

Volume II of II (Part A) Proponent's Environmental Assessment for the Ocean Ranch Substation Project

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Submitted by:

SDGE

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PROPONENT'S ENVIRONMENTAL ASSESSMENT (PART A)

FOR THE

OCEAN RANCH SUBSTATION PROJECT

A.16-07-016

VOLUME II OF II

JULY 2016

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TABLE OF CONTENTS

1.0 PEA SUMMARY 1-1

1.1 PROJECT LOCATION 1-1
1.2 PROPOSED PROJECT COMPONENTS 1-1
1.2.1 Ocean Ranch Distribution Substation 1-2
1.2.2 Power Line TL 6966 Loop-In 1-2
1.2.3 12 kV Distribution System 1-2
1.2.4 Telecommunication Systems 1-3
1.3 PROJECT NEED AND RANGE OF ALTERNATIVES CONSIDERED 1-3
1.4 PROPONENTS ENVIRONMENTAL ASSESSMENT CONTENTS 1-3
1.5 MAJOR PEA CONCLUSIONS 1-5
1.5.1 Resource Areas with No Impact or Less than Significant Impacts 1-5
1.5.2 Significant, Unavoidable Impacts 1-5
1.6 PUBLIC OUTREACH EFFORTS AND LETTERS OF SUPPORT 1-6
1.6.1 Public Outreach 1-6
1.6.2 Letters of Support 1-6
1.7 AREAS OF CONTROVERSY 1-6
1.8 ISSUES TO BE RESOLVED 1-6
1.9 REFERENCES 1-20

2.0 PROJECT PURPOSE AND NEED 2-1

2.1 BACKGROUND 2-1
2.1.1 Existing Electric System Constraints 2-1
2.2 PROJECT PURPOSE AND NEED 2-2
2.2.1 Purpose of the Project 2-2
2.2.2 Need for the Project 2-2
2.3 PROJECT OBJECTIVES 2-3
2.3.1 Objective 1: Meet the Area's Existing and Forecasted Electric Load Growth 2-3
2.3.2 Objective 2: Maintain Substation and Circuit Reliability with Additional Tie and Transformer Capacity 2-3
2.3.3 Objective 3: Reduce Area Substation Loading to Optimum Operating Conditions 2-4
2.3.4 Objective 4: Locate the Proposed Project's Facilities within SDG&E Fee-Owned Property, Franchise, or Existing Easements 2-4
2.4 CONCLUSION 2-4
2.5 REFERENCES 2-4

3.0 PROJECT DESCRIPTION 3-1

3.1 PROPOSED PROJECT OVERVIEW 3-1
3.2 PROPOSED PROJECT OBJECTIVES 3-7
3.3 PROPOSED PROJECT LOCATION AND REGIONAL CONTEXT 3-7
3.3.1 Location 3-7
3.3.2 Existing Site Conditions 3-7
3.3.3 Site Access 3-8
3.4 EXISTING REGIONAL ELECTRIC SYSTEM 3-8

3.4.1 Existing Power Line 3-8
3.4.2 Existing Substation System 3-8
3.5 PROPOSED PROJECT COMPONENTS 3-9
3.5.1 Ocean Ranch Distribution Substation 3-9
3.5.2 Power Line TL 6966 Loop-In 3-16
3.5.3 12 kV Distribution System 3-19
3.5.4 Telecommunication Systems 3-26
3.6 CONSTRUCTION 3-30
3.6.1 Work Areas 3-30
3.6.2 Construction Methods 3-37
3.6.3 Construction Equipment and Personnel 3-45
3.6.4 Cut and Fill 3-46
3.7 PERMANENT LAND/RIGHT-OF-WAY REQUIREMENTS 3-47
3.8 GENERAL PROJECT OPERATION AND MAINTENANCE ACTIVITIES AND PRACTICES 3-47
3.8.1 Ocean Ranch Substation Operation and Maintenance 3-47
3.9 STANDARD OPERATING PROCEDURES 3-48
3.10 APPLICANT PROPOSED MEASURES 3-54
3.11 IMPLEMENTATION OF APPLICANT PROPOSED MEASURES 3-56
3.12 ANTICIPATED PERMITS AND APPROVALS 3-56
3.13 REFERENCES 3-57

4.0 ENVIRONMENTAL IMPACT ASSESSMENT 4-1

4.1 AESTHETICS 4.1-1
4.1.1 Introduction 4.1-1
4.1.2 Regulatory Setting 4.1-1
4.1.3 Existing Conditions 4.1-3
4.1.4 Standard Operating Procedures 4.1-8
4.1.5 Applicant Proposed Measures 4.1-9
4.1.6 Project Impacts 4.1-9
4.1.7 References 4.1-21
4.2 AGRICULTURAL RESOURCES 4.2-1
4.2.1 Introduction 4.2-1
4.2.2 Regulatory Setting 4.2-1
4.2.3 Existing Conditions 4.2-4
4.2.4 Standard Operating Procedures 4.2-4
4.2.5 Applicant Proposed Measures 4.2-4
4.2.6 Project Impacts 4.2-5
4.2.7 References 4.2-6
4.3 AIR QUALITY 4.3-1
4.3.1 Introduction 4.3-1
4.3.2 Regulatory Setting 4.3-1
4.3.3 Existing Conditions 4.3-5
4.3.4 Standard Operating Procedures 4.3-9
4.3.5 Applicant Proposed Measures 4.3-10
4.3.6 Project Impacts 4.3-10

4.3.7 References 4.3-14
4.4 BIOLOGICAL RESOURCES 4.4-1
4.4.1 Introduction 4.4-1
4.4.2 Regulatory Setting 4.4-2
4.4.3 Existing Conditions 4.4-6
4.4.4 Standard Operating Procedures 4.4-16
4.4.5 Applicant Proposed Measures 4.4-18
4.4.6 Project Impacts 4.4-19
4.4.7 References 4.4-26
4.5 CULTURAL RESOURCES 4.5-1
4.5.1 Introduction 4.5-1
4.5.2 Regulatory Setting 4.5-1
4.5.3 Existing Conditions 4.5-5
4.5.4 Standard Operating Procedures 4.5-9
4.5.5 Applicant Proposed Measures 4.5-9
4.5.6 Project Impacts 4.5-10
4.5.7 References 4.5-11
4.6 GEOLOGY AND SOILS 4.6-1
4.6.1 Introduction 4.6-1
4.6.2 Regulatory Setting 4.6-2
4.6.3 Existing Conditions 4.6-5
4.6.4 Standard Operating Procedures 4.6-12
4.6.5 Applicant Proposed Measures 4.6-12
4.6.6 Project Impacts 4.6-12
4.6.7 References 4.6-16
4.7 GREENHOUSE GAS EMISSIONS 4.7-1
4.7.1 Introduction 4.7-1
4.7.2 Regulatory Setting 4.7-1
4.7.3 Existing Conditions 4.7-5
4.7.4 Standard Operating Procedures 4.7-6
4.7.5 Applicant Proposed Measures 4.7-8
4.7.6 Project Impacts 4.7-8
4.7.7 References 4.7-11
4.8 HAZARDS AND HAZARDOUS MATERIALS 4.8-1
4.8.1 Introduction 4.8-1
4.8.2 Regulatory Setting 4.8-2
4.8.3 Existing Conditions 4.8-8
4.8.4 Standard Operating Procedures 4.8-13
4.8.5 Applicant Proposed Measures 4.8-16
4.8.6 Project Impacts 4.8-16
4.8.7 References 4.8-23
4.9 HYDROLOGY AND WATER QUALITY 4.9-1
4.9.1 Introduction 4.9-2
4.9.2 Regulatory Setting 4.9-2
4.9.3 Existing Conditions 4.9-8
4.9.4 Standard Operating Procedures 4.9-10

4.9.5 Applicant Proposed Measures 4.9-14
4.9.6 Project Impacts 4.9-15
4.9.7 References 4.9-24
4.10 LAND USE AND PLANNING 4.10-1
4.10.1 Introduction 4.10-1
4.10.2 Regulatory Setting 4.10-1
4.10.3 Existing Conditions 4.10-6
4.10.4 Standard Operating Procedures 4.10-8
4.10.5 Applicant Proposed Measures 4.10-8
4.10.6 Project Impacts 4.10-8
4.10.7 References 4.10-10
4.11 MINERAL RESOURCES 4.11-1
4.11.1 Introduction 4.11-1
4.11.2 Regulatory Setting 4.11-1
4.11.3 Existing Conditions 4.11-2
4.11.4 Standard Operating Procedures 4.11-3
4.11.5 Applicant Proposed Measures 4.11-3
4.11.6 Project Impacts 4.11-3
4.11.7 References 4.11-4
4.12 NOISE AND VIBRATION 4.12-1
4.12.1 Introduction 4.12-1
4.12.2 Regulatory Setting 4.12-1
4.12.3 Existing Conditions 4.12-5
4.12.4 Standard Operating Procedures 4.12-7
4.12.5 Applicant Proposed Measures 4.12-7
4.12.6 Project Impacts 4.12-8
4.12.7 References 4.12-16
4.13 POPULATION AND HOUSING 4.13-1
4.13.1 Introduction 4.13-1
4.13.2 Regulatory Setting 4.13-1
4.13.3 Existing Conditions 4.13-3
4.13.4 Standard Operating Procedures 4.13-4
4.13.5 Applicant Proposed Measures 4.13-4
4.13.6 Project Impacts 4.13-4
4.13.7 References 4.13-5
4.14 PUBLIC SERVICES 4.14-1
4.14.1 Introduction 4.14-1
4.14.2 Regulatory Background 4.14-1
4.14.3 Existing Conditions 4.14-2
4.14.4 Standard Operating Procedures 4.14-3
4.14.5 Applicant Proposed Measures 4.14-3
4.14.6 Project Impacts 4.14-4
4.14.7 References 4.14-6
4.15 RECREATION 4.15-1
4.15.1 Introduction 4.15-1
4.15.2 Regulatory Setting 4.15-1

4.15.3 Existing Conditions 4.15-2
4.15.4 Standard Operating Procedures 4.15-3
4.15.5 Applicant Proposed Measures 4.15-3
4.15.6 Project Impacts 4.15-3
4.15.7 References 4.15-4
4.16 TRAFFIC AND TRANSPORTATION 4.16-1
4.16.1 Introduction 4.16-1
4.16.2 Regulatory Setting 4.16-1
4.16.3 Existing Conditions 4.16-4
4.16.4 Standard Operating Procedures 4.16-6
4.16.5 Applicant Proposed Measures 4.16-7
4.16.6 Project Impacts 4.16-7
4.16.7 References 4.16-11
4.17 UTILITIES AND SERVICE SYSTEMS 4.17-1
4.17.1 Introduction 4.17-1
4.17.2 Regulatory Setting 4.17-1
4.17.3 Existing Conditions 4.17-4
4.17.4 Standard Operating Procedures 4.17-5
4.17.5 Applicant Proposed Measures 4.17-6
4.17.6 Project Impacts 4.17-6
4.17.7 References 4.17-10
4.18 CUMULATIVE IMPACTS 4.18-1
4.18.1 Introduction 4.18-1
4.18.2 Significance Criteria 4.18-1
4.18.3 Timeframe of Analysis 4.18-1
4.18.4 Area of Analysis 4.18-1
4.18.5 Methodology 4.18-2
4.18.6 Existing/Operating Projects 4.18-2
4.18.7 Foreseeable Projects Inventory 4.18-2
4.18.8 Cumulative Impacts 4.18-5
4.18.9 Conclusion 4.18-16
4.18.10 References 4.18-16
5.0 DETAILED DISCUSSION OF SIGNIFICANT IMPACTS 5-1
5.1 INTRODUCTION 5-1
5.2 APPLICANT PROPOSED MEASURES TO MINIMIZE SIGNIFICANT EFFECTS 5-1
5.3 DESCRIPTION OF PROJECT ALTERNATIVES TO MINIMIZE SIGNIFICANT EFFECTS 5-1
5.3.1 Introduction 5-1
5.3.2 Methodology 5-2
5.3.3 Proposed Project Objectives 5-3
5.3.4 No Project Alternative 5-4
5.3.5 Alternatives Considered but Rejected 5-4
5.3.6 Alternative Substation Sites 5-5
5.3.7 Power Line Configuration Alternatives 5-7
5.4 GROWTH-INDUCING IMPACTS 5-8

5.4.1 Growth Caused by Direct and Indirect Employment 5-8
5.4.2 Growth Related to the Provision of Additional Electric Power 5-9
5.4.3 Proposed Project and Growth 5-10
5.5 References 5-10

6.0 OTHER PROCESS-RELATED DATA NEEDS 6-1

6.1 DATA NEEDS 6-1
6.2 REFERENCES 6-10

LIST OF FIGURES

3-1 Regional Location Map 3-2
3-2 Proposed Project Overview Map 3-3
3-3 Existing Substations and Power Line System Electrical Configuration 3-5
3-4 Proposed Substations and Power Line System Electrical Configuration 3-6
3-5 Proposed Ocean Ranch Substation Ultimate Layout 3-12
3-6 Proposed Ocean Ranch Substation Initial Arrangement 3-13
3-7 Proposed Ocean Ranch Substation Ultimate Arrangement 3-14
3-8 Proposed Ocean Ranch Substation Ultimate Arrangement-69 kV Low Profile 3-15
3-9 Typical 69 kV Underground Vault 3-17
3-10 Typical 69 kV Underground Duct Bank 3-18
3-11 Typical 12 kV Underground Duct Bank 3-21
3-12 Typical 12 kV Underground Manhole 3-22
3-13 Typical Switch and Capacitor Pad 3-23
3-14 Typical 12 kV Switch 3-24
3-15 Typical 12 kV Capacitor 3-25
3-16 Typical Telecommunication Monopole 3-27
3-17 Typical Telecommunication Underground Duct Bank 3-28
3-18 Typical Telecommunication Underground Handhole 3-29
3-19 Kearny Construction and Operation Center 3-32
3-20 North Coast Construction and Operations Center 3-33
3-21 Northeast Construction and Operations Center 3-34
3-22 Typical Underground Construction Process within Roadways 3-36
4.1-1 Existing Conditions Photographs 4.1-5
4.1-2 Existing Conditions Photographs Continued 4.1-6
4.1-3 Existing Conditions Photographs Continued 4.1-7
4.1-4 Substation Viewshed 4.1-11
4.1-5 Key Views 1 through 4 ....4.1-12
4.1-6 Key Views 5 through 7 ....4.1-13
4.1-7 Location and Direction of Key Views 4.1-15
4.1-8 Simulation 1 ....4.1-16
4.1-9 Simulation 2 ....4.1-18

4.1-10 Simulation 3 ..... 4.1-19
4.4-1 Project Survey Area 4.4-7
4.4-2 CNDDB Sensitive Species within 1 Mile of the Project Survey Area 4.4-9
4.4-3 Critical Habitat within 5 Miles of the Project Survey Area 4.4-11
4.4-4 City of Oceanside Subarea Plan Preserve 4.4-17
4.6-1 Geology and Faults Near the Proposed Project 4.6-9
4.9-1 Surface Water in Proposed Project Vicinity 4.9-11
4.9-2 Drainage Areas 4.9-21
4.10-1 Planned Land Use 4.10-3
4.10-2 Existing Zoning 4.10-5
4.12-1 Construction Vibration Amplitudes 4.12-12
4.12-2 Noise Generated by Electrical Substation 4.12-13
6-1 Ocean Ranch Substation Project Overview Map 6-2

LIST OF TABLES

1-1 PEA Checklist Key 1-6
2-1 Projected Load Percentage – Without and With Proposed Project 2-3
3-1 Distribution Relocation Summary 3-20
3-2 Distribution System Structures 3-20
3-3 Summary of Temporary Work Areas 3-30
3-4 Proposed Cable Pulling Site 3-35
3-5 Standard Construction Equipment and Usage 3-38
3-6 Proposed Construction Schedule 3-45
3-7 Proposed Project Cut-and-Fill Requirements Summary (cubic yards) 3-46
3-8 Applicant Proposed Measures by Resource Area 3-55
3-9 Anticipated Permit, Approval, and Consultation Requirements 3-57
4.3-1 Ambient Air Quality Standards 4.3-2
4.3-2 State and Federal Air Quality Designations for San Diego County 4.3-7
4.3-3 Air Quality Concentrations near the Proposed Project Area 4.3-8
4.3-4 SDAPCD Air Quality Significance Thresholds 4.3-11
4.3-5 Maximum Daily Construction Emissions 4.3-11
4.3-6 Maximum Daily Fugitive Dust Emissions from Construction 4.3-12
4.4-1 Vegetation Communities in the Ocean Ranch PSA 4.4-12
4.4-2 Special Status Wildlife Species Potentially Occurring in the Project Area 4.4-15
4.4-3 Estimated Construction Impacts by Vegetation Community 4.4-22
4.4-4 Estimated Impacts to Sensitive and Non-Sensitive Habitats 4.4-22
4.6-1 Key Active Faults within the Region 4.6-6
4.7-1 Lifetimes, Global Warming Potentials, and Abundances of Several Significant GHGs 4.7-5
4.7-2 Most Recent California GHG Emissions Percentage Changes 4.7-6
4.7-3 Estimated GHG Emissions (Construction and Operations and Maintenance) 4.7-10

4.8-1 Summary of Regulatory Database Search Results – 0.5-Mile 4.8-10
4.8-2 Hazardous Materials Typically Used for Construction and/or Operation and Maintenance 4.8-19
4.10-1 Existing and Designated Land Use 4.10-6
4-12-1 Land Use Compatibility for Community Noise Environments 4.12-3
4.12-2 Maximum Allowable 1-Hour Average Sound Level (dBA L_{eq}) 4.12-5
4.12-3 Sensitive Receptors 4.12-6
4.12-4 Substation Construction Exterior Sound Levels Adjusted for Workday 4.12-9
4.12-5 Underground Line Construction Exterior Sound Levels Adjusted for Workday 4.12-10
4.12-6 Human Response to Transient Vibrations 4.12-11
4.13-1 Population Totals and Trends 4.13-3
4.13-2 2010 Project Area Total Housing Units and Vacancy Rates 4.13-3
4.13-3 2014 Employment Figures and Unemployment Range 4.13-4
4.16-1 Existing Roadway Segment Level of Service 4.16-6
4.16-2 Potential Roadways Impacted by Conductor Work 4.16-9
4.18-1 Planned and Proposed Projects within 1 Mile 4.18-3
6-1 Parcel List Within 300 Feet of Proposed Project 6-3

TABLE OF CONTENTS

1.0 PEA SUMMARY 1-1

1.1 PROJECT LOCATION 1-1
1.2 PROPOSED PROJECT COMPONENTS 1-1
1.2.1 Ocean Ranch Distribution Substation 1-2
1.2.2 Power Line TL 6966 Loop-In 1-2
1.2.3 12 kV Distribution System 1-2
1.2.4 Telecommunication Systems 1-3
1.3 PROJECT NEED AND RANGE OF ALTERNATIVES CONSIDERED 1-3
1.4 PROPONENTS ENVIRONMENTAL ASSESSMENT CONTENTS 1-3
1.5 MAJOR PEA CONCLUSIONS 1-5
1.5.1 Resource Areas with No Impact or Less than Significant Impacts 1-5
1.5.2 Significant, Unavoidable Impacts 1-5
1.6 PUBLIC OUTREACH EFFORTS AND LETTERS OF SUPPORT 1-6
1.6.1 Public Outreach 1-6
1.6.2 Letters of Support 1-6
1.7 AREAS OF CONTROVERSY 1-6
1.8 ISSUES TO BE RESOLVED 1-6
1.9 REFERENCES 1-20

LIST OF TABLES

1-1 PEA Checklist Key 1-6

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1.0 PEA SUMMARY

Consistent with California Public Utilities Commission (CPUC) General Order 131-D, this Proponent's Environmental Assessment (PEA) has been prepared by San Diego Gas & Electric Company (SDG&E) to support SDG&E's application for a Permit to Construct the Ocean Ranch Substation Project (Proposed Project).

1.1 PROJECT LOCATION

The Proposed Project is situated in northern San Diego County, approximately 35 miles north of downtown San Diego (refer to Chapter 3.0, *Project Description*, Figure 3-1, Regional Location Map; and Figure 3-2, Proposed Project Overview Map). SDG&E proposes to construct a new distribution substation and loop in the existing single circuit 69 kilovolt (kV) power line tie line (TL) 6966 to connect to the proposed substation. The proposed Ocean Ranch Substation site is located in the southeastern portion of the City of Oceanside, within the Pacific Coast Business Park, which is part of the Rancho Del Oro Specific Plan area. Surrounding land uses in the area include light industrial and commercial. The proposed substation site consists of two parcels (5.60 and 4.06 acres) for a total of 9.66 acres, which will be used for the initial and ultimate substation buildout area and will include site work and grading. Access to the site will be provided primarily from a cul-de-sac on Rocky Point Drive. Secondary access will be provided from another entry point from Avenida Del Oro. SDG&E is requesting access rights from the City of Oceanside to establish the proposed access driveway that will be limited to SDG&E personnel. Both access points into the site will be gated.

1.2 PROPOSED PROJECT COMPONENTS

The Proposed Project includes the following main components:

- **Ocean Ranch Distribution Substation.** Construct a new 69/12kV low-profile substation with an initial capacity of 60 megavolt ampere (MVA) rating, and an ultimate capacity of 120 MVA.
- **69 kV Single Circuit Power Line.** This project will loop-in existing TL 6966 from San Luis Ray to the new Ocean Ranch Substation. In order to connect to the proposed Ocean Ranch Substation, the existing underground segment of TL 6966 will be intercepted at the intersection of Avenida De La Plata and Rancho Del Oro and extended to the proposed substation via the construction of an underground power line duct bank with a total length of approximately 1,500 feet.
- **12 kV Distribution System.** Four new distribution circuits will be installed and will intercept four existing circuits. A portion of the existing circuits will be offloaded to the new Ocean Ranch circuits. Approximately 4,650 feet of new 12 kV distribution line will be constructed, most of which will be on the Ocean Ranch Substation site. The Proposed Project includes construction of four new manholes and one new handhole to access the new segment of underground 12 kV distribution line.
- **Telecommunication Systems.** A 40-foot monopole will be installed in the southwest corner of the proposed Ocean Ranch Substation property to provide a communications link to the San Luis Rey Substation. AT&T services will enter the property from the street. A conduit duct will be installed from the proposed substation control shelter to the property line to intercept the AT&T duct structure.

1.2.1 Ocean Ranch Distribution Substation

The proposed Ocean Ranch Substation facility is planned to occupy the entire site (9.66 acres), which will include the facility's water quality basins, landscaping, internal maintenance roads, and future uses. The proposed substation will be a low profile design enclosed by an approximately 10-foot-tall, "La Paz" or similar brown colored, masonry perimeter wall. The Proposed Project will have two arrangements—initial and ultimate. The steel structures within the substation will be comprised of galvanized steel, while the transformers, breakers, switchgear, and capacitors will be painted American National Standards Institute 70 Grey. The control shelter and screen wall will be constructed from "La Paz" or similar brown masonry blocks and will include a welded metal roof. The initial configuration of the substation is proposed to have a capacity of 60 MVA and at its ultimate configuration, the substation is planned to be a 120 MVA, 69/12 kV low profile distribution substation.

Substation lighting will be provided by a mixture of high-pressure sodium, metal halide, and LED lights that will be installed to adhere to SDG&E standards. An approximately 10-foot-tall masonry wall will enclose the entire substation. Two approximately 10-foot-tall by 30-foot-wide sliding gates (main entry) and one approximately 10-foot-tall by 20-foot-wide sliding gate (secondary access) will be installed within the perimeter wall to provide access to the substation.

1.2.2 Power Line TL 6966 Loop-In

A portion of the existing 69 kV power line TL 6966 will be extended and undergrounded to the proposed Ocean Ranch Substation.

In order to connect to the proposed Ocean Ranch Substation, the existing underground segment of TL 6966 will be intercepted at the intersection of Rancho Del Oro and Avenida De La Plata and extended underground along Rancho Del Oro to the proposed substation site. This proposed underground segment will consist of an underground duct bank traversing in a northerly direction along Rancho Del Oro from the Avenida De La Plata and Rancho Del Oro intersection to the proposed substation site. The total length of the reconfigured underground power line is approximately 1,500 feet, of which approximately 1,000 feet are within the public road rights-of-way (ROW). The remainder is within SDG&E ROW or franchise position. Additionally, approximately four vaults, one per underground power line, will be installed within the proposed substation property area.

1.2.3 12 kV Distribution System

The proposed underground 12 kV distribution line will be approximately 4,650 feet, located primarily on the proposed substation site, with a portion extending off-site to Rocky Point Drive and Avenida Del Oro. The new 12 kV distribution line going north on Rocky Point Drive and Avenida Del Oro will intercept existing handholes at Windansea Street. Four 12 kV underground distribution circuits will be constructed. All four underground distribution circuits will be routed to four proposed manholes and one handhole, extending along Avenida Del Oro and will tie into the existing underground system serving the area.

The proposed underground segment of the 12 kV distribution line will require installation of four new manholes and one new handhole. Two new manholes will be located within the proposed Ocean Ranch Substation site and two will be located within franchise positions along Avenida Del Oro. One new handhole will be located at the southern end of the proposed substation site.

1.2.4 Telecommunication Systems

The telecommunication system will be composed of fiber optic cable and microwave radio, and AT&T communication service to provide reliable and redundant communications to the proposed substation. The telecommunication services facilitate the remote monitoring, control, and operation of substation equipment and provide teleprotection relaying, telemetry, telephone, modem, access control, and video monitoring. In order to connect the proposed Ocean Ranch Substation to these systems, fiber optic cable, microwave radio, and AT&T services will be installed.

The fiber optic cable will be installed in the underground duct structures connecting the proposed Ocean Ranch Substation.

A 40-foot tall monopole will be installed in the southwest corner of the proposed Ocean Ranch Substation site for a microwave radio communication system. A 2-foot-diameter antenna will be mounted on the monopole and point west to provide a communications link to the San Luis Rey Substation. A conduit duct will be installed on the site between the monopole and the substation.

1.3 PROJECT NEED AND RANGE OF ALTERNATIVES CONSIDERED

The purpose of the Proposed Project is to construct a new substation to (1) provide additional capacity to serve the existing area load and forecasted customer-driven electrical load growth; and (2) prevent potential long outages or disruption of service to SDG&E customers in the Oceanside area. As described further in Chapter 2.0, *Project Purpose and Need*, this goal is achieved by the following objectives:

- Objective 1: Meet the Area's Existing and Forecasted Electric Load Growth.
- Objective 2: Maintain Substation and Circuit Reliability with Additional Tie and Transformer Capacity.
- Objective 3: Reduce Area Substation Loading to Optimum Operating Conditions.
- Objective 4: Locate the Proposed Project's Facilities within SDG&E Fee-Owned Property, Franchise, or Existing Easements.

A No Project Alternative, six alternative locations for the Ocean Ranch Substation site, and three power line alternatives to serve the new substation were considered for further analysis during the development of the Proposed Project. Two of the power line alternatives were rejected following further analysis, and substation sites that did not warrant further analysis were also rejected. The Proposed Project was ultimately selected because it best meets all of the Proposed Project objectives. Details of the alternatives analysis are provided in Chapter 5.0, *Detailed Discussion of Significant Impacts*.

1.4 PROPONENTS ENVIRONMENTAL ASSESSMENT CONTENTS

This PEA was prepared in accordance with the PEA Checklist issued by the CPUC on November 24, 2008, and is divided into the following six chapters:

Chapter 1.0, *PEA Summary*, discusses the contents and conclusions of the PEA and describes SDG&E's ongoing and past coordination efforts.

Chapter 2.0, *Project Purpose and Need*, outlines the Proposed Project's objectives, which have been discussed previously.

Chapter 3.0, *Project Description,* provides a detailed description of the Proposed Project. This discussion includes specifics regarding the following:

- Proposed Project location and regional context
- The existing regional electric system
- Proposed Project facilities
- Construction methods
- Construction schedule
- Permanent and temporary land/ROW requirements
- General operation and maintenance activities
- Federal and local permits that will be obtained for the Proposed Project
- Summary of the Applicant Proposed Measures (APMs) to be implemented as part of the Proposed Project

Chapter 4.0, *Environmental Impact Assessment*, includes an environmental impact assessment summary and a discussion of the existing conditions and potential and anticipated impacts of the Proposed Project for each of the following resource areas:

- Section 4.1, *Aesthetics*
- Section 4.2, *Agriculture and Forestry Resources*
- Section 4.3, *Air Quality*
- Section 4.4, *Biological Resources*
- Section 4.5, *Cultural Resources*
- Section 4.6, *Geology and Soils*
- Section 4.7, *Greenhouse Gas (GHG) Emissions*
- Section 4.8, *Hazards and Hazardous Materials*
- Section 4.9, *Hydrology and Water Quality*
- Section 4.10, *Land Use and Planning*
- Section 4.11, *Mineral Resources*
- Section 4.12, *Noise*
- Section 4.13, *Population and Housing*
- Section 4.14, *Public Services*
- Section 4.15, *Recreation*
- Section 4.16, *Traffic and Transportation*
- Section 4.17, *Utilities and Service Systems*
- Section 4.18, *Cumulative and Growth Inducing Impacts*

This chapter includes any applicable APMs for each resource area. This chapter also includes a Cumulative Analysis, which discusses past, present, and reasonably foreseeable future projects within the Proposed Project area, as well as the Proposed Project's potential to contribute to a significant cumulative effect.

Chapter 5.0, *Detailed Discussion of Significant Impacts*, identifies that there are no potentially significant impacts that will result from the Proposed Project, evaluates alternatives to the Proposed Project, describes the justification for the preferred alternative, and provides a discussion of potential growth inducing impacts.

Chapter 6.0, *Other Process-Related Data Needs*, states that a list including all parcels within 300 feet of the Proposed Project was prepared and provided under separate cover. No other data needs were identified for this PEA.

1.5 MAJOR PEA CONCLUSIONS

1.5.1 Resource Areas with No Impact or Less than Significant Impacts

This PEA analyzes the potential environmental impact associated with construction, operation, and maintenance of the Proposed Project. The following 16 resource areas will not be impacted by the Proposed Project or will have less-than-significant impacts:

- Section 4.1, *Aesthetics*
- Section 4.2, *Agriculture and Forestry Resources*
- Section 4.3, *Air Quality*
- Section 4.6, *Geology and Soils*
- Section 4.7, *GHG Emissions*
- Section 4.8, *Hazards and Hazardous Materials*
- Section 4.9, *Hydrology and Water Quality*
- Section 4.10, *Land Use and Planning*
- Section 4.11, *Mineral Resources*
- Section 4.12, *Noise*
- Section 4.13, *Population and Housing*
- Section 4.14, *Public Services*
- Section 4.15, *Recreation*
- Section 4.16, *Traffic and Transportation*
- Section 4.17, *Utilities and Service Systems*
- Section 4.18, *Cumulative and Growth Inducing Impacts*

The following two resource areas have less-than-significant impacts with the implementation of APMs:

- Section 4.4, *Biological Resources*
- Section 4.5, *Cultural Resources*

APMs for the Proposed Project are discussed in detail in Table 3-8 of Chapter 3.0, *Project Description*, and are summarized in their relevant resource sections.

1.5.2 Significant, Unavoidable Impacts

The Proposed Project will not result in any significant, unavoidable impacts. Based on the findings in Chapter 4.0, *Environmental Impact Assessment*, the Proposed Project is not likely to result in significant impacts to any resource areas after implementation of the APMs and SDG&E's standard operating procedures.

1.6 PUBLIC OUTREACH EFFORTS AND LETTERS OF SUPPORT

1.6.1 Public Outreach

SDG&E contacted the City of Oceanside, to confirm that the Proposed Project would not conflict with any project planned in and around the Proposed Project area. SDG&E engaged with staff from the City of Oceanside, including: Maryam Wagner, Senior Engineering Assistant, Curtis Jackson, Property Agent, Richard Greenbauer, Principal Planner, Bill Ramsey, Planning Consultant, and Douglas Eddow, Property Management Department. The City confirmed that the Proposed Project does not conflict with any planned projects scheduled to be constructed.

1.6.2 Letters of Support

SDG&E received a letter of support from the Economic Development Manager on behalf of the City of Oceanside on April 1, 2014, stating that the selected Proposed Project site is in the best interests of the City (included as Appendix A, Letters of Support). The City was included early on in the planning process to ensure the City's concerns were addressed.

1.7 AREAS OF CONTROVERSY

There are no existing areas of controversy associated with the Proposed Project.

1.8 ISSUES TO BE RESOLVED

There are no existing issues that require resolution.

Table 1-1. PEA Checklist Key

Location in CPUC Checklist and Checklist Item		Location in PEA
Chapter 1: PEA Summary		
Include major conclusions of the PEA.		Section 1.5 Major PEA Conclusions
List any areas of controversy.		Section 1.7 Areas of Controversy
Include a description of public outreach efforts, if any.		Section 1.6 Public Outreach Efforts and Letters of Support
Identify any major issues that must be resolved, including the choice among reasonably feasible alternatives and mitigation measures, if any.		Section 1.5 Major PEA Conclusions
Chapter 2: Project Purpose and Need		
2.1 Overview	Include an analysis of Proposed Project objectives and purpose and need that is sufficiently detailed so that the Commission can independently evaluate the Proposed Project need and benefits in order to accurately consider them in light of the potential environmental impacts.	Section 2.2 Project Purpose and Need Section 2.3 Project Objectives
	Explain the objective(s) and/or purpose and need for implementing the Proposed Project.	Section 2.2 Project Purpose and Need Section 2.3 Project Objectives
2.2 Project Objectives	Include an analysis of the reason why attainment of these objectives is necessary or desirable. Such analysis must be sufficiently detailed to inform the Commission in its independent formulation of Proposed Project objectives which will aid any appropriate California Environmental Quality Act alternatives screening process.	Section 2.3 Project Objectives

Table 1-1. PEA Checklist Key

Location in CPUC Checklist and Checklist Item		Location in PEA
Chapter 3: Project Description		
3.1 Project Location	Identify geographical location: County, City (provide Proposed Project location map[s]).	Section 3.3.1 Location Figure 3-1 Regional Location Map Figure 3-2 Proposed Project Overview Map
	Provide a general description of land uses within the Proposed Project site (e.g., residential, commercial, agricultural, recreation, vineyards, farms, open space, number of stream crossings).	Section 3.3.1 Location
	Describe if the Proposed Project is located within an existing property owned by the Applicant, traverses existing ROW, or requires new ROW. Provide the approximate area of the property or the length of the Proposed Project that is in an existing ROW or which requires new ROWs.	Section 3.7 Permanent Land/Right-of-Way Requirements
3.2 Existing System	Describe the local system to which the Proposed Project relates. Include all relevant information about substations, transmission lines, and distribution circuits.	Section 3.4 Existing Regional Electric System
	Provide a schematic diagram and map of the existing system.	Figure 3-3 Existing Substations and Power Line System Electrical Configuration
	Provide a schematic diagram that illustrates the system as it would be configured with the implementation of the Proposed Project.	Figure 3-4 Proposed Substations and Power Line System Electrical Configuration
3.3 Project Objectives	Refer to Chapter 2, Project Purpose and Need, if already described there	Chapter 2.0 Project Purpose and Need Section 3.2 Proposed Project Objectives
3.4 Proposed Project	Describe the whole of the Proposed Project. Is it an upgrade, a new line, new substations, etc.?	Section 3.5 Proposed Project Components
	Describe how the Proposed Project fits into the regional system. Does it create a loop for reliability, etc.?	Section 3.5 Proposed Project Components
	Describe all reasonably foreseeable future phases or other reasonably foreseeable consequences of the Proposed Project.	Section 3.5 Proposed Project Components
	Provide the capacity increase in megawatts. If the Proposed Project does not increase capacity, state that.	Section 3.5 Proposed Project Components
	Provide geographic information system (GIS) (or equivalent) data layers for the Proposed Project preliminary engineering, including estimated locations of all physical components of the Proposed Project, as well as those related to construction.	Figure 3-2 Proposed Project Overview Map A CD containing the relevant GIS data for the Proposed Project has been submitted under separate cover as part of this PEA package.
3.5 Project Components		
3.5.1 Transmission Line	Describe what type of line exists and what type of line is proposed (e.g., single-circuit, double-circuit, upgrade 69 kV to 115 kV).	Section 3.5.2 Power Line TL 6966 Loop-in
	Identify the length of the upgraded alignment, the new alignment, etc.	Section 3.5.2 Power Line TL 6966 Loop-in
	Describe whether construction would require one-for-one pole replacement, new poles, steel poles, etc.?	Section 3.5.2 Power Line TL 6966 Loop-in
	Describe what would occur to other lines and utilities that may be collocated on the poles to be replaced (e.g., distribution, communication).	Section 3.5.2 Power Line TL 6966 Loop-in

Table 1-1. PEA Checklist Key

Location in CPUC Checklist and Checklist Item		Location in PEA
3.5.2 Poles/Towers	Provide information for each pole/tower that would be installed and for each pole/tower that would be removed.	not applicable (N/A)
	Provide a unique identification number to match GIS database information.	N/A
	Provide a structural diagram and, if available, photos of existing structure. Preliminary diagram or "typical" drawings and, if possible, photos of proposed structure. Also provide a written description of the most common types of structures and their use (e.g., tangent poles would be used when the run of poles continues in a straight line). Describe if the pole/tower design meets raptor safety requirements.	N/A
	Provide the type of pole (e.g., wood, steel) or tower (e.g., self-supporting, lattice).	N/A
	Identify typical total pole lengths, the approximate length to be embedded, and the approximate length that would be above ground surface; for towers, identify the approximate height above ground surface and approximate base footprint area.	N/A
	Describe any specialty poles or towers; note where they would be used (e.g., angle structures, heavy angle lattice towers, stub guys, etc.); make sure to note if any guying would likely be required across a road.	N/A
	If the Proposed Project includes pole-for-pole replacement, describe the approximate location of where the new poles would be installed relative to the existing alignment.	N/A
	Describe any special pole types (e.g., poles that require foundations, transition towers, switch towers, microwave towers) and any special features.	N/A
3.5.3 Conductor Cable		
3.5.3.1 Above-Ground Installation	Describe the type of line to be installed on the poles/tower (e.g. single-circuit with distribution, double circuit).	N/A
	Describe the number of conductors required to be installed on the poles or tower and the number on each side including applicable engineering design standards.	N/A
	Provide the size and type of conductor (e.g., aluminum conductor, steel reinforced, non-specular) and insulator configuration.	N/A
	Provide the approximate distance from the ground to the lowest conductor and the approximate distance between the conductors (i.e., both horizontally and vertically). Provide specific information at highways, rivers, or special crossings.	N/A
	Provide the approximate span lengths between poles or towers, note where different if distribution is present or not if relevant.	N/A
	Determine whether other infrastructure would likely be collocated with the conductor (e.g., fiber optics); if so, provide conduit diameter of other infrastructure.	Section 3.5.4 Telecommunication Systems

Table 1-1. PEA Checklist Key

Location in CPUC Checklist and Checklist Item		Location in PEA
3.5.3.2 Below-Ground Installation	Describe the type of line to be installed (e.g., single circuit cross-linked polyethylene-insulated solid-dielectric, copper conductor cables).	Section 3.5.2 Power Line TL 6966 Loop-in Section 3.6.2.2 Installation of Underground 12 kV Distribution Line and 69 kV Loop-In
	Describe the type of casing the cable would be installed in (e.g., concrete-encased duct bank system); provide the dimensions of the casing.	Section 3.6.2.2 Installation of Underground 12 kV Distribution Line and 69 kV Loop-in
	Provide an engineering 'typical' drawing of the duct bank and describe what types of infrastructure would likely be installed within the duct bank (e.g., transmission, fiber optics).	Section 3.6.2.2 Installation of Underground 12 kV Distribution Line and 69 kV Loop-in
3.5.4 Substations	Provide "typical" plan and profile views of the proposed substation and the existing substation if applicable.	Figure 3-5 Proposed Ocean Ranch Substation Ultimate Layout Figure 3-6 Proposed Ocean Ranch Substation Initial Arrangement Figure 3-7 Proposed Ocean Ranch Substation Ultimate Arrangement Figure 3-8 Proposed Ocean Ranch Substation Ultimate Arrangement 69 kV Low Profile
	Describe the types of equipment that would be temporarily or permanently installed and provide details as to what the function/use of said equipment would be. Include information such as, but not limited to: mobile substations, transformers, capacitors, and new lighting.	Section 3.5.1 Ocean Ranch Distribution Substation
	Provide the approximate or "typical" dimensions (width and height) of new structures including engineering and design standards that apply.	Section 3.5.2 Power Line TL 6966 Loop-in Section 3.5.3 12 kV Distribution System
	Describe the extent of the Proposed Project. Would it occur within the existing fence line, existing property line or would either need to be expanded?	Section 3.5.1 Ocean Ranch Distribution Substation
	Describe the electrical need area served by the distribution substation.	Chapter 2.0: Project Purpose and Need Section 3.1 Proposed Project Overview Section 3.2 Proposed Project Objectives
3.6 Right-of-Way Requirements	Describe the ROW location, ownership, and width. Would the existing ROW be used or would new ROW be required?	Section 3.7 Permanent Land/Right-of-Way Requirements
	If a new ROW is required, describe how it would be acquired and approximately how much land would be required (length and width).	Section 3.7 Permanent Land/Right-of-Way Requirements
	List the properties likely to require acquisition.	Section 3.7 Permanent Land/Right-of-Way Requirements
3.7 Construction		
3.7.1 For All Projects		
3.7.1.1 Staging Areas	Where would the main staging area(s) likely be located?	Section 3.6.1.1 Staging Yards Section 3.6.1.2 Existing SDG&E Material Storage Yards
	Approximately how large would the main staging area(s) be?	Section 3.6.1.1 Staging Yards Section 3.6.1.2 Existing SDG&E Material Storage Yards
	Describe any site preparation required, if known, or generally describe what might be required (i.e., vegetation removal, new access road, installation of rock base).	Section 3.6.1.1 Staging Yards
	Describe what the staging area would be used for (i.e., material and equipment storage, field office, reporting location for workers, parking area for vehicles and equipment).	Section 3.6.1.1 Staging Yards

Table 1-1. PEA Checklist Key

Location in CPUC Checklist and Checklist Item		Location in PEA
	Describe how the staging area would be secured; would a fence be installed? If so, describe the type and extent of the fencing.	Section 3.6.1.1 Staging Yards
	Describe how power to the site would be provided if required (i.e., tap into existing distribution, use of diesel generators).	Section 3.6.1.1 Staging Yards
	Describe any grading activities and/or slope stabilization issues.	Section 3.6.1.1 Staging Yards
3.7.1.2 Work Areas	Describe known work areas that may be required for specific construction activities (i.e., pole assembly, hill side construction, etc.).	Section 3.6.1 Work Areas
	For each known work area, provide the area required (include length and width) and describe the types of activities that would be performed.	Section 3.6.1 Work Areas
	Identify the approximate location of known work areas in the GIS database.	Figure 3-2 Proposed Project Overview Map A CD containing the relevant GIS data for the work areas has been submitted under separate cover as part of this PEA package.
	Describe how the work areas would likely be accessed (e.g., construction vehicles, walk-in, helicopter).	Section 3.6.1 Work Areas Section 3.6.1.3 Access Roads
	If any site preparation is likely required, generally describe what and how it would be accomplished.	Section 3.6.1 Work Areas
	Describe any grading activities and/or slope stabilization issues.	Section 3.6.1 Work Areas
	Based on the information provided, describe how the site would be restored.	Section 3.6.1 Work Areas
3.7.1.3 Access Roads and/or Spur Roads	Describe the types of roads that would be used and/or would need to be created to implement the Proposed Project. Road types may include, but are not limited to: new permanent road; new temporary road; existing road that would have permanent improvements; existing road that would have temporary improvements; existing paved road; existing dirt/gravel road; and overland access.	Section 3.5.1 Ocean Ranch Distribution Substation Section 3.6.1 Work Areas Section 3.6.1.3 Access Roads
	For road types that require preparation, describe the methods and equipment that would be used.	Table 3-5 Standard Construction Equipment and Usage Section 3.6.1.3 Access Roads
	Identify approximate location of all access roads (by type) in the GIS database.	Section 3.6.1.3 Access Roads Figure 3-2 Proposed Project Overview Map A CD containing the relevant GIS data for the Proposed Project has been submitted under separate cover as part of this PEA package.
	Describe any grading activities and/or slope stabilization issues.	Section 3.6.2.1 Construction of Ocean Ranch Substation 3.6.2.2 Installation of Underground 12 kV Distribution Line and 69 kV Loop-In Table 3-5 Standard Construction Equipment and Usage

Table 1-1. PEA Checklist Key

Location in CPUC Checklist and Checklist Item		Location in PEA
3.7.1.4 Helicopter Access	Identify which proposed poles/towers would be removed and/or installed using a helicopter.	Helicopter use is not proposed.
	If different types of helicopters are to be used, describe each type (e.g., light, heavy, or sky crane) and what activities they would be used for.	Helicopter use is not proposed.
	Provide information as to where the helicopters would be staged, where they would refuel, and where they would land within the Proposed Project site.	Helicopter use is not proposed.
	Describe any Best Management Practices (BMPs) that would be employed to avoid impacts caused by use of helicopters, for example: air quality and noise considerations.	Helicopter use is not proposed.
	Describe flight paths, payloads, hours of operations for known locations, and work types.	Helicopter use is not proposed.
3.7.1.5 Vegetation Clearance	Describe the types of vegetation clearing that may be required (e.g., tree removal, brush removal, flammable fuels removal) and why (e.g., to provide access).	3.6.2.1 Construction of Ocean Ranch Substation
	Identify the preliminary location and provide an approximate area of disturbance in the GIS database for each type of vegetation removal.	Section 3.6.1 Work Areas A CD containing the relevant GIS data for the Proposed Project has been submitted under separate cover as part of this PEA package.
	Describe how each type of vegetation removal would be accomplished.	3.6.2.1 Construction of Ocean Ranch Substation
	For removal of trees, distinguish between tree trimming as required under GO-95 and tree removal.	N/A
	Describe the types and approximate number and size of trees that may need to be removed.	N/A
	Describe the type of equipment typically used.	Table 3-5 Standard Construction Equipment and Usage
3.7.1.6 Erosion and Sediment Control and Pollution Prevention during Construction	Describe the areas of soil disturbance including estimated total areas and associated terrain type and slope. List all known permits required. For project sites of less than one acre, outline the BMPs that would be implemented to manage surface runoff. Things to consider include, but are not limited to: Erosion and sedimentation BMPs, vegetation removal and restoration, and/or hazardous waste, and spill prevention plans.	Section 3.9 Standard Operating Procedures Section 3.6.4 Cut and Fill Section 3.12 Anticipated Permits and Approvals Table 3-8 Applicant Proposed Measures by Resource Area Table 3-9 Anticipated Permit, Approval, and Consultation Requirements
	Describe any grading activities and/or slope stabilization issues.	Section 3.6.2.1 Construction of Ocean Ranch Substation Section 3.6.2.2 Installation of Underground 12 kV Distribution Line and 69 kV Loop-In Section 3.6.2.5 Site Cleanup
	Describe how construction waste (i.e., refuse, spoils, trash, oil, fuels, poles, pole structures) would be disposed.	Section 3.6.2.1 Construction of Ocean Ranch Substation Section 3.6.2.2 Installation of Underground 12 kV Distribution Line and 69 kV Loop-In Section 3.6.2.5 Site Cleanup
3.7.1.7 Cleanup and Post-Construction Restoration	Describe how cleanup and post-construction restoration would be performed (i.e., personnel, equipment, and methods). Things to consider, but are not limited to, restoration of natural drainage patterns, wetlands, vegetation, and other disturbed areas (i.e., staging areas, access roads).	Section 3.6.2.5 Site Cleanup

Table 1-1. PEA Checklist Key

Location in CPUC Checklist and Checklist Item		Location in PEA
3.7.2 Transmission Line Construction (Above Ground)		
3.7.2.1 Pull and Tension Sites	Provide the general or average distance between pull and tension sites.	N/A
	Provide the area of pull and tension sites including the estimated length and width.	Table 3-4 Proposed Cable Pulling Site Section 3.6.1.4 Pulling Sites
	According to the preliminary plan, identify the number of pull and tension sites that would be required, and their locations. Provide the location information in GIS.	Figure 3-2 Proposed Project Overview Map Table 3-4 Proposed Cable Pulling Site Section 3.6.1.4 Pulling Sites A CD containing the relevant GIS data for the Proposed Project has been submitted under separate cover as part of this PEA package.
	Describe the type of equipment that would be required at these sites.	Section 3.6.2.2 Installation of Underground 12 kV Distribution Line and 69 kV Loop-In Table 3-5 Standard Construction Equipment and Usage Section 3.6.1.4 Pulling Sites
	If conductor is being replaced, describe how it would be removed from the site.	N/A
3.7.2.2 Pole Installation and Removal	Describe how the construction crews and their equipment would be transported to and from the pole site locations. Provide vehicle type, number of vehicles, estimated number of trips, and hours of operation.	N/A
	Describe the process of removing the poles and foundations.	N/A
	Describe what happens to the holes that the poles were in (i.e., reused or backfilled)?	N/A
	If the holes are to be backfilled, what type of fill would be used and where would it come from?	N/A
	Describe any surface restoration that would occur at the pole sites.	N/A
	Describe how the poles would be removed from the sites.	N/A
	If topping is required to remove a portion of an existing transmission pole that would now only carry distribution lines, describe the methodology to access and remove the tops of these poles. Describe any special methods that would be required to top poles that may be difficult to access, etc.	N/A
	Describe the process of how the new poles/towers would be installed; specifically identify any special construction methods (e.g., helicopter installation) for specific locations or for different types of poles/towers.	N/A
	Describe the types of equipment and their use as related to pole/tower installation.	N/A
	Describe the actions taken to maintain a safe work environment during construction (e.g., covering of holes/excavation pits).	N/A
	Describe what would be done with soil that is removed from a hole/foundation site.	N/A
	For any foundations required, provide a description of the construction method(s), approximate average depth and diameter of excavation, approximate volume of soil to be excavated, approximate volume of concrete or other backfill required, etc.	N/A
	Describe briefly how poles/towers and associated hardware are assembled.	N/A

Table 1-1. PEA Checklist Key

Location in CPUC Checklist and Checklist Item		Location in PEA
	Describe how the poles/towers and associated hardware would be delivered to the site; would they be assembled offsite and brought in or assembled on site?	NA
	Provide the following information about pole/tower installation and associated disturbance area estimates; pole diameter for each pole type (e.g., wood, self-supporting steel, lattice), base dimensions for each pole type, auger hole depth for each pole type, permanent footprint per pole/tower, number of poles/towers by pole type, average work area around poles/towers by pole type (e.g., for old pole removal and new pole installation), and total permanent footprint for poles/towers.	N/A
3.7.2.3 Conductor/Cable Installation	Provide a process-based description of how new conductor/cable would be installed and how old conductor/cable would be removed, if applicable.	Section 3.6.2.2 Installation of Underground 12 kV Distribution Line and 69 kV Loop-In
	Generally describe the conductor/cable splicing process.	Section 3.6.2.2 Installation of Underground 12 kV Distribution Line and 69 kV Loop-In
	If vaults are required, provide their dimensions and approximate location/spacing along the alignment.	Figure 3-9 Typical 69 kV Underground Vault Figure 3-2 Proposed Project Overview Map Section 3.5.2 Power Line TL 6966 Loop-In Figure 3-9 Typical 69 kV Underground Vault Figure 3-10 Typical 69 kV Underground Duct Bank
	Describe in what areas conductor/cable stringing/installation activities would occur.	Section 3.6.2.2 Installation of Underground 12 kV Distribution Line and 69 kV Loop-In
	Describe any safety precautions or areas where special methodology would be required (e.g., crossing roadways, stream crossing).	Section 3.6.2.2 Installation of Underground 12 kV Distribution Line and 69 kV Loop-In
3.7.3 Transmission Line Construction (Below Ground)		
3.7.3.1 Trenching	Describe the approximate dimensions of the trench (e.g., depth, width).	Section 3.6.2.2. Installation of Underground 12 kV Distribution Line and 69 kV Loop-In
	Describe the methodology of making the trench (e.g., saw cutter to cut the pavement, backhoe to remove, etc.).	Section 3.6.2.2. Installation of Underground 12 kV Distribution Line and 69 kV Loop-In
	Provide the total approximate cubic yardage of material to be removed from the trench, the amount to be used as backfill and the amount to subsequently be removed/disposed of offsite.	Section 3.6.2.2. Installation of Underground 12 kV Distribution Line and 69 kV Loop-In
	Provide off-site disposal location, if known, or describe possible option(s).	Section 3.6.2.2. Installation of Underground 12 kV Distribution Line and 69 kV Loop-In
	If engineered fill would be used as backfill, provide information as to the type of engineered backfill and the amount that would be typically used (e.g., top two feet would be filled with thermal-select backfill).	Section 3.6.2.2. Installation of Underground 12 kV Distribution Line and 69 kV Loop-In
	Describe if dewatering would be anticipated, if so, how the trench would be dewatered, what the anticipated flows of the water are, whether there would be treatment, and how the water would be disposed.	Section 3.6.2.3 Dewatering
	Describe the process for testing excavated soil or groundwater for the presence of pre-existing environmental contaminants that could be exposed as a result of trenching operations.	Section 3.6.2.3 Installation of Underground 12 kV Distribution Line and 69 kV Loop-In
	If pre-existing hazardous waste was encountered, describe the process of removal and disposal.	Section 3.6.2.3 Installation of Underground 12 kV Distribution Line and 69 kV Loop-In
	Describe any standard BMPs that would be implemented.	Section 3.9 Standard Operating Procedures

Table 1-1. PEA Checklist Key

Location in CPUC Checklist and Checklist Item		Location in PEA
3.7.3.2 Trenchless Techniques: Microtunnel, Bore and Jack, Horizontal Directional Drilling	Provide the approximate location of the sending and receiving pits.	N/A (trenchless techniques are not proposed)
	Provide the length, width and depth of the sending and receiving pits.	
	Describe the methodology of excavating and shoring the pits.	
	Describe the methodology of the trenchless technique.	
	Provide the total cubic yardage of material to be removed from the pits, the amount to be used as backfill and the amount to subsequently be removed/disposed of off-site.	
	Describe the process for safe handling of drilling mud and bore lubricants.	
	Describe the process for detecting and avoiding "fracturing out" during horizontal directional drilling operations.	
	Describe the process for avoiding contact between drilling mud/lubricants and stream beds.	
	If engineered fill would be used as backfill, provide information as to the type of engineered backfill and the amount that would be typically used (e.g., top two feet would be filled with thermal-select backfill).	
	If dewatering is anticipated, describe how the pit would be dewatered, what the anticipated flows of the water are, whether there would be treatment, and how the water would be disposed.	
	Describe the process for testing excavated soil or groundwater for the presence of pre-existing environmental contaminants.	
	If a pre-existing hazardous waste was encountered, describe the process of removal and disposal.	
	Describe any grading activities and/or slope stabilization issues.	
	Describe any standard BMPs that would be implemented.	
3.7.4 Substation and Switching Station Construction	Describe any earth-moving activities that would be required; what type of activity and, if applicable, estimate cubic yards of materials to be reused and/or removed from the site for both site grading and foundation excavation.	Section 3.6.4 Cut and Fill Table 3-7 Proposed Project Cut-and-Fill Requirements Summary (cubic yards)
	Provide a conceptual landscape plan in consultation with the municipality in which the substation is located.	Appendix B: Conceptual Landscape Plan
	Describe any grading activities and/or slope stabilization issues.	Section 3.6.2 Construction Methods
	Describe possible relocation of commercial or residential property, if any.	N/A
3.7.5 Construction Workforce and Equipment	Provide the estimated number of construction crew members.	Section 3.6.3 Construction Equipment and Personnel
	Describe the crew deployment, whether crews would work concurrently (i.e., multiple crews at different sites), if they would be phased, etc.	Section 3.6.3 Construction Equipment and Personnel
	Describe the different types of activities to be undertaken during construction, the number of crew members for each activity (i.e., trenching, grading), and the number and types of equipment expected to be used for said activity. Include a written description of the activity.	Section 3.6.3 Construction Equipment and Personnel Table 3-5 Standard Construction Equipment and Usage

Table 1-1. PEA Checklist Key

Location in CPUC Checklist and Checklist Item		Location in PEA
	Provide a list of the types of equipment expected to be used during construction of the Proposed Project as well as a brief description of the use of the equipment.	Table 3-5 Standard Construction Equipment and Usage
3.7.6 Construction Schedule	Provide a preliminary project construction schedule; include contingencies for weather, wildlife closure periods, etc.	Section 3.6.3.1 Proposed Construction Schedule Table 3-6. Proposed Construction Schedule
3.8 Operation and Maintenance	Describe the general system monitoring and control (i.e., use of standard monitoring and protection equipment, use of circuit breakers and other line relay protection equipment, etc.).	Section 3.8 General Project Operation and Maintenance Activities and Practices
	Describe the general maintenance program of the Proposed Project including timing of inspections (i.e., monthly, every July, as needed), type of inspection (i.e., aerial inspection, ground inspection), and a description of how the inspection would be implemented. Things to consider: who/how many crew members, how would they access the site (i.e., walk to site, vehicle, all-terrain vehicle), would new access be required, would restoration be required).	Section 3.8 General Project Operation and Maintenance Activities and Practices
	If additional full time staff would be required for operation and/or maintenance, provide the number of workers and for what purpose they are required.	Section 3.8 General Project Operation and Maintenance Activities and Practices
3.9 Applicant Proposed Measures	If there are measures that the Applicant would propose to be part of the Proposed Project, include those measures and reference plans or implementation descriptions.	Section 3.10 Applicant Proposed Measures
Chapter 4: Environmental Setting		
	For each resource area discussion within the PEA, include a description of the physical environment in the vicinity of the Proposed Project (e.g., topography, land use patterns, biological environment), including the local environment (site-specific) and regional environment.	Section 4.X.3 under each resource area provides a discussion of the physical environment in the vicinity of the Proposed Project.
	For each resource area discussion within the PEA, include a description of the regulatory environment/context (federal, state, and local).	Section 4.X.2 under each resource area provides a discussion of the regulatory environment/context.
Chapter 5: Environmental Impact Assessment Summary		
5.1 Aesthetics	Provide visual simulations of prominent public view locations, including scenic highways, to demonstrate the views before and after project implementation. Additional simulations are highly recommended.	Section 4.1.6.1 Methodology Figure 4.1-8 Simulation 1 Figure 4.1-9 Simulation 2 Figure 4.1-10 Simulation 3
5.2 Agriculture Resources	Identify the types of agricultural resources affected.	Section 4.2.6 Project Impacts
5.3 Air Quality	Provide supporting calculations/spreadsheets/technical reports that support emission estimates in the PEA.	Appendix C: Air Quality Data: CalEEMod Input and Output Files / GHG Emission Calculations
	Provide documentation of the location and types of sensitive receptors that could be impacted by the Project (e.g., schools, hospitals, houses). Critical distances to receptors is dependent on type of construction activity.	Section 4.3.3.2 Air Quality
	Identify Proposed Project GHG emissions.	Section 4.7.6.2 Significance Criteria Table 4.7-3 Estimated Construction GHG Emissions
	Quantify GHG emissions from a business as usual snapshot. That is, what the GHG emissions will be from the Proposed Project if no mitigations were used.	Section 4.7.6.2 Significance Criteria Table 4.7-3 Estimated Construction GHG Emissions (Construction and Operations and Maintenance)

Table 1-1. PEA Checklist Key

Location in CPUC Checklist and Checklist Item		Location in PEA
	Quantify GHG emission reductions from every APM that is implemented. The quantifications will be itemized and placed in tabular format.	N/A
	Identify the net emissions of the Proposed Project after mitigation have been applied.	N/A
	Calculate and quantify GHG emissions (CO2 equivalent) for the Proposed Project, including construction and operation.	Section 4.7.6.2 Significance Criteria Table 4.7-3 Estimated Construction GHG Emissions (Construction and Operations and Maintenance)
	Calculate and quantify the GHG reduction based on reduction measures proposed for the Proposed Project.	Section 4.7.2.3 Local: SDG&E Programs
	Propose APMs to implement and follow to maximize GHG reductions. If sufficient, CPUC will accept them without adding further mitigation measures.	Section 4.7.5 Applicant Proposed Measures
	Discuss programs already in place to reduce GHG emissions on a system-wide level. This includes the Applicant's voluntary compliance with the United States (U.S.) Environmental Protection Agency (USEPA) sulfur hexafluoride (SF_6) reduction program, reductions from energy efficiency, demand response, long-term procurement plan, et.al.	Section 4.7.4 Standard Operating Procedures
	Ensure that the assessment of air quality impacts is consistent with PEA Sections 3.7.5 and 3.7.6, as well as with the PEA's analysis of impacts during construction, including traffic and all other emissions.	Section 4.3.6 Project Impacts Section 4.7.6 Project Impacts Table 4.3-5 Maximum Daily Construction Emissions Table 4.3-6 Maximum Daily Fugitive Dust Emissions from Construction Table 4.7-3 Estimated GHG Emissions (Construction and Operations and Maintenance)
5.4 Biological Resources	Provide a copy of the Wetland Delineation and supporting documentation (i.e., data sheets). If verified, provide supporting documentation. Additionally, GIS data of the wetland features should be provided as well.	Appendix D: Biological Technical Report
	Provide a copy of special-status surveys for wildlife, botanical and aquatic species, as applicable. Any GIS data documenting locations of special-status species should be provided.	Section 4.4.3.1 Project Survey Area Table 4.4-2 Special Status Plant Species Potentially Occurring in the Project Area Table 4.4-3 Special Status Wildlife Species Potentially Occurring in the Project Area Table 4.4-4 Critical Habitat within 5 Miles of the Project Survey Area
5.5 Cultural Resources	Cultural Resources Report documenting a cultural resources investigation of the Proposed Project. This report should include a literature search, pedestrian survey, and Native American consultation.	Cultural Resources Report submitted separately under confidential cover Appendix E: Native American Heritage Commission (NAHC) Correspondence
	Provide a copy of the records found in the literature search.	Cultural Resources Report submitted separately under confidential cover
	Provide a copy of all letters and documentation of Native American consultation.	Appendix E: NAHC Correspondence
5.6 Geology and Soils	Provide a copy of the geotechnical investigation if completed, including known and potential geologic hazards such as ground shaking, subsidence, liquefaction, etc.	Appendix F: Geotechnical Study

Table 1-1. PEA Checklist Key

Location in CPUC Checklist and Checklist Item		Location in PEA
5.7 Hazards and Hazardous Materials	Include an Environmental Data Resources report.	Section 4.8.6.1 Methodology Appendix G: Phase I Environmental Site Assessment
	Include a Hazardous Substance Control and Emergency Response Plan, if required.	Section 4.8.4 Standard Operating Procedures
	Include a Health and Safety Plan, if required.	N/A
	Describe the Worker Environmental Awareness Program.	Section 4.8.4 Standard Operating Procedures
	Describe which chemicals would be used during construction and operation of the Proposed Project. For example, fuels for construction, naphthalene to treat wood poles before installation, etc.	Table 4.8-2 Hazardous Materials Typically Used for Construction and/or Operation and Maintenance
5.8 Hydrology and Water Quality	Describe impacts to groundwater quality including increased runoff due to construction of impermeable surfaces, etc.	Section 4.9.6 Project Impacts Appendix H: Water Quality Construction Best Management Practices Manual Appendix I: Preliminary Drainage Study
	Describe impacts to surface water quality including the potential for accelerated soil erosion, downstream sedimentation, and reduced surface water quality.	Section 4.9.6 Project Impacts
5.9 Land Use and Planning	Provide GIS data of all parcels within 300 feet of the Proposed Project with the following data: assessor's parcel number, mailing address, and parcel's physical address.	Chapter 6.0 Other Process-Related Data Needs
5.10 Mineral Resources	Data needs already specified under Chapter 3 would generally meet the data needs for this resource area.	N/A
5.11 Noise	Provide long-term noise estimates for operational noise (e.g., corona discharge noise, and station sources such as substations).	Section 4.12.6 Project Impacts
5.12 Population and Housing	Data needs already specified under Chapter 3 would generally meet the data needs for this resource area.	N/A
5.13 Public Services	Data needs already specified under Chapter 3 would generally meet the data needs for this resource area.	N/A
5.14 Recreation	Data needs already specified under Chapter 3 would generally meet the data needs for this resource area	N/A
5.15 Transportation and Traffic	Discuss traffic impacts resulting from construction of the Proposed Project including ongoing maintenance operations.	Section 4.16.6 Project Impacts
	Provide a preliminary description of the traffic management plan that would be implemented during construction of the Proposed Project.	SDG&E will implement standard traffic control procedures, which could include a Traffic Control Plan. The Traffic Control Plan will be prepared by a project engineer or contractor prior to construction.
5.16 Utilities and Services Systems	Describe how treated wood poles would be disposed of after removal, if applicable.	Section 4.17.6.2 Significance Criteria
5.17 Cumulative Analysis	Provide a list of projects (i.e., past, present, and reasonably foreseeable future projects) within the Proposed Project area that the applicant is involved in.	Section 4.18.6 Existing/Operating Projects Section 4.18.7 Foreseeable Projects Inventory Table 4.18-1 Planned and Proposed Projects within 1 Mile
	Provide a list of projects that have the potential to be proximate in space and time to the Proposed Project. Agencies to be contacted include, but are not limited to, the local planning agency, Caltrans, etc.	Table 4.18-1 Planned and Proposed Projects within 1 Mile

Table 1-1. PEA Checklist Key

Location in CPUC Checklist and Checklist Item		Location in PEA
5.18 Growth-Inducing Impacts, If Significant	Provide information on the Proposed Project's growth-inducing impacts, if any.	N/A
	Provide information on any economic or population growth in the surrounding environment that will, directly or indirectly, result from the Proposed Project.	N/A
	Provide information on any increase in population that could further tax existing community service facilities (e.g., schools, hospitals, fire, police), that will directly or indirectly result from the Proposed Project.	N/A
	Provide information on any obstacles to population growth that the Proposed Project would remove.	N/A
	Describe any other activities, directly or indirectly encouraged or facilitated by the Proposed Project, that would cause population growth that could significantly affect the environment, either individually or cumulatively.	N/A
Chapter 6: Detailed Discussion of Significant Impacts		
6.1 Mitigation Measures Proposed to Minimize Significant Effects	Discuss each mitigation measure and the basis for selecting a particular mitigation measure should be stated.	N/A
6.2 Description of Project Alternatives and Impact Analysis	Provide a summary of the alternatives considered that would meet most of the objectives of the Proposed Project and an explanation as to why they were not chosen as the Proposed Project.	Section 5.3.4 No Project Alternative Section 5.3.5 Alternatives Considered but Rejected Section 5.3.6 Alternative Substation Sites Section 5.3.7 Power Line Configuration Alternatives
	Alternatives considered and described by the Applicant should include, as appropriate, system or facility alternatives, route alternatives, route variations, and alternative locations.	Section 5.3.6 Alternative Substation Sites Section 5.3.7 Power Line Configuration Alternatives
	Include a description of a "No Project Alternative" should be included.	Section 5.3.4 No Project Alternative
	If significant environmental effects are assessed, the discussion of alternatives shall include alternatives capable of substantially reducing or eliminating any said significant environmental effects, even if the alternative(s) substantially impede the attainment of the Proposed Project objectives and are more costly.	N/A
6.3 Growth-Inducing Impacts	Discuss if the Proposed Project would foster economic or population growth, either directly or indirectly, in the surrounding environment.	Section 5.4 Growth-Inducing Impacts
	Discuss if the Proposed Project would cause an increase in population that could further tax existing community services (e.g., schools, hospitals, fire, police).	Section 5.4 Growth-Inducing Impacts
	Discuss if the Proposed Project would remove obstacles to population growth.	Section 5.4 Growth-Inducing Impacts
	Discuss if the Proposed Project would encourage and facilitate other activities that would cause population growth that could significantly affect the environment, either individually or cumulatively.	Section 5.4 Growth-Inducing Impacts

Table 1-1. PEA Checklist Key

Location in CPUC Checklist and Checklist Item		Location in PEA
6.4 Applicant Proposed Measures to address GHG Emissions	Include a menu of suggested APMs that applicants can consider to address GHG emissions. Suggested APMs include, but are not limited to: 1. If suitable park-and-ride facilities are available in the Project vicinity, construction workers will be encouraged to carpool to the job site to the extent feasible. The ability to develop an effective carpool program for the Proposed Project would depend upon the proximity of carpool facilities to the job site, the geographical commute departure points of construction workers, and the extent to which carpooling would not adversely affect worker show-up time and the Project's construction schedule. 2. To the extent feasible, unnecessary construction vehicle and idling time will be minimized. The ability to limit construction vehicle idling time is dependent upon the sequence of construction activities and when and where vehicles are needed or staged. Certain vehicles, such as large diesel powered vehicles, have extended warm-up. To the extent feasible, unnecessary construction vehicle and idling time will be minimized. The ability to limit construction vehicle idling time is dependent upon the sequence of construction activities and when and where vehicles are needed or staged. Certain vehicles, such as large diesel powered vehicles, have extended warm-up times following start-up that limit their availability for use following startup. Where such diesel powered have extended warm-up times following start-up that limit their availability for use following startup. Where such diesel powered vehicles are required for repetitive construction tasks, these vehicles may require more idling time. The Proposed Project will apply a "common sense" approach to vehicle use; if a vehicle is not required for use immediately or continuously for construction activities, its engine will be shut off. Construction foremen will include briefings to crews on vehicle use as part of pre-construction conferences. Those briefings will include discussion of a "common sense" approach to vehicle use. 3. Use low-emission construction equipment. Maintain construction equipment per manufacturing specifications and use low-emission equipment described here. All offroad construction diesel engines not registered under the California Air Resources Board (CARB) Statewide Portable Equipment Registration Program shall meet at a minimum the Tier 2 California Emission Standards for Off-Road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, Sec. 2423(b)(1). 4. Diesel Anti-Idling: In July 2004, the CARB adopted a measure to limit diesel-fueled commercial motor vehicle idling. 5. Alternative Fuels: CARB would develop regulations to require the use of one to four percent biodiesel displacement of California diesel fuel. 6. Alternative Fuels: Ethanol, increased use of ethanol fuel 7. Green Buildings Initiative. 8. Facility wide energy efficiency audit. 9. Diesel Anti-Idling: In July 2004, the CARB adopted a measure to limit diesel-fueled commercial motor vehicle idling.	Section 4.7 GHG Emissions Proposed Project emissions will be below the annual significance threshold set by the SCAQMD for industrial projects, and therefore mitigation will not be required.

Table 1-1. PEA Checklist Key

Location in CPUC Checklist and Checklist Item		Location in PEA
	10. Alternative Fuels: CARB would develop regulations to require the use of one to four percent biodiesel displacement of California diesel fuel. 11. Alternative Fuels: Ethanol, increased use of ethanol fuel 12. Green Buildings Initiative. 13. Facility wide energy efficiency audit. 14. Complete GHG emissions audit. The audit will include a review of the GHG emitted from those facilities (substations), including carbon dioxide, methane, chlorofluorocarbon, and hydrofluorocarbon compounds (SF_6). 15. There is an EPA approved SF_6 emissions protocol (http://www.epa.gov/electricpowersf6/resources/index.html #three). 16. SF_6 program wide inventory. For substations, keep inventory of leakage rates. 17. Increase replacement of breakers once leakage rates exceed one percent within 30 days of detection. 18. Increased investment in current programs that can be verified as being in addition to what the utility is already doing. 19. The SF_6 Emission Reduction Partnership for the Electric Power Systems was launched in 1999 and currently includes 57 electric utilities and local governments across the U.S. of applications, including that of dielectric insulating material in electrical transmission and distribution equipment, such as circuit breakers. Electric power systems that join the Partnership must, within 18 months, establish an emission reduction goal reflecting technically and economically feasible opportunities within their company. They also agree to, within the constraints of economic and technical feasibility, estimate their emissions of SF6, establish a strategy for replacing older, leakier pieces of equipment, implement SF_6 recycling, establish and apply proper handling techniques, and report annual emissions to the EPA. The EPA works as a clearinghouse for technical information, works to obtain commitments from all electric power system operators and will be sponsoring an international conference in 2000 on SF6 emission reductions. 20. Quantify what comes into the system and track programmatically SF_6. Applicant can propose other GHG reducing mitigations.	
Chapter 7: Other Process-Related Data Needs		
Noticing	Include an excel spreadsheet that identifies all parcels within 300 feet of any Proposed Project component with the following data: APN number, owner mailing address, and parcels physical address.	Chapter 6.0 Other Process-Related Data Needs Table 6-1 Parcel List Within 300 Feet of Proposed Project

1.9 REFERENCES

No references are cited in this section.

TABLE OF CONTENTS

2.0 PROJECT PURPOSE AND NEED 2-1

2.1 BACKGROUND 2-1

2.1.1 Existing Electric System Constraints 2-1

2.2 PROJECT PURPOSE AND NEED 2-2

2.2.1 Purpose of the Project 2-2

2.2.2 Need for the Project 2-2

2.3 PROJECT OBJECTIVES 2-3

2.3.1 Objective 1: Meet the Area's Existing and Forecasted Electric Load Growth 2-3

2.3.2 Objective 2: Maintain Substation and Circuit Reliability with Additional Tie and Transformer Capacity 2-3

2.3.3 Objective 3: Reduce Area Substation Loading to Optimum Operating Conditions 2-4

2.3.4 Objective 4: Locate the Proposed Project's Facilities within SDG&E Fee-Owned Property, Franchise, or Existing Easements 2-4

2.4 CONCLUSION 2-4

2.5 REFERENCES 2-4

LIST OF TABLES

2-1 Projected Load Percentage – Without and With Proposed Project 2-3

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2.0 PROJECT PURPOSE AND NEED

This chapter of the Proponent's Environmental Assessment (PEA) identifies the purpose and need for San Diego Gas & Electric Company (SDG&E) Proposed Ocean Ranch Substation Project (Proposed Project), as required by the California Public Utilities Commission (CPUC) PEA Guidelines (CPUC Information and Criteria List, Appendix B, Section V) and the California Environmental Quality Act (CEQA) Guidelines (Section 15124[b]). Additional information regarding the Proposed Project's purpose and need is provided in SDG&E's application to the CPUC, in accordance with CPUC General Order 131-D.

2.1 BACKGROUND

SDG&E is a regulated public utility that provides electric service to approximately 3.5 million people within a 4,100-square-mile service area, covering 25 cities and unincorporated areas within San Diego County and a portion of southern Orange County.

2.1.1 Existing Electric System Constraints

The electric system consists of various elements, such as transmission or power lines, substations, transformers, capacitors, and synchronous condensers. Electric transmission facilities are required to comply with mandatory North American Electric Reliability Corporation (NERC), Western Electric Coordinating Council (WECC) and California Independent System Operator (CAISO) standards. NERC standards require that all transmission or power lines[1] and transformers in service remain within their normal and emergency ratings (i.e., the maximum total current and voltage in an electrical circuit, expressed in terms of megavolt amperes [MVA]), and that all transmission or power lines and transformers that remain in service following the loss of a single transmission or power line or transformer remain within applicable MVA ratings.

In providing electrical service to the Oceanside area, SDG&E currently operates three substations: Melrose Substation, Morro Hill Substation, and San Luis Rey Substation. Commercial and residential growth in the Oceanside area is loading these existing substations to their ultimate capacities. The optimum substation load is 80 to 85 percent, which allows for transformer bank loads to be transferred in the event of a transformer bank outage. Optimum operating conditions maintain substation reliability and reduce outage times. All three substations are currently operating above 85 percent. Recent and anticipated load additions in Oceanside (e.g., planned commercial uses, as described in Section 4.18, *Cumulative Impacts*) will add additional load to the existing substations, which are already approaching their ultimate capacities. SDG&E has therefore determined that additional substation capacity is currently

[1] As defined in General Order 131-D, a transmission line is a line designed to operate at or above 200 kilovolts (kV). A power line is designed to operate between 50 and 200 kV. The Proposed Project operates at 69 kV and is therefore described as a power line throughout this PEA.

needed for reliability and to serve the projected electric distribution load growth to prevent bank overloads in 2018.

2.2 PROJECT PURPOSE AND NEED

A project's purpose is defined as a set of objectives the project intends to meet whereas a project's need is the deficiency that the project was initiated to address. In this context, the Proposed Project's purpose and need are defined below.

2.2.1 Purpose of the Project

The purpose of the Proposed Project is to construct a new substation to (1) provide additional capacity to serve the existing area load and forecasted customer-driven electrical load growth; and (2) prevent potential long outages or disruption of service to SDG&E customers in the Oceanside area. This goal is achieved by the following objectives:

- Objective 1: Meet the Area's Existing and Forecasted Electric Load Growth.
- Objective 2: Maintain Substation and Circuit Reliability with Additional Tie and Transformer Capacity.
- Objective 3: Reduce Area Substation Loading to Optimum Operating Conditions.
- Objective 4: Locate the Proposed Project's Facilities within SDG&E Fee-Owned Property, Franchise, or Existing Easements.

These objectives are discussed in further detail in Section 2.3.

2.2.2 Need for the Project

The existing circuits that currently serve the Oceanside area are fed primarily from the Melrose, Morro Hill, and San Luis Rey substations. In 2018, the average loading of all three substations is projected to be at 94 percent of capacity, well above optimal operating conditions of 80-85 percent. The projected load at each of these substations is as follows:

- **Melrose Substation** will be at 94 percent load and experiencing a bank overload of 101 percent by 2018. This substation is already built-out to its ultimate four-transformer bank (120 MVA) capacity.
- **Morro Hill Substation** will be at 96 percent load by 2018. This substation is a land-locked, radial-fed temporary substation with a one-transformer bank (12.5 MVA) capacity due to its locational constraints. These constraints prohibit routing circuits north and west of the substation because of its proximity to Marine Corps Base Camp Pendleton, and south and east because of the San Luis Rey River.
- **San Luis Rey Substation** will be at 92 percent load and experiencing circuit overloads by 2018. This substation is built-out to its ultimate four-transformer bank (120 MVA) capacity.

The 2015 total substation load for the Oceanside area is 268 megawatts. In the current economic conditions, the annual substation growth rate is approximately 1 percent (average of 3 megawatts annually); in 20 years (2038) under this scenario, the load is anticipated to be 327 megawatts, an increase of 59 megawatts.

2.3 PROJECT OBJECTIVES

The Proposed Project components are presented in more detail in Chapter 3.0, *Project Description*, while each of the Proposed Project objectives is described in more detail below.

2.3.1 Objective 1: Meet the Area's Existing and Forecasted Electric Load Growth

In order to provide additional capacity to serve existing area load, as well as forecasted customer-driven electrical load growth, and to prevent potential long outages or disruption of service to existing customers in the Oceanside area, SDG&E proposes construction of the new Ocean Ranch Substation. Without additional capacity provided by the new substation, the Morro Hill, Melrose, and San Luis Rey customer load cannot be reliably served. The SDG&E Internal Forecasting Distribution Planning Report (2014) requires installation of 60 MVA of initial rated capacity within the 10-year forecast period.

The Ocean Ranch Substation will initially be constructed at a rated capacity of 60 MVA but designed to expand to an ultimate capacity of 120 MVA in order to accommodate any potential future load growth.

Table 2-1 displays the projected load percentages at each substation without the Project and with the Project.

Table 2-1. Projected Load Percentage – Without and With Proposed Project

		Projected Load Percent Without Proposed Project / with Proposed Project*			
Substation	**Banks**	**2018**	**2019**	**2020**	**2021**
Melrose	ME3031	101 / 101	103 / 84	104 /84	105 / 84
	ME3233	86 / 86	87 / 87	88 / 88	88 / 88
Morro Hill	MH30	96 / 96	97/ 80	97 / 80	98 / 80
San Luis Rey	SA3334	98 / 98	98 / 72	99 / 72	100 / 72
	SA3536	87 / 87	88 / 75	88 / 75	89 / 62

Note: *Load will be transferred to the proposed Ocean Ranch Substation; in service date: 2019.

As shown in Table 2-1, with implementation of the Proposed Project, the projected load percentages decrease over time. Without the Proposed Project, projected load percentages would be at 86 percent or higher in 2018. A 15 to 20 percent reserve capacity is desirable for each area substation in order to handle outages and routine maintenance by being able to transfer load without disrupting customers' service. Forecasted electrical load growth and the desire to reduce outages and disruption of service to new and existing customers in the area are factors driving the need to construct a new substation in this area.

The proposed Ocean Ranch Substation will offload the surrounding substations and thereby allow SDG&E to meet both the existing and anticipated customer-driven electrical load growth and to maintain reliability of service to existing customers in the Oceanside area. The Proposed Project has been designed to meet Objective 1 identified by SDG&E.

2.3.2 Objective 2: Maintain Substation and Circuit Reliability with Additional Tie and Transformer Capacity

Constructing a new substation will maintain the area's reliability by increasing capacity and adding new distribution circuits and ties. New capacity and circuit ties will be used to offload highly loaded circuits and substations within the area and to allow for load transfers during outage conditions and planned

maintenance. Additional load transfer capability during circuit outages will reduce the number of customers affected and shorten the restoration time. The proposed Ocean Ranch Substation would also provide tie capacity in the event of a loss of a single transformer in the Oceanside area.

2.3.3 Objective 3: Reduce Area Substation Loading to Optimum Operating Conditions

The optimum substation loading is 80 to 85 percent, which allows transformer bank load transfer in the event of a transformer bank outage. System reliability improves and outage time is minimized when substation and circuit transfer capacity is available. When there is optimum loading, a transformer can be removed from service and maintenance performed at any time without creating outages. The addition of the proposed Ocean Ranch Substation would reduce the current substation loading to the optimum range.

2.3.4 Objective 4: Locate the Proposed Project's Facilities within SDG&E Fee-Owned Property, Franchise, or Existing Easements

Another primary objective of the Proposed Project is to locate the proposed facilities within existing SDG&E rights-of-way (ROWs) or franchise positions, and within areas that already include electric power facilities, to the extent feasible. The Proposed Project has been designed to meet Objective 4, and construction of the Proposed Project will fulfill this objective.

The Proposed Project would be located on SDG&E fee-owned land, existing ROWs, easements, and franchise positions.

2.4 CONCLUSION

The Proposed Project effectively and efficiently meets all of the objectives outlined above. The Proposed Project will result in construction of a new 69/12 kV substation (Ocean Ranch) and looping in TL 6966 into the proposed Ocean Ranch Substation to provide additional capacity to serve existing and future area load and to prevent potentially long outages or disruption of service to existing and new customers. The Proposed Project also maximizes the utilization of existing facilities and land, including existing ROW, structures, and access road networks.

2.5 REFERENCES

SDG&E. 2014. Internal Forecasting Distribution Planning Report.

TABLE OF CONTENTS

3.0 PROJECT DESCRIPTION 3-1

3.1 PROPOSED PROJECT OVERVIEW 3-1
3.2 PROPOSED PROJECT OBJECTIVES 3-7
3.3 PROPOSED PROJECT LOCATION AND REGIONAL CONTEXT 3-7
3.3.1 Location 3-7
3.3.2 Existing Site Conditions 3-7
3.3.3 Site Access 3-8
3.4 EXISTING REGIONAL ELECTRIC SYSTEM 3-8
3.4.1 Existing Power Line 3-8
3.4.2 Existing Substation System 3-8
3.5 PROPOSED PROJECT COMPONENTS 3-9
3.5.1 Ocean Ranch Distribution Substation 3-9
3.5.2 Power Line TL 6966 Loop-In 3-16
3.5.3 12 kV Distribution System 3-19
3.5.4 Telecommunication Systems 3-26
3.6 CONSTRUCTION 3-30
3.6.1 Work Areas 3-30
3.6.2 Construction Methods 3-37
3.6.3 Construction Equipment and Personnel 3-45
3.6.4 Cut and Fill 3-46
3.7 PERMANENT LAND/RIGHT-OF-WAY REQUIREMENTS 3-47
3.8 GENERAL PROJECT OPERATION AND MAINTENANCE ACTIVITIES AND PRACTICES 3-47
3.8.1 Ocean Ranch Substation Operation and Maintenance 3-47
3.9 STANDARD OPERATING PROCEDURES 3-48
3.10 APPLICANT PROPOSED MEASURES 3-54
3.11 IMPLEMENTATION OF APPLICANT PROPOSED MEASURES 3-56
3.12 ANTICIPATED PERMITS AND APPROVALS 3-56
3.13 REFERENCES 3-57

LIST OF FIGURES

3-1 Regional Location Map....3-2
3-2 Proposed Project Overview Map....3-3
3-3 Existing Substations and Power Line System Electrical Configuration....3-5
3-4 Proposed Substations and Power Line System Electrical Configuration....3-6
3-5 Proposed Ocean Ranch Substation Ultimate Layout....3-12
3-6 Proposed Ocean Ranch Substation Initial Arrangement....3-13
3-7 Proposed Ocean Ranch Substation Ultimate Arrangement....3-14
3-8 Proposed Ocean Ranch Substation Ultimate Arrangement-69 kV Low Profile....3-15
3-9 Typical 69 kV Underground Vault....3-17
3-10 Typical 69 kV Underground Duct Bank....3-18
3-11 Typical 12 kV Underground Duct Bank....3-21
3-12 Typical 12 kV Underground Manhole....3-22
3-13 Typical Switch and Capacitor Pad....3-23
3-14 Typical 12 kV Switch....3-24
3-15 Typical 12 kV Capacitor....3-25
3-16 Typical Telecommunication Monopole....3-27
3-17 Typical Telecommunication Underground Duct Bank....3-28
3-18 Typical Telecommunication Underground Handhole....3-29
3-19 Kearny Construction and Operation Center....3-32
3-20 North Coast Construction and Operations Center....3-33
3-21 Northeast Construction and Operations Center....3-34
3-22 Typical Underground Construction Process within Roadways....3-36

LIST OF TABLES

3-1 Distribution Relocation Summary....3-20
3-2 Distribution System Structures....3-20
3-3 Summary of Temporary Work Areas....3-30
3-4 Proposed Cable Pulling Site....3-35
3-5 Standard Construction Equipment and Usage....3-38
3-6 Proposed Construction Schedule....3-45
3-7 Proposed Project Cut-and-Fill Requirements Summary (cubic yards)....3-46
3-8 Applicant Proposed Measures by Resource Area....3-55
3-9 Anticipated Permit, Approval, and Consultation Requirements....3-57

3.0 PROJECT DESCRIPTION

3.1 PROPOSED PROJECT OVERVIEW

San Diego Gas & Electric (SDG&E) is a regulated public utility that provides electric service to 3.5 million people within a 4,100-square-mile service area, covering parts of two counties and 25 cities and unincorporated communities in the San Diego area (Figure 3-1). In an effort to serve existing and anticipated customer-driven load and maintain reliability of the electrical distribution system, SDG&E proposes to construct a new distribution substation (Figure 3-2). The substation site is proposed on land owned by SDG&E and the power line loop-in is located within existing SDG&E rights-of-way (ROWs) and franchise position within the City of Oceanside public streets. Additional detail on the purpose, need, and objectives of the Ocean Ranch Substation Project (Proposed Project) is provided in Chapter 2.0, *Project Purpose and Need*.

The Proposed Project includes the following primary components, which are described in more detail in Section 3.5, *Proposed Project Components*:

- **Ocean Ranch Distribution Substation.** Construct a new 69/12 kilovolt (kV) low-profile substation in the City of Oceanside. The substation will be named Ocean Ranch, have an initial capacity of 60 megavolt ampere (MVA) rating, and an ultimate capacity of 120 MVA.
- **Power Line Tie Line (TL) 6966 Loop-In.** TL 6966 is an existing underground 69 kV circuit which has termination points at San Luis Rey Substation (to the west) and Melrose Substation (to the east). It will be intercepted at the intersection of Avenida De La Plata and Avenida Del Oro and extended to the proposed Ocean Ranch Substation via the construction of an underground power line duct bank with a total length of approximately 1,500 feet. This will reconfigure the existing tie line into TL 6966 (San Luis Rey to Ocean Ranch) and TL 6979 (Ocean Ranch to Melrose). Refer to Figure 3-3 and Figure 3-4 for existing and ultimate configuration of substations and power lines in the area.
- **12 kV Distribution System.** Four new distribution circuits will be installed and will intercept four existing circuits. A portion of the existing circuits will be offloaded to the new Ocean Ranch circuits. Approximately 4,650 feet of new 12 kV distribution line will be constructed, most of which will be on the proposed Ocean Ranch Substation site. The Proposed Project includes construction of four new manholes and one new handhole to access the new segment of underground 12 kV distribution line.
- **Telecommunication Systems.** A 40-foot monopole will be installed in the southwest corner of the proposed Ocean Ranch Substation property for the microwave radio communication system. A 2-foot-diameter antenna will be mounted on the monopole and point west to provide a communications link to the San Luis Rey Substation. AT&T services will enter the property from the street. A conduit duct will be installed from the substation control shelter to the property line to intercept the AT&T duct structure. Two pad-mounted pedestals, approximately 3 feet high, will be installed to enclose the communications equipment at or near the property line.

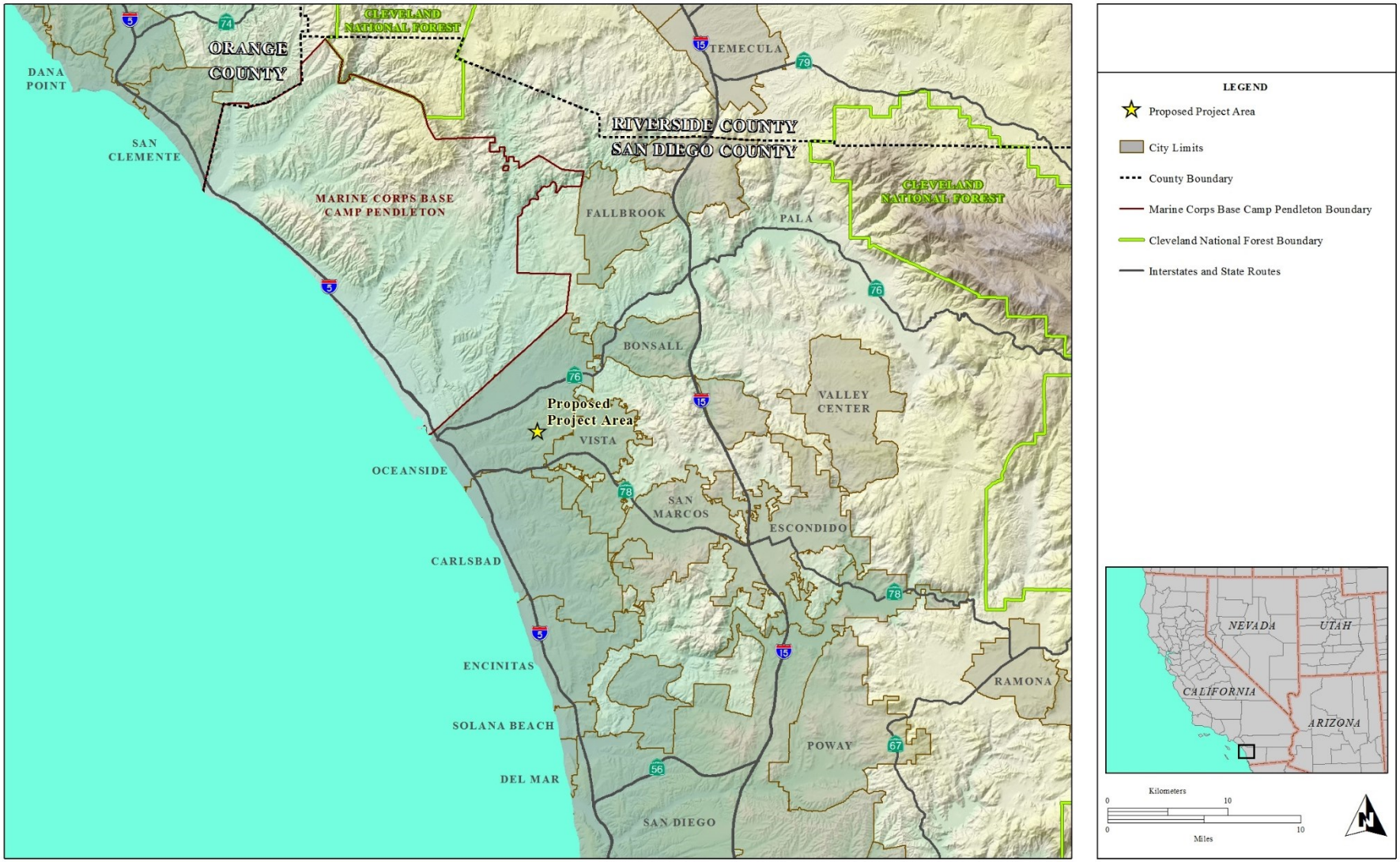


Figure 3-1 Regional Location Map

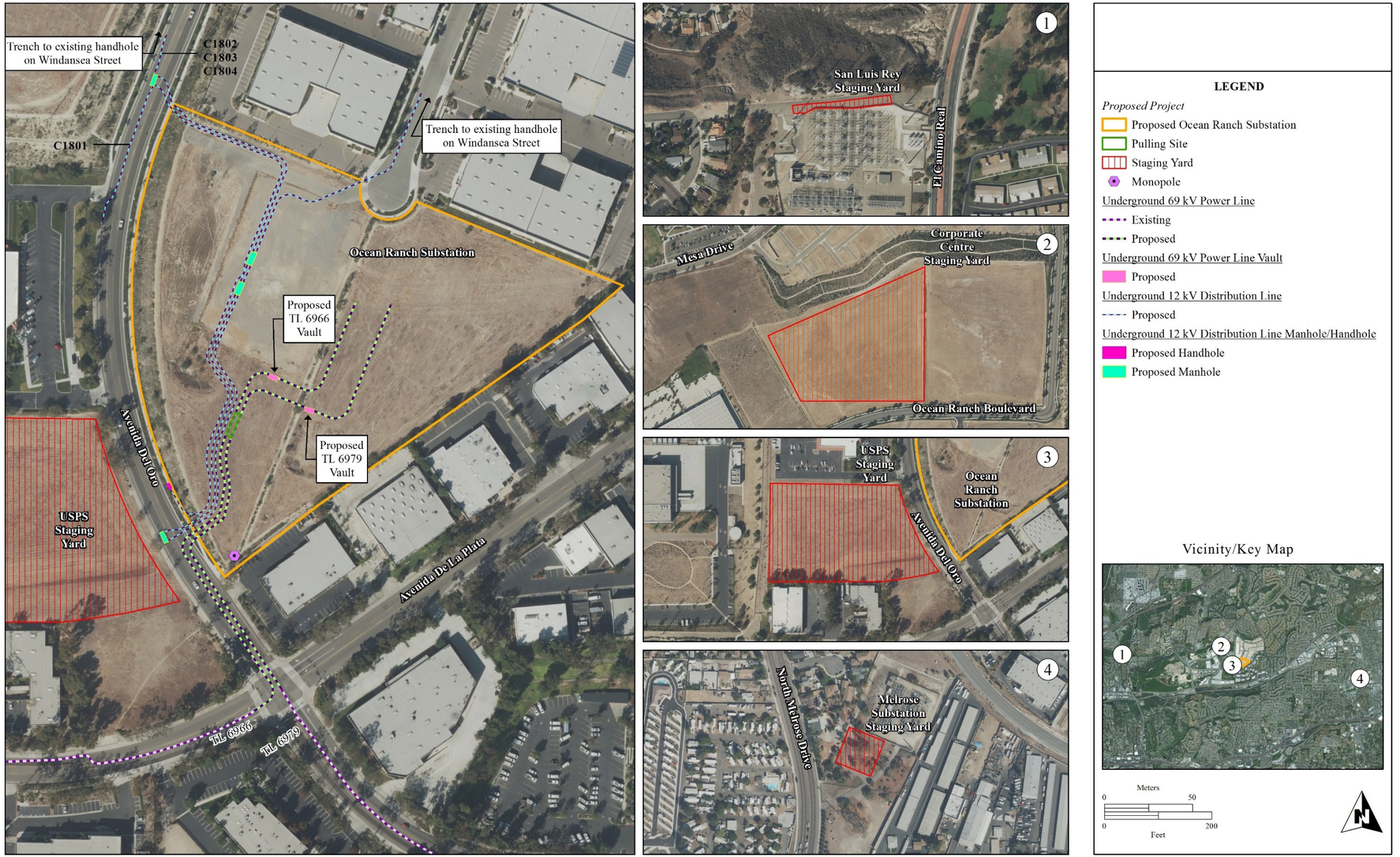


Figure 3-2 Proposed Project Overview Map

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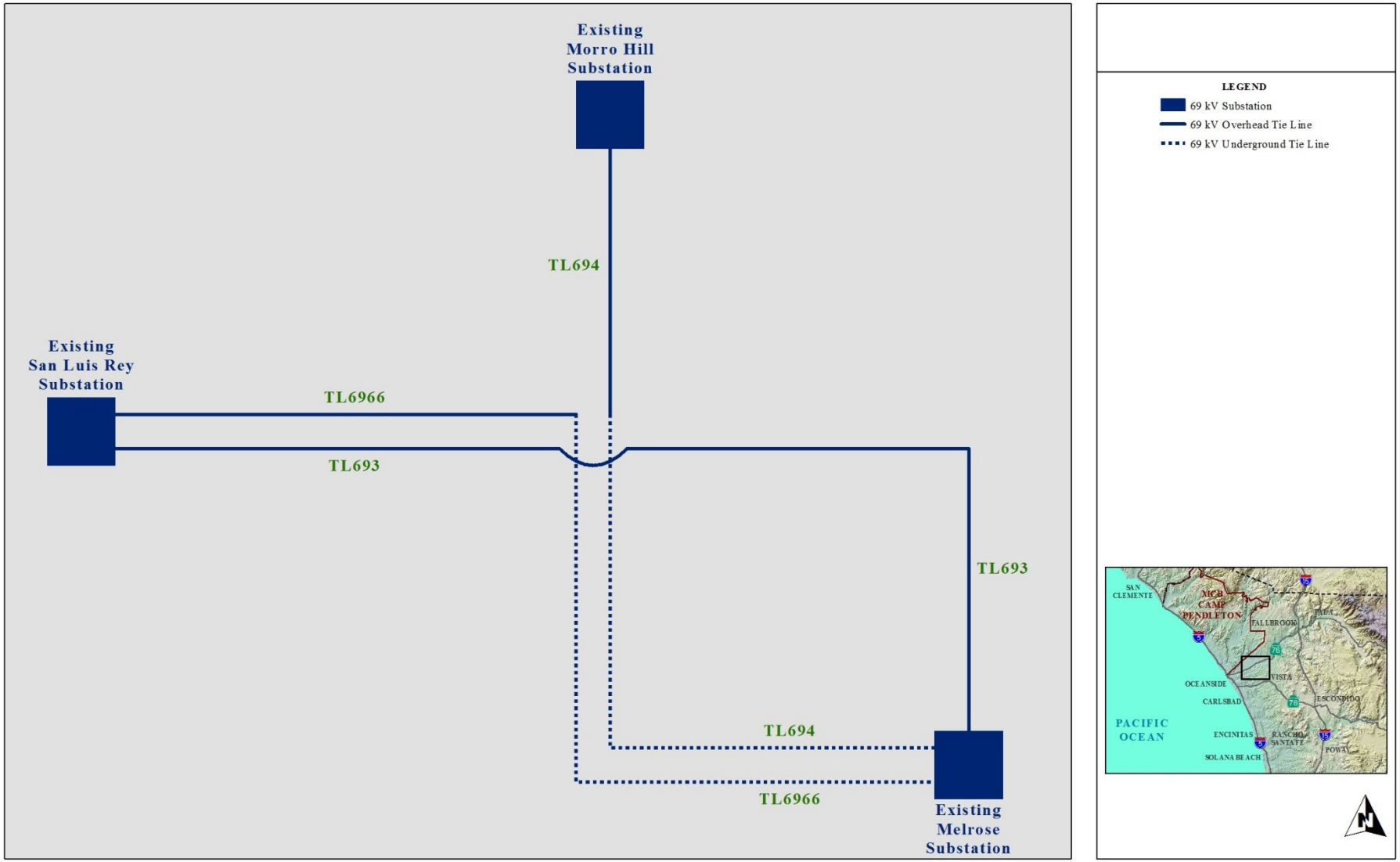


Figure 3-3 Existing Substations and Power Line System Electrical Configuration

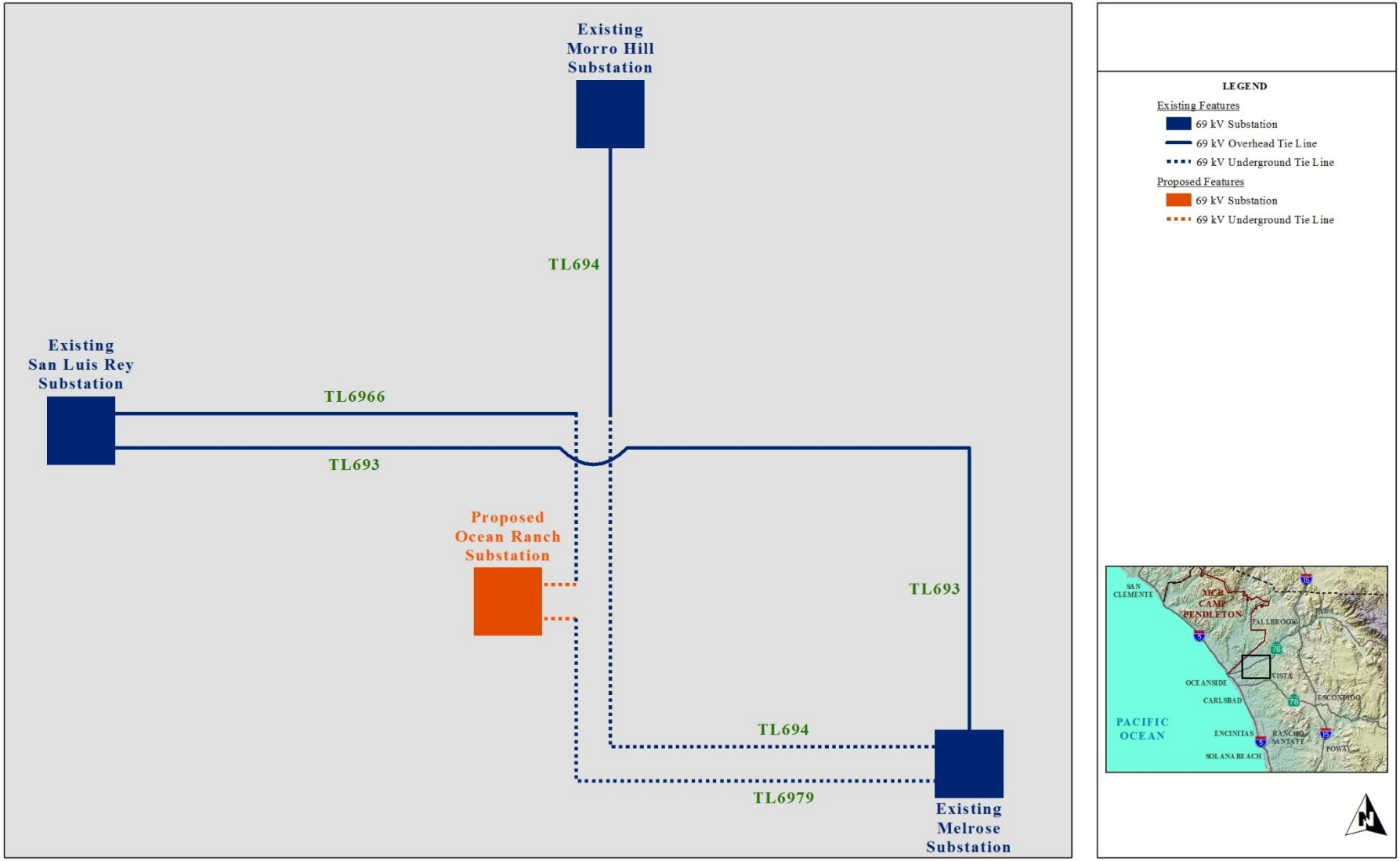


Figure 3-4 Proposed Substations and Power Line System Electrical Configuration

The proposed Ocean Ranch Distribution Substation will initially be constructed at a rated capacity of 60 MVA, but designed to expand to an ultimate capacity of 120 MVA. Planned initial substation load and growth rate does not require the installation of the ultimate 120 MVA substation capacity within the distribution planning 10-year forecast.

The California Public Utilities Commission (CPUC) will be the lead agency under the California Environmental Quality Act (CEQA). SDG&E is submitting this PEA to the CPUC in support of its Application for a Permit to Construct.

3.2 PROPOSED PROJECT OBJECTIVES

The purpose of the Proposed Project is to construct a new substation to (1) provide additional capacity to serve the existing area load and forecasted customer-driven electrical load growth; and (2) prevent potential long outages or disruption of service to SDG&E customers in the Oceanside area. This goal is achieved by the following objectives:

- Objective 1: Meet the Area's Existing and Forecasted Electric Load Growth by adding 60 MVA.
- Objective 2: Maintain Substation and Circuit Reliability with Additional Tie and Transformer Capacity.
- Objective 3: Reduce Area Substation Loading to Optimum Operating Conditions.
- Objective 4: Locate the Proposed Project's Facilities within SDG&E Fee-Owned Property, Franchise, or Existing Easements.

Detailed discussion of the project objectives is provided in Chapter 2.0, *Project Purpose and Need*.

3.3 PROPOSED PROJECT LOCATION AND REGIONAL CONTEXT

3.3.1 Location

As shown in Figure 3-1, Regional Location Map, the Proposed Project is situated in northern San Diego County, approximately 35 miles north of downtown San Diego. The proposed Ocean Ranch Substation is located in the southeastern portion of the City of Oceanside, within the Pacific Coast Business Park, which is part of the Rancho Del Oro Specific Plan area. The proposed Ocean Ranch Substation will be located entirely on land owned by SDG&E.

3.3.2 Existing Site Conditions

The proposed substation site is within the developed Pacific Coast Business Park and consists of two parcels: Assessor's Parcel Number 161-512-26 is 5.60 acres and Assessor Parcel Number 161-512-27 is 4.06 acres, for a total of 9.66 acres. Currently the site is located on disturbed land, which consists of nonnative vegetation and soils characterized by physical disturbance. A portion of the site is a graded area covered with gravel. The existing land uses in the vicinity of the Proposed Project are mostly industrial and commercial, with some open, undeveloped land. North, east, and south of the proposed substation site are adjacent office buildings within the Pacific Coast Business Park; west of the site is a United States Postal Service distribution facility and vacant parcels located within the Pacific Coast Business Park.

3.3.3 Site Access

Access to the site will be provided primarily from a cul-de-sac on Rocky Point Drive. Secondary access will be provided from another entry point from Avenida Del Oro. The northerly entrance to the proposed substation site connects to the cul-de-sac at the terminus of Rocky Point Drive. The proposed secondary entrance is located near the intersection of Avenida Del Oro and Avenida De La Plata. SDG&E is requesting access rights from the City of Oceanside to establish the proposed access driveway that will be limited to SDG&E personnel. Both access points into the site will be gated.

3.4 EXISTING REGIONAL ELECTRIC SYSTEM

Within the Proposed Project area, three substations (Morro Hill, San Luis Rey, and Melrose) feed the majority of northern San Diego County's electricity demand. Figure 3-3 illustrates the existing power system in the greater project area.

3.4.1 Existing Power Line

The existing TL 6966 69 kV power line that will be looped-in originates at San Luis Rey Substation and currently terminates at Melrose Substation. TL 6966 resides in an overhead double circuit configuration that shares common overhead pole structures with TL 693 from San Luis Rey Substation which runs easterly to near the proposed Ocean Ranch Substation site. Most of the existing power line route is overhead out of San Luis Rey Substation, prior to transitioning underground on a cable pole located along Avenida De La Plata west of the intersection of Avenida Del Oro/Avenida De La Plata. The underground power line then travels easterly along Avenida De La Plata for approximately 0.3 mile toward Avenida Del Oro.

The existing configuration of the power line with relation to the proposed substation site is described as follows:

- TL 6966 originates at San Luis Rey Substation and terminates at Melrose Substation (refer to Figure 3-3). TL 6966 runs east from San Luis Rey Substation on overhead structures, transitioning underground at a cable pole located on Avenida De La Plata, proceeding easterly along Avenida De La Plata to Avenida Del Oro, south of the proposed substation site.

3.4.2 Existing Substation System

The existing substation facilities currently installed and operating within the vicinity of the Proposed Project are as follows and shown in Figure 3-3:

- **San Luis Rey Substation**. A 230/69/12 kV substation within SDG&E's service territory, located on the northwest corner of the El Camino Real and Mesa Drive intersection in Oceanside. The substation currently has four 69/12 kV, 30 MVA distribution transformers installed and feeds the following 12 kV distribution circuits:
    - C190, C191, C192, C194, C198, C199, C213, C497, C498, C900, C901, C902, C903, C904, and C905.
    - The substation is currently built out to its ultimate configuration with no room for expansion.

- **Melrose Substation**. A 69/12 kV substation within SDG&E's service territory, located on the northeast corner of the Olive Avenue and Melrose Drive intersection in Vista. The substation currently has four 69/12 kV, 30 MVA distribution transformers installed and feeds the following 12 kV distribution circuits:
    - C205, C206, C207, C208, C209, C504, C505, C506, C507, C508, C509, and C821.
    - The substation is currently built out to its ultimate configuration with no room for expansion.
- **Morro Hill Substation**. A 69/12 kV substation within SDG&E's service territory located on the west side of Vandegrift Boulevard, just north of College Boulevard in Oceanside. The substation currently has one 69/12 kV, 12.5 MVA distribution transformer installed and feeds the following 12 kV distribution circuits:
    - C486 and C487.
    - The substation is built out to its ultimate configuration. Due to its proximity to the Marine Corps Base Camp Pendleton to the north and west, and to the San Luis Rey River south and east, the locational constraints of this substation prohibit the routing of circuits north and west of the substation. As such, this substation is a land-locked radial-fed temporary substation with a one-transformer bank (12.5 MVA) capacity. Although this SDG&E-owned substation property has room for potential expansion by moving the existing fence line in order to install more transformers, its location inhibits the construction of more distribution circuits out of the substation and south across the San Luis Rey riverbed to the identified load center. Due to this limiting factor, Morro Hill would not be able to meet SDG&E's needs or serve the electric distribution load growth that would be served by the Proposed Project.

3.5 PROPOSED PROJECT COMPONENTS

Each of these Proposed Project components are discussed in detail in the following section. As discussed in Chapter 2.0, *Project Purpose and Need*, these components are required to maintain system reliability.

3.5.1 Ocean Ranch Distribution Substation

The proposed substation and power line system electrical configuration are shown in Figure 3-4. The proposed Ocean Ranch Substation facility is planned to occupy the entire site (9.66 acres), which will include the facility's water quality basins, landscaping, and internal maintenance roads. The proposed substation will be a low profile design enclosed by an approximately 10-foot-tall, "La Paz" or similar brown masonry perimeter wall.

With regard to the Proposed Project, two arrangements—the initial and ultimate—are discussed in this section. The steel structures within the substation will be comprised of galvanized steel, while the transformers, breakers, switchgear, and capacitors will be painted American National Standards Institute 70 Grey. The control shelter and screen wall will be constructed from "La Paz" or similar brown masonry blocks and will include a welded metal roof.

The initial configuration of the substation is proposed to have a capacity of 60 MVA and include the following equipment:

- Two 69 kV low profile underground power line terminations.
- Two 69 kV low profile main bus sections.
- Twelve 69 kV low profile disconnect switches.
- Five 69 kV circuit breakers.
- Two low profile 69/12 kV, 30 MVA transformer banks.
- Two quarter sections of 12 kV metal clad switchgear.
- Two 12 kV, 4-step, 7,200 kV-ampere reactive (kVAR) capacitor banks.
- One 20-foot-wide by 40-foot-long by 11-foot-tall masonry block control shelter to enclose all protection relays, controls, supervisory control and data acquisition (SCADA), and telecommunication equipment.
- Two points of entry via two 30-foot-wide slide gates (main entry) and one 20-foot-wide slide gate (secondary access).

At its ultimate configuration, the substation is planned to be a 120 MVA, 69/12 kV low profile distribution substation. The ultimate configuration is proposed to include the following components:

- Four 69 kV low profile underground power line terminations.
- Two 69 kV low profile main bus sections.
- Fourteen 69 kV low profile disconnect switches.
- Nine 69 kV circuit breakers.
- Four low profile 69/12 kV, 30 MVA transformer banks.
- Four quarter sections of 12 kV metal clad switchgear.
- Four 12 kV, 4-step, 7,200 kVAR capacitor banks.
- Two 12 kV, 4-step, 7,200 kVAR reactor banks.
- Battery storage.
- One 20-foot-wide by 40-foot-long by 11-foot-tall masonry block control shelter to enclose all protection relays, controls, SCADA, and telecommunication equipment.
- Two points of entry via two 30-foot-wide slide gates (main entry) and one 20-foot-wide slide gate (secondary access).

The proposed substation will be designed and constructed with global containment to prevent any oil resulting from accidental leaks from the installed equipment from leaving the substation perimeter. The global oil containment system that is designed to contain 110 percent of the oil capacity of the installed equipment (which contains the largest amount of oil) will be installed inside the substation to collect any oil resulting from accidental equipment leaks. Under the initial and ultimate configuration, each low profile transformer will contain approximately 10,400 gallons of oil (varies by manufacturer).

Substation lighting will be provided by a mixture of high-pressure sodium, metal halide, and LED lights that will be installed to adhere to the following SDG&E standards:

- Provide enough light for a safe entry and exit from the substation.
- Allow for safe driving around busses/racks, corners, and roadways.
- Allow for a preliminary visual inspection of the substation.

With the exception of the gate entry lights, which will remain on at night for safety purposes, the remaining substation lighting will not be turned on unless it is required for nighttime work and/or an emergency. One light will be installed at the main gate, one light will be installed at the secondary access point, one light will be installed on each side of the control shelter, and a minimum of two lights will be installed on each substation wall. All on-site lighting will be oriented downward to minimize glare on surrounding property.

As described previously, an approximately 10-foot-tall masonry wall will enclose the entire substation. The wall will be set back from the street edges of the site, with landscaped areas in front of it. The landscaping will be similar in character to the existing streetscape and landscaped areas within the business park, and will include trees and shrubs. Two approximately 10-foot-tall by 30-foot-wide sliding gates and one approximately 10-foot-tall by 20-foot-wide sliding gate will be installed within the perimeter wall to provide primary and secondary access to the substation. The gates will be constructed from chain-link material and will be designed to accommodate standard brown slats. Barbed wire will be installed horizontally along the interior of the wall and gates so as not to be visible from the exterior of the substation. The primary access will be from Rocky Point Drive via the existing cul-de-sac. The secondary access entry to the substation will be at Avenida Del Oro on the southwest side of the substation property. Appropriate signage will be posted on the substation wall and gates, in accordance with federal, state, and local safety regulations.

The access road within the proposed Ocean Ranch Substation will be asphalt-paved with an approximate width of 20 feet. The road will connect the primary and secondary access to the control shelter, which will be located in the center of the proposed Ocean Ranch Substation. This interior road will be approximately 940 feet long, occupying approximately 0.4 acres and circling various installed equipment throughout the interior perimeter wall.

A detailed drawing that depicts the proposed Ocean Ranch Substation layout is included as Figure 3-5. The initial configuration general arrangement of the proposed Ocean Ranch Substation is shown on Figure 3-6, and the ultimate configuration general arrangement is shown on Figure 3-7. A profile sketch of the proposed substation is shown on Figure 3-8.

Site development includes, but is not limited to the following:

- Site development for the 69/12 kV substation pad and future use pad directly adjacent to the substation;
- Minimal retaining walls as needed;
- Replacement of the existing temporary desilting basins with permanent construction of two flow-through planter basins;
- Storm drain system and connection to proposed flow-through planter basins;
- Approximately 1,200 linear feet of masonry block screening walls; and
- 18,800 square feet of interior access roads and/or driveways.

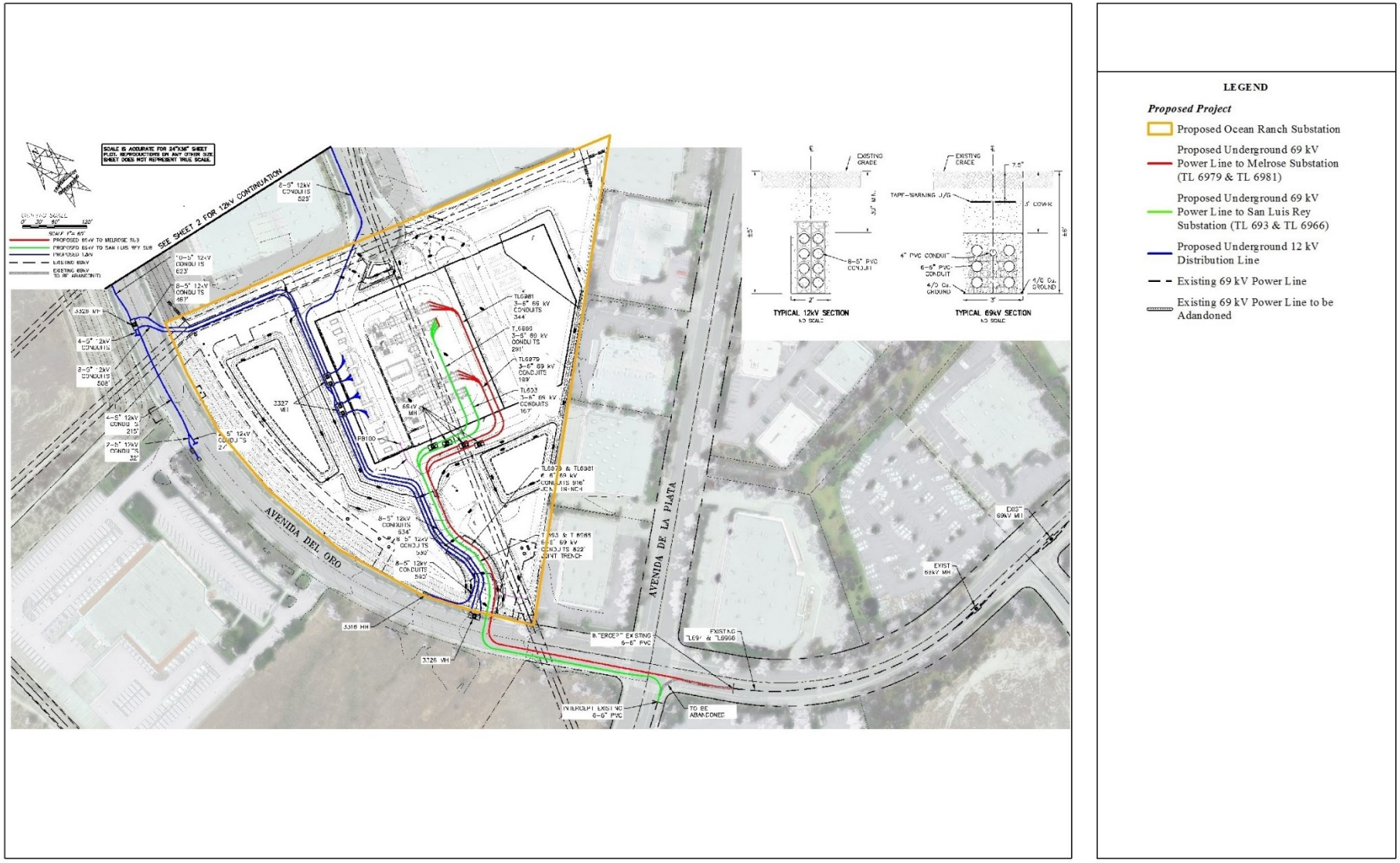


Figure 3-5 Proposed Ocean Ranch Substation Ultimate Layout

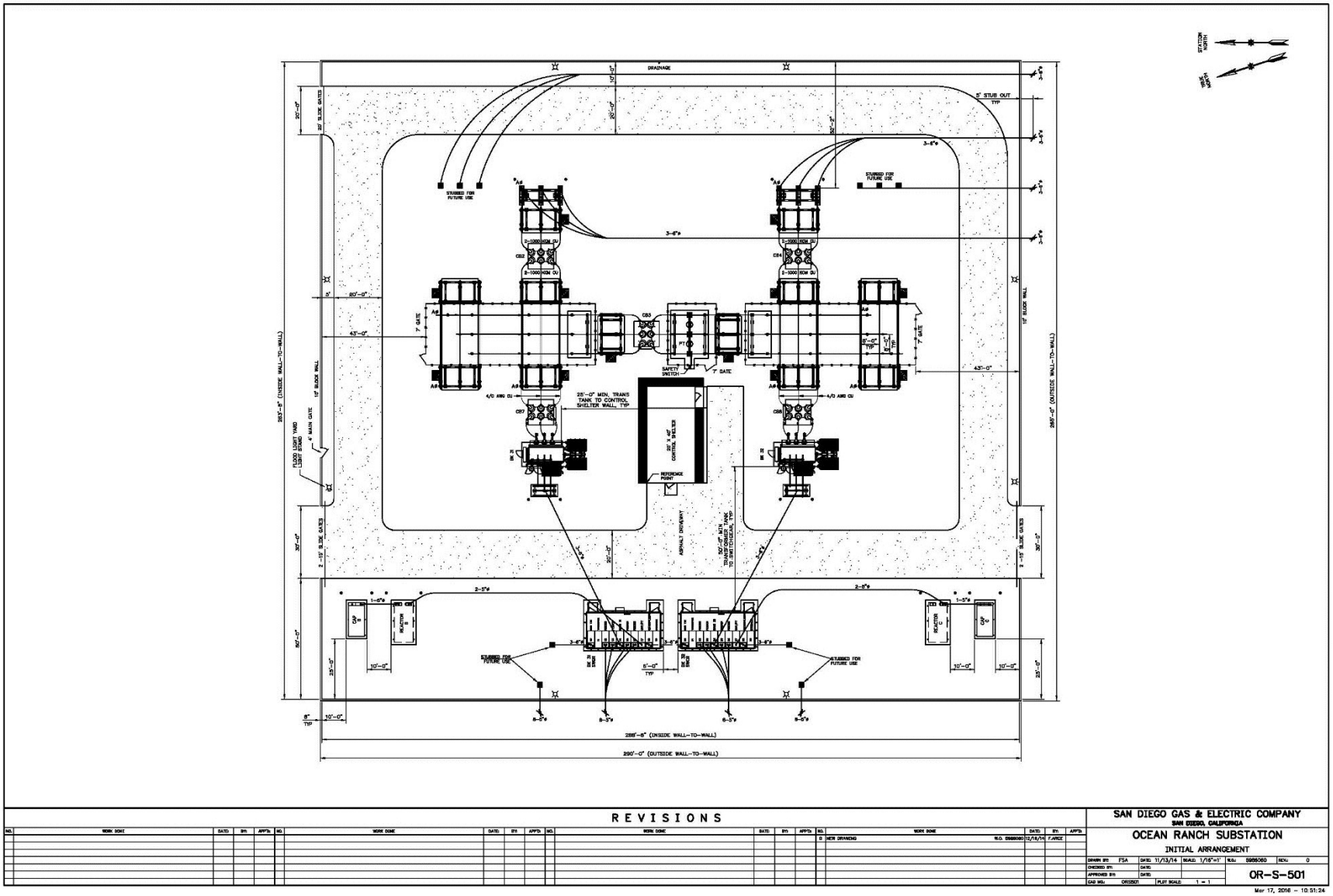


Figure 3-6 Proposed Ocean Ranch Substation Initial Arrangement

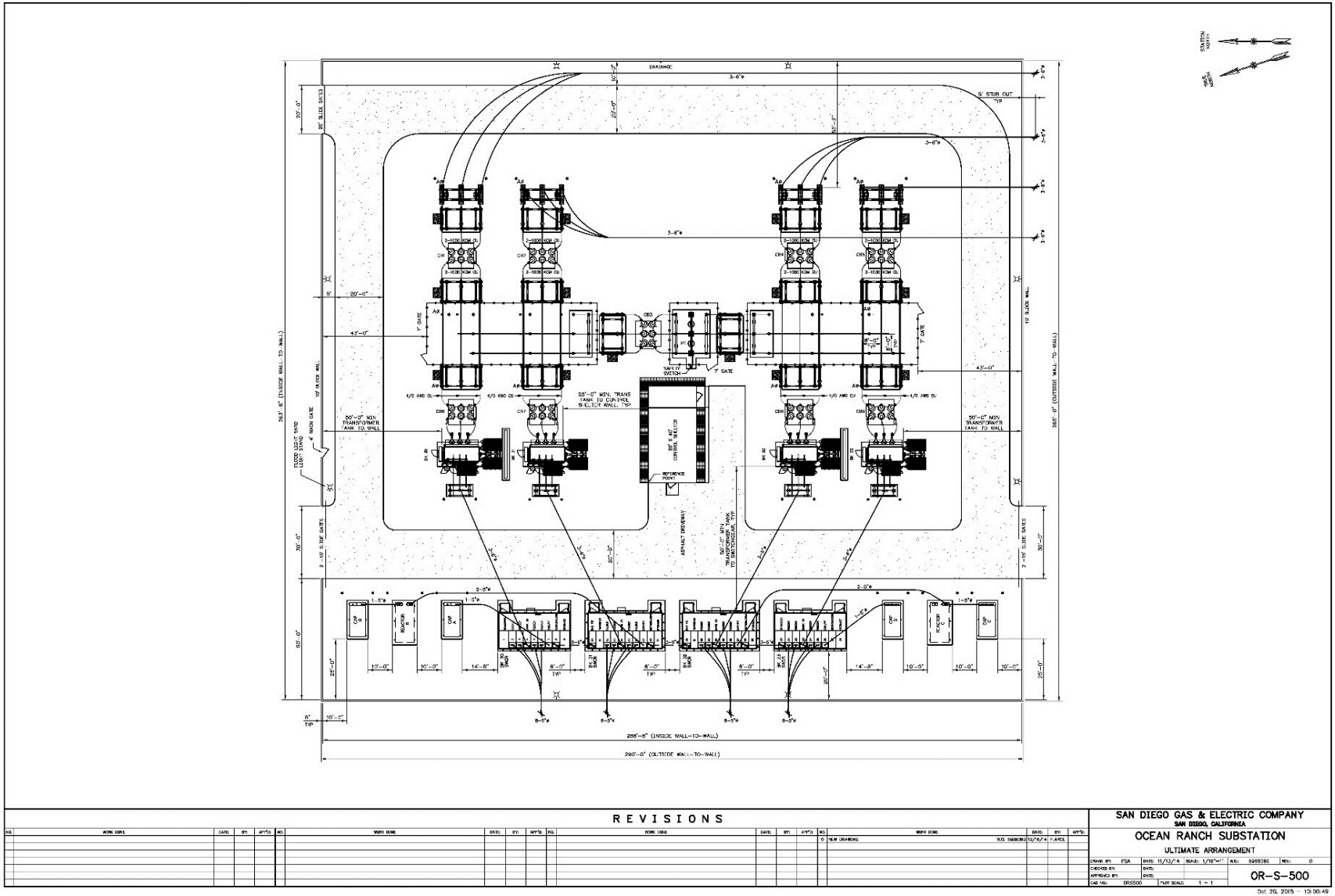


Figure 3-7 Proposed Ocean Ranch Substation Ultimate Arrangement

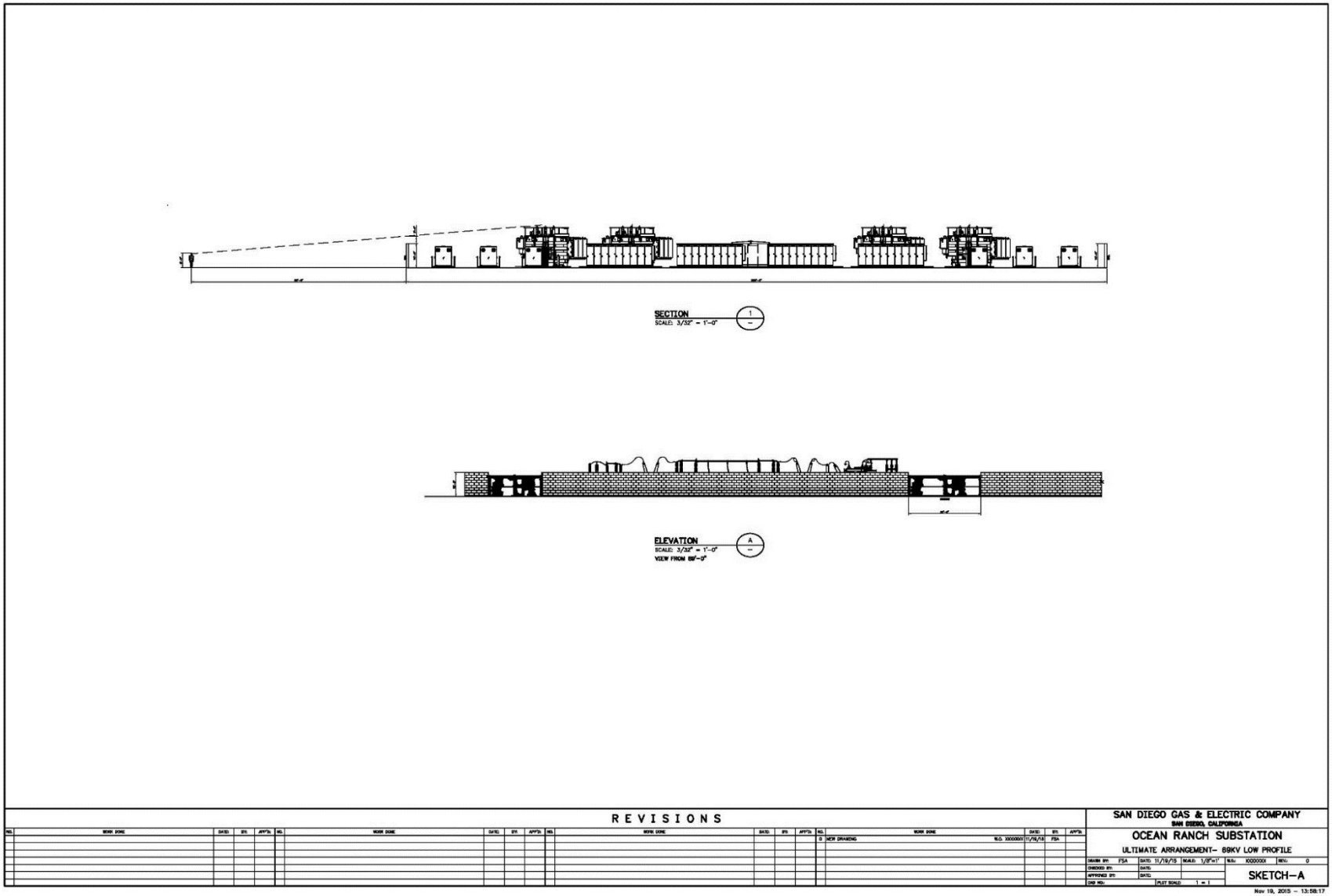


Figure 3-8 Proposed Ocean Ranch Substation Ultimate Arrangement-69 kV Low Profile

3.5.2 Power Line TL 6966 Loop-In

In order to connect in to the proposed Ocean Ranch Substation, the existing underground segment of power line TL 6966 will be intercepted at the intersection of Rancho Del Oro and Avenida De La Plata and extended underground along Rancho Del Oro to the proposed substation site. This proposed underground segment will consist of an underground duct bank traversing in a northerly direction along Rancho Del Oro from the Avenida De La Plata and Rancho Del Oro intersection to the proposed substation site, for a combined total distance of approximately 1,500 feet. The proposed underground segment will create two circuits into the proposed Ocean Ranch Substation. The underground power line within the constructed duct bank connecting into the proposed Ocean Ranch Substation from the Melrose Substation will be relabeled as TL 6979. The underground power line within the constructed duct bank connecting into the proposed substation from San Luis Rey Substation will continue to be labeled as TL 6966. Additionally, approximately two vaults, one per underground power line, shall be installed within the proposed substation property area (refer to Figure 3-2). An offset vault design configuration (one circuit per vault) will be implemented to maintain reliability and for maintenance.

The total length of the new underground power line is approximately 1,500 feet of which approximately 1,000 feet is within the public road ROW. The remainder is within SDG&E ROW or franchise position. The existing power line consists of one existing TL to be modified:

- Existing TL 6966 – San Luis Rey Substation to Melrose Substation (overhead and underground).

The two final loop-in TL re-configurations will be as follows:

- Re-configured TL 6966 – San Luis Rey Substation to Ocean Ranch Substation (overhead and underground).
- Re-configured TL 6979 – Melrose Substation to Ocean Ranch Substation (underground)

Open trench construction will be used in public roadways to install the new loop-in. The width of the construction corridor will be approximately 20 to 30 feet wide, and is expected to require the temporary closure of one to two traffic lanes; however, SDG&E will work with the local jurisdiction and comply with the required encroachment permit. During construction, the trench for placement of the loop-in will be 3 feet wide and will run between vaults and the substation (Figure 3-9 and Figure 3-10).

A minor segment of existing underground 69 kV power line would be abandoned at the intersection of Avenida Del Oro and Avenida De La Plata to accommodate the new interception points for the proposed underground TLs, as shown in Figure 3-5.

One pulling site will be required to pull underground cable. The pulling site will be roughly 50 feet long by 30 feet wide (refer to Section 3.6.1.4, Pulling Sites). No grading is anticipated at the pulling site.

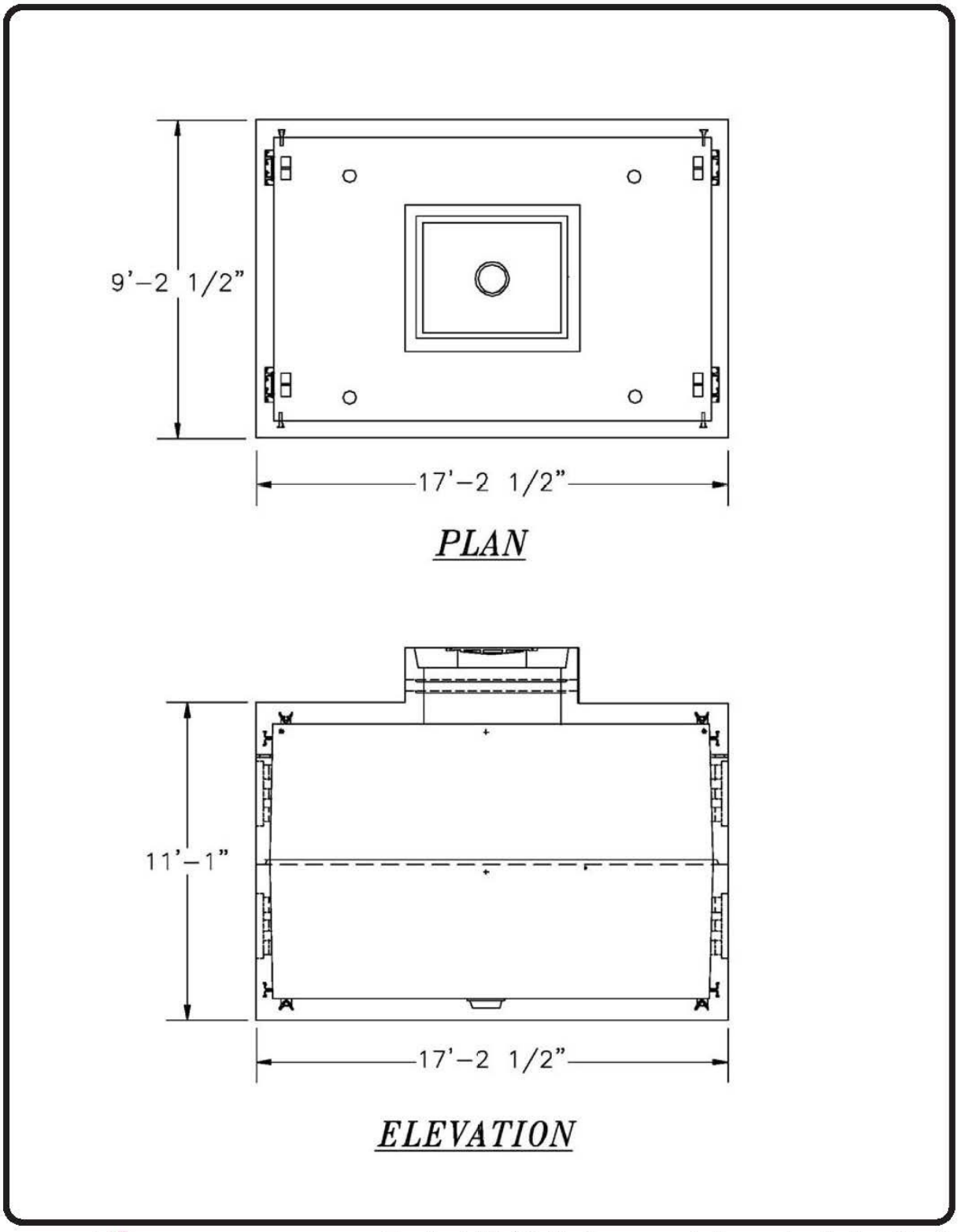


Figure 3-9 Typical 69 kV Underground Vault

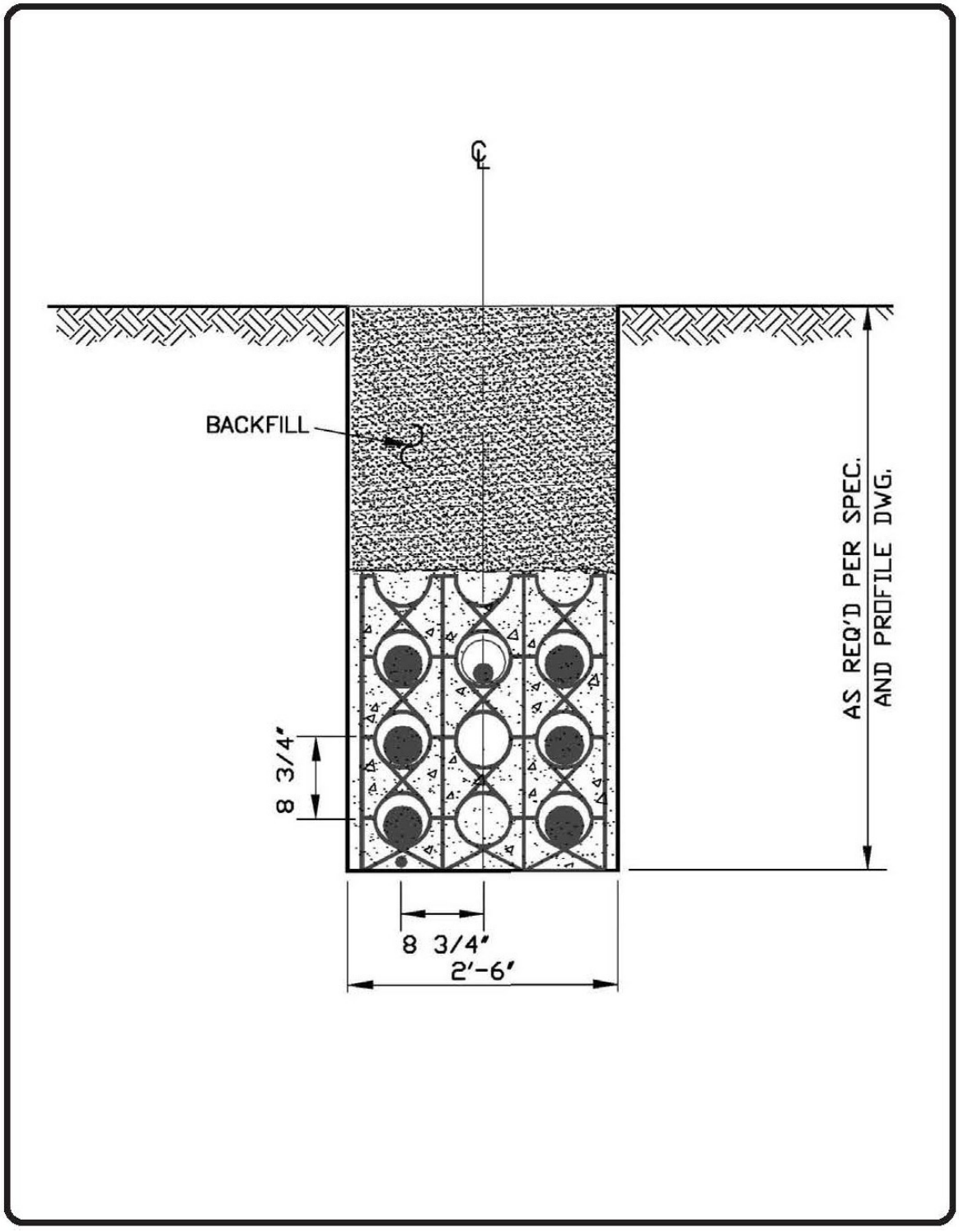


Figure 3-10 Typical 69 kV Underground Duct Bank

3.5.3 12 kV Distribution System

The Proposed Project will include installing approximately 4,650 feet of new underground duct banks to facilitate relocation of the existing distribution circuits (C509, C903, C904, and C905) from existing substations to the proposed Ocean Ranch Substation. Each underground duct bank will be comprised of four 8-5 inch diameter polyvinyl chloride conduits encased in concrete. The conduit duct packages for the 12 kV circuits and telecommunications will be arranged in two columns, spaced vertically and horizontally from the conduit centerline by 7.5 inches.

The proposed underground segment of the 12 kV distribution line will require installation of four new manholes and one new handhole. Two new manholes will be located within the proposed Ocean Ranch Substation site and two will be located within franchise positions along Avenida Del Oro. One new handhole will be located at the southern end of the proposed substation site.

The horizontal separation between adjacent duct packages will be 5 feet from centerline to centerline and the duct package will have an average depth of approximately 5 feet (Figure 3-11). The conduit duct packages will continue and intercept existing conduit in Avenida Del Oro. All distribution circuits will be installed underground outside of the proposed Ocean Ranch Substation within franchise position (Figure 3-12).

The proposed underground 12 kV distribution line will be approximately 4,650 feet, located primarily on the proposed substation site, with a portion extending off-site to Rocky Point Drive and Avenida Del Oro. The new 12 kV distribution line going north on Rocky Point Drive and Avenida Del Oro will intercept existing handholes at Windansea Street. Four 12 kV underground distribution circuits will be constructed. All four underground distribution circuits will be routed to four proposed manholes and one handhole, extending along Avenida Del Oro tying into the existing underground system serving the area.

A portion of the existing circuits will be offloaded to the proposed circuits. Four initial duct packages will be installed: two will head south and two will go directly west onto Avenida Del Oro. The first circuit, C1801, will be routed from the northern manhole on Avenida Del Oro south to a new pad-mounted switch located on Avenida Del Oro. C1801 will ultimately connect to existing C509. The second circuit, C1802, will be routed from the northern manhole on Avenida Del Oro north to a new pad-mounted switch where it will ultimately connect to existing C903. The third circuit, C1803, will be routed from the northern manhole on Avenida Del Oro north to a new padmount switch and will ultimately connect to existing C904. The fourth circuit, C1804, will be routed from the northern manhole on Avenida Del Oro north to a new padmount switch located north of Windansea Street on Old Grove Road and will ultimately connect to existing C905. Refer to Table 3-1, Distribution Relocation Summary and Figure 3-2.

The Proposed Project will provide additional circuits to facilitate load transfers and distribute circuit load. The electric distribution circuits exiting the substation will be installed in public ROW or within the franchise position of City of Oceanside public streets. The proposed 12 kV system will be designed to accommodate a 120 MVA substation. The configuration of the proposed four circuits will cut over to existing circuits originating from the proposed Ocean Ranch Substation and have the following equipment installed:

- 7,000 feet of trench conduit 8-5 (improved street) including manholes.
- 2,000 feet of cable and connections no. 1000 kcmil copper (CU) 3 ph 15 kV.
- 3,500 feet of cable and connections no. 1000 kcmil aluminum (AL) 3 ph 15 kV.
- Four switch trayer 4-way with SCADA padmount.
- Four capacitor pad-mount SCADA 1,200 kVAR.

Typical drawings of the concrete pads, switches, and capacitors have been included as Figure 3-13, Figure 3-14, and Figure 3-15. Table 3-2 provides information on the number and type of distribution structures installed as part of the Proposed Project.

Table 3-1. Distribution Relocation Summary

Existing Distribution Circuit Number	Approximate Interception Point	Proposed Distribution Circuit Number
C509	800 feet	C1801
C903	800 feet	C1802
C904	1,400 feet	C1803
C905	2,500 feet	C1804

Source: SDG&E 2015.
Notes: Table contents based upon preliminary engineering and subject to change.

Table 3-2. Distribution System Structures

Structure Type	Amount Installed
12 kV underground distribution circuits	4
Underground duct banks	4,650 feet
Manholes	4
Handholes	1

Source: SDG&E 2015.
Notes: Table contents based upon preliminary engineering.

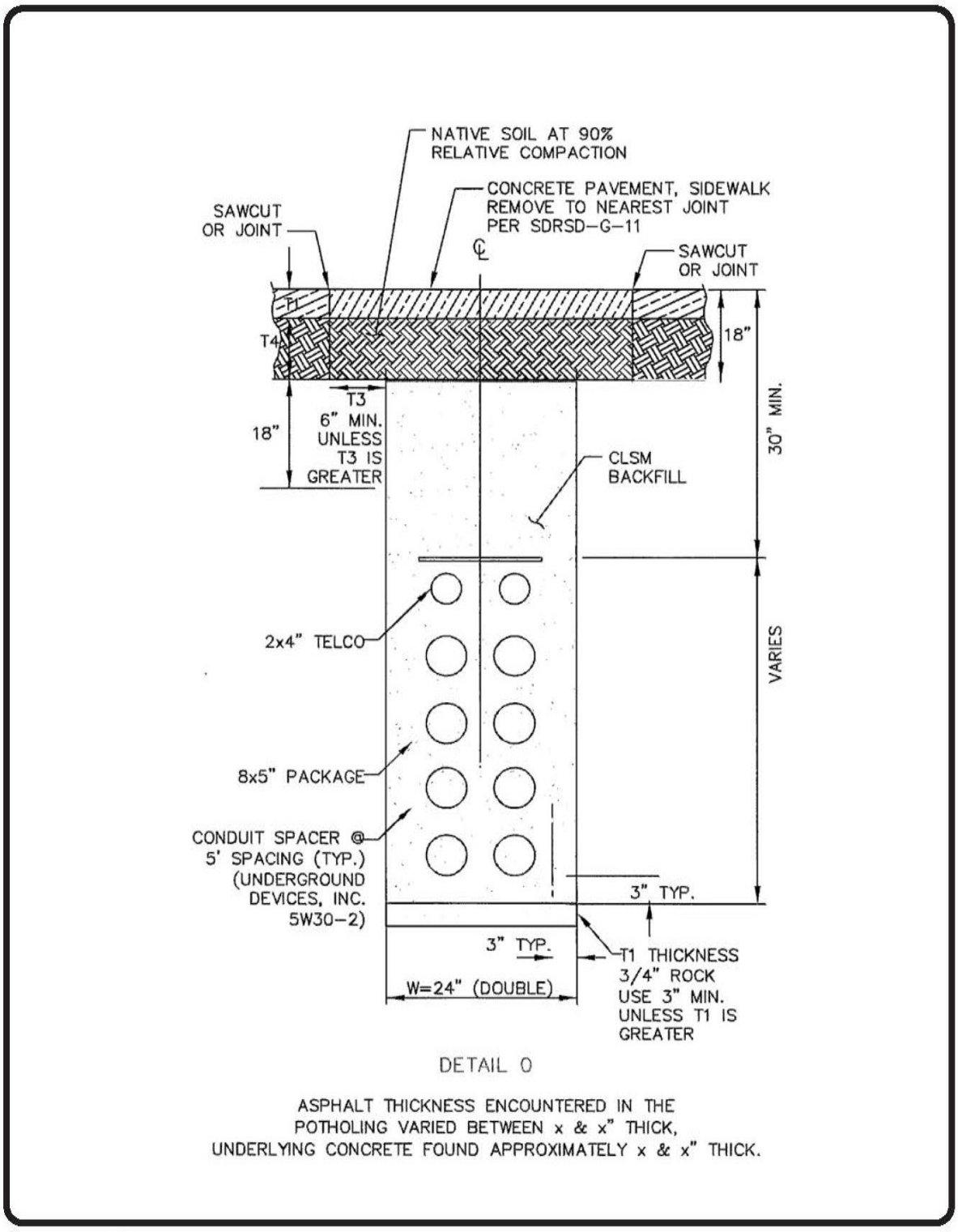


Figure 3-11 Typical 12 kV Underground Duct Bank

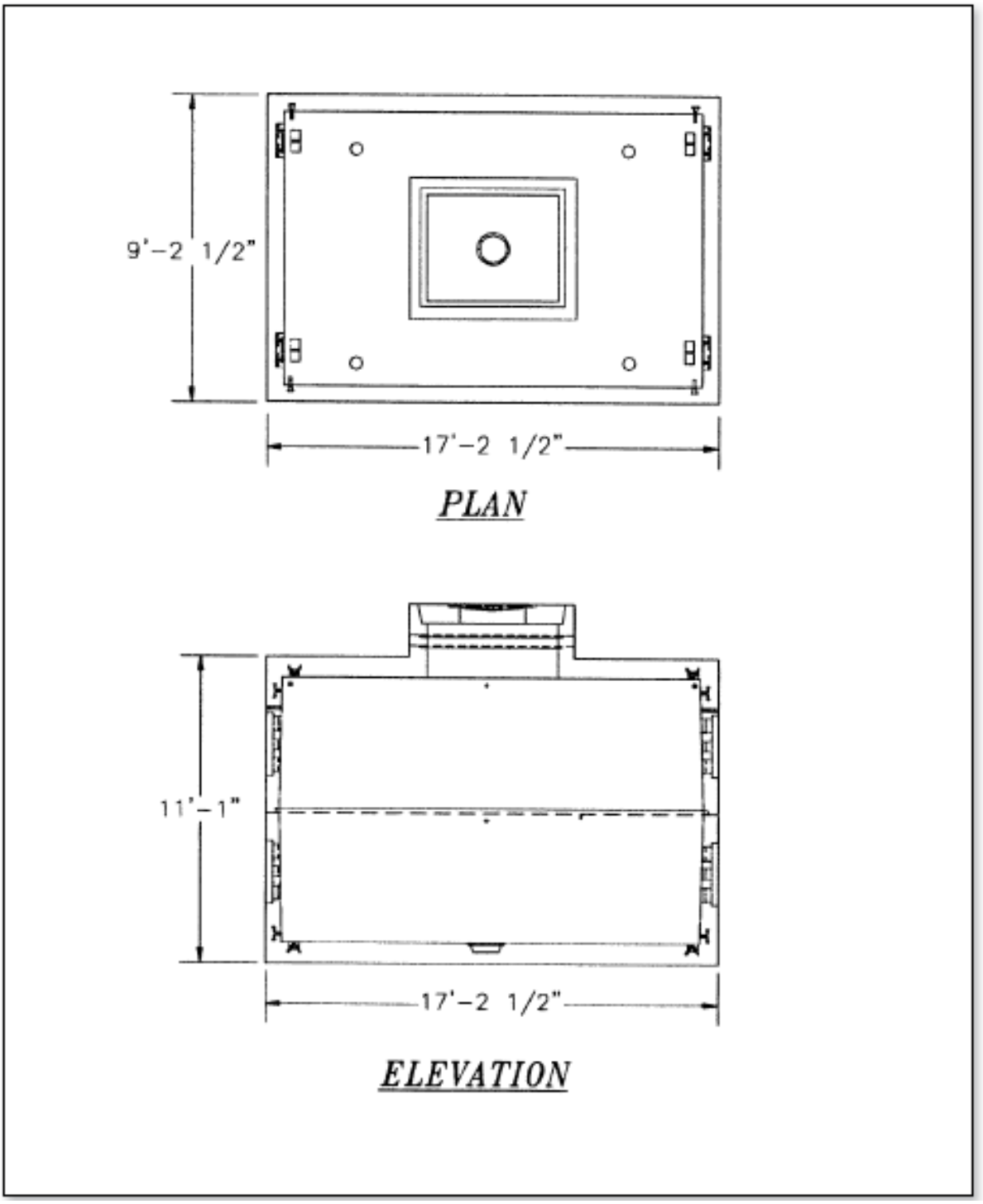


Figure 3-12 Typical 12 kV Underground Manhole

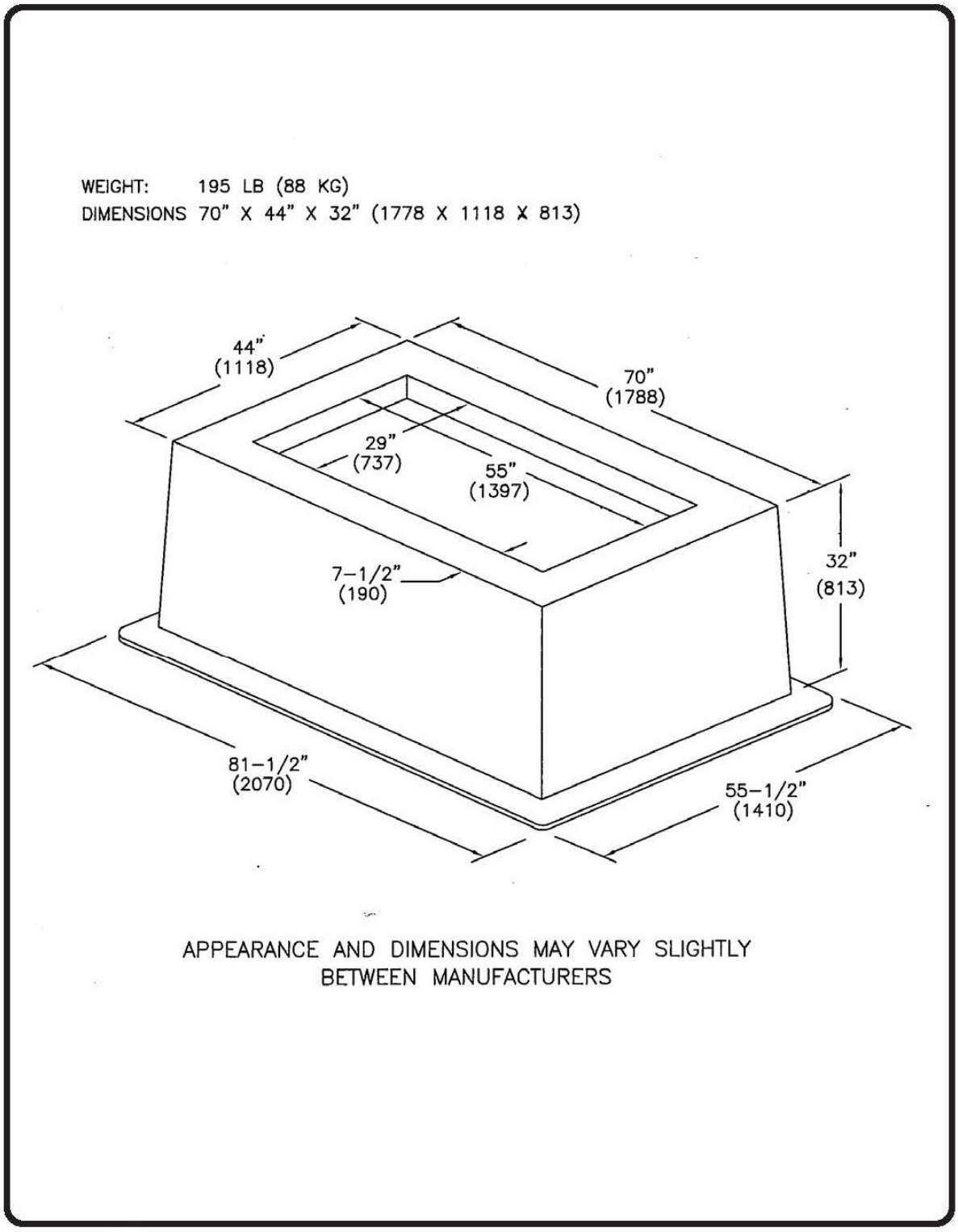


Figure 3-13 Typical Switch and Capacitor Pad

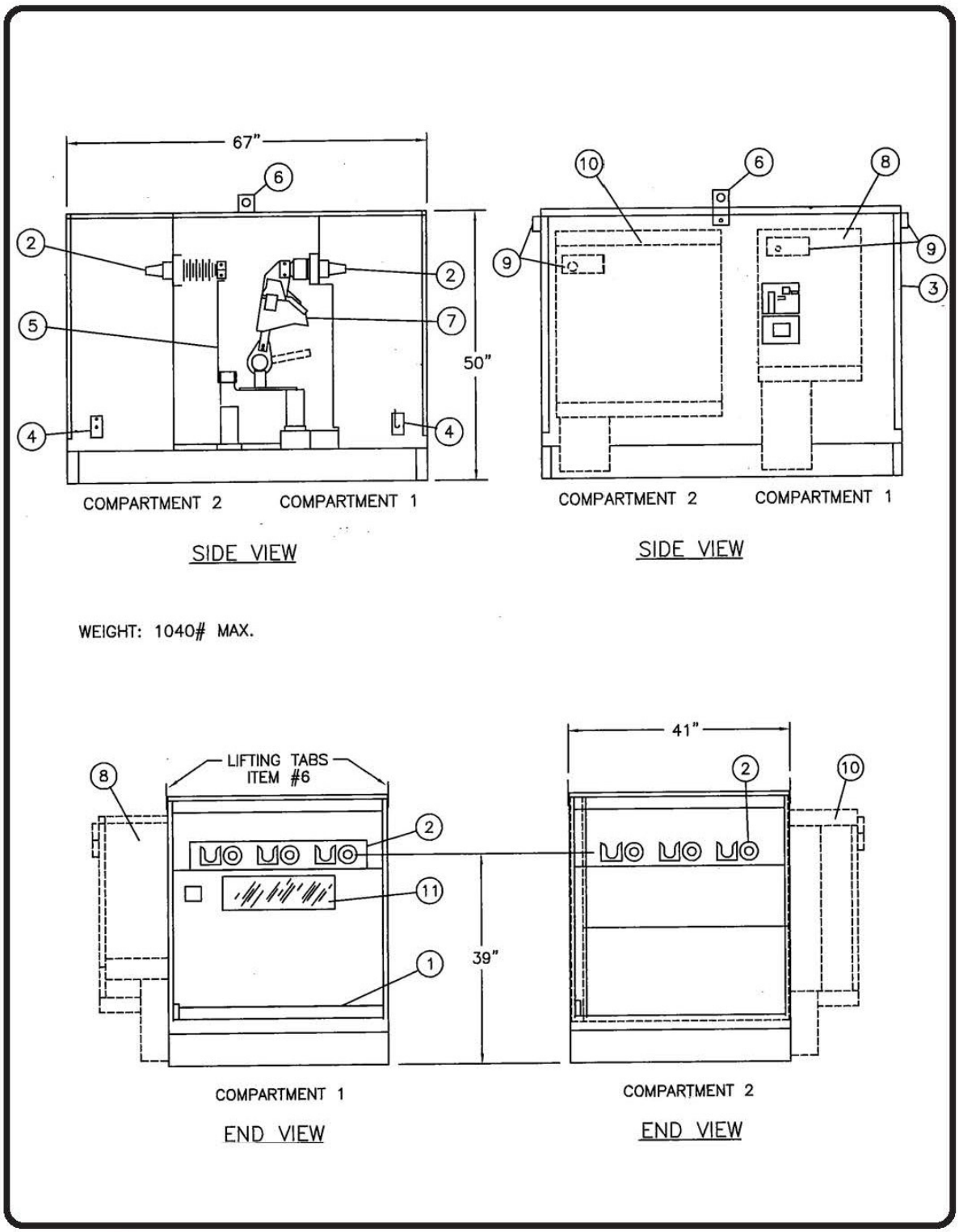


Figure 3-14 Typical 12 kV Switch

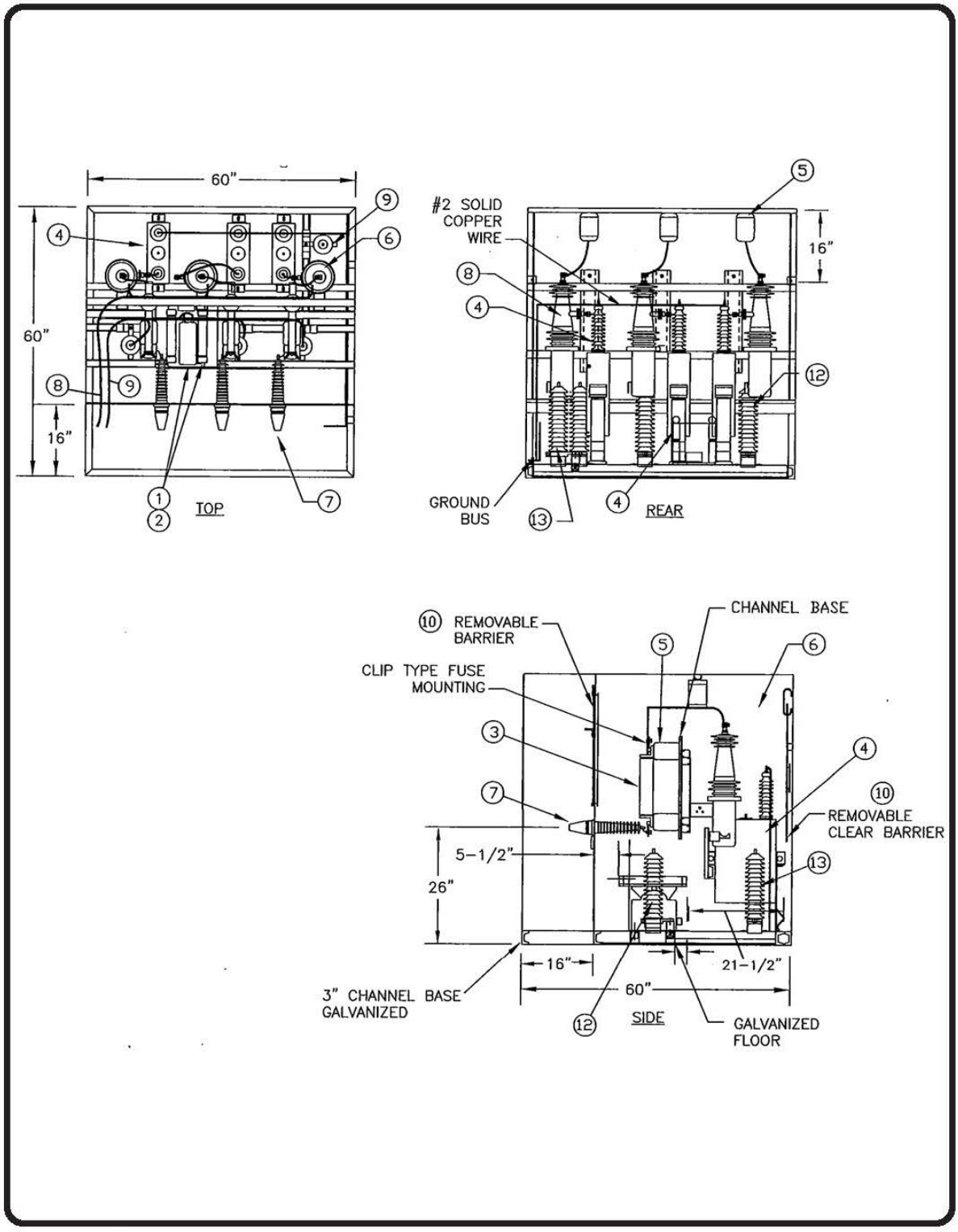


Figure 3-15 Typical 12 kV Capacitor

3.5.4 Telecommunication Systems

The telecommunication system will be composed of fiber optic cable and microwave radio, and AT&T communication service to provide reliable communications to the proposed substation. The telecommunication services facilitate the remote monitoring, control, and operation of the substation equipment and provide teleprotection relaying, telemetry, telephone, modem, access control, and video monitoring. In order to connect the proposed Ocean Ranch Substation to these substation systems, fiber optic cable, microwave radio, and AT&T services will be installed.

The fiber optic cable will be installed in the underground duct structures connecting the proposed Ocean Ranch Substation.

A 40-foot monopole will be installed in the southwest corner of the proposed Ocean Ranch Substation site for the microwave radio communication system. A 2-foot-diameter antenna will be mounted on the monopole and point west to provide a communications link to the San Luis Rey Substation. A conduit duct will be installed on the site between the monopole and the substation. A typical drawing of the monopole is included in Figure 3-16.

AT&T services will enter the site from a public street near the substation site. A conduit duct will be installed from the substation to the property line to intercept the AT&T duct structure. Two pad-mounted pedestals, approximately 3-feet high, will be installed to enclose the communications equipment, which will be located at or near the property line. Typical drawings of the proposed underground duct banks and handholes have been included as Figure 3-17 and Figure 3-18.

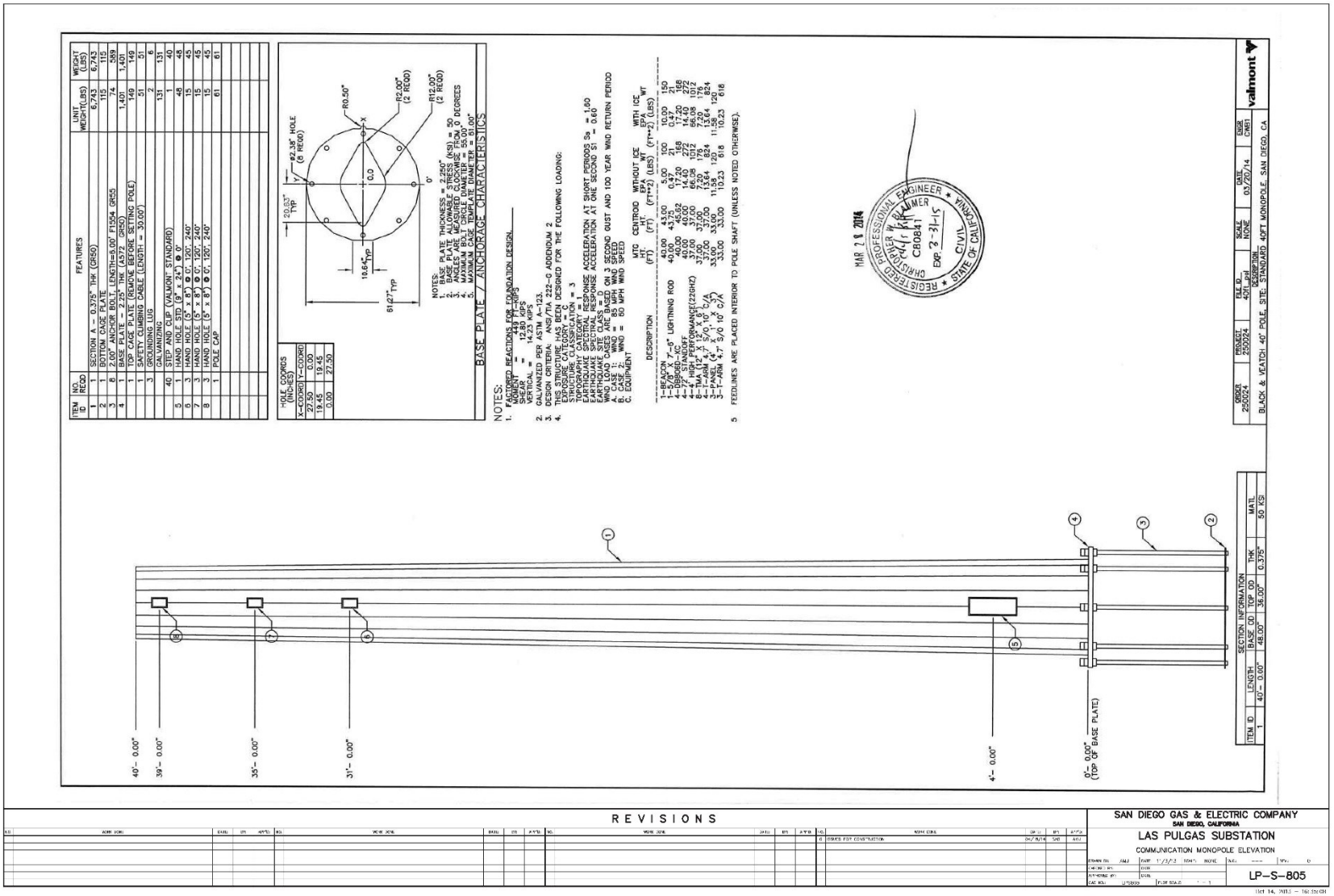
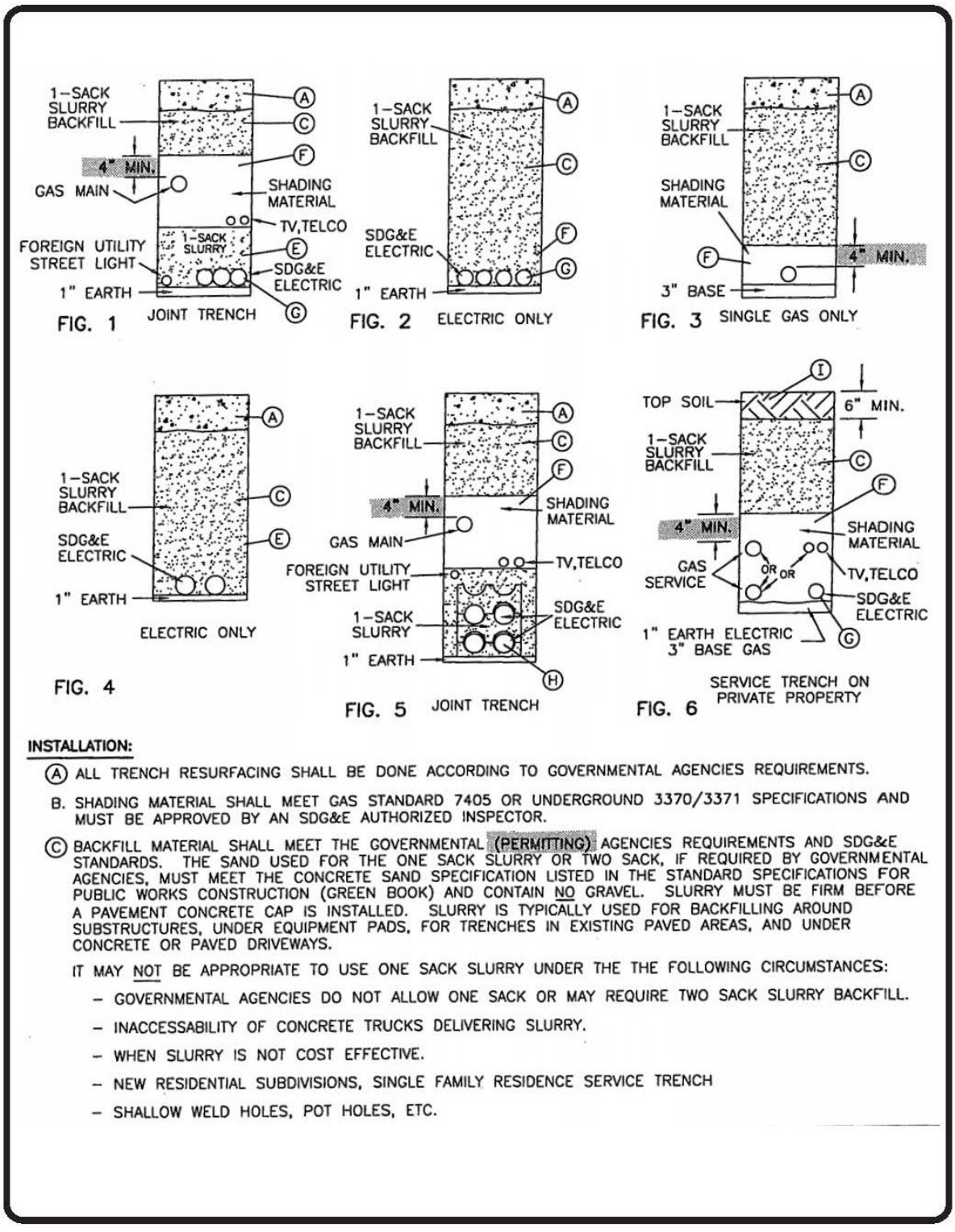


Figure 3-16 Typical Telecommunication Monopole



INSTALLATION:

(A) ALL TRENCH RESURFACING SHALL BE DONE ACCORDING TO GOVERNMENTAL AGENCIES REQUIREMENTS.

B. SHADING MATERIAL SHALL MEET GAS STANDARD 7405 OR UNDERGROUND 3370/3371 SPECIFICATIONS AND MUST BE APPROVED BY AN SDG&E AUTHORIZED INSPECTOR.

(C) BACKFILL MATERIAL SHALL MEET THE GOVERNMENTAL (PERMITTING) AGENCIES REQUIREMENTS AND SDG&E STANDARDS. THE SAND USED FOR THE ONE SACK SLURRY OR TWO SACK, IF REQUIRED BY GOVERNMENTAL AGENCIES, MUST MEET THE CONCRETE SAND SPECIFICATION LISTED IN THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREEN BOOK) AND CONTAIN NO GRAVEL. SLURRY MUST BE FIRM BEFORE A PAVEMENT CONCRETE CAP IS INSTALLED. SLURRY IS TYPICALLY USED FOR BACKFILLING AROUND SUBSTRUCTURES, UNDER EQUIPMENT PADS, FOR TRENCHES IN EXISTING PAVED AREAS, AND UNDER CONCRETE OR PAVED DRIVEWAYS.

IT MAY NOT BE APPROPRIATE TO USE ONE SACK SLURRY UNDER THE THE FOLLOWING CIRCUMSTANCES:

- GOVERNMENTAL AGENCIES DO NOT ALLOW ONE SACK OR MAY REQUIRE TWO SACK SLURRY BACKFILL.
- INACCESSABILITY OF CONCRETE TRUCKS DELIVERING SLURRY.
- WHEN SLURRY IS NOT COST EFFECTIVE.
- NEW RESIDENTIAL SUBDIVISIONS, SINGLE FAMILY RESIDENCE SERVICE TRENCH
- SHALLOW WELD HOLES, POT HOLES, ETC.

Figure 3-17 Typical Telecommunication Underground Duct Bank

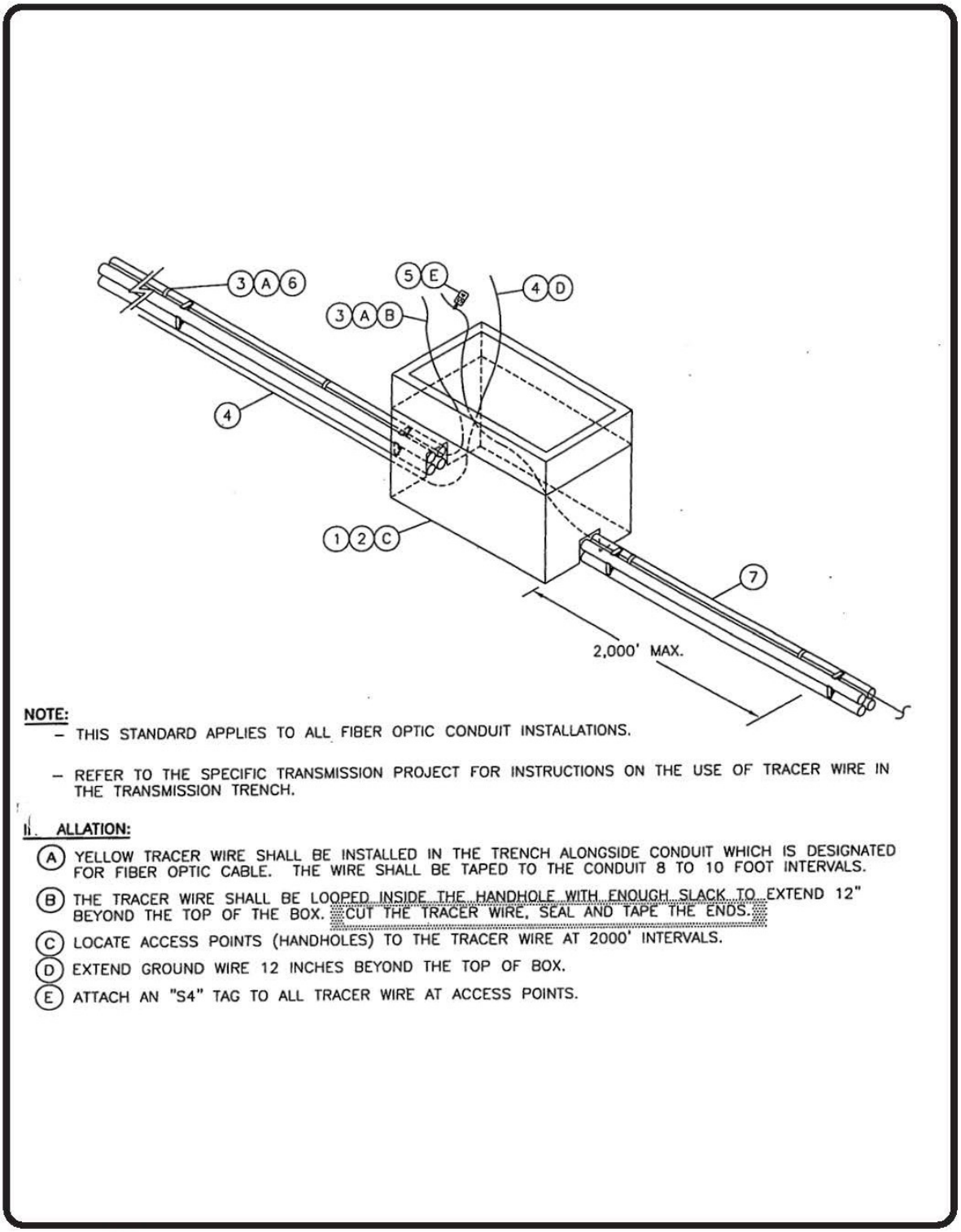


Figure 3-18 Typical Telecommunication Underground Handhole

3.6 CONSTRUCTION

This section includes an overview of the construction activities required for the Proposed Project. Specifically, this section describes typical construction methods for underground facilities, and substation construction. Staging and work areas will be also required for construction of new facilities, removal of existing facilities, and storage and staging of construction equipment and materials as described in Section 3.6.1, Work Areas.

3.6.1 Work Areas

Temporary workspace will be required for each Proposed Project component in order to facilitate construction. These anticipated workspace requirements are described in detail in the following subsections and summarized in Table 3-3, Summary of Temporary Work Areas. Temporary work areas will all be accessed by construction equipment using existing access roads. All work areas will be restored as near to preconstruction conditions as possible following the completion of construction. Further discussion of the restoration process is provided in Section 4.4, *Biological Resources*.

Table 3-3, Summary of Temporary Work Areas, outlines the estimated total work area required for construction of the Proposed Project.

Table 3-3. Summary of Temporary Work Areas

Work Area Type	Estimated Number	Estimated Total Area (Acres)
Staging Yards	4 areas	17.50
Underground Construction (69 kV loop-in)	1,500 feet (length)	1.10
Underground Construction (12 kV distribution line)	4,650 feet (length)	3.20
	Total	**21.80**

Source: SDG&E 2015.

3.6.1.1 Staging Yards

SDG&E has identified staging yards commensurate with the size, location, and scope of the Proposed Project. Previously used staging yards were identified, as well as large undeveloped areas near the Proposed Project that have been previously disturbed and/or graded. While SDG&E has exercised reasonable diligence in identifying potential construction staging yards, there is no guarantee that the identified staging yards will be available by the time the Proposed Project is set to begin construction because the Proposed Project is in an area with several vacant lots available for development. If previously identified staging yards are not available at the time of construction, several alternate locations within the general vicinity are potentially available. These sites possess similar characteristics (graded, disturbed habitat, industrial land uses), that would satisfy project needs. Prior to use, SDG&E would ensure that these alternative parcels would be reviewed for environmental sensitivity such as sensitive species or habitats to ensure that their use would not result in any significant environmental impacts.

Four staging yards, which will accommodate the majority of construction equipment, vehicles, personnel, and material staging, have been identified as discussed below. These temporary staging areas include a total area of approximately 17.5 acres:

- The Corporate Center staging yard is approximately 11.5 acres of disturbed habitat located north of Ocean Ranch Boulevard and south of Mesa Drive.
- The USPS staging yard is approximately 5 acres of undeveloped land, located just south of the USPS building and to the west of Ocean Ranch Substation site. This area is composed of non-native grassland and disturbed non-native grassland.
- The San Luis Rey staging yard is approximately 0.5 acre of paved, fenced area with an existing access road located next to the existing San Luis Rey Substation.
- The Melrose staging yard is approximately 0.5 acre of paved, fenced area with an existing access road located next to the existing Melrose Substation and approximately 3 miles away from the proposed Ocean Ranch Substation.

Staging yards may be used for refueling vehicles and construction equipment by a mobile fueling truck. In addition, other activities performed at the staging areas may include assembly of project components, open storage of material and equipment, construction trailers, portable restrooms, parking, lighting and may include generator use for temporary power supply. Construction workers will typically meet at the staging yard each morning and park their vehicles at the yard. In-ground fencing will be installed at the staging yards wherever it is not already installed. Gravel, class II base, or other best management practices (BMPs) may be used to line the ground at staging yards to avoid creation of unsafe mud conditions and unnecessary sediment transport off-site.

3.6.1.2 Existing SDG&E Material Storage Yards

Materials would be initially delivered to existing SDG&E facilities, before being transported to the Proposed Project site. No improvements would occur at these sites related to the Proposed Project. The existing material storage yards that will be used include:

- Kearny Construction and Operation Center is approximately 18.6 acres, located approximately 0.8 miles west of Interstate 15, 0.5 mile east of State Route 163, and 0.15 mile north of Clairemont Mesa Boulevard (Figure 3-19). It is located approximately 28 miles from the proposed Ocean Ranch Substation.
- North Coast Construction and Operations Center is approximately 15.2 acres, located in Carlsbad, near the intersection of Carlsbad Boulevard and Cannon Road. (Figure 3-20). It is located approximately 6 miles from the proposed Ocean Ranch Substation.
- Northeast Construction and Operations Center is approximately 25.1 acres, located in Escondido, California, north of Auto Park Way and south of West Mission Road (Figure 3-21). It is located approximately 12 miles from the proposed Ocean Ranch Substation.

These existing SDG&E facilities are paved, fenced land with security. Upon the completion of final engineering, additional SDG&E facilities may be identified for use.

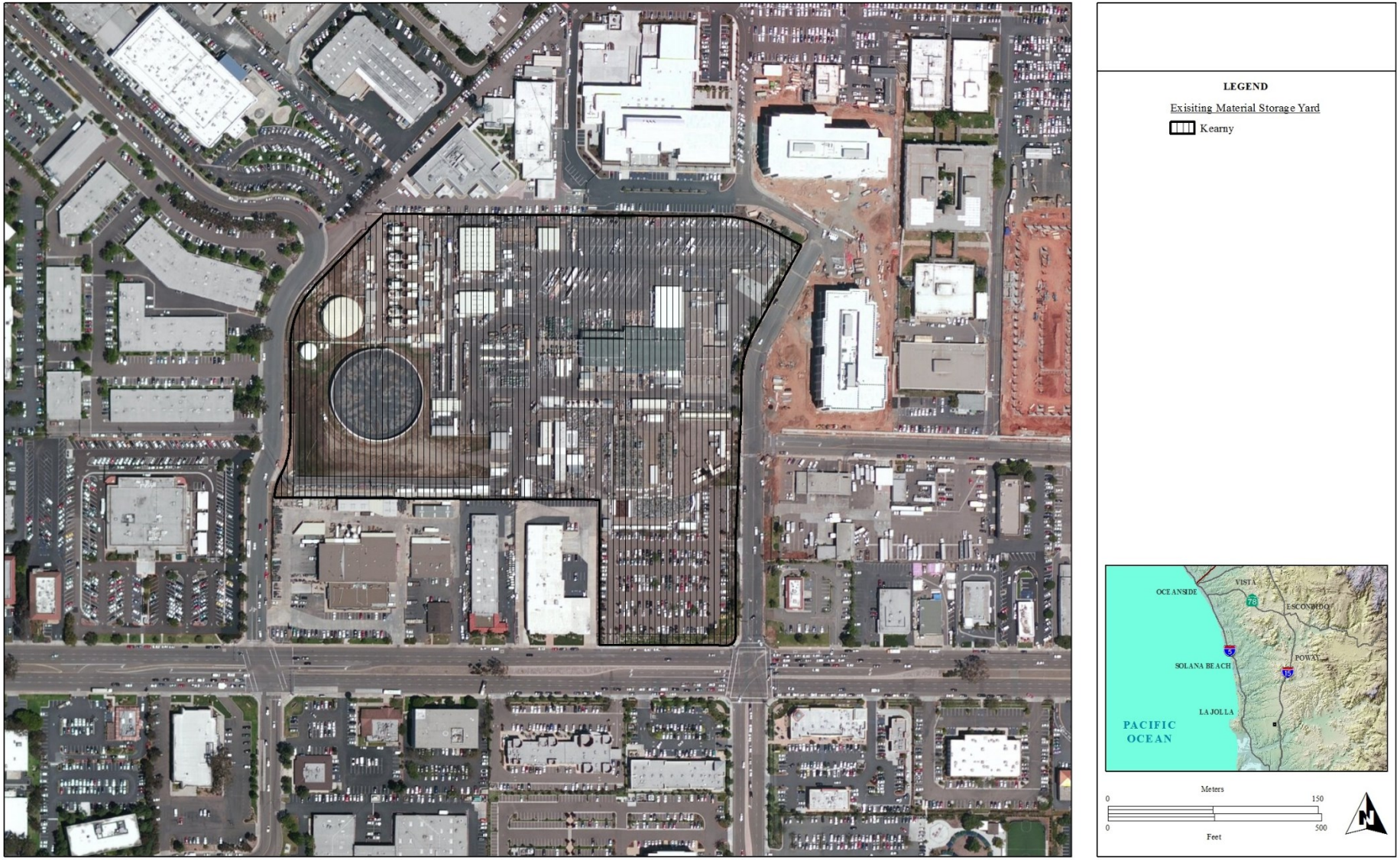


Figure 3-19 Kearny Construction and Operation Center



Figure 3-20 North Coast Construction and Operations Center

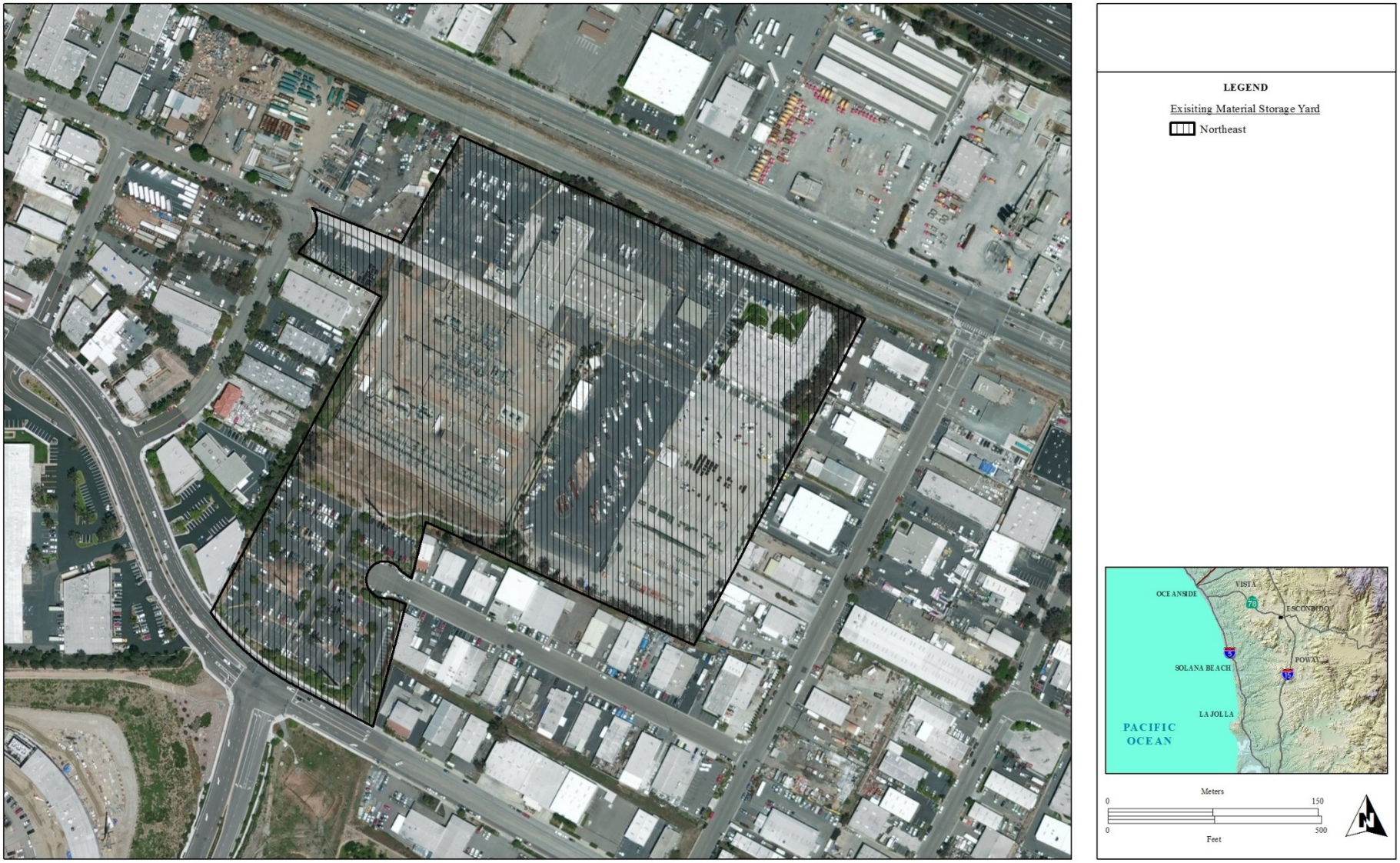


Figure 3-21 Northeast Construction and Operations Center

3.6.1.3 Access Roads

Construction will primarily take place within the existing SDG&E fee-owned property, franchise or existing easements. Most work areas are accessible by vehicle in paved/developed areas or other existing disturbed areas. Vehicles will remain within existing access roads, previously disturbed areas, and designated temporary work areas, where feasible.

The temporary impact areas may vary because the positioning of construction vehicles, equipment, and materials cannot be accurately anticipated prior to construction, as locations are dependent upon the contractor safely performing the work.

3.6.1.4 Pulling Sites

Pulling sites are temporary construction areas used for the pulling of underground cable. The underground cable installation process will require a pull site located adjacent to the proposed and existing underground vaults. This pull site will be approximately 50 feet long by 30 feet wide and will be located within the underground trench/vault work areas (Table 3-4). A typical drawing of the proposed underground construction activities has been included as Figure 3-22, Typical Underground Construction Process within Roadways.

Table 3-4. Proposed Cable Pulling Site

Pulling Site Name	Location	Estimated Dimensions (Width × Length)	Estimated Total Area (Acres)
PS 1	Within the proposed Ocean Ranch Substation	30 feet × 50 feet	0.03
		TOTAL	**0.03**

Source: SDG&E 2015.

3.6.1.5 69 kV and 12 kV Underground Line Work Areas

Installation of new duct banks and vaults will require temporary workspace within Avenida Del Oro and Avenida De La Plata. The underground trench work area will be approximately 20 to 30 feet wide and will be generally centered on the power line alignments. The underground trench work area will be adjusted to comply with traffic control permits to maintain traffic flow through construction areas as necessary.

All trenching and vault work areas will be located within City of Oceanside streets and SDG&E fee-owned property, franchise or existing easements. These work areas will also support all cable installation activities, as well as the associated construction equipment to perform the work. A total of approximately 4,650 linear feet of workspace will be required for the proposed 12 kV underground distribution line, which requires approximately 3.2 acres (assuming a work area width of 30 feet for installation of duct bank). A total of approximately 1,500 linear feet of work space (or approximately 1.10 acres, assuming a work area width of 30 feet for duct banks, 30 feet wide by 30 feet long for vault installation) will be required for installation of the proposed 69 kV underground power line loop-in. Site preparation for an underground trench work area and vault installation work areas will involve a survey mark-out with offsets of the proposed trench alignment, as well as setting up traffic controls prior to construction.

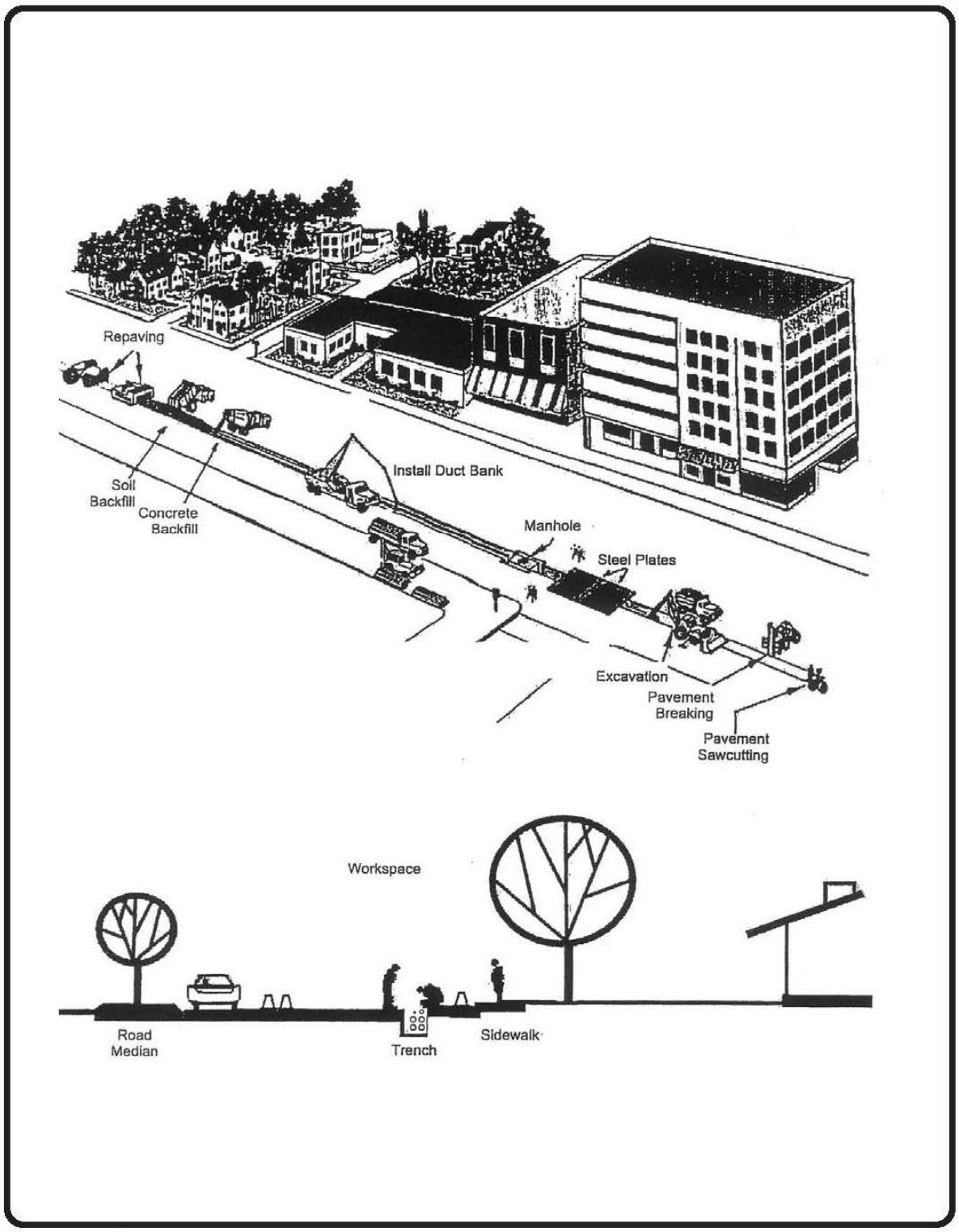


Figure 3-22 Typical Underground Construction Process within Roadways

3.6.2 Construction Methods

3.6.2.1 Construction of Ocean Ranch Substation

Site Development

Because the proposed substation site is currently disturbed, minimal vegetation clearing will be required for construction. Site development activities will commence with clearing and grading of the site based on the recommendations of the geotechnical investigation, which will determine the appropriate onsite pad elevation and foundation support also in order to maintain adequate site drainage. Approximately 18,100 cubic yards will be excavated during site grading, 8,000 cubic yards of which will be used as fill/embankment within the site and 10,100 cubic yards will be exported from the site. Onsite material will be reused to the extent possible, as recommended by a Geotechnical Engineer.

Approximately 16,600 cubic yards of select fill will be imported to help achieve the conceptual design elevation. For construction of the flow-through planters, approximately 2,200 cubic yards of bioretention soil mix and 1,500 cubic yards of gravel will be imported and placed. Site grading will be accomplished primarily with bulldozers and backhoes, which will condition, cut and fill, and blend the native soil and imported material to the desired pad elevations (Table 3-5).

At this time, it is expected that approximately 7,200 cubic yards of Class II aggregate base and 1,200 cubic yards of asphalt will also be installed at the proposed Ocean Ranch Substation. The substation pad will be surfaced primarily with Class II aggregate base, and primary access roads will be paved with asphalt. Construction of the boundary walls will begin once grading is complete.

Construction of the proposed Ocean Ranch Substation will require approximately 28,700 cubic yards of imported fill material and 10,100 cubic yards of exported material to develop the proposed substation site. Haul trucks will operate periodically, as needed, during the grading phase of construction. In general, an average of approximately 20 truck trips per day for an estimated 6 months will be required to complete the proposed substation grading and boundary wall installation. In addition, approximately 5 additional trips per day are anticipated for the delivery of materials and equipment for the duration of construction, based on current design criteria.

Primary access to the substation site during construction will be provided via Rocky Point Drive with secondary access via Avenida Del Oro.

Below-Grade Construction

Following site development, below-grade work will begin, which will include the construction of structure and equipment foundations, underground ducts, ground grid, and erection of the control shelter. Concrete trucks, backhoes, loaders, ditch-witches, and skid steer loaders will be used for the below-grade work (Table 3-5).

Table 3-5. Standard Construction Equipment and Usage

Project Phase	Phase Duration	Vehicle/Equipment Type	Quantity Required	Hours Per Day Operating at Site
Temporary Staging Yard – Site Preparation	1 Week	Dump Truck	3	6
		Rubber Tired Loader	1	6
		Backhoe	1	6
Proposed 69/12 kV Substation – Site Development and Mass Grading[1]	3 Months	D5K Dozer	1	6
		D8T Dozer	1	6
		140H Blade	1	6
		966 H Loader	1	6
		834 Rubber Tired Dozer	1	6
		Dump Truck (12 CY)	25	7
		Asphalt Truck	8	1
		Maintenance Truck	1	1
		657E Scraper or 637E Scraper	1	7
		289C Track Skid Steer	1	4
		Excavator	1	6
		430E Rubber Tire Backhoe	1	6
		Ride On Roller Compactor	1	7
		Ditch-witch	1	6
		John Deer 210E Skip Loader	1	3
		2,000 Gallon Water Truck (2)	1	7
Proposed 69/12 kV Substation – Site Development and Finish Grading[1]	2 Months	D5K Dozer	1	6
		D8T Dozer	1	6
		140H Blade	1	6
		966 H Loader	1	6
		834 Rubber Tired Dozer	1	6
		Maintenance Truck	1	1
		657E Scraper (2) or 637E Scraper (2)	1	7
		289C Track Skid Steer	1	6
		430E Rubber Tire Backhoe	1	6
		Ride On Roller Compactor	1	7
		John Deer 210E Skip Loader	1	4
		2,000 Gallon Water Truck (2)	1	4
Proposed 69/12 kV Substation – Retaining/Boundary Wall Construction	2 Months	Skytrack Forklift	1	2
		Bobcat Skid Steer Loader	1	6
		Excavator	1	9
		Water Truck	1	9
		Car/Pick-up Truck	5	1
		Maintenance Truck	1	3
		Delivery Truck	3	1
		Walk-behind Compactor	3	8
		Motor Grader	1	8
		Compactor	2	8
		Front-end loader (IT28)	3	8
		Skip Loader	1	7
		Rubber Tire Backhoe	1	7

Table 3-5. Standard Construction Equipment and Usage

Project Phase	Phase Duration	Vehicle/Equipment Type	Quantity Required	Hours Per Day Operating at Site
Proposed 69/12 kV Substation – Driveways/Sidewalks (AC Paving)	2 Months	AC Paver	1	6
		Bobcat Skid Steer	1	5
		Skip Loader	1	5
		Steel Drum Roller	2	6
		Backhoe	1	6
		Loader	2	6
		Dump Truck (20 CY)	2	3
Proposed 69/12 kV Substation – Below-Grade Construction	6 Months	Bobcat Skid Steer Loader	1	4
		Water Truck	1	3
		Concrete Truck	15	0.5
		Ditch-witch	1	6
		938H Loader	1	6
		Rubber Tire Backhoe	1	7
		305 Mini Excavator	1	7
Proposed 69/12 kV Substation – Equipment Installation	6 Months	Boom Trucks	2	6
		Manlift	1	6
		Bucket Truck	4	5
		Oil Rig (Trailer with Generator)	1	24
		Cable Dolly (Trailer)	1	No Engine
		Pulling Rig (Trailer)	2	No Engine
		Water Truck	1	2
69 kV Underground Power Line – Duct Bank Construction, Vault and Cable Installation	3 Months	Backhoe	1	7
		Flatbed Truck	1	1
		Dump Truck	2	3
		Water Truck	1	1
		Air Compressor	1	7
		Pulling Rig	1	1
		Air Truck	1	0.2
		Boom Truck	1	0.2
		Bucket Truck	1	0.2
12 kV Distribution – Trenching and Conductor Installation	3 Months	Line Truck	1	0.1
		Puller	1	2
		Reel Trailer	1	1
		Splice Truck	1	1
		Pick-up Truck	1	1
		Water Truck	1	2
		Pulling Rig	1	0.3
		Forklift	1	0.2
		Wire Truck	1	0.2
		Boom Truck	1	0.2
		Concrete Saw	1	0.5
		Pick-up Truck, 1-2 Man	3	1
		Pick-up Truck, Crew Cab	4	1
		Flatbed Truck	4	1
		Crane	1	0.5
		Bobcat Skid Steer Loader	1	6
		Backhoe	2	7
		Trackhoe	1	1
		Dump Haul Truck	5	6

Table 3-5. Standard Construction Equipment and Usage

Project Phase	Phase Duration	Vehicle/Equipment Type	Quantity Required	Hours Per Day Operating at Site
		Pick-up with Saw Cutter Trailer	1	0.1
		Concrete Truck	9	0.7
		Asphalt Dump Truck	2	0.2
		Asphalt Paver	1	0.5
		Steel Drum Roller	1	0.1
		Dump Trucks with Compressor and Emulsion Sprayer	1	0.2
Telecommunication System Extension – Duct Bank Construction, Vault and Cable Installation	1 Month	Backhoe or Rockwheel	1	7
		Dump Trucks (20 CY)	2	0.2
		Skid Steer Loader	1	7
		Concrete Truck	4	0.7
Energization – Testing and Commissioning	1 Month	Relay Telecommunication Vans	3	3
Temporary Staging Yard – Clean-Up	1 Week	Dump Truck	1	2
		Flatbed Truck	1	2
		Backhoe	1	7

Note: [1]Mass grade and finish grade involve the same type, quantity, and hours of operation for a majority of the off-road equipment. The same equipment used for mass grade will also be used for finish grade.

Above-Grade Construction

Once the grading activities and below-grade construction are complete, major equipment and structures will be installed and anchored on their respective foundations. The following steps will be taken to install the above-grade equipment:

- The 69 kV low profile bus section steel will be erected.
- The 69 kV circuit breakers will be installed on their foundations.
- The control shelter will be constructed, and relay panels, controls, battery, and station lighting and power will be installed.
- The ground grid, control, communication, and power ducts will be installed and wiring of the equipment controls and protection devices will follow.
- The 69/12 kV transformers will be installed on their foundations, assembled, and filled with oil.
- The 12 kV switchgear and capacitors will be installed on their foundations.

Power line loop-in and distribution circuits will be completed and connected inside the substation following final installation of the substation structures and equipment. Communication equipment will be connected inside the control shelter. Testing will be performed on all equipment after the equipment is installed and wired, and before placing it in service. Equipment will be placed in service once the circuits and power line are ready to be energized and are tested outside the substation.

Portable cranes and heavy hauling trucks will be employed to bring in the 69/12 kV transformers. Substation crews, assist vehicles, forklifts, man lifts, and boom trucks will be used to construct the substation. Oil-processing equipment and vacuum pumps will be used to fill transformers with oil. Pick-up trucks and vans will be used for the wiring and control testing of the substation equipment.

Line trucks, assist vehicles, and cable dolly trailers will be used for construction of the power line and distribution circuits.

A temporary tap to an existing distribution line may be installed to provide electrical service to the substation staging area during construction. This temporary tap may be used to power construction trailers, lighting, or small hand-held machinery or tools until the substation is energized.

3.6.2.2 Installation of Underground 12 kV Distribution Line and 69 kV Loop-In

Trenching

Coordination with the City will also occur to secure encroachment permits for trenching in the City's ROW, as required. It is anticipated that between one and two lanes of Avenida Del Oro and Avenida De La Plata will occasionally be closed during trenching activities. During these closures, traffic controls will be implemented as required by the encroachment permit(s).

Trenching operations will be staged in intervals as allowed by any permit requirements. The spoils generated by excavation activities will be transported to an SDG&E-approved disposal site. At any one time, open trenches will not exceed that required to facilitate installation of the duct bank. Steel plating will be placed over the trenches to maintain vehicular and pedestrian traffic across areas that are not under active construction.

The duct bank will be installed using open-cut trenching techniques. The typical trench dimensions for installation of each duct bank will be 3 to 6 feet deep and 2 to 7 feet wide, depending on the duct bank configuration. Depths may vary depending on soil stability and the presence of existing substructures. The trench will be widened and shored where necessary to meet California Occupational Safety and Health Administration requirements. If trench water is encountered, trenches will be dewatered using a portable pump, and the water will be disposed of in accordance with acquired permits as described in Section 3.6.2.3, Dewatering.

Throughout trench excavation and installation of the duct bank and vaults, removed asphalt and concrete will be transported to an approved off-site facility. Excavated soils not suspected to be impacted will be reused to the extent feasible or disposed of at an appropriate facility. Should soil that is stained, odorous, or otherwise suspect be encountered during trenching activities, SDG&E will sample in place, test, profile, and transport this material to an appropriately permitted disposal facility in accordance with applicable federal, state and local laws and regulations.

The number of truck trips to transport excavated materials to storage yards and/or disposal facilities will vary based on the rate of the trenching, the area excavated to install the vaults, and proximity of the storage yards/disposal facilities to the ROW. For purposes of this Proposed Project, approximately 5 to 10 truck trips per day will be required during trenching activities at one site. Jackhammers may be used sparingly to break up sections of concrete that the saw-cutting and pavement-breaking machines cannot reach. Other miscellaneous equipment may include a concrete saw, backhoe, excavator, roller compactor, water trucks, various paving equipment, and standard 1-ton pick-up trucks.

As described previously, traffic controls will be implemented to direct local traffic safely around work areas. SDG&E will coordinate provisions for emergency vehicle and local access with the City of Oceanside as necessary.

Duct Bank Installation

Duct banks are used to consolidate cabling and to secure circuit conduits below ground. As the trenches for the underground duct banks are completed, SDG&E will install the cable conduits (separated by spacers) and pour concrete around the conduits to form the duct banks. The duct banks will typically consist of 8-inch-diameter conduits, which will house the electrical cables and 2-inch-diameter conduits for the telecommunications cable used for system protection and communication. The dimensions of the duct banks will be approximately 3 feet wide by 3 feet tall for a vertical configuration (refer to Figure 3-11).

Once the conduits are installed and encased, a fluidized thermal backfill will be utilized to fill most of the remainder of the trench. Finally, an aggregate road base or backfill of slurry concrete with an asphalt concrete cap will be installed to restore the road in compliance with local requirements. While the completed trench sections are being restored, additional trench will be opened farther down the street. This process will continue until the distribution circuits are completed. Each duct bank will have a minimum of 36 inches of cover. Larger trenches will be excavated where vaults are installed, as described in the subsection that follows.

Where the distribution duct bank will cross other substructures that operate at normal soil temperature (e.g., gas lines, telephone lines, water mains, storm drains, and sewer lines), a minimal radial clearance of 12 inches will be required. In instances where the duct bank will be installed parallel to other substructures, a minimum radial clearance of 24 inches will be required. Ideal clearances of 2 to 5 feet are preferred. Where the duct banks cross or run parallel to substructures that operate at temperatures significantly exceeding normal soil temperature (e.g., other underground power line circuits, primary distribution cables, steam lines, and heated oil lines), additional radial clearance may be required. All work will be done in conformance with SDG&E's current construction and operating practices.

Manhole Installation

Manholes will be constructed to provide access to the circuit for operations, maintenance, and repair activities. SDG&E will excavate and install preformed concrete manholes during trenching for duct banks for the underground power line. The manholes will be used to pull cable through the conduits and splice the cables together during installation. During operation, the manholes will provide access to the underground cables for maintenance, inspections, and repairs.

Manholes will be constructed of prefabricated steel-reinforced concrete and designed to withstand the maximum credible earthquake in the area and heavy truck traffic loading. Installation would occur over a 1-week period beginning with excavation and shoring of the manhole pit followed by delivery and installation of the manhole, filling and compacting the backfill, and repaving the excavated area where necessary.

Vault Installation

SDG&E will excavate and install preformed concrete splice vaults during trenching for the duct banks. The proposed trench alignment and vault locations are shown on Figure 3-2, Proposed Project Overview Map. The installation of each vault will require an excavation measuring approximately 11 feet by 7.5 feet by 29 feet. Initially, the vaults will be used to pull cable through the conduits and splice the cables together during construction. During operation, the vaults will provide access to the underground cables for maintenance, inspections, and repairs.

Vaults will be constructed of prefabricated, steel-reinforced concrete and designed to withstand the maximum credible earthquake in the area and traffic loading. The installation process for each vault will occur over a 1-week period, beginning with excavation and shoring of the vault pit, followed by delivery and installation of the vault, filling and compacting the backfill, and repaving the excavated area where necessary.

Cable Pulling, Splicing, and Termination

After installation of the conduit, SDG&E will install the cables in the duct banks. Each cable segment will be pulled into the duct bank, spliced at each of the vaults along the route, and terminated at the proposed Ocean Ranch Substation. To pull the cable through the ducts, a cable reel will be placed at one end of the section and a pulling rig will be placed at the other end. A larger rope will then be pulled into the duct using a pull line and will be attached to the cable-pulling eyes to pull the cable into the duct. A lubricant will be applied to the cable as it enters the duct to decrease friction during pulling.

Splicing typically takes 12 to 16 hours to complete. At each end of the underground segment, the cables will rise out of the ground and terminate within the substation.

3.6.2.3 Dewatering

No dewatering is anticipated during construction of the underground 69 kV loop-in or the distribution circuits; however, SDG&E will acquire coverage under the General Permit for Stormwater Discharges Associated with Construction Activity (Construction General Permit) from the State Water Resources Control Board (SWRCB) and prepare a Stormwater Pollution Prevention Plan (SWPPP) prior to construction which will address any potential discharges in the event that dewatering is required. The SWPPP will detail project information, dewatering procedures, stormwater runoff prevention control procedures, monitoring and reporting procedures, and BMPs. Bentonite or similar stabilizing materials may be used to support foundation installation when water is present within the excavation.

Should dewatering be necessary, the following construction dewatering procedures will be implemented during construction:

- A submersible pump will be installed.
- Groundwater will be pumped to a desiltation tank (baker tank) at one end for sediment and filtering. Baffles will be installed in the tank to increase sedimentation. Water in the tank will be allowed to flow out from the opposite end when needed.
- Water quality testing of encountered groundwater will be performed to ensure compliance with the RWQCB National Pollutant Discharge Elimination System requirements. If water quality levels do not meet permit requirements, additional baker tanks, or treatment, or filtering may be required.
- Treated water will be reused in compliance with permit requirements or disposed of at an approved SDG&E disposal site.

3.6.2.4 Rock-Splitting and Blasting

It is not currently anticipated that blasting will be required to complete construction of the Proposed Project. However, if significant or dense rock is encountered, blasting may be required. In most instances, if rock is encountered during excavation, a hydraulic rock drilling and splitting procedure

(rock-splitting) may potentially be used to minimize trenching or drilling time, depending on site specific conditions. The procedure involves drilling a hole in the rock and inserting a nonblasting cartridge of propellant. The cartridge is mechanically initiated by an impact generation device. This hydro-fracturing effect causes controlled tensile crack propagation in the rock and does not result in flyrock, noxious fumes, or ground vibrations.

In the unlikely event that rock blasting is used during construction where solid rock is present and where the hydraulic rock drilling and splitting procedure would be ineffective, the following procedure will be utilized to minimize both drilling time and noise impacts. The procedure involves drilling approximately 3-inch-diameter blast holes to the full depth of the shaft and inserting explosives. Blasting caps are connected, and a nonelectric detonator is employed. Flyrock protection is installed prior to blasting, and seismographs are placed to measure and record peak particle velocity and air blast levels at various distances from the blast site. Dust control will include a combination of steel plate covering, geotextile fabric with chain-link fence covering, and wetting the blasting surface. If blasting is utilized with the Proposed Project, the blasting contractor will be required to obtain a blasting permit and explosive permit per applicable local regulatory ordinances. The appropriate BMPs will be used before, during, and after all project-related construction activities where necessary to prevent erosion and off-site sedimentation.

3.6.2.5 Site Cleanup

SDG&E will restore all areas that are temporarily disturbed by Proposed Project activities (including the pulling site and staging areas) to near preconstruction conditions following the completion of construction. Restoration will include grading and restoration of sites to original contours and reseeding, as appropriate. Where land is rented from private land owners (such as staging yards), post-construction restoration may be completed in consultation with the landowner. All post-construction restoration will be in compliance with the Project's SWPPP, which will be prepared pursuant to applicable stormwater regulations (refer to Section 3.10, *Applicant Proposed Measures*, Section 4.6, *Geology and Soils*, and Section 4.9, *Hydrology and Water Quality*, for additional information). In addition, all construction materials and debris will be removed from the Proposed Project area and recycled or properly disposed of off-site. SDG&E will conduct a final survey to ensure that cleanup activities are successfully completed as required.

All areas that are temporarily disturbed by the underground power line loop-in installation activities will be restored as near to preconstruction conditions as possible, following completion of construction. Restoration will involve the removal of all construction debris for recycling or disposal off-site and repaving, as appropriate. SDG&E will complete the following as part of the final construction activities:

- Restore all removed curbs, gutters, and sidewalks.
- Repave all removed or damaged paved surfaces.
- Restore landscaping or vegetation as necessary.
- Replace any damaged or removed fencing.
- Remove all construction materials from the construction site.

3.6.2.6 Outage Coordination

SDG&E will coordinate line outages in order to maintain system reliability and construction personnel safety. Based upon preliminary engineering, SDG&E anticipates only minor interruptions of service to customers during construction during tie-ins.

3.6.3 Construction Equipment and Personnel

Construction equipment will include bulldozers, excavators, loaders, graders, and trucks for excavating, compacting, and hauling. All exported soil and new fill will be transported using street-legal dump/loader trucks. Concrete trucks, backhoes, ditch-witches, and skid steers will be used for the foundation and below-grade work. Portable cranes and heavy hauling trucks will be employed to bring in the 69/12 kV transformers. Substation crews, assist vehicles, forklifts, man lifts, and boom trucks will be used to construct the substation, along with pick-up trucks and vans for the wiring and control testing of the substation equipment. Underground line trucks, assist vehicles, and cable dolly trailers will be used for construction of the 69 kV loop-in and distribution circuits. Table 3-5, Standard Construction Equipment and Usage, lists the typical construction equipment that could be used and respective uses per the Proposed Project scope.

SDG&E will primarily use its own workforce for construction, but will supplement, as needed, from an approved contractors' pool of qualified workers. It is anticipated that up to 40 workers will be employed for the site development phase of the Proposed Project at its peak. Approximately 33 workers will be required for the grading and site development at the proposed Ocean Ranch Substation. An average of approximately 12 workers are expected during the foundation and below-grade work. Construction of the substation is expected to require an average of 24 workers. Installation of the power line loop-in will require between 14 to 20 workers. Final testing and checkout will require nine electricians and/or engineers. Crews are anticipated to work Monday through Saturday from 7:00 a.m. to 5:00 p.m.

3.6.3.1 Proposed Construction Schedule

SDG&E estimates that construction of the Proposed Project will take a total of approximately 20 months to complete, depending upon unforeseen/unpredictable factors such as weather and required transmission outages. Proposed construction is scheduled to occur on or about October 1, 2017, and run through June 2019. The proposed construction schedule, outlined by component, is summarized in Table 3-6, Proposed Construction Schedule. The dates shown are based on permitting estimates and approvals, and are subject to change.

Transformer oil filling may require vacuum pulls and oil installation requiring continuous work 24 hours per day (3 to 5 days per transformer).

Table 3-6. Proposed Construction Schedule

Proposed Project Component	Activity	Approximate Duration	Anticipated Start Date
Temporary Staging Yard	Site Preparation	1 week	October 2017
	Clean-up	1 week	June 2019
Proposed 69/12 kV Substation	Site Development and Grading	5 months	October 2017
	Retaining/Boundary Wall Construction	2 months	January 2018

Table 3-6. Proposed Construction Schedule

Proposed Project Component	Activity	Approximate Duration	Anticipated Start Date
	Driveways/Sidewalks (AC Paving)	2 months	March 2019
	Below-Grade Construction	6 months	March 2018
	Substation Equipment Installation	6 months	September 2018
69 kV Underground Power Line	Duct Bank Construction, Vault and Cable Installation	3 months	January 2019
12 kV Distribution	Trenching and Conductor Installation	3 months	February 2019
Telecommunication System Extension	Duct Bank Construction, Vault and Cable Installation	1 month	February 2019
Energization	Testing and Commissioning	1 month	May 2019
	Energization	1 month	June 2019

3.6.4 Cut and Fill

It is anticipated that construction of the Proposed Project would result in up to approximately 69,700 cubic yards of cut and fill (Table 3-7).

Table 3-7. Proposed Project Cut-and-Fill Requirements Summary (cubic yards)

Project Component	Cut	Fill	Net Import/Export
Temporary Staging Yards Site Preparation and Cleanup[1]	1,965	1,965	1,965/1,965
Ocean Ranch Substation	18,100	36,700	28,700/10,100
Underground power line (69 kV) trench and duct bank installation	1,995	1,995	1,995/1,995
Underground distribution (12 kV) line trench and duct bank installation	3,490	3,490	3,490/3,490

Source: SDG&E 2015.
Notes: Table contents based upon preliminary engineering.
[1] 30 percent of 17.5 acres of temporary staging yards will have 3-inches of rock temporarily installed (for a total of 5 acres). Cut for this purpose refers to rock clean-up and fill refers to rock installation.

Final civil engineering for the Proposed Project has yet to be completed, therefore final cut and fill may differ from the estimates provided above. Actual cut and fill grading amounts may vary depending upon actual field conditions and final detailed engineering. Soil may be reused onsite within SDG&E fee-owned property, franchise or existing easements where extensive grading and excavation is not required in areas of existing access roads, spur roads, and work pads. Excess soil from excavation may also be transported to a local recycling or appropriately permitted waste disposal facility if the soil is not reused onsite or otherwise recycled. Excess soil would be reused onsite wherever possible and only transported offsite as the final option.

3.7 PERMANENT LAND/RIGHT-OF-WAY REQUIREMENTS

The Proposed Project is located within existing utility corridors, franchise areas, and SDG&E fee-owned property that currently feature permanent work pads and access roads. Operation and maintenance of the Proposed Project will utilize these existing work areas and roads. It is anticipated that no additional ROW is a required for this project.

3.8 GENERAL PROJECT OPERATION AND MAINTENANCE ACTIVITIES AND PRACTICES

SDG&E would continue to regularly inspect, maintain, and repair the existing power line and distribution line facilities and substation following completion of Proposed Project construction. Operation and maintenance activities will not significantly increase in intensity, frequency, or duration with implementation of the Proposed Project and will be substantially similar to existing operation and maintenance activities. Typical activities involve both routine inspections and preventive maintenance to ensure service reliability, as well as emergency work to maintain or restore service continuity. General Order 165 requires that transmission and power lines are inspected at least every three years for corrosion, equipment misalignment, loose fittings, and other common mechanical problems. SDG&E performs aerial and ground inspections of facilities.

SDG&E conducts power and transmission line operation and maintenance activities which typically include security and other inspections, ROW and access repairs, herbicide application, emergency and non-emergency repairs and replacements, and tree trimming.

3.8.1 Ocean Ranch Substation Operation and Maintenance

Once the proposed Ocean Ranch Substation is constructed and placed in service, it will be unmanned except for periodic routine maintenance activities that will facilitate reliable operation of all equipment within the facility. The proposed Ocean Ranch Substation will be monitored and controlled remotely by SDG&E's Control Center.

Ongoing maintenance will involve testing, monitoring, and repairing equipment, as well as emergency and routine procedures to enable efficient provision of SDG&E electric services. All access gates to the proposed substation will be locked to prevent entry of unauthorized individuals. In addition, signage will be posted on the substation's exterior and at the entryways to restrict entry to those who are not qualified SDG&E personnel.

Routine maintenance is expected to require approximately six trips per year by a two- to four-person crew. Routine operations will require one or two workers in a light utility truck to visit the substation on a daily or weekly basis. It is anticipated that one annual major maintenance inspection will occur, requiring an estimated 10 SDG&E personnel to be present at the substation. It is anticipated that this inspection will take approximately one week to complete. Nighttime maintenance activities are not expected to occur more than once a year.

Landscape maintenance will occur on an as-needed basis for purposes of enhancing the streetscape along the perimeter of the substation and for safety and/or access. Such activities will generally require the presence of one or two maintenance vehicles and one or more employees to clear and/or trim vegetation to ensure that an adequate working space is maintained around the substation facilities.

3.8.1.1 Power Line Maintenance

SDG&E maintains a clear working space area around certain facilities pursuant to requirements found within General Order 95 and Public Resources Code (PRC) section 4292. SDG&E keeps these areas clear of shrubs and other obstructions for fire prevention purposes.

Typical power line operation and maintenance activities include security and other inspections, ROW and access repairs, herbicide application, emergency and nonemergency repairs and replacements, and tree trimming. These activities are performed on an as-needed basis.

The new 69 kV loop-in will be inspected consistent with SDG&E's existing underground inspection and maintenance program. The line will be accessed from the two new vaults during the annual underground transmission inspection program. The inspection requires traffic control to access the vault safely, open the vault covers and perform a visual survey from above (entry into vault with energized cables is not permitted), and use of infrared, partial discharge monitoring, or other diagnostic instrumentation that may be available. The total time to inspect each vault is expected to be less than 1 day under normal operating conditions. The inspection of the underground power line will be the same for all existing underground inspections currently completed by SDG&E within the City of Oceanside and throughout SDG&E's service territory.

3.9 STANDARD OPERATING PROCEDURES

The Proposed Project includes design features and ordinary construction and operating procedures that avoid and minimize environmental impacts. The standard operating procedures incorporated into the Proposed Project include measures that are routinely implemented by SDG&E. Many of these features and procedures have been developed over time to avoid and minimize environmental impacts to comply with applicable environmental laws and regulations. Consistent with its existing operation and maintenance practices, SDG&E will implement these operating procedures as appropriate during construction, operation, and maintenance to avoid and minimize potential environmental impacts.

Many of the design features and ordinary construction and operating procedures incorporated into all phases of the Proposed Project are described below.

- **Blasting.** In the unlikely event that rock blasting is used during construction, a noise and vibration calculation will be prepared and submitted to SDG&E for review before blasting at each site. The construction contractor will ensure compliance with all relevant local, state, and federal regulations relating to blasting activities, as well as SDG&E's blasting guidelines.
- **Carpooling.** SDG&E encourages construction workers to carpool to the greatest extent possible.
- **Communication with Adjacent Property Owners (Parking).** SDG&E will communicate with adjacent land owners for use of areas where off-street parking may be temporarily lost due to construction activities.
- **Conceptual Landscape Plan.** The conceptual landscape plan for the proposed Ocean Ranch Substation would be implemented as part of the Proposed Project following construction of the substation. (The Conceptual Landscape Plan is provided as Appendix B). The landscaping plan, planting scheme, lighting guidelines, and sign regulations, include street trees and shrubs along Rocky Point Drive and Avenida Del Oro and interior landscape plants that are low-water use, regionally appropriate, and visually compatible with the surrounding area and that do not conflict with the Pacific Coast Business Park Industrial Master Development Plan.

Implementation of the landscape plan would ensure that the project perimeter wall, street-front areas, and slopes would be visually similar to the existing business park surrounding the project, and would provide partial screening of the perimeter wall.

The plan incorporates low-water-use, mostly native plants that are visually similar to existing plants on neighboring properties. The landscaping includes strawberry tree (*Arbutus unedo*) at the entrance to the site from Rocky Point Drive, and on the top of the slope along Avenida Del Oro. The landscape plan leaves in place the existing street trees and slope planting along the west side of the parcels facing Avenida Del Oro, and adds more shrubs and trees to the slope as well. The Proposed Project's landscape elements have been selected to comply with existing streetscape guidelines and to visually blend with existing neighboring landscapes. Low-water-use, mostly native plants are proposed throughout the interior landscape areas of the site, including trees and shrubs that are visually similar to existing plants on neighboring lots, such as Australian willow (*Geijera parviflora*) and holly leaf cherry (*Prunus ilicifolia*). These trees will provide a visual connection to the surrounding streetscapes, and will provide some screening of the Proposed Project's perimeter walls. Medium-sized shrubs and low-growing shrubs and ground covers are proposed as well. The site includes two retention basins, which will be planted with locally appropriate grasses and rushes.

- **Construction Noise.** SDG&E will meet and confer with the appropriate municipality to discuss temporarily deviating from the requirements of the Municipal Code, as described in the construction noise exemption process.
- **Construction Practices**. During clearing, grading, earth moving, or excavation operations, SDG&E will follow applicable regulations and control excessive fugitive dust emissions by regular watering or other dust preventive measures, which may include the following procedures:
    - Spray unpaved construction areas with water, approved dust-control agents, or soil stabilizers to reduce particulates; sufficiently water material excavated or graded.
    - Sweep, vacuum, and/or remove dirt or debris spilled onto paved surface to reduce resuspension of particulate matter caused by vehicle movement.
    - Haul trucks moving soil to or from the site will either be covered or maintain 2 feet minimum freeboard.
    - Onsite stockpiles will be covered, watered, or bermed if left inactive for more than 24 hours.
    - Tracking-control measures, in accordance with SDG&E BMP Manual Measures 1-7, will be implemented.
    - Implementation of measures during construction to control fugitive dust and reduce exhaust emissions to meet SDAPCD Rule 55 requirements.
    - Prevent visible dust from the project from emanating beyond the property line, to the maximum extent feasible.
    - To the extent feasible, unnecessary construction vehicle and idling time will be minimized. The ability to limit construction vehicle idling time is dependent upon the sequence of construction activities and when and where vehicles are needed or staged. Certain vehicles, such as large diesel powered vehicles, have extended warm-up times following start-up that limit their availability for use following startup. Where such diesel-powered vehicles are required for repetitive construction tasks, these vehicles may require more idling time. The Proposed Project will apply a common sense approach to

vehicle use; if a vehicle is not required for use immediately or continuously for construction activities, its engine will be shut off. Construction foremen will include briefings to crews on vehicle use as part of preconstruction tailboard or training. Those briefings will include discussion of a "common sense" approach to vehicle use.

- **Coordination with City.** SDG&E is coordinating with the City regarding the re-establishment of access rights on Avenida Del Oro for access to a secondary private driveway at the proposed Ocean Ranch Substation site.
- **Coordination with Emergency Service Providers.** SDG&E coordinates with the affected emergency service providers in the event that lane closures occur.
- **Cultural Resources.** SDG&E's practices follow applicable federal, state, and local laws to protect and avoid cultural resources, including the Archaeological Resources Protection Act of 1979, as amended; the National Historic Preservation Act of 1966, as amended; California Penal Code section 622½, PRC sections 5097.1 through 5097.6, PRC section 5097.98, and CEQA. An independent expert conducted preconstruction surveys, prepared an inventory of cultural resources within the Proposed Project's Area of Potential Effect, and provided recommendations for avoidance and minimization of cultural resources. Known cultural resources will be spanned or otherwise avoided through Project design and through routing during construction activities to the extent feasible.
- **Encroachment Permits.** SDG&E will obtain the required encroachment permits from the City of Oceanside for crossings at city streets and will ensure that proper safety measures are in place while construction work is occurring near public roadways. These safety measures include flagging, proper signage, and orange cones to alert the public to construction activities near the roadway.
- **Generators.** Generator use will be limited to less than 50 horsepower (HP) at all staging yards. Any generators used at the staging yards will be located away from noise sensitive areas, and positioned on the property to comply with local noise ordinances.
- **Geotechnical Report.** A geotechnical study has been conducted for the Proposed Project under direction of a California-licensed Geotechnical Engineer or Certified Engineering Geologist, and recommendations identified in the geotechnical report will be carried out. The Geotechnical Study, SDG&E Ocean Ranch Substation Pacific Coast Business Park, was completed on June 15, 2015.
- **Hazardous Materials.** SDG&E shall address potential impacts relating to the handling and use of hazardous materials through compliance with applicable state and federal regulations, including but not limited to the following:
  - Federal OSHA regulations for worker safety in hazardous material remediation and hazardous waste operations (29 CFR Section 1910.120)
  - Federal OSHA regulations hazard communication for workers (29 CFR Section 1910.1200)
  - Federal OSHA regulations for toxic air contaminants for workers (29 CFR Section 1910.1000)
  - California OSHA (CalOSHA) regulations for worker safety in hazardous material remediation and hazardous waste operations (8 California Code of Regulations 5192)

  - CalOSHA regulations for hazard communication for workers (8 California Code of Regulations 5194)
  - Department of Toxic Substances Control (DTSC) regulations implementing Resource Conservation and Recovery Act of 1976 (RCRA) and the California Hazardous Waste Control Law (22 California Code of Regulations Division 4.5).

- **Hazardous Materials and Waste Management Plan.** SDG&E will prepare a project-specific Hazardous Materials and Waste Management Plan (HMWMP) for the construction phase of the Proposed Project to ensure compliance with all applicable federal, state, and local regulations. The HMWMP will reduce or avoid the use of potentially hazardous materials for the purposes of worker safety, protection from groundwater contamination, and proper disposal of hazardous materials. The plan will include the following information related to hazardous materials and waste, as applicable:
  - A list of the hazardous materials that will be present on site during construction, including information regarding their storage, use, and transportation.
  - Procedures for the identification of and avoidance of contaminated materials.
  - Any secondary containment and countermeasures that will be required for onsite hazardous materials, as well as the required responses for different quantities of potential spills.
  - A list of spill response materials and the locations of such materials at the Proposed Project site during construction.
  - A list of the adequate safety and fire suppression devices for construction activities involving toxic, flammable, or exposure materials.
  - A description of the waste-specific management and disposal procedures that will be conducted for any hazardous materials that will be used or are discovered during construction of the Proposed Project.
  - A description of the waste minimization procedures to be implemented during construction of the Proposed Project.
- **Landowner Notification**. Landowners of parcels within 300 feet of Proposed Project will receive notification of the start of construction at least one week prior to the start of construction activities within that area.
- **Mufflers.** Functioning mufflers will be maintained on all equipment.
- **Natural Community Conservation Plan (NCCP) Operation Protocols.** Based on the design of the Proposed Project, no mitigation is required, but SDG&E will implement the following construction and operation protocols:
  - Section 7.1.1 – General Behavior for All Field Personnel
  - Section 7.1.2 – Training
  - Section 7.1.4 – Maintenance, Repair, and Construction of Facilities
  - Section 7.1.5 – Maintenance of Access Roads
  - Section 7.1.8 – Survey Work
  - Section 7.1.9 – Emergency Repairs

- **New Chain-Link Fence.** New fencing installed as part of the Proposed Project will be a dull, nonreflective finish to reduce potential glare.
- **Overall Grading and Drainage Design.** The overall grading design will include replacement of the existing temporary desilting basins with permanent construction of two flow-through planter basins to provide hydromodification management of smaller, more frequent storm events, treatment of storm water runoff, and peak flow attenuation from larger, less frequent events (such as the 100-year storm).
- **Perimeter Wall.** The perimeter wall would be designed to blend with the neighboring buildings and provide continuity with the existing landscape, and would not conflict with standard design criteria and requirements for electrical substations or the Pacific Coast Business Park Industrial Master Development Plan.
- **Project Fire Prevention Plan.** SDG&E Electric Standard Practice 113.1 will be the Project Fire Prevention Plan. This standard identifies risk-related activities as well as measures (including tools and procedures) to address said risks. This standard addresses all work activities which have the potential to start a wildland fire and sets forth equipment and practices relevant to fire prevention. This plan meets state and local fire prevention guidelines.
- **Restoring Appearance of Temporarily Disturbed Areas.** When Proposed Project construction has been completed, all temporarily disturbed terrain will be restored as near to preconstruction conditions as possible. Revegetation would be used, where appropriate (revegetation in certain areas is not possible due to vegetation management requirements related to fire safety) to reestablish a natural appearing landscape and reduce potential visual contrast between disturbed areas and the surrounding landscape.
- **Safety and Worker Environmental Awareness Program.** SDG&E will prepare a project-specific environmental and safety awareness program for project personnel. Training may include the following topics:
  - General safety procedures
  - General environmental procedures
  - Fire safety
  - Biological resources
  - Cultural resources
  - Paleontological resources
  - Hazardous materials protocols and BMPs
  - SWPPP
- **SDG&E Water Quality Construction BMP Manual.** SDG&E's Water Quality Construction BMP Manual organizes and presents SDG&E's standard water quality protection procedures for various specific actions that routinely occur as part of SDG&E's ongoing construction, operations, and maintenance activities. The primary focus of most BMPs is the reduction and/or elimination of potential water quality impacts during construction of linear and substation projects, such as the Proposed Project. The BMPs described within the BMP Manual were derived from several sources including the State of California guidelines as well as the Caltrans Water Quality BMPs. The BMP Manual will be utilized during construction (by way of preparation and implementation of the SWPPP),

operation, and maintenance of the Proposed Project to ensure compliance with all relevant SDG&E and government-mandated regulatory water quality standards.

- **SF_6 mitigation strategies.** SDG&E will implement their existing SF_6 mitigation strategies during the operation and maintenance of SF_6-containing equipment installed as part of the Proposed Project. These strategies include:
  - Continue CARB's Mandatory Reporting Regulation for GHG emissions.
  - Implement SDG&E's SF_6 leak detection and repair program. This program includes monthly visual inspections of each geographic information system (GIS), which includes checking pressure levels within the breaker and recording these readings in SDG&E's Substation Management System. During the installation or major overhaul of any GIS, the unit is tested over a 24-hour period to ensure no leaks are present. Minor overhauls of each GIS are conducted every 36 to 40 months to check overall equipment health. This process includes checking gas pressure, moisture ingress, and SF_6 decomposition. If the GIS fails any of these checks, the unit is checked for leaks and repaired. In addition, all GISs are equipped with a gas monitoring device and alarm that automatically alert SDG&E's Grid Operations Center. If gas pressure approaches minimum operating levels, an alarm is immediately reported to SDG&E's Substation Construction and Maintenance Department. The GIS is usually inspected for leaks within 24 hours of such an alarm. SDG&E's leak detection practice includes the following three methodologies:
    - Spraying a leak-detection agent onto common leak points—including O-rings, gaskets, and fittings;
    - Using a field-monitoring device (sniffer) to detect the presence of SF_6 gas; and
    - Using a laser-detection camera to detect the presence of SF_6 gas when the above two methods are unsuccessful in finding a leak.
  - Implement a SF_6 recycling program.
  - Train employees on the safety and proper handling of SF_6.
- **Soil Disturbance.** Ground and soil disturbance will be minimized through the use of existing access routes, to the extent feasible.
- **Soil Stabilization.** Once temporary surface disturbances are complete, areas that will not be subject to additional disturbance will be stabilized to control soil erosion. Disturbed areas must be stabilized per the project SWPPP.
- **Spill Prevention, Control, and Countermeasure (SPCC) Plan.** If required, an SPCC Plan will be prepared in accordance with CFR 40, Part 112 before petroleum products in threshold quantities will be stored on-site. Elements of an SPCC Plan include, but are not limited to, the following:
  - Facility diagram and description;
  - Oil discharge predictions;
  - Appropriate secondary containment or diversionary structures;
  - Facility drainage;
  - Personnel training and oil discharge prevention briefings; and
  - Recordkeeping and five-year plan review.

- **Standard Traffic Control Procedures.** SDG&E will implement traffic control plans to address potential disruption of traffic circulation during construction activities and address any safety issues. These traffic control plans will be prepared prior to construction by the project engineer or contractor.
- **Temporary Lighting.** Temporary lighting at staging and storage areas will be directed on site and away from any sensitive receptors.
- **Visual Screening of Staging Yards.** Where staging yards are visible to the public, opaque mesh or slats (or equivalent material) will be installed along the fence that will soften the view of the staging yard from public vantage points such as roads, residences, and public vantage points.
- **Water Sourcing.**
  - To the extent that recycled water is used, the Proposed Project will adhere to use restrictions and water quality monitoring and reporting regulations associated with use of tertiary-treated recycled water for construction uses (e.g., dust control, soil compaction, and concrete mixing) permitted under the SWRCB General Order or the San Diego RWQCB Waiver 2 and consistent with the state's anti-degradation policy.
  - Potable water to support project construction and operations activities will be sourced from the City of Oceanside. Project construction water use calculations are the basis for obtaining a will-serve letter from the City of Oceanside.
    - To the extent feasible, tertiary-treated recycled water will be utilized for allowed construction practices (e.g., dust control, soil compaction, cement mixing) if available. The San Luis Rey Waste Water Treatment Plant (WWTP) which is located approximately one mile west of the project is currently being upgraded to produce double the current daily volume of recycled water. In addition, the associated El Corazon commercial recycled water fill station has been constructed (near the NE corner of Oceanside Boulevard and El Camino Real) and is expected to be permitted and operational in 2016. To the extent that tertiary-treated recycled water is available at this fill station it will be sourced and utilized for approved uses. Note that the San Luis Rey WWTP has larger daily volumes of recycled water available during the winter months and experiences a seasonal volume drawdown during the summer months.
  - The Proposed Project plans to adhere to the City of Oceanside Emergency Drought Response Ordinance.

3.10 APPLICANT PROPOSED MEASURES

In addition to the above project design features and ordinary construction and operating procedures included as part of the Proposed Project description, SDG&E will also incorporate the Applicant Proposed Measures (APMs) that have been identified and developed specifically for the Proposed Project during the preparation of the PEA. Table 3-8, Applicant Proposed Measures by Resource Area, identifies the APMs that are applicable to each resource area and details the complete APMs. The various resource sections of this document outline how and when the APMs will be applied to avoid or minimize impacts to a less than significant level.

Table 3-8. Applicant Proposed Measures by Resource Area

Resource Area	Relevant Applicant Proposed Measures
Biological Resources	**APM BIO-1:** *General Biological Resources.* The Proposed Project work areas shall be limited to the sites specified in the project description. Access to the project site shall utilize existing access roads, where possible. Parking, driving, and storing of vehicles will be limited to previously disturbed, compacted, and developed areas, where possible. • A contractor education program will be conducted by a qualified biologist. It will be conducted during all project phases and cover: (1) the potential presence of listed species and their habitats; (2) the requirements and boundaries of the project (e.g., areas delineated on maps and by flags or fencing); (3) the importance of complying with avoidance and minimization measures; (4) environmentally responsible construction practices; (5) identification of sensitive resource areas in the field; and (6) problem reporting and resolution methods. • A qualified biologist will be assigned to the Proposed Project. The designated biologist will have the authority to halt construction in that segment of the Proposed Project to prevent impact to any listed species. • Heavy equipment, construction, equipment maintenance, and staging activities will occur in designated areas and be restricted to existing roads and disturbed areas to the maximum extent practicable. • Where possible, laydown, stockpiling, parking, driving, and storing of vehicles and equipment will be limited to previously disturbed/compacted and developed areas within and immediately adjacent to existing roads. **APM BIO-2:** *Vegetation and Special-Status Plant Species.* • Disturbance to adjacent native vegetation will be avoided to the greatest extent. **APM BIO-3:** *Migratory Birds.* • Trimming or removal of vegetation during the peak breeding season (February 15 to August 31) will require a survey by a qualified biologist to confirm that active nests will not be affected. If an active nest is found within the Proposed Project at any time, work will stop immediately in the immediate area of the nest and redirected away from the nest location. **APM BIO-4:** *Special Status Wildlife Species.* • Protocol-level surveys for the burrowing owl shall occur prior to the commencement of construction. The survey shall be conducted by a qualified biologist in accordance with the Staff Report on Burrowing Owl Mitigation. The surveys shall commence at least 30 days and not less than 14 days prior to construction. The survey results shall be provided to SDG&E within 14 days following completion of surveys. • If burrowing owls are detected within the Project Study Area, measures consistent with the methodology as established in the Staff Report on Burrowing Owl Mitigation and in concurrence with the local California Department of Fish and Wildlife (CDFW) office will be implemented. This includes, but is not limited to the use of buffers around burrows, inspection of equipment, monitoring, and the potential for development of a Burrowing Owl Exclusion Plan approved by the local CDFW office. • Preconstruction surveys/sweeps shall be conducted by a qualified biologist to determine the presence of the western yellow bat at the Melrose staging yard. The preconstruction clearance sweeps for special status species shall occur at work areas where suitable habitat is present within approximately 24 hours of staging activities each day. If special status species are found, SDG&E will determine the need for additional consultation with the agencies.

Table 3-8. Applicant Proposed Measures by Resource Area

Resource Area	Relevant Applicant Proposed Measures
Cultural/ Paleontological Resources	**APM CUL-1:** *Paleontological Resource Monitoring Program.* A paleontological resource monitoring program will be implemented during construction. The program will include construction monitoring, fossil salvage, laboratory preparation of salvaged specimens, curation of prepared specimens, and storage of curated specimens. A paleontologist will be onsite to monitor all ground disturbing activities (e.g., grading and excavation) within native sediments, until such time as the monitor determines monitoring activities are not necessary. The monitor will inspect all fresh cut slopes and trenches, spoils piles, and graded pad surfaces for unearthed fossil remains. If any paleontological find is identified during monitoring, then the monitor will communicate with the general environmental monitor and the construction manager. Salvage may include techniques such as "pluck-and-run", hand quarrying, and bulk matrix sampling and screen-washing. The monitor will also collect stratigraphic data to define the nature of fossiliferous sedimentary rock units with the Project Area, their geographic distributions, and their lithologic characteristics. Paleontological monitoring would not be required in locations where artificial imported fill materials occur for the full depth of the proposed ground disturbance.

Until final design, and in some cases until installation, utility projects must remain more flexible in the definition of their ultimate configuration and placement than most nonlinear projects. The Proposed Project may encounter unique topographical and natural features or site-specific engineering challenges that could not be reasonably foreseen and specifically planned for in advance. The APMs take into consideration the potential for the Proposed Project to encounter such features and enhance SDG&E's ability to avoid or minimize future potential impacts to sensitive environmental resources.

The APMs allow for *limited* project design flexibility while avoiding or minimizing environmental impacts, to the extent feasible. As defined in CEQA, "feasible" is defined as being "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors" while attaining the project's basic objectives and its purpose and need.

3.11 IMPLEMENTATION OF APPLICANT PROPOSED MEASURES

SDG&E will be responsible for overseeing the assembly of construction and environmental teams that will implement the Proposed Project APMs. SDG&E maintains an environmental compliance management program to monitor, document, and enforce the implementation of APMs during each project phase, as appropriate.

3.12 ANTICIPATED PERMITS AND APPROVALS

The CPUC is the lead agency for this Proposed Project. This PEA is being prepared as part of an application to obtain a Permit to Construct for the Proposed Project. In addition to the Permit to Construct, SDG&E may be required to obtain a number of other permits from federal, state, and local agencies. Table 3-9, Anticipated Permit, Approval, and Consultation Requirements, lists the permits, approvals, and licenses that SDG&E anticipates obtaining from jurisdictional agencies.

Table 3-9. Anticipated Permit, Approval, and Consultation Requirements

Permit Type/Name	Issuing Agency	Jurisdiction/Purpose
Federal Agencies		
Not Applicable		
State Agencies		
Permit to Construct	CPUC	Overall Project approval and CEQA review.
National Pollutant Discharge Elimination System– Construction Stormwater Permit	California SWRCB	Stormwater discharges associated with construction activities disturbing more than one acre of land.
Consultation	CDFW	Consultation on burrowing owls and/or western yellow bats if these species are identified within the Proposed Project area.
Local Agencies		
Approval of Remandment Application	City of Oceanside	Accommodate secondary driveway at substation site along Avenida Del Oro.
Encroachment Permit	City of Oceanside	For crossings at city streets and trenching in the City's ROW.
Grading Permit	City of Oceanside	Site grading.
Recycled Water General Order	SWRCB	Used to discharge tertiary-treated recycled water to land for approved construction activities.

Notes:[1] Table contents based upon preliminary engineering and are subject to change.

3.13 REFERENCES

No references were cited in this chapter.

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TABLE OF CONTENTS

4.1 AESTHETICS 4.1-1
4.1.1 Introduction 4.1-1
4.1.2 Regulatory Setting 4.1-1
4.1.3 Existing Conditions 4.1-3
4.1.4 Standard Operating Procedures 4.1-8
4.1.5 Applicant Proposed Measures 4.1-9
4.1.6 Project Impacts 4.1-9
4.1.7 References 4.1-21

LIST OF FIGURES

4.1-1 Existing Conditions Photographs 4.1-5
4.1-2 Existing Conditions Photographs Continued 4.1-6
4.1-3 Existing Conditions Photographs Continued 4.1-7
4.1-4 Substation Viewshed 4.1-11
4.1-5 Key Views 1 through 4 ..... 4.1-12
4.1-6 Key Views 5 through 7 ..... 4.1-13
4.1-7 Location and Direction of Key Views 4.1-15
4.1-8 Simulation 1 ..... 4.1-16
4.1-9 Simulation 2 ..... 4.1-18
4.1-10 Simulation 3 ..... 4.1-19

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4.1 AESTHETICS

Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c.	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d.	Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

4.1.1 Introduction

This section of the Proponent's Environmental Assessment (PEA) describes the existing conditions and project-related impacts to aesthetic resources in the vicinity of the Proposed Project. The analysis concludes that less than significant impacts related to aesthetic resources will occur. The Proposed Project's effects on this resource were evaluated using the significance criteria set forth in Appendix G of the California Environmental Quality Act (CEQA) Guidelines. The conclusions are summarized in the impact summary table above, and discussed in more detail in Section 4.1.6.

4.1.2 Regulatory Setting

This section includes a description of the aesthetic resources regulatory framework.

4.1.2.1 Federal

There are no federal regulations associated with aesthetics that are relevant to the Proposed Project.

4.1.2.2 State

California Department of Transportation: Scenic Highway Program

The Scenic Highway Program in the state of California is aimed at the protection and long-term preservation of highway corridors of scenic value to ensure the aesthetic value of lands adjacent to highways. The State Scenic Highway System includes highways that are either eligible for designation as scenic highways or have been designated as such. The status of a state scenic highway changes from eligible to officially designated when the local jurisdiction adopts a scenic corridor protection program, applies to the California Department of Transportation for scenic highway designation approval, and receives the designation. A city or county may propose adding routes with outstanding scenic elements to the list of eligible highways; however, state legislation is required for them to become designated.

There are no designated state scenic highways in the Proposed Project area. There are two eligible state scenic highways near the Proposed Project site—Interstate 5 (approximately 6 miles away) and State Route 76 (approximately 2 miles away); however, neither of these are officially designated.

4.1.2.3 Local

As provided in California Public Utilities Commission (CPUC) General Order 131-D, the CPUC has exclusive jurisdiction over the siting, design, and construction of the Proposed Project, preempting local discretionary authority over the location and construction of electrical utility facilities. Therefore, the Proposed Project is not subject to local discretionary land use regulations. Nonetheless, as part of the environmental review process, San Diego Gas & Electric Company (SDG&E) considers relevant local land use plans and policies that pertain to aesthetics and visual resources.

City of Oceanside General Plan – Land Use Element

There are several goals pertaining to visual character and aesthetics in the Land Use Element. A Community Enhancement goal is: "the consistent, significant, long term preservation and improvement of the environment, values, aesthetics, character, and image of Oceanside as a safe, attractive, desirable, and well-balanced community." Another objective for utilities is: "To assure the long-term efficient economic and aesthetic provision of public utilities to the City and its residents and businesses."

Policy 2.721 A states that "The City shall require sufficient screening, fencing, noise attenuation, landscaping, open space setbacks, or other permanent mitigation or buffering measures between utility corridors and adjacent and surrounding land uses. The employed measures shall be of sufficient scope to minimize to the maximum extent possible negative impacts to adjacent surrounding land uses from the particular utility corridor."

Policy 2.725 D states that "The City shall require the undergrounding of energy transmission lines and distribution systems to new land developments or uses" (City of Oceanside 2002).

Pacific Coast Business Park, Industrial Master Development Plan

The proposed Ocean Ranch Substation site is within the Pacific Coast Business Park Industrial Master Development Plan, which is a component of the Rancho Del Oro Specific Plan and is part of the industrially designated area in the central portion of Oceanside encompassing 124.31 acres (City of Oceanside 2005). Design and development within the Industrial Master Development Plan include:

Utilities and Communication Devices

- "All electric, telephone, gas, and cable service lines to individual lots or sites shall be installed and maintained underground," and
- "Exterior onsite utilities, including but not limited to drainage systems, sewers, gas lines, water lines and electrical, telephone, and communications wires and equipment, shall be installed and maintained underground."

Landscape Criteria

The landscape elements of the Pacific Coast Business Park Industrial Master Development Plan are intended to create an aesthetically pleasing setting for business park development, and to be compatible with the design concepts of the adjacent industrial park areas while establishing a distinct identity for the Pacific Coast Business Park. The landscape design framework for the Proposed Project is established within the public street rights-of-way, including the project identification signage and landscaped parkways. The

project guidelines include cross sections of each street within the development to show the overall planting scheme to be used within the Pacific Coast Business Park and the location of sidewalks within the parkway, which have been placed to accommodate landscaped parkways adjacent to the curb.

The planting palette for streetscapes within the Pacific Coast Business Park Industrial Master Development Plan complies with the horticultural requirements of the site and was created to provide a landscape in which the plants visually complement each other and have similar water requirements and seasonal temperature limitations in order to ensure the long-term success of the plant material. The Pacific Coast Business Park Industrial Master Development Plan palette incorporates many of the plants used throughout the Rancho Del Oro Specific Plan Area in order to provide continuity within the Specific Plan. The plan includes plant palettes with initial container sizes for developments, including for required landscape setback areas.

The design details are intended to be compatible with the design concepts of the adjacent industrial park areas while establishing a distinct identity for the Pacific Coast Business Park. The landscape design framework is established within the public street rights-of-way, including the project identification signage, the landscaped parkways, and, on Old Grove Road, median plantings. The intent of the Pacific Coast Business Park Industrial Master Development Plan landscape guidelines is to have the plants guide users to their final destination and provide visual cues to make access routes through the area easier to use. The plan includes use of taller plants at intersections to allow drivers to anticipate upcoming intersections, and delineates distinct tree species for each street. The planting guidelines also are intended to provide scale and green screens to shield views of parked vehicles, screen trash bin areas, and block walls.

Lighting

- "The streets and signs within the Pacific Coast Business Park shall be lit with adequate fixtures to provide safe and aesthetic illumination," and
- "Building illumination and architectural lighting shall be soft and non-glaring in character. 'Wall-washing,' overhead down lighting and interior illumination that spills outside is encouraged. All lighting visible from adjacent streets shall be indirect and shall incorporate full cut-off shield fixtures."

Business Park Sign Regulations

- "Project identification signage will utilize consistent color, logo and type-style elements, which will assist in unifying the signage throughout the development," and
- "All project identification signage must be placed in such a location as to not obstruct sight distance. Signs may not be located within a public right-of-way. Signs located in the corner clear zone shall not exceed 30 inches in height, nor create a traffic sight obstruction or other pedestrian or traffic hazard."

4.1.3 Existing Conditions

The proposed Ocean Ranch Substation site is located in a business park area characterized by office and light-industrial buildings that are generally two stories tall, but are permitted to be up to 80 feet tall. Street trees and landscaping are typically aligned along both sides of the streets in the area, and the parking lots surrounding the buildings support shrubs, flowers, and trees. The area is highly uniform in appearance, though only moderately vivid. The buildings, streetscapes, signage, and lot designs conform to design guidelines that create a highly intact visual environment. However, much of the business park still contains

empty lots, and these unpaved, un-landscaped areas interrupt the continuity of the business park where visible.

The proposed substation will be located on two vacant lots that are not highly visible from most public streets. The wedge-shaped site is located at a higher elevation than Avenida Del Oro, which parallels the western site boundary. Existing business park buildings abut the northeast and southeast boundaries of the site. The main entrance to the proposed substation site will be at the end of the Rocky Point Drive cul-de-sac. The undeveloped lots are visible from this point, at the top of a small, landscaped slope. The proposed substation will tie into TL 6966, which is an existing underground 69 kilovolts (kV) circuit with termination points at San Luis Rey Substation (to the west) and Melrose Substation (to the east). Since the new substation is the only above-ground feature, the underground lines are not discussed further since they are not visible and would not contribute to aesthetic and visual resources impacts. The location where TL6966 will connect to the new substation is within the proposed substation site and accounted for in the following analysis.

The existing conditions of the proposed substation site and the surrounding area are shown in the photographs depicted in Figures 4.1-1, 4.1-2, and 4.1-3.



Avenita de la Plata, looking Northeast



Ocean Ranch Boulevard, looking Southeast



Avenida del Oro, looking Northeast



Rocky Point Drive cul-de-sac, looking Southwest



Parking lot of US Post Office on Avenida Del Oro, looking East



Avenida del Oro, looking West

Figure 4.1-1 Existing Conditions Photographs



Southwest corner of Project Site, looking West



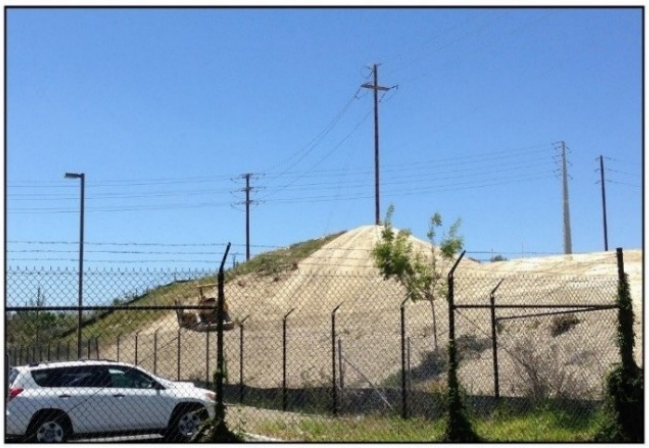
Northwest corner of Project Site, looking Northwest



Avenida del Oro and Windansea Street, looking South



Avenida del Oro at northwest corner of Project Site, looking Southeast



Construction site at Avenida del Oro, looking West



Senior Center Drive, looking East

Figure 4.1-2 Existing Conditions Photographs Continued



Corporate staging yard at northeast corder, looking West



USPS staging yard from Avenida de la Plata looking North



Melrose staging yard from Melrose Drive, looking Southwest



San Luis Rey staging yard at northwest corner, looking West

Figure 4.1-3 Existing Conditions Photographs Continued

4.1.4 Standard Operating Procedures

With implementation of standard operating procedures as outlined in Section 3.9, *Standard Operating Procedures*, and summarized in this section, impacts related to aesthetic resources will remain less than significant.

- **Conceptual Landscape Plan.** The conceptual landscape plan for the proposed Ocean Ranch Substation would be implemented as part of the Proposed Project following construction of the substation. (The Conceptual Landscape Plan is provided as Appendix B). The landscaping plan, planting scheme, lighting guidelines, and sign regulations, include street trees and shrubs along Rocky Point Drive and Avenida Del Oro and interior landscape plants that are low-water use, regionally appropriate, and visually compatible with the surrounding area and that do not conflict with the Pacific Coast Business Park Industrial Master Development Plan.

  Implementation of the landscape plan would ensure that the project perimeter wall, street-front areas, and slopes would be visually similar to the existing business park surrounding the project, and would provide partial screening of the perimeter wall.

  The plan incorporates low-water-use, mostly native plants that are visually similar to existing plants on neighboring properties. The landscaping includes strawberry tree (*Arbutus unedo*) at the entrance to the site from Rocky Point Drive, and on the top of the slope along Avenida Del Oro. The landscape plan leaves in place the existing street trees and slope planting along the west side of the parcels facing Avenida Del Oro, and adds more shrubs and trees to the slope as well. The Proposed Project's landscape elements have been selected to comply with existing streetscape guidelines and to visually blend with existing neighboring landscapes. Low-water-use, mostly native plants are proposed throughout the interior landscape areas of the site, including trees and shrubs that are visually similar to existing plants on neighboring lots, such as Australian willow (*Geijera parviflora*) and holly leaf cherry (*Prunus ilicifolia*). These trees will provide a visual connection to the surrounding streetscapes, and will provide some screening of the Proposed Project's perimeter walls. Medium-sized shrubs and low-growing shrubs and ground covers are proposed as well. The site includes two retention basins, which will be planted with locally appropriate grasses and rushes.

- **Dulled Galvanized Steel Structures.** New structures are designed utilizing dulled galvanized steel to avoid potential adverse effects relating to fire and fire damage, as well as adverse effects due to high moisture content in coastal areas. The dulled aspect of the steel poles also minimizes the potential for visual impacts relating to glare.

- **New Chain Link Fence.** New fencing installed as part of the Proposed Project will be a dull, non-reflective finish to reduce potential glare.

- **Perimeter Wall.** The perimeter wall would be designed to blend with the neighboring buildings and provide continuity with the existing landscape, and would not conflict with standard design criteria and requirements for electrical substations or the Pacific Coast Business Park Industrial Master Development Plan.

- **Restoring Appearance of Temporarily Disturbed Areas.** When Proposed Project construction has been completed, all temporarily disturbed terrain will be restored as near to preconstruction conditions as possible. Revegetation would be used, where appropriate (revegetation in certain areas is not possible due to vegetation management requirements related to fire safety) to reestablish a natural appearing landscape and reduce potential visual contrast between disturbed areas and the surrounding landscape.

- **Temporary Lighting.** Temporary lighting at staging and storage areas will be directed on site and away from any sensitive receptors.
- **Visual Screening of Staging Yards.** Where staging yards are visible to the public, opaque mesh or slats (or equivalent material) will be installed along the fence that will soften the view of the staging yard from public vantage points such as roads, residences, and public vantage points.

4.1.5 Applicant Proposed Measures

Implementation of the above standard operating procedures would ensure that the visual impacts would be less than significant, and no additional APMs would be necessary.

4.1.6 Project Impacts

The Proposed Project includes construction of a new 69/12 kV substation and loop-in of an existing 69 kV power line to connect to the proposed substation (refer to Chapter 3.0, *Project Description*).

The proposed visible features analyzed here include the substation equipment, perimeter wall, landscaping, and staging yards.. The substation will be a relatively low-profile facility, with equipment less than 20 feet tall. A 40-foot monopole will be installed in the southwest corner of the proposed Ocean Ranch Substation site for the microwave radio communication system. A 10-foot-tall masonry wall will enclose the entire substation. The wall will be set back from the street edges of the site, with landscaped areas in front of it. The landscaping and wall design will be similar in character to the existing streetscape and landscaped areas within the business park, and will include trees and shrubs. Two approximately 10-foot-tall by 30-foot-wide sliding gates and one approximately 10-foot-tall by 20-foot-wide sliding gate will be installed within the perimeter wall to provide primary and secondary access to the substation. The gates will be constructed from chain-link material and will be designed to accommodate standard brown slats. Barbed wire will be installed horizontally along the interior of the wall and gates so as not to be visible from the exterior of the substation. The primary access will be from Rocky Point Drive via the existing cul-de-sac. The secondary access entry to the substation will be at Avenida Del Oro on the southwest side of the substation property. Appropriate signage will be posted on the substation wall and gates, in accordance with federal, state, and local safety regulations.

Additionally, four staging yards will be used to accommodate the majority of construction equipment, vehicles, personnel, and material staging. Two of these staging yards are within the substation viewshed. These temporary staging areas include a total of approximately 17.5 acres:

- The Corporate Center staging yard is approximately 11.5 acres of disturbed habitat located north of Ocean Ranch Boulevard and south of Mesa Drive.
- The USPS staging yard is approximately 5 acres of undeveloped land, located just south of the USPS building and to the west of the proposed Ocean Ranch Substation site. This area is composed of non-native grassland and disturbed non-native grassland.
- The San Luis Rey staging yard is approximately 0.5 acre of paved area with an existing access road located next to the existing San Luis Rey Substation.
- The Melrose staging yard is approximately 0.5 acre of paved, fenced area with an existing access road located next to the existing Melrose Substation and approximately 3 miles away from the proposed Ocean Ranch Substation site.

The temporary impact areas may vary because the positioning of construction vehicles, equipment, and materials cannot be accurately anticipated prior to construction, as locations are dependent upon the contractor safely performing the work. Once the proposed Ocean Ranch Substation is constructed and placed in service, it will not require personnel stationed onsite except during periodic and routine maintenance activities that will ensure reliable operation of all equipment within the substation. The underground components will be inspected consistent with SDG&E's existing underground inspection and maintenance program.

4.1.6.1 Methodology

The visual impact of the Proposed Project has been evaluated through the use of a viewshed analysis, determination of potential key views, and creation of visual simulations. A viewshed analysis helps to identify areas from which the Proposed Project may be visible. The viewshed analysis was performed to determine project visibility up to 1.5 miles away. Even so, proposed features may not be visually prominent from the outer edges of the viewshed, even if these objects are large enough to be visible, because distance decreases scale and contrast that is normally perceived by changes in texture, color, and pattern.

The theoretical viewshed shown in Figure 4.1-4 was developed using a Digital Elevation Model. The Digital Elevation Model files consist of x, y, and z data (north-south, east-west, and elevational data) representing an area 33 feet by 33 feet per data point. A viewshed analysis evaluates the visibility of each point based on its elevation in relation to the elevation of the surrounding areas. The result shows areas from which the analyzed points may be visible, but is theoretical since it only takes into account the position of the viewer, the location of the element being viewed, and the intervening topography, but does not analyze the effects of trees, buildings, or other structures that could block or screen project elements. It also does not take into account the effects of distance on the visibility of elements. It does, however, represent the worst-case visibility of prominent project elements.

The viewshed was created for data points in the middle of the proposed Ocean Ranch Substation site. The points were assigned an elevation (z data) based on the proposed height of the feature. The figure shows the areas within 1.5 miles of the proposed Ocean Ranch Substation site from which one or multiple proposed features may be visible.

After the viewshed analysis was conducted, the project team verified the result with field visits, analysis of aerial photographs and topographical data, and publicly available street views. The team surveyed the visual environment of the Proposed Project and feature locations as well as the surrounding area at the same time, to determine the baseline visual environment (shown in the photographs depicted in Figures 4.1-1, 4.1-2, and 4.1-3) and potential Key View locations. Field visits also included the collection of Key View photographs. Figures 4.1-5 and 4.1-6 illustrate the Key Views, and Figure 4.1-7 is a map showing the location from which each of the view photographs was taken.

To illustrate and evaluate the effect of the proposed features on the visual environment surrounding the Proposed Project, the team created photograph simulations of the proposed features. The simulations were prepared for Key Views 1, 2, and 7 (the locations of which are shown in Figure 4.1-7), and are used to support the evaluation below.

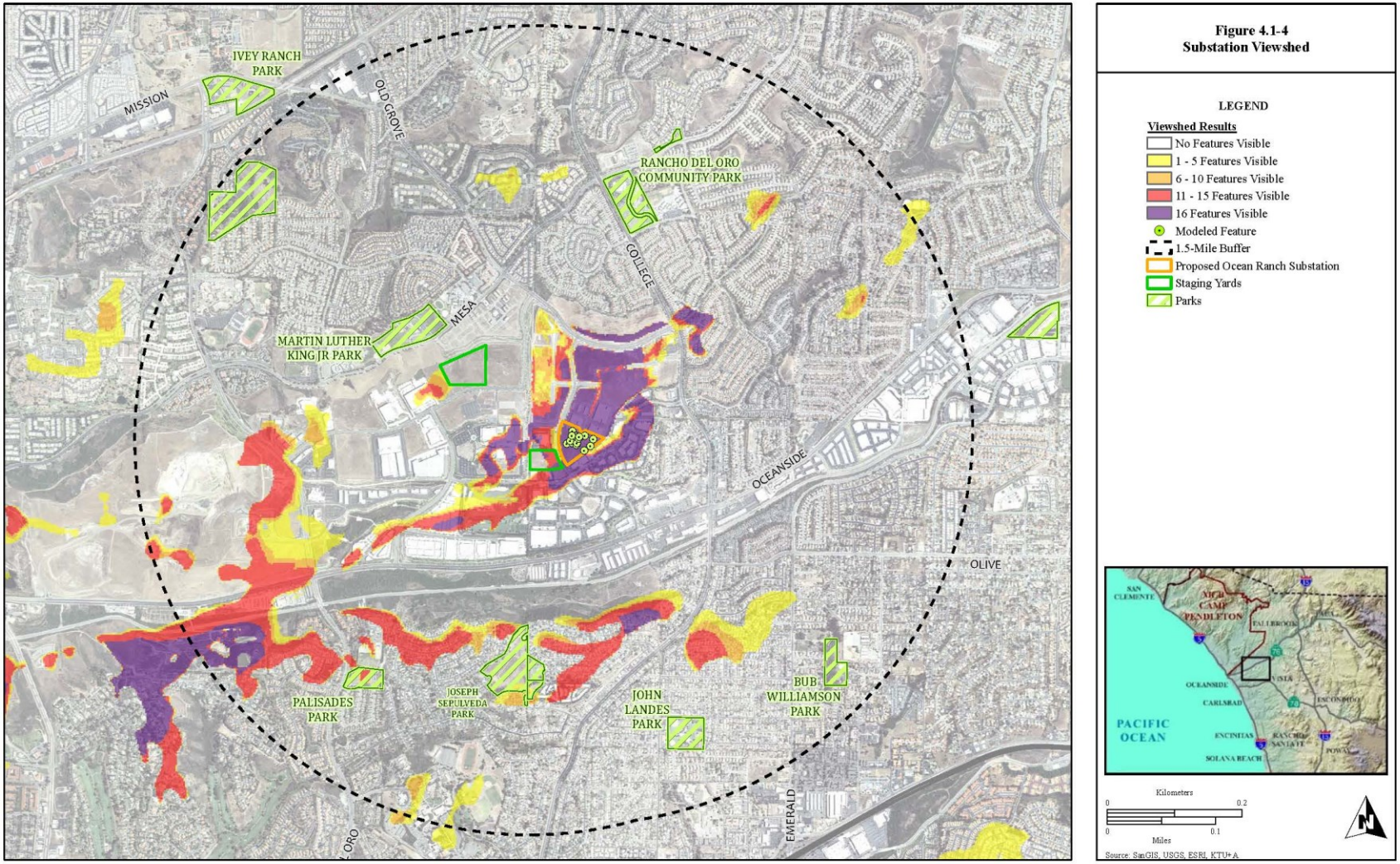


Figure 4.1-4 Substation Viewshed



Key View 1
North of intersection of Avenida Del Oro and Avenida De La Plata looking Northeast



Key View 2
Cul-de-sac at southern end of Rocky Point Drive looking Southwest



Key View 3
Parking lot of US Post Office on Avenida Del Oro, looking East



Key View 4
West of intersection of Avenida Del Oro and Avenida De La Plata looking West

Note: Views outlined in Red have been selected for simulation.

Figure 4.1-5 Key Views 1 through 4



Key View 5
Southeast corner of Project Site looking Southwest



Key View 6
Avenida del Oro and Windansea Street, looking South



Key View 7
Avenida del Oro at northwest corner of Project Site, looking Southeast

Note: Views outlined in Red have been selected for simulation.

Figure 4.1-6 Key Views 5 through 7

4.1.6.2 Evaluation of Visible Elements

The proposed Ocean Ranch Substation site is surrounded by a business park and light industrial buildings. As the viewshed analysis shows (refer to Figure 4.1-4), most of the project features may be visible from the private business park lots immediately surrounding the site. However, from many of the business park lots, existing buildings between the site and the viewer will block views of the proposed substation site. Views will mostly be available from portions of several public roads within the business park, such as Rocky Point Drive, which will provide the main access to the site, and some portions of Avenida Del Oro, along which the substation's secondary access will be located. Some of the project elements will also be visible from Avenida de la Plata southwest of the proposed substation site, and Old Grove Road north of the site.

Additionally, some portions of the proposed substation site will be visible from private residences in neighborhoods surrounding the site. The views from these residential areas include vegetation, structures, roads, and existing power lines and power poles. The proposed substation features that would be most visible include the wall and landscaping. Some equipment may be visible above the walls from some angles, but overall the proposed substation site would be similar in appearance to the surrounding area due to the Proposed Project's incorporation of local design guidelines. Therefore the proposed substation features would blend with the surrounding structures and landscaping, and would not substantially contrast with the area or be highly noticeable. The monopole would be the tallest proposed substation feature, but because it would be narrow, would not be highly noticeable or contrast with the surrounding area. Therefore the proposed substation as seen from residential areas would create a less than significant impact.

Three photo simulations have been prepared that depict the Proposed Project features within the existing context. The photo simulations were prepared from the views marked with red on Figure 4.1-7, the Key View location map. These key views were selected because they are the locations with the most viewers.

As shown in Simulation 1, Figure 4.1-8, the proposed Ocean Ranch Substation elements that will be most prominent in views along Avenida Del Oro include the perimeter landscaping and the concrete block wall. The monopole would be visible as well, as the tallest element introduced into the view. The wall surrounding the equipment will be set back from the street edges of the site, with landscaped areas in front of them. As shown in the simulation, a small portion of the equipment may also be visible above the walls. Overall, however, the equipment is a minor element, and the wall and landscaping are the dominant features. The landscaping and wall design will be similar in character to the existing streetscape and landscaped areas within the business park, and thus would not highly contrast with the surrounding area, ensuring that the substation would not a create significant visual impact.

A 40-foot monopole will be installed in the southwest corner of the proposed Ocean Ranch Substation site for the microwave radio communication system. A 2-foot-diameter antenna will be mounted on the monopole and point west to provide a communications link to the San Luis Rey Substation. This large steel monopole will be a light-colored steel structure approximately as tall as the nearby trees. The surface of the monopole would not be reflective. The monopole would be seen mostly from the roadways in the surrounding area, when a viewer glances in the direction of the proposed substation site. It would have no visible wires strung from it, and despite its height, would be relatively narrow. It would be a singular, unique element in the view, but due to the brevity of views from the roadways and the non-reflective surface of the monopole, it would not be an element that draws a viewer's attention. Therefore, the monopole would not be a significant feature. The top of the monopole may be visible from some residential areas, but from anywhere but the immediate roadway next to the proposed substation site, the monopole would be one small feature in a wider view, and not highly distinguishable within those views. Its relatively small scale would therefore ensure that it would not be significant feature in residential views.

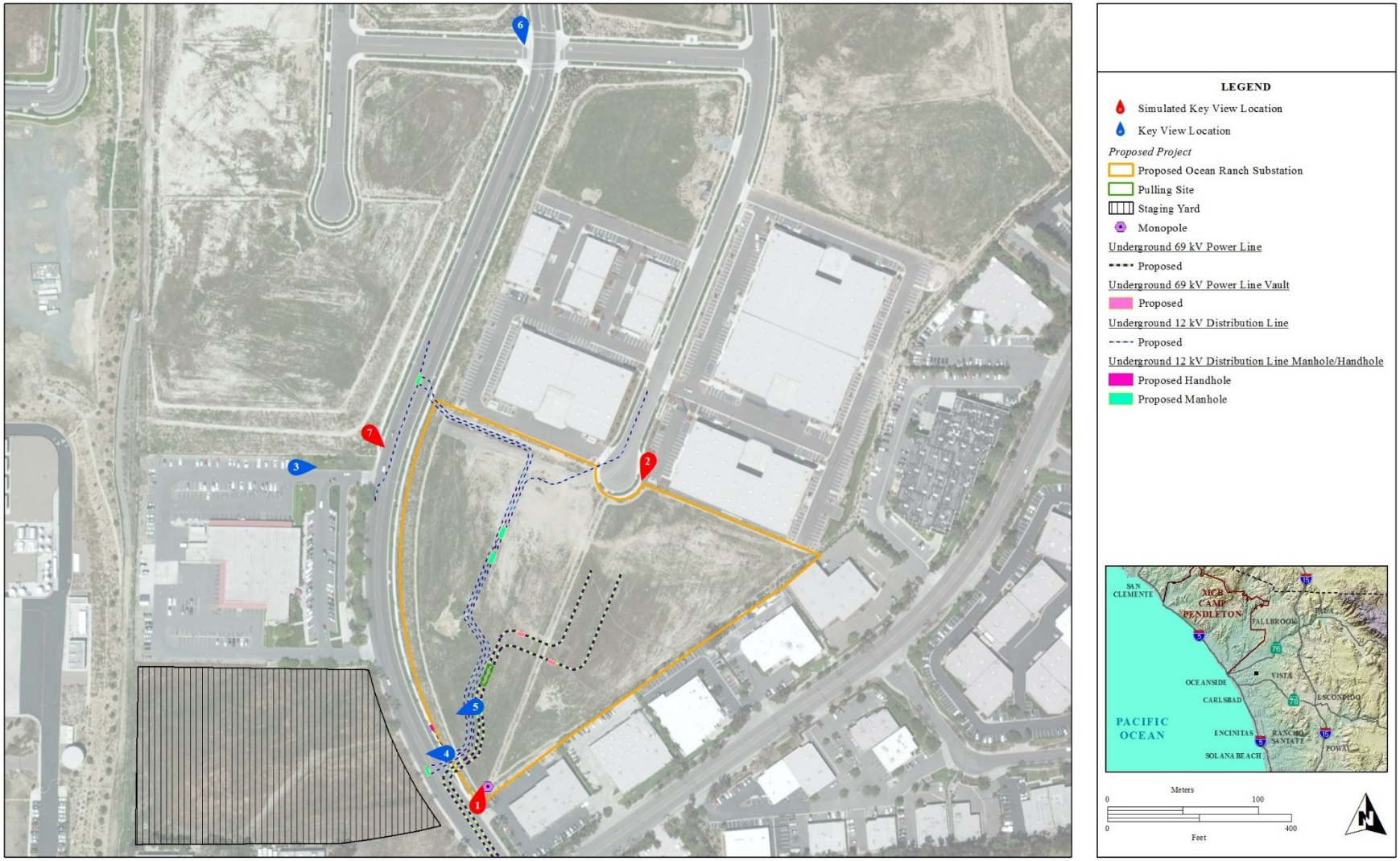


Figure 4.1-7 Location and Direction of Key Views



Figure 4.1-8 Simulation 1

Simulation 2, Figure 4.1-9, illustrates a view of the proposed substation site from the cul-de-sac at the end of Rocky Point Drive. The site access driveway, concrete block wall, and landscaping will be visible from this point, filling in an otherwise empty lot. The Proposed Project features will be mostly blocky, geometric shapes, and the wall will have a uniform color. Gray, complex equipment will also be visible above the walls. The landscaping will provide some variety of color and variation along the otherwise mostly blank wall. The proposed trees and shrubs also will provide a visual connection to the existing landscaping along each side of Rocky Point Drive. This would help ensure continuity between the project features and the surrounding area.

Simulation 3, Figure 4.1-10, is a view from Avenida Del Oro looking at the northwestern corner of the proposed substation site. From here, the Proposed Project elements will be at the top of an existing slope, and visible at such an angle that they would extend above the high horizon line. The proposed landscaping would be the most prominent feature from this angle. The new landscaping will be similar in appearance to the landscaping in the surrounding business park. The addition of the trees, shrubs, and ground covers where there currently is no vegetation would create more unity within views of the area, therefore the new trees and shrubs would not create a negative change in the view, despite being placed at such a high position relative to the viewer. As shown in Simulation 3, the top of the perimeter wall would be visible, but would be mostly shielded from view by the proposed and existing plants and the existing slope.

In areas where the underground power line will be looped into the proposed substation,vaults will be installed, and the power line will b Trenching will occur in existing streets, and will result in ground surface disturbances. The visual impact of the final paved surface of the trenches will be less than significant. The construction of the trenches will include trucks, signs, and traffic control equipment, which will be noticeable elements in the local area of the work. Work will occur for approximately 6 months, after which the trucks, equipment, and traffic control elements will be removed. Due to the limited time frame of the construction activity at any given location, the visual effects of the construction of vaults and trenching will be less than significant.

The staging yards will be used for construction equipment, vehicles, and materials. Activities performed at the staging areas may include assembly of project components, open storage of material and equipment, construction trailers, portable restrooms, parking, and lighting. Each staging yard would be surrounded by a fence and an opaque screening material will be used. The equipment and materials within the yards would be somewhat visible from public streets, but the view will be softened by the screeing matieral.

e trenched between vaults. The vaults will be less than 3 feet tall, and therefore will be only noticeable from the areas immediately surrounding each box. The limited height of the vaults ensures that they will not block views of any scenic features or vistas. Each will be located in developed areas near public streets that already contain multiple utility and street furniture items (e.g., signs, power poles, already existing electrical boxes, telecom and other utility enclosures), and will not contrast with the existing elements. The construction of underground vaults will have aesthetic impacts that are less than significant.



Figure 4.1-9 Simulation 2



Figure 4.1-10 Simulation 3

The Corporate staging yard at Ocean Ranch Boulevard is higher in elevation on the eastern side than the abutting roadway, and at approximately the same elevation at the southwest corner. Residential lots neighbor the staging yard to the north, and are lower in elevation than the yard. Views would therefore be most visible from the southwest corner, and become less visible toward the east and northeast. The USPS staging yard is at the same elevation as Avenida De La Plata and Avenida Del Oro which extend along the south and east sides of the yard, respectively. The staging yard would be highly visible from each of these roadways. Fencing, vehicles, and materials within each staging yard would be new features within views from the roadways abutting each. The change in elevation between the Corporate Center staging yard and Ocean Ranch Boulevard on the east and the residential areas on the north will help to lessen the visual contrast of the staging features. The USPS staging yard has no existing slopes or features to lessen the visual contrast of the proposed staging yard features. The San Luis Rey and Melrose staging yards would be within the existing substation footprints. The equipment at the San Luis Rey and Melrose staging yards would not be highly distinguishable from the existing substation equipment, and thus would not create a noticeable change in views.

The staging yards would be in place for the duration of the construction period. Due to the limited time frame of the construction activity, the visual effects of the staging yards will be temporary and less than significant. Additionally, the inclusion of screening materials on the fences (as outlined in the Standard Operating Procedures) would shield the equipment, vehicles, and materials from views.

With implementation of standard operating procedures as outlined in Section 3.9, *Standard Operating Procedures*, and summarized in this section, impacts related to aesthetics will be less than significant.

4.1.6.3 Significance Criteria

According to Section 15002(g) of the CEQA Guidelines, "a significant effect on the environment is defined as a substantial adverse change in the physical conditions which exist in the area affected by the proposed project." As stated in Section 15064(b) of the CEQA Guidelines, the significance of an activity may vary with the setting. Per Appendix G of the CEQA Guidelines, the significance of project-related impacts on aesthetic resources was evaluated for each of the criteria listed in the impact summary table as described below.

a) Have a substantial adverse effect on a scenic vista? *No Impact*

The Proposed Project will not be located in an area where there is a designated scenic vista. Additionally, the proposed Ocean Ranch Substation and loop-in work will have a limited viewshed (Figure 4.1-4, above). Landscaping measures and the design of the proposed substation's perimeter walls, and the limited construction period for undergrounding work, will ensure that changes within the viewshed are not substantial. The Proposed Project will not have an adverse effect on a scenic vista.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? *No Impact*

No scenic resources such as trees, rock outcroppings, or historic buildings are present in the Proposed Project area, and none will be altered by the Proposed Project. Additionally, the nearest state scenic highway is 2 miles north of the Proposed Project, and the proposed features will not be visible from the highway. No scenic resources will be impacted by development of the Proposed Project.

c) Substantially degrade the existing visual character or quality of the site and its surroundings? *Less than Significant*

The proposed Ocean Ranch Substation will include a landscape plan and design features (such as the perimeter wall), consistent with applicable City land use plans, policies, and regulations. As a result, while the Proposed Project will introduce new visual elements into the immediate area, the Proposed Project features will have a similar visual character and quality as the existing buildings and streetscape. Although the proposed new 40-foot monopole would be a new unique element in the view, it would be approximately the same height as the nearby trees, of relatively small scale within the larger view, and would not be a significant prominent feature. Construction and operation of the Proposed Project will be consistent with applicable City land use plans, policies, and regulations. Therefore, the Proposed Project will have a less than significant impact on and will not substantially degrade the existing visual character or quality of the site or its surroundings.

d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area? *Less than Significant*

Substation lights will be installed at the proposed Ocean Ranch Substation site entrance, and will provide a low level of ambient light to provide safe entry and exit; driving around busses/racks, corners, and roadways; and to allow for a preliminary visual inspection of the proposed substation. With the exception of the gate entry lights, which will remain on at night for safety purposes, the remaining substation lighting will not be turned on unless it is required for nighttime work and/or an emergency. One light will be installed at the main gate, one light will be installed on each side of the control shelter, and a minimum of two lights will be installed on each substation wall. All on-site lighting will be oriented downward to minimize glare on surrounding property. Any lights selected for installation at the proposed Ocean Ranch Substation will be consistent with local codes in terms of shielding, cut-off, and maximum level of light allowed, and would not affect nighttime views in the area. None of the proposed substation elements (equipment, walls, landscaping, etc.) would create a source of glare.

Underground line and installation of vaults will not create any light or glare.

4.1.7 References

City of Oceanside. 2002. General Plan, Land Use Element.

City of Oceanside. 2005. Pacific Coast Business Park, Industrial Master Development Plan. A Component of the Rancho Del Oro Specific Plan. June 21.

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TABLE OF CONTENTS

4.2 AGRICULTURAL RESOURCES 4.2-1
4.2.1 Introduction 4.2-1
4.2.2 Regulatory Setting 4.2-1
4.2.3 Existing Conditions 4.2-4
4.2.4 Standard Operating Procedures 4.2-4
4.2.5 Applicant Proposed Measures 4.2-4
4.2.6 Project Impacts 4.2-5
4.2.7 References 4.2-6

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4.2 AGRICULTURAL RESOURCES

Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural land?	☐	☐	☐	☒
b.	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined by Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d.	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e.	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

4.2.1 Introduction

This section of the PEA describes the existing conditions and project-related impacts to agricultural resources in the vicinity of the Proposed Project. The analysis concludes that no impacts related to agricultural resources will occur. The Proposed Project's effects on these resources were evaluated using the significance criteria set forth in Appendix G of the CEQA Guidelines. The conclusions are summarized in the checklist above, and discussed in more detail in Section 4.2.6.

4.2.2 Regulatory Setting

This section includes a description of the regulatory framework related to agricultural resources.

4.2.2.1 Federal

No federal regulations related to agricultural or forest resources are applicable to the Proposed Project.

4.2.2.2 State

Department of Conservation Farmland Mapping and Monitoring Program Important Farmland Designations

The California Department of Conservation (DOC) Division of Land Resource Protection generates maps depicting Important Farmlands. These farmlands are categorized according to specific criteria, including soil quality and irrigation conditions. Approximately 94 percent of the Farmland Mapping and Monitoring Program (FMMP) study area is based on the United States (U.S.) Department of Agriculture Natural Resource Conservation Service soil classification system, which evaluates both physical and chemical conditions, including soil temperature, moisture regime, pH, flooding, groundwater depth, erodibility, permeability, and sodium content. FMMP maps are updated every 2 years using an aerial imagery review, field reconnaissance, computer mapping analyses, and public input. The minimum land use mapping unit is 10 acres, and smaller units of land are generally incorporated into surrounding map classifications.

The DOC has established the following eight land use classifications:

- **Prime Farmland.** Prime Farmland has the optimum combination of physical and chemical conditions that are able to sustain long-term agricultural production. The soil quality, growing season, and moisture supply on Prime Farmlands provide conditions to produce sustained high yields. Prime Farmlands must have been used for irrigated production within 4 years of the mapping date.
- **Farmland of Statewide Importance.** Farmland of Statewide Importance is similar to Prime Farmland; however, these farmlands have minor shortcomings, such as a higher slope or decreased ability to store soil moisture. Similar to Prime Farmlands, Farmlands of Statewide Importance must have been used for irrigated production within 4 years of the mapping date.
- **Unique Farmland.** Unique Farmland has lower-quality soils and is used for the production of California's leading agricultural products. Unique Farmlands are typically irrigated, but may also include non-irrigated vineyards or orchards found in certain climatic zones. Unique Farmlands must have been cropped within 4 years of the mapping date.
- **Farmland of Local Importance.** Farmland of Local Importance are farmlands that are vital to the local agricultural economy, as identified by each county's local advisory committee and board of supervisors.
- **Grazing Land.** Grazing Land is land on which existing vegetation is suitable for livestock grazing.
- **Urban and Built-Up Land.** Urban and Built-Up Land is defined as land that is occupied by buildings or other structures at a minimum density of one unit to 1.5 acres (or approximately six structures to 10 acres). These lands are used for development purposes, including residential, commercial, industrial, construction, public administration, institutional, transportation yards, airports, cemeteries, golf courses, sewage treatment, sanitary landfills, and water control structures.
- **Other Land.** Other Land includes all lands that are not in any other map category, such as waterbodies smaller than 40 acres; low-density rural developments; confined livestock, poultry, or aquaculture facilities; and brush, timber, wetland, and riparian areas not suitable for livestock grazing.
- **Water.** Water includes all perennial waterbodies that are a minimum of 40 acres.

For the purposes of this section, "Important Farmlands" include Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance.

Williamson Act Land Designations

The Williamson Act, also known as the California Land Conservation Act of 1965 (California Government Code [CGC] Section 51200 et seq.), preserves agricultural and open space lands from conversion to urban land uses by establishing a contract between local governments and private landowners to voluntarily restrict their land holdings to agricultural or open space use. In return, landowners receive property tax assessments based on farming or open space use, rather than assessments based on the full market property value, which is typically 20 percent to 75 percent higher. Williamson Act contracts are valid for a minimum of 10 years and are automatically renewed each year for an additional 10-year term, in the absence of a notice of nonrenewal.

The Williamson Act also allows local governments to establish Agricultural Preserves, parcels of land for which cities or counties are willing to enter into Williamson Act contracts. Agricultural Preserves must include a minimum of 100 acres and typically avoid areas in which public utility improvements and associated land acquisitions may be necessary (CGC Section 51230). Although the Williamson Act does not specify compatible land uses for property located adjacent to contract lands or Agricultural Preserves, it does state that cities and counties must determine compatible land use types while recognizing that temporary or permanent population increases frequently impair or hamper agricultural operations (CGC Section 51220.5).

4.2.2.3 Local

As provided in the CPUC General Order 131-D, the CPUC has exclusive jurisdiction over the siting, design, and construction of the Proposed Project, the Proposed Project is not subject to local discretionary land use regulations. Nonetheless, as part of the environmental review process, SDG&E considers relevant local land use plans and policies that pertain to agriculture.

County of San Diego

Farmland of Local Importance is land of value to the local economy, as defined by each county's local advisory committee and adopted by its board of supervisors. Farmland of Local Importance is either currently producing, or has the capability to produce agricultural products, but does not meet the criteria of Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. Authority to adopt or to recommend changes to the category of Farmland of Local Importance rests with the San Diego County Board of Supervisors (DOC 2015).

City of Oceanside General Plan-Land Use Element

The objective of the city's agricultural policies is to identify, conserve, and enhance agricultural areas.

Policy 2.03 A states that the City shall assure in all sections that the legal parcels or interests in agricultural lands are sufficient size to viably conduct agricultural practices.

Policy 2.5 C states that the City shall, in all proposed actions converting agricultural land to other land uses, consider the loss of those lands to the potential agricultural productivity to the community; and shall assure that land use compatibility to agricultural land is fully defined and assured.

Policy 2.5 D states that Land Use compatibility is of primary importance to agricultural areas, since land use conflicts between agricultural and non-agricultural uses can force the economic non-viability of agricultural areas.

Policy 3.19 A states that the City shall apply agricultural land use designations and zoning classifications to areas of significant productive agricultural use.

Policy 3.19 C states that the City shall encourage participation of agricultural property owners in Williamson Act contracts.

City of Oceanside General Plan-Environmental Resource Management Element

This element is designed to conserve natural resources and preserve open space in the City of Oceanside. It provides information on agricultural resources and lands that are capable of supporting agricultural operations. As shown in this element, the Proposed Project site is not in an area designated as "good" or "fair" for agriculture.

4.2.3 Existing Conditions

Existing agricultural resources are described in terms of location relative to the Proposed Project, and the agricultural importance of these resources, as defined by regulatory agencies.

4.2.3.1 Designated Farmland

None of the Proposed Project is on land designated as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland, as defined by the FMMP.

The proposed substation site is designated by the DOC as Urban and Built-Up Land (DOC 2013a; 2014). However, the Proposed Project Site is zoned as industrial. The current land uses in the vicinity of the Proposed Project are industrial and commercial, with some open, undeveloped land. The proposed substation site is in the Pacific Coast Business Park within the Rancho Del Oro Specific Plan Area, on two undeveloped vacant and disturbed parcels located within a developed industrial area of Oceanside. Land adjacent to the Proposed Project is designated by the DOC as Other Land and Urban and Built-Up Land (DOC 2013a, 2014).

4.2.3.2 Williamson Act

There are no Williamson Act lands in the vicinity of the Proposed Project. The Proposed Project site is listed as Non-Enrolled Land and Urban and Built-Up Land. Non-enrolled land is not under a Williamson Act contract (DOC 2013b).

4.2.3.3 Agricultural General Plan Designations and Zoning

The Proposed Project does not traverse any land designated in the City of Oceanside General Plan as agricultural land or forest land, and is not zoned by the City of Oceanside for agricultural uses (City of Oceanside 1992, 2002). None of the Proposed Project area is under active crop cultivation or used for livestock grazing. As shown in the Environmental Resource Management Element of the City's General Plan, the Proposed Project site is not in an area designated as "good" or "fair" for agriculture (City of Oceanside 2002).

4.2.4 Standard Operating Procedures

There are no project standard procedures related to agriculture that are applicable to the Proposed Project.

4.2.5 Applicant Proposed Measures

No APMs related to agricultural resources are proposed.

4.2.6 Project Impacts

The Proposed Project includes construction of a new 69/12 kilovolt (kV) substation and loop-in of an existing underground 69 kV power line to connect to the proposed substation (refer to Chapter 3.0, *Project Description*).

The temporary impact areas may vary because the positioning of construction vehicles, equipment, and materials cannot be accurately anticipated prior to construction, as locations are dependent upon the contractor safely performing the work.

Once the proposed Ocean Ranch Substation is constructed and placed in service, it will not require personnel stationed onsite except during periodic and routine maintenance activities that will ensure reliable operation of all equipment within the substation. The underground components will be inspected consistent with SDG&E's existing underground inspection and maintenance program.

4.2.6.1 Methodology

The agricultural resources analysis within this section involved a review of various documents, including the City of Oceanside General Plan and zoning maps, the DOC's FMMP, and aerial photography. The most recent DOC map for San Diego County showing farmland is from 2010. The Proposed Project was compared to existing and planned land use designations in order to determine impacts.

4.2.6.2 Significance Criteria

According to Section 15002(g) of the CEQA Guidelines, "a significant effect on the environment is defined as a substantial adverse change in the physical conditions which exist in the area affected by the proposed project." The significance of project-related impacts on agricultural resources were evaluated for each of the criteria listed in the checklist above, as discussed below.

a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural land? *No Impact*

The Proposed Project is not located on any land designated as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland as defined by the FMMP. The proposed substation site is located on land designated by the DOC Urban and Built-Up Land (DOC 2013a; 2014) and the site is zoned industrial and located within the Pacific Coast Business Park of the Rancho Del Oro Specific Plan Area, and land adjacent to the site is designated by the DOC as Other Land and Urban and Built-Up Land (DOC 2013a, 2014).

Therefore, the Proposed Project would not alter any existing agricultural uses and would not convert designated farmland to non-agricultural use. No impacts would occur as a result of the Proposed Project.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract? *No Impact*

The Proposed Project is not located on any land zoned for agricultural uses. The proposed Ocean Ranch Substation site is zoned for industrial use and is part of the Pacific Coast Business Park within the Rancho Del Oro Specific Plan Area (City of Oceanside 2005). No Williamson Act contracts exist in the vicinity of the Proposed Project (DOC 2013b). Therefore, no impact will occur as a result of the Proposed Project.

c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined by Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? *No Impact*

The Proposed Project is not located on any land zoned for forest or timberland use. Additionally, it would not result in rezoning land for forest or timberland use. Therefore, there will be no zoning conflicts as a result of the Proposed Project. No impact will occur.

d) Would the project result in the loss of forest land or conversion of forest land to non-forest uses? *No Impact*

See response to c) above. Therefore, there will be no conversion of forest land to a non-forest use as a result of the Proposed Project. No impact will occur.

e) Would the project involve other changes in the existing environment, which, due to their location or nature, could result in the conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use? *No Impact*

The Proposed Project is not located on or near any farmland or forest resources and, therefore, would not result in conversion of such lands to non-agricultural uses. Therefore, no impact will occur as a result of the Proposed Project.

4.2.7 References

City of Oceanside. 1992. Zoning Ordinance. Article 13.

City of Oceanside. 2002. General Plan, Land Use Element and Environmental Resource Management Element.

City of Oceanside. 2005. Pacific Coast Business Park, Industrial Master Development Plan. A Component of the Rancho Del Oro Specific Plan. June 21.

DOC. 2013a. San Diego County Important Farmland 2010, Sheet 1 of 2.

DOC. 2013b. San Diego County Williamson Act 2013/2014, Sheet 1 of 2.

DOC. 2014. California Important Farmland Finder. Website (http://maps.conservation.ca.gov/ciff/ciff.html) accessed January 23, 2015.

DOC. 2015. FMMP. Farmland of Local Importance. Website (http://www.consrv.ca.gov/dlrp/fmmp/Documents/Local_definitions_00.pdf) accessed January 23, 2015.

TABLE OF CONTENTS

4.3 AIR QUALITY 4.3-1
4.3.1 Introduction 4.3-1
4.3.2 Regulatory Setting 4.3-1
4.3.3 Existing Conditions 4.3-5
4.3.4 Standard Operating Procedures 4.3-9
4.3.5 Applicant Proposed Measures 4.3-10
4.3.6 Project Impacts 4.3-10
4.3.7 References 4.3-14

LIST OF TABLES

4.3-1 Ambient Air Quality Standards 4.3-2
4.3-2 State and Federal Air Quality Designations for San Diego County 4.3-7
4.3-3 Air Quality Concentrations near the Proposed Project Area 4.3-8
4.3-4 SDAPCD Air Quality Significance Thresholds 4.3-11
4.3-5 Maximum Daily Construction Emissions 4.3-11
4.3-6 Maximum Daily Fugitive Dust Emissions from Construction 4.3-12

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4.3 AIR QUALITY

Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b.	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d.	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e.	Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

4.3.1 Introduction

This section of the PEA describes the existing air quality conditions within the Proposed Project area and evaluates the project-related air quality impacts from construction and operation. The Proposed Project will generate short-term air quality impacts during construction with minimal additional air quality impacts during operations and maintenance. The analysis concludes that less than significant impact would occur from the Proposed Project. The Proposed Project's effects on this resource were evaluated using the significance criteria set forth in Appendix G of the CEQA Guidelines. The conclusions are summarized in the checklist above, and discussed in more detail in Section 4.3.6.

4.3.2 Regulatory Setting

This section includes a description of the air quality regulatory framework.

4.3.2.1 Federal

Clean Air Act

The 1970 federal Clean Air Act (CAA), (42 U.S. Code [U.S.C.] §7401 *et seq*.) established national ambient air quality standards for six pollutants: carbon monoxide (CO), ozone (O_3), particulate matter less than 10 microns (PM_{10}), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead (Pb). These six criteria pollutants are known to have adverse impacts on human health and the environment. To protect human health and the environment, the U.S. Environmental Protection Agency (USEPA) has set primary and secondary maximum ambient thresholds. The primary thresholds were set to protect human health, particularly that of children and the elderly, as well as individuals that suffer from chronic lung conditions (e.g., asthma and emphysema). The secondary standards were set to protect the natural environment and prevent further

deterioration of animals, crops, vegetation, and buildings. The combined primary and secondary standards are termed the National Ambient Air Quality Standards (NAAQS).

The 1977 CAA required each state to develop and maintain a State Implementation Plan (SIP) for each criteria pollutant that exceeds ambient air quality standards. The SIP serves as a tool to reduce pollutants that are known to cause impacts that exceed the ambient thresholds and to achieve compliance with the NAAQS. In 1990, the CAA was amended to strengthen regulation of both stationary and mobile emission sources for the criteria pollutants.

In July 1997, the USEPA developed new health-based NAAQS for O_3 and PM_{10}. However, these standards were not fully implemented until 2001, after the resolution of several lawsuits. The new federal O_3 standard of 0.08 parts per million (ppm), established in 1997, was based on a longer averaging period (eight hours versus one hour), recognizing that prolonged exposure to O_3 is more damaging. In March 2008, the USEPA further lowered the eight-hour O_3 standard from 0.08 ppm to 0.075 ppm. In response to continuing evidence that O_3 exposure at levels just meeting federal clean air standards is demonstrably unhealthful, on October 1, 2015, USEPA strengthened the 8-hour standard to 0.070 ppm from 0.075 ppm. The new, federal O_3 standard is now equivalent to the California O_3 standard. USEPA has indicated that it will update the national designation areas in October 2017 to reflect the strengthened standard and that the designations will be based on 2014-2016 air quality data.

The federal particulate matter (PM) standard is based on finer particles (2.5 microns and smaller versus 10 microns and smaller), recognizing that finer particles may have a higher residence time in the lungs and contribute to greater respiratory illness. In February 2007, the NO_2 NAAQS was amended to lower the existing one-hour standard of 0.25 ppm to 0.18 ppm, which is not to be exceeded, and established a new annual standard of 0.030 ppm, which is also not to be exceeded. Table 4.3-1 contains a list of the NAAQS and California Ambient Air Quality Standards (CAAQS).

Table 4.3-1. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards		National Standards	
		ppmv	ug/m^3	ppmv	ug/m^3
Ozone (O_3)	1-hour	0.09	180	—	—
	8-hour	0.07	137	0.075[1]	147
Nitrogen Dioxide (NO_2)	1-hour	0.18	339	0.100	188
	Annual	0.03	57	0.053	100
Sulfur Dioxide (SO_2)	1-hour	0.25	655	0.075	196
	3-hour (secondary)	—	—	0.50	1,300
	24-hour	0.04	105	0.14	—
	Annual	—	—	0.03	—
Carbon Monoxide (CO)	1-hour	20	22,898	35	40,071
	8-hour	9	10,304	9	10,304
	Lake Tahoe (8-hr)	6	6,869	—	—
Particulates (as PM_{10})	24-hour	—	50	—	150
	Annual	—	20	—	—
Particulates (as $PM_{2.5}$)	24-hour	—	—	—	35
	Annual	—	12	—	12
Lead (Pb)	30-day	—	1.5	—	—

Table 4.3-1. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards		National Standards	
		ppmv	ug/m^3	ppmv	ug/m^3
	3-month (rolling)[2]	—	—	—	0.15
Sulfates (as SO_4)	24-hour	—	25	—	—
Hydrogen Sulfide (H_2S)	1-hour	0.03	42	—	—
Vinyl Chloride (C_2H_3Cl)	24-hour	0.01	26	—	—
Visibility Reducing Particles	8-hour	Extinction coefficient of 0.23 per km; visibility of 10 miles or more (0.07 to 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent.		—	—

Source: CARB 2015a.
Notes:
ppmv = parts per million by volume.
ug/m^3 = micrograms per cubic meter.
[1] On October 1, 2015, USEPA lowered the national 8-hour ozone standard from 0.075 to 0.070 ppm. However, given that this change is recent and designation areas for the lowered standard is not anticipated until 2017, the previous standard and attainment status remain in the table.
[2] The 1.5 ug/m^3 federal quarterly lead standard applied until 2008; 0.15 ug/m^3 rolling 3-month average thereafter.
For gases, ug/m^3 calculated from ppmv based on molecular weight and standard conditions.
Standard Temperature 25 degrees Celsius.
Standard Molar Volume 24.465 liter/g-mole.

4.3.2.2 State

California Clean Air Act

The CAA of 1988 requires air districts to develop and implement strategies to attain CAAQS. For some pollutants, the California standards are more stringent than the national standards. Regional air quality management districts, such as the San Diego County Air Pollution control District (SDAPCD), had to prepare an air quality plan specifying how federal and state standards would be met.

California Air Resources Board (CARB) enforces the CAAQS and works with the state's Office of Environmental Health Hazard Assessment in identifying and enforcing rules related to toxic air contaminants, including the Air Toxic Hot Spots Information and Assessment Act of 1987. Enacted to identify toxic air contaminant hot spots where emissions from specific sources may expose individuals to an elevated risk of adverse health effects, the act requires that business or other establishments identified as significant sources of toxic emissions provide the affected population with information about health risks posed by the emissions.

CARB also regulates mobile emission sources in California—such as construction equipment, trucks, and automobiles—and oversees the air districts. Relevant programs related to oversight of mobile source emissions include the Off-Road and On-Road Mobile Sources Emission Reduction programs, the Portable Equipment Registration Program, and the Airborne Toxic Control Measure for diesel particulate matter (DPM) from Portable Engines. The Mobile Sources Emission Reduction programs are aimed at reductions of nitrogen oxides (NO_x), volatile organic compounds (VOC), CO, and PM_{10}. CARB has also adopted specific control measures for the reduction of DPM from off-road, in-use diesel vehicles (rated 25 horsepower and higher), such as back hoes, dozers, and earthmovers used in construction projects. Additional DPM control measures are also in place for heavy-duty, on-road, diesel trucks operated by public utilities and municipalities. The Portable Equipment Registration Program and Airborne Toxic Control

Measure for DPM from Portable Engines provide for statewide registration and control of DPM from portable engines rated 50 horsepower and higher.

4.3.2.3 Local

As provided in CPUC General Order 131-D, the CPUC has exclusive jurisdiction over the siting, design, and construction of the Proposed Project, preempting local discretionary authority over the location and construction of electrical utility facilities. Therefore, the Proposed Project is not subject to local discretionary land-use regulations. Nonetheless, as part of the environmental review process, SDG&E considers relevant local land use plans and policies that pertain to air quality.

San Diego County Air Pollution Control District

The air districts are primarily responsible for regulating stationary emission sources at industrial and commercial facilities within their respective geographic areas and for preparing the air quality plans required under the federal and California CAAs. The SDAPCD is the primary agency responsible for planning, implementing, and enforcing federal and state ambient standards in San Diego County. The plans, rules, and regulations presented in the following subsections apply to all sources in the jurisdiction of the SDAPCD.

San Diego County Air Pollution Control District Air Quality Plans

The SDAPCD's air quality plans collectively provide an overview of the region's air quality and air pollution sources and identify the pollution-control measures needed to expeditiously attain and maintain air quality standards. The SDAPCD's air quality plans include the San Diego Regional Air Quality Strategy (RAQS) and the San Diego portion of the California SIP, which address state and federal requirements, respectively.

Ozone Air Quality Management Plan

The SDAPCD SIP predicts that state and local programs will allow San Diego County to reach attainment status for the previously applicable 0.08 ppm federal eight-hour O_3 NAAQS (per the SIP submitted to the USEPA in June 2007).

The SDAPCD maintains the RAQS, which acts as a road map demonstrating how the district will eventually meet the state O_3 NAAQS. The RAQS details the measures and regulations that focus on managing and reducing O_3 precursors, such as NO_x and VOCs. The RAQS control measures concentrate on stationary sources that are under the SDAPCD's jurisdiction; however, all emission sources and control measures are included, such as any under the jurisdiction of CARB (e.g., on-road motor vehicles, off-road vehicles and equipment, and consumer products) and USEPA (e.g., aircraft, ships, trains, and pre-empted off-road equipment).

Particulate Matter Air Quality Management Plan

The California CAA does not require local districts to establish an air quality management plan for state PM_{10} nonattainment, but the SDAPCD has prepared a report entitled Measures to Reduce Particulate Matter in San Diego County.

San Diego County Air Pollution Control District Regulation IV – Prohibitions, Rule 50 – Visible Emissions

This rule prohibits any activity that will create air contaminant emissions darker than 20 percent opacity for more than an aggregate of three minutes in any consecutive 60-minute time period.

San Diego County Air Pollution Control District Regulation IV – Prohibitions, Rule 51 – Nuisance

This regulation prohibits any activity that will discharge air contaminants that cause or have a tendency to cause injury, detriment, nuisance, or annoyance to people and the public or damage to any business or property.

San Diego County Air Pollution Control District Regulation IV – Prohibitions, Rule 55 – Fugitive Dust Control

This regulation prohibits any activity that will discharge visible dust emissions into the atmosphere beyond the property line bounding the activity for more than three minutes during any 60-minute period. This regulation also prohibits visible roadway dust due to track-out or carry-out.

San Diego County Air Pollution Control District Rule XV – Federal Conformity

The federal conformity rule prohibits any federal actions that may be inconsistent with the SDAPCD's efforts to achieve attainment with the NAAQS.

City of Oceanside General Plan-Land Use Element

Policy 3.18 A. The City shall cooperate with the San Diego Air Pollution Control Board, and participate in the RAQS.

4.3.3 Existing Conditions

4.3.3.1 Air Basin

The Proposed Project is located within the San Diego Air Basin (SDAB). Given its coastal location, this air basin experiences a milder climate with low annual rainfall that primarily occurs during the winter months. Climate plays an important role in the air quality of the SDAB. When cool, moist air from the coast travels toward the higher elevations, a temperature inversion can occur. This inversion layer prevents polluted air from rising and dispersing. According to the SDAPCD, most air quality exceedances are recorded on the lower mountain slopes that experience an inversion layer.

Local meteorological conditions in the vicinity of the Proposed Project conform to the regional pattern of strong onshore winds by day (especially in summer) and weak offshore winds at night (particularly during the winter). These local wind patterns are driven by the temperature difference between the ocean and the warm interior topography. In the summer, moderate breezes between eight and 12 miles per hour blow onshore and up through the valley from the southwest by day. Light onshore breezes may continue overnight when the land remains warmer than the ocean. In the winter, the onshore flow is weaker and the wind flow reverses to blow from the northeast in the evening as the land becomes cooler than the ocean.

The climate of the City of Oceanside, as with all of Southern California, is largely controlled by the strength and position of the Pacific High. This high-pressure ridge over the West Coast creates a repetitive pattern of frequent early morning cloudiness, hazy afternoon shine, clean daytime onshore breezes and little temperature change throughout the year. Limited rainfall occurs in the winter as the fringes of mid-latitude storms occasionally move through the area. Average annual temperatures range from a high of 66 degrees Fahrenheit to a low of 54 degrees Fahrenheit with average annual precipitation of 10 inches in the Proposed Project area.

4.3.3.2 Air Quality

Criteria Air Pollutants

O_3, CO, NO_2, SO_2, Pb, PM_{10}, and $PM_{2.5}$ are all criteria air pollutants (CAPs) that are regulated in California. Non-methane ethane VOCs, also referred to as ROGs, are also regulated as precursors to the formation of O. These criteria pollutants and their effects on humans are discussed in the following subsections.

Ozone

O_3 is a colorless gas that is not directly emitted as a pollutant, but is formed when hydrocarbons and NOx react in the presence of sunlight. Low wind speeds or stagnant air mixed with warm temperatures typically provide optimum conditions for the formation of O_3. Because O_3 formation does not occur quickly, O_3 concentrations often peak downwind of the emission source. As a result, O_3 is of regional concern as it impacts a larger area. When inhaled, O_3 irritates and damages the respiratory system.

Particulate Matter

PM, which is defined as particles suspended in a gas, is often a mixture of substances, including metals, nitrates, organic compounds, and complex mixtures, such as diesel exhaust and soil. PM can be traced back to both natural and man-made sources. The most common sources of natural PM are dust and fires, while the most common man-made source is the combustion of fossil fuels.

PM causes irritation to the human respiratory system when inhaled. The extent of the health risks due to PM exposure can be determined by the size of the particles. The smaller the particles, the deeper they can be deposited in the lungs. PM is often grouped into two categories—inhalable PM less than 10 microns in diameter (PM_{10}) and fine PM less than 2.5 microns in diameter ($PM_{2.5}$).

Carbon Monoxide

CO is a colorless, odorless, and tasteless gas that is directly emitted as a by-product of combustion. CO concentrations tend to be localized to the source, with the highest concentrations being associated with cold, stagnant weather conditions. CO is readily absorbed through the lungs into the blood, where it reduces the ability of the blood to carry oxygen.

Nitrogen Oxides

NO_x is a generic name for the group of highly reactive gases that contain nitrogen and oxygen in varying amounts. Many types of NO_x are colorless and odorless. However, when combined with particles in the air, the common pollutant NO_2 can often be seen as a reddish-brown layer over many urban areas.

NO_x forms when fuel is burned at high temperatures. Typical man-made sources of NO_x include motor vehicles, fossil-fueled electricity generation utilities, and other industrial, commercial, and residential sources that burn fuels. NO_x can harm humans by affecting the respiratory system. Small particles can penetrate the sensitive parts of the lungs and can cause or worsen respiratory disease and can aggravate existing heart conditions.

As discussed previously, O_3 is formed when NO_x and VOCs react with sunlight.

Sulfur Oxides (SO_x)

SO_x are formed when sulfur-containing materials are processed or burned. SO_x sources include industrial facilities (e.g., petroleum refineries and cement manufacturing and metal processing facilities), locomotives, large ships, and some non-road diesel equipment.

A wide variety of health and environmental impacts are associated with SO_x because of the way it reacts with other substances in the air. A number of people are particularly sensitive to SO_x emissions, including children, the elderly, people with asthma, and people with heart or lung disease. When inhaled, these particles gather in the lungs and contribute to increased respiratory symptoms and disease, difficulty breathing, and premature death.

Volatile Organic Compounds

VOCs (or ROGs) are a group of chemicals that react with NOx and hydrocarbons in the presence of heat and sunlight to form O_3. Examples of VOCs include gasoline fumes and oil-based paints. This group of chemicals does not include methane or other compounds determined by the USEPA to have negligible photochemical reactivity.

Air Quality Designations

There are three types of air quality designations that can be given to an area for a particular pollutant, which are:

- Nonattainment: This designation applies when air quality standards have not been consistently achieved.
- Attainment: This designation applies when air quality standards have been achieved.
- Unclassified: This designation applies when insufficient monitoring data exists to determine a nonattainment or attainment designation.

The attainment status for San Diego County is presented in Table 4.3.2, below. San Diego County is currently designated as nonattainment for O_3 and PM.

Table 4.3-2. State and Federal Air Quality Designations for San Diego County

Criteria Air Pollutants	State	Federal
O_3 (8 hour standard)	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Unclassified
$PM_{2.5}$	Nonattainment	Unclassified/Attainment
CO	Attainment	Unclassified/Attainment
NO_2	Attainment	Unclassified/Attainment
SO_2	Attainment	Attainment
Sulfates	Attainment	-
Pb	Attainment	Unclassified/Attainment
Hydrogen Sulfide	Unclassified	-
Visibility Reducing Particles	Unclassified	-

Source: CARB 2015b.

Toxic Air Contaminants (TACs)

TACs are the listed toxic pollutants as established by the Office of Environmental Health Hazard Assessment. Under Assembly Bill 1807, CARB is required to use certain criteria in prioritizing, identifying, and controlling air toxics. In selecting substances for review, CARB must consider pollutants that may pose a threat to human health or cause or contribute to serious illnesses or death. For many TACs, no threshold level exists below which adverse health impacts may not be expected to occur. This contrasts with the

CAPs, for which acceptable levels of exposure can be determined and for which the federal and state governments have set ambient air quality standards.

PM emissions generated by diesel combustion, or DPM, are of particular concern in California.

In 1998, the Office of Environmental Health Hazard Assessment completed a 10-year comprehensive human health assessment of diesel exhaust. The results of this assessment formed the basis for CARB to formally identify DPM as a TAC that poses a threat to human health. Because no established CAAQS exist for TACs, they are managed on a case-by-case basis, depending on the quantity and type of emissions and the proximity of potential receptors. DPM emissions result from a wide variety of sources, including on-road and off-road vehicles and stationary and portable internal combustion engines.

Ambient Air Quality

The current air quality conditions at the two monitoring sites nearest to the Proposed Project area are summarized for O_3, PM_{10}, and $PM_{2.5}$ in Table 4.3-3, Air Quality Concentrations near the Proposed Project Area. As shown in Table 4.3-3, the air quality in the surrounding areas has been relatively stable over the past five years.

Table 4.3-3. Air Quality Concentrations near the Proposed Project Area

Monitoring Site	Year	O_3 (ppm) Maximum 1-hour	PM_{10} (µg/m^3) Maximum 24-hour[a]	$PM_{2.5}$ (µg/m^3) Maximum 24-hour
Escondido	2014	0.099	44.0	82.3
	2013	0.084	82.0	56.3
	2012	0.084	33.0	70.7
	2011	0.098	40.0	27.4
	2010	0.105	43.0	52.2
Camp Pendleton[1]	2014	0.097	-	28.0
	2013	0.078	-	42.3
	2012	0.092	-	28.0
	2011	0.085	-	30.7
	2010	0.092	-	27.3

Source: CARB 2015c.
Note: [1] The Camp Pendleton air monitoring station does not monitor PM_{10}.

Sensitive Receptors

Person(s) within the population that are particularly susceptible to adverse health effects to air contaminant exposure are "sensitive receptors." This population group includes children, the elderly, and the ill. Sensitive receptors are typically found in schools, childcare centers, hospitals, convalescent homes, retirement homes, playgrounds, and residences. The Proposed Project site is immediately surrounded by industrial and commercial uses, with some undeveloped land in the vicinity. The nearest sensitive receptor sites to the Proposed Project are schools. There are a total of 4 schools located within 0.25 mile of the proposed substation site. See Section 4.8, *Hazards*, which provides more detailed information about the schools that are in close proximity to the Proposed Project components.

4.3.4 Standard Operating Procedures

As described in Section 3.9, *Standard Operating Procedures*, the Proposed Project will involve various procedures related to air quality resources, including:

- **Carpooling:** SDG&E encourages construction workers to carpool to the greatest extent possible.
- **Construction Practices:**
  - During clearing, grading, earth moving, or excavation operations, SDG&E will follow applicable regulations and control excessive fugitive dust emissions by regular watering or other dust preventive measures, which may include the following procedures:
    - Spray unpaved construction areas with water, approved dust-control agents, or soil stabilizers to reduce particulates; sufficiently water material excavated or graded.
    - Sweep, vacuum, and/or remove dirt or debris spilled onto paved surface to reduce re-suspension of particulate matter caused by vehicle movement.
    - Haul trucks moving soil to or from the site will either be covered or maintain 2 feet minimum freeboard.
    - Onsite stockpiles will be covered, watered, or bermed if left inactive for more than 24 hours.
    - Tracking-control measures, in accordance with SDG&E Best Management Practices (BMP) Manual Measure 1-7, will be implemented.
    - Implementation of measures during construction to control fugitive dust and reduce exhaust emissions to meet SDAPCD Rule 55 requirements.
    - Prevent visible dust from the project from emanating beyond the property line, to the maximum extent feasible.
  - To the extent feasible, unnecessary construction vehicle and idling time will be minimized. The ability to limit construction vehicle idling time is dependent upon the sequence of construction activities and when and where vehicles are needed or staged. Certain vehicles, such as large diesel powered vehicles, have extended warm-up times following start-up that limit their availability for use following startup. Where such diesel-powered vehicles are required for repetitive construction tasks, these vehicles may require more idling time. The Proposed Project will apply a common sense approach to vehicle use; if a vehicle is not required for use immediately or continuously for construction activities, its engine will be shut off. Construction foremen will include briefings to crews on vehicle use as part of preconstruction tailboard or training. Those briefings will include discussion of a "common sense" approach to vehicle use.
- **Generators:** Generator use will be limited to less than 50 horsepower at all staging yards. Any generators used at the staging yards will be located away from noise sensitive areas, and positioned on the property to comply with local noise ordinances.
- **Mufflers:** Functioning mufflers will be maintained on all equipment.
- **Soil Disturbance:** Ground and soil disturbance will be minimized through the use of existing access routes, to the extent feasible.
- **Soil Stabilization:** Once temporary surface disturbances are complete, areas that will not be subject to additional disturbance will be stabilized to control soil erosion. Disturbed areas must be stabilized per the project Stormwater Pollution Prevention Plan (SWPPP).

4.3.5 Applicant Proposed Measures

No air quality APMs are proposed.

4.3.6 Project Impacts

The Proposed Project includes construction of a new 69/12 kV substation and loop-in of an existing underground 69 kV power line to connect to the proposed substation (refer to Chapter 3.0, *Project Description*).

There will be short term air quality impacts from the construction of the Proposed Project. The temporary impact areas may vary because the positioning of construction vehicles, equipment, and materials cannot be accurately anticipated prior to construction, as locations are dependent upon the contractor safely performing the work. Once the proposed Ocean Ranch Substation is constructed and placed in service, it will not require personnel stationed onsite except during periodic and routine maintenance activities that will ensure reliable operation of all equipment within the substation. The underground components will be inspected consistent with SDG&E's existing underground inspection and maintenance program. There will be a minimal increase in operation-related air quality emissions impacts associated with vehicle trips to and from the substation for periodic and routine maintenance.

4.3.6.1 Methodology

The Proposed Project's anticipated construction related criteria pollutant emissions were quantified using California Emissions Estimator Model (CalEEMod), Version 2013.2.2. The Proposed Project's specific location information combined with the anticipated disturbance area (i.e, substation site and access road, staging yards, underground power line, and distribution circuits), construction schedule, off-road equipment, and import/export materials as discussed in Chapter 3.0, *Project Description*, were used to generate emissions rates and quantify the maximum daily and annual air quality emissions for a range of air pollutants. Staging yards that are paved/fenced were not included in CalEEMod since they require no ground disturbance. Air quality emissions from operations and maintenance of the Proposed Project were qualitatively evaluated given the minimal change anticipated from Proposed Project implementation. The construction related air quality emissions summary reports are provided in Appendix C, Air Quality Data: CalEEMod Input and Output Files/Greenhouse Gases (GHG) Emission Calculations.

4.3.6.2 Significance Criteria

San Diego County Air Pollution Control District Thresholds

To determine whether a significant impact will occur during construction, the SDAPCD informally recommends quantifying construction emissions and comparing them to significance thresholds (pounds per day) found in the SDAPCD regulations for stationary sources (pursuant to Rule 20.1, et seq.) and shown in Table 4.3-4, SDAPCD Air Quality Significance Thresholds. If emissions during Proposed Project construction exceed the thresholds, then construction activities will have the potential to violate air quality standards or contribute substantially to existing violations.

Table 4.3-4. SDAPCD Air Quality Significance Thresholds

Significance Threshold	Criteria Pollutants					
	PM_{10}	$PM_{2.5}$[1]	NO_x	CO	SO_x	VOCs
Pounds Per Day	100	55	250	550	250	75[2]
Tons Per Year	15	10	40	100	40	13.7[3]

Source: SDAPCD 1998.
Notes:
[1] USEPA "Proposed Rule to Implement the Fine Particle National Ambient Air Quality Standards" published September 8, 2005. Also used by the South Coast Air Quality Management District.
[2] Threshold for VOCs based on the threshold of significance for VOCs from the South Coast Air Quality Management District.
[3] Threshold based on 75 pounds per day multiplied by 365 days per year and divided by 2,000 pounds per ton.

Using the above thresholds, the significance of project-related impacts on air quality systems were evaluated for each of the criteria listed in the checklist above, as discussed below.

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?
Less than Significant

A significant impact on air quality will occur if the Proposed Project conflicts with or obstructs the implementation of the applicable air quality plan. Although the Proposed Project will result in CAP emissions within the basin, the primary focus is that the Proposed Project's emissions are properly anticipated in the regional air quality planning process and reduced where feasible. To determine if the emissions were captured during the air quality planning process, it is necessary to assess the Proposed Project's consistency with the RAQS. Consistency with the RAQS is determined by evaluating if the Proposed Project's emissions exceed the CAP thresholds established by the SDAPCD and if the Proposed Project will result in growth that has been anticipated.

Construction activities primarily result in the emissions of PM and NOx. Sources of PM are from fugitive dust and exhaust – exhaust is also the primary source of NOx. Typical fugitive dust sources include soil disturbance activities (i.e., substation grading and power line trenching), vehicle and equipment travel on unpaved surfaces, and the loading/unloading of export/import materials. Exhaust emissions sources are from the combustion of fossil fuels associated with both on-road and off-road construction equipment. The CalEEMod emissions report demonstrates that the peak emissions would be in compliance with all SDAPCD thresholds, as identified in Table 4.3-5, Maximum Daily Construction Emissions.

Table 4.3-5. Maximum Daily Construction Emissions

Year		Criteria Pollutant Emissions (pounds per day)				
	PM_{10}	$PM_{2.5}$	NO_x	CO	SO_x	VOC
2017	19.07	11.92	103.39	73.60	0.103	9.11
2018	20.29	12.86	116.09	88.01	0.134	10.70
2019	2.65	2.13	38.36	34.41	0.064	4.06
Threshold	100	55	250	550	250	75
Threshold Exceeded?	No	No	No	No	No	No

The Proposed Project is not a trip-generating project, such as a residential or commercial development, nor will it result in population growth. Following completion of the Proposed Project construction, SDG&E will incorporate the substation and the power and distribution line components into its regular operations and maintenance schedule. Nonetheless, operations and maintenance activities will not significantly

increase in intensity, frequency or duration and will be substantially similar to existing operations and maintenance activities. Therefore, the Proposed Project's operational emissions are anticipated to be well below the applicable SDAPCD thresholds.

The Proposed Project will not conflict with or obstruct implementation of the applicable air quality plan, and will have a less-than-significant impact in regard to plan consistency.

b) Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation? *Less than Significant*

The Proposed Project will require various pieces of heavy equipment, including bulldozers, excavators, loaders, backhoes, and compactors. Street-legal haul trucks will be employed during material import and export activities to and from staging yards and existing material storage yards, and portable cranes and heavy hauling trucks will be employed for equipment delivery and installation. Concrete trucks, boom trucks, bucket trucks, and pick-up trucks will arrive and depart from the area, as necessary, to construct the different phases of the Proposed Project, including substation site development and construction, underground power line installation.

Construction of the Proposed Project will generate short-term air quality emissions during construction activities. As discussed in Section 4.3.6.1, *Methodology*, CalEEMod was used to quantify anticipated criteria pollutant air quality emissions from construction based on information provided in Chapter 3.0, *Project Description* that include phases of construction and schedule; equipment type(s), quantities, and daily hour of use; and amount of material imported and exported. The Proposed Project's emissions results are presented in Table 4.3-5, Maximum Daily Construction Emissions for $PM_{2.5}$ and PM_{10}.

Detailed discussions of the Proposed Project's impacts to air quality from fugitive dust, construction equipment exhaust, and TAC sources are provided below.

Fugitive Dust Emissions

Construction activities are a source of fugitive dust (PM_{10} and $PM_{2.5}$) emissions that have the potential to temporarily impact local air quality. In addition, fugitive dust may be a nuisance to those living and working in the Proposed Project area. Fugitive dust emissions are associated with land clearing, excavation, cut and fill, loading and unloading dirt into haul trucks, and truck travel on unpaved roadways. Fugitive dust emissions can vary substantially from day to day, depending on the level of activity, specific operations, and weather conditions. Fugitive dust from grading and construction is expected to be short term and will cease when these activities are completed.

Fugitive dust emissions were estimated using CalEEMod and the resulting maximum daily emissions are presented in Table 4.3-6, Maximum Daily Fugitive Dust Emissions from Construction. As shown, the emissions would be below the applicable thresholds. As a result, impacts from fugitive dust will be less than significant.

Table 4.3-6. Maximum Daily Fugitive Dust Emissions from Construction

Year	PM_{10}	$PM_{2.5}$
2017	14.46	7.68
2018	14.74	7.75
2019	1.48	0.24
Threshold	100	55
Threshold Exceeded?	No	No

Construction Equipment and Worker Vehicle Exhaust

Exhaust emissions from construction activities include emissions from worker vehicles trips, emissions produced on site during equipment use, and emissions from trucks transporting import and export material to and from the site from staging yards and existing material storage yards. Emitted pollutants will include CO, SO_x, VOC, NO_x, PM_{10}, and $PM_{2.5}$. As presented in Table 4.3-5, Maximum Construction Emissions, the maximum daily uncontrolled emissions for each year of construction of the Proposed Project will not exceed the SDAPCD's standards for all pollutants. Therefore, impacts associated with construction will be less than significant.

Toxic Air Contaminants

DPM will be emitted from on- and off-road vehicles that use diesel as fuel during the construction phase of the Proposed Project. Potential health effects associated with exposure to DPM are long-term and are evaluated on the basis of a lifetime of exposure (70 years). The nearest sensitive receptor sites to the Proposed Project are schools. There are a total of 4 schools located within 0.25 mile of the proposed substation site. These sensitive receptors sites could potentially be exposed to DPM during Proposed Project construction activities. Because construction activities will be short-term in nature, the sensitive receptors will not be exposed to DPM for any length of time. As a result, impacts will be less than significant.

CARB has adopted airborne toxic control measures (ATCMs) applicable to off-road diesel equipment and portable diesel engines with a rating of 50 brake horsepower or greater. The purpose of these ATCMs is to reduce emissions of PM from engines subject to the rule. The ATCMs require diesel engines to comply with PM emissions limitations on a fleet-averaged basis. CARB has also adopted an ATCM that limits diesel-fueled commercial motor vehicle idling. The rule applies to motor vehicles with gross vehicular weight ratings greater than 10,000 pounds that are licensed for on-road use. The rule restricts vehicles from idling for more than five minutes at any location, with exceptions for idling that may be necessary for the operation of the vehicle.

All off-road diesel equipment, on-road heavy-duty diesel trucks, and portable diesel equipment used for the Proposed Project will meet the state's applicable ATCMs for control of diesel PM or NOx in the exhaust (e.g., ATCMs for portable diesel engines, off-road vehicles, and heavy-duty on-road diesel trucks, and five-minute diesel engine idling limits) that are in effect during implementation of the Proposed Project. The mobile fleets used in the Proposed Project are expected to be in full compliance with these ATCMs. This will ensure that pollutant emissions in diesel engine exhaust do not exceed applicable federal or state air quality standards. As a result, impacts will be less than significant.

With the incorporation of the Proposed Project's operations and maintenance activities into SDG&E's regular operations and maintenance schedule, the additional criteria pollutant emissions generated are anticipated to be well below the criteria pollutant emissions from construction activities and well below the applicable SDAPCD thresholds. Therefore, the operation and maintenance of the Proposed Project will result in less-than-significant impacts related to existing air quality standards.

c) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? *Less than Significant*

The Proposed Project is located in San Diego County, which is state and federally designated nonattainment for O_3 and state designated nonattainment for PM_{10} and $PM_{2.5}$ – see above Table 4.3.2, State and Federal Air Quality Designations for San Diego County. Construction of the Proposed Project will result in a

temporary increase in NOx, CO and VOCs which are precursors to O_3, and PM_{10} and $PM_{2.5}$. However, as shown in Table 4.3-5, these temporary increases will not exceed the SDAPCD emission thresholds.

The Proposed Project's operations and maintenance activities will be incorporated into SDG&E's regular operations and maintenance schedule. Consequently, operations and maintenance activities will not significantly increase in intensity, frequency or duration and will be substantially similar to existing operations and maintenance activities. Therefore, the Proposed Project's operational emissions are expected to be well below the criteria pollutant emissions from construction activities and well below the applicable SDAPCD thresholds.

The Proposed Project will not result in a cumulatively considerable net increase of criteria pollutants from construction or operations and maintenance activities and impacts will be less than significant.

d) Would the project expose sensitive receptors to substantial pollutant concentrations? ***Less than Significant***

The Proposed Project site is immediately surrounded by industrial and commercial uses, with undeveloped land in the vicinity. The highest pollutant concentrations would occur during substation development and construction. There are four schools located within 0.25 mile of the proposed substation site. Nevertheless, as discussed above, the Proposed Project construction or operation emissions would not result in the violation of an existing air quality standard, including emissions associated with substation development and construction. Furthermore, SDG&Es implementation of the standard operating procedures, particularly those focused on reducing fugitive dust (PM_{10} and $PM_{2.5}$), would further alleviate any potential to expose sensitive receptors to substantial pollutant concentrations. The Proposed Project will have less than significant impact to sensitive receptors.

e) Would the project create objectionable odors affecting a substantial number of people? ***Less than Significant***

Due to the nature of the Proposed Project, impacts from the creation of objectionable odors are unlikely. Typical odor nuisances include hydrogen sulfide, ammonia, chlorine, and other sulfide-related emissions. No significant sources of these pollutants will exist during construction or operations.

The Proposed Project construction activities will release odors associated with the combustion of diesel during equipment use. These emissions will be temporary in nature and localized to the immediate area. The Proposed Project is immediately surrounded by commercial and industrial uses where the types of odors that are typically generated, i.e., odors from diesel fueled vehicles traveling to and through these areas, will be consistent with the construction equipment odors generated during the Proposed Project In addition and as discussed in section b) above, the on-road and off-road equipment used for the Proposed Project will be required to meet CARB's ATCMs, which are aimed at reducing diesel exhaust emissions. Therefore, due to the temporary nature of the activities and compliance with CARB's ATCMs, the Proposed Project's impacts will be less than significant.

4.3.7 References

CARB 2015a. California Air Resources Board. State and National Ambient Air Quality Standards. Website (http://www.arb.ca.gov/research/aaqs/aaqs2.pdf).

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TABLE OF CONTENTS

4.4 BIOLOGICAL RESOURCES 4.4-1
4.4.1 Introduction 4.4-1
4.4.2 Regulatory Setting 4.4-2
4.4.3 Existing Conditions 4.4-6
4.4.4 Standard Operating Procedures 4.4-16
4.4.5 Applicant Proposed Measures 4.4-18
4.4.6 Project Impacts 4.4-19
4.4.7 References 4.4-26

LIST OF FIGURES

4.4-1 Project Survey Area 4.4-7
4.4-2 CNDDB Sensitive Species within 1 Mile of the Project Survey Area 4.4-9
4.4-3 Critical Habitat within 5 Miles of the Project Survey Area 4.4-11
4.4-4 City of Oceanside Subarea Plan Preserve 4.4-17

LIST OF TABLES

4.4-1 Vegetation Communities in the Ocean Ranch PSA 4.4-12
4.4-2 Special Status Wildlife Species Potentially Occurring in the Project Area 4.4-15
4.4-3 Estimated Construction Impacts by Vegetation Community 4.4-22
4.4-4 Estimated Impacts to Sensitive and Non-Sensitive Habitats 4.4-22

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4.4 BIOLOGICAL RESOURCES

Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, ore regulations, or by the California Department of Fish and Game ore U.S. Fish and Wildlife Service?	☐	☐	☒	☐
b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c.	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 or the Clean Water Act (including, but not limited to, marsh vernal pool, coastal, etc.) through direct removal, filling hydrological interruption, or other means?	☐	☐	☐	☒
d.	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f.	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

4.4.1 Introduction

This section of the PEA describes the existing conditions and project-related impacts to biological resources in the vicinity of the Proposed Project. The analysis concludes that less than significant impacts related to biological resources will occur. The Proposed Project's effects on this resource were evaluated using the significance criteria set forth in Appendix G of the CEQA Guidelines. The conclusions are summarized in the impact summary table above, and discussed in more detail in Section 4.4.6.

4.4.2 Regulatory Setting

This section includes a description of the biological resources regulatory framework. The CPUC has exclusive jurisdiction over the siting, design, and construction of the Proposed Project and the Proposed Project is not subject to local discretionary land use regulations.

4.4.2.1 Federal

Federal Endangered Species Act

The federal Endangered Species Act (ESA) of 1973 (16 U.S.C. Section 1531 et seq.) is aimed at the protection of plants and animals that have been identified as being at risk of extinction, and classified as either threatened or endangered. Section 9 of the ESA also regulates the "taking" of any endangered fish or wildlife species. As development is proposed, the responsible agency or individual landowners are required to submit to a formal consultation with the U.S. Fish and Wildlife Service (USFWS) to assess impacts to listed species (including plants) or their critical habitat as the result of a development project, pursuant to Sections 7 and 10 of the ESA. The USFWS is required to make a determination as to the extent an impact(s) would have to a particular species due to a project. If it is determined that impacts to a species would likely occur, measures to avoid or reduce such impacts must be identified. The USFWS may issue an incidental take statement, following consultation and the issuance of a Biological Opinion. This allows for take of the species that is incidental to another authorized activity, provided that the action will not adversely affect the existence of the species.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 U.S.C. Section 703 et seq.) is a federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The number of bird species covered by the MBTA is extensive and is listed at 50 Code of Federal Regulation (CFR) 10.13. The regulatory definition of "migratory bird" is broad and includes any mutation or hybrid of a listed species and includes any part, egg, or nest of such a bird (50 CFR 10.12).

Migratory birds are not necessarily federally listed as endangered or threatened birds under the ESA. The MBTA, which is enforced by USFWS, makes it unlawful "by any means or in any manner, to pursue, hunt, take, capture, [or] kill" any migratory bird, or attempt such actions, except as permitted by regulation. The applicable regulations prohibit the take, possession, import, export, transport, sale, purchase, barter, or offering of these activities, except under a valid permit or as permitted in the implementing regulations (50 CFR 21.11).

Clean Water Act

The purpose of the Clean Water Act (CWA) is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredge or fill material into waters of the U.S. without a permit from the U.S. Army Corps of Engineers (USACE). The definition of "waters of the U.S." includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR § 328.3(b)). The USEPA has veto authority over the USACE's administration of the Section 404 program and may override a USACE decision with respect to permitting.

The CWA (33 U.S.C. Section 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the U.S. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain nonpoint sources discharges into surface water. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). The Proposed Project is under the jurisdiction of the San Diego Regional Water Quality Control Board (RWQCB). Section 4.9, Hydrology and Water Quality, has additional details regarding the CWA, including Sections 401, 402, and 404 (including the June 2015 final Clean Water Rule).

Final Rule for Revised Designation of Critical Habitat for the Coastal California Gnatcatcher

The USFWS designates critical habitat for endangered and threatened species under the federal ESA (16 U.S.C. § 1533 (a)(3)). Critical habitat is designated for the survival and recovery of federally listed endangered and/or threatened species. Critical habitat includes areas used for foraging, breeding, roosting, shelter, and movement or migration.

In the USFWS 2003 Proposed Rule to Revise Designation of Critical Habitat for the Coastal California Gnatcatcher, the USWFS considered but did not propose as critical habitat, pursuant to sections 3(5)(A) and 4(b)(2) of the Act, reserve lands covered by three completed and approved regional/subregional Habitat Conservation Plans (68 CFR 20228). These lands include SDG&E right-of-way (ROW) within SDG&E's Natural Community Conservation Plan (NCCP). Although these areas were not included in the proposed critical habitat, the USFWS sought public review and comment on these lands, provided maps to facilitate the public's ability to comment, and alerted the public that the lands could potentially be included in the final designation. Lands considered but not proposed for designation were also analyzed for potential economic impacts in the Draft Economic Analysis.

In 2007, USFWS issued the Revised Final Rule, reaffirming exclusion of lands within approved regional and subregional Habitat Conservation Plans under section 4(b)(2) of the federal ESA. USFWS determined that lands owned by SDG&E and covered under SDG&E's NCCP provided greater benefits to coastal California gnatcatcher than other areas designated as critical habitat. As such, the USFWS designation of critical habitat for the coastal California gnatcatcher specifically excludes SDG&E ROW within SDG&E's NCCP area.

4.4.2.2 State

CEQA Guidelines § 15380

Enacted in 1970, CEQA requires an applicant to fully disclose environmental impacts before issuance of a permit by state and local agencies. State CEQA Guidelines Section 15380(b) articulates the classifications of species to be analyzed under CEQA. In general, impacts to plants or their habitat having a California Rare Plant Rank of 1A (plants presumed extirpated in California and either rare or extinct elsewhere), 1B (plants rare, threatened, or endangered in California and elsewhere), 2A (plants presumed extirpated in California, but common elsewhere), 2B (plants rare, threatened, or endangered in California), or 3 (plants about which more information is needed – a review list) must be analyzed during preparation of the environmental documents relating to CEQA. According to the California Native Plant Society's (CNPS) Rare Plant Program, species with these California Rare Plant Rank rankings meet the definition of "rare and endangered" under the aforementioned CEQA Guidelines.

California ESA (Fish and Game Code §§ 2050-2115.5)

The California Endangered Species Act (CESA) of 1984 regulates the listing and take of plant and animal species designated as endangered, threatened, or rare within the state. The State of California also lists Species of Special Concern (SSC) based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. The California Department of Fish and Wildlife (CDFW) is given the responsibility by the State to assess development projects for their potential to impact listed species and their habitats. State-listed special status species are also addressed through the issuance of a permit under Fish and Game Code section 2081 (Memorandum of Understanding), consistent with the Multiple Habitat Conservation Program that affects the project area.

California Species of Special Concern

SSC is an administrative designation by CDFW and carries no formal legal status. These species are designated by the CDFW with the goal of focusing attention on animals with conservation risk, to stimulate research on poorly known species, and to achieve conservation and recovery of these animals before they meet criteria for listing under CESA. SSC should be considered during the environmental review process.

Fully Protected Species (Fish and Game Code §§ 3511, 4700, 5050, 5515)

Prior to the development of the CESA and the ESA, certain species were listed as "fully protected" by the State of California. Fully protected species, including fish, amphibians, reptiles, birds, and mammals, were identified to allow for the protection of those animals that were rare or that were threatened by potential extinction. The majority of fully protected species have since been listed as threatened or endangered under the CESA and/or the ESA. Fully protected species may not be taken or possessed at any time. Fish and Game Code lists birds (Section 3511), mammals (Section 4700), reptiles and amphibians (Section 5050), and fish (Section 5515).

Nongame Birds, Birds of Prey, Nests, and Eggs (Fish and Game Code §§ 3503, 3503.5, 3513, 3800)

The State of California has incorporated the protection of birds and nests in Sections 3503 and migratory nongame birds in Section 3513 and 3800 of the Fish and Game Code. Birds of prey, that is, birds in the orders *Falconiformes* or *Strigiformes*, are protected from possession, and egg/nest destruction in Section 3503.5.

Native Plant Protection Act (Fish and Game Code §§ 1900–1913)

The Native Plant Protection Act was adopted in 1977 (Fish and Game Code §§ 1900–1913) to preserve, protect, and enhance rare and endangered plants. The CDFW is responsible for administering the Native Plant Protection Act, while the Fish and Game Commission has the authority to designate native plants as "endangered" or "rare" and provide measures to avoid take.

Streambed Alteration Program (Fish and Game Code §§ 1601-1606)

Sections 1601 through 1606 of the Fish and Game Code require that a Notification of Lake or Streambed Alteration Agreement Application be submitted to the CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." The CDFW reviews the proposed actions and, if necessary, submits (to the applicant) a proposal that includes measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by the CDFW and applicant is a Lake or Streambed Alteration Agreement.

Porter-Cologne Water Quality Act

The intent of the Porter-Cologne Act is to protect water quality and the beneficial uses of water. It applies to both surface and groundwater. Under this law, the State Water Resource Control Board develops statewide water quality plans, and the RWQCB develops basin plans, which identify beneficial uses, water quality objectives, and implementation plans. The RWQCB has the primary responsibility to implement the provisions of both statewide and basin plans. Waters regulated under the Porter-Cologne Act, referred to as "Waters of the state," include isolated waters that are no longer regulated by the USACE. Any person discharging, or proposing to discharge, waste to Waters of the state must file a Report of Waste Discharge and receive either waste discharge requirements or a waiver to waste discharge requirements before beginning the discharge.

Natural Community and Conservation Plans

The Natural Community and Conservation Planning Act (California Fish and Wildlife Code Section 2800-2835) allows for the creation of NCCPs to protect state-listed species, usually in connection with the issuance of a Section 2081 take permit under the CESA.

San Diego Gas and Electric Subregional Natural Community and Conservation Plan

The Proposed Project falls within the area in which SDG&E's utility operations are governed by SDG&E's Subregional NCCP (SDG&E 1995). The NCCP prescribes "operational protocols" (i.e., various protection, mitigation, and conservation measures) that SDG&E must implement. Protocols include 61 operational protocols that SDG&E routinely implements with every project to avoid and/or minimize impacts to sensitive resources.

4.4.2.3 Local

As provided in CPUC General Order 131-D, the CPUC has exclusive jurisdiction over the siting, design, and construction of the Proposed Project, preempting local discretionary authority over the location and construction of electrical utility facilities. Therefore, the Proposed Project is not subject to local discretionary land use regulations. Nonetheless, as part of the environmental review process, SDG&E considers relevant local land use plans and policies that pertain to biological resources as discussed below.

North County Multiple Habitat Conservation Program

The Multiple Habitat Conservation Program is a planning process that addresses plant and animal species in northwestern San Diego County, including Oceanside. The goal of the program is to conserve approximately 19,000 acres of habitat (of which 8,800 acres are already in public ownership and contribute toward the habitat preserve system) to protect over 80 rare, threatened, or endangered species.

Subarea plans for the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, and Vista are being prepared and must be adopted by each city council. Then implementing agreements with the CDFW and the USFWS must be signed before incidental take permits can be issued.

The City of Oceanside is in the process of adopting a Subarea Habitat Conservation Plan (SAP)/Natural Community Conservation Plan that will address how the city will conserve natural biotic communities and sensitive plant and wildlife species pursuant to the California NCCP Act of 1991, the CESA and the federal ESA. If adopted, this could provide landowners with more regulatory certainty and it could aid in conserving the area's biodiversity.

City of Oceanside General Plan

The Land Use Element has a policy that the City of Oceanside shall protect, maintain, and enhance existing sensitive habitats. The Environmental Resource Management Element is also designed to conserve natural resources and preserve open space. It includes goals and objectives geared toward preservation, including ones specifically to enhance vegetation and wildlife habitats, especially those areas with rare, endangered, or threatened species. Areas with unique vegetation and wildlife habitats receive a high priority in the planning of parks, and in areas where habitat modification is inevitable, mitigating and/or compensatory measures such as native plant restoration, land reclamation, or land interest donation will be considered.

Vegetation and Wildlife Habitats Policies

- "A biological survey report, including a field survey, shall be required for a proposed project site if the site is largely or totally in a natural state or if high interest species of plants or animals have been found on nearby properties.
- In areas where vegetation or wildlife habitat modification is inevitable, mitigation and/or compensatory measures such as native plant restoration, land reclamation, habitat replacement, or land interest donation will be considered.
- Areas containing unique vegetation or wildlife habitats shall receive a high priority for preservation.
- Specific plans shall be developed in conjunction with regional and county agencies where appropriate, for areas where there is occurrence of endangered or threatened species."

4.4.3 Existing Conditions

The following paragraphs describe the sources and procedures used to compile information on biological resources present in the Project Survey Area (PSA). This includes literature and data review and on-the-ground surveys. The following information is adapted from the Biological Technical Report (Pangea Biological 2016), provided in Appendix D, Biological Technical Report.

4.4.3.1 Project Survey Area

The PSA includes a 50-foot survey buffer around the proposed 9.66 acres site for the proposed Ocean Ranch Substation, and each staging yard (Figure 4.4-1).

The PSA was established for biological resource surveys and was designed to study a wide enough area that it would accommodate minor changes in project design (such as changes to the dimensions of workspace and/or additions/deletions or changes to the locations of poles/structures) without the need to conduct additional surveys. The methods used to conduct the studies within the PSA are detailed below.

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Figure 4.4-1 Project Survey Area

Literature Review

Prior to conducting the field surveys, existing documentation relevant to the Proposed Project and the surrounding areas was reviewed. As part of the initial data review for the Proposed Project, a literature review of reference materials was conducted, including existing management plans, aerial photography of the region, the California Natural Diversity Database (CNDDB) (CDFW 2016c; Figure 4.4-2), a search of the CNPS Inventory of Rare and Endangered Vascular Plants of California, the USFWS website and Federal Register regarding federally listed species, U.S. Geological Survey (USGS) topographic maps, and the National Wetlands Inventory maps, review of reports of previous biological resource surveys conducted in the vicinity of the Proposed Project, and manuals, guides, and other environmental documentation and resources for California plants and wildlife. Pertinent planning documents relevant to the Proposed Project were also referenced, including SDG&E's Subregional NCCP.

Special Status Species Lists

To develop a list of special status plant and wildlife species that occur or could potentially occur within the Proposed Project, a search of the CNDDB RareFind 5 program, maintained by the CDFW, was conducted for plant and wildlife species that could be within 1 mile of the PSA (Figure 4.4-2). Other resources that were queried included the USFWS website, CDFW website (CDFW 2016a, CDFW 2016b), CNPS Inventory of Rare and Endangered Vascular Plants of California (CNPS 2015), the SDG&E Subregional NCCP (SDG&E 1995), and San Diego County Bird Atlas (Unitt 2004). Records for known special status plants and wildlife within 1 mile of the Proposed Project were compiled and reviewed. Species were considered special status if they met the following criteria:

- Species have a California Rare Plant Rank of 1A, 1B, 2A, 2B, or 3 based on the CNPS's Rare Plant Program;
- Species are designated by the USFWS as Birds of Conservation Concern;
- Species are federally listed as endangered or threatened, or are a candidate for listing status; or
- Species are state-listed as endangered, threatened, a California SSC, or fully protected.

Determination of the potential for listed, sensitive, or other sensitive plant and/or wildlife species to occur on the Proposed Project was assessed based on the following criteria:

- Low Potential for Occurrence – There are no historical records for this species within or in the immediate vicinity of the PSA, and any habitat or specific environmental conditions needed to support the species do not exist or are of poor quality.
- Moderate Potential for Occurrence – 1) Historical records exist for the species within or adjacent to the PSA; however, either no suitable habitat exists, or only poor quality habitat occurs within or in the immediate vicinity of the PSA, or 2) No previous historical records for this species have been recorded within or in the immediate vicinity of the PSA; however, suitable habitat exists for the species within or in the immediate vicinity of the PSA.
- High Potential for Occurrence – Historical records exist for the species within or adjacent to the PSA and suitable habitat for the species exists within or in the immediate vicinity of the PSA.
- Present – The species has been observed within or in the immediate vicinity of the PSA.

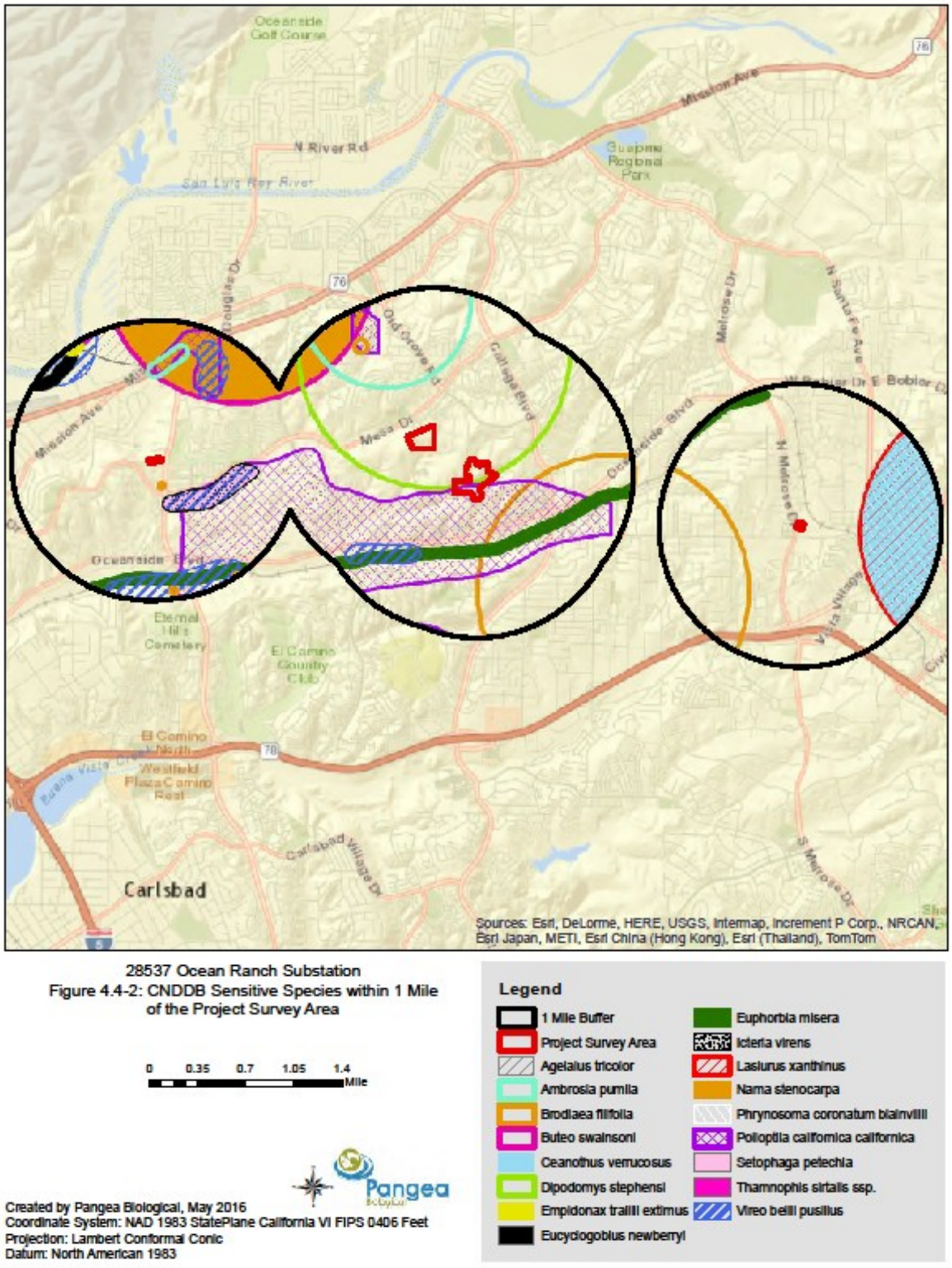


Figure 4.4-2 CNDDB Sensitive Species within 1 Mile of the Project Survey Area

Critical Habitat

A search of the USFWS Environmental Conservation Online System – Critical Habitat Portal was conducted to identify whether the Proposed Project area is located within any USFWS-designated critical habitat areas. In addition, recovery plans for sensitive species and geographic information system (GIS) data from the USFWS website were also reviewed (USFWS 2015) (Figure 4.4-3).

Resource Agency Correspondence

Pangea Biological and USFWS-permitted biologists working with the Pangea Biological team coordinated with the USFWS regarding surveys for sensitive wildlife species within the PSA by submitting notifications to conduct protocol-level surveys, as a condition of their USFWS permit to survey these species.

Field Surveys

During field surveys conducted within the PSA, biologists noted any general and special status plant and wildlife species occurring onsite or in the immediate vicinity of the PSA. Species were detected by direct observation, but also through signs such as parts of plants that had grown in previous seasons or earlier in the growing season, and scat, tracks, burrows, and vocalizations of wildlife species.

Biological Resource Surveys/Vegetation Mapping

At the request of SDG&E, general biological resource surveys were conducted by Pangea Biological in March, May, and October 2015, and March 2016 to determine the vegetation communities located within the PSA, and determine the potential federal, state, and/or NCCP Sensitive (covered) species that occur or have potential to occur. Surveys were conducted to map vegetation communities and to determine potential habitat areas for the sensitive species listed as potentially occurring in the PSA. Vegetation community classifications used in this report follow Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (1986), as modified by Oberbauer (Oberbauer 2008).

Rare Plant Surveys

Reconnaissance-level field surveys were conducted throughout the PSA to determine the potential habitat for rare plants that could occur on the Proposed Project area.

Sensitive Wildlife Surveys

Western Burrowing Owl

Potential suitable habitat for the western burrowing owl (*Athene cunicularia hypugaea*) was identified during the initial biological surveys of the PSA. Protocol surveys for the western burrowing owl will be conducted in early 2017 in suitable habitat to determine the presence or absence of this species in the PSA.

Wetlands and Waters

According to the Biological Technical Report, the review of several source documents did not identify any jurisdictional wetland or non-wetland waters in the PSA. In addition, no jurisdictional wetlands or non-wetland waters were identified during the biological surveys conducted for the Proposed Project.

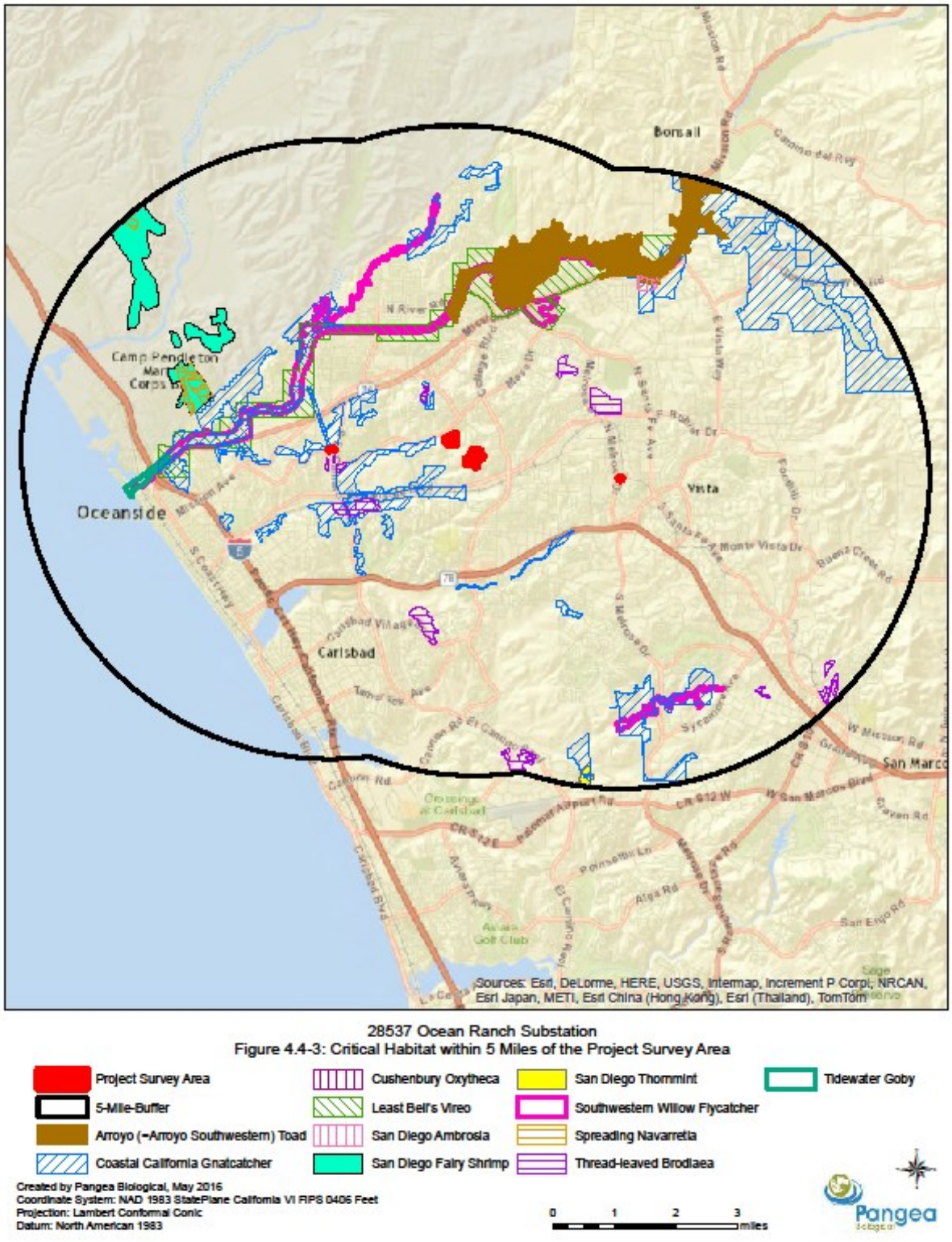


Figure 4.4-3 Critical Habitat within 5 Miles of the Project Survey Area

Biological Resources Setting

The PSA ranges in elevation from 194 feet to 372 feet above mean sea level. The terrain along the PSA consists primarily of relatively flat topography. The PSA consists of primarily disturbed undeveloped areas, as well as some developed areas, with a substantial network of existing paved roads providing access to the Proposed Project.

The PSA is located within San Diego County, which is known for its biological diversity. In addition to the vegetation communities that occur within the PSA, suitable habitat for sensitive plant and wildlife species was also identified. This section identifies the vegetation communities identified within the PSA, as well as the plant and wildlife species that occur or could potentially occur within the PSA.

Vegetation Communities

The PSA supports three vegetation communities and cover types. Vegetation communities are assemblages of plant species that commonly coexist in the wild. The classification of vegetation communities is based on the life form of the dominant species within that community and the associated flora. Plant community classification and descriptions are based on Holland (1986) as updated by Oberbauer et al. (2008) for San Diego County.

The PSA and other associated project components generally support three vegetation communities:

- Disturbed Southern Riparian Scrub
- Disturbed Habitat
- Urban/Developed/Landscape/Ornamental/Bare Ground

The vegetation communities occurring within the PSA are described below and are illustrated in Appendix D. The vegetation communities observed within the PSA and the relative acreages of each plant community are provided in Table 4.4-1. Disturbed habitat and Urban/Developed/Landscape/Ornamental/Bare Ground areas are the dominant cover types within the PSA.

Table 4.4-1. Vegetation Communities in the Ocean Ranch PSA

Vegetation Community	Area (acres)
Riparian/Wetland	
Southern Disturbed Southern Riparian Scrub (Disturbed)	0.16
Subtotal	**0.16**
Urban/Developed/Landscape/Ornamental/Disturbed	
Disturbed Habitat	24.37
Urban/Developed/Landscape/Ornamental/Bare Ground	3.34
Subtotal	**27.71**
Total	**27.86**

Source: Pangea Biological 2016.

Riparian/Wetland

Disturbed Southern Riparian Scrub (Holland Code 63300)

The disturbed southern riparian scrub is a vegetation community dominated by small trees or shrubs that are associated with drainages or river systems (Oberbauer et.al. 2008). The native vegetation can also be mixed with non-native vegetation in previously disturbed areas and can be highly disturbed in some areas. The dominant species within the PSA include arroyo willow (*Salix lasiolepis*), mulefat (*Baccharis salicifolia*), chrysanthemum (*Chrysanthemum sp.*), wild oat (*Avena fatua*), Russian-thistle (*Salsola tragus*), and iceplant (*Mesembryanthemum crystallinum*). Within the PSA there is one location where disturbed riparian scrub was observed.

The proposed site for the Ocean Ranch Substation consists primarily of disturbed (maintained) vegetation, consisting of native and non-native plant species. Within the site is a human-made drainage basin engineered and installed to minimize offsite stormwater runoff from this disturbed area during storm events. The vegetation around this basin does not appear to have been maintained as often as the surrounding area, and an assemblage of native and non-native plant species that also occur in wet areas persist. Although a few of the plant species observed immediately around the drainage basin can also be found in wet areas such as waterbodies and/or wetlands, and during a storm event the drainage basin is capable of retaining surface water, this area was determined to be non-jurisdictional during biological surveys[1]. Based solely on the plant species composition observed at this disturbed location during biological surveys, the area surrounding the drainage basin was initially described as disturbed southern riparian scrub habitat. However, it is expected that the riparian plant species observed in the vicinity of the basin only exist as a result of the water runoff generated and diverted to the drainage basin, and would not occur there if not for the installed basin. Also due to the highly disturbed and isolated nature of the site, the vegetation immediately surrounding the basin is not functioning as riparian habitat, and its ecological value is considered to be low.

Urban/Developed/Landscape/Ornamental/Bare Ground

Disturbed Habitat (Holland Code 11300)

Disturbed habitat includes vegetation and soils characterized by physical disturbance. In these sites, non-native species are commonly introduced by humans. A physical disturbance may include clearing for fuel management, repeated grading, graded firebreaks,construction staging areas, or any repeated use areas. Examples of repeated use areas are trails, access roads, and dirt parking lots. Characteristic species of these communities include black mustard (*Brassica nigra*), sweet fennel (*Foeniculum vulgare*), Russian-thistle, tocalote (*Centaurea melitensis*), fascicled tarweed (*Deinandra fasciculata*), coyote brush *(Baccharis pilularis)*, coastal goldenbush (*Isocoma menziesii*), pepper tree (*Schinus* sp.), fan palm (*Washingtonia robusta*), ripgut brome (*Bromus diandrus*), telegraph weed (*Heterotheca grandiflora*), western ragweed (*Ambrosia psilostachya*), tamarisk (*Tamarix* sp.), sea-lavender (*Limonium* sp.), and lupine (*Lupinus* sp.). Annual grasses are not often included in this vegetation community and are considered more typical of non-native annual grassland. Disturbed habitat occurs within the PSA primarily in the form of those areas regularly mowed or maintained.

[1] Nor was this area identified as a jurisdictional wetland or non-wetland water by the Biological Technical Report.

Urban/Developed (Holland Code 12000)

Urban/developed areas, including landscape/ornamental areas, are those that have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Urban/developed areas occur throughout the PSA, and include paved and dirt access roads, bare ground associated with disturbance and/or development, buildings, paved parking lots, road medians and roadsides, as well as landscaped areas that often require irrigation (Oberbauer et.al. 2008). Urban/developed areas are not necessarily considered a vegetation community, and typically support none or very few biological resources.

Special Status Plants

Special status plant species that have the potential to occur within the PSA based on the literature research, and have historically been documented within 1 mile of the PSA include: cliff spurge (*Euphorbia misera*), Mud nama (*Nama stenocarpum*), San Diego ambrosia (*Ambrosia pumila*), wart-stemmed ceanothus (*Ceanothus verrucosus*), and thread-leaved brodiaea (*Brodiaea filifolia*). While these five special status plant species have historically been documented within 1 mile of the PSA, no special status plant species or any suitable habitat for these species was observed within the PSA during the surveys conducted in support of the Proposed Project. A compendium list of plant species observed during studies in support of the Proposed Project is included in Appendix D.

Special Status Wildlife

A compendium list of wildlife species observed during studies in support of the Proposed Project is included in Appendix D.

For purposes of this report, special status wildlife species include those that are either listed or proposed for listing as threatened or endangered under the state or federal ESA, species designated as Birds of Conservation Concern by the USFWS, species designated as fully protected and SSC by the CDFW. As shown on Figure 4.4-2, 12 special status wildlife species have been historically documented as occurring within 1 mile of the PSA and include the California gnatcatcher (*Polioptila californica californica*), least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), Swainson's hawk (*Buteo swainsoni*), tricolored blackbird (*Agelaius tricolor*), yellow warbler (*Setophaga petechial*), yellow-breasted chat (*Icteria virens*), tidewater goby (*Eucyclogobius newberryi*), San Diego horned lizard (*Phrynosoma coronatum blainvillii*), south coast garter snake (*Thamnophis sirtalis ssp*), western yellow bat (*Lasiurus xanthinus*) and Stevens' Kangaroo rat (*Dipodomys stephensi*). Additional information about each species is provided in Appendix D.

Special Status Species Surveys

No sensitive wildlife species were observed within the PSA during surveys conducted in support of the Proposed Project. However, two special status wildlife species, western burrowing owl and western yellow bat, have the potential to occur within the Proposed Project. A detailed discussion of these special status species is provided below and in Table 4.4-3.

Western Burrowing Owl

The burrowing owl can be found in grassland and open scrub habitats where it utilizes mammal burrows, and occasionally human-made structures such as culverts, for roosting and nesting. The species occurs in San Diego County year-round, with the breeding season generally February through August, but is more common in winter. While this species was not identified on the CNDDB database search results for sensitive species occurring within 1 mile of the PSA, open disturbed areas and human-made structures

potentially suitable for burrowing owl were observed in the PSA. Therefore, there is a low potential for this species to occur within the PSA. Protocol surveys for the western burrowing owl will be conducted in early 2017 to determine the presence or absence of this species within the PSA.

Western Yellow Bat

The western yellow bat is found in southern California in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. It roosts in trees, and often roosts in the dead palm fronds of palm trees. It has been documented below 2,000 feet in elevation. This species occurs year-round in California. This species feeds on a variety of insects including ants, wasps, bees, flies, mosquitoes, butterflies, moths, beetles, grasshoppers, and crickets. Potential roosting habitat occurs within the palm trees and other trees within the PSA (specifically, the Melrose yard), therefore, there is a low potential for the western yellow bat to occur within the PSA.

Critical Habitat

Under the ESA, to the extent prudent and determinable, the USFWS is required to designate Critical Habitat for endangered and threatened species (16 U.S.C. § 1533 (a)(3)). Critical Habitat is defined as areas of land, water, and air space containing the physical and biological features essential for the survival and recovery of endangered and threatened species. Designated Critical Habitat includes sites for breeding and rearing, movement or migration, feeding, roosting, cover, and shelter.

Table 4.4-2. Special Status Wildlife Species Potentially Occurring in the Project Area

Species	Habitat Requirements	Listing Status	Potential to Occur within PSA
Birds			
Western burrowing owl (*Athene cunicularia*)	Grassland and open scrub habitat, and occasionally in human-made structures such as culverts, for roosting and nesting	BCC, SSC	Low potential – suitable disturbed habitat observed within the PSA
Mammals			
Western yellow bat (*Lasiurus zanthinus*)	Valley foothill riparian habitat, desert riparian, desert wash, and pal oasis habitats, roosts in trees, and prefers palms for roosting	SSC	Low potential – trees within Melrose staging yard may provide suitable habitat for roosting

Notes: BCC = Birds of Conservation Concern; SSC = California Species of Special Concern.

Designated Critical Habitats require special management and protection of existing resources, including water quality and quantity, host animals and plants, food availability, pollinators, sunlight, and specific soil types. Critical habitat designation delineates all suitable habitat, occupied or not, that is essential to the survival and recovery of the species.

The PSA is within 5 miles of Critical Habitat for San Diego ambrosia, San Diego thornmint, spreading navarretia, thread-leaved brodiaea, San Diego fairy shrimp, tidewater goby, arroyo toad, California gnatcatcher, least Bell's vireo, cushenbury oxytheca, and southwestern willow flycatcher (refer to Figure 4.4-3). However, no critical habitat is located within the PSA.

Wildlife Movement Corridors

Wildlife corridors are defined as areas that connect suitable habitat in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features, such as canyon drainages, ridgelines, or areas with dense vegetation cover can provide corridors for wildlife travel. Wildlife corridors are important to mobile species because they provide access to individuals to find mates, food, and water, and allow the dispersal of individuals away from high-population-density areas; and by allowing immigration and emigration of individuals to other populations, they allow for gene flow among populations. Wildlife corridors are considered sensitive by resource and conservation agencies.

Terrestrial wildlife species tend to travel along natural drainages such as Loma Alta Creek and the San Luis Rey River, in order to have protective cover from predators and a water and food source. Migrating avian species will use native habitat areas as stopovers on their journey through the area.

The City of Oceanside's SAP identifies the existing San Luis Rey Substation, and the power line from the San Luis Rey Substation, east along El Camino Real to Rancho Del Oro Road as being within a designated Wildlife Corridor Planning Zone. This existing San Luis Rey Substation and associated power line are depicted on the City of Oceanside SAP Figure 2-7 as an existing SDG&E transmission corridor (Figure 4.4-4).

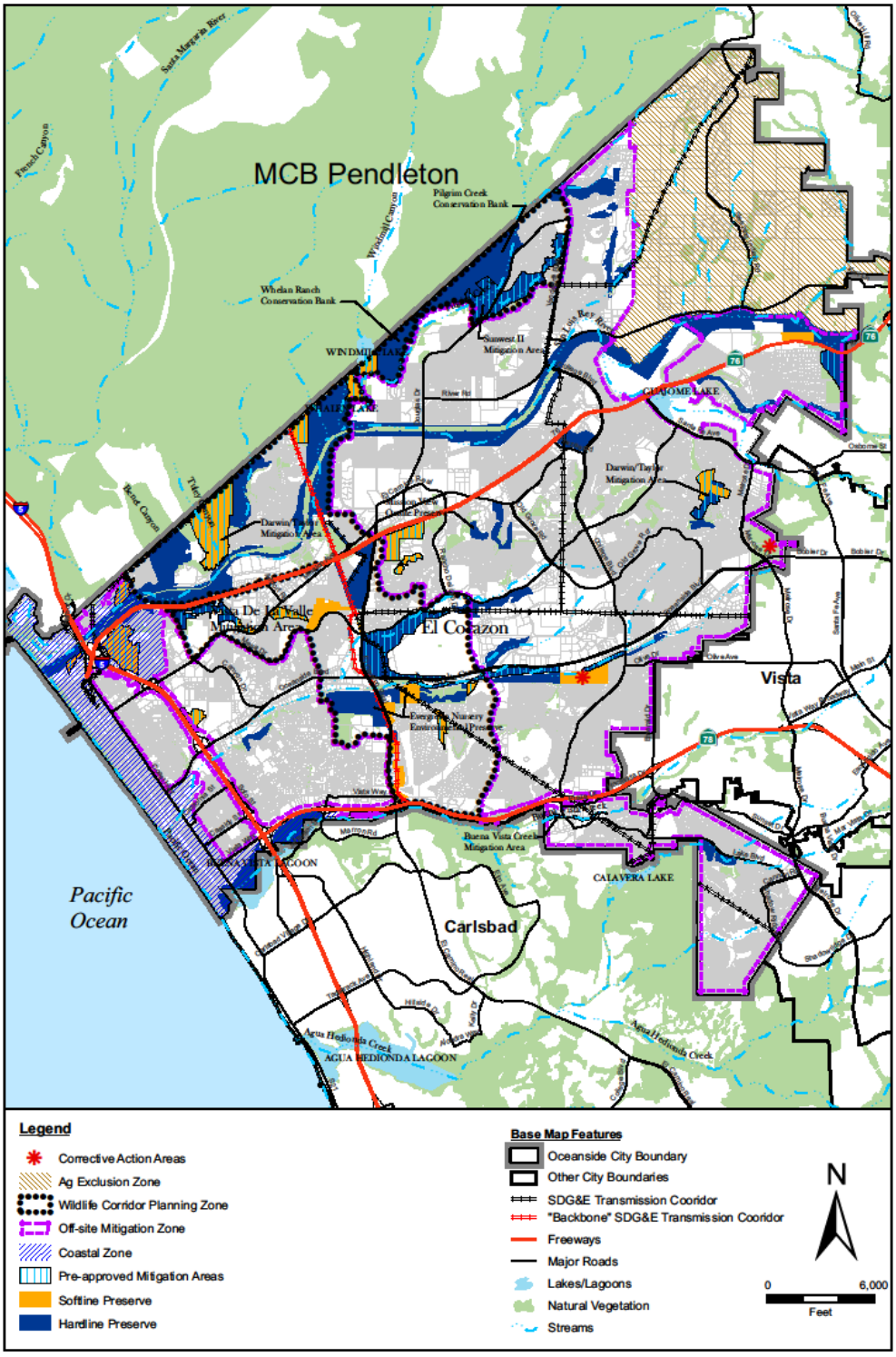
Jurisdictional Resources

The Proposed Project does not contain water resources including riverine, wetland and non-wetland water features that may be considered "waters of the U.S."

4.4.4 Standard Operating Procedures

SDG&E implements their operational protocols for projects such as the Proposed Project. Operational protocols represent an environmentally sensitive approach to traditional utility construction maintenance and repair activities. As described in Section 3.9, *Standard Operating Procedures*, the Proposed Project will involve various procedures related to biological resources, including:

- NCCP Operational Protocols, including:
  - Section 7.1.1 – General Behavior for All Field Personnel
  - Section 7.1.2 – Training
  - Section 7.1.4 – Maintenance, Repair and Construction of Facilities
  - Section 7.1.5 – Maintenance of Access Roads
  - Section 7.1.8 – Survey Work
  - Section 7.1.9 – Emergency Repairs



Source: City of Oceanside 2010

Figure 4.4-4 City of Oceanside Subarea Plan Preserve

4.4.5 Applicant Proposed Measures

- **APM BIO-1:** *General Biological Resources.* The Proposed Project work areas shall be limited to the sites specified in the project description. Access to the project site shall utilize existing access roads, where possible. Parking, driving, and storing of vehicles will be limited to previously disturbed, compacted, and developed areas, where possible.
    - A contractor education program will be conducted by a qualified biologist. It will be conducted during all project phases and cover: (1) the potential presence of listed species and their habitats; (2) the requirements and boundaries of the project (e.g., areas delineated on maps and by flags or fencing); (3) the importance of complying with avoidance and minimization measures; (4) environmentally responsible construction practices; (5) identification of sensitive resource areas in the field; and (6) problem reporting and resolution methods.
    - A qualified biologist will be assigned to the Proposed Project. The designated biologist will have the authority to halt construction in that segment of the Proposed Project to prevent impact to any listed species.
    - Heavy equipment, construction, equipment maintenance, and staging activities will occur in designated areas and be restricted to existing roads and disturbed areas to the maximum extent practicable.
    - Where possible, laydown, stockpiling, parking, driving, and storing of vehicles and equipment will be limited to previously disturbed/compacted and developed areas within and immediately adjacent to existing roads.
- **APM BIO-2:** *Vegetation and Special Status Plant Species.*
    - Disturbance to adjacent native vegetation will be avoided to the greatest extent.
- **APM BIO-3:** *Migratory Birds.*
    - Trimming or removal of vegetation during the peak breeding season (February 15 to August 31) will require a survey by a qualified biologist to confirm that active nests will not be affected. If an active nest is found within the Proposed Project at any time, work will stop immediately in the immediate area of the nest and redirected away from the nest location.
- **APM BIO-4:** *Special Status Wildlife Species.*
    - Protocol-level surveys for the burrowing owl shall occur prior to the commencement of construction. The survey shall be conducted by a qualified biologist in accordance with the Staff Report on Burrowing Owl Mitigation. The surveys shall commence at least 30 days and not less than 14 days prior to construction. The survey results shall be provided to SDG&E within 14 days following completion of surveys.
    - If burrowing owls are detected within the Project Study Area, measures consistent with the methodology as established in the Staff Report on Burrowing Owl Mitigation and in concurrence with the local CDFW office will be implemented. This includes, but is not limited to the use of buffers around burrows, inspection of equipment, monitoring, and the potential for development of a Burrowing Owl Exclusion Plan approved by the local CDFW office.

- Preconstruction surveys/sweeps shall be conducted by a qualified biologist to determine the presence of the western yellow bat at the Melrose staging yard. The preconstruction clearance sweeps for special status species shall occur at work areas where suitable habitat is present within approximately 24 hours of staging activities each day. If special status species are found, SDG&E will determine the need for additional consultation with the agencies.

4.4.6 Project Impacts

The Proposed Project includes construction of a new 69/12 kV substation and loop-in of an existing 69 kV power line to connect to the proposed substation (refer to Chapter 3.0, *Project Description*).

Once the proposed Ocean Ranch Substation is constructed and placed in service, it will not require personnel stationed on site except for during periodic and routine maintenance activities that will ensure reliable operation of all equipment within the substation. Therefore, the impact analysis is focused only on construction activities that are required to construct the new substation, install the new underground power line, and establish temporary work areas.

Construction of the Proposed Project has the potential to impact sensitive species and habitat. The discussion below considers impacts to biological resources that may occur from construction (short-term impacts). SDG&E has identified and incorporated APMs in the development of the Proposed Project to avoid or minimize project impacts to biological resources.

Impacts associated with the Proposed Project can be classified as temporary or permanent, and direct or indirect. Temporary impacts generally include impacts associated with construction activities, including the use of vehicles and equipment to assemble and install new facilities and remove and/or replace old equipment, the use of temporary workspace, storage of construction materials and equipment, or vegetation removal in areas to conduct construction activities. The temporary impact areas may vary because the positioning of construction vehicles, equipment, and materials cannot be accurately anticipated prior to construction, as locations are dependent upon the contractor safely performing the work. These areas are intended to be restored as near to preconstruction conditions as possible once construction is complete. Permanent impacts generally include impacts associated with construction and installation of the proposed Ocean Ranch Substation. The underground components will be inspected consistent with SDG&E's existing underground inspection and maintenance program.

Direct impacts to biological resources may include the physical loss or removal of vegetation due to the installation of new facilities or work at staging/laydown areas. Indirect impacts to biological resources during construction may include the interruption of normal nesting or foraging behaviors, loss of prey items, such as insects or food resources, or the suppression of growth due to excessive dust or noise. Impacts to sensitive species may occur either through temporary or permanent habitat loss, interruption of normal species routines, or through direct mortality.

Potential impact to special status species associated with the Proposed Project were assessed by analyzing species-specific requirements, including necessary vegetative habitat, elevational range, foraging needs, denning or breeding requirements, migratory trends, current ranges, and known occurrences or records.

4.4.6.1 Project Specific Impacts

The following describes the potential for impacts to sensitive biological resources during construction of the Proposed Project. During construction, operation, and maintenance phases of the project, SDG&E will

operate in compliance with applicable state and federal laws, regulations, permit conditions, and requirements.

The Proposed Project has been designed to avoid sensitive habitat areas that may support special status species and sensitive biological resources when possible, including not placing facilities in drainage areas or other sensitive habitats, using existing access roads to the greatest extent possible, and placing staging areas, and laydown areas outside of sensitive habitats, where feasible. Where avoidance of sensitive habitat areas supporting sensitive species is not possible, or where sensitive habitat areas exist adjacent to Proposed Project work areas, SDG&E will implement APMs to minimize project impacts.

Permanent Impacts

Permanent impacts include the placement of underground conductor vault and construction of the Ocean Ranch Substation.

Underground Conduit Vaults

Four underground conductor vaults are proposed for the underground portion of the Proposed Project. The anticipated permanent impacts for the installation of the underground vaults are the dimensions of the vaults themselves (approximately 10 feet by 18 feet in size). Therefore, the estimated permanent impacts for the installation of the underground vaults is 180 square feet per vault or a total of 720 square feet.

Ocean Ranch Substation

Construction of the Ocean Ranch Substation will result in approximately 9.66 acres of permanent impacts for the initial and ultimate substation paved buildout area, which will include a graded pad and permanent access roads within the substation site.

Temporary Impacts

Temporary impact areas may vary because the positioning of construction vehicles, equipment, and materials cannot be accurately anticipated prior to construction, as locations are dependent upon the contractor safely performing the work. The impacts from construction vehicles, equipment, and materials staged outside of delineated temporary work areas would be evaluated by the on-site biological monitor prior to placement. The onsite biological monitor, as appropriate, would assist crews in placement of construction vehicles, equipment, and materials to avoid and minimize impacts to sensitive habitat types.

In general, temporary impact areas were evaluated based on anticipated geometric work spaces around each proposed work location. Construction work spaces are dynamic in nature and may require minor modifications during the construction phase of the Proposed Project to facilitate worker safety and to avoid impacts to natural resources, including sensitive habitats. Therefore, the proposed temporary impact areas below are estimated based on the best information available at the time of this report.

Existing Access Roads

SDG&E will utilize existing access roads during construction. No new access roads are proposed for the Proposed Project. Construction would primarily take place within existing SDG&E fee-owned property, franchise or existing easements. Work areas are accessible by vehicle in paved/developed areas or other existing disturbed areas.

Staging Yards

The Proposed Project may require the use of approximately four staging yards that may temporarily impact disturbed, developed, and landscaped areas. The total size of the four proposed staging yards totals approximately 17.5 acres.

Underground Power Line

The installation of approximately 5,980 linear feet of new underground power line will require a 30-foot-wide workspace for the entire length of the line. These impacts will be primarily within existing paved roads, and existing disturbed areas. Impacts associated with trenching and installation of the proposed underground transmission line section will result in approximately 179,400 square feet (4.12 acres) of temporary impacts, primarily to previously developed and disturbed areas.

4.4.6.2 Methodology

Project impacts to all sensitive biological resources that are known to occur or have a potential to occur within the PSA were considered. Protocol surveys for the western burrowing owl will be conducted prior to construction (surveys anticipated to occur in the Spring of 2017), to determine the presence or absence of this species within the PSA.

Although additional surveys are planned to evaluate impacts associated with the Proposed Project, impacts to all sensitive biological resources that are currently known to occur based on the surveys conducted during 2015 were evaluated. In addition, project impacts to special status plant and wildlife species that have a potential to occur were thoroughly evaluated based on the existing conditions within the PSA and historical occurrence data for the vicinity. Impacts to special status species associated with the Proposed Project were assessed by analyzing species-specific requirements, including necessary vegetative habitat, elevational range, foraging needs, denning or breeding requirements, migratory trends, current ranges, and known occurrences or records.

4.4.6.3 Significance Criteria

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS? *Less than Significant*

Overview

Anticipated project impacts were calculated based on vegetation mapping, site-specific conditions, and proposed impact areas described above for features included in the Proposed Project design. Construction work spaces are dynamic in nature and may require minor modifications during the construction phase of the Proposed Project to facilitate worker safety and avoid impacts to natural resources, including sensitive habitats. Therefore, the proposed permanent and temporary impact areas discussed below are estimated and may shift or be modified within the existing PSA.

Impacts to Vegetation Communities

Estimated permanent and temporary construction impacts to specific vegetation communities associated with the Proposed Project were calculated using anticipated permanent and temporary impact work areas described above. The anticipated impact areas per vegetation community are shown in detail in Table 4.4-3 below.

Table 4.4-3. Estimated Construction Impacts by Vegetation Community

Vegetation Community	Anticipated Area of Temporary Impact in Acres	Anticipated Area of Permanent Impact in Acres
Disturbed Southern Riparian Scrub	0	0.16
Disturbed Habitat	16.39	7.98
Urban/Developed/Landscape/ Ornamental/Bare Ground	1.82	1.52
Total Estimated Impacts	**18.21**	**9.66**

The disturbed southern riparian scrub located on the proposed Ocean Ranch site has been created by a human-made drainage basin engineered and installed to minimize offsite stormwater runoff from this disturbed area during storm events. Based solely on the plant species composition observed at this disturbed location during biological surveys, the area surrounding the drainage basin was initially described as disturbed southern riparian scrub habitat. However, it is expected that the riparian plant species observed in the vicinity of the basin only exist as a result of the water runoff generated and diverted to the drainage basin, and would not occur there if not for the installed basin. Also, due to the highly disturbed and isolated nature of the site, the vegetation immediately surrounding the basin is not functioning as riparian habitat, and its ecological value is considered as low. Therefore, impacts to vegetation communities as a result of implementation of the Proposed Project are considered less than significant.

Impact to Sensitive Habitats

Sensitive habitats are considered naturally occurring plant assemblages or restored habitats that are reasonably expected to support natural diversity and carrying capacities of sensitive species in the region. For the purpose of this evaluation, sensitive habitats include disturbed southern riparian scrub. As discussed above, the disturbed southern riparian scrub is not part of a jurisdictional water and has been created by a human-made drainage basin. Due to the highly disturbed and isolated nature of the site, its dependence on the runoff generated and diverted to the drainage basin, the vegetation immediately surrounding the basin is not functioning as riparian habitat, and its ecological value is considered as low; impacts to this habitat are considered less than significant.

Non-sensitive habitat types are those typically of a lower biological value and include bare ground, heavily disturbed areas, developed and urban areas (paved), and landscaping. Non-sensitive communities include disturbed, pavement/developed/bare ground, and landscape/ornamental areas. These areas are not typically expected to provide major ecological value, contribute to the function of natural habitats and open space areas in the region, or support sensitive plant and wildlife species. However, two sensitive wildlife species have a low potential to occur within the disturbed habitat within the PSA. A summary of impacts of habitat types is provided in Table 4.4-4.

Table 4.4-4. Estimated Impacts to Sensitive and Non-Sensitive Habitats

Type of Impact	Total Estimated Area of Impact in Acres
Temporary Impacts	
Total Estimated Temporary Impacts to Sensitive Native Vegetation Communities	0.00
Total Estimated Temporary Impacts to Non-Sensitive Communities (Disturbed, Urban/Developed, Bare Ground, and Landscape/Ornamental)	18.21
Total Estimated Temporary Impacts	***18.21***

Table 4.4-4. Estimated Impacts to Sensitive and Non-Sensitive Habitats

Type of Impact	Total Estimated Area of Impact in Acres
Permanent Impacts	
Total Estimated Permanent Impacts to Sensitive Native Vegetation Communities (Disturbed Southern Riparian Scrub)	0.16
Total Estimated Permanent Impacts to Non-Sensitive Communities (Disturbed, Urban/Developed, Bare Ground, and Landscape/Ornamental)	9.50
Total Estimated Permanent Impacts	***9.66***

Impacts to Special Status Plant Species

Five special status plant species have historically been documented within the PSA, however, no special status species were observed within the PSA during the biological surveys. Based upon the location of the proposed facilities, and no special status species were observed within the PSA, construction activities are not expected to impact special status plant species.

Impacts to Special Status Wildlife Species

Construction activities could potentially impact special status wildlife species, depending on the final location of the proposed facilities. Two special status wildlife species (western burrowing owl and western yellow bat) have potential to occur within the PSA. Permanent impacts to special status wildlife species could include the removal of suitable habitat with project facilities, or direct mortality to individuals, nests, burrows, and young as a result of construction. Temporary impacts may include temporary construction activities that alter normal behavior patterns, including migration and dispersal, courtship and mating, and foraging and roosting.

Birds

Construction activities could potentially result in impacts to foraging and/or nesting habitat for one sensitive avian species—western burrowing owl—that has the potential to occur within the PSA. Proposed Project activities that could result in impacts include removal of vegetation to facilitate temporary staging or storage of equipment and construction vehicles and construction of the proposed Ocean Ranch Substation. Other potential impacts to sensitive avian species include noise from construction equipment and vehicles.

Protocol surveys for the western burrowing owl will be conducted within the PSA in early 2017 to determine the presence or absence of this species within the PSA. There is a low potential for this species to occur within the Proposed Project due to the presence of suitable habitat (open areas). If the species is not detected during protocol surveys within the PSA, then the potential for impacts to this species is minimal. If this species is detected during future protocol surveys, protective measures for the western burrowing owl, APM BIO-4, would be implemented during construction to help minimize impacts to this species.

The above species as well as all migratory bird species and their active nests are protected under the MBTA. NCCP Operational Protocols as well as focused nesting bird surveys and avoidance would limit any impacts to nesting birds. Implementation of Standard Operating Procedures outlined in Section 4.4.4 and APMs in Section 4.4.5 will further minimize less than significant impacts to special status bird species and migratory bird species.

Mammals

Proposed construction activities, including clearing vegetation during creation of work areas, may cause both permanent and temporary impacts to one sensitive mammal species, the western yellow bat, if present. Temporary impacts from these activities may include a reduction of roosting habitat from trimming of trees for temporary work areas, construction noise, and ground vibration, as the western yellow bat may be deterred from inhabiting the trees during construction activities. If this species is detected during preconstruction surveys within the PSA, protective measure APM BIO-4 would be implemented to minimize impacts to this species.

Impacts to Critical Habitat

The PSA is not located within any critical habitat, therefore, the Proposed Project will not result in any impacts to critical habitat.

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS? *Less than Significant*

Sensitive natural communities are communities that have limited distribution statewide or within a county or region and are often vulnerable to the environmental effects of projects. Sensitive natural communities in the Proposed Project area are included in Section 4.4.3, *Existing Conditions*. The construction of the proposed Ocean Ranch Substation would result in 0.16 acre of permanent impacts to disturbed southern riparian scrub, refer to Tables 4.4-3 and 4.4-4. As discussed above under Section a) above, within the proposed Ocean Ranch Substation site is a human-made drainage basin engineered and installed to minimize offsite stormwater runoff from this disturbed area during storm events. The vegetation around this basin does not appear to have been maintained as often as the surrounding area, and an assemblage of native and non-native plant species that occur in wet areas exist. Although a few of the plant species observed immediately around the drainage basin can also be found in wet areas such as waterbodies and/or wetlands, and during a storm event the drainage basin is capable of retaining surface water, this area was determined to be considered non-jurisdictional during biological surveys. The area surrounding the drainage basin was initially described as disturbed southern riparian scrub habitat based solely on the plant species composition observed at this disturbed location during biological surveys. However, it is expected that the riparian plant species observed in the vicinity of the basin only exist as a result of the water runoff generated and diverted to the drainage basin, and would not occur there if not for the installed basin. Also, due to the highly disturbed and isolated nature of the site, the vegetation immediately surrounding the basin is not functioning as riparian habitat. Therefore, the ecological value of the disturbed southern riparian scrub is considered to be low. Due to the disturbed nature of the southern riparian scrub, and that this habitat is not naturally occurring at this location, the 0.16 acre of permanent impacts to this habitat is considered less than significant. No temporary direct or indirect impacts, or permanent indirect impacts to sensitive natural communities would result from the Proposed Project.

c) Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? *No Impact*

The Proposed Project has been designed to avoid impacts to jurisdictional (aquatic) resources. The proposed Ocean Ranch Substation and the four proposed staging yards are located outside of

jurisdictional resources. As discussed above under Sections a) and b) above, a human-made detention basin is located on the proposed Ocean Ranch Substation site. While the drainage basin is capable of retaining surface water during a storm event, this area was determined to be considered non-jurisdictional during biological surveys. As a result, the Proposed Project will result in no impacts associated with wetlands.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? *Less than Significant*

There are no established native wildlife nursery sites located in the PSA; therefore, no impacts to native wildlife nursery sites are anticipated as a result of the Proposed Project. According to the Oceanside SAP, the existing TL 6966 and TL 693 power lines are located within a Wildlife Corridor Planning Zone. The SAP identifies SDG&E's San Luis Rey Substation as being located along El Camino Real between Mesa Dive and Mission Avenue, and its electrical transmission corridor (comprised of fee-owned rights-of-way and easements) runs north-south through the central portion of the City of Oceanside. Per the City of Oceanside, "the electrical transmission corridor is associated with many of the remaining habitat patches in the City and is anticipated to continue to act as a north-south habitat corridor through the City (City of Oceanside 2010)."

The proposed San Luis Rey staging yard consists of a paved area located immediately north of the existing San Luis Rey Substation. The proposed staging yard would be utilized to store equipment needed during the construction phase of the Proposed Project. While local wildlife movements may be temporarily disrupted during the use of the San Luis Rey staging yard, the temporary impacts that result from using the site to store equipment and the additional vehicles traveling to and from the staging yard are not expected to significantly affect the movement of wildlife along any existing or potential wildlife movement corridors with the PSA. Therefore, impacts to wildlife movement corridors are not expected as a result of the Proposed Project. Furthermore, the Proposed Project would not occur within or adjacent to existing drainages that can serve as wildlife movement corridors.

Therefore, impacts to wildlife movement corridors as a result of construction of the Proposed Project are anticipated to be less than significant.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? *No Impact*

Construction and operation and maintenance of the Proposed Project will not conflict with any local environmental policies or ordinances promulgated to protect biological resources. The Proposed Project is located within the City of Oceanside and based on a review of applicable local policies, the Proposed Project will not conflict with local policies. Therefore, the Proposed Project will not conflict with any local policies or plans protecting biological resources, and there will be no impact.

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plans, NCCP, or other approved local, regional, or state habitat conservation plan? *No Impact*

The City of Oceanside's SAP identifies areas within the City that are envisioned to provide natural community conservation or require special considerations for habitat modification due to preserve planning parameters from the SAP. The project is located in areas that are designated as Wildlife Corridor Planning Zone, and Off-site Mitigation Zone (see Figure 4.4-4). The proposed San Luis Rey staging yard is located within an area designated as a Wildlife Corridor Planning Zone within the City of Oceanside's SAP. However, as discussed under Section d) above, the Proposed Project will be located in an existing

SDG&E transmission corridor on a paved area adjacent to the existing San Luis Rey substation. The activities associated with the proposed staging yard will be consistent with activities that occur at the existing substation and/or the current use of this staging yard for operation and maintenance activities, and therefore, impacts to the existing wildlife corridor would not result.

Although the proposed underground portion of the power line (TL 6966), the proposed Ocean Ranch Substation, Corporate staging yard, and USPS staging yard will be located in an area designated as an Off-site Mitigation Zone, construction will be conducted within disturbed or developed lands or paved roads, which do not contain suitable habitat for sensitive wildlife species. The City of Oceanside's SAP does not require mitigation for impacts to these land types (City of Oceanside 2000). Therefore, the Proposed Project does not conflict with the SAP.

The Proposed Project will not use the take authority granted by the USFWS and the CDFW in the NCCP for impacts to covered species. Potential take of state species will be handled, as necessary, through consultation with the CDFW in accordance with applicable sections of the CESA. Although the SDG&E Subregional NCCP will not be used for the Proposed Project and the Proposed Project is within the City of Oceanside's Multiple Habitat Conservation Program, proposed construction activities will implement applicable avoidance and minimization measures specified in the NCCP Operational Protocols as standard operating procedures. Therefore, there will be no impact.

4.4.7 References

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TABLE OF CONTENTS

4.5 CULTURAL RESOURCES....4.5-1
4.5.1 Introduction....4.5-1
4.5.2 Regulatory Setting....4.5-1
4.5.3 Existing Conditions....4.5-5
4.5.4 Standard Operating Procedures....4.5-9
4.5.5 Applicant Proposed Measures....4.5-9
4.5.6 Project Impacts....4.5-10
4.5.7 References....4.5-11

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4.5 CULTURAL RESOURCES

Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☐	☐	☒
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☐	☐	☒
c.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
d.	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒
e.	Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074?	☐	☐	☐	☒

4.5.1 Introduction

This section of the PEA describes the existing conditions and project-related impacts to cultural resources in the vicinity of the Proposed Project. There are no known sensitive cultural resources within the project area, and the analysis concludes that there will be a less than significant impact to cultural resources. There are known paleontological resources in the project area. Incorporation of the standard operating procedures described in Section 4.5.4 and APMs in Section 4.5.5 will minimize any impacts to a less than significant level.

The Proposed Project's effects on cultural resources were evaluated using the significance criteria set forth in Appendix G of the CEQA Guidelines. The conclusions are summarized in the impact summary table above, and discussed in more detail in Section 4.5.6. The following summary concerning cultural and paleontological resources is derived from the confidential Cultural Resources Survey Reports and Paleontological Records Search, which will be submitted separately to CPUC staff under Public Utilities Code Section 583.

4.5.2 Regulatory Setting

4.5.2.1 Federal

No federal regulations related to cultural or paleontological resources are applicable to the project. Section 106 of the National Historic Preservation Act does not apply because no federal agency discretionary action is required for the project, and no federal lands or monies are involved.

4.5.2.2 State

California Environmental Quality Act

CEQA requires that impacts to cultural resources be identified and, if impacts will be significant, that mitigation measures be implemented to reduce those impacts to the extent feasible. Public Resources Code (PRC) Section 21081. In the protection and management of the cultural environment, both the statute and the CEQA Guidelines (14 California Code of Regulations Section 15000 et seq.) provide definitions and standards for cultural resources management. Pursuant to Guideline 15064.5(a), the term "historical resource" includes:

- "A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (CRHR). A resource included in a local register of historical resources…or identified as significant in a historical resource survey…shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the CRHR, including the following:
    - it is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
    - it is associated with the lives of persons important in our past;
    - it embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
    - it has yielded, or may be likely to yield, information important in prehistory or history.
- The fact that a resource is not listed in, or determined to be eligible for listing in the CRHR, not included in a local register of historical resources, or identified in a historical resources survey, does not preclude a lead agency from determining that the resource may be a historical resource."

As defined in PRC Section 21083.2(g), a "unique archaeological resource" is:

- "An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:
    - it contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
    - it has a special and particular quality such as being the oldest of its type or the best available example of its type; or
    - it is directly associated with a scientifically recognized important prehistoric or historical event or person."

Section 15064.5(b)(1) of the CEQA Guidelines explains that effects on historical resources would be considered adverse if they involve physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the resource would be materially impaired. Adverse effects on historical resources may result in a project having a significant effect on the environment. Section 15064(c)(3) requires that unique archaeological resources receive treatment under PRC Section 21083.2, which requires these resources to be preserved in place or left in an undisturbed state. If these treatments are not possible, then mitigation for significant effects is required, as outlined in PRC Section 21082.2(c).

The statutes and guidelines cited above specify how cultural resources are to be analyzed for projects subject to CEQA. Archival and field surveys must be conducted, and identified cultural resources must be inventoried and evaluated in prescribed ways.

California Register of Historical Resources

The CRHR is a public listing that was established by the California Office of Historic Preservation to encourage public recognition and protection of resources of architectural, historical, archeological and cultural significance (Section 5024.1). Any resource eligible for listing in the CRHR must also be considered significant under CEQA. A historical resource may be listed in the CRHR if it meets one or more of the following criteria:

- it is associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States;
- it is associated with the lives of persons important to local, California, or national history;
- it embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic value; or
- it has yielded or has the potential to yield information that is important in the prehistory or history of the local area, California, or the nation.

Automatic listings include properties listed in the National Register of Historic Places (NRHP) or State Historical Landmarks from number 770 onward (PRC Section 5024.1(d)). In addition, Points of Historical Interest nominated since January 1998 are to be jointly listed as Points of Historical Interest and in the CRHR. Landmarks prior to number 770 and Points of Historical Interest may be listed through an action of the State Historical Resources Commission.

Resources listed in a local historic register or deemed significant in a historical resources survey, as provided under PRC Section 5024.1(g), are presumed to be historically or culturally significant unless the preponderance of evidence demonstrates that they are not (PRC Section 21084.1). A resource that is not listed on or determined to be ineligible for listing in the CRHR, not included in a local register of historical resources, or not deemed significant in a historical resources survey may, nonetheless, be historically significant.

California Native American Graves Protection and Repatriation Act of 2001, California Health and Safety Code

Broad provisions for the protection of Native American cultural resources are contained in the California Health and Safety Code, Division 7, Part 2, Chapter 5 (Sections 8010 through 8030), including the California Native American Graves Protection and Repatriation Act (Cal NAGPRA). Cal NAGPRA established a state policy to ensure that California Native American human remains and cultural items are

treated with respect and dignity. Cal NAGPRA also provides the mechanism for disclosure and return of human remains and cultural items held by publicly funded agencies and museums in California. In addition, Cal NAGPRA outlines the process that California Native American tribes who are not recognized by the federal government may follow to file claims for human remains and cultural items held in agencies or museums.

State Regulations Concerning Human Remains

Several provisions of the California PRC govern archaeological finds in terms of human remains, or any other related object of archaeological or historical interest or value. Procedures are detailed under PRC Section 5097.9 through 5097.994 (Native American Historic Resource Protection Act) for actions to be taken whenever Native American remains are discovered. Under these provisions, if a county coroner determines that human remains found during excavation or disturbance of land are Native American, the coroner must contact the California Native American Heritage Commission (NAHC) within 24 hours (Health and Safety Code Section 7050.5(c)), and the NAHC must determine and notify the most likely descendant, who may make recommendations for removal and nondestructive analysis of the remains and for the removal of items associated with Native American burials or cremations within 24 hours (Section 5097.98).

Furthermore, Section 7050.5 of the California Health and Safety Code states that any person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in PRC Section 5097.99. Any person removing any human remains without authority of law or written permission of the person or persons having the right to control the remains under PRC Section 7100 has committed a public offense that is punishable by imprisonment (Health and Safety Code Section 7051).

Assembly Bill 52

Assembly Bill 52, signed by Governor Brown on September 25, 2014 and effective starting July 1, 2015, mandates that "tribal cultural resources" must be considered under CEQA. The law also provides for additional Native American consultation requirements. A "tribal cultural resource" is a site, feature, place, cultural landscape, sacred place, or object that is considered of cultural value to a California Native American Tribe. PRC Section 20174. A tribal cultural resource may be:

- listed on the CRHR or a local historic register;
- eligible for the CRHR or a local historic register; or
- considered significant if the lead agency determines significance based on the CRHR criteria.

Determining whether a project would have a significant impact on a tribal cultural resource requires consultation with the relevant California Native American Tribe(s), if applicable pursuant to PRC Section 21080.3.1.

Paleontological Resources

Paleontological resources are limited, nonrenewable resources of scientific, cultural, and educational value that are protected under CEQA. CEQA Appendix G, Part V inquires whether a project will destroy a unique paleontological resource. PRC Section 5097.5 protects paleontological resources located on public lands from the knowing and willful excavation, removal, destruction, injury, or defacement without a permit from the agency with jurisdiction over the land. Section 5097 further outlines the preservation and protection of

these resources. In addition, local ordinance also govern the preservation and protection of paleontological resources (see Section 4.5.2.3, *Local*).

4.5.2.3 Local

As provided in CPUC General Order 131-D, the CPUC has exclusive jurisdiction over the siting, design, and construction of the Proposed Project, preempting local discretionary authority over the location and construction of electrical utility facilities. Therefore, the Proposed Project is not subject to local discretionary land use regulations. Nonetheless, as part of the environmental review process, SDG&E considers relevant local land use plans and policies that pertain to cultural and paleontological resources.

County of San Diego General Plan-Conservation and Open Space Element

Goal COS-9, Educational and Scientific Uses: Paleontological resources and unique geologic features conserved for educational and/or scientific purposes.

Policy COS-9.1 (Preservation) requires the salvage and preservation of unique paleontological resources when exposed to the elements during excavation or grading activities or other development processes (County of San Diego 2011a).

City of Oceanside General Plan – Land Use Element

Policy 3.2 C states that "cultural resources that must remain in-situ to preserve their significance shall be preserved intact and interpretive signage and protection shall be provided by project developers."

Policy 3.2 D states that "an archaeological survey report shall be prepared by a Society of Professional Archaeologists certified archaeologist for a project proposed for grading or development if any of the following conditions are met:

- the site is completely or largely in a natural state;
- there are recorded sites on nearby properties;
- the project site is near or overlooks a water body (creek, stream, lake, freshwater lagoon);
- the project site includes large boulders and/or oak trees; or
- the project site is located within a half-mile of Mission San Luis Rey.

Policy 3.23 A states that "paleontological survey reports shall be prepared by a qualified paleontologist approved by the City for all proposed projects that are located in the area designated as having a high potential for fossils on the City's natural resource management database system" (City of Oceanside 2002).

4.5.3 Existing Conditions

The following paragraphs describe the sources and procedures used to compile information on cultural and paleontological resources present in the Proposed Project's Area of Potential Effect (APE). This includes literature and data review and intensive pedestrian surveys. The following information is adapted from the Archaeological Constraints Survey (Hector et al. 2015) and the Archaeological Resources Reports (Hector et al. 2016) and the Paleontological Records Search (Anderson 2016). The information provided in these documents was then used to evaluate the Proposed Project against the CEQA checklist to determine impacts. These reports will be submitted to CPUC under confidential cover.

4.5.3.1 Project APE

The proposed Ocean Ranch Substation site is mostly disturbed land in a vacant lot within a developed industrial area. Construction will primarily take place within existing SDG&E fee-owned property, franchise or existing easements. The Proposed Project's APE consists of the proposed Ocean Ranch Substation site, underground power line loop-in, and staging yards.

Literature Review

The Applicant conducted a constraints review for the Project, which consisted of literature and records search to identify previously recorded archaeological resources and previously conducted inventories near the APE (Hector et al. 2015). The constraints review utilized data provided under contract with the South Coastal Information Center, which was included in the Archaeological Constraints Survey report (Hector et al. 2015). The Archaeological Constraints Survey consisted of archival research of the California Historical Resources Information System GIS Inventory data for known and recorded sites and surveyed areas within the vicinity of the Proposed Project's APE.

There are no known cultural resources within the proposed work areas. Five previously recorded cultural resources are within 1,700 feet of the Proposed Project are outside the APE and will not be impacted. These five resources are precontact archaeological artifact scatters, two of which are also small camps and/or habitation sites (CA-SDI-1280, CA-SDI-6136, CA-SDI-8090, CA-SDI-10445, and CA-SDI-10446).

The nearest known listed historic site is the Mission San Luis Rey de Francia. It is a National Historical Landmark, is listed on the NRHP, and is a California Historical Landmark. It is located 2 miles northwest of the Proposed Project's APE.

Field Surveys

An intensive pedestrian survey of the APE was conducted in conformance with federal (BLM) standards, or better (Hector et al. 2016). The purpose of the survey was to identify and evaluate any cultural constraints present with the APE. The pedestrian survey was conducted at closely spaced transects of no more than 15-meter intervals of the Ocean Ranch substation site. The survey included the Ocean Ranch substation site, monopole location, staging yards, and an additional 50' buffer around these locations. All access roads were covered by a field survey, with an additional 20' buffer outside the road edge. The survey included the inspection of animal burrows and road clearings, and cuts and slopes to examine any exposed stratigraphy. All mapping was recorded using a Trimble GPS unit.

No previously recorded or newly identified archaeological or historic resources were observed in or adjacent to the APE. One cultural resource, SDI-6136, was identified near the substation; however, it was outside the APE.

Native American Consultation

A Sacred Lands File search for the Project APE was received from the California NAHC on April 22, 2015. The Sacred Lands File search results prepared by the NAHC failed to indicate the presence of Native American cultural resources within the APE (Hector et al. 2015). Follow-up correspondence was sent on June 19, 2015 to all individuals and groups indicated by the NAHC as having affiliation with the APE. These tribes include: Pauma Band of Luiseño Indians, Soboba Band of Luiseño Indians, Rincon Band of Luiseño Indians, Temecula Band of Luiseño Indians (Pechanga), San Luis Rey Band of Mission Indians, Pala Band of Mission Indians, and La Jolla Band of Mission Indians.

Follow-up correspondence consisted of a letter describing the Project and a map indicating the APE. Recipients were requested to reply with any information they are able to share about Native American resources that might be adversely affected by the Ocean Ranch project. To date, four responses have been received including the Pala Band of Luiseño Indians (response on June 25, 2015), Soboba Band of Luiseño Indians (response on June 29, 2015), Rincon Band of Luiseño Indians (response on July 6, 2015), and Temecula Band of Luiseño Indians (Pechanga) (response on July 27, 2015). All four responses noted that no resources were identified; however, the project is located within tribal ancestral lands. The four tribes requested that a qualified Native American Monitor be present for any future ground disturbing work.

4.5.3.2 Natural Setting

The Proposed Project is located in the San Luis Rey River Coastal Subbasin, which is characterized by a Mediterranean semiarid climate (Hector et al. 2015). Vegetation in the region consists of coastal sage scrub. Typical plants include buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), white sage (*Salvia apiana*), sugar bush (*Rhus ovata*), squaw bush (*Rhus trilobata*), laurel sumac (*Rhus laurinia*), cattail (*Typha* sp.), spike-rush (*Eleocharis* sp.), bulrush (*Scripus* sp.), pickleweed (*Salicornia virginica*), salt grass (*Distichlis spicata*), willow (*Salix* sp.), cottonwood (*Populus fremontii*), and sycamore (*Platanus racemose*) (Hector et al. 2015).

The area is also home to a variety of mammals, birds, and reptiles including coyote (*Canis lantrans*), desert wood rat (*Neotoma lepida*), California ground squirrel (*Spermophilus beecheyi*), desert cottontail (*Sylvilagus audubonii*), and many bats and mice (Hector et al. 2015).

Soils that underlie the Proposed Project area consist primarily of loose to medium dense fill, medium dense to very dense, or hard to very hard colluvium, and at depth very dense formational soils, which are primarily of the Eocene-age Santiago Formation (see Section 4.5.6, *Project Impacts*). The Proposed Project area consists of documented fill overlying alluvial and colluvial deposits above native moderate- to very highly cemented Santiago Formation materials. There are also numerous outcrops of nonmarine Pleistocene deposits exposed near the Proposed Project area. The Santiago Formation is highly sensitive for the presence of paleontological resources. Sixty six recorded fossil collecting localities have been reported within a 0.5 mile radius of the Proposed Project area. As the project area overlies the Santiago Formation, ground-disturbing work occurring should be considered to have a high potential for encountering buried paleontological resources (Anderson 2016).

A more detailed discussion of the natural setting is available in Section 4.4, *Biological Resources*.

4.5.3.3 Cultural Setting

Human occupation began in the Proposed Project area approximately 11,500 years ago; however, people may have lived in the region as far back as 15,000 years ago (Hector et al. 2015). The Paleoindian occupation of the region is called the San Dieguito culture, which is characterized by large stone tools, eccentric stone artifacts, and groundstone. Paleoindians lived in highly mobile small groups and primarily hunted large game animals and processed some plants and seeds.

The Archaic Period dates from 8,500 to 1,500 years ago. Archaic people lived in mobile, small groups and primarily relied on marine resources including mollusks, fish, and plants, as well as fewer terrestrial game and plant species. Coastal Archaic sites are often referred to as the La Jolla Complex and are characterized by shell middens, stone tools, cobble tools, groundstone metates and manos, and discoidal stone artifacts (Hector et al. 2015). Inland Archaic sites are often referred to as the Pauma Complex, which are similar to the coastal sites except they lack evidence of shellfish consumption and exhibit a reduced reliance on animal

bone. The practice of transhumance where people follow the seasonal availability of food likely began during the Archaic Period.

The Late Prehistoric Period dates from 1,500 to 200 years ago. Changes in the artifact assemblages from these types of sites include the use of bow and arrow technology and ceramics, and an increase in the consumption of plant foods (e.g., acorns) (Hector et al. 2015). People tended to live in large villages that housed multiple activities. Different groups occupied the region during the Late Prehistoric and included the Yuman-speaking Kumeyaay, who developed into the Digueño people during the ethnohistoric period, and the Shoshone, including the Luiseño (Payomkowishum) and Juaneño (Acjachemen) (Hector et al. 2015).

The Luiseño occupied the Proposed Project area during the ethnohistoric period, which ended in the twenty-first century. They may have displaced the Kumeyaay who lived to the south. Contact with Europeans began with the voyage of Juan Rodríguez Cabrillo in 1542 (Hector et al. 2015). Missions were established in the region in the late 1700s, including the Mission of San Juan Capistrano in 1776 and the Mission San Luis Rey de Francia in 1798. The missions converted the Native Americans to Christianity; used the Native Americans as laborers; and introduced European diseases, agriculture, and animal husbandry to the Native Americans (Hector et al. 2015).

Expansion of private land grants to inland areas increased during the 1820s after Mexico won independence from Spain, which also initiated a departure from the mission system (Hector et al. 2015). California was occupied by the United States during the Mexican-American War of 1846-1848. After the Treaty of Guadalupe-Hidalgo was signed in 1848, California was annexed to the United States and the U.S. government had to recognize legitimate land claims including those of Mexicans. Waves of settlers began after the Gold Rush in 1849, which created tension between the settlers who would squat on Mexican-owned land (Hector et al. 2015).

The majority of land in the region was used for ranching, but by the 1860s, many of the original landowners had lost their land holdings through the Board of Land Commissioners, which was created by the California Land Claim Act of 1851 (Hector et al. 2015). Settlers continued to flock to the area, facilitated by the Homestead Act of 1862, the Timber Culture Act of 1873, and the transcontinental railroad that reached California by 1885. The population of San Diego increased from 5,000 in 1885 to 40,000 in 1889 (Hector et al. 2015). The growth in the 1890s was primarily focused in the coastal areas and adjacent inland valleys (Hector et al. 2015).

4.5.3.4 Paleontological Setting

A paleontological records search was conducted at the Deparment of Paleontology by the San Diego Natural History Museum for the project (Anderson 2016). A total of 66 fossil collecting locations have been recorded within a 0.5 mile radius of the Proposed Project area. Many of these fossils are considered significant as they represent multiple past environments. The majority of localities include fluvial, estuarine, and marine deposits of the Santiago Formation (Anderson 2016). These localities produced a wide variety of fossils including: fossilized stem and leaf impressions of terrestrial plants (e.g., freshwater algae and reeds), shell remains and impressions of marine invertebrates (e.g., segmented worms, barnacles, shrimp, crabs, ostracods, bryozoans, brachiopods, sea urchins, snails, clams, mussels, and oysters), mineralized remains of marine vertebrates (e.g., fish, rays, and sharks), and fossilized remains of terrestrial vertebrates (e.g., amphibians, birds, oreodonts, camels, pigs, bats, arboreal gliding mammals, primitive carnivores, creodonts, insectivores, rabbits, marsupials, brontotheres, amynodonts, horses, tapirs, rhinos, primates, rodents, tortoises, softshell turtles, crocodilians, snakes, and lizards) (Anderson 2016). Terrestrial

vertebrates (e.g., bison, horse, rodents, and reptiles) have also been recovered from a late Pleistocene-age stream terrace deposit and a late Oligiocene-age Sespe/Vaqueros Formation (Anderson 2016).

4.5.4 Standard Operating Procedures

- **Cultural Resources.** SDG&E's practices follow applicable Federal, State, and local laws to protect and avoid cultural resources, including: Archaeological Resources Protection Act of 1979, as amended, National Historic Preservation Act of 1966, as amended, California Penal Code section 622 ½, PRC sections 5097.1 through 5097.6, PRC section 5097.98, and CEQA. An independent firm conducted pre-construction surveys, prepared an inventory of cultural resources within the Proposed Project's APE, and provided recommendations for avoidance and minimization of impacts to cultural resources. Known cultural resources will be spanned or otherwise avoided through Project design and through routing during construction activities to the extent feasible. The Proposed Project has been designed to minimize ground disturbance and decrease impacts to unknown buried deposits.
- **Safety and Worker Environmental Awareness Program.** SDG&E will prepare a project-specific environmental and safety awareness program for project personnel. The training may include relevant topics such as:
  - General safety procedures
  - General environmental procedures
  - Fire safety
  - Biological resources
  - Cultural resources
  - Paleontological resources
  - Hazardous materials protocols and best management practices
  - Stormwater Pollution Prevention Plan

There are no standard operating procedures related to paleontological resources that are applicable to the Proposed Project beyond the environmental and safety awareness program.

4.5.5 Applicant Proposed Measures

The Proposed Project will have no impact on known cultural resources and there are no APMs proposed related to cultural resources. The following APM will be implemented as part of the Proposed Project to reduce any potential impacts to paleontological resources to a less than significant level.

- **APM CUL-1:** *Paleontological Resource Monitoring Program.* A paleontological resource monitoring program will be implemented during construction. The program will include construction monitoring, fossil salvage, laboratory preparation of salvaged specimens, curation of prepared specimens, and storage of curated specimens. A paleontologist will be onsite to monitor all ground disturbing activities (e.g., grading and excavation) within native sediments, until such time as the monitor determines monitoring activities are not necessary. The monitor will inspect all fresh cut slopes and trenches, spoils piles, and graded pad surfaces for unearthed fossil remains. If any paleontological find is identified during monitoring, then the monitor will communicate with the general environmental monitor and the construction manager. Salvage may include techniques

such as "pluck-and-run," hand quarrying, and bulk matrix sampling and screen-washing. The monitor will also collect stratigraphic data to define the nature of fossiliferous sedimentary rock units with the Project Area, their geographic distributions, and their lithologic characteristics. Paleontological monitoring would not be required in locations where artificial imported fill materials occur for the full depth of the proposed ground disturbance.

4.5.6 Project Impacts

The Proposed Project includes construction of a new 69/12 kV substation and loop-in of an existing 69 kV power line to connect to the proposed Ocean Ranch Substation (refer to Chapter 3.0, *Project Description)*.

Once the proposed Ocean Ranch Substation is constructed and placed in service, it will not require personnel stationed onsite except during periodic and routine maintenance activities that will ensure reliable operation of all equipment within the substation. The underground components will be inspected consistent with SDG&E's existing underground inspection and maintenance program.

The cultural resources surveys conducted within the Proposed Project's APE did not locate any cultural resources (see Section 4.5.6.1, *Methodology*). The records search for paleontological resources within and adjacent to the APE found 66 fossil collecting locations within a 0.5 mile radius of the Proposed Project area (see Section 4.5.3.3, *Paleontological Setting*). As such, no impacts are anticipated to cultural resources. Additionally, any impacts to paleontological resources would be less than significant through the use of APM CUL-1.

The temporary impact areas may vary because the positioning of construction vehicles, equipment, and materials cannot be accurately anticipated prior to construction, as locations are dependent upon the contractor safely performing the work. The proposed ground disturbance during construction may impact unknown cultural resources. In addition, the proposed ground disturbance has the potential to impact paleontological resources should it extend deep enough to encounter previously undisturbed deposits within the Santiago Formation. The Proposed Project has been designed to minimize ground disturbance and decrease impacts to unknown buried deposits.

4.5.6.1 Methodology

Potential Project impacts to all cultural and paleontological resources that are known to occur or have a potential to occur within the APE were considered. Literature searches and intensive pedestrian surveys were contuced in the APE to determine the presence or absence of cultural resources within the APE.

Impacts to all cultural and paleontological resources that are currently known to occur based on the listerature searchs and surveys conducted during 2015 were evaluated.

4.5.6.2 Significance Criteria

The significance of project-related impacts on cultural and paleontological resources were evaluated for each of the criteria listed in the checklist above, as discussed below.

a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5? *No Impact*

No known cultural resources are located within the proposed Ocean Ranch Substation APE. Therefore, the significance of any known historical resources will not be adversely changed and no historical resources will be impacted.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5? *No Impact*

There are no known cultural resources located within the proposed Ocean Ranch Substation APE. Therefore, the significance of any known archaeological resources will not be adversely changed and no archaeological resources will be impacted. In addition, the Applicant will implement an environmental and safety awareness program for project personnel, which will include the procedures to be followed in the event of an unanticipated discovery of cultural resources.

c) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? *Less than Significant*

There are paleontological resources present within the APE and surrounding areas. Therefore, the potential to directly or indirectly destroy unique paleontological resources is moderate to high. The Applicant will implement an environmental and safety awareness program for project personnel, which program will include education about paleontological resource procedures, and the Applicant will implement a paleontological resource monitoring program during construction. The monitor will ensure that previously unidentified paleontological resources are preserved by methods outlined in the monitoring programs (such as "pluck-and-run", hand quarrying, and bulk matrix sampling and screen-washing) if encountered during construction. Therefore, the impacts to unique paleontological resources will be less than significant with the incorporation of the mitigation measures.

d) Would the project disturb any human remains, including those interred outside of formal cemeteries? *No Impact*

There are no known human remains located within the proposed Ocean Ranch Substation APE. Therefore, there will be no impacts to any human remains, including those interred outside of formal cemeteries. In addition, the Applicant will implement an environmental and safety awareness program for project personnel, which will include the procedures to be followed in the event of an unanticipated discovery of human remains.

e) Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074? *No Impact*

Based on the NAHC sacred lands file search and subsequent letters that were sent out to the tribes, there are no known tribal cultural resources located within the proposed Ocean Ranch Substation APE. Therefore, the significance of any known tribal cultural resources will not be adversely changed and no tribal cultural resources will be impacted. In addition, the Applicant will implement an environmental and safety awareness program for project personnel, which will include the procedures to be followed in the event of an unanticipated discovery of tribal cultural resources. The CPUC, as the lead agency, will initiate formal tribal consultation following Assembly Bill 52 guidelines, to formally identify any tribal cultural resources that have not been previously identified.

4.5.7 References

Anderson, Nikki. 2016. Letter Report re: Paleontological Records Search – Ocean Ranch Substation Project (eTS #28537). San Diego Natural History Museum, San Diego.

City of Oceanside. 2002. General Plan, Land Use Element.

Hector, Susan, Jennifer Roland, and Josh Tansey. 2015. Archaeological Constraints Survey for the SDG&E Ocean Ranch Substation Project, Oceanside/ North Vista, San Diego County, California (SDG&E eTS #28537). NWB Environmental Services, LLC, San Diego.

Hector, Susan, Jennifer Roland, and Josh Tansey. 2016. Final Archaeological Resources Report for the SDG&E Ocean Ranch Substation Project, Oceanside/ North Vista, San Diego County, California (SDG&E eTS #28537). NWB Environmental Services, LLC, San Diego. March 31, 2016.

TABLE OF CONTENTS

4.6 GEOLOGY AND SOILS 4.6-1
4.6.1 Introduction 4.6-1
4.6.2 Regulatory Setting 4.6-2
4.6.3 Existing Conditions 4.6-5
4.6.4 Standard Operating Procedures 4.6-12
4.6.5 Applicant Proposed Measures 4.6-12
4.6.6 Project Impacts 4.6-12
4.6.7 References 4.6-16

LIST OF FIGURES

4.6-1 Geology and Faults Near the Proposed Project 4.6-9

LIST OF TABLES

4.6-1 Key Active Faults within the Region 4.6-6

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4.6 GEOLOGY AND SOILS

Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i.	Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	☐	☐	☒	☐
ii.	Strong seismic ground shaking?	☐	☐	☒	☐
iii.	Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv.	Landslides?	☐	☐	☒	☐
b.	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c.	Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d.	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

4.6.1 Introduction

This section of the PEA describes the existing conditions and impacts related to geology, soils, and seismic potential in the vicinity of the Proposed Project. The analysis concludes that less than significant impacts will occur with regard to geology, soils, and seismic potential. The Proposed Project's effects on geology, soils, and seismicity were evaluated using the significance criteria set forth in Appendix G of the CEQA Guidelines. The conclusions are summarized in the checklist above, and discussed in more detail in Section 4.6.6.

4.6.2 Regulatory Setting

This section includes a description of the geologic setting and regulatory framework.

4.6.2.1 Federal

The International Building Code (IBC) is the national model building code. The 2015 IBC is the most recent edition. The 2012 IBC was the most recent version of the IBC incorporated into the prevailing 2013 California Building Standards Code (more commonly known as the California Building Code [CBC]) and it currently applies, as it may be amended, to all structures being constructed in California (California Building Standards Commission [BSC] 2015a). The national model codes are incorporated by reference into the state building codes, such as the CBC discussed below.

4.6.2.2 State

California Building Code

The CBC is promulgated under the California Code of Regulations, Title 24, Parts 1 through 12 and is administered by the California BSC. The national model code standards adopted into Title 24 apply to all occupancies in California except for modifications adopted by State agencies and local governing bodies. The CBC is updated every 3 years, and 2013 was the most recent update in the 3-year cycle (California BSC 2015a). The BSC published an Intervening Code Adoption Cycle Supplement to the 2013 CBC in January 2015, which became effective July 1, 2015 (California BSC 2015b).

Alquist-Priolo Act

The Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) was adopted by the State of California in 1972 in order to address the hazards of surface fault rupture along known active faults (PRC, Section 2621 et. seq.). The purpose of the Alquist-Priolo Act is to reduce the threat to life and property, specifically from surface fault rupture, by preventing the construction of buildings used for human occupancy on the surface trace of active faults. Under the Alquist-Priolo Act, the State has defined an "active" fault as having had surface displacement during the past 11,000 years (Holocene time). This law directs the State Geologist to establish Earthquake Fault Zones (known as "Special Studies Zones" prior to January 1, 1994) to regulate development within designated hazard areas. City and county jurisdictions must require a geologic investigation to demonstrate that a proposed development project, which includes structures for human occupancy, is adequately set back (usually at least 50 feet) from an active fault prior to permitting. In accordance with the Alquist-Priolo Act, the State has delineated "Earthquake Fault Zones" along identified active faults throughout the state (California Department of Conservation 2013).

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act was passed in 1990 and directs the State Department of Conservation to identify and map areas subject to earthquake hazards, such as liquefaction, earthquake-induced landslides, and amplified ground shaking (PRC 2690–2699.6; for maps refer to California Department of Conservation 2007). Passed by the State legislature after the 1989 Loma Prieta Earthquake, the Seismic Hazards Mapping Act is aimed at reducing the threat to public safety and minimizing potential loss of life and property in the event of a damaging earthquake event. Seismic Hazard Zone Maps are a product of the Seismic Hazards Mapping Program and are produced to identify Zones of Required Investigation; most developments designed for human occupancy within these zones must conduct site-specific geotechnical investigations to identify the hazard and to develop appropriate mitigation measures prior to permitting by local jurisdictions.

4.6.2.3 Local

As provided in CPUC General Order 131-D, the CPUC has exclusive jurisdiction over the siting, design, and construction of the Proposed Project, preempting local discretionary authority over the location and construction of electrical utility facilities. Therefore, the Proposed Project is not subject to local discretionary land use regulations. Nonetheless, as part of the environmental review process, SDG&E considers relevant local land use plans and policies that pertain to geology, soils, and seismic potential.

County of San Diego General Plan-Conservation and Open Space Element

Goal COS-9, Educational and Scientific Uses: Paleontological resources and unique geologic features conserved for educational and/or scientific purposes (County of San Diego 2011a).

Policy COS-9.2: Impacts of Development. Require development to minimize impacts to unique geological features from human related destruction, damage, or loss.

County of San Diego General Plan-Safety Element

Goal S-7, Reduced Seismic Hazards: Minimize personal injury and property damage resulting from seismic hazards (County of San Diego 2011b).

Policy S-7.1: Development Location. Locate development in areas where the risk to people or resources is minimized. In accordance with the California Department of Conservation Special Publication 42, require development be located a minimum of 50 feet from active or potentially active faults, unless an alternative setback distance is approved based on geologic analysis and feasible engineering design measures adequate to demonstrate that the fault rupture hazard would be avoided.

Policy S-7.2: Engineering Measures to Reduce Risk. Require all development to include engineering measures to reduce risk in accordance with the CBC, and other seismic and geologic hazard safety standards, including design and construction standards that regulate land use in areas known to have or potentially have significant seismic and/or other geologic hazards.

Policy S-7.3: Land Use Location. Prohibit high occupancy uses, essential public facilities, and uses that permit significant amounts of hazardous materials within Alquist-Priolo and County special studies zones.

Policy S-7.4: Unreinforced Masonry Structures. Require the retrofitting of unreinforced masonry structures to minimize damage in the event of seismic or geologic hazards.

Policy S-7.5: Retrofitting of Essential Facilities. Seismic retrofit essential facilities to minimize damage in the event of seismic or geologic hazards.

Goal S-8, Reduced Landslide, Mudslide, and Rock Fall Hazards: Minimized personal injury and property damage caused by mudslides, landslides, or rock falls.

Policy S-8.1: Landslide Risks. Direct development away from areas with high landslide, mudslide, or rock fall potential when engineering solutions have been determined by the County to be infeasible.

Policy S-8.2: Risk of Slope Instability. Prohibit development from causing or contributing to slope instability.

City of Oceanside General Plan-Land Use Element

Policy 1.24-I: states that the structural quality of the soil and geologic conditions shall be incorporated into the site design and determine the method and type of construction. Slope stability shall be ensured during and after construction (City of Oceanside 2002a).

City of Oceanside General Plan-Environmental Resource Management Element

The City has basic objectives for natural resources which include soils, erosion, and drainage. Objective 1 is to "consider appropriate engineering and land use planning techniques to mitigate rapid weathering of the rocks, soil erosion, and the siltation of the lagoons." The City will continue to enforce the Grading Ordinance (Ord. No. 73-46) to prevent erosion of the soils and hillsides (City of Oceanside 2002b). The City provides the following recommendations to reduce the effects of erosion and siltation:

- Keep grading to a minimum, leave vegetation and soils undisturbed wherever possible.
- Plant bare slopes and cleared areas with appropriate vegetation.
- Chemically treat soils to increase the stability and resistance to erosion.
- Install retaining structures where appropriate.
- Construct drainage systems to direct and control rate of surface runoff.
- Construct silt traps and settling basins in drainage systems.
- Construct weirs and check dams on streets.

City of Oceanside General Plan-Public Safety Element

The City's Public Safety Element of the General Plan includes broad statements of the City's intent to mitigate or eliminate identified risks (City of Oceanside 2002c). The actual programs to be developed are in the form of recommendations. In general terms, one goal expresses Oceanside's approach to public safety:

- Take the action necessary to ensure an acceptable level of public safety for prevention and reduction of loss of life and personal property of the citizens of Oceanside.

Objectives

- Seismic and Geologic Hazard
    - Consider seismic geologic hazards when making land use decisions particularly in regard to critical structures.
    - Minimize the risk of occupancy of all structures from seismic and geologic occurrences.
- Flooding Hazards
    - Consider the potential for flooding when making land use decisions.

Abatement of Seismic and Geologic Hazards

The City presently requires soil borings to be taken on all proposed building sites prior to the issuance of building permits. These borings are generally routine in nature and are used to identify water table levels and presence of expansive soils, uncompacted fill, etc. The City also identifies several other geotechnical investigations that should be accomplished if a site has been identified as being particularly susceptible to certain geologic problems.

4.6.3 Existing Conditions

4.6.3.1 Geological Setting

The Proposed Project area is situated in the Oceanside area of the Peninsular Ranges geomorphic province of Southern California (refer to Chapter 3.0, *Project Description,* Figure 3-2, Proposed Project Overview Map). This province is characterized as an assemblage of north to northwest trending, high-relief ranges stretching south from the Santa Monica Mountains in Los Angeles, through San Diego County and south into Baja, California. Some of the notable ranges of southern California include the Santa Ana Mountains, the Laguna Mountains and the Cuyamaca Mountains. The development of this mountain system is closely tied to the transform tectonism (folding, deformations, and displacements) of the San Andreas Fault System.

San Diego County encompasses three geomorphic sub-zones set in a series of north-to-northwest trending belts, roughly parallel to the coastline. Most of the northern portion of San Diego County, including the Proposed Project site is situated within the eastern side coastal subzone near the transition boundary with central mountainous zone. The coastal subzone is characterized by Quaternary to Mesozoic age sedimentary rock material. The sedimentary deposits are configured in a wedge shape mass, which thickens to the west across the coastal plain from the edge of the mountainous terrain toward the coastline. The sediments are comprised of a variety of claystones, siltstones, sandstones, and conglomerates. Older granitic and metamorphic bedrock occupies the mountainous terrain toward the east and consists of numerous plutonic igneous masses and smaller patches of metamorphic rock into, which the granitic rock intruded (Kleinfelder 2015).

The landscape was eroded during the Pleistocene epoch by a system of generally west-flowing large scale drainage systems and associated tributary drainages resulting in the formation of the canyons/valleys that dominate the regional terrain of San Diego County. These processes also resulted in the accumulation of alluvial soils along drainage pathways and as wedge shape masses along the bottom of eroding hillslopes specifically described as colluvial deposits (Kleinfelder 2015).

4.6.3.2 Faults, Seismicity, and Related Hazards

Faults

Within southern California, the San Andreas Fault is a complex system of numerous faults known as the San Andreas Fault System that span a 150-mile wide zone from the main San Andreas Fault in the Imperial Valley westward to a location offshore of San Diego. Compared to other parts of southern California, San Diego County has a relatively quieter seismic history. The historical pattern of seismic activity in San Diego has generally been characterized as a broad scattering of small- to moderate-magnitude earthquakes, whereas the surrounding regions of Southern California, such as the Imperial Valley, Los Angeles County, northern Baja California, and the nearby offshore regions, are characterized by a relatively higher rate of seismicity. The tectonic setting of Southern California is dominated by dextral (right-lateral) strike-slip faults with a general northwest-by-southeast trend. The major faults east of the San Diego region (from east to west) include the San Andreas Fault, the San Jacinto fault, and the Elsinore fault. Major faults west of San Diego include the Palos Verdes-Coronado Bank fault, the San Diego Trough fault, and the San Clemente fault (Table 4.6-1). These fault zones, as well as other faults in the region have the potential for generating earthquakes and associated strong ground motions at the proposed site (USGS 2015).

Table 4.6-1. Key Active Faults within the Region

Name	Type of Fault	Slip Rate (mm/yr)
San Clemente Fault Zone (S. Clemente Fault)	Dextral	1.5-2
San Diego Trough Fault Zone	Dextral	1.5-3
Coronado Bank Fault Zone (C. Bank - Palos Verdes Section)	Dextral	1-5
Newport-Inglewood-Rose Canyon Fault Zone (Oceanside Section)	Dextral	1-5
Elsinore Fault Zone (Temecula Section)	Dextral	1-5
San Jacinto Fault Zone (various sections)	Dextral-Reverse	>5
San Andreas Fault Zone (various sections)	Dextral	>5

Note: mm/yr = millimeters per year.
Source: California Geologic Survey 2010; Southern California Earthquake Data Center 2015; USGS 2015.

The most dominant zone of faulting within the San Diego region is associated with the Rose Canyon Fault Zone. The Proposed Project site is located between the Rose Canyon Fault Zone, located approximately 9 miles (14 kilometers [km]) to the southwest, and the Elsinore Fault Zone, located approximately 19 miles (30.5 km) to the northeast. Although activity on any of the known and unknown faults within the San Andreas Fault System can affect the seismicity of the San Diego region, activity within both the Rose Canyon Fault Zone and the Elsinore Fault Zone dominates most aspects of the seismic hazard at the Proposed Project site (Kleinfelder 2015).

Fault Rupture

The Alquist-Priolo Earthquake Fault Zoning Act of 1972, formerly known as the Special Studies Zoning Act, regulates construction and development of buildings intended for human occupancy to avoid rupture hazards from surface faults. This act does not specifically regulate overhead power lines or substations, but it does aid in defining areas where fault rupture is most likely to occur. Alquist-Priolo Earthquake Fault Zones are regulatory zones that encompass surface traces of active faults that have a potential for future surface fault rupture. Although portions of San Diego County are within a mapped Alquist-Priolo fault zone, the City of Oceanside and the Proposed Project site are not. The nearest mapped active Alquist-Priolo fault zone lays within the Pala quadrangle, approximately 19 miles (30.5 km) northeast of the Proposed Project site.

Review of readily available geologic and fault maps does not show any active or potentially active fault features passing through or nearby the Proposed Project area. An active fault is one which has undergone displacement within the last approximately 11,000 years. A potentially active fault (aka: Pre-Holocene fault) is one in which movement has occurred at sometime between 1.6 million years and 11,000 years before present. As previously noted, the closest active fault to the site is the Rose Canyon Fault, which is located approximately 9 miles (14 km) offshore to the southwest. The closest potentially active fault is located approximately 0.5 mile (0.8 km) to the southeast (Kennedy and Tan 2005). This is a small discontinuous fault that does not trend toward the Proposed Project site. Based on these relationships, the hazard with respect to fault rupture is considered low (Kleinfelder 2015).

Ground Motion

Ground shaking is responsible for the vast majority of damage during a seismic event. Multiple variable factors control how ground motion interacts with structures, making the impact hazard of ground shaking difficult to predict. Seismic waves propagating through the earth's crust can vibrate in any direction and at different frequencies depending on the rupture mechanism and the material through which the waves are

propagating. Similarly, the intensity of shaking during an earthquake is dependent on the distance from the epicenter of the earthquake, depth to the hypocenter, the magnitude of the earthquake, and the geologic conditions underlying and surrounding the area.

The Proposed Project site is located in a seismically active region that in general is subject to significant hazards from moderate to large earthquakes. Ground shaking due to nearby and distant earthquakes should be anticipated during the life of the structure. The Geotechnical Report developed for the proposed Ocean Ranch Substation is provided in Appendix F, Geotechnical Study (Kleinfelder 2015). The report details the recommended seismic design parameters for buildings and other structures within the Proposed Project area based upon the site geology and the 2013 CBC (Table 1 of Appendix F).

Liquefaction and Seismic Compression

Liquefaction describes a phenomenon in which saturated, cohesionless soils temporarily lose shear strength (liquefy) due to increased pore water pressures induced by strong, cyclic ground motions during an earthquake. Structures founded on or above potentially liquefiable soils may experience bearing capacity failures due to the temporary loss of foundation support, vertical settlements (both total and differential), lateral spreading, and ground oscillations. The factors known to influence liquefaction potential include soil type, relative density, grain size, confining pressure, depth to groundwater, and the intensity and duration of the seismic ground shaking. Liquefaction is most prevalent in loose, saturated sandy, silty, or gravelly soils. Seismic settlement can occur either as a result of post-liquefaction reconsolidation as porewater pressure dissipates, or in unsaturated, predominantly granular and loose soils that tend to densify during seismic shaking. Loose to medium dense granular material with no fines, or with low plasticity fines, are most susceptible to seismic compression.

According to the Geotechnical Report, the Proposed Project site is underlain by loose to medium dense fill, medium dense to very dense, or hard to very hard, colluvium, and at depth by very dense formational soils. Based on the nature of these deposits, and the absence of shallow groundwater, the potential for liquefaction across the site is low (Kleinfelder 2015). Based on the stratigraphy and soil density (determined during borings performed at the Proposed Project site) the seismic-related settlement of the soil above groundwater is less than 0.5 inch (1.3 centimeter). Therefore, no mitigation measures are recommended in the Geotechnical Report (Kleinfelder 2015).

Landslides and Slope Instability

Strong ground motion can result in rockfall hazards and/or slope instability. The slopes most susceptible to earthquake-induced failure include those with highly weathered and unconsolidated materials on moderately steep slopes, especially in areas of previously existing landslides.

Landslides occur when masses of rock, earth, or debris move down a slope, including rock falls, deep failure of slopes, and shallow debris flows. The actuators of landslides can be both natural events—such as earthquakes, rainfall, and erosion—and human activities. Those induced by man are most commonly related to large grading activities that can potentially cause new slides or reactivate old ones when compacted fill is placed on potentially unstable slopes. Excavation operations can also contribute to landslides when lateral support is removed near the base of unstable hillside areas. Conditions to be considered in regard to slope instability include slope inclination, characteristics of the soil materials, the presence of groundwater, and degree of soil saturation.

Several formations within the San Diego region are particularly prone to landsliding. One of these is the Eocene age Santiago Formation which underlies the site. These formations (including the Santiago) generally have higher clay content and are more prone to mobilize when they become saturated with water.

Other factors, such as steeply dipping bedding that protrudes out of the face of the slope and/or the presence of fracture planes in the slope, will also increase the potential for landsliding.

According to the Geotechnical Report, previous grading at the proposed Ocean Ranch Substation site has resulted in a relatively flat-lying surface topography all around the site, and there were no reported mapped landslides at the proposed Ocean Ranch Substation site in the geologic literature reviewed (Kleinfelder 2015). Notwithstanding the Geotechnical Report, undivided Holocene (modern day to 11,700 years before present) and Pleistocene (11,700 to 2.6 million years before present) epochs, Quaternary landslide formations have been mapped within 0.25 mile (0.4 km) both to the northwest and to the south of the proposed Ocean Ranch Substation site (Figure 4.6-1) (Kennedy and Tan 2005). The existing underground power line crosses through a Quaternary landslide formation near the intersection of Avenida Del Oro and Calle Platino to the south of the proposed Ocean Ranch Substation site. The mapped Quaternary landslide formations have substantial development (including parking lots, roads, and buildings) on the ground surface, strongly suggesting a state of stability over these formations.

The hazard with respect to landsliding is considered low at the proposed Ocean Ranch Substation site because of the relatively flat-lying surface conditions within and around it (Kleinfelder 2015). The underground components of the Proposed Project fall within the flat-lying surfaces proximate to the proposed substation. Additionally, static and seismic slope stability analyses of the existing fill slopes performed for the Geotechnical Report indicated that the calculated factors of safety exceed the industry minimum. Therefore, the potential for significant large-scale slope instability at the proposed Ocean Ranch Substation site is considered low (Kleinfelder 2015).

Differential Settlement

If the soil beneath a structure settles non-uniformly, the structure can be damaged. The reasons for differential settlement are usually traced to differences in the bearing characteristics of the soils. Alternatively, a portion of the soil beneath a structure may lose strength during an earthquake due to liquefaction. If liquefaction occurs non-uniformly, differential compaction will occur.

Settlement (not necessarily differential) of deep fills occurs from the weight of the fill itself. This occurs slowly, even when subsurface and surface drainage is provided, and is a function of a number of variables including depth, soil type, age of fill, degree of initial compaction, and degree of wetting. The Geotechnical Report prepared for the Proposed Project indicates that under the proposed improvements and the allowable soil bearing pressure recommendations discussed in that report, total settlements are expected to be 0.5 inch or less, while differential settlements over a 40-foot span are not expected to exceed 75 percent of the total settlement (Kleinfelder 2015).

Subsidence

Subsidence occurs most often when fluids are withdrawn from the ground, removing partial support for previously saturated soils. More rarely, subsidence occurs due to tectonic downwarping during earthquakes. Neither source of subsidence appears to be present in the Proposed Project area; therefore, no impacts from subsidence are expected (Kleinfelder 2015).

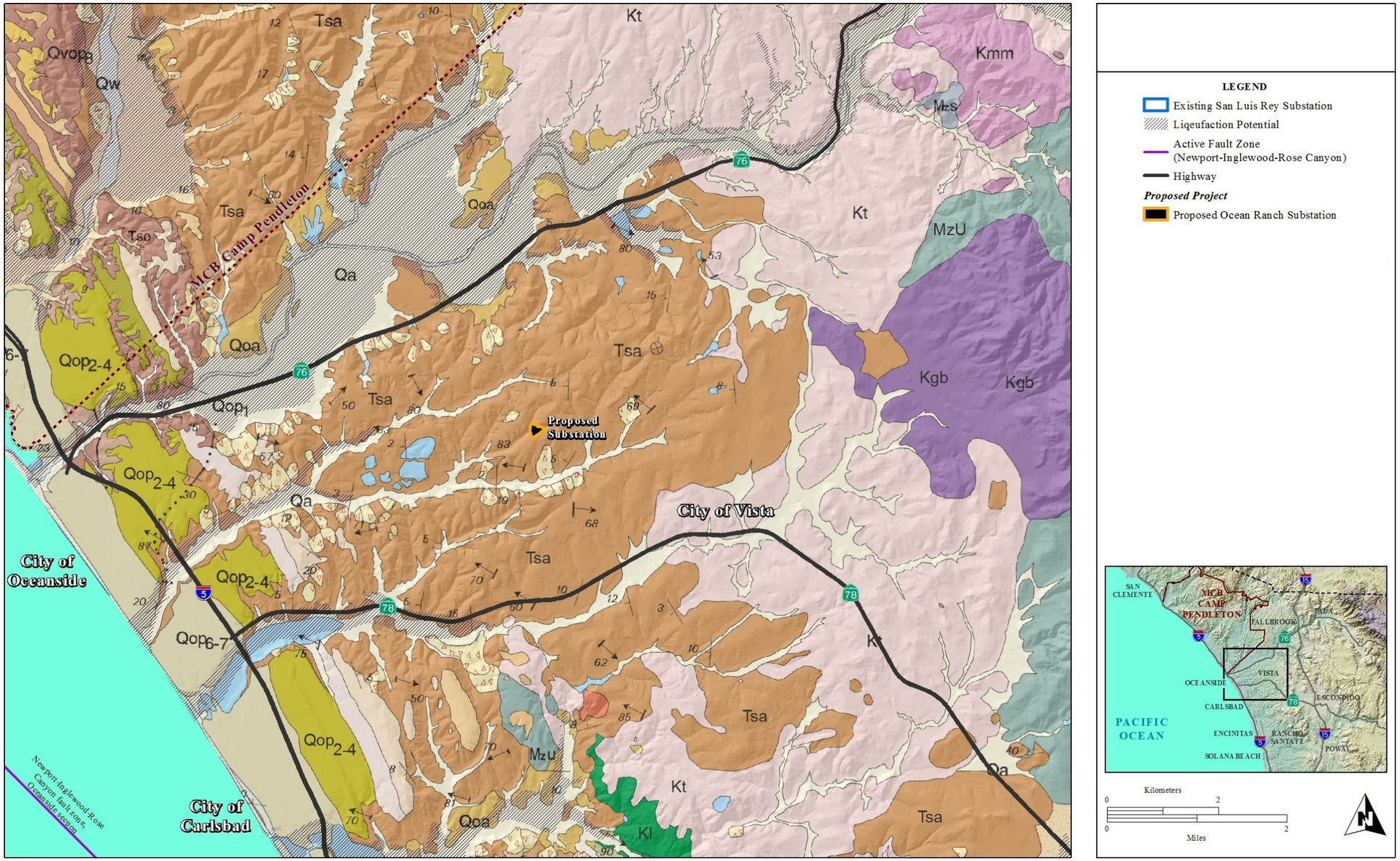


Figure 4.6-1 Geology and Faults Near the Proposed Project

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Soils

The proposed Ocean Ranch Substation site, prior to original grading, consisted of a northeast trending ridgeline with two natural drainage features trending along the slope sidewalls. One drainage feature was located on the northwest side of the substation site trending roughly parallel to Avenida Del Oro. The other drainage trended northeast across the middle of the site from Avenida Del Oro where it merged with the other drainage toward the northeast corner. The drainage flow direction was toward the southwest with elevations of approximately 194 feet above mean sea level at Avenida Del Oro up to approximately 315 feet mean sea level at the northeast corner of the site. The highest elevations on the site were approximately 372 feet mean sea level at the southern corner and 360 feet on the north.

According to the Geotechnical Report prepared for the Proposed Project, there have been at least two prior reported phases of earthwork construction at the site which consisted primarily of infilling of the drainage features with artificial fill. The first earthwork phase consisted of fill placement along the western side of the site for construction of Avenida Del Oro, and along the southeast side of the site during construction of the adjacent subdivision on Avenida De La Plata. That grading resulted in the formation of an enclosed basin in the central portion of the site with a bottom elevation of approximately 304 feet mean sea level. A subdrain was reportedly installed which allowed the basin to drain toward the southwest (Kleinfelder 2015).

Two geologic units underlie the fill. The youngest is an alluvial deposit, which consists primarily of material shed down the side slopes of the drainage feature and depositing toward the bottom. This type of alluvial deposit is generally created by slope runoff is more specifically designated as a young colluvial deposit. The oldest is the underlying bedrock material that is comprised of the aforementioned Santiago Formation. Descriptions of these units, including the artificial fill, are provided in Appendix F (Kleinfelder 2015). Generalized descriptions are provided in the subsequent sections. The geometry of the subsurface units are depicted on the geologic cross-sections on Figures 5 and 6 of Appendix F (Kleinfelder 2015).

Expansive or Collapsible Soils

Expansive soils are characterized by the ability to undergo significant volume change (e.g., shrink and swell) as a result of variation in soil moisture content. Expansive soils typically have high absorption capacity and slow to very slow infiltration rates. Soil moisture content can change due to many factors, including perched groundwater, landscape irrigation, precipitation, roof drainage, utility leakage, and drought. Expanding or contracting of soils may result in undesirable settlement or heave of structures or concrete slabs supported on grade.

According to a pre-project Geotechnical Siting Study, the granular materials of the moderate- to very highly cemented Santiago Formation (beneath the artificial fill) possess a very low- to low-expansion potential (Kleinfelder 2012). The undifferentiated colluvial deposits located above the Santiago Formation and below the artificial fill, consist of potentially expansive sandy clay and clay. However, it is expressed in "hard condition" and of a suitable density, thickness, and depth as to render unnecessary its complete removal (Kleinfelder 2015 and 2012)[1]. The Geotechnical Report for the proposed Ocean Ranch Substation

[1] This material, located between a low elevation 291.5 feet mean sea level to a high of 305 feet mean sea level, in a band of thickness ranging from 3.5 to 11.5 feet, appears to have been removed from the area of the Phase 2 overexcavation work conducted in 2006-2007 (Kleinfelder 2015 and 2012).

determined that the fill soils at the site have a low to medium expansion potential (Kleinfelder 2015). Based on the pre-project Geotechnical Siting Study, Geotechnical Report, various document review, field investigations, and experience with similar materials, the fill soils encountered at the site are in fact expected to have a medium potential for expansive soils. Because the expansive soil potential is medium (not high) and comprises only a fraction of the soils encountered, no special mitigation measures for expansive soils were recommended.

4.6.4 Standard Operating Procedures

As described in Section 3.9, *Standard Operating Procedures*, the Proposed Project will involve various features and procedures related to geology, soils, and seismicity, including:

- **Geotechnical Report.** A geotechnical study has been conducted for the Proposed Project under the direction of a California-licensed Geotechnical Engineer or Certified Engineering Geologist, and recommendations identified in the geotechnical report will be carried out to ensure that all site preparation and earthwork operations are performed in accordance with applicable codes. The Geotechnical Study, SDG&E Ocean Ranch Substation, Pacific Coast Business Park, was completed on June 15, 2015.
- **Restoring Appearance of Temporarily Disturbed Areas.** When Proposed Project construction has been completed, all temporarily disturbed terrain will be restored as near to preconstruction conditions as possible. Re-vegetation would be used, where appropriate (revegetation in certain areas is not possible due to vegetation management requirements related to fire safety) to reestablish a natural appearing landscape and reduce potential visual contrast between disturbed areas and the surrounding landscape.
- **Soil Disturbance.** Ground and soil disturbance will be minimized through the use of existing access routes, to the extent feasible.
- **Soil Stabilization.** Once temporary surface disturbances are complete, areas that would not be subject to additional disturbance will be stabilized to control soil erosion. Disturbed areas must be stabilized per the project SWPPP.

4.6.5 Applicant Proposed Measures

No geology, soils or seismicity APMs are proposed.

4.6.6 Project Impacts

The Proposed Project includes construction of a new 69/12 kV substation and loop-in of an existing 69 kV underground power line to connect to the proposed substation (refer to Chapter 3.0, *Project Description).*

The temporary impact areas may vary because the positioning of construction vehicles, equipment, and materials cannot be accurately anticipated prior to construction, as locations are dependent upon the contractor safely performing the work.

Once the proposed Ocean Ranch Substation is constructed and placed in service, it will not require personnel stationed onsite except during periodic and routine maintenance activities that will ensure reliable operation of all equipment within the substation. The underground components will be inspected consistent with SDG&E's existing underground inspection and maintenance program.

4.6.6.1 Methodology

The existing conditions and potential impacts associated with geologic hazards were primarily obtained from a 2012 Geotechnical Siting Study prepared for the site (Kleinfelder 2012), and a 2015 Geotechnical Study for the site (Kleinfelder 2015; Appendix F). The research and analyses conducted by Kleinfelder included a review of regional information and previous geotechnical investigations, as well as subsurface investigations that included multiple borings and test pits. Materials reviewed include publications and/or data from the USGS, the California Geological Survey, CBC, and other technical reports and resources. Laboratory testing was conducted to aid in classifying the soils and to evaluate physical characteristics of select soils encountered that may affect foundation design and construction procedures. The tests were performed in general conformance with the current American Society for Testing and Materials or California Department of Transportation standards. A description of the laboratory testing program is presented in Appendix B of the Geotechnical Report (Kleinfelder 2015; Appendix F).

4.6.6.2 Significance Criteria

The potential significance of project-related impacts on geology and soil resources were evaluated for each of the criteria listed in the checklist above, as discussed below.

ai) Would the project expose people or structures to substantial adverse effects involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? *Less than Significant*

During earthquakes, the potential for the ground to rupture can occur either at or below the earth's surface, causing large vertical and/or horizontal displacement of the ground along the fault. Any structures built across or in very close proximity to a fault could experience significant damage in the event of surface fault rupture.

The Oceanside segment of the Newport-Inglewood-Rose Canyon fault is the closest mapped active fault site, as it is located approximately 9 miles west and offshore from the Proposed Project area. Review of published geologic maps did not identify the presence of any active or potentially active faults crossing the Proposed Project area. Further, the area is not located within an Alquist-Priolo earthquake fault rupture hazard zone. The potential for fault-related surface rupture in the Proposed Project area is low. Further, the Proposed Project will be unstaffed except during periodic and routine maintenance activities. Therefore, the Proposed Project will have a less than significant impact with regard to effects on people or structures in the event of a rupture of a known fault.

aii) Would the project expose people or structures to substantial adverse effects involving strong seismic shaking? *Less than Significant*

All Proposed Project structures and foundations will be designed to withstand strong seismic accelerations in accordance with SDG&E's standard operating procedures to reduce the potential for damage to occur to the proposed facilities or expose people to risk in the event of a major seismic event. The design and construction of the Proposed Project will conform to the specific mandated structural design and performance requirements to protect against the effects of strong seismic shaking. In addition, the results and recommendations provided in the Proposed Project's specific geotechnical investigations will be considered in the final design to ensure that Proposed Project components are constructed to withstand strong seismic shaking. Further, the Proposed Project will be unstaffed except during periodic and routine maintenance activities. With consideration of the existing soil conditions in the final design, the recommendations from the Geotechnical Report, and adherence to SDG&E's standard operating

procedures, which comply with all appropriate and applicable codes and seismic standards, the potential for damage to people or structures caused by strong seismic shaking is considered less than significant.

aiii) Would the project expose people or structures to substantial adverse effects involving ground failure? *Less than Significant*

The Proposed Project area consists of documented fill overlying alluvial and colluvial deposits above native moderate- to very highly cemented Santiago Formation materials. Liquefaction potential is characterized as very low and soil expansion is conservatively characterized as medium. Further, the Proposed Project will be unstaffed except during periodic and routine maintenance activities. To ensure the Proposed Project is designed to minimize the risk from geological hazards related to ground failure as a result of very low liquefaction potential or medium fill material expansion, SDG&E will consider the results and recommendations provided in the Proposed Project-specific Geotechnical Report. As a result, impacts to people and structures related to ground failure, including liquefaction, are anticipated to be less than significant.

aiv) Would the project expose people or structures to substantial adverse effects involving landslides? *Less than Significant*

Hazards related to slope instability and landslides are generally associated with foothill areas and mountain terrain, as well as steep riverbanks and levees. The Proposed Project area is relatively flat and does not contain substantial landslide hazards. The three nearby Quaternary age landslide formations noted in Section 4.6.3.2, *Faults, Seismicity, and Related Hazards*, Subsection Landslides and Slope Instability, are not expected to present a threat to, or be threatened by, the Proposed Project because of its limited construction timeframe and small footprint with respect to the landslide formations. Moreover, the landslide formations have existing development on the ground surface above them, strongly suggesting a state of stability. In addition, the Proposed Project is unlikely to result in any new landslide hazards. Therefore, impacts to people and structures from landslides are anticipated to be less than significant.

b) Would the project result in substantial soil erosion or the loss of topsoil? *Less than Significant*

The substation will require 9.66 acres for the initial and ultimate substation paved buildout area. The substation site is disturbed but currently undeveloped. The substation site will be graded during construction. Grading will create the potential for some soil erosion by removing the existing graded gravel surface and exposing soil during the construction phase of the Proposed Project. Rain and wind have the ability to detach soil particles and transport them off site. However, SDG&E will implement a SWPPP and adhere to its Water Quality Construction BMP Manual, which will minimize soil erosion and reduce impacts to a less-than significant level. The SWPPP and the SDG&E Water Quality Construction BMP Manual are described in more detail in Section 4.9, Hydrology and Water Quality. In addition, as previously discussed, the Proposed Project site is disturbed and does not contain any valuable topsoil. As a result, impacts will be less than significant.

Construction of the other Proposed Project components, including the use of staging yards, will occur within previously disturbed areas and along existing paths or roadways where no valuable topsoil is present. The total length of the underground power line loop-in is approximately 1,500 feet, of which approximately 1,000 feet are within the public road ROW. The remainder is within SDG&E ROW or franchise position. Any trenching that may occur as part of underground power line loop-in will be managed in the same manner as the proposed Ocean Ranch Substation construction activities, including a SWPPP and BMPs as appropriate. Because impacts related to soil erosion will be temporary and controlled through the use of

BMPs and because no topsoil will be disturbed, impacts associated with the other Proposed Project components will be less than significant.

Within a developed substation, the potential for erosion is considered low due to the site drainage and surfacing improvements that will be in place. Operation and maintenance of the Proposed Project will not typically involve ground-disturbing activities or grading. If grading is required, SDG&E will implement the BMPs outlined in its Water Quality Construction BMP Manual. Therefore, operational impacts to soil erosion and topsoil will be less than significant.

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

As previously described (refer to Appendix F), the Proposed Project area is relatively flat, and new slopes—if proposed at the site—will be engineered slopes designed at stable inclinations. Thus, slope instability is not considered a hazard. The soils located at the proposed Ocean Ranch Substation site and the surrounding area, including the location of the Proposed Project's underground components, have very low potential for liquefaction. Even so, the results and recommendations from the Geotechnical Report will be considered and implemented, as needed, to reduce the potential for adverse effects, such as differential settlement, lateral spreading, subsidence, or collapse in the unlikely scenario that liquefaction does occur. Thus, impacts from geologic instability will be less than significant.

San Diego County is subject to relatively strong seismic shaking due to regional earthquakes. However, as described previously, the Proposed Project components will be constructed to withstand strong ground movement and moderate ground deformation in accordance with SDG&E's standard operating procedures and by considering the results and recommendations from the geotechnical investigations. As a result, impacts from strong ground movements are anticipated to be less than significant.

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

Soils with expansion characteristics are present near the surface of the proposed Ocean Ranch Substation site. Fill soils near the surface are conservatively considered to have a medium potential for expansion. As described in Chapter 3.0, *Project Description*, onsite material will be reused to the extent possible, as recommended by a Geotechnical Engineer. Unsuitable (i.e., loose, porous, soft, or expansive) soils will be removed and replaced with imported fill that meets the requirements of SDG&E and the geotechnical engineer's recommendations. In addition, the results and recommendations from the Geotechnical Report will be considered in the final engineering design to reduce risks associated with expansive soils.

With regard to the underground components of the Proposed Project, the risk to life or structures from expansive soils is expected to be low. The area in the immediate area of the proposed substation is already well-developed, suggesting soil characteristics solid enough to support buildings and roads. Thus, impacts related to expansive soils is anticipated to be less than significant.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? *No Impact*

Soil permeability is a consideration for projects that require septic system installation. Because the Proposed Project will not involve the installation of a septic tank or alternative wastewater disposal system, no impacts will occur.

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TABLE OF CONTENTS

4.7 GREENHOUSE GAS EMISSIONS 4.7-1
4.7.1 Introduction 4.7-1
4.7.2 Regulatory Setting 4.7-1
4.7.3 Existing Conditions 4.7-5
4.7.4 Standard Operating Procedures 4.7-6
4.7.5 Applicant Proposed Measures 4.7-8
4.7.6 Project Impacts 4.7-8
4.7.7 References 4.7-11

LIST OF TABLES

4.7-1 Lifetimes, Global Warming Potentials, and Abundances of Several Significant GHGs 4.7-5
4.7-2 Most Recent California GHG Emissions Percentage Changes 4.7-6
4.7-3 Estimated GHG Emissions (Construction and Operations and Maintenance) 4.7-10

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4.7 GREENHOUSE GAS EMISSIONS

Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b.	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

4.7.1 Introduction

This section of the PEA describes the existing conditions and project-related impacts to GHG emissions in the vicinity of the Proposed Project. The analysis concludes that less than significant impacts will occur with regard to GHG emissions. The Proposed Project's effects were evaluated using the significance criteria set forth in Appendix G of the CEQA Guidelines. The conclusions are summarized in the impact summary table above, and discussed in more detail in Section 4.7.6.

4.7.2 Regulatory Setting

4.7.2.1 Federal

Endangerment Finding

On April 17, 2009, the USEPA issued its proposed endangerment finding for GHG emissions. On December 7, 2009, the USEPA Administrator signed the following two distinct findings regarding GHGs under Section 202(a) of the CAA:

- Endangerment Finding: The USEPA found that the current and projected concentrations of the six key well-mixed GHGs—carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons (HFCs), and polyfluorinated compounds (PFCs)—in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The USEPA found that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to GHG pollution, which threatens public health and welfare.

The endangerment findings do not themselves impose any requirements on industry or other entities. However, this action is a prerequisite to finalizing the USEPA's proposed GHG emissions standards for light-duty vehicles, which were jointly proposed by the USEPA and the U.S. Department of Transportation's National Highway Safety Administration on September 15, 2009.

Mandatory Reporting of Greenhouse Gases, Title 40, Part 98 of the Code of Federal Regulations

The USEPA's rule about Mandatory Greenhouse Gas Reporting (Title 40, Part 98 of the CFR) requires mandatory reporting of GHGs for certain facilities. Subpart DD of the rule, Electrical Transmission and Distribution Equipment Use, applies to PFCs and SF_6 reporting from gas-insulated substations.

Under this Rule, owners and operators of electric power system facilities with a total nameplate capacity that exceeds 17,820 pounds (7,838 kilograms) of SF_6 and/or PFCs must report emissions of SF_6 and/or PFCs from the use of electrical transmission and distribution equipment. Owners or operators must collect emissions data; calculate GHG emissions; and follow the specified procedures for quality assurance, missing data, recordkeeping, and reporting.

The rule requires each electric power system facility operator to report total SF_6 and PFC emissions (including emissions from equipment leaks, installation, servicing, decommissioning, and disposal, and from storage cylinders) from the following types of equipment:

- gas-insulated substations
- circuit breakers
- switchgears, including closed-pressure and hermetically sealed pressure switchgears
- gas-insulated lines containing SF_6 or PFCs
- gas containers, such as pressurized cylinders
- gas carts
- electric power transformers
- other containers of SF_6 or PFCs

Facilities subject to Subpart DD began monitoring GHG emissions on January 1, 2011, in accordance with the methods specified in Subpart DD. The deadline for reporting is March 31 of each year, unless that date falls on a weekend, in which case the report is due the next business day.

4.7.2.2 State

Assembly Bill 32, the California Global Warming Solutions Act of 2006

In September 2006, then-Governor Arnold Schwarzenegger signed California Assembly Bill 32, the Global Warming Solutions Act, into law. Pursuant to Assembly Bill 32, the CARB adopted a comprehensive Assembly Bill 32 Scoping Plan in December 2008, which outlined programs designed to achieve the 2020 GHG reduction goal of 174 million metric tons carbon dioxide equivalent (CO_2e) through regulations, market mechanisms, and other actions. The Scoping Plan was updated in 2014, and CARB is currently moving forward with a second update to reflect a GHG reduction target of 40 percent below 1990 levels by 2030.

For the electricity sector, the scoping plan adopted the CPUC's recommendations for investor-owned and publicly owned utilities to continue and increase implementation of programs designed to reduce emissions. These recommendations included energy efficiency programs, increasing the use of electricity supplies obtained from renewable generation sources to 33 percent by 2020, and the adoption of a cap and trade system to ensure an overall reduction of emissions from electric generation.

The Assembly Bill 32 Scoping Plan Measure H-6 led to CARB's Regulation for Reducing Sulfur Hexafluoride Emissions from Gas Insulated Switchgear (Title 17, Sections 95350 to 95359 of the California Code of Regulations). Gas Insulated Switchgear equipment can be a potential source of fugitive SF_6 emissions. CARB's SF_6 regulation requires a reduction of SF_6 emissions from all electrical power equipment insulated with SF_6 gas regardless of location. Gas Insulated Switchgear includes switches, stand-alone gas-insulated equipment, and any combination of electrical disconnects, fuses, electrical transmission

lines, transformers, and/or circuit breakers used to isolate gas-insulated electrical equipment. SF6 has a global warming potential of 23,900, which is the highest of any GHG identified by the Intergovernmental Panel on Climate Change.

CARB's SF_6 regulation sets the maximum emissions rate for SF_6-containing equipment at 10 percent by 2011. The maximum allowable emissions rate decreases by 1 percent each year. In 2020, the threshold will remain at 1 percent.

State Standards Addressing Vehicular Emissions

California Assembly Bill 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light-duty trucks. CARB adopted the regulations on September 24, 2009, to reduce GHG emissions in new passenger vehicles from 2009 through 2016. CARB has estimated that the regulations will reduce emissions from the light-duty passenger vehicle fleet by an estimated 18 percent in 2020 and by 27 percent in 2030.

Senate Bills 1078 and 107 and Executive Order S-14-08

Senate Bill 1078 requires retail sellers of electricity to provide at least 20 percent of their supply from renewable sources by 2017. Senate Bill 107 changed the target date to 2010. In November 2008, then-Governor Arnold Schwarzenegger signed Executive Order S-14-08, which expands the Renewables Energy Standard to 33 percent by 2020. In April 2011, the California Legislature enacted Senate Bill 2, which mandates the Renewables Portfolio Standard of 33 percent by 2020 for investor-owned and publicly owned utilities.

Executive Order S-21-09

Executive Order S-21-09 directs CARB to work with the CPUC and the California Energy Commission to implement the Renewables Portfolio Standard of 33 percent by 2020. On May 5, 2011, the CPUC adopted Order Instituting Rulemaking 11-05-005 to open a new proceeding for the Renewables Portfolio Standard.

CARB is also working with the California Independent System Operator and other load balancing authorities to address reliability, renewable integration requirements, and interactions with wholesale power markets. CARB established a "loading order" in its Energy Action Plan for resources that provide the greatest environmental benefits with the least environmental costs and impacts on public health.

Executive Order B-30-15

On April 29, 2015, Governor Jerry Brown issued an executive order that identified an interim GHG reduction target in support of targets previously identified under S-3-05 and Assembly Bill 32. Executive Order B-30-15 set an interim target goal of reducing GHG emissions to 40 percent below 1990 levels by 2030 as one way to keep California on a trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80 percent below 1990 levels by 2050 as set forth in S-3-05. To facilitate achievement of this goal, B-30-15 calls for an update to CARB's Scoping Plan to express the 2030 target in terms of million metric tons of CO_2e. The executive order also calls for state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets. In 2014, CARB established its 2020 statewide target for GHG reductions at 431 million metric tons CO_2e, based on the Updated Scoping Plan (CARB 2014a).

4.7.2.3 Local

As provided in CPUC General Order 131-D, the CPUC has exclusive jurisdiction over the siting, design, and construction of the Proposed Project, preempting local discretionary authority over the location and

construction of electrical utility facilities. Therefore, the Proposed Project is not subject to local discretionary land use regulations. Nonetheless, as part of the environmental review process, SDG&E considers relevant local land use plans and policies that pertain to GHG.

County of San Diego

In July 2015, the County of San Diego began preparation of its Climate Action Plan. The Climate Action Plan will be a comprehensive plan that will outline the specific activities that the county will undertake to reduce GHG emissions in compliance with Assembly Bill 32. The City of Oceanside does not have a Climate Action Plan.

South Coast Air Quality Management District

In 2008, South Coast Air Quality Management District approved a Climate Change Policy to direct efforts on the reduction of GHG emissions and to establish GHG reduction programs. Regulation XXVII - Climate Change includes Rule 2701, SoCal Climate Solutions Exchange and Rule 2702, Greenhouse Gas Reduction Program which established a voluntary GHG reduction program allowing purchase or use of GHG reduction credits to fund GHG reduction projects. Also in 2008, South Coast Air Quality Management District adopted a GHG significance threshold for stationary/industrial sources of 10,000 metric tons of CO_2e emissions annually.

SDG&E Programs

SDG&E has been engaged for many years in activities to reduce GHG emissions. These activities include programs to increase energy efficiency and efforts to meet the Renewables Portfolio Standard of 33 percent of its supply from renewable sources by 2020. SDG&E is the first California utility to deliver 33 percent renewable power.

SDG&E submits a mandatory Long-Term Procurement Plan (LTPP) to the CPUC that describes its strategy for meeting the forecasted load during the next 10 years. The LTPP must be consistent with the "loading order" prescribed in the Energy Action Plan to meet growth first with conservation, then with renewable sources of electricity, and finally with new fossil fuel sources to the extent necessary. New generation sources must be consistent with the LTPP. The CPUC approved SDG&E's most recent LTPP that became effective in September 2012. The LTPP includes the following programs to reduce GHG emissions:

- energy efficiency, which will reduce needed capacity by 616 megawatts by 2021;
- demand response, which will reduce needed capacity by 302 megawatts by 2021;
- renewables, which will provide 1,826 megawatts in 2021; and
- new peaker plants to back up intermittent renewables and support retirement of older plants.

Forecasted reductions from these programs are greater than 1.5 million metric tons CO_2e per year. These efforts will reduce carbon intensity by one-third while accommodating continued population growth, and will ensure consistency with the applicable plans, policies, and regulations adopted by California to reduce GHG emissions.

4.7.3 Existing Conditions

4.7.3.1 Existing Setting

Climate change is a complex phenomenon that has the potential to alter local climatic patterns and meteorology. Although modeling indicates that climate change will result globally and regionally in sea level rise and in changes in climate and rainfall, among other effects, there remains uncertainty with regard to characterizing the precise *local* climate characteristics and predicting precisely how various ecological and social systems will react to any changes in the existing climate at the local level.

Greenhouse Gas Emission Sources

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the transportation, industrial/manufacturing, electric utility, residential, commercial, and agricultural sectors. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2010, accounting for 38 percent of total GHG emissions in the state. This was followed by the electric power sector (including generation sources both in-state and out-of-state that supply electricity to California) (21 percent) and the industrial sector (19 percent) (CARB 2014a). Emissions of CO_2 are primarily byproducts of fuel combustion. CH_4, a highly potent GHG, typically results from fugitive emission sources such as agricultural activities and landfills. N_2O is also largely attributable to agricultural activities and soil management. Smaller amounts of CH_4 and N_2O emissions occur as a byproduct of fuel combustion. CO_2 sinks, or reservoirs, include vegetation and the ocean, and absorb CO_2 through sequestration and dissolution, respectively.

CO_2e is a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential, is a measure of the heat-trapping ability of a given GHG over a 100-year period relative to the heat-trapping ability of CO_2, as described below in Table 4.7-2. The global warming potential of CO_2 is defined to equal 1. The global warming potential values used in this report are based on the Intergovernmental Panel on Climate Change Second Assessment Report and United Nations Framework Convention on Climate Change reporting guidelines, and are defined in Table 4.7-1. Although the Intergovernmental Panel on Climate Change Fourth Assessment Report presents different global warming potential estimates, the current inventory standard relies on Second Assessment Report global warming potentials to comply with reporting standards and consistency with regional and national inventories. The Second Assessment Report global warming potentials are used in CARB's California inventory and the California Global Warming Solutions Act of 2006 Scoping Plan estimates.

Table 4.7-1. Lifetimes, Global Warming Potentials, and Abundances of Several Significant GHGs

Gas	Global Warming Potential (100 years)	Lifetime (years)[1]	Atmospheric Abundance
CO_2 (ppm)	1	50–200	379
CH_4 (ppb)	21	12	1,745
N_2O (ppb)	310	114	314
HFC-23 (ppt)	11,700	270	14
HFC-134a (ppt)	1,300	14	7.5
HFC-152a (ppt)	140	1.40	0.5
CF_4 (ppt)[2]	6,500	50,000	80

Table 4.7-1. Lifetimes, Global Warming Potentials, and Abundances of Several Significant GHGs

Gas	Global Warming Potential (100 years)	Lifetime (years)[1]	Atmospheric Abundance
C_2F_6 (ppt)[2]	9,200	10,000	3.0
SF_6 (ppt)	23,900	3,200	4.2

Sources: CARB 2014.
Notes:
[1] Defined as the half-life of the gas.
[2] Carbon tetrafluoride (CF_4) and hexafluoroethane (C_2F_6) are PFCs.
ppm = parts per million; ppb = parts per billion; ppt = parts per trillion.

Expressing individual GHG emissions as CO_2e converts the heat-trapping ability and longevity of the individual GHGs to a common basis that is equivalent to the effect that would occur if only CO_2 were being emitted.

Greenhouse Gas Emissions Inventories

A GHG inventory is a quantification of all GHG emissions and sinks within a selected physical and/or economic boundary. GHG inventories can be performed on a large scale (e.g., for global and national entities) or on a small scale (e.g., for a particular building or person). Although many processes are difficult to evaluate, several agencies have developed tools to quantify emissions from certain sources. Table 4.7-2 outlines the most recent California GHG emissions percentage changes.

Table 4.7-2. Most Recent California GHG Emissions Percentage Changes

Greenhouse Gas	GHG Gross Emissions (million metric tons CO_2e)*				Percentage Change	
	2000	2010	2011	2012	2000–2012	2011–2012
CO_2	409.3	386.8	383.5	388.7	−5.0	1.4
CH_4	34.0	37.3	37.5	38.1	12.3	1.7
N_2O	15.0	13.0	12.6	13.4	−10.9	6.5
SF_6	0.4	0.3	0.3	0.3	−30.1	-3.2
Other Halogenated Gases	7.6	15.6	17.1	18.1	137.3	6.3
Total Gross Emissions	**466.3**	**453.1**	**450.9**	**458.7**	**−1.6**	**1.7**

Source: CARB 2014.
Note: * All greenhouse gases are weighted relative to CO_2 based on the Intergovernmental Panel on Climate Change 4th Assessment Report.

4.7.4 Standard Operating Procedures

As described in Section 3.9, *Standard Operating Procedures*, the Proposed Project will involve the following procedures related to minimizing GHG emissions:

- **Construction Practices.**
  - During clearing, grading, earth-moving, or excavation operations, SDG&E will control excessive fugitive dust emissions by regular watering or other dust preventive measures using the following procedures:

  - Spray unpaved construction areas with water, approved dust-control agents, or soil stabilizers to reduce particulates; sufficiently water any material that is excavated or graded.
  - Sweep, vacuum, and/or remove dirt or debris spilled onto paved surface to reduce re-suspension of particulate matter caused by vehicle movement.
  - Haul trucks moving soil to or from the site will either be covered or maintain 2 feet minimum freeboard.
  - Onsite stockpiles will be covered, watered, or bermed if left inactive for more than 24 hours.
  - Tracking-control measures, in accordance with SDG&E Best Management Practice Manual Measure 1-7, will be implemented.
  - Visible dust from the Proposed Project will be prevented from emanating beyond the property line, to the extent feasible.
- To the extent feasible, unnecessary construction vehicle and idling time will be minimized. The ability to limit construction vehicle idling time is dependent upon the sequence of construction activities and when and where vehicles are needed or staged. Certain vehicles, such as large diesel-powered vehicles, have extended warm-up times following startup that limit their availability for use following startup. Where such diesel-powered vehicles are required for repetitive construction tasks, these vehicles may require more idling time. The Proposed Project will apply a common-sense approach to vehicle use; if a vehicle is not required for use immediately or continuously for construction activities, its engine will be shut off. Construction foremen will include briefings to crews on vehicle use as part of preconstruction tailboard or training. Those briefings will include discussion of a "common sense" approach to vehicle use.

- **Generators.** Generator use will be limited to less than 50 horsepower at all staging yards. Any generators used at the staging yards will be located away from noise sensitive areas, and positioned on the property to comply with local noise ordinances.
- **Mufflers.** Functioning mufflers will be maintained on all equipment.
- **SF_6 mitigation strategies.** SDG&E will implement their existing SF_6 mitigation strategies during the operation and maintenance of SF_6-containing equipment installed as part of the Proposed Project. These strategies include:
  - Continue CARB's Mandatory Reporting Regulation for GHG emissions.
  - Implement SDG&E's SF_6 leak detection and repair program. This program includes monthly visual inspections of each Gas Insulated Switchgear, which includes checking pressure levels within the breaker and recording these readings in SDG&E's Substation Management System. During the installation or major overhaul of any Gas Insulated Switchgear, the unit is tested over a 24-hour period to ensure no leaks are present. Minor overhauls of each Gas Insulated Switchgear are conducted every 36 to 40 months to check overall equipment health. This process includes checking gas pressure, moisture ingress, and SF_6 decomposition. If the Gas Insulated Switchgear fails any of these checks, the unit is checked for leaks and repaired. In addition, all Gas Insulated Switchgears are equipped with a gas monitoring device and alarm that automatically alert SDG&E's Grid Operations Center. If gas pressure approaches minimum operating levels, an alarm is immediately reported to SDG&E's Substation Construction and Maintenance Department. The Gas Insulated Switchgear is usually inspected

for leaks within 24 hours of such an alarm. SDG&E's leak detection practice includes the following three methodologies:

- Spraying a leak-detection agent onto common leak points—including O-rings, gaskets, and fittings;
- Using a field-monitoring device (sniffer) to detect the presence of SF6 gas; and
- Using a laser-detection camera to detect the presence of SF6 gas when the above two methods are unsuccessful in finding a leak.

- Implement a SF_6 recycling program.
  - Train employees on the safety and proper handling of SF_6.

4.7.5 Applicant Proposed Measures

No APMs regarding GHG emissions are proposed.

4.7.6 Project Impacts

The Proposed Project includes construction of a new 69/12 kV substation and loop-in of an existing underground 69 kV power line to connect to the proposed substation (refer to Chapter 3.0, *Project Description*). With the exception of SF_6, the operation and maintenance activities required for the Proposed Project will not change substantially from those currently required for the existing system. The substation will be unmanned, with minimal vehicle trips associated with operation and maintenance activities that will result in a negligible amount of mobile source emissions. The underground components will be inspected consistent with SDG&E's existing underground inspection and maintenance program. Therefore, the impact analysis is focused on construction activities, as described in Chapter 3.0, *Project Description,* and, for operation and maintenance, fugitive SF_6 emissions associated with leaks from the gas-insulated circuit breakers.

4.7.6.1 Methodology

To quantify GHG emissions associated with construction activities of the Proposed Project, CalEEMod was used. The model was developed in collaboration with the air districts in California. Default data (e.g., emission factors, trip lengths, source inventory, etc.) have been provided by the various air districts to account for local requirements and conditions. The Proposed Project's specific location information combined with the construction schedule, off-road equipment, and import/export materials (i.e., haul trips) as discussed in Chapter 3.0, *Project Description*, were used to generate GHG emissions. Quantification of fugitive SF_6 emissions associated with the use of the SF_6 gas-insulated circuit breakers at the substation was completed based on the number of equipment insulated with SF_6, quantity of SF_6 used at the site, and guaranteed manufacturer leaks rate for equipment.

4.7.6.2 Significance Criteria

Standards for determining impact significance were derived from Appendix G of the CEQA Guidelines as well as the South Coast Air Quality Management District and County of San Diego thresholds, as explained below. Under these guidelines, impacts to GHGs will be considered significant if the Proposed Project:

- Generates GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

- Conflicts with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG.

Neither the City of Oceanside nor the SDAPCD has established GHG thresholds under CEQA. The South Coast Air Quality Management District has adopted, and the County of San Diego Planning & Development Services has issued, a significance threshold of 10,000 metric tons of CO_2e emissions annually for industrial sources, below which levels an industrial project would not generate GHG emissions that would have a significant impact on the environment. The South Coast Air Quality Management District and the County of San Diego recommend amortizing construction emissions over a 30-year period to account for their contribution to GHG emissions over the lifetime of the Proposed Project.

Per Appendix G of the CEQA Guidelines, the significance of project-related impacts on GHG emissions were evaluated for each of the criteria listed in the impact summary table, as discussed below.

a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? *Less than Significant*

Project GHG emissions are limited to construction emissions resulting from construction vehicles and equipment and fugitive SF_6 emissions associated with the use of SF_6 gas insulated circuit breakers within the substation.

Construction

The primary GHG emissions associated with construction activities occur as CO_2 from gasoline and diesel combustion, with more limited vehicle tailpipe emissions of N_2O and CH_4, as well as other GHG emissions related to vehicle cooling systems. Construction-period CO_2, CH_4, and CO_2e emissions were obtained from the CalEEMod model.

As shown in Table 4.7-3, Proposed Project construction will result in approximately 1,117 metric tons of CO_2e over the entire construction period. GHG emission calculations for construction activities are presented in Appendix C, Air Quality Data: CalEEMod Input and Output Files/GHG Emission Calculations.

Operation and Maintenance

The Proposed Project will use SF_6 gas as an insulating agent within the circuit breakers at the substation. The use of SF_6, a highly potent GHG, the effect of which is 23,900 times greater than an equivalent quantity of CO_2, is problematic because fugitive emissions can escape gas-insulated switchgear through leaks in fittings, etc. as they age.

Based on an USEPA study (USEPA date not available), lower and upper bound weighted-average leak rate estimates of 0.2 and 2.5 percent, respectively, represent the best and worst case scenarios for circuit breaker leakage. The manufacturer of the circuit breakers for the Proposed Project guarantees an annual leakage rate for SF_6 to be closer to the lower bound estimate, at approximately 0.5 percent.

The Proposed Project will utilize nine circuit breakers, each with a canister containing 128 pounds of SF_6. The allowable manufacturer leakage limit for each canister is 0.5 percent per year. Therefore, the anticipated emission rate from the circuit breaker is approximately 0.64 pound of SF_6 per year, per canister (6.94 metric tons CO_2e) totaling approximately 5.76 pounds of SF_6 per year for all nine canisters (6.94 metric tons CO_2e x 9 = 62.46 metric tons CO_2e/year).

Table 4.7-3. Estimated GHG Emissions (Construction and Operations and Maintenance)

Construction Year	GHG Emissions (Metric Tons CO_2e /year)
2017	348
2018	549
2019	220
Total Construction Emissions	1,117
Annualized Construction Emissions (over 30 years)	37
Operational Emissions (SF_6 Circuit Breakers)	62.46
Total Project-Related Operational Emissions (Annualized Construction Emissions + Operational Emissions)	99.46
GHG Threshold	10,000

Source: CalEEMod Version 2013.2.2.

The Proposed Project's total project-related operational CO_2e emissions of 99.46 metric tons annually will be below the annual significance threshold of 10,000 metric tons of CO_2e. The emissions are also less than significant as compared to the system wide reductions being pursued by SDG&E in accordance with its LTPP (an estimated reduction of 1,500,000 metric tons of CO_2e related to electricity procurement by 2016 is projected, Table V-1, Sheet Number 153). As described in Section 4.7.4, *Standard Operating Procedures*, SDG&E will implement standard construction practices that will further minimize GHG impacts. These include minimizing idling time and holding briefings for crews on vehicle use as part of preconstruction conferences.

Given the above, the Proposed Project's contribution to cumulative GHG emissions and global climate change will be less than significant.

b) Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? *No Impact*

The Proposed Project's GHG emissions from construction will be below the significance thresholds on an absolute basis and when amortized over a 30-year period, as recommended by the South Coast Air Quality Management District and the County of San Diego. Construction-generated GHG emissions will be further reduced through the implementation of CARB's recently imposed restrictions on diesel vehicle idling and mandates on reduction of emissions from mobile sources, as well as implementation of SDG&E's Standard Operating Procedures, both of which are consistent with the goals of Assembly Bill 32.

The Proposed Project will use SF_6 gas as an insulating agent within the nine circuit breakers at the substation. Fugitive SF_6 emissions can escape gas-insulated switchgear through leaks in fittings, etc. as they age. As discussed above, the Proposed Project operational GHG emissions from fugitive SF_6 emissions are 62.46 metric tons CO_2e/year.

CARB regulations require a reduction of SF_6 emissions from all electrical power equipment insulated with SF_6 gas. The SF_6 regulation sets the maximum emissions rate for SF_6-containing equipment at 10 percent by 2011. The maximum allowable emissions rate decreases by 1 percent each year. In 2016, the threshold will be 5 percent. In 2020, the threshold will remain at 1 percent.

Implementation of SDG&E's standard operating procedures for management of SF_6-containing equipment is consistent with the adopted CARB regulation to reduce emissions related to SF_6 use. SDG&E is required to establish and maintain a complete equipment inventory for each location where SF_6 is used for insulation,

and annually report emissions through CARB's Mandatory Reporting Regulation for GHG emissions. This information is required to be kept current for CARB enforcement staff inspection and verification (CARB 2014b).

Therefore, no impact will occur related to conflicts with applicable plans, policies, or regulations adopted to reduce GHG emissions.

4.7.7 References

CARB. 2014a. California Greenhouse Gas Emission Inventory: 2000-2012. May 2014. Website (http://www.arb.ca.gov/cc/inventory/pubs/reports/ghg_inventory_00-12_report.pdf) accessed on June 23, 2015.

CARB. 2014b. Sulfur Hexafluoride (SF_6) Emission Reductions from Gas Insulated Switchgear–FAQs. Page last reviewed August 2014. Website (http://www.arb.ca.gov/cc/sf6elec/faq/faq.htm#34) accessed on January 8, 2016.

USEPA. No Date Specified. SF_6 Leak Rates from High Voltage Circuit Breakers – USEPA Investigates Potential Greenhouse Gas Emissions Source. Website (http://www3.epa.gov/highgwp/electricpower-sf6/documents/leakrates_circuitbreakers.pdf) accessed January 12, 2016.

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TABLE OF CONTENTS

4.8 HAZARDS AND HAZARDOUS MATERIALS....4.8-1
4.8.1 Introduction....4.8-1
4.8.2 Regulatory Setting....4.8-2
4.8.3 Existing Conditions....4.8-8
4.8.4 Standard Operating Procedures....4.8-13
4.8.5 Applicant Proposed Measures....4.8-16
4.8.6 Project Impacts....4.8-16
4.8.7 References....4.8-23

LIST OF TABLES

4.8-1 Summary of Regulatory Database Search Results – 0.5-Mile....4.8-10
4.8-2 Hazardous Materials Typically Used for Construction and/or Operation and Maintenance....4.8-19

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4.8 HAZARDS AND HAZARDOUS MATERIALS

Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d.	Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?	☐	☐	☐	☒
e.	If located within an airport land use plan or within 2 miles of a public airport or public use airport for which such a plan has not been adopted, result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f.	If located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h.	Expose people or structures to a significant risk of loss, injury or death involving wildland fire, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

4.8.1 Introduction

This section of the PEA describes the existing conditions and project-related impacts to hazards and hazardous materials in the vicinity of the Proposed Project (refer to Chapter 3.0, *Project Description*, Figure 3-2, Proposed Project Overview Map). The analysis concludes that less than significant impacts related to hazards and hazardous materials will occur. The Proposed Project's effects in this regard were evaluated using the significance criteria set forth in Appendix G of the CEQA Guidelines. The conclusions are summarized in the impact summary table above, and discussed in more detail in Section 4.8.6.

4.8.2 Regulatory Setting

This section includes a description of the hazards and hazardous materials regulatory framework.

4.8.2.1 Federal

U.S. Environmental Protection Agency

The USEPA maintains a list of materials considered to be hazardous to the environment or to human health. These materials are identified in the following three categories:

- *F-List.* Wastes from the F-list are published under Title 40 of the CFR Section 261.31. These wastes include non-specific source wastes common in manufacturing and industrial processes.
- *K-List.* K-list wastes are published under 40 CFR Section 261.32. These wastes include source-specific wastes from specific industries, including pesticide manufacturing and petroleum refining.
- *P-List and U-List.* Wastes from the P- and U-lists are published under 40 CFR Section 261.33. These wastes include discarded commercial chemical products in an unused form.

Waste that has not been previously listed may still be considered hazardous if it exhibits one or more of the following characteristics: ignitibility, corrosivity, reactivity, or toxicity (40 CFR Section 261 Subpart C).

Uniform Building Code and Uniform Fire Code

The Uniform Building Code and the Uniform Fire Code provide federal guidance on for fire protection. To minimize potential fire risk and damage to structures, the Uniform Building Code articulates construction materials and other elements or construction practices. In addition, the Uniform Fire Code provides design measures for installation of fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards and safety measures, hazardous material storage and use, and other general and specialized requirements pertaining to fire safety and prevention.

Resource Conservation and Recovery Act

Resource Conservation and Recovery Act of 1976 (RCRA) regulates potential health and environmental problems associated with hazardous and nonhazardous waste. This law is implemented by the USEPA through Subtitle C, Title 42 of the U.S.C. Section 6921 et. seq., and its implementing regulations (40 CFR Section 260 et seq.). The generation, transportation, treatment, storage, and disposal of hazardous waste is regulated through RCRA Subtitle C, which addresses a "cradle-to-grave" approach to hazardous waste management. All states are subject to Subtitle C with regard to hazardous waste generation. RCRA also provides the specific quantities of wastes that are regulated under this act.

Comprehensive Environmental Response, Compensation, and Liability Act and Superfund Amendments and Reauthorization Act

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Superfund Amendments and Reauthorization Act, together with their implementing regulations, govern the use, planning, reporting, clean up, and notification with regard to hazardous materials and hazardous material releases into the environment. These statutes are codified in 40 CFR Section 239 through 282 and the regulations are defined in 40 CFR Section 302 through 355.

Annual reporting requirements associated with hazardous materials released into the environment are provided in 42 USC Section 11023 and 40 CFR Section 372.30. Reporting of both routine discharges and spill releases is required. In addition, Title III of Superfund Amendments and Reauthorization Act

(identified as the Emergency Planning and Community Right-To-Know Act of 1986) requires that all states develop and implement local chemical emergency preparedness programs and make available information pertaining to hazardous materials that are used at facilities within local communities.

Clean Water Act/Clean Air Act

The CWA provides measures governing the accidental release of hazardous materials to surface waters. Similarly, the CAA provides measures aimed at preventing the accidental release of hazardous materials into the atmosphere.

Regulations implementing the CAA and governing hazardous materials emissions are provided in 40 CFR Part 68. Implementation of these regulations is intended to prevent the accidental release of hazardous materials into the environment.

Additional Federal Regulations

The following additional federal planning documents or regulations will be applicable to the Proposed Project:

- Occupational Safety and Health Administration (OSHA) (29 CFR, Part 1910, Subpart H).
- Toxic Substances Control Act.
- SPCC Plan (40 CFR, Part 112 – Oil Pollution Prevention). A facility is covered by the SPCC rule if it has an aggregate aboveground oil storage capacity greater than 1,320 gallons or a completely buried storage capacity greater than 42,000 gallons and there is a reasonable expectation of an oil discharge into or upon navigable waters of the U.S.

4.8.2.2 State

California Hazardous Materials and Waste Codes

Individual states are required by the RCRA to develop their own programs for the regulation of hazardous waste discharges; however, such plans are required to meet or exceed RCRA requirements. Within the State of California, the storage, handling, use, and/or disposal of hazardous materials is regulated through various sections of the California Health and Safety Code (H&SC).

The California Hazardous Waste Control Law (HWCL) addresses the control of hazardous wastes for the State. The HWCL regulates generators of universal waste (e.g., batteries, mercury control devices, dental amalgams, aerosol cans, and lamps/cathode ray tubes) under Section 25100 et seq. of the H&SC, as well as hydrocarbon waste (e.g., oils, lubricants, and greases) that is not classified as hazardous waste under the federal RCRA regulations. The Department of Toxic Substances Control is responsible for the administration and enforcement of the HWCL.

The Hazardous Materials Release Response Plans and Inventory Act (H&SC, Section 25500 et seq.) and regulations provided in 19 California Code of Regulations Section 2620 et seq. require that local governments be responsible for the regulation of facilities that store, handle, or use hazardous materials above threshold quantities. The threshold quantities for identified hazardous materials are 55 gallons for liquids, 500 pounds for solids, and 200 cubic feet for compressed gases measured at standard temperature and pressure. Facilities storing such hazardous materials in excess of their threshold quantities are required to prepare a Hazardous Materials Business Plan (HMBP) to identify the facility's internal response requirements to accidental spills. The HMBP may identify emergency contacts, hazardous material inventory and quantities, control methods, emergency response measures, and employee training methods.

The HMBP is required to be submitted to the local Certified Unified Program Agency (CUPA), which for the Proposed Project is the County of San Diego's Department of Environmental Health Hazardous Materials Management Division (HMMD). In the event of a spill from such a facility, both the CUPA and the California Governor's Office of Emergency Services (OES) must be notified.

H&SC Section 25249.5 et seq. of the Safe Drinking Water and Toxics Enforcement Act (i.e., Proposition 65) is administered through the California Office of Environmental Health Hazard Assessment. The H&SC regulates cancer-causing and reproduction-impairing chemicals. Under Proposition 65, users of such regulated chemicals are required to issue a public warning before potential exposure to chemicals above a threshold amount occurs (H&SC Section 25249.6). In addition, the Act is aimed at preventing discharges or releases of specified hazardous materials into a "source of drinking water." The Act provides a list of chemicals of concern (H&SC Section 25249.5), which is periodically updated.

Section 25404 et seq. of the California H&SC includes the California Unified Hazardous Waste and Hazardous Material Management Regulatory Program Act, which establishes specific requirements for handling hazardous waste locally by establishing the CUPA. The responsibility for management of local hazardous wastes is delegated by the California EPA to the local agency through a Memorandum of Understanding.

California Occupational Safety and Health Administration

The California OSHA (Cal/OSHA) of 1970 provides measures to address the safety of construction and industrial workers. Title 8 of the California Code of Regulations implements the majority of these measures. Cal/OSHA is responsible for enforcing the occupational and public safety laws adopted by the U.S. Department of Labor's OSHA. OSHA is responsible for the regulation of workplace hazards and hazardous materials at the federal level, while Cal/OSHA regulates hazards and hazardous materials at the state level.

Department of Toxic Substances Control/California EPA

Department of Toxic Substances Control regulates hazardous waste, cleans up existing contamination, and looks for ways to reduce hazardous waste produced in California, while the California EPA is charged with developing, implementing, and enforcing the state's environmental protection laws.

Regional Water Quality Control Board

The San Diego RWQCB is responsible for protecting the beneficial uses of surface water and groundwater resources in the San Diego area. The RWQCB adopted a Water Quality Control Plan (Basin Plan) in September 1994 and amended the plan in April 2011. The Basin Plan sets forth implementation policies, goals, and water management practices in accordance with the Porter-Cologne Water Quality Control Act. The Basin Plan establishes both numerical and narrative standards and objectives for water quality aimed at protecting aquatic resources. Project discharges to surface waters in the region are subject to the regulatory standards set forth in the Basin Plan, which prevents the discharge of hazardous materials into waters of the U.S. Although groundwater is not used as a municipal or domestic water supply, the RWQCB enforces the provisions of the state statutes that protect groundwater.

California Building Code

The CBC provides design and construction measures for structures and other facilities with regard to fire protection and prevention. The CBC supplements the Uniform Building Code by providing measures that are specific to potential conditions in the State of California. Measures provided in the CBC are integrated and enforced through city and county review of development projects, the Office of the State Fire Marshal, and by local city or county fire chiefs or marshals.

California Public Resources Code

The California PRC provides regulations to enhance safety with regard to the operation and management of electrical transmission lines. These include, but are not limited to, the following:

- *PRC Section 4292*. This section requires the clearing of flammable vegetation around specific structures that support certain connectors or types of electrical apparatus. An approximately 10-foot radius around such structures must remain clear of vegetation for the entirety of the fire season.
- *PRC Section 4293*. This section requires specific clearance between conductors and vegetation. As the line voltage increases, the radius of clearance also increases. It is also required that some trees must be removed if they pose the potential to fall on an electrical transmission line and cause damage.

California Public Utilities Commission

Originally adopted in 1941, General Order 95 governs the design, construction, and maintenance of overhead electrical lines. Rule 31.1 of GO 95 generally requires that overhead electrical lines be designed, constructed, and maintained in accordance with accepted good practices for the given conditions known at the time. Rule 35 of GO 95 establishes requirements for tree trimming.

On January 18, 2012, after a three-year rulemaking to review measures to reduce fire hazards associated with overhead power line and communication facilities, the CPUC issued D.12-01-032 which adopted significant revisions to GO 95, GO 165, and GO 166, Inspection Requirements for Electric Distribution and Transmission Facilities. Phase I and Phase II revisions to the GO's addressed vegetation management practices, inspection cycles, corrective maintenance timeframes and other fire reduction measures in fire threat zones.

Additional State Regulations

The following additional State planning documents or regulations are applicable to the Proposed Project:

- 2010 Strategic Fire Plan for California (California Department of Forestry and Fire Protection [CAL FIRE]).
- Hazardous Waste Haulers Act (California H&SC, Division 20, Article 6.5).

4.8.2.3 Local

As provided in CPUC GO 131-D, the CPUC has exclusive jurisdiction over the siting, design, and construction of the Proposed Project, preempting local discretionary authority over the location and construction of electrical utility facilities. Therefore, the Proposed Project is not subject to local discretionary land use regulations. Nonetheless, as part of the environmental review process, SDG&E considers relevant local plans and policies that pertain to hazards and hazardous materials.

County of San Diego

Within San Diego County, the HMMD is the CUPA responsible for the implementation of the requirements for handling hazardous waste. Hazardous materials are addressed through various county codes and regulations. The HMMD's hazardous material requirements include hazardous waste determination, storage and transportation of hazardous waste, treatment and disposal requirements, biennial reporting, emergency preparedness and prevention, emergency procedures, business plans, personnel training, and standards for violations. In addition, San Diego County has an adopted Emergency Operations Plan, which is used by all key partner agencies within the county to respond to major emergencies and disasters.

Regulations for the storage and use of explosives are provided in San Diego County General Regulation, Section 6904.

San Diego County Regional Airport Authority Airport Land Use Compatibility Plan

The Proposed Project is located approximately 3 miles east of Oceanside Municipal Airport (OMA) and approximately 6 miles from the Marine Corps Base (MCB) Camp Pendleton Airport. The Airport Land Use Commission is required by federal and state law to create or update Airport Land Use Compatibility Plans (ALUCPs) for San Diego County's 16 public-use and military airports. The San Diego County Regional Airport Authority has an ALUCP for OMA and MCB Camp Pendleton. The ALUCPs address airport compatibility issues related to noise, safety, airspace protection, and aircraft overflight. Local agencies are required to submit proposed actions to the Airport Land Use Commission for compatibility review until their General Plans are found to be consistent with the applicable ALUCP.

County of San Diego Hazardous Material Business Plan

An HMBP contains basic information on the location, type, quantity, and health risks of hazardous materials used, hauled, or stored by a business operating in the State.

Each business shall prepare an HMBP using the California Environmental Reporting System if that business uses, handles, or stores a hazardous material (including hazardous waste) or an extremely hazardous material in quantities greater than or equal to the following:

- 500 pounds of a solid substance.
- 55 gallons of a liquid.
- 200 cubic feet of compressed gas.
- A hazardous compressed gas in any amount (highly toxic gases with a Threshold Limit Value of 10 parts per million or less).
- Extremely hazardous substances in threshold planning quantities as defined in 40 CFR Part 355.

County of San Diego General Plan – Safety Element

The purpose of the Safety Element is to include safety considerations in the planning and decision-making process by establishing policies related to future development that will minimize the risk of personal injury, loss of life, property damage, and environmental damage associated with natural and man-made hazards. The Safety Element addresses the County of San Diego's natural hazards and human activities that may pose a threat to public safety.

Goal S-3 Minimized Fire Hazards: Minimized injury, loss of life, and damage to property resulting from structural or wildland fire hazards.

Policy S-3.1: Defensible Development. Require development to be located, designed, and constructed to provide adequate defensibility and minimize the risk of structural loss and life safety resulting from wildland fires.

Policy S-3.2: Development in Hillsides and Canyons. Require development located near ridgelines, top of slopes, saddles, or other areas where the terrain or topography affect its susceptibility to wildfires to be located and designed to account for topography and reduce the increased risk from fires.

Policy S-3.3: Minimize Flammable Vegetation. Site and design development to minimize the likelihood of a wildfire spreading to structures by minimizing pockets or peninsulas, or islands of flammable vegetation within a development.

Policy S-3.4: Service Availability. Plan for development where fire and emergency services are available or planned.

Policy S-3.5: Access Roads. Require development to provide additional access roads when necessary to provide for safe access of emergency equipment and civilian evacuation concurrently.

Policy S-3.6: Fire Protection Measures. Ensure that development located within fire threat areas implement measures that reduce the risk of structural and human loss due to wildfire. Mitigation measures include, but are not limited to, the use of ignition resistant materials, multiple ingress and egress routes, and fire protection systems.

Policy S-3.7: Fire Resistant Construction. Require all new, remodeled, or rebuilt structures to meet current ignition resistance construction codes and establish and enforce reasonable and prudent standards that support retrofitting of existing structures in high fire threat areas.

Goal S-11: Controlled Hazardous Material Exposure. Limited human and environmental exposure to hazardous materials that pose a threat to human lives or environmental resources.

Goal S-11.1: Land Use Location. Require that land uses involving the storage, transfer, or processing of hazardous materials be located and designed to minimize risk and comply with all applicable hazardous materials regulations.

Goal S-11.2: Industrial Use Restrictions. Restrict industrial uses that store, process, or transport significant amounts of hazardous material to areas designated as High Impact Industrial.

Goal S-11.3: Hazards-Sensitive Uses. Require that land uses using hazardous materials be located and designed to ensure sensitive uses, such as schools, hospitals, day care centers, and residential neighborhoods, are protected. Similarly, avoid locating sensitive uses near established hazardous materials users or High Impact Industrial areas where incompatibilities would result.

Goal S-11.4: Contaminated Lands. Require areas of known or suspected contamination to be assessed prior to reuse. The reuse shall be in a manner that is compatible with the nature of the contamination and subsequent remediation efforts.

Goal S-11.5: Development Adjacent to Agricultural Operations. Require development adjacent to existing agricultural operations in Semi-Rural and Rural Lands to adequately buffer agricultural areas and ensure compliance with relevant safety codes where pesticides or other hazardous materials are used.

City of Oceanside General Plan – Hazardous Waste Management Element

The Hazardous Waste Management Element of the City of Oceanside General Plan addresses the City's goal of preventing pollution and minimization of hazardous waste that cannot be re-used or recycled on site. The City provides methods by which this goal may be realized including the reduction, elimination, secure containment, recycling, on-site treatment, and detoxification of hazardous materials and wastes as well as the improvement of processes and practices which involve the use or production of hazardous materials and waste. Another goal is the prevention of pollution of the City's air, water, and soil by hazardous materials and hazardous waste to the greatest extent possible.

City of Oceanside General Plan – Public Safety Element

The Public Safety Element of the City of Oceanside General Plan addresses safety considerations to ensure an acceptable level of public safety for prevention and reduction of loss of life and personal property of the citizens of Oceanside, including fire hazards. Per the General Plan, the danger of fire is likely the most severe hazard faced by residents of Oceanside. Fire prevention measures are detailed in this Public Safety Element related to structural, non-structural, and natural hazards. The City of Oceanside operates five fire stations, providing 3- to 5-minute response times to all areas within the City. Station 3, located on the southeast corner of Oceanside Boulevard and El Camino Real is the nearest station to the Proposed Project.

SDG&E Standards, Plans, and Procedures

SDG&E's Electric Standard Practice 113.1 (Wildland Fire Prevention and Fire Safety)

SDG&E's Electric Standard Practice 113.1 constitutes SDG&E's wildland fire prevention and fire safety standards for all activities, including construction activities such as those included as part of the Proposed Project. The purpose of Electric Standard Practice 113.1 is to formalize procedures and routine construction practices that will, among other things: improve SDG&E's ability to prevent the start of any wildland fire; set standards for tools and equipment to assist with rapid response to small fires; incorporate federal, state and local requirements into standard business practices; establish "Red Flag Warning" restrictions; set criteria for when a formal fire plan is required; and establish a template and requirements for formal fire plans.

SDG&E Fire Prevention Plan

The SDG&E Fire Prevention Plan is prepared in compliance with CPUC Decision 12-01-032 (Fire Safety Order) and provides "a comprehensive inventory of the organizational and operational activities that SDG&E undertakes in order to address the risk of fire in the SDG&E service territory."

SDG&E undertakes and implements numerous fire prevention and safety programs, procedures, and protocols and the SDG&E Fire Prevention Plan includes descriptions of SDG&E fire prevention and safety procedures and programs including fire threat and risk area mapping; operational practices to reduce the risk of fires; field practice guidelines; advanced vegetation management; fire hardening programs; and other related plans and programs.

As part of SDG&E's fire threat and risk mapping program, SDG&E uses a network of weather stations to monitor for high risk weather conditions, such as extreme winds.

4.8.3 Existing Conditions

4.8.3.1 Existing Setting

The following paragraphs describe the existing setting in the context of emergency response, hazardous materials, fire hazards, and potentially affected land uses (including schools, hospitals, and airports). Schools located within 0.25 mile of the Proposed Project have been identified according to CEQA requirements to assess impacts with regard to hazardous conditions. As the Proposed Project is located within a highly urbanized area of the City of Oceanside with established commercial and light industrial uses, the potential for hazardous materials contamination due to present or historic land uses does exist.

Emergency Response and Evacuation Plans

Within the Proposed Project area, emergency response is handled first and primarily by the individual municipal agency with jurisdictional authority. The standard emergency response procedures for each of

the relevant jurisdictions are outlined within the following subsections. Likewise, in the unlikely event that an evacuation is necessary, it will be carried out by the appropriate jurisdictional agencies (e.g., state, local, or military police). Potential evacuation scenarios identified by various State of California, San Diego County, and Southern California Edison's San Onofre Nuclear Generating Station planning documents include those initiated by radiation emission from the San Onofre Nuclear Generating Station facility, wildland fires, a tsunami, and/or terrorist attack. The following paragraphs describe emergency response plans and provisions of federal, state, and local entities having jurisdiction in and around the Proposed Project.

California

The State Emergency Plan outlines the emergency management system for use during all emergencies within the State of California (California OES 2009). The State Emergency Plan is developed, maintained, and implemented by the California OES. The State Emergency Plan defines the "policies, concepts, and general protocols" for the proper implementation of the California Standardized Emergency Management System. The Standardized Emergency Management System is an emergency management protocol that agencies within California must follow during multiagency response efforts whenever state agencies are involved.

San Diego County

The County OES is responsible for coordination of county-level responses to disasters, and of notification and coordination of appropriate agencies, including responding agencies. The OES staffs the Operational Area Emergency Operations Center, the centralized facility from which the County-wide response effort is managed in the event of a disaster situation. The Emergency Operations Center in turn staffs the Unified Disaster Council, which is responsible for coordinating county-wide plans and programs. The OES also is responsible for resource management and mobilization (County of San Diego 2015). The County's Unified Emergency Services Organization maintains the Operational Area Emergency Plan (County of San Diego 2014).

City of Oceanside

The City of Oceanside adopted the San Diego County Operational Area Emergency Plan and modified it as appropriate to the City. The City of Oceanside Fire Department developed and is responsible for maintaining the City of Oceanside Emergency Plan (Emergency Plan). The Emergency Plan is Standardized Emergency Management System-compliant and National Incident Management System-standardized. It was adopted in 2009, and was developed specifically to prepare for, respond to, and recover from any emergency or disaster that may affect the City of Oceanside. The Emergency Plan outlines specific steps for the City's response to an array of different emergencies, which are also covered by the 16 annexes/operations plans in the San Diego County Operational Area Emergency Plan. The City of Oceanside Police Department and Fire Department would represent first responders within the City and would provide mutual aid response within the San Diego County Operational Area (City of Oceanside Fire Department 2009).

Contaminated Sites

To determine those sites that may potentially represent the greatest risk, the following were considered:

- **Density of Listed Sites.** The greater the number of listed sites in the Project vicinity, the greater the potential for encountering contamination; and

- **Type of Release and Medium Affected.** Contaminants are typically transported at a faster rate in groundwater than in soil. The volume of contaminant released, release date, and medium impacted all affect how contaminants may have migrated and, therefore, their potential to result in an impact.

Existing Hazardous Sites

An electronic database search report was prepared by Environmental Data Resources (EDR), Inc. to complete the environmental records review relative to the proposed Ocean Ranch Substation site (refer to Appendix G, Phase I Environmental Site Assessment) (SDG&E 2015). The database search was used to identify properties that may be listed in the referenced agency records within the ASTM standard approximate search distances for Phase I Environmental Site Assessment database searches. Refer to Appendix G for a detailed description of each database searched. The database search report also contains search results of other State environmental databases that are relevant to the substation site.

The Phase I Environmental Site Assessment prepared for the proposed substation site concluded there is no evidence of recognized environmental conditions associated with the site. Table 4.8-1 lists the 13 properties (15 businesses) that were identified in the database search report within 0.5 mile of the substation site. Of these, three adjoining properties were considered notable: (1) 4112 Avenida Del La Plata, (2) 4100 Avenida De La Plata, and (3) 4128 Avenida De La Plata. However, since none of the three sites have been issued violations and based on the hydraulically down-gradient direction from the substation site, these properties have limited potential to adversely affect the substation site. (SDG&E 2015).

Table 4.8-1. Summary of Regulatory Database Search Results – 0.5-Mile

Business Name	Approximate Distance/Direction	Database	Summary of Listing
Bay Cal Commercial Painting (4100 Avenida De La Plata)	Adjacent property South	RCRA-SQG	Listed as Small Quantity Generator. No violations reported.
Landmark MGF Inc. (4112 Avenida De La Plata)	Adjacent property South-Southeast	RCRA-SQG	Listed as Small Quantity Generator. No violations reported.
		FINDS	Listed
Radax West Inc. (4128 Avenida De La Plata)	Adjacent property East-Southeast	RCRA-SQG	Listed as Small Quantity Generator. No violations reported.
		FINDS	Listed
		HAZNET	Listed for: other inorganic solid waste; other organic solids.
H and H Screening and Graphics (4147 Avenida De La Plata)	400 feet East-Northeast	RCRA-SQG	Listed as Small Quantity Generator. No violations reported.
		FINDS	Listed
		SD Co. HMMD	Listed as handler of regulated hazardous materials and hazardous waste generation.
		HAZNET	Listed for disposal of off-specification, aged, or surplus organics and unspecified organic liquid mixture.
Gilead Sciences Inc. (4049 Avenida De La Plata)	500 feet South-Southwest	RCRA-LQG	Listed as Large Quantity Generator. No violations reported.
		FINDS	Listed
		HAZNET	Listed for storage, bulking, and/or transfer off-site and incineration (thermal destruction other than use as a fuel).

Table 4.8-1. Summary of Regulatory Database Search Results – 0.5-Mile

Business Name	Approximate Distance/Direction	Database	Summary of Listing
Excelsior Enterprises Inc. (1947 Plaza Real)	750 feet East	RCRA-SQG	Listed as Small Quantity Generator. No violations reported.
		FINDS	Listed
		HAZNET	Listed for liquids with halogenated organic compounds >= 1,000 mg/l
P&M Manufacturing Company (4056 Calle Platino)	1,000 feet South	RCRA-SQG	Listed as Small Quantity Generator. No violations reported.
		FINDS	Listed
National Metal Technologies (4040 Calle Platino)	1,000 feet South-Southwest	RCRA-SQG	Listed as Small Quantity Generator. Notices of violations in 1991, 1992, 1994, since corrected.
		FINDS	Listed
		SLIC	A waste oil release was reported. The soil only case was closed in 1994.
		SD Co. HMMD	Listed as handler of regulated hazardous materials, and hazardous waste generation and treatment.
		HAZNET	Listed for generation of organic solids, unspecified aqueous solution, phosphate sludge, and oil/water separation sludge.
		SD Co. SAM	A soil only case was closed in 1994.
		ENVIROSTOR	No further action granted in 2006.
SMM USA, Inc. (4055 Calle Platino)	1,200 feet South-Southeast	HWP	Listed for historical non-operating permit.
Sumitomo Metal Mining USA, Inc. (4055 Calle Platino)	1,200 feet South-Southeast	RCRA-TSDF	Listed as a facility that is engaged in the treatment, storage or disposal of hazardous waste with no violations.
		CERC-NFRAP	Preliminary assessment completed in 1991, archived in 1996.
		CORRACTS	Listed as a facility that manufactures fabricated metal products.
		FINDS	Listed as a hazardous waste biennial reporter.
		HAZNET	Listed for discharge of off-specification, aged or surplus organics and unspecified aqueous solution to sewer and for recycling.
TMI (4079 Calle Platino)	1,500 feet South-Southeast	SD Co. HMMD	Listed for storage of diesel fuel oil and sulfuric acid; 2006 violation for lack of hazardous materials business plan.
		SLIC	Gasoline cleanup site closed in 1995.
		EMI	Listed from 1990 through 1997.
		SD Co. SAM	Case closed in 1995.
Greenfield Fence Inc. (4051 Oceanside Boulevard)	1,900 feet South	HIST CORTESE	Listed
		LUST	A gasoline-impacted soil only case was closed in 1997.

Table 4.8-1. Summary of Regulatory Database Search Results – 0.5-Mile

Business Name	Approximate Distance/Direction	Database	Summary of Listing
		SD Co. HMMD	Listed as handler of regulated hazardous materials and waste; storage of unleaded gasoline, lubricating oils, latex paint, used oil, organic liquids, antifreeze, paint sludge, compressed gas, and used oil filters; violations listed from 2006 to 2012.
		HAZNET	Listed for disposal activity: fuel blending prior to energy recovery at another site.
		SD Co. SAM	Soil only case closed in 1997.
San Diego Auto Auction (4051 Oceanside Boulevard)	1,900 feet South	LUST	A gasoline-impacted soil only case was closed in 1997.
		SD Co. HMMD	Listed for inactive permit.
		SWEEPS UST	One 4,000 gallon unleaded gasoline underground storage tank, one 550 gallon petroleum underground storage tank, and one 550 gallon unleaded gasoline underground storage tank were reported.
Replanet LLC (4150 Oceanside Boulevard)	2,000 feet Southeast	SWRCB	Recycler of aluminum, glass, plastic, and metals since 2012.
		SD Co. HMMD	Listed as handler of regulated hazardous materials and generator of hazardous and medical waste; storage of propane, solvents, aerosols and flammables, medical waste, and corrosive waste.
		HAZNET	Listed for disposal activity: storage, bulking, and/or transfer off-site (no treatment/recovery).
Unocal/76 Service Station #7288 (4181 Oceanside Boulevard)	2,400 feet East-Southeast	LUST	Low priority gasoline-impacted soil only case closed in 2007; monitoring program closed in 2012.
		SLIC	Cleanup Program Site case closed.
		SD Co. HMMD	Permitted handler of regulated hazardous materials and hazardous/medical waste generation; violation for improper posting and labeling requirements since corrected.
		SD Co. SAM	Site assessment and mitigation case closed in 2007.

Source: SDG&E 2015.

No properties within 1 mile of the proposed substation site were identified by EDR in the database search report in the Federal National Priorities List (NPL), Department of Defense Facilities list, Federal Comprehensive Environmental Response, Compensation, and Liability Information System list, Formerly Used Defense Sites list, or the California-equivalent NPL list.

Contaminated Soil and Groundwater

No visual or olfactory indications of soil or groundwater contamination have been identified along the power line route or at the proposed substation site. A review of regulatory records and historical aerial photography did not identify impacted soil and/or groundwater in any of the areas affected by the Proposed Project. Based on previous studies, the substation site and much of the surrounding area have an estimated

groundwater level to be greater than 30 feet below ground surface and less than 280 feet above msl (SDG&E 2015), as described further in Section 4.9, Hydrology and Water Quality.

Fire Hazards

The Proposed Project is located in an area designated as a Non-Very High Fire Hazard Safety Zone as determined by the California Department of Forestry and Fire Protection (CAL FIRE 2009).

Potentially Affected Land Uses

Schools

Children in schools are considered to be sensitive receptors and are therefore considered in the analysis for impacts relative to hazards and hazardous materials. Four schools are located within 0.25 mile of the Proposed Project (Google 2015). These schools are: The Classical Academy (approximately 0.2 mile to the east); La Petite Academy (approximately 0.25 mile to the northeast); Coastal Academy (approximately 0.2 mile to the south); and Quantum Learning (approximately 0.25 mile to the southeast).

Hospitals

There are no large hospitals located in the immediate vicinity of the Proposed Project. The closest medical facility is 8-2-8 Urgent Care, located approximately 0.5 mile southeast of the proposed substation site. The Scripps Coastal Medical Center, Veteran's Administration San Diego Healthcare System Oceanside Clinic, the Rady Children's Hospital, and Tri-City Medical Center are within approximately 2 miles of the proposed project (Google 2015).

Airports

The Proposed Project is located approximately 3 miles east of OMA and is located within the airport influence area (San Diego County Regional Airport Authority 2015). Therefore, the Proposed Project is required by the State of California to be consistent with the OMA ALUCP. The January 2010 OMA ALUCP describes the noise, safety, airspace protection, and overflight policies and standards adopted to promote compatibility between the OMA and surrounding future land uses (OMA 2010).

The Proposed Project is located approximately 6 miles south from the MCB Camp Pendleton Airport and within the airport influence area (San Diego County Regional Airport Authority 2015), therefore, it is required by law to be consistent with the MCB Camp Pendleton ALUCP. The June 2008 MCB Camp Pendleton ALUCP describes the noise, safety, airspace protection, and overflight policies and standards adopted to promote compatibility between the OMA and surrounding future land uses (MCB Camp Pendleton 2008).

4.8.4 Standard Operating Procedures

With implementation of the standard operating procedures as outlined within Section 3.9, *Standard Operating Procedures*, and summarized in this section, impacts related to hazards and hazardous materials will remain less than significant.

- **Blasting.** In the unlikely event that rock blasting is used during construction, a noise and vibration calculation will be prepared and submitted to SDG&E Environmental Programs and Transmission Engineering and Design for review before blasting at each site. The construction contractor will ensure compliance with all relevant local, state, and federal regulations relating to blasting activities, as well as SDG&E's blasting guidelines.

- **Encroachment Permits.** SDG&E will obtain the required encroachment permits from the appropriate jurisdictional agencies for crossings at city streets and will ensure that proper safety measures are in place while construction work is occurring near public roadways. These safety measures include flagging, proper signage, and orange cones to alert the public to construction activities near the roadway.
- **Hazardous Materials.** SDG&E shall address potential impacts relating to the handling and use of hazardous materials through compliance with numerous state and federal regulations, including, but not limited to:
    - Federal OSHA regulations for worker safety in hazardous material remediation and hazardous waste operations (29 CFR Section 1910.120).
    - Federal OSHA regulations hazard communication for workers (29 CFR Section 1910.1200).
    - Federal OSHA regulations for toxic air contaminants for workers (29 CFR Section 1910.1000).
    - Cal/OSHA regulations for worker safety in hazardous material remediation and hazardous waste operations (8 California Code of Regulations 5192).
    - Cal/OSHA regulations for hazard communication for workers (8 California Code of Regulations 5194).
    - Department of Toxic Substances Control regulations implementing RCRA and the California HWCL (22 California Code of Regulations Division 4.5).
- **Hazardous Materials and Waste Management Plan.** SDG&E will prepare a project-specific Hazardous Materials and Waste Management Plan (HMWMP) for the construction phase of the Proposed Project to ensure compliance with all applicable federal, state, and local regulations. The HMWMP will reduce or avoid the use of potentially hazardous materials for the purposes of worker safety, protection from groundwater contamination, and proper disposal of hazardous materials. The plan will include the following information related to hazardous materials and waste, as applicable:
    - A list of the hazardous materials that will be present on site during construction, including information regarding their storage, use, and transportation;
    - Procedures for the identification of and avoidance of contaminated materials;
    - Any secondary containment and countermeasures that will be required for onsite hazardous materials, as well as the required responses for different quantities of potential spills;
    - A list of spill response materials and the locations of such materials at the Proposed Project site during construction;
    - A list of the adequate safety and fire suppression devices for construction activities involving toxic, flammable, or exposure materials;
    - A description of the waste-specific management and disposal procedures that will be conducted for any hazardous materials that will be used or are discovered during construction of the Proposed Project; and

  - A description of the waste minimization procedures to be implemented during construction of the Proposed Project.

- **Project Fire Prevention Plan.** SDG&E Electric Standard Practice 113.1 will be the Project Fire Prevention Plan. This standard identifies project-specific risk-related activities as well as measures (including tools and procedures) to address said risks. This standard addresses all work activities which has potential to start a wildland fire and sets forth equipment and practices relevant to fire prevention. This plan meets state and local fire prevention guidelines.
- **Safety and Worker Environmental Awareness Program.** SDG&E will prepare a Safety and Worker Environmental Awareness Program for project-personnel. The Safety and Worker Environmental Awareness Program may include training for relevant topics such as:
  - General safety procedures;
  - General environmental procedures;
  - Fire safety;
  - Biological resources;
  - Cultural resources;
  - Paleontological resources;
  - Hazardous materials protocols and BMPs; and
  - The SWPPP;
- **SDG&E Water Quality Construction BMP Manual.** SDG&E's Water Quality Construction BMPs Manual (included as Appendix H) organizes and presents SDG&E's standard water quality protection procedures for various specific actions that routinely occur as part of SDG&E's ongoing construction, operations, and maintenance activities. The primary focus of most BMPs is the reduction and/or elimination of potential water quality impacts during construction of linear projects such as the Proposed Project. The BMPs described within the BMP Manual were derived from several sources including the State of California guidelines as well as the Caltrans Water Quality BMPs. The BMP Manual will be utilized during construction (by way of preparation and implementation of the SWPPP), operation, and maintenance of the Proposed Project to ensure compliance with all relevant SDG&E and government-mandated regulatory water quality standards.
- **SPCC Plan.** SDG&E will prepare an SPCC in accordance with CFR 40, Part 112 before petroleum products in threshold quantities will be stored on-site. Elements of an SPCC Plan include, but are not limited to, the following:
  - Facility diagram and description;
  - Oil discharge predictions;
  - Appropriate secondary containment or diversionary structures;
  - Facility drainage;
  - Personnel training and oil discharge prevention briefings; and
  - Recordkeeping and five-year plan review.

- **Standard Traffic Control Procedures.** SDG&E will implement traffic control plans to address potential disruption of traffic circulation during construction activities and address any safety issues. These traffic control plans will be prepared by the Proposed Project engineer or contractor.

4.8.5 Applicant Proposed Measures

No APMs related to hazards and hazardous materials are proposed.

4.8.6 Project Impacts

The Proposed Project includes construction of a new 69/12 kilovolt substation and loop-in of an existing 69 kV underground power line to connect to the proposed substation (refer to Chapter 3.0, *Project Description*).

The temporary impact areas may vary because the positioning of construction vehicles, equipment, and materials cannot be accurately anticipated prior to construction, as locations are dependent upon the contractor safely performing the work.

Once the proposed Ocean Ranch Substation is constructed and placed in service, it will not require personnel stationed onsite except during periodic and routine maintenance activities that will ensure reliable operation of all equipment within the substation. The underground components will be inspected consistent with SDG&E's existing underground inspection and maintenance program.

4.8.6.1 Methodology

Records Review

A database search report was obtained from EDR for the proposed substation site. The report documents findings of various federal, state, and local regulatory database searches regarding properties with known or suspected releases of hazardous materials or petroleum hydrocarbons. The following federal, state, and local records were reviewed, among others, to determine areas where contamination might be encountered during construction:

- California Hazardous Material Incident Report System.
- Comprehensive Environmental Response, Compensation, and Liability Information System.
- Department of Toxic Substances Control Cortese List.
- Emergency Response Notification System and State Lists.
- Federal Institutional Controls/Engineering Controls.
- Federal Superfund Liens.
- Leaking Underground Storage Tanks.
- Local Landfill/Solid Waste Disposal sites.
- Local Brownfield sites.
- NPL (included delisted and proposed sites).
- Notify 65.
- Registered Underground Storage Tank or Aboveground Storage Tank Database.

- RCRA Corrective Action Report (CORRACTS) Treatment, Storage, Disposal facilities.
- RCRA non-CORRACTS Treatment, Storage, Disposal facilities.
- RCRA generators.
- School Property Evaluation Program.
- State and Tribal Equivalent NPL/ Comprehensive Environmental Response, Compensation, and Liability Information System sites.
- State and Tribal Registered Underground Storage Tanks.
- State and Tribal Landfills and Solid Waste Disposal sites.
- State and Tribal Leaking Underground Storage Tanks.
- State and Tribal Voluntary Cleanup sites.
- Statewide Spills, Leaks, Investigations, and Cleanups.
- State Response sites.
- Statewide Spills, Leaks, Investigations, and Cleanups.
- Toxic Alert for California Superfund sites.
- Toxic Release Inventory Database.

A review of the databases identified properties located within the recommended ASTM distances from the proposed substation. This review identified hazardous materials and the use, generation, storage, treatment, or disposal of chemicals, as well as any release incidents of such materials that may be encountered by the proposed substation.

In addition, emergency evacuation and response plans employed by the City of Oceanside and emergency measures implemented by the County of San Diego OES were researched. The City of Oceanside General Plan was also reviewed for relevant policies, plans, and programs pertaining to hazards and hazardous materials.

Historical Use

Aerial photographs, city directories, and topographic maps were reviewed as part of the Phase I Environmental Site Assessment (refer to Appendix G), to assess historical site and adjacent property uses, and the potential for encountering hazardous materials in the proposed substation site as a result of historical use. The Phase I Environmental Site Assessment confirmed the previous use of the proposed substation site as undeveloped land used for agricultural purposes from prior to 1939 until sometime between January 2006 and April 2007 when it was graded in preparation for development. The substation site appeared to be actively cultivated for more than 60 years, but no documentation as to any application of pesticides or herbicides at the substation site was identified (Google 2016).

4.8.6.2 Significance Criteria

According to Section 15002(g) of the CEQA Guidelines, "a significant effect on the environment is defined as a substantial adverse change in the physical conditions which exist in the area affected by the proposed project." As stated in Section 15064(b) of the CEQA Guidelines, the significance of an activity may vary

with the setting. The significance of project-related impacts on hazards and hazardous materials was evaluated for each of the criteria listed in the impact summary table as described below.

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? *Less than Significant*

It is possible that impacts could occur from the transport or use of hazardous materials during the construction phase as the result of incidental spills or other unauthorized releases during foundation excavation and construction; trenching; conductor pulling, splicing, and tensioning during the installation of the 69/12 kV distribution substation and underground components; and transformer transporting and/or oil filling. Other impacts relative to the use of hazardous materials could occur during construction at temporary storage sites, from transportation of materials or workers to worksites, or during the refueling or servicing of equipment. Vehicles and equipment used for construction may contain or require temporary, short-term use of potentially hazardous substances, such as fuel, lubricating oils, or hydraulic fluid.

In addition, material that is excavated, transported, stored, or disposed of during construction of the Proposed Project has a low potential to contain hazardous materials. The Phase I Environmental Site Assessment prepared for the proposed substation site concluded there is no evidence the site contains hazardous materials that could present a hazard to construction workers, the public, or the environment (refer to Appendix G). However, if hazardous materials are encountered during construction, hazards to construction workers, the public, or the environment could occur if not properly managed.

Based on previous studies, the proposed substation site and much of the surrounding area have an estimated groundwater level to be greater than 30 feet below ground surface and less than 280 feet above mean sea level (SDG&E 2015). As such, although it is not expected that groundwater will be encountered, there is the potential for groundwater to be encountered during construction. Should groundwater be encountered, the procedures described in Section 3.6.2.4, *Dewatering* in Chapter 3.0, *Project Description* regarding groundwater discharge will be followed.

A general listing of types of chemicals used during construction is provided in Table 4.8-2: Hazardous Materials Typically Used for Construction and/or Operation and Maintenance. Under the initial and ultimate configuration of the substation, each low profile transformer will contain approximately 10,400 gallons of oil. With the exception of the transformer oil, use of hazardous materials during construction, will not require hazardous materials in unusual quantities or with unusual risks compared to typical construction projects. In the case of an inadvertent release or other unauthorized release, hazardous materials could have the potential to adversely affect the health or safety of construction workers, nearby building occupants or residents, or others within the vicinity of the Proposed Project.

Table 4.8-2. Hazardous Materials Typically Used for Construction and/or Operation and Maintenance

Hazardous Materials	
ABC fire extinguisher	Hydraulic fluid
Acetylene gas	Insect killer
Air tool oil	Insulating oil (inhibited, non-PCB)
Ammonium hydroxide	Lubricating grease
Antifreeze (ethylene glycol)	Mastic coating
Automatic transmission fluid	Methyl alcohol
Battery acid (in vehicles and in the meter house of the substations)	Mineral oil
Bottled oxygen	Motor oils
Brake fluid	Paint thinner
Canned spray paint	Propane
Chain lubricant (contains methylene chloride)	Puncture seal tire inflator
Connector grease (penotox)	Safety fuses
Contact cleaner 2000	Starter fluid
Diesel de-icer	Sulfur hexafluoride (within the circuit breakers in the substations)
Diesel fuel	Two-cycle oil (contains distillates and hydrotreated heavy paraffinic)
Diesel fuel additive	Wasp and hornet spray (1,1,1-trichoroethane)
Eye glass cleaner (contains methylene chloride)	WD-40
Gasoline	ZEP (safety solvent)
Gasoline treatment	ZIP (1,1,1-trichloroethane)
Hot stick cleaner (cloth treated with polydimethylsiloxane)	

As presented in Section 4.8.2, *Regulatory Setting*, several laws, rules, and regulations apply to the routine use of hazardous materials during construction, which include proper handling and disposal of hazardous materials. SDG&E will comply with all such laws, rules, and regulations. Transport of hazardous materials during the construction period, including approximately 10,400 gallons of transformer oil to enable initial operation of the substation, will comply with applicable laws, rules and regulations. In the event of an accidental release of hazardous materials during construction, all spills will be immediately cleaned up and disposed of properly in accordance with federal, state, and local regulations. Typical industry practices could include, but would not be limited to, use of absorbent pads for spill containment, specified locations for construction vehicle refueling, and a daily vehicle inspection schedule designed to identify leaking fuels and/or oils as early as possible.

In addition, a HMWMP, as described in Section 4.8.4, *Standard Operating Procedures*, will be implemented. This plan will include procedures for the use, storage, and transportation of hazardous materials; protocols for the implementation of secondary containment and countermeasures for hazardous materials; a list of and the locations of spill response materials, and a description of waste management and disposal procedures. As part of SDG&E's ordinary operating procedures, a Safety and Worker Environmental Awareness Program will be developed which will include training on hazardous material protocols and BMPs. Use of hazardous materials during construction will be in accordance with established protocols and applicable Material Safety Data Sheets. With the adherence to applicable laws and

regulations, implementation of SDG&E's Water Quality Construction BMP Manual, Safety and Worker Environmental Awareness Program training, and implementation of standard operating procedures as outlined in Section 3.9, *Standard Operating Procedures*, and summarized in this section, impacts will be less than significant.

Similar to activities occurring during the construction phase, the use of hazardous materials during ongoing operation and maintenance of the proposed Ocean Ranch Substation could pose health and safety hazards to SDG&E maintenance staff, area residents, and the surrounding environment as the result of an inadvertent release of hazardous substances during routine or emergency maintenance, as well as during daily operation of the facilities.

The majority of chemicals used for ongoing operation or maintenance activities will be similar to those used during the construction phase; however, daily use of such chemicals will generally be considerably less during operation and maintenance than during construction. A typical list of the types of hazardous materials used during operations and maintenance is provided in Table 4.8-2, Hazardous Materials Typically Used for Construction and/or Operation and Maintenance. Hazardous chemicals used for operations and maintenance activities, with the exception of the oil contained in the substation transformers, will be transported to and removed from the Proposed Project site by maintenance personnel, rather than stored on site, to reduce the overall potential for accidental release of such substances.

At its ultimate configuration, the proposed Ocean Ranch Substation will support four low profile transformers banks that will contain a total of approximately 10,400 gallons of oil. As the transformers age, the potential increases for leaks to occur. Other major natural events (e.g., seismic events) or collisions from maintenance equipment will also have the potential to result in a release into the environment. Storage and use of hazardous materials, including mineral oil, in amounts exceeding 1,320 gallons is regulated under the CWA. SDG&E will prepare a site-specific HMBP and SPCC Plan, which will contain the proper procedures for storage, handling, spill response, and disposal of hazardous materials, including fueling, maintenance, spill containment, leak inspection, and cleanup procedures, in accordance with the CWA. In addition, the proposed Ocean Ranch Substation will include a global oil containment system to ensure any future leak or spill is fully contained. The basin will be designed to have a capacity that exceeds the transformers' capacity by 10 percent. With the installation of the global oil containment system, which is part of the Proposed Project's design, and implementation of HMBP and SPCC Plans, the Proposed Project's transport, use, storage, and disposal of hazardous materials will not pose a significant hazard. The potential impacts are considered less than significant.

b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? *Less than Significant*

The EDR database search report revealed that no existing contamination has been identified on the proposed substation site as discussed previously. No demolition activities at the substation site that could potentially result in the release of hazardous materials (e.g., asbestos) will be required. Trenching will be required for the underground vaults and the loop-in of the underground power line. The potential exists to encounter previously unknown contaminated soil or water during construction activities.

As discussed above in response to Question a) regarding routine transport, use, or disposal of hazardous materials, hazardous materials used in vehicles or equipment during the construction phase may inadvertently be released through spills or leaks; however, with the adherence to applicable laws and regulations, implementation of SDG&E's Water Quality Construction BMP Manual, Safety and Worker

Environmental Awareness Program training, and implementation of standard operating procedures, including implementation of a SPCC Plan, construction-related impacts will be less than significant.

Hazardous material impacts could occur as a result of incidental spills during normal operation or routine or emergency maintenance at the proposed Ocean Ranch Substation. SDG&E and its contractors will be subject to and will follow all relevant local, state, and federal regulations regarding the transport, storage, use, handling, and spill response for hazardous materials. Vehicles and equipment that will be used to maintain Proposed Project facilities may contain materials that could constitute a hazardous substance if released into the environment; however, the use of such chemicals will typically be considerably less than those used during Proposed Project construction activities.

To reduce the potential for adverse effects to occur, SDG&E will maintain readily available spill kits to effectively respond to incidental spills as part of their ordinary operating procedures. With these measures in place, potential impacts from operation and maintenance of the Proposed Project will be less than significant.

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? *Less than Significant*

The nearest sensitive receptors to the Proposed Project are schools. There are a total of 4 schools located within 0.25 mile of the proposed substation site. These schools are: The Classical Academy (approximately 0.2 mile to the east); La Petite Academy (approximately 0.25 mile to the northeast); Coastal Academy (approximately 0.2 mile to the south); and Quantum Learning (approximately 0.25 mile to the southeast).

As discussed in the response to Question a), impacts associated with hazardous material transport, use, or disposal during construction are considered to be less than significant. In addition, as discussed in the response to Question b), impacts associated with reasonably foreseeable upset and accident conditions are considered to be less than significant due to the implementation of an SPCC and the maintenance of spill kits by substation personnel. In addition, as further discussed in the response to Question b), a Safety and Worker Environmental Awareness Program will be prepared to guide construction workers on how to properly manage any contamination discovery.

Construction activities will result in temporary emissions of construction-related air pollutants in the vicinity of the schools, but not of a quantity or duration that would be considered hazardous to students or other receptors within the Proposed Project area. Because the temporary emissions in the vicinity of the schools will not be of a hazardous concentration (see Section 4.3, Air Quality), this impact is less than significant.

Therefore, construction of the Proposed Project is not expected to cause a significant health or environmental hazard, and potential impacts from the use of hazardous substances within proximity to schools will be less than significant.

As discussed in the response to Question a), the use of hazardous materials during operation and maintenance will generally be considerably less than during construction. Hazardous chemicals used will be transported to and removed from the Proposed Project site by maintenance personnel, rather than stored onsite, and therefore will not cause significant health or environmental hazards. In addition, the installation of a global oil containment system and implementation of a SPCC Plan, as required by law, will ensure that any hazardous materials leak or spill at the proposed Ocean Ranch Substation will be fully contained and appropriately controlled during operation. Therefore, potential impacts from the use of hazardous substances within proximity to schools during operation and maintenance will be less than significant.

d) Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment? *No Impact*

The proposed substation site is not identified on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Cortese List). Therefore, construction of the Proposed Project will not result in any impacts related to known hazardous materials sites listed in Government Code Section 65962.5. Although 13 sites with past or current hazardous materials cases were identified within 0.5 mile of the proposed substation, including adjacent to the substation site, they do not pose significant risk due to their localized nature, present regulatory status, and lack of current violations reported. Therefore, impacts related to hazards associated with Government Code Section 65962.5 will not occur.

e) Would the project, if located within an airport land use plan or within 2 miles of a public airport or public use airport for which such a plan has not been adopted, result in a safety hazard for people residing or working in the project area? *No Impact*

The Proposed Project is located within the airport influence area of the OMA and MCB Camp Pendleton Airport. Both airports have adopted ALUCPs. The Proposed Project is located approximately 3 miles east of OMA and approximately 6 miles from MCB Camp Pendleton Airport. The Proposed Project will be designed and constructed in accordance with the noise, safety, airspace protection, and overflight policies and standards described in the OMA ALUCP and in the MCB Camp Pendleton ALUCP, which were designed to prevent new structures from becoming hazards to air navigation. Thus, there will be no creation of hazards to air navigation and, therefore, no safety hazard for people residing or working in the Proposed Project area.

Per CFR Part 77: Objects Affecting Navigable Airspace, structures that are 200 feet high above ground level will require coordination with the Federal Aviation Administration. Per the OMA ALUCP requirements and the MCB Camp Pendleton ALUCP requirements, coordination with the Federal Aviation Administration is not required prior to construction of the Proposed Project because no structures greater than 200 feet in height will be constructed or utilized. The Proposed Project will have no impact on public airports, nor will it result in a safety hazard for people residing or working in the project area.

f) Would the project, if located within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area? *No Impact*

The closest private airstrip is located at the OMA, approximately 3 miles from the Proposed Project. As discussed in the response to Question e), the Proposed Project will not create hazards to air navigation and, therefore, no safety hazard for people residing or working in the proposed project area. The Proposed Project will be designed and constructed in accordance with the noise, safety, airspace protection, and overflight policies and standards described in the OMA ALUCP. Therefore, the Proposed Project will have no impact on private airstrips, nor will it result in a safety hazard for people residing or working in the project area.

g) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? *Less than Significant*

The City of Oceanside adopted the San Diego County Operational Area Emergency Plan and modified it as appropriate to the City. The City of Oceanside Fire Department developed and is responsible for maintaining the City of Oceanside Emergency Plan. As described in detail in Section 4.16, *Traffic and Transportation*, temporary lane closures will be necessary during some construction activities to provide safety to the public and workers within public areas and roadways. It is anticipated that between one and

two lanes of Avenida Del Oro and Avenida De La Plata will occasionally be closed during trenching activities. Temporary parking of limited construction-related vehicles along Rocky Point Drive may be required depending on actual construction activities occurring at the proposed Ocean Ranch Substation site.

Road closures and encroachment into public roadways could increase hazards if the appropriate safety measures were not in place, such as proper signage, orange cones, and flaggers. However, SDG&E will obtain the required encroachment permits from the City of Oceanside and implement traffic control measures accordingly. In addition, emergency vehicles will be provided access during the temporary closures. Therefore, emergency access will not be directly impacted during construction. In the event of an emergency requiring evacuation, SDG&E will ensure that all potential routes are open and accessible for public use by limiting trenching activities to approximately 300 to 500 linear feet per day within a single lane of traffic, or as allowed by permit requirements. As a result, any potential impacts during construction will be less than significant.

Operation and maintenance of the Proposed Project is not expected to require any road or lane closures and, therefore, will not interfere with any emergency vehicle or evacuation routes. Therefore, no impact will occur during operation and maintenance.

h) Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fire, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? *No Impact*

The Proposed Project site will be located in an urban area with little to no vegetation on site. As previously discussed, the Proposed Project site is not located in a wildland fire hazard area. CAL FIRE identified the Project Area as non-very high fire hazard severity zone. Although energized conductors can create potential for a fire hazard, SDG&E takes into account normal and unusual structural loading in its designs under General Order 95 to prevent these fire hazards. Further, SDG&E will implement their Electric Standard Practice 113.1 as the Project Fire Prevention Plan. This standard identifies project-specific risk-related activities as well as measures (including tools and procedures) relevant to fire prevention, in compliance with state and local fire prevention guidelines. Therefore, no impact will occur.

4.8.7 References

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TABLE OF CONTENTS

4.9 HYDROLOGY AND WATER QUALITY 4.9-1
4.9.1 Introduction 4.9-2
4.9.2 Regulatory Setting 4.9-2
4.9.3 Existing Conditions 4.9-8
4.9.4 Standard Operating Procedures 4.9-10
4.9.5 Applicant Proposed Measures 4.9-14
4.9.6 Project Impacts 4.9-15
4.9.7 References 4.9-24

LIST OF FIGURES

4.9-1 Surface Water in Proposed Project Vicinity 4.9-11
4.9-2 Drainage Areas 4.9-21

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4.9 HYDROLOGY AND WATER QUALITY

Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Violate any other water quality standards or waste discharge requirements?	☐	☐	☒	☐
b.	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or off-site?	☐	☐	☒	☐
e.	Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f.	Otherwise substantially degrade water quality?	☐	☐	☒	☐
g.	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h.	Place within a 100-year flood hazard area, structures that would impede or redirect flood flows?	☐	☐	☐	☒
i.	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j.	Cause inundation by seiche, tsunami or mud flow?	☐	☐	☒	☐

4.9.1 Introduction

This section of the PEA describes the existing conditions and project-related impacts to hydrology and water quality in the vicinity of the Proposed Project. The analysis concludes that less than significant impacts related to hydrology and water quality will occur. The Proposed Project's effects on these resource issues were evaluated using the significance criteria set forth in Appendix G of the CEQA Guidelines. The conclusions are summarized in the impact summary table above, and discussed in more detail in Section 4.9.6.

4.9.2 Regulatory Setting

This section includes a description of the hydrology and water quality regulatory framework.

4.9.2.1 Federal

Clean Water Act

The CWA (Title 33 of the U.S.C. Section 1251 et seq.), formerly the Federal Water Pollution Control Act of 1948, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of waters of the U.S. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain non-point source discharges to surface water.

CWA Clean Water Rule

In June 2015, the USEPA and the USACE finalized the Clean Water Rule to clarify the definition of "waters of the U.S." under the CWA (USEPA 2015). The Rule provides for the following:

- Defines and protects tributaries that impact the health of downstream waters;
- Provides certainty in how far safeguards extend to nearby waters;
- Protects the nation's regional water treasures;
- Focuses on streams, not ditches;
- Maintains the status of waters within municipal separate storms sewer systems; and
- Reduces the use of case-specific analysis of waters.

CWA Section 402

The NPDES program is administered by the USEPA, which provides oversight in California to the RWQCBs. The Proposed Project is under the jurisdiction of the San Diego RWQCB. The NPDES program was established in 1972 to control discharges of pollutants from defined point sources (33 USC Section 1342) and was initially focused on industrial-process wastewater and Publicly-Owned Treatment Works. Section 402 of the CWA was amended in 1987 to include requirements for five separate categories of stormwater discharges, known as Phase I facilities which include:

- Facilities already covered by an NPDES permit for stormwater.
- Facilities that engage in industrial activities.
- Large municipal separate storm drain systems that serve more than 250,000 people.
- Medium municipal separate storm drain systems that serve between 100,000 and 250,000 people.
- Facilities that are considered significant contributors of pollutants to waters of the U.S.

In August 1995, the USEPA issued a final rule for Phase II discharges. Light industrial facilities, small construction sites (less than 5 acres), and small municipalities (population less than 100,000) are considered Phase II stormwater discharges.

Under Section 402 of the CWA, projects that disturb 1 acre or more of soil are required to obtain coverage under the SWRCB's General Permit for Stormwater Discharges Associated with Construction Activity Order No. 2009-0009-DWQ NPDES No. CAS000002 (General Permit; SWRCB 2009). The General Permit requires the applicant to file a public notice of intent to discharge stormwater and to prepare and implement a .SWPPP. The SWPPP includes a site map, description of proposed activities, demonstration of compliance with applicable ordinances and regulations, and a description of BMPs to be implemented to reduce potential erosion and discharge of construction-related pollutants.

CWA Section 404

Section 404 of the CWA authorizes the USACE to regulate the discharge of dredged or fill material to waters of the U.S., including wetlands (33 U.S.C. Section 1344). The USACE issues individual site-specific permits or general permits (i.e., Nationwide Permits or Regional General Permits) for such discharges.

CWA Section 401

Under Section 401 of the CWA, any applicant for a federal license or permit to conduct any activity that may result in any discharge into navigable waters must provide the licensing or permitting agency with a Water Quality Certification that the discharge will comply with the applicable CWA provisions or a waiver (33 U.S.C. Section 1341). If a federal permit is required, such as a USACE permit for dredge and fill discharges, the project proponent must also obtain a Water Quality Certification from the RWQCB.

CWA Sections 303 and 304

Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the U.S. (33 U.S.C. Section 1313). Section 304(a) requires the USEPA to publish water quality criteria that accurately reflect the latest scientific knowledge on the kind of effects and extent of effects that pollutants in water may have on health and welfare (33 U.S.C. Section 1314(a)). Where multiple uses exist, water quality standards must protect the most sensitive use. Water quality standards are typically numeric, although narrative criteria based on biomonitoring methods may be employed when numerical standards cannot be established or when they are needed to supplement numerical standards.

Section 303(c)(2)(b) of the CWA requires states to adopt numerical water quality standards for toxic pollutants for which the USEPA has published water quality criteria and which could reasonably be expected to interfere with designated uses in a waterbody.

Under Section 303(d) of the CWA, states, territories, and authorized tribes are required to develop a list of waterbodies where beneficial uses are impaired. The waters on the list do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. The law requires that these jurisdictions establish priority rankings for water segments on the lists and develop action plans, called Total Maximum Daily Loads, to improve water quality.

4.9.2.2 State

California Fish and Game Code

Sections 1601 through 1616 of the California Fish and Game Code require a Lake or Streambed Alteration Agreement between the CDFW and an entity proposing to substantially divert or obstruct

the natural flow or affect changes to the bed, channel, or bank of any river, stream, or lake. The Lake or Streambed Alteration Agreement is designed to protect the fish and wildlife resources of a river, lake, or stream.

Porter Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act works in cooperation with the CWA to establish the SWRCB. The SWRCB is divided into nine regions, each overseen by a RWQCB. The SWRCB, and thus each RWQCB, is responsible for protecting California's surface waters and groundwater supplies.

The Porter-Cologne Water Quality Control Act develops Basin Plans that designate the beneficial uses of California's rivers and groundwater basins. The Basin Plans also establish narrative and numerical water quality objectives for those waters. Basin Plans are updated every 3 years and provide the basis of determining waste discharge requirements, taking enforcement actions, and evaluating clean water grant proposals. The Porter-Cologne Water Quality Control Act is also responsible for implementing CWA Sections 401-402 and 303(d) to SWRCB and RWQCBs.

SWRCB Order 2014-0174-DWQ

The SWRCB adopted Water Quality Order 2014-0174-DWQ for the reissuance of the Statewide General NPDES Permit (CAG990002) on October 21, 2014. This permit covers short-term and intermittent discharges from the dewatering of utility vaults and underground structures to waters of the U.S. by utility companies, and is utilized by permittees for the discharge of uncontaminated water from vaults and substructures (i.e., water not related to construction groundwater dewatering) to surface waters. This Order expires on June 29, 2020, but will remain in effect until the SWRCB reissues the General Permit.

SWRCB Order WQ-2014-0090-DWQ

The SWRCB adopted a statewide permit for Title 22-compliant recycled water uses in 2014. This general order is utilized by permittees for application of recycled water to land for permitted uses. The general order is currently being revised by the SWRCB and is anticipated to be issued in 2016 as Water Reclamation Requirements for recycled Water Use. Among other changes, hydrostatic testing is expected to be included as an approved construction use for tertiary-treated recycled water in the Water Reclamation Requirements. Coverage under this statewide permit supersedes local restrictions on recycled water use contained within water purveyor Waste Discharge Requirements and Master Reclamation Permits. Discharges of recycled water to waters of the U.S., waters of the State and/or the Municipal Separate Storm Sewer System are prohibited.

Temporary and permanent uses of tertiary-treated recycled water for allowed construction activities can be permitted by obtaining coverage under this statewide permit. The activities include dust control, soil compaction, concrete mixing, housekeeping (e.g., street sweeping) and hydrostatic testing (expected to become an explicitly authorized use in 2016).

4.9.2.3 Local

As provided in CPUC General Order 131-D, the CPUC has exclusive jurisdiction over the siting, design, and construction of the Proposed Project, preempting local discretionary authority over the location and construction of electrical utility facilities. Therefore, the Proposed Project is not subject to local discretionary land-use regulations. Nonetheless, as part of the environmental review process, SDG&E considers relevant local land use plans and policies that pertain to hydrology and water quality.

San Diego RWQCB Basin Plan

The San Diego Basin, where the Proposed Project is located, falls under the jurisdiction of the San Diego RWQCB. San Diego County and the other municipal stormwater co-permittees have been mandated by the San Diego RWQCB to regulate discharges to its storm drains.

The San Diego RWQCB is responsible for protecting the beneficial uses of surface water and groundwater resources in the San Diego area. The San Diego RWQCB adopted a Basin Plan in September 1994 which sets forth implementation policies, goals, and water management practices in accordance with the Porter-Cologne Water Quality Control Act and establishes both numerical and narrative standards and objectives for water quality aimed at protecting aquatic resources. Discharges to surface waters in the region are subject to the regulatory standards set forth in the Basin Plan, which prevents the unauthorized discharge of pollutants into waters of the U.S. Permits, Waste Discharge Requirements and waivers are utilized by the San Diego RWQCB to control discharges and protect water quality.

San Diego RWQCB Municipal Stormwater Permit

The San Diego RWQCB issued the San Diego Municipal Permit Order No. R9-2013-0001 (NPDES No. CAS0109266) to the County of San Diego, the San Diego Unified Port District, San Diego Regional Airport Authority, and 18 cities in San Diego County (including the City of Oceanside, and together the co-permittees) with the primary goal of preventing polluted discharges from entering the stormwater conveyance system and local receiving and coastal waters. Pursuant to the permit, the co-permittees are required to develop and implement measures that will address and prevent pollution from development projects. Priority development projects are also required to include BMPs in the permanent design to reduce pollutant discharges from project sites.

San Diego RWQCB Waiver 2

The San Diego RWQCB issued the Waiver of Waste Discharge Requirements Number 2 in 2014 (Order No. R9-2014-0041) to facilitate discharges to land of recycled water throughout the San Diego Region. To ensure compliance with surface and groundwater quality objectives, permittees must comply with both general and specific conditions of the waiver.

Temporary uses of tertiary-treated recycled water for allowed construction activities can be permitted by obtaining coverage under this waiver. The activities can include dust control, soil compaction, concrete mixing, and/or housekeeping (e.g., street sweeping) if specifically allowed within applicable Master Reclamation Permits, Waste Discharge Requirements or Water Reclamation Requirements.

County of San Diego Standard Urban Stormwater Mitigation Plan

In order to comply with the San Diego RWQCB's San Diego Municipal Permit (NPDES No. CAS0109266), a Standard Urban Stormwater Mitigation Plan was developed for San Diego County. A Stormwater Management Plan that complies with the criteria provided in the Standard Urban Stormwater Mitigation Plan must be developed for applicable priority development projects in San Diego County.

County of San Diego General Plan, Conservation and Open Space Element

Water Policies

Policy COS-4.1 Water Conservation. Require development to reduce the waste of potable water through use of efficient technologies and conservation efforts that minimize the County's dependence on imported water and conserve groundwater resources.

Policy COS-4.2 Drought-Efficient Landscaping. Require efficient irrigation systems and in new development encourage the use of native plant species and non-invasive drought tolerant/low water use plants in landscaping.

Policy COS-4.3 Stormwater Filtration. Maximize stormwater filtration and/or infiltration in areas that are not subject to high groundwater by maximizing the natural drainage patterns and the retention of natural vegetation and other pervious surfaces. This policy shall not apply in areas with high groundwater, where raising the water table could cause septic system failures, moisture damage to building slabs, and/or other problems.

Policy COS-4.4 Groundwater Contamination. Require land uses with a high potential to contaminate groundwater to take appropriate measures to protect water supply sources.

Policy COS-4.5 Recycled Water. Promote the use of recycled water and gray water systems where feasible.

Policy COS-5.1 Impact to Floodways and Floodplains. Restrict development in floodways and floodplains in accordance with policies in the Flood Hazards section of the Safety Element.

Policy COS-5.2 Impervious Surfaces. Require development to minimize the use of directly connected impervious surfaces and to retain stormwater run-off caused from the development footprint at or near the site of generation.

Policy COS-5.3 Downslope Protection. Require development to be appropriately sited and to incorporate measures to retain natural flow regimes, thereby protecting downslope areas from erosion, capturing runoff to adequately allow for filtration and/or infiltration, and protecting downstream biological resources.

Policy COS-5.5 Impacts of Development to Water Quality. Require development projects to avoid impacts to the water quality in local reservoirs, groundwater resources and recharge areas, watersheds, and other local water sources.

City of Oceanside General Plan-Land Use Element

Policy 2.7.24 A. The Master Drainage Plan will set standards for citywide drainage.

Policy 3.22 A. The City shall strive to completely reclaim wastewater for re-use.

City of Oceanside General Plan-Community Facilities Element

Policy 6.2. All new development in the City of Oceanside shall pay drainage impact fees to defray that development's proportionate share of drainage facilities serving the basin where the new development is located.

City of Oceanside Standard Urban Stormwater Mitigation Plan

The Proposed Project is located within the City of Oceanside. In May 2013, the San Diego RWQCB reissued the municipal stormwater NPDES permit to San Diego area municipal co-permittees. The City of Oceanside is identified as a co-permittee under the municipal permit. As required by the reissued permit, the City is currently updating their Standard Urban Stormwater Mitigation Plan, which will be based upon the County of San Diego Model BMP Design Manual and designed to facilitate the implementation of the new requirements of the Municipal Permit (RWQCB Order No. R9-2013-0001 NPDES No. CAS0109266).

The reissued municipal permit updates and expands stormwater requirements for new development and redevelopment projects. Stormwater treatment requirements have been made more widely applicable and more stringent. New requirements include minimum standards for the implementation of Low Impact Development practices and the integration of flow control criteria designed to mitigate runoff peaks and durations from development sites to manage hydromodification in receiving waters. By following the Standard Urban Stormwater Mitigation Plan procedure, applicants can develop a single integrated design which complies with the complex and overlapping NPDES permit Low Impact Development, stormwater treatment, and runoff peak-and-duration-control requirements.

City of Oceanside Emergency Drought Response Plan

The City of Oceanside adopted an ordinance to make urgency changes to Chapter 37, Article V of the Oceanside City Code relating to water conservation in May of 2015 following the Governor's issuance of an Executive Order imposing restrictions on water suppliers and reductions in potable water usage through February 2016. This ordinance outlines drought response levels depending on the percentage of required consumer demand reduction, and either promotes or requires implementation of measures to improve water conservation and reduce waste. Specific conservation practices and measures relevant to construction activities and ongoing maintenance activities are described. In general, these pertain to irrigation of landscaping, washing of paved surfaces, and use of recycled or non-potable water. Many of SDG&E's BMPs in the Water Quality Construction Manual are consistent with measures outlined in the ordinance. The use of the tertiary-treated recycled water, whenever feasible, for applicable portions of project construction and/or operations is also consistent with measures outlined in the ordinance.

SDG&E Standards, Plans, and Procedures

SDG&E Water Quality Construction BMPs Manual

SDG&E's Water Quality Construction BMP Manual (included as Appendix H) and applies to activities such as saw cutting, potholing, trenching, excavation, and stockpiling, regardless of the quantified area of soil disturbance or a project's location. The document consolidates BMP requirements from various municipalities, regional, state, and federal organizations. It provides a process for selection and implementation of appropriate BMPs depending on project activities. The *What*, *When*, *Where,* and *How* of implementation are detailed for each BMP in the categories of sediment controls, waste and materials management controls, nonstormwater discharge controls, and erosion controls (SDG&E 2011).

Spill Prevention, Control, and Countermeasures Plan

A facility is covered by the SPCC rule (40 CFR, Part 112 – Oil Pollution Prevention) if it has an aggregate aboveground oil storage capacity greater than 1,320 gallons or a completely buried storage capacity greater than 42,000 gallons and there is a reasonable expectation of an oil discharge into or upon navigable waters of the U.S. SDG&E will prepare an SPCC in accordance with CFR 40, Part 112 before petroleum products in threshold quantities will be stored on-site, as described in Section 4.9.4, Standard Operating Procedures.

SDG&E Construction Water Sourcing Investigation

The SDG&E Construction Water Sourcing Investigation provides an overview of all potential water sources available within the SDG&E service territory and is utilized to determine the most appropriate source(s) of water for project construction and operations phases. The plan outlines the regulatory requirements for sourcing, procuring and using water from various sources (e.g., water districts, surface water diversions, groundwater wells, etc.). The plan is an internal reference document used to assist

SDG&E in conserving potable water resources and selecting alternative water sources (e.g., recycled water) whenever feasible for both construction and operations components of projects (SDG&E 2015a).

4.9.3 Existing Conditions

The overall existing hydrologic conditions of the Proposed Project are described in the following subsections.

4.9.3.1 Environmental Setting

The Proposed Project is situated in the San Diego Basin, within the Carlsbad Hydrologic Unit (904) and the Loma Alta hydrologic subarea (904.1). The Loma Alta watershed is 9.8 square miles and extends westward for approximately 7.25 miles from the Pacific Ocean (Carlsbad Watershed Management Area Responsible Agencies 2014). Ninety-seven percent of the watershed area is within the City of Oceanside and 3 percent is within the City of Vista.

San Diego is considered to have a Mediterranean climate, with sunny days 70 percent of the year. In the San Diego area, the majority of precipitation falls between December and April with minimal rainfall during the summer months. Annual average precipitation for the Loma Alta watershed is approximately 12.5 inches per year (Loma Alta Creek Watershed Jurisdictions 2011).

The proposed Ocean Ranch Substation site is located within the City of Oceanside. The existing 69 kV power line to be looped-in will connect to the proposed Ocean Ranch Substation. Elevations in the Proposed Project area range from approximately 194 to 372 feet above mean sea level (Google, Inc. 2015). The proposed Ocean Ranch Substation site will have two drainage basins that discharge to the municipal storm drain system.

The closest major drainage is Loma Alta Creek, located approximately 0.5 miles to the south of the proposed Ocean Ranch Substation site. Garrison Creek, an intermittent tributary to Loma Alta Creek, is located about 1.7 miles west of the proposed substation. The proposed substation site is relatively small at 9.66 acres, located in an area of rolling hills and valleys. Based on topography (USGS 2011 and Google, Inc. 2015), surface water in the proposed substation area will flow south and southwest to an unnamed tributary of Loma Alta Creek. Power line TL 6966 loop-in (underground) will be within the existing roadway adjacent to the proposed substation.

Surface Waters

The Proposed Project is within the Loma Alta Creek watershed located completely within the City of Oceanside. The watershed has an area of approximately 6,277 acres and extends 7.29 miles inland. The drainage is confined to a single basin between the San Luis Rey River to the north and the Buena Vista Creek watershed to the south. Generally, the slopes are moderate to shallow in the watershed. Much of the length of Loma Alta Creek and Garrison Creek have been channelized in the past to prevent property flood damage. However flood prevention is still a high priority to the City of Oceanside (Carlsbad Watershed Network 2002).

Loma Alta Creek flows approximately 7 miles to the Loma Alta Slough and the Pacific Ocean (City of Oceanside 2015a). Loma Alta Slough is approximately 3 to 4 miles downstream from the proposed substation site at Buccaneer Beach. It is a small coastal lagoon typically closed by a sand berm, but it can open seasonally with increased inflow from the creek or by anthropogenic breaching. Storms resulting in between 0.1 and 0.2 inches of precipitation can produce runoff from areas in the watershed to Loma Alta Creek and Loma Alta Slough (Loma Alta Creek Watershed Jurisdictions 2011).

All flow from the proposed substation site is ultimately collected and conveyed by the storm drain system in Avenida Del Oro. The proposed substation site was previously graded during development of the surrounding business park. The proposed substation site was graded into two separate pads, each of which is currently served by a temporary desilting basin. Within each desilting basin, there is an outlet riser pipe that is connected to the public storm drain system under Avenida Del Oro.

Groundwater

Groundwater basins can be found along major drainages in San Diego County. The Project area is located south of the Mission Groundwater Basin in the Loma Alta hydrologic subarea.

There has been saltwater intrusion in the lower Mission Groundwater Basin and water quality issues in the upper basin as a result of agricultural use and reuse (City of Oceanside 2002). The City of Oceanside currently uses groundwater as a minor source of municipal water. Groundwater beneficial uses in this subarea are designated for industrial purposes, and municipal uses are expected to occur in the future (San Diego RWQCB 2011a). In the City of Oceanside, groundwater is vulnerable to contamination from sewer collections and agricultural and irrigation wells (City of Oceanside 2013). The City of Oceanside's Mission Basin Groundwater Purification Facility provides approximately 15 percent of the City's water supply by treating brackish groundwater (City of Oceanside 2015b).

Based on previous studies, the substation site and much of the surrounding area have an estimated groundwater level to be greater than 30 feet below ground surface and less than 280 feet above mean sea level (SDG&E 2015b). Public groundwater data available through Geotracker® from a site located approximately 0.5 miles southeast found groundwater at a depth of roughly 75 feet below current grade of the proposed substation site. Groundwater levels in the Project area are expected to fluctuate due to seasonal variations in weather. The exploratory borings for the proposed substation site were performed during a season characterized by relatively little rainfall and multiple years of drought conditions locally. As a result, the measured groundwater levels at the proposed substation site may represent lower-than-normal groundwater levels at that location.

Surface Water Quality

The Proposed Project and the proposed U.S. Postal Service staging yard are approximately 0.5 miles north of the nearest identified stream, Loma Alta Creek (Figure 4.9-1). (Refer to Chapter 3.0, *Project Description,* for additional Proposed Project details.)

The Basin Plan (San Diego RWQCB 2011a) designates beneficial uses for surface and groundwater in the basin, and it also sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the State's antidegradation policy. Beneficial uses of Loma Alta Creek include noncontact recreation, wildlife habitat, and warm freshwater habitat. The Loma Alta Slough, a small coastal estuary fed by Loma Alta Creek, is listed as having beneficial uses of contact and noncontact recreation; estuarine, marine, and wildlife habitat; and rare, threatened, or endangered species (San Diego RWQCB 2011b).

The Loma Alta Creek watershed is listed as an impaired water body under Section 303(d) of the CWA. Reasons for listing include bacterial contamination and eutrophication in the slough and out-fall area, specifically due to *Enterococcus* and Coliform and phosphorus pollution (MACTEC Engineering and Consulting, Inc. 2009). In the channelized portions of Loma Alta Creek, high nutrient levels occur and there are extensive algal blooms. Sedimentation may be an issue, due to the presence of erodible soils and extensive habitat disturbance in the watershed (Carlsbad Watershed Network 2002). Other pollutants of concern in this watershed include trace metals and pesticides.

Urban runoff has been identified as a key source of bacteria and nutrient pollution to Loma Alta Creek (City of Carlsbad 2008). High pollutant levels at the lagoon at Buccaneer Beach resulted in frequent beach closures. In 2008, the City of Oceanside completed the Loma Alta Creek Ultraviolet Radiation Stormwater Treatment Facility to address this issue (City of Oceanside 2010). This facility intercepts and diverts all dry weather creek flows for treatment before discharge into the creek just upstream of the lagoon. During wet weather flows, the lagoon is open and the treatment system is not employed, allowing flows to empty directly to the ocean. Other projects to reduce pollution to Loma Alta Creek have also been undertaken by local and private organizations (City of Carlsbad 2008).

Floodplains

According to FEMA's Flood Insurance Rate Maps, the proposed substation site is not located with a FEMA identified 100-year and/or 500-year flood zone, or floodplains identified by San Diego GIS.

Dam Failure Inundation Areas

The Office of Emergency Services is responsible for maintaining data of inundation areas for dam failures in California. The Proposed Project is not located within an area at risk of inundation from dam failure (County of San Diego 2011).

4.9.4 Standard Operating Procedures

As described in Section 3.9, *Standard Operating Procedures*, the Proposed Project will involve various standard procedures related to hydrology and water quality resources, including:

- **Hazardous Materials.** SDG&E shall address potential impacts relating to the handling and use of hazardous materials through compliance with numerous state and federal regulations, including, but not limited to:
    - Federal OSHA regulations for worker safety in hazardous material remediation and hazardous waste operations (29 CFR Section 1910.120),
    - Federal OSHA regulations hazard communication for workers (29 CFR Section 1910.1200),
    - Federal OSHA regulations for toxic air contaminants for workers (29 CFR Section 1910.1000),
    - CalOSHA regulations for worker safety in hazardous material remediation and hazardous waste operations (8 California Code of Regulations 5192),
    - CalOSHA regulations for hazard communication for workers (8 California Code of Regulations 5194), and
    - Department of Toxic Substances Control regulations implementing Resource Conservation and Recovery Act of 1976 and the California HWCL (22 California Code of Regulations Division 4.5).

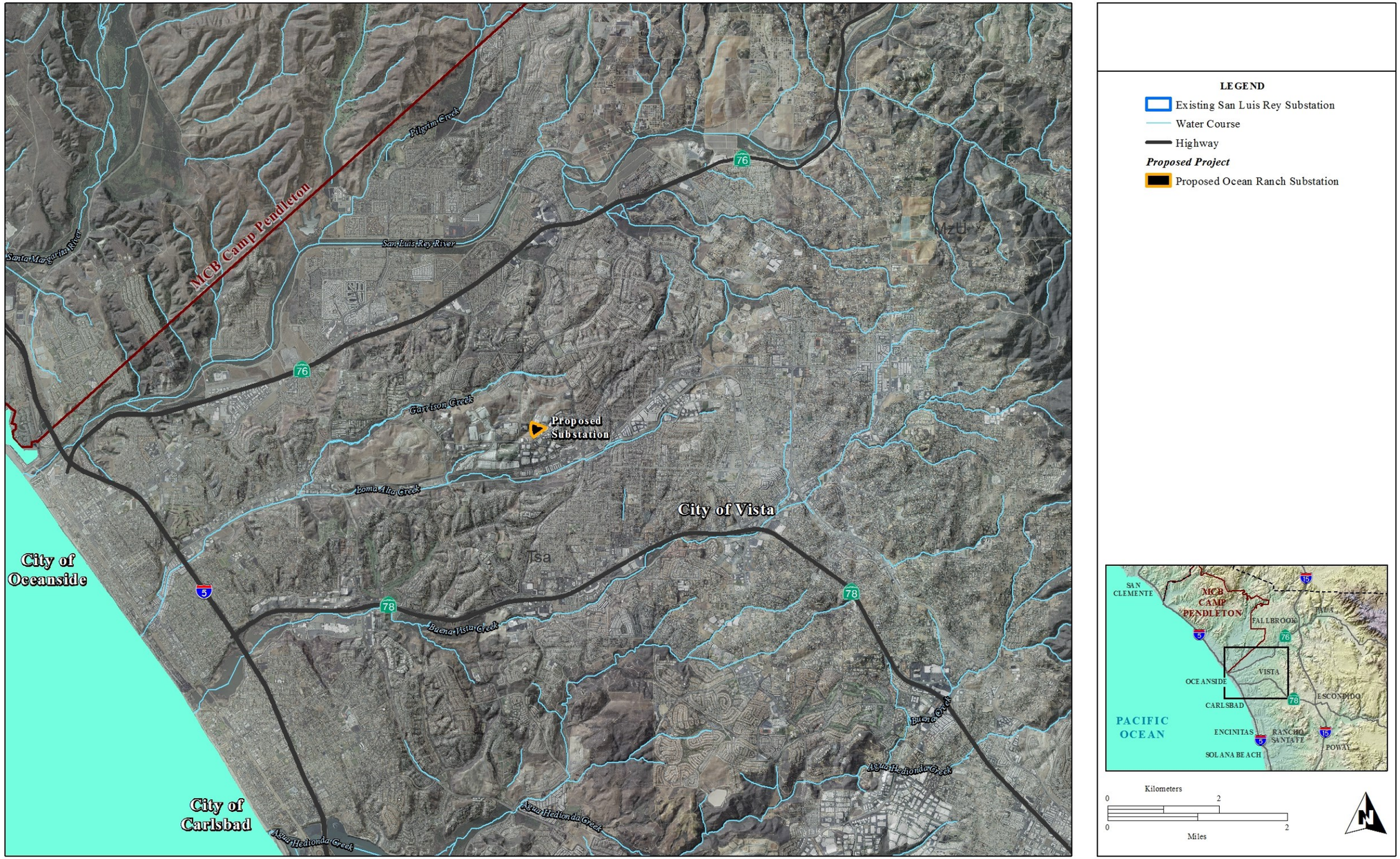


Figure 4.9-1 Surface Water in Proposed Project Vicinity

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- **Hazardous Materials and Waste Management Plan.** SDG&E will prepare a project-specific HMWMP for the construction phase of the Proposed Project to ensure compliance with all applicable federal, state, and local regulations. The HMWMP will reduce or avoid the use of potentially hazardous materials for the purposes of worker safety, protection from groundwater contamination, and proper disposal of hazardous materials. The plan will include the following information related to hazardous materials and waste, as applicable:
  - A list of the hazardous materials that will be present on site during construction, including information regarding their storage, use, and transportation;
  - Procedures for the identification of and avoidance of contaminated materials;
  - Any secondary containment and countermeasures that will be required for onsite hazardous materials, as well as the required responses for different quantities of potential spills;
  - A list of spill response materials and the locations of such materials at the Proposed Project site during construction;
  - A list of the adequate safety and fire suppression devices for construction activities involving toxic, flammable, or exposure materials;
  - A description of the waste-specific management and disposal procedures that will be conducted for any hazardous materials that will be used or are discovered during construction of the Proposed Project; and
  - A description of the waste minimization procedures to be implemented during construction of the Proposed Project.
- **Overall Grading and Drainage Design.** The overall grading design will include replacement of the existing temporary desilting basins with permanent construction of two flow-through planter basins to provide hydromodification management of smaller, more frequent storm events, treatment of storm water runoff, and peak flow attenuation from larger, less frequent events (such as the 100-year storm).
- **SDG&E Water Quality Construction BMP Manual.** SDG&E's Water Quality Construction BMPs Manual (BMP Manual, included as Appendix H) organizes and presents SDG&E's standard water quality protection procedures for various specific actions that routinely occur as part of SDG&E's ongoing construction, operations, and maintenance activities. The primary focus of most BMPs is the reduction and/or elimination of potential water quality impacts during construction of linear and substation projects such as the Proposed Project. The BMPs described within the BMP Manual were derived from several sources including the State of California guidelines as well as the Caltrans Water Quality BMPs. The BMP Manual will be utilized during construction (by way of preparation and implementation of the SWPPP), operation, and maintenance of the Proposed Project to ensure compliance with all relevant SDG&E and government-mandated regulatory water quality standards.
- **Soil Disturbance.** Ground and soil disturbance will be minimized through the use of existing access routes, to the extent feasible.
- **Soil Stabilization.** Once temporary surface disturbances are complete, areas that will not be subject to additional disturbance will be stabilized to control soil erosion. Disturbed areas must be stabilized per the project SWPPP.

- **SPCC Plan.** SDG&E will prepare an SPCC in accordance with CFR 40, Part 112 before petroleum products in threshold quantities will be stored on-site. Elements of an SPCC Plan include, but are not limited to, the following:
  - Facility diagram and description;
  - Oil discharge predictions;
  - Appropriate secondary containment or diversionary structures;
  - Facility drainage;
  - Personnel training and oil discharge prevention briefings; and
  - Recordkeeping and five-year plan review.
- **Water Sourcing**
  - The Proposed Project will adhere to use restrictions and water quality monitoring and reporting regulations associated with use of tertiary-treated recycled water for construction uses (e.g., dust control, soil compaction, and concrete mixing) permitted under the SWRCB General Order or the San Diego RWQCB Waiver 2 and consistent with the state's anti-degradation policy.
  - Potable water to support project construction and operations activities will be sourced from the City of Oceanside. Project construction water use calculations, when completed, will be the basis for obtaining a will-serve letter from the City of Oceanside.
    - To the extent feasible, tertiary-treated recycled water will be utilized for allowed construction practices (e.g., dust control, soil compaction, cement mixing) if available. The San Luis Rey Wastewater Treatment Plant which is located approximately one mile west of the project is currently being upgraded to produce double the current daily volume of recycled water. In addition, the associated El Corazon commercial recycled water fill station has been constructed (near the NE corner of Oceanside Boulevard and El Camino Real) and is expected to be permitted and operational in 2016. To the extent that tertiary-treated recycled water is available at this fill station, it will be sourced and utilized for approved uses. Note that the San Luis Rey Wastewater Treatment Plant has larger daily volumes of recycled water available during the winter months and experiences a seasonal volume drawdown during the summer months.
  - The Proposed Project will attempt to adhere to the local (City of Oceanside) Emergency Drought Response Ordinance.

With implementation of these standard procedures, potential impacts relating to hydrology and water quality resources will remain less than significant.

4.9.5 Applicant Proposed Measures

No hydrology and water quality APMs are proposed.

4.9.6 Project Impacts

The Proposed Project includes construction of a new 69/12 kV substation and loop-in of an existing 69 kV underground power line to connect to the proposed substation (refer to Chapter 3.0, *Project Description*).

In addition, the proposed grading and drainage design will modify or replace the existing temporary desilting basins with permanent flow-through planter basins designed to provide both hydromodification management of smaller, more frequent storm events, as well as attenuation of peak flow from larger, less frequent events (such as the 100-year storm).

The temporary impact areas may vary because the positioning of construction vehicles, equipment, and materials cannot be accurately anticipated prior to construction, as locations are dependent upon the contractor safely performing the work.

Once the proposed Ocean Ranch Substation is constructed and placed in service, it will not require personnel stationed onsite except during periodic and routine maintenance activities that will ensure reliable operation of all equipment within the substation. The underground components will be inspected consistent with SDG&E's existing underground inspection and maintenance program.

4.9.6.1 Methodology

Hydrology and water quality in the Proposed Project area were evaluated through a reconnaissance-level survey and review of the following:

- Phase I Environmental Site Assessment for the proposed Ocean Ranch Substation site (Appendix G),
- Preliminary Drainage Study for the proposed Ocean Ranch Substation (Appendix I),
- Water quality studies and Environmental Impact Reports from other projects in the area,
- City and County general plans,
- USGS 7.5-minute series quadrangle maps,
- Online geographic information system sources, and
- Aerial photographs of the Proposed Project area.

Furthermore, the San Diego RWQCB Basin Plan was reviewed to ensure compliance with state and local regulations. FEMA maps were referenced to determine the location and extent of flood zones.

4.9.6.2 Significance Criteria

The significance of project-related impacts on hydrology and water quality resources were evaluated for each of the criteria listed in the checklist above, as discussed below.

a) Would the proposed Project violate any water quality standards or waste discharge requirements? *Less than Significant*

Construction will primarily take place within the existing SDG&E easements, access roads and substation property. Most work areas are accessible by vehicle in paved/developed areas, unpaved SDG&E-maintained access roads, or other existing disturbed areas. Vehicles will remain within existing access roads, previously disturbed areas, and designated temporary work areas, where feasible.

Construction of the Proposed Project will result in ground-disturbing activities including trenching that will expose soil, which may result in erosion and subsequent sedimentation. Sediment transport from construction work areas to adjacent water resources could contribute to water quality degradation and violate RWQCB standards. Sediment transport from work areas could occur from surface water run-on and runoff, heavy precipitation, overwatering during dust-abatement activities, or vehicle tracking and soil transport onto adjacent paved surfaces. The proposed substation site has previously been partially and/or fully graded, and slopes gently to the southwest. The erosion potential at most of the Proposed Project work areas is low, primarily because of flat to gentle terrain. However, the erosion potential will increase during construction when the soils become disturbed, and when vehicles and equipment enter and exit work areas.

The temporary impact areas may vary because the positioning of construction vehicles, equipment, and materials cannot be accurately anticipated prior to construction, as locations are dependent upon the contractor safely performing the work. The impacts from construction vehicles, equipment, and materials staged outside of delineated temporary work areas (e.g., SDG&E fee owned property, franchise position or existing easements) would be evaluated by the on-site biological monitor prior to placement. The monitor, as appropriate, would assist crews in placement of construction vehicles, equipment, and materials to avoid and minimize impacts to sensitive habitat types, including receiving water bodies.

Equipment and construction materials stored within the substation and staging areas could come in contact with rainwater or stormwater runoff that could potentially transport deleterious substances overland to the nearby water resources. Hazardous materials used during construction (e.g., diesel fuel, hydraulic fluid, oils, grease, and concrete) can be transported by stormwater runoff and threaten aquatic life. A list of hazardous materials that are anticipated to be used during construction is included in Table 4.8-2, Hazardous Materials Typically Used in Construction and/or Operation and Maintenance (Section 4.8, *Hazards and Hazardous Materials*). In addition, stormwater contact with litter and/or construction materials could pose a threat to nearby water quality.

The Proposed Project area does not contain water resources including riverine, wetland and non-wetland water features that may be considered waters of the U.S. or state waters and therefore subject to regulation by resource agencies. Applicable state and federal regulations include but are not limited to: the federal Clean Water Act (Sections 401 and 404) and California Department of Fish and Game Code 1600. Surveys conducted in May and October 2015 by Pangea show that no jurisdictional water features are located in the Proposed Project Area. The jurisdictional evaluation is provided in Appendix D.

The Proposed Project has been designed to avoid impacts to water resources. Proper erosion control measures and other BMPs will be implemented during construction. In conclusion, no impacts to jurisdictional resources are expected.

The proposed substation will include a private drainage system which will tie into two flow-through planter basins sized large enough to capture both the treatment volume and 100-year storm volume, as well as provide hydromodification management. As concluded by the drainage study prepared for the proposed substation (Appendix I), the flow-through planter basins will provide peak flow attenuation of runoff such that the peak discharge from the site in the proposed condition will be equal to or less than the peak flow from the site in the existing condition (Fuscoe Engineering 2015). In addition, SDG&E will acquire coverage under the Construction General Permit from the SWRCB and prepare a SWPPP prior to construction which will address any potential discharges. The SWPPP will detail project information, dewatering procedures (if necessary), stormwater runoff prevention control procedures, monitoring and reporting procedures, and BMPs. Therefore, the Proposed Project is not anticipated to impact any

downstream waters, and will not require permits or agreements from USACE, RWQCB, and CDFW for discharge into jurisdictional waters (Pangea Biological et al., 2015).

Wastewater, such as that related to the use of portable restrooms, will be generated by construction workers over the duration of construction of the Proposed Project. However, the amount of wastewater generated during the short-term construction periods for Proposed Project will be minimal and will be contained within the portable restrooms before being treated and properly disposed of by a licensed contractor.

Groundwater is not anticipated to be encountered during potholing, trenching, or construction of the Proposed Project. However, as discussed in Section 3.6.2.4, should dewatering be necessary, the following construction dewatering procedures will be implemented:

- A submersible pump will be installed.
- Groundwater will be pumped to a desiltation tank (baker tank) at one end for sediment and filtering. Baffles will be installed in the tank to increase sedimentation. Water in the tank will be allowed controlled flow out from the opposite end when needed.
- Water quality testing of encountered groundwater will be performed to ensure compliance with the RWQCB NPDES requirements. If water quality levels do not meet permit requirements, additional baker tanks, or treatment, or filtering may be required.

Treated water will be reused in compliance with permit requirements or disposed of at an approved SDG&E disposal site.

Potential impacts to water quality will be minimized through implementation of standard operating procedures, including the SWPPP, SPCC Plan, flow-through planter basins and BMPs from SDG&E's Water Quality Construction BMP Manual. As a result, the Proposed Project will result in a less-than-significant impact to water quality and waste discharge requirements.

The standard operating procedures will provide permanent stabilization for all areas that are disturbed during construction of the Proposed Project. For the proposed Ocean Ranch Substation, this will include installation of road base or gravel and landscaping. Daily operation and maintenance of the Proposed Project will not impact water quality or result in discharges to waters because existing roads will be used to access Proposed Project components.

Use of tertiary-treated recycled water for approved construction activities, if available for the project, will be permitted under the SWRCB General Order or the San Diego RWQCB Waiver 2. Sourcing, transport, storage, application to land, monitoring and reporting of all recycled water use will be conducted in compliance with all general and specific conditions specified within the General Order or Waiver 2 (including prohibition on discharge to surface waters or the Municipal Separate Storm Sewer System). Both the General Order and the Waiver conform to the state's anti-degradation policy. As a result, the Proposed Project will result in a less-than-significant impact to water quality or waste discharge requirements.

SDG&E operation and maintenance personnel may use oils, paint, concrete, or solvents in the course of routine maintenance of the substation equipment, but these materials will not be stored or disposed of at the substation site and their use will conform to applicable laws and regulations governing the use, management, and disposal of hazardous materials.

The proposed Ocean Ranch Substation, at ultimate build-out, will include four transformers. The maximum amount of oil required for the transformers at the Ocean Ranch Substation will be approximately 10,400 gallons per transformer. These transformers will have the potential to leak hazardous oil. In order to minimize potential impacts, oil spill containment basins will be installed around the transformers to capture any oil that accidentally leaks or is spilled from these components. Also, the project design includes provision of a global oil containment system, designed to contain 110 percent oil capacity of the installed equipment which contains the largest amount of oil, as a secondary line of defense against a spill. In addition, a copy of the substation's SPCC Plan will be maintained and will contain specific procedures for managing hazardous materials during the operation phase of the Proposed Project. Therefore, impacts from construction and operations of the Proposed Project will be less than significant.

b) Would the Proposed Project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? *Less than Significant*

As discussed above, groundwater is not anticipated to be encountered during construction of the Proposed Project because the required excavation depths are less than the estimated depth to groundwater in the Proposed Project area. Based on previous studies, the substation site and much of the surrounding area have an estimated groundwater level to be greater than 30 feet below ground surface and less than 280 feet above mean sea level (SDG&E 2015b). In the event that groundwater is encountered, implementation of the dewatering procedures described under Question a) above would be implemented. Groundwater would be reused to the extent allowed under RWQCB NPDES and the SWRCB Construction General Permit requirements, including potential use for dust suppression during construction. Although construction activities could result in the use of groundwater, the amount of withdrawal, if necessary during dewatering, is expected to be negligible and would not have any effect on existing groundwater supplies. Impacts related to existing groundwater levels from construction will be less than significant.

A limited amount of water will be required to allow for long-term operation and maintenance of the proposed Ocean Ranch Substation. Water use will be limited to irrigation of any onsite landscaping associated with the facilities (i.e., revegetative groundcover or landscape screening). Water will be obtained from permitted municipal sources that can provide an adequate water supply to the site.

The amount of impervious surface area resulting from construction of the Proposed Project will be an increase in comparison to current conditions. The substation will require 9.66 acres for the initial and ultimate substation paved buildout area. However, the existing underlying soil conditions at the proposed substation site consist of fine to medium grained soils (i.e., sandy clay, lean clay, and clayey sand), which generally preclude infiltration through the soil matrix. Therefore, it is unlikely that rainfall on the site infiltrates down to the groundwater table under current conditions. Considering the relatively small footprint of the site compared to the overall groundwater basin, it is anticipated that roughly the same amount of water will recharge the groundwater table locally surrounding the Proposed Project as it does under existing conditions. The underground components are located within existing paved roads. Therefore, less than significant impacts to groundwater supply, quality, or recharge will result from construction and maintenance activities.

c) Would the Proposed Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? *Less than Significant*

Construction-related activities will result in minor deviations to the existing drainage patterns on site, due to grading and construction of the Proposed Project components. However, as mentioned above in Question c), the underground components of the Proposed Projects are located in existing paved roads, and would therefore not substantially alter drainage patterns in the vicinity. The proposed substation site is gently sloped to the southwest, consistent with the final expected grading plan for the Proposed Project. The proposed substation site will be regraded to make one large pad that is suitable for the substation equipment. As a result, the existing temporary desilting basin on the west pad will be re-graded and flow-through planter basins will be constructed. Similarly, the desilting basin on the east pad will be modified to serve as a permanent flow-through planter basin. Runoff from the northeastern corner of the site outside the limits of development will be collected by a series of catch basins and directed into the east basin.

The substation site is divided into seven drainage areas, as depicted in the Post-Development Drainage Exhibit in Appendix I. Proposed flow-through basin 1 will receive flow from drainage area 1 and attenuate the peak flow rate to be at or below existing condition levels. Flow-through basin 2 will receive flow from drainage area 2 and will attenuate flows from this area. Drainage areas 3 through 7 cannot be conveyed directly to the flow-through planter basins due to elevation constraints. These areas include the slope on the western edge of the site, a portion of the access road to Avenida Del Oro, and a small fraction around the Rocky Point Drive cul-de-sac. The increase in flow from these areas will be managed by increasing the detention volume provided in basin 2 accordingly. As a result, the proposed flow-through planter basin on the west side of the site will be sized large enough to ensure that the total 100-year flowrate from the site under proposed conditions will be attenuated to a level equal to or less than existing conditions and provide hydromodification management for smaller, more frequent storm events. Flow-through planter basins will meet City of Oceanside planter lined basin requirements (Fuscoe Engineering 2015).

Figure 4.9-2 illustrates the drainage design for the proposed substation. The proposed design will not substantially increase the existing velocity or volume of stormwater flows either onsite or in offsite areas. Because the substation site is currently disturbed, minimal vegetation clearing will be required for construction. All non-disturbed areas disturbed during grading will be restored as near to preconstruction conditions as possible.

Drainage patterns in the Proposed Project area will return to near preconstruction conditions and the Proposed Project will not significantly alter the existing onsite drainage patterns or significantly increase the amount of runoff generated from the site. No net change will occur in the amount of stormwater released from the Proposed Project area, which will preclude any offsite soil erosion that may otherwise result.

The Proposed Project will not alter the course of any waterways. Impacts to drainage patterns, as well as subsequent erosion and offsite siltation resulting from construction of the Proposed Project, will be less than significant.

Onsite drainage patterns established during construction will generally remain unchanged with long-term operation and maintenance of the proposed Ocean Ranch Substation. The proposed grading improvements will not result in impacts from increased onsite or offsite erosion or siltation because the proposed substation will include a private drainage system which will tie into two flow-through planter basins sized large enough to capture both the treatment volume, provide hydromodification management,

and 100-year storm volume (Fuscoe Engineering 2015). As such, impacts resulting from onsite or offsite drainage patterns will be less than significant with operation and maintenance of the facilities.

d) Would the Proposed Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? *Less than Significant*

As previously discussed in the response to Question c), construction-related activities will result in minor deviations to the existing drainage patterns, due to grading, trenching and construction of the Proposed Project components. However, due to the inclusion of the flow-through planter basins that will provide hydromodification management and peak flow attenuation, such changes will not substantially increase the existing velocity or volumetric rate of stormwater flows onsite or in offsite areas. As such, flow rates and volumes will not be substantially altered and potential impacts from runoffs or flooding will be less than significant.

Once construction of the Proposed Project facility and associated project components has been completed, no additional changes to onsite or offsite drainages are anticipated. The Proposed Project will not result in the potential for increased runoff volumes, and stormwater facilities in the surrounding area will not be further affected with the installation of the flow-through planter basins. Therefore, a less than significant impact will result from stormwater runoff with operation and maintenance of the Proposed Project.

e) Would the Proposed Project create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? *Less than Significant*

The enclosed area of the proposed Ocean Ranch Substation will be located within a disturbed vacant lot and development of the site will commence with the removal of vegetation, predominantly consisting of grasses. Once cleared, grading will take place based on the final grading plans and recommendations of the geotechnical investigation, which will determine the appropriate onsite pad elevation and foundation support that also maintains adequate site drainage. Runoff from the site will not change substantially from pre-construction conditions because of the use of the flow-through planter basins. Consequently, there will be a less-than-significant impact to existing stormwater drainage systems.

The volume of stormwater during construction of the underground components is expected to be the same as it was prior to construction because trenching is required to construct the duct banks. Pre-construction contours and elevations will be re-established following the completion of construction; therefore, stormwater runoff is anticipated to remain unchanged when compared to pre-construction conditions. Construction will introduce new sources of pollutants that could enter stormwater and be transported offsite. Sources of pollutants are discussed in detail in response to question a) above. Such pollutants may include hazardous materials (e.g., diesel fuel, hydraulic fluid, oil, and grease), as well as typical construction materials, sediment, and trash. With implementation of the SWPPP and following the SDG&E's Water Quality Construction BMP Manual, the Proposed Project would not provide substantial additional sources of polluted runoff. Therefore, impacts associated with introducing pollutants to stormwater runoff will be less than significant.

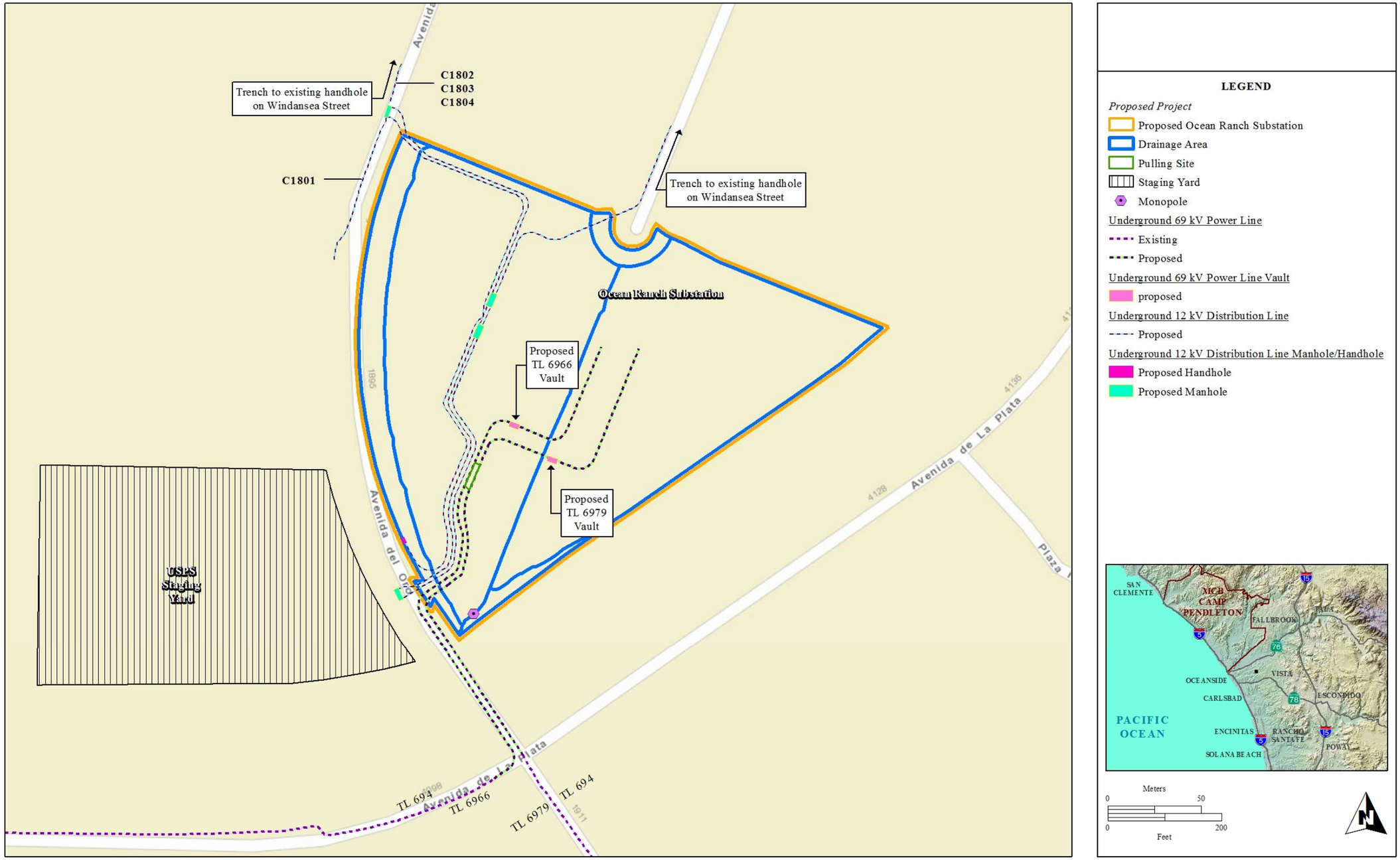


Figure 4.9-2 Drainage Areas

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Surface runoff following the completion of construction of the Proposed Project is expected to be similar to the existing conditions due to standard operating procedures which will provide permanent stabilization for all areas that are disturbed during construction of the Proposed Project. The substation will include a greater amount of impermeable surfaces than existing conditions; however, the drainage in the area will be improved by the flow-through planter basin drainage system. The new drainage system will result in minimal impacts to existing stormwater conveyance systems during the operation and maintenance phase. Substation equipment will be exposed to stormwater; however, these materials are not readily soluble and will not contribute to water quality degradation.

Maintenance activities, such as routine inspections, can introduce pollutants that are similar to those that are typical during construction. Any material or equipment needed to make a repair will be brought to the Proposed Project site and then returned to an SDG&E maintenance yard upon completion. In addition, SDG&E will implement standard protocols in accordance with applicable state and federal regulations to control, contain, clean up, and dispose of any pollutants that may occur during maintenance activities.

Fertilizers and soil amendments may be used to facilitate plant growth around the perimeter of the proposed substation site in accordance with the landscaping plans. Fertilizers or other soil amendments will be used according to the manufacturer's specifications and in quantities that minimize the potential to reach nearby waterways. As a result, impacts from stormwater runoff will be less than significant.

f) Would the Proposed Project otherwise substantially degrade water quality? *Less than Significant*

Potential sources of pollutants and activities that can contribute to water quality degradation are discussed in detail in response to Question a) above. No other foreseeable sources of pollution are anticipated to be associated with construction or operation of the Proposed Project. Nonetheless, water features located in close proximity to the Proposed Project would be protected by the project grading design, Solid Waste Management Plan, SWPPP, and SPCC plan to prevent any reduction in existing water quality, including the quality of groundwater. As a result, impacts will be less than significant.

g) Would the Proposed Project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? *No Impact*

No housing will be constructed as part of the Proposed Project. Therefore, no housing will be placed within a 100-year flood hazard area, and no impact will occur.

h) Would the project place structures within a 100-year flood hazard area which would impede or redirect flood flows? *No Impact*

According to the FEMA Flood Plain Map and the San Diego GIS, the Proposed Project is not located within the 100-year or 500-year flood hazard boundary.

No new structures will be constructed that will impede or redirect flood flow within a 100-year flood hazard area. As a result, the Proposed Project will result in no impacts associated with flood zones.

i) Would the Proposed Project expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam? *No Impact*

Proposed Project construction will not expose people or structures to a significant risk of loss, injury, or death due to flooding, as no onsite or offsite flood impacts are expected as described in the response to

Question h). No permanent buildings will be placed in a known 100-year flood hazard area. Thus, no impacts will occur.

j) Would the Proposed Project cause inundation by seiche, tsunami, or mud flow? *Less than Significant*

The Proposed Project is located approximately 6 miles from the Pacific Ocean and approximately 370 feet above mean sea level. Given the distance, tsunami impacts are considered highly unlikely and any such impacts are expected to not cause catastrophic damage to the Proposed Project area. Any impacts that will result from a tsunami are expected to be less than significant.

Seiches are typically associated with impounded waterbodies. The Proposed Project will not be located near any lakes or other impounded waterbodies; therefore, no impact from seiches will occur.

A mudflow is a flow of soil and debris that occurs after intense rainfall, earthquakes, or severe wildfires. The potential for a mudflow to occur depends on the slope steepness, soil type, and soil moisture content. Given that the Proposed Project area is only gently sloping and in a suburban developed area, a mudflow is not anticipated.

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TABLE OF CONTENTS

4.10 LAND USE AND PLANNING 4.10-1
4.10.1 Introduction 4.10-1
4.10.2 Regulatory Setting 4.10-1
4.10.3 Existing Conditions 4.10-6
4.10.4 Standard Operating Procedures 4.10-8
4.10.5 Applicant Proposed Measures 4.10-8
4.10.6 Project Impacts 4.10-8
4.10.7 References 4.10-10

LIST OF FIGURES

4.10-1 Planned Land Use 4.10-3
4.10-2 Existing Zoning 4.10-5

LIST OF TABLES

4.10-1 Existing and Designated Land Use 4.10-6

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4.10 LAND USE AND PLANNING

Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Physically divide an established community?	☐	☐	☐	☒
b.	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐
c.	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

4.10.1 Introduction

This section of the PEA describes the existing conditions and project-related impacts to land use and planning in the vicinity of the Proposed Project. The analysis concludes that less than significant impacts related to land use and planning will occur. The Proposed Project's effects on land use and planning were evaluated using the significance criteria set forth in Appendix G of the CEQA Guidelines. The conclusions are summarized in the impact summary checklist above, and discussed in more detail in Section 4.10.6.

4.10.2 Regulatory Setting

This section includes a description of the land use regulatory framework.

4.10.2.1 Federal

There are no federal regulations associated with land use and planning that are relevant to the Proposed Project.

4.10.2.2 State

Natural Community and Conservation Plans

The Natural Community and Conservation Planning Act (California Fish and Wildlife Code Section 2800-2835) allows for the creation of NCCPs to protect state-listed species, usually in connection with the issuance of a Section 2081 take permit under the CESA.

San Diego Gas and Electric Subregional NCCP

The Proposed Project falls within the area in which SDG&E's utility operations are governed by SDG&E's Subregional NCCP (SDG&E 1995). The NCCP prescribes 61 operational protocols that SDG&E routinely implements with every project to avoid and/or minimize impacts to sensitive resources.

4.10.2.3 Local

As provided in CPUC General Order 131-D, the CPUC has exclusive jurisdiction over the siting, design, and construction of the Proposed Project, preempting local discretionary authority over the location and construction of electrical utility facilities. Therefore, the Proposed Project is not subject to local discretionary land use regulations. Nonetheless, as part of the environmental review process, SDG&E considers relevant local land use plans and policies that pertain to land use and planning.

City of Oceanside General Plan Land Use Element – Rancho Del Oro Specific Plan

The City of Oceanside General Plan provides a framework of policies, objectives, and land use designations to guide long-term development within Oceanside. The Rancho Del Oro Specific Plan is part of the Land Use Element of the General Plan, and applies to approximately 1,940 acres of land in the center of Oceanside (San Diego Association of Governments [SANDAG] 2014). The plan was prepared to create a high-quality, comprehensive planned community and it provides for phased mixed-use development with industrial and commercial uses and a variety of residential housing options. It also includes provisions for implementing circulation system and public utility improvements.

The proposed Ocean Ranch Substation is located within the Rancho Del Oro Specific Plan area (Figure 4.10-1). The proposed substation is within the Pacific Coast Business Park Industrial Master Development Plan as discussed in more detail below. The 11.5-acre Corporate Center staging yard and the 5-acre U.S. Postal Service staging yard have general plan land designations of Light Industrial (LI). The 0.5-acre San Luis Rey staging yard has a general plan land designation of Civic Institutional (CI) and the 0.5-acre Melrose staging yard has a general plan land designation of Industrial General (IG).

Pacific Coast Business Park, Industrial Master Development Plan

The proposed substation is within the Pacific Coast Business Park Industrial Master Development Plan, which is a component of the Rancho Del Oro Specific Plan area and is part of the industrially designated area in the central portion of Oceanside encompassing 124.31 acres. Permitted uses include those allowed by the City of Oceanside regulations for the LI zone district (refer to zoning ordinance discussion below). The Industrial Master Development Plan includes some regulations that are in addition to those found in the zoning ordinance, along with design and development standards for Pacific Coast Business Park. Combined with the existing LI regulations, the standards serve to protect the property's value and compatibility with adjoining developments (City of Oceanside 2005).

Private development proposals located within the Pacific Coast Business Park are reviewed by the Pacific Coast Business Park Review Board and the City for compliance with the zoning ordinance and with the following design and development standards from the Industrial Master Development Plan.

Building and Site Regulations

- Maximum structure height 80 feet
- Maximum lot coverage 75 percent
- Maximum floor area ratio 1.0

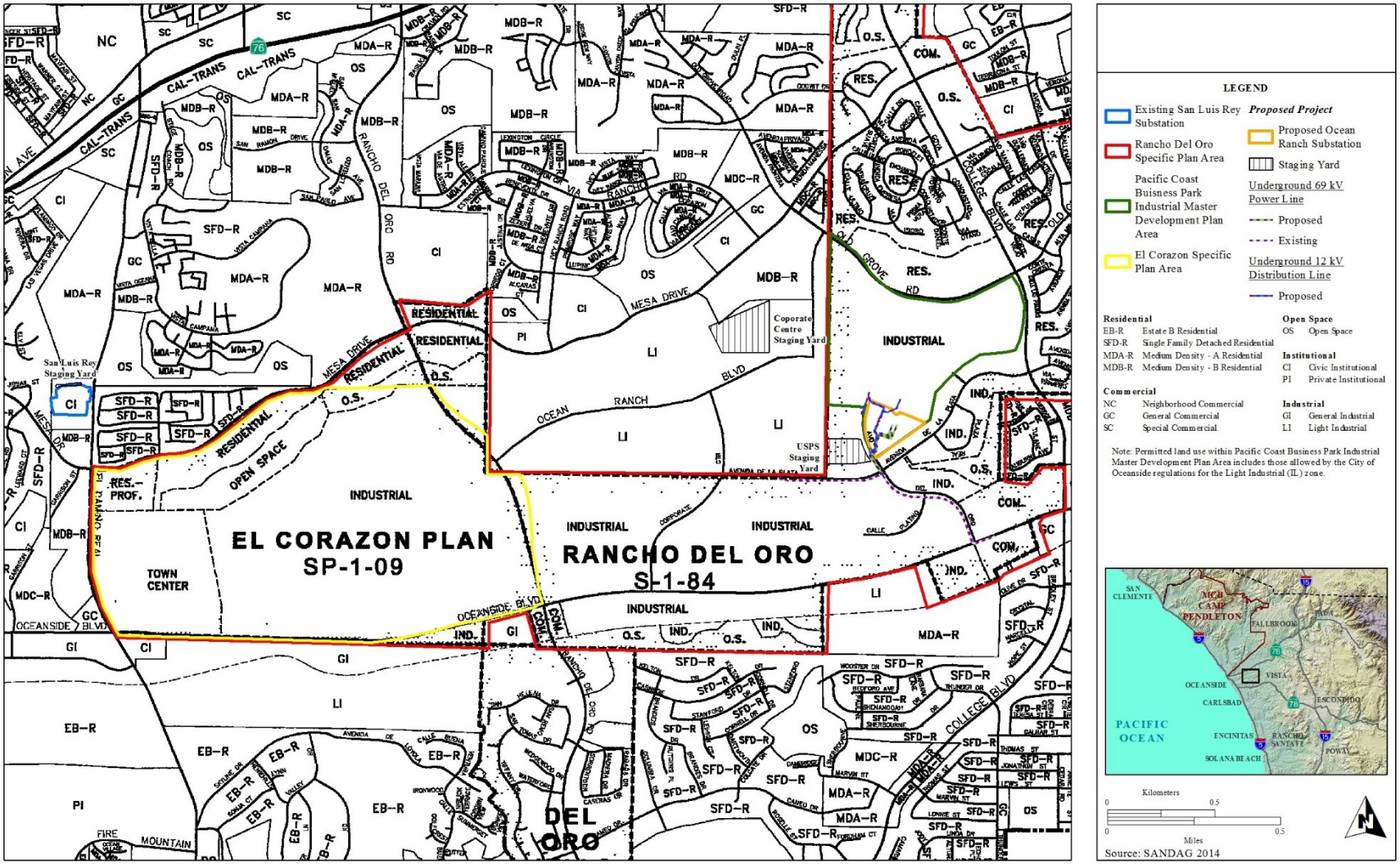


Figure 4.10-1 Planned Land Use

Parking

- "Adequate off-street parking shall be provided to accommodate all parking needs for the site. No on-street parking is allowed within Pacific Coast Business Park.
- Required off-street parking shall be provided on the site of the use served, on a contiguous site, or within 300 feet of the subject site.
- Parking provided in structures must be screened by architectural elements and/or landscaping."

Utilities and Communication Devices

- "All electric, telephone, gas, and cable service lines to individual lots or sites shall be installed and maintained underground.
- Exterior onsite utilities, including but not limited to drainage systems, sewers, gas lines, water lines and electrical, telephone, and communications wires and equipment, shall be installed and maintained underground."

Walls and Fencing

- "Fencing and walls shall comply with Section 3040 of the City of Oceanside Zoning Ordinance. Materials used for all fencing and walls shall be of high quality as approved by the Pacific Coast Business Park board."

In addition, Pacific Coast Business Park Design Guidelines articulate standards for proposed building design, site, and landscape design, including lighting and signage, planting scheme and plant types, and other architectural features (i.e., entrances). The Design Guidelines are enforced by the Pacific Coast Business Park Covenants, Codes and Restrictions. The Ranch Maintenance Association is responsible for maintaining the streetscapes within the Rancho Del Oro Specific Plan area.

City of Oceanside Zoning Ordinance

The proposed Ocean Ranch Substation site is zoned as Planned Development District 1 (PD-1) (Figure 4.10-2). The purpose of the PD district is to establish a procedure for developing parcels with less rigid standards and fewer delays, ensure thorough planning and review, and encourage variety and avoid monotony in large developments by allowing more freedom in design selection (City of Oceanside 1992).

The 11.5-acre Corporate Center staging yard is zoned as LI, the 5-acre U.S. Postal Service staging yard is zoned as PD-1, the 0.5-acre San Luis Rey staging yard is zoned as Public and Semipublic (PS), the 0.5-acre Melrose staging yard is zoned as Light Manufacturing (M-1).

North County Multiple Habitat Conservation Program

The Multiple Habitat Conservation Program is a planning process that addresses plant and animal species in northwestern San Diego County, including Oceanside. The goal of the program is to conserve approximately 19,000 acres of habitat (of which 8,800 acres are already in public ownership and contribute toward the habitat preserve system) to protect over 80 rare, threatened, or endangered species.

Subarea plans for the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, and Vista are being prepared and must be adopted by each city council. Then implementing agreements with the CDFW and the USFWS must be signed before incidental take permits can be issued.

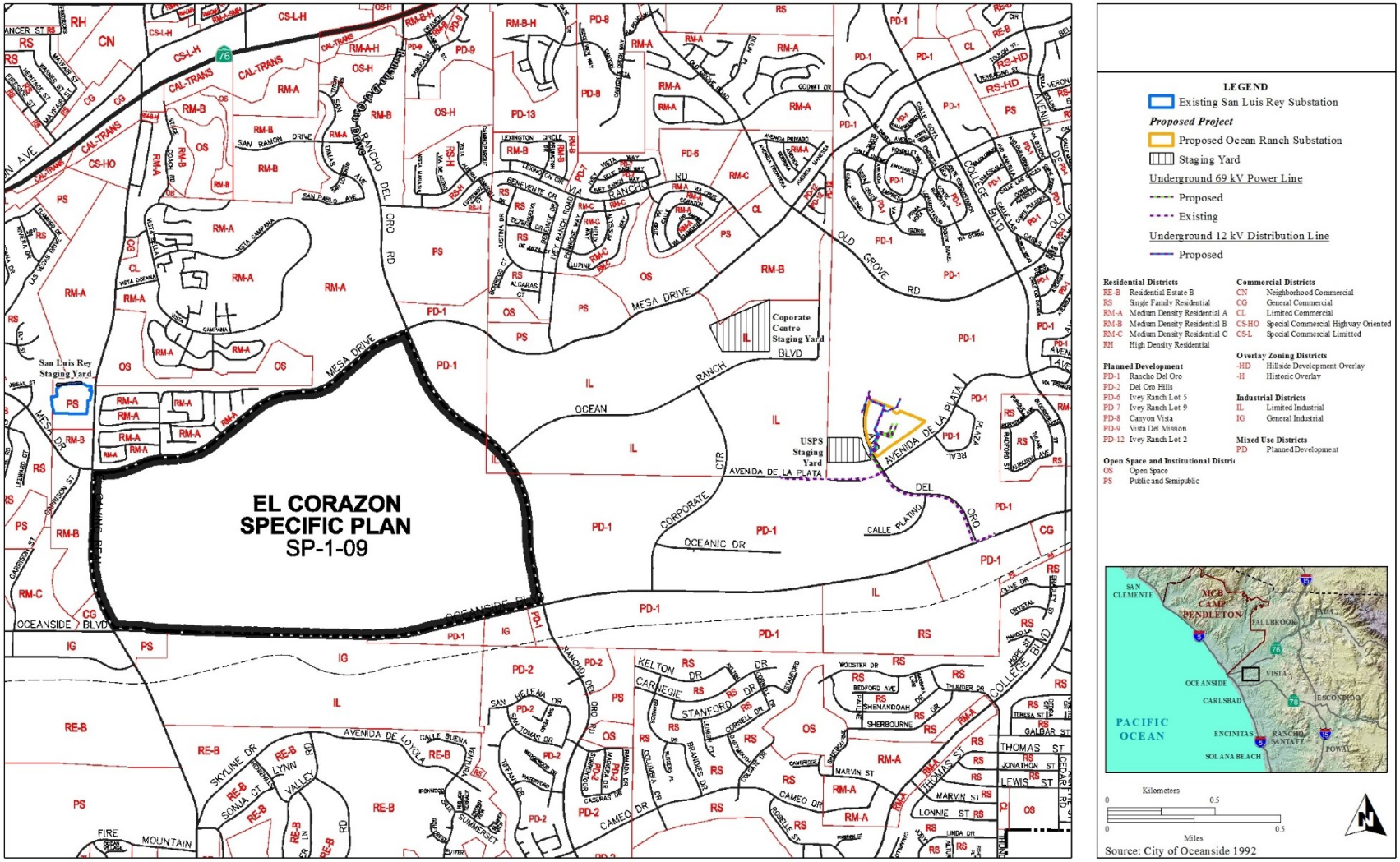


Figure 4.10-2 Existing Zoning

The City of Oceanside is in the process of adopting a SAP that will address how the City will conserve natural biotic communities and sensitive plant and wildlife species pursuant to the California NCCP Act of 1991, the CESA and the federal ESA. If adopted, this could provide landowners with more regulatory certainty and it could aid in conserving the area's biodiversity.

4.10.3 Existing Conditions

The current land uses in the vicinity of the Proposed Project are industrial and commercial (refer to Figure 4.10-1). The proposed substation site is located on undeveloped land near an industrial park. Existing land uses and zoning are summarized in Table 4.10-1 below and discussed in detail in Section 4.9.3.1, *Existing Land Uses by Project Component.*

Table 4.10-1. Existing and Designated Land Use

Proposed Project Component	Existing Land Use	General Plan Designation	Zone Designation	Specific Plan Designation
Ocean Ranch Substation	Undeveloped land	LI	PD-1	Rancho Del Oro Specific Plan/ Pacific Coast Business Park Industrial Master Development Plan (LI/Limited Industrial)
Corporate Center Staging Yard	Undeveloped land	LI	IL	N/A
U.S. Postal Service Staging Yard	Undeveloped land	LI	PD-1	Rancho Del Oro Specific Plan (LI/Light Industrial)
San Luis Rey Staging Yard	Paved, undeveloped land	CI	PS	N/A
Melrose Staging Yard	Paved, undeveloped land	IG	M-1	N/A

Note: N/A = not applicable.
Source: City of Oceanside 2002, 2005; City of Vista 2015a, 2015b.

4.10.3.1 Existing Land Use by Project Component

The following summarizes land uses surrounding the Proposed Project area broken down by project component.

Proposed Ocean Ranch Substation

The proposed Ocean Ranch Substation will be located within the Pacific Coast Business Park on two parcels owned by SDG&E: Assessor's Parcel Number 161-512-26 is 5.6 acres and Assessor's Parcel Number 161-512-27 is 4.06 acres. The proposed substation will require the total area (9.66 acres), which will be used for the initial and ultimate substation paved buildout area and will include site work/grading.

Access to the proposed substation site will be provided primarily from the north via a cul-de-sac on Rocky Point Drive. Secondary access will be provided via a new entry point from Avenida Del Oro, near the intersection of Avenida Del Oro and Avenida De La Plata. SDG&E is requesting access rights from the City of Oceanside to establish the proposed secondary access driveway. Both access points into the site will be gated and limited to SDG&E personnel.

Current adjoining land uses include:

- North, east, and south of the proposed substation site are adjacent office buildings within Pacific Coast Business Park;
- West of the proposed substation site, there is a U.S. Postal Service distribution facility and undeveloped lots, which are south of the U.S. Postal Service distribution facility;
- Farther to the west, past the U.S. Postal Service distribution facility, is an SDG&E power line ROW, followed by a parking lot and the Genentech pharmaceutical manufacturing facility; and
- There is a residential development located approximately 0.25 mile to the east of the business park, with a small landscaped corridor separating the business park from the single-family residences.

Construction Right-of-Way

As summarized in Table 3-3, *Summary of Temporary Work Areas* in the Project Description, approximately 21.80 acres will be needed for temporary construction work areas, including staging yards and underground construction work areas.

The temporary staging areas consist of previously used staging yards or large undeveloped industrial areas near one or more portions of the Proposed Project that have been previously disturbed and/or graded, totaling an area of approximately 17.5 acres:

- The Corporate Center staging yard is approximately 11.5 acres of disturbed habitat located north of Ocean Ranch Boulevard and south of Mesa Drive.
- The U.S. Postal Service staging yard is approximately 5 acres of undeveloped land, located just south of the U.S. Postal Service building and to the west of Ocean Ranch Staging Yard. This area is composed of non-native grassland and disturbed non-native grassland.
- The San Luis Rey staging yard is approximately 0.5 acre of paved area with an existing access road located next to the existing San Luis Rey Substation.
- The Melrose staging yard is approximately 0.5 acre of paved area with an existing access road located next to the existing Melrose Substation.

Construction sites are accessible by vehicles on paved City streets or existing unpaved SDG&E-maintained access roads.

The existing material storage yards that will be used include:

- Kearny Construction and Operation Center is approximately 18.6 acres, located approximately 0.8 miles west of Interstate 15, 0.5 mile east of State Route 163, and 0.15 mile north of Clairemont Mesa Boulevard (refer to Figure 3-24).
- North Coast Construction and Operations Center is approximately 15.2 acres, located in Carlsbad, near the intersection of Carlsbad Boulevard and Cannon Road (refer to Figure 3-25).
- Northeast Construction and Operations Center is approximately 25.1 acres, located in Escondido, California, north of Auto Park Way and south of West Mission Road (refer to Figure 3-26).

These existing SDG&E facilities are paved, fenced land with security.

4.10.4 Standard Operating Procedures

As described in Section 3.9, *Standard Operating Procedures*, the Proposed Project will involve various procedures related to land use and planning, including:

- **Coordination with City.** SDG&E is coordinating with the City regarding the re-establishment of access rights on Avenida Del Oro for access to a secondary private driveway at the proposed Ocean Ranch Substation site.
- **NCCP Operation Protocols.**
    - Section 7.1.1 – General Behavior for All Field Personnel
    - Section 7.1.2 – Training
    - Section 7.1.4 – Maintenance, Repair, and Construction of Facilities
    - Section 7.1.5 – Maintenance of Access Roads
    - Section 7.1.8 – Survey Work
    - Section 7.1.9 – Emergency Repairs
- **Restoring Appearance of Temporarily Disturbed Areas.** When Proposed Project construction has been completed, all temporarily disturbed terrain will be restored as near to preconstruction conditions as possible. Revegetation will be used, where appropriate (revegetation in certain areas is not possible due to vegetation management requirements related to fire safety) to re-establish a natural appearing landscape and reduce potential visual contrast between disturbed areas and the surrounding landscape.

With implementation of these standard operating procedures a there will be no significant impacts relating to land use and planning.

4.10.5 Applicant Proposed Measures

APMs applicable to Section 4.4, *Biological Resources*, would avoid conflicts with applicable Habitat Conservation Plans or NCCPs. No additional APMs regarding land use and planning are proposed.

4.10.6 Project Impacts

The Proposed Project includes construction of a new 69/12 kV substation and loop-in of an existing underground 69 kV power line to connect to the proposed substation (refer to Chapter 3.0, *Project Description*). The Proposed Project will take place primarily within the existing area devoted to the underground power line, franchise areas, and SDG&E property that currently features permanent work pads and existing access roads.

The temporary impact areas may vary because the positioning of construction vehicles, equipment, and materials cannot be accurately anticipated prior to construction, as locations are dependent upon the contractor safely performing the work.

Once the proposed Ocean Ranch Substation is constructed and placed in service, it will not require personnel stationed onsite except during periodic and routine maintenance activities that will ensure reliable

operation of all equipment within the substation. The underground components will be inspected consistent with SDG&E's existing underground inspection and maintenance program.

4.10.6.1 Methodology

The land use analysis consisted of a review of various land use plans, policies, and regulations for the City, including the City of Oceanside General Plan, the Pacific Coast Business Park Industrial Master Development Plan, and the Oceanside Subarea Plan.

4.10.6.2 Significance Criteria

The significance of project-related impacts on land use and planning resources were evaluated for each of the criteria listed in the checklist above, as discussed below.

a) Would the project physically divide an established community? *No Impact*

The Proposed Project will take place primarily within the existing area devoted to the underground power line, franchise areas, and SDG&E property that currently features permanent work pads and existing access roads (e.g., the proposed substation).

The proposed Ocean Ranch Substation site is entirely bounded by roads and existing industrial development, with Avenida del Oro to the west and Avenida De La Plata to the east. The area immediately surrounding the proposed substation site is zoned as limited industrial, and no residences are in the immediate vicinity. Access to businesses and other uses in the area surrounding the Proposed Project site will be maintained at all times.

During construction, some roads may be limited to one-way traffic at times to allow for materials to be transported. However, one-way traffic control will be temporary and short term, and is not anticipated to create any divisions or barriers between uses or the greater community. All temporary disturbance areas, including staging areas, will be returned to preconstruction conditions following project completion. Therefore, construction activities will not divide an established community, and no impacts will occur.

Once the proposed Ocean Ranch Substation is constructed and placed in service, it will be unmanned except for periodic routine maintenance activities that will ensure reliable operation of all equipment within the facility. SDG&E's existing facilities and operation and maintenance activities are included in the baseline for evaluating the impacts of the Proposed Project.

Therefore, all project components will be within established parcels or existing roads and no alteration to the established community will occur. No existing established communities will be physically divided as a result of the Proposed Project; thus no impact will occur.

b) Would the Proposed Project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? *Less than Significant*

As provided in CPUC General Order 131-D, the CPUC has exclusive jurisdiction over the siting, design, and construction of the Proposed Project, preempting local discretionary authority over the location and construction of electrical utility facilities. Therefore, the Proposed Project is not subject to local discretionary land use regulations. SDG&E has nonetheless analyzed the Proposed Project's conformity with local land use plans, policies, and regulations.

The proposed Ocean Ranch Substation site is located within a developed industrial area of Oceanside. The area is meant to accommodate a wide range of moderate to low-intensity industrial uses capable of being located adjacent to residential areas with minimal buffering measures. SDG&E received a letter of support from the City on April 1, 2014, stating that the final substation site location is in the best interests of the City. Oceanside's Economic Development department worked closely with SDG&E early in the development of the Proposed Project to determine the substation site location. Several departments within SDG&E reached out to the City to ensure the City's concerns were addressed and needs were met. SDG&E also communicated with the City about the use of temporary staging areas to ensure the avoidance of impacts. The use of these staging areas is considered compatible with existing land use designations due to the temporary nature of construction, and because all construction will occur either within existing areas devoted to utilities, franchise areas, or SDG&E property.

Construction and operation of the Proposed Project will comply with applicable City land use plans, policies, and regulations. Proposed Project activities will not conflict with any applicable land use plan, policy, or regulation. Therefore, impacts will be less than significant.

c) Would the Proposed Project conflict with any applicable Habitat Conservation Plan or Natural Community Conservation Plan? *No Impact*

The underground portion of TL 6966 that will be looped-in and the proposed Ocean Ranch Substation will be located in an area designated as an Off-site Mitigation Zone, construction will be conducted within disturbed, developed lands, or paved roads. The City of Oceanside's SAP does not require mitigation for impacts to these land types. Therefore, the Proposed Project does not conflict with the SAP, and as stated in Section 4.4, *Biological Resources*, there would be no impact.

The Proposed Project will not use the take authority granted by the USFWS and the CDFW in the NCCP for impacts to covered species. Potential take of state species will be handled, as necessary, through consultation with the CDFW in accordance with applicable sections of the CESA. Although the SDG&E Subregional NCCP will not be used for the Proposed Project and the Proposed Project is within the City of Oceanside's Multiple Habitat Conservation Program, proposed construction activities will implement applicable avoidance and minimization measures specified in the NCCP Operational Protocols as standard operating procedures. Therefore, there will be no impact.

4.10.7 References

City of Oceanside. 2002. General Plan, Land Use Element.

City of Oceanside. 2005. Pacific Coast Business Park, Industrial Master Development Plan. A Component of the Rancho Del Oro Specific Plan. June 21.

City of Oceanside. 2010. Final Oceanside Subarea Plan.

City of Vista. 2015a. City of Vista 2030 Land Use. Website (http://www.cityofvista.com/home/showdocument?id=1166) accessed March 2016.

City of Vista. 2015b. City of Vista Zoning Map. Website (http://www.cityofvista.com/home/showdocument?id=1178) accessed March 2016.

Kleinfelder. 2015. Geotechnical Siting Study. San Diego Gas & Electric Ocean Ranch Substation, Pacific Coast Business Park Oceanside, California. June 15.

SANDAG. 2014. San Diego Associations of Governments Regional GIS Data Warehouse. Website (http://www.sandag.org/index.asp?subclassid=100&fuseaction=home.subclasshome) accessed January 2014.

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TABLE OF CONTENTS

4.11 MINERAL RESOURCES 4.11-1
4.11.1 Introduction 4.11-1
4.11.2 Regulatory Setting 4.11-1
4.11.3 Existing Conditions 4.11-2
4.11.4 Standard Operating Procedures 4.11-3
4.11.5 Applicant Proposed Measures 4.11-3
4.11.6 Project Impacts 4.11-3
4.11.7 References 4.11-4

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4.11 MINERAL RESOURCES

Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state?	☐	☐	☐	☒
b.	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

4.11.1 Introduction

This section of the PEA describes the existing conditions and project-related impacts to mineral resources in the vicinity of the Proposed Project. The analysis concludes that no impacts related to mineral resources will occur. The Proposed Project's effects on this resource were evaluated using the significance criteria set forth in Appendix G of the CEQA Guidelines. The conclusions are summarized in the checklist above, and discussed in more detail in Section 4.11.6.

4.11.2 Regulatory Setting

This section includes a description of the mineral resources regulatory framework.

4.11.2.1 Federal

There are no federal regulations associated with mineral resources that are relevant to the Proposed Project.

4.11.2.2 State

Surface Mining and Reclamation Act of 1975

The California Geological Survey designates mineral resource zones where access to important mineral resources may be threatened, according to provisions of the California Surface Mining and Reclamation Act (SMARA) of 1975. SMARA requires that all jurisdictions incorporate mapped mineral resource designations approved by the State Mining and Geology Board into their general plans. The State Mining and Geology Board and the Office of Mine Reclamation are jointly charged with ensuring proper administration of SMARA's requirements. The State Mining and Geology Board promulgates regulations to clarify and interpret SMARA's provisions and serves as a policy and appeals board. The Office of Mine Reclamation provides an ongoing technical assistance program for lead agencies and operators, maintains a database of mine locations and operational information statewide, and is responsible for compliance-related matters.

4.11.2.3 Local

As provided in CPUC General Order 131-D, the CPUC has exclusive jurisdiction over the siting, design, and construction of the Proposed Project, preempting local discretionary authority over the location and

construction of electrical utility facilities. Therefore, the Proposed Project is not subject to local discretionary land use regulations. Nonetheless, as part of the environmental review process, SDG&E considers relevant local land use plans and policies that pertain to mineral resources.

City of Oceanside General Plan – Environmental Resource Management Element

The main objective related to minerals is to protect existing mineral resources and regulate mineral extraction activities to minimize hazards and conflicts with other land uses as well as to preserve and enhance the appearance of the area (City of Oceanside 2002a).

City of Oceanside General Plan – Land Use Element

The following policies included in the City of Oceanside General Plan Land Use Element generally relate to the Proposed Project with respect to mineral resources (City of Oceanside 2002b).

Mineral Resource Policies

3.31 Mineral Resource Areas

- "Minerals Resource Areas shall remain in effect until the resource has been depleted or no longer exists in sufficient quantity or quality to be of benefit to the City and/or the region."

3.313 Crystal Silica Policy

- "The mining area of the Crystal Silica Company located northeast of the El Camino Real/Oceanside Boulevard intersection contains deposits of silica sand which shall be permitted to be mined under the provision of its permits and the Rancho del Oro Specific Plan and Development Agreement."

3.32 Land Use Compatibility Policies

- "When considering development proposals within urbanized sections of Mineral Resource Areas, the City shall balance the potential loss of the mineral deposit against the value of the development and consider the importance of the deposit to the regional market and not just its local significance.
- Proposed developments within or adjacent to Mineral Resource Areas shall provide adequate buffering, building placement, and phasing plans to assure compatibility with existing mining operations.
- Development within or adjacent to Mineral Resource Areas shall not be permitted if found to significantly interfere with the future or continued extraction of the resource."

4.11.3 Existing Conditions

4.11.3.1 Mineral Setting

The proposed Ocean Ranch Substation site is mostly disturbed land in a vacant lot within a developed industrial area (refer to Chapter 3.0, *Project Description*, Figure 3-2, Proposed Project Overview Map). Specifically, the proposed substation area is within the Pacific Coast Business Park and is zoned as industrial. The Proposed Project will primarily occur within existing SDG&E fee-owned property, franchise or existing easements, within which there are no known mineral deposits.

According to the Environmental Resource Management Element of the General Plan, the City of Oceanside is located within the San Luis Rey River Basin, which comprises 73.5 percent of the total available mineral deposits accessible to sand procedures in San Diego County. This basin contains construction-quality sand and silica sand used for glass manufacturing. However, most of the sand deposits are found in the urbanized

area of Oceanside and are considered "unavailable." The majority of the sand deposits are located north of Mission Avenue. None of these sand deposit areas are near the Proposed Project area.

4.11.4 Standard Operating Procedures

There are no standard operating procedures related to mineral resources that are applicable to the Proposed Project.

4.11.5 Applicant Proposed Measures

No mineral resource APMs are proposed.

4.11.6 Project Impacts

The Proposed Project includes construction of a new 69/12 kV substation and loop-in of an existing 69 kV underground power line to connect to the proposed substation (refer to Chapter 3.0, *Project Description*).

The temporary impact areas may vary because the positioning of construction vehicles, equipment, and materials cannot be accurately anticipated prior to construction, as locations are dependent upon the contractor safely performing the work.

The operation and maintenance activities required for the loop-in of the existing 69 kV underground power line will not change from those currently required for the existing system, thus, no operation-related impacts related to mineral resources will occur. Once the proposed Ocean Ranch Substation is constructed and placed in service, it will not require personnel stationed on site except during periodic and routine maintenance activities that will ensure reliable operation of all equipment within the substation. The underground components will be inspected consistent with SDG&E's existing underground inspection and maintenance program.

4.11.6.1 Methodology

The mineral resource analysis involved a review of the City of Oceanside General Plan.

4.11.6.2 Significance Criteria

The significance of project-related impacts on mineral resources was evaluated for each of the criteria listed in the checklist above, as discussed below.

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? *No Impact*

The Proposed Project is not located within areas of known mineral deposits. All mineral resources within the City of Oceanside are located outside the Proposed Project area. Therefore, no known mineral resources will be lost due to Proposed Project-related construction or operation and maintenance activities, and no impact will occur.

b) Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan? *No Impact*

There are no known locally important mineral resources located within the Proposed Project area. No active mining operations or known areas designated or delineated for mineral resource recovery are located within the Proposed Project area. In addition, no known mineral resources that have noted value to the region will be impacted by construction or operation of the Proposed Project. Therefore, no impacts will occur.

4.11.7 References

City of Oceanside. 2002a. General Plan, Environmental Resource Management Element.
City of Oceanside. 2002b. General Plan, Land Use Element.

TABLE OF CONTENTS

4.12 NOISE AND VIBRATION 4.12-1
4.12.1 Introduction 4.12-1
4.12.2 Regulatory Setting 4.12-1
4.12.3 Existing Conditions 4.12-5
4.12.4 Standard Operating Procedures 4.12-7
4.12.5 Applicant Proposed Measures 4.12-7
4.12.6 Project Impacts 4.12-8
4.12.7 References 4.12-16

LIST OF FIGURES

4.12-1 Noise Generated by Electrical Substation 4.12-13
4.12-2 Construction Vibration Amplitudes 4.12-12

LIST OF TABLES

4-12-1 Land Use Compatibility for Community Noise Environments 4.12-3
4.12-2 Maximum Allowable 1-Hour Average Sound Level (dBA L_{eq}) 4.12-5
4.12-3 Sensitive Receptors 4.12-6
4.12-4 Substation Construction Exterior Sound Levels Adjusted for Workday 4.12-9
4.12-5 Underground Line Construction Exterior Sound Levels Adjusted for Workday 4.12-10
4.12-6 Human Response to Transient Vibrations 4.12-11

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4.12 NOISE AND VIBRATION

Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b.	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c.	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d.	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e.	If located within an airport land use plan or within 2 miles of a public airport or public use airport for which such a plan has not been adopted, would the project result in exposure of persons residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f.	If located within the vicinity of a private airstrip, would the project result in exposure of persons residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

4.12.1 Introduction

This section describes the existing conditions and project-related impacts to noise and vibration systems in the vicinity of the Proposed Project (refer to Chapter 3.0, Project Description, Figure 3-2, Proposed Project Overview Map). The analysis concludes that less than significant impacts related to noise and vibration systems will occur. The Proposed Project's effects on this resource were evaluated using the significance criteria set forth in Appendix G of the CEQA Guidelines. The conclusions are summarized in the checklist above, and discussed in more detail in Section 4.12.6.

4.12.2 Regulatory Setting

This section includes a description of the noise and vibration regulatory framework.

4.12.2.1 Federal

Noise Regulations

Noise Control Act of 1972

The USEPA, pursuant to the Noise Control Act of 1972, established guidelines for acceptable noise levels for sensitive receivers such as residential areas, schools, and hospitals. The levels set forth are 55 A-Weighted decibels (dBA) day-night sound level (L_{dn}) for outdoor use areas and 45-dBA L_{dn} for indoor use areas, and a maximum level of 70-dBA L_{dn} is identified for all areas to prevent hearing loss[1] (USEPA 1974). These levels provide guidance for local jurisdictions, but do not have regulatory enforceability. In the absence of applicable noise limits, the USEPA levels can be used to assess the acceptability of project-related noise.

U.S. Department of Housing and Urban Development

The U.S. Department of Housing and Urban Development (HUD) has also established guidelines for acceptable noise levels for sensitive receivers such as residential areas, schools, and hospitals (24 CFR 51). The HUD's noise levels include a two-pronged guidance, one for the desirable noise level and the other for the maximum acceptable noise level. The desirable noise level established by HUD conforms to the USEPA guidance of 55-dBA L_{dn} for outdoor use areas of residential land uses and 45-dBA L_{dn} for indoor areas of residential land uses. The secondary HUD standard establishes a maximum acceptable noise level of 65-dBA L_{dn} for outdoor use areas of residential areas.

Vibration Regulations

There are no specific regulations for vibration, however the Federal Transit Administration (FTA) provides guidance for analysis of groundborne noise and vibration related to transportation and construction-induced vibration. The Proposed Project is not subject to FTA regulation; however, these FTA guidelines serve as a useful tool to evaluate vibration impacts. With respect to human response within residential uses (e.g., annoyance, sleep disruption), FTA recommends a maximum acceptable vibration standard of 80 vibration decibels (FTA 2006).

4.12.2.2 State

Noise Regulations

The California Code of Regulations has guidelines for evaluating the compatibility of various land uses as a function of community noise exposure, as shown in Table 4.12-1 below. The State has also established noise insulation standards for new multifamily residential units, hotels, and motels that would be subject to relatively high levels of transportation-related noise. These requirements are collectively known as the California Noise Insulation Standards (California Code of Regulations Title 24, Part 2 CBC, Chapter 12). The noise insulation standards set forth an interior standard of 45 dBA L_{dn} in any habitable room. They require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than 60 dBA L_{dn}.

[1] The human ear is not uniformly sensitive to all sound frequencies; therefore, the A-weighting scale has been devised to correspond with the human ear's sensitivity. The A-weighting scale uses the specific weighting of sound pressure levels from about 31.5 hertz to 16 kilohertz for determining the human response to sound.

Table 4-12-1. Land Use Compatibility for Community Noise Environments

Land Use Category	Community Noise Exposure L_{dn} or CNEL, dBA					
	55	60	65	70	75	80
Residential: Low-density Single Family, Duplex, Mobile Homes						
Residential: Multiple Family						
Transient Lodging: Motels, Hotels						
Schools, Libraries, Churches, Hospitals, Nursing Homes						
Auditoriums, Concert Halls, Amphitheaters						
Sports Arena, Outdoor Spectator Sports						
Playgrounds, Neighborhood Parks						
Golf Courses, Riding Stables, Water Recreation, Cemeteries						
Office Buildings, Business Commercial and Professional						
Industrial, Manufacturing, Utilities, Agriculture						

Legend	
	Normally Acceptable. Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal construction without any special noise insulation requirements.
	Conditionally Acceptable. New construction or development should only be undertaken after a detailed analysis of the noise reduction requirements is made and the needed insulation features included in the design.
	Normally Unacceptable. New construction or development should generally be discouraged. If new development is to proceed, a detailed analysis of the noise reduction requirements is made and the needed insulation features included in the design.
	Clearly Unacceptable. New development or construction should not be undertaken.

Source: California Office of Planning and Research 2003.

State regulations pertaining to worker noise exposure apply to the construction phase of the Proposed Project (for example Cal/OSHA Occupational Noise Exposure Regulations [8 California Code of Regulations General Industrial Safety Orders, Article 105, Control of Noise Exposure, Section 5095, et seq.]), or for workers in a "central plant" and/or maintenance facility, or involved in the use of maintenance equipment or heavy machinery.

Vibration Regulations

The California Department of Transportation (Caltrans) also provides guidance for analysis of groundborne noise and vibration. The Proposed Project is not subject to Caltrans regulations; however, these guidelines serve as another useful tool to evaluate vibration impacts. Caltrans guidelines recommend that a standard of 0.2 inch per second peak particle velocity (PPV) not be exceeded for protection of normal residential buildings, and that 0.08 inch per second PPV not be exceeded for protection of old or historically significant structures (Caltrans 2004).

4.12.2.3 Local

As provided in CPUC General Order 131-D, CPUC has exclusive jurisdiction over siting, design, and construction of the Proposed Project, preempting local discretionary authority over the location and construction of electrical utility facilities. Therefore, the Proposed Project is not subject to local discretionary land-use regulations. Nonetheless, as part of the environmental review process, SDG&E considers relevant local land use plans and policies that pertain to noise and vibration.

City of Oceanside General Plan Noise Element

The City's General Plan Noise Element prohibits construction noise in excess of 85 dB at 100 feet from the source of noise, and prohibits construction activities between 6:00 p.m. and 7:00 a.m. when such activities exceed the existing ambient noise level by 5 dB or more. The Noise Element also indicates that a special permit may be granted to extend construction hours by the City's Director of Public Works if "extenuating circumstances exist." In addition, the Noise Element specifies that off-highway motor vehicles should not emit noise in excess of the following levels:

- 82 dBA for a vehicle 6,000 pounds or more in weight.
- 74 dBA for any other on-highway vehicle used off-road.
- 70 dBA for any off-road vehicles less than 6,000 pounds in weight.

Machinery, circulation devices, fans, and other such equipment are not be permitted to operate when a noise level is created at the property line exceeding 5 dBA above the ambient level (City of Oceanside 1974).

City of Oceanside Municipal Code

Chapter 38 (Noise Control) of the Oceanside Municipal Code limits operational noise to 1-hour average sound levels (dBA equivalent sound pressure level [L_{eq}]) depending on the zoning district and time of day. The sound level limit applies at any point on or beyond the boundary of the property on which the sound is produced. The sound level limit at a location on a boundary between two zoning districts is the arithmetic mean of the respective limits for the two zones.

Construction activities are subject to Section 38.17, which specifically prohibits the operation of any pneumatic or air hammer, pile driver, steam shovel, derrick, steam, or electric hoist, parking lot cleaning equipment or other appliance, the use of which is attended by loud or unusual noise, between the hours of 10:00 p.m. and 7:00 a.m. Section 38.15 indicates that exceptions to the noise limits can be granted for construction, maintenance, or other public improvement activities by government agencies or public utilities by the city manager or designee. The noise limits for various zones are summarized in Table 4.12-2.

Table 4.12-2. Maximum Allowable 1-Hour Average Sound Level (dBA L_{eq})

Base District Zone	7:00 a.m. to 9:59 p.m.	10:00 p.m. to 6:59 a.m.
(1) Residential Districts:		
RE (Residential Estate)	50	45
RS (Single-Family)	50	45
RM (Medium Density)	50	45
RH (High Density)	55	50
RT (Residential Tourist)	55	50
(2) C (Commercial)	65	60
(3) I (Industrial)	70	65
(4) D (Downtown)	65	55
(5) A (Agricultural)	50	45
(6) OS (Open Space)	50	45

Source: City of Oceanside Municipal Code 2015.

Municipal Code Section 38.15 (Exemptions for construction, maintenance or other public improvement activities by government agencies or public utilities) states:

> "Notwithstanding anything in this chapter to the contrary, the city manager, or the manager's designee, on a case-by-case basis, may authorize construction, maintenance or other public improvement activities by a government agency or a public utility, that exceed the noise, duration or hour of work limits established by this chapter, upon a determination that the authorization furthers the public interest."

The City's Grading Ordinance (Ordinance No. 81-20) states that grading and equipment operations within 0.5 mile of a structure used for human occupancy can only be conducted Monday through Friday between the hours of 7:00 a.m. to 6:00 p.m. Further, the noise levels associated with any construction equipment should not exceed 85 dB at a distance of 100 feet (City of Oceanside 1981).

4.12.3 Existing Conditions

4.12.3.1 Existing Noise Sources

The Proposed Project and staging yards are located within areas containing light industrial, commercial, and/or civic uses (refer to Section 4.10, *Land Use*). The dominant ambient day and night noise sources in the Proposed Project area are primarily related to traffic and transportation on adjacent roadways. Existing sources of ambient noise include on-road traffic from Avenida Del Oro and Avenida De La Plata, and the North County Transit District Sprinter. Potential noise sources could also include the OMA located approximately 3 miles west of the proposed substation.

It is important to note that the sound levels in most communities fluctuate, depending on the activity of nearby and distant noise sources, time of the day, or season of the year. Within an hour, the sound level can fluctuate between the lowest level and the highest level. However, it can be expected that the following ambient noise levels exist in the Proposed Project area:

- Recreational/Open Space – range from 10 to 40 dBA;
- Suburban/residential areas – range from 40 to 50 dBA;

- Arterial roadways – range from 50 to 65 dBA;
- Office or commercial uses – from 50 to 60 dBA; and
- Industrial uses – 65 to 80 dBA (Industrial Noise Control 2016; CHC 2016).

4.12.3.2 Sensitive Receptors

Sensitive noise receptors are uses such as schools, hospitals, rest homes, long-term care and mental healthcare facilities, and residential areas where excessive noise would be a nuisance. Some jurisdictions may identify other noise-sensitive uses such as churches, libraries, and parks. Insensitive noise receptors typically include uses that generate significant noise levels and uses of low-level human occupancy. Refer to Table 4.12-3 for a list of sensitive noise receptors within 1 mile of the proposed substation site. A 1-mile radius represents a reasonable distance where sensitive noise receptors could experience impacts because most typical construction equipment noise attenuates to less than 70 dBA at 800 feet and would not be discernable at a distance of 1 mile. The underground construction work would occur on and adjacent to the proposed substation site, and therefore is included in the distances in Table 4.12-3 below.

Table 4.12-3. Sensitive Receptors

Type	Name	Distance from Substation Site (mile)	Direction from Substation Site
Residential	Radford Street and adjacent residential streets	0.3	East
	Via Isidro and adjacent residential streets	0.5	North
	Avenida Sevilla and adjacent residential streets	0.5	East
	Nautilus Way and adjacent residential streets	0.5	North
	Olive Drive and adjacent residential streets	0.6	Southeast
	Wooster Drive and adjacent residential streets	0.7	South
	Fairwinds- Ivey Ranch Retirement Community	0.7	Northwest
	Carnegie Drive and adjacent residential streets	0.8	Southwest
	Via Clemente and adjacent residential streets	0.8	Northwest
Hospitals	8-2-8 Walk-In Clinic Urgent Care	0.6	Southeast
Schools	Martin Luther King Jr. Middle School	0.9	West
	Classical Academy	0.3	East
	La Petite Academy	0.25	Northeast
	Coastal Academy	0.2	South
	Quantum Learning	0.25	Southeast
	El Camino High School	1.5	West
	Pacific View Charter School	1.0	East
	San Diego Neighborhood Homeschools	0.5	South
	Discovery Isle Child Development Center	0.7	South

Table 4.12-3. Sensitive Receptors

Type	Name	Distance from Substation Site (mile)	Direction from Substation Site
Places of Worship	North County Christian Life Center	0.3	East
	Rushing Wind Ministries	0.3	East
	Jehovah's Witnesses	0.3	Southeast
	Grace Anglican Church	0.5	South
	Vineyard North Church	0.6	Southwest
	City of Refuge Church	0.8	Southwest
	St. Margaret's Catholic Church	0.8	East
Parks	El Corazon Specific Plan Area	1.0	South
	Martin Luther King Jr. Park	0.6	Northwest
	Joseph Sepulveda Park	0.6	South
	Rancho Del Oro Park/Joe & Mary Mottino Family YMCA	0.8	North
	Palisades Park	1.0	Southwest
	John Landes Park	1.0	Southeast
	Bub Williamson Park	1.3	Southeast

4.12.4 Standard Operating Procedures

As described in Section 3.9, Standard Operating Procedures, the Proposed Project will involve various procedures and restrictions related to noise:

- **Blasting.** In the unlikely event that rock blasting is used during construction, a noise and vibration calculation will be prepared and submitted to SDG&E for review before blasting at each site. The construction contractor will ensure compliance with all relevant local, state, and federal regulations relating to blasting activities, as well as SDG&E's blasting guidelines.
- **Construction Noise.** SDG&E will meet and confer with the appropriate municipality to discuss temporarily deviating from the requirements of the Municipal Code, should it become necessaryas described in the construction noise exemption process.
- **Generators.** Generator use will be limited to less than 50 horsepower at all staging yards. Any generators used at the staging yards will be located away from noise sensitive areas, and positioned on the property to comply with local noise ordinances.
- **Landowner Notification.** Landowners of parcels within 300 feet of Proposed Project will receive notification of the start of construction at least one week prior to the start of construction activities within that area.
- **Mufflers.** Functioning mufflers will be maintained on all equipment.

4.12.5 Applicant Proposed Measures

No noise and vibration APMs are proposed.

4.12.6 Project Impacts

The Proposed Project includes construction of a new 69/12 kV substation and loop-in of an existing underground 69 kV power line to connect to the proposed substation (refer to Chapter 3.0, *Project Description*).

The temporary impact areas may vary because the positioning of construction vehicles, equipment, and materials cannot be accurately anticipated prior to construction, as locations are dependent upon the contractor safely performing the work. Once the proposed Ocean Ranch Substation is constructed and placed in service, it will not require personnel stationed on site except during periodic and routine maintenance activities that will ensure reliable operation of all equipment within the substation. The underground components will be inspected consistent with SDG&E's existing underground inspection and maintenance program.

4.12.6.1 Methodology

Evaluation of noise and vibration impacts from the Proposed Project included reviewing applicable City and community noise standards, characterizing the existing noise environment, evaluating land use compatibility levels outlined in the City of Oceanside General Plan Noise Element and Municipal Code, and predicting construction and operational noise levels and for impacts at the nearest noise-sensitive receptors. The noise analysis focuses on the construction of the proposed Ocean Ranch Substation, and construction activities associated with the underground TL 6966 loop-in connecting into the proposed substation.

4.12.6.2 Significance Criteria

The significance of project-related impacts on noise and vibration systems were evaluated for each of the criteria listed in the checklist above, as discussed below.

a) Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? *Less than Significant*

Construction of the Proposed Project will require the temporary use of various types of noise-generating equipment as summarized in Chapter 3.0, *Project Description*, Table 3-5. Substation construction will include such equipment as: a backhoe, boom trucks, bucket trucks, compactors, dozers, dump trucks, an excavator, a forklift, a grader, loaders, a manlift, an oil rig, a pulling rig, rollers, and a scraper. The underground component will include such equipment as: a backhoe, concrete saw, crane, excavator, jackhammer, loader, paver, trucks, vacuum truck, and wire pulling machine. A generator will also be required during the construction phase of the Proposed Project, including running for an approximate 24-hour period to fill the distribution banks with oil at the final phases of construction. Generators may also be used at staging yards, as discussed above in Section 4.12.4, *Standard Operating Procedures*, but will placed so they do not affect sensitive receptors.

The human ear perceives sound in a nonlinear fashion; hence, the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather they combine logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA. Accordingly, noise at any specific receptor is dominated by the closest and loudest equipment. Construction equipment will not generally be operated continuously, and equipment will not always be operated simultaneously. There will be times when no equipment is being operated and noise will be at ambient levels. Typical usage factors for this type of

construction equipment were applied to sound levels in order to arrive at the average sound level that may occur during a typical workday. Usage factors are applied irrespective of workday duration. The usage factors account for the fact that equipment are not always operated at full throttle conditions, and are not used for an entire workday. Tables 4.12-4 and 4.12-5 show the adjusted exterior sound levels for a typical workday during construction of the proposed substation and underground facilities, respectively. Construction sound levels are shown at expected various distances, covering the full range of distances to nearby sensitive receptors in the Proposed Project area.

Table 4.12-4. Substation Construction Exterior Sound Levels Adjusted for Workday

Equipment	Adjusted Noise Level for Workday (dBAA)				
	50 feet	100 feet	200 feet	500 feet	1,000 feet
Backhoe	76	70	64	56	49
Boom Truck	73	67	61	53	46
Bucket Truck	73	67	61	53	46
Bulldozer	81	75	69	61	54
Compactor	85	79	73	65	58
Excavator	77	71	65	57	50
Forklift	80	74	68	60	53
Generator (with Oil Rig Trailer)	82	76	70	62	55
Grader / Blade	75	69	63	55	48
Loader	75	69	63	55	48
Paver	74	68	62	54	47
Portable Generator	70	64	58	50	43
Pulling Rig	74	68	62	54	47
Scraper	85	79	73	65	58
Trencher	73	67	61	53	46
Trucks- Heavy (e.g., Asphalt, Dump, Flatbed, Maintenance, Line, Splice, Water)	81	75	69	61	54

Source: BLM 2011, Federal Highway Administration (FHWA) 2006, SDG&E 2014.

Table 4.12-5. Underground Line Construction Exterior Sound Levels Adjusted for Workday

Equipment	Adjusted Noise Level for Workday (dBAA)				
	50 feet	100 feet	200 feet	500 feet	1,000 feet
Air Compressor	85	79	73	65	58
Backhoe	74	68	62	54	47
Boom Truck, Crane	73	67	61	53	46
Bucket Truck	73	67	61	53	46
Concrete Saw	83	77	71	63	56
Excavator	77	71	65	57	50
Jackhammer	78	72	66	58	51
Loader	75	69	63	55	48
Paver	74	68	62	54	47
Pulling Rig	74	68	62	54	47
Roller	85	79	73	65	58
Trucks-Heavy (e.g., Asphalt, Dump, Flatbed, Maintenance, Line, Splice, Water)	81	75	69	61	54
Truck – Vacuum, Air	81	75	69	61	54

Source: FHWA 2006, SDG&E 2014.

The underground power line work is located adjacent to the proposed Ocean Ranch Substation. The closest sensitive noise receptor, Coastal Academy, is approximately 1,060 feet (or 0.2 mile) east of the proposed Ocean Ranch Substation. The noise levels shown on Tables 4.12-4 and 4.12-5 are those that would be experienced by people outdoors. However, normal wood frame construction usually provides from 12 to 18 dBA of reduction from exterior to interior areas, and well over 20 dBA is commonly achieved in modern structures that meet current energy conservation requirements. Noise impacts associated with construction activities would be temporary, and most, if not all, of the work would be conducted in compliance with the local noise ordinance, which restricts noise-generating activities to daytime hours, and otherwise exempts construction from noise thresholds for work in the public interest. Some concrete pours may take place during an extended day, depending on the size of the pour. Transformer oil filling at the substation site will require that an air compressor run continuously over a 24-hour period. Actual cutovers of the circuits of the substation will be scheduled in a manner that maintains uninterrupted service to customers, which may require work to be done after normal business hours or on the weekend and/or nights. As a standard operating procedure, SDG&E will meet and confer with the City of Oceanside, as needed, regarding activities that will be conducted outside of the hours permitted by the Noise Ordinance. In addition, other standard operating procedures will be implemented to minimize noise such as locating noisy equipment as far away from sensitive receptors as possible, ensuring mufflers are operating correctly, and resident notification of upcoming construction activities that could generate noise. With implementation of these standard operating procedures, construction noise impacts would be less than significant.

The permanent noises generated by an electrical substation are limited to transformer operation and equipment and vehicles used by workers performing periodic maintenance (Figure 4.12-1). Transformer noise generally contains a pure-tone or "hum" component, as well as noise associated with cooling fans and oil pumps that operate periodically. Due to the distance to sensitive receptors, noise associated with operation of the substation would be negligible and less than significant. Noise levels will be further reduced by a planned masonry wall around the substation perimeter. The noise impacts from operation of the substation will be less than significant.

Operation of the underground electrical power line will not generate noise. Corona is generally a phenomenon that can cause a tiny electric discharge that can ionize air close to the conductors, creating a noise. The corona effect would not be a design concern for underground power lines, regardless of voltage level, since the energized conductors are fully enclosed in a semi-conducting layer within the insulated cables that serve to equalize the electrical gradient at the surface of the components. Therefore, no corona noise is created by underground power lines.

The proposed Ocean Ranch Substation will be unstaffed and electrical equipment within the substation will be controlled from SDG&E's central operations facilities. Entry to an operational substation is restricted to authorized personnel only. Routine maintenance is expected to require approximately six trips per year by a two- to four-person crew. Equipment used to support this effort will include a crew truck, hydraulic tools, oil filtration equipment and a boom truck. Routine operations will require one or two workers in a light utility truck to visit the substation on a daily or weekly basis. It is anticipated that one annual major maintenance inspection will occur, requiring an estimated 10 personnel. It is anticipated that this inspection will take approximately one week or less to complete using a crew truck, hydraulic tools, oil filtration equipment, and a boom truck. As a result, there will be no exceedance of established noise standards due to maintenance of the substation, and impacts would be less than significant. As with the existing underground 69 kV power line, it is anticipated that the 69 kV underground power line connecting into the substation will be inspected once per year. The inspection of the underground power line will be the same for all existing underground inspections currently completed by SDG&E within the City of Oceanside and throughout SDG&E's service territory. Following construction, these activities will not change; therefore, impacts would be less than significant.

b) Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? *Less than Significant*

Construction activities can generate varying degrees of ground-borne vibration, depending on the construction procedure and the construction equipment used. Operating construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receiving buildings. Vibration levels as a result of construction would generally be below the level needed to perceive vibration for most people. Table 4.12-6 states that vibrations become perceptible by humans at an amplitude of approximately 0.035 inch per second. When compared to Figure 4.12-1, a PPV of 0.035 inch per second is generated at a distance of approximately 50 feet by a loaded truck. The Proposed Project will not involve rock blasting or the use of ramming equipment, which tend to result in higher vibration levels. Because there are no sensitive receptors located within 50 feet of the Proposed Project, and construction activities are not anticipated to generate perceivable levels of ground-borne vibration, groundborne vibration impacts would be less than significant.

Table 4.12-6. Human Response to Transient Vibrations

Human Response	PPV (inch per second)
Severe	>0.9
Strongly Perceptible	0.24 to 0.9
Distinctly Perceptible	0.035 to 0.24
Barely Perceptible	<0.035

Source: Caltrans 2004.

Operation of the Proposed Project will consist of routine maintenance activities and emergency repairs. It is unlikely that these activities will produce significant groundborne vibrations because operation and maintenance activities will not require significant ground-disturbing activities. Operation of transformers at the proposed Ocean Ranch Substation could produce groundborne vibration; however, groundborne vibrations will be perceptible only in the immediate transformer pad vicinity (i.e., less than 25 feet), if at all. This will not be perceptible at the property line, much less to sensitive receptors outside of the site. No other component of the Proposed Project will generate vibrations during operation. Therefore, there will be no impact.

c) Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? *Less than Significant*

Operation of the underground electrical power line will not generate noise. Corona is generally a phenomenon that can cause a tiny electric discharge that can ionize air close to the conductors, creating a noise. The corona effect would not be a design concern for underground power lines, regardless of voltage level, since the energized conductors are fully enclosed in a semi-conducting layer within the insulated cables that serve to equalize the electrical gradient at the surface of the components. Therefore, no corona noise is created by underground power lines.

The primary source of permanent operational noise at the proposed Ocean Ranch Substation will be limited to transformer operation and equipment and vehicles used by workers performing periodic maintenance (see discussion under a) above). No maintenance is required for the underground power line. The nearest sensitive noise receptor, as shown in Table 4.12-3, is approximately 0.2 mile, which is approximately 1,050 feet south from the proposed Ocean Ranch Substation. As shown in Figure 4.12-2, the 45 dBA contour is within the substation site. Due to the distance to sensitive receptors, noise associated with operation of the proposed substation would be negligible and less than significant. Increased permanent ambient noise that could affect the surrounding commercial and industrial uses would be within the acceptable noise level range of such uses. In addition, noise levels will be further reduced by the proposed masonry wall around the substation perimeter. The noise impacts from operation of the Proposed Project will be less than significant.

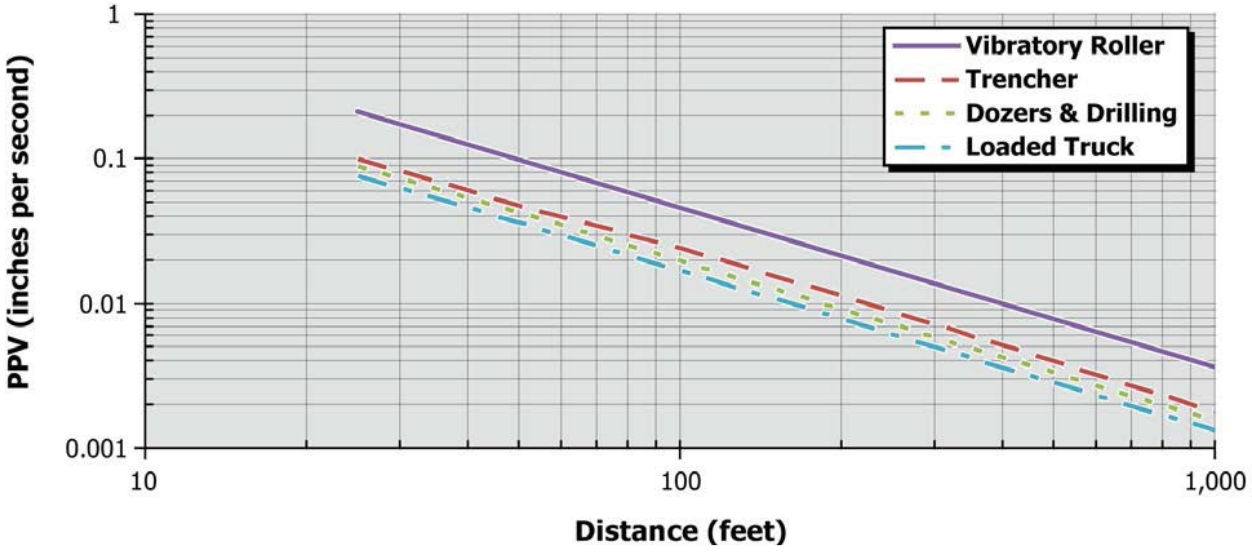
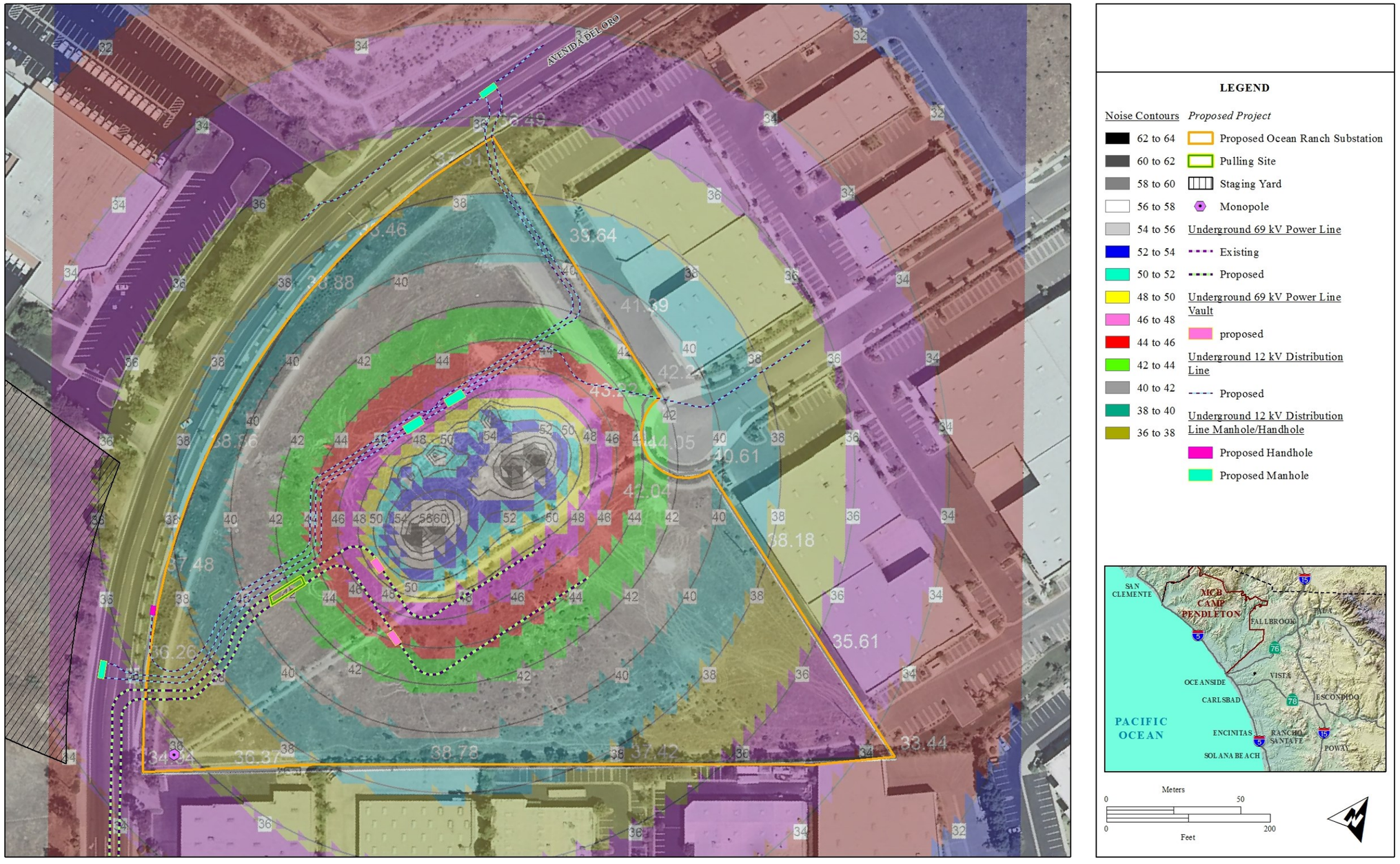


Figure 4.12-1 Construction Vibration Amplitudes



Source: SDG&E 2015.

Figure 4.12-2 Noise Generated by Electrical Substation

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d) Would the project result in substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? *Less than Significant*

As discussed under a) above, noise impacts associated with construction activities would be temporary, and most, if not all, of the work would be conducted in compliance with the local noise ordinance, which restricts noise-generating activities to daytime hours, and otherwise exempts construction from noise thresholds for work in the public interest. Some concrete pours may take place during an extended day, depending on the size of the pour. Transformer oil filling at the substation site will require that an air compressor run continuously over a 24-hour period. Actual cutovers of the circuits of the substation will be scheduled in a manner that maintains uninterrupted service to customers, which may require work to be done after normal business hours or on the weekend and/or nights. As a standard operating procedure, SDG&E will meet and confer with the City of Oceanside, as needed, regarding activities that will be conducted outside of the hours permitted by the Noise Ordinance. In addition, other standard operating procedures will be implemented to minimize noise such as locating noisy equipment as far away from sensitive receptors as possible, ensuring mufflers are operating correctly, and resident notification of upcoming construction activities that could generate noise. With implementation of these standard operating procedures construction noise impacts would be less than significant.

As discussed above, noise impacts resulting from operation of the proposed Ocean Ranch Substation would be less than significant. Routine inspection and maintenance activities currently performed on the underground power line would continue and would include all new project components. Maintenance activities would typically occur over short timeframes each year and generate minimal noise. Operation would not result in substantial temporary or periodic increase in ambient noise levels in the Proposed Project vicinity above existing levels. Therefore, noise impacts from operation and maintenance of the Proposed Project would be less than significant.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, will the project expose people residing or working in the project area to excessive noise levels? *No Impact*

The proposed substation site is located approximately 3 miles east of OMA and approximately 6 miles southeast of the MCB Camp Pendleton Airport. The proposed substation site is located within the airport influence areas of both airports (San Diego County Regional Airport Authority 2015). As a result, the Proposed Project is required by the State to be consistent with the OMA ALUCP and Camp Pendleton ALUCP in terms of air hazards and noise.

The Proposed Project would not add any permanent population residing or working in the area that could potentially be affected by existing airport noise. The Proposed Project is approximately 3 miles from an airport. Due to the distance involved construction and periodic maintenance workers would not be exposed to excessive noise levels from airport use. Therefore, the Proposed Project will have no impact related to excessive noise that could affect people residing or working in the project area.

f) For a project within the vicinity of a private airstrip, will the project expose people residing or working in the project area to excessive noise levels? *No Impact*

There are no private airstrips located within 2 miles of the Proposed Project. Therefore, people working in the Proposed Project area during the construction, operation, or maintenance phases will not be exposed to excessive noise levels attributable to a private airstrip, and no impact will occur.

4.12.7 References

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TABLE OF CONTENTS

4.13 POPULATION AND HOUSING 4.13-1
4.13.1 Introduction 4.13-1
4.13.2 Regulatory Setting 4.13-1
4.13.3 Existing Conditions 4.13-3
4.13.4 Standard Operating Procedures 4.13-4
4.13.5 Applicant Proposed Measures 4.13-4
4.13.6 Project Impacts 4.13-4
4.13.7 References 4.13-5

LIST OF TABLES

4.13-1 Population Totals and Trends 4.13-3
4.13-2 2010 Project Area Total Housing Units and Vacancy Rates 4.13-3
4.13-3 2014 Employment Figures and Unemployment Range 4.13-4

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4.13 POPULATION AND HOUSING

Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b.	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c.	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

4.13.1 Introduction

This section of the PEA describes the existing conditions and project-related impacts to population and housing in the vicinity of the Proposed Project The analysis concludes that no impacts related to population and housing will occur. The Proposed Project's effects on population and housing were evaluated using the significance criteria set forth in Appendix G of the CEQA Guidelines. The conclusions are summarized in the checklist above, and discussed in more detail in Section 4.13.6.

4.13.2 Regulatory Setting

This section includes a description of the population and housing regulatory framework.

4.13.2.1 Federal

There are no federal regulations associated with population and housing that are relevant to the Proposed Project.

4.13.2.2 State

There are no state regulations associated with population and housing that are relevant to the Proposed Project.

4.13.2.3 Local

As provided in CPUC General Order 131-D, the CPUC has exclusive jurisdiction over the siting, design, and construction of the Proposed Project, preempting local discretionary authority over the location and construction of electrical utility facilities. Therefore, the Proposed Project is not subject to local discretionary land use regulations. Nonetheless, as part of the environmental review process, SDG&E considers relevant local land use plans and policies that pertain to population and housing.

City of Oceanside General Plan, Housing Element

The following is a summary of the City of Oceanside's goals (City of Oceanside 2009):

- *Goal 1:* Produce opportunities for decent and affordable housing for all of Oceanside's citizens.
    - *Policy 1.1.* Promote a high-quality urban environment with stable residential neighborhoods and healthy business districts.
    - *Policy 1.2.* Encourage and assist in neighborhood rehabilitation and beautification activities.
    - *Policy 1.3.* Promote a high rate of homeownership in Oceanside.
    - *Policy 1.4.* Advocate the rehabilitation of substandard residential properties by homeowners and landlords.
    - *Policy 1.5.* Continue to utilize the City's code enforcement program to bring substandard units into compliance with City codes and to improve overall housing quality and conditions in Oceanside.
    - *Policy 1.6.* Encourage higher density housing development along transit corridors and smart growth focus areas.
- *Goal 2:* Encourage the development of a variety of housing opportunities, with special emphasis on providing:
    1. A broad range of housing types, with varied levels of amenities and number of bedrooms.
    2. Sufficient rental stock for all segments of the community, including families with children.
    3. Housing that meets the special needs of the elderly and persons with disabilities.
    4. Housing that meets the needs of large families.
    - *Policy 2.1.* Designate land for a variety of residential densities sufficient to meet the housing needs for a variety of household sizes and income levels, with higher densities being focused in the vicinity of transit stops, smart growth focus areas, and in proximity to significant concentrations of employment opportunities.
- *Goal 3:* Protect, encourage, and provide housing opportunities for persons of low and moderate income.
    - *Policy 3.1.* Continue to utilize federal and state subsidies to the fullest extent in order to meet the needs of lower income residents.
    - *Policy 3.2.* Use the City's regulatory powers to promote affordable housing.
- *Goal 4:* Promote equal opportunity for all residents to reside in housing of their choice.
    - *Policy 4.1.* Prohibit discrimination in the sale or rental of housing with regard to race, ethnic background, religion, disability, income, sex, age, familial status, or household composition.
    - *Policy 4.2.* Assist in the enforcement of fair housing laws by receiving and investigating fair housing allegations, monitoring compliance with fair housing laws, and referring possible violations to enforcing agencies.

4.13.3 Existing Conditions

Table 4.13-1 identifies population totals and trends within the City of Oceanside and San Diego County. In 2013, Oceanside had an estimated population of 172,794 residents, or approximately 5 percent of the 3,211,252 total population of the San Diego County and less than 1 percent of the 38,332,521 total population of California.

Table 4.13-1. Population Totals and Trends

Jurisdiction	2000 Census Total	2010 Census Total	2013 Estimate	Percentage Change Between 2000 and 2010	Projected Population for 2020
City of Oceanside	161,029	167,086	172,794	4	195,592
San Diego County	2,813,833	3,095,313	3,211,252	9	3,540,000

Notes: The 2013 total is an estimate based on actual 2010 numbers.
Source: San Diego Association of Governments 2011; U.S. Census Bureau 2014.

Table 4.13-2 identifies the number of housing units and the vacancy rates for San Diego County and the City of Oceanside. The 2010 U.S. Census Bureau determined that the San Diego County had 1,169,496 housing units with a vacancy rate of 8.1 percent. In 2010, Oceanside had an estimated 64,435 housing units with a vacancy rate of 8.1 percent (U.S. Census Bureau 2015).

Table 4.13-2. 2010 Project Area Total Housing Units and Vacancy Rates

County/City	Total Housing Units	Percent Vacant
City of Oceanside	64,435	8.1
San Diego County	1,169,496	8.1

Source: U.S. Census Bureau 2015.

For 2010, approximately 52.7 percent of the total housing units in San Diego County were detached, single-family homes (U.S. Census Bureau 2015).

4.13.3.1 Temporary Housing

There is one hotel approximately 1.5 miles west of the Proposed Project. There are also residences approximately 1.0 mile from the Proposed Project.

For 2014, the San Diego Tourism Authority reported approximately 474 hotel and motel properties with over 59,691 rooms available to visitors within San Diego County. The total average occupancy rate for these lodging establishments was approximately 74.6 percent (San Diego Tourism Authority 2015).

4.13.3.2 Employment and Income

Table 4.12-3 identifies the total employment and unemployment rates for the Proposed Project area. In December 2014, the unemployment rate for San Diego County was 5.1 percent, with approximately 82,900 people unemployed. The City of Oceanside had an unemployment rate of 4.9 percent, with approximately 4,300 people unemployed.

Table 4.13-3. 2014 Employment Figures and Unemployment Range

City/County	Total Employed	Total Unemployed	Unemployed Rate (Percent)
City of Oceanside	84,000	4,300	4.9
San Diego County	1,523,800	82,900	5.1

Source: California Employment Development Department 2015.

According to U.S. Census Bureau data for 2009 to 2013, the median annual household income for the City of Oceanside was $58,153 and for San Diego County was $62,962 (U.S. Census Bureau 2014).

4.13.4 Standard Operating Procedures

There are no standard operating procedures related to population and housing that are applicable to the Proposed Project.

4.13.5 Applicant Proposed Measures

No population and housing APMs are proposed.

4.13.6 Project Impacts

The Proposed Project includes construction of a new 69/12 kV substation and loop-in of an existing 69 kV underground power line to connect to the proposed substation (refer to Chapter 3.0, *Project Description*).

The temporary impact areas may vary because the positioning of construction vehicles, equipment, and materials cannot be accurately anticipated prior to construction, as locations are dependent upon the contractor safely performing the work.

Once the proposed Ocean Ranch Substation is constructed and placed in service, it will not require personnel stationed onsite except during periodic and routine maintenance activities that will ensure reliable operation of all equipment within the substation. The underground components will be inspected consistent with SDG&E's existing underground inspection and maintenance program.

4.13.6.1 Methodology

Data used to conduct demographic and economic analyses were obtained primarily from statistical reports published by the U.S. Census Bureau and the California Employment Development Departiment. A literature search was also conducted and included City of San Diego publications and government websites, such as the San Diego Association of Governments website.

4.13.6.2 Significance Criteria

The significance of project-related impacts on population and housing were evaluated for each of the criteria listed in the checklist above, as discussed below.

a) Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? *No Impact*

SDG&E estimates that construction of the Proposed Project will take a total of approximately 20 months to complete, depending upon unforeseen/unpredictable factors such as weather and required transmission outages. Proposed construction is scheduled to occur on or about October 1, 2017, and run through June

2019. It is anticipated that up to 40 workers will be employed for the site development phase of the Proposed Project at its peak. Approximately 33 workers will be required for the grading and site development at the proposed Ocean Ranch Substation. An average of approximately 12 workers are expected during the foundation and below-grade work. Construction of the substation is expected to require an average of 24 workers. SDG&E will primarily use its own workforce for construction, but will supplement, as needed, from an approved contractors' pool of qualified workers.

Most of the workers will travel from within 30 miles of the Proposed Project. Only a small percentage of the total number of contractor-supplied workers, if any, will need to reside temporarily in hotels/motels in Oceanside or other surrounding communities. The need for temporary lodging will therefore occur only as needed. Given that construction will employ the existing local workforce plus a relatively minor number of temporary as-needed additional workers, and considering the temporary nature of construction activities, the Proposed Project will not result in substantial population growth in the Proposed Project area. Any temporary increase in population due to construction will not have an impact compared to the existing population in the Oceanside (Table 4.13-1).

The purpose of the Proposed Project is to maintain the reliability of the current electrical system to service existing and planned future users. Following construction of the Proposed Project, no permanent jobs are expected to be created as a result of the Proposed Project. When in operation, the substation will be unstaffed and remotely operated. Maintenance of the power line will be periodic and of short duration. As a result, no impacts to population growth from the Proposed Project will occur.

b) Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? *No Impact*

The Proposed Project will not involve the removal or relocation of any housing. Therefore, no impacts will occur from the Proposed Project related to displacement of housing.

c) Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? *No Impact*

The Proposed Project will not involve the displacement of any people. Therefore, no impacts will occur from the Proposed Project related to displacement of people.

4.13.7 References

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TABLE OF CONTENTS

4.14 PUBLIC SERVICES 4.14-1
4.14.1 Introduction 4.14-1
4.14.2 Regulatory Background 4.14-1
4.14.3 Existing Conditions 4.14-2
4.14.4 Standard Operating Procedures 4.14-3
4.14.5 Applicant Proposed Measures 4.14-3
4.14.6 Project Impacts 4.14-4
4.14.7 References 4.14-6

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4.14 PUBLIC SERVICES

Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i.	Fire protection?	☐	☐	☐	☒
ii.	Police protection?	☐	☐	☐	☒
iii.	Schools?	☐	☐	☐	☒
iv.	Parks?	☐	☐	☒	☐
v.	Other public facilities?	☐	☐	☐	☒

4.14.1 Introduction

This section of the PEA describes the existing conditions and project-related impacts to public services in the vicinity of the Proposed Project. The analysis concludes that no impacts related to public services will occur. The Proposed Project's effects on this resource were evaluated using the significance criteria set forth in Appendix G of the CEQA Guidelines. The conclusions are summarized in the checklist above, and discussed in more detail in Section 4.14.6.

4.14.2 Regulatory Background

This section includes a description of the public services regulatory framework.

4.14.2.1 Federal

There are no federal regulations associated with public services that are relevant to the Proposed Project.

4.14.2.2 State

2010 Strategic Fire Plan for California

The 2010 Strategic Fire Plan for California was developed in coordination with the State Board of Forestry and Fire Protection and CAL FIRE to reduce and prevent the impacts of fire in California. Goal 6 of the Plan sets objectives to determine the level of suppression resources (staffing and equipment) needed to protect private and public state resources. Specific objectives include, but are not limited to, maintaining an initial attack policy which prioritizes life, property, and natural resources; determining suppression resources allocation criteria; analyzing appropriate staffing levels and equipment needs in relation to the current and future conditions; increasing the number of CAL FIRE crews for fighting wildfires and other

emergency response activities; maintaining cooperative agreements with local, state, and federal partners; and implementing new technologies to improve firefighter safety, where available (State Board of Forestry and Fire Protection 2010). The standards outlined in this document are applicable to the fire protection agency serving the City of Oceanside.

4.14.2.3 Local

As provided in CPUC General Order 131-D, the CPUC has exclusive jurisdiction over the siting, design, and construction of the Proposed Project, preempting local discretionary authority over the location and construction of electrical utility facilities. Therefore, the Proposed Project is not subject to local discretionary land use regulations. Nonetheless, as part of the environmental review process, SDG&E considers relevant local land use plans and policies that pertain to public services.

City of Oceanside

The 2002 City of Oceanside General Plan, Public Safety Element contains the objectives and policies established by the City of Oceanside related to fire management and other emergency services. These policies relate to necessary equipment, response, and preventative measures for safety personnel.

The 2002 General Plan, Community Facilities Element contains the goals and policies related to public facilities in the City Oceanside. The policies ensure that adequate public facilities and services are provided to serve existing and future residential, commercial, and industrial development throughout the City.

4.14.3 Existing Conditions

4.14.3.1 Fire and Emergency Services

The Oceanside Fire Department serves the Proposed Project area. The fire department is located at 300 North Coast Highway in the City of Oceanside, which is approximately 7.2 miles east of the Proposed Project site. Oceanside Fire Department Station 3 is approximately 3.4 miles west of the Proposed Project site, and Station 5 is approximately 3.5 miles north of the site.

As stated in the Community Facilities Element of the Oceanside General Plan, there is a 5-minute response time from fire stations to all developed areas within the City. There is a maximum response time for paramedic units of 8 minutes in urban areas and 15 minutes in rural areas.

As stated in the Public Safety Element, the City maintains the necessary equipment, personnel, and water supply levels required for the current class 5 insurance rating over the entire city.

4.14.3.2 Police Protection Services

The Oceanside Police Department serves the Proposed Project area. The Oceanside Police Department headquarters is located at 3855 Mission Avenue in the City of Oceanside. The Proposed Project site is approximately 2.8 miles southeast of police headquarters. In addition to police protection services, the police department also operates two of the six resource centers in the City: the Police Beach Facility, which is located at 122 North the Strand, and the Downtown Resource Center, which is located at 401 Mission Avenue C-122.

4.14.3.3 Hospitals

The following are the closest major medical facilities to the Proposed Project site:

- Tri-City Medical Center, located at 4002 Vista Way, approximately 2.9 miles south of the Proposed Project site.

- Ray's Children Hospital, located at 4120 Waring Road, approximately 2.7 miles south of the Proposed Project site.
- Scripps Coastal Medical Center, located at 4318 Mission Avenue, approximately 1.7 miles northwest of the Proposed Project site.

4.14.3.4 Schools

The Proposed Project site falls within the Oceanside Unified School District. There are four schools located within 0.25 mile of the proposed substation site. These schools are: The Classical Academy (approximately 0.2 miles east); La Petite Academy (approximately 0.25 miles northeast); Coastal Academy (approximately 0.2 miles south); and Quantum Learning (approximately 0.25 miles southeast).

4.14.3.5 Other Services

The closest public library to the Proposed Project site is the Mission Branch Library located at 3861 Mission Avenue. It is located approximately 2.8 miles northwest of the proposed site.

The City has four recreation centers, the closest being the John Landes Recreation Center, which is approximately 1.0 mile south of the Proposed Project site.

There are many parks in the City of Oceanside. The Oceanside parks nearest to the Proposed Project site include the following:

- SoCal Sports Complex within the El Corazon Specific Plan Area, which includes recreational use areas, is located approximately 1.0 mile from the proposed Ocean Ranch Substation.
- The Martin Luther King, Jr. Park, located approximately 0.6 miles from the proposed Ocean Ranch Substation.
- Rancho Del Oro Park, located approximately 0.8 miles north of the proposed Ocean Ranch Substation.
- Palisades Park, located approximately 1.0 mile southwest of the proposed Ocean Ranch Substation.
- Joseph Sepulveda Park, located approximately 0.6 miles south of the proposed Ocean Ranch Substation.
- John Landes Park, located approximately 1.0 mile southeast of the proposed Ocean Ranch Substation.

There is an additional park in the City of Vista, Bub Williamson (8.7 acres), located 1.3 miles southeast of proposed Ocean Ranch Substation site.

4.14.4 Standard Operating Procedures

There are no standard operating procedures related to public services that are applicable to the Proposed Project.

4.14.5 Applicant Proposed Measures

No public services APMs are proposed.

4.14.6 Project Impacts

The Proposed Project includes construction of a new 69/12 kV substation and loop-in of an existing 69 kV underground power line to connect to the proposed substation (refer to Chapter 3.0, *Project Description*).

The temporary impact areas may vary because the positioning of construction vehicles, equipment, and materials cannot be accurately anticipated prior to construction, as locations are dependent upon the contractor safely performing the work.

Once the proposed Ocean Ranch Substation is constructed and placed in service, it will not require personnel stationed onsite except during periodic and routine maintenance activities that will ensure reliable operation of all equipment within the substation. The underground components will be inspected consistent with SDG&E's existing underground inspection and maintenance program.

4.14.6.1 Methodology

Research regarding fire, police, emergency services, and public libraries involved the review of data from the City of Oceanside General Plan. Data pertaining to local area schools were obtained from the Oceanside Unified School District. Statistics pertaining to local hospitals and recreational amenities were also obtained through additional desktop-level research, utilizing online sources. In addition, Google Earth aerial photographs of the Proposed Project area were reviewed.

4.14.6.2 Significance Criteria

The potential significance of project-related impacts on public services were evaluated for each of the criteria listed in the checklist above, as discussed below.

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services? *No Impact*

The Proposed Project will be constructed within the City of Oceanside. It is anticipated that up to 40 workers will be employed for the site development phase of the Proposed Project at its peak. Approximately 33 workers will be required for the grading and site development at the proposed Ocean Ranch Substation. An average of approximately 12 workers are expected during the foundation and below-grade work. Construction of the substation is expected to require an average of 24 workers. Installation of the power line loop-in will require between 14 to 20 workers.

Construction of the Proposed Project is unlikely to affect the use, accessibility, or operation of any public services or facilities within the immediate area, including fire or police protection services, emergency services, hospitals, schools, parks, or other services (i.e., libraries), because workers will travel from within the San Diego County area where they are already using such services. Moreover, this small number of construction personnel represents an insignificant fraction of the region's existing population. On an as-needed basis, additional workers may need to reside temporarily at local lodging establishments, but this limited number of workers would not affect public services. Therefore, construction of the Proposed Project will not create a significant new workforce that will result in a new or increased demand for public services.

The Proposed Project will not result in a permanent need for new or additional public services, because it will not directly induce population growth or result in the construction of residential or other land uses that

will indirectly induce area population growth. Therefore, no impacts will occur related to the need for additional or altered public services.

ai) Would the project result in a substantial adverse impact on fire protection? *No Impact*

During construction, the Proposed Project will not increase the temporary demand for fire protection because it will not perceptibly increase local population. SDG&E will primarily use its own workforce for construction, but will supplement, as needed, from an approved contractors' pool of qualified workers. Therefore, construction of the Proposed Project will not create a significant new workforce that will result in a new or increased demand for fire protection services. The Proposed Project will not result in a permanent need for new or additional fire protection services, because it will not directly induce population growth or result in the construction of residential or other land uses that will indirectly induce area population growth. Also refer to Section 4.8, *Hazards and Hazardous Materials*. Therefore, no impacts will occur related to the provision of fire protection services.

aii) Would the project result in a substantial adverse impact on police protection? *No Impact*

During construction, the Proposed Project will not increase the temporary demand for police protection because it will not perceptibly increase local population. SDG&E will primarily use its own workforce for construction, but will supplement, as needed, from an approved contractors' pool of qualified workers. Therefore, construction of the Proposed Project will not create a significant new workforce that will result in a new or increased demand for police protection services. The Proposed Project will not result in a permanent need for new or additional police protection services, because it will not directly induce population growth or result in the construction of residential or other land uses that will indirectly induce area population growth. Also refer to Section 4.8, *Hazards and Hazardous Materials*. Therefore, no impacts will occur related to the provision of police protection services.

aiii) Would the project result in a substantial adverse impact on schools? *No Impact*

During construction, the Proposed Project will not increase the temporary demand on school services because it will not perceptibly increase local population. SDG&E will primarily use its own workforce for construction, but will supplement, as needed, from an approved contractors' pool of qualified workers. Therefore, construction of the Proposed Project will not create a significant new workforce that will result in a new or increased demand for school services. Family relocation will not be necessary. No new hires will be required for operation and maintenance of the Proposed Project. Therefore, school enrollment will not be affected, and no new schools will be necessary as a result of the Proposed Project. As a result, no impacts to schools are expected.

aiv) Would the project result in a substantial adverse impact on parks? *Less than Significant*

Construction of the Proposed Project will not increase local population growth resulting in the need for new parks or park expansion, nor will it cause a reduction in the availability of recreational resources in the area. The minor increase in daily worker population as a result of the Proposed Project will not put additional demand on existing parks due to the small and temporary nature of the increase. In addition, no additional workers will be utilized during operation of the Proposed Project. Thus, the small temporary increase in workers during construction would be a less than significant impact on parks in the area. Also refer to Section 4.15, *Recreation*. Therefore, the Proposed Project will result in less than significant impacts to parks or other recreational facilities.

av) Would the project result in a substantial adverse impact on other public facilities? ***No Impact***

No other public facilities are located within 0.25 miles of the Proposed Project. The closest public library, the Mission Branch Library, is located approximately 2.8 miles northwest of the Proposed Project site. The Proposed Project will not increase the local population or otherwise result in a change that will necessitate alteration or expansion of the public library or other existing public services. As a result, no impacts are anticpated.

4.14.7 References

City of Oceanside. 2002. General Plan, Community Facilities Element.

City of Oceanside. 2002. General Plan, Public Safety Element.

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Oceanside Police Department. Website (http://www.ci.oceanside.ca.us/gov/police/) accessed January 26, 2015.

Oceanside Public Library. Website (www.ci.oceanside.ca.us/gov/lib/) accessed January 26, 2015.

Oceanside Unified School District. Website (www.oside.k12.ca.us) accessed January 26, 2015.

State Board of Forestry and Fire Protection. 2010. 2010 Strategic Fire Plan for California. June. Website (http://cdfdata.fire.ca.gov/pub/fireplan/fpupload/fpppdf668.pdf) accessed September 2015.

TABLE OF CONTENTS

4.15 RECREATION 4.15-1
4.15.1 Introduction 4.15-1
4.15.2 Regulatory Setting 4.15-1
4.15.3 Existing Conditions 4.15-2
4.15.4 Standard Operating Procedures 4.15-3
4.15.5 Applicant Proposed Measures 4.15-3
4.15.6 Project Impacts 4.15-3
4.15.7 References 4.15-4

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4.15 RECREATION

Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b.	Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

4.15.1 Introduction

This section of the PEA describes the existing conditions and project-related impacts to recreation in the vicinity of the Proposed Project. The analysis concludes that no significant impacts related to recreation will occur. The Proposed Project's effects on this resource were evaluated using the significance criteria set forth in Appendix G of the CEQA Guidelines. The conclusions are summarized in the checklist above, and discussed in more detail in Section 4.15.6.

4.15.2 Regulatory Setting

This section includes a description of the recreational regulatory framework.

4.15.2.1 Federal

There are no federal regulations associated with recreation that are relevant to the Proposed Project.

4.15.2.2 State

There are no state regulations associated with recreation that are relevant to the Proposed Project.

4.15.2.3 Local

As provided in CPUC General Order 131-D, the CPUC has exclusive jurisdiction over the siting, design, and construction of the Proposed Project, preempting local discretionary authority over the location and construction of electrical utility facilities. Therefore, the Proposed Project is not subject to local discretionary land use regulations. Nonetheless, as part of the environmental review process, SDG&E considers relevant local land use plans and policies that pertain to recreation.

City of Oceanside General Plan – Land Use Element

With respect to public recreation facilities, the Land Use Element of the Oceanside General Plan states that the City's objective is: "to enhance the well-being of City residents by providing opportunities for relaxation, rest, activity, and education through a well-balanced system of private and public park and recreational facilities distributed to serve the entire community" (City of Oceanside 2002a). The following policies generally relate to the Proposed Project.

Policies - Public Recreation Facilities

- Provide adequate parkland acreage in both location and size to meet the recreation needs of existing and future residents and to preserve natural resources within the City.
- Provide for the optimum functional and aesthetic integration of all recreational, environmental, cultural, and social elements into Oceanside parks.
- Emphasize trail linkage opportunities between community, county, and state open space systems and recreation facilities and throughout those private developments where deemed both suitable and appropriate.
- Foster cooperative use of existing land resources and recreational facilities between other public and quasi-public agencies.

El Corazon Specific Plan

The El Corazon Specific Plan area is bounded by Oceanside Boulevard to the south, El Camino Real to the west, Mesa Drive to the north, and Rancho Del Oro to the east. The area is planned for a blend of open space and habitat area, recreational uses, commercial and office development, and a residential mixed-use component.

City of Oceanside General Plan – Community Facilities Element

A goal in the Community Facilities Element of the Oceanside General Plan is: "to enrich the quality of life for all residents of Oceanside by providing adequate and accessible public park and recreation facilities, by providing constructive leisure opportunities, and by providing recreational experiences and programs that contribute to the total health of the individual while meeting the overall needs and desires of the community" (City of Oceanside 2002b).

City of Oceanside General Plan – Environmental Management Element

An objective within the Environmental Resource Management Element is to plan adequate recreation facilities. Areas containing unique vegetation and wildlife habitats receive a high priority in the planning of parks (City of Oceanside 2002c). The following goal generally relates to the Proposed Project.

Goal - Recreation and Scenic Areas

- Encourage the preservation of significant visual open spaces when such preservation is in the best interest of the public health, safety, and welfare.

City of Oceanside General Plan – Recreational Trails Element

The Recreational Trails Element outlines several goals and objectives for the City to maintain and improve access to recreational trails. The City aims to provide a safe and efficient system of bicycle, equestrian, and pedestrian trails throughout the City, to create a non-motorized connection to recreational and commuting destinations (City of Oceanside 2002d).

4.15.3 Existing Conditions

There are seven parks located within 2 miles of the Proposed Project. The nearest park to the proposed substation is Martin Luther King, Jr. Park, located approximately 0.5 miles northwest. It is 17 acres and includes the following amenities: barbecues, baseball/softball field, drinking fountain, multipurpose field, parking area, picnic area, play equipment, restrooms, roller hockey field, skate park, and soccer field.

Rancho Del Oro Park is located approximately 0.8 miles north of the proposed Ocean Ranch Substation. It is 16 acres and includes the following amenities: drinking fountains, multipurpose field, parking area, restrooms, and tennis courts. The Joe Mottino Family YMCA operates on the Rancho Del Oro Park property and provides various organized recreational opportunities to the community. Joseph Sepulveda Park is 3 acres and located approximately 0.6 miles south of the proposed Ocean Ranch Substation. Amenities at this park include: barbecues, baseball/softball field, basketball, drinking fountain, food service, picnic area and play equipment (City of Oceanside 2015). The Palisades Park is approximately 5 acres and is located 1.0 mile southwest of the proposed Ocean Ranch Substation. The SoCal Sports Complex within the El Corazon Specific Plan Area, with 20 full-size fields on 52.5 acres, is also located approximately 1 mile from the proposed Ocean Ranch Substation Two other parks are located over a mile from the Proposed Project area: John Landes (10 acres; approximately 1.0 mile southeast of the proposed Ocean Ranch Substation site), and Bub Williamson (8.7 acres; 1.3 miles southeast of the proposed Ocean Ranch Substation site) in the City of Vista.

The closest golf course to the Proposed Project site is the Emerald Isle Golf Course. It is located at 660 South El Camino Real, approximately 3.3 miles west of the Proposed Project (City of Oceanside 2015).

Regional recreational amenities nearby include the Guajome Regional Park, located approximately 2.4 miles northeast on North Santa Fe Avenue, which offers campground sites, day use areas, open space, trails, ponds, playgrounds, a basketball court, and private group gathering facilities. The Oceanside public beach area, located approximately 5 miles to the west, is also considered a popular regional recreational amenity, including 3.5 miles of sandy beaches, a pier, a harbor, and pedestrian and bike paths. The Buena Vista Lagoon/Ecological Reserve is another regional amenity located at the south end of the beachfront on the Oceanside-Carlsbad city boundary.

San Luis Rey River Trail is a Class I public bicycle/pedestrian trail that runs along the San Luis Rey River from College Boulevard (north side of Highway 76), 7.2 miles west toward the ocean.

Trails located nearest the Proposed Project are located within the El Corazon Specific Plan Area, approximately 1 mile west of the proposed substation. The City of Oceanside completed scheduled trail and fencing improvements within the El Corazon Specific Plan Area in December 2015.

4.15.4 Standard Operating Procedures

There are no standard operating procedures related to public services that are applicable to the Proposed Project.

4.15.5 Applicant Proposed Measures

No recreation APMs are proposed.

4.15.6 Project Impacts

The Proposed Project includes construction of a new 69/12 kV substation and loop-in of an existing 69 kV underground power line to connect to the proposed substation (refer to Chapter 3.0, *Project Description*).

The temporary impact areas may vary because the positioning of construction vehicles, equipment, and materials cannot be accurately anticipated prior to construction, as locations are dependent upon the contractor safely performing the work.

Once the proposed Ocean Ranch Substation is constructed and placed in service, it will not require personnel stationed onsite except during periodic and routine maintenance activities that will ensure reliable operation of all equipment within the substation. The underground components will be inspected consistent with SDG&E's existing underground inspection and maintenance program.

4.15.6.1 Methodology

The recreation analysis consisted of a review of the City of Oceanside General Plan and online resources provided by the Oceanside Parks and Recreation Department detailing existing parks, trails, golf areas, and other amenities within the City. In addition, Google Earth aerial photographs of the Proposed Project area were reviewed.

4.15.6.2 Significance Criteria

The significance of project-related impacts on recreational resources were evaluated for each of the criteria listed in the checklist above, as discussed below.

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? *Less than Significant*

SDG&E will primarily use its own workforce for construction, but will supplement, as needed, from an approved contractors' pool of qualified workers. It is anticipated that up to 40 workers will be employed for the site development phase of the Proposed Project at its peak. Approximately 33 workers will be required for the grading and site development at the proposed Ocean Ranch Substation. An average of approximately 12 workers are expected during the foundation and below-grade work. Construction of the substation is expected to require an average of 24 workers. Installation of the power line loop-in will require between 14 to 20 workers.

The minor increase in daily worker population will not put additional demand on existing recreational facilities due to the small and temporary nature of the increase. In addition, no additional workers will be utilized during operation of the Proposed Project. Thus, the small temporary increase in workers during construction would be a less than significant impact on recreational facilities in the area.

b) Would the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment? *No Impact*

See Question a) above. The Proposed Project does not include recreational facilities or require construction of new recreational facilities. The Proposed Project will be located in an area characterized predominately by light- and medium-industrial and business park uses which would not be compatible with recreational facilities. Additional construction workers would not necessitate construction of new recreational facilities, or the expansion of existing facilities. Therefore, there will be no impact.

4.15.7 References

City of Oceanside. 2002a. General Plan, Land Use Element.

City of Oceanside. 2002b. General Plan, Community Facilities Element.

City of Oceanside. 2002c. General Plan, Environmental Resource Management Element.

City of Oceanside. 2002d. General Plan, Recreational Trails Element.

City of Oceanside. 2015. Parks and Recreation: Parks, Trails, Golf and Amenities. Website (http://www.ci.oceanside.ca.us/gov/ns/parks/amenities/default.asp) accessed October 15, 2015.

SDG&E. 2015. Personal Communication between Colleen Fino, SDG&E, and Curtis Jackson, City of Oceanside. September 11, 2015.

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TABLE OF CONTENTS

4.16 TRAFFIC AND TRANSPORTATION 4.16-1
4.16.1 Introduction 4.16-1
4.16.2 Regulatory Setting 4.16-1
4.16.3 Existing Conditions 4.16-4
4.16.4 Standard Operating Procedures 4.16-6
4.16.5 Applicant Proposed Measures 4.16-7
4.16.6 Project Impacts 4.16-7
4.16.7 References 4.16-11

LIST OF TABLES

4.16-1 Existing Roadway Segment Level of Service 4.16-6
4.16-2 Potential Roadways Impacted by Conductor Work 4.16-9

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4.16 TRAFFIC AND TRANSPORTATION

Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
b.	Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c.	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d.	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e.	Result in inadequate emergency access?	☐	☐	☒	☐
f.	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

4.16.1 Introduction

This section of the PEA describes the existing conditions and project-related impacts to traffic and transportation in the vicinity of the Proposed Project. The analysis concludes that less than significant impacts to traffic and transportation will occur. The Proposed Project's effects on this resource were evaluated using the significance criteria set forth in Appendix G of the CEQA Guidelines. The conclusions are summarized in the checklist above, and discussed in more detail in Section 4.16.6.

4.16.2 Regulatory Setting

This section includes a description of the traffic and transportation regulatory framework.

4.16.2.1 Federal

14 CFR Part 77

All airports and navigable airspace not administered by the Department of Defense are under the jurisdiction of the Federal Aviation Administration. Title 14, Part 77 of the CFR establishes the standards and required notification for objects affecting navigable airspace. In general, construction projects that exceed 200 feet above ground level—or that extend at a ratio greater than 100 to one (horizontal to vertical) from a public or military airport runway less than 3,200 feet long out to a horizontal distance of 20,000 feet—are considered potential obstructions and require notification to the Federal Aviation Administration.

4.16.2.2 State

Caltrans is the state agency responsible for the design, construction, maintenance, and operation of the California State Highway System, as well as segments of the Interstate Highway System that lie within the state's boundaries. The closest Caltrans facility is State Route 76, which is located approximately 1.7 miles to the northwest of the substation site. Caltrans' construction practices require temporary traffic control planning "when the normal function of the roadway, or a private road open to public travel, is suspended" (Caltrans 2012). Specifically, if it is determined that traffic restrictions and detours are needed on, or would affect, state highways, a Transportation Management Plan may be required of the project applicant for approval by Caltrans prior to construction. The Transportation Management Plan must be prepared in accordance with the California Manual on Uniform Traffic Control Devices (Caltrans 2012). In addition, Caltrans requires that permits be obtained for transportation of oversized loads and transportation of certain materials, and for construction-related traffic disturbance.

4.16.2.3 Local

As provided in CPUC General Order 131-D, the CPUC preempts local discretionary authority over the location and construction of electrical utility facilities. Therefore, the Proposed Project is not subject to local discretionary land -use regulations. Nonetheless, as part of the environmental review process, SDG&E considers relevant local land use plans and policies that pertain to traffic and transportation.

San Diego Association of Governments' 2050 Regional Transportation Plan (RTP)

The SANDAG 2050 RTP presents a transportation system designed to maximize transit enhancements, integrate biking and walking elements, and promote programs to reduce demand and increase efficiency (SANDAG 2011)[1]. One key theme of the 2050 RTP is to improve the connections between land use and transportation plans by using smart growth principles. The 2050 RTP includes a Sustainable Communities Strategy that integrates land use planning, housing development, protection of sensitive habitat and resources areas, and transportation planning. The Sustainable Communities Strategy also addresses how the San Diego region would meet or exceed state targets for per capita greenhouse gas emissions from

[1] The Environmental Impact Report for the SANDAG 2050 RTP was challenged and overturned by a court of appeal on November 24, 2014 finding that the Environmental Impact Report was deficient. SANDAG's petition for review of the decision was granted by the California Supreme Court on March 11, 2015. However, the applicability of the RTP is not anticipated to change as a result of the lawsuit.

passenger vehicles. Although the San Diego Region is exempt from the state Congestion Management Program, the 2050 RTP complies with federal congestion management regulations (i.e., 23 CFR 450.320).

City of Oceanside General Plan-Circulation Element

The Circulation Element provides goals, objectives, and policies to maintain and improve the City of Oceanside's transportation system and enhance travel choices for current and future residents, visitors, and workers.

Objectives

- Aim for an acceptable Level of Service (LOS) D or better on all Circulation Element roadways on an average daily basis and at intersections during the am and pm peak periods.
- Ensure that all streets within the City achieve the City's mobility goals and design standards as highlighted throughout the Circulation Element.

Policies

- All streets within the City shall be designed in accordance with the adopted City of Oceanside design standards. Typical cross-sections and design criteria for the various street classifications are shown in the City Engineers Design and Processing Manual.
- The City may permit construction of private streets within individual development projects, provided that:
    - They are designed geometrically and structurally to meet City standards.
    - Only project occupants are served.
    - All emergency vehicle access requirements are satisfied.
    - The streets do not provide direct through route between public streets.
    - The Homeowners Association and/or property owners provide an acceptable program for financing regular street maintenance.
- The City shall review all project applications and reduce or eliminate residential driveways on all collector and busier streets. Access to commercial projects shall be designed to meet the City's standards and limited to the extent feasible. The City shall routinely review existing collector and higher streets to determine, as feasible, the closing, combining, or relocation of existing driveways.
- The City shall approve and build streets as per City of Oceanside Engineering Manual Specifications.
- The City shall:
    - Require new developments to provide collector and local street improvements according to the standards of the City Engineering Department.
    - Require new developments to dedicate necessary right-of-way when the subdivision or development of property adjacent to Circulation Element streets is proposed.

  - Require new developments to provide all necessary grading, installation of curbs, gutters, sidewalks, parkway tree planting, and street lights, unless these improvements are provided through other means.
  - Require new developments to provide half-street improvements plus 12 feet beyond the centerline in accordance with City standards.

- If the location and traffic generation of a proposed development will result in congestion on major streets or failure to meet the LOS D threshold, or if it creates safety hazards, the proposed development shall be required to make necessary off-site improvements. Such improvements may be eligible for reimbursement from collected impact fees. In some cases, the development may have to wait until financing for required off-site improvements is available. In other cases where development would result in unavoidable impacts, the appropriate findings of overriding consideration will be required to allow temporary undesirable levels of service.
- The City shall require that those responsible for street improvements replant, replace, or install new landscaping pursuant to existing City policy along all new roadways or on those that have been redesigned and reconstructed.

Appendices to the Circulation Element include a Bicycle Master Plan, and Pedestrian Master Plan, future transit service information, and other relevant plans and data. Appendix D of the Circulation Element, Existing Roadway Segment Classification, contains existing traffic counts and LOS for Circulation Element roadways. Data from this appendix is presented in the following section.

4.16.3 Existing Conditions

4.16.3.1 Existing Setting

Roadways

Access to the site will be provided primarily from the north via a cul-du-sac on Rocky Point Drive. Secondary access will be provided via a new entry point from Avenida Del Oro, near the intersection of Avenida Del Oro and Avenida De La Plata. SDG&E is requesting access rights from the City of Oceanside to establish the proposed secondary access driveway. Both access points into the site will be gated and limited to SDG&E personnel.

Based on Table 3-3 of the Circulation Element, both of these roadways are two-lane industrial collector streets that can accommodate up to 9,000 average daily vehicle trips at LOS D. The nearest intersection analyzed in the Circulation Element, College Boulevard/Old Grove Road, is characterized by LOS C conditions in both the morning and afternoon peak hours. As noted in Table 3-1 of the Circulation Element, access to adjoining property for two-lane industrial collectors is classified as "Limited Access," consistent with the Circulation Element policies described above.

Passenger Rail Service

The North Country Transit District (NCTD) Coaster and Sprinter, Metrolink, and Amtrak Pacific Surfliner provide commuter rail service to San Diego County and beyond. The Sprinter is the closest railway in the project vicinity, connecting Oceanside, Vista, San Marcos, and Escondido over 22 miles, serving 15 stations along the State Route 78 corridor. The Sprinter runs every 30 minutes in each direction Monday through Friday, from approximately 4 am to 9 pm. Friday and Saturday trains run later. The Sprinter travels east and west immediately south of Oceanside Boulevard with stations at El Camino

Real, Rancho Del Oro Drive, and College Boulevard in the project vicinity. The nearest Sprinter station (i.e., the College Boulevard Station) is located approximately 0.50 mile to the south and east of the proposed Ocean Ranch Substation site.

Airports

Oceanside Municipal Airport (also known as the Bob Maxwell Memorial Field) is located approximately 3 miles northwest of the proposed Ocean Ranch Substation, northwest of State Route 76 and Foussat Road. This is a general aviation airport featuring one runway and fuel services on a 43-acre parcel. The airport is operated and managed by Airport Property Ventures.

MCB Camp Pendleton airfield (also known as Munn Field), is located approximately 6 miles north of the project site. The facility, operated by the U.S. Marine Corps, supports over 180 helicopters and a wide variety of Marine Corps units and visiting aircraft from other branches of the Armed Forces.

Bus Service

The NCTD Breeze is a public bus system for North County travel that connects with the Coaster, Sprinter, Metrolink, Amtrak, San Diego Transit and Trolley lines, and Orange County Transit Authority system at the San Clemente station. NCTD bus lines that operate in the project vicinity include routes 313, 315, 316, 317, 318, 323, and 325. Routes 315 and 316 provide transit service on Avenida Del Oro adjacent to the Proposed Project. No local bus service is provided along Rocky Point Drive.

Bicycle Facilities

The City of Oceanside designates and maintains three types of bicycle facilities. These include bike paths or trails (also known as Class 1 bikeways), bike lanes (Class 2), and bike routes (Class 3). Bike paths or trails operate within a right-of-way that is separated from vehicular traffic. Bike lanes are located within roadways, but are delineated by warning symbols and striping. Bike routes operate in the shoulder lane of roadways, but are not delineated by striping. The City of Oceanside Bicycle Master Plan (Circulation Element; Appendix A) includes an inventory of existing bicycle facilities in the City. As indicated in the Bicycle Master Plan, bike lanes exist in the vicinity of the project site including those along Oceanside Boulevard, College Boulevard, Old Grove Road, Mesa Drive, Rancho Del Oro Drive, Ocean Ranch Boulevard, and Corporate Center Drive. Portions of Avenida Del La Plata accommodate a bike route. Although the Master Plan indicates that portions of Avenida Del Oro are bike routes, a field review conducted in November 2014 identified striped bike lanes adjacent to the proposed substation.

4.16.3.2 Roadway Classifications and Level of Service

Streets in the City of Oceanside are classified based on the intended function of the roadway, in terms of travel speed, trip distance, and access to and from adjacent land uses. Arterial streets are intended to accommodate traffic moving at a relatively high speed over a long distance. Access to arterial streets (e.g., via driveways, on-street parking) is generally limited. Collector streets accommodate traffic moving over shorter distances and at lower speeds than arterials. The intended function of a collector street is to provide a linkage between local and arterial streets. Local streets provide access to land uses and do not accommodate a substantial amount of through traffic. Speed and trip distance on local streets is lower than for arterials and collectors. The City has established sub-classifications for both arterials and collectors based on the number of lanes, the type of adjacent land use, and design considerations. The City has established a maximum capacity for sub-classifications of arterials and collectors that is expressed in terms of a daily traffic volume.

Roadway and intersection operating conditions, and the adequacy of existing roadway systems to accommodate projected future traffic, are described in terms of LOS ratings. LOS is a method used to rate the performance of streets, intersections, and other highway facilities. Developed by the Transportation Research Board (TRB), and documented various editions of the Highway Capacity Manual since 1965, LOS rates performance on a scale of A to F, with LOS A reflecting free flowing conditions and LOS F representing heavily congested conditions (TRB 2010). The minimum performance standard is LOS D for the City of Oceanside; therefore, in most cases, LOS E or LOS F is considered unacceptable. As shown in Table 4.16-1, most roadway segments have LOS D or better conditions and can accommodate a substantial traffic volume increase while remaining at or below LOS D. The only exception is College Boulevard, which has LOS E and can accommodate a traffic increase of 800 daily trips without triggering a significant traffic impact based on significance criteria published by the San Diego Traffic Engineers' Council/Institute of Transportation Engineers (SANTEC/ITE) (SANTEC/ITE 2000).

Table 4.16-1. Existing Roadway Segment Level of Service

Street	Number of Lanes	Classification	LOS	Average Daily Traffic Volume	Traffic Increase Triggering a Significant Impact
Old Grove Rd.	4	Major Arterial	A	11,600	23,400
Rancho Del Oro Dr.	4	Major Arterial	A	12,400	22,600
Oceanside Blvd.	6	Prime Arterial	B	29,900	25,100
Mesa Dr.	4	Secondary Collector	B	13,300	11,700
College Blvd.	4	Major Arterial	E	38,200	800

Sources: City of Oceanside 2002; SANTEC/ITE 2000.

4.16.4 Standard Operating Procedures

As described in Section 3.9, *Standard Operating Procedures*, the Proposed Project will involve various procedures and restrictions related to traffic and transportation, including:

- **Carpooling.** SDG&E encourages construction workers to carpool to the greatest extent possible.
- **Coordination with Adjacent Land Owners (Parking).** Coordination with adjacent land owners for use of areas where off-street parking may be temporarily lost due to construction activities.
- **Coordination with Emergency Service Providers.** SDG&E coordinates with the affected emergency service providers in the event that lane closures occur.
- **Encroachment Permits.** SDG&E will obtain the required encroachment permits from the City of Oceanside for crossings at city streets and will ensure that proper safety measures are in place while construction work is occurring near public roadways. These safety measures include flagging, proper signage, and orange cones to alert the public to construction activities near the roadway.
- **Standard Traffic Control Procedures.** SDG&E will implement traffic control plans to address potential disruption of traffic circulation during construction activities and address any safety issues. These traffic control plans will be prepared prior to construction by the project engineer or contractor.

With implementation of these standard operating procedures, impacts relating to traffic and transportation will remain less than significant.

4.16.5 Applicant Proposed Measures

No traffic and transportation APMs are proposed.

4.16.6 Project Impacts

The Proposed Project includes construction of a new 69/12 kV substation and loop-in of an existing underground 69 kV power line to connect to the proposed substation (refer to Chapter 3.0, *Project Description*).

The temporary impact areas may vary because the positioning of construction vehicles, equipment, and materials cannot be accurately anticipated prior to construction, as locations are dependent upon the contractor safely performing the work.

Once the proposed Ocean Ranch Substation is constructed and placed in service, it will not require personnel stationed onsite except during periodic and routine maintenance activities that will ensure reliable operation of all equipment within the substation. The underground components will be inspected consistent with SDG&E's existing underground inspection and maintenance program.

4.16.6.1 Methodology

The analysis presented below is based on a review of relevant planning and engineering documents and data obtained from Internet research, including the City of Oceanside General Plan Circulation Element (City of Oceanside 2002), SANDAG 2050 Regional Transportation Plan (SANDAG 2011), California Manual on Uniform Traffic Control Devices (Caltrans 2012), Transportation Research Board Highway Capacity Manual (TRB 2010), and the SANTEC/ITE for Guidelines for Traffic Impact Studies in the San Diego Region (SANTEC/ITE 2000). Impacts to traffic and transportation were assessed based on the capacity of the transportation network to accommodate the Proposed Project's temporary traffic increase during construction.

4.16.6.2 Significance Criteria

The significance of project-related impacts on recreational resources were evaluated for each of the criteria listed in the checklist above, as discussed below.

a) **Would the project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? *Less than Significant***

Construction activities will result in a temporary increase in traffic on the roadway network as the result of worker commuting trips, trips for the delivery of construction equipment and material (including fill material) from existing materials storage yards in the cities of Oceanside, Clairemont and Carlsbad, and trips to remove construction debris to an SDG&E approved recycling facility or landfill. Construction workers will typically drive to the staging yards to park their personal vehicles, organize into construction crews, and then proceed to the construction areas in off-road construction vehicles that are stored at the

four staging yards. Although carpooling will be encouraged, for purposes of analysis the maximum number of construction worker trips is assumed. During the peak of construction, the number of construction workers may reach 40 (Section 3.6.3, *Construction Equipment and Personnel*). Assuming one inbound trip and one outbound trip each day, construction worker commuting will add 80 trips to roadways that provide access to and from the Proposed Project. As shown in Table 4.16-1, Roadway Segment Level of Service, there is enough capacity on all roadway segments to accommodate this temporary traffic increase.

In addition to worker trips, the Proposed Project will include truck haul trips associated with the import and export of fill material. These trips will be scheduled to coincide with related construction activities, and therefore would be intermittent (rather than occurring regularly throughout the entire construction period). The Proposed Project will require approximately 69,420 cubic yards of cut and fill (see Chapter 3.0, *Project Description*, for additional information). The Proposed Project will involve a maximum of 20 daily haul truck trips during the six-month substation site development and grading phase of construction. SDG&E will acquire fill material from up to 12 alternative sources, including six in San Diego County, four in Imperial County, and one each in Riverside and Orange Counties. Depending on the origin of the fill material, trucks would make regional trips on freeways, arterial streets, and other roadways to access the Proposed Project.

Construction of the proposed substation will require up to 20 daily truck trips during the construction period. Occasionally, material will be picked up from SDG&E's existing material storage yards to be delivered directly to the Proposed Project site (refer to Section 3.6.1.2, *Existing SDG&E Material Storage Yards*). Trips from the existing material storage yards would be infrequent and would not significantly add to traffic in the area. Given that the 20 additional truck trips would be temporary and may originate from up to 12 different sources, and because there is sufficient capacity on the street network to accommodate both employee and haul trips (see Table 4.16-1), haul trips will not result in a substantial traffic volume increase on freeways or regional arterials, and the impact will be less than significant.

Construction of the Proposed Project will result in a temporary impact on several roadways near the proposed Ocean Ranch Substation. All trenching and vault work areas will be located primarily within City of Oceanside streets and SDG&E fee-owned property, franchise or existing easements. Underground trenches, manholes, and handholes to accommodate 12 kV and 69 kV getaway circuits will be installed in segments of Avenida Del Oro, Avenida De La Plata, Rocky Point Drive, and Windansea Street. For the most part, the trenches and related facilities will be installed along paved roadway shoulders. However, the underground facilities would cross both lanes of traffic at one location on Windansea Street and Avenida De La Plata and two locations on Avenida Del Oro. Also, construction to re-establish access to Avenida Del Oro may necessitate the temporary closure of a portion of the northbound lane on this roadway. However, construction related impacts to traffic and transportation will be short-term and localized. If feasible, at least one lane of travel through each construction area will remain open throughout the construction period to accommodate roadway users (including emergency vehicles, motorists, transit vehicles, bicyclists and pedestrians). SDG&E will prepare a Traffic Control Plan in accordance with City of Oceanside requirements to ensure the safe and efficient passage of vehicles, pedestrians and bicycles through the construction zones. The Traffic Control Plan will include, but not be limited to, advance notification of any street closures or detours, appropriate flagging, and other measures deemed necessary by the City to ensure public safety. Because the Proposed Project will comply with all requirements of the Traffic Control Plan, and SDG&E will implement standard operating procedures as defined above, there will be no conflict and therefore no impact. Other roads that could potentially need traffic control due to adjacent conductor work are listed in Table 4.16-2.

Table 4.16-2. Potential Roadways Impacted by Conductor Work

Roadway	Project Component
Avenida De La Plata	Trenching, manholes and handholes
Avenida Del Oro	Trenching, manholes and handholes
Rocky Point Drive	Trenching, manholes and handholes
Windansea Street	Trenching, manholes and handholes

No policies or requirements related to the Proposed Project were identified within the SANDAG 2050 RTP. Although the Proposed Project is not subject to local discretionary land use regulation, it is nonetheless consistent with the following objectives and policies contained in the City of Oceanside General Plan:

- Require new developments to provide all necessary grading, installation of curbs, gutters, sidewalks, parkway tree planting, and street lights, unless these improvements are provided through other means.
- The City shall require that those responsible for street improvements replant, replace, or install new landscaping pursuant to existing City policy along all new roadways or on those that have been redesigned and reconstructed.

As discussed above in Section 4.16.2.3, the City's Circulation Element indicates that new developments are to dedicate necessary ROW when the subdivision or development of property adjacent to Circulation Element streets is proposed. Avenida Del Oro has a pavement width that is consistent with the typical cross-section of a collector street. No additional ROW will be required for the substation facility. Therefore, there will be no conflict.

The City of Oceanside also has a policy regarding the minimization of access driveways onto collector streets, such as Avenida Del Oro. SDG&E will coordinate with the City to ensure that the re-established access to Avenida Del Oro is designed and constructed in accordance with City requirements. As described in the following section, the Proposed Project's operation and maintenance-related traffic will be less than one trip per day, on average. Given this consideration, and accounting for the fact that most operation and maintenance traffic will be routed to the primary access point on Rocky Point Drive, the impact of this driveway to traffic flow along Avenida Del Oro will be minor. Therefore, the Proposed Project's potential to conflict with the General Plan Circulation Element will be less than significant.

Construction of the Proposed Project will not impact policies related to mass transit providers, as no such policies were identified that relate to the Proposed Project. While the proposed driveway onto Avenida Del Oro may require temporary relocation of an existing NCTD bus stop, construction will not conflict with any policies related to rail system operation. The Proposed Project will comply with all requirements of any applicable encroachment permits and approvals; therefore, impacts from conflicts with applicable plans and policies will be less than significant.

Due to the relatively low volume and periodic nature of construction-related traffic, impacts to the transportation network will not result in any conflict with plans, ordinances or policies establishing measures of effectiveness for the performance of the circulation system. Additionally, implementation of a Traffic Control Plan, prepared by SDG&E and reviewed and approved by the appropriate jurisdictional agencies, as well as other standard operating procedures listed above, will ensure that construction-related traffic impacts will not result in any such conflict. Therefore, there will a less than significant impact.

b) Would the project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? *Less than Significant*

As discussed above, the City's Circulation Element has identified a minimum performance standard of LOS D. As further discussed above, the Proposed Project would generate a maximum of 80 worker trips per day during construction. As shown in Table 4.16-1, there is more than enough capacity to accommodate this temporary traffic increase. Therefore, construction workers' daily transportation is not expected to cause a significant impact because Proposed Project-generated traffic will be minimal, will occur over the course of the day, and will not result in a traffic volume increase that would trigger a significant effect based on City criteria.

It is anticipated that construction of the Proposed Project will require a maximum of 20 truck trips per day during the 6 months of proposed substation grading. In addition, approximately 5 additional trips per day are anticipated for the delivery of materials and equipment for the duration of construction. All truck trips would access the substation site from the primary access point off Rocky Point Drive. Although some disruption to traffic flow may occur when trucks enter or exit the proposed Ocean Ranch Substation site, such events will be periodic and temporary. As needed, signage or flagmen may be used to reduce disruptions to traffic flow and to maintain public safety during construction.

Because the increase in vehicle trips generated by the Proposed Project during construction will add an insignificant volume of traffic to surrounding roadways and will not trigger a significant impact per the City of Oceanside Circulation Element, there will be no conflict with congestion management programs and impacts will be less than significant.

c) Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks? *No Impact*

The Proposed Project is located outside of the civil aviation airspace protection surfaces (i.e., Federal Aviation Administration Regulation Part 77 surfaces) that emanate from the Oceanside Municipal Airport. Also, the proposed Ocean Ranch Substation is situated outside of the height notification boundary established by the Federal Aviation Administration. The Proposed Project would not involve the construction of any structures on or near any aviation facilities and construction would be completed using ground-based equipment and vehicles, and not using helicopters or other aircraft. Therefore, it is not anticipated that the Proposed Project will result in a change in air traffic patterns or an increase in safety risks and no impact to air traffic will occur.

d) Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? *Less than Significant*

Construction of the Proposed Project will involve activities within and adjacent to public roadways, and will necessitate temporary lane narrowing and in some instances lane closure. Construction activities within and adjacent to public roadways could increase hazards if appropriate safety measures are not in place, such as proper signage, orange cones, and other traffic control measures. As listed above under Section 4.16.6, *Standard Operating Procedures*, SDG&E will obtain the required Encroachment Permit from the City of Oceanside, and will prepare a Traffic Control Plan for approval by the appropriate jurisdictional agencies to provide for the safe and efficient movement of emergency vehicles, bicycles, pedestrians, and transit vehicles through or around construction zones while protecting the workers,

equipment, and construction areas. While there may be a limited increase in hazards due to construction activities proximate to public roadways, construction will be temporary and will be conducted in accordance with the Traffic Control Plan and standard operating procedures. Therefore, impacts will be less than significant.

e) Would the project result in inadequate emergency access? *Less than Significant*

During construction, all public streets will remain open to emergency vehicles at all times. SDG&E may prepare a Traffic Control Plan in areas where construction activities may temporarily affect traffic flow. As described above, standard operating procedures will be implemented, and in the event that lane closures occur, SDG&E and/or appropriate contractor personnel will coordinate with the affected emergency service providers to let them know the schedule and duration of the lane closures. Therefore, there the impact will be less than significant.

f) Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? *No Impact*

Because the Proposed Project will not reconfigure or permanently alter any existing public transit, bicycle, or pedestrian facilities, it will not cause any conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities in the area, or otherwise decrease the performance or safety of such facilities. Therefore, no impact will occur.

4.16.7 References

Caltrans. 2012. California Manual on Uniform Traffic Control Devices. January.

City of Oceanside. 2002. General Plan, Circulation Element.

SANDAG. 2011. 2050 Regional Transportation Plan. October.

SANTEC/ITE. 2000. SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego Region. March.

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TABLE OF CONTENTS

4.17 UTILITIES AND SERVICE SYSTEMS 4.17-1
4.17.1 Introduction 4.17-1
4.17.2 Regulatory Setting 4.17-1
4.17.3 Existing Conditions 4.17-4
4.17.4 Standard Operating Procedures 4.17-5
4.17.5 Applicant Proposed Measures 4.17-6
4.17.6 Project Impacts 4.17-6
4.17.7 References 4.17-10

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4.17 UTILITIES AND SERVICE SYSTEMS

Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b.	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities (the construction of which could cause significant environmental effects)?	☐	☐	☐	☒
c.	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities (the construction of which could cause significant environmental effects)?	☐	☐	☒	☐
d.	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new and expanded entitlements needed?	☐	☐	☒	☐
e.	Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f.	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g.	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

4.17.1 Introduction

This section describes the existing conditions and project-related impacts to utilities and service systems in the vicinity of the Proposed Project (refer to Chapter 3.0, *Project Description*, Figure 3-2, Proposed Project Overview Map). The analysis concludes that less than significant impacts related to utilities and service systems will occur. The Proposed Project's effects on this resource were evaluated using the significance criteria set forth in Appendix G of the CEQA Guidelines. The conclusions are summarized in the checklist above, and discussed in more detail in Section 4.17.6.

4.17.2 Regulatory Setting

This section includes a description of the utilities and service systems regulatory framework.

4.17.2.1 Federal

There are no federal regulations associated with utilities that are relevant to the Proposed Project.

4.17.2.2 State

California Integrated Waste Management Act of 1989

Assembly Bill 939 codified the California Integrated Waste Management Act of 1989 in the Public Resources Code and established a hierarchy to help the California Integrated Waste Management Board and local agencies to implement three major priorities under the Integrated Waste Management Act: source reductions; recycling and composting; and environmentally safe transfer and land disposal. Waste diversion mandates are included under these priorities. Each city or county plan must include an implementation schedule for diversion goals: 25 percent of all solid waste through recycling, source reduction, and composting by January 1, 1995 and 50 percent by January 1, 2000 (California Department of Resources Recycling and Recovery [CalRecycle] 1997). Senate Bill 1016 (2007) streamlines the process of goal measurement related to Assembly Bill 939 by using a disposal-based indicator: the per capita disposal rate. The per capita disposal rate uses only two factors: a jurisdiction's population (employment can be considered in place of population in certain circumstances) and the jurisdiction's disposal as reported by disposal facilities (CalRecycle 2012).

4.17.2.3 Local

As provided in CPUC General Order 131-D, the CPUC has exclusive jurisdiction over the siting, design, and construction of the Proposed Project, preempting local discretionary authority over the location and construction of electrical utility facilities. Therefore, the Proposed Project is not subject to local discretionary land use regulations. Nonetheless, as part of the environmental review process, SDG&E considers relevant local land use plans and policies that pertain to utilities and service systems.

City of Oceanside General Plan-Land Use Element

An objective for the City is to assure the long-term efficient economic and aesthetic provision of public utilities to the City and its residents and businesses. The City aims to provide sufficient buffering from utility corridors and surrounding land uses to protect public safety and welfare, and ensure the long-term use of utility corridors. The City also aims to assure the City's citizens are appropriately served with sufficient energy in the long-term (City of Oceanside 2002).

Utility Corridor Policies

- The City shall require sufficient screening, fencing, noise attenuation, landscaping, open space setbacks, or other permanent mitigation or buffering measures between utility corridors and adjacent and surrounding land uses. The employed measures shall be of sufficient scope to minimize to the maximum extent possible negative impacts to adjacent surrounding uses from the particular utility corridor.
- The City shall encourage the coordination and combination of multiple utilities into one unified corridor or corridor network. By consolidating utility corridors, negative impacts associated with utility corridors can be more effectively and efficiently mitigated, overall corridor maintenance costs are decreased, less land is used in corridor right-of-ways, and the citizens of Oceanside will have a clearer understanding of the importance and scope of a utility corridor network.
- The City shall restrict any development, improvement, and/or use of a utility corridor to assure the long-term low cost maintenance of the utility or utility corridor.

Water Supply Policies

- The City of Oceanside, which buys water from the San Diego County Water Authority (SDCWA), is responsible for storage facilities and the distribution system.
- Water supply and distribution facilities shall be funded by assessment districts except in older portions of the City that already have service.
- New development in unserved areas shall be approved only where an assessment district is formed that will provide storage facilities and the distribution system prior to occupancy.
- The water supply and distribution system shall be designed for the logical service unit area to allow for development of the services unit area at the intensity proposed by the General Plan.

Sewage Collection and Treatment Policies

- The system should be designed for a logical service unit to allow for full development of the service area at the intensity proposed by the General Plan.

Energy Policies

- The City shall encourage the design, installation, and use of passive and active solar collection systems.
- The City shall encourage the use of energy efficient design, structures, materials, and equipment in all land development or uses.
- The City shall encourage the use of long-term lower cost energy sources.
- The City shall require the undergrounding of energy transmission lines and distribution systems to new land developments or uses.

Communication Systems Policies

- Communication facilities shall be required to conform visually with surrounding land uses and/or natural features.
- The City shall require the consolidation and joint-use of communication facilities and structures whenever possible.

Pacific Coast Business Park, Industrial Master Development Plan

The proposed Ocean Ranch substation is within the Pacific Coast Business Park, which is part of the industrially-designated area in the central portion of the City of Oceanside encompassing 124.31 acres. The Pacific Coast Business Park is within the Rancho Del Oro Specific Plan Area. This Development Plan provides updated regulations and design standards for the Pacific Coast Business Park property (City of Oceanside 2005).

Utilities and Communication Devices Policies

- All electric, telephone, gas and cable service lines to individual lots or sites shall be installed and maintained underground.
- Exterior onsite utilities, including but not limited to drainage systems, sewers, gas lines, water lines and electrical, telephone and communications wires and equipment, shall be installed and maintained underground.

- Antennas and devices for transmission or reception of any type of signals shall be located so as to screen their view from public areas. All exposed devices require specific approval by the Pacific Coast Business Park Review Board.
- Electrical equipment shall be mounted on the interior of a building wherever practical. When interior mounting is not practical, electrical equipment shall be screened with walls, berms or landscape materials. Where exterior mounting is required, locating electrical equipment along the side or rear of a building is desirable.
- Private sewer components (manholes, clarifiers, etc.) shall not be located within project entry drives nor within landscape areas. The components should be located in the aisles of parking lots or service drives towards the rear of a site.

4.17.3 Existing Conditions

The existing utilities most affected by the Proposed Project are described in the following sections.

4.17.3.1 Potable Water

The City of Oceanside has two direct sources of potable water: the Metropolitan Water District (MWD) of Southern California purchased by SDCWA, and the Mission Groundwater Basin of Lower San Luis Rey River Valley (City of Oceanside 2015a).

SDCWA is a wholesale water agency that provides imported water to its 24 member agencies. The SDCWA, in turn, purchases the majority of its water from MWD, which is comprised of 26 cities and water agencies serving 18 million people in six counties. MWD imports water from two primary sources: from the Colorado River via MWD's Colorado Aqueduct and from northern California via the State Water Project. Water is delivered to southern California by way of MWD's approximately 242-mile-long aqueduct, which transports Colorado River water from Lake Havasu to MWD's service area. In addition, water from northern California is delivered to southern California through an approximately 444-mile-long aqueduct. The water is captured in reservoirs north of Sacramento and released through natural rivers and streams into the Sacramento-San Joaquin Delta. MWD then blends the Colorado River and State Water Project water at a facility in Riverside County. SDCWA supplies both treated and raw water imported to the City through five aqueduct connections. Treated water is delivered directly into the City's distribution system. Raw water is treated at the City's Robert A. Weese Filtration Plant, which can treat up to 25 million gallons of water per day, prior to delivery into the City's distribution system (City of Oceanside 2010).

In addition to water purchased from SDCWA, raw water is pumped from the Mission Groundwater Basin, which is then delivered by City-operated well fields to the Mission Basin Groundwater Purification Facility. The Mission Basin Groundwater Purification Facility supplies 15 percent of the City's water supply and can treat up to 6.4 million gallons per day of local brackish groundwater using a reverse osmosis treatment process to remove the salts contained within the groundwater, and an additional treatment to remove iron and magnesium (City of Oceanside 2010, 2015a).

4.17.3.2 Water Drainage Facilities

All flow from the substation site is ultimately collected and conveyed by the storm drain system in Avenida Del Oro. The Proposed Project area located between Rocky Point Drive and Avenida Del Oro, at the southwestern end of Rocky Point Drive, has been previously graded with a catch basin located within the center to western edge of the lot. Elevations in the Propsed Project area range from approximately 194 to 372 feet above mean sea level (msl) (Google, Inc. 2015). The proposed Ocean Ranch Substation site will

have two drainage basins that discharge to the municipal storm drain system. See Section 4.9, *Hydrology and Water Quality*, which provides more detailed information on the water drainage system, and the Preliminary Drainage Study for the proposed Ocean Ranch Substation (Appendix I).

4.17.3.3 Electricity and Gas

Electricity and gas in the City of Oceanside is provided by SDG&E.

4.17.3.4 Cable and Telephone

Telephone, wireless phone, video/cable, and internet services are available from AT&T for residents within the Proposed Project area. Cox Communications and Time Warner Cable also provide cable, broadband, and phone services.

4.17.3.5 Sewer

The City of Oceanside's Wastewater Division collects, treats and disposes of all of the City's sewage at the San Luis Rey Wastewater Treatment Plant and the La Salina Wastewater Treatment Plant. All sewage is treated to levels set by the Environmental Protection Agency. The San Luis Rey plant serves areas east of Interstate 5 and the La Salina plant treats sewage from areas west of Interstate 5, downtown and along the coast. Both plants discharge treated effluent through the Oceanside Ocean Outfall. Flows from Fallbrook Public Utilities District and MCB Camp Pendleton are also discharged through the Oceanside Ocean Outfall. Wastewater Division staff are responsible for operating and maintaining over 450 miles of pipelines, 34 sewer lift stations, and an industrial waste inspection program (City of Oceanside 2015b).

4.17.3.6 Solid Waste

Waste Management of North County is the contractor for the City of Oceanside to provide contract trash services to the residential, multifamily and commercial customers within city limits. Non-recyclable solid waste disposal in the City of Oceanside is accommodated by the Palomar Transfer Station in Carlsbad which ultimately disposes of nonrecyclable waste at Otay Landfill. The Otay Landfill is located at 1700 Maxwell Road in Chula Vista. Otay Landfill had 24.5 million cubic yards of capacity as of March 2012 and is expected to reach capacity by the year 2028 (CalRecycle 2016).

4.17.4 Standard Operating Procedures

With implementation of standard procedures as outlined in Section 3.9, *Standard Operating Procedures,* and summarized in this section, impacts related to utilities and service systems will remain less than significant.

- **SDG&E Water Quality Construction BMP Manual.** SDG&E's Water Quality Construction BMPs Manual organizes and presents SDG&E's standard water quality protection procedures for various specific actions that routinely occur as part of SDG&E's ongoing construction, operations, and maintenance activities. The primary focus of most BMPs is the reduction and/or elimination of potential water quality impacts during construction of linear and substation projects, such as the Proposed Project. The BMPs described within the BMP Manual were derived from several sources including the State of California guidelines as well as the Caltrans Water Quality BMPs. The BMP Manual will be utilized during construction (by way of preparation and implementation of the SWPPP), operation, and maintenance of the Proposed Project to ensure compliance with all relevant SDG&E and government-mandated regulatory water quality standards.

- **Water Sourcing.**
    - To the extent that recycled water is used, the Proposed Project will adhere to use restrictions and water quality monitoring and reporting regulations associated with use of tertiary-treated recycled water for construction uses (e.g., dust control, soil compaction, and concrete mixing) permitted under the SWRCB General Order or the San Diego RWQCB Waiver 2 and consistent with the state's anti-degradation policy.
    - Potable water to support project construction and operations activities will be sourced from the City of Oceanside. Project construction water use calculations are the basis for obtaining a will-serve letter from the City of Oceanside.
    - To the extent feasible, tertiary-treated recycled water will be utilized for allowed construction practices (e.g., dust control, soil compaction, cement mixing) if available. The San Luis Rey Waste Water Treatment Plant which is located approximately 1 mile west of the project is currently being upgraded to produce double the current daily volume of recycled water. In addition, the associated El Corazon commercial recycled water fill station has been constructed (near the northeast corner of Oceanside Boulevard and El Camino Real) and is expected to be permitted and operational in 2016. To the extent that tertiary-treated recycled water is available at this fill station, it will be sourced and utilized for approved uses. Note that the San Luis Rey Waste Water Treatment Plant has larger daily volumes of recycled water available during the winter months and experiences a seasonal volume drawdown during the summer months.
    - The Proposed Project will adhere to the City of Oceanside Emergency Drought Response Ordinance.

4.17.5 Applicant Proposed Measures

No utilities and service systems APMs are proposed.

4.17.6 Project Impacts

The Proposed Project includes construction of a new 69/12 kV substation and loop-in of an existing underground 69 kV power line to connect to the proposed substation (refer to Chapter 3.0, *Project Description*).

The temporary impact areas may vary because the positioning of construction vehicles, equipment, and materials cannot be accurately anticipated prior to construction, as locations are dependent upon the contractor safely performing the work.

Once the proposed Ocean Ranch Substation is constructed and placed in service, it will not require personnel stationed onsite except during periodic and routine maintenance activities that will ensure reliable operation of all equipment within the substation. The underground components will be inspected consistent with SDG&E's existing underground inspection and maintenance program.

4.17.6.1 Methodology

Information regarding local utilities was obtained from the City of Oceanside's General Plan and Urban Water Management Plan. Internet searches were also conducted to gather information regarding utility service providers in the vicinity of the Proposed Project.

4.17.6.2 Significance Criteria

The significance of project-related impacts on utilities and service systems were evaluated for each of the criteria listed in the checklist above, as discussed below.

a) Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? *Less than Significant*

Construction of the Proposed Project will not generate wastewater. Portable toilets will be provided for onsite use by construction workers and will be maintained by a licensed sanitation contractor. Portable toilets will be used in accordance with applicable sanitation regulations established by OSHA, which generally requires 1 portable toilet for every 10 construction workers. The licensed contractor will dispose of the waste at an offsite location and in compliance with standards established by the RWQCB. The proposed scope of work for the construction phase requires minimal volumes of water for the purpose of dust control, soil compaction, and mixing cement. Water used for dust control and soil compaction will be dispersed onsite and will either evaporate or be absorbed into the ground, and water used for cement mixing becomes incorporated into the concrete mixture and is not discharged as a wastewater byproduct.

Dewatering during trenching for underground cable placement and during construction of the Project is not anticipated. As discussed in Section 3.6.2.4, *Dewatering*, should dewatering be necessary, the following construction dewatering procedures will be implemented during construction:

- A submersible pump will be installed.
- Groundwater will be pumped to a desiltation tank (baker tank) at one end for sediment and filtering. Baffles will be installed in the tank to increase sedimentation. Water in the tank will be allowed controlled flow out from the opposite end when needed.
- Water quality testing of encountered groundwater will be performed to ensure compliance with the RWQCB NPDES requirements. If water quality levels do not meet permit requirements, additional baker tanks, or treatment, or filtering may be required.

Disposal of treated water will be reused in compliance with permit requirements or disposed of at an approved SDG&E disposal site. Water quality testing of encountered groundwater will be performed to ensure compliance with the RWQCB and NPDES requirements. If water quality levels do not meet permit requirements, additional baker tanks, treatment, or filtering may be required. Disposal of water will be at an approved SDG&E disposal site. The water will be discharged to land within the conditional allowable average limit, transported to a nearby sewer inlet, or disposed of at an approved SDG&E disposal site. Water will not require treatment at a wastewater facility, thereby resulting in a less than significant impact.

Long-term operation and maintenance of the proposed Ocean Ranch Substation will not generate wastewater. The substation will be unstaffed and no sanitary facilities that require waste treatment will be constructed on site. Therefore, no impact will result.

b) Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities (the construction of which could cause significant environmental effects)? *No Impact*

As part of SDG&E's standard operating procedures, water will be applied to unpaved portions of the Proposed Project area to control dust, soil compaction, and cement mixing. Because the water used for dust control and soil compaction will be dispersed onsite and will either evaporate or be absorbed into the ground, and the water used for cement mixing will become incorporated into the concrete mixture, no

wastewater is anticipated. In addition, portable restrooms will be used and maintained during construction and removed after the construction of the Proposed Project. Construction will not require additional capacity to existing municipal water or wastewater treatment systems and, therefore, will have no impact on these systems.

Wastewater will not be generated by long-term operation and maintenance of the Proposed Project. Water use will be limited to irrigation of any onsite landscaping associated with the facilities. In addition, no sanitation facilities will be located on site and, therefore, no impact will occur.

c) Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities (the construction of which could cause significant environmental effects)? *Less than Significant*

Construction-related activities will result in minor deviations to the existing drainage patterns on site, due to grading, and will have the potential to temporarily contribute additional runoff water to existing or planned storm water drainage systems during construction. The proposed Ocean Ranch Substation site will be re-graded to make one large pad that is suitable for the substation equipment. As a result, the existing temporary desilting basin on the west pad will be re-graded and flow-through planter basins will be constructed. Similarly, the desilting basin on the east pad will be modified to serve as a permanent flow-through planter basin. Runoff from the northeastern corner of the site outside the limits of development will be collected by a series of catch basins and directed into the east basin. Flow-through planter basins will meet the City of Oceanside planter-lined basin requirements (Fuscoe Engineering 2015). All areas outside of the proposed Ocean Ranch Substation site, such as the location of the loop-in work, will be restored as near to preconstruction conditions as possible.

SDG&E will acquire coverage under the General Permit for Stormwater Discharges Associated with Construction Activity (Construction General Permit) from the SWRCB and prepare a SWPPP prior to construction which will address any potential discharges. The SWPPP will detail project information, dewatering procedures (if necessary), stormwater runoff prevention control procedures, monitoring and reporting procedures, and will implement SDG&E's Water Quality Construction BMP Manual to reduce impacts to municipal storm water drainage facilities. The use of BMPs during construction activities to control runoff will not necessitate the construction of new storm water drainage facilities or expansion of existing facilities. Therefore, changes to the stormwater drainage system will have a less than significant impact.

d) Would the project have sufficient water supplies available from existing entitlements and resources to serve the project from existing entitlements and resources, or are new and expanded entitlements needed? *Less than Significant*

Minimal water will be required during site grading and below-grade construction activities to control dust and for soil compaction on non-paved portions of the Proposed Project area. Water will be brought to the site in trucks specially equipped to allow for the dispersal of water. The construction phase also requires minimal volumes of water for the purpose of mixing cement. Project construction water use calculations are the basis for obtaining a will-serve letter from the City of Oceanside. The estimated average daily water usage during construction is 17,500 gallons (0.05 acre-feet) per day for the Proposed Project. The City of Oceanside has approximately 26,350 million gallons (94,098.42 acre-feet) of water available in its water supply during a normal year; therefore, a sufficient water supply is available to meet water demands for construction needs.

Tertiary-treated recycled water will be used to the extent feasible under the SWRCB General Waste Discharge Requirements for Recycled Water Use (WQ 2014-0090-DWQ). However, if tertiary-treated recycled water is not available in the required quantities at the time of project construction, potable water will be obtained from local water purveyors instead.

To the extent feasible under the State Water Resources Control Board General Waste Discharge Requirements for Recycled Water Use (WQ 2014-0090-DWQ), tertiary-treated recycled water will be utilized for allowed construction practices (e.g., dust control, soil compaction, cement mixing) if available. The San Luis Rey Waste Water Treatment Plant which is located approximately one mile west of the Proposed Project is currently being upgraded to produce double the current daily volume of recycled water. In addition, the associated El Corazon commercial recycled water fill station is expected to be operational in 2016. To the extent that tertiary-treated recycled water is available, it will be sourced and utilized for approved uses. The demand for water will be temporary and short-term, and no new entitlements will be required. Therefore, the impact will be less than significant.

Ongoing water use will be limited to irrigation of any onsite landscaping associated with the facilities including the stormwater catch basins (i.e., revegetative groundcover or landscape screening). The proposed palette incorporates many of the plants used throughout the Rancho Del Oro Specific Plan Area, to provide continuity within the Specific Plan Area. The plants will have the same water requirement and seasonal temperature limitations. This small quantity of water will be obtained from municipal sources as discussed previously for construction activities; therefore, the impact will be less than significant.

e) Would the project result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? *No Impact*

As previously addressed in the responses to Questions 4.17a and 4.17b, construction, operation, and maintenance of the Proposed Project will not generate wastewater. Therefore, no impact will occur.

f) Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? *Less than Significant*

The Proposed Project will generate a limited amount of solid waste during construction (i.e., refuse, spoils, trash, packaging). All waste that cannot be recycled will ultimately be transported to an SDG&E approved facility and disposed of properly and in accordance with all applicable federal, state, and local laws regarding solid and hazardous waste disposal. Currently, San Diego County is running at less than half of their disposal limit (CalRecycle 2015). The Otay Landfill has sufficient capacity to accommodate the amount of waste anticipated to be generated during construction. Excess soil from excavation of trenches may also be transported to a local recycling or appropriately permitted waste disposal facility if the soil is not re-used onsite or otherwise recycled. Excess soil will be re-used onsite wherever possible and only transported offsite as the final option. Therefore, impacts will be less than significant.

The operation and maintenance of the Proposed Project will generate a limited amount of solid waste. The proposed substation will not require staff and will not produce waste. The only waste generated will be associated with operational equipment maintenance, crew lunches, and packaging material associated with replacement parts. Therefore, there will be a less than significant impact to solid waste.

g) Would the project comply with federal, state, and local statutes and regulations related to solid waste? *No Impact*

Construction and operations of the Proposed Project will generate a minimal amount of solid waste (i.e., refuse, spoils, trash, packaging). As previously discussed in the response to Question f), solid waste produced during construction and operations will be disposed of at a nearby licensed landfill, such as Otay Landfill. Management and disposal of solid waste will comply with all applicable federal, state, and local statutes and regulations. Thus, the Proposed Project will not violate any solid waste statutes or regulations, and there will be no impact.

4.17.7 References

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CalRecycle. 2016. Facility/Site Summary Details: Otay Landfill (37-AA-0010). Website (http://www.calrecycle.ca.gov/SWFacilities/Directory/37-AA-0010/Detail/) accessed April 28, 2016.

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TABLE OF CONTENTS

4.18 CUMULATIVE IMPACTS 4.18-1
4.18.1 Introduction 4.18-1
4.18.2 Significance Criteria 4.18-1
4.18.3 Timeframe of Analysis 4.18-1
4.18.4 Area of Analysis 4.18-1
4.18.5 Methodology 4.18-2
4.18.6 Existing/Operating Projects 4.18-2
4.18.7 Foreseeable Projects Inventory 4.18-2
4.18.8 Cumulative Impacts 4.18-5
4.18.9 Conclusion 4.18-16
4.18.10 References 4.18-16

LIST OF TABLES

4.18-1 Planned and Proposed Projects within 1 Mile 4.18-3

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4.18 CUMULATIVE IMPACTS

4.18.1 Introduction

The CEQA Guidelines require a discussion of the cumulative impacts of a project. Cumulative impact analysis accounts for the combined impacts associated with two or more projects in a given area. The following cumulative analysis evaluates the cumulative impacts from the Proposed Project in combination with other past, present, and reasonably foreseeable future projects in the area. Based on the cumulative impacts analysis, the Proposed Project will not result in a significant cumulative environmental impact in any of the resource areas evaluated.

4.18.2 Significance Criteria

CEQA defines cumulative impacts as changes in the physical environment resulting from the incremental impact of the project when added to other nearby past, present, and future projects. The Proposed Project's contribution will be analyzed to determine whether it is cumulatively considerable (CEQA Guidelines Section 15064[h][1]). Section 15064(h)(1) of the CEQA Guidelines further explains:

> When assessing whether a cumulative effect requires an EIR [Environmental Impact Report], the lead agency shall consider whether the cumulative impact is significant and whether the effects of the project are cumulatively considerable. An EIR must be prepared if the cumulative impact may be significant and the project's incremental effect, though individually limited, is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (California Natural Resources Agency 2009).

The significance of an impact may be weighed against the overall effect as both increases and decreases in impacts may balance one another. Furthermore, "the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable (CEQA Guidelines 15064(h)(4))."

4.18.3 Timeframe of Analysis

For the purpose of this cumulative impacts analysis, the Proposed Project is defined in terms of construction and post-construction operation and maintenance. SDG&E anticipates that construction of the entire Proposed Project will take less than two years from initial site development through energization. Proposed construction is scheduled to occur on or about October 1, 2017, and run through June 2019. The complete construction schedule, outlined by component, is summarized in Table 3-8, Construction Schedule.

4.18.4 Area of Analysis

The analysis of cumulative impacts includes projects occurring in the vicinity of the substation site and loop-in of existing underground 69 kV circuit power line. The analysis area represents the physical extent of the limits in which permanent impacts of the Proposed Project may occur. Existing conditions and reasonably foreseeable projects were identified within a 1-mile buffer of the Proposed Project area.

4.18.5 Methodology

Information was gathered from internet searches of local planning departments, state agency websites, and military websites. The websites of the following entities were reviewed for development projects, road and utility improvement projects, and capital improvement projects:

- Caltrans
- CPUC
- City of Oceanside
- Southern California Edison
- MCB Camp Pendleton
- San Diego County

SDG&E contacted the City of Oceanside, to confirm that the Proposed Project would not conflict with any reasonably foreseeable project planned in and around the Proposed Project area. SDG&E engaged with staff from the City of Oceanside including: Maryam Wagner, Senior Engineering Assistant, Curtis Jackson, Property Agent, Richard Greenbauer, Principal Planner, Bill Ramsey, Planning Consultant, and Douglas Eddow, Property Management Department. The City confirmed that the Proposed Project does not conflict with any planned projects scheduled to be constructed.

4.18.6 Existing/Operating Projects

Past projects within the vicinity of the Proposed Project are in San Diego County, California (primarily in the City of Oceanside). The existing and operating projects in the area consist mainly of light industrial, commercial, and public institutional uses. Section 4.10, *Land Use and Planning*, outlines all of the specific existing land uses in the vicinity of the Proposed Project.

4.18.7 Foreseeable Projects Inventory

For the purposes of this document, "reasonably foreseeable" refers to projects that have begun the application process at the federal, state, or local level. Table 4.18-1, Planned and Proposed Projects within 1 Mile, lists seven known projects that are within 1 mile of the Proposed Project area. Projects are included that are located within 1 mile of the Proposed Project and are of sufficient size and type such that, when combined with the Proposed Project, there would be a potential for cumulative effects on the environment. For example, small-scale discretionary projects like usage permit projects (such as liquor license applications) that are internal to an existing building or development and have no significant impact to the environment, modifications to existing individual homes or businesses that do not result in any increases in noise, traffic, air emissions, etc. (i.e., architectural modifications to existing structures such as patios, decks, fences, and awnings), and site-specific residential developments (including swimming pools, backyard renovations, and second story additions), do not create incremental environmental impacts that, when added with the impacts from the Proposed Project, could result in a cumulatively significant impact. Such projects are not included in this analysis.

Table 4.18-1. Planned and Proposed Projects within 1 Mile

Project	Approximate Location	Distance from Proposed Project (approx. miles)	Project Description/Size	Anticipated Implementation Schedule	
				Start	End
College Boulevard Improvement Project	In the City of Oceanside, at the intersection of College Boulevard and Oceanside Boulevard	The Proposed Project is approximately 0.5 mile from the improvement project.	College Boulevard is proposed to be widened from a 4-lane to a 6-lane major arterial from Olive Drive to Avenida De La Plata. Because the City's General Plan Circulation Element recommends College Boulevard to be widened to and classified as a 6-lane major arterial between Waring Road and Old Grove Road, a General Plan Amendment is required to maintain segments of College Boulevard as a 4-lane major arterial. This project also includes intersection improvements at Waring Road.	2017	Unknown
North San Diego Water Reuse Coalition Regional Recycled Water Project	The western boundary of the project area is the Pacific Ocean. The northern boundary is Camp Pendleton and Rainbow Municipal Water District. The eastern boundary is Valley Center MWD, the City of Poway, and the City of San Diego.	The Proposed Project is within the boundaries of this regional Water Project.	The Water Project consists of development of regional recycled water infrastructure that includes interagency connections to increase the capacity and connectivity of the recycled water storage and distribution systems of the North San Diego Water Reuse Coalition. The Water Project includes replacing potable water uses with recycled water, converting facilities to recycled water service, connecting discrete recycled water systems to one another, increasing recycled water treatment and storage capacity, distributing recycled water to effectively meet recycled water demands, and implementing advanced water treatment to produce and use potable reuse water within northern San Diego County.	2016	2035
Inland Rail Trail Bikeway	A 21-mile Class I bikeway located through the cities of Oceanside, Vista, San Marcos, and Escondido, as well as within a portion of the unincorporated County of San Diego	Phase 2 is approximately 0.25 mile south of the Proposed Project.	The Inland Rail Trail is a proposed 21-mile Class I bikeway. When completed, the path will provide access to five SPRINTER stations. The project is generally located in the North County Transit District ROW.	2015	2018
Pacific Coast Business Park Industrial Master Development Plan Area	120 acres bound on the north by Old Grove Road and the east by College Boulevard	The proposed Ocean Ranch Substation is within the Business Park.	The Industrial Master Development Plan Area includes the 120-acre Master Planned Business Park. Phase I includes 15 office and industrial tilt-up buildings, on 13.8 acres. Two lots have been sold but are not full developed yet, and 15 individual lots (50.87 acres) are for sale in the business park. The business park is being	2005	Unknown

Table 4.18-1. Planned and Proposed Projects within 1 Mile

Project	Approximate Location	Distance from Proposed Project (approx. miles)	Project Description/Size	Anticipated Implementation Schedule	
				Start	End
			developed by Prolgois, Inc. and Guthrie Real Estate; 16 lots, ranging from 1.58 acres to 20 acres are still available for sale.		
Ocean Ranch Corporate Centre Area	400 acres roughly bound by Mesa Drive to the north, the west be Ranch Del Oro Drive, and the south by Oceanside Boulevard.	Approximately 0.4 mile west of the proposed Ocean Ranch Substation site.	The Ocean Ranch Corporate Centre area is adjacent to the eastern edge of the Pacific Coast Business Park Industrial Master Plan Area. The 400 acre site is mostly developed and occupied with commercial uses. There are three commercial building projects (with associated site improvements) under construction: First Park @ Ocean Ranch; MagnaFlow expansion, Coca Cola expansion, and 1 project with an application on file: Windstar Ocean Ranch (commercial development with associated site improvements). The under construction projects will be complete in 2016; however, the Windstar Ocean Ranch construction schedule is pending and will be developed once the application is approved.	2015	2016/ Unknown
Terraza Rancho Del Oro Village XII	28.2 acre parcel bound on the east by College Boulevard and the south by Old Grove Road	Approximately 0.4 mile north of the proposed Ocean Ranch Substation site	The Terraza Rancho Del Oro project includes the development of 314 dwelling units on 88 lots within the 28.2 acre parcel. The development would include 72 single-family residences, 242 units developed as tri-plex or five-plex residential condominiums, and other site improvements.	2015	Unknown
Vista Creekside Apartments	1.28 acre site located south of Vista Village Drive, east of Santa Fe Ave, north of Lado de Loma Dr, and west of Eddie Drive	Approximately 0.2 mile southeast of the Melrose staging yard	The Vista Creekside Apartments project includes the development of a 41-unit apartment complex on the 1.28 acre site. This project is currently pending review by the City of Vista, and no construction schedule has been published.	Unknown	Unknown
Guajome Park Academy	1132 N. Melrose Drive, north of West Los Angeles Drive	Approximately 0.5 mile north of the Melrose staging yard	The Guajome Park Academy project is applying for a special use permit to install a K-5 charter school in an existing 43,000 square foot commercial building. The project is under review by the City of Vista.	Unknown	Unknown
Bella Vista Apartments	1.2 acres at 1225 N. Santa Fe Drive, north of East Drive	Approximately 0.7 mile northeast of the Melrose staging yard	The Bella Vista Apartments project includes the development of a 48-unit apartment building on a 1.2 acre site. This project is currently pending review by the City of Vista, and no construction schedule has been published.	Unknown	Unknown

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In addition to the projects listed in Table 4.18-1, Planned and Proposed Projects within 1 mile, the Public Utilities Act requires each electrical corporation, as a part of its distribution planning process, to consider distributed energy resources for its distribution system to ensure reliable electric services. SDG&E considered constructing a distributed energy resources facility at the site, but rejected it for the reasons described in the alternatives discussion in Chapter 5.3.5.3. Therefore, such distributed energy resources project is not reasonably foreseeable and is not included in the foregoing analysis.

4.18.8 Cumulative Impacts

This section discusses whether the Proposed Project will result in significant environmental impacts when combined with other past, present, planned, and probable future projects in the area. The discussion below focuses primarily on construction-related impacts. This is because the operation and maintenance activities required for the Proposed Project will not change from those currently required for the existing system; thus, no additional operation-related impacts will occur.

The Proposed Project will have no impact on any of the following resources and therefore it will not contribute to any cumulative effect relative to these resources:

- Agriculture and Forestry
- Mineral Resources
- Population and Housing

As a result, these resource areas were not further analyzed with regard to cumulative impacts.

Cumulative impacts to the following resources could occur as a result of construction of the Proposed Project in conjunction with the other planned and proposed projects:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- GHG Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Public Services
- Recreation
- Traffic and Transportation
- Utilities and Service Systems

4.18.8.1 Aesthetics

The Proposed Project will not have any impacts associated with the following CEQA Appendix G significance criterion relating to aesthetics:

- Substantial adverse effect on a scenic vista (impact criterion a), and
- Substantial damage to scenic resources (impact criterion b).

Therefore, there will be no cumulatively considerable impacts associated with these significance criteria, and it is not further discussed herein. The remaining aesthetics-related impacts are discussed below.

Overall Visual Character

The Proposed Project includes construction of a new 69/12 kV substation and loop in of existing 69 kV underground power line to connect to the proposed substation. The Proposed Project will have a less than significant impact on the overall visual character of the surrounding area. The Proposed Project will include a landscape plan and design features (such as the perimeter wall) that conform to the guidelines within the Pacific Coast Business Park and Rancho Del Oro Specific Plan; the Ocean Ranch Corporate Centre does not have published guidelines. The land development and infrastructure projects listed in Table 4.18-1 would involve permanent changes to the visual environment as the result of land use development, installation of electric facilities, and the demolition of existing structures as the result of decommissioning.

However, the proposed substation and telecommunication facilities are generally consistent with existing structures. Therefore, when taken together with the visual impacts associated with the planned and proposed projects, the cumulative impact will be less than significant.

New Light or Glare

The Proposed Project will add on-site lighting at the proposed Ocean Ranch Substation that will provide a low level of ambient light. The addition of this lighting will not add a substantial new source of light or glare, and will therefore have a less than significant impact. The following projects from Table 4.18-1 involve residential, commercial, and recreational development and have the potential to add substantial light or glare: Pacific Coast Business Park Industrial Master Development Plan Area, Ocean Ranch Corporate Center, and Terraza Ranch Del Oro Village XII. However, the incremental amount of additional light produced at the proposed Ocean Ranch Substation is not anticipated to have a cumulatively substantial adverse impact related to light or glare.

4.18.8.2 Air Quality

Construction of the Proposed Project is anticipated to result in short-term, less than significant impacts related to air quality standards. The cumulatively considerable effects relating to air quality significance criteria is discussed below.

Air Quality Plans and Standards

As stated above and within Section 4.3, *Air Quality*, emissions from construction of the individual segments of the Proposed Project would result in less than significant, short-term impacts relating to criteria pollutants. Construction of the projects listed in Table 4.18-1 could result in significant, short-term impacts to air quality. Therefore, cumulatively considerable adverse effects could result where construction activities for multiple projects occur simultaneously. However, it is assumed that all projects would comply with the SDAPCD and South Coast Air Quality Management District rules and regulations for the control of construction-generated emissions. Impacts from the construction of the projects described in Table 4.18-1 could be significant and unavoidable, but are assumed to be minimized to the greatest extent feasible through compliance with SDAPCD and South Coast Air Quality Management District rules and regulations. The incremental increase in emissions related to the construction of the Proposed Project will fall well within the emission budgets for construction projects included in the SIP. The Proposed Project will also comply with SDAPCD and South Coast Air Quality Management District rules and regulations, and will apply standard operating procedures, as outlined in Section 4.3, *Air Quality*. Therefore, the

Proposed Project is not anticipated to contribute to any significant cumulative adverse impacts relating to the air quality standards compliance.

Exposure of Sensitive Receptors

The Proposed Project was determined to have less than significant impacts relating to emissions of toxic air contaminants during construction activities. These less than significant impacts are related to emissions of diesel particulate matter, which has been identified as having carcinogenic and chronic health effects. However, the construction schedule is such that emissions will not occur long-term. While the projects listed in Table 4.18-1 could have similar effects relating to exposure to sensitive receptors, these impacts would similarly be associated with construction activities, which are by their nature short-term compared to carcinogenic and chronic exposure periods established by the CARB and the Office of Environmental Health Hazard Assessment guidelines. In addition, emissions would be minimized through project-level and regional compliance with SDAPCD and South Coast Air Quality Management District rules and regulations for controlling construction-related emissions. Therefore, cumulative impacts are less than significant.

Objectionable Odors

Construction of the Proposed Project is anticipated to have less than significant impacts associated with the emission of objectionable odors. Construction equipment and construction operations for the Proposed Project and the cumulative projects would emit trace pollutants that could be considered to have objectionable odors, such as diesel exhaust. However, these odors would be temporary in nature, even where construction of the Proposed Project would occur simultaneously with other projects. Where construction of the Proposed Project is nearest to potential receptors for objectionable odors, there are no planned or likely foreseeable projects that could contribute to cumulatively considerable adverse effects. Therefore, no cumulatively considerable adverse effects are anticipated relating to objectionable odors.

4.18.8.3 Biological Resources

The Proposed Project will not have any impacts associated with the following CEQA Appendix G significance criteria relating to biological resources:

- Impacts to wetlands (impact criterion c),
- Conflicts with local policies (impact criterion e), and
- Conflict with Habitat Conservation Plan or Natural Community Conservation Plan (impact criterion f).

Therefore, there will be no cumulatively considerable impacts associated with these significance criteria. The remaining biological resources impacts are discussed below.

Impacts to Protected Species, Habitats, or Species Movement/Migration

Construction of the Proposed Project is anticipated to have less than significant impacts relating to state and federally listed species, protected habitats, and species movement and/or migration. Impacts to native vegetation communities resulting from the Proposed Project could result in a cumulative impact when taken together with other projects in the vicinity (described in Table 4.18-1).

The Proposed Project will involve permanent impacts on less than 0.16 acre of sensitive habitat (refer to Section 4.4.6, *Project Impacts*), which consists entirely of Diegan coastal sage scrub. As such, the Proposed Project will not appreciably decrease the land available for biological resources and wildlife migration.

Cumulative impacts within a region are most effectively minimized by comprehensive plans that address the impacts of regional growth on wildlife and its habitats. The projects listed in Table 4.18-1 are located in the San Diego Multiple Habitat Conservation Program area. Each of these projects would be required to minimize any impacts to state and federally listed species and/or habitats through compliance with CEQA, the federal ESA, the CESA, and/or applicable local habitat conservation plans. Therefore, any impacts to biological resources from other projects listed in Table 4.18-1 would also be avoided, and as such, cumulatively considerable impacts to biological resources would be less than significant.

4.18.8.4 Geology and Soils

The Proposed Project will not have any impacts associated with the following CEQA Appendix G significance criterion relating to geology and soils during construction or operations and maintenance:

- Soils incapable of supporting septic system use (impact criterion e).

Therefore, there will be no cumulatively considerable impacts associated with this significance criterion or operation and maintenance of the Proposed Project. The remaining geology and soils impacts are discussed below.

Seismic and Geologic Hazards

Construction of the Proposed Project is anticipated to have less than significant impacts relating to seismic and geologic hazards with implementation of standard operating procedures (refer to Section 4.6, *Geology and Soils*). Geologic hazards, such as seismic shaking, liquefaction, and landslides, could adversely affect the Proposed Project, as well as the projects listed within Table 4.18-1. However, these impacts are largely avoided through adherence to design and engineering standards, which are applicable to all of the projects listed in Table 4.18-1. Therefore, cumulative impacts related to seismic and geologic hazards are less than significant.

Soil Erosion and Loss of Topsoil

Construction of the Proposed Project will have less than significant impacts relating to soil erosion and loss of topsoil. While planned and proposed projects may also have impacts relating to soil erosion and loss of topsoil in the vicinity of the Proposed Project, all of these projects are subject to the UBC for the construction of new buildings and would be required to prepare SWPPP if they involve more than 1 acre of soil disturbance. Compliance with these requirements will minimize soil erosion and loss of topsoil, and the cumulative impact will be less than significant.

4.18.8.5 Greenhouse Gas Emissions

During operations and maintenance, the Proposed Project will utilize SF_6 gas as an insulating agent within the nine circuit breakers at the substation. However, GHG emissions from the use of SF_6 will be well below the annual significance thresholds of 10,000 metric tons of CO_2e. Furthermore, SDGE will incorporate the use of SF_6 gas at the substation into their existing standard operating procedures (i.e., SF_6 leak detection and repair program, and Mandatory GHG Emissions Reporting) to help monitor and reduce potential SF_6 emissions. Therefore, there will be no cumulatively considerable impacts associated with operations and maintenance. The GHG emissions-related impacts for construction activities are discussed below.

GHG Emissions

The Proposed Project will result in GHG emissions during construction. These emissions will be below the SDAPCD and South Coast Air Quality Management District thresholds for carbon dioxide equivalents

annually for industrial projects. The Proposed Project will not induce growth or development and will therefore not result in GHG emissions associated with induced growth.

All GHG emissions can be regarded as being cumulative in nature. A cumulative GHG impact in the Proposed Project area could occur during construction, particularly if construction activities for the planned and proposed projects are concurrent with the Proposed Project. However, emissions generated during Proposed Project construction are projected to be well below the adopted 10,000 metric tons of carbon dioxide equivalent threshold of significance adopted by the County of San Diego and the South Coast Air Quality Management District. Regardless, SDG&E will be required to adhere to the standards and requirements established by the SDAPCD, which will minimize the Proposed Project's contribution to cumulative GHG emissions. The other projects in the area will also be required to adhere to the applicable standards and requirements. As such, cumulative impacts contributed by the Proposed Project will be less than significant.

Conflict with Adopted GHG Plans, Policies, and Regulations

Construction of the Proposed Project will comply with AB 32 and CARB requirements for the reduction of GHG emissions. Construction emissions were also determined to be below local significance thresholds for industrial projects (refer to Section 4.7, *Greenhouse Gas Emissions*). Thus, impacts are anticipated to be less than significant. The projects listed in Table 4.18-1 will also be required to adhere to adopted GHG plans, policies, and regulations. Therefore, cumulatively considerable adverse effects are not anticipated from construction of the Proposed Project.

4.18.8.6 Hazards and Hazardous Materials

The Proposed Project will not have any impacts associated with the following CEQA Appendix G significance criteria relating to hazards and hazardous materials during construction or operations and maintenance:

- Located on a 65962.5-listed site (impact criterion d),
- Is located within 2 miles of an airport or airport land use plan (impact criterion e),
- Private airstrip safety hazards (impact criterion f), and
- Expose people or structures to significant risk of loss involving wildland fire (impact criterion h).

Therefore, there will be no cumulatively considerable impacts associated with these significance criteria or operation and maintenance of the Proposed Project. The remaining hazards and hazardous materials-related impacts are discussed below.

Routine Transport and Handling of Hazardous Materials and Wastes

The Proposed Project will result in less than significant impacts associated with routine handling and transport of hazardous materials as well as for potential accident or upset (refer to Section 4.8, *Hazards and Hazardous Materials*). These impacts will be less than significant in part due to adherence to existing hazardous materials and worker safety regulations. Any other similar potential hazardous materials impacts associated with the projects outlined in Table 4.18-1 would similarly be minimized through adherence to existing regulations. None of the projects outlined within Table 4.18-1 involve large-scale utilization of hazardous or acutely hazardous substances (such as chemical plants, refineries, or heavy manufacturing) and as such the possibility of a cumulatively considerable threat from the routine transport or reasonably foreseeable accident or upset conditions involving hazardous materials is less than significant.

Hazardous Emissions within 0.25 Mile of a School

With the implementation of standard operating procedures, construction of the Proposed Project is not expected to result in release of hazardous emissions or hazardous materials in the vicinity of schools. Additionally, none of the projects outlined in Table 4.18-1 would be likely to involve acutely hazardous materials or emissions proximate to the Classical Academy, La Petite Academy, or Quantum Learning (i.e., the schools that are closest to the Proposed Project). Therefore, any cumulative impacts will be less than significant.

Emergency Response and Evacuation

The Proposed Project will not interfere with any emergency plans. However, during construction, the Proposed Project will involve the temporary partial closure of some lanes. The implementation of traffic control plans will ensure the safe and efficient movement of traffic through and around the construction zones, and will accommodate access by emergency vehicles. Given their location relative to the Proposed Project, the planned and proposed projects are not expected to affect the same roadways at the same time as the Proposed Project. Therefore, there will be no significant cumulative impact.

4.18.8.7 Hydrology and Water Quality

The Proposed Project will not have any impacts associated with the following CEQA Appendix G significance criteria relating to hydrology and water quality during construction or operations and maintenance:

- Placement of housing within flood zones (impact criteria g and h), and
- Exposure to risk of loss from flood (impact criterion i).

Therefore, there will be no cumulatively considerable impacts associated with these significance criteria and the above listed criteria are not further discussed herein. The remaining hydrology and water quality-related impacts are discussed below.

Stormwater and Water Quality

Construction of the Proposed Project will result in less than significant impacts to water quality standards, stormwater, and other water quality. While construction of the Proposed Project has the potential to cause detrimental impacts to water quality, these adverse effects are minimized by complying with existing regulations, including NPDES and stormwater control regulations, and by implementing the SDG&E BMP Manual for Water Quality Construction (also known as the SDG&E BMP Manual).

The projects listed in Table 4.18-1 would have similar potential to degrade water quality during construction, but these projects would also be subject to existing water quality and stormwater regulations and would also generally be considered to have less than significant impacts on water quality. The projects listed in Table 4.18-1 could result in adding elevated levels of pollutants to the surface water drainage system from stormwater runoff from new or expanded roadways. Implementation of state and local regulations requiring the use of BMPs during construction would prevent impacts on water quality related to runoff. Other construction projects would also be required to implement BMPs and major projects would need to obtain authorization under the Construction General Permit.

The North San Diego Water Reuse Coalition Water Project may include groundwater dewatering and subsequent discharge to surface waters. Any such discharge would be subject to permit requirements of the San Diego RWQCB per *General Waste Discharge Requirements for Discharges from Groundwater Extraction and Similar Discharges to Surface Waters within the San Diego Region except for San Diego*

Bay. Compliance with permit requirements would provide adequate protection of surface water quality. None of the other projects outlined in Table 4.18-1 are expected to involve direct discharges to surface waters that could result in significant adverse effects to surface water quality, although some of the projects would likely include impacts to waters of the U.S. and waters of the State of California. Regardless, construction of the Proposed Project is not anticipated to result in significant adverse effects to surface water quality. No cumulatively considerable effects are anticipated. Overall, the Proposed Project is not anticipated to contribute to any cumulatively considerable adverse effects on water quality.

Drainage Patterns

Construction of the Proposed Project would not result in substantial effects to the existing drainage patterns in the Proposed Project area. Impacts are therefore anticipated to be less than significant. The Proposed Project will involve construction activities that could indirectly affect drainage patterns and flow rates. However, the use of BMPs during construction activities to control runoff will ensure that such activities would not substantially alter the existing drainage pattern and will not result in increased surface flow outside of existing drainage patterns. The Proposed Project will therefore not result in significant adverse effects to surface water quality.

Proposed development and infrastructure projects listed on Table 4.18-1 could alter existing drainage patterns and drainages within the Proposed Project area. However, the Proposed Project does not include new impermeable surfaces that would substantially increase surface flow and would not actually impact existing drainages. The Proposed Project is therefore not anticipated to substantially contribute to any cumulatively considerable adverse effect on the existing drainage pattern or surface flow.

4.18.8.8 Land Use and Planning

The Proposed Project will not have any impacts associated with the following CEQA Appendix G significance criteria relating to land use during construction or operations and maintenance:

- Physically divide an established community (impact criterion a).

Therefore, there will be no cumulatively considerable impacts associated with these significance criteria or operation and maintenance of the Proposed Project. The remaining land use and planning-related impact is discussed below.

Compliance with Land Use Plans, Policies, and Regulations

Construction of the Proposed Project will not conflict with any applicable land use plans, policies, or regulations. Furthermore, construction will mostly occur in existing SDG&E fee-owned property, franchise, or existing easements. The Pacific Coast Business Park Industrial Master Development Plan Area is an active land use plan being implemented in the immediate vicinity of the Proposed Project. This planned development includes changes to existing land uses, and has been approved by the City of Oceanside. Therefore, the Pacific Coast Business Park Industrial Master Development Plan is not in conflict with applicable land use plans, policies, and regulations. The remaining projects listed in Table 4.18-1 will not have an impact on land use. Therefore, the Proposed Project is not anticipated to contribute to any cumulatively considerable adverse impacts to land use and planning.

Conflict with Habitat Conservation Plans or NCCPs

As stated in Section 4.10.6, *Project Impacts*, the construction of the underground loop-in will be located in an area designated as an Off-site Mitigation Zone, but construction will be conducted within disturbed, developed lands, or paved roads. The City of Oceanside's SAP does not require mitigation for impacts to

these land types. Additionally the Proposed Project will not use the take authority granted by the USFWS and the CDFW in the NCCP for impacts to covered species.

The projects listed in Table 4.18-1 are located in the San Diego Multiple Habitat Conservation Program area. Each of these projects would be required to minimize any impacts to state and federally listed species and/or habitats through compliance with CEQA, the federal ESA, the CESA, and/or applicable local habitat conservation plans. Therefore, there will be no cumulatively considerable conflicts with Habitat Conservation Plans or NCCPs.

4.18.8.9 Noise

The Proposed Project will not have any impacts associated with the following CEQA Appendix G significance criteria relating to noise during construction or operations and maintenance:

- Noise generation in proximity to an airport (impact criterion e), and
- Effects associated with private airports (impact criterion f).

Therefore, there will be no cumulative considerable impacts associated with these significance criteria or with operation and maintenance. The remaining noise-related impacts are discussed below.

Generation of Noise and Vibration

As outlined in Section 4.12, *Noise*, construction of the Proposed Project will have less than significant impacts relating to noise generation. Construction of the Proposed Project will generate noise, as would the construction of the projects outlined in Table 4.18-1. However, most of the projects outlined in Table 4.18-1 are not located in the immediate vicinity of Proposed Project (i.e., are located greater than 0.3 mile from Proposed Project features), or have sufficiently varied construction schedules as to make combined construction noise unlikely and are therefore not likely to combine with Proposed Project-generated construction noise to create significant adverse effects, as noise attenuates (i.e., is reduced) rapidly with distance.

However, even if construction of the Proposed Project were to combine with construction of one of the other projects (thereby providing for the maximum potential for cumulative noise effects), construction activities will be temporary, and will generally only occur during daytime hours, when the adverse effects of noise are less pronounced for noise-sensitive receptors. Therefore, any cumulatively considerable adverse noise effects impacts will be less than significant.

Compliance with Noise Codes

As outlined in Section 4.12, *Noise*, construction of the Proposed Project will have less than significant impacts relating to local noise standards and ordinances. The Proposed Project will comply with applicable noise codes during construction, because the majority of construction activities will occur during daytime construction periods. It is assumed that the projects listed within Table 4.18-1 would also be constructed during daytime construction timeframes. If other projects require extensive work outside of allowable construction timeframes, it is unlikely that the Proposed Project would also concurrently need to do nighttime work in a proximate place. Therefore, no cumulatively considerable adverse effects relating to compliance with noise codes are anticipated.

4.18.8.10 Public Services

The Proposed Project will not have any impacts associated with the following CEQA Appendix G significance criteria relating to public services:

- Fire and police protection (impact criterion ai and aii),
- Schools (impact criterion aiii), and
- Other public facilities (impact criterion av).

Therefore, there will be no cumulative considerable impacts associated with this significance criterion. The remaining public services-related impacts are discussed below.

Adversely Impact Parks or Park Service Ratios

The Proposed Project will not impact existing parks, be related to increased use of existing parks, or the construction or expansion of park facilities. While residential development projects included in Table 4-18-1 may add increased users to park facilities, the Proposed Project will not add to these impacts. Therefore, no cumulative impacts are anticipated for park facilities.

4.18.8.11 Recreation

The Proposed Project will not have any impacts associated with the following CEQA Appendix G significance criterion relating to recreation during construction or operations and maintenance:

- Include or expand recreational facilities (impact criterion b).

Therefore, there will be no cumulative considerable impacts associated with this significance criterion. The remaining recreation-related impacts are discussed below.

Increase In Park Use

As discussed in Section 4.15, *Recreation,* the Proposed Project will have less than significant temporary impacts that may affect the use of some recreational facilities during construction. The following projects from Table 4.18-1 have the potential to add users to park facilities: Pacific Coast Business Park Industrial Master Development Plan Area, Ocean Ranch Corporate Centre, and Terraza Rancho Del Oro Village XII. Given the location of the other projects, most of the planned and proposed projects are not expected to interact with the same park and recreation facilities. In its operation, residents at Terraza Rancho Del Oro Village XII may use recreational facilities near the Proposed Project, but as the Proposed Project will not lead to any additional park use, the cumulatively considerable impacts will be less than significant. In general, local recreational amenities are increasing cumulatively in the area. Therefore, the Proposed Project is not anticipated to contribute to cumulatively considerable adverse impacts to recreation.

4.18.8.12 Traffic and Transportation

The Proposed Project will not have any impacts associated with the following CEQA Appendix G significance criteria relating to transportation and traffic during construction or operations and maintenance:

- Change in air traffic control patterns (impact criterion c), and
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities (impact criterion f).

Therefore, there will be no cumulative considerable impacts associated with this significance criterion. The remaining transportation-related impacts are discussed below.

Conflict with the Performance of the Local Circulation System

As described in Section 4.16, *Traffic and Transportation*, construction of the Proposed Project will result in a temporary increase in traffic on the roadway network from worker trips and delivery and removal of

construction materials, equipment, and debris. This increase will be include up to 20 truck trips per day and up to 80 daily worker trips to/from the Proposed Project area during peak construction. This increase would be temporary and the roadways in the vicinity of the Proposed Project have sufficient capacity to accommodate the increase. It is possible that the projects identified in Table 4.18-1 could also contribute to an increase in local congestion. Notably, the proposed Terraza Rancho Del Oro Village XII development could substantially increase the residential population in the immediate vicinity of the Proposed Project. However, this real estate development project does not have defined future construction or completion schedules, and thus it is unlikely that it would be under construction soon enough to have a cumulative effect on congestion with the Proposed Project. One future commercial development project in the Ocean Ranch Corporate Centre area, Windstar Ocean Ranch, does not have a defined construction schedule, as the application for the project is still pending approval. If construction were to occur at the same time as the Proposed Project, there are sufficient alternative routes and road capacity near the proposed Ocean Ranch Substation site to accommodate the temporary construction traffic for both projects. Therefore, the Proposed Project is not anticipated to contribute to cumulatively considerable adverse impacts to the performance of the local roadway system.

Conflict with Congestion Management

Any temporary increase in traffic associated with the Proposed Project will be less than significant. As discussed above, it is possible that the projects identified in Table 4.18-1 could also contribute to an increase in local congestion. If the construction schedules for these projects aligned with the Proposed Project's construction schedule, there are sufficient alternative routes and road capacity near the proposed Ocean Ranch Substation site to accommodate the temporary construction traffic for both projects. Therefore, the Proposed Project is not anticipated to contribute to cumulatively considerable adverse impacts to congestion management.

Increase in Transportation Hazards

Construction of the Proposed Project will involve activities within and adjacent to pubic roadways, and will necessitate temporary lane narrowing and in some instances lane closure. However, SDG&E will obtain the required Encroachment Permit from the City of Oceanside, and will prepare a Traffic Control Plan to provide for the safe and efficient movement of bicycles, pedestrians, and transit vehicles through or around construction zones while protecting the workers, equipment, and construction areas. If any of the projects identified in Table 4.18-1 would similarly result in the narrowing of roadways or lane closures, those projects would similarly be required to obtain encroachment permits and file Traffic Control Plans with the City of Oceanside. The City would then have the authority to stagger road impact elements among projects to minimize hazard risks. Therefore, the Proposed Project is not anticipated to contribute to cumulatively considerable adverse impacts to transportation hazards.

Impacts to Emergency Access

During construction, all public streets will remain open to emergency vehicles at all times. SDG&E will prepare a Traffic Control Plan in areas where construction activities may temporarily affect traffic flow. Projects identified in Table 4.18-1 would similarly be required to file Traffic Control Plans with the City of Oceanside. The City would then have the authority to stagger road impact elements among projects to minimize impacts to emergency access. Therefore, the Proposed Project is not anticipated to contribute to cumulatively considerable adverse impacts to emergency access.

4.18.8.13 Utilities and Service Systems

The Proposed Project will not have any impacts associated with the following CEQA Appendix G significance criteria relating to utilities and service systems during construction or operations and maintenance:

- Require or result in the construction of new water or wastewater treatment facilities (impact criterion (b),
- Result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project's projected demand (impact criterion e), and
- Comply with federal, state, and local status and regulations relating to solid waste (impact criterion g).

Therefore, there will be no cumulative considerable impacts associated with these significance criteria. The remaining utility-related impacts are discussed below.

Consistency with Wastewater Treatment Requirements of the Regional Water Quality Control Board

Construction of the Proposed Project will have less than significant impacts relating to wastewater treatment requirements. SDG&E will acquire coverage under the General Permit for Stormwater Discharges Associated with Construction Activity (Construction General Permit) from the SWRCB and prepare a SWPPP prior to construction which will address any potential discharges. The SWPPP will detail project information, dewatering procedures (if necessary), stormwater runoff prevention control procedures, monitoring and reporting procedures, and BMPs. While planned and proposed projects may also have impacts relating to wastewater treatment in the immediate vicinity of the Proposed Project, all of these projects are subject to NPDES requirements. The water from these projects will be discharged in accordance with applicable regulations or disposed of at an approved disposal site. As a result, the water will not require treatment at a wastewater facility and the cumulative impact will be less than significant.

Need for New or Expanded Stormwater Facilities

Construction of the Proposed Project will have less than significant impacts relating to stormwater treatment requirements. SDG&E will implement the Proposed Project's Stormwater Mitigation Plan to reduce impacts to municipal stormwater drainage facilities. The use of BMPs during construction activities to control runoff will not necessitate the construction of new storm water drainage facilities or expansion of existing facilities. Each of the projects identified in Table 4.18-1 would be similarly required to develop stormwater mitigation plans as part of their approved construction plans. Pacific Coast Business Park Plan Area, Ocean Ranch Corporate Centre, and Terraza Rancho Del Oro Village XII will all increase impermeable surfaces in the area. These planned developments are required to include stormwater management infrastructure to control runoff. However, the Proposed Project would not be a substantial contributor to the management needs of these planned developments, and thus the cumulative impact of the Proposed Project will be less than significant.

Water Supply

Construction of the Proposed Project will use some water, mainly for the purpose of dust control. The Proposed Project will obtain water for dust control and other construction needs from existing local sources by the construction contractors. The projects identified in Table 4.18-1 would also likely require water during construction. The source would likely be local, similar to the source for the Proposed Project.

However, as proposed by SDG&E, the anticipated construction schedule for the Proposed Project would not substantially coincide with construction of other projects. Therefore, cumulative impacts to water supply, if any, would be less than significant.

Solid Waste and Landfill Capacity

Construction of the Proposed Project would result in less than significant impacts to solid waste (landfill) capacity. While almost of all of the projects listed in Table 4.18-1 would have a similar potential to create solid waste and utilize landfill capacity, the existing local landfill system has ample capacity for the foreseeable future, and none of the projects listed in Table 4.18-1 would likely result in large amounts of solid waste generation. Therefore, cumulative impacts to solid waste and landfill capacity, if any, would be less than significant.

4.18.9 Conclusion

While the Proposed Project will contribute to certain cumulative impacts, its contribution to these impacts is anticipated to be minimal. It is anticipated that the other projects within the vicinity of the Proposed Project will be required to implement avoidance and minimization measures similar to SDG&E's APMs, measures, and permit conditions. These measures will minimize potential environmental impacts, thereby minimizing the overall cumulative effects. As a result, cumulative impacts are expected to be less than significant.

4.18.10 References

No references were cited in this section.

TABLE OF CONTENTS

5.0 DETAILED DISCUSSION OF SIGNIFICANT IMPACTS.....5-1

5.1 INTRODUCTION.....5-1
5.2 APPLICANT PROPOSED MEASURES TO MINIMIZE SIGNIFICANT EFFECTS.....5-1
5.3 DESCRIPTION OF PROJECT ALTERNATIVES TO MINIMIZE SIGNIFICANT EFFECTS 5-1
5.3.1 Introduction 5-1
5.3.2 Methodology 5-2
5.3.3 Proposed Project Objectives.....5-3
5.3.4 No Project Alternative.....5-4
5.3.5 Alternatives Considered but Rejected 5-4
5.3.6 Alternative Substation Sites 5-5
5.3.7 Power Line Configuration Alternatives.....5-7
5.4 GROWTH-INDUCING IMPACTS 5-8
5.4.1 Growth Caused by Direct and Indirect Employment 5-8
5.4.2 Growth Related to the Provision of Additional Electric Power 5-9
5.4.3 Proposed Project and Growth.....5-10
5.5 REFERENCES.....5-10

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5.0 DETAILED DISCUSSION OF SIGNIFICANT IMPACTS

5.1 INTRODUCTION

In accordance with the Proponent's Environmental Assessment (PEA) Checklist issued by the California Public Utilities Commission (CPUC) on November 24, 2008, this chapter:

- Identifies the potentially significant impacts that would result from construction, operation, or maintenance of San Diego Gas & Electric Company (SDG&E's) Proposed Project;
- Summarizes the alternatives that were evaluated to determine the Proposed Project and provides background regarding SDG&E's selection of the preferred alternative; and
- Discusses the Proposed Project's potential to induce growth in the area.

5.2 APPLICANT PROPOSED MEASURES TO MINIMIZE SIGNIFICANT EFFECTS

Based on the findings in Chapter 4, *Environmental Impact Assessment*, the Proposed Project is not likely to result in significant impacts on any resource areas after implementation of the Applicant Proposed Measures (APMs) and SDG&E's ordinary construction and operating restrictions. SDG&E has identified four APMs that it plans to implement during construction and/or operation of the Proposed Project to reduce or avoid impacts. Chapter 3, *Project Description*, provides the APMs that have been proposed as part of the Proposed Project.

5.3 DESCRIPTION OF PROJECT ALTERNATIVES TO MINIMIZE SIGNIFICANT EFFECTS

5.3.1 Introduction

Section 15126.6, subdivisions (a) and (f)(2)(A), of the California Environmental Quality Act (CEQA) Guidelines and Assigned Commissioner's Ruling on Application 01-07-004 (dated October 16, 2002) do not require a review of alternatives when a project would not result in significant environmental impacts after mitigation. Here, the Proposed Project would not result in significant environmental impacts after implementation of the APMs, so no review of alternatives would be required under CEQA. However, the CPUC has adopted an "Information and Criteria List" specifying the information required from any applicant for a project subject to CEQA. The CPUC requires applicants to describe a reasonable range of alternatives to the Proposed Project, or to the location of the Proposed Project, which could feasibly attain most of the basic objectives of the Proposed Project, and why they are rejected in favor of the ultimate choice that is carried forward for analysis.

This chapter describes reasonable alternatives to the Proposed Project, and to the location of the Proposed Project, which could feasibly attain most of the basic objectives of the Proposed Project, and why they are rejected in favor of the Proposed Project that has been carried forward for analysis in the PEA. SDG&E evaluated a reasonable range of alternatives with the potential to avoid or substantially lessen significant impacts of the Proposed Project.

Under CEQA, the intent of analyzing project alternatives is to identify ways to mitigate or avoid the significant effects of the Proposed Project on the environment (Public Resources Code Section 21002.1). Under this standard, the discussion of alternatives should focus on alternatives to the Proposed Project or

the locations that are capable of avoiding or substantially decreasing the significant impacts of the Proposed Project.

This environmental alternatives analysis evaluates the No Project Alternative, six alternative locations for the Ocean Ranch Substation, and three power line configuration alternatives to serve the new substation. Each alternative is evaluated for its feasibility and ability to fulfill the Proposed Project objectives, as well as its ability to reduce environmental impacts compared to the Proposed Project. All of the substation site alternatives are located in the cities of Oceanside or Vista.

Alternatives to the Proposed Project that were evaluated, including the No Project Alternative, are summarized in the following sections. Feasible alternatives that were considered but eliminated because they did not meet the Proposed Project objectives or reliability requirements are also discussed.

5.3.2 Methodology

CEQA does not provide specific direction regarding the methodology of alternatives comparison. Resource areas that are generally given more weight in comparing alternatives are those with long-term impacts, such as visual impacts, permanent loss of habitat, or land use conflicts. Impacts associated with construction (i.e., temporary or short-term impacts) or those that are easy to mitigate to the less-than-significant level are generally considered to be less important.

5.3.2.1 Power Line Alternatives

The analysis of electrical transmission alternatives are considered based on the ability to locate the facilities within existing rights-of-way (fee-owned, easements, franchise), provides for the capacity to satisfy ultimate substation configuration, environmental considerations, land use compatibility, constructability, and cost.

5.3.2.2 Substation Alternatives

The analysis of substation alternatives separated location review criteria into two categories: "musts" and "wants." *Musts* are those criteria that are critical to improvement of a substation site and are required for a site to be considered as an alternative, and *wants* are those items that would enhance site utility but are not critical or prohibitive to site development.

The following criteria must be met for a site to be considered by SDG&E for a new substation:

- Approximately 1 mile from the load center;
- Outside the Federal Emergency Management Agency (FEMA) 100-year floodplain;
- Minimum acreage to accommodate the type, voltage, and megavolt ampere (MVA) rating;
- Minimum developed pad size to accommodate the type, voltage, and MVA rating;
- Geologically stable with implementation of standard grading practices;
- Vehicle access;
- Power line and distribution line access;
- Feasible land acquisition; and
- Adequate substation grounding.

If these criteria are not met, then the site does not satisfy the basic criteria for substation development and cannot be considered further.

For sites that met the above *musts* requirements, the following *wants* criteria were then considered:

- Approximately 0.5 mile from the load center;
- Fairly level ground;
- Land use compatibility;
- Adjacent non-congested streets for distribution and power line getaways;
- Adjacent streets at ultimate width;
- Proximity to power lines for current and future needs;
- Adequate space for energy storage;
- Reasonable land costs;
- Community and city concurrence likely;
- Access for equipment delivery;
- Good drainage;
- Limited visual impact;
- Minimal remedial grading required;
- No biological or archaeological issues;
- Fits within standard substation layout; and
- Constructability that minimizes such factors as retaining walls required, sewer/water line conflicts, etc.

5.3.3 Proposed Project Objectives

The other relevant inquiry with regard to alternatives analyses are the project objectives. SDG&E identified the following objectives for the Proposed Project:

- Objective 1: Meet the Area's Existing and Forecasted Electric Load Growth.
- Objective 2: Maintain Substation and Circuit Reliability with Additional Tie and Transformer Capacity.
- Objective 3: Reduce Area Substation Loading to Optimum Operating Conditions.
- Objective 4: Locate the Proposed Project's Facilities within SDG&E Fee-Owned Property, Franchise, or Existing Easements.

Each of these Proposed Project objectives is more thoroughly described in Chapter 2, *Purpose and Need*.

5.3.4 No Project Alternative

CEQA requires an evaluation of the No Project Alternative so that decision makers can compare the impacts of approving the Proposed Project with the impacts of not approving the Proposed Project (CEQA Guidelines, Section 15126.6[e]). The CPUC also requires analysis of the No Project Alternative. Under the No Project Alternative, the Ocean Ranch Substation would not be constructed.

The existing circuits in the Oceanside area that would be offloaded to the proposed Ocean Ranch Substation would instead continue to be fed by the existing Melrose, Morro Hill, and San Luis Rey substations. These existing substations are approaching their ultimate capacities due to residential and commercial growth in the Oceanside area.

In 2018, the average loading of these substations is projected to be at 94 percent of capacity. More particularly, the projected load at each substation is estimated as follows:

- **Melrose Substation** will be at 94 percent load and experiencing a bank overload by 2018. This substation is already built-out to its ultimate four-transformer bank (120 MVA) capacity.
- **Morro Hill Substation** will be at 96 percent load by 2018. This substation is a land-locked, radial-fed temporary substation with a one-transformer bank (12.5 MVA) capacity due to its locational constraints. These constraints prohibit routing circuits north and west of the substation because of its proximity to Marine Corps Base Camp Pendleton, and south and east because of the San Luis Rey River.
- **San Luis Rey Substation** will be at 92 percent load and experiencing bank and circuit overloads by 2018. This substation is built-out to its ultimate four-transformer bank (120 MVA) capacity.

A 15- to 20-percent reserve capacity is desirable for each area substation to handle outages and routine maintenance by being able to transfer load without disrupting customers' service. The estimates above indicate that there will be no such reserve capacity at the area substations by 2018. Indeed, forecasted electrical load growth and the need to reduce outages and avoid disruption of service to new and existing customers in the area are the prime factors driving the need to construct a new substation in this area.

The No Project Alternative would not meet three of the four Proposed Project objectives. Without a new substation, SDG&E would not be available to meet existing or forecasted load growth. Nor could SDG&E maintain substation and circuit reliability. In addition, without a new substation, SDG&E would not be able to reduce area substation loading to optimum operating conditions. The No Project Alternative would continue to have facilities located with SDG&E fee-owned property, franchise, and existing easements.

5.3.5 Alternatives Considered but Rejected

5.3.5.1 Alternative Substation Sites

The Ocean Ranch Substation site selection process considered a total of 22 sites. Over the course of several years, 12 sites were considered but eliminated and 3 sites were added since some of the candidate sites and potential properties became unavailable. Of the final 22, 6 were selected for further analysis and are addressed in this chapter. The remaining sites were rejected based on their failure to meet either the *musts* or *wants* listed in Section 5.3.2.2 *Substation Alternatives*, above. These reasons included land use compatibility issues, size constraints, previously recorded archaeological sites, non-availability of parcels due to development/purchase by other parties, unwilling sellers, and/or need for business relocation.

5.3.5.2 Power Line Configuration Alternatives

Power line configuration alternatives that were rejected early in the evaluation process are not discussed in detail in this document. As a result of that early process, three alternative configurations were selected for further analysis and are addressed in this chapter.

5.3.5.3 Distributed Energy Resources

An option to install energy storage in place of a new substation was considered but rejected as a long-term solution. Energy storage would provide a short-term deferral of two or three years, but the load growth in the area would outpace the ability of battery storage to provide needed capacity.

The Ocean Ranch Substation site was studied as part of a request for proposals solicitation process. SDG&E initiated a request for proposals in December 2014 seeking proposals to assess whether a 4 megawatt/12 megawatt-hour energy storage system could effectively address forecasted load growth on circuits feeding from the Melrose and San Luis Rey substations. Vendor bids were received in March 2015. The bids were evaluated internally by SDG&E staff and externally by an industry-recognized consulting firm, and a final report was prepared. As detailed in the post-solicitation report submitted to the CPUC on December 1, 2015, the internal and external review indicated that the short-term deferral using battery storage was not an effective option. While a distributed energy resources facility may be constructed in the future, it does not meet most of the basic project objectives and so it was not selected for further analysis in this chapter.

5.3.6 Alternative Substation Sites

Six substation sites were considered for construction of the proposed Ocean Ranch Substation. Each of the six sites was evaluated in relation to the 16 *musts/wants* criteria, and each site is described below.

5.3.6.1 Department of Motor Vehicles Site

The Department of Motor Vehicles site is 9.42 acres and located in the City of Oceanside. Although the site is relatively close to a power line corridor, there are numerous other constraints. The location is not acceptable to the City of Oceanside; this L-shaped parcel is bisected by three existing sewer easements that would likely require major sewer modification and relocation (including a sewer pump station on a trunk sewer line); and southerly portions of the parcel are in the FEMA-designated 100-year floodplain. Consequently, although the entire acreage would need to be purchased, SDG&E would not be able to use much of the site and there would be little opportunity to sell unused portions of the parcel. Although the site zoning is compatible with substation construction, the property owner and the City of Oceanside staff do not support the selection of this site. The City expressed opposition to a substation at this location due to visibility from Highway 78, and acquisition of the site would likely be subject to a contentious condemnation process. There are no known environmental constraints, but the City of Oceanside maintains that there would be setback issues from the existing creek to the south. The L-shaped parcel has an average slope of about 5 percent toward the south. This site did not meet the following requirements from the *musts* list: outside of FEMA floodplain and feasible land acquisition.

5.3.6.2 Creekview Site

This site is 10.27 acres and located in the City of Vista. The site has advantages as a recently developed site, such as documented grading improvements, suitable access, and sufficient drainage. However, the Creekview site is developed with new underground infrastructure and free-standing condominium medical offices, with two units already sold and occupied. Extensive demolition would be required to

accommodate the substation. Additionally, the site is farther from a power line corridor than the other alternatives. Construction costs and the ability to negotiate a purchase, including condemnation and relocation costs, are also constraints. This site did not meet the following requirements from the *musts* list: feasible land acquisition.

5.3.6.3 Breeze Hill Site

This site is 5.15 acres and located in the City of Vista. The site is surrounded by apartments to the west; county jail, courthouse, and LA Fitness to the east; frontage road and freeway to the north; and offices to the south. Portions of the site are located within the 100-year floodplain. There is limited room for water quality facilities, such as detention basins. It was previously recorded as an archaeological site. An ephemeral drainage spans east to west across the site and drains into a flowing creek on the west side of Hacienda Drive. The Breeze Hill site had preliminary plans developed; however, the drainage was determined to be a constraint due to the likelihood of triggering permit requirements with the Regional Water Quality Control Board, U.S. Army Corps of Engineers, and the California Department of Fish and Wildlife (Sections 401, 404, and 1600). Construction costs, including grading and construction of a 40-foot retaining wall, also were a constraint. This site did not meet the following requirements from the *musts* list: outside of FEMA floodplain and power line and distribution line access (far from nearest transmission corridor, compared to other potential sites).

5.3.6.4 Pacific Coast Business Park Parcel 7

This site is 7.78 acres and located in the City of Oceanside. The previously graded lot is level and has suitable access from a cul-de-sac in the business park. The site is adequately sized, and drainage from the site to a public storm drain is a benefit. However, this site was recently sold to Federal Express and is currently being developed as part of the Federal Express warehouse complex; therefore, acquisition would likely be subject to a contentious condemnation process. This site did not meet the following requirements from the *musts* list: feasible land acquisition.

5.3.6.5 Pacific Coast Business Park Parcel 16 and Parcel 17 (Preferred Alternative)

Parcel 16 is a 5.6-acre site in the city of Oceanside within the existing Pacific Coast Business Park. The previously graded lot is level and has suitable access from a cul-de-sac in the business park. The site is adequately sized to accommodate water quality basin(s), and drainage from the site to a public storm drain is a benefit.

Parcel 17 is a 4.06-acre site immediately adjacent to Parcel 16 in the Pacific Coast Business Park. The previously graded lot is level and has suitable access from a cul-de-sac in the business park. The site is adequately sized to accommodate water quality basin(s). Drainage from the site to a public storm drain is a benefit.

The site meets all of the criteria in the *musts* list including that it is located close to the existing power line and underground distribution circuits. In addition, the final determining factors that made this site the preferred alternative include the following *wants*:

- Compatibility with surrounding land uses; and
- Elevated site to minimize visual impacts.

5.3.6.6 Alternative Substation Site Evaluation Conclusion

Of the six final candidate sites, several present significant challenges. For example, the Department of Motor Vehicles site does not have support from the property owner or the City of Oceanside and would

likely be subject to a contentious condemnation process to acquire. The Creekview site is already developed with medical/office condominium-type facilities and would require demolition. The Breeze Hill site would result in extensive site preparation costs (i.e., retaining walls and grading) and also contains a previously recorded archaeological site. In addition, development of the Breeze Hill site would require Section 401/404 permits due to the presence of U.S. Army Corps of Engineers jurisdictional waters. Although Parcel 7 in the Pacific Coast Business Park is located adjacent to the existing San Luis Rey Melrose electric power line corridor, it became unavailable as it was sold to Federal Express for future development.

The remaining two parcels in the fully graded Pacific Coast Business Park, Parcel 16 and Parcel 17, were determined to be the preferred substation site. Although the site is more than 1 mile from the load center, it is considered optimum due to its size, location to an adjacent uncongested road system, constructability, and reasonable acquisition costs. Preliminary engineering and environmental studies have been completed for this site. With proper implementation of the required power system upgrades, the studies support the feasibility of using Pacific Coast Business Park Parcels 16 and17 from an engineering and environmental perspective.

5.3.7 Power Line Configuration Alternatives

Three power line configuration alternatives were selected for further evaluation and are described below.

5.3.7.1 Option A – Loop-in existing Tie Line (TL) 6966 from San Luis Rey to Ocean Ranch (Preferred Alternative)

Option A includes the loop-in of existing TL 6966 (San Luis Rey to Melrose) to the proposed Ocean Ranch Substation utilizing the existing 97/102 MVA rating. This would create two power lines, one being TL 6966 (San Luis Rey to Ocean Ranch), the other being TL 6979 (Ocean Ranch to Melrose) utilizing the existing rating. The loop-in would be located in existing ROW.

5.3.7.2 Option B – Reconductor TL 693 and TL 6966 and Loop into Ocean Ranch Substation

Option B includes the loop-in of TL 6966 and TL 693, and reconductoring of both power lines from the San Luis Rey Substation to the proposed Ocean Ranch Substation. This alternative configuration would require 2.5 miles of reconductoring to serve the ultimate design of the Ocean Ranch Substation with low environmental impact. Option B would give the flexibility to expand the substation later without any further transmission system upgrades. California Independent System Operator (CAISO) did not support this alternative in their 2015-2016 Transmission Planning Report because it did not find a need, as of March 25, 2016, to loop-in the second transmission line into the new substation, and reconductor the transmission line section between San Luis Rey and Ocean Ranch.

5.3.7.3 Option C – Bundled TL 6966/TL 693 and New Power Line from San Luis Rey Substation

Option C includes the construction of 3 miles of new power line with overhead/underground options from San Luis Rey to Ocean Ranch, and bundled TL 6966 and TL 693. The existing overhead TL 693 and TL 6966 would be bundled as one power line from the San Luis Rey Substation to the proposed Ocean Ranch Substation. The bundled lines would be unbundled when leaving the Ocean Ranch Substation to the Melrose Substation. This alternative configuration would serve the ultimate design of the Ocean Ranch Substation.

5.3.7.4 Power Line Configuration Alternatives Conclusion

Option A was chosen as the preferred alternative configuration because in the 2015-2016 Transmission Plan CAISO concurred with the plan to interconnect the Proposed substation with one line looped-in. Option B was rejected because the CAISO did not find a need, as of March 25 2016, to loop-in the second transmission line into the new substation, and reconductor the transmission line section between San Luis Rey and Ocean Ranch.

5.4 GROWTH-INDUCING IMPACTS

CEQA requires a lead agency to review and discuss ways in which a project could induce growth. The CEQA Guidelines (Section 15126.2[d]) consider a project to be growth inducing if it fosters economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding area. New employees hired for proposed commercial and industrial development projects and population growth resulting from residential development projects represent direct forms of growth. Other examples of growth-inducing projects are the expansion of urban services into previously undeveloped areas or the removal of major obstacles to growth, such as transportation corridors and potable water supply.

The growth-inducing potential of the Proposed Project could be considered significant if it were to stimulate human population growth or a population concentration in the City of Oceanside or other surrounding communities above what is assumed in local and regional land use plans or in projections made by regional planning authorities. Significant growth impacts could also occur if the Proposed Project were to provide infrastructure or service capacity to accommodate growth levels beyond those permitted by local or regional plans and policies. Because the Proposed Project will not increase housing, bring in new services, or improve the existing infrastructure system (with the exception of making the existing electric service more reliable and adding additional capacity to accommodate planned growth), it will not stimulate population growth or result in a new concentration of residents, businesses, or industries.

5.4.1 Growth Caused by Direct and Indirect Employment

Construction and operation of the Proposed Project itself will not affect employment patterns in the area. Construction activities are anticipated to occur between 2017 and 2019. SDG&E will employ an average of approximately 30 workers throughout the construction period. During the peak construction period, up to 40 workers may be employed. SDG&E primarily will use its own workforce for construction, but will supplement as needed from an approved contractors' pool of qualified workers. Most of the workers selected through this process will travel from within a 30-mile radius of the Proposed Project. Only a small percentage of the total number of contractor-supplied workers, if any, will need to reside temporarily in hotels/motels in Oceanside or other surrounding communities. The need for temporary lodging will therefore occur only as needed. Given that construction will employ the existing local workforce plus a relatively minor number of temporary as-needed additional workers, and considering the temporary nature of construction activities, the Proposed Project will not result in substantial population growth in the Proposed Project area. Any temporary increase in population due to construction will not have an impact compared to the existing population in the City of Oceanside.

Following construction, no permanent jobs are expected to be created as a result of the Proposed Project. When in operation, the substation will be unstaffed and remotely operated. Maintenance of the substation will be periodic and of short duration. Because the Proposed Project will not result in an increase in

employment during the operation and maintenance phase, the Proposed Project will not increase the demand for new housing.

5.4.2 Growth Related to the Provision of Additional Electric Power

The population of San Diego County has increased every year since 1944. As a result, growth is part of the past, present, and expected future of the region. The San Diego Association of Governments (SANDAG) is the regional planning entity for the San Diego region and is composed of representatives from 18 cities and the County government. SANDAG serves as the forum for regional decision making. SANDAG makes strategic plans, obtains and allocates resources, and provides information on a broad range of topics pertinent to the region's quality of life.

The cities and County have designated SANDAG as the regional planning board, pursuant to a voter-approved proposition. The cities and County provide SANDAG with information about their general plans, local growth patterns, and land use regulations. In return, SANDAG generates regional management plans and population forecasts. As members of SANDAG, the cities and County review and approve all plans and forecasts prepared by SANDAG. The cities and County use SANDAG's findings to develop and shape their respective general plans and land use regulations. The County and each city is required to adopt a general plan, which must be updated on a regular basis. All general plans and subsequent amendments are subject to CEQA review.

In 2004, SANDAG prepared a Regional Comprehensive Plan (RCP) to provide policy guidance on accommodating the growth projected by SANDAG (SANDAG 2004). A key element of the RCP is the Integrated Regional Infrastructure Strategy (IRIS), which outlines guidance for planning the region's infrastructure. The goal of the IRIS is to ensure internal consistency with respect to long-term regional infrastructure planning to meet the needs of the growth projected by SANDAG. The IRIS addresses the energy supply and delivery system as key infrastructure elements. As the primary utility that provides electric service to approximately 3.4 million people using approximately 1.4 million meters in its service area—which includes all of San Diego County and the southern part of Orange County, SDG&E participates in and supports this aspect of the planning process. SANDAG has been preparing long-range forecasts of population, housing, and employment since the 1970s. SANDAG's forecasts represent the changes anticipated for the region based on the best available information. The forecast is produced by using established computer models that evaluate land use, demographics, regional and local economics, and transportation patterns. The SANDAG forecasts use a complex set of assumptions, input data, computations, and model interactions.

The latest Regional Growth Forecast (RGF) was developed for 2050 and provides an update of expected growth from the previous model that was developed for 2030 (SANDAG 2010). The 2050 RGF is based on data from the 2008 estimate produced by the California Department of Finance plus updated information for all model inputs.

The 2050 RGF predicts that economic and local population growth will continue at a steady rate through 2050, although at a slightly slower rate than in the previous 40 years. These updated projections suggest that the region will approach 4.4 million residents, 1.9 million jobs, and 1.5 million housing units by 2050.

SANDAG does not use energy as a driver of growth; however, its regional growth model recognizes the investment in energy infrastructure as necessary to support implementation of the RCP. SDG&E coordinates with SANDAG to address this component of its regional planning process. Only local

government entities with jurisdiction over land use approvals can directly cause or prevent growth. How and where development occurs within SDG&E's service area is dictated by the land use agencies with this authority. SDG&E responds to such development.

5.4.3 Proposed Project and Growth

The objectives of the Proposed Project, as articulated above, include maintaining existing reliability standards for the distribution and substation systems, and providing substation and circuit tie capacity that will ensure additional reliability while minimizing environmental impacts. The Proposed Project will provide additional capacity to serve the existing load and to prevent potential long outages or disruption of service to existing and new customers. Furthermore, the Proposed Project will not create a new service or source of power that will indirectly allow for an increase in population or housing as a result, as it will not extend infrastructure into previously unserved areas.

The Proposed Project will accommodate existing and planned power demands in SDG&E's service territory, as well as those based on state- and locally adopted plans and projections. SDG&E responds to projected development and forecasts, rather than inducing growth by extending infrastructure for future unplanned development. Therefore, the Proposed Project will not induce population growth in the area.

5.5 References

SANDAG. 2004. Regional Comprehensive Plan for the San Diego Region. July 2004.

SANDAG. 2010. 2050 Regional Growth Forecast, Agenda Item No. 10-02-16. File No. 3100900. Website (http://www.sandag.org/uploads/projectid/projectid_355_10794.pdf) accessed November 16, 2015.

TABLE OF CONTENTS

6.0 OTHER PROCESS-RELATED DATA NEEDS 6-1

6.1 DATA NEEDS 6-1
6.2 REFERENCES 6-10

LIST OF FIGURES

6-1 Ocean Ranch Substation Project Overview Map 6-2

LIST OF TABLES

6-1 Parcel List Within 300 Feet of Proposed Project 6-3

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6.0 OTHER PROCESS-RELATED DATA NEEDS

6.1 DATA NEEDS

In accordance with the requirements of California Public Utilities Commission General Order 131-D, a list that includes all parcels within 300 feet of the Proposed Project was prepared. The list includes the assessor's parcel number, owner mailing address, and the physical address of each property within the 300-foot buffer (Table 6-1 and Figure 6-1). The list is intended to allow for future public noticing of all those identified with regard to the proposed Ocean Ranch Substation Project.

No other process-related data needs were identified for this Proponent's Environmental Assessment. All information contained within the previous chapters of this document is considered adequate in determining the potential environmental effects of the Proposed Project and identifying the means by which to properly reduce any such potential effects to a level that is less than significant through implementation of San Diego Gas & Electric Company Applicant Proposed Measures and Standard Operating Procedures. No significant and non-mitigable impacts would result with Project implementation, and all potential impacts identified for the Proposed Project would be reduced to less than significant.

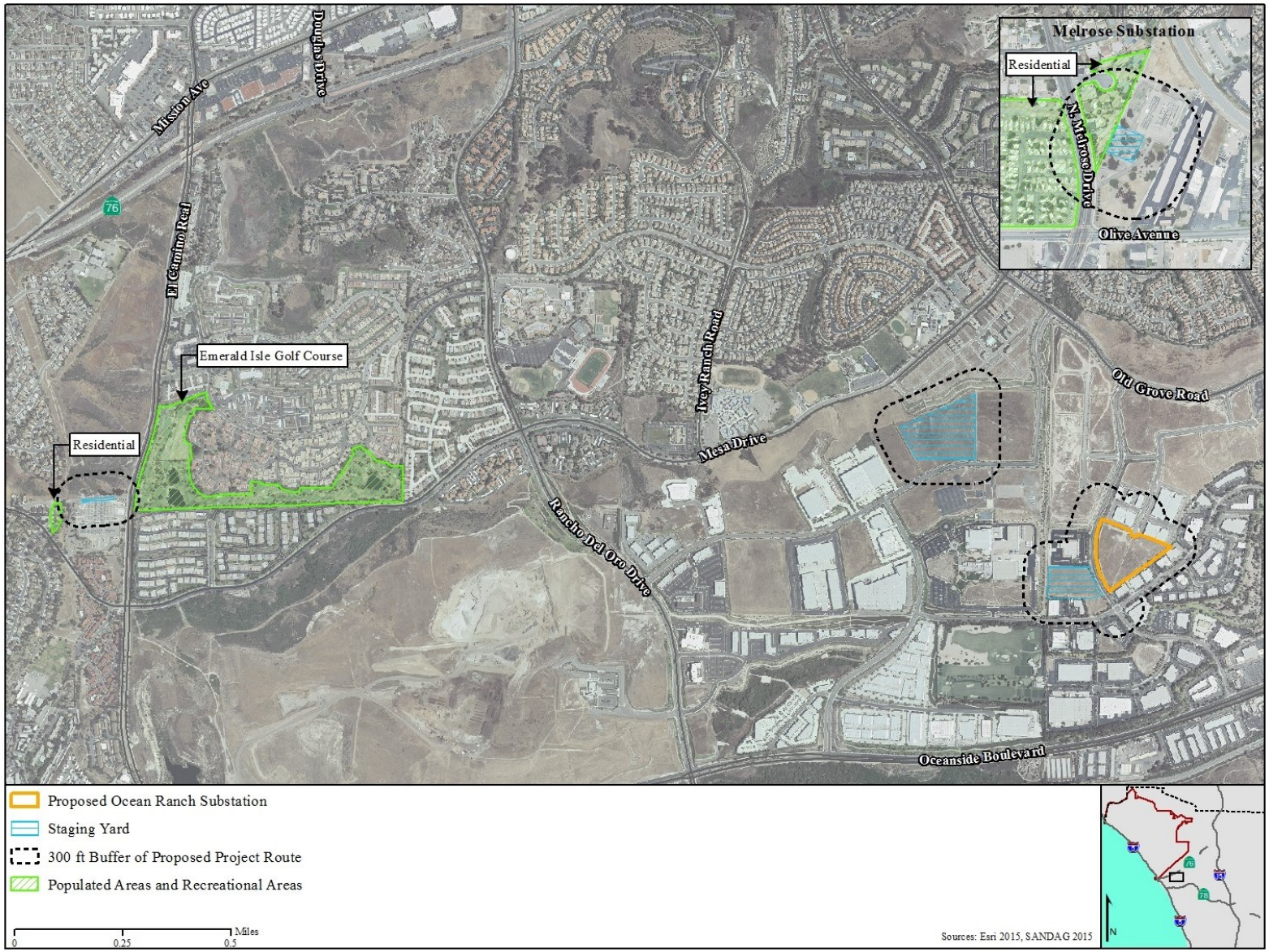


Figure 6-1 Ocean Ranch Substation Project Overview Map

Table 6-1. Parcel List Within 300 Feet of Proposed Project

Assessor's Parcel Number	Mailing Street Address	Mailing City and State	Mailing Zip	Parcel Street Address	Parcel City and State	Parcel Zip
1615125300	4636 VIA HUERTO	SANTA BARBARA CA	93110	1355 ROCKY POINT DR	OCEANSIDE CA	92056
1615125800	60 STATE ST #1200	BOSTON MA	02109	1336 ROCKY POINT DR	OCEANSIDE CA	92056
1631220500	11217 WINDBROOK WAY	SAN DIEGO CA	92131	555 MELROSE DR N	VISTA CA	92083
7716312443	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #F13	VISTA CA	92083
7716312448	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #O2	VISTA CA	92083
7716312474	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #P10	VISTA CA	92083
1606901300	12275 EL CAMINO REAL #200	SAN DIEGO CA	92130	MESA DR	OCEANSIDE CA	
1605712200	1 DNA WAY	SOUTH SAN FRANCISCO CA	94080	CORPORATE CENTRE	OCEANSIDE CA	92056
7716312424	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #E5	VISTA CA	92083
7716312425	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #E7	VISTA CA	92083
7716312427	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #E10	VISTA CA	92083
1625020500	4112 AVENIDA DE LA PLATA	OCEANSIDE CA	92056	4136 AVENIDA DE LA PLATA	OCEANSIDE CA	92056
7716312410	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #B2	VISTA CA	92083
1615125200	41775 ELM ST #101	MURRIETA CA	92562	1357 ROCKY POINT DR	OCEANSIDE CA	92056
1615125400	60 STATE ST #1200	BOSTON MA	02109	1351 ROCKY POINT DR	OCEANSIDE CA	92056
7716312440	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #F10	VISTA CA	92083
7716312454	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #O8	VISTA CA	92083
7716312470	510 N MELROSE DR #P6	VISTA CA	92083	510 MELROSE DR N #P6	VISTA CA	92083
7716312476	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #P12	VISTA CA	92083
1606901400	12275 EL CAMINO REAL #200	SAN DIEGO CA	92130	MESA DR	OCEANSIDE CA	
1634800800	2550 MOTTINO DR	OCEANSIDE CA	92056	565 MELROSE DR N	VISTA CA	92083
1606910700	12275 EL CAMINO REAL #200	SAN DIEGO CA	92130	MESA DR	OCEANSIDE CA	
1605712100	1 DNA WAY	SOUTH SAN FRANCISCO CA	94080	ANTIBODY WAY	OCEANSIDE CA	
7716312426	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #E9	VISTA CA	92083
7716312431	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #E14	VISTA CA	92083

Table 6-1. Parcel List Within 300 Feet of Proposed Project

Assessor's Parcel Number	Mailing Street Address	Mailing City and State	Mailing Zip	Parcel Street Address	Parcel City and State	Parcel Zip
7716312433	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #E16	VISTA CA	92083
1625020100	52 VISTA MONTEMAR	LAGUNA NIGUEL CA	92677	4100 AVENIDA DE LA PLATA	OCEANSIDE CA	92056
1625020800	P O BOX 2588	SAN MARCOS CA	92079	AVENIDA DE LA PLATA	OCEANSIDE CA	92056
7716312402	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #A2	VISTA CA	92083
7716312405	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #A5	VISTA CA	92083
7716312411	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #B3	VISTA CA	92083
7716312414	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #C1	VISTA CA	92083
7716312457	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #O11	VISTA CA	92083
1625024500	4119 AVENIDA DE LA PLATA	OCEANSIDE CA	92056	4119 AVENIDA DE LA PLATA	OCEANSIDE CA	92056
1615126100	1342 ROCKY POINT DR	OCEANSIDE CA	92056	1342 ROCKY POINT DR	OCEANSIDE CA	92056
1631221000	CALIFORNIA STATE ASSESSED*				VISTA CA	
7716312489	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #R13	VISTA CA	92083
7716312490	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #R15	VISTA CA	92083
7716312466	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #P2	VISTA CA	92083
7716312481	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #P1A	VISTA CA	92083
1615122700	CALIFORNIA STATE ASSESSED*			ROCKY POINT DR	OCEANSIDE CA	92056
1605712700	P O BOX 29291	PHOENIX AZ	85038	OCEAN RANCH BLVD	OCEANSIDE CA	92056
1606910400	1251 AVENUE OF THE AMERICAS	NEW YORK NY	10020	OCEAN RANCH BLVD	OCEANSIDE CA	
1625025000	3435 WILSHIRE BLVD	LOS ANGELES CA	90010	AVENIDA DE LA PLATA	OCEANSIDE CA	92056
1615121000	PUBLIC AGENCY			1909 AVENIDA DEL ORO	OCEANSIDE CA	92056
1620202100	CALIFORNIA STATE ASSESSED*				OCEANSIDE CA	
7716312418	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #C5	VISTA CA	92083
7716312434	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #F1	VISTA CA	92083
1625020400	657 ROLLING HILLS RD	VISTA CA	92081	4128 AVENIDA DE LA PLATA	OCEANSIDE CA	92056

Table 6-1. Parcel List Within 300 Feet of Proposed Project

Assessor's Parcel Number	Mailing Street Address	Mailing City and State	Mailing Zip	Parcel Street Address	Parcel City and State	Parcel Zip
7716312404	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #A4	VISTA CA	92083
1605121200	181 ELY ST	OCEANSIDE CA	92054	181 ELY ST	OCEANSIDE CA	92054
1605121300	178 ELY ST	OCEANSIDE CA	92054	178 ELY ST	OCEANSIDE CA	92054
1606900400	1251 AVENUE OF THE AMERICAS	NEW YORK NY	10020	HARBOR WAY	OCEANSIDE CA	
1615125100	ONE BISCAYNE TOWER #2400 2 S BISCAYNE BLVD	MIAMI FL	33131	1349 ROCKY POINT DR	OCEANSIDE CA	92056
7716312437	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #F4	VISTA CA	92083
7716312485	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #R5	VISTA CA	92083
7716312488	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #R11	VISTA CA	92083
1631300100	2244 S SANTA FE AVE #B2	VISTA CA	92084	527 OLIVE AVE	VISTA CA	92083
7716312468	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #P4	VISTA CA	92083
1615122600	CALIFORNIA STATE ASSESSED*			ROCKY POINT DR	OCEANSIDE CA	92056
1625024700	144 REDWOOD AVE	CARLSBAD CA	92008	4125 AVENIDA DE LA PLATA	OCEANSIDE CA	92056
1625030300	657 ROLLING HILLS RD	VISTA CA	92081	4040 AVENIDA DE LA PLATA	OCEANSIDE CA	92056
1634800300	P O BOX 1662	RCHO SANTA FE CA	92067	501 DOVE CIR	VISTA CA	92083
1620202000	CALIFORNIA STATE ASSESSED*				OCEANSIDE CA	92054
1625032700	333 LAKESIDE DR	FOSTER CITY CA	94404	4049 AVENIDA DE LA PLATA	OCEANSIDE CA	92056
7716312420	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #E1	VISTA CA	92083
1625020200	4112 AVENIDA DE LA PLATA	OCEANSIDE CA	92056	4112 AVENIDA DE LA PLATA	OCEANSIDE CA	92056
1620403900	550 VISTA BELLA	OCEANSIDE CA	92057	EL CAMINO REAL	OCEANSIDE CA	92054
1603001200	PUBLIC AGENCY			EL CAMINO REAL	OCEANSIDE CA	92054
7716312401	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #P10	VISTA CA	92083
7716312463	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #O17	VISTA CA	92083

Table 6-1. Parcel List Within 300 Feet of Proposed Project

Assessor's Parcel Number	Mailing Street Address	Mailing City and State	Mailing Zip	Parcel Street Address	Parcel City and State	Parcel Zip
7716312435	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #F2	VISTA CA	92083
7716312436	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #F3	VISTA CA	92083
7716312445	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #F15	VISTA CA	92083
7716312449	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #O3	VISTA CA	92083
7716312450	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #O4	VISTA CA	92083
7716312451	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #O5	VISTA CA	92083
7716312484	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #R3	VISTA CA	92083
7716312486	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #R7	VISTA CA	92083
1634800900	520 DOVE CIR	VISTA CA	92083	520 DOVE CIR	VISTA CA	92083
7716312469	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #P5	VISTA CA	92083
1634800100	1020 S SANTA FE AVE #C	VISTA CA	92084	517 DOVE CIR	VISTA CA	92083
1634800200	4826 DIANE AVE	SAN DIEGO CA	92117	509 DOVE CIR	VISTA CA	92083
1615124800	1347 ROCKY POINT DR	OCEANSIDE CA	92056	1347 ROCKY POINT DR	OCEANSIDE CA	92056
1625032600	4095 AVENIDA DE LA PLATA	OCEANSIDE CA	92056	4095 AVENIDA DEL ORO	OCEANSIDE CA	92056
7716312419	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #C6	VISTA CA	92083
7716312428	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #E11	VISTA CA	92083
7716312429	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #E12	VISTA CA	92083
1624410500	302 MAINSAIL RD	OCEANSIDE CA	92054	302 MAINSAIL RD	OCEANSIDE CA	92054
1624410700	310 MAINSAIL RD	OCEANSIDE CA	92054	310 MAINSAIL RD	OCEANSIDE CA	92054
1603000300	CALIFORNIA STATE ASSESSED*				OCEANSIDE CA	
1625041200	4143 AVENIDA DE LA PLATA	OCEANSIDE CA	92056	AVENIDA DE LA PLATA	OCEANSIDE CA	92056
7716312407	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #A7	VISTA CA	92083
7716312406	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #A6	VISTA CA	92083
1631211000	558 N MELROSE DR	VISTA CA	92083	558 MELROSE DR N	VISTA CA	92083
1615125900	22466 BAYBERRY	MISSION VIEJO CA	92692	1338 ROCKY POINT DR	OCEANSIDE CA	92056
1615126000	60 STATE ST #1200	BOSTON MA	02109	1340 ROCKY POINT DR	OCEANSIDE CA	92056
7716312438	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #F6	VISTA CA	92083

Table 6-1. Parcel List Within 300 Feet of Proposed Project

Assessor's Parcel Number	Mailing Street Address	Mailing City and State	Mailing Zip	Parcel Street Address	Parcel City and State	Parcel Zip
7716312442	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #F12	VISTA CA	92083
7716312447	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #O1	VISTA CA	92083
7716312482	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #PM1	VISTA CA	92083
7716312491	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #R17	VISTA CA	92083
1605724100	1 POLARIS WAY #100	ALISO VIEJO CA	92656	MESA DR	OCEANSIDE CA	
7716312475	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #P11	VISTA CA	92083
7716312480	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #P18	VISTA CA	92083
7716312471	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #P7	VISTA CA	92083
1605712800	P O BOX 29291	PHOENIX AZ	85038	OCEAN RANCH BLVD	OCEANSIDE CA	
1605713200	165 S UNION BLVD #510	LAKEWOOD CO	80228	4010 OCEAN RANCH BLVD	OCEANSIDE CA	92056
1634800400	505 DOVE CIR	VISTA CA	92083	505 DOVE CIR	VISTA CA	92083
1634800600	514 DOVE CIR	VISTA CA	92083	514 DOVE CIR	VISTA CA	92083
7716312416	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #C3	VISTA CA	92083
7716312421	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #E2	VISTA CA	92083
7716312423	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #E4	VISTA CA	92083
7716312432	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #E15	VISTA CA	92083
1624416600	P O BOX 232211	ENCINITAS CA	92023	JIBSAIL ST	OCEANSIDE CA	
1624416700	P O BOX 232211	ENCINITAS CA	92023	JIBSAIL ST	OCEANSIDE CA	
7716312408	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #A8	VISTA CA	92083
7716312413	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #P1-M	VISTA CA	92083
7716312458	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #O12	VISTA CA	92083
7716312459	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #O13	VISTA CA	92083
7716312461	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #O15	VISTA CA	92083
7716312455	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #O9	VISTA CA	92083
1606900500	1251 AVENUE OF THE AMERICAS	NEW YORK NY	10020	PACIFICAL WAY	OCEANSIDE CA	
7716312453	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #O7	VISTA CA	92083
7716312479	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #P16	VISTA CA	92083

Table 6-1. Parcel List Within 300 Feet of Proposed Project

Assessor's Parcel Number	Mailing Street Address	Mailing City and State	Mailing Zip	Parcel Street Address	Parcel City and State	Parcel Zip
1615121700	60 STATE ST #1200	BOSTON MA	02109	BLACKS BEACH ST	OCEANSIDE CA	
7716312467	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #P3	VISTA CA	92083
7716312473	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #P9	VISTA CA	92083
1625024600	4121 AVENIDA DE LA PLATA	OCEANSIDE CA	92056	4121 AVENIDA DE LA PLATA	OCEANSIDE CA	92056
1625024800	3213 SITIO MONTECILLO	CARLSBAD CA	92009	4129 AVENIDA DE LA PLATA	OCEANSIDE CA	92056
1634800500	508 DOVE CIR	VISTA CA	92083	508 DOVE CIR	VISTA CA	92083
1615124900	41775 ELM ST #101	MURRIETA CA	92562	ROCKY POINT DR	OCEANSIDE CA	92056
1615125000	1359 ROCKY POINT DR	OCEANSIDE CA	92056	1359 ROCKY POINT DR	OCEANSIDE CA	92056
7716312430	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #E13	VISTA CA	92083
1624410600	306 MAINSAIL RD	OCEANSIDE CA	92054	306 MAINSAIL RD	OCEANSIDE CA	92054
7716312403	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #A3	VISTA CA	92083
7716312456	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #O10	VISTA CA	92083
1631211100	17300 RED HILL AVE #280	IRVINE CA	92614	550 MELROSE DR N	VISTA CA	92083
1615125500	60 STATE ST #1200	BOSTON MA	02109	1353 ROCKY POINT DR	OCEANSIDE CA	92056
1615125600	60 STATE ST #1200	BOSTON MA	02109	1332 ROCKY POINT DR	OCEANSIDE CA	92056
1631211200	17300 RED HILL AVE #280	IRVINE CA	92614	510 MELROSE DR N	VISTA CA	92083
1631220600	545 N MELROSE DR	VISTA CA	92083	545 MELROSE DR N	VISTA CA	92083
1631220900	4211 MOONLIGHT LN	OCEANSIDE CA	92056	539 OLIVE AVE	VISTA CA	92083
7716312439	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #F8	VISTA CA	92083
7716312441	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #F11	VISTA CA	92083
7716312444	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #F14	VISTA CA	92083
7716312446	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #F16	VISTA CA	92083
7716312452	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N	VISTA CA	92083
7716312483	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #R1	VISTA CA	92083
7716312487	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #R9	VISTA CA	92083
7716312472	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #R8	VISTA CA	92083
7716312477	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #P8	VISTA CA	92083

Table 6-1. Parcel List Within 300 Feet of Proposed Project

Assessor's Parcel Number	Mailing Street Address	Mailing City and State	Mailing Zip	Parcel Street Address	Parcel City and State	Parcel Zip
7716312478	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #P13	VISTA CA	92083
1625030100	1220 ROSECRANS ST #320	SAN DIEGO CA	92106	4096 AVENIDA DE LA PLATA	OCEANSIDE CA	92056
1605712300	1 DNA WAY	SOUTH SAN FRANCISCO CA	94080	OCEAN RANCH BLVD	OCEANSIDE CA	92056
7716312415	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #C2	VISTA CA	92083
7716312417	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #C4	VISTA CA	92083
7716312422	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #E3	VISTA CA	92083
1625020300	8980 GRANT LINE RD	ELK GROVE CA	95624	4120 AVENIDA DE LA PLATA	OCEANSIDE CA	92056
1625020900	P O BOX 9195	RANCHO SANTA FE CA	92067	4113 AVENIDA DE LA PLATA	OCEANSIDE CA	92056
1620403700	550 VISTA BELLA	OCEANSIDE CA	92057	660 EL CAMINO REAL	OCEANSIDE CA	92054
7716312409	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #B1	VISTA CA	92083
7716312412	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #B4	VISTA CA	92083
7716312460	510 N MELROSE DR #O14	VISTA CA	92083	510 MELROSE DR N #O14	VISTA CA	92083
7716312464	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #O18	VISTA CA	92083
7716312465	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #O19	VISTA CA	92083
1625030200	P O BOX 956	WILSONVILLE OR	97070	4048 AVENIDA DE LA PLATA	OCEANSIDE CA	92056
1625041300	4144 AVENIDA DE LA PLATA	OCEANSIDE CA	92056	4144 AVENIDA DE LA PLATA	OCEANSIDE CA	92056
7716312462	510 N MELROSE DR	VISTA CA	92083	510 MELROSE DR N #O16	VISTA CA	92083

Note: * Parcel owned by San Diego Gas & Electric Company.

6.2 REFERENCES

No references cited in this section.