

CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE (415) 904-5200
FAX (415) 904-5400
TDD (415) 597-5885



W9a, W10a, W11a

Appeal Filed:	12/14/17
49 th Working Day:	2/27/18
CDP Filed:	11/03/17
180th Day:	05/02/18
CC Filed:	10/20/17
3 Months (CC):	1/20/18
6 Months (CC)	4/20/18
Staff:	KH-SF
Staff Report:	1/25/18
Hearing Date:	2/07/18

STAFF REPORT: APPEAL – SUBSTANTIAL ISSUE, DE NOVO/ REGULAR CALENDAR, AND CONSISTENCY CERTIFICATION

Appeal Number:	A-5-DRL-17-0071
Application No.:	9-17-0389
Consistency Certification No.:	CC-0004-17
Applicant:	Tyco Electronics Subsea Communications (TE SubCom)
Local Government:	City of Los Angeles
Local Decision:	Approval without Conditions
Appellant:	Coastal Commission Executive Director
Project Location:	In state and federal waters offshore of Dockweiler State Beach out to the edge of the continental shelf; and several locations within the City of Los Angeles including Dockweiler State Beach Parking Lot #3 and South Marine Avenue between Dockweiler Parking Lot #3 and Imperial Highway (Exhibit 1).

Project Description:

Appeal of City of Los Angeles Local Coastal Development Permit No. 16-09, approved for the construction of a cable landing site at Dockweiler State Beach Parking Lot #3 with the capacity to install up to four fiber optic cable systems, two beach manholes, one ocean ground bed, and a buried terrestrial conduit system to connect the landing sites to a data center outside of the Coastal Zone ([Exhibit 2](#)). Also includes the dual permit jurisdiction coastal development permit application for the same proposed project. In the Commission’s original jurisdiction, the project also includes installation and operation of one submarine fiber optic cable extending from El Segundo through state waters and terminating in Hong Kong ([Exhibits 1 and 3](#)).

Staff Recommendation:

Substantial Issue On Appeal, Approval With Conditions on Dual Permit Application and Concurrence with conditions on the Consistency Certification.

Important Hearing Procedure Note: The Commission will not take testimony on this “substantial issue” recommendation unless at least three commissioners request it. The Commission may ask questions of the applicant, any aggrieved person, the Attorney General or the executive director prior to determining whether or not to take testimony regarding whether the appeal raises a substantial issue. If the Commission takes testimony regarding whether the appeal raises a substantial issue, testimony is generally and at the discretion of the Chair limited to 3 minutes total per side. Only the applicant, persons who opposed the application before the local government (or their representatives), and the local government shall be qualified to testify during this phase of the hearing. Others may submit comments in writing. If the Commission finds that the appeal raises a substantial issue, the de novo phase of the hearing will follow, unless it has been postponed, during which time the Commission will take public testimony.

SUMMARY OF STAFF RECOMMENDATION

TE SubCom proposes the first phase of a multi-phase project to install and operate up to four transpacific submarine fiber optic cables to land at Dockweiler State Beach in the City of Los Angeles with the purpose of connecting the United States to various locations along the western rim of the Pacific Ocean. In the first phase, TE SubCom proposes to construct a landing site with the capacity to install up to four fiber optic cable systems, and to install and operate one subsea cable system, the Pacific Light Cable Network (PLCN), which would be installed through state and federal waters out to the edge of the continental shelf and eventually terminating in Hong Kong, China ([Exhibits 1, 2, 3](#)).

This recommendation addresses the following components related to the proposed project: (1) substantial issue determination for the City of Los Angeles's action, (2) De Novo/dual jurisdiction and original jurisdiction CDP, and (3) federal consistency certification. The standard of review for all components is Chapter 3 of the Coastal Act.

Staff first recommends that the Commission determine that a **substantial issue exists** with respect to the grounds on which Appeal A-5-DRL-17-0071 has been filed for the following reasons: the project, as approved by the City of Los Angeles, is inconsistent with the Marine Resource, ESHA, Water Quality, Hazards and Cultural Resources policies of Chapter 3 of the Coastal Act. Staff also recommends that, after a public hearing, the Commission **approve the de novo permit/Dual Jurisdiction/Original Jurisdiction Permit** with special conditions.

The key Coastal Act issues raised by this project are the potential for adverse impacts to marine resources and commercial fishing. The proposed project has the potential to harm marine mammals, fish, hard bottom habitat, soft bottom habitat and marine water quality. These issues were not adequately addressed by the City. To minimize impacts, Commission staff recommends several conditions designed to protect marine habitats and sensitive species. These include **Special Condition 4** requiring TE SubCom to submit a Marine Wildlife Monitoring and Contingency Plan (MWMCP), **Special Condition 5** that requires the cable to be buried to a depth of 1.0 meter, and **Special Condition 6** requiring TE SubCom to avoid and eliminate cable suspensions. **Special Conditions 11 and 12** require TE SubCom to survey the cable every 5 years and to eventually remove it from state waters. In addition, **Special Conditions 14 and 15** require TE SubCom to quantify impacts to hard bottom substrate and mitigate for those impacts through payment of a hard bottom mitigation fee to be used to remove derelict fishing gear and marine debris from waters off of Southern California. Further, **Special Conditions 16, 17, 18, and 19** require TE SubCom to submit plans to protect against the discharge of hazardous and non-hazardous substances into the marine environment. As conditioned, the Commission staff recommends the Commission find the proposed project would be consistent with Sections 30230, 30231 and 30232 of the Coastal Act.

The proposed project also has the potential to result in conflicts and impacts to commercial and recreational fishing activities. To minimize this potential, **Special Conditions 7, 8, and 9** require TE SubCom to notify fisherman of the location of the installed cable and any areas of exposed or suspended cable. In addition, **Special Condition 24** requires TE SubCom to adhere to the requirements included in an existing Fishing Agreement ([Exhibit 10](#)). As conditioned, the Commission staff recommends the Commission find the project would protect commercial and recreational fishing interests and is therefore consistent with Coastal Act Section 30234.5.

Commission staff recommends that the Commission (1) find substantial issue raised by the City's action (Appeal No. A-5-DRL-17-0071), (2) **approve** coastal development permit application A-5-DRL-17-0071/9-16-0160, as conditioned, and (3) **conditionally concur** with consistency certification CC-0004-17.

TABLE OF CONTENTS

I. MOTIONS AND RESOLUTIONS	6
A. SUBSTANTIAL ISSUE DETERMINATION FOR APPEAL A-5-DRL-17-0071	6
B. DE NOVO CDP DETERMINATION FOR APPEAL A-5-DRL-17-0071/CDP 9-17-0389	6
C. CONSISTENCY CERTIFICATION	7
II. APPEAL PROCEDURES AND JURISDICTION.....	7
A. APPEAL PROCEDURES	7
B. SINGLE/DUAL PERMIT JURISDICTION AREAS	8
C. LOCAL GOVERNMENT ACTION	8
III. FINDINGS AND DECLARATIONS FOR SUBSTANTIAL ISSUE	9
A. PROJECT DESCRIPTION	9
B. APPELLANT’S CONTENTIONS	12
C. FACTORS TO BE CONSIDERED IN SUBSTANTIAL ISSUE ANALYSIS	13
D. SUBSTANTIAL ISSUE ANALYSIS	13
E. SUBSTANTIAL ISSUE CONCLUSION	20
IV. DE NOVO COASTAL DEVELOPMENT/FEDERAL CONSISTENCY DETERMINATION	20
A. APPLICANT’S CONSISTENCY CERTIFICATION	20
B. STANDARD CONDITIONS	20
C. SPECIAL CONDITIONS	21
V. FINDINGS AND DECLARATIONS FOR DE NOVO COASTAL DEVELOPMENT PERMIT A-5-DRL-17-0071/9-17-0389	30
A. PROJECT DESCRIPTION	30
B. PRIOR FIBER OPTIC CABLE PROJECTS APPROVED BY COASTAL COMMISSION.....	30
C. OTHER AGENCY APPROVALS.....	31
D. DREDGING AND PLACEMENT OF FILL IN COASTAL WATERS	32
E. MARINE RESOURCES AND WATER QUALITY	36
F. ENVIRONMENTALLY SENSITIVE HABITAT.....	53
G. COMMERCIAL AND RECREATIONAL FISHING.....	58
H. PUBLIC ACCESS AND RECREATION.....	63
I. CULTURAL RESOURCES	64
J. GEOLOGY AND HAZARDS.....	66
K. CALIFORNIA ENVIRONMENTAL QUALITY ACT	69
L. FEDERAL CONSISTENCY	69

APPENDICES

[Appendix A – Substantive File Documents](#)

EXHIBITS

Exhibit 1 – Project Overview

Exhibit 2 – Proposed Terrestrial Cable Route

Exhibit 3 – Proposed Maine Project Components

Exhibit 4 – Marine Horizontal Directional Drilling Bore Locations

- Exhibit 5 - Proposed Staging and Terrestrial Project Components
- Exhibit 6 – Marine Horizontal Directional Drilling Plan
- Exhibit 7 – Marine Hazards in the Vicinity of the Project Area
- Exhibit 8 – Cable Installation by Sea Plow
- Exhibit 9 – EIR Mitigation Measures Incorporated Into this CDP
- Exhibit 10 – Fishing Agreement
- Exhibit 11 – Marine Protected Areas in the Vicinity of the Project Area
- Exhibit 12 – Sensitive Habitats in the Vicinity of the Project Area
- Exhibit 13 – Seafloor Substrate Maps for First Section of Offshore Cable
- Exhibit 14 – Terrestrial Vegetation Communities in the Project Area
- Exhibit 15 – El Segundo Blue Butterfly Habitat
- Exhibit 16 – Sea Level Rise Modeling for the Project Area

I. MOTIONS AND RESOLUTIONS

A. SUBSTANTIAL ISSUE DETERMINATION FOR APPEAL A-5-DRL-17-0071

Motion:

*I move that the Commission determine that Appeal No. A-5-DRL-17-0071 raises **NO Substantial Issue** with respect to the grounds on which the appeal has been filed under § 30602 of the Coastal Act.*

Staff recommends a **NO** vote. Failure of this motion will result in a de novo hearing on the application, and adoption of the following resolution and findings. Passage of this motion will result in a finding of No Substantial Issue and the local action will become final and effective. The motion passes only by an affirmative vote of the majority of the appointed Commissioners present.

Resolution to Find Substantial Issue:

*The Commission hereby finds that Appeal No. **A-5-DRL-17-0071** presents A **SUBSTANTIAL ISSUE** with respect to the grounds on which the appeal has been filed under § 30602 of the Coastal Act regarding consistency with Chapter 3 policies of the Coastal Act.*

B. DE NOVO CDP DETERMINATION FOR APPEAL A-5-DRL-17-0071/CDP 9-17-0389

Motion:

*I move that the Commission **approve** Coastal Development Permit A-5-DRL-17-0071/9-17-0389 subject to the conditions set forth in the staff recommendation.*

Staff recommends a **YES** vote on the foregoing motion. Passage of this motion will result in conditional approval of the permit and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution:

The Commission hereby approves Coastal Development Permit A-5-DRL-17-0071/9-17-0389 and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

C. CONSISTENCY CERTIFICATION

Motion:

I move that the Commission conditionally concur with TE SubCom's Consistency Certification CC-0004-17 on the grounds that, if modified in accordance with the following conditions, the project described therein would be consistent with the enforceable policies of the California Coastal Management Program (CCMP).

Staff recommends a **YES** vote on the motion. Passage of this motion will result in a concurrence with the certification and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.

Resolution to Conditionally Concur with Consistency Certification:

The Commission hereby conditionally concurs with TE SubCom's Consistency Certification CC-0004-17 on the grounds that, if modified in accordance with the following conditions, the project described therein would be consistent with the enforceable policies of the CCMP.

II. APPEAL PROCEDURES AND JURISDICTION

A. APPEAL PROCEDURES

Section 30600(b) of the Coastal Act provides that prior to certification of its LCP, a local jurisdiction may, with respect to development within its area of jurisdiction in the coastal zone and consistent with the provisions of Sections 30604, 30620 and 30620.5, establish procedures for the filing, processing, review, modification, approval or denial of a coastal development permit. Pursuant to this provision, the City of Los Angeles developed a permit program in 1978 to exercise its option to issue local CDPs. Sections 13301-13325 of Title 14 of the California Code of Regulations provide procedures for issuance and appeals of locally issued CDPs. Section 30602 of the Coastal Act allows *any* action by a local government on a CDP application evaluated under Section 30600(b) to be appealed to the Commission. The standard of review for such an appeal is the Chapter 3 policies of the Coastal Act. [Cal. Pub. Res. Code §§ 30200 and 30604.]

After a final local action on a local CDP application, the Coastal Commission must be noticed within five days of the decision. After receipt of such a notice, which contains all the required information, a twenty working-day appeal period begins during which any person, including the applicant, the Executive Director, or any two members of the Commission, may appeal the local decision to the Coastal Commission. [Cal. Pub. Res. Code § 30602; 14 Cal. Code Regs. § 13316.] As provided under section 13318 of Title 14 of the California Code of Regulations, the appellant must conform to the procedures for filing an appeal as required under section 13111 of Title 14 of the California Code of Regulations, including the specific grounds for appeal and a summary of the significant question raised by the appeal.

The action currently before the Commission is to find whether there is a “substantial issue” or “no substantial issue” raised by the appeal of the local approval of the proposed project. Sections

30621 and 30625(b)(1) of the Coastal Act require a de novo hearing of the appealed project unless the Commission determines that no substantial issue exists with respect to the grounds for appeal.

Commission staff recommends a finding of **substantial issue**. If the Commission decides that the appellant's contention raises no substantial issue as to conformity with Chapter 3 of the Coastal Act, the action of the local government becomes final. Alternatively, if the Commission finds that a substantial issue exists with respect to the conformity of the action of the local government with the Chapter 3 policies of the Coastal Act, the local CDP is voided and the Commission shall review the CDP as a de novo matter, holding the de novo portion of the public hearing either at this same meeting or at a later date. In this case, Commission staff has included the De Novo matter and the Commission's Dual CDP on the agenda for the same meeting as the substantial issue portion of the appeal. Section 13321 of the Coastal Commission regulations specifies that de novo actions will be heard according to the procedures outlined in Sections 13114 and 13057-13096 of the Commission's regulations.

If there is no motion from the Commission to find no substantial issue, it will be presumed that the appeal raises a substantial issue and the Commission will continue into the hearing for the de novo phase of the public hearing on the merits of the application. The de novo phase of the public hearing on the merits of the application uses the Chapter 3 policies of the Coastal Act as the standard of review. Sections 13110-13120 of Title 14 of the California Code of Regulations further explain the appeal hearing process.

If the Commission decides to hear arguments and vote on the substantial issue question, those who are qualified to testify at the hearing, as provided by Section 13117 of Title 14 of the California Code of Regulation, will generally and at the discretion of the Chair have three minutes per side to address whether the appeal raises a substantial issue. The only persons qualified to testify before the Commission at the substantial issue portion of the appeal process are the applicant, persons who opposed the application before the local government (or their representatives), and the local government. Testimony from other persons must be submitted in writing. The Commission will then vote on the substantial issue matter. It takes a majority of Commissioners present to find that the grounds for the appeal raise no substantial issue.

B. SINGLE/DUAL PERMIT JURISDICTION AREAS

Within the areas specified in Section 30601, which is known in the City of Los Angeles permit program as the *Dual Permit Jurisdiction* area, the Coastal Act requires that any development which receives a local CDP permit also obtain a second (or "dual") CDP from the Coastal Commission. The Commission's standard of review for the proposed development in the *Dual Permit Jurisdiction* area is the Chapter 3 policies of the Coastal Act. For projects located inland of the areas identified in Section 30601 (i.e., projects in the *Single Permit Jurisdiction*), the City of Los Angeles local CDP is the only CDP required. The proposed project site is located within the *Dual Permit Jurisdiction Area*. The applicant's application (9-17-0389) for the Coastal Commission dual permit was received on May 2, 2017.

C. LOCAL GOVERNMENT ACTION

After a public hearing on September 28, 2017, the City of Los Angeles certified the Environmental Impact Report (EIR) and issued a Notice of Decision on the Local Coastal Development Permit (LCDP 16-09) for this project on November 3, 2017. The City's Notice of

Final Action for the local CDP was received in the Coastal Commission's South Coast District Office on November 14, 2017, and on November 16, 2017, Coastal Commission staff established the twenty working-day appeal period of the California Coastal Commission for the local action. On December 14, 2017, one appeal was received from the Executive Director. No other appeals were received prior to the end of the appeal period. On December 14, 2017, a Notification of Appeal was sent to the City of Los Angeles, West Los Angeles Area Planning Commission and the applicant, notifying each party of the appeal of local CDP 16-09.

III. FINDINGS AND DECLARATIONS FOR SUBSTANTIAL ISSUE

The Commission hereby finds and declares:

A. PROJECT DESCRIPTION

TE SubCom proposes the first phase of a multi-phase project to install and operate up to four transpacific submarine fiber optic cables to land at Dockweiler State Beach in the City of Los Angeles with the purpose of connecting the United States to various locations along the western rim of the Pacific Ocean. In the first phase, TE SubCom proposes to construct a landing site with the capacity to install up to four fiber optic cable systems, and to install and operate one subsea cable system, the Pacific Light Cable Network (PLCN), which would be installed through state and federal waters out to the edge of the continental shelf and eventually terminating in Hong Kong, China (see [Exhibits 1-5](#)). Specifically, the proposed project includes the following components:

- Four marine directional bores to provide housing for the fiber optic conduit. The bores would be drilled from one onshore location, travel under the beach and surf zone, and resurface approximately 4,511 ft. offshore .
- Two adjacent landing manholes to be installed at the directional bore site to provide access to the conduit. These manholes would serve as the terminus point for two directional bores each.
- The PLCN cable system, including marine and terrestrial fiber optic cable, ground cable and power cable.
- A buried terrestrial conduit system constructed from the landing manhole at each landing site to an existing data center in El Segundo. Only a portion of the terrestrial conduit system is located within the Coastal Zone.
- One ocean ground bed consisting of anodes installed into holes drilled in the beach down to the seawater level below the beach surface.

Each of these components would be described in detail below.

Cable Landing Sites, Directional Bores and Landing Manholes

TE SubCom proposes one cable landing site located in the northeast corner of Parking Lot #3 at Dockweiler State Beach in the City of Los Angeles. This landing site marks the landward end of four directional bores that extend below the surface, to a point approximately 4,511 ft. offshore (See [Exhibit 4](#)). The purpose of each bore is to provide a conduit for a submarine cable to come ashore without causing disruption to the seafloor or beach within the surf zone. The landing site

would serve as the principal staging area for installation of the directional bores including access for heavy equipment. The staging area would cover an area approximately 175 ft. by 75 ft., which would temporarily displace approximately 58 parking spaces or 13% of Parking Lot #3.

Each bore would be drilled using a process called horizontal directional drilling (HDD). To install each bore, workers would first excavate an HDD entry pit within the landing site (approximately 10 ft. wide by 15 ft. long by 6 ft. deep). Next, the HDD rig, positioned at the entry pit, would be used to drill a hole. The bore depth profile would range from 6.5 ft. at the entry point to a maximum depth of approximately 120 ft. ([Exhibit 6](#)). Prior to drilling, tracking wire threaded inside a small conduit would be installed between the bore entry point onshore and the exit point offshore to help guide the HDD activities. The tracking wire would cross under the Marvin Braude Bike Path in two locations and would be hand-dug to approximately 12 inches below the surface. The marine portion of the tracking wire would be installed using divers and would be anchored in place with concrete blocks (2 ft x 2ft x 2ft).

As the bore hole is drilled, sections of 5 inch steel conduit used to house the fiber optic and power cables would be advanced into the hole. During the drilling process, returned drilling fluid (usually a combination of inert clay and water) and bore cuttings would collect in the entry pit, and drill fluid would be treated and recycled back into the drill stem. For the last 10 to 130 ft. of the bore, the HDD contractor would switch from drill fluids to freshwater. Once the exact exit location is determined, divers would use water jets to excavate sediment to expose the end of the bore pipe and then cut off the drill steel. Finally, a temporary pull-line would be installed to facilitate pulling the submarine cable through the conduit and a check valve would be installed at the offshore end of the pipe. This process would be repeated for each of the four proposed bores.

After drilling is complete, spent drill fluids and cuttings would be collected and disposed of at an appropriate off-site location and the site restored to its initial condition. The HDD boring process is expected to take approximately eight to twelve weeks. With time for staging and demobilization and site restoration included, TE SubCom and its contractors expect to occupy the bore sites for a period ranging from ten to fourteen weeks in total.

