# Draft Environmental Impact Report / Environmental Assessment *Summary*

# Olivenhain Trunk Sewer Improvements Project

February 2016

Infrastructure ENGINEERING CORPORATION

# Olivenhain Trunk Sewer Improvements Project

# Draft
# Environmental Impact Report/Environmental Assessment

# SUMMARY

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# Summary

The attached document is a draft environmental impact report/environmental assessment (Draft EIR/EA) analyzing the effects of implementing the City of Encinitas' (City's) proposed Olivenhain Trunk Sewer Improvements Project (Project, proposed Project). The Draft EIR/EA was prepared in compliance with the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA). The basic purposes of the CEQA statute include informing the public and decision makers about the potential significant impacts of proposed projects, identifying ways to avoid or reduce environmental damage, and enhancing public participation in the planning process. The NEPA statute similarly requires federal agencies to encourage and enable public involvement in decisions affecting environmental quality and to identify approaches that will avoid adverse environmental effects. As the Project proponent and owner, the City is serving as the lead agency for CEQA compliance for the proposed Project. As the federal agency with the most direct regulatory oversight over the Project, the U.S. Army Corps of Engineers (Corps) is the lead agency for NEPA compliance.

Because of the Project's location in sensitive jurisdictional habitat that is home to a number of state- and/or federally listed wildlife species, several resource agency permits and approvals will be needed to implement the Project in compliance with the various regulations that protect these resources. Table S-1 lists the other state and local agencies who will use this document in regulatory decision making and are therefore considered responsible agencies under CEQA. In addition to external agency authorization, the Project will also need to obtain a Major Use Permit (MUP) from the City's Department of Planning and Building because of its location in an area zoned for ecological resource/open space/park (ER/OS/PK) use.

**Table S-1: Agency Approvals Required for Olivenhain Trunk Sewer Improvements Project**

| Permit or Authorization | Required for… | Agency with Jurisdiction |
|---|---|---|
| Clean Water Act §404 permit | Activities affecting jurisdictional waters of the United States | U.S. Army Corps of Engineers |
| Clean Water Act §401 water quality certification | | San Diego Regional Water Quality Control Board |
| California Streambed Alteration Agreement | Activities affecting the bed or banks of a watercourse under state jurisdiction | California Department of Fish and Wildlife |
| Federal Endangered Species Act "take" authorization | Activities that may result in disturbance, injury, mortality or other detrimental effects on species listed as threatened or endangered under the federal Endangered Species Act | U.S. Fish and Wildlife Service |
| California Endangered Species Act §2081 authorization | Activities that may result in injury, mortality, or other detrimental effects on species listed as threatened or endangered by the State of California | California Department of Fish and Wildlife |
| Coastal Development Permit | Construction of facilities within the protected Coastal Zone | California Coastal Commission |
| Encroachment Permit | Work with state right-of-way at westernmost end of alignment | California Department of Transportation |
| Excavation permit per County Municipal Code §41.113 | Excavation within County parklands | San Diego County Department of Parks and Recreation |
| Authorization under County Resource Protection Ordinance | Projects proposed for environmentally sensitive lands under County jurisdiction | San Diego County Department of Planning and Building Services |
| San Diego County Development Permit | Construction of improvements in an area of special flood hazard | San Diego County Department of Planning and Building Services |

# Contents of This Summary

This *Summary* presents the following information.

- A brief description of the proposed Project, including the Project's location, the need for the Project, Project goals and objectives, how the Project approach was developed, and what the Project would entail
- Known topics of concern or controversy
- A summary of the Project's impacts and the mitigation measures proposed to reduce the level of impact
- Issues remaining to be resolved
- An overview of the contents and organization of the Draft EIR/EA

# Project Overview

## Background

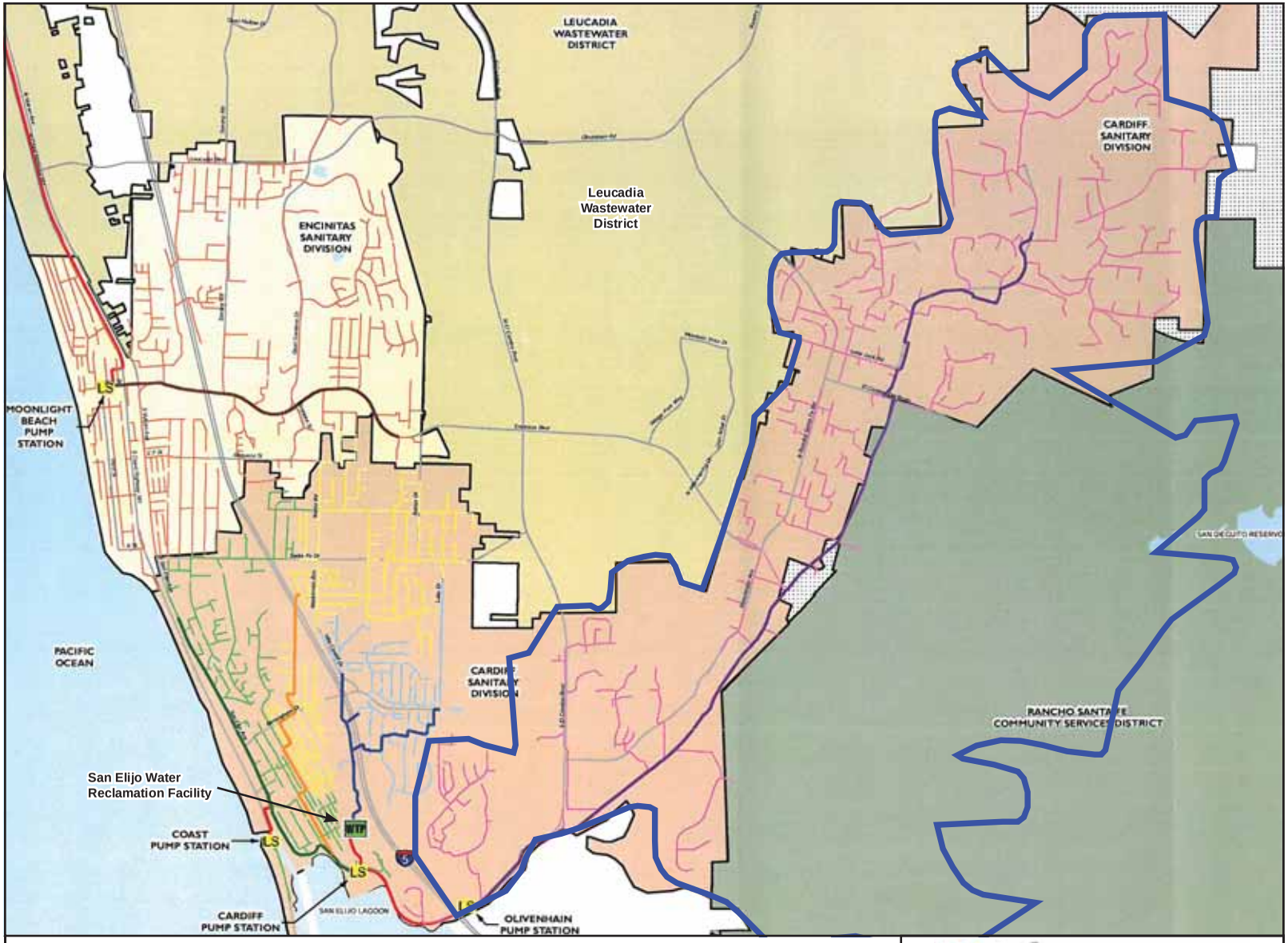
Sanitary sewer and wastewater treatment service within the City of Encinitas is provided by the Encinitas Sanitary Division, Cardiff Sanitary Division, and Leucadia Wastewater District, depending on location. The Encinitas Sanitary Division and Cardiff Sanitary Division are arms of the City, and serve the majority of the City's residents; the Leucadia Wastewater District is an independent agency serving the remainder of the City along with other neighboring communities.

Of the 3 wastewater providers serving Encinitas, the Cardiff Sanitary Division has the largest service area at 12 square-miles and some 19,600 residents. The Olivenhain Trunk Sewer (OTS) is the longest and largest of the CSD's 4 trunk sewers. It collects wastewater from numerous smaller tributary sewer lines in the southeast portion of Encinitas, the community of Olivenhain, and portions of the community of Cardiff and unincorporated San Diego County (see Figure S-1), and conveys the flows almost 4 miles along Escondido Creek and San Elijo Lagoon to the Olivenhain Pump Station at the Manchester Avenue/I-5 interchange. From there, wastewater is piped to the San Elijo Water Reclamation Facility in Cardiff for treatment.

## Project Location

The Project would involve the portion of the OTS between approximately the I-5/Manchester Avenue interchange and the intersection of Lone Jack Road and Santa Fe Vista Court (see Figure S-2). Upstream of MiraCosta College (located at the intersection of MiraCosta College Road and Manchester Avenue), the Project alignment is within or immediately adjacent to the Escondido Creek/San Elijo Lagoon corridor; as such it is largely within wetland and riparian habitat, including extensive lands within the San Elijo Lagoon Ecological Reserve (Reserve), which is jointly owned by the County of San Diego (County), San Elijo Lagoon Conservancy (Conservancy), and State of California, and is operated and managed by the County Parks and Recreation Department. The remainder of the alignment, from approximately MiraCosta College downstream to the Olivenhain Pump Station at the I-5 overcrossing, is within the paved Manchester Avenue roadway. The lower portion of the Project alignment is within the Coastal Zone.

As Figure S-2 shows, the majority of the Project alignment is within City limits, and the remainder is in unincorporated San Diego County. The principal land uses neighboring the Project alignment along the north side of the San Elijo Lagoon/Escondido Creek corridor include residential and rural residential development,




**Source: modified from City of Encinitas (2011)**

Olivenhain Trunk Sewer

Olivenhain Collector Sewer

Olivenhain Trunk Sewer Service Area

0 1,350 2,700 Feet

N

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**City of Encinitas • Olivenhain Trunk Sewer Improvements Project**

**Figure S-1**
**Olivenhain Trunk Sewer System**


CARLSBAD
SAN MARCOS
ESCONDIDO
ENCINITAS
UNINCORPORATED
SAN DIEGO COUNTY
Project Alignment
SOLANA BEACH
POWAY
DEL MAR
Pacific
Ocean
SAN DIEGO
5
15
56
805
Carlsbad
Santa Fe
Vista Ct
Lone Jack Rd
Escondido Creek
Rancho Santa Fe Rd
Encinitas
Unincorporated
San Diego County
Manchester Ave
Manchester Ave
San Elijo
Lagoon
5
Solana Beach
Legend
Project Alignment
Jurisdictional Boundaries
0
1,500
3,000
Feet
Infrastructure
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City of Encinitas • Olivenhain Trunk
Sewer Improvements Project
Figure S-2
Project Location

MiraCosta College, and the Encinitas Country Day School. North of the MiraCosta College campus the character of development becomes semi-rural and is dominated by larger horse properties featuring extensive paddock areas within the Creek and Lagoon floodplain. Commercial development abuts the alignment at South Rancho Santa Fe Road. County land uses crossed by the alignment primarily include rural lands, with a small area of open space/conservation lands.

## Need for Project

The OTS is one of the most vulnerable components of the City's wastewater system. Originally constructed in 1972, a number of its manholes are deteriorating and require rehabilitation as they are experiencing significant inflow and infiltration that increases flow volumes in the line. In addition, maintenance access into the Creek and Lagoon is inadequate to fully support reliable service. In particular, the City is unable to access all of the manholes along the lower OTS with the equipment needed to clean this large-diameter sewer line. Without proper cleaning, sediment and debris accumulate in the line and create blockages that can lead to failure and/or overflows and spills. The stakes are high: failure of the OTS has the potential to interrupt sanitary sewer service to a large number of residences and businesses, and spills or overflows would adversely affect water quality in some of San Diego County's most valuable and sensitive natural habitat.

## Project Goals and Objectives

The Project is proposed to address existing maintenance issues with the OTS, improving the overall reliability of the City's wastewater system and better protecting water quality and habitat values in Escondido Creek and San Elijo Lagoon.

Specific project objectives are as follows.

- Rehabilitating existing sewer manholes along the OTS; reducing inflow and infiltration into the OTS, and decreasing the volume of water that needs to be treated at the San Elijo Joint Powers Treatment Plant
- Realigning approximately 2,800 linear feet of the OTS above El Camino del Norte and increasing its capacity to meet currently projected system needs; this aspect of the Project includes realigning approximately 1,000 linear feet of sewer main out of the Escondido Creek floodplain into Lone Jack Road
- Providing environmentally appropriate access for maintenance vehicles along the remainder of the OTS
- Removing an existing but unnecessary siphon that increases the level of maintenance required, along with the associated manhole
- Minimizing adverse effects on sensitive habitat and contributing to the long-term health of the Creek and Lagoon systems

To provide for adequate maintenance, City wastewater operations staff must be able to access all of the manholes along the Project reach of the OTS once or twice each year and as needed.

## Project Development

Because much of the Project is located in sensitive habitat, including dedicated conservation lands, the City has been working closely with staff of the Conservancy, the resource agencies (Corps, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, San Diego Regional Water Quality Control Board, and

California Coastal Commission), and the County to develop an approach that respects and enhances the value of Lagoon and Creek resources. The Project development process is described in detail in Draft EIR/EA Chapter 2 and summarized below.

The City began by conducting an inventory of the habitat resources along the Project alignment. With a detailed, up-to-date understanding of Project corridor resources in place, the City then initiated a series of working meetings with regulatory agency, Conservancy, and County staff in order to

- develop a clear understanding of the conservation priorities that should guide the project
- develop an environmentally sensitive approach to meet the need for access along the full length of the OTS

The traditional approach to access would have been to provide a paved roadway along the length of the Project alignment, but it became clear very early in the planning process that the footprint of such a facility would result in undesirable loss and disconnection of habitat. The introduction of extensive hardscape into the Creek and Lagoon corridor was also understood as inappropriate and undesirable. It was thus a priority to identify alternate means of addressing the need for access. Following are some of the approaches evaluated.

- **Realignment** – relocating the Project reach of the OTS from the Escondido Creek/San Elijo Lagoon corridor into nearby City streets to avoid the need for access into sensitive habitat
- **Manhole removal** – "retiring" selected manholes and reducing the number of points where access into sensitive habitat is needed; retired manholes could either be removed or sealed and abandoned in place, depending on local constraints
- **Restricted timing** – limiting maintenance work to the non-nesting season to avoid disturbance of nesting birds and reduce the need for improvements to enable driving access
- **Alternate vehicles** – using alternate vehicles to reduce or avoid the need for improved access into sensitive habitat, for instance
  - Using of smaller maintenance equipment to reduce the need for improved access in sensitive habitat
  - Using cargo helicopters to deliver the City's Vac-Con to manholes and avoid the need for overland travel in sensitive habitat
- **Temporary roadway products** – using temporary roadway products such as MudTraks® that are laid down when access is needed and removed immediately following use
- **Access spurs** – creating a series of spur routes accessing manholes from "jumping off points" at the ends of existing City roadways.

Approaches were evaluated based on the following criteria

- ability to achieve the Project need, goal, and objectives
- feasibility/practicability[1]

[1] Both *feasibility* and *practicability* address whether an approach can realistically be brought to fruition; the two terms reflect similar concepts as they are applied in state and federal processes, respectively. For purposes of this Project, *feasible* was defined consistent with the CEQA statute (§21061.1) and *CEQA Guidelines* (§15364) as meaning "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and

Those that were identified as incapable of meeting the Project need, goal, or objectives were eliminated from further consideration, as were those that failed to pass the feasibility/practicability test. Approaches that were identified as offering the potential to meet the Project need, goal, and objectives *and* were also evaluated as feasible and practicable remained in consideration.

