicinity but not at the closest work area), construction noise levels are estimated to approximately 75 to 76 dBA L_{eq}. Although construction noise would not exceed the City's noise standards since it would comply with City's Code of Ordinances, noise levels could still be relatively high and could be considered a temporary substantial increase to those more sensitive to noise. As such, the construction of the project would result in a potentially significant temporary impact (**Impact NOI-1**). Mitigation Measures **MM-NOI-1** and **MM-NOI-2** have been provided (see Section 4.11.5, below) and would reduce the impact to less than significant.

Traffic Noise Impacts

The noise levels associated with roadway traffic for each of the three project alternatives (as discussed in Section 1.3) were determined based on data obtained from the traffic impact report (see Appendix K) for the proposed project. The Federal Highway Administration's Traffic Noise Model (TNM), Version 2.5 (FHWA 2004) noise modeling software was used to model the traffic noise that would result from the roadway traffic volumes identified in the TIA.

The results of the traffic noise modeling for the Existing and Existing plus Project scenarios are summarized in Table 4.11-6, Summary of Existing and Existing Plus Project Traffic Noise Levels. Receiver locations (shown on Figure 4.11-1) consisted of the measurement locations ST1 – ST6, as well as four additional modeled-only locations (M1 – M4) in order to assure that all eight roadway segments were assessed. As shown in Table 4.11-6, the increase in noise levels resulting from the project would be 1 dB or less, which is below the discernible level of change for the average human ear in the context of community noise (i.e., outside of a listening lab or other controlled conditions). Thus, a less than significant impact is expected for project-related off-site traffic noise increases affecting existing residences in the vicinity.

Table 4.11-6
Summary of Existing and Existing Plus Project Traffic Noise Levels

Receiver; Adjacent Roadway Segment	CNEL (dB)		
	Existing	*Existing + Project*	*dB Change*
ST1; Segment 7	59	59	0
ST2; Segment 7	61	61	0
ST3; Segment 6	67	68	1
ST4; Segment 5	63	63	0
ST5; Segment 3	60	60	0
ST6; Segment 3	70	70	0
M1; Segment 8	68	68	0
M2; Segment 4	64	64	0
M3; Segment 2	53	53	0
M4; Segment 1	65	65	0

Source: Noise Technical Report (Appendix J)

None of the modelled off-site receptors would experience noise levels that increase from below 65 dBA CNEL to greater than 65 dBA CNEL. Since the limit of acceptable exterior noise exposure for residences is 65 dBA CNEL, project-related traffic noise increases would not cause traffic noise exposure at existing residences to exceed an established standard. Therefore, the permanent impact of the proposed project on traffic noise would be less than significant.

Cumulative Noise Impacts Associated with Project Traffic

The changes in cumulative (i.e., existing plus cumulative projects) traffic noise levels associated with the project and alternatives are considered in this section. Table 4.11-7, Summary of Cumulative and Cumulative Plus Project Traffic Noise Levels, shows the modeling results for Year 2035 and Year 2035 plus project scenarios.

Table 4.11-7
Summary of Cumulative and Cumulative Plus Project Traffic Noise Levels

Receiver	CNEL (dB)				
	Future Conditions (2035) with Existing Geometry (A)	Future (2035) Conditions with Proposed Project (B)	dB Change (B-A)	Future (2035) Conditions with GP Buildout Geometry (C)	dB Change (C-A)
ST1	59	59	0	60	1
ST2	61	62	1	62	1
ST3	68	68	0	68	0
ST4	63	64	1	64	1
ST5	61	61	0	61	0

Table 4.11-7
Summary of Cumulative and Cumulative Plus Project Traffic Noise Levels

Receiver	CNEL (dB)				
	Future Conditions (2035) with Existing Geometry (A)	Future (2035) Conditions with Proposed Project (B)	dB Change (B-A)	Future (2035) Conditions with GP Buildout Geometry (C)	dB Change (C-A)
ST6	71	71	0	71	0
M1	68	68	0	68	0
M2	65	65	0	65	0
M3	54	54	0	54	0
M4	65	65	0	65	0

Source: Noise Technical Report (Appendix J)

As shown in Table 4.11-7, in either of the Future (2035) build scenarios (i.e., columns B and C), the change in traffic noise levels at adjacent noise-sensitive receivers from existing conditions would be 1 dB or less. This change in noise levels is less than the threshold of perception for most people. In addition, none of the modelled receivers would experience noise levels that increase from below 65 dBA CNEL (the City's exterior residential noise standard) to greater than 65 dBA CNEL because of the project. Therefore, the permanent cumulative impact of the proposed project on traffic noise would be less than significant.

Would the project result in the generation of excessive groundborne vibration or groundborne noise levels?

The heavier pieces of construction equipment used at this site would include dozers, graders, and pavers. Based on published vibration data, the anticipated construction equipment would generate a peak particle velocity of approximately 0.089 inch/second or less at a distance of 25 feet (FTA 2018).

Information from Caltrans (Caltrans 2013) indicates that continuous vibrations with a peak particle velocity of approximately 0.1 inch/second begin to annoy people. Groundborne vibration is typically attenuated over short distances. The closest existing residences would be approximately 30 feet or more from the construction area. At a distance of 30 feet, the peak particle velocity from construction would be approximately 0.068 inch/second, and thus would be below the annoyance threshold of 0.1 inch/second and below the damage threshold of 0.2 inch/second. Therefore, impacts related to vibration from construction activities would be less than significant.

For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The project area is not located within the vicinity of a private airstrip. The nearest airport to the project is Oceanside Municipal Airport, located approximately 3.5 miles to the west of the project site at Old Grove Road. The proposed project corridor is not located within 2 miles of any airport and would not expose people residing or working in the area to excessive noise levels associated with an airport. Therefore, the proposed project would result in no impact related to airports.

4.11.5 Mitigation Measures

The following mitigation measures would reduce temporary impacts from construction noise to a less than significant level.

MM-NOI-1 The City and/or its construction contractor shall comply with the following measures during construction:

1. Construction activities shall not occur between the hours of 6:00 pm and 7:00 am Monday through Friday. In the event that construction is required to extend beyond these times, extended hours permits shall be required.
2. Pumps and associated equipment (e.g., portable generators etc.) shall be shielded from sensitive uses using local temporary noise barriers or enclosures or shall otherwise be designed or configured so as to minimize noise at nearby noise-sensitive receivers.
3. Staging of construction equipment shall not occur within 20 feet of any noise- or vibration-sensitive land uses.
4. All noise-producing equipment and vehicles using internal combustion engines shall be equipped with mufflers; air-inlet silencers where appropriate; and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specification. Mobile or fixed “package” equipment (e.g., arc-welders, air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment.
5. All mobile or fixed noise-producing equipment used for the project that are regulated for noise output by a local, state, or federal agency shall be in compliance with regulations.

6. Idling equipment shall be kept to a minimum and moved as far as practicable from noise-sensitive land uses.
7. Electrically powered equipment shall be used instead of pneumatic or internal combustion powered equipment, where feasible.
8. Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors.
9. The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be used for safety warning purposes only.

MM-NOI-2 Effective communication with local residents shall be maintained prior to and during construction. Specifically, the City shall inform local residents of the schedule, duration, and progress of the construction. Additionally, residents shall be provided contact information for noise- or vibration-related complaints.

4.11.6 Level of Significance after Mitigation

With implementation of mitigation measures **MM-NOI-1** and **MM-NOI-2**, short-term (temporary) noise impacts from construction activities (**Impact NOI-1**) would less than significant.

DUDEK

SOURCE: SANGIS 2017

FIGURE 4.11-1

Noise Measurement and Modeling Locations

College Boulevard Improvements Project EIR

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4.12 PUBLIC SERVICES

This section describes the existing setting of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project.

4.12.1 Existing Conditions

Fire Protection

OFD provides fire protection services to the City. OFD's mission is "to meet and exceed community needs and expectations through the preservation and protection of life, property, and the environment" (City of Oceanside 2019a). OFD employs 126 personnel and support staff in the following positions:

- Fire chief
- Deputy chiefs
- Division chiefs
- Battalion chiefs
- Captains
- Engineers
- Firefighter/paramedics
- Lifeguards
- Fire marshal
- Fire safety specialists/investigators
- Fire inspectors
- Fire plans examiner
- Assistant training officers
- Administrative support staff

OFD owns and operates eight fire stations within their service area. At these eight fire stations, the following apparatus are in service 24 hours a day, 365 days a year:

- 6 fire engines
- 1 quint ladder truck
- 1 tiller truck
- 5 ambulances
- 3 brush engines
- 1 brush patrol
- 1 water tender
- 1 battalion chief command vehicle
- 1 command and interoperability trailer
- 1 incident support trailer
- 1 mass casualty response vehicle
- 1 confined space trailer

Eight department firehouses are located throughout the City and of these stations, the closest to the project site are Fire Station 8 and Fire Station 4. Fire Station 8 is located approximately 0.35 miles west of the College Boulevard/Oceanside Boulevard intersection. Fire Station 4 is located approximately 0.60 mile southeast of the College Boulevard and Barnard Drive/Waring Road intersection at 3990 Lake Boulevard. OFD indicates, "the minimum response standard for 911 medical emergencies in the City is to arrive within five minutes, 90% of the time." Further, the City of Oceanside's General Plan Public Safety Element indicates a goal of maintaining an Insurance Services Office (ISO) rating of Class 5 City wide.

Police Protection

OPD provides police protection services to the City with a mission "to work with the community to build trust and provide quality service that actively prevents crime, reduces the fear of crime and promotes safety." OPD employs 325 personnel and staff support in the following positions:

- Police Chief
- Captains
- Lieutenants
- Sergeants
- Officers
- Communications Manager
- Dispatchers
- Records Manager
- Records Technicians
- Field Evidence Technicians
- Community Services Officers
- Crime Prevention Specialist
- Evidence and Property Technicians
- Finance and Training Manager
- Program Specialists
- Support Staff

OPD owns and operates one police station within their service area. The OPD fleet consists of the following assets:

- 63 marked patrol vehicles
- 50 unmarked sedans and utility vehicles
- Armored Rescue Vehicle
- SWAT Equipment Truck
- Crisis Negotiation Van
- Prisoner Transport Van
- Mobile Command Center
- 9 marked motorcycles
- 2 staff transport vans
- 4 patrol vessels
- 2 all-terrain vehicles

OPD handles more than 110,000 call for service each year (F. Armijo, personal conversation, March 2018).

OPD has a goal of providing a maximum 5-minute response time to all priority 1 and 2 emergency service calls (City of Oceanside 1990). Based on 2017 data, the citywide average response time for Priority One calls, which include life-threatening emergencies, was 5 minutes 87.85% of the time.

OPD is located at 3855 Mission Avenue, Oceanside, approximately 2.5 mile northwest of the project site.

Schools

The Oceanside Unified School District (OUSD) provides education services within City boundaries. The District Office is located at 2111 Mission Avenue, Oceanside, California 92508. As of September 9, 2019, OUSD operates and maintains 16 elementary schools, 4 middle schools, 2 high schools, and 1 alternative high school for approximately 17,617 students (OUSD 2019).

Parks and Recreation

The City of Oceanside's parks and recreational facilities consists of five recreation centers, two senior centers, 15 community parks, 17 neighborhood parks, one regional park, five skate parks, two pools, and two gymnasiums. In addition, 3.5 miles of beach and other recreational/education facilities are located in the City (City of Oceanside 2019b). The City's General Plan Recreational Trails Element focuses on the provision and maintenance of pedestrian, bicycle, and equestrian trail systems throughout the City (City of Oceanside 1995). The City's General Plan Environmental Resource Management Element provides the City's recreational standards for parks, which includes the dedication of 5 acres of park per 1,000 residents (City of Oceanside 1975a).

The Parks and Recreation facilities nearest to the project site consist of Joseph Sepulveda Park, which includes a baseball field, basketball court, and playground and is located approximately 0.20 mile west of the College Boulevard/Marvin Street intersection. In addition, John Landes Recreation Center is located at 2855 Cedar Road (approximately 0.35 mile east of the College Boulevard/Marvin Road intersection) and Rancho Del Oro Community Park is located approximately 0.40 mile north of the College Boulevard/Old Grove Road intersection.

Other Public Facilities

The Oceanside Public Library system provides library services to the City through two library locations and mobile libraries. The Civic Center Library is located at 330 North Coast Highway approximately 6.7 miles southwest of the project site. The Mission Branch Library is located at 3861-B Mission Avenue, Oceanside, California 92058, approximately 5.5 miles west of the project site at Old Grove Road. The City's General Plan Community Facilities Element provides guidelines and standards for library services that require 0.55 square feet of library floor area per resident, 3 staff members per 6,000 residents, and 3 items for every resident of the City (City of Oceanside 1990).

4.12.2 Relevant Plans, Policies and Ordinances

4.12.2.1 Federal

There are no federal plans, policies, and ordinances that are relevant to public services and the proposed project.

4.12.2.2 State

There are no state plans, policies, and ordinances that are relevant to public services and the proposed project.

4.12.2.3 Local

City of Oceanside General Plan

The State of California requires that each city draft and adopt a comprehensive General Plan that provides long-term plans, policies, goals, and objectives for development within the City. The City's General Plan serves as the primary planning source for all other plans adopted by the City. The City's General Plan is composed of multiple elements to address specific areas of development. Public services are addressed in the City's General Plan within the Community Facilities Element, Land Use Element, and Environmental Resource Management Element.

<u>Community Facilities Element</u>

The Community Facilities Element provides long-term policies for public services and utilities within the City, including parks, fire department, police department, libraries, water systems, municipal facilities, and schools. This element outlines adequate service ratios, maintenance policies, and future planning policies. The following are relevant objectives and policies from the City's General Plan Community Facilities Element (City of Oceanside 1990):

Park and Recreation Facilities Objective 1: To enrich the quality of life for all residents of Oceanside by providing adequate and accessible public park and recreation facilities, by providing constructive leisure opportunities, and by providing recreational experiences and programs that contribute to the total health of the individual while meeting the overall needs and desires of the community.

> **Parks and Recreation Policy 1.1:** The objectives and policies of the Park and Recreation Master Plan (1987) for City of Oceanside shall guide the acquisition and development of parks and recreation facilities in the City of Oceanside and shall be supplemented and modified by the following policies.

Parks and Recreation Policy 1.2: The City of Oceanside shall assist in the coordinated planning, development and maintenance of unique regional amenities within and adjacent to the community. These amenities include: Guajome Regional Park; the Oceanside Public Beach Area; the proposed greenway and bikeway along the San Luis Rey Corridor; and the Buena Vista lagoon. This regional recreational and open space amenity system shall be planned, developed and implemented in coordination with the existing system of parks throughout the City of Oceanside.

Parks and Recreation Policy 1.3: The City of Oceanside shall combine its park designation categories of Neighborhood, Community, and Special Use Parks into a single "Community Park" designation and shall strive to provide 5.0 acres of developed "Community Parks" per 1,000 residents within the City.

Library Facilities Objective 1: To provide and maintain adequate public library facilities, staffing, inventory of items and volumes, and related services for all residents of the City of Oceanside, within the State of California published guidelines of *California Libraries in the 1980's: Strategies for Service* as feasible.

Library Facilities Policy 2.1: The City of Oceanside, through the Oceanside Public Library Board of Trustees shall make reasonable efforts to provide and maintain the following library facilities and service standards within the City:

- Library Facilities floor area of 0.55 square feet per resident of the City of Oceanside;
- Accessibility for all Oceanside residents to a public library facility within ten (10) minutes in driving time or two (2) miles in distance, whichever is greater;
- A ratio of three (3) public library staff, consisting of one librarian plus two clerical staff, per 6,000 residents of the City of Oceanside; and
- A ratio of total items in the Oceanside library inventory of 3.0 items per resident of Oceanside.

Fire Department Objective 1: To protect the health, safety, and welfare of Oceanside residents and property through the provision of adequate fire protection and emergency medical services to all residences, businesses, and public facilities within the City; to identify and mitigate potential hazards to the community; and to prepare for, respond to, and aid in the recovery from emergencies related to fire, explosion, hazardous materials, rescue, and medical problems as well as natural disasters such as earthquakes, floods, and storms.

Fire Department Policy 3.1: The City of Oceanside shall strive to provide adequate Fire Department facilities through the achievement of the following facilities and services standards:

- A five (5) minute response time from fire stations to all developed areas within the City of Oceanside;
  - Personnel staffing at a minimum of four (4) people per company;
  - City maintained staffing levels adequate to achieve a locally desirable Insurance Service Office (ISO) rating; and
  - A maximum response time for paramedic units of eight (8) minutes in urban areas and fifteen (15) minutes in rural areas.

Fire Department Policy 3.10: In order to minimize fire hazards, the Oceanside Fire Department shall be involved in the review of development applications. Consideration shall be given to adequate emergency access, driveway widths, turning radii, fire hydrant locations, and Needed Fire Flow requirements.

Police Facilities Objective 1: To maintain law and order within the community and to create and sustain a personal sense of safety and security among Oceanside residents, businesses and visitors through provision of adequate law enforcement services, personnel, and facilities.

Police Facilities Policy 4.3: The City of Oceanside Police department shall strive to provide a maximum response time of five (5) minutes for all Priority I and II emergency service calls.

<u>Land Use Element</u>

The Land Use Element (City of Oceanside 1986) are guides to land use planning within the City and affect many of the issues addressed in the City's other General Plan elements.

Public Safety Element

The following are relevant objectives and policies from the City's General Plan Public Safety Element (City of Oceanside 1975b):

Public Safety Objective 1.15: To ensure an acceptable level of public safety for the prevention and reduction of loss of life and personal property of the citizens and visitors of Oceanside.

Public Safety Policy A: The City shall continually evaluate the acceptable level of risk to the public health, safety, and general welfare, and adjust policies accordingly.

Public Safety Policy B: The City shall provide available information, and encourage education of seismic, geologic, fire, flooding, and other hazards.

Fire Hazards Policies 1.153:

Fire Hazards Policy A: The City shall maintain the necessary equipment, personnel, and water supply levels to provide a class 4 or better insurance rating to the entire City.

Fire Hazards Policy B: Places of public assembly shall be designed with adequate, well-marked emergency exits, and have public address systems which would not be rendered inoperable because of fire.

4.12.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to public services are based on Based on the significance criteria established by Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.), a significant impact related to public services and facilities would generally occur as a result of project implementation if the project would:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, a need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of public services:
   a. Fire Protection
   b. Police Protection
   c. Schools
   d. Parks
   e. Other public facilities.

4.12.4 Impacts Analysis

Would the proposed project result in substantial physical adverse impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives of any of the public services: (a) fire protection, (b) police protection, (c) schools, (d) parks, or (e) other public facilities?

Fire Protection

The fire protection stations nearest to the project site are Fire Station 4 and Fire Station 8. Fire Station 8 is located approximately 0.35 miles west of the College Boulevard/Oceanside

Boulevard intersection. Fire Station 4 is located approximately 0.60 mile southeast of the College Boulevard and Barnard Drive/Waring Road intersection at 3990 Lake Boulevard.

The widening of College Boulevard from four lanes to six lanes between Olive Drive and Old Grove Road and roadway improvements between Waring Road and Marcella Street would generally help to alleviate the existing traffic congestion along the roadway and enhance curb/gutter systems and pedestrian and bicycle access. Reducing traffic congestion would also allow for better access for public emergency services and improve their response times. New or physically altered fire protection facilities would not be required during construction and operation of the proposed project. As such, no physical effects associated with new or physically altered facilities would occur and no impacts would occur.

Temporary impacts associated with restricted or reduced access along College Boulevard may result during construction of the project and could affect the ability of fire protection services to meet response time goals when responding to a service call. However, as identified in **PDF TRAF-1** (see Chapter 3, Project Description), implementation of the Traffic Control Plan would ensure that emergency response services would be provided with information concerning the closures and the applicable contact information to reach the on-site construction manager. This would allow prior notification to ensure that access through the construction area is possible upon arrival of an emergency vehicle. No long-term operational phase impacts to fire protection services would occur or a need for new or physically altered fire protection facilities would not be triggered by the proposed project. As such, with implementation of a Traffic Control Plan (**PDF-TRAF-1**) which is required by the City, impacts would be less than significant.

Police Protection

Located at 3855 Mission Avenue, the Oceanside Police Department is situated approximately 2.5 mile northwest of the intersection of College Boulevard and Old Grove Road. Demand for police protection is not anticipated to increase during construction and operation of the Proposed Project and the project would not trigger a need for new or physically altered police protection facilities. Construction activities and reduced access along College Boulevard could however affect the departments' ability to maintain service call response time goals. Implementation of a Traffic Control Plan during the construction phase (**PDF TRAF-1**) would ensure that emergency response services including police protection would be provided information concerning the closures and applicable contact information to reach the on-site construction manager. In addition, implementation of the Traffic Control Plan would provide for prior notification to ensure that access through the construction area is possible upon arrival of an emergency vehicle. Because the Proposed Project would not create physical impacts associated with the provision of new or altered police protection facilities, no impacts would occur.

Schools

Because no housing is proposed and no increase in students would occur because of implementation of road widening and improvement activities, the Proposed Project would not create physical effects associated with the provision of new or physically altered school facilities in the area. Therefore, no impacts would occur.

Parks and Recreation

The Proposed Project consists of roadway widening and general roadway and right-of-way improvements along College Boulevard between Waring Road and Old Grove Road. Construction and operation of the Proposed Project would not create physical effects associated with the provision of new or physically altered parks and recreation facilities. Therefore, no impacts would occur.

Other Public Facilities

Construction and operation of the Proposed Project would not affect existing demand for library facilities such that new or physically altered facilities would be required. Therefore, no impacts would occur.

4.12.5 Mitigation Measures

No impacts associated with physical effects resulting from the provision of new or physically altered governmental facilities would occur. **PDF-TRA-1** has been incorporated into the Proposed Project and would be implemented during construction. As such, no mitigation measures are required.

4.12.6 Level of Significance After Mitigation

No impacts to public services were identified in Section 4.12.4.

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4.13 TRAFFIC AND CIRCULATION

This section describes the existing traffic/circulation setting of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed College Boulevard Improvement project (proposed project).

This section is based on the 2016 Traffic Impact Analysis prepared for the project by Fehr & Peers, as revised in July and October 2019. The Traffic Impact Analysis (TIA) report analyzes how the proposed project may impact existing and future traffic and circulation within the project area. The TIA is included as Appendix K of this EIR.

4.13.1 Existing Conditions

Analysis Methodologies

The existing roadway conditions, as well as the project impact analysis, was evaluated based on the Highway Capacity Manual (HCM), published by the Transportation Research Board in 2000. Although the 2010 HCM was available at the time this report was published; the HCM 2000 methodology was used because it allows for calculating delay for intersections with unique signal timings or intersection configurations such as those included in the project study area. Differences in analysis results for intersection level of service (LOS) evaluation have been found to be negligible between the 2000 and 2010 HCM and are not expected to change the conclusions of this report.

The HCM methodology is based on an A to F level of service rating system, where LOS A represents free flowing traffic and LOS F represents heavily congested traffic. The ratings are assigned to roadway segments and intersections based on several factors. Typically LOS operations of A to D are considered acceptable, and operations of LOS E and F are considered unacceptable.

Intersections operations are evaluated in the AM and PM peak hours based on the seconds of delay experienced by motorists, as calculated utilizing *Synchro* (version 8.0) computer software. Stop controlled intersection analysis is based on the average control delay expressed in seconds per vehicle, and is calculated for each lane movement; the movement with the worst (i.e., longest) delay is presented.

Roadway segment LOS analysis is based on the functional classification of the roadway, the maximum capacity, roadway geometrics, and existing or forecast Average Daily Traffic (ADT) volumes. Peak hour roadway segment LOS is based on the urban street classification and the average travel speed on the roadway segment. Urban street LOS is based on average through-vehicle travel speed for the segment and is influenced by the number of signals per mile and by the intersection control delay.