To facilitate future access to the cable, one landing manhole would be constructed at the landward end of each group of two directional bores ([Exhibit 5](#)). The landing manhole, measuring approximately 6.6 ft. wide by 11.8 ft. long by 6.9 ft. deep, would contain the splice where the submarine cable connects to the terrestrial cable. A 36 inch diameter manhole cover would be installed at the same grade as the parking lot. Both manholes would be completed within two weeks to complete.

Submarine fiber optic cable system

TE SubCom proposes to install the PLCN cable along the alignment shown in [Exhibit 3](#). This alignment was selected to avoid known marine features such as the El Segundo Offshore Marine Terminal Safety Zone, the Channel Islands National Marine Sanctuary, explosives dumping areas, fisheries associated with Tanner Bank and Cortes Bank, contaminated sediments associated with the Palos Verdes Shelf and the Hyperion sewerage outfall, and commercial vessel anchoring and pilot boarding areas ([Exhibit 7](#)).

The first step in installing the marine portion of the cable is to connect the landward end of the cable to the terrestrial cable system through the beach manhole. The contractor would use a

winch to pull the marine cable from the cable-lay vessel through the directional bore pipe and into the landing manhole where it would be ready to connect to the terrestrial cable system. This process is expected to take approximately two days and would be monitored by divers from the main workboat. Once the connection is complete, TE SubCom would then install articulated pipe, consisting of a protective iron casing, around the cable along approximately 16.4 ft. from the bore pipe exit point seaward and for about 65.6 ft between the beach manhole and the landward entry point of the bore pipe.

Before installing the submarine fiber optic cable on the seafloor, TE SubCom would conduct a pre-lay grapnel run to clear debris from the cable corridor. Anything snagged on the grapnel, such as discarded fishing gear, would be retrieved and disposed of onshore. The grapnel would not be pulled over areas of hard bottom or in the vicinity of existing buried cables. Once the pre-lay grapnel run is complete, TE SubCom would begin laying the fiber optic cable. Beginning at the end of the bore pipe, the cable would be payed out by the cable lay vessel and temporarily laid on the seafloor. For the first 100-130 ft. of cable laid seaward of the bore pipe, divers would bury the cable using hand jets to a target depth of 3.3 ft. or 1 meter.

For the rest of the cable route out to the edge of the continental shelf (at an approximate depth of 3,937 ft. (1200 meters)), the cable would be installed using a cable plow ([Exhibit 8](#)). The plow, as it is pulled by the cable-laying ship, slices through the ocean floor sediments while simultaneously feeding the cable into the newly created furrow. As the sled continues to move forward, the weight of the sled coupled with the weight of the soil, closes and compacts the furrow, effectively burying the cable to a target burial depth of 3.3 ft. (1 meter). In areas where the plow is not able to achieve the targeted burial depth due to bottom conditions, an ROV would be used to attempt to bury the cable by jetting the sediments under the cable to create a furrow. In hard bottom areas and areas deeper than 3,937 ft., the cable would be laid directly on the seafloor.

Terrestrial Conduit System

The terrestrial conduit system links the marine fiber optic cable to existing and future fiber optic infrastructure. The conduit system consists of four 4-inch ducts (one for each horizontal bore) each of which would contain three 1.25-inch diameter plastic sub-ducts for the fiber optic cable, ground cable and power cable. TE SubCom proposes to install the sub-ducts in one of the four main ducts. The other three ducts would remain empty until future phases of the project are implemented. Installation of all four conduits is proposed as part of the current project to minimize the need for future excavations or interruptions in service.

The proposed terrestrial conduit system would be installed primarily in public Right of Ways (ROWs) between the cable landing site and the Equinix Data Center located at 1920 East Maple Avenue, El Segundo along the route shown in [Exhibit 2](#). Pre-cast concrete manholes would be placed every approximately 820 ft. or less along the proposed route to allow future access for maintenance. The majority of the terrestrial conduit system would be installed using open trenching due to the presence of aging subsurface infrastructure along the route. However, HDD would be used to install a section of the route along South Marine Avenue to avoid impacts to existing dune habitat. Where trenching is required, a backhoe would be used to excavate an 18 inch wide by 48 inch deep trench. The opening of the trench may be as wide as 8 ft.in sand and 3 ft. within paved areas to allow placement of the ducts. Shoring could be used for trench segments located in sandy sediments along South Marine Ave. Once the trench is complete, the

conduit would be placed inside and then native soils or a sand-cement slurry would be used to backfill the trench and the site restored to preconstruction condition or better.

Finally, the innerduct and cables would be pulled through the conduits. The contractor would introduce a pulling lubricant straight into the conduit to reduce friction. Installation of the terrestrial conduit system is expected to take approximately three weeks.

Ocean Ground Bed

Two earth array ocean ground beds (OGB) would be installed for the proposed PLCN cable and a future cable to provide both cathodic protection to control corrosion and a ground for the electricity that powers the submarine cable amplifiers ([Exhibit 5](#)). Each OGB would include a single row of three 3.5-inch diameter anodes buried between 10 and 16 ft. The anodes would be installed horizontally with approximately 3.3 to 6.6 ft. of separation. Following the installation of the OGB, a trench would be excavated from the OGB to the beach manhole to accommodate installation of a 1.25 inch conduit that houses the main trunk ground cable. The site would then be backfilled with native soils and/or sand and restored to its initial condition. Installation of the OGB and connection to the beach manhole is expected to take approximately four days.

TE SubCom estimates that construction of the entire proposed project would take approximately 8-10 months in total. Onshore work would occur during the hours of 7:00 AM to 9:00 PM on Monday through Friday and 8:00 AM to 6:00 PM on Saturdays. Directional drilling activities may be conducted continuously for 24 hours a day, 7 days a week. Offshore activities would also be conducted 24 hours a day, 7 days a week.

Once installed, the marine and terrestrial portions of the fiber optic cable do not require routine maintenance. However, damage caused by salt water intrusion into the conduit, anchors or snagged fishing gear could result in a fault that would need to be repaired. If the cable is buried, a de-trenching grapnel, divers and/or an ROV could be used to remove the cable from the burial trench and bring it to the surface for repair. There, the cable would be repaired and then reburied in its original position to the extent practicable. If the cable is not buried, it might be possible to bring the cable to the surface without cutting it.

TE SubCom estimates that the proposed fiber optic cable project would have a life of approximately 25 years. Within 90 days of either taking the cable out of service or the expiration of the City's entitlement, TE SubCom would notify the City, the Commission and other applicable agencies of the status and the proposed disposition of the inactive cable. At the end of the cable's life, TE SubCom proposes to abandon the conduit and manhole system as well as buried portions of the cable in place, both in the water and on land.

B. APPELLANT'S CONTENTIONS

On September 28, 2017, the City of Los Angeles approved Local Coastal Development Permit (LCDP) No. 16-09 for construction of a landing site with the capacity to install up to four Trans-Pacific fiber optic cable systems. On November 14, the Coastal Commission's South Coast District Office received the Notice of Final Action for the local permit. On December 14, 2017, the Executive Director of the Coastal Commission filed an appeal of the permit authorizing the proposed project. The appellant contends that the City's LCDP failed to address the project's potential adverse impacts on marine resources and the biological productivity and quality of

coastal waters. The appellant also contends that the City's LCDP did not adequately address potential impacts to terrestrial resources and environmentally sensitive habitat areas or impacts from erosion and hazards. Finally, the appellant asserts that by failing to explicitly include mitigation measures required under CEQA in the LCDP, the City of Los Angeles does not have any ability to enforce these measures to ensure consistency with the Coastal Act.

C. FACTORS TO BE CONSIDERED IN SUBSTANTIAL ISSUE ANALYSIS

Section 30625(b)(1) of the Coastal Act states that the Commission shall hear an appeal of a local government action carried out pursuant to Section 30600(b) unless it finds that no substantial issue exists as to conformity with Chapter 3 of the Coastal Act. The term "substantial issue" is not defined in the Coastal Act or its implementing regulations. Section 13115(b) of the Commission's regulation simply indicates that the Commission would hear an appeal unless it "finds that the appeal raises no significant question." In previous decisions on appeals, the Commission had been guided by the following factors:

1. The degree of factual and legal support for the local government's decision that the development is consistent or inconsistent with the relevant provisions of the Coastal Act;
2. The extent and scope of the development as approved or denied by the local government;
3. The significance of the coastal resources affected by the decision;
4. The precedential value of the local government's decision for future interpretations of its LCP; and,
5. Whether the appeal raises local issues, or those of regional or statewide significance.

Even when the Commission chooses not to hear an appeal, appellants nevertheless may obtain judicial review of the local government's coastal permit decision by filing petition for a writ of mandate pursuant to Code of Civil Procedure, Section 1094.5.

Staff is recommending that the Commission find that **a substantial issue exists** with respect to whether the local government action conforms to the provisions of Chapter 3 of the Coastal Act for the reasons set forth below.

D. SUBSTANTIAL ISSUE ANALYSIS

As stated in Section IV of this report, the grounds for an appeal of a CDP issued by the local government prior to certification of its LCP are the project's conformity with Chapter 3 policies of the Coastal Act. Any local government CDP issued or denied prior to certification of its LCP may be appealed to the Commission. The Commission shall hear an appeal unless it determines that no substantial issue exists as to conformity with Chapter 3 policies of the Coastal Act. There is no certified LCP for this area of the City of Los Angeles. As such, the Coastal Act is the standard of review for this CDP. [Cal. Pub. Res. Code § 30625(b)(1); 14 C.C.R. § 13321.]

Section III(B) of this staff report outlined the appellant's contentions regarding the project. Concerns raised by the appellant include the City-approved project's consistency with sections 30230, 30231, 30232, 30240, 30244 and 30253 of the Coastal Act. The Commission's decision

will be guided by the factors listed in the previous section of this report (Section III(C). Factors to be Considered in Substantial Issue Analysis).

Here, a substantial issue exists with respect to the proposed project's conformance with Chapter 3 of the Coastal Act because the City-approved project is not consistent with the marine resource protection, water quality, environmentally sensitive habitat, archeological and paleontological resources and hazard policies of Chapter 3 of the Coastal Act. In particular, the City's CDP does not address potential impacts due to hazards or impacts on the marine environment from the proposed project. In addition, the City's CDP does not require appropriate mitigation measures, identified in the CEQA analysis, to avoid or minimize impacts to environmentally sensitive habitat and archeological and paleontological resources. The City's staff report did not provide adequate findings to justify the approval.

Section 30230 of the Coastal Act states:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 of the Coastal Act states:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Section 30232 of the Coastal Act states:

Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.

Coastal Act Section 30240 states:

- (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.*
- (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

Coastal Act Section 30244 states:

Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

Coastal Act Section 30253(2) states that:

New development shall...:

(a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.

(b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

The applicant is proposing to construct a subsurface landing site for up to four subsea fiber optic cable systems in the northwest corner of Parking Lot #3 at Dockweiler State Beach. This involves: (1) installing steel bore pipes below the beach and surf zone using horizontal directional drilling (HDD), (2) constructing two beach manholes approximately 7 ft. deep, and (3) installing an ocean ground bed (OGB) between 9.8 and 16.4 ft. below ground level. In addition, the applicant would install and operate one subsea fiber optic cable, the Pacific Light Cable Network (PLCN) that extends from the landing site through Santa Monica Bay and eventually terminates in Hong Kong (see [Exhibits 1-5](#)).

The proposed project, including work undertaken within the City of Los Angeles's (City) jurisdiction above the mean high tide line, has the potential to result in adverse impacts to marine resources, ESHA, hazards and cultural resources. The City's staff report, however, fails to adequately address these Coastal Act impacts. Each of these Coastal Act areas is discussed in more detail below.

1. Impacts to Marine Resources

The proposed project, including work undertaken within the City of Los Angeles's (City) jurisdiction above the mean high tide line, has the potential to result in adverse impacts to marine resources. The four steel bore pipes would be installed using HDD, a technique that involves excavating a large entry pit, positioning an HDD rig in the pit and drilling a hole under the beach and surf zone and surfacing approximately 4,511 ft. offshore of the landing site. Although this method is generally preferable to trenching because it avoids direct impacts to beach and surf zone areas, there is still a potential for adverse impacts from an inadvertent release of drilling fluids (i.e., frac-out) onto the beach or surf zone above the bore. Although it does not pose an acute toxicity threat, drilling fluid releases can smother benthic organisms and contribute to increases in turbidity. With similar projects, the Commission has required development and implementation of a Frac-Out Contingency Plan to minimize potential impacts from HDD boring activities.

Further, terrestrial and horizontal directional drilling construction activities at the landing site, installation of the ocean ground beds, and terrestrial cable installation activities have the potential to result in marine water quality impacts due to storm water discharges, accelerated soil erosion, and sedimentation. In addition, inadvertent releases of oil or other hazardous material

from construction-related vehicles or equipment have the potential to degrade water quality of nearby ground or surface waters. For similar projects, the Commission has required development and implementation of a Stormwater Management Plan and a Spill Prevention and Response Plan to ensure that runoff or inadvertent releases associated with project activities do not adversely affect local water quality or nearby habitats.

The City's staff report, however, fails to address these Coastal Act impacts. In Section C.1.a., the staff report states that "The proposed project is not expected to impact any coastal waters, wetlands estuaries or lakes. No marine resources exist within or adjacent to the project site." The City's jurisdiction starts at the mean high tide line and moves landward. It is possible that the City did not consider impacts to marine resources because its jurisdictional boundary lies landward of beach areas affected by the daily tide. However, even if the project site itself is not considered part of the marine environment, it is located immediately adjacent to the marine environment. And as described above, even though project activities lie outside the reach of the daily tides, runoff or inadvertent releases associated with project activities are likely to migrate towards the ocean and certainly have the potential to affect species that inhabit both the marine and terrestrial environments. Thus, to claim that no marine resources exist within or adjacent to the project site and that the proposed project is not anticipated to impact coastal waters is not accurate.

Interestingly, the City's staff report does discuss the potential for impacts to some marine resources, such as Essential Fish Habitat, marine special-status species and hard-bottom habitat areas. However, these impacts are discussed under the Coastal Act policy protecting environmentally sensitive habitat areas (Coastal Act Section 30240). In general, Coastal Act Section 30240 applies to land resources, while impacts to marine resources fall under Coastal Act Section 30230. In this case, analyses of impacts to specific marine resources were addressed under the incorrect Coastal Act policy.

The City's staff report goes on to say "The activity approved through this CDP will not involve the transport of hazardous substances, and, thus, there will be no spillage of crude oil, gas, petroleum products, or hazardous substances..." However, the project description for the proposed project clearly states the need for multiple types of large construction vehicles, including a crane, backhoe, drill rig, and several types of trucks, as well as a generator, all of which require fuel to operate. Thus, an inadvertent spill of hazardous substance is a potential occurrence that should have been analyzed under the City's CDP.

The proposed project could result in impacts to marine resources and adversely affect water quality in the project vicinity. Thus, the City's failure to address these issues in the staff report for the CDP raises a substantial issue with respect to the Chapter 3 policies of the Coastal Act.

2. Impacts to Environmentally Sensitive Habitat Areas

The City's staff report addresses the project's potential impacts to Environmentally Sensitive Habitat (ESHA) in Section C.1.b. of the staff report. The staff reports mentions the potential for impacts to several special status species, including the El Segundo blue butterfly, silvery legless and coast horned lizard, grunion, California least tern, loggerhead shrike, burrowing owl and raptors from the proposed project. The staff report states that "project related activities could result in substantial adverse effects, either directly or through habitat modification." This

statement is not in dispute. However, the staff report fails to go into any specifics on the type of impacts anticipated and how measures proposed by the applicant or included in the EIR will adequately ensure consistency with Coastal Act Policy 30240. More specifically, the staff report fails to discuss the potential for impacts to ESHA resulting from HDD activities. As described above, HDD, while generally considered the least environmentally damaging way to bring a cable or pipeline onshore, does have the potential to result in inadvertent releases of drilling fluid into the surrounding environment. This occurrence, called a frac-out, can smother species living within the soil column or on the soil surface and/or displace these species from valuable habitat. For the proposed project, the special-status lizards, birds and spawning grunion are particularly vulnerable to impacts associated with a frac-out. Furthermore, the City's analysis fails to address potential impacts from HDD and other project-related activities to vegetated southern foredune habitat. As in Section 1 above, the City's failure to address these issues in the staff report for the CDP raises a substantial issue with respect to the Chapter 3 policies of the Coastal Act.

3. Hazards

The City found that the proposed project would not affect the geologic, flood or fire risks and was therefore consistent with Section 30253 of the Coastal Act. However, the proposed project involves the burial of project components under the beach or adjacent beach parking lot. These areas, along with adjacent areas of Dockweiler State Beach, will be subject to sea level rise, including higher tide levels, longer and stronger storm surge and increasing wave heights. These factors could result in increased levels of sediment movement to and from the beach. If sand is increasingly eroded from the beach, project components could become unburied, creating a hazard or nuisance to beach goers and animals that inhabit the area. If this scenario comes to pass, the applicant could seek to protect the approved development through a sea wall or other type of protection. To avoid this outcome, it is crucial to understand how vulnerable the site and proposed development are to sea level rise, and to put any necessary conditions in place to ensure that the hazard is mitigated appropriately. The City's failure to do this in the staff report for the CDP raises a substantial issue with respect to the Chapter 3 policies of the Coastal Act.

4. Mitigation Measures

In addition to issuing a CDP, the City also served as the CEQA lead in developing the EIR for the proposed project. As required under CEQA, the EIR included several mitigation measures designed to ensure the project's environmental impacts were less than significant. As is often the case, several of the mitigation measures were also applicable to Coastal Act issues. The staff report generally referenced these measures in finding the project consistent with the Coastal Act. However, instead of requiring these same mitigation measures under the CDP, the City included a statement in the staff report to the CDP that "Mitigation measures, described in the adopted mitigation monitoring program, have been incorporated into the proposed project." However, this is not adequate to ensure consistency with the Coastal Act.

By not explicitly including these measures as part of the CDP, the City's ability to enforce these conditions to ensure the project is carried out in a manner that is consistent with the Coastal Act is not clear. Several of these mitigation measures included plans that had not yet been developed but were used in the Coastal Act analysis to demonstrate consistency with the Coastal Act. Generally, the Commission has approved similar conditions but with a requirement that the Executive Director review and approve the specified Plan and with clear parameters describing the

components of the plan and the standards by which it would be reviewed. This review and approval step ensures that the applicant develops plans that include and implement the specific measures necessary to find the project consistent with the Coastal Act.

To illustrate, the City's staff report states that the proposed project has the potential to directly or indirectly impact a unique paleontological resource. Yet, through implementation of Mitigation Measure CR-1, which requires development of a Cultural and Paleontological Resource Management Plan, project-related impacts on paleontological resources would be less than significant with mitigation. The staff report does not specify what components this plan must have to assure consistency with Coastal Act Section 30244. Presumably, the applicant will develop this Plan without further input or approval from the City. Thus, the City cannot be sure that the procedures in the final plan bring the project into consistency with the Coastal Act. In the event that there is an impact to cultural resources associated with project activities, it is unclear, given the lack of specificity in the CDP, what enforcement actions the City can take to rectify the impact. This example illustrates a significant failing of the staff report and raises a substantial issue with respect to the Chapter 3 policies of the Coastal Act.

Substantial Issue Factors

Applying the five factors listed in the prior section clarifies that the appeal raises "a substantial issue" with respect to Chapter 3 of the Coastal Act, and therefore does meet the substantiality standard of Section 30265(b)(1), because the nature of the proposed project and the local government action are not consistent with policies of Chapter 3 of the Coastal Act.

The first factor is the degree of factual and legal support for the local government's decision that the development is consistent or inconsistent with the relevant provisions of the Coastal Act. The City approved the proposed project and found it consistent with the Coastal Act. As discussed in further detail later in this staff report, Commission staff agrees with the City's overall finding that the proposed project, with mitigation measures included, can be found consistent with the Coastal Act. The City, however, did not provide sufficient findings in its staff report to support this conclusion.

The City made an erroneous finding that the proposed project does not have the potential to result in adverse impacts to marine resources. As discussed above, proposed project activities such as HDD or other work on or adjacent to the beach could result in a frac-out or other inadvertent release of potentially hazardous materials that could harm marine and beach organisms and habitats. The potential for adverse impacts from these activities can be minimized with the requirement of a Frac-Out Contingency Plan that requires careful monitoring of the beach and nearshore project areas during HDD activities (see Section V.E.). The City, however, failed to address any impacts to marine resources, and thus monitoring was not required under the CDP (although it should be noted that a Frac-Out Contingency Plan was included as a mitigation measure under CEQA). Thus, the City's finding that the proposed project was consistent with Coastal Act Section 30231 was not supported.

The City's staff report also made findings that the proposed project was consistent with Sections 30240 and 30253 of the Coastal Act. However, the City failed to address potential impacts from HDD on ESHA on the beach and in the dunes behind the beach. The City also neglected to address potential hazards associated with burying infrastructure on the beach under current and

future sea levels and sand transport conditions. In neglecting these critical issues, the City failed to adequately support its finding of consistency with policies found in Sections 30240 and 30253 of the Coastal Act.