The following approaches were found to be either infeasible or incapable of meeting the Project need; details are presented in Draft EIR/EA Chapter 2, Table 2-2.

- Realigning the OTS out of the Creek and Lagoon
- Restricting maintenance to the non-nesting (dry) season
- Replacing the City's large Vac-Con with smaller maintenance equipment
- Using cargo helicopters to deliver the Vac-Con, avoiding the need for surface access
- Using temporary roadway products to avoid the need for permanent access improvements

The following approaches remained in consideration; again, see Draft EIR/EA Chapter 2 for detailed discussion.

- Access spurs
- A combination of access spurs and along-alignment access

The Project as proposed (analyzed as the City's preferred alternative in the attached Draft EIR/EA) was developed with extensive input from the Conservancy and resource agencies and that the City believes would best reflect the Project's conservation-oriented guiding principles while providing the rehabilitation and long-term maintenance access that is so badly needed. It is described further in the following section. Feasible alternatives to the proposed Project, also analyzed in the Draft EIR/EA, are presented briefly after the overview of the proposed Project.

Although complete realignment of the OTS was found to be infeasible/impracticable, initial screening of approaches had determined that it would be feasible/practicable to realign a portion of the OTS upstream of El Camino del Norte, removing it from sensitive habitat and relocating it into City streets (Lone Jack Road). Initial project planning by the City had also identified the desirability of removing an existing siphon, which is no longer needed and creates a maintenance challenge as well as odor issues, along with the associated manhole. At the request of the resource agencies, the City team also evaluated the potential to retire/remove additional manholes and found that 2 more manholes could also be taken out of service without compromising OTS maintenance. All of these features were incorporated into the proposed Project (preferred alternative) and the other alternatives carried forward for Draft EIR/EA analysis.

## Overview of Proposed Project

The proposed Project is a combination solution that incorporates access spurs, limited segments of along-alignment access, realignment and upsizing of the portion of the OTS upstream of El Camino del Norte (Lone Jack segment), removal of the existing siphon and associated manhole, removal of 2 additional manholes,

technological factors." *Practicable* was defined consistent with the U.S. Environmental Protection Agency's Clean Water Act Section 404 guidance as meaning "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes" (40 CFR §230.3[q]). This definition was selected because the Section 404 permit is the primary federal authorization needed to implement the Project.

and rehabilitation of the remaining 50 manholes. In this configuration, the Project would use portions of the City's existing OTS easement, as well as limited segments of new easement; the existing easement would also be retained by the City but would only be improved where it is part of the new access route. Figure S-3 shows the locations of existing manholes along the Project alignment, along with the locations of the manholes to be realigned along Lone Jack Road. The proposed Project is shown in more detail in Figures S-4a through S-4c. Please note that in addition to existing infrastructure, Figure S-3 also shows the locations and extent of the more detailed maps in Figures S-4a, S-4b, and S-4c. All 11x17 foldout figures are presented at the end of this *Summary*.

The City had initially considered including a public access component for a portion of the Project, but because of resident input received early in the planning process, concluded that the Project will not provide trails, vista points, or other public access. Entry to the new access from public rights-of-way will be gated, locked, and posted with "No Trespassing" signage. Entry from easements on private property will be posted with "No Trespassing" signage.

The new access would be 16 feet wide, the minimum needed for safe and reliable passage for the large equipment needed to clean and maintain the OTS. Where access spurs dead-end at manholes, a limited hammerhead turn-around area would be provided to allow equipment to exit the manhole area. The proposed footprints of the turn-arounds have been reduced to the minimum needed for safe maneuvering.

Access routes would be improved (engineered) where necessary to enable access by the City's large Vac-Con truck or similar future equipment. The level of improvement would be the minimum needed to enable reliable passage in an often wet or saturated environment, while preventing the development or ruts that could damage surface drainage patterns, as summarized in Table S-2.

**Table S-2: Levels of Improvement**

| Level | Existing Substrate | Habitat Setting | Treatment |
|---|---|---|---|
| 0 | Existing surface is drivable by heavy trucks year-round | Existing pavement; existing well-traveled dirt or gravel roadways | No treatment needed |
| 1 | Ground is relatively dry most of the time but may flood occasionally. Deep saturation is unusual or rare | Uplands, upper-level floodplain terraces; some areas of intergraded scrub and marshland | • Armortec® or turf reinforcement mats with revegetation<br>• No overexcavation |
| 2 | Ground is often wet, but will support pedestrian travel | Lower-level terraces; some upper marsh plain areas | • StrataWeb™ (or similar) 6 inches deep<br>• Overexcavation + base refill of up to 12 inches<br>• Single layer geogrid<br>• Subgrade preparation |
| 3 | Ground is wet most of the time; pedestrians walking across this ground typically have muddy shoes | Marshlands | • StrataWeb™, 6 inches deep<br>• Overexcavation + base refill of up to 24 inches<br>• Single layer geogrid<br>• Subgrade preparation |
| 4 | Ground is always wet, and pedestrians may sink in up to 4 inches. Shallow standing water is often present | Marshlands | • StrataWeb™ 6 inches deep<br>• Overexcavation + base refill of up to 36 inches<br>• Double layer geogrid<br>• Subgrade preparation |

| Level | Existing Substrate | Habitat Setting | Treatment |
|---|---|---|---|
| 5 | Standing or flowing water is present for long durations | Tributary channel and swale crossings in marshlands and along Creek; drainage ditches | • Engineered at-grade "Arizona crossing" with StrataWeb™ 6 inches deep over base fill, multiple layers of geogrid<br>*OR*<br>• Small box culvert or elliptical pipe crossing<br>• With either approach, crossing engineered to reduce profile and minimize hydraulic effects on Escondido Creek floodflows |

All of the reinforcement/stabilization measures proposed for use in the new access are plantable and would be vegetated with appropriate, low-growing herbaceous and shrubby native species once installation is complete. With this provision, although the new access is unlikely to provide the same level of function and value as adjacent natural habitat, it would offer a "green," permeable surface, allowing water to infiltrate naturally and maintaining a level of habitat connectivity and some habitat value. Figures S-4a through S-4c are color-coded to show where the different levels of improvement would be used in the proposed Project.

Table S-3 presents the proposed revegetation palette. The final selection of species and density of planting will be tailored on a reach by reach basis to match existing habitat as closely as possible while still providing drivable access.

**Table S-3: Tentative Revegetation Palette by Habitat**

| Location/Elevation | Planting Palette | |
|---|---|---|
| | Scientific Name | Common Name |
| Low Elevation/Wetlands | *Frankenia salina* | Alkali heath |
| | *Anemopsis californica* | Yerba mansa |
| | *Distichlis spicata* | Saltgrass |
| | *Jaumea carnosa* | Salty Susan |
| | *Cressa truxillensis* | Spreading alkaliweed |
| | *Atriplex prostrata* | Spearscale |
| | *Artemisia douglasiana* | Mugwort |
| High Elevation/Uplands | *Acmispon glaber* | Deerweed |
| | *Artemisia californica* | California sagebrush |
| | *Distichlis spicata* | Saltgrass |
| | *Eriogonum fasciculatum* var. *fasciculatum* | California buckwheat |
| | *Eriophyllum confertiflorum* var. *confertiflorum* | Golden yarrow |
| | *Isocoma menziesii* var. *menziesii* | Coast goldenbush |
| | *Nasella pulchra* | Purple needlegrass |
| | *Vulpia microstachys* | Three week fescue |

## Project Construction

Construction would proceed in four phases:

- access construction
- manhole rehabilitation

- siphon and manhole removal
- upstream ("Lone Jack segment") realignment and upsizing

Details of each phase are provided in Draft EIR/EA Chapter 2.

Construction planning has emphasized reducing the work footprint to minimize impacts on sensitive habitat. Access would be constructed first, and during the construction process all activity would be confined to the footprint of the finished access route. This is less efficient (and potentially more costly) from the construction standpoint, but was identified as necessary to minimize impacts on habitat. Staging for materials and equipment would also occur within the new access footprint or outside the Creek/Lagoon corridor; no staging would be permitted in sensitive habitat outside the access footprint. Staging on private property near the active work site is unlikely, and in no case would staging on private property be permitted unless the property owner is willing and provides written consent. Access to County-, Conservancy-, and other non-City-owned lands will be coordinated with the appropriate landowners.

## Project Operation

Constructing the new access route would enable the City to reinstate a full program of inspections, cleaning, and maintenance along the Project reach of the OTS, consistent with the City's standard operations and maintenance practices for the sanitary sewer system as a whole. This would entail the following activities.

- Visual inspection of manhole condition on a twice yearly schedule.
- Closed circuit television (CCTV) video inspection once a year following cleaning.
- Sewer line cleaning twice yearly
- Access road maintenance to maintain drivability

Additional information on the inspection, cleaning, and maintenance program is provided in Draft EIR/EA Chapter 2.

## Environmental Commitments

Because the majority of the Project alignment is within or in close proximity to sensitive habitat, the City has adopted a number of procedures to avoid and reduce adverse impacts on the environment. The Project will also incorporate a number of standard measures that represent "best management practices" for worker and community safety. Collectively, these are referred to as the Project's *Environmental Commitments*, presented in Table S-4 beginning on the next page. The Environmental Commitments, along with any additional requirements identified through the CEQA/NEPA review or permitting processes (mitigation measures and permit terms, respectively) will be included in the Project construction documents to support efficient, accurate, and binding implementation. Similar commitments, including measures to protect water quality and avoid/reduce habitat and species impacts, are being developed in consultation with resource agency staff via the regulatory permitting process for implementation during future inspection, cleaning, and maintenance activities once the new access is in use.

### Table S-4: Olivenhain Trunk Sewer Improvements Project Environmental Commitments

| Issue Addressed | Measures |
|---|---|
| Creek and Lagoon Water Quality | • Contractor will be required to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) consistent with all current requirements of the current California Construction General Permit. More information on the SWPPP requirement is provided in Draft EIR/EA Chapter 3 (*Hydrology and Water Quality*) |

| Issue Addressed | Measures |
|---|---|
| | • The SWPPP will be submitted to the City for review and approval prior before the start of construction. It will include, but will not necessarily be limited to, the following provisions:<br>– No fueling, lubrication, maintenance, or staging of vehicles or equipment will be permitted within sensitive habitat. In conjunction with SWPPP development, a qualified biologist separately retained and reporting to the City (City's biologist) will designate fueling locations within paved or concrete areas at least 125 feet away from riparian areas. The use of containment measures such as drip pans may also be required, depending on the nature of the fueling locations. If a diesel-powered pump is needed for the bypass during siphon replacement, it will be sited outside sensitive habitat and/or placed within secondary (dual) containment<br>– Where work within areas of flowing or standing water is necessary, cofferdams or other appropriate containment will be used to prevent ground disturbance from increasing downstream sediment loading and turbidity. In flowing water, an appropriate flow bypass will also be provided. If cofferdamming/containment/flow bypass is identified as necessary, the measures will be approved by, and installed under the supervision of, the City's biologist<br>– Appropriate types and sufficient quantities of materials will be maintained onsite to contain any spill or inadvertent release of materials that may cause a condition of pollution or nuisance if the materials reach jurisdictional waters<br>– In the event of a spill, appropriate spill response procedures will be initiated as soon as the incident is discovered. City staff and the San Diego County RWQCB will be notified as soon as feasible, and in no case more than 24 hours after the occurrence |
| Biological Resources Protection | • All construction activity will be confined to the final access footprint<br>• No construction staging will occur within sensitive habitat<br>• The limits of permissible construction activity will be defined in the field using temporary construction fencing, pin flags, or another similar low-impact medium. In each work area, fencing will be installed in advance of mobilization, and will remain in place until construction in that area is complete and the contractor has demobilized. Fencing will be installed under the direct supervision of a qualified wildlife biologist contracted by the City (City's biologist)<br>• The construction documents will require the contractor to abide by the requirements of the Environmental Commitments, CEQA/NEPA mitigation, and permit terms and conditions, as well as the directions in the field of the City's biologist<br>• The City's biologist will monitor construction activity to verify that construction limits are respected and that the Project's other Environmental Commitments, mitigation requirements, and permit terms and conditions are being properly implemented<br>• Vegetation removal and trimming will be restricted to the minimum necessary to enable work<br>• Erosion and sediment control measures used for the proposed Project, including fiber rolls and bonded fiber matrix, will be made from biodegradable materials such as jute, with no plastic mesh, to avoid creating a wildlife entanglement hazard. If wattles are used, only certified sterile, weed-free rice straw will be permitted<br>• To avoid disturbance associated with nighttime construction lighting, no night work will occur within sensitive habitat<br>• Any nighttime construction lighting in roadways will use the lowest illumination that provides for a safe working environment and will be shielded and/or directed inward toward the work area, avoiding light spill into sensitive habitat<br>• All food-related trash such as wrappers, cans, bottles, and food scraps will be disposed of on a daily basis in secure, closed containers only and will be regularly removed from the Project site. Feeding of wildlife (e.g., ground squirrels) will be strictly prohibited |
| Revegetation Design | To meet regulatory requirements and provide the best possible platform for successful revegetation, the Project revegetation plan will include at a minimum the following information<br>• The location and extent of the replanted areas<br>• The plant species to be used in each habitat type, along with propagule types, including container sizes, seed mixtures, and seeding rates |

| Issue Addressed | Measures |
|---|---|
| | • A schematic plan showing the planting area<br>• Planting schedule<br>• Guidance regarding irrigation, if warranted during the establishment period<br>• Site- and habitat-specific measures to control exotic vegetation<br>• A detailed monitoring program together with interim and final success criteria to evaluate the progress of revegetated areas<br>• Contingency/corrective measures that will be implemented if success criteria are not met<br>• Identification of all parties responsible for revegetation success<br>The plan will be prepared by qualified ecologist and/or landscape architect staff with expertise and experience in northern San Diego County ecosystems and native species revegetation |
| Control of Invasive Non-Native Plant Species On Land | • In areas where invasive non-native plants are not established, construction will maximize the reuse of native site materials for fill and revegetation, to take advantage of the weed-deterrent properties of saline/alkaline soils. Where invasive non-native plants are known to be present, clean and sterile (weed-free) offsite fill materials will be required. Project construction documents will delineate the portions of the project where onsite materials are to be used and those where import materials will be required, based on information from the Conservancy's invasive species tracking and management program<br>• Prior to groundbreaking, the City will provide training to Contractor staff on invasive species precautions. Training will be delivered by a qualified biologist or ecologist<br>• During construction, the Contractor will be required to implement the following precautions—based on recommendations from the California Invasive Plant Council (2012a, 2015b)—to prevent the spread of invasive non-native plant species<br>– Designate lay-down and staging areas outside of infested areas prior to starting work; permissible and prohibited staging areas will be delineated in the Project construction documents based on information from the Conservancy's invasive species tracking<br>– Clean tools, equipment, and vehicles before entering and leaving worksites. Designate specific areas for cleaning tools, vehicles, equipment, clothing and gear<br>– Clean footwear and gear before entering worksites. Clean clothing, footwear, and gear before leaving infested worksites. Designate specific areas for cleaning clothing, boots, and gear<br>– Dispose of invasive plant materials offsite; contain invasive plant material during transport<br>– Use weed-free sources for project materials<br>– Prevent invasive plant contamination of project materials when stockpiling and during transport<br>– Revegetate and/or mulch disturbed soils as soon as possible |
| Control of Invasive Non-Native Aquatic Species | During in-water construction for Level 5 improvements, the Contractor will be required to implement the following additional precautions to prevent the spread of invasive non-native aquatic species. Requirements are based on recommendations from the state's Protect Your Waters – Stop Aquatic Hitchhikers campaign (www.protectyourwaters.net).<br>• Use only dry and previously cleaned materials and equipment for inwater work<br>• Clean and dry all equipment, gear, and materials before removal from the site, removing all visible mud, plant materials, and fish/animals. Eliminate all water from equipment and materials before removal from the site<br>• Cleaning will be accomplished using hot water if possible. If this is not possible, a high-pressure spray will be used |
| Vector Control | The Project will be designed to avoid increasing the potential for ponding and stagnancy with the potential to support mosquito breeding. Design will be guided by the current *Best Management Practices for Mosquito Control in California* issued by the California Department of Public Health (2012). Manhole covers will be designed to restrict access by mosquitoes to the extent practicable |