Traffic Study Area

Based on the criteria identified in the San Diego Traffic Engineering Council/Institute of Traffic Engineers Guidelines for Traffic Impact Studies in the San Diego Region (March 2000), the study area was determined based on where 50 peak-hour project trips would travel to/from the site. The traffic study area was developed through coordination between City staff and Fehr & Peers. The traffic study area is shown on Figure 4.13-1, Project Study Area and Intersections, and includes the following locations:

Intersections

1. College Boulevard/Old Grove Road
2. College Boulevard/Avenida De La Plata
3. College Boulevard/Aztec Street
4. College Boulevard/Oceanside Boulevard
5. College Boulevard/Olive Drive
6. College Boulevard/Thunder Drive
7. College Boulevard/Marvin Street East
8. College Boulevard/Marvin Street West
9. College Boulevard/Roselle Avenue
10. College Boulevard/Barnard Drive/Waring Road
11. College Boulevard/Vista Way
12. College Boulevard/SR-78 Eastbound Off-Ramps
13. College Boulevard/Haymar Drive/Plaza Drive

Roadway Segments

1. College Boulevard between Avenida Empressa and Old Grove Road
2. College Boulevard between Old Grove Road and Avenida De La Plata
3. College Boulevard between Avenida De La Plata and Oceanside Boulevard
4. College Boulevard between Oceanside Boulevard and Olive Drive
5. College Boulevard between Olive Drive and Thunder Drive
6. College Boulevard between Thunder Drive and Marvin Street East
7. College Boulevard between Marvin Street and Barnard Drive/Waring Road
8. College Boulevard between Waring Road and Vista Way

Existing Roadway Circulation System

A comprehensive data collection effort was undertaken by Fehr & Peers to identify existing transportation conditions in the vicinity of the College Boulevard corridor. The assessment of existing conditions relevant to this study includes an inventory of the street system, traffic volumes on these facilities, and operating conditions at key intersections. Existing public transit service, bicycle facilities, and pedestrian facilities are also described.

College Boulevard

College Boulevard is a four to six-lane divided roadway from North River Road in the City of Oceanside to south of SR-78 into the City of Carlsbad with posted speed limits ranging from 40 to 50 miles per hour (mph). College Boulevard is currently constructed with four travel lanes within the study area (Old Grove to Vista) except for the section between Waring Road and the south City boundary, where six lanes are currently constructed. Both raised medians and bicycle lanes characterizes the majority of the corridor, while on-street parking is only permitted from just south of West Marvin Street to Thunder Drive.

Old Grove Road

Old Grove Road is a two-lane to four-lane divided roadway orientated in a generally north-south direction and curves to the east adjacent to the northern portion of the study area. Old Grove Road extends southeast from SR-76 to east of College Boulevard until it intersects Pine Ridge Road and becomes Temple Heights Drive. The City of Oceanside Circulation Element classifies Old Grove Road as a four-lane Major Arterial.

Thunder Drive

Thunder Drive is a two-lane roadway oriented in a north-south direction, but curves to an east-west direction west of the study corridor. Thunder Drive extends southward from Wooster Drive to Vista Way. The City of Oceanside Circulation Element classifies Thunder Drive as a two-lane Collector road.

Oceanside Boulevard

Oceanside Boulevard is a four-lane to six-lane divided roadway orientated in an east-west direction. Oceanside Boulevard extends east from Coast Highway to the Oceanside-Vista city limit where it becomes West Bobier Drive within the City of Vista. The City of Oceanside Circulation Element classifies Oceanside Boulevard as a four-lane Major Arterial from Coast Highway to El Camino Real, and from College Boulevard to Melrose Drive. From El Camino Real to College Boulevard, Oceanside Boulevard is classified as a six-lane Prime Arterial.

Olive Avenue

Olive Avenue is a four-lane roadway orientated in an east-west direction. Olive Drive extends eastwards from College Boulevard to Vista Village Drive in the City of Vista. The City of Oceanside Circulation Element classifies Olive Drive as a four-lane Secondary Collector.

Avenida De La Plata

Avenida De La Plata is a two-lane roadway and has a two-way left turn lane west of College Boulevard. It is orientated in an east-west direction within the study area. It extends from Corporate Center Drive to east of College Boulevard. After crossing College Boulevard, it extends northward until it terminates at Mesa Drive. The City of Oceanside Circulation element classifies Avenida De La Plata as a two-lane Collector road.

Mesa Drive

Mesa Drive is a two-lane to four-lane roadway with a two-way left turn lane orientated in an east-west direction. Mesa Drive extends eastwards from Mission Avenue to North Santa Fe Avenue. The City of Oceanside Circulation Element classifies Mesa Drive as a four-lane Secondary Collector.

Aztec Street

Aztec Street is a two-lane roadway oriented in an east-west direction. Aztec Street extends eastward from Blueridge Street to Comanche Street. Aztec Street is considered a local neighborhood street that provides access to a single family neighborhood to the west and apartment community to the east.

Marvin Street

Marvin Street is a two-lane roadway oriented in an east-west direction. Marvin Street extends eastward from Oxfard Place to Thunder Drive with an alignment break at College Boulevard. There is also the short eastern segment that extends eastward from Annette Street to Yvonne Street. Marvin Street is considered a local neighborhood street.

Roselle Avenue

Roselle Avenue is a two-lane roadway oriented in an east-west direction and curves to a north-south direction west of Johnson Drive. Roselle Avenue extends eastward from Cameo Drive to Scott Drive. Roselle Avenue is considered a local neighborhood street.

Barnard Drive/Waring Road

Barnard Drive/Waring Road is a three and two-lane roadway that is generally oriented in an east-west direction. To the west of College Boulevard, along Barnard Drive, the roadway has two lanes in the northwest direction and one lane in the southeast direction until it reaches Carr Drive, after which the roadway provides one lane in each direction. Barnard Drive goes on to loop around the Mira Costa College. To the east of College Boulevard, along Waring Road, the roadway has two-lanes and extends eastward to Morningside Drive where it terminates. The City of Oceanside Circulation Element classifies Barnard Drive/Waring Road as a two-lane Collector road.

Vista Way

Vista Drive is a two and four-lane roadway oriented in an east-west direction. Near the study corridor, Vista way provides four-lanes, though it does narrow to two-lanes to the east when it enters Vista, California. Vista Way extends eastward from Walmart Drive to Vista Village Drive. The City of Oceanside Circulation Element classifies Vista Way as a Secondary Collector road.

Haymar Drive/Plaza Drive

Haymar Drive/Plaza Drive is a two and four-lane roadway oriented in an east-west direction. To the east of College Boulevard, Plaza Drive extends eastward to Thunder Drive where it goes on into Vista, California as Hacienda Drive. To the west of College Boulevard, Haymar Drive goes into Carlsbad, California where it terminates at a cul-de-sac directly fronting the historical site of Marron Adobe. The City of Oceanside Circulation Element classifies Plaza Drive as a Secondary Collector road.

Existing Transit Network

Existing transit service near the study corridor includes bus and light rail services provided by the North County Transit District (NCTD). Although several transit lines cross College Boulevard, only Route 315, Route 323, and Route 325 of the local bus service called the Breeze travel along portions of College Boulevard. NCTD transit routes are described below.

Breeze Route 315

Route 315 provides daily service from Area 22 on Camp Pendleton and the College Boulevard Sprinter Station. In the study area, the route travels along College Boulevard, west on Avenida de la Plata then south on Avenida Del Oro to the College Boulevard Sprinter Station. After the Sprinter Station, Route 315 travels northbound via Oceanside Boulevard to College Boulevard. Weekday headways are 30 minutes during peak hours and 1 hour during off peak hours. Headways on the weekend and holidays range from 60 to 90 minutes.

Breeze Route 323

Route 323 provides weekday service from the College Boulevard Sprinter station to Quarry Creek, which is its southern terminus. Route 323 also provide limited service that extends from Quarry Creek to Sage Creek High School. The route traverses the study corridor from Oceanside Boulevard to Olive Drive. The only stop along the study corridor is at College Boulevard/Oceanside Boulevard intersection. Weekday headways range from 60 minutes during peak periods and 120 minutes during off peak hours. Route 323 does not operate on weekends or holidays.

Breeze Route 325

Route 323 provides daily service excluding Sundays and holidays from Carlsbad Village to the College Boulevard Sprinter Station. The route travels on the study corridor from Oceanside Boulevard to Thunder Drive and from Vista Way to Barnard Drive/Waring Road. The only stop within the study corridor is located at the College Boulevard/Oceanside Boulevard intersection. Weekday headways range from 20 to 40 minutes and Saturday headways are 60 minutes.

Sprinter

The Sprinter is a light rail line serving 15 stations in the cities of Oceanside (western terminus), Vista, San Marcos, and Escondido (eastern terminus). The line provides service to Palomar College and California State University, San Marcos. At the Oceanside Transit Center, the Sprinter connects to three regional rail lines including the Coaster, Metrolink, and well as to Amtrak’s Pacific Surfliner. The Sprinter runs every 30 minutes in both east and west directions Monday through Friday, from approximately 4 AM to 9 PM. Trains run later on Friday and Saturday evenings to approximately 10:30 pm (westbound to Oceanside), and to approximately 11:30 PM (eastbound to Escondido). On weekends and holidays the trains operate every 60 minutes with the exception of the 10 AM to 6 PM period where trains operate every 30 minutes. The College Boulevard Sprinter Station is located west the study corridor at Oceanside Boulevard of and is within walking distance (0.25 mile) of College Boulevard.

Existing Bicycle Network

The City of Oceanside is recognized by the League or American Bicyclists as a Bicycle Friendly Community, with approximately nine miles of bike paths, 17 miles of bike routes, and 70 miles of bike lanes. All along the College Boulevard study corridor, there are dedicated Class II bicycle lanes in both the northbound and southbound directions. East-west roadways intersecting College Boulevard that provide Class II bicycle lanes include Old Grove Road, Avenida De La Plata, Oceanside Boulevard, Barnard Drive, and Vista Way.

Existing Pedestrian Network

Existing pedestrian access is provided via four (4) to six (6) foot wide sidewalks along the east and west side of College Boulevard. There is a gap in the sidewalk along the west side of the street from Vista Way to Haymar Drive/Plaza Drive. Study intersections with pedestrian facilities are described below:

1. College Boulevard/Old Grove Road
   - Signalized intersection with marked crosswalks and push buttons on all legs
2. College Boulevard/Avenida De La Plata
   - Signalized intersection with marked crosswalks and push buttons on the east, west, and south legs
4. College Boulevard/Oceanside Boulevard
   - Signalized intersection with marked crosswalks and push buttons on all legs
5. College Boulevard/Olive Avenue
   - Signalized intersection with marked crosswalks and push buttons on all legs
6. College Boulevard/Thunder Drive
   - Signalized intersection with marked crosswalks and push buttons on all legs
8. College Boulevard/West Marvin Street
   - Signalized intersection with a marked crosswalk on the north leg and push buttons on both the north and west legs
9. College Boulevard/Roselle Avenue
   - Signalized intersection with push buttons on all legs
10. College Boulevard/Barnard Drive/Waring Road
    - Signalized intersection with marked crosswalks and push buttons on the west, east, and south legs
11. College Boulevard/Vista Way
    - Signalized intersection with marked crosswalks and push buttons on the west, east, and north legs
13. College Boulevard/Haymar Drive/Plaza Drive
    - Signalized intersection with marked crosswalks and push buttons on west, east, and south legs.

Existing Traffic Volumes

Daily Street Segment Operations

Average daily traffic (ADT) volumes were collected for the study roadway segments in mid-September 2018. Table 4.13-1 displays the LOS analysis for the key corridor study area roadway segments under Existing Conditions. As shown in the table, the study roadway segments currently operate at LOS D or better, with the exception of the following four segments (note: numbering in the list below corresponds to the numbering of segments in Table 4.13-1):

- 2. College Boulevard between Old Grove Road & Avenida De La Plata (LOS E)
- 3. College Boulevard between Avenida De La Plata and Oceanside Boulevard (LOS E)
- 4. College Boulevard between Oceanside Boulevard and Olive Drive (LOS F)
- 5. College Boulevard between Olive Drive & Thunder Street East (LOS E)

Table 4.13-1
Existing (2018) Conditions Roadway ADT Volumes and LOS

Segment	Existing Cross Section	LOS E Capacity	Existing ADT	V/C	LOS
1. College Boulevard between Avenida Empressa & Old Grove Road	4-ln MA w/ raised median	40,000	29,875	0.747	C
2.College Boulevard between Old Grove Road and Avenida de la Plata	4-ln MA w/ raised median	40,000	38,215	0.955	**E**
3.College Boulevard between Avenida De La Plata and Oceanside Boulevard	4-ln MA w/ raised median	40,000	36,971	0.924	**E**
4.College Boulevard between Oceanside Boulevard and Olive Drive	4-ln MA w/ raised median	40,000	49,943	1.249	**F**
5.College Boulevard between Olive Drive and Thunder Drive	4-ln MA w/ raised median	40,000	35,917	0.898	**E**
6. College Boulevard between Thunder Drive and Marvin Street East	4-ln MA w/ raised median	40,000	31,746	0.794	D
7. College Boulevard between Marvin Street and Barnard Drive/Waring Road	4-ln MA w/ raised median	40,000	32,778	0.819	D
8. College Boulevard between Barnard Drive/Warring Road & Vista Way	6-ln MA, divided	50,000	44,216	0.844	D

Source: Appendix K
Note: Deficient roadway segment operation shown in **bold**.

Peak Hour Segment Analysis

In conjunction with the daily traffic counts, speed data was collected along the eight study roadway segments over the course of a 24-hour period in order to conduct a HCM Arterial Analysis. Refer to Appendix K for additional speed data. The HCM arterial analysis utilizes the peak hour segment speeds in order to assess peak hour conditions, as shown in Table 4.13-2. As shown, the following seven segments operate at unacceptable LOS:

- College Boulevard between Avenida De La Plata and Aztec Street (SB operates at LOS E in the AM peak hour)
- College Boulevard between Aztec Street and Oceanside Boulevard (SB operates at LOS E in the AM peak hour)
- College Boulevard between Oceanside Boulevard and At-Grade Crossing (SB and NB operate at LOS F in the AM/PM peak hours)
- College Boulevard between At-Grade Crossing and Olive Drive (NB operates at LOS E in the PM peak hour)
- College Boulevard between Waring Road and Vista Way (NB operates at LOS E in the PM peak hour, and SB operates at LOS F in the AM/AM peak hour)
- College Boulevard between Vista Way and SR-78 Eastbound Off-Ramps (SB operates at LOS E in the PM peak hour)
- College Boulevard between SR-78 Eastbound Off-Ramp and Plaza Drive (NB operates at LOS E in the AM peak hour, SB operates at LOS E/F in the AM/PM peak hours)

Table 4.13-2
Existing (2018) Conditions Roadway Peak Hour LOS

Segment[1]	Direction	AM		PM	
		Speed (mph)	*LOS2,3*	*Speed (mph)*	*LOS2,3*
College Boulevard between Old Grove Road and Avenida De La Plata	NB	29.7	B	27.7	C
	SB	24.9	C	26.6	C
College Boulevard between Avenida De La Plata and Aztec Street	NB	29.7	B	31.4	B
	SB	**16.5**	**E**	18.4	D
College Boulevard between Aztec Street and Oceanside Boulevard	NB	29.7	B	31.4	B
	SB	**16.5**	**E**	18.4	D
College Boulevard between Oceanside Boulevard and At-Grade Crossing	NB	**3.8**	**F**	**3.6**	**F**
	SB	**8.3**	**F**	**9.2**	**F**
College Boulevard between At-Grade Crossing and Olive Drive	NB	18.8	D	**16.3**	**E**
	SB	21.5	D	24.6	C
College Boulevard between Olive Drive and Thunder Drive	NB	20.0	D	21.6	D
	SB	33.2	B	31.9	B
College Boulevard between Thunder Drive and Marvin Street West	NB	25.1	C	25.0	C
	SB	30.4	B	29.8	B
	NB	23.7	C	32.6	B

Table 4.13-2
Existing (2018) Conditions Roadway Peak Hour LOS

Segment[1]	Direction	AM Speed (mph)	AM LOS2,3	PM Speed (mph)	PM LOS2,3
College Boulevard between Marvin Street West and Roselle Avenue	SB	21.5	D	23.5	C
College Boulevard between Roselle Avenue and Waring Road	NB	38.3	A	32.0	B
	SB	21.1	D	20.5	D
College Boulevard between Waring Road and Vista Way	NB	18.1	D	**14.8**	**E**
	SB	**11.6**	**F**	**4.7**	**F**
College Boulevard between Vista Way and SR-78 Eastbound Off-Ramps	NB	17.8	D	17.0	D
	SB	18.9	D	**16.1**	**E**
College Boulevard between SR-78 Eastbound Off-Ramp and Plaza Drive	NB	**16.6**	**E**	17.6	D
	SB	**14.5**	**E**	**10.5**	**F**

Source: Appendix K
Notes:
1. The peak hour segment analysis segments were reviewed and finalized during the original scoping of the Project in 2014 with City staff and in several instances, the peak hour analysis segments differ from the Roadway ADT segments.
2. LOS calculations performed using the 2000 Highway Capacity Manual (HCM) method.
3. Unacceptable roadway segments in **bold**.

Peak Hour Intersection Operations

Existing peak hour volumes and lane configurations were used to calculate levels of service for each of the 13 study intersections. The results of the existing LOS analysis are presented in Table 4.13-3 and the corresponding LOS calculation sheets are included in Appendix K.

The results of the LOS calculations indicate that the existing study intersections operate at an overall acceptable service level (LOS D or better), with the exception of the following two locations (note: numbering in the list below corresponds to the numbering of segments in Table 4.13-3):

- 4. College Boulevard/Oceanside Boulevard (LOS E during the AM peak hour)
- 11. College Boulevard/Vista Way (LOS E during the PM peak hour)

Table 4.13-3
Existing Peak Hour Intersection Conditions

Study Intersection	Traffic Control	Peak Hour	Delay (sec/veh)[1]	LOS [2,3]
1.College Boulevard/Old Grove Road	Signalized	AM	31.9	C
		PM	26.3	C
2.College Boulevard/Avenida De La Plata	Signalized	AM	16.4	B
		PM	17.6	B
3. College Boulevard/Aztec Street	SSSC	AM	15.2	C
		PM	25.8	D
4. College Boulevard/Oceanside Boulevard	Signalized	AM	**64.2**	**E**
		PM	53.0	D
5.College Boulevard/Olive Drive	Signalized	AM	25.0	C
		PM	32.1	C
6.College Boulevard/Thunder Drive	Signalized	AM	19.1	B
		PM	23.7	C
7.College Boulevard/ East Marvin Street	SSSC	AM	10.4	B
		PM	14.3	B
8.College Boulevard/ West Marvin Street	Signalized	AM	12.4	B
		PM	8.2	A
9.College Boulevard/Roselle Avenue	Signalized	AM	12.0	B
		PM	11.6	B
10.College Boulevard/Barnard Drive/Waring Road	Signalized	AM	31.2	C
		PM	30.2	C
11.College Boulevard/Vista Way	Signalized	AM	38.3	D
		PM	**74.6**	**E**
12.College Boulevard/SR-78 Eastbound Off-Ramps	Signalized	AM	13.7	B
		PM	14.1	B
13.College Boulevard/Haymar Drive/Plaza Drive	Signalized	AM	20.3	C
		PM	41.2	D

Source: Appendix K
Notes:
1. Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized intersections. The vehicular delay for the worst movement is reported for side-street stop-controlled intersections (SSSC).
2. LOS calculations performed using the 2000 Highway Capacity Manual (HCM) method.
3. Unacceptable seconds of delay per vehicle and LOS highlighted in bold.

4.13.2 Relevant Plans, Policies, and Ordinances

4.13.2.1 Federal

There are no federal plans, policies, and ordinances that are particularly relevant to traffic and circulation and the proposed project.

4.13.2.2 State

SB 743, CEQA Guidelines Update

In 2013, SB 743 was signed into law and requires new metrics for analyzing transportation impacts under CEQA to provide an alternative to level of service (LOS). Specifically, SB 743 changes the focus of transportation impact analysis in CEQA from measuring impacts to drivers, to measuring the impact of driving. The change is being made by replacing LOS with vehicle miles of travel (VMT) and providing streamlined review of land use and transportation projects that will help reduce future VMT growth. This shift in transportation impact focus is expected to better align transportation impact analysis and mitigation outcomes with the State's goals to reduce greenhouse gas (GHG) emissions, encourage infill development, and improve public health through more active transportation (Fehr and Peers 2019). Proposed changes to the CEQA Guidelines, Section 15064.3, were promulgated by the Office of Planning and Research (OPR) in November 2017. In January 2019, the Natural Resources Agency finalized updates to the CEQA Guidelines including the incorporation of SB 743 modifications. The Guidelines changes were approved by the Office of Administrative Law and are now in effect. Specific to SB 743, Section 15064.3(c) states, "A lead agency may elect to be governed by the provisions of this section immediately. Beginning on July 1, 2020, the provisions of this section shall apply statewide."

At the time of preparation of this EIR and the Project Traffic Impact Analysis, however, evaluation of transportation impacts using the VMT metric is not required by the State or City of Oceanside CEQA Guidelines, and LOS is the official metric for identifying traffic impacts and mitigation.

4.13.2.3 Local

City of Oceanside General Plan Circulation Element and Master Transportation Roadway Plan

As required by State of California Law, the City has included and adopted a Master Transportation Roadway Plan as part of the City's General Plan. In tandem with the other elements of the City's General Plan, the Master Transportation Roadway Plan creates and addresses goals and policies as they related to the City's transportation system. The Master Transportation Roadway Plan, a subsection of the Circulation Element (City of Oceanside 2012), focuses on maintaining and improving the City's roadways that compose the transportation network by providing service standards, objectives, and policies (City of Oceanside 2012). Select applicable General Plan goals and their corresponding policies are listed below:

> **Objective i**: Implement a circulation system that provide a high level of mobility, efficiency, access, safety, and environmental consideration that accommodates all modes of travel such as vehicular, truck, transit, bicycle, pedestrian, and rail.

Policy 2.4: The City's circulation system shall promote efficient intra- and inter-city travel with minimum disruption to established and planned residential neighborhoods.

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

Policy 3.3: All streets within the City shall be designed in accordance with the adopted City of Oceanside design standards. Typical cross-sections and design criteria for the various street classifications are shown in the City Engineers Design and Processing Manual.

SANDAG Regional Transportation Plan and Sustainable Communities Strategy

The San Diego Association of Governments' (SANDAG's) *San Diego Forward: The Regional Plan* (Regional Plan) combines the region's two most important existing planning documents—the Regional Comprehensive Plan (RCP) and the Regional Transportation Plan and its Sustainable Communities Strategy (RTP/SCS). The RCP, adopted in 2004, laid out key principles for managing the region's growth while preserving natural resources and limiting urban sprawl. The plan covered eight policy areas, including urban form, transportation, housing, healthy environment, economic prosperity, public facilities, our borders, and social equity. These policy areas were addressed in the 2050 RTP/SCS and are now fully integrated into the Regional Plan (SANDAG 2015).

On April 25, 2015, SANDAG released the Draft Regional Plan for public comment, with a closing date of July 15, 2015. A Final Regional Plan was adopted by the SANDAG Board of Directors on October 9, 2015.

4.13.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to traffic and circulation are based on Appendix G of the 2019 CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to traffic and circulation would occur if the proposed project would:

a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).

c) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersection) or incompatible use (e.g., farm equipment).

d) Result in inadequate emergency access.