Finally, the City did not require any special conditions in its CDP to mitigate potential impacts from the proposed project. The project EIR did include several mitigation measures to mitigate impacts under CEQA. However, given that the Coastal Act analysis relied on some of these measures to demonstrate consistency with the Coastal Act, these measures should have been explicitly included in the CDP.

Therefore, the Coastal Commission finds that the City provided inadequate factual or legal support for its decision to approve this project.

The second factor is the extent and scope of the development as approved or denied by the local government. The proposed project includes more than 18 miles of fiber optic cable and crosses local, state and federal jurisdictions. The City's jurisdiction over the project includes 3.6 miles of the terrestrial fiber optic cable network. Thus, the geographic extent of the development is significant. Therefore, the Commission finds that the City-approved development covers a significant area and has the potential to impact a much larger area.

The third factor is the significance of the coastal resources affected by the decision. The issues raised by the appeal are mostly related to habitat – both marine and terrestrial. The proposed project within the City's jurisdiction has a large footprint that spans several types of habitats, including beach and dune. And the activities proposed in these areas have the potential to adversely impact these as well as intertidal and subtidal habitats. All of these habitats are critical to the survival of many coastal species. The Coastal Act recognizes their importance by requiring that marine resources be maintained, enhanced, and where feasible, restored and that the biological productivity of coastal waters and healthy populations of all species of marine organisms be maintained (Coastal Act Section 30230, 30231). Some of the specific resources protected under this policy include grunion, several species of marine mammals, including endangered fin and blue whales, several special status birds and Essential Fish Habitat (see Section V.E.). The Coastal Act also requires that development be sited and designed to avoid impacts to environmentally sensitive habitat areas (Coastal Act Section 30240). The project site includes both disturbed and restored southern fordune habitat ESHA some of which supports the endangered El Segundo blue butterfly, the silvery legless lizard, the coast horned lizard and several special status bird species (see Section V.F.). The City-approved CDP also did not adequately protect archeological and paleontological resources, an important coastal resource that is protected by Coastal Act Section 30244. Therefore, the Commission finds that the coastal resources affected by the development are significant.

The fourth factor is the precedential value of the local government's decision for future interpretations of its LCP. The City does not currently have a certified LCP for the Playa Del Rey area. However, when the City does have a certified LCP, the City will be responsible for analyzing these types of projects for consistency with the LCP. It is critical that the consistency analysis address all the applicable coastal act issues and ensure that mitigation measures are implemented to bring the project into conformity with applicable Coastal Act policies as described in the LCP. The Commission has reviewed and approved 11 similar fiber optic cable projects in the last 26 years, and several more are expected in the future. Although each project is reviewed

on a case-by-case basis, there are similarities between the various projects and a common suite of issues that must be addressed. Impacts to marine resources and environmentally sensitive habitat from HDD and other project-related activities that occur on the beach are a critical component of the Coastal Act analysis for these projects. A thorough coastal hazards analysis and analysis of impacts to archeological and paleontological resources are also critical. The City's failure to adequately address these issues for the proposed project creates a poor precedent for future projects in the region and across the state and is not consistent with past Commission actions. Therefore, the Commission finds that the City's action sets a precedent that could lead to future inadequate reviews of fiber optic cable projects or other projects with similar impacts.

The final factor is whether the appeal raises local issues, or those of regional or statewide significance. The City's failure to adequately address the issues described above is significant on a local level, where the potentially affected resources are located. However it also raises regional and statewide concerns. As mentioned previously, the Commission has already approved 11 fiber optic cable projects in the last 26 years. Given the State's increasing demand for fast and reliable internet connectivity, more projects in a variety of locations are expected in the near and distant future. It is important to maintain consistency in the review of these projects and that the aforementioned common suite of issues be thoroughly addressed in each case. Therefore, the Commission finds that the City's action raises issues of local, regional and statewide significance.

E. SUBSTANTIAL ISSUE CONCLUSION

The issues raised by the appeal relate to marine resources, environmentally sensitive habitat areas, coastal hazards, and archeological/paleontological resources, which are fundamental principles protected by the Coastal Act. Therefore, the Commission finds that the appeal raises a substantial issue as to conformity with Chapter 3 policies of the Coastal Act.

IV. DE NOVO COASTAL DEVELOPMENT/FEDERAL CONSISTENCY DETERMINATION

The standard of review for this CDP and federal consistency determination is the Chapter 3 policies of the Coastal Act. All Substantial Issue Determination Findings (Section III) above are incorporated herein by reference.

A. APPLICANT'S CONSISTENCY CERTIFICATION

TE SubCom has certified that the proposed activity complies with the California Coastal Management Program and will be conducted in a manner consistent with such program.

B. STANDARD CONDITIONS

The coastal development permit (9-17-0389) is granted subject to the following standard conditions:

1. **Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. **Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. **Interpretation.** Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.
4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

C. SPECIAL CONDITIONS

This permit is granted subject to the following special conditions, as applicable to both Coastal Development Permit (CDP) No. 9-17-0389 and Consistency Certification (CC) No. CC-0004-17:

1. **Performance Bond.** Prior to issuance of this permit, the applicant shall provide a surety bond or other security device guaranteed by The Permittee acceptable to the Executive Director of the Coastal Commission (hereinafter “Executive Director”), for \$500,000, and naming the Coastal Commission as the assured, to guarantee the faithful observance and performance of the applicant of the terms and conditions of this permit. The surety bond or other security device shall be maintained in full force and effect at all times until both cables have been removed pursuant to **Special Condition 12** of this permit.
2. **Other Permits and Approvals:** PRIOR TO THE START OF CONSTRUCTION, the applicant shall provide to the Executive Director copies of all other local, state, and federal permits required to perform project-related work. These permits and approvals include:
 - a. Regional Water Quality Control Board – Los Angeles Region: final approved 401 water quality certification.
 - b. U.S. Army Corps of Engineers: Authorization under Nationwide Permit #12, pursuant to Rivers and Harbors Act Section 10 and Clean Water Act Section 404.
3. **Environmental Impact Report Mitigation Measures.** This permit incorporates those mitigation measures identified in the August 2017 2016, *Final EIR for the Los Angeles Trans-Pacific Telecommunications Cable Hub* (State Clearinghouse No. 2016101050) concerning marine resources, biological resources, fishing, public access, cultural resources and hazards that are attached to this report as [Exhibit 9](#).
4. **Marine Wildlife Monitoring and Contingency Plan (MWMCP).** AT LEAST 60 DAYS PRIOR TO THE START OF CABLE INSTALLATION ACTIVITIES, The Permittee shall prepare a MWMCP for review and approval by the Executive Director. The Permittee shall implement the MWMCP during all marine operations (e.g., cable installation, post-lay inspection, burial, maintenance and repair, retrieval of entangled

fishing gear, and inspection surveys). The MWMCP shall include the following elements, and shall be implemented consistent with vessel and worker safety:

- Prior to the start of offshore activities, the Permittee shall provide awareness training to all Project-related personnel and vessel crew, including viewing of an applicable wildlife and fisheries training video, on the most common types of marine wildlife likely to be encountered in the Project area and the types of activities that have the most potential for affecting the animals.
- A minimum of two National Marine Fisheries Service (NMFS)-qualified marine mammal observers shall be located on the cable installation vessel (CIV) to conduct observations, with two observers on duty during all cable installation activities. The MWMCP shall identify any scenarios that require an additional observer on the CIV or other Project vessel and, in these cases, make recommendations as to where they should be placed to ensure complete coverage of the surrounding marine environment.
- Shipboard observers shall submit a daily sighting report to the Executive Director no later than noon the following day, provided that electronic communications from the CIV are available, that shall be of sufficient detail to determine whether observable effects to marine mammals are occurring.
- The observers shall have the appropriate safety and monitoring equipment adequate to conduct their activities (including night-vision equipment).
- The observers shall have the authority to stop any activity that could result in harm to a marine mammal or sea turtle. For monitoring purposes, the observers shall establish a 1,640 foot (500 meter) radius avoidance zone around the CIV and other Project vessels (if required by the MWMCP) for the protection of large marine mammals (i.e., whales) and a 500-foot (152-meter) radius avoidance zone around the CIV and other Project vessels (if required by the MWMCP) for the protection of smaller marine mammals (i.e., dolphins, sea lions, seals, etc.) or sea turtles.
- In the event that a whale becomes entangled in any cables or lines, the observer shall immediately notify NMFS and the Executive Director, so appropriate response measures can be implemented. Similarly, if any take involving harassment or harm to a marine mammal occurs, the observer shall immediately notify the Executive Director, NMFS and any other required regulatory agency.
- While cable is being deployed, cable-laying vessel speeds shall be limited to less than 2 nautical miles per hour (knots), with the speed of Project support vessels while assisting the cable-laying vessel moderated to 3 to 5 knots to minimize the likelihood of collisions with marine mammals and sea turtles.
- Propeller noise and other noises associated with cable laying activities shall be reduced or minimized to the extent feasible.
- The captain of the CIV and the Permittee's Project management team shall be responsible for ensuring that the MWMCP is implemented.
- A final report summarizing the results of monitoring activities shall be submitted to the Executive Director and other appropriate agencies no more than 90 days following completion of cable installation and retrieval activities. The report shall include: (a) an evaluation of the effectiveness of monitoring protocols and (b) reporting of (i) marine mammal, sea turtle, and other wildlife sightings (species and numbers); (ii) any wildlife behavioral changes; and (iii) any project delays or

cessation of operations due to the presence in the project area of marine wildlife species subject to protection.

5. **Cable Burial Depth.** The cable shall be buried to a depth of 1.0 meter in waters up to 1200 meters, except where precluded by seafloor substrates. Where a 1.0-meter burial depth cannot be achieved, the Permittee shall bury the cables to the maximum depth feasible.
6. **Avoid and Eliminate Cable Suspensions.** AT LEAST 60 DAYS PRIOR TO THE START OF CABLE INSTALLATION ACTIVITIES, the Permittee shall prepare a Cable Slack Management Plan for review and approval by the Executive Director. The plan shall include the following elements to avoid and eliminate cable suspensions:
 - During cable surface-lay operations, the Permittee shall employ a remotely-operated vehicle ("ROV") to track cable-lay operations and provide real-time ROV video feed to the cable ship.
 - If the ROV video feed identifies a suspended segment of cable that can be eliminated or minimized by repositioning or introduction of additional cable slack, the Permittee shall recover the cable and reinstall it using the above methods.
 - During post-lay inspection and burial operations, The Permittee shall use a ROV to reposition and/or bury to 1.0 meter any suspended or exposed cable segment, unless precluded from doing so by seafloor substrates.
7. **Notification of Exposed Cable.** During the marine cable installation phase of the project, the Permittee shall submit to (a) the Executive Director, (b) the U.S. Coast Guard (for publication in a Notice to Mariners), and (c) the signatories of the Fishing Agreement (see **Special Condition 24**), weekly notices containing preliminary as-built coordinates of any unburied or exposed sections of cable. The Permittee shall also make radio broadcast announcements on the local fishers' emergency radio frequency that provide the current cable installation location and a toll-free number that can be called for additional information.
8. **As-Built Documentation.** Within 45 days of completing marine cable installation, The Permittee shall submit to the Executive Director and the signatories of the Fishing Agreement (see **Special Condition 24**) the following: (a) as-built plans in writing (Route Position List) and alignment or strip charts depicting bathymetry, seafloor substrates or features, seabed profile, depth of cable burial below the seafloor, and cable tension; (b) electronic as-built plans (in a format to be determined by the Fishing Agreement signatories); and (c) as-built cable plans overlaid on National Oceanic and Atmosphere Administration ("NOAA") navigation charts. The cable location shall be obtained by an acoustic navigation system linked to a surface differential global positioning system. The transponder for the acoustical navigational system shall be mounted on the equipment used for cable burial. The cable shall be considered installed the day after the last day of post-lay inspection burial operations.
9. **Changes to Nautical Charts:** WITHIN 30 DAYS OF COMPLETING INWATER CONSTRUCTION, the Permittee shall provide written verification to the Executive Director that the Permittee has submitted project-related information to the National Oceanic and Atmospheric Administration (NOAA) to be included on area nautical charts.

Information submitted shall include as-built drawings, blueprints, or other engineering documents which depict the completed development; geographic coordinates of the location, using a Differential Geographic Positioning System (DGPS) unit or comparable navigational equipment; and the Permittee's point of contact and telephone number.

10. **Cable Installation Report.** WITHIN 60 DAYS OF CABLE INSTALLATION, the Permittee shall submit to the Executive Director a cable installation report containing, at minimum, the following: (a) a summary of pre-lay, cable-laying, and burial methods used; (b) a summary of slack control equipment and methods applied during cable installation; (c) results from the post-lay burial survey indicating the depth of burial achieved along the cable route; (d) identification of any areas of cable suspension greater than 1.0 meter from the seafloor and a description of why cable could not be re-routed to avoid suspended cable; (e) a map depicting the cable route and indicating areas where the cable could not be buried and where cable suspensions of greater than 1.0 meter from the seafloor are present; (f) an evaluation of the consistency of cable installation with the project description and applicable special conditions of this permit; and (g) a description of any observed fishing activity during the pre-lay and cable installation project phases.
11. **Cable Surveying.** Within five years of cable installation, the Permittee shall survey those portions of the cable route from the mean high tide line to where project operations extend into federal waters out to the 1,000-fathom depth contour to verify that the cables have remained buried consistent with the as-built cable burial plan. The survey shall be conducted by a third party, approved by the Executive Director, using a ROV equipped with video and still cameras. Within 30 days of survey completion, the Permittee shall submit to the Executive Director a report describing the results of the survey (including still images) and a copy of the videotape(s) recorded during the cable survey. The videotape(s) shall include a display that identifies the date, time, position, water depth, and heading of the ROV.
 - a. If the initial five year cable installation survey demonstrates no significant change in cable burial status, then the Permittee shall not be required to conduct a follow-up cable survey except after any event that has the potential to affect the cable. "Event" for the purposes of this condition is defined as: an incident or activity (such as a gear snag), the circumstances of which indicate the likelihood that previously buried cable has become unburied; an act of God, such as a severe earthquake in the vicinity of the cables that could cause deformation of the sea floor or underwater landslides; or any other significant event that could cause excessive ocean floor scouring. The applicant shall notify the Executive Director in writing within 10 days of the reporting or other identification of a qualifying event, and shall schedule a survey at the soonest available opportunity, subject to vessel availability, weather conditions, and related operational conditions affecting the survey. Five years after the initial cable survey, and once every five years thereafter, in the absence of an event that would trigger a cable survey as described above, the applicant shall submit a written statement to the Executive Director confirming that no qualifying event has occurred since the prior cable survey and that no other conditions or changes have occurred that would affect the burial status of the segments of the cable that were documented as buried in the post-lay survey and subsequent cable surveys.

- b. If, instead, the initial five year survey demonstrates that a segment(s) of a cable is no longer buried consistent with the as-built cable burial plan, the Permittee shall, within 30 days of survey completion, submit to the Executive Director for review and written approval a plan to re-bury that cable segment(s). Upon approval of the plan by the Executive Director, the Permittee shall proceed to implement the plan in accordance with the time schedule specified therein. The Permittee shall also be required to conduct additional cable burial surveys within five years of the initial survey and every five years thereafter and to re-bury any unburied cable identified in such surveys consistent with this special condition.
12. **Cable Removal.** WITHIN 90 DAYS OF EITHER TAKING A CABLE OUT OF SERVICE or after the expiration or sooner termination of the Permittee's City of Los Angeles lease(s) or permit(s), the Permittee shall apply for an amendment to this permit to remove the cable(s) from state and federal waters offshore of California. Upon approval by the Commission of the permit amendment, the applicant shall implement the cable removal project authorized by the amendment in accordance with the time schedule specified therein.
13. **Grunion Run Monitoring.** If project-related construction activities on the beach will occur during the seasonally predicted grunion run and egg incubation period as identified by the California Department of Fish and Wildlife (generally April through August), then prior to construction activities on the beach, the Permittee shall have a qualified biologist conduct a survey of the project site to determine presence of California grunion. If the biologist determines that any grunion spawning activity is occurring and/or that grunion are present in or adjacent to the project site, then no construction, maintenance, grading, or sand-disturbing activities shall occur on, or adjacent to, the area of the beach where grunion have been observed to spawn until the next predicted run in which no grunion are observed. Surveys shall be conducted for all seasonally predicted run periods in which material is proposed to be placed at any of the above sites. The Permittee shall have the biologist provide inspection reports after each grunion run observed and shall provide copies of such reports to the Executive Director and to the California Department of Fish and Wildlife.
14. **Hard Bottom Seafloor Study.** WITHIN 60 DAYS OF CABLE INSTALLATION, the Permittee shall submit to the Executive Director for review and approval the results of a Hard Bottom Study that quantifies the extent of hard bottom substrate that is impacted by the installed cable out to the edge of the Outer Continental Shelf. The study will use data collected during cable installation and/or post-lay burial operations to determine areas where the cable is in direct contact with or is suspended above hard bottom substrate. The study shall also include any unanticipated impacts to hard bottom from anchoring or other project-related activities. At least 30 days prior to the cable installation work, the Permittee shall submit to the Executive Director for review and approval a proposed methodology for collecting the necessary data and calculating the hard bottom impact. Still-photographs of representative habitat shall be taken in any area of rocky substrate traversed by the cable. The survey shall quantify the extent of exposed rocky substrate, including type and relief along the cable corridor and the height and length of any cable

suspended over rocky or soft substrates at heights greater than 1.0 meter from the seafloor.

15. **Hard Bottom Mitigation Fund.** The applicant shall compensate for all project-related impacts to hard bottom habitat through payment of a compensatory hard bottom mitigation fee to be used to remove derelict fishing gear and other marine debris from waters in the Southern California Bight. This work will be carried out pursuant to a Memorandum of Agreement (“MOA”) by and between the California Coastal Commission and the Regents of the University of California on behalf of the UC Davis Wildlife Health Center’s California Lost Fishing Gear Recovery Project.

The amount of the hard bottom mitigation fee shall be calculated by applying a 3:1 mitigation ratio to the total square footage of impacted hard bottom and then multiplying that acreage by a compensation rate of \$14.30 per square foot. The total square footage of hard bottom impacted shall be calculated by multiplying the linear distance of cable laid on or suspended over hard bottom by approximately twice the width of the cable (i.e., 3 inches). The fee shall be paid to the UC Davis Wildlife Center within 30 calendar days of the approval of the Executive Director of the results of the hard bottom study required by **Special Condition 14**. The applicant shall provide evidence of this payment to the Executive Director within the same time frame.

16. **Inadvertent Release Contingency Plan for HDD activities.** PRIOR TO ISSUANCE OF THIS PERMIT, the Permittee shall submit to the Executive Director for review and approval an Inadvertent Release Contingency Plan for all HDD activities associated with the project. The plan shall include, at a minimum:
- (a) An evaluation of a worst-case spill volume;
 - (b) Clear identification of the location of entry and exit pits and the trajectory and depth of onshore bores along South Marine Avenue.
 - (c) A commitment to use water as a drilling fluid for the last 60-100 feet of the marine HDD bore before the drill punches out into the exit pit.
 - (d) Measures describing training of personnel, monitoring procedures, equipment, materials and procedures in place for the prevention, containment, clean up, and disposal of released drilling muds, and agency notification protocols;
 - (e) Methods for detecting the accidental release of drilling fluids that include: (1) monitoring by a minimum of one biological monitor throughout drilling operations to ensure swift response if a release (i.e., frac-out) occurs; (2) continuous monitoring of drilling pressures to ensure they do not exceed those needed to penetrate the formation; (3) continuous monitoring of mud returns at the exit and entry pits to determine if mud circulation has been lost; (4) continuous monitoring by spotters to follow the progress of the drill bit during the pilot hole operation, and reaming and pull back operations; and (5) a protocol for using fluorescent dye to detect a frac-out on the sea floor during offshore HDD activities.
 - (f) Protocols the Permittee will follow if there is a loss of circulation or other indicator of a release of fluids.
 - (g) Protocols the Permittee will follow if there is a fluid release on beach or other onshore habitat (e.g., isolating the area through construction of temporary berms/dikes and use of silt fences, straw bales, absorbent pads, straw wattles, and plastic sheeting). Specific protocols shall be developed in the event of a fluid

release in suitable El Segundo blue butterfly habitat to ensure that a spill is contained in a manner that avoids impacts to the butterfly and its host plant, the dune buckwheat.