| Issue Addressed | Measures |
|---|---|
| Hazardous Materials Safety | • All hazardous materials used in Project construction will be transported, stored, handled, and used in strict accordance with label restrictions and all applicable federal, state, and local regulations<br>• In the event known or suspected hazardous materials are encountered during site preparation, grading, or other Project-related activity, work in the vicinity of the find will be suspended until qualified staff (staff meeting the Environmental Professional qualifications in ASTM E1527-13) retained by the City can assess the nature of the find and stipulate appropriate follow-up and protective measures. Work may proceed elsewhere on the alignment, assuming the discovery is localized.<br>• If the qualified staff/environmental professional consider it warranted, the City will conduct a Phase II hazardous materials investigation or appropriate equivalent procedure to identify the nature and extent of contamination and evaluate potential impacts on project construction, human health, and the environment. If necessary, based on the outcomes of the Phase II investigation, the City will implement Phase III remediation measures consistent with all applicable local, state, and federal codes and regulations. Construction in areas of known and potential contamination will not resume until remediation is complete. If waste disposal is necessary, materials will be handled and disposed of by a licensed waste-disposal contractor and transported by a licensed hauler to an appropriately licensed and permitted disposal or recycling facility, in accordance with local, state, and federal requirements<br>• The Project Contract Documents will stipulate the contractors' responsibilities in accommodating and assisting with the implementation of these commitments |
| Noise and Disturbance Control | The Contractor will be required to implement the following measures to reduce the potential for disturbance due to construction noise. These measures are being required to keep Project construction in compliance with City ordinances limiting construction noise; although a portion of the Project is within the unincorporated County, the City's construction noise standards will be adopted for the entire Project alignment because they are more restrictive than the corresponding County standards<br>• Construction will take place Monday through Friday; weekend work will not be permitted<br>• Use of heavy equipment will be restricted to the period between 10 AM and 5 PM; in no case will equipment be operated for more than 8 hours within any 24 hour period<br>• Construction equipment will be equipped with manufacturer's standard noise control devices or mufflers, or with equally effective replacement devices consistent with manufacturer specifications<br>• Use of Jake brakes will be prohibited<br>• Stationary noise-generating equipment will be located as far as possible from residences and sensitive receptors<br>• At least 2 weeks before construction begins, the Contractor will be required to notify residences and other addresses within 300 feet of the Project alignment via mailing or doorhanger distribution. Notification will include an overview of the proposed Project and the planned construction schedule. It will also include a Construction Hotline number community members can contact with questions or concerns. The Contractor will designate staff members who are responsible for making sure reasonable measures are implemented in the event disturbance is reported by the community |
| Traffic Control and Safety | The Contractor will be required to develop and implement a Traffic Control Plan to avoid and minimize potential disruption related to the presence of construction traffic on area roadways. Preparation of the Plan will include coordination with emergency responders, including the Encinitas Fire Department, regarding emergency response and evacuation planning.<br>The Plan will be subject to City review and approval, and the City will have oversight to verify proper and effective implementation<br>The Plan is expected to contain the following types of stipulations:<br>• **Regional Access**<br>– Use of the City's current designated truck routes to access the general Project area<br>– Use of designated routes in neighboring jurisdictions, if applicable |

| Issue Addressed | Measures |
|---|---|
| | – Avoidance of congested or inappropriate roadways and intersections<br>– Avoidance of residential neighborhoods<br>• **Local Access**<br>– Avoidance of peak-hour travel via intersections currently operating below an acceptable level of service (LOS), including but not necessarily limited to the intersections of Rancho Santa Fe Road and Lone Jack Road and Rancho Santa Fe Road and El Camino del Norte, as well as Manchester Avenue between I-5 And El Camino Real<br>– Avoidance of roadways/intersections adjacent to school entrances in the hour prior to the start of the school and the hour at the end of the school day<br>• **Lane Closures and In-Roadway Construction**<br>– Restriction or avoidance of in-roadway work during peak AM and PM commute hours<br>– Maintenance of 2 way traffic flow on all arterial and other major roadways, including Manchester Avenue<br>– Maintenance of 1 lane open at all times on any 2 lane road<br>– Limiting lane closures to the duration and area required for safety<br>– Use of signage and flagging to give the public adequate warning<br>– Use of nonskid traffic plates over open trenches to minimize hazards<br>– Notification and coordination with City Fire Station 6, located at 770 Rancho Santa Fe Road<br>– Coordination with area schools, faith communities, and commercial centers to minimize disruption and avoid potential conflicts with event traffic<br>• **Alternate Modes of Transportation**<br>– Clearly marked pedestrian and equestrian detours and safety barriers if needed, for any closure of or incursion onto a sidewalk, walkway, or equestrian trail, or if pedestrian or equestrian safety would otherwise by compromised<br>– Clearly marked bicycle detours, and safety barriers if needed, upon any closure of or incursion onto a bike route, or if bicyclist safety would otherwise be compromised<br>– Provision of crossing guards and/or flaggers as needed to avoid traffic conflicts and provide for safe passage by pedestrians, bicyclists, and equestrians<br>– Measures to avoid interference with North County Transit District (NCTD) bus route 304, including reducing construction traffic along the bus route in the 7 AM and 2 PM peak usage hours; prohibiting staging, parking, and waiting/stalling within 50 feet of bus stops and bus turn-outs; notifying NCTD of construction schedules<br>• **Equipment and Parking**<br>– Locating staging and stationary equipment as far away as possible from roadways and areas used by pedestrians, bicyclists, and equestrians<br>– Provisions for worker parking within designated staging areas<br>– Prohibition on construction staging and parking on residential streets |
| Air Quality | Per San Diego County Air Pollution Control District's Rule 55:<br>• Active construction areas, unpaved access roads, and unpaved parking and staging areas will be watered as necessary to suppress fugitive dust during grubbing, clearing, grading, trenching, construction rehabilitation work, and soil compaction<br>• Sweepers and water trucks will be used to control dust and debris at public street access points<br>• Exposed stockpiles of loose materials will be covered, watered, and/or stabilized with nontoxic soil binders approved for use in sensitive habitats<br>• Traffic speeds in all unpaved areas will be limited to 15 miles per hour<br>• All haul and dump trucks carrying loose materials will maintain at least 2 feet of freeboard or will be securely covered<br>• Revegetation will occur as soon as feasible following construction |

| Issue Addressed | Measures |
|---|---|
| | The following additional measures will be required to reduce emissions of volatile organic compounds (VOCs) and diesel particulate matter (DPM):<br>– Touch-up painting of the pipe installations will use low-VOC content paint<br>– Low-VOC content epoxy coating will be applied to new and rehabilitated manholes<br>– Minimum Tier 3 engine will be used in all diesel vehicles and equipment<br>– If Tier 3 or newer engines for equipment or vehicles are not available, all diesel-powered equipment and vehicles will be equipped with diesel particulate filters |

## Alternatives to the Project as Proposed

In addition to the Project as proposed (preferred alternatives), the attached Draft EIR/EA analyzes the following alternatives. All of the "action" alternatives (Alternative 1, Alternatives 2A and 2B) would incorporate the same Environmental Commitments as the proposed Project, and would be bound by similar regulatory permit terms and conditions. Figures showing the alternatives are 11x17 foldouts presented at the end of this *Summary*.

- **Alternative 1: Combination Access, Alternate Configuration** – Like the proposed Project, Alternative 1 is a combination solution that would incorporate access spurs, limited segments of along-alignment access, realignment of the Lone Jack segment, removal of the existing siphon and associated manhole (MH 1286), removal of 2 additional manholes (MH 1304 and MH 1283), and rehabilitation of the remaining 50 manholes. Like the proposed Project, Alternative 1 would also use portions of the City's existing OTS easement with additional segments of new easement to be negotiated with property owners; the existing easement would also be retained by the City. Alternative 1 would rely on the same "tiered" approach to surface improvements as the proposed Project, with the level of engineering adjusted to the existing substrate condition. The proposed Project and Alternative 1 differ only in the location and configuration of the access spurs (see Figures S-5a through S-5c). Alternative 1 would enable the same operational regime as that described for the proposed Project.

- **Alternative 2: Conventional Continuous Access, Plantable/Pervious Surface Treatments** – Alternative 2 would realign the Lone Jack segment, remove the existing siphon and associated manhole (MH 1286), remove 2 additional manholes (MH 1304 and MH 1283), rehabilitate the remaining 50 manholes, and construct an access route along the remainder of the OTS alignment from El Camino del Norte to Manchester Avenue. Like the proposed Project and Alternative 1, Alternative 2 would also use the "tiered" approach to surface improvements. Alternative 2 differs from the proposed Project and Alternative 1 in that it would provide a continuous access route along the entire length of the OTS alignment from El Camino del Norte downstream to Manchester Avenue. Alternative 2 would enable the same operational regime as that described for the proposed Project.

  Two scenarios are considered under Alternative 2. **Alternative 2A** would generally follow the City's existing easement, requiring fairly extensive use of Level 5 improvements to provide reliable year-round passage, as shown in Figures S-6a through S-6c. **Alternative 2B** would relocate access out of the wettest portions of the corridor to reduce the use of Level 5 treatment, as shown in Figures S-7a through S-7c; this would entail acquisition of some additional easement segments, with the existing easement also retained. The primary differences between Alternatives 2A and 2B appear near MiraCosta College (Figures S-6a and S-7a), south of Rancho Santa Fe Road (Figures S-6b and S-7b), and between Rancho Santa Fe Road and El Camino Del Norte (Figures S-6c and S-7c).

- **No Project/No Action –** The No Project/No Action Alternative would not modify existing infrastructure; there would be no manhole rehabilitation, and no access would be provided. Operations under the No Project/No Action Alternative would remain unchanged from current practices. City staff would access the project reach of the OTS as and when feasible for cleaning, visual inspection, and CCTV inspection. Access to some of the manholes would continue to be unreliable or infeasible, and it would likely remain difficult or impossible to provide adequate cleaning and maintenance. The No Project/No Action Alternative would not satisfy the Project need/goals/objectives, but under law must be analyzed so the consequences of not moving ahead with the Project or another "action" alternative are fully understood and disclosed (*CEQA Guidelines* 15126.6[e][1]).

## Issues of Known Concern or Controversy

CEQA requires lead agencies preparing EIRs to conduct a public scoping process to gather input on topics that are of concern to the public and should be addressed in the EIR. Table S-4 itemizes this input and identifies the portions of this *Summary* and the attached Draft EIR/EA that provide relevant information.

**Table S-4: Issues of Concern**

| Topic/Concern | For Relevant Information, Please See… |
|---|---|
| Why the Project is needed | *Need for Project*, above<br>Draft EIR/EA Chapter 2, beginning on page 2-1 |
| Whether the OTS can be relocated out of the Creek and Lagoon, so access into sensitive habitat is not needed | Draft EIR/EA Table 2-2, beginning on page 2-7 |
| Whether the Project would provide public access or trail use | *Project Overview*, above<br>Draft EIR/EA *Project Approach* section, beginning on page 2-2 |
| The need for regulatory permit authorization | Table S-1, above<br>Draft EIR/EA Table 1-1 and Chapters 3 and 4 |
| Impacts on lands set aside for conservation; impacts on Creek and Lagoon habitat | *Environmental Commitments*, above<br>Draft EIR/EA: |
| Impacts on special-status plants and wildlife in the Creek and Lagoon; the need to protect special-status birds that use the Creek/Lagoon corridor | • Measures incorporated to protect sensitive habitats and other resources associated with the Creek and Lagoon—*Environmental Commitments*, beginning on page 2-20<br>• Impacts on biological resources (including sensitive habitat as well as special-status species)—Chapter 4 |
| Potential to contribute to the spread of invasive non-native plant species | *Environmental Commitments*, above<br>Draft EIR/EA:<br>• Measures to Control Invasive Non-Native Plant Species On Land, page 2-22<br>• Measures to Control Invasive Non-Native Aquatic Species, page 2-23 |
| Plans for mitigation/compensation for impacted habitat | *Environmental Commitments*, above<br>Draft EIR/EA:<br>• Revegetation of disturbed areas—pages 2-12 ff. and 2-16; *Revegetation Design Measures*, page 2-22<br>• Habitat compensation—page 4-1 |

| Topic/Concern | For Relevant Information, Please See… |
|---|---|
| How the Project will protect water quality during construction | *Environmental Commitments*, above<br>Draft EIR/EA:<br>• *Measures to Protect Creek and Lagoon Water Quality*, beginning on page 2-20<br>• Water quality impacts—Chapter 3 |
| How the City will ensure that construction contractors adhere to the Project's environmental requirements | *Environmental Commitments*, above<br>Draft EIR/EA *Environmental Commitments*, page 2-20 |
| Potential for the Project to foster mosquito breeding | *Environmental Commitments*, above<br>Draft EIR/EA *Measures to Prevent Vector-Related Hazards* on page 2-23 |
| Whether Project grading would alter floodway or floodplain topography; impacts on flood conveyance and flood control | Draft EIR/EA page 2-12; Draft EIR/EA Chapter 3 |

## Summary of Project Impacts and Proposed Mitigation

The attached Draft EIR/EA analyzes the Project's potential to impact the following resources.

- Aesthetics
- Air Quality and Greenhouse Gas Emissions
- Biological Resources and Jurisdictional Habitat
- Cultural and Paleontological Resources
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise and Vibration
- Transportation and Traffic
- Utilities and Service Systems
- Environmental Justice

For all resources, analysis considered the Project's reasonably foreseeable *direct impacts* (i.e., effects that are immediately related to the Project and typically occur close in space and time to Project implementation) as well as its *indirect impacts* (i.e., effects that are not immediately related to the Project itself, but are secondary outcomes of Project effects, and may occur at a greater remove in time and/or space). Analysis also considered the Project's contribution to *cumulative impacts* (i.e., effects that result from repeated activities over a period of time, and effects representing the reasonably foreseeable combined outcome of more than one past, present, and/or future project).

Preliminary analysis (presented in Draft EIR/EA Chapter 1, Table 1-4) determined that the following resources would not be significantly impacted, and they are not discussed in detail in the Draft EIR/EA.

- Agriculture and Forestry Resources
- Geology, Soils, and Seismicity
- Land Use and Planning

- Mineral Resources
- Population and Housing
- Public Services
- Recreation
- Socioeconomics
- Wild and Scenic Rivers

An overview of the proposed Project's potential environmental impacts, the mitigation measures that have been identified to address them, and the residual level of impact with mitigation in place is presented below. The findings in this overview represent the Project's anticipated level of impact assuming implementation of the *Environmental Commitments* summarized above (and discussed in detail in Draft EIR/EA Chapter 2), as well as the Terms and Conditions of the regulatory permits that must be obtained before the Project can be implemented. As identified in Table S-1, this will include authorizations under the federal and California Endangered Species Acts, as well as Sections 404 and 401 of the federal Clean Water Act, Section 1602 of the California Fish and Game Code, and the California Coastal Act. The Project is therefore subject to extensive regulatory oversight, including a requirement to incorporate project-specific measures to avoid and reduce impacts on the special-status species that use the Project corridor, and requirements to compensate for the loss of habitat within the footprint of the new access route. This is discussed further in Chapter 4 of the attached Draft EIR/EA.