Significance Criteria – City of Oceanside and SANTEC /ITE

The City uses the published San Diego Traffic Engineering Council/Institute of Traffic Engineers guidelines for the determination of the significance of impacts. A project is considered to have a significant impact if the new project traffic has decreased the operations of surrounding roadways by a defined threshold. Furthermore, the City requires a peak hour arterial progression analysis to be conducted for roadway segments anticipated to operate at deficient levels of service based on ADT volumes and thresholds, where the daily V/C ratio increase due to the addition of the project's daily traffic would meet the significant impact criteria. If the project's impact would not meet the roadway segment peak hour significance criteria, then the project's impact to the roadway segment would not be considered a significant impact. The defined thresholds are shown in Table 4.13-4 for roadway segments and intersections.

If a project exceeds the thresholds in Table 4.13-4, then the proposed project may be considered to have a significant impact. A feasible mitigation measure will need to be identified to return the impact within the thresholds (pre-project plus allowable increase), or the impact will be considered significant and unmitigated.

Two types of traffic-related impacts were identified: direct traffic impacts and cumulative traffic impacts. Direct impacts were calculated where proposed project–added traffic resulted in a degradation in Level of Service (LOS) from acceptable LOS D or better operations to below LOS D conditions. Cumulative impacts were calculated where proposed project–added traffic resulted in significant increase in intersection delay or street segment volume-to-capacity ratios over the allowable thresholds shown in Table 4.13-4 at locations with pre-existing LOS deficiencies (LOS E or F). Future (2035) significant impacts are considered cumulative since traffic generated by existing development, future general growth, and other development projects are all included in the Future (2035) traffic volume projections. This is because for an impact to be termed direct, the project traffic must be the sole reason that the impact occurs.

Table 4.13-4
Traffic Impact Significant Thresholds

Level of Service with Proposed Project[1]	Allowable Increase Due to Project Impacts[2]		
	Roadway Segments		*Intersections*
	V/C	*Speed (mph)*	*Delay (sec.)*
E and F	0.02	1.0	2.0

Source: SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego Region, March 2, 2000.
Notes: V/C = Volume to Capacity Ratio; Speed = Arterial speed measured in miles per hour; Delay = Average stopped delay per vehicle measured in seconds for intersections; LOS = Level of Service

1. All level of service measurements are based upon HCM procedures for peak-hour conditions. However, V/C ratios for roadway segments may be estimated on an ADT volume basis. The acceptable LOS for roadways and intersections is generally "D" ("C" for undeveloped or not densely developed locations per jurisdiction definitions).
2. If a proposed project's traffic causes the values shown in the table to be exceeded, the impacts are deemed to be significant. These impact changes may be measured from appropriate computer programs or expanded manual spreadsheets. The applicant shall then identify feasible mitigations (within the Traffic Impact Study [TIS] report) that will maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable (see note (a)) the applicant shall be responsible for mitigating significant impact changes.

4.13.4 Impacts Analysis

Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

To assess the project impact to performance of the circulation system, the analysis compares the without project conditions in the Existing (2018) conditions and Future (2035) conditions to those conditions with project. The change in project conditions is then assessed based on the significance criteria traffic impact thresholds identified above. Project impacts under the existing conditions are considered direct impacts while project impacts under the future year conditions are considered cumulative. Below is a summary of the project impact analysis provided in the TIA (Appendix K). In addition, the analysis below compares the queueing data at five intersections without project in the Existing (2018) conditions and Future (2035) conditions to those conditions with project. While the City of Oceanside does not have established criteria or thresholds of significance for queue lengths, the information is provided for comparative purposes and disclosure.

Existing (2018) Plus Project Conditions

The Existing (2018) plus project conditions incorporates the proposed project traffic improvements into the existing baseline conditions. As detailed in the Chapter 3, Project Description, the project traffic improvements consist of widening College Boulevard from a four-lane arterial to a six-lane arterial from Olive Drive to Old Grove Road. Along this section, road and right-of-way improvements to the corridor are proposed to enhance existing and future traffic operations, provide congestion relief, and reduce queue lengths from existing conditions, improve safety conditions for the unsignalized intersections and access points along the corridor, and provide safer travel routes for bicyclists and pedestrians. In addition to widening of College Boulevard between Olive Drive and Old Grove Road, the City proposes include curb/gutter improvements and relocation of utilities to accommodate the widened roadway segment, installation of retaining walls, and relocation of bike lanes, lighting, and sidewalks in various locations along College Boulevard between Waring Road/Barnard Drive and Marcella Street and between Olive Drive and Old Grove Road. Therefore, as the project itself does not generate traffic, this analysis does not alter the trips assumed to be generated in the area.

Daily Segment Analysis

As discussed under Section 4.13.1, Existing Conditions, four of the eight studied roadway segments operate at unacceptable LOS E or F under the existing conditions. With the additional roadway improvements proposed as a part of the project, the volume to capacity ratio at three of these College Boulevard segments between Old Grove Road and Olive Drive would improve and all other segments would experience no change (see Table 4.13-5). Specifically, the daily roadway segment analysis indicates improved operations at the following segments as a result of the increase in roadway capacity for four to six lanes:

- College Boulevard: Old Grove Road to Avenida de la Plata (LOS E to LOS C)
- College Boulevard: Aztec Street to Oceanside Boulevard (LOS E to LOS C)
- College Boulevard: Oceanside Boulevard to Olive Drive (LOS F to LOS E)

Overall, the project would improve flow through three segments and not substantially impact traffic at the remaining study area segments. The thresholds for evaluating impact significance are based on increase in the volume-to-capacity ratio at segments operating at unacceptable levels. As the project would not increase the volume-to-capacity ratio at any segment (the volume-to-capacity ratio would decrease at the three segments listed above), the project would have a less than significant impact to segments under the Existing Plus Project conditions.

Peak Hour Segment Analysis

The City of Oceanside requires a peak hour arterial progression analysis to be conducted for roadway segments anticipated to operate at deficient levels of service based on ADT volumes and thresholds, where the V/C ratio increase due to the addition of project traffic would meet the significant impact criteria. As shown in Table 4.13-5, deficient daily roadway segment levels of service are projected at the following segments in the Existing (2018) Plus Project condition:

- College Boulevard between Oceanside Boulevard & Olive Drive (LOS E)
- College Boulevard between Olive Drive & Thunder Drive (LOS E)

Table 4.13-6 presents the Existing (2018) Plus Project Roadway Peak Hour LOS conditions.

At College Boulevard between Oceanside Boulevard and the At-Grade Crossing, operating conditions in the Existing (2018) Plus Project condition (LOS F) would be the same as in Existing (2018) conditions (LOS F) but speeds would improve in both directions (i.e., northbound and southbound) and in both the AM and PM peak hours. Between the At-Grade Crossing and Olive Drive, operating conditions on College Boulevard would be acceptable (i.e., LOS D or better) in the Existing (2018) Plus Project condition in both directions and in both the AM and PM peak hours. Therefore, impacts would be less than significant.

College Boulevard between Olive Drive & Thunder Drive, the peak hour segment analysis shows acceptable operating conditions (i.e., LOS D or better) in both Existing (2018) and with Existing (2018) Plus Project. As such, impacts would be less than significant.

Intersections

Under Existing (2018) conditions, two intersections within the study area operate at unacceptable LOS; College Boulevard/Oceanside Boulevard in the AM peak hour; College Boulevard/Vista Way in the PM peak hour. See Table 4.13-7, Existing (2018) Plus Project Intersection Conditions. With Existing (2018) Plus Project conditions, all intersections within the study area would operate acceptably (see Table 4.13-7). The criteria for determining project impact significance is based on the increased delay at intersections operating unacceptably. As all intersections would operate acceptably in the Existing (2018) Plus Project condition, the project would result in a less than significant impact to intersections.

Queueing Lengths

The City of Oceanside's criteria for queue lengths is the available storage capacity at study intersections and segments. If that storage capacity is exceeded, then there is a project impact.

As previously stated, under the existing conditions, two intersections within the study area operate at unacceptable LOS: College Boulevard/Oceanside Boulevard in the AM peak hour and College Boulevard/Vista Way in the PM peak hour. Available turn pocket storage is exceeded in the AM northbound movement at the College Boulevard/Oceanside Boulevard intersection and in the PM southbound movement at the College Boulevard /Olive Drive intersection (see Table 4.13-8).

Table 4.13-5
Existing (2018) Plus Project Conditions Roadway ADT Volumes and LOS

Segment	Existing					Existing (2018) Plus Project					∆ V/C	Sig?
	Cross Section[1]	*LOS E Capacity*	*ADT*	*V/C*	*LOS*[2]	*Cross Section*	*LOS E Capacity*	*ADT*	*V/C*	*LOS*[2]		
1. College Blvd b/w Avenida Empressa & Old Grove Rd	4-ln MA w/ raised median	40,000	29,875	0.747	C	4-ln MA w/ raised median	40,000	29,875	0.747	C	0	No
2. College Blvd b/w Old Grove Rd & Avenida De La Plata	4-ln MA w/ raised median	40,000	38,215	0.955	**E**	6-ln MA, divided	50,000	38,215	0.764	C	-0.191	No
3. College Blvd b/w Avenida De La Plata & Oceanside Blvd	4-ln MA w/ raised median	40,000	36,971	0.924	**E**	6-ln MA, divided	50,000	36,971	0.739	C	-0.185	No
4. College Blvd b/w Oceanside Blvd & Olive Dr	4-ln MA w/ raised median	40,000	49,943	1.249	**F**	6-ln MA, divided	50,000	49,943	0.999	**E**	-0.250	No
5. College Blvd b/w Olive Dr & Thunder Dr[3]	4-ln MA w/ raised median	40,000	35,917	0.898	**E**	4-ln MA w/ raised median	40,000	35,917	0.898	**E**	0	No
6. College Blvd b/w Thunder Dr & Marvin St East[3]	4-ln MA w/ raised median	40,000	31,746	0.794	D	4-ln MA w/ raised median	40,000	31,746	0.794	D	0	No
7. College Blvd b/w Marvin St & Barnard Dr/Waring Rd[3]	4-ln MA w/ raised median	40,000	32,778	0.819	D	4-ln MA w/ raised median	40,000	32,778	0.819	D	0	No
8. College Blvd b/w Barnard Dr/Waring Rd & Vista Way	6-ln MA, divided	50,000	44,216	0.844	D	6-ln MA, divided	50,000	44,216	0.884	**E**	0	No

Source: Appendix K

Notes:

1. ln= lane, MA= Major Arterial
2. Deficient roadway segment operation shown in **bold**.
3. Under the Recommended Alternative, the 4-Lane Major Arterial cross-section for the segment remains. Therefore, the V/C ratio and future roadway LOS is based on the City's LOS standard and capacity criteria for a 4-Lane Major Arterial roadway.

Table 4.13-6
Existing (2018) Plus Project Conditions Roadway Peak Hour LOS[1]

Segment[2]	Direction	Existing				Existing Plus Project				Δ Speed	
		AM		*PM*		*AM*		*PM*			
		Speed (mph)	*LOS3,4*	*Speed (mph)*	*LOS3,4*	*Speed (mph)*	*LOS3,4*	*Speed (mph)*	*LOS3,4*	*AM*	*PM*
College Boulevard between Old Grove Road and Avenida De La Plata	NB	29.7	B	27.7	C	20.3	D	28.5	B	-9.4	0.8
	SB	24.9	C	26.6	C	28.8	B	25.8	C	3.9	-0.8
College Boulevard between Avenida De La Plata and Aztec Street	NB	29.7	B	31.4	B	25.5	C	29.0	B	-4.2	-2.4
	SB	16.5	**E**	18.4	D	32.1	B	30.1	B	15.6	11.7
College Boulevard between Aztec Street and Oceanside Boulevard	NB	29.7	B	31.4	B	28.1	B	29.5	B	-1.6	-1.9
	SB	16.5	**E**	18.4	D	12.6	**F**	16.6	**E**	-3.9	-1.8
College Boulevard between Oceanside Boulevard and At-Grade Crossing	*NB*	*3.8*	***F***	*3.6*	***F***	*6.7*	***F***	*4.5*	***F***	***2.9***	*0.9*
	SB	*8.3*	***F***	*9.2*	***F***	*11.1*	***F***	*11.6*	***F***	*2.8*	*2.4*
College Boulevard between At-Grade Crossing and Olive Drive	*NB*	*18.8*	*D*	*16.3*	***E***	*20.5*	*D*	*19.5*	*D*	*1.7*	*3.2*
	SB	*21.5*	*D*	*24.6*	*C*	*21.1*	*D*	*24.4*	*C*	*-0.4*	*-0.2*
College Boulevard between Olive Drive and Thunder Drive[5]	*NB*	*20.0*	*D*	*21.6*	*D*	*20.8*	*D*	*21.5*	*D*	*0.8*	*-0.1*
	SB	*33.2*	*B*	*31.9*	*B*	*33.6*	*B*	*32.3*	*B*	*0.4*	*0.4*
College Boulevard between Thunder Drive and Marvin Street West[5]	NB	25.1	C	25.0	C	25.1	C	24.6	C	0	-0.4
	SB	30.4	B	29.8	B	30.7	B	28.4	B	0.3	-1.4
College Boulevard between Marvin Street West and Roselle Avenue[5]	NB	23.7	C	32.6	B	32.2	B	32.0	B	8.5	-0.6
	SB	21.5	D	23.5	C	28.5	B	32.0	B	7	8.5

Table 4.13-6
Existing (2018) Plus Project Conditions Roadway Peak Hour LOS[1]

Segment[2]	Direction	Existing				Existing Plus Project				Δ Speed	
		AM		*PM*		*AM*		*PM*			
		Speed (mph)	*LOS3,4*	*Speed (mph)*	*LOS3,4*	*Speed (mph)*	*LOS3,4*	*Speed (mph)*	*LOS3,4*	*AM*	*PM*
College Boulevard between Roselle Avenue and Waring Road	NB	38.3	A	32.0	B	39.5	A	34.2	B	1.2	2.2
	SB	21.1	D	20.5	D	27.1	C	27.4	C	6	6.9
College Boulevard between Barnard Drive/Waring Road and Vista Way	NB	18.1	D	14.8	**E**	19.7	D	19.4	D	1.6	4.6
	SB	11.6	**F**	4.7	**F**	14.9	**E**	11.9	**F**	**3.3**	**7.2**

Source: Appendix K

Notes:

1. The peak hour arterial progression analysis is required for roadway segments forecasted to operate at deficient levels of service based on ADT volumes in the daily. As indicated in Table 4.13-5, three segments are forecasted to operate deficiently in the daily (those segments are italicized above) and therefore, the results of the peak hour analysis are applicable in the determination of impacts to only these segments.
2. The peak hour segment analysis segments were reviewed and finalized during the original scoping of the Project in 2014 with City staff and in several instances, the peak hour analysis segments differ from the Roadway ADT segments.
3. LOS calculations performed using the 2000 Highway Capacity Manual (HCM) method.
4. Unacceptable roadway segments in bold.
5. Under the Recommended Alternative, the 4-Lane Major Arterial cross-section for the segment remains.

Table 4.13-7
Existing (2018) Plus Project Intersection Conditions

Study Intersection	Traffic Control	Peak Hour	Existing Conditions		Existing Plus Project		Change in Delay1	Sig?
			Delay[1, 2]	*LOS*[2]	*Delay*[1, 2]	*LOS*[2]		
1. College Boulevard/Old Grove Road	Signalized	AM	31.9	C	31.3	C	-0.6	No
		PM	26.3	C	25.7	C	-0.6	No
2. College Boulevard/Avenida De La Plata	Signalized	AM	16.4	B	15.0	B	-1.4	No
		PM	17.6	B	13.8	B	-3.8	No
3. College Boulevard/Aztec Street	SSSC[3]/ Signalized[4]	AM	15.2	C	5.0	A	-10.2	No
		PM	25.8	D	4.9	A	-20.9	No
4. College Boulevard/Oceanside Boulevard[5]	Signalized	AM	**64.2**	**E**	45.6	D	-18.6	No
		PM	53.0	D	42.8	D	-10.2	No
5. College Boulevard/Olive Drive	Signalized	AM	25.0	C	24.8	C	-0.2	No
		PM	32.1	C	33.3	C	1.2	No
6. College Boulevard/Thunder Drive	Signalized	AM	19.1	B	19.6	B	0.5	No
		PM	23.7	C	24.2	C	0.5	No
7. College Boulevard/East Marvin Street	SSSC	AM	10.4	B	10.3	B	-0.1	No
		PM	14.3	B	14.2	B	-0.1	No
8. College Boulevard/West Marvin Street	Signalized	AM	12.4	B	9.9	A	-2.5	No
		PM	8.2	A	8.2	A	0.0	No
9. College Boulevard/Roselle Avenue	Signalized	AM	12.0	B	7.5	A	-4.5	No
		PM	11.6	B	8.5	A	-3.1	No
10. College Boulevard/Barnard Drive/Waring Road	Signalized	AM	31.2	C	46.3	D	15.1	No
		PM	30.2	C	20.0	B	-10.2	No
11. College Boulevard/Vista Way	Signalized	AM	38.3	D	39.7	D	1.4	No
		PM	**74.6**	**E**	35.2	D	-39.4	No
12. College Boulevard/SR-78 Eastbound Off-Ramps	Signalized	AM	13.7	B	12.7	B	-1.0	No
		PM	14.1	B	14.4	B	0.3	No
13. College Boulevard/Haymar Drive/Plaza Drive	Signalized	AM	20.3	C	22.3	C	2.0	No
		PM	41.2	D	32.7	C	-8.5	No

Source: Appendix K
1. Seconds of delay per vehicle.
2. Unacceptable seconds of delay per vehicle and LOS highlighted in **bold**.
3. SSSC = Side street stop-controlled intersection
4. The currently SSSC intersection would be improved to a signalized intersection with the Project.

The planned improvement at the intersection for a third-through lane on WB Oceanside Boulevard was assumed in the TIA (Appendix K) under Existing Plus Project Conditions.

Table 4.13-8
Existing (2018) Plus Project Intersection Queue Conditions

Intersection	Left Turn Direction	Double Left	Existing (2018)			Existing (2018) Plus Project		
			Available Storage (ft)	*AM Peak Hour 95th %ile (feet)*	*PM Peak Hour 95th %ile (feet)*	*Available Storage (ft)*[1]	*AM Peak Hour 95th %ile (feet)*	*PM Peak Hour 95th %ile (feet)*
1. College Boulevard/Old Grove Road	NB	Yes	350	104	193	350	166	179
	SB	No	310	56	36	310	59	72
2. College Boulevard/Avenida De La Plata	NB	No	230	230	156	360	#332	175
	SB	No	200	11	20	200	15	22
3. College Boulevard/Aztec Street	NB	No	180	1	4	180	29	33
	SB	No	200	3	7	180	25	51
4. College Boulevard/Oceanside Boulevard	NB	Yes	345	**#455**	211	320	**#390**	215
	SB	Yes	300	84	160	420	96	#189
5.College Boulevard/Olive Drive	NB	No	190	12	33	190	12	34
	SB	Yes	300	291	**#495**	450	306	**#506**

Notes:
Locations where queueing exceeds available storage capacity are noted with **bold** text.
= 95th percentile volume exceeds capacity, queue may be longer
* = Volume for 95th percentile queue is metered by upstream signal
1 Approximate length based on the approved plans for the Project.

While the identified queueing issues also occur in the Existing (2018) condition, the additional capacity associated with widening of College Boulevard between Olive Drive and Old Grove Road would exacerbate existing queueing conditions at the College Boulevard/Oceanside Boulevard intersection (NB left turn movement; AM peak hour) and College Boulevard/Olive Drive intersection (SB left turn movement; PM peak hour) and would result in **potentially significant impacts (Impact TRAF-1 and Impact TRAF-2)**.

Future (2035) Plus Project Conditions

The Future (2035) condition assumes the cumulative buildout of the General Plan, including the buildout of both land uses and roadways. The land use buildout is based on the General Plan designation and the associated anticipated buildout expected to occur by 2035. The traffic generated by this build out is included in the Future (2035) baseline. The roadway conditions under the Future (2035) without project scenario include buildout of all roadways to their General Plan designations. More specifically, the Future (2035) baseline assumes that College Boulevard in the study area would be a four-lane Major Arterial with raised median from Avenida Empressa to Old Grove Road, and a six-lane Major Arterial from Old Grove Road and Waring Road/Barnard Drive. Under the Future (2035) plus project, the same generation of ADT is assumed but College Boulevard between Olive Drive and Barnard Drive/ Waring Road would remain as a four-lane Major Arterial.

It should also be noted that the Series 12 traffic model used in this TIA (see Appendix K) includes the SR-78/Rancho del Oro interchange, which is currently included in the City's *Circulation Element*. Thus, the forecasted Future (2035) volumes reflect the traffic conditions associated with the completion of the SR-78/Rancho del Oro interchange that would be located southwest of the corridor study area. Therefore, traffic volumes could be higher on College Boulevard (particularly south of Waring Road) if the Rancho del Oro interchange is not implemented.

Per the request of City of Oceanside, intersection and roadway segment operations of the Future Year (2035) Conditions with the Proposed Project without the SR-78/Rancho del Oro interchange was evaluated and used to assess how the traffic patterns shift without the construction of the new interchange would affect operations along College Boulevard. Details of this alternative scenario analysis are summarized in Appendix K.

Overall, the results of the "without Rancho del Oro Interchange" included the following affects to traffic patterns:

- increase in ADT on Vista Way and SR-78 between Rancho del Oro and College Boulevard (up to 36%)
- increase in ADT on College Boulevard south of Waring (up to 15%)

- decrease in ADT on College Boulevard north of Waring Road (up to 15%)
- decrease in ADT on Rancho del Oro (up to 38%)

The analysis indicated that up to 36 percent of ADT would shift from Rancho del Oro/SR-78 to College Boulevard/SR-78. The forecasted shift in traffic would result in an increase in ADT on Vista Way, SR-78, and College Boulevard south of Waring Road, and a decrease along College Boulevard north of Waring Road.

Daily Segment Analysis

Future (2035) Plus Project Conditions Roadway ADT Volumes and LOS are included in Table 4.13-9. As shown in Table 4.13-9, three of the eight studied roadway segments operate at unacceptable LOS E or F under the Future (2035) buildout conditions. These segments include College Boulevard between Avenida De La Plata & Oceanside Boulevard (LOS E); College Boulevard between Oceanside Boulevard & Olive Drive (LOS F); and College Boulevard between Barnard Drive/Waring Road & Vista Way (LOS E).

On College Boulevard between Avenida De La Plata & Oceanside Boulevard (see Table 4.13-9), LOS and V/C would be the same in the Future (2035) conditions. Because the segment is forecast to operate with a deficient LOS, a progressional peak hour analysis was conducted for roadway segments. The results of the peak hour analysis are presented in Table 4.13-10. As shown in the table, on College Boulevard between Aztec Street & Oceanside Boulevard, LOS would be the same in the Future (2035) and Future (2035) Plus Project conditions however, speeds would slightly improve in the PM peak hour (northbound direction) and in the AM peak hour (southbound direction). Because Plus Project conditions would not trigger exceedance of the 1 MPH decrease threshold, impacts would be less than significant. Further, the latest *Oceanside General Plan: Circulation Element* (2012), includes a statement of overriding consideration for the unacceptable operating conditions forecasted to occur on the segment. Therefore, the project does not result in any new impact at this segment not already identified in the General Plan. Accordingly, the project does not create a new impact compared to effects associated with buildout of the existing General Plan.

On College Boulevard between Oceanside Boulevard & Olive Drive, the peak hour analysis separates the segment into two subsegments. Subsegment 1 is between Oceanside Boulevard and the At-Grade Crossing and Subsegment 2 is between the At-Grade Crossing and Olive Drive. LOS in the two future conditions would be the same on the subsegments and speed increases and decreases would be less than the 1 MPH threshold (see Table 4.13-10). As such, impacts would be less than significant. In addition, unacceptable operating conditions on this segment was identified in the latest *Oceanside General Plan: Circulation Element* (City of Oceanside 2012), which includes a statement of overriding considerations for the unacceptable operating conditions forecasted to occur on the segment. Therefore, the project does not result in any new impact at this segment not already identified in the General Plan. Accordingly, the project does not create a new impact compared to effects associated with buildout of the existing General Plan.

On College Boulevard between Barnard Drive/Waring Road & Vista Way (see Table 4.13-9), LOS in the Future (2035) Plus Project condition would be acceptable (i.e., LOS D) in the northbound direction. In the southbound direction, LOS D conditions would occur in the AM peak hour but in the PM peak hour, LOS E conditions would degrade to LOS F conditions in the Future (2035) Plus Project scenario. Despite the LOS F conditions, speeds in the southbound direction in the PM peak hour would be within the 1 MPH threshold. As such, Future (2035) Plus Project conditions would not result in a significant impact on future roadway conditions on College Boulevard between Barnard Drive/Waring Road & Vista Way. In addition, unacceptable operating conditions on this segment was identified in the latest *Oceanside General Plan: Circulation Element* (City of Oceanside 2012), which includes a statement of overriding consideration for the unacceptable operating conditions forecasted to occur on the segment.

As illustrated in Table 4.13-9, at two of the eight segments analyzed in the TIA, the Future (2035) Plus Project condition would result in worsened operations such that Future (2035) buildout LOS D conditions would be degraded to LOS E. These segments include College Boulevard between Olive Drive & Thunder Drive East (LOS E); and College Boulevard between Marvin Street & Barnard Drive/Waring Road (LOS E). While the LOS E operating conditions would not occur in the Future (2035) General Plan Buildout conditions (see Table 4.13-9), the peak hour segment analysis revealed acceptable level of service operations under the Future (2035) Plus Project conditions for the two segments (see Table 4.3-10). Therefore, based on the result of the peak hour segment analysis, the impact to these segments is less than significant.

Peak Hour Segment Analysis

As discussed above under Daily Segment Analysis, three of the eight studied roadway segments operate at unacceptable LOS E or F under the Future (2035) buildout conditions. These segments include College Boulevard between Aztec Street & Oceanside Boulevard (LOS E); College Boulevard between Oceanside Boulevard & Olive Drive (LOS F); and College Boulevard between Barnard Drive/Waring Road & Vista Way (LOS E). The peak hour analysis for these three segments is discussed above under Daily Segment Analysis and the Future (2035) Plus Project Conditions Roadway Peak Hour LOS is presented below in Table 4.13-10.

Intersections

Under the Future (2035; General Plan Buildout) conditions, all intersections within the study area would operate acceptably (Table 4.13-11). With the project changes to College Boulevard, all intersections would continue to operate acceptably under the Future (2035) Plus Project conditions. The criteria for determining project impact significance is determined based on the addition of delay to intersections operating unacceptably. As all intersections would operate acceptably, the project would result in a less than significant impact to intersections under the Future (2035) Plus Project conditions.

Table 4.13-9
Future (2035) Plus Project Conditions Roadway ADT Volumes and LOS

Segment	Future (2035) General Plan Buildout					Future (2035) Plus Project					△ V/C	Sig?
	Cross Section	*Future LOS E Capacity*	*ADT*	*V/C*	*LOS*	*Cross Section*	*Future LOS E Capacity*	*ADT*	*V/C*	*LOS*		
1. College Blvd b/w Avenida Empressa & Old Grove Rd	4-Ln MA w/ raised median	40,000	30,800	0.770	D	4-Ln MA w/ raised median	40,000	32,200	0.805	D	0.035	No
2. College Blvd b/w Old Grove Rd & Avenida De La Plata	6-Ln MA, Divided	50,000	41,000	0.820	D	6-Ln MA, Divided	50,000	41,100	0.822	D	0.002	No
3. College Blvd b/w Avenida De La Plata & Oceanside Blvd[1]	6-Ln MA, Divided	50,000	46,400	0.928	**E**	6-Ln MA, Divided	50,000	46,400	0.928	**E**	0.00	No[1]
4. College Blvd b/w Oceanside Blvd & Olive Dr[1]	6-Ln MA, Divided	50,000	61,900	1.238	**F**	6-Ln MA, Divided	50,000	60,100	1.202	**F**	-0.036	No[1]
5. College Blvd b/w Olive Dr & Thunder Dr[2]	6-Ln MA, Divided	50,000	43,400	0.868	D	4-Ln MA w/ raised median	40,000	39,400	0.985	**E**	**0.117**	No[1]
6. College Blvd b/w Thunder Dr & Marvin St East[2]	6-Ln MA, Divided	50,000	38,700	0.774	C	4-Ln MA w/ raised median	40,000	34,500	0.863	D	0.089	No
7. College Blvd b/w Marvin St & Barnard Dr/ Waring Rd[1,2]	6-Ln MA, Divided	50,000	41,600	0.832	D	4-Ln MA w/ raised median	40,000	35,200	0.880	**E**	**0.048**	No[1]
8. College Blvd b/w Barnard Dr/Waring Rd & Vista Way[1]	6-Ln MA, Divided	50,000	46,500	0.930	**E**	6-Ln MA, Divided	50,000	45,100	0.902	**E**	-0.028	No[1]

Source: Appendix K

Notes:

Deficient roadway segment operation shown in bold.

ln= lane, MA= Major Arterial

1. While deficient operations would occur on Segments 3, 4, 7 and 8 in the Future (2035) Plus Project condition, the peak hour segment analysis revealed acceptable level of service operations for these segments. Therefore, based on the peak hour segment analysis (see Table 4.13-10), the impact to these segments is less than significant.
2. Under the Project, the 4-Lane Major Arterial cross-section for the segment remains. Therefore, the V/C ratio and future roadway LOS is based on the City's LOS standard and capacity criteria for a 4-Lane Major Arterial roadway.

Table 4.13-10
Future (2035) Plus Project Conditions Roadway Peak Hour LOS[1]

Segment[2]	Direction	Future (2035) General Plan Buildout				Future (2035) Plus Project				Δ Speed	
		AM		*PM*		*AM*		*PM*			
		Speed (mph)	*LOS3,4*	*Speed (mph)*	*LOS3,4*	*Speed (mph)*	*LOS3,4*	*Speed (mph)*	*LOS3,4*	*AM*	*PM*
College Boulevard between Old Grove Road and Avenida De La Plata	NB	28.1	B	28.9	B	26.2	C	27.5	C	-1.9	-1.4
	SB	24.1	C	24.1	C	24.5	C	23.4	C	0.4	-0.7
College Boulevard between Avenida De La Plata and Aztec Street	NB	27.2	C	29.4	B	27.3	C	28.3	B	0.1	-1.1
	SB	31.4	B	30.9	B	31.4	B	29.8	B	0	-1.1
College Boulevard between Aztec Street and Oceanside Boulevard	*NB*	*27.8*	*C*	*30.2*	*B*	*27.8*	*C*	*30.4*	*B*	*0*	*0.2*
	SB	***12***	***F***	***14.2***	***E***	***12.6***	***F***	***14.2***	***E***	*0.6*	*0*
College Boulevard between Oceanside Boulevard and At-Grade Crossing	*NB*	***6.9***	***F***	***3.4***	***F***	***7.7***	***F***	***4.0***	***F***	*0.8*	*0.6*
	SB	***9.4***	***F***	***9.9***	***F***	***9.7***	***F***	***10.3***	***F***	*0.3*	*0.4*
College Boulevard between At-Grade Crossing and Olive Drive	*NB*	*19.4*	*D*	*17.3*	*D*	*19.4*	*D*	*17.6*	*D*	*0*	*0.3*
	SB	*20.1*	*D*	*23.0*	*C*	*19.4*	*D*	*22.6*	*C*	*-0.7*	*-0.4*
College Boulevard between Olive Drive and Thunder Drive	*NB*	*20.4*	*D*[3]	*20.4*	*D*[3]	*19.4*	*D*	*17.1*	*D*	*-1*	*-3.3*
	SB	*30.6*	*B*[3]	*31.6*	*B*[3]	*31.9*	*B*	*31.1*	*B*	*1.3*	*-0.5*
College Boulevard between Thunder Drive and Marvin Street West[5]	NB	25.4	C[3]	24.8	C[3]	25.8	C	24.4	C	0.4	-0.4
	SB	29	B[3]	26.6	C[3]	27.6	C	25.5	C	-1.4	-1.1
College Boulevard between Marvin Street West and Roselle Avenue[5]	NB	32.1	B[3]	33.2	B[3]	30.2	B	33.0	B	-1.9	-0.2
	SB	29.4	B[3]	32.3	B[3]	28.7	B	32.8	B	-0.7	0.5
College Boulevard between Roselle Avenue and Waring Road[5]	*NB*	*39.9*	*A*	*35.4*	*A*	*39.6*	*A*	*33.6*	*B*	*-0.3*	*-1.8*
	SB	*24.8*	*C*	*26.7*	*C*	*25.9*	*C*	*28.6*	*B*	*1.1*	*1.9*

Table 4.13-10
Future (2035) Plus Project Conditions Roadway Peak Hour LOS[1]

Segment[2]	Direction	Future (2035) General Plan Buildout AM Speed (mph)	AM LOS3,4	PM Speed (mph)	PM LOS3,4	Future (2035) Plus Project AM Speed (mph)	AM LOS3,4	PM Speed (mph)	PM LOS3,4	△ Speed AM	△ Speed PM
College Boulevard between Barnard Drive/Waring Road and Vista Way	*NB*	*18.1*	*D*	***14.4***	***E***	*20.7*	*D*	*19.0*	*D*	*2.6*	*4.6*
	SB	*19.2*	*D*	***13.5***	***E***	*17.3*	*D*	***12.7***	***F***	*-1.9*	*-0.8*

Source: Appendix K
Notes:
1. The peak hour arterial progression analysis is required for roadway segments forecasted to operate at deficient levels of service based on ADT volumes in the daily. As indicated in Table 4.13-9, five segments are forecasted to operate deficiently in the daily (those segments are italicized above) and therefore, the results of the peak hour analysis are applicable in the determination of impacts to only these segments.
2. The peak hour segment analysis segments were reviewed and finalized during the original scoping of the Project in 2014 with City staff and in several instances, the peak hour analysis segments differ from the Roadway ADT segments.
3. LOS calculations performed using the 2000 Highway Capacity Manual (HCM) method.
4. Unacceptable roadway segments in bold.
5. Under the Project, the 4-Lane Major Arterial cross-section for the segment remains.

Table 4.13-11
Future (2035) Plus Project Peak Hour Intersection Conditions

Study Intersection	Traffic Control	Peak Hour	Future (2035) General Plan Buildout Delay[1]	Future (2035) General Plan Buildout LOS	Future (2035) Plus Project Delay[1]	Future (2035) Plus Project LOS	Change in Delay[1]	Sig?
1. College Boulevard/Old Grove Road	Signalized	AM	35.4	D	36.2	D	0.8	No
		PM	30.2	C	31.1	C	0.9	No
2. College Boulevard/Avenida De La Plata	Signalized	AM	18.8	B	17.7	B	-1.1	No
		PM	14.7	B	15.6	B	0.9	No
3. College Boulevard/Aztec Street	SSSC/Signal[2]	AM	5.3	A	5.2	A	-0.1	No
		PM	5.1	A	5.1	A	0	No
4. College Boulevard/Oceanside Boulevard	Signalized	AM	53.7	D	51.2	D	-2.5	No
		PM	54.9	D	50.3	D	-4.6	No
5. College Boulevard/Olive Drive	Signalized	AM	24.9	C	27.6	C	2.7	No

Table 4.13-11
Future (2035) Plus Project Peak Hour Intersection Conditions

Study Intersection	Traffic Control	Peak Hour	Future (2035) General Plan Buildout		Future (2035) Plus Project		Change in Delay[1]	Sig?
			Delay[1]	*LOS*	*Delay[1]*	*LOS*		
		PM	31.3	C	48.6	D	17.3	No
6. College Boulevard/Thunder Drive	Signalized	AM	18.4	B	19.3	B	0.9	No
		PM	22.8	C	25.4	C	2.6	No
7. College Boulevard/East Marvin Street	SSSC	AM	11.0	B	10.3	B	-0.7	No
		PM	14.8	B	14.1	B	-0.7	No
8. College Boulevard/West Marvin Street	Signalized	AM	10.4	B	13.6	B	3.2	No
		PM	9.8	A	11.4	B	1.6	No
9. College Boulevard/Roselle Avenue	Signalized	AM	5.9	A	7.3	A	1.4	No
		PM	7.1	A	8.9	A	1.8	No
10. College Boulevard/Barnard Drive/Waring Road	Signalized	AM	27.1	C	23.2	C	-3.9	No
		PM	30.2	C	23.2	C	-7	No
11. College Boulevard/Vista Way	Signalized	AM	20.9	C	27.2	C	6.3	No
		PM	31.6	C	32.3	C	0.7	No
12. College Boulevard/SR-78 Eastbound Off-Ramps	Signalized	AM	12.1	B	11.7	B	-0.4	No
		PM	14.6	B	14.0	B	-0.6	No
13. College Boulevard/Haymar Drive/Plaza Drive	Signalized	AM	21.3	C	22.1	C	0.8	No
		PM	53.2	D	50.3	D	-2.9	No

Source: Appendix K
Notes:
1. Delay is measured in seconds per vehicle.
2. The College Boulevard/Aztec Street intersection would be signalized with the implementation of the project.
3. SSSC= stop sign controlled intersection .

Queueing Lenghts

As previously stated, the City of Oceanside's criteria for queue lengths is the available storage capacity at study intersections and segments. If that storage capacity is exceeded, then there is a project impact. The following study intersections that were also analyzed to determine if excessive queueing under the Future (2035) Plus Project may occur. Queues were generated by Fehr & Peers using the Synchro 8 analysis software (see Appendix K):

1. College Boulevard/Old Grove Road
2. College Boulevard/Avenida De La Plata
3. College Boulevard/Aztec Street
4. College Boulevard/Oceanside Boulevard
5. College Boulevard/Olive Drive

The purpose of the queue assessment presented in the TIA is to determine the frequencies of left-turn traffic spilling back into the through traffic lanes thereby reducing through capacity along College Boulevard during the peak hours. As shown in Table 4.13-12 and the Synchro queue reports provided in Appendix K, potential queuing issues have been identified in the Future (2035) Plus Project condition at:

- NBL on College Boulevard/Oceanside Boulevard during the AM peak hour
- SBL on College Boulevard/Olive Drive during the PM peak hour

Table 4.13-12
Future (2035) Plus Project Intersection Queue Conditions

Intersection	Left Turn Direction	Double Left	Future (2035) General Plan Buildout			Future (2035) Plus Project		
			Available Storage (ft)	*AM Peak Hour 95th %ile (feet)*	*PM Peak Hour 95th %ile (feet)*	*Available Storage (ft)[1]*	*AM Peak Hour 95th %ile (feet)*	*PM Peak Hour 95th %ile (feet)*
1. College Boulevard/Old Grove Road	NB	Yes	350	120	156	350	142	208
	SB	No	310	53	100	310	53	100
2. College Boulevard/Avenida De La Plata	NB	No	360	229	154	360	230	166
	SB	No	200	8	24	200	*8	*24
3. College Boulevard/Aztec Street	NB	No	180	40	38	180	40	*39
	SB	No	180	20	51	180	*20	*50
	NB	Yes	320	**#393**	257	320	**#398**	241

Table 4.13-12
Future (2035) Plus Project Intersection Queue Conditions

Intersection	Left Turn Direction	Double Left	Future (2035) General Plan Buildout			Future (2035) Plus Project		
			Available Storage (ft)	*AM Peak Hour 95th %ile (feet)*	*PM Peak Hour 95th %ile (feet)*	*Available Storage (ft)[1]*	*AM Peak Hour 95th %ile (feet)*	*PM Peak Hour 95th %ile (feet)*
4. College Boulevard/Oceanside Boulevard	SB	Yes	420	104	245	420	96	224
5.College Boulevard/Olive Drive	NB	No	190	26	45	190	26	45
	SB	Yes	450	333	#**524**	450	364	**#615**

Notes:
Locations where queueing exceeds available storage capacity are noted with **bold** text.
= 95th percentile volume exceeds capacity, queue may be longer
* = Volume for 95th percentile queue is metered by upstream signal
1. Approximate length based on the approved plans for the Project.

The above queuing issues are based on a review of the 95th percentile queues. The 95th percentile queues represent the worst-case condition that in many cases will not be experienced due to upstream metering. A review of the 50th percentile queues, which reflect more typical cycle conditions, showed that there will be no regularly occurring left-turn queuing issues at the College Boulevard/Oceanside Boulevard intersection (see Appendix K). At the College Boulevard/Olive Drive intersection, the Future Year 2035 PM peak hour volume on the southbound approach will exceed the capacity, and as such, the southbound left turn may experience queues that are longer than reported under the 50th percentile analysis.

One of the key operational issues along the corridor is the impact of the Sprinter gates located between Oceanside Boulevard and Olive Drive. Queuing both northbound and southbound along this segment of the corridor exists today and will continue to exist under the Project based on the results of the queueing assessment. It is also projected that there will be a heavy southbound left turn movement during the peak periods at the Oceanside Boulevard and Olive Drive intersection that continue to exceed the left turn pocket. To clarify, the project itself is not adding trips to College Boulevard. However, as demonstrated in Table 4.13-12, available storage in the southbound left turn movement at the College Boulevard/Olive Drive intersection would be exceeded in both Future (2035) scenarios. Compared to the Future (2035) General Plan Buildout conditions, queues at the Oceanside Boulevard and Olive Drive intersection in the PM peak hour under the Project are projected to increase by approximately 91 feet which equates to approximately 5 car lengths (see Appendix K). Also, queueing at the northbound left-turn movement at the College Boulevard/Oceanside Boulevard intersection would increase by approximately 5 feet under the Project as compared to General Plan Buildout conditions which equates to less than as single car length. While queueing issues (i.e., exceedance of available storage) at the Oceanside Boulevard and Olive Drive intersections with College Boulevard are projected to occur under both future conditions, this analysis conservatively concludes that Project queues would result in potentially significant impacts at the College Boulevard/Oceanside Boulevard intersection (NB left turn movement; AM peak hour) and College Boulevard/Olive Drive intersection (SB left turn movement; PM peak hour). As such, impacts are **potentially significant (Impact TRAF-1 and TRAF-2)**.

<u>Other Plans, Ordinances, or Policies Addressing the Circulation System</u>

In regards to other plans, ordinances, or policies addressing the circulation system, a consistency analysis between the proposed project and relevant policies of the Circulation Element is provided in Chapter 4.10, Land Use. As discussed therein, with future approval and adoption of the General Plan Amendment by the City Council, the proposed project would not conflict with the Circulation Element of the General Plan.

While the proposed project primarily consists of roadway segment widening between Olive Drive and Old Grove Road, the project also includes sections of reconstructed sidewalks, crosswalk striping, traffic-calming chokers, and extended bike lanes. For example, College Boulevard would be widened approximately 600 feet of College Boulevard on the east side, north of Waring Road, to extend the bike lane and provide a third through lane and also construct multi-tier retaining walls on College Boulevard on the east side. Also, north of Waring Road/Barnard Drive on College Boulevard, the existing parkway would be moved adjacent to the curb and the sidewalk would be reconstructed to the right-of-way line for an approximate distance of 3,000 feet. Refer to Chapter 3, Project Description of this EIR for additional details regarding proposed roadway improvements. In general and compared to existing conditions, the proposed project would improve pedestrian and bicycle facilities along College Boulevard near the intersection of Waring Road/Barnard Drive.

The NCTD provides public transit services along College Boulevard. Specifically, Routes 315, 323, and 325 run on College Boulevard. During construction, bus service would continue to run on College Boulevard and proposed improvements would not preclude the ongoing provisions of bus services and facilities (i.e., stops) on College Boulevard. Thus, the proposed project would not conflict with any existing transit stop locations or transit routes.

Therefore, impacts to programs or plans addressing multi-modal transportation would be less than significant.

Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Per CEQA Guidelines Section 15064.3, VMT analysis criteria detailed in this CEQA Guidelines Section does not apply until July 1, 2020 unless adopted earlier by the lead agency. The City of Oceanside has not elected this provision for VMT ahead of the standard schedule and, therefore, this section does not apply.

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

The project would include widening College Boulevard from a four-lane major arterial to a six-lane Major Arterial from Olive Drive to Old Grove Road. Additionally, the City proposes road and right-of-way improvements to the corridor to enhance existing and future traffic operations, provide congestion relief, and reduce queue lengths, improve safety conditions for the unsignalized intersections and access points along the corridor, and provide safer travel routes for bicyclists and pedestrians. Refer to Chapter 3, Project Description of this EIR for additional details regarding proposed roadway improvements.

The proposed improvements would be completed in accordance with the City Engineering Manual standards, and would include standard sidewalks, lanes, median, and bike lanes in accordance with the roadway designations. As such, project design and construction would be prepared and conducted in accordance with City General Plan Master Transportation Roadway Plan Policy 3.3 The project would also include traffic-calming chokers to narrow the travel way at approximately 600 feet north of Roselle Avenue, and lengthened left-turn lanes at southbound Thunder Drive and northbound Marvin Street West that would further enhance safety. Overall, compliance with roadway standards would avoid the introduction of a new, significant traffic hazard. Thus, impacts would be less than significant.

Would the project result in inadequate emergency access?

Construction of proposed improvements may require partial road closures, construction vehicles entering and exiting the project site, and pedestrian or bicycle lane closures. Construction along College Boulevard may potentially result in impacts to general access to surrounding land uses, including emergency access. In order to ensure adequate access to the project site and surrounding land uses during construction, a Traffic Control Plan (TCP) (**PDF-TRAF-1**) would be prepared by the contractor and/or City prior to permit issuance of construction activity within the public right-of-way. The primary purpose of a TCP is to provide for the safe and efficient movement of motorists (including emergency vehicles), bicycles, and pedestrians through or around construction zones while protecting the workers, equipment, and construction areas. The City requires that TCPs be consistent with the California Manual on Uniform Traffic Control Devices and the San Diego Regional Standard Drawings for TCPs. With implementation of a TCP as required by the City, impacts related to emergency access during construction would be less than significant.

With the implementation of the proposed widening, emergency access through College Boulevard would continue to be provided. The proposed improvements would be completed in accordance with the City Engineering Manual standards, and would accommodate emergency vehicles. As indicated above, the project would improve traffic flow relative to the existing conditions. However, compared to the 2035 General Plan Buildout scenario that proposes to widen College Boulevard between Old Grove Road and Waring Road to six lanes, the proposed project widening of College Boulevard between Olive Drive and Old Grove Road to six lanes would result in reduced traffic flow. While traffic flow through the corridor would be reduced compared to the 2035 General Plan Buildout scenario, improvements would reduce existing queuing at project intersections and increased roadway capacity (compare to existing conditions) between Olive Drive and Old Grove Road. Widening and improvements would result in minimal interference to potential emergency vehicles accessing College Boulevard and adjacent land uses. Therefore, the proposed project would not result in inadequate emergency access during operation and impacts would be less than significant.

4.13.5 Mitigation Measures

Based on the City's significance criteria, the proposed project is projected to have two significant direct projects associated with turning movement queues (i.e., exceedance of available storage capacity) at College Boulevard/Oceanside Boulevard intersection (NB left turn movement; AM peak hour) and College Boulevard/Olive Drive intersection (SB left turn movement; PM peak hour). As stated in the TIA (see Appendix K) and in Section 4.13.4, above, extending the existing turn pockets at these locations is infeasible due to the presence of the Sprinter tracks/gates and related "Keep Clear" zones. Roadway widening is also infeasible due to lack of right-of-way; however, implementation of the following measures would improve operations at these intersections:

MM-TRAF-1 College Boulevard/Oceanside Boulevard and College Boulevard/Olive Drive. Prior to the issuance of the grading permit, the City shall optimize signals at the College Boulevard/Oceanside Boulevard and College Boulevard/Olive Drive intersections to reduce forecasted queues.

MM-TRAF-2 College Boulevard/Olive Drive. Prior to the issuance of the grading permit, the City shall restripe the southbound approach to the College Boulevard/Olive Drive intersection to provide for a "trap" outside left turn lane that extends the queue capacity by 550 feet more than the existing condition.

As discussed in Section 4.13-4, at two of the eight segments analyzed the Future (2035) Plus Project condition would result in worsened operations such that Future (2035) General Plan Buildout LOS D conditions would be degraded to LOS E. See Table 4.13-9. These segments include College Boulevard between Olive Drive & Thunder Drive East (LOS E); and College

Boulevard between Marvin Street & Barnard Drive/Waring Road (LOS E). While the LOS E operating conditions would not occur in the Future (2035) General Plan Buildout conditions, the peak hour segment analysis revealed acceptable level of service operations under the Future (2035) Plus Project conditions for the two segments (see Table 4.13-10). Therefore, based on the peak hour segment analysis and City significance criteria, LOS E conditions on these roadway segments are less than significant. Accordingly, no mitigation is provided or required. Also, on the College Boulevard segment between Old Grove and Oceanside Boulevard, LOS E conditions are projected under the Future (2035) Plus Project condition but would result in a lower ADT volume compared to the Future (2035) General Plan Buildout condition. Therefore, based on the City's thresholds, LOS E conditions on this segment would not result in a significant Project impact.

As shown in Table 4.13-9, three of the eight studied roadway segments operate at unacceptable LOS E or F under the Future (2035) General Plan Buildout conditions. These segments include College Boulevard between Avenida De La Plata & Oceanside Boulevard (LOS E); College Boulevard between Oceanside Boulevard & Olive Drive (LOS F); and College Boulevard between Barnard Drive/Waring Road & Vista Way (LOS E). Under the Project, the segments would continue to operate at LOS E and LOS F, respectively, and differences in V/C between the two future scenarios would be less than the 0.02 increase standard for assessing impacts at unacceptable operating segments. As discussed in Section 4.13.4, the peak hour analysis conducted for the roadway segment revealed that under the Future (2035) Plus Project scenario the three roadway segments would not be significantly impacted. As such, the project would not result in a potential significant impact on these three segments. Further, unacceptable operating conditions on these segments were identified in the latest *Oceanside General Plan: Circulation Element* (City of Oceanside 2012), which includes a statement of overriding consideration for the segments. Therefore, the project does not result in any new impact at these segments not already identified in the General Plan. Accordingly, no mitigation is provided or required.

4.13.6 Level of Significance After Mitigation

With implementation of **MM-TRAF-1 and MM-TRAF-2**, queueing impacts forecasted in the Existing (2018) Plus Project and Future (2035) Plus Project scenarios at College Boulevard/Oceanside Boulevard intersection (NB left turn movement; AM peak hour) and College Boulevard/Olive Drive intersection (SB left turn movement; PM peak hour) would be reduced to a less than significant level.

No additional impacts concerning conflicts with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities were identified in the TIA (see Appendix K).

Per CEQA Guidelines Section 15064.3, VMT analysis criteria detailed in this CEQA Guidelines Section does not apply until July 1, 2020 unless adopted earlier by the lead agency. The City of Oceanside has not elected this provision for VMT ahead of the standard schedule and, therefore, this section does not apply. As such, the Project was not assessed for potential conflicts or inconsistencies with CEQA Guidelines section 15064.3, subdivision (b).

The proposed project would result in a less-than-significant impact associated with hazards due to a design feature.

The proposed project would result in a less-than-significant impact associated with inadequate emergency access.

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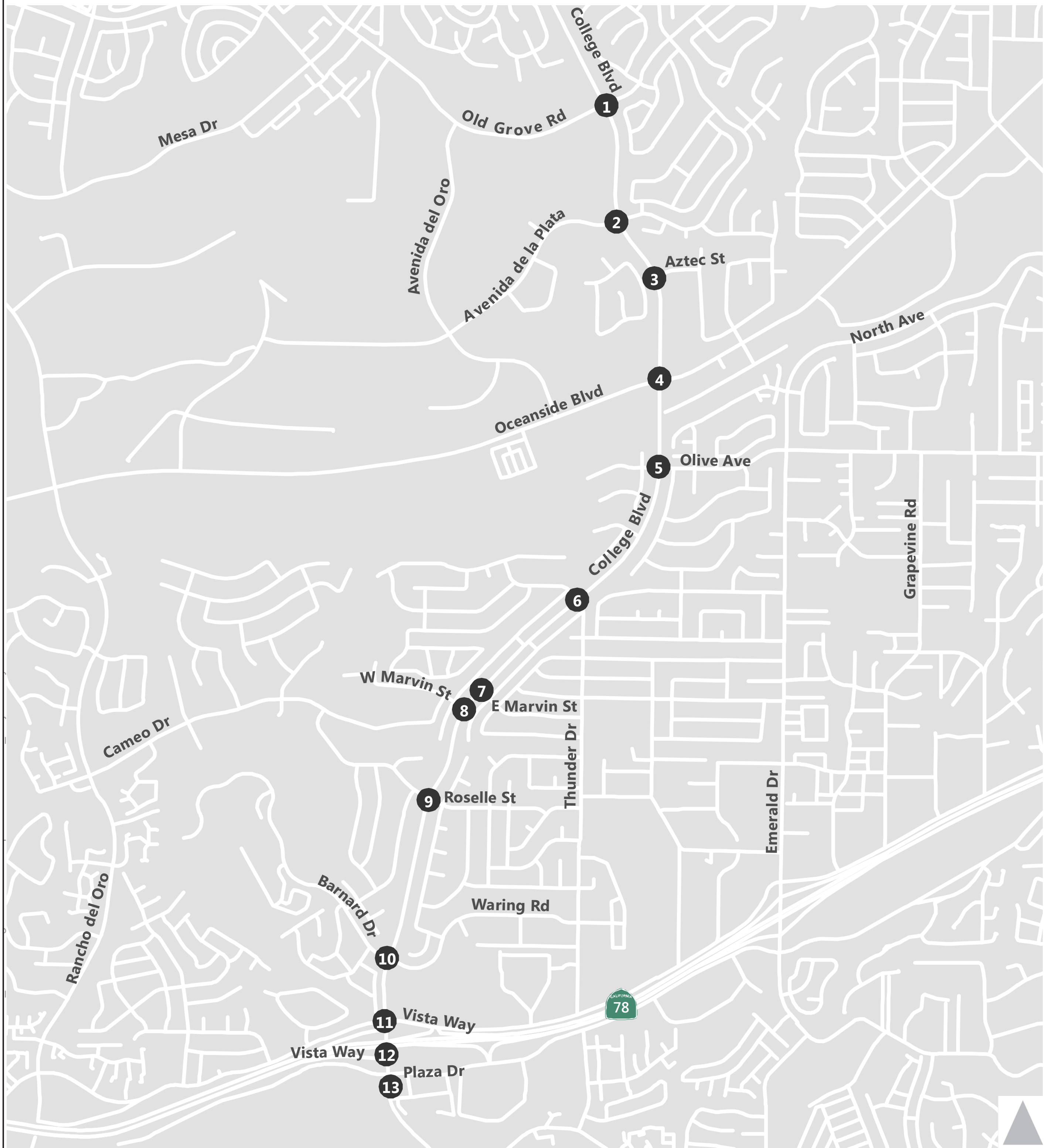

Study Intersections

DUDEK

SOURCE: Fehr & Peers 2019

FIGURE 4.13-1
Project Study Area and Intersections

College Boulevard Improvement Project EIR

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4.14 TRIBAL CULTURAL RESOURCES

This section describes the existing setting for tribal cultural resources, identifies associated regulatory requirements, evaluates potential impacts, and establishes mitigation measures related to implementation of proposed project. The following analysis is based on the cultural report prepared for the proposed project by Dudek (see Appendix C).

4.14.1 Existing Conditions

4.14.1.1 Setting

Refer to Section 4.4, Cultural Resources, and Appendix C of this EIR for a full discussion regarding the existing cultural, historical, and paleontological setting of the proposed project.

Dudek conducted a South Coast Information Center (SCIC) records search in May 2016 which indicated that no cultural resources have been previously identified within proposed project area. Four prehistoric archaeological sites and one historic address have been previously recorded within the 0.5-mile records search area but all sites are located at least 1,000 feet from the project site.

4.14.1.2 Tribal Coordination and Consultation

Dudek requested a search of Native American Heritage Commission (NAHC) Sacred Lands File on May 25, 2016, for the proposed project area. The NAHC provided results on May 27, 2016 and following receipt of the NAHC response, letters were sent on June 13, 2016, to the listed tribal representatives requesting information, opinions, or concerns relating to the proposed project. The letters contained a brief description of the project, a request for information pertaining to cultural resources or place that may be impacted by the project, and a reference map. Follow-up calls were made on June 27, 2016. To date, representatives from Viejas Band of Kumeyaay Indians (June 21, 2016) and Pala Tribal Historic Preservation Office (June 27, 2016) have responded to Dudek's outreach letters; both requested that a Native American monitor be present during ground disturbance, and asked to be updated on any future findings.

On January 28, 2019, the City distributed a letter inviting local tribes an opportunity to consult on the environmental review of the project pursuant to Assembly Bill (AB) 52. The letter was distributed to twenty-four tribes included on the NAHC tribal consultation list for San Diego County. Two tribes responded to the letter: Agua Caliente Band of Cahuilla Indians and the San Luis Rey Band of Mission Indians. In their letter, the Agua Caliente Band of Cahuilla Indians stated the project was located outside of the Tribe's Traditional Use Area and therefore, the tribe deferred to others in the area. No request for formal consultation was made by the Agua Caliente Band of Cahuilla Indians. The San Luis Rey Band of Mission Indians formal requested consultation pursuant to AB 52. The City met with the San Luis Rey Band of Mission Indians on

November 18, 2019 during which the tribe clarified that the City's standard conditions of approval for tribal cultural resources had recently been updated. No specific concerns regarding the project site or project were relayed by the San Luis Rey Band representative although they did indicate that they may follow up with the City at a later date.

4.14.1.3 Tribal Cultural Resources

Please see Section 4.14.1.2. During consultation under AB 52, no specific tribal cultural resources were identified by responding tribes within the footprint of the project.

4.14.2 Relevant Plans, Policies, and Ordinances

4.14.2.1 Federal

There are no federal plans, policies and ordinances that are particularly relevant to tribal cultural resources and the proposed project.

4.14.2.2 State

California Register of Historical Resources and the California Environmental Quality Act

CEQA requires that all private and public activities not specifically exempted be evaluated against the potential for environmental damage, including effects to historical resources. Historical resources are recognized as part of the environment under CEQA. The act defines historical resources as "any object, building, structure, site, area, or place that is historically significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (California Public Resources Code, Section 5020.1[j]).

Lead agencies have a responsibility to evaluate historical resources against the CRHR criteria prior to making a finding as to a proposed project's impacts to historical resources. Mitigation of adverse impacts is required if the proposed project will cause substantial adverse change. Substantial adverse change includes demolition, destruction, relocation, or alteration such that the significance of a historical resource would be impaired. While demolition and destruction are fairly obvious significant impacts, it is more difficult to assess when change, alteration, or relocation crosses the threshold of substantial adverse change. The CEQA Guidelines provide that a project that demolishes or alters those physical characteristics of a historical resource that convey its historical significance (i.e., its character-defining features) is considered to materially impair the resource's significance. The CRHR is used in the consideration of historical resources relative to significance for purposes of CEQA. The CRHR includes resources listed in or formally determined eligible for listing in the National Register of Historic Places (NRHP) and some California State Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR, and are presumed to be significant resources for purposes of CEQA unless a preponderance of evidence indicates otherwise.

Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the CRHR (California Public Resources Code, Section 5024.1; 14 CCR 4852), which include the following:

- It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or
- It is associated with the lives of persons important to local, California, or national history; or
- 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; or
- It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Senate Bill 18

The Traditional Tribal Cultural Places Bill of 2004 (SB 18) requires local governments to consult with Native American tribes during the project planning process. The intent of this legislation is to encourage consultation and assist in the preservation of "Native American places of prehistoric, archaeological, cultural, spiritual, and ceremonial importance" (County of San Diego 2007). The purpose of this consultation is to protect the identity of the cultural place and to develop appropriate and dignified treatment of the cultural resource. The consultation is required whenever a General Plan, General Plan Amendment, Specific Plan, Specific Plan Amendment, or Open Space Element is proposed for adoption. As part of the planning process, California Native American tribes must be given the opportunity to consult with the lead agency for the purpose of preserving, mitigating impacts to, and identifying cultural places.

Assembly Bill 52

AB 52, which took effect July 1, 2015, establishes a consultation process between California Native American tribes and lead agencies in order to address tribal concerns regarding project impacts and mitigation to tribal cultural resources (TCRs). Public Resources Code, Section 21074(a) defines TCRs and states that a project that has the potential to cause a substantial adverse change to a TCR is a project that may have an adverse effect on the environment. A TCR is defined as a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe that is either (1) listed or eligible for listing in the CRHR or a local register of historical resources, or (2) determined by a lead agency to be a TCR.

Native American Historic Resource Protection Act

State law addresses the disposition of Native American burials in archaeological sites, and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the NAHC to resolve disputes regarding the disposition of such remains. In addition, the Native American Historic Resource Protection Act (PRC Section 5097 et seq.) makes it a misdemeanor punishable by up to 1 year in jail to deface or destroy a Native American historic or cultural site that is listed or may be eligible for listing in the California Register of Historical Resources.

California Native American Graves Protection and Repatriation Act

The California Native American Graves Protection and Repatriation Act (California Repatriation Act) (25 U.S.C., Chapter 32), enacted in 2001, requires all state agencies and museums that receive state funding and that have possession or control over collections of human remains or cultural items, as defined, to complete an inventory and summary of these remains and items on or before January 1, 2003, with certain exceptions. The California Repatriation Act also provides a process for the identification and repatriation of these items to the appropriate tribes.

California Health and Safety Code Section 7050.5

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. California Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains can occur until the County Coroner has examined the remains (Section 7050.5b). If the coroner determines or has reason to believe that the remains are those of a Native American, the coroner must contact the NAHC within 24 hours (Section 7050.5c). The NAHC will notify the most likely descendant, and with the permission of the landowner, the most likely descendant may inspect the site of discovery. The inspection must be completed within 24 hours of notification of the most likely descendant by the NAHC. The most likely descendant may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

4.14.2.3 Local

There are no local plans, policies and ordinances that are particularly relevant to tribal cultural resources and the proposed project.

4.14.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to traffic and circulation are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to traffic and circulation would occur if the proposed project would:

1. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
   a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
   b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

4.14.4 Impacts Analysis

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

No historical resources, as defined by PRC Section 5020.1(k), are present within areas that will be impacted by the project. No historical resources were observed during a reconnaissance-level site survey performed by Dudek. Four prehistoric archaeological sites and one historic address have been previously recorded within the 0.5-mile records search area but all sites are located at least 1,000 feet from the project site. The historic residence is located at 317 Cedar Road, a half mile east of the proposed project corridor. Because the project would not cause substantial adverse change to a tribal cultural resource listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), impacts would be less than significant.

b. ***A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?***

No tribal cultural resources have been identified that could be impacted by the project through consultation with traditionally geographically affiliated California Native American Tribes. As indicated in Sections 4.14.1, the City has received one request for consultation under AB 52. A request was formally made by the San Luis Rey Band of Mission Indians and the City met with the tribe on November 18, 2019. Consultation with tribal representatives did not identify or provide information regarding any tribal cultural resources as defined by AB 52. However, the San Luis Rey Band of Mission Indians representative indicated that the City’s standard conditions of approval for tribal cultural resources would be appropriate to implement during project construction. The City’s standard conditions of approval for tribal cultural resources have been incorporated into the EIR as mitigation measure MM-CUL-1 (refer to Section 4.4). While no tribal cultural resources that may be affected by the project have been identified, mitigation measure MM-CUL-1 is incorporated to protect and appropriately treat unearthed tribal cultural resources during construction activities. With incorporation of mitigation measure MM-CUL-1, impacts would be less than significant.

4.14.5 Mitigation Measures

With implementation of Mitigation Measure MM CUL-1 (see Section 4.4, Cultural Resources), impacts to TCRs would be less than significant. No additional mitigation measures would be required.

4.14.6 Level of Significance After Mitigation

Potential impacts to tribal cultural resources would be less than significant, with incorporation of **MM-CUL-1**.

4.15 UTILITIES AND SERVICE SYSTEMS

This section describes the existing utilities setting of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project.

4.15.1 Existing Conditions

Water Utilities Department

The Water Utilities Department is responsible for providing potable water, wastewater, and storm water services to the City of Oceanside. This department is also responsible for overseeing waste and recycling services, as well as implementing the Zero Waste Plan. Each division is described in further detail below.

Water Division

The Water Division provides potable water services to the City through operating and maintaining water treatment, distribution, and metering facilities. The Water Division purchases the majority of the City's water supply from the San Diego County Water Authority (SDCWA) and treats it at the Robert A. Weese Filtration Plant (Weese Plant) with a capacity of 25 million gallons per day (mgd) (City of Oceanside 2019a). Mission Basin provides for the remaining water supply through extraction and treatment at the Mission Basin Groundwater Purification Facility (Mission Basin Plant) with a capacity of 6.4 mgd. (City of Oceanside 2019b). The Water Division also operates and maintains over 500 miles of waterlines that distribute water throughout the City, and 12 reservoirs with a combined capacity of 50.5 million gallons (City of Oceanside 2019c).

The project site is located in a developed area of the City of Oceanside. The College Boulevard corridor is primarily located adjacent to residential uses to the east and west but also occasionally parallels commercial shopping centers and office development near and north of Oceanside Boulevard. Within these areas the water systems have been in place for many years with much of the piping has been upgraded to asbestos cement or PVC piping.

Wastewater Treatment

The City of Oceanside's Water Utilities Department – Wastewater Division collects, treats, and disposes of the City's sewage to levels set by the Environmental Protection Agency. The Wastewater Division is responsible for operating and maintaining over 450 miles of pipelines and 34 lift stations, as well as the San Luis Rey Wastewater Treatment Plant and the La Salina Wastewater Treatment Plant (City of Oceanside 2019d). Serving areas of the City east of I-5 (including the proposed project area) while also providing service for the Rainbow Metropolitan Water District and a portion of the City of Vista, the San Luis Rey plant treats wastewater to the secondary level by conventional biological treatment and clarification (City of Oceanside 2019e). The San Luis Rey Plant has an annual average flow of 9.77 mgd (City of Oceanside 2019e).

Storm Drain Facilities

In addition to curbs and gutters, intermittent storm drain inlets are installed along the College Boulevard improvement corridor.

Standards for citywide drainage are established in the City's Master Drainage Plan. Please see Section 4.15.2 below for additional information regarding the City's Master Drainage Plan.

Storm Water

The City implements the Clean Water Program as a method to improve water quality of local water sources. Much of the CWP is realized through public education and outreach about pollution prevention practices. The City has a hotline to report urban runoff or storm drain dumping in order to help enforce better practices among residents and business owners.

As discussed in Chapter 4.9, Hydrology and Water Quality, the Project falls within the Loma Alta hydrologic subarea (HSA) and the El Salto HSA located within the Carlsbad hydrologic unit. The portion of the Project within the Loma Alta HSA crosses Loma Alta creek approximately 600 feet south of the intersection of College Boulevard and Oceanside Boulevard. All storm water generated within the proposed Project area in the Loma Alta HSA discharges through either storm drains or the natural channel immediately downstream from where College Boulevard crosses Loma Alta Creek (Crossing). There are four distinct discharge points immediately downstream the creek crossing

The portion of the Project within the El Salto HSA is split into two basins with different discharge points. Sections of the proposed Project between Thunder Drive and the low point between Marvin Street and Rosella Avenue discharge to a drainage network that follows a natural depression west along the northern boundary of MiraCosta College. Surface flows generated in the remaining Project area south of this point are collected by the storm drain network that parallels College Boulevard and discharges into Buena Vista Creek south of SR- 78.

Solid Waste and Recycling

Waste Management provides solid waste and recycling services within the City of Oceanside. Waste Management disposes of solid waste collected in the City of Oceanside at the El Sobrante Landfill located at 10910 Dawson Canyon Road in the City of Corona. Solid waste collected from the City is disposed of at the El Sobrante Landfill located in Corona, California. The El Sobrante Landfill has a maximum permitted throughput of 16,054 tons per day with estimated remaining capacity of 143,977,17 tons and projected closure date of January 1, 2051 (CalRecycle 2019). Recyclables are collected by Waste Management and delivered to the Waste Management Materials Recovery Facility located at 2050 North Glassell Street in the City of Orange.

4.15.2 Relevant Plans, Policies, and Ordinances

4.15.2.1 Federal

.National Pollution Discharge Elimination System

Section 402 of the Clean Water Act established the National Pollutant Discharge Elimination System (NPDES) to regulate the discharge of pollutants from point sources. The U.S. Environmental Protection Agency (EPA) has authorized the State of California to administer its NPDES permitting program. The program is administered at the local level by the Regional Water Quality Control Boards (RWQCBs) as described below.

4.15.2.2 State

Regional Water Quality Control Board

The San Diego Regional Water Quality Control Board (RWQCB) regulates water quality in portions of San Diego, Orange, and Riverside Counties pursuant to the Federal Clean Water Act (CWA). RWQCB sets standards, determines regulatory compliance, issues discharge permits, and enforces other actions related to ensuring the water quality of the region. The San Luis Rey Plant, La Salinas Treatment Plant, and Mission Basin Groundwater Purification Facility in the City operate in compliance with National Pollution Discharge Elimination System (NPDES) Permit No. CA0107433 adopted by the RWQCB through Order No. R9-2011-0016, as amended by Orders No. R9-2012-0042 and R9-2012-0060.

California SB X7-7

SB X7-7, The Water Conservation Act of 2009, was enacted in November 2009 to require all water suppliers to increase water use efficiency. The legislation sets an overall goal of reducing per-capita urban water use by 20% by December 31, 2020 (California Water Code Section 10608.20). In order to reach this goal, SB X7-7 requires each urban retail water supplier to report progress in meeting water use targets (California Water Code Section 10608.40). The law also requires wholesale water suppliers to support their retail member agencies' efforts to comply with SB X7-7 through a combination of regionally and locally administered active and passive water conservation measures, programs, and policies, as well as the use of recycled water.

4.15.2.3 Local

City of Oceanside

General Plan

The State of California requires that each city draft and adopt a comprehensive general plan that provides long-term policy and development guidelines and goals within each city's jurisdiction. Each general plan has several required elements. The relevant elements are the Environmental Resource Management Element and the Hazardous Waste Management Element. All other specific plans and programs adopted by the City must be consistent with the City's General Plan and its elements.

The Environmental Resource Management Element focuses on conserving and preserving natural resources and open space within the City. These resources include water, soil, coastal, minerals, habitats, air, agriculture, culture, and recreation space. This element is consistent with the City's General Plan and all other elements.

The Hazardous Waste Management Element provides overall policy guidance for safe and effective managing of hazardous waste within the City. Items within this element's scope include hazardous waste facilities, pollution prevention, and waste reduction and elimination. This element is consistent with the City's General Plan and all other elements.

Urban Water Management Plan and Water Conservation Master Plan Update

As required by California Water Code Sections 10617 and 10620, the City, as an urban water supplier, must prepare and adopt an Urban Water Management Plan (UWMP) every 5 years. The City adopted its 2015 UWMP in June 2016. The UWMP describes current water system services, facilities, supplies, and demands and includes an analysis of the City's water supply and demand planning within its service area for variable water years (average, single-dry, and multiple-dry years) over a 20-year horizon. Based on the 2015 UWMP, which is appended and incorporated by reference, the City's supplies, and reliability analysis show that with implementation of additional planned supplies and water conservation, supplies will meet demands under all water years through 2040 (City of Oceanside 2016).

The City also has prepared its Water Conservation Master Plan Update (Master Plan Update) to illustrate the City's efforts to cost-effectively help meet future water needs and satisfy state-mandated per capita reduction targets in accordance with the 2009 Water Conservation Act (SBX7-7). The Master Plan Update makes recommendations for specific water conservation measures to help the City achieve conservation goals set by the Water Conservation Act of 2009 (Senate Bill X7-7) and a reduction of 25 gallons per capita per day by 2020 (City of Oceanside 2015). The plan is consistent with the 2015 UWMP.

Zero Waste Strategic Resource Management Plan

In 2012, the City adopted and enacted the Zero Waste Strategic Resource Management Plan, which established methods to reach the goal of diverting 75% of solid waste by 2020, working in conjunction with State of California Assembly Bill 341 (AB 341) (City of Oceanside 2012). When the plan was approved in 2012, the City was already achieving a 67 percent diversion rate and per the City of Oceanside's Solid Waste and Recycling website, the City increased its original 75% diversion by 2020 goal to 75-90% diversion (City of Oceanside 2019f).

City of Oceanside Municipal Code

The City's Municipal Code provides various chapters that define requirements for public facilities impact fees as a condition of approval of building permits for development projects. Specifically, Chapter 32C, Section 32C.3 states that "prior to the issuance of a building permit for new construction, including residential and nonresidential development, on any property within the citywide area of benefit established pursuant to this chapter, the applicant for such permit shall pay or cause to be paid any fees established and apportioned pursuant to this chapter for the purpose of defraying the actual or estimated cost of constructing the city's public facilities". Public facilities, as defined by the City's Municipal Code, are all governmental facilities specified within the City's General Plan, including water, sewer, and stormwater systems.

Chapter 13 of the City's Municipal Code contains the Solid Waste and Recycling Code. The Solid Waste and Recycling Code provides definitions, administration requirements, enforcement, and regulations for storage, disposal, and collection of solid waste as well as provision of recycling facilities and separation of recyclables within the City.

4.15.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to utilities and service systems are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to utilities and service systems would occur if the project would:

1. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects.
2. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.
3. Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
4. Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
5. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

4.15.4 Impacts Analysis

Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects?

The proposed project would not trigger or result in a need to construct a new water or wastewater treatment facility or expand existing facilities. The project does not propose to alter water or wastewater treatment facilities and expansion of existing facilities would not be required to accommodate the project which entails widening of an existing road (i.e., College Boulevard) and other roadway improvements. In addition, as the project would not generate new demand, construction and operation of the project would not require new or expanded electric power, natural gas or telecommunication facilities. .

During construction of the project, the City would implement one storm water facility recommendation identified in the 2003 Plan of Drainage. More specifically, the City would implement recommendations identified for Facility ID LAC-149 which entails upsizing (to a 42-inch diameter cured-in place pipe (CIPP)) of a 78-foot long segment of an existing 36-inch diameter CIPP between Olive Drive and Loma Alta and adjacent to the southbound travel lanes. However, the proposed upsizing would not be triggered or rendered necessary due to implementation of the project as the recommended upsizing was initially identified by the City in 2003.

As previously stated, road-widening efforts would entail alterations to the existing curb and gutter system and stormwater inlets. However, these systems would be reconstructed and connections would be reestablished by the City prior to the completion of construction activities. As such, potential impacts to water, wastewater, and power facilities would be less than significant.

Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Construction of the proposed project would result in a temporary increase in water usage. Specifically, the Project contractor would import and periodically apply water for general dust control during ground disturbing construction activities. Water usage during construction would be temporary and would not be substantial such that the ability of reasonably foreseeable future developments to acquire water would be compromised.

The proposed project would not generate substantial long-term demand for additional water supplies over existing. Irrigated landscaping is proposed within portions of the College Boulevard median however, landscaping would consist of low-maintenance and low-water use shrubs and trees and would generally replace more water intensive vegetation. Given the minimal water demand generated during construction and operation of the project, sufficient supplies are available to serve the project and future development. As such, impacts would be less than significant.

Would the project result in a determination by the wastewater treatment provider, which serves or may serve the project, that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Project implementation would not significantly affect wastewater treatment, since the proposed project would not generate a substantial volume of additional wastewater that would noticeably affect operations at the San Luis Rey Wastewater Treatment Plant. Therefore, impacts would be less than significant.

Would the project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

During construction, construction activities would generate a limited amount of solid waste such that would generally consist of construction debris, asphalt, and concrete. No regular solid waste disposal would be necessary for the improved roadway following completion of construction activities. As with the rest of the City, solid waste disposal during construction would be provided by Waste Management. Solid waste collected from the City is disposed of at the El Sobrante Landfill located in Corona, California. The El Sobrante Landfill has a maximum permitted throughput of 16,054 tons per day with estimated remaining capacity of 143,977,170 tons and projected closure date of January 1, 2051 (CalRecycle 2019).

The City's goal is to achieve a 75 to 90% diversion/recycling rate by 2020 based on their Complete Zero Waste Plan (City of Oceanside 2019f). In accordance with this plan, demolition and construction waste would be recycled as feasible. As the project would not impair the attainment of solid waste reduction goals, project impacts would be **less than significant**.

Would the project comply with federal, state, and local statutes and regulations related to solid waste?

The proposed project would be subject to the Zero Waste Plan that is aligned with AB 341 (Sloid Waste Diversion). The City's goal is to achieve a 75 to 90% diversion/recycling rate by 2020 based on their Complete Zero Waste Plan. The proposed project would collaborate with the solid waste providers that service the City, such as Waste Management, in order to ensure proper compliance with the Zero Waste Plan.

All construction debris and other waste generated during construction activities would be disposed of in an approved site in compliance with federal, state and local regulations. During construction, common construction and demolition materials such as concrete and masonry would be recycled and the project contractor would comply with the City's Complete Zero Waste Plan. No regular solid waste disposal would be necessary for the improved roadway following completion of construction activities. As such, no impacts would result.

4.15.5 Mitigation Measures

Significant impacts to utilities and service systems have not been identified and therefore, no mitigation measures are required.

4.15.6 Level of Significance After Mitigation

No mitigation measures are required.

CHAPTER 5
EFFECTS FOUND NOT TO BE SIGNIFICANT

Section 15128 of the California Environmental Quality Act (CEQA) Guidelines requires that an environmental impact report (EIR) briefly describe why various environmental effects were determined not to be significant and therefore were not discussed in detail in the EIR. The environmental issues outlined in the following sections are not considered significant, and the reasons for the conclusion of non-significance are discussed.

5.1 AGRICULTURE AND FORESTRY RESOURCES

A significant impact related to agriculture and forestry resources would occur if the project would:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)).

d) Result in the loss of forest land or conversion of forest land to non-forest use.

f) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

The proposed project site does not include and is not adjacent to Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Department of Conservation [DOC] 2016). College Boulevard is an existing paved road located in a developed, urban environment and would not convert designated farmland to non-agriculture use, conflict with existing zoning for agricultural use or a Williamson Act contract, or conflict with existing zoning for, or cause rezoning of, forest land. In addition, the proposed project would not result in the loss of forestland (or conversion of forestland to non-forest use) or involve other changes that could result in conversion of Farmland to non-agricultural use or conversion of Forestland to non-forest use. Therefore, no significant impacts to agriculture and forestry resources would occur.

5.2 MINERAL RESOURCES

A significant impact related to mineral resources would occur if the project would:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

According to Figure 2, Mineral Resources Zones included in the County of San Diego's Guidelines for Determining Significance and Report Format and Content Requirements: Mineral Resources (County of San Diego 2008), the College Boulevard corridor overlies an area mapped as MRZ-3 (resource potentially present). However, as the Project entails roadway widening and related activities on an existing road, the proposed project would not result in the loss of availability of a known mineral resource that would be of value. In addition, the proposed project would not impact the major areas of mineral deposits in the City (i.e., San Luis Rey River Basin) and would not entail grading of previously undisturbed lands in a mapped sand deposits areas pursuant to Figure ERM-5, Sand Deposits, of the General Plan Environmental Resource Management Element (City of Oceanside 1975). As such, the proposed project would not result in the loss of locally important mineral resource recovery site as delineated on a local general plan, specific plan, or other land use plan. Therefore, no significant impacts to mineral resources would occur.

5.3 POPULATION AND HOUSING

A significant impact related to population and housing would occur if the project would:

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

The project would not induce substantial population growth in the area, as no homes are proposed. The project would not induce substantial growth in the area, as many of the surrounding properties are already developed or planned to be developed under the City's General Plan. Furthermore, College Boulevard is proposed to be widened to a 6-lane major arterial from Olive Drive to Old Grove Road, which would be consistent with the City of Oceanside's Circulation Element Year 2030 classification of College Boulevard as a 6-lane major arterial.

As identified in the project description, proposed widening of College Boulevard between Waring Road and Old Grove Road would require the acquisition of right-of-way, affecting parts of approximately 65 parcels along the College Boulevard corridor. These parcels are primarily privately owned and are currently developed with landscaping and single- and multi-family residences. There are however, no structures within the proposed acquisition area and no displacement of existing housing would result. In addition, no change to the underlying zoning or associated density of the affected parcels would occur. Therefore, no impact to population and housing would occur. For the portions of affected parcels to be acquired, the City of Oceanside would work with the private property owners to determine fair market value.

As the proposed project site currently contains no housing or people, the construction of the proposed improvements would not displace any existing housing or displace any number of people. Therefore, impacts relating to the displacement of housing and people were found to be less than significant.

5.4 RECREATION

A significant impact related to recreation would occur if the project would:

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

The proposed project does not include a housing component. Given these factors, the proposed project would not lead to increased use of existing parks or other recreational facilities that would cause or accelerate substantial physical deterioration of these facilities. In addition, the proposed project has no need for additional park services, and does not require the construction or expansion of recreational facilities. Therefore, impacts to recreational resources were determined to be less than significant.

5.5 WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

a) Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

The proposed project is not located within a state responsibility area or lands classified as very high fire hazard severity zones (VHFHSZ). The proposed project site is located approximately 1.4 miles northwest from a VHFHSZ mapped near Calavera Lake area and 3.3 miles southeast from a VHFHSZ mapped near the San Luis Rey River (CAL FIRE 2009). As discussed in Section 5.6(f) and 5.13(d), the project would not conflict with the regional or city emergency response plans, and the site would have adequate emergency access. Refer to Section 5.6(f) and 5.13(d) for additional information. The proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan and, therefore, would have a less than significant impact.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

See answer to Section 5.5(a). The proposed project site is an existing paved road located in a highly urbanized and developed area. The project site is not located within or adjacent to a fire hazard severity zone and construction does not pose a severe wildfire fire risk. In addition, adequate emergency egress would be provided during construction and the City and County has adequately planned for wildfire hazards (see Section 5.6(f)). The proposed project would not exacerbate wildfire risks, exposing occupants to pollutants and, therefore, would have a **less than significant** impact.

c) Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

See answer to Section 5.5(a). The project entails widening of an existing paved road and as such, the project would not exacerbate fire risks. In addition, the proposed project is not located with or adjacent to a fire hazard severity zone and proposed improvements would be constructed within an existing roadway. The proposed project would not require the installation or maintenance of infrastructure that would exacerbate fire risk and, therefore, would have a **less than significant** impact.

d) Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

See answer to Section 5.5(a). The project is not located in a VHFHSZ and risk if wildfire is considered low due to the developed nature of the project site (i.e., College Boulevard) and adjacent land uses. As stated in Chapter 4.6, Geology and Soils, no evidence of landsliding was noted during the site reconnaissance or previous geotechnical investigations that were reviewed by Geocon, and no landslides are known at locations that would affect the proposed project (see Appendix F). According to Ninyo & Moore (see Appendix E), landslides are mapped in close proximity west of the project alignment near Olive Drive however; these landslides do not underlie the project area. In addition, the project (widening of an existing paved road and roadway improvements) would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, because of runoff, post-fire slope instability, or drainage changes. Therefore, impacts would be **less than significant.**

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CHAPTER 6
CUMULATIVE EFFECTS

6.1 INTRODUCTION

Although the environmental effects of an individual project may not be significant when that project is considered independently, the combined effects of several projects may be significant when considered collectively. Such impacts are "cumulative impacts." Section 15355 of the California Environmental Quality Act (CEQA) Guidelines defines cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Section 15130 of the CEQA Guidelines provides guidance for analyzing significant cumulative impacts in an Environmental Impact Report (EIR). According to this section of the CEQA Guidelines, the discussion of cumulative impacts "...need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by standards of practicality and reasonableness." The discussion should also focus only on significant effects resulting from the project's incremental effects and the effects of other projects. According to Section 15130(a)(1), "An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR."

Cumulative impacts can occur from the interactive effects of a single project. For example, the combination of noise and dust generated during construction activities can be additive and can have a greater impact than either noise or dust alone. However, substantial cumulative impacts more often result from the combined effect of past, present, and future projects located in proximity to the project under review. Therefore, it is important for a cumulative impacts analysis to be viewed over time and in conjunction with other related past, present, and reasonably foreseeable future developments whose impacts might compound or interrelate with those of the project under review.

6.2 Methodology

According to Section 15130(b) of the CEQA Guidelines, cumulative impact analysis may be conducted and presented by either of two methods:

(A) a list of past, present, and probable activities producing related or cumulative impacts; or

(B) a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document that has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact.

With the exception of the impact analyses of air quality and greenhouse gas emissions, the cumulative list approach has been utilized in the cumulative analysis presented in this chapter, as discussed below. Air quality and greenhouse gas emissions cumulative impacts have been evaluated using the summary of projections method because impacts can only be analyzed on a broad, area-wide scope, and in a cumulative context.

6.3 Cumulative Projects

Based upon information provided by the City of Oceanside, and information gathered from other agencies (e.g. Caltrans), a list of cumulative projects under consideration for this analysis is presented in Table 6-1. The location of identified cumulative projects is depicted on Figure 6-1.

Table 6-1
Cumulative Project List

Map ID No.	Project Title	Project Location	Project Description	Status
City of Oceanside				
1	Arroyo Verde Shopping Center	Northeast corner of the Oceanside Boulevard/Rancho Del Oro Drive intersection	Development of commercial uses allowed by right within the existing PD-1 zone on 3.6 acres	Under review (Final MND dated September 2018)
2	Buena Vista Lagoon	The boundary between the Cities of Carlsbad and Oceanside	Enhancement efforts for Buena Vista Lagoon as a component of the North Coast Corridor Public Works Plan/Transportation and Resource Enhancement Program	Under review (Final EIR dated September 2017)
3	Fairfield Inn & Suites	The north side of Oceanside Boulevard, west of the Interstate 5 freeway, between Vine Street and Clementine Street.	99-room select service hotel on a currently vacant 2.32 acre lot	Under review (Final EIR dated November 2017)
4	The Inns at Buena Vista Creek	Southeastern corner of the State Route 78 (SR-78)/Jefferson Street intersection	A 426-room hotel with a meeting/banquet pavilion, and a parking structure on approximately 12.5 acres of vacant land	Under review (Final EIR dated April 2018)
5	Quarry Creek	South of SR-78 and west of College Boulevard at the former site of the South Coast Material Quarry	Full development of the Master Plan would provide a total of 656 residential dwelling units, public use, and open space uses, as well as supporting infrastructure. The project also includes approximately 88 acres of open space and conserved areas.	Final EIR approved April 2013

Table 6-1
Cumulative Project List

Map ID No.	Project Title	Project Location	Project Description	Status
6	Moody's El Corazon Recycling Facility Relocation	Within the El Corazon Specific Plan area, west of the SoCal Sports Complex.	Relocation and downsizing of the Moody's El Corazon Construction and Demolition Debris Recycling Facility 2,000 feet to the western portion of the El Corazon Specific Plan area	Under review (Draft MND dated July 2018)
7	Coast Highway Corridor Study	The project encompasses an approximate 3.5-mile-long segment of the Coast Highway corridor between Harbor Drive in the north and Buena Vista Lagoon in the south through the city of Oceanside.	The project consists of two components, the Complete Streets improvements and the Coast Highway Incentive District. These components would create new development guidelines and regulations to encourage redevelopment and revitalization of the corridor study area.	Under review (Partially Recirculated Draft EIR released November 2018)
8	San Onofre Nuclear Generation Station Units 2 & 3 Decommissioning Project	Northwestern San Diego County (west of I-5 and east of the Pacific Ocean; intake structures and other components extend west of SONGS into the Pacific Ocean)	Decommissioning of the San Onofre Nuclear Generation Station would occur between 2019 and 2028 and would consist of a variety of remediation, removal, and disposal activities.	Under review (Draft EIR dated June 2018)
9	Scripps Health 78 & Jefferson Medical Office Facility	East of Jefferson Street and north of SR-78	Construction of a new medical office building in the northern portion of the 4.5-acre site. The proposed MOB would be proximately 85,000 square feet and would house medical staff providing general health care services to the general public.	Final MND dated April 2018
10	Talone Vector Remediation	Between Frazee Road and College Boulevard, behind the Towne Center North Shopping Area	Vector control activities under Section 404 of the federal Clean Water Act	Under review (Final MND dated July 2018)
11	Tri-City Hospital Parking Structure	On the TCMC Campus at 4002 Vista Way	Parking structure and a Temporary Construction Entry Drive on 3.9 acres for the TCMC Campus	Under construction (Final ND May 2018)
12	Villas Mission San Luis Rey	North of Mission Avenue and east of Mission View Manor and Mission View RV Storage	A residential care facility for the elderly on an 8.01-acre site within the Mission San Luis Rey grounds.	Under review (Final MND dated February 2018)
13	Melrose +Oceanside	East and west of Melrose Drive, north of Oceanside Boulevard/Bobier Drive	37 single-family homes, 278 multifamily dwelling units, 10 KSF restaurant, 10 KSF office space	Under review (Final EIR dated April 2018)

Table 6-1
Cumulative Project List

Map ID No.	Project Title	Project Location	Project Description	Status
14	North River Farms	The project site is laterally bisected into northern and southern sections by North River Road. The northern portion of the project site is bordered on the east by Wilshire Road.	The project proposes a planned development consisting of a General Plan Amendment, Zoning Ordinance Amendment, PD Plan, Development Agreement, and Vesting Tentative Map. If approved, these entitlements would allow the development of a planned residential, mixed-use, and sustainable community on 176.6 acres of land in the northeastern portion of the City along the North River Road alignment.	Under review (Draft EIR recommended for denial by Planning Commission 1/28/2019)
15	Kawano/Nagata	On North River Road, between Avenida Descanso and Calle Montecito	Construction of high density housing on the 25.6-acre site; zone change of light industrial to high density residential	Under review
16	Villa Storia	North central portion of City within the Mission San Luis Rey Historic Area. Project site is bound by Mission Avenue and SR-76 to the south, mobile homes and other residential development to the north, residential development to the east and Mission San Luis Rey to the west.	The project proposes four separate Planning Areas that would support a variety of residential uses including single-family detached and cluster developments, single-family attached clusters, and a variety of townhouses on the 35.59 acre site.	Under construction
17	El Corazon	Site is bound by Mesa Drive to the north, Rancho del Oro Drive to the east, Oceanside Boulevard to the south, and El Camino Real to the west	Mixed-Use Master Plan on a 465-acre property. Development would include hotels, a variety of commercial uses, a senior center, a community center, library, recreation facilities, a greenwaste facility, open space, and associated infrastructure	Approved, phases in progress
18	Rancho Del Oro Village XII	Northwest quadrant of the College Boulevard and Old Grove Road intersection	303 residential multifamily units	Under construction

6.4 CUMULATIVE IMPACT ANALYSIS

6.4.1 Aesthetics

Projects contributing to cumulative visual effects include those within the project viewshed. The viewshed encompasses the area within which the viewer is most likely to observe the proposed project and surrounding uses. Therefore, the project viewshed is the geographic extent for the analysis of cumulative impacts to visual resources and aesthetics.

As discussed in Section 4.1, Aesthetics, the proposed project would not substantially impact a scenic vista. College Boulevard and the adjacent landscape are not identified as visual open space and none of the features listed in Table ERM-2 as visual open space is within the viewshed of the proposed project corridor. As such, there are no designated scenic vistas located along the proposed project corridor. The proposed project consists of road widening and additional improvements that would alter the current extents and striping of the College Boulevard corridor between Barnard Drive/Waring Road and Old Grove Road. The primarily horizontal character of the proposed project would not result in an impact to scenic features in the City of Oceanside. In addition, none of the cumulative projects listed in Table 6-1 are within the same viewshed as the proposed project. Therefore, the proposed project would not combine with other projects to result in a cumulative impact to these scenic resources.

There are no state-designated scenic highways adjacent to, or in the vicinity of, the project site. While not officially designated at the time of preparation of this EIR, segments of SR-76 and I-5 are considered to be eligible for state scenic highway designation (Caltrans 2017). The northern extent of the proposed project (i.e., College Boulevard at Old Grove Road) is located over 2 miles from SR-76 (at College Boulevard) and the project is located approximately 4.8 mile east of I-5. Intervening topography and development screen the project site from motorists on SR-76 and I-5. Therefore, the proposed project would not substantially damage scenic resources within a state scenic highway, and would not combine with other projects to result in an impact to this eligible state scenic highway.

Because the project entails road widening and other improvements that would display a quality and character consistent with that currently displayed by existing features of the College Boulevard improvement corridor (i.e., asphalt surface, concrete curbs, white and yellow striping), the proposed project would result in a weak change in the visual environment. Additionally, as mentioned previously, none of the cumulative projects listed in Table 6-1 are within the same viewshed as the proposed project. Therefore, the proposed project would not combine with other cumulative projects to substantially degrade the visual character of the site or the surroundings.

The project would not introduce new temporary or permanent sources of light or glare to the College Boulevard corridor. Therefore, the proposed project would not combine with other projects to result in significant impacts associated with lighting and/or glare.

6.4.2 Air Quality

The geographic context considered for the cumulative air quality analysis is the San Diego Air Based (SDAB), which is under the jurisdiction of the San Diego Air Pollution Control District (SDAPCD). Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the SDAPCD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are relevant in the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality. As described previously in Section 4.2, Air Quality, the proposed project would have a less than significant individual impact from short-term construction.

The SDAB is a nonattainment area for ozone (O_3) under the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). The poor air quality in the SDAB is the result of cumulative emissions from motor vehicles, off-road equipment, commercial and industrial facilities, and other emission sources that emit these pollutants or their precursors (i.e., volatile organic compounds (VOC) and oxides of nitrogen (NO_x) for O_3). In analyzing cumulative impacts from a project, the analysis must specifically evaluate the proposed project's contribution to the cumulative increase in pollutants for which the basin is designated as nonattainment for the CAAQS and NAAQS. If the proposed project does not exceed thresholds and is determined to have less than significant project-specific impacts, it may still contribute to a significant cumulative impact on air quality if the emissions from the proposed project, in combination with the emissions from other proposed or reasonably foreseeable future projects, are in excess of established thresholds. However, a project would only be considered to have a significant cumulative impact if the proposed project's contribution accounts for a significant proportion of the cumulative total emissions (i.e., it represents a "cumulatively considerable contribution" to the cumulative air quality impact).

Additionally, for the SDAB, the Regional Air Quality Strategy (RAQS) serves as the long-term regional air quality planning document for the purpose of assessing cumulative operational emissions in the basin to ensure the SDAB continues to make progress toward NAAQS- and CAAQS-attainment status. As such, cumulative projects located in the San Diego region would have the potential to result in a cumulative impact to air quality if, in combination, they would conflict with or obstruct implementation of the RAQS. Similarly, individual projects that are inconsistent with the regional planning documents upon which the RAQS is based would have the potential to result in cumulative operational impacts if they represent development and population increases beyond regional projections.

The SDAB has been designated as a federal nonattainment area for O3 and a state nonattainment area for O_3, PM_{10}, and $PM_{2.5}$. The nonattainment status is the result of cumulative emissions from all sources of these air pollutants and their precursors within the basin. Projects that emit these pollutants or their precursors (i.e., VOCs and NO_x for O_3) potentially contribute to poor air quality. In analyzing cumulative impacts from a project, the analysis must specifically evaluate the project's contribution to the cumulative increase in pollutants for which the basin is designated as nonattainment for the CAAQS and NAAQS. Since the proposed project would result in regional emissions of VOCs, NO_x, PM_{10}, and $PM_{2.5}$ that would exceed SDAPCD thresholds, the proposed project would result in a cumulatively considerable increase in these nonattainment pollutants. As described above in the analysis pertaining to violation of any air quality standard, since the City lacks the authority to mandate emission reductions for on-road vehicles, or to control driver behavior, no feasible mitigation measures have been identified to reduce these emissions. This cumulative impact would be significant and considerable.

6.4.3 Biological Resources

Cumulative impacts consider the potential regional effects of a project and how a project may affect an ecosystem or one of its members beyond the project limits and on a regional scale. It is presumed that all reasonably foreseeable cumulative projects, including those described in Table 6-1, would be required to conform to existing regulations with respect to avoidance, minimization, and mitigation of impacts to sensitive habitat, achieving no-net-loss of wetlands and like/kind replacement for impacts to sensitive habitat that cannot be avoided. Therefore, it is assumed that impacts would be assessed and mitigated pursuant to CEQA, and those projects within the City's jurisdiction would be reviewed by the City's during the project review and approval process.

As discussed in Section 4.3, Biological Resources, the proposed project would result in direct permanent impacts to urban/developed land (i.e., College Boulevard) due to the proposed roadway improvements. Vegetation removal or other vegetation- or ground-disturbing activities associated with construction has the potential to impact nesting birds protected under the Migratory Bird Treaty Act (MBTA), raptors, and sensitive vegetation outside of the authorized limits of work. Impacts to these biological resources would be mitigated on-site through **MM-BIO-1** (biological monitoring during nesting/breeding season) and **MM-BIO-2** (fencing to delineate the limits of grading). All direct and indirect impacts would be reduced to less than significant levels with implementation of **MM-BIO-1** and **MM-BIO-2**, and the proposed project would not result in a loss of vegetation that is regionally significant.

Some of the cumulative projects listed in Table 6-1, Cumulative Project List, are located in previously developed areas with few biological resources, while other cumulative projects are in areas where biological resources could be impacted as a result of development. However, implementation of **MM-BIO-1** and **MM-BIO-2** to address site-specific impacts would reduce the proposed project's contribution to a cumulatively considerable impact to a level that is less than significant.

6.4.4 Cultural Resources

A cumulative impact in terms of cultural resources refers to the mounting aggregate effect upon cultural resources due to modern or recent historical land use, such as residential development or natural processes that result from human activity (e.g., erosion). As discussed in Section 4.4, Cultural Resources, no archaeological resources have been observed or recorded within the project area. However there is the potential for the inadvertent discovery of cultural resources during construction activities. Implementation of **MM-CUL-1** (review of unanticipated finds) would reduce potential impacts to archaeological to less than significant levels. Cultural and paleontological resources are localized and generally unique at each site. All significant cultural and paleontological resources associated with this and other projects would be mitigated on a project-by-project basis; therefore, a significant cumulative impact to the region's known and yet-to-be-discovered cultural resources would not occur.

6.4.5 Energy

Potential cumulative impacts on energy would result if the proposed project, in combination with past, present, and future projects, would result in the wasteful or inefficient use of energy. This could result from development that would not incorporate sufficient building energy efficiency features, would not achieve building energy efficiency standards, or would result in the unnecessary use of energy during construction and/or operation. The cumulative projects within the areas serviced by the energy service providers would be applicable to this analysis. Projects that include development of large buildings or other structures that would have the potential to consume energy in an inefficient manner would have the potential to contribute to a cumulative impact. Projects that would mostly include construction, such as transportation infrastructure, could also contribute to a cumulative impact; however, the impact of these projects would be limited because they would typically not involve substantial ongoing energy use.

The amount of electricity used during construction would be minimal; typical demand would stem from the use of electrically powered hand tools and if needed, a construction trailer used by managerial staff. Natural gas is not anticipated to be required during construction of the project. Any minor amounts of natural gas that may be consumed as a result of proposed project construction would be temporary and negligible and would not be wasteful, inefficient, or unnecessary or have an adverse effect.

As described in Section 4.5, Energy, the proposed project would not result in significant environmental impacts due to wasteful, inefficient, or unnecessary use of energy. Unlike other projects, the proposed project entails roadway widening and as such, energy usage is primarily associated with vehicle use of the road which would occur with or without the project. Unlike a large building or structure that would consume energy, the project would not directly generate demand for energy. Overall, the project would not result in excessive electricity usage and project impacts would be **less than significant.**

In consideration of cumulative energy use, the proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Thus, the proposed project would not contribute to a cumulative impact to the wasteful or inefficient use of energy. As such, the proposed project would not result in a cumulatively considerable contribution to a potential cumulative energy impact.

6.4.6 Geology and Soils

The geographic context considered for potential cumulative impacts to people and structures related to geologic and seismic hazards is more localized, or site-specific, than other impacts. As analyzed in Section 4.6, Geology and Soils, the proposed project would experience less than significant impacts related to geology and soils with implementation of **PDF-GEO-1** (incorporation of geotechnical recommendations), **PDF-HYD-1** (implementation of a SWPPP), adherence to the California Building Code, and incorporation of best management practices. Impacts related to earthquakes and adverse soil conditions would be less than significant with implementation of **PDF-GEO-1**. Further, monitoring on site during grading and excavation activities (**MM-GEO-1**) would reduce potential impacts to paleontological resources. Other geologic/soil issues relate to local, site-specific soil conditions, ground response to earthquakes, and the potential for adverse soil conditions to damage the proposed project's structural components would be less than significant with implementation of **MM-GEO-1**.

Geotechnical conditions are unique to each site and are not cumulatively related. Approved projects and those under review are subject to soils and stability analysis and cannot be constructed unless each project is determined to be geotechnically feasible. Therefore, based on the analysis provided in Section 4.6, Geology and Soils, there would be no cumulative impacts associated with slopes and soil stability. With regard to seismicity, future development identified in the cumulative scenario may expose additional property and people to ground shaking from earthquakes. However, this impact can be mitigated by compliance with the California Building Code's seismic requirements. Therefore, a significant cumulative impact to geology and soil would not occur.

6.4.7 Greenhouse Gas Emissions

Due to the global nature of the assessment of GHG emissions and the effects of global climate change, impacts can currently only be analyzed from a cumulative impact context; therefore, this EIR's analysis in Section 4.7, Greenhouse Gas Emissions, includes the assessment of both project and cumulative impacts. Under CEQA, a project would have a significant cumulative impact caused by the combined impact of past, present, and probable future projects if its incremental impact represents a "cumulatively considerable" contribution to such cumulative impacts (14 CCR 15064(h)).

The proposed project would generate GHG emissions during construction that contribute to potential cumulative impacts of GHG emissions on climate change. As detailed in Section 4.7, Greenhouse Gas Emissions, the incremental increase in annual GHG emissions with the proposed project, as compared to buildout of College Boulevard in accordance with the existing Circulation Element, would be approximately 85,899 MT CO_2e per year because of the increase in regional VMT which considers regional growth in the SANDAG study area. After accounting for amortized proposed project construction emissions, total GHGs generated by the proposed project would be approximately 85,914 MT CO_2e per year. As such, annual operational GHG emissions with amortized construction emissions would exceed the applied threshold of 900 MT CO_2e per year. Therefore, a significant cumulative impact associated with the proposed project's long-term GHG contribution would occur.

6.4.8 Hazards and Hazardous Materials

Cumulative impacts related to hazards and hazardous materials would result from projects that combine to increase exposure to hazards and hazardous materials. Therefore, the geographic context considered for potential cumulative impacts related to hazards and hazardous materials is more localized, or site-specific, than other impacts.

As described in Section 4.8, Hazards and Hazardous Materials, the proposed project would have less-than-significant impacts relative to hazards and hazardous materials with mitigation measures incorporated. Based on the hazards assessment, three of the 55 listed sites identified in the review of regulatory agency records are considered site of concern, thus requiring mitigation (**MM-HAZ-1** through **MM-HAZ-3**).

During both construction and operation of the proposed project, there is potential for release of hazardous materials related to storage, transport, use, and disposal from construction debris, landscaping, and commercial products. However, the proposed project would be required to adhere to federal, state, and local laws, which regulate the management and use of hazardous materials, which are intended to minimize risk to public health associated with hazardous materials. Additionally, the proposed project proposes roadway improvements, which is not typically considered a source of substantial hazardous materials.

The proposed project consists of roadway widening and intersection improvements that would be located in an urbanized area that is surrounded by existing development. Due to the nature of the project, it would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. Cumulative wildfire impacts would not be considerable.

Although cumulative projects have the potential to result in significant impacts to hazards and hazardous materials, these projects would also be subject to federal, state, and local regulations that would help reduce potential impacts. Cumulative projects may also require similar mitigation measures to help further reduce potential impacts. In addition, as shown in Figure 6-1, none of the identified cumulative projects would be adjacent to or in close proximity to the project site. Therefore, the proposed project combined with the cumulative projects provided in Table 6-1 would not result in a cumulative significant impact related to hazards and hazardous materials.

6.4.9 Hydrology and Water Quality

The primary pollutants of concern on the project site would be associated with private vehicle use (e.g., any leakage of grease/oils) and/or trash (e.g., due to improper waste disposal). The release of such pollutants would be localized and periodic, minor in magnitude (especially in comparison to the total volume of stormwater discharges entering Alta Loma Creek from the entire urban watershed), and would not contribute to impairments under Section 303(d) of the CWA. Nevertheless, because the cumulative effects of past projects have resulted in substantial water quality problems in the region's major waterways, and because water quality problems are generally cumulative, all efforts must be made to reduce pollutant concentrations within stormwater discharges to the maximum extent practicable, even if the impact of an individual project appears inconsequential.

Therefore, source control BMPs including but not limited to storm drain stenciling or signage; protection of trash storage areas from rainfall, run-on, runoff, and wind would be implemented during construction. The BMPs would ensure that the contribution of the proposed project to cumulative impacts on water quality would be less than significant. Cumulative projects would also be subject to federal CWA, state, and local regulations and would be required to implement BMPs to reduce potential pollutant concentrations within stormwater discharges to the maximum extent practicable. Cumulative projects may require mitigation measures to help further reduce potential impacts. Therefore, the proposed project, in combination with cumulative projects, would not result in a cumulatively considerable impact on water quality.

Upon completion of construction, the proposed project would increase peak runoff flows from the project site through an overall increase in impervious area. However, the operation of the proposed project would not exceed existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

Cumulative projects would also be subject to federal, state, and local regulations concerning runoff flows and stormwater quality. Cumulative projects and would be required to implement BMPs to reduce potential pollutant concentrations within stormwater discharges to the maximum extent practicable. Cumulative projects may require mitigation measures to help further reduce potential impacts to hydrology and water quality. Therefore, the operation of the proposed project would not would not result in a significant cumulative impact to drainage or water quality from project operation.

6.4.10 Land Use

College Boulevard is an existing roadway and the proposed widening of the roadway and implementation of planned improvements would not conflict with existing land use designations or planned development of adjacent lands. As stated in Section 4.10, Land Use and Planning, the proposed project would not physically divide an established community, and would be compatible with surrounding land uses. The proposed project, in combination with other related cumulative projects, would not disrupt or divide the project area or region.

The proposed project and related cumulative projects in the immediate vicinity are subject to the goals and policies of applicable lead agency General Plan and other related planning documents, Consistency with the City's applicable General Plan policies (and any other applicable planning documents) would ensure compliance and orderly development of the proposed project and other related cumulative projects. Similar to the College Boulevard Improvement Project that proposes an amendment to the City's General Plan Circulation Element, projects in the cumulative scenario requiring an amendment to an existing planning document would be required to process the amendment with the applicable lead agency. Approval of the amendment is a discretionary action taken by the lead agency. Because the project would not result in a significant environmental impact in regards to the inconsistency with the Circulation Element's 2030 Master Transportation Road Plan proposed number of lanes (6) for College Boulevard from Old Grove Road to Waring Road, the proposed project would not contribute to a cumulatively considerable impact concerning conflicts with applicable plans, policies, and regulations.

6.4.11 Noise

Because construction and operational noise primarily affects areas in the vicinity of the project site, the geographic context for the cumulative noise analysis would include areas immediately surrounding the project site. None of the cumulative projects listed in Table 6-1 would be located immediately adjacent to the project site. Two identified cumulative projects are located within 0.5 mile of the Project site: Tri-City Hospital Parking Structure (Project 11 on Figure 6-1) and Rancho Del Oro Village XII (Project 18 on Figure 18). As of winter 2018, both projects were under active construction and are anticipated to be completed prior to the certification of this EIR. At such, the construction schedules of the proposed project and these cumulative projects would not overlap to create simultaneous construction noise. In addition, cumulative projects would need to comply with the City's Noise Control Ordinance and limit construction activities to the allowable hours. Given the distance between the project site and the cumulative projects within the City, and the cumulative projects' compliance with the local jurisdictional noise standards, it is unlikely that the noise increase associated with potential overlapping construction activities of cumulative projects and the proposed project would exceed 3 dB (the minimum change in the sound level of individual events that an average human ear can detect). Therefore, the increased noise would not result in significant cumulative impacts.

As none of the cumulative projects listed in Table 6-1 would be located adjacent to the project site, no cumulatively considerable operational stationary noise impacts would occur. As shown in Table 4.11-6, Summary of Existing and Existing Plus Project Traffic Noise Levels, the proposed project's traffic-related impacts would result in a 1 dB or less increase (rounded to whole numbers) at measurement and modeling location along College Boulevard. Therefore, the increase in noise associated with cumulative traffic would not result in a significant cumulative noise impact.

6.4.12 Public Services

The geographic context for the analysis of cumulative impacts associated with public services consists of the City, because fire protection, police protection, school, recreation, and other public services are provided by the City, or within the City.

As described in Section 4.12, Public Services, temporary impacts associated with restricted or reduced access along College Boulevard may result during construction of the project and could affect the ability of fire and police protection services to meet response time goals when responding to a service call. However, as identified in Project Design Feature (PDF) TRA-1, implementation of the Traffic Control Plan would ensure that emergency response services would be provided with information concerning the closures and the applicable contact information to reach the on-site construction manager.

The proposed project consists of roadway widening and general roadway and right-of-way improvements along College Boulevard between Waring Road and Old Grove Road. The project does not propose the addition of new housing to the area that could generate increased demand for other public facilities such as schools, parks, or libraries. Therefore, the proposed project, in combination with the cumulative projects, would not result in a significant cumulative impact related to public services and facilities.

6.4.13 Traffic and Circulation

The geographic scope of the cumulative traffic and circulation impacts is the study area summarized in Section 4.13, Traffic and Circulation, and further detailed in the Traffic Impact Analysis (TIA) (Appendix K). Likewise, cumulative traffic impacts of the proposed project are evaluated and detailed in Section 4.13 and Appendix K to this EIR. As detailed in Section 4.13, three of the eight studied roadway segments operate at unacceptable LOS E or F under the Future (2035; General Plan Buildout) conditions. These segments include (1) College Boulevard between Aztec Street & Oceanside Boulevard (LOS E); (2) College Boulevard between Oceanside Boulevard & Olive Drive (LOS F); and (3) College Boulevard between Barnard Drive/Waring Road & Vista Way (LOS E). With the proposed reduction of three segments from six-lanes to four-lanes associated with the project, the segments (in 2035) would continue to operate at LOS E and LOS F, respectively, and differences in V/C between the two future scenarios would be less than the 0.02 increase standard for assessing impacts at unacceptable operating segments. In addition, the progression peak hour analysis conducted for the roadway segment and revealed that in the Future (2035) Plus Project scenario, the roadway segments would not be significantly impacted. As such, the project would not result in a potential significant impact on these three segments. Further, unacceptable operating conditions on these segments were identified in the latest Oceanside General Plan: Circulation Element (2012), which includes a statement of overriding consideration for the segments. Therefore, the project does not result in any new impact at these segments not already identified in the General Plan. Accordingly, no mitigation is provided or required.

Therefore, the proposed project and other reasonably foreseeable development would not result in a new significant cumulative impact that was not previously identified in the City's Circulation Element.

6.4.14 Tribal Cultural Resources

As described in Section 4.14, Tribal Cultural Resources, consultation with tribal representatives did not result in the identification of any Tribal Cultural Resources (TCRs). Each cumulative project subject to Assembly Bill 52 would require tribal consultation on a case by case basis to identify any potential TCRs affected by each cumulative project. As the proposed project includes mitigation for potential impacts to TCRs and cumulative projects would been expected to implement similar measures, it would not result in a significant cumulative impact.

6.4.15 Utilities and Service Systems

The geographic context for the analysis of cumulative impacts associated with utilities and service systems consists of the City of Oceanside.

Similar to the proposed project and consistent with the jurisdictional runoff management program requirements established by NPDES Permit No. CAS0109266 and Order No. R9-2015-0100, cumulative projects would be required to implement LID BMPs to control the project's contribution of pollutants to the MS4. Unlike other project considered in the cumulative scenario that would generate wastewater and require new connections for water service, the proposed project entail roadway widening and other activities that would alter the physical conditions of

College Boulevard. As such, the proposed project would not require new water or wastewater facilities or new storm water drainage facilities. While the project would not generate solid waste during operations, a limited volume would be generated during construction. As with the proposed project, cumulative projects in the City would be subject to the Zero Waste Plan (aligned with AB 341) that aims to divert 75% to 90% of waste by 2020.

The proposed project would have a minimal effect on utilities and service systems in the City of Oceanside and would not result in a significant impact. Therefore, it would not result in a significant cumulative impact.

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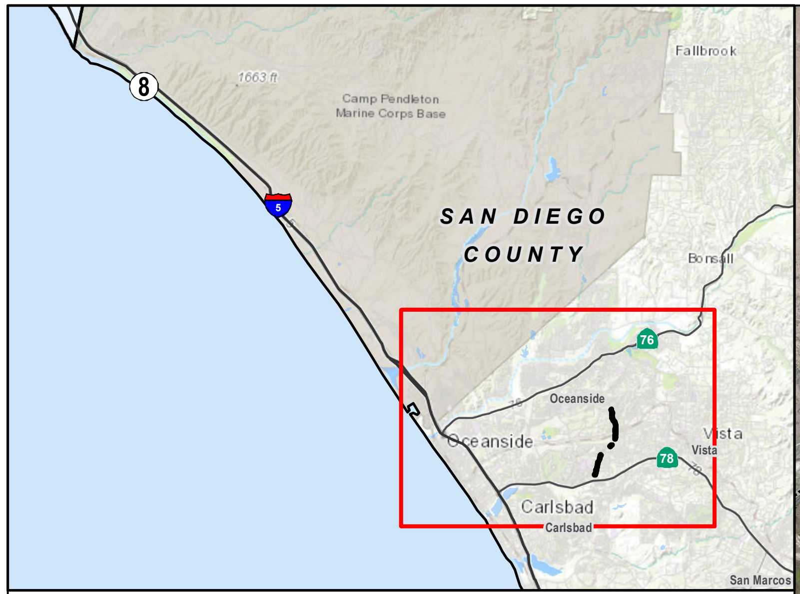

- Project Corridor

Cumulative

1 - Arroyo Verde Shopping
2 - Buena Vista Lagoon
3 - Fairfield Inn & Suites
4 - Inns at Buena Vista Creek
5 - Quarry Creek
6 - Moody's El Corazon Recycling Facility
7 - Coast Highway Corridor Study
8 - San Onofre Nuclear Generation Station Units 2 & 3 Decommissioning Project
9 - Scripps Health 78 & Jefferson Medical Office
10 - Talone Vector
11 - Tri-City Hospital Parking
12 - Villas Mission San Luis Rey
13 - Melrose + Oceanside
14 - North River Farms
15 - Kawano/Nagata
16 - Villa Storia
17 - El Corazon
18 - Rancho Del Oro Village XII

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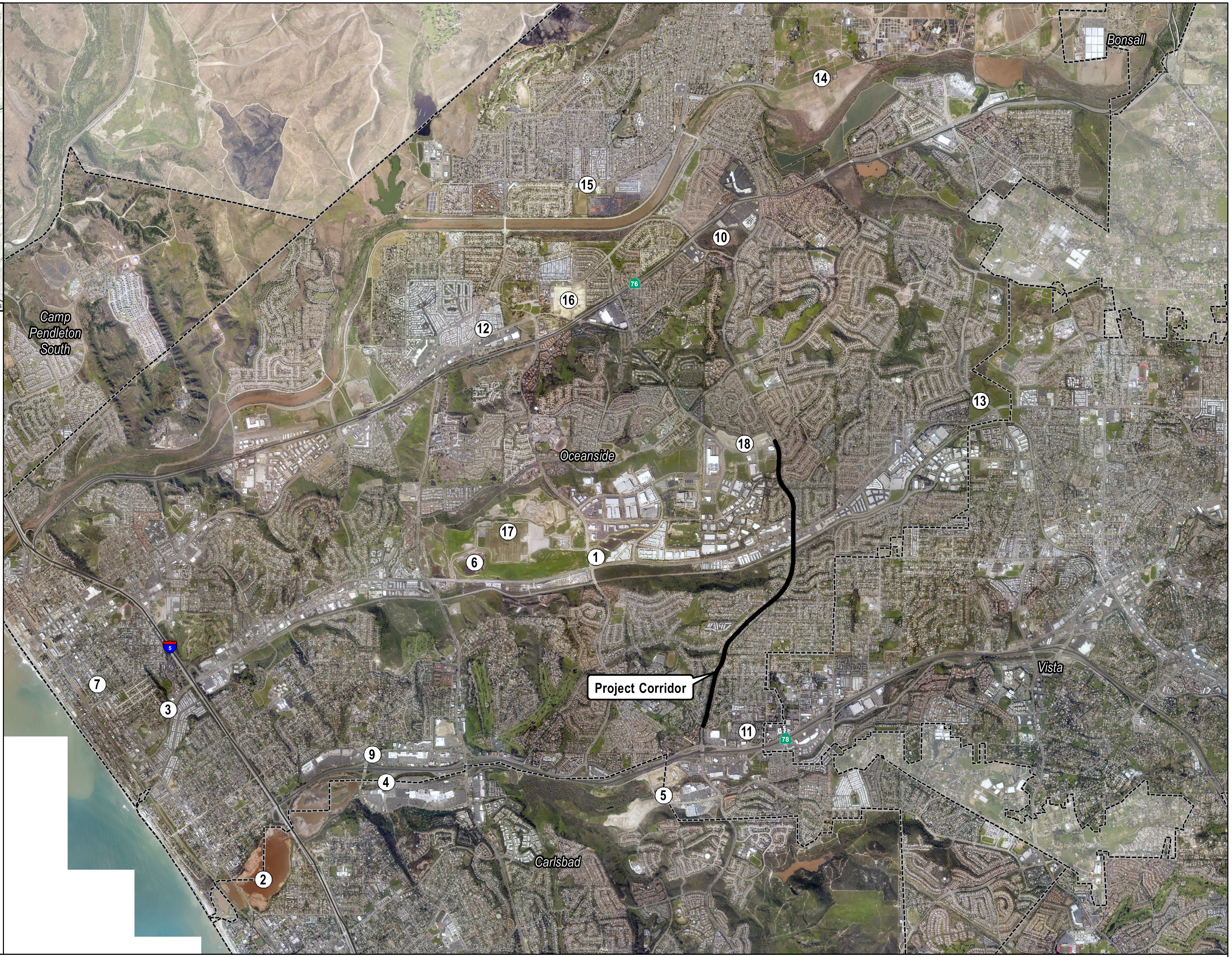

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SOURCE: SANGIS 2017, 2018

FIGURE 6-1
Cumulative Projects

College Boulevard Improvements EIR

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CHAPTER 7
OTHER CEQA CONSIDERATIONS

This chapter includes the following other considerations that are required in an Environmental Impact Report (EIR):

- Growth inducement (Section 7.1)
- Significant and irreversible environmental effects (Section 7.2)
- Significant and unavoidable environmental impacts (Section 7.3)

7.1 GROWTH INDUCEMENT

Section 15126.2(d) of the CEQA Guidelines mandates that the growth-inducing nature of the proposed project be discussed. This CEQA Guideline states that the growth-inducement analysis is intended to address the potential for the project to "foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." Furthermore, the CEQA Appendix G Checklist (Population and Housing) also mandates that a CEQA document discuss the project's likelihood to induce substantial population growth in an area, either directly (e.g., by proposing new homes or businesses) or indirectly (e.g., through extension of roads or other infrastructure) (14 CCR 15000 et seq.).

A project may be distinguished as either facilitating planned growth or inducing unplanned growth. Facilitating growth is relating to the establishment of direct employment, population, or housing growth that would occur within a project site. Inducing growth is related to lowering or removing barriers to growth or by creating an amenity or facility that attracts new population/economic activity. For purposes of this Environmental Impact Report (EIR) analysis, a significant growth inducement impact would occur if the proposed project, and associated infrastructure improvements, directly or indirectly removes obstacles to growth such that the induced growth would significantly burden existing community services, the environment or cause a demand for General Plan Amendments. This section contains a discussion of the growth inducing factors related to the proposed project and as defined under CEQA Guidelines, Section 15126.2(d). A project is defined as growth inducing when it directly or indirectly:

1. Fosters population growth
2. Fosters economic growth
3. Includes the construction of additional housing in the surrounding environment
4. Removes obstacles to population growth

5. Taxes existing community service facilities, requiring construction of new facilities that could cause significant environmental effects
6. Encourages or facilitates other activities that could significantly affect the environments, either individually or cumulatively

It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

The project would not induce substantial population growth in the area, as no homes are proposed. The project would not induce substantial growth in the area, as many of the surrounding properties are already developed or planned to be developed under the City's General Plan.

As identified in the project description, proposed widening of College Boulevard between Waring Road and Old Grove Road would require the acquisition of right-of-way, affecting parts of 65 parcels along the College Boulevard corridor. These parcels are primarily privately owned and are currently developed with landscaping and single- and multi-family residences. There are however, no structures within the proposed acquisition area and no displacement of existing housing would result. For the portions of affected parcels to be acquired, the City of Oceanside would work with the private property owners to determine fair market value.

As the proposed project site currently contains no housing or people, the construction of the proposed improvements would not displace any existing housing or displace any number of people. Therefore, the proposed project would not be considered growth inducing.

7.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL EFFECTS

CEQA Guidelines Section 15126.2(d) requires that an EIR identify any significant irreversible environmental changes associated with a proposed project. That section describes irreversible effects as:

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. In addition, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified. (See Public Resources Code section 21100.1 and Title 14, California Code of Regulations, section 15127 for limitations to applicability of this requirement.)

Per Section 15127, irreversible changes are only required to be addressed in EIRs when connected with the adoption amendment of a local plan, policy or ordinance; adoption by a local agency formation commission of a resolution making determinations or when the project is subject to National Environmental Policy Act and requires and Environmental Impact Statement. As the proposed project includes a General Plan Amendment, an analysis of significant irreversible environmental effects is required.

Implementation of the proposed project would result in irreversible environmental changes. While the project would not convert the corridor to a new use (the entirety of the proposed project (i.e., the improvement corridor) is currently developed with road infrastructure, sidewalks, or landscaping), construction and operation of the proposed project would require the use of resources that include but are not limited to concrete, petrochemical construction materials, fuels, and energy. Because the proposed project would result in increased capacity, it would result in an incremental increase in the consumption of resources such as fuels during long-term operation and occupancy. As such, the proposed project would result in the long-term use of fossil fuels and other nonrenewable resources.

7.3 SIGNIFICANT AND UNAVOIDABLE IMPACTS

CEQA Guidelines, Section 15126.2(b), requires that an EIR describe any significant impacts that cannot be avoided, including those impacts that can be mitigated but not reduced to a less-than-significant level. Chapter 4, Environmental Analysis, of this EIR describes the potential environmental impacts of the proposed project and recommends mitigation measures to reduce impacts, where feasible. As discussed in this EIR, air quality and greenhouse gas emissions would result in significant and unavoidable impacts in Future (2035) Plus Project conditions.

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CHAPTER 8
ALTERNATIVES

8.1 SCOPE AND PURPOSE

Section 15126.6(a) of the California Environmental Quality Act (CEQA) Guidelines requires that an environmental impact report (EIR) "describe a range of reasonable alternatives to the proposed project, or to the location of the project, that would feasibly attain most of the basic objectives but would avoid or substantially lessen any of the significant environmental effects of the project, and evaluate the comparative merits of the alternatives." Section 15126.6(a) also provides that an EIR need not consider every conceivable alternative to a project. Instead, the EIR must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation.

Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (California Public Resources Code, Section 21002.1), the purpose of an EIR's alternatives discussion is to focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project, even if the alternatives would impede to some degree the attainment of the project's objectives or be more costly.

However, an EIR need not consider alternatives that are infeasible. There also is no ironclad rule governing the nature or scope of the alternatives to be discussed in an EIR, other than the "rule of reason." The "rule of reason" governing the range of alternatives specifies that an EIR should only discuss those alternatives necessary to foster meaningful public participation and informed decision-making.

The CEQA Guidelines require the EIR to analyze a "No Project" Alternative. CEQA also requires that an EIR identify the environmentally superior alternative from among the evaluated alternatives. If the environmentally superior alternative is the No Project Alternative, then the EIR shall identify an environmentally superior alternative among the other alternatives (14 CCR 15126.6(e)(2)).

This EIR has determined that the College Boulevard Improvement Project (proposed project) would result in significant and unavoidable impacts, even with incorporation of feasible mitigation, related to the following: air quality and greenhouse gas emissions. The proposed project would result in potentially significant impacts that would be reduced to a level below significant related to the following: biological resources, cultural resources, hazards and hazardous materials, noise, and tribal cultural resources. The proposed project would result in no impact or less than significant impacts to the following: aesthetics, agriculture and forestry resources, energy, geology and spoils, hydrology and water quality, land use, mineral resources, population and housing, public services, recreation, transportation, utilities and service systems.

For each of the alternatives identified, this EIR conducts the following assessment:

- Describe the alternative
- Determine if the alternative would meet most of the basic project objectives
- Assess potential feasibility of the alternative
- Determine if the alternative would potentially eliminate or reduce a potentially significant impact of the project

If the alternative meets the above criteria, then the EIR analysis will address the potential impacts of the alternative relative to those potentially significant impacts of the project. An environmentally superior alternative will then be identified based on the alternative's ability to reduce environmental impacts.

Based on the identified significant environmental impacts above, the objectives established for the project (refer to Section 7.2.1, Project Objectives, below), consideration of local plans and zoning designations, and consideration of public input, this EIR evaluates four alternatives to the proposed project:

1. Alternative 1: No Project (No Build) Alternative;
2. Alternative 2: General Plan Circulation Element Alternative; and
3. Alternative 3: College Boulevard Widening Alternative 1

8.2 CRITERIA FOR SELECTION AND ANALYSIS OF ALTERNATIVES

8.2.1 Project Objectives

The project is guided by the following objectives:

1. Improve/enhance access and circulation along the College Boulevard corridor.
2. Accommodate existing and future traffic volumes on College Boulevard.
3. Implement the recommendations of the College Boulevard Project Study Report as it relates to College Boulevard.
4. Enhance the existing bicycle circulation network through extended bicycle lanes.
5. Improve pedestrian access at select intersections along the Project corridor through striping and traffic calming measures.

6. Obtain improved consistency with the adopted Circulation Element.
7. Provide opportunities for physical improvements to public infrastructure such sidewalks and intersections, and bike and pedestrian facilities.
8. Implement green street design elements including the installation of low maintenance vegetation with irrigation in select medians (i.e., where the width of the median is wide enough) and construction of non-contiguous sidewalks where feasible.

8.2.2 Feasibility

CEQA Guidelines, Section 15126.6(f)(1), identifies the factors to be taken into account to determine the feasibility of alternatives. The factors include site suitability; economic viability; availability of infrastructure; general plan consistency; other plans or regulatory limitations; jurisdictional boundaries; and whether the applicant can reasonably acquire, control, or otherwise have access to the alternative site. No one of these factors establishes a fixed limit on the scope of reasonable alternatives. An alternative does not need to be considered if its environmental effects cannot be reasonably ascertained and if implementation of such an alternative is remote or speculative.

It has been recognized that, for purposes of CEQA, "feasibility" encompasses "desirability" to the extent that the latter is based on a reasonable balancing of the relevant economic, environmental, social, and technological factors (*California Native Plant Society v. City of Santa Cruz* [2009] 177 Cal.App.4th 957, 1001). This balancing is harmonized with CEQA's fundamental recognition that policy considerations may render alternatives impractical or undesirable (California Public Resources Code Section 21081; CEQA Guidelines Section 15126.6[c] and 15364).

8.2.3 Evaluation of Significant Impacts

According to CEQA Guidelines, Section 15126.6(b), the alternatives discussion should focus on those alternatives that, if implemented, could eliminate or reduce any of the significant environmental impacts of the proposed project. The significant effects of the project impacts are considered to be those that are identified to be potentially significant prior to the incorporation or implementation of any mitigation measures.

8.2.4 Rationale for the Selection of Alternatives

As part of an alternatives analysis, CEQA requires an EIR to address a No Project Alternative. The purpose of describing and analyzing a No Project Alternative is to allow decision makers to compare the impacts of approving a proposed project with the impacts of not approving the proposed project.

EIRs should also identify any alternatives that were considered by the Lead Agency but rejected, and briefly explain the reasons why the Lead Agency made such a determination. Among the factors that may be used in an EIR to eliminate alternatives from detailed consideration are (i) failure to meet most of the basic project objectives, (ii) infeasibility, and/or (iii) inability to avoid significant environmental impacts.

In accordance with these requirements and based on comments received during the CEQA Notice of Preparation and scoping process for the proposed project, two alternatives to the proposed project were considered and analyzed compared to the proposed project. A No Project (No Build) Alternative is considered as the "no project" alternative.

8.3 ALTERNATIVES CONSIDERED BUT REJECTED

This EIR considered additional alternatives that are not carried forward for detailed analysis. During the public scoping process for the proposed project, members of the public identified a Rancho Del Oro Interchange Alternative that considered construction of an interchange on Rancho del Oro Road at SR-78 and diversion of traffic from College Boulevard to Rancho del Oro Road. The interchange was initially identified by the City in the 1981 General Plan Circulation Element and is included in the proposed 2030 Master Transportation Roadway Plan as presented in the current (i.e., 2012) Circulation Element. With the proposed interchange, an additional north-south route from SR-78 to SR-76 would be provided and would roughly parallel the College Boulevard corridor. While the interchange would divert some through passenger car traffic (and truck traffic) from College Boulevard to Rancho del Oro Road, the City no longer considers the interchange to be a viable capital improvement project based on costs, neighborhood opposition, and potential impacts to a nearby historic structure. Therefore, the Rancho del Oro Road Interchange Alternative, that does not implement the recommendations of the College Boulevard Project Study Report or the 2030 Master Transportation Roadway Plan as presented in the Circulation Element, is not feasible and was not carried forward.

8.4 ALTERNATIVES UNDER CONSIDERATION

8.4.1 Alternative 1: No Project Alternative

8.4.1.1 Alternative Description

Under the No Project (No Build) Alternative, College Boulevard would remain in its existing condition and would not be improved as under the proposed project. The current configuration of College Boulevard between Waring Road/Barnard Drive and Old Grove Road would remain as is under existing conditions. Segments of the road would not be widened and sidewalk, curb and gutter, and intersection improvements would not be implemented.

As described in Chapters 2 and 4 of this EIR, in its existing condition College Boulevard is currently constructed and classified as a four-lane Major Arterial from Waring Road to Old Grove Road. This configuration would remain unchanged under this alternative.

8.4.1.2 Comparison of Significant Effects

Air Quality

This alternative would not result in construction activities, increased capacity, or operational emissions-generating land uses that would act as sources for pollutant emissions. However, the addition of forecasted traffic onto College Boulevard with existing roadway segment geometries and lane configurations would result in increased delay at intersections and would conceivably result in increased vehicular idling times. While increased idling due to exacerbated delay and degraded operating conditions may result in greater mobile source emissions during project operations, maintenance of existing capacity of College Boulevard in the study area would generally result in reduced impacts compared to the proposed project.

Biological Resources

As the proposed project would not be constructed, no significant construction impacts to sensitive biological resources would occur under this alternative. Therefore, existing sensitive resources including nesting birds would not be impacted. Therefore, this alternative would result in reduced impacts compared to the proposed project.

Cultural Resources

This alternative would not require any excavation or grading; therefore, this alternative would not encounter known and unknown potentially significant cultural or archaeological resources. Therefore, this alternative would result in reduced impacts compared to the proposed project

Geology and Soils

This alternative would not require any excavation or grading; therefore, this alternative would not encounter known and unknown potentially significant paleontological resources. Therefore, this alternative would result in reduced impacts compared to the proposed project.

Greenhouse Gas Emissions

This alternative would not require the use of construction equipment or result in GHG emitting construction activities. This alternative would not generate any GHG emissions and would not require any mitigation or project design features to offset GHG emissions. Therefore, this alternative would result in reduced impacts compared to the proposed project.

Noise

This alternative would not require use of noise and vibration generating construction equipment. The alternative would not result in operational noise associated with increased volume capacity of College Boulevard or travel lanes in closer proximity to adjacent land uses. Therefore, this alternative would result in reduced impacts compared to the proposed project.

Traffic and Circulation

Implementation of this alternative would maintain the existing condition of College Boulevard. However, as detailed in Section 4.13 Traffic and Circulation, queueing issues occur under existing conditions at the same intersections (i.e., College Boulevard/Oceanside Boulevard NB left turn movement, AM peak hour and College Boulevard/Olive Drive SB left turn movement, PM peak hour) as under Existing (2018) Plus Project Conditions. As such, under the No Project Alternative, similar queueing impacts are anticipated and would be comparable to the queueing issues anticipated under the project.

Tribal Cultural Resources

This alternative would not require any excavation or grading; therefore, this alternative would not encounter known and unknown potentially significant tribal cultural resources. Therefore, this alternative would result in reduced impacts compared to the proposed project

8.4.1.3 Relation to Project Objectives

The No Project Alternative does not meet any of the objectives set forth in Sections 3.1 and 8.2.1 of this EIR.

8.4.2 Alternative 2: General Plan Circulation Element Alternative

8.4.2.1 Alternative Description

Under the General Plan Circulation Element Alternative, College Boulevard would be widened in accordance with the 2030 Master Transportation Roadway Plan as presented in the Circulation Element. Specifically, in the 2030 Master Transportation Roadway Plan, College Boulevard is designated as a six-lane Major Arterial from Lake Boulevard north to Old Grove Road. Therefore, this alternative would entail the construction and operation of College Boulevard as a six-lane Major Arterial from Waring Road/Barnard Drive to Old Grove Road. Widening of the corridor to six-lanes would also entail sidewalk, curb and gutter, and intersection improvements associated with accommodating the new configuration of College Boulevard.

8.4.2.2 Comparison of Significant Effects

Air Quality

Construction emissions resulting from development of this alternative would be greater compared to the proposed project due to a greater amount of required grading, paving, and sealing. The construction phase of this alternative would be longer than the proposed project, increasing emissions.

During operation, the segment of College Boulevard in the project study area would have a greater volume capacity than under the proposed project. Due to a greater volume capacity, this alternative could accommodate more ADT relative to College Boulevard under the proposed project and would generate reduced regional VMT (see Section 4.2, Air Quality, and Appendix K). Therefore, this alternative would result in reduced air quality impacts compared to the proposed project.

Biological Resources

Compared to the proposed project, the General Plan Circulation Element Alternative would result in slightly greater construction impacts due to a greater footprint of disturbance and longer duration of construction activities. Similar to the proposed project, potentially significant impacts under this alternative could be mitigated to a less than significant level. It is assumed that similar mitigation required of the proposed project would be available for this alternative. However, the expanded construction footprint and longer construction schedule would result in increased potential for temporary indirect impacts to wildlife including nesting birds and direct impacts to vegetation outside of approved work limits.

Cultural Resources and Geology and Soils

While more overall excavation would be required, this alternative would have the same or similar potential of encountering significant unknown cultural during excavation as the proposed project. This alternative would require the same cultural and paleontological mitigation as required of the proposed project. Therefore, this alternative would result in similar impacts as the proposed project.

Greenhouse Gas Emissions

Similar to the Air Quality impacts discussed above, this alternative would result in reduced operational greenhouse gas emissions when compared to the proposed project. The reduction is attributed solely to lower annual regional VMT (Future 2035 conditions) as noted in Section 4.2, Air Quality, and Appendix K. In addition, this alternative would be consistency with the City's

CAP, SANDAG's Regional Plan and other regulations adopted for reducing the emissions of greenhouse gases.

Noise

Overall, construction activities would be increased and duration lengthened under this alternative compared to the proposed project. In addition, construction activities under this alternative would be located a similar to slightly closer distance to existing sensitive receptors between Olive Drive and Barnard Drive/Waring Road.

Greater volume capacity would result in increased ADT and an increased contribution to traffic noise. In addition, traffic on College Boulevard would generally be located in closer proximity to adjacent land uses including single-family residential development that occurs along the corridor. Similar interior noise mitigation as under the proposed project would be required of this alternative. Therefore, this alternative would result in slightly greater construction and operational noise impacts compared to the proposed project.

Traffic and Circulation

Future projected traffic and circulation conditions of the Project and the General Plan Circulation Element Alternative are assessed in Section 4.13, Traffic and Circulation. As demonstrated in Table 4.13-12, available storage in the southbound left turn movement at the College Boulevard/Olive Drive intersection would be exceeded in both Future (2035) scenarios. Compared to the Future (2035) General Plan Buildout conditions, queues at the Oceanside Boulevard and Olive Drive intersection in the PM peak hour under the Project are projected to increase by approximately 91 feet that equates to approximately 5 car lengths. Also, queueing at the northbound left-turn movement at the College Boulevard/Oceanside Boulevard intersection would increase by approximately 5 feet under the Project as compared to General Plan Buildout conditions which equates to less than as single car length. Therefore, in terms of projected queueing impacts, this alternative would result in slightly reduced impacts as compared to the proposed project.

Tribal Cultural Resources

While more overall excavation would be required, this alternative would have the same or similar potential of encountering tribal cultural resources during excavation as the proposed project. This alternative would require the same mitigation as required of the proposed project. Therefore, this alternative would result in similar impacts as compared to the proposed project.

8.4.2.3 Relation to Project Objectives

The General Plan Circulation Element Alternative meets all of the objectives set forth in Sections 3.1 and 8.2.1 of this EIR.

However, compared to the proposed project, this alternative would require greater acquisition of private property to expand the existing right-of-way and would located traffic in closer proximity to single-family residences (in particular, College Boulevard-facing residences between Marvin Street and Thunder Drive). In addition, this alternative may entail greater potential impacts to biological resources due to a larger area of disturbance. Similar potential cultural and tribal cultural resource impacts would occur as the proposed project. Lastly, due to a longer construction period associated with the expanded widening corridor, this alternative may result in slightly longer duration noise impacts during construction.

8.4.3 Alternative 3: College Boulevard Widening Alternative 1

8.4.3.1 Alternative Description

Under the College Boulevard Widening Alternative 1, College Boulevard would be to six lanes between Olive Drive and Old Grove Road. No improvements south of Olive Drive would occur under this alternative. Therefore, this alternative would entail the construction and operation of College Boulevard as a six-lane Major Arterial from Olive Drive to Old Grove Road. Widening of the corridor to six-lanes would also entail sidewalk and curb and gutter improvements between Olive Drive and Old Grove Road.

8.4.3.2 Comparison of Significant Effects

Environmental Analysis

Compared to the proposed project, this alternative would result in reduced short-term construction impacts to air quality, greenhouse gas emission, and noise. Because an overall shorter segment of College Boulevard would be widened, this alternative would require less overall time to construct. Because this alternative would not implement improvements south of Olive Road, traffic operations along the entire segment of College Boulevard (Waring Road to Old Grove Road) would be slightly worse compared to the proposed project. All other impacts including operational air quality and greenhouse gas emissions, traffic and circulation impacts, temporary impacts to cultural and tribal cultural resources, geology and soils (paleontological resources), and noise would be would be similar to the project.

8.4.3.3 Relation to Project Objectives

This alternative would achieve the majority of the project objectives with the exception of enhancements to the existing bicycle circulation network and improved pedestrian access at intersections through striping and traffic calming measures.

8.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Table 8-1 outlines the comparative impacts between each alternative and the proposed project. The No Project (No Build) Alternative would result in the least environmental impacts and would be the environmentally superior alternative. However, CEQA Guidelines, Section 15126.6(e)(2), states that if the environmentally superior alternative is the "no project" alternative, the EIR also must identify an environmentally superior alternative among the other alternatives. In this case, the environmentally superior alternative is the General Plan Circulation Element Alternative. However, it should be noted that the General Plan Circulation Element Alternative would result in greater temporary noise impacts and impacts to biological resources during construction and would require the acquisition of additional right-of-way through physically constrained residential neighborhoods.

Table 8-1
Comparative Summary of Alternatives Under Consideration and Proposed Project

Alternative	Impacts										
	Air Quality			*Biological Resources*		*Cultural Resources*	*Geology and Soils*	*Greenhouse Gas Emissions*		*Noise*	*Tribal Cultural Resources*
	AIR-1: Plan Conflict	*AIR-2: Cumulative Increase*	*AIR-3: Pollutant Conc.*	*BIO-1/BIO-2: Nesting Birds*	*BIO-3: Riparian Habitat*	*CUL-1: Archaeo Resources*	*GEO-1: Paleontological Resources*	*GHG-1: Emissions*	*GHG-2: Plan Conflicts*	*NOI-1: Construction Noise*	*TCR-1: Tribal Cultural Resources*
Project	SNM	SNM	SNM	SM	SM	SM	SM	SNM	SNM	SM	SM
No Project	NI (-)	NI (-)	NI (-)	NI (-)	NI (-)	NI (-)	NI (-)	NI (-)	NI (-)	NI (-)	NI (-)
GP Circulation Element Alternative	LS	LS	LS	SM (+)	SM (-)	SM (=)	SM (=)	LS	LS	SM (+)	SM (=)
College Boulevard Widening Alternative 1	SNM	SNM	SNM	SM (-)	SM (=)	SM (=)	SM (=)	SNM	SNM	SM (-)	SM (=)

NI= No impact
LS=Less than significant impact
SM=Significant but mitigated impact
SNM = Significant not mitigated impact
"-" = reduced impact relative to the project
"=" = similar impact relative to the project
"+" = greater impact relative to the project

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CHAPTER 10
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