- (h) Protocols the Permittee will follow if there is a fluid release in marine waters (e.g., immediately erect an isolation/containment environment (underwater boom and curtain).
- (i) If a frac-out and fluid release occurs in the marine environment, the Permittee shall immediately halt work and notify and consult with the staffs of the City, Coastal Commission, CDFW's Office of Spill Prevention and Response, and National Oceanic and Atmospheric Administration Fisheries regarding appropriate incident-specific actions to be undertaken before HDD activities can begin again.
- (j) If a frac-out and fluid release occurs in the terrestrial environment, the Permittee shall immediately halt work and notify and consult with the staffs of the City, Coastal Commission, and U.S. Fish and Wildlife Service regarding appropriate incident-specific actions to be undertaken before HDD activities can begin again.

17. **Spill Prevention and Response Plan.** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the Permittee shall submit a Project-specific Spill Prevention and Response Plan to the Executive Director for review and approval. The Plan shall identify the worst-case spill scenario and demonstrate that adequate spill response equipment will be available. The Plan shall also include preventative measures the Permittee will implement to avoid spills and clearly identify responsibilities of onshore and offshore contractors and the Permittee personnel and shall list and identify the location of oil spill response equipment (including booms), appropriate protocols and response times for deployment. Petroleum-fueled equipment on the main deck of all vessels shall have drip pans or other means of collecting dripped petroleum, which shall be collected and treated with onboard equipment. Response drills shall be in accordance with Federal and State requirements. Contracts with off-site spill response companies shall be in-place and shall provide additional containment and clean-up resources as needed.
18. **Critical Operations and Curtailment Plan (COCP).** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the Permittee shall submit a Final COCP to the Executive Director for approval. The COCP shall define the limiting conditions of sea state, wind, or any other weather conditions that exceed the safe operation of offshore vessels, equipment, or divers in the water; that hinder potential spill cleanup; or in any way pose a threat to personnel or the safety of the environment. The COCP shall provide for a minimum ongoing 5-day advance favorable weather forecast during offshore operations. The plan shall also identify the onsite person with authority to determine critical conditions and suspend work operations when needed.
19. **Marine Discharge.** There shall be no marine discharge of sewage or bilge/ballast water from vessels either installing or repairing the cables. A zero-discharge policy shall be adopted for all project vessels.
20. **Stormwater Management Plan:** PRIOR TO ANY PROJECT-RELATED GRADING OR FILLING, the Permittee shall provide for the Executive Director's review and approval a Stormwater Management Plan that describes all structural and non-structural measures the Permittee will implement to avoid and minimize stormwater-related impacts

during construction activities. The Plan shall identify measures the Permittee will implement to store and/or contain materials, soils, and debris originating from the project in a manner that precludes their uncontrolled entry and dispersion into nearby waters or habitat areas. Any debris that inadvertently enters coastal waters shall be removed immediately. The Plan shall identify Best Management Practices (BMPs) that will be implemented during project activities to prevent erosion and excessive sedimentation and to protect wetlands, coastal waters and upland habitats from stormwater runoff associated with project activities.

21. **El Segundo Blue Butterfly Avoidance and Southern Fore-dune Habitat Protection Plan.** PRIOR TO THE ISSUANCE OF THE CDP, the Permittee shall provide for the Executive Director's review and approval an El Segundo Blue Butterfly Avoidance Plan that shall describe all measures the Permittee will implement to ensure avoidance of El Segundo Blue Butterflies and any suitable habitat in the project vicinity. The Plan shall include, at a minimum the following elements:
- a. Prior to the commencement of construction activities, a qualified biologist, approved by the Executive Director, shall conduct a biological survey of the project area within Dockweiler State Beach and any other sandy beach or dune habitat, including a 300 foot buffer. All areas where the host plant, dune buckwheat, for the El Segundo blue butterfly is present shall be mapped as well as all vegetated southern fore-dune habitat, regardless of the level of disturbance. Mapping should also indicate the specific locations of any project components, including cable, manholes, relief pits and any other components within the vicinity of the southern fore-dune areas.
 - b. The Plan shall include a description of all avoidance and protection measures, including fencing, training of all project personnel, monitoring and other measures, to ensure that impacts to ESHA are avoided.
 - c. Parking, lay down, storage and staging areas, and site access for project vehicles and personnel shall occur outside the 300 foot buffer surrounding suitable El Segundo blue butterfly habitat. These activities shall also be located as far away from vegetated southern fore-dune habitat as is feasible.
 - d. Activities at the ground surface associated with installation of terrestrial cable shall maintain a 5 ft. buffer around any vegetated southern fore-dune habitat except where development is taking place in areas where existing pavement, such as roads and parking lots, are already present.
 - e. Activities at the ground surface associated with installation of terrestrial cable shall occur outside a 100 foot buffer around any southern fore-dune vegetation that has been identified as suitable habitat for the El Segundo blue butterfly, except where development is taking place in areas where existing pavement, such as roads and parking lots, are already present. Notwithstanding the foregoing, the relief pit, necessary for reducing the likelihood of a frac-out, may be located within the 100 foot buffer but shall be sited the maximum feasible distance from dune buckwheat and other dune vegetation. The Permittee shall indicate the specific location of the relief pit and the buffer distances to nearby dune buckwheat and other dune vegetation in the Plan.
 - f. Where feasible, installation of terrestrial conduit within 300 ft. of suitable butterfly habitat would be completed from late September to early June, outside the flight period of adult El Segundo blue butterflies.

- g. The qualified biologist shall monitor all project activities involved in installing the terrestrial cable along South Marine Ave. within Dockweiler State Beach and ensure all protection measures are implemented.
 - h. After construction on Dockweiler State Beach has concluded, the biologist shall conduct a post-construction survey to document that all identified suitable El Segundo butterfly habitat and other southern foredune habitat is intact and unchanged by project activities.
22. **Avoidance of Nesting Birds.** NO MORE THAN 14 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES, a qualified biologist, approved by the Executive Director, shall conduct a pre-construction survey for the presence of nesting birds. If an active nest of a Federal or State-listed threatened or endangered bird species, bird species of special concern, or any species of raptor is identified during such preconstruction surveys, or is otherwise identified during construction, the Permittee shall notify all appropriate State and Federal agencies within 24 hours, and shall develop an appropriate action plan specific to each incident that shall be consistent with any recommendations of those agencies. The Permittee shall notify the Executive Director in writing within 24 hours and consult with the Executive Director regarding the determinations of the State and Federal agencies. At a minimum, if the active nest is located within 300 feet of construction activities (within 500 feet for raptors), the Permittee must ensure that nesting birds are not disturbed by construction-related noise and activity, and shall submit a plan to the Executive Director, for review and approval, demonstrating how construction activities will be modified to avoid, minimize and mitigate impacts to nesting birds, including, but not limited to, such measures as buffer zones around nests, limits on duration of construction activities, and limits on the location of construction-related machinery and activity.
23. **Artificial Lighting.** Artificial lighting of work areas during nighttime hours shall be minimized to the maximum extent practicable. If nighttime lighting is necessary, lights shall be low-wattage, non-reflective, shielded, and directed downward such that no light will shine beyond the boundaries of the immediate work area or onto the surrounding beach and dune areas.
24. **Compliance With Fishing Agreement Requirements.** In a manner consistent with the requirements of Sections 1.1(a) through 1.1(k) of the Fishing Agreement as amended in November 2017 (see [Exhibit 10](#)), the Permittee shall comply with all deadlines for payment, reimbursement, and compensation of all expenses of the Cable Committee and Cable Committee representatives, as approved by the Cable Committee in its Annual Budget.
25. **Cable Repairs.** The Permittee shall provide notice of proposed cable repairs in writing to the Executive Director and in a U.S. Coast Guard Notice to Mariners 15 days prior to any cable repair or maintenance activity, or as soon as possible for emergency repairs.
26. **Cable Entanglements and Gear Retrieval.** In the event that fishermen snag a cable and lose or cut gear, or that any other type of entanglement occurs (e.g., whale), the Permittee shall use all feasible measures to retrieve the fishing gear or object. The Permittee shall notify the Executive Director within 48 hours of its knowledge of gear loss or other cable

entanglement. Retrieval shall occur no later than six weeks after discovering or receiving notice of the incident, unless otherwise authorized by the Executive Director. If full removal of gear is not feasible, the Permittee shall remove as much gear as practicable to minimize harm to wildlife (e.g. fishes, birds, and marine mammals). Within two weeks of completing the recovery operation, the Permittee shall submit to the Executive Director a report describing (a) the nature of and location of the entanglement (with a map) and (b) the retrieval method used for removing the entangled gear or object or the method used for minimizing harm to wildlife if gear retrieval proves infeasible.

27. **Elimination of Future Hazards.** Within 30 days of discovering that a project component approved under this CDP that is located in intertidal waters, on the beach or further inland has become unburied, the Permittee shall rebury the project components or, if reburial is infeasible, it shall submit an amendment to this CDP to seek approval for a different course of action.

V. FINDINGS AND DECLARATIONS FOR DE NOVO COASTAL DEVELOPMENT PERMIT A-5-DRL-17-0071/9-17-0389

A. PROJECT DESCRIPTION

Please see Section III.A. for a complete description of the proposed project.

B. PRIOR FIBER OPTIC CABLE PROJECTS APPROVED BY COASTAL COMMISSION

The Coastal Commission has approved a number of fiber optic cable projects in offshore waters:

- In January 1992, the Coastal Commission approved the installation, operation, and maintenance of one cable, HAW-5, and four conduits (#4-91-61) offshore of Montana de Oro State Park.
- In September 1994, the Coastal Commission approved two additional cables, TPC5-T1 and TPC5-G (#4-91-61-A1) offshore of Montana de Oro State Park.
- In April 2000, the Coastal Commission approved the installation of two fiber optic cables and five offshore conduits by MFS Globenet and MCI WorldCom (E-99-011) at Montana de Oro State Park.
- In May and June 2000, the Coastal Commission approved the installation of two fiber optic cables by AT&T (E-98-029) off of Montana de Oro State Park.
- In June 2000, the Coastal Commission approved the installation of three fiber optic cables and three conduits by PC Landing Corporation and PAC Landing Corporation at Grove Beach (E-98-27).
- In September 2000, the Coastal Commission approved the installation of one fiber optic cable and five conduits at Manchester State Beach, and one cable off of Montana de Oro State Park by AT&T Corporation (E-00-004).
- In December 2000, the Coastal Commission approved the installation of a festoon fiber optic cable along the California coastline landing onshore at four locations (Morro Bay, Leadbetter Beach in Santa Barbara, Manhattan Beach, and Mission Beach in San Diego) by Global West Network, Inc. (E-00-008).

- In July 2002, the Coastal Commission approved the installation of two fiber optic cables landing at the City of Hermosa Beach in Los Angeles County by Tyco Networks (US), Inc. (E-01-029).
- In September 2005, the Coastal Commission approved the installation of a research fiber optic cable extending Moss Landing to the Smooth Ridge in Monterey Bay by the Monterey Bay Aquarium Research Institute (MBARI) (E-05-007).
- In March 2009, the Coastal Commission approved the installation of two additional fiber optic cables by AT&T (E-08-021) off of Montana de Oro State Park.
- In July 2016, the Coastal Commission approved the installation of one fiber optic cable offshore of Hermosa Beach and the construction of two landing sites in Hermosa Beach with a total capacity of four cables (9-16-0160) by MC Global BP4, Inc.

Through its federal consistency authority, the Coastal Commission has also concurred with numerous other consistency certifications, consistency determinations, and negative determinations for submarine fiber optic cable-related projects in other areas of the state by, for example, the Navy, Coast Guard, Federal Aviation Administration, MCI WorldCom, AT&T, Global West, Tyco Networks (US) and MC Global BP4, Inc.

C. OTHER AGENCY APPROVALS

City of Los Angeles

The City of Los Angeles (City) is the lead agency under the California Environmental Quality Act (CEQA) for the proposed project. On November 3, 2017, the City certified the final EIR for the project and issued a Coastal Development Permit for the proposed project. The onshore portions of the proposed project are located within the City of Los Angeles dual permit jurisdiction Area. The Coastal Act requires that any development located in this jurisdiction which receives a local CDP permit also obtain a second (or “dual”) CDP from the Coastal Commission. The Commission's standard of review for the proposed development in the *Dual Permit Jurisdiction* area is the Chapter 3 policies of the Coastal Act. The offshore portions of this project are within the Commission’s original jurisdiction. Thus, the Commission will consider both the onshore and offshore portions of the project within the Coastal Zone as part of a CDP. In addition to issuing a LCDP, the City is the landowner for one upland parcel and the submerged lands offshore of Dockweiler State Beach. Ownership and management of the tidelands offshore of the City was granted to the City by the State Lands Commission. Easements and an Excavation Permit on these lands are currently being considered by the City.

County of Los Angeles

The applicant applied to the County for a Right-of-Entry Permit and a Licensing Agreement for work at Dockweiler State Beach, which is operated by Los Angeles County Beaches and Harbors. These approvals are pending. It also applied to the County for an Encroachment Permit and a Licensing Agreement within the City of El Segundo, which is outside the Coastal Zone. These approvals are pending.

Regional Water Quality Control Board – Los Angeles Region (RWQCB)

The RWQCB regulates waste discharges into receiving waters in the project area. The Applicant submitted an application for a Section 401 water quality certification. The RWQCB issued a

draft certification on November 7, 2017, and is expected to issue a final water quality certification in the next month.

California Department of Transportation

The applicant applied to the Caltrans for an Encroachment Permit. This approval is pending.

U.S. Army Corps of Engineers (Corps)

The Corps has regulatory authority over the proposed project under Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 1344) and Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344). The Corps processed the request under Nationwide Permit #12 (Utility Line Activities) and issued a final verification letter on October 17, 2017.

D. DREDGING AND PLACEMENT OF FILL IN COASTAL WATERS

Coastal Act Section 30233(a) states:

The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

- (1) *New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.*
- (2) *Maintaining existing, or restoring previously dredged depths on existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.*
- (3) *In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.*
- (4) *Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.*
- (5) *Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.*
- (6) *Restoration purposes.*
- (7) *Nature study, aquaculture, or similar resource dependent activities.*

The proposed project includes the burial or placement of a marine cable on the seafloor. This constitutes fill of open coastal waters that is subject to Coastal Act Section 30233(a). This section imposes three tests on a project that includes dredging and/or fill of open coastal waters. The first test requires that the proposed activity must fit into one of the seven categories of uses enumerated above. The second test requires that there be no feasible less environmentally

damaging alternative. The third test requires that feasible mitigation measures be provided to minimize the project's adverse environmental effects.

Allowable Use Test

One of the seven allowable uses of fill under 30233(a) is a coastal-dependent industrial facility. The proposed TE SubCom Pacific Light Cable Network (PLCN) transoceanic fiber optic cable, whose purpose is to directly connect the United States with Hong Kong, is "coastal-dependent" since it requires "a site on, or adjacent to, the sea to be able to function at all" as defined in Coastal Act Section 30101. The Commission thus finds that the proposed PLCN cable meets the allowable use test of Coastal Act Section 30233(a).

Alternatives

The Commission must further find that there is no feasible less environmentally damaging alternative to the proposed project, especially with respect to the impacts of submarine cables and cable installation on marine organisms and hard bottom habitat. In order to find that there is no less environmentally damaging alternative to the proposed project, it is necessary to investigate the three types of alternatives: (a) alternatives to the proposed landing sites; (b) alternative offshore routes; and (c) installation methods.

Alternatives to the Proposed Landing Sites

The Project EIR examined alternative landing sites within the City of Los Angeles, including at Dockweiler State Beach, Hermosa Beach, and Manhattan Beach.

Alternative sites within the City of Los Angeles

The EIR analyzed beach landing locations that are located closer to the entrance of Dockweiler State Beach. These locations would reduce the linear footprint of the terrestrial conduit system and thus decrease construction-related impacts associated with installing the terrestrial portion of the cable. However, by locating the landing site to the south of the proposed site, the marine portion of the cable would have to pass through an area designated by NOAA as a restricted navigation zone due to submerged pipelines, sewer lines and other infrastructure. Installing a buried cable through an offshore restricted zone would significantly increase the potential for impacts to existing infrastructure, and thus render this alternative technically infeasible.

The EIR also considered an inland landing site, east of Dockweiler State Beach and outside of the coastal zone. Although this alternative would avoid impacts to coastal resources at Dockweiler State Beach, the EIR could not identify a feasible site that could accommodate the equipment and footprint needed to conduct the HDD activities. All the potential inland sites were located either in ESHA, within the footprint of Vista Del Mar, a coastal access road, or within the boundaries of Los Angeles International Airport (LAX). These alternatives were viewed as infeasible from a regulatory standpoint and eliminated from further consideration.

Hermosa Beach Sites

The EIR examined the alternative of landing the PLCN cable at the existing MC Global landing site in Hermosa Beach, approved by the Commission in 2016 and constructed in 2017. Using an existing landing site would significantly reduce construction-related impacts from HDD and

installation of the terrestrial cable network. However, one of the objectives of the proposed project is to ensure network “diversity” or geographic separation between cable systems to improve system reliability in the event of a physical event (i.e., tsunami or submarine landslide) that could damage the cables. Adding another landing site reduces the likelihood that one event would damage multiple cables and cutoff network services to southern California. In addition, the applicant that built the Hermosa Beach landing site in 2017 is in the planning stages for additional cables to land at this location. Thus, the availability of the site for an additional cable is uncertain. Thus, this alternative was eliminated from further consideration.

The EIR provided a more extensive analysis of an alternative landing site on 11th Street in Hermosa Beach. The impacts for this alternative were generally similar to the proposed project, with a few exceptions. This alternative would avoid potential impacts to ESHA located at Dockweiler State Beach (see Section F for additional discussion). However, given the more densely used and populated area surrounding the alternative landing site, impacts to public access and recreation from noise, traffic and temporary loss of public parking would increase. This alternative would also require construction of a new Power Feed Equipment (PFE) which would involve additional construction-related impacts. Furthermore, this alternative landing site is located much closer to the existing MC Global landing site, thus increasing the potential for a single event to damage several cable systems and significantly affect network connectivity to the area. The EIR determined that this alternative was not less environmentally damaging than the proposed project.

City of Manhattan Beach

The EIR also examined landing the PLCN cable at the existing landing site at Bruce’s Beach Park in the City of Manhattan Beach. Although there is capacity for a single cable, this alternative would not achieve the desired goal of diversifying the system. In addition, the applicant contends that there is sufficient demand to warrant several new cable systems and so construction of a new hub is justified.

Other sites within Manhattan Beach, without existing infrastructure, were also considered in the EIR. However, all of the potential landing sites are located near congested areas, including residential areas and beaches with high recreational use. This would make staging the HDD activities technically challenging and also lead to an increase in the potential for impacts to public access and recreation. Thus, alternative landing sites in Manhattan Beach were eliminated from further consideration.

It is important to note that the alternatives described above do not result in any significant changes to the length of cable that will be installed on the seafloor and the resulting impact associated with fill of open coastal waters. The Commission finds that there is no feasible less environmentally damaging alternative landing location to the proposed project.

Alternative Offshore Routes

TE SubCom sited the proposed PLCN cable route to minimize or avoid sensitive marine habitats and other known marine features. Areas that were identified by TE SubCom for avoidance or impact minimization included: rocky substrates, marine sanctuaries, conservation areas, fishing areas, explosives dumping areas, contaminated sediments, commercial outfalls and anchorages,

submarine canyons and unstable substrates, as well as known significant marine cultural resources. [Exhibit 7](#) shows the proposed cable route and several hazards and habitat areas that were avoided. In addition, TE SubCom worked with local fishing organizations to choose routes with minimal potential to affect fisheries. Specifically, the following areas were avoided:

- Channel Islands National Marine Sanctuary
- Chemical waste dumping areas and spoil grounds
- El Segundo Offshore Marine Terminal Safety Zone
- Contaminated sediments associated with the Palos Verdes Shelf and the Hyperion sewerage outfall
- Commercial vessel anchoring and pilot boarding areas

Although the proposed project will not avoid all hard bottom substrate, impacts to the biological communities that surround these areas will be minimized. TE SubCom conducted a geophysical survey of seabed features that concluded that the hard bottom habitat within the cable corridor consisted of low relief rocks or sub-cropping rocks which is defined as rock covered by a thin layer of loose sediment less than 5 feet thick. Subcropping rock can include areas where rocks or boulders are intermittently exposed at the seabed surface. No high-relief rocky areas were identified. These results are fairly typical of the surrounding marine environment. Although the EIR did not specifically analyze alternate marine cable routes, it is not likely that, due to the prevalence of scattered low-relief rocky outcrops in the relatively narrow corridors available, that an alternate route could be found that would be able to completely avoid or even significantly decrease impacts to hard bottom areas. Therefore, the Commission finds that there is no feasible less environmentally damaging alternative marine route to the proposed project.