**Table S-5: Impacts Summary – Proposed Project**

| Impact | Significance | Mitigation | Significance with Mitigation |
|---|---|---|---|
| **Hydrology and Water Quality – Draft EIR/EA Chapter 3** | | | |
| HWQ1 – Potential to Violate Water Quality Standards during Construction | Less than significant | *None required* | Less than significant |
| HWQ2 – Potential to Violate Water Quality Standards during Operations | Less than significant<br>**Long-term: Benefit** | *None required* | Less than significant<br>**Long-term: Benefit** |
| HWQ3 – Potential to Impede or Redirect Floodflows | Less than significant | *None required* | Less than significant |
| HWQ4 – Potential to Increase Runoff On- or Offsite | No impact | *None required* | No impact |
| HWQ5 – Potential to Result in Substantial Erosion or Siltation On- or Offsite | Construction period: Less than significant<br>Long-term: No Impact | *None required* | Less than significant |
| HWQ6 – Potential to Interfere with Groundwater Recharge | No impact | *None required* | No impact |
| HWQ7 – Potential to Deplete Groundwater Supplies | No impact | *None required* | No impact |

| Impact | Significance | Mitigation | Significance with Mitigation |
|---|---|---|---|
| HWQ8 – Potential to Expose People or Structures to Tsunami, Seiche, Mudflow, or Dam Failure Inundation Hazards | Less than significant | *None required* | Less than significant |
| **Biological Resources – Draft EIR/EA Chapter 4** | | | |
| BIO1– Potential for Adverse Effects on Special-Status Plants | Less than significant | *None required* | Less than significant |
| BIO2 – Potential for Adverse Effects on Special-Status Wildlife | Construction period impacts on nesting birds: Potentially significant<br>All other impacts: Less than significant | BIO2.1: Conduct Pre-Construction Nesting Bird Surveys<br>BIO2.2: Protect Occupied Nests | Less than significant |
| BIO3 – Potential for Adverse Effects on Sensitive Natural Upland Communities | Construction period: Less than significant<br>**Long term: Benefit** | *None required* | Construction period: Less than significant<br>**Long term: Benefit** |
| BIO4 – Potential for Adverse Effects on Wetlands and Other Jurisdictional Waters | Construction period: Less than significant<br>**Long term: Benefit** | *None required* | Construction period: Less than significant<br>**Long term: Benefit** |
| BIO5 – Potential to Interfere with the Movement of Native Fish or Wildlife or Established Wildlife Corridors | Less than significant | *None required* | Less than significant |
| BIO6 – Potential to Impede the Use of Native Wildlife Nursery Sites | Less than significant | *None required* | Less than significant |
| BIO7 – Potential to Conflict with Local Policies or Regulations Protecting Biological Resources | No impact | *None required* | No impact |
| BIO8 – Potential to Conflict with an Adopted Conservation Plan | No impact | *None required* | No impact |
| **Cultural and Paleontological Resources – Draft EIR/EA Chapter 5** | | | |
| CUL1 – Potential to Result in a Substantial Adverse Change in the Significance of a Known Historic-Era Resource | Potentially significant | CUL1.1: Provide Qualified Archaeologist Supervision for Removal and Reinstallation of Historic-Era Fence Posts<br>CUL1.2: Provide Qualified Archaeologist and Native American Monitoring for Ground-Disturbing Activities in Vicinity of Area of Concern 2 | Less than significant |
| CUL2 – Potential to Result in a Substantial Adverse Change in the Significance of a Known Archaeological Resource | Potentially significant | CUL2.1: Conduct Resource Evaluation and Implement Treatment Follow-Up | Less than significant |
| CUL3 – Potential to Result in a Substantial Adverse Change in the Significance of Previously Unrecorded (Unknown) Resources | Potentially significant | CUL3.1: Provide Qualified Archaeologist and Native American Monitoring for Additional Ground-Disturbing Activities | Less than significant |
| CUL4 – Potential to Result in a Substantial Adverse Change to a "Unique Archaeological Resource" | No impact | *None required* | No impact |

| Impact | Significance | Mitigation | Significance with Mitigation |
|---|---|---|---|
| CUL5 – Potential for Disturbance of Human Remains | Potentially significant | CUL5.1: Comply with State Requirements in the Event Human Remains Are Discovered | Less than significant |
| CUL6 – Potential for Loss, Damage, or Destruction of Paleontological Resources | Potentially significant | CUL6.1: Retain Qualified Paleontologist Staff to Conduct Design Review and Implement Treatment Plan | Less than significant |
| **Aesthetics – Draft EIR/EA Chapter 6** | | | |
| Impact AES1 – Potential for Permanent Damage to Designated Scenic Resources | No impact; limited local benefit | *None required* | No impact; limited local benefit |
| Impact AES2A – Potential for Degradation of Visual Character and Quality from Construction | Construction: Significant<br>Revegetation establishment: Significant | AES2A.1: Provide Visual Screening for Construction Staging and Maintain Orderly Construction Areas | Construction: Less than significant<br>Revegetation establishment: **Significant and unavoidable** |
| Impact AES2B – Potential for Degradation of Visual Character and Quality from Operations | No impact | *None required* | No impact |
| Impact AES3 – Potential to Introduce New Sources of Substantial, Visually Intrusive Glare | Less than significant | *None required* | Less than significant |
| Impact AES4 – Potential to Introduce New Sources of Nighttime Light with the Potential to Contribute to "Light Spill" | No impact | *None required* | No impact |
| **Traffic and Transportation – Draft EIR/EA Chapter 7** | | | |
| TRAFFIC1 – Potential to Conflict with Local Circulation Elements, Congestion Management System Policies, or Other Applicable Traffic and Transportation Ordinances | No impact | *None required* | No impact |
| TRAFFIC2 – Potential to Conflict with Adopted Policies, Plans, or Programs Regarding Public Transit, Bicycle, or Pedestrian Facilities | No impact | *None required* | No impact |
| TRAFFIC3 – Potential to Cause an Increase in Traffic on Local Roadways Substantial in Relation to the Existing V/C Ratio | No impact | *None required* | No impact |
| TRAFFIC4 – Potential to Exacerbate an Already Unacceptable LOS | Less than significant | *None required* | Less than significant |
| TRAFFIC5 – Potential to Lead to Inadequate Emergency Response or Evacuation Routes | Less than significant | *None required* | Less than significant |
| TRAFFIC6 – Potential to Decrease Performance or Safety of Public Transit, Bicycle, or Pedestrian Facilities | Less than significant | *None required* | Less than significant |

| Impact | Significance | Mitigation | Significance with Mitigation |
|---|---|---|---|
| **Air Quality and Greenhouse Gas Emissions – Draft EIR/EA Chapter 8** | | | |
| AIR1 – Potential to Conflict with or Obstruct an Applicable Air Quality Plan | No impact | *None required* | No impact |
| AIR2 – Potential to Violate an Air Quality Standard, or Substantially Contribute to Such a Violation, Now or in the Future | Construction period: No impact<br>Long-term: Less than significant | *None required*<br>*None required* | Construction period: No impact<br>Long-term: Less than significant |
| AIR3 – Potential to Result in a Cumulatively Considerable Increase in Levels of any Criteria Pollutant for which the San Diego Air Basin is Currently in Non-Attainment | Construction and operations: Less than cumulatively considerable | *None required* | Construction and operations: Less than cumulatively considerable |
| AIR4 – Potential to Expose Sensitive Receptors to Substantial Pollutant Concentrations | Less than significant | *None required* | Less than significant |
| AIR5 – Potential to Create Objectionable Odors Affecting a Substantial Number of People | Construction period: Less than significant<br>Long-term benefit | *None required* | Less than significant<br>Long-term benefit |
| AIR6 – Potential to Conflict with an Applicable Plan, Policy, or Regulation Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases | No impact | *None required* | No impact |
| AIR7 – Potential to Generate Cumulatively Considerable Levels of Greenhouse Gas Emissions | Less than cumulatively considerable | *None required* | Less than cumulatively considerable |
| **Noise and Vibration – Draft EIR/EA Chapter 9** | | | |
| NOISE1 – Potential for Noise Levels to Exceed Applicable Noise Standards during Project Construction | No Impact | *None required* | No impact |
| NOISE2 – Potential to Create a Substantial Increase in Ambient Sound Levels, Resulting in Disturbance to Noise Sensitive Land Uses during Project Construction | Less than Significant | *None required* | Less than significant |
| NOISE3 – Potential for Noise Levels to Exceed Applicable Noise Standards during Project Operation | Less than significant | *None required* | Less than significant |
| NOISE4 – Potential to Create a Substantial Increase in Ambient Sound Levels, Resulting in Disturbance to Noise Sensitive Land Uses during Project Operation | Less than significant | *None required* | Less than significant |

| Impact | Significance | Mitigation | Significance with Mitigation |
|---|---|---|---|
| NOISE5 – Potential for Exposure of Persons or Structures to Excessive Groundborne Vibration during Construction | Less than significant | *None required* | Less than significant |
| NOISE6 – Potential for Exposure of Persons or Structures to Excessive Groundborne Vibration during Operations | Less than significant | *None required* | Less than significant |
| **Hazards and Hazardous Materials – Draft EIR/EA Chapter 10** | | | |
| Impact HAZ1 – Potential for Location on a Site that is Included on a List of Hazardous Materials Sites Compiled Pursuant to California Government Code Section 65962.5 | No impact | *None required* | No impact |
| Impact HAZ2 – Potential to Create Hazard to Workers, the Public, or the Environment through the Routine Transport, Use, Disposal, or Accidental Release of Hazardous Materials | Construction period: Less than significant<br>**Long-term: Benefit** | *None required* | Construction period: Less than significant<br>**Long-term: Benefit** |
| Impact HAZ3 – Potential to Create Hazard Related to the Transport, Use, or Disposal of Hazardous Materials within 0.25 Mile of a School | Construction period: Less than significant<br>Operation: No impact | *None required* | Construction period: Less than significant<br>Operation: No impact |
| Impact HAZ4 – Potential to Create Health or Environmental Hazard Related to Discovery of Undocumented Hazardous Materials | Construction period: Less than significant<br>Operation: No impact | *None required* | Construction period: Less than significant<br>Operation: No impact |
| Impact HAZ5 – Potential to Interfere with an Adopted Emergency Response, Evacuation, and/or Hazardous Materials Response Plan | Construction period: Less than significant<br>Operation: No impact | *None required* | Construction period: Less than significant<br>Operation: No impact |
| Impact HAZ6 – Increased Risk of Wildland Fires and Associated Hazards | Significant | HAZ6.1: Require Implementation of Wildland Fire Risk Reduction Measures | Less than significant |
| **Utilities and Service Systems – Draft EIR/EA Chapter 10** | | | |
| UTIL1 – Potential for Substantial Adverse Physical Effects on Existing Utilities Infrastructure | Construction Period: No impact<br>**Long-term: Benefit** | *None required* | Construction Period: No impact<br>**Long-term: Benefit** |
| UTIL2 – Potential for Exceedance of Applicable Wastewater Treatment Capacity or Requirements | No impact | *None required* | No impact |
| UTIL3 – Potential to Require New or Expanded Stormwater Facilities | No impact | *None required* | No impact |
| UTIL4 – Potential to Require Augmented Water Supply or New Water Entitlements | No impact | *None required* | No impact |
| UTIL5 – Potential to Result in Substantially Increased Demand for Electrical Power | No impact | *None required* | No impact |

| Impact | Significance | Mitigation | Significance with Mitigation |
|---|---|---|---|
| UTIL6 – Potential for Violation of Solid Waste Regulations | No impact | *None required* | No impact |
| UTIL7 – Potential to Exceed Landfill Capacity | No impact | *None required* | No impact |

## Environmental Justice – Draft EIR Chapter 12

The Project alignment is entirely within Census Tracts 171.06, 171.10, and 161.04. None of these census tracts qualifies as an area of minority population or an area of low-income population per the applicable federal standards. The Project would not result in a disproportionate affect (either adverse or beneficial) on minority or low-income populations.

## Potential to Induce Growth – Draft EIR/EA Chapter 13

As Chapter 2 discusses, this Project is proposed to improve the reliability of the wastewater system serving existing levels of development; it would rehabilitate and provide for improved maintenance of a critical component of the City's wastewater conveyance system. The Project would not directly construct housing, relocate populations, or lead to economic growth and thus would have no impact relative to these aspects of growth inducement.

The Project would upsize approximately 2,800 linear feet of OTS upstream of El Camino del Norte, to meet the increased service need projected at build-out under the City's current approved General Plan. This improvement is considered to represent removal of an existing obstacle to growth, and the Project is evaluated as growth-inducing in this regard.

However, future development undertakings to realize this planned growth could take a number of forms; although the number of units is generally known at this time, the specifics of individual projects are outside the envelope of what is reasonably foreseeable at present, and any discussion of their potential effects in the attached Draft EIR/EA would therefore be speculative. Any such future projects would require separate discretionary approval, and thus would undergo CEQA review when they are brought forward.

Similarly, improvements made under the proposed Project would remain in service for several decades, and thus could potentially serve increased area populations in future areas of development or densification not currently envisioned in City planning documents. The nature and effects of such projects are also outside the bounds of what is now reasonably foreseeable; no further analysis of issues related to growth inducement is feasible at this time, but such projects would also trigger separate discretionary approval and CEQA review when they are proposed.

## Sustainability-Related Impacts – Draft EIR/EA Chapter 14

- A variety of renewable and non-renewable natural resources would be required to install the new access improvements, relocate the Lone Jack segment of the existing OTS, and rehabilitate the aging and degraded manholes along the Project reach. In addition, water would be used directly in Project construction, and would also be required to propagate and maintain the plant materials used in revegetation, and in irrigation during the revegetation establishment period. Finally, energy resources would be required for construction, including direct consumption of energy in construction and the indirect use of the energy consumed for production, transport, and marketing of construction materials. The use of materials and energy for Project construction would represent an irretrievable one-time commitment of resources.
- Once installed, the new improvements should remain in place for decades: 10 – 25 years for new manhole liners, up to 25 years for the new access, and 50 years for the new sewer pipeline in Lone Jack Road. During this time, Project components should require little maintenance to remain fully serviceable, although small amounts of various construction materials and energy resources could be required for upkeep. The new access route would also slightly increase the consumption of fossil fuel resources and water associated with operation and maintenance of the City's wastewater system, since it would enable the City to reach portions of OTS that are currently inaccessible, and would therefore increase the overall level of operations and maintenance activity somewhat.
- At the same time, the Project would greatly reduce the potential for overflows and spills and the corollary potential for detrimental (and potentially long-term if not irrecoverable) effects on water quality and ecological function in Escondido Creek and San Elijo Lagoon, as well as the use of resources required for cleanup and restoration activities.
- To summarize, the Project would require an up-front investment of material and energy resources and would also entail an ongoing commitment to consumption of small increments of material resources, water, and energy. However, it would markedly improve the City's ability to maintain the OTS, decreasing the potential for spills and avoiding the associated environmental damage as well as the use of materials and energy potentially needed for cleanup. This represents an investment of both energy and resources to avoid long-term damaging outcomes.

## Contribution to Cumulative Impacts

Both CEQA and NEPA require lead agencies to evaluate the impacts of a proposed undertaking in a larger context that includes the combined effects of other projects that may affect the same area or the same resources. If a project would involve repeated activities over time, the combined effect of these activities must also be analyzed. Together, these two types of combined effects are referred to as *cumulative impacts* or *cumulative effects*.

Section 15355 of the *CEQA Guidelines* defines ***cumulative impacts*** as including two categories of effects:

- impacts that reflect the combined outcome of repeated similar activities over a period of time; for the propose Project, this is limited to the combined outcome of repeated operational activities, since construction would be short-term and temporary
- impacts that reflect the combined outcome of more than one project; detailed analysis is required when (1) a significant cumulative impact exists, *and* (2) the proposed undertaking would have the potential to contribute to or exacerbate it

The Project would not create new significant cumulative impacts due to repeated activities over time. Table S-6 summarizes the project's potential to contribute to significant existing cumulative impacts.

**Table S-6: Project Contribution to Existing Significant Cumulative Impacts**

| Resource | Existing Cumulative Impact | Project's Potential to Contribute | Significance of Project Contribution |
|---|---|---|---|
| Air Quality and GHG Emissions | The San Diego Air Basin (SDAB), which includes the District's service area and the Project alignment, is in non-attainment of state and federal standards for ozone/ozone precursors. This represents a significant cumulative impact on air quality. The SDAB is also in non-attainment of the state standard for fine respirable particulate matter. This represents an additional significant cumulative impact on air quality.<br>Greenhouse gas emissions are generated from a variety of natural and anthropogenic sources, including industry, transportation, electricity production, commercial and residential uses, and agriculture. A growing scientific and regulatory consensus recognizes greenhouse gas emissions as a cumulative, long-term concern at the local, national, and worldwide scales. This also represents a significant cumulative impact. | Construction of the proposed Project would result in temporary increase in emissions of criteria pollutants.<br>Expanded operations and maintenance activities would also result in a slight long-term increase in criteria pollutant emissions. | With Project environmental commitments, **less than cumulatively considerable** |

| Resource | Existing Cumulative Impact | Project's Potential to Contribute | Significance of Project Contribution |
|---|---|---|---|
| Biological Resources, Jurisdictional Habitat | Coastal San Diego County has experienced substantial loss and degradation of natural habitats over the past 2 centuries. This represents a significant cumulative impact at the landscape or habitat level. At the species level, additional significant cumulative impacts are considered to exist where individual plant and wildlife species have been identified as qualifying for federal or state special status. | The Project would entail activities within sensitive habitat occupied by a number of protected species, would result in loss of some habitat, and would have the potential to disturb nesting protected birds. | With Project environmental commitments, mitigation, and regulatory permit Terms and Conditions incorporated, **less than cumulatively considerable** |
| Cultural and Paleontological Resources | Over the past 200 years, agricultural growth and urban expansion have substantially modified the Native American cultural legacy in San Diego County and throughout California, including culturally important sites, culturally important plant and wildlife resources, and traditional cultural practices. | Ground-disturbing activities during Project construction could result in disturbance or loss of archaeological resources. | With mitigation incorporated, **less than cumulatively considerable** |
| Hydrology and Water Quality | A number of streams, lakes, reservoirs, and ocean/bay waters in the San Diego area are included on the State Water Resources Control Board's current list of water quality–impaired water bodies. Region-wide, this represents a significant cumulative impact on water quality. | Project construction and operation within the Creek corridor would have some potential for impacts on water quality in San Elijo Lagoon and Escondido Creek, both of which are identified as water quality–impaired. | With Project environmental commitments and regulatory permit Terms and Conditions incorporated, **less than cumulatively considerable** |
| Traffic and Transportation | Several roadways and intersections in the Project vicinity, including ones that offer primary arterial access to the Project alignment, operate at an unacceptable level of service at least intermittently. This represents a significant existing cumulative impact on transportation system function. | Construction would add a comparatively small number of heavy trucks and other vehicles to area roadways and intersections, including several that are currently operating at an unacceptable LOS. Traffic from operations would be on the order of 1 – 2 additional trips per year. | With Project environmental commitments (Traffic Control Plan) in place, **less than cumulatively considerable** |

## Issues Remaining to be Resolved

One primary issue remaining to be resolved centers on the details of the habitat compensation package, which will be formalized—and become legally binding on the City—through the regulatory permitting process. Additional species-specific measures may also be incorporated to increase protection for the listed species that use the Project corridor. Focusing these requirements through the regulatory permit avenue rather than detailing them in the Draft EIR/EA avoids potential conflicts between permit Terms and Conditions and CEQA/NEPA mitigation adopted in advance of permit issuance, providing more straightforward and unambiguous requirements and thus supporting more effective implementation.

Informal negotiations toward definition of the mitigation package, including offsets for habitat impacted to accommodate the new access route, as well as measures to avoid and minimize operational impacts on special-status species and sensitive habitats once the new access is in use, are taking place in parallel with circulation of the attached Draft EIR/EA. They will be completed once CEQA/NEPA review is completed and formal permit applications can be submitted. Regulatory agency oversight under the applicable requirements of the federal Clean Water Act, state and federal Endangered Species Acts, and California Coastal Act provides a performance standard to ensure effective mitigation planning and implementation

The City will also be working with private landowners and the County regarding the portions of the Project alignment where new easements are needed. First and foremost, the City has committed to ensuring a positive outcome for all property owners, and will be working with willing parties only; alternative routing will be selected if agreements cannot be reached. Items to be resolved include delineating the easement boundaries and arriving at mutually satisfactory easement terms that enable Project implementation while respecting property values and property owner rights and responsibilities. These discussions will also continue concurrent with circulation of the attached Draft EIR.

## Contents and Organization of the Draft EIR/EA

The attached Draft EIR/EA is organized as shown in Table S-7 below.

**Table S-7: Draft EIR/EA Organization at a Glance**

***Section 1: Project Introduction***

Chapter 1 – Introduction
Chapter 2 – Proposed Project and Alternatives

***Section 2: Natural Resources***

Chapter 3 – Hydrology and Water Quality
Chapter 4 – Biological Resources and Jurisdictional Habitat

***Section 3: Heritage Resources***

Chapter 5 – Cultural and Paleontological Resources

***Section 4: Social and Built Environment Resources***

Chapter 6 – Aesthetics
Chapter 7 – Transportation and Traffic
Chapter 8 – Noise and Vibration
Chapter 9 – Air Quality and Greenhouse Gas Emissions
Chapter 10 – Hazards and Hazardous Materials
Chapter 11 – Utilities and Service Systems
Chapter 12 – Environmental Justice

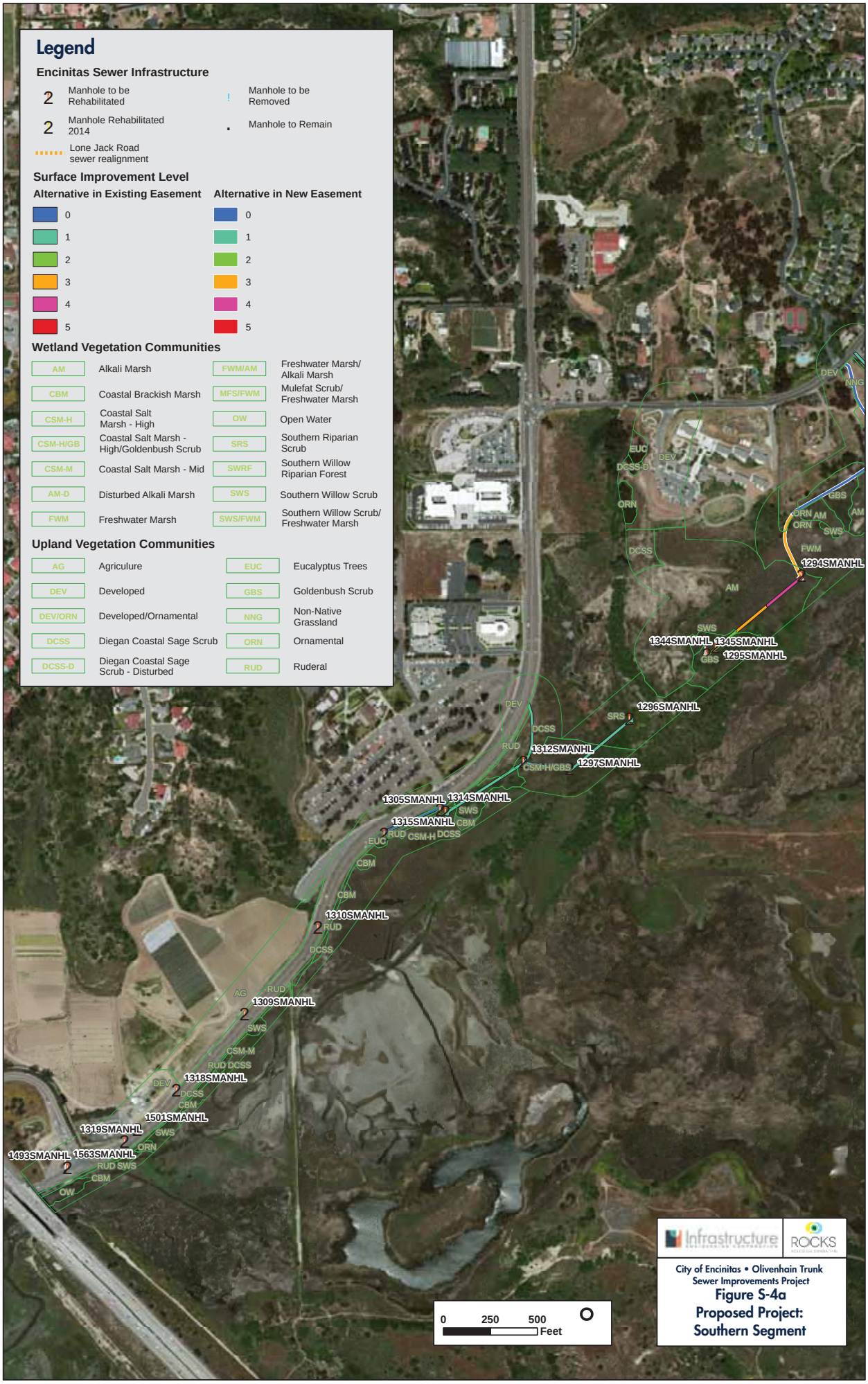
***Section 5: Other Required Analyses***

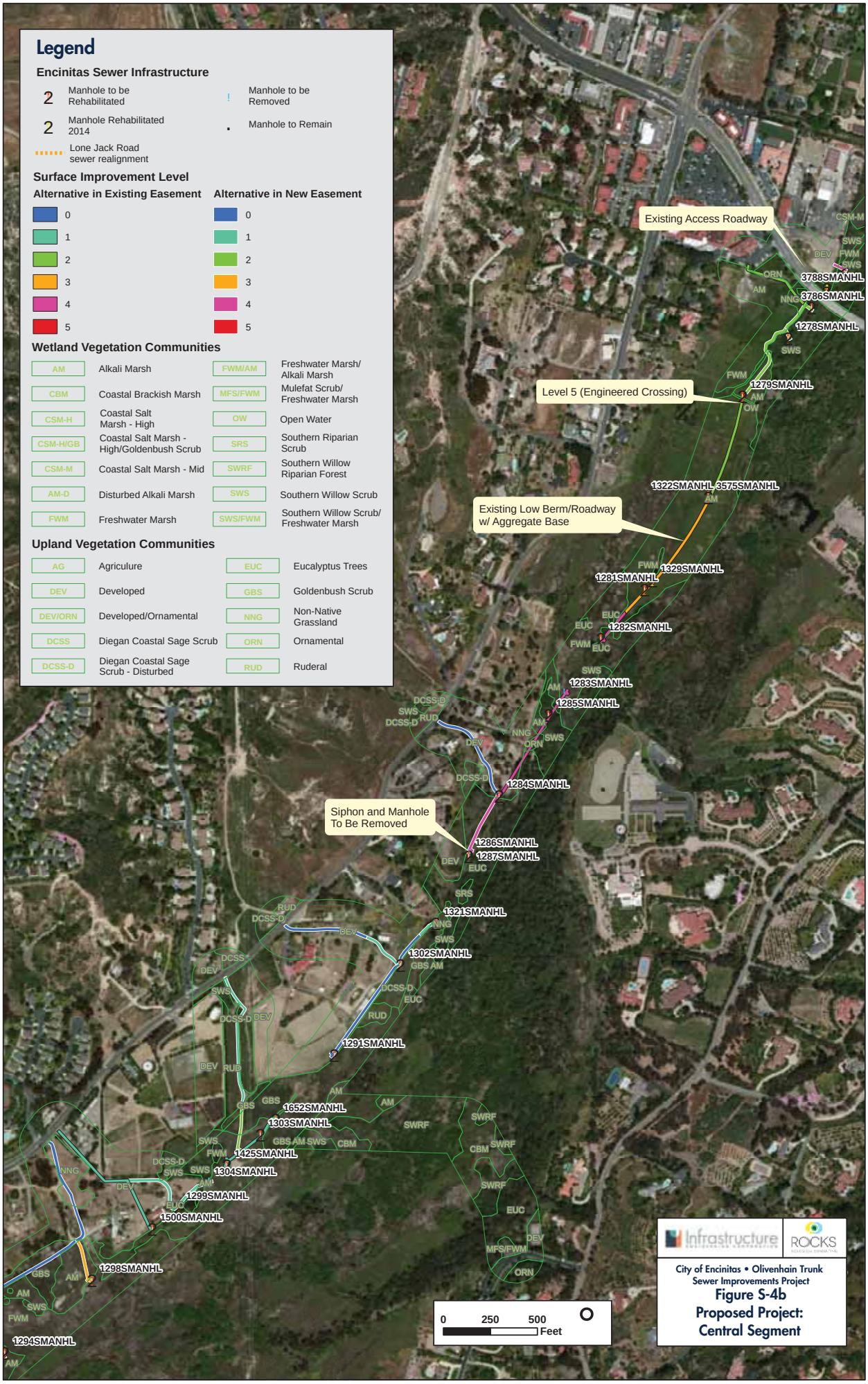
Chapter 13 – Growth Inducement and Related Impacts
Chapter 14 – Environmental Sustainability
Chapter 15 – Cumulative Impacts
Chapter 16 – Impacts Comparison and Environmentally Superior Alternative

***Appendices***

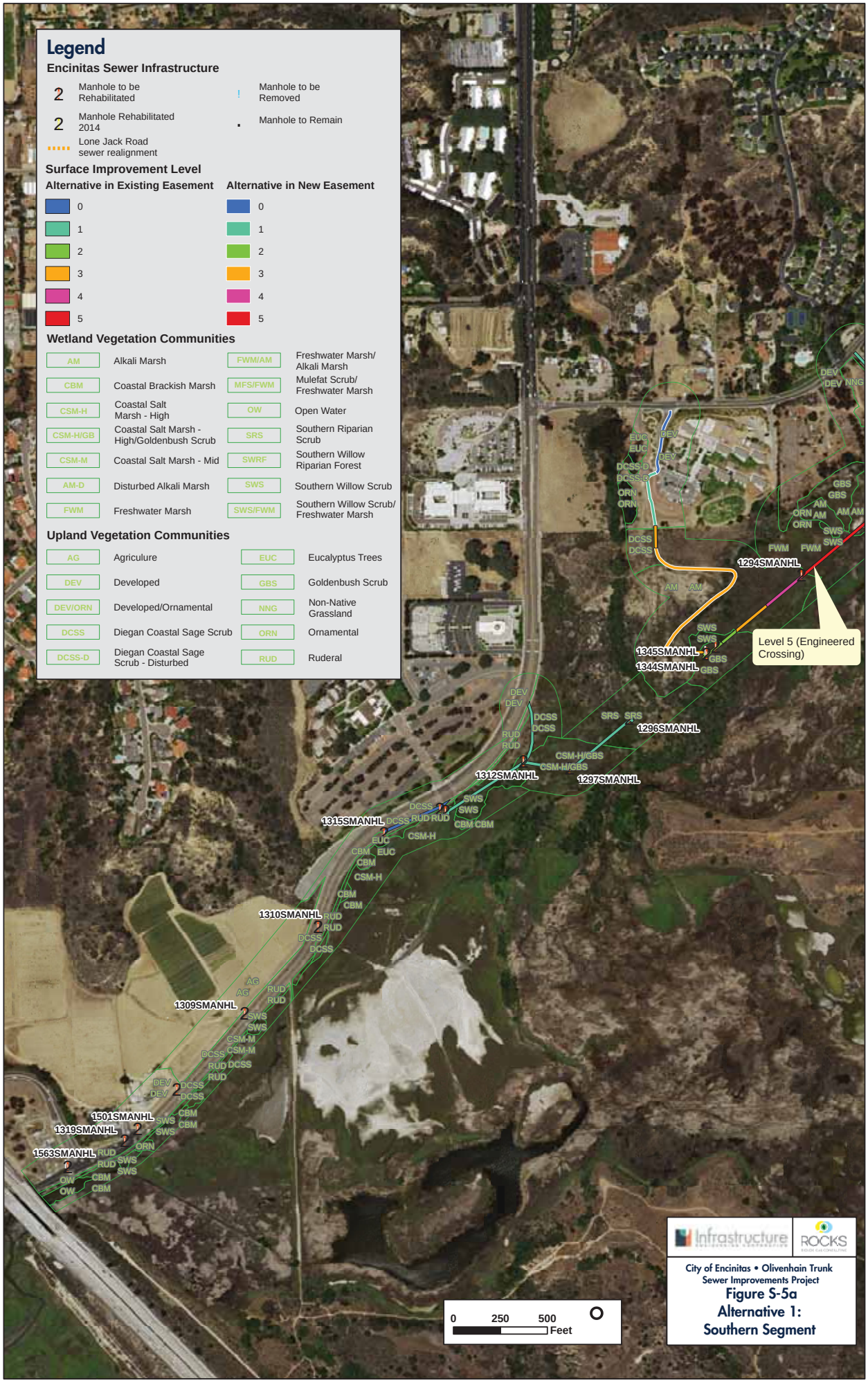
Appendix A: List of Acronyms and Abbreviations (11 × 17 foldout)
Appendix B: Scoping Summary Report
Appendix C: Alternatives Screening—Supporting Materials
Appendix D: Biological Resources Technical Report
Appendix E: Cultural Resources Technical Report
Appendix F: Air Quality and Greenhouse Gas Emissions Technical Report
Appendix G: List of Preparers
Appendix H: Distribution and Noticing

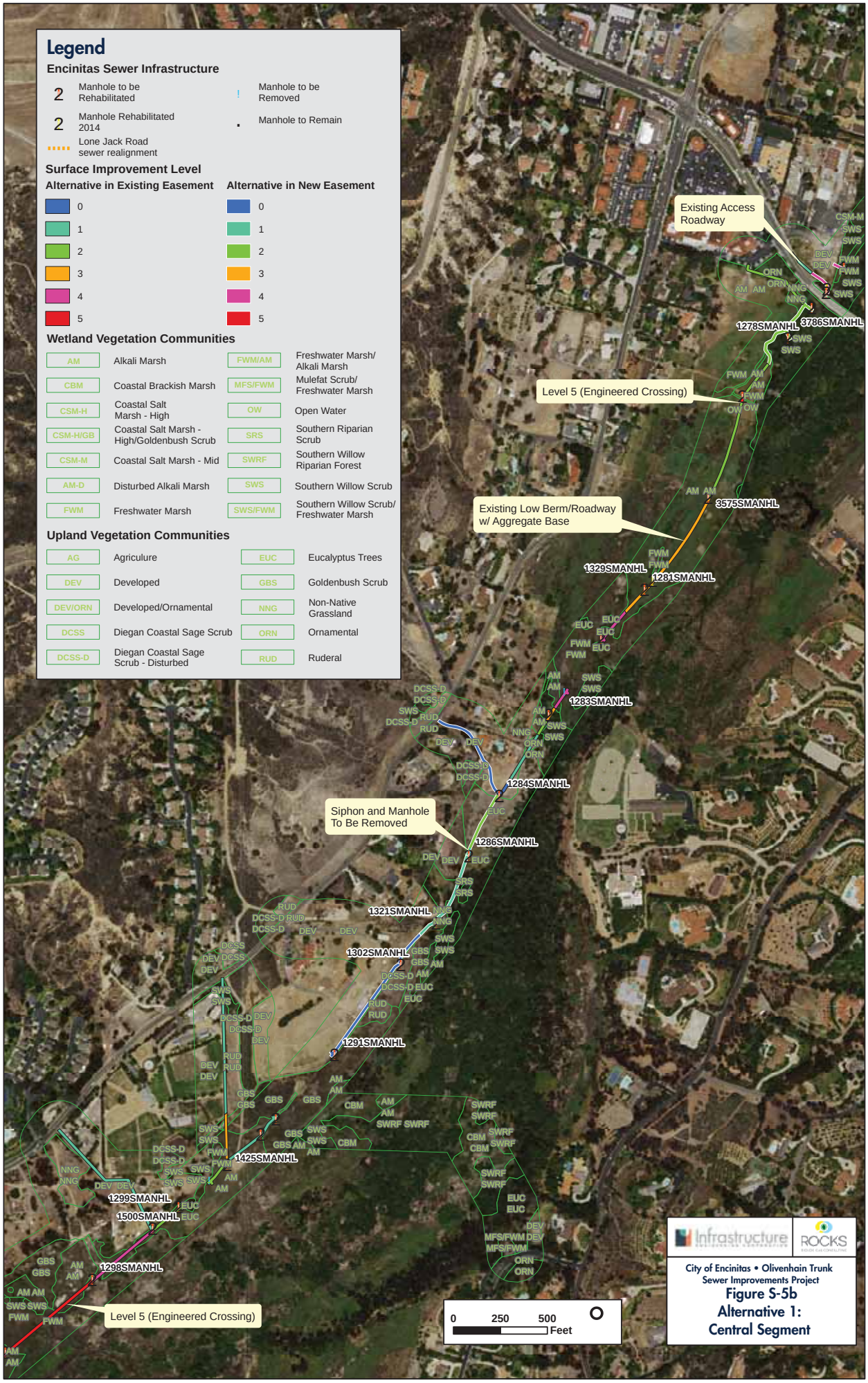

Sewer to be realigned into Lone Jack Road. Exact locations of manholes to be determined.
Manholes and Sewer to be Abandoned
Figure S-4(c)
Figure S-5(c)
Figure S-6(c)
Figure S-7(c)
Lone Jack Rd
Figure S-4(b)
Figure S-5(b)
Figure S-6(b)
Figure S-7(b)
RANCHO SANTA FE RD
EL CAMINO REAL
MANCHESTER AVE
Figure S-4(a)
Figure S-5(a)
Figure S-6(a)
Figure S-7(a)
Legend
Figure Extent
Project Alignment
Manhole to be Rehabilitated
Manhole Rehabilitated 2014
Manhole to be Removed
Manhole to Remain
Lone Jack Road Sewer Realignment
0
1,000
2,000
Feet
Infrastructure
City of Encinitas • Olivenhain Trunk Sewer Improvements Project
Figure S-3
Project Overview Map


Legend
Encinitas Sewer Infrastructure
Manhole to be Rehabilitated
Manhole to be Removed
Manhole Rehabilitated 2014
Manhole to Remain
Lone Jack Road sewer realignment
Surface Improvement Level
Alternative in Existing Easement
Alternative in New Easement
0
1
2
3
4
5
Wetland Vegetation Communities
AM Alkali Marsh
CBM Coastal Brackish Marsh
CSM-H Coastal Salt Marsh - High
CSM-H/GB Coastal Salt Marsh - High/Goldenbush Scrub
CSM-M Coastal Salt Marsh - Mid
AM-D Disturbed Alkali Marsh
FWM Freshwater Marsh
FWM/AM Freshwater Marsh/ Alkali Marsh
MFS/FWM Mulefat Scrub/ Freshwater Marsh
OW Open Water
SRS Southern Riparian Scrub
SWRF Southern Willow Riparian Forest
SWS Southern Willow Scrub
SWS/FWM Southern Willow Scrub/ Freshwater Marsh
Upland Vegetation Communities
AG Agriculure
DEV Developed
DEV/ORN Developed/Ornamental
DCSS Diegan Coastal Sage Scrub
DCSS-D Diegan Coastal Sage Scrub - Disturbed
EUC Eucalyptus Trees
GBS Goldenbush Scrub
NNG Non-Native Grassland
ORN Ornamental
RUD Ruderal
1294SMANHL
1295SMANHL
1296SMANHL
1297SMANHL
1305SMANHL
1309SMANHL
1310SMANHL
1312SMANHL
1314SMANHL
1315SMANHL
1318SMANHL
1319SMANHL
1344SMANHL
1345SMANHL
1493SMANHL
1501SMANHL
1563SMANHL
0 250 500 Feet
Infrastructure
ROCKS
City of Encinitas • Olivenhain Trunk Sewer Improvements Project
Figure S-4a
Proposed Project: Southern Segment

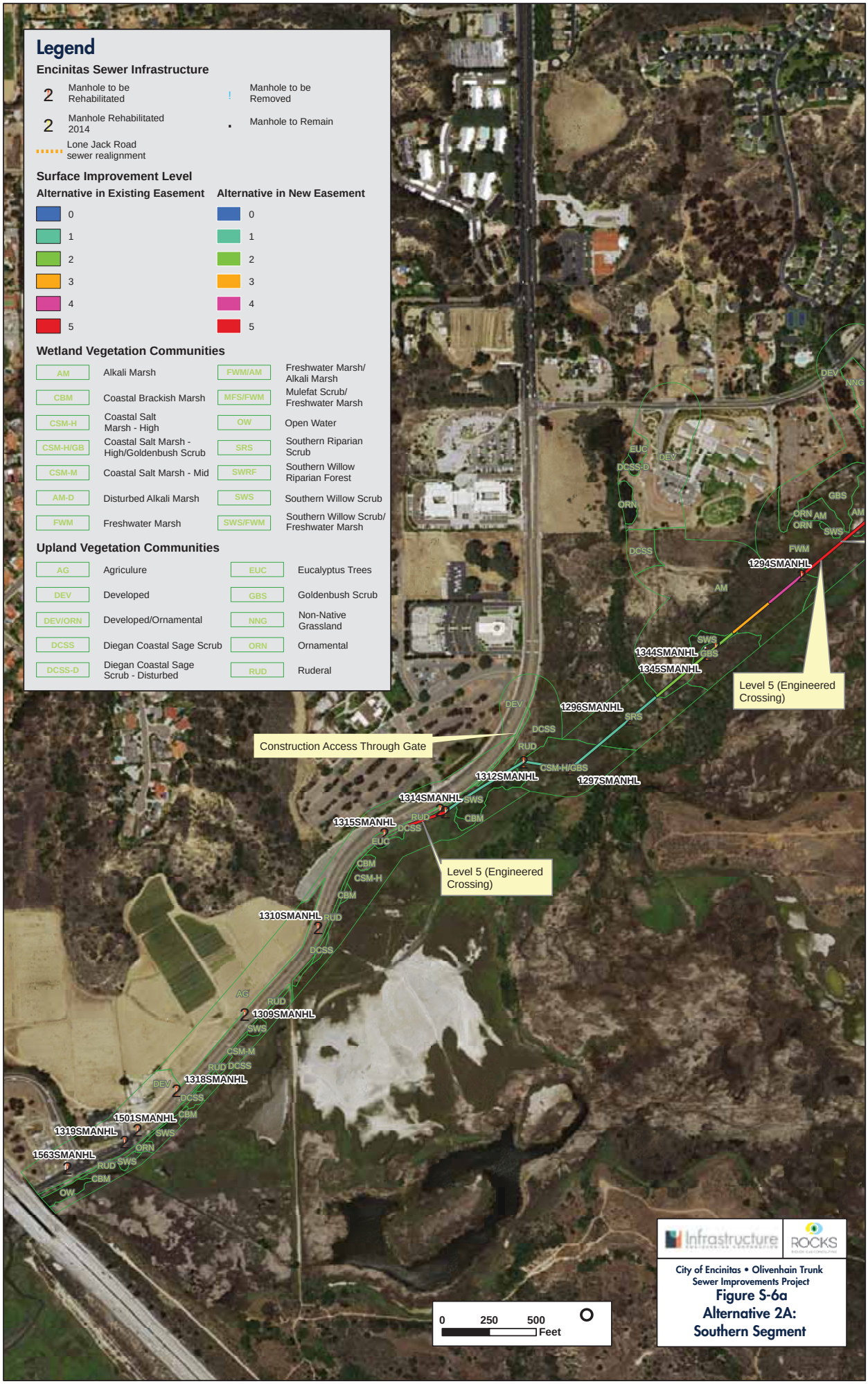

Legend
Encinitas Sewer Infrastructure
Manhole to be Rehabilitated
Manhole to be Removed
Manhole Rehabilitated 2014
Manhole to Remain
Lone Jack Road sewer realignment
Surface Improvement Level
Alternative in Existing Easement
Alternative in New Easement
0
1
2
3
4
5
Wetland Vegetation Communities
AM Alkali Marsh
CBM Coastal Brackish Marsh
CSM-H Coastal Salt Marsh - High
CSM-H/GB Coastal Salt Marsh - High/Goldenbush Scrub
CSM-M Coastal Salt Marsh - Mid
AM-D Disturbed Alkali Marsh
FWM Freshwater Marsh
FWM/AM Freshwater Marsh/ Alkali Marsh
MFS/FWM Mulefat Scrub/ Freshwater Marsh
OW Open Water
SRS Southern Riparian Scrub
SWRF Southern Willow Riparian Forest
SWS Southern Willow Scrub
SWS/FWM Southern Willow Scrub/ Freshwater Marsh
Upland Vegetation Communities
AG Agriculture
DEV Developed
DEV/ORN Developed/Ornamental
DCSS Diegan Coastal Sage Scrub
DCSS-D Diegan Coastal Sage Scrub - Disturbed
EUC Eucalyptus Trees
GBS Goldenbush Scrub
NNG Non-Native Grassland
ORN Ornamental
RUD Ruderal
Existing Access Roadway
Level 5 (Engineered Crossing)
Existing Low Berm/Roadway w/ Aggregate Base
Siphon and Manhole To Be Removed
3788SMANHL
3786SMANHL
1278SMANHL
1279SMANHL
1322SMANHL
3575SMANHL
1329SMANHL
1281SMANHL
1282SMANHL
1283SMANHL
1285SMANHL
1284SMANHL
1286SMANHL
1287SMANHL
1321SMANHL
1302SMANHL
1291SMANHL
1652SMANHL
1303SMANHL
1425SMANHL
1304SMANHL
1299SMANHL
1500SMANHL
1298SMANHL
1294SMANHL
0 250 500 Feet
Infrastructure
ROCKS
City of Encinitas • Olivenhain Trunk Sewer Improvements Project
Figure S-4b
Proposed Project: Central Segment

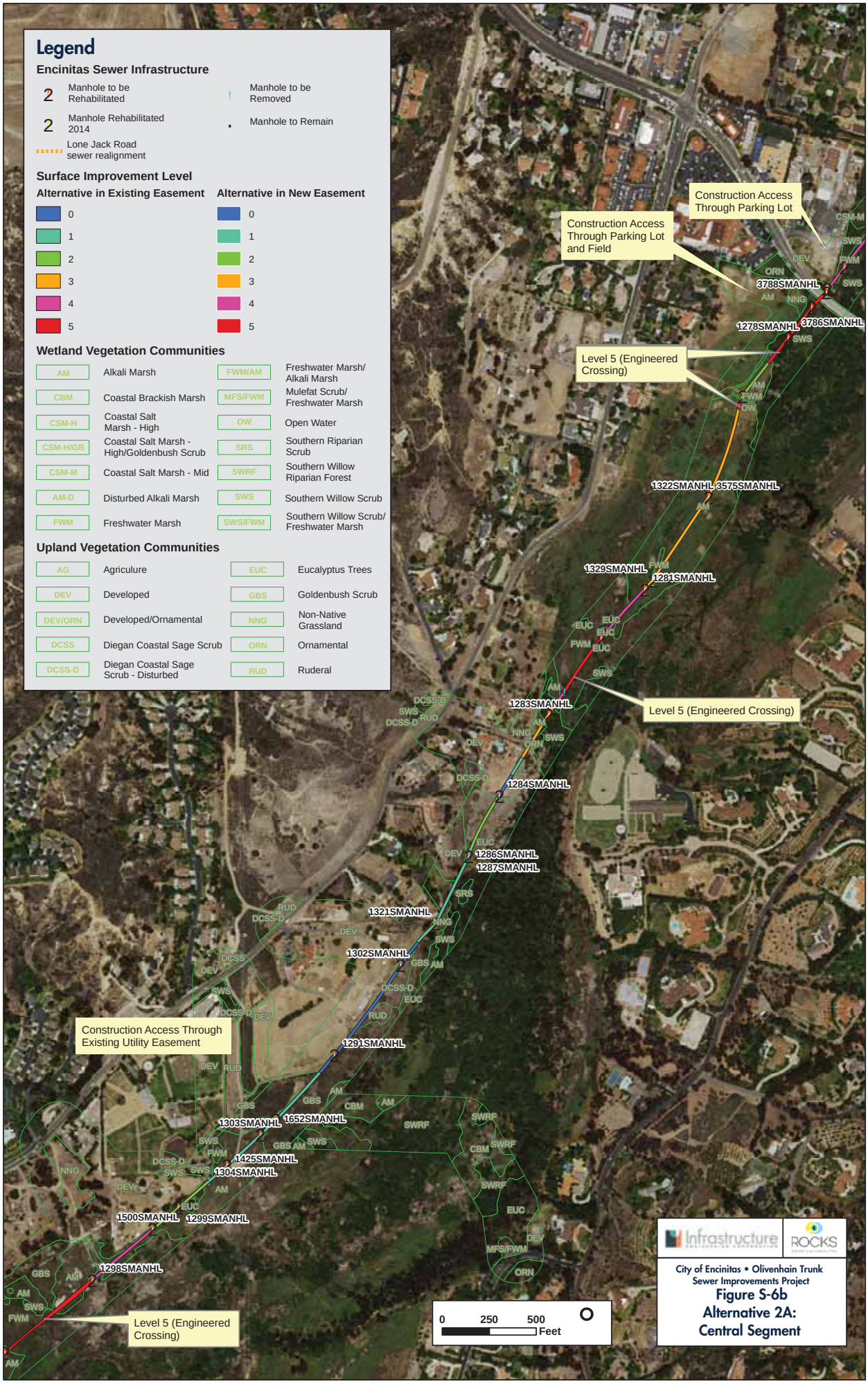

Legend
Encinitas Sewer Infrastructure
Manhole to be Rehabilitated
Manhole to be Removed
Manhole Rehabilitated 2014
Manhole to Remain
Lone Jack Road sewer realignment
Surface Improvement Level
Alternative in Existing Easement
Alternative in New Easement
0
1
2
3
4
5
Wetland Vegetation Communities
AM Alkali Marsh
CBM Coastal Brackish Marsh
CSM-H Coastal Salt Marsh - High
CSM-H/GB Coastal Salt Marsh - High/Goldenbush Scrub
CSM-M Coastal Salt Marsh - Mid
AM-D Disturbed Alkali Marsh
FWM Freshwater Marsh
FWM/AM Freshwater Marsh/ Alkali Marsh
MFS/FWM Mulefat Scrub/ Freshwater Marsh
OW Open Water
SRS Southern Riparian Scrub
SWRF Southern Willow Riparian Forest
SWS Southern Willow Scrub
SWS/FWM Southern Willow Scrub/ Freshwater Marsh
Upland Vegetation Communities
AG Agriculture
DEV Developed
DEV/ORN Developed/Ornamental
DCSS Diegan Coastal Sage Scrub
DCSS-D Diegan Coastal Sage Scrub - Disturbed
EUC Eucalyptus Trees
GBS Goldenbush Scrub
NNG Non-Native Grassland
ORN Ornamental
RUD Ruderal
Sewer to be realigned into Lone Jack Road. Exact locations of manholes to be determined.
Level 5 (Engineered Crossing)
Existing Access Roadway
612SMANHL
1131SMANHL
1132SMANHL
1133SMANHL
1134SMANHL
1135SMANHL
1137SMANHL
1136SMANHL
1138SMANHL
1139SMANHL
1140SMANHL
1141SMANHL
1142SMANHL
1264SMANHL
1263SMANHL
1268SMANHL
169SMANHL
1270SMANHL
266SMANHL
1269SMANHL
1271SMANHL
1272SMANHL
3826SMANHL
1275SMANHL
1276SMANHL
1300SMANHL
1327SMANHL
1277SMANHL
1301SMANHL
3788SMANHL
0 250 500 Feet
Infrastructure
ROCKS
City of Encinitas • Olivenhain Trunk Sewer Improvements Project
Figure S-4c
Proposed Project: Northern Segment


Legend
Encinitas Sewer Infrastructure
Manhole to be Rehabilitated
Manhole to be Removed
Manhole Rehabilitated 2014
Manhole to Remain
Lone Jack Road sewer realignment
Surface Improvement Level
Alternative in Existing Easement
Alternative in New Easement
0
1
2
3
4
5
Wetland Vegetation Communities
AM Alkali Marsh
CBM Coastal Brackish Marsh
CSM-H Coastal Salt Marsh - High
CSM-H/GB Coastal Salt Marsh - High/Goldenbush Scrub
CSM-M Coastal Salt Marsh - Mid
AM-D Disturbed Alkali Marsh
FWM Freshwater Marsh
FWM/AM Freshwater Marsh/ Alkali Marsh
MFS/FWM Mulefat Scrub/ Freshwater Marsh
OW Open Water
SRS Southern Riparian Scrub
SWRF Southern Willow Riparian Forest
SWS Southern Willow Scrub
SWS/FWM Southern Willow Scrub/ Freshwater Marsh
Upland Vegetation Communities
AG Agriculure
DEV Developed
DEV/ORN Developed/Ornamental
DCSS Diegan Coastal Sage Scrub
DCSS-D Diegan Coastal Sage Scrub - Disturbed
EUC Eucalyptus Trees
GBS Goldenbush Scrub
NNG Non-Native Grassland
ORN Ornamental
RUD Ruderal
1294SMANHL
1345SMANHL
1344SMANHL
1296SMANHL
1312SMANHL
1297SMANHL
1315SMANHL
1310SMANHL
1309SMANHL
1501SMANHL
1319SMANHL
1563SMANHL
Level 5 (Engineered Crossing)
0 250 500 Feet
Infrastructure
ROCKS
City of Encinitas • Olivenhain Trunk Sewer Improvements Project
Figure S-5a
Alternative 1:
Southern Segment

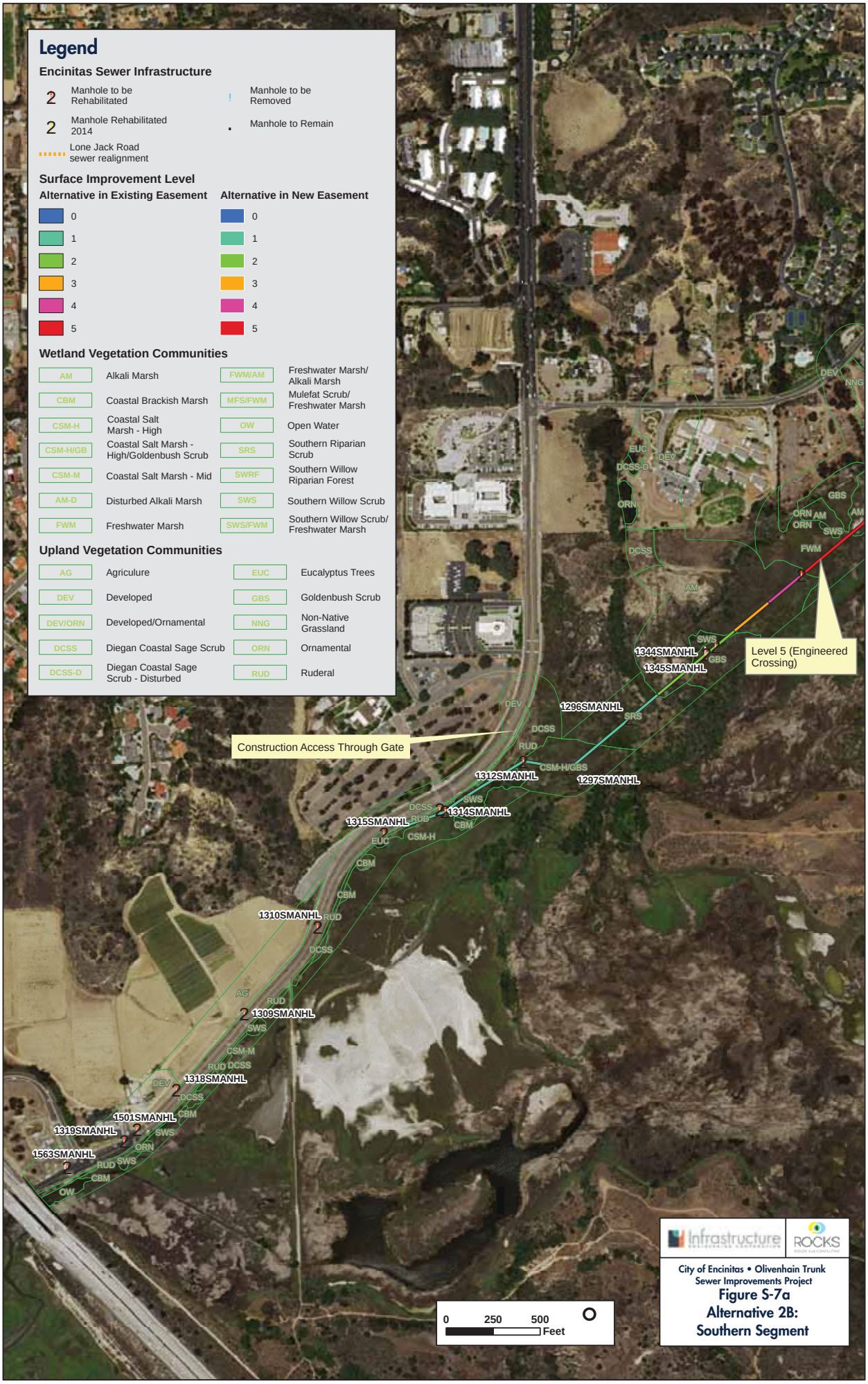

Legend
Encinitas Sewer Infrastructure
Manhole to be Rehabilitated
Manhole to be Removed
Manhole Rehabilitated 2014
Manhole to Remain
Lone Jack Road sewer realignment
Surface Improvement Level
Alternative in Existing Easement
Alternative in New Easement
0
1
2
3
4
5
Wetland Vegetation Communities
AM Alkali Marsh
CBM Coastal Brackish Marsh
CSM-H Coastal Salt Marsh - High
CSM-H/GB Coastal Salt Marsh - High/Goldenbush Scrub
CSM-M Coastal Salt Marsh - Mid
AM-D Disturbed Alkali Marsh
FWM Freshwater Marsh
FWM/AM Freshwater Marsh/ Alkali Marsh
MFS/FWM Mulefat Scrub/ Freshwater Marsh
OW Open Water
SRS Southern Riparian Scrub
SWRF Southern Willow Riparian Forest
SWS Southern Willow Scrub
SWS/FWM Southern Willow Scrub/ Freshwater Marsh
Upland Vegetation Communities
AG Agriculure
DEV Developed
DEV/ORN Developed/Ornamental
DCSS Diegan Coastal Sage Scrub
DCSS-D Diegan Coastal Sage Scrub - Disturbed
EUC Eucalyptus Trees
GBS Goldenbush Scrub
NNG Non-Native Grassland
ORN Ornamental
RUD Ruderal
Existing Access Roadway
Level 5 (Engineered Crossing)
Existing Low Berm/Roadway w/ Aggregate Base
Siphon and Manhole To Be Removed
Level 5 (Engineered Crossing)
1278SMANHL
3786SMANHL
3575SMANHL
1329SMANHL
1281SMANHL
1283SMANHL
1284SMANHL
1286SMANHL
1321SMANHL
1302SMANHL
1291SMANHL
1425SMANHL
1299SMANHL
1500SMANHL
1298SMANHL
0 250 500 Feet
Infrastructure
ROCKS
City of Encinitas • Olivenhain Trunk Sewer Improvements Project
Figure S-5b
Alternative 1:
Central Segment

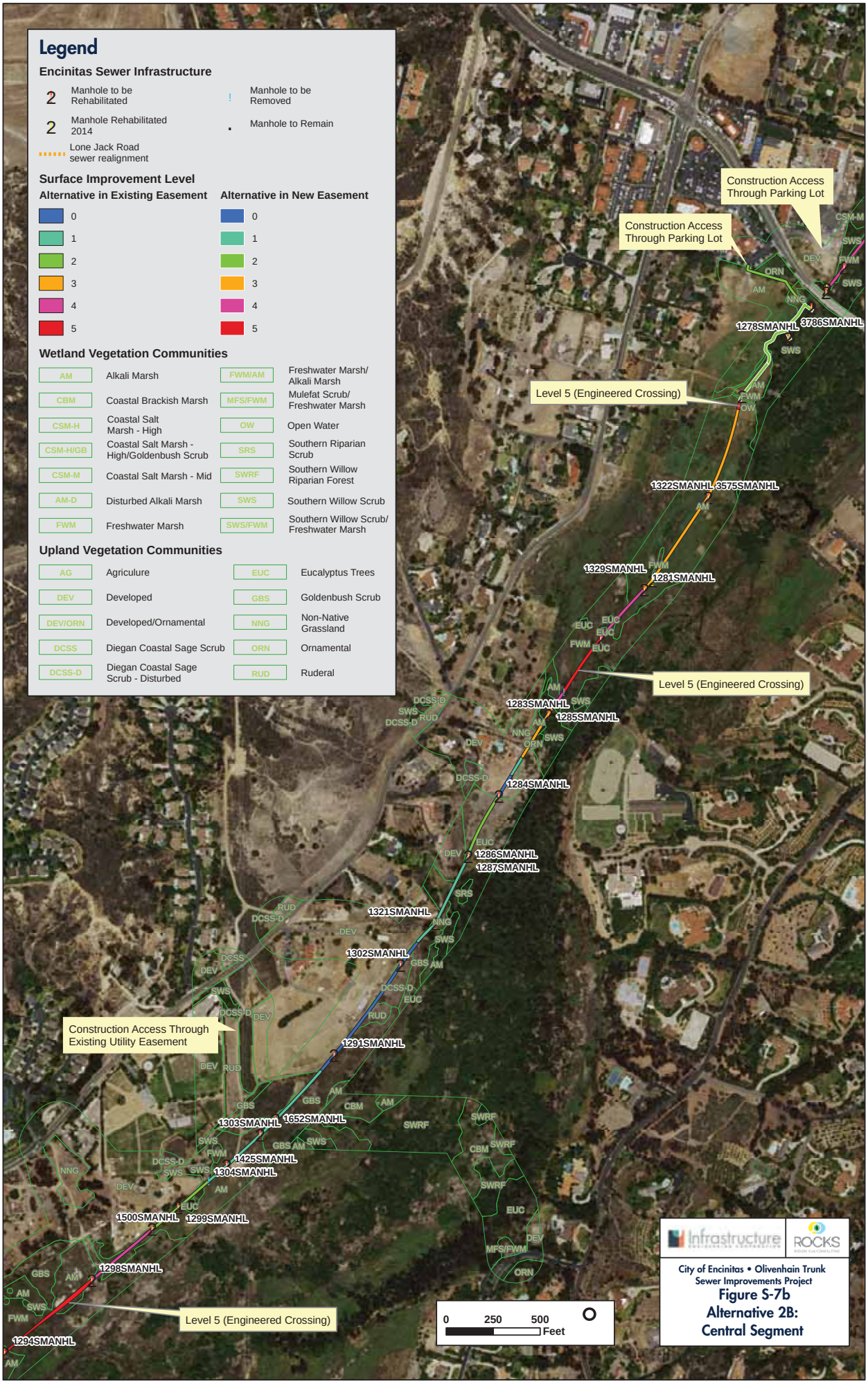

Legend
Encinitas Sewer Infrastructure
2 Manhole to be Rehabilitated
! Manhole to be Removed
2 Manhole Rehabilitated 2014
. Manhole to Remain
Lone Jack Road sewer realignment
Surface Improvement Level
Alternative in Existing Easement
Alternative in New Easement
0
1
2
3
4
5
Wetland Vegetation Communities
AM Alkali Marsh
CBM Coastal Brackish Marsh
CSM-H Coastal Salt Marsh - High
CSM-H/GB Coastal Salt Marsh - High/Goldenbush Scrub
CSM-M Coastal Salt Marsh - Mid
AM-D Disturbed Alkali Marsh
FWM Freshwater Marsh
FWM/AM Freshwater Marsh/ Alkali Marsh
MFS/FWM Mulefat Scrub/ Freshwater Marsh
OW Open Water
SRS Southern Riparian Scrub
SWRF Southern Willow Riparian Forest
SWS Southern Willow Scrub
SWS/FWM Southern Willow Scrub/ Freshwater Marsh
Upland Vegetation Communities
AG Agriculure
DEV Developed
DEV/ORN Developed/Ornamental
DCSS Diegan Coastal Sage Scrub
DCSS-D Diegan Coastal Sage Scrub - Disturbed
EUC Eucalyptus Trees
GBS Goldenbush Scrub
NNG Non-Native Grassland
ORN Ornamental
RUD Ruderal
Sewer to be realigned into Lone Jack Road. Exact locations of manholes to be determined.
Level 5 (Engineered Crossing)
Existing Access Roadway
612SMANHL
1131SMANHL
1132SMANHL
1134SMANHL
1133SMANHL
1135SMANHL
1137SMANHL
1136SMANHL
1138SMANHL
1139SMANHL
1140SMANHL
1142SMANHL
1264SMANHL
1263SMANHL
1268SMANHL
169SMANHL
1270SMANHL
266SMANHL
1269SMANHL
1271SMANHL
1272SMANHL
3826SMANHL
1276SMANHL
1300SMANHL
1327SMANHL
1277SMANHL
3788SMANHL
0 250 500 Feet
Infrastructure
ROCKS
City of Encinitas • Olivenhain Trunk Sewer Improvements Project
Figure S-5c
Alternative 1: Northern Segment


Legend
Encinitas Sewer Infrastructure
Manhole to be Rehabilitated
Manhole to be Removed
Manhole Rehabilitated 2014
Manhole to Remain
Lone Jack Road sewer realignment
Surface Improvement Level
Alternative in Existing Easement
Alternative in New Easement
0
1
2
3
4
5
Wetland Vegetation Communities
AM Alkali Marsh
CBM Coastal Brackish Marsh
CSM-H Coastal Salt Marsh - High
CSM-H/GB Coastal Salt Marsh - High/Goldenbush Scrub
CSM-M Coastal Salt Marsh - Mid
AM-D Disturbed Alkali Marsh
FWM Freshwater Marsh
FWM/AM Freshwater Marsh/ Alkali Marsh
MFS/FWM Mulefat Scrub/ Freshwater Marsh
OW Open Water
SRS Southern Riparian Scrub
SWRF Southern Willow Riparian Forest
SWS Southern Willow Scrub
SWS/FWM Southern Willow Scrub/ Freshwater Marsh
Upland Vegetation Communities
AG Agriculture
DEV Developed
DEV/ORN Developed/Ornamental
DCSS Diegan Coastal Sage Scrub
DCSS-D Diegan Coastal Sage Scrub - Disturbed
EUC Eucalyptus Trees
GBS Goldenbush Scrub
NNG Non-Native Grassland
ORN Ornamental
RUD Ruderal
1294SMANHL
1344SMANHL
1345SMANHL
1296SMANHL
1312SMANHL
1297SMANHL
1314SMANHL
1315SMANHL
1310SMANHL
1309SMANHL
1318SMANHL
1501SMANHL
1319SMANHL
1563SMANHL
Level 5 (Engineered Crossing)
Construction Access Through Gate
Level 5 (Engineered Crossing)
0 250 500 Feet
Infrastructure
ROCKS
City of Encinitas • Olivenhain Trunk Sewer Improvements Project
Figure S-6a
Alternative 2A:
Southern Segment


Legend
Encinitas Sewer Infrastructure
Manhole to be Rehabilitated
Manhole to be Removed
Manhole Rehabilitated 2014
Manhole to Remain
Lone Jack Road sewer realignment
Surface Improvement Level
Alternative in Existing Easement
Alternative in New Easement
0
1
2
3
4
5
Wetland Vegetation Communities
AM Alkali Marsh
CBM Coastal Brackish Marsh
CSM-H Coastal Salt Marsh - High
CSM-H/GB Coastal Salt Marsh - High/Goldenbush Scrub
CSM-M Coastal Salt Marsh - Mid
AM-D Disturbed Alkali Marsh
FWM Freshwater Marsh
FWM/AM Freshwater Marsh/ Alkali Marsh
MFS/FWM Mulefat Scrub/ Freshwater Marsh
OW Open Water
SRS Southern Riparian Scrub
SWRF Southern Willow Riparian Forest
SWS Southern Willow Scrub
SWS/FWM Southern Willow Scrub/ Freshwater Marsh
Upland Vegetation Communities
AG Agriculure
DEV Developed
DEV/ORN Developed/Ornamental
DCSS Diegan Coastal Sage Scrub
DCSS-D Diegan Coastal Sage Scrub - Disturbed
EUC Eucalyptus Trees
GBS Goldenbush Scrub
NNG Non-Native Grassland
ORN Ornamental
RUD Ruderal
Construction Access Through Parking Lot
Construction Access Through Parking Lot and Field
Level 5 (Engineered Crossing)
Construction Access Through Existing Utility Easement
3788SMANHL
3786SMANHL
1278SMANHL
1322SMANHL
3575SMANHL
1329SMANHL
1281SMANHL
1283SMANHL
1284SMANHL
1286SMANHL
1287SMANHL
1321SMANHL
1302SMANHL
1291SMANHL
1303SMANHL
1652SMANHL
1425SMANHL
1304SMANHL
1500SMANHL
1299SMANHL
1298SMANHL
0 250 500 Feet
Infrastructure
ROCKS
City of Encinitas • Olivenhain Trunk Sewer Improvements Project
Figure S-6b
Alternative 2A:
Central Segment


Legend
Encinitas Sewer Infrastructure
Manhole to be Rehabilitated
Manhole to be Removed
Manhole Rehabilitated 2014
Manhole to Remain
Lone Jack Road sewer realignment
Surface Improvement Level
Alternative in Existing Easement
Alternative in New Easement
0
1
2
3
4
5
Wetland Vegetation Communities
AM Alkali Marsh
CBM Coastal Brackish Marsh
CSM-H Coastal Salt Marsh - High
CSM-H/GB Coastal Salt Marsh - High/Goldenbush Scrub
CSM-M Coastal Salt Marsh - Mid
AM-D Disturbed Alkali Marsh
FWM Freshwater Marsh
FWM/AM Freshwater Marsh/ Alkali Marsh
MFS/FWM Mulefat Scrub/ Freshwater Marsh
OW Open Water
SRS Southern Riparian Scrub
SWRF Southern Willow Riparian Forest
SWS Southern Willow Scrub
SWS/FWM Southern Willow Scrub/ Freshwater Marsh
Upland Vegetation Communities
AG Agriculure
DEV Developed
DEV/ORN Developed/Ornamental
DCSS Diegan Coastal Sage Scrub
DCSS-D Diegan Coastal Sage Scrub - Disturbed
EUC Eucalyptus Trees
GBS Goldenbush Scrub
NNG Non-Native Grassland
ORN Ornamental
RUD Ruderal
Sewer to be realigned into Lone Jack Road. Exact locations of manholes to be determined.
Construction Access Through Triple C Ranch Road and Dirt Road
Level 5 (Engineered Crossing)
Construction Access Through Dirt Road
Level 5 (Engineered Crossing)
Construction Access Through Parking Lot
612SMANHL
1131SMANHL
1132SMANHL
1133SMANHL
1134SMANHL
1135SMANHL
1137SMANHL
1136SMANHL
1138SMANHL
1139SMANHL
1140SMANHL
1141SMANHL
1142SMANHL
1264SMANHL
1263SMANHL
1268SMANHL
169SMANHL
1270SMANHL
266SMANHL
1269SMANHL
1271SMANHL
1272SMANHL
3826SMANHL
1276SMANHL
1300SMANHL
1327SMANHL
3788SMANHL
0 250 500 Feet
Infrastructure
ROCKS
City of Encinitas • Olivenhain Trunk Sewer Improvements Project
Figure S-6c
Alternative 2A:
Northern Segment


Legend
Encinitas Sewer Infrastructure
Manhole to be Rehabilitated
Manhole to be Removed
Manhole Rehabilitated 2014
Manhole to Remain
Lone Jack Road sewer realignment
Surface Improvement Level
Alternative in Existing Easement
Alternative in New Easement
0
1
2
3
4
5
Wetland Vegetation Communities
AM Alkali Marsh
CBM Coastal Brackish Marsh
CSM-H Coastal Salt Marsh - High
CSM-H/GB Coastal Salt Marsh - High/Goldenbush Scrub
CSM-M Coastal Salt Marsh - Mid
AM-D Disturbed Alkali Marsh
FWM Freshwater Marsh
FWM/AM Freshwater Marsh/ Alkali Marsh
MFS/FWM Mulefat Scrub/ Freshwater Marsh
OW Open Water
SRS Southern Riparian Scrub
SWRF Southern Willow Riparian Forest
SWS Southern Willow Scrub
SWS/FWM Southern Willow Scrub/ Freshwater Marsh
Upland Vegetation Communities
AG Agriculure
DEV Developed
DEV/ORN Developed/Ornamental
DCSS Diegan Coastal Sage Scrub
DCSS-D Diegan Coastal Sage Scrub - Disturbed
EUC Eucalyptus Trees
GBS Goldenbush Scrub
NNG Non-Native Grassland
ORN Ornamental
RUD Ruderal
Level 5 (Engineered Crossing)
Construction Access Through Gate
1344SMANHL
1345SMANHL
1296SMANHL
1312SMANHL
1297SMANHL
1314SMANHL
1315SMANHL
1310SMANHL
1309SMANHL
1318SMANHL
1501SMANHL
1319SMANHL
1563SMANHL
0 250 500 Feet
City of Encinitas • Olivenhain Trunk Sewer Improvements Project
Figure S-7a
Alternative 2B:
Southern Segment


Legend
Encinitas Sewer Infrastructure
Manhole to be Rehabilitated
Manhole to be Removed
Manhole Rehabilitated 2014
Manhole to Remain
Lone Jack Road sewer realignment
Surface Improvement Level
Alternative in Existing Easement
Alternative in New Easement
0
1
2
3
4
5
Wetland Vegetation Communities
AM Alkali Marsh
CBM Coastal Brackish Marsh
CSM-H Coastal Salt Marsh - High
CSM-H/GB Coastal Salt Marsh - High/Goldenbush Scrub
CSM-M Coastal Salt Marsh - Mid
AM-D Disturbed Alkali Marsh
FWM Freshwater Marsh
FWM/AM Freshwater Marsh/ Alkali Marsh
MFS/FWM Mulefat Scrub/ Freshwater Marsh
OW Open Water
SRS Southern Riparian Scrub
SWRF Southern Willow Riparian Forest
SWS Southern Willow Scrub
SWS/FWM Southern Willow Scrub/ Freshwater Marsh
Upland Vegetation Communities
AG Agriculture
DEV Developed
DEV/ORN Developed/Ornamental
DCSS Diegan Coastal Sage Scrub
DCSS-D Diegan Coastal Sage Scrub - Disturbed
EUC Eucalyptus Trees
GBS Goldenbush Scrub
NNG Non-Native Grassland
ORN Ornamental
RUD Ruderal
Construction Access Through Parking Lot
Construction Access Through Parking Lot
Level 5 (Engineered Crossing)
Level 5 (Engineered Crossing)
Construction Access Through Existing Utility Easement
Level 5 (Engineered Crossing)
1278SMANHL
3786SMANHL
1322SMANHL
3575SMANHL
1329SMANHL
1281SMANHL
1283SMANHL
1285SMANHL
1284SMANHL
1286SMANHL
1287SMANHL
1321SMANHL
1302SMANHL
1291SMANHL
1303SMANHL
1652SMANHL
1425SMANHL
1304SMANHL
1500SMANHL
1299SMANHL
1298SMANHL
1294SMANHL
0 250 500 Feet
Infrastructure
ROCKS
City of Encinitas • Olivenhain Trunk Sewer Improvements Project
Figure S-7b
Alternative 2B:
Central Segment


Legend
Encinitas Sewer Infrastructure
Manhole to be Rehabilitated
Manhole to be Removed
Manhole Rehabilitated 2014
Manhole to Remain
Lone Jack Road sewer realignment
Surface Improvement Level
Alternative in Existing Easement
Alternative in New Easement
0
1
2
3
4
5
Wetland Vegetation Communities
AM Alkali Marsh
CBM Coastal Brackish Marsh
CSM-H Coastal Salt Marsh - High
CSM-H/GB Coastal Salt Marsh - High/Goldenbush Scrub
CSM-M Coastal Salt Marsh - Mid
AM-D Disturbed Alkali Marsh
FWM Freshwater Marsh
FWM/AM Freshwater Marsh/ Alkali Marsh
MFS/FWM Mulefat Scrub/ Freshwater Marsh
OW Open Water
SRS Southern Riparian Scrub
SWRF Southern Willow Riparian Forest
SWS Southern Willow Scrub
SWS/FWM Southern Willow Scrub/ Freshwater Marsh
Upland Vegetation Communities
AG Agriculure
DEV Developed
DEV/ORN Developed/Ornamental
DCSS Diegan Coastal Sage Scrub
DCSS-D Diegan Coastal Sage Scrub - Disturbed
EUC Eucalyptus Trees
GBS Goldenbush Scrub
NNG Non-Native Grassland
ORN Ornamental
RUD Ruderal
Sewer to be realigned into Lone Jack Road. Exact locations of manholes to be determined.
612SMANHL
1131SMANHL
1132SMANHL
1134SMANHL
1133SMANHL
1135SMANHL
1137SMANHL
1136SMANHL
1138SMANHL
1139SMANHL
1140SMANHL
1141SMANHL
1142SMANHL
1264SMANHL
1263SMANHL
1268SMANHL
169SMANHL
Construction Access Through Triple C Ranch Road and Dirt Road
1270SMANHL
Level 5 Engineered Crossing
1271SMANHL
1272SMANHL
Level 5 Engineered Crossing
3826SMANHL
Construction Access Through Dirt Road
1276SMANHL
1300SMANHL
Level 5 Engineered Crossing
Construction Access Through Parking Lot
3788SMANHL
0 250 500 Feet
Infrastructure
ROCKS
City of Encinitas • Olivenhain Trunk Sewer Improvements Project
Figure S-7c
Alternative 2B:
Northern Segment