Installation Method

The applicant proposes to land the cable onshore through a marine bore installed using HDD technology. Using HDD to install the bore significantly below the surface eliminates the need to use trenching on the beach or to place the cable directly in the surf zone where it could result in adverse impacts to intertidal species or become exposed and result in a hazard to beach-goers and mariners. The Commission's findings for approval of CDP E-01-029 for a fiber optic cable project in the same area proposed by Tyco Networks (US) stated:

The Coastal Commission staff geologist believes that given shoreline erosion predictions, sand migration studies, extreme storm events during El Nino years, and other factors, that a trenched cable would likely be exposed at least once, if not multiple times, during the life of the project, resulting in additional public access, recreation, water quality, and marine resource impacts in the future due to repair activities.

In addition to the Tyco cable described above, the Commission has approved several projects that employed HDD technology to bring submarine fiber optic or power cables onshore, and has generally found it to be the environmentally superior method for landing the cable onshore.¹

¹ E-98-27 (PC Landing Corporation and PAC Landing Corporation), E-99-011 (MFS Globenet and MCI WorldCom), E-00-004 (AT&T Corporation), E-01-021 (Tyco Networks), E-08-021 (AT&T), E-13-001 (Venoco, Inc.), 9-16-0160 (MC Global).

Thus, the Commission finds that there is no environmentally superior alternative to the proposed cable installation method of HDD.

Accordingly, for the reasons described above, the Commission finds that the proposed project is the least environmentally damaging feasible alternative and therefore meets the second test of Coastal Act Section 30233(a).

Mitigation

The final requirement of Coastal Act Section 30233(a) is that dredging and filling of coastal waters may be permitted if feasible mitigation measures have been provided to minimize any adverse environmental effects. In Sections E and F of this report, the Commission has identified feasible mitigation measures that will minimize the adverse environmental effects of the PLCN cable. These mitigation measures include requiring TE SubCom to bury the cable to a depth of 1 meter, avoid and eliminate cable suspensions, provide notification to fisherman of the location of the cable and any exposed sections (to reduce the potential for snags), submit plans to minimize impacts from anchoring, frac-outs, spills of hazardous material and stormwater runoff, and to assess and mitigate for impacts to hard bottom habitat incurred by the proposed project. With the imposition of the conditions of this permit, the Commission finds that the third test of Coastal Act Section 30233(a) has been met and the proposed project is consistent with Section 30233(a) of the Coastal Act.

E. MARINE RESOURCES AND WATER QUALITY

Section 30230 of the Coastal Act states:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 of the Coastal Act states:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Section 30232 of the Coastal Act states:

Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such

materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.

The offshore portion of the project extends from the shoreline at Dockweiler State Beach, through the Santa Monica Basin and outer Santa Barbara Channel and out to the edge of the Outer Continental Shelf ([Exhibits 1 and 3](#)). This area is known for its biological diversity and contains several valuable marine habitats characterized by both soft and hard substrate, and supports several special-status species. Although not located within a State or federal Marine Protected Area, the project site is in the vicinity of the Channel Island National Marine Sanctuary, Point Dune State Conservation Area and Marine Reserve, Point Vicente State Marine Conservation Area (SMCA), several SMCAs on Catalina Island, and the Santa Barbara Island State Marine Reserve (SMR) ([Exhibit 11](#)). Santa Monica Bay is also designated as Essential Fish Habitat (EFH) and serves as an important commercial fishery for a variety of fish and invertebrate species ([Exhibit 12](#)).

The proposed project involves the installation of fiber optic cable on the seafloor from the shoreline out to the edge of the OCS and has the potential to result in impacts to marine mammals and sea turtles, fish, hard bottom habitat, soft bottom habitat, and marine water quality. Each of these potential impacts is discussed in detail below.

1. Marine Mammal and Sea Turtle Impacts

There are three potential types of impacts to whales and other marine wildlife due to the proposed project: entanglement with the project cable, entanglement with “ghost nets” or abandoned fishing gear, and collision with project vessels.

Potential Whale Entanglement with the Project Cable

Marine mammals that live and migrate through coastal waters in the project area may become entangled in unburied or insufficiently buried cable or in cable suspensions. Whale species commonly observed in the area offshore of Dockweiler State Beach include gray whales (*Eschrichtius robustus*), humpback whales (*Megaptera novaeangliae*), blue whales (*Balaenoptera musculus*), fin whales (*B. physalus*), minke whales (*B. acutorostrata*), North Pacific right whales (*Eubaelena japonica*), sperm whales (*Physeter microcephalus*), and killer whales (*Orinus orca*), several of which are listed as endangered under the federal Endangered Species Act. In addition, several types of dolphins and porpoises, including bottlenose dolphins (*Tursiops truncatus*), Pacific white-sided dolphins (*Lagenorhynchus obliquidens*) and Risso’s dolphins (*Gampus griseus*) are also common in the area. Other types of marine mammals such as pinnipeds (*e.g.*, sea lions, harbor seals, and elephant seals), fissipeds (*e.g.*, sea otters) and sea turtles have also been observed.

Of the marine mammal species that frequent the area, two species--the California gray whale (*Eschrichtius robustus*) and sperm whale (*Physeter macrocephalus*)--have the potential to become entangled due to, respectively, bottom-feeding behavior or deep-diving behavior. Approximately 20,000 gray whales migrate through California waters each year between Alaskan waters and Baja California. Due to their abundance off the Pacific coast, their tendency to hug the shoreline during migration and their bottom feeding patterns, gray whales may face the highest risk of entanglement with insufficiently buried or exposed cables. The majority of

southbound (November to January) gray whales migrate within 2 nautical miles (nm) from shore, while the northbound migration occurs much closer to shore, with mother and calves reported within kelp beds and sometimes only yards from the shoreline. These distances, however, vary seasonally over time, particularly due to the deterring presence of boat traffic. The number of migrating gray whales recorded near San Clemente Island suggests that a significant proportion of the total population crosses the project area during the southbound and northbound migrations (E&E, 2001).

Gray whales usually feed nearshore in soft-bottom sediments, and also typically feed opportunistically during migration (MMS 1989). Gray whales forage on the seafloor by diving, rolling onto one side on the seafloor, and sucking up sediments that the whale filters with its baleen (E&E, 2001). One study also found sea floor gouges approximately 15 centimeters deep created by migrating gray whales offshore of Northern California, and concluded that migrating gray whales interact with the muddy part of the central marine shelf (at 60-120 meter water depths), although this behavior was determined to be secondary to their migratory objective (Cacchione et al, 1987). Gray whales can also dive in waters from 150 to 200 meters deep, but usually prefer shallower water.

Sperm whales are much less abundant off the coast of California than gray whales, numbering only approximately 1,200 individuals. Sperm whales typically inhabit deep open waters, and are the deepest and longest diving of all cetaceans. Sperm whales regularly dive to water depths between 200 and 1,000 meters (E&E, 2001). Sperm whales are the only species confirmed to have been entangled in a submarine cable, and their deep diving puts them at risk of entanglement with insufficiently buried, exposed, or suspended cables. However, based on aerial and boat surveys off California, sperm whales are usually found north of the project area (Fahy 2002). In addition, unlike gray whales, sperm whales do not bottom feed; instead, they feed solely on squid and octopi found in the water column (E&E, 2001). NMFS has therefore determined the risk of sperm whale entanglement to be very low (Fahy 2002).

Several older studies have documented occurrences of whale entanglements with submarine cables. A study by Heezen (1957) documents fourteen examples of sperm whale entanglements with submarine telegraph cables worldwide between 1930 and 1955.² Heezen postulated that the sperm whales became entangled "...while swimming along in search of food, with their lower jaw skimming through the upper layer of sediment. It may also be that the whales attacked the cable mistaking it for prey." The report also documented possible entanglements of baleen (*e.g.*, gray) whales in shallower water, and one humpback whale reported entangled in Alaskan waters.

In the October 2008 *IEEE Journal of Oceanic Engineering*, Wood and Carter published the results of a new evaluation of two substantial fault databases to determine the occurrence of whale entanglements with telecommunication cables since the 1955-1966 time period. Wood and Carter discuss the 14 cable faults occurring between 1877 and 1955 attributed to whales in Heezen's 1957 study, and they cite a 1969 study of the Alaska-mainland USA telegraph system which reported two whale entanglements prior to 1966. Wood and Carter state that both of the aforementioned studies "continue to be cited as examples of the potential threat posed to whales by submarine cables although there is a suggestion, unsupported by definitive data, that

²At the time of the study, there were nearly a half-million miles of cable laid on the sea floor in various parts of the world (Heezen 1957). That figure has more than doubled in the years since (Rampal 1998).

entanglements may not have occurred since 1955-1966.” Wood and Carter’s 2008 report concluded that:

Before 1955-1966, up to 16 faults in submarine telegraphic cables were reported and attributed to entanglements with mainly sperm whales. Circumstantial evidence suggests that capture was related to excessive slack in repaired cables laid in areas of rough and/or steep topography. Since 1955-1966, substantial fault data sets contain no reference to whale entanglements. This cessation and its continuation to the present day is largely related to marked changes in submarine cable design, deployment, and maintenance as well as advances in marine surveying. The period from 1955 to 1966 marked the phased replacement of submarine telegraphic cables by coaxial types, which were superseded by fiber-optic systems in the 1980s. Cables of the post telegraphic era have different torsional and flexile characteristics, are laid with just enough slack to follow the seabed topography, and are commonly buried below the seabed on the continental shelf and upper continental slope – the main sounding habitat of sperm whales. Furthermore, precision marine surveys allow for accurate cable placement to avoid areas where potential ensnaring suspensions may result.

Despite these findings, the potential for whale entanglement with submarine cables still exists. Given the diving depth ranges of both gray whales and sperm whales, and the bottom-foraging behavior of gray whales, the presence of suspensions in the submarine cable increases the risk of whale entanglement in cables. In addition, the potential for entanglement is present during the initial installation of the cable as cable is payed out from the cable-laying vessel on the surface and traverses the entire length of the water column before it is buried in the seafloor sediments. Due to the protection of these marine mammals under the Endangered Species Act and the Marine Mammal Protection Act, entanglement or injury impacts due to insufficiently buried or exposed cables or from cable-laying would be significant. TE SubCom estimates that approximately twenty-one percent of the total cable distance to the edge of the continental shelf (approximately thirty miles) crosses hard substrate or other obstructions where the cable will not be buried and will instead be placed on the ocean floor, thus creating the potential for cable suspensions. For an additional twenty-one percent of the total cable distance, burial of the cable will be attempted, but given the bottom substrate in these areas, success is uncertain.

The Project EIR analyzed the risk to whales from cable entanglement and concluded that the impact was not significant. Specifically, the EIR listed several factors that contribute to this conclusion:

- The majority of the cable in the nearshore environment where whales transit the coast will be buried.
- In hard bottom areas where the cable cannot be buried, the cable would be surface-laid with only enough slack to allow the cable to conform to the seabed.
- Post-lay burial and inspection would be conducted to attempt to re-bury any segments of exposed cable.

Furthermore, the Project EIR also notes that there have been no reported entanglements or fishing gear losses (due to snags on exposed cable) in the project area to date.

To ensure that the proposed project minimizes the potential for whale and other marine wildlife interaction with the project cables, and to document any future entanglements, the Commission requires that several conditions be met by the applicant. **Special Condition 3** requires TE SubCom to implement the mitigation measures related to marine resources included in the final EIR ([Exhibit 9](#)). Mitigation Measure MBIO-1, 2 and 3 requires TE SubCom to provide 2 marine mammal observers for marine mammal and sea turtle monitoring, submit a cable burial verification report to the City immediately post-project and five years after the cable is laid and retrieve any reported snagged fishing gear. To further reduce the potential for entanglement during cable laying, **Special Condition 4** requires TE SubCom to submit a Marine Mammal Monitoring and Contingency Plan to the Executive Director for review and approval. The plan will incorporate the marine protection elements of Mitigation Measure MBIO-1 but goes farther to include provisions for a marine mammal avoidance zone, reporting requirements, reduced vessel speed during cable-laying activities and minimization of propeller noise. The observers will send daily sightings reports to the Executive Director and other agencies and will have the authority to stop any activity that could result in harm to a marine mammal or sea turtle.

To minimize the potential for entanglement once the cable is installed, **Special Condition 5** requires TE SubCom to bury the cable to a depth of 1.0-meter except where precluded by seafloor substrates. Where a 1.0-meter burial depth cannot be achieved, TE SubCom is required to bury the cables to the maximum depth feasible. In order to ensure that cable installation is consistent with the project description, **Special Condition 8** requires TE SubCom to submit to the Executive Director and the signatories to the Fishing Agreement (required by **Special Condition 24**) the as-built plans, including burial depth, of the project cable.

To minimize the occurrence of suspended cable, **Special Condition 6** requires TE SubCom submit to the Executive Director for review and approval a Cable Slack Management Plan that describes the steps TE SubCom will take during cable installation to identify and eliminate, where feasible, segments of cable that are suspended above the seafloor. This condition is especially important given the significant length of cable where burial is uncertain.

As a preventive measure against potential future entanglement impacts, **Special Condition 11** requires that starting five years after the cable is installed and every five years thereafter (unless otherwise determined by the Executive Director based on a finding that portions of the cable route have not remained buried), TE SubCom shall survey the cable to verify that the cable has remained buried consistent with the as-built cable burial plan. In addition, **Special Condition 12** requires TE SubCom to apply for an amendment to this permit to remove the cable within 90 days of either taking the cable out of service or after the expiration or sooner termination of TE SubCom's easement in state waters off of Dockweiler State Beach.

In order to ensure compliance with these and other conditions, **Special Condition 1** requires TE SubCom to post a performance bond in the amount of \$500,000 to cover its cable operations in State and federal waters out to the 1,800-meter water depth.

Entanglement with Ghost Nets and Abandoned Fishing Gear

Fishermen may snag gear or nets on cables. When this occurs, fishermen generally abandon their gear or nets (creating "ghost nets"), thereby creating a risk to marine mammals and other species. Pursuant to a "Fishing Agreement" executed by GU Holdings, Inc. representing the PLCN cable with various fishermen and their representatives (see [Exhibit 10](#)), when it appears

that a fisherman has snagged a cable, he or she is expected to cut the gear instead of risking damage to the cable. If the fisherman was operating consistent with established procedures, GU Holdings, Inc. will reimburse the fisherman for the lost gear. This abandoned gear, and particularly the nets, can become a hazard to marine life, potentially entangling marine mammals and fish, preventing them from feeding and causing them to drown.

To address these concerns, the proposed project was designed to reduce impacts to commercial and recreational fishing. The practice of burying the cable to an optimal depth of 1 meter will ensure that the vast majority of the cable is buried beneath the surface and does not create a potential hazard for fisherman. TE SubCom estimates that 21% of the cable length will be laid on the surface and thus available to snag fishing gear. For an additional 21% of the cable, burial will be attempted, but success is uncertain. To further minimize the likelihood that fisherman come into contact with the cable, **Special Condition 8** requires TE SubCom to provide the signatories to the Fishing Agreement with as-built plans of the installed cable, including information related to burial depth and cable suspensions. This information can be used by fisherman to avoid potentially problematic areas where the cable is exposed. In addition, **Special Condition 9** requires TE SubCom to provide NOAA with the information necessary to update their nautical charts to reflect the position and burial status of the installed cable.

Although the entanglement of fishing with the proposed cable is not expected to occur, to provide additional assurance that any gear that does become entangled would not pose a threat to marine wildlife, **Special Condition 26** has been added to require TE SubCom to use all feasible measures to retrieve any fishing gear or object that becomes entangled in a cable no later than six weeks after discovering or receiving notice of the incident. If full removal is not feasible, TE SubCom shall remove as much gear as practicable to minimize harm to wildlife. Within two weeks of completing a recovery operation, TE SubCom is required to submit to the Executive Director a report describing the nature and location of the entanglement and the retrieval method used. This measure is consistent with EIR MBIO-3.

Marine Mammal or Sea Turtle Collision with Project Vessels

The proposed project could also result in impacts to marine mammals and sea turtles from collisions with or harassment from project vessels during marine operations associated with the proposed project. As described above, several species of marine mammals are known to inhabit the waters in the vicinity of the proposed project. Ship strikes of whales present the most serious concern. In 2007, four blue whales were found dead in the vicinity of the Santa Barbara Channel and Los Angeles-Long Beach Harbors with direct or indirect evidence of having been struck by a ship. However, the slow speeds necessary for project vessels during cable installation activities are likely to limit the potential for collisions with marine mammals or sea turtles. The EIR for the MC Global fiber optic cable project, a similar project with a cable landing just south of Dockweiler State Beach in Hermosa Beach stated that:

Ship strikes during cable installation is highly unlikely since the speed of the ship during the cable laying activities is slower (approximately 0.5 to 1.5 knots while plowing) than migrating whales or fast-swimming sea lions. According to the Large Whale Ship Strike Database, the majority of strikes were by vessels traveling between 13 and 15 knots, there are no reported collisions below 2 knots (Jenson and Silber, 2003). Nevertheless, there remains a small risk of marine mammals and sea turtles encountering Project vessels and, therefore, there is a

potential for collisions. Any collision or potential for harm to marine mammals and sea turtles would be a significant impact.

In addition, the EIR for the proposed project states that impacts from noise and vessel movement have the potential to result in behavioral changes or disruptions in animal movements. These impacts, however, are expected to be temporary and geographically isolated and would not cause disruptions substantially different than normal ship traffic through the area.

The EIR also includes MBIO-1, a mitigation measures designed to reduce the impact on marine mammals and sea turtles to a less than significant level. This measure requires awareness training, monitoring by two qualified observers, development of project-specific monitoring procedures and control measures and reporting any collisions to the resource agencies. **Special Condition 3** requires TE SubCom to implement this mitigation measure. However, although this measure is likely to decrease the risk of a collision, it does not go far enough to protect marine species as required under the Section 30230 of the Coastal Act, which requires that biological productivity of coastal waters be sustained. For example, for previous cable-laying projects of similar scope, the Commission has generally required a minimum of two National Marine Fisheries Service (NMFS)-qualified marine mammal observers on duty during all cable installation activities to ensure adequate coverage of the project area. In addition, these conditions do not identify an appropriate avoidance zone, or require project vessels to reduce speeds to avoid collisions. Thus, consistent with previous fiber optic submarine cable project approvals, the Commission has included an additional mitigation measure to ensure that impacts to marine mammals and sea turtles are minimized and healthy populations of marine organisms are maintained. **Special Condition 4** requires TE SubCom to submit a Marine Wildlife Monitoring and Contingency Plan to the Executive Director for review and approval. This plan incorporates elements of the EIR mitigation measures described above but also includes provisions for a minimum of two NMFS-qualified marine wildlife observers on duty during all cable installation activities, the establishment of 500-1640 foot avoidance zone, and limits on project vessel speed and reporting requirements. With these conditions in place, the potential for adverse impacts to marine mammals and sea turtles from collisions with project vessels or harassment from noise associated with project activities will be minimized.

2. Fish

The distribution of fishes in Santa Monica Bay, like the rest of the California Coast, is influenced by depth, substrate type, temperature and ocean currents. According to the MC Global EIR, nearshore rocky areas in the Southern California Bight (SBC) vary widely with respect to the observed assemblages of macroinvertebrates and fishes. Many of the most abundant species in the SBC are schooling fish found in the water column such as seniorita (*Oxyjulis californica*) and blacksmith (*Chromis punctipinnis*) or demersal (i.e., fishes living on or near the sea floor) species such as kelp bass (*Paralabrax clathratus*) and California sheephead (*Semicossyphus pulcher*) often associated with giant kelp communities. In soft substrates, the most widespread benthic habitat in the SBC, fish assemblages are characterized by flatfishes such as sandabs (*Citharichthys* spp), California halibut (*Paralichthys californicus*) and other demersal species as well as several species of pelagic fishes, such as northern anchovy (*Engraulis mordax*), topsmelt and California grunion (*Leuresthes tenuis*). Grunion have been observed to spawn on the sandy beaches of Dockweiler Beach. Other special-status species may also be present including the

scalloped hammerhead (*Sphyrna lewini*) and steelhead (*Oncorhynchus mykiss*). In addition, the proposed cable route passes through areas of Santa Monica Bay designated as Essential Fish Habitat for three Fishery Management Plans: (1) Pacific Coast Groundfish, Coastal Pelagic Species, and Highly Migratory Species, and through an area designated as a Cowcod (*Sebastes levis*) Conservation Area.

In contrast to benthic species, fish species are not likely to experience direct impacts from project activities. Cable installation activities will result in a temporary increase in turbidity that will likely cause mobile species such as fish and marine mammals to avoid the project area. However, sediment is likely to settle relatively quickly (i.e., within a matter of hours), and the relatively narrow project footprint will not substantially limit available habitat. Thus, these impacts are not expected to be significant. During cable-lay operations, the cable installation vessel will move slowly, allowing any mobile species to avoid the descending cable. There is a low probability that fish species could be harmed by a frac-out during HDD operations, largely due to increases in turbidity. However, it is likely that in the event of a frac-out, fish species will avoid the immediate area. Implementation of **Special Condition 16** (discussed in detail in the next section) will further reduce the potential for a frac-out. Further, **Special Condition 18** requires TE SubCom to submit a Critical Operations and Curtailment Plan which describes the sea and weather conditions under which project activities can safely proceed, thus minimizing sediment dispersal and the potential for release of hazardous material by limiting construction activities to avoid periods of storms or heavy seas.

In addition to fish in the water column, a frac-out could result in adverse impacts to grunion spawning, eggs and larvae. Grunion move onto sandy beaches to spawn at night during the spring and summer months after high tide events. Any beach-disturbing activity during or after grunion spawning could have a negative impact on grunion spawning success. Although the HDD bore itself will not result in impacts to grunion spawning due to its depth far below the surface, a frac-out that releases bentonite muds to the surface could smother any grunion, eggs and/or larvae that are present. As currently scheduled, HDD operations are expected to occur in late summer and fall of 2016, thus avoiding the grunion spawning season altogether. However, to ensure that grunion spawning runs are protected in the event of unforeseen schedule adjustments, **Special Condition 13** requires TE SubCom to monitor the beach for grunion runs if construction of the HDD bore occurs between March and August. If grunion are confirmed to be spawning on the beach, then all HDD operations must stop until the spawning event is complete. This measure, in combination with **Special Condition 16** will ensure that grunion spawning activities are sufficiently protected.

Another potential concern for fish species are impacts associated with noise from construction activities. Criteria developed by several federal and state agencies, including the National Marine Fishery Service (NMFS), United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) set a threshold-type criteria for exposure to impulse sounds at 206 dB.³ Lower levels may cause fish to alter their behavior patterns by avoiding the affected area, but are not expected to cause injury. Project-related underwater noise is expected to originate from project vessels and from HDD activities at the exit pit. For marine vessels, underwater noise is generally correlated with vessel speed. One study measured sound

³ Underwater standard ((dB re 1μPa @ 1m).

levels from a tug travelling at 11 knots at 160dB at a distance of 2 meters. Due to underwater attenuation, noise levels would be reduced to less than 120 dB at a distance of 200 meters. Background levels of noise in the near-shore environment are often close to 120 dB due to both anthropogenic and natural sources of noise. Noise from HDD activities would originate from drilling activities near the exit pit. Fortunately, the exit pit will be located in soft-bottom habitat and noise associated with HDD will be significantly less than if the drill was required to break through hard rock. Based on this information, noise levels are not anticipated to reach levels that would cause injury in fish. As an additional precaution, **Special Condition 4** requires TE SubCom to limit the speed of project vessels to two nautical knots (miles per hour), and support vessels to 3-5 knot, further reducing noise levels associated with project activities.

Finally, the proposed project also has the potential to result in disturbance to Essential Fish Habitat and the Cowcod Conservation Area. Specifically, in areas of soft substrate, the pre-lay grapnel run and cable installation activities including use of the sea plow or ROV to bury the cable could result in short term disturbance associated with the displacement of sediments and minor, local turbidity effects from suspended sediments. In addition, resuspension of contaminated sediments could occur, although the areas of highest concentration will be avoided. These potential impacts are likely to be short-lived, with full recovery expected within a year. In hard bottom areas, horizontal movement and strumming of the cable has the potential to harm organisms in the immediate vicinity of the cable. However, methods and equipment used to install undersea cables have improved over the years to greatly reduce horizontal movement during installation⁴, and for this Project an impact width of only 3 inches is assumed. Thus, impacts to hard substrate in Essential Fish Habitat are expected to be minor and localized. Further, although recovery time for hard bottom areas is expected to be longer than in soft-bottom areas, the small width of the disturbance corridor would limit impacts to individuals. Therefore, the proposed project is not likely to lead to any measurable reduction in the capacity of these environments to support fishes identified in the Fishery Management Plans.

3. Benthic Species: Hard Substrate Impacts

Cable-laying operations could adversely impact hard substrate habitat and associated biota. Hard substrate is exposed rocky seafloor area that provides habitat for a diverse group of plants and animals. Common epifaunal invertebrates occurring in the hard substrate areas vary based on depth and substrate relief height. Along much of the California coast, there is a strong positive association between the types of communities and the depths and substrate types in which they occur. Hard substrates, including rocky bottoms, rock outcrops, and rock crevices, provide habitat and shelter for numerous sessile organisms, demersal fishes, and mobile invertebrates such as lobsters and crabs. In shallow waters (less than 200 meters or 656 feet), algae, including giant kelp, eelgrass and anemones such as *Corynactis californica* are present. At these depths (and deeper), depending on favorable high relief substrate, current speeds and sedimentation rates, branching hard and soft corals have also been reported. In deeper waters (greater than 600 meters or 1,968 feet), hydroids provide substrate to anemones, amphipods, polychaetes, and ectoprocts. Gorgonians, large sponges, shrimp, crinoids, and ophiuroids, brittle stars, and seastars are also present.

⁴ City of Hermosa Beach Final EIR (2016)

Hard substrate (especially high-relief substrate) and its associated biota are rare, and therefore any effect to them is potentially significant. Impacts to high-relief substrate in particular are significant because: (a) deepwater reefs are relatively rare along the central and southern California coast; (b) they support a diverse assemblage of epifaunal invertebrates; (c) they attract fish as a nursery ground, food source, and as shelter; and (d) epibiota residing on rocky substrates are sensitive to mechanical disturbance and increased sediment loads.

Adverse impacts (*e.g.*, crushing, scraping, and/or displacement) to hard substrate can occur during cable installation and subsequent movement of the cable on the seafloor due to currents and wave action. In their study on the environmental impacts of a one- to three-inch submarine cable offshore of Half Moon Bay, Kogan et al. (2006) found incisions, scrapes, and vertical grooves from 2.5-inches to 17.5-inches wide in rocky substrate along the cable route. Hard substrate was altered or damaged by these scrapes and grooves and typical epifaunal organisms were absent. Placement of the project cable on rocky substrates would disrupt associated bottom communities, likely crushing and/or dislodging small, sessile or relatively sedentary invertebrates along a narrow strip. Sessile species may experience repeated, localized disturbances throughout the life of the cable if it moves due to current action.

Potentially significant impacts to hard substrate and biota could occur if rock features are crossed with the grapnel or if anchors are placed directly on hard bottom. The grapnel will be dragged along the proposed alignment in soft sediment areas and is expected to disturb a three foot-wide area along the centerline of the cable lay corridor. However, to avoid impacts to hard bottom associated with the pre-lay grapnel run, TE SubCom will not deploy the grapnel in areas of rocky seafloor substrate. Impacts to hard bottom habitat from anchors would be temporary, but studies have shown that impacted areas could be slow to recover. According to the project description and CDP application materials, the main cable laying vessel is equipped with a dynamic positioning system that does not use anchors. This includes during storms, high waves and other reasonably foreseeable circumstances. Smaller vessels used for HDD diver support, installation of eco blocks and inadvertent release monitoring may drop a small anchor in rough sea conditions. However, these vessels will only be present in the nearshore project area where geophysical surveys indicated that the seafloor consisted of soft substrate with no hard bottom areas. **Special Condition 14** (described in more detail below), requires that TE Subcom submit a post-project study that documents project-related impacts to hard bottom areas, including from any unanticipated anchoring. Thus, with inclusion of this measure, impacts to hard bottom habitat and the associated benthic species from anchoring of project vessels will be minor.

TE SubCom will, however, lay cable over areas of hard substrate. The Commission calculates the hard substrate impact area by multiplying the length of cable that will be laid over hard substrate by double the cable width (because the cable does not necessarily stay stationary). In this case, TE SubCom estimates the length of cable to be laid over hard substrate to be 20,548 ft (6.3 kilometers). Double the width of cable is 3 inches or 0.25 feet. The projected hard substrate impact area is thus 5,137 square feet⁵. As described above, cable-laying activities and any

⁵ The EIR included an estimate of 132,550 ft² of hard bottom impact. However, these estimates were refined in June 2017 to incorporate geotechnical core data. The revised estimated length of cable crossing hard bottom was 20,548 ft multiplied by an impact width of 3 inches (.25 ft) results in a hard bottom impact area of 5,137 ft². (TE SubCom 2017).

ongoing movement of the cable over the life of project, has the potential to damage or crush rocky substrate and its associated biota.

In previous marine cable related projects, the applicant has mitigated for potential project-related impacts to hard substrate and its biota by paying an agreed upon sum to the UC Davis Wildlife Health Center's California Lost Fishing Gear Recovery Project. Started in 2005 by the SeaDoc Society, a marine ecosystem health program of the UC Davis Wildlife Health Center, the primary purpose of the Recovery Project is to remove commercial fishing gear that is accidentally lost or intentionally discarded in California's marine environment.

Derelict fishing gear is likely found in the water along the entire coast of California. The gear is potentially hazardous to divers and an array of wildlife including seabirds, turtles, sea otters, and other marine mammals. Derelict fishing gear affects the marine environment in several ways: it can continue to "catch" fish and marine animals, which become enmeshed or trapped, and it can damage the habitat upon which it becomes entangled or upon which it rests. It is also a visual blight on the seafloor, diminishing the natural aesthetic quality of the seafloor and rocky habitat. Currently, the SeaDoc Society is focusing gear recovery efforts in the newly established Central Coast Marine Protected Areas network and near the Channel Islands.

The Commission has previously found contributions to the Recovery Project to be an acceptable form of compensation for unavoidable adverse impacts to hard substrate and the organisms it supports. In combined CDP/Consistency Certification no. E-08-021/CC-005-09, the Commission accepted AT&T's offer of \$100,000 to the Recovery Project as adequate to compensate for potential project-related impacts to 5,500 square feet of hard substrate and its biota. Subsequent marine cable projects have used this \$100,000 dollars per 5,500 square feet of impact area figure approved under E-08-021/CC-005-09 to determine appropriate compensatory funds for different areas of impact. For example, the Commission approved a payment of \$32,000 (32% of \$100,000) to compensate for a hard bottom impact of 1760 square feet (32% of 5,500 square feet).

In 2016, Commission staff examined data on completed compensatory mitigation work to quantify the acreage of compensation that could be achieved for the funds provided to the Recovery Project for this purpose. At that time, the Recovery Project had received a total of \$801,193 in compensatory mitigation funds to mitigate impacts to a collective total of 24,325 square feet of hard bottom habitat from seven fiber optic cable projects and two pipeline removal projects. With these funds, the Recovery Project was able to collect 1301 items of derelict fishing gear over 105 field days, resulting in the enhancement of an estimated 64,702 square feet. These data show that the Recovery Project was able to achieve enhancement of marine habitats at a mitigation ratio of 2.7 to 1 and for a cost per area of \$12.38/square foot. When this cost per acre figure was adjusted to 2016 dollars using the Consumer Price Index, the result was \$13.80/square foot.

For the MC Global fiber optic cable project CDP (Final Adopted Findings for CDP 9-16-0160/CC-0001-16), the Commission approved an approach that used the results from the analysis of Recovery Project data described above to determine an appropriate mitigation fee for impacts to hard bottom substrate from submarine cable projects. In addition, the Commission applied a 3:1 mitigation ratio because of the nature of the mitigation work performed by the

Recovery Project. The Recovery Project's work removes chronic sources of habitat and wildlife disturbance and loss, but they do not actively restore habitat areas after those sources of disturbance are removed. The actual "restoration" of the disturbed areas is achieved through natural recruitment of missing organisms over time. It can often take years for that natural recovery to occur on marine hard substrate habitats (Lissner et al., 1991). Compensating for this time lag between the impact and the success of the mitigation site is one of the principal reasons the Commission has applied mitigation ratios in other cases. Another key consideration is the likelihood of mitigation success. Once the Recovery Project removes a source of disturbance from a particular area, it is highly likely that natural recovery of the restored site will occur over the long-term. However, unlike terrestrial mitigation projects where the Commission generally requires conservation easements or other types of protections to protect against future ecological damage, there is no similar mechanism that can be applied to protect marine mitigation sites. Thus, the Commission cannot assume that future anthropogenic disturbance of the same site will not occur in the future. It is likely that some of the sites that are restored by the Recovery Project could be subjected to future damage as lost fishing gear re-accumulates or other types of damage are sustained. Thus, in this case, the uncertainty in the long term restoration of the site also justifies applying a 3:1 mitigation ratio when calculating the appropriate mitigation fee.

As described above, TE SubCom estimates that the proposed project could impact approximately 5,137 square feet of hard bottom substrate. This impact area was determined using data from a Geophysical Survey, conducted in 2016, that used sonar to determine substrate type within the cable corridor. These data are then used to forecast the anticipated depth of burial that can be achieved, but can only provide an estimate of the impact. To determine the actual impact, **Special Condition 14** requires TE SubCom to conduct a post-lay burial survey of the installed cable to quantify the extent of actual hard bottom impacts. The survey shall also quantify the height and length of any cable suspended at heights greater than 1.0-meter from the seafloor. Within 45 days of completing the survey, TE SubCom will submit to the Executive Director a written report describing the results of the survey for review and approval.

Additionally, **Special Condition 15** requires TE SubCom to compensate for all project-related impacts to hard bottom habitat through payment of a compensatory hard bottom mitigation fee to the UC Davis Wildlife Center to be used to remove derelict fishing gear and other marine debris from waters in the Southern California Bight. The total hard bottom mitigation fee will be calculated by applying a 3:1 mitigation ratio to the total square footage of impacted hard bottom and then multiplying that acreage by a compensation rate of \$14.30 per square foot (equal to \$13.80 in 2016 dollars adjusted to 2018 using the Consumer Pricing Index). The total square footage of hard bottom impacted will be calculated by multiplying the linear distance of cable laid on or suspended over hard bottom by approximately twice the width of the cable (i.e., 3 inches).

The mitigation work will be carried out pursuant to a Memorandum of Agreement ("MOA") by and between the California Coastal Commission and the Regents of the University of California on behalf of the UC Davis Wildlife Health Center's California Lost Fishing Gear Recovery Project. Once the mitigation funds are received, the Recovery Project will submit a spending plan to the Executive Director for review and approval that includes, at minimum, a description of the mitigation project and its estimated cost. The mitigation work will aim to recover known (previously located and/or reported) and opportunistically encountered derelict commercial fishing nets, traps and other types of gear within the Southern California Bight. The removal of

derelict nets snagged on rocky bottom habitat or on underwater structures, or in some cases still attached to fishing vessels, is critical because this form of derelict fishing gear (net) presents a significant entanglement/drowning risk to wildlife and to underwater users (divers, scientists, engineers). The Recovery Project will also recover lost trap gear that results in hazards, blight, and/or interferes with fishing, emphasizing recovery soon after the close of commercial seasons. Project personnel will collect data on all gear recovered, including location, type, substrate type and impacts to resources and habitat. The overall scope of the field effort will be dependent upon the final determination of mitigation funds.

The Commission finds that removing lost fishing gear and other marine debris from the marine environment will offset the projected impacts to rocky bottom areas caused by cable-laying activities. Thus, with the above special condition incorporated, impacts to hard bottom habitat and the associated benthic species will be minimized, consistent with the requirement in 30230 that marine resources be maintained and enhanced.

4. Benthic Species: Soft Bottom Habitat Impacts

Soft-bottom areas are unconsolidated sediments (e.g., gravel, coarse-grained and mixed sediments, sand, and mud) that provide habitat to epifauna (surface living) and infaunal (below-surface living) organisms. Impacts to epifauna and infauna due to the proposed project are of concern because: (1) the proposed cable burial will disturb their seafloor habitat; (2) many infaunal organisms have limited mobility and cannot easily escape habitat disturbance or rapidly repopulate regions of disturbance; and (3) they are a source of food for more mobile epifaunal and pelagic marine organisms such as crabs, fin fish, and marine mammals.

Soft-bottom benthic communities in the nearshore areas of the proposed cable routes are comprised of species associated with the sand and gravel substrate typical of the high-energy and dynamic environments of the California coast. As depth increases from the shore to 200 meters (656 feet), the density of infaunal species increases, most likely because of the greater stability of the sediments. Examples of dominant species present at shallow water depths (subtidal to 30 meters or 98.4 feet) include several species of red algae and epibenthic biota such as the ornate tube worm (*Diopatra ornata*), cancer crabs (*Cancer* sp.), the slender crab (*Cancer gracilis*), the masking crab (*Loxorhynchus crispatus*), octopus (*Octopus rubescens* and *O. bimaculatus/bimaculoides*), the white sea pen (*Stylatula elongata*), the sea cucumber (*Parastichopus californicus*), the sunflower star (*Pycnopodia helianthoides*). In the coarser sand habitats, the invertebrate community was typically dominated by ornate tubeworms and sand dollars when they were present in colonies occupying fairly narrow bands. Demersal fish present include the California halibut and other flat fish species. From 30-150 meter (98.4-410 feet) depths, species such as sea pens, several species of anenomes, the sea slug (*Pleurobranchia californica*), and the leafy flat star (*Petalaster [Luidia] foliolata*), and flatfish are also present. At 125-600 meter (410-1,968 feet) depths, most of the epibenthic fauna are sea urchins. At deeper depths, soft substrates are generally inhabited by sea pens, octopus, sea stars, and multiple species of small polychaetes and crustaceans. However, in deep basin areas (e.g., below roughly 600 meters or 1,968 feet), low oxygen conditions contribute to decreased abundance and biomass of invertebrates. However, in near-island habitats like the Santa Barbara Channel, which comprise a significant portion of the proposed cable routes, the above communities become diverse and abundant. The proposed cable routes pass outside the current boundaries of the

Channel Islands National Marine Sanctuary. According to the EIR, no threatened or endangered soft-bottom benthic species were identified during surveys or are known to exist in the project area.

Approximately 58 percent of the proposed cable route crosses soft-bottom habitat. Another 21% of the cable route crosses areas likely to contain a mixture of hard and soft bottom habitats. In October 2016, TE SubCom completed a geophysical survey of the seafloor habitats within the proposed cable route corridor between proposed offshore terminus of the landing bore pipe out to approximately 222 kilometers offshore. Data collected during that survey were used to characterize the seafloor habitat and associated biota.

The EIR states that potential impacts to marine habitats and associated biota could occur throughout the cable laying operation, including those resulting in seafloor disturbance (i.e., pre-lay grapnel clearance, excavation around the conduit, and the laying and burial of the cable). In addition, during periodic surveying of the cable route as required by **Special Condition 11**, any cable segments that have become exposed will be reburied with an ROV jet pursuant to an approved re-burial plan.

In evaluating the significance of potential project impacts on soft-bottom habitat and associated biota, the EIR states that:

The scale and duration of disturbance caused by Project activities, however, are limited, resulting in localized and temporary disturbance to the seabed. As described in environmental analyses for similar projects in California, the maximum width of the disturbance area caused by the sea plow would be approximately 26 ft (8 m), but the furrow or trench would be approximately 3.3 ft (1 m) (AMS 2015, as cited in City of Hermosa Beach 2016).

Motile invertebrates, fish, and other wildlife in the vicinity are anticipated to avoid the plow and recolonize the area after the plow has left. Species that inhabit the upper layer of the soft-bottom sediments may be displaced, smothered or crushed by cable placement and burial. As discussed in Section 3.1.1.3, these organisms are accustomed to the dynamic conditions of soft bottom habitats and as such the populations are resilient. The area disturbed by cable installation would be small relative to available habitat, and species in the soft bottom habitats are expected to repopulate rapidly. In addition to being a relatively small area of disturbance, the benthic infauna that would be impacted in the soft-bottom areas are common species that would readily repopulate the disturbed area after the cable is laid (City of Hermosa Beach 2016). An example of this recovery was observed during a routine ROV survey of a fiber optic cable along the central coast of California in 2007. Several other buried fiber optic cables were crossed, and there were no detectable differences in benthic macrofauna observed at these locations (AMS 2015).

Studies have shown that additional factors, including the fact that the disturbance to benthic habitat does not involve the removal of sediment, and the proximity of the disturbed sediments to undisturbed sediments, will also serve to minimize the amount of time needed for benthic

organisms to recover (AMS 2015). Thus, impacts to soft bottom habitat from the proposed project are expected to be minor and temporary for the following reasons: (1) the area of impact is relatively small compared to the geographical extent of this habitat type offshore of Dockweiler State Beach; (2) the species that are likely to be impacted are common and will readily repopulate; and (3) studies have shown that recolonization and recovery of most soft-bottom communities is rapid following short-term and localized disturbance.

5. Marine Water Quality Impacts

The proposed project offshore lies in open coastal waters off of Santa Monica Bay and the Southern California Bight. The Dockweiler State Beach landing site is located in Santa Monica Bay, a coastal embayment between Point Dume and the Palos Verdes peninsula, located in one of the most densely populated areas on the west coast. Water quality conditions within the bay are affected by general oceanographic conditions as well as point and non-point sources of pollutants, including wet and dry weather flows through storm drains and urban runoff, and municipal and industrial wastewater discharges, the latter representing the largest source of pollutants to the bay. The Hyperion Treatment Plant alone discharges an average of 352 million gallons per day of treated sewage. Other point sources are the Joint Water Pollution Control Plant with outfalls off the Palos Verdes peninsula, the Chevron Refinery in El Segundo, the El Segundo and Scattergood Generating Stations, and the Redondo Beach L.L.C. Generating Station. According to the EIR, pollutants of concern for the Santa Monica Bay include pesticides (specifically DDT and chlordane), PCBs, PAHs, TBT, metals, pathogenic bacteria and viruses, total suspended solids, nutrients, trash and debris, chlorine, oxygen demands, and oil and grease. Dockweiler State Beach and Santa Monica Nearshore and Offshore are considered impaired water bodies under the Clean Water Act Section 303(d).

The principal potential impacts on marine water quality due to the proposed project are: (1) impacts to filter-feeding benthic organisms due to increased turbidity during cable installation (including grapnel, burial, re-burial, repair, and water-jetting operations) and the suspension and resettling of contaminated sediments within Santa Monica Bay; (2) impacts on benthic habitat and water quality due to potential release of the drilling fluid bentonite if a “frac-out” occurs during horizontal directional drilling operations; (3) the release of fuel, hazardous material, sewage or bilge/ballast water from project vessels; and (4) increased erosion, sedimentation, and other potential water quality impacts related to terrestrial construction activities.

Turbidity and Redistribution of Contaminated Sediments

The size of the turbidity plume caused by cable installation activities (*i.e.*, grapnel, jetting, and burial) depends on the grain size of the bottom sediments, rates at which the suspended particles settle to the bottom or are dispersed by bottom currents, and the energy produced by the trenching equipment. Increases in turbidity can degrade water quality by reducing light penetration, discoloring the ocean surface, or interfering with filter-feeding benthic organisms sensitive to increased turbidity. In addition to impacts associated with turbidity, if suspended sediment is contaminated, it can lead to further impacts associated with increased exposure rates for marine organisms.

At the conduit terminus, water jetting operations to expose the newly installed conduit will result in localized increases in turbidity. Similarly, the pre-lay grapnel run, laying of the cable, and use

of the sea plow farther offshore will also result in local and temporary increases in turbidity, although the levels of turbidity are expected to be lower for these activities. The EIR states that the majority of sediments along the proposed cable route consist largely of clay, with some sand and silt particles. However, the majority of sediments at the HDD bore terminus and in the nearshore environment consist of sand (CDP Application for 9-17-0071, see [Exhibit 13](#)). Sand particles are expected to settle rapidly within the immediate area of the impact, whereas clay particles will settle more slowly and have the potential to drift farther from the impact site. The most significant potential turbidity impacts will occur at the bore terminus where water jetting will occur. Because of the predominance of sand particles in this area, suspended sediment is expected to settle rapidly resulting in only minor, short-lived and localized impacts to marine organisms. In areas of the project further offshore, there is a greater potential for suspended particles to remain suspended for longer periods of time. However, the project activities in these areas are less energetic and are expected to result in significantly less suspension of bottom sediments. Thus, the concentration of suspended sediment in the surrounding water column will be small, and any resulting impacts will be minor. Thus, due to the localized, minor and short-term nature of the increase in turbidity, impacts to filter-feeding and other benthic organisms will not be significant.

As the proposed cables are laid through Santa Monica Bay, there is a potential to disturb areas containing sediments contaminated with DDT, PCBs, metals, and other contaminants resulting in dispersal and potential uptake of these contaminants by benthic organisms. The degree of sediment contamination in Santa Monica Bay is dependent on location and depth. The proposed cable route avoids known locations of contaminated sediments. However, sampling conducted in the project area did indicate that sediments in this area contain elevated levels of DDT, PCBs and mercury (CDP Application for 9-17-0389). Specifically, individual soils samples contain contaminant levels above “Effects Range Low” but do not exceed “Effects Range Medium.” “Effects Range Medium is defined by NOAA as the “Concentration above which effects are frequently or always observed among most species of biota.” Thus, concentrations are below levels at which impacts would be expected. Furthermore, studies conducted by the U.S. Coast Guard’s Coastal and Marine Group in coordination with the Southern California Water Research Project and the City of Los Angeles, Bureau of Sanitation have found that contaminant levels in Santa Monica Bay sediments are lowest in the surface sediments where project-related disturbance would occur (CDP Application for 9-17-0071). In addition, as discussed above, the proposed construction methods are not likely to result in significant suspension and/or redistribution of sediments. Project activities are confined to a small footprint and would thus be expected to generate small amounts of resuspended sediment, especially compared to natural dispersion through wave action or ocean currents. Thus, water quality impacts associated with resuspension of contaminated sediments are expected to be minor.

Frac-outs during HDD Operations

TE SubCom will use bentonite, a non-toxic drilling fluid, during HDD operations. HDD activities could result in the inadvertent release of drilling fluids (i.e., frac-out) onto the beach or surf zone above the bore. Although it does not pose an acute toxicity threat, bentonite releases can smother benthic organisms and contribute to increases in turbidity. To minimize the potential impacts associated with a frac-out, TE SubCom included an applicant measure to prepare and implement an Inadvertent Release Contingency Plan. In addition, the EIR included

Mitigation Measure MBIO-4 which requires TE SubCom to add the use of fluorescent dye to improve detection of a frac-out in the marine environment. **Special Condition 3** incorporates this mitigation measure included in the EIR into this CDP. In addition, **Special Condition 16** adds additional requirements to the Inadvertent Release Contingency Plan to ensure it is consistent with Coastal Act requirements and past Commission approvals. Specifically, **Special Condition 16** requires that the Inadvertent Release Contingency Plan also includes provisions to use water as a drilling fluid for the last 60-100 feet of the HDD bore, a monitoring procedure using fluorescent dye to detect a frac-out occurring on the seafloor where visibility is poor (consistent with MBIO-4), and protocols to be followed in the event of a loss of drilling pressure and a confirmed frac-out. With these measures in place, the potential for a frac-out will be minimized and in the event a frac-out does occur, TE SubCom will have procedures in place to ensure that any impacts are temporary and minor.

Project Vessel Releases

The proposed project requires the use of several different marine vessels and equipment to support the construction and operation of the PLCN cable. It is possible that marine vessels could discharge fuel or other hazardous fluids, sewage water, bilge water, debris, or ballast water into the marine environment. Depending on the size and contents of the release, impacts to marine organisms could be significant. Although the likelihood of a spill occurring is low, the applicant included a measure to develop an Oil Spill Contingency Plan as part of the project. To ensure that this plan is consistent with Coastal Act Requirements, **Special Condition 17** requires TE SubCom to submit a project-specific Spill Prevention and Response Plan to the Executive Director for review and approval. The Plan shall identify the worst-case spill scenario and demonstrate that adequate spill response equipment is available. In addition, the Plan shall clearly identify responsibilities, list and identify the location of oil spill response equipment, and include a plan for conducting training and response drills. Further, **Special Condition 18** requires TE SubCom to implement an Executive Director-approved Critical Operations and Curtailment Plan (COCP). The COCP defines the limiting conditions of sea state, wind, or any other weather conditions that would hinder safe operation of vessels and equipment or a potential spill cleanup. Finally, consistent with previous fiber optic cable projects, **Special Condition 19** requires implementation of a zero discharge policy for all project vessels.

Erosion from Terrestrial Activities

Terrestrial and horizontal directional drilling construction activities at the two staging sites, installation of the ocean ground bed at Dockweiler State Beach, and terrestrial cable installation activities have the potential to result in water quality impacts due to storm water discharges, accelerated soil erosion, and sedimentation. TE SubCom is in the process of seeking a 401 Certification from the Regional Water Quality Control Board that will address these issues. **Special Condition 2** requires TE SubCom to submit evidence of approval of the 401 Certification to the Executive Director. To further ensure that impacts associated with stormwater runoff and erosion are minimized, **Special Condition 20** requires TE SubCom to submit a Stormwater Management Plan to the Executive Director for review and approval that identifies Best Management Practices to control erosion and stormwater runoff from the project site.

In addition, inadvertent releases of oil or other hazardous material from construction-related vehicles or equipment has the potential to degrade water quality of nearby ground or surface waters. To minimize the likelihood of a spill, **Special Condition 17** requires TE SubCom to develop a Spill Prevention and Contingency Plan for terrestrial construction activities (as well as marine activities as described above). The Plan shall include provisions to identify the worst-case spill scenario and demonstrate that adequate spill response equipment is available. In addition, the Plan shall clearly identify responsibilities, include provisions to conduct worker training related to recognizing and responding to spills, maintaining equipment to avoid leaks, and implementing safe refueling practices. Implementation of these measures will minimize the potential for an inadvertent release of hazardous materials during terrestrial construction activities.

To summarize, with the inclusion of the Special Conditions described above, the Commission finds the proposed project will minimize the potential for adverse impacts associated with increased turbidity, resuspension of contaminated sediments, inadvertent release of drilling fluids or hazardous substances, discharges from project vessels and runoff from terrestrial activities. The project will therefore maintain the biological productivity and quality of coastal waters and ensure that the project does not adversely impact existing populations of marine organisms.

6. Conclusion

For the reasons discussed above, the Commission finds that the proposed project, as conditioned by **Special Conditions 1,2,3, 4, 5, 6, 11, 12, 13, 14, 15, 16, 17, 18, 19, and 20**, will be carried out in a manner that maintains marine resources and sustains the biological productivity and quality of coastal waters and protects against the spillage of hazardous substances into the marine environment, and is therefore consistent with Coastal Act Sections 30230, 30231 and 30232.

F. ENVIRONMENTALLY SENSITIVE HABITAT

Coastal Act Section 30240 states:

- (a) *Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.*
- (b) *Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

The terrestrial components of the proposed project within the Coastal Zone are located largely in Dockweiler State Beach and the public right-of-ways along South Marine Avenue and West Imperial Highway (see [Exhibit 2](#)). Land use surrounding the terrestrial conduit routes includes public beach, open space dune habitat, public utility (Hyperion Water Reclamation Plant) and LAX Airport. The cable landing itself, the terrestrial portion of the marine bores and all HDD activities will be located beneath a paved parking lot. The ocean ground beds will be buried in sandy substrate immediately adjacent to the parking lot. The westernmost portions of the terrestrial conduit system, from the beach manholes to South Marine Drive and then along the

South Marine Drive until its intersection with West Imperial Highway, will be located on or beneath sandy beach areas. Along South Marine Drive, the cable will be laid adjacent to the transition between beach and disturbed or restored southern foredune habitat ([Exhibit 14](#)). The proposed project has the potential to impact protected habitats and special status species as described in detail below.

1. Southern foredune habitat and the El Segundo Blue Butterfly

Southern foredune habitat is considered a sensitive natural community by CDFW. Dune systems are considered one of the most dynamic habitat types on earth and are dependent upon, and highly influenced by, wind and wave action. These forces cause sand accretion or erosion, depending on their strength, which tends to follow seasonal patterns. Dunes form parallel to the prevailing winds and perpendicular to the coastline and support an array of native plants and animals uniquely adapted to this transition zone between land and sea. In addition to their habitat and aesthetic values, dune ecosystems are recognized for providing important protection to inland structures and lands from storm events (Engel 2014). The dunes behind Dockweiler Beach are generally characterized by low, often succulent, perennial subshrubs and herbs and can support several species of reptiles, birds and mammals. To the east of the conduit, between Vista Del Mar Rd. and LAX, is approximately 300 acres of disturbed southern foredune habitat that is designated as the El Segundo Dunes ESHA. Small remnants of this habitat exist on the landward edge of Dockweiler Beach, outside of the designated ESHA area, where the applicant has proposed to install a terrestrial portion of the fiber optic cable. The terrestrial conduit will also pass under an area of restored southern foredune (see [Exhibits 14 and 15](#)).

The Coastal Commission has determined in past actions that southern foredune habitat, regardless of the level of disturbance, is considered Environmentally Sensitive Habitat Area (ESHA). According to a memo on Biological Resources at Broad Beach, written by Commission biologist Dr. Jonna Engel, California dune ecosystems have suffered a disproportionately high amount of human impact because the coast is a highly desirable area for industry, tourism, recreation, and residential settlements. As a result, dune ecosystems are listed as very rare by the CDFW Natural Diversity Database. Section 30107.5 of the Coastal Act defines environmentally sensitive habitat (ESHA) as “*any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments*”. Consistent with prior Commission action, the vegetated areas of southern foredunes at Dockweiler Beach rise to the level of ESHA because they are rare and are easily disturbed and degraded by human activities and development as shown by the significant loss of dune habitat and the high cover of non-native and invasive species. Non-vegetated areas in the project area do not rise to the level of ESHA, however these areas would be prime targets for restoration and could develop into ESHA in the future.

The applicant conducted biological surveys of the project area to characterize the vegetation communities and identify any special status species. These surveys generally found that the area surrounding the cable route was heavily disturbed by human use and contained little vegetation. Vegetation that was present consisted largely of invasive species, including iceplant, crystalline ice plant (*Mesembryanthemum crystallinum*), saltgrass, Bermuda grass (*Cynodon dactylon*), Mexican fan palm (*Washingtonia robusta*), tree tobacco (*Nicotiana glauca*), sea lavender

(*Limonium perezii*), and other landscaping species. No special status species plant or wildlife species was observed. In the restored southern foredune habitat, field surveys observed several plant species that are both typical and atypical of this vegetation community: ragweed (*Ambrosia artemisiifolia*), mulefat (*Baccharis salicifolia*), dune buckwheat (*Eriogonum parvifolium*), California sagebrush (*Artemisia californica*), brittlebush (*Encelia californica*), lemonade berry (*Rhus integrifolia*), and telegraph weed (*Heterotheca grandiflora*). Although no special status species were observed in this area during the biological surveys, the El Segundo blue butterfly, federally listed as endangered, has been documented in this area. The butterfly is solely dependent on dune buckwheat at all stages of its lifecycle. Field surveys conducted for the project found several small patches of vegetation including dune buckwheat in the restored habitat area west of South Marine Drive (see [Exhibit 15](#)).

The proposed project includes installation of cable through areas considered both potential and documented El Segundo blue butterfly habitat, vegetated southern foredune habitat and un-vegetated sandy beach areas. Potential impacts include both direct impacts to critical habitat for the butterfly (i.e., individual plants or patches of dune buckwheat) and vegetated foredune habitat, and indirect impacts from dust, noise and other disturbance associated with construction vehicles, equipment and personnel associated with HDD activities, terrestrial cable installation and staging. To minimize impacts to El Segundo blue butterfly, the applicant proposes to install the terrestrial cable using HDD for approximately 2,165 ft through the restored dune habitat where the butterfly has been observed. The remaining 1900 feet of terrestrial cable between the beach manhole and the intersection with West Imperial Highway would be installed using open trenching methods (see [Exhibit 14](#)). To further minimize the potential for impacts to the El Segundo blue butterfly, the EIR requires Mitigation Measure TBIO-1 that requires the applicant to retain a qualified biologist to conduct pre-construction presence/absence protocol survey of the conduit alignment including a 300 foot buffer. The biologist would map all areas where dune buckwheat is present and project-related activities including parking, staging, storage and access would occur outside this buffered area. The measure also states that where feasible, installation of terrestrial conduit within 300 feet of suitable butterfly habitat should occur between September and June, outside the flight period of adult El Segundo blue butterflies. Mitigation measure TBIO-2 requires that the applicant provide environmental awareness training for all project personnel that includes the location of all sensitive biological resources, identification of special status species that could be present, and how to avoid impacts to these resources.

Mitigation measures included in the EIR will be important in minimizing impacts to the El Segundo butterfly, but these measures do not go far enough to ensure that impacts to this species and the surrounding habitat are avoided and the project is consistent with Section 30240 of the Coastal Act. The EIR identifies the restored southern foredune habitat as ESHA and the applicant has proposed to avoid direct impacts to this habitat by installing the terrestrial cable below the habitat using HDD. Furthermore, TBIO-1 requires that certain project activities, including staging, parking, storage, etc be conducted outside the 300 foot buffer around suitable butterfly habitat. However, it is unclear from the project description and the EIR analysis, how close cable laying activities on the surface will come to suitable butterfly habitat. [Exhibit 14](#), taken from the EIR, seems to indicate that HDD activities would begin immediately adjacent (to the north) of the ESHA, and thus does not eliminate the potential for direct impacts to potential butterfly habitat inside and outside the restored dune area. Furthermore, the EIR does not

identify all vegetated southern foredune habitat as ESHA and thus, does not include measures to ensure that impacts to these areas are avoided.

The Recovery Plan for the El Segundo blue butterfly, developed by the U.S. Fish and Wildlife Service in 1998 (USFWS 1998), states that loss of native dune habitat and the introduction of invasive plant and wildlife species led to the near extinction of the butterfly. However, efforts in the last 40-50 years to preserve remaining dune habitat and expand the population of dune buckwheat have been successful in increasing the butterfly population from a low of approximately 500 in 1984 (Center for Biological Diversity) to 25,000 in 2015 (Watson, 2016). According to the Recovery Plan, the “centerpiece of any effort,” to delist the butterfly “...must be the Airport Dunes, as this site contains not only the largest fragment, but the closest approximation to the prehistoric El Segundo Dune ecosystem.” Based on this statement, the El Segundo Dunes ESHA adjacent to the project site is ground zero for recovery of the butterfly. Thus, any suitable butterfly habitat in the vicinity of the El Segundo Dunes ESHA should be considered ESHA and should be protected against any significant disruption of habitat values as required by Section 30240 of the Coastal Act. Furthermore, as discussed earlier, the Coastal Commission has, in past actions, determined that any southern foredune habitat is ESHA.

To ensure that ESHA is adequately protected and that the project does not significantly disrupt adjacent ESHA, consistent with the Coastal Act, the Commission is requiring TE SubCom to develop an El Segundo Blue Butterfly Avoidance and Southern Forefune Protection Plan under **Special Condition 21**. This condition builds on TBIO-1 but includes several additional measures. Consistent with TBIO-1, **Special Condition 21** requires that a qualified biologist conduct surveys of the terrestrial conduit route on or adjacent to beach or dune habitat and delineate a 300 foot and 100 foot buffer around vegetated areas. Parking, lay down, storage and staging areas, and site access shall not occur within 300 feet of suitable El Segundo blue butterfly habitat, including any individual or patches of dune buckwheat observed by the biologist. These activities shall also avoid any vegetated foredune habitat and maximize the buffer around these areas, as feasible. Project activities related to installation of the terrestrial cable shall be conducted between late September and early June, outside of the active period for adult El Segundo blue butterflies, where feasible, and shall not occur within 100 feet of the mapped butterfly habitat or within 5 feet of vegetated southern foredune habitat, except where project activities will occur in paved areas. Given the high level of regular disturbance and isolated nature of the southern foredune vegetation not associated with the restored butterfly habitat or dune buckwheat plant, the smaller 5 foot buffer around these areas is adequate to ensure impacts to these areas are avoided. **Special Condition 21** also requires a post-construction biological survey to verify that all identified habitat remains intact after construction has concluded.

Furthermore, to further minimize the remote possibility of impacts associated with a frac-out, **Special Condition 16** requires that the applicant develop for review and approval by the Executive Director, an Inadvertent Release Contingency Plan that includes several provisions specific to HDD activities undertaken along South Marine Avenue in close proximity to El Segundo blue butterfly habitat and vegetated southern foredune habitat. This Plan shall clearly identify the location of the HDD entry and exit pits as well as the trajectory and depth of the bore to ensure direct impacts are avoided. The Plan shall also identify a monitoring procedure to

detect a frac-out and protocols to be followed in the event of a loss of drilling pressure and a confirmed frac-out. With these measures in place, the potential for a frac-out will be minimized and in the event a frac-out does occur, TE SubCom will have procedures in place to ensure ESHA is not impacted. With the inclusion of **Special Conditions 21 and 17**, impacts to the El Segundo blue butterfly and southern foredune habitat will be avoided and these ESHAs will be protected against the significant disruption of habitat values.

The proposed project also has the potential to result in indirect impacts to southern foredune ESHA from noise, dust and general disturbance. However, project-related impacts are not expected to be substantially different from impacts associated with the routine use of South Marine Avenue, Vista Del Mar and LAX. Furthermore, according to the EIR, impacts on the El Segundo blue butterfly associated with fugitive dust emissions will be avoided with the implementation of best available control measures, such as site watering, required under SCAQMD Rule 403. In addition, **Special Condition 21** mandates that the applicant maintain a 100 to 300 foot buffer around any suitable butterfly habitat. Finally **Special Condition 23** requires that night lighting be minimized to the extent feasible and that any necessary artificial lighting be shielded and directed downward and away from nearby dune and beach habitat which will ensure that indirect impacts to these areas from construction-related activities will be minor.

2. Birds

In addition to the El Segundo blue butterfly, the area surrounding the terrestrial conduit system has the potential to provide habitat for other special status species and migratory birds, such as the state and federally protected western snowy plover (*Charadrius nivosus nivosus*), California least tern (*Sternula antillarum browni*), loggerhead shrike (*Lanius ludovicianus*) and burrowing owl (*Athene cunicularia*). Approximately 850 feet to the north of the project site on Dockweiler State Beach is an area that has been designated as critical habitat for snowy plovers. This area is called the Dockweiler North Critical Habitat Unit. To the south of the project area, is another area designated as critical habitat for snowy plovers. This area is called the Dockweiler South Critical Habitat Unit. Both of these areas would be avoided during all project-related activities. Least terns generally prefer to nest in undisturbed sandy areas and have been observed in Ballona Wetlands, less than a mile to the north. Loggerhead shrikes nest in dune areas and have been observed in the El Segundo Dunes ESHA. Wintering burrowing owls have also been observed in the El Segundo Dunes ESHA, but not in close proximity to the project area.

Although the proposed project avoids designated critical habitat for western snowy plover, California least terns, loggerhead shrikes, burrowing owls and other migratory birds, the project area does include potentially suitable nesting and/or foraging habitat for these bird species. Ground disturbance and other construction-related impacts including noise and dust could disturb or displace any nesting birds that are present. To address this concern, the EIR included Mitigation Measure TBIO-5, incorporated into this CDP through **Special Condition 3**, which requires that the applicant conduct pre-construction nesting bird surveys within 500 feet of the project area if project-related activities occur during the migratory bird season (February 1 – August 31). If an active nest is found, the biologist will establish a no-disturbance buffer that cannot be breached until the nest is deemed inactive. The size of the buffer will be determined by the biologist based on the bird's behavior, nest location, landscape features and proposed site activities in the vicinity. To ensure that impacts to western snowy plover, California least tern

and other nesting birds are avoided, **Special Condition 22** further requires that pre-construction surveys for nesting birds be conducted year-round to ensure that surveys are also conducted during the western snowy plover roosting season (September through March). If an active nest is found any time during the year, TE SubCom shall notify all appropriate State and Federal agencies and develop an appropriate action plan. If the active nest is located within 300 feet of construction activities (or 500 feet for raptors), TE SubCom shall submit a plan, for review and approval by the Executive Director, describing how construction activities will be modified to avoid impacts to nesting birds.

To further reduce opportunities for disturbance to birds and other wildlife, the EIR included TBIO-6 that requires the applicant to minimize artificial lighting during nighttime hours and to implement glare screening measures and the use of downward cast lighting. **Special Condition 23** further requires TE SubCom to shield any necessary lighting and direct it away from beach and dune areas. With incorporation of **Special Conditions 3, 22 and 23**, the proposed project will avoid impacts to nesting and migratory birds.

3. Reptiles

Other special status species that could be present in the project area are the silvery legless lizard (*Anniella pulchra pulchra*) and coast horned lizard (*Phrynosoma blainvilli*), both designated as CA species of special concern. These species are known to inhabit foredune and vegetated beach communities and have been observed in the nearby El Segundo Dunes ESHA. To avoid impacts to these species, the EIR included Mitigation Measures TBIO-3 and 4. TBIO-3 requires that a qualified biologist survey all potential habitat within 250 feet of the project area for silvery legless lizard and coast horned lizard on a daily basis before the start of construction activities. If either reptile is discovered, the biologist shall actively move or passively encourage the lizard away from the project area. Measure TBIO-4 requires that in the event that a trench is left open overnight, the applicant, under the guidance of the biologist, shall incorporate a ramp to provide an escape route to any trapped wildlife. Both of these measures are incorporated into this CDP through **Special Condition 3**. **Special Condition 21** also requires that the applicant maintain buffers around suitable habitat for the El Segundo blue butterfly and vegetated southern foredune habitat. This measure will also provide additional protection to the silvery legless lizard and coast horned lizard. With these measures in place, impacts to silvery legless lizard and coast horned lizard will be avoided.

With the incorporation of **Special Conditions 3, 16, 17, 21, 22 and 23**, the Commission finds that habitat supporting special-status species and nesting birds will be protected against any disruption of habitat values, and thus, the proposed project is consistent with Section 30240 of the Coastal Act.

G. COMMERCIAL AND RECREATIONAL FISHING

Coastal Act Section 30234.5 states:

The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.

Commercial fishing is an important component of the regional economy in southern California. The major fishing ports in the project area are San Pedro and Terminal Island at the Port of Los Angeles near Long Beach, approximately 24 miles southeast of the proposed cable landing site. In 1999, commercial fishery landings at the Port of Los Angeles were ranked 8th by poundage (194.7 million pounds) and 16th by dollar value (\$36.1 million) nationwide. In 2016, the Port of Los Angeles's nationwide ranking had dropped to 23rd by poundage (36.5 million pounds) and 62nd by dollar value (\$18.6 million) (CDFW 2016, NOAA 2016). Other nearby fishing ports include Port Hueneme, Redondo Beach, and Newport Beach. The most common fishing gear types used in the project area include nets, trawls, pots and traps, trolling, and hand lines.

Recreational fishing in the area is predominantly by hook-and-line. Rocky headland areas in the Point Buchon area are fished for rockfish, lingcod, and cabezon. Other target species in this area include barracuda, bonito, and white sea bass. Trolling for salmon occurs parallel to shore out to depths just over 300 feet from near Point Sal to Cayucos. Fishers on charter boats also troll for albacore farther offshore.

Potential Project-Related Impacts

The gear types with the greatest potential for interacting with cables are bottom trawls.⁶ Fishing may still occur over the cables, whether buried or unburied, but in areas where the cable is not buried (*e.g.*, over rocky substrates or on steep slopes), is insufficiently buried, or becomes exposed, and where trawling occurs, the gear may be snagged, damaged, or abandoned if the fisherman is forced to cut his or her gear. Fishing will also be temporarily precluded during cable installation and repair operations. The principal impacts to fishing due to the proposed project therefore are: (1) preclusion from the project area during cable installation and repair; (2) fishing gear-cable conflict or entanglement; (3) and economic losses due to fishing-cable conflicts, including preclusion and gear loss.

Commercial fishing will be precluded from the cable installation corridor and safety zone during marine activities associated with cable installation. While the duration of these activities will vary along the cable corridor, in-water activities could take a total of 10 weeks. Temporary economic impacts to fishermen therefore could result during cable installation. Pursuant to the federal Submarine Cable Act (47 U.S.C. 21 §24), all vessels are required to maintain a distance of at least one nautical mile from a vessel laying or repairing a cable and one-quarter mile from the buoy of a vessel intended to mark the position of a cable when being laid or out of order. However, *de facto* preclusion created by all cable installation activities will be temporary and in constant motion as the cables are being laid and/or buried so there will be sufficient access to other fishing and boating areas in the project area. Moreover, once the cables are buried, there will be unrestricted access to these areas. Fishing could occur at locations within the route, but away from the cable-laying vessel(s), throughout the installation period. Therefore, a temporary fishing preclusion zone should not be a significant impact to commercial and recreational fishermen.

⁶ Bottom longlines also have a high potential for interacting with cables on the seafloor; however this type of fishing gear is now prohibited in California.

To minimize potential conflicts and impacts to fishing from cable installation, operation, and repair, TE SubCom became a party to an existing agreement called the Southern California Cable & Fishing Agreement dated June 8, 2002 between fiber optic cable companies representing the UNITY (Cable Segment 4), Tata (Cable Segment 4) and SEA-US cables and the Southern California Trawlers Association, the Los Angeles Commercial Fishermen's Association, the Southern California Commercial Fishing Association, and individual fishermen not represented by a fishing association (hereinafter referred to as the "Fishing Agreement" – See [Exhibit 9](#) for the full text). The original Fishing Agreement included the provisions summarized below:

- Distribute as-built cable installation information in writing, electronically, and on navigational charts of cable location and burial depth after installation to assure that accurate positions and depths are known to fishermen and other interested parties;
- Establish and fund a Cable Committee with fishermen and cable company representatives to "...reduce potential conflicts between the installation, continuation, and maintenance of the Cable Projects and commercial fishing activities along the California Coast";
- Fund and hire, through the Cable Committee, a Cable Committee Liaison Officer to carry out Cable Committee activities;
- Approval by the Cable Committee of all future cable alignments;
- Allow a representative of the fishing community to observe all cable-laying activities;
- Fund a Commercial Fishing Industry Improvement Fund in the amount of \$25,000 annually, for enhancement of commercial fisheries and the commercial fishing industry and support facilities. The funds are intended to be used for fisheries research, education, management, safety, and socioeconomic purposes;
- Establish a 24-hour hotline to take calls from fishermen who believe they have snagged their gear on fiber optic cables;
- Pay 100% of the costs of gear sacrificed by fishermen as a result of snagging cable provided 1) the fisherman has informed the 24-hour toll-free telephone hotlines of its situation; and 2) the fisherman's conduct was consistent with the Fishing Vessel Operating Procedures established in the Fishing Agreement; and pay additional claims according to Cable Committee guidelines based on the principle of "making the fisherman whole for his economic loss resulting from the Covered Cable snag";
- Pay "reasonable compensation" to fishermen economically impacted by cable installation or repair activities;
- Release any claims they might otherwise have against individual fishermen and refrain from taking any administrative, legal, or other action to sanction and/or recover damages against fishermen who comply with terms and conditions of the Fishing Agreement;
- Assume all liability, responsibility, and risk for any damage which may occur to their cables resulting from their inability to construct, maintain, place, and continue those cables in a manner which does not interfere with traditional fishing operations;
- Pay \$500 for each vessel engaged in trawl fishing in the project area that is owned or operated by a fisherman who signs the Fishing Agreement for use in upgrading communication and navigation equipment; and
- Resolve disputes with fishermen according to Dispute Resolution procedures.

This agreement was amended in November 2017 to acknowledge that the South Bay Cable/Fisheries Liaison Committee, Inc. (SBCFLC) is the successor to the Southern California Trawlers Association, the Los Angeles Commercial Fishermen’s Association and the Southern California Commercial Fishing Association and that the SBCFLC has represented that it has assumed all rights and obligations of the individual fisherman who had signed the original agreement. The amended agreement increases the amount of required funding for the Commercial Fishing Industry and Improvement Fund for the PLCN and any future cables to \$40,000 annually. **Special Condition 24** requires TE SubCom to abide by the provisions of the Fishing Agreement. To further minimize potential conflicts with fishing during cable repairs, **Special Condition 25** requires TE SubCom to provide notice in writing to the Executive Director and in a U.S. Coast Guard *Notice to Mariners* 15 days prior to any cable repair or maintenance activity, or as soon as possible for emergency repairs.

To address the economic impacts of preclusion from the project area, in Section 1.2(f) of the Fishing Agreement, TE SubCom agrees to “provide reasonable compensation to Fishermen who suffer damage as a result of the acts of installing, repairing, replacing, or maintaining of the Cable Projects, or any incidental activities in connection therewith. The amount of such compensation, as well as those entitled to receive it, shall be determined by the Cable Company, implementing guidelines approved by the Committee prior to installation.” This portion of the Fishing Agreement does not specify the amount of compensation to fishermen; it allows for Cable Committee input into the quantity and recipients of the compensation through “guidelines.”

Once a cable is laid, fishing gear could snag cable segments that are insufficiently buried or exposed on the seafloor, resulting in gear damage or loss. If gear is snagged and lost, fishermen would incur financial losses from abandoned gear and lost fishing time. TE SubCom will minimize potential fishing conflicts and effects through a number of measures. Most importantly, **Special Condition 5** requires TE SubCom to bury the cable to a depth of 1.0 meter in waters up to 1200 meters, except where precluded by seafloor substrates. Where a 1.0-meter burial depth cannot be achieved, TE SubCom shall bury the cables to the maximum depth feasible. TE SubCom estimates it can bury the cable along approximately 60% of the cable route, with an additional 20% where burial will be attempted. Buried cable will minimize the potential for fishing gear entanglement and gear damage or loss. TE SubCom will lay the cable on the seafloor and will not attempt to bury it in waters between 1200 meters and 1800 meters in depth. However, according to local fisherman (pers.com. Halmay and McCorkle, 6/28/16), there is minimal, if any, fishing beyond 1200 meters in this area, and the types of equipment that could be used in areas deeper than 1200 meters are not expected to interact with the cables on the seafloor.

To minimize the potential that fishing gear is snagged on exposed cable, several conditions have been added to ensure fisherman and other interested parties are notified of the as-built location of the cable as well as the location of exposed sections of the cable. **Special Condition 7** requires TE SubCom to notify fishermen of areas of exposed cable during the marine cable installation phase of the project by submitting to (a) the Executive Director, (b) the U.S. Coast Guard (for publication in a *Notice to Mariners*), and (c) the signatories of Fishing Agreement, weekly notices containing preliminary as-built coordinates of any unburied or exposed sections of cable.

TE SubCom is also required to make radio broadcast announcements on the local fishers' emergency radio frequency that provide the current cable installation location and a toll-free number that can be called for additional information. **Special Condition 8** requires TE SubCom to submit to the signatories of the Fishing Agreement electronic and hard copy as-built plans overlaid on NOAA navigation charts. Further, **Special Condition 10** requires TE SubCom to submit to the Executive Director a final cable installation report that includes a summary of cable installation and cable slack methods used; identification of any areas of cable suspension greater than 1.0 meter above the seafloor; an evaluation of the consistency of cable installation with TE SubCom's project description and conditions of this permit; and a description of any observed fishing activity during the pre-lay and cable installation project phases. In addition, **Special Condition 9** requires TE SubCom, within 60 days of completion of cable installation, to submit evidence to the Executive Director that TE SubCom has submitted to NOAA the geographical coordinates of the cable as-built plans using a Differential Geographic Positioning System unit or comparable navigational equipment so that NOAA can update its navigational charts for this area of coast.

In areas where the cable is suspended over the seafloor, there is a greater chance of fishing gear snags and entanglements. To minimize cable suspensions, **Special Condition 6** requires TE SubCom to submit a "Cable Slack Management Plan" to the Executive Director for review and approval. The Plan will describe the steps TE SubCom will take during cable installation to identify and eliminate, where feasible, segments of cable that are suspended above the seafloor.

To make sure that buried cable remains buried, **Special Condition 11** requires TE SubCom to conduct a cable burial survey five years after the cable is installed. The survey shall be conducted by a remotely operated vehicle ("ROV") equipped with video and still cameras. If the survey indicates no significant change to the burial status of the cable, then the Permittee will conduct a subsequent survey only if an "event" occurs that could result in the cable becoming unburied. An "event" is defined as an incident or activity (such as a gear snag), the circumstances of which indicate the likelihood that previously buried cable has become unburied; an act of God, such as a severe earthquake in the vicinity of the cables that could cause deformation of the sea floor or underwater landslides; or any other significant event that could cause excessive ocean floor scouring. If the survey indicates that there has been significant change to the burial status of the cable, TE SubCom shall submit to the Executive Director a plan to re-bury those cable segments.

To address potential impacts during cable repairs or cable re-burial, **Special Condition 25** requires TE SubCom to provide notice of such proposed repair or re-burial to the Executive Director and in a US Coast Guard Notice to Mariners 15 days prior to any cable repair or maintenance activity, or as soon as possible for any emergency repairs. In addition, within 90 days of either taking a cable out of service or after the expiration or termination of TE SubCom's lease agreement with the City, **Special Condition 12** requires TE SubCom to apply for an amendment to this permit to remove the cables from the seafloor.

In order to ensure compliance with these and other conditions, **Special Condition 1** requires TE SubCom to post a performance bond in the amount of \$500,000 to cover its cable operations in State and federal waters out to the 1,800-meter water depth

With implementation of these measures, the Commission finds that project-related impacts to commercial and recreational fishermen will be minimized and the proposed project is consistent with Section 30234.5 of the Coastal Act.

H. PUBLIC ACCESS AND RECREATION

Coastal Act Section 30210 states:

In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Coastal Act Section 30220 states:

Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

Proposed project activities may result in short-term disruption to recreational boaters and beach users. During marine cable installation, recreational fishers and other boaters must avoid the cable installation ship. Pursuant to the federal Submarine Cable Act (47 U.S.C. 21), the master of any vessel must keep a distance of at least one nautical mile from a vessel engaged in laying or repairing a cable and at least ¼ of a mile from buoys intended to mark the position of a cable when it is being laid. Therefore, the project may cause recreational vessels to change their course. However, the preclusion zones created by cable installation and repair activities will be temporary and in constant motion as the cables are being laid and/or buried so there will be sufficient access to other fishing and boating areas in the project area. Moreover, once the cables are laid, full access will be restored. Because of the short-term nature of the preclusion zones, the disruption of fishing and boating is not significant.

The onshore installation of the marine bores and cable, ocean ground beds and terrestrial cable may inconvenience beach users in the short-term. Project related activities would temporarily occupy a portion of one of the Dockweiler State Beach Parking Lots as well as a small area of beach during installation of the ocean ground beds and terrestrial conduit. Project staging and construction would occupy approximately 58 parking spaces in Dockweiler State Beach Parking Lot #3 for approximately four months. This represents 4.5 percent of the parking spaces available from the three closest parking lots at Dockweiler State Beach (the farthest lot located approximately a third of a mile away from the project site). In addition, construction and security personnel working on the project may take up additional parking spaces in Lot #3. Beach access would be maintained at all times.

Although project activities would occupy some parking spaces available to Dockweiler State Beach users, impacts to public access are expected to be minor. Approximately 87 percent of the parking spaces, or 374 spots, would remain available in Parking Lot #3. Additional beach parking is available in Lots #1 and #2 (approximately 846 spaces) and along Vista Del Mar Avenue just to the east of the beach. Furthermore, project-related activities are expected to occur outside of the peak summer months. In the event that construction activities do extend into peak

beach use season, the EIR included Mitigation Measure LU-1 requiring TE SubCom to coordinate with the County of Los Angeles, Department of Beaches and Harbors to arrange for a shuttle to transport construction workers onto the project site from a location away from the beach, to avoid use of additional parking spaces in the Dockweiler State Beach parking lot, if needed. This measure is incorporated into this CDP by **Special Condition 3**. Incorporation of this measure ensures that impacts on beach parking from project-related activities will be minor.

Project-related activities, including installation of the terrestrial conduit and construction traffic to and from the parking and staging areas, could result in increased traffic on streets surrounding the project site including Imperial Highway, South Marine Avenue and a small section of Vista Del Mar. To address these concerns, the EIR included Mitigation Measure TR-1 which restricts construction on arterial or collector roads to off-peak hours and Mitigation Measure TR-2 which requires TE SubCom to maintain continuous pedestrian and bicycle routes. These measures are also incorporated into this CDP by **Special Condition 3**. With this measure in place, increased construction-related traffic should not hinder access to Dockweiler State Beach and other coastal areas.

Directional drilling activities also could generate noise that could interfere with the recreational experience of beach users. However, noise at Dockweiler State Beach is likely elevated as compared to other beach locations due to aircraft noise from LAX, located just east of the project site and vehicular noise along the major thoroughfares adjacent to the site. According to the EIR, ambient daytime noise measurements on the beach range from 60 dBA to 81 dBA. The two primary sources of project-related noise are the drill rig and the mud system. Assuming an ambient noise level of 70 dBA, TE SubCom estimated a noise impact area within which background and project-related noise combined would exceed 75 dBA. The boundary of the noise impact area would be located 415 feet from the HDD equipment. HDD activities would be conducted over a 24-hour period and the total expected duration of project activities would be three to four months. To reduce the impact of project-related noise on beach-goers, the EIR required Mitigation Measure NOISE-1 which requires the applicant to equip all construction equipment with mufflers and other feasible noise attenuation devices, avoid use of horns, whistles and bells except for safety reasons, and to establish a mechanism for members of the public to report any noise-related concerns. **Special Condition 3** incorporates this measure into this CDP.

With the above-described measures in place, the Commission finds that any project-related impacts to public access and beach users will be minimal and temporary and therefore concludes the project, as conditioned, would be consistent with Sections 30210 and 30220 of the Coastal Act.

I. CULTURAL RESOURCES

Coastal Act Section 30244 states:

Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

Historic and cultural resources are places or objects that possess historical, cultural, archaeological or paleontological significance and include sites, structures, or objects significantly associated with, or representative of earlier people, cultures and human activities and events. Project-related activities have the potential to disturb or damage Native American artifacts and shipwrecks of potential cultural resources value. Disturbance of surface and subsurface soils both in the onshore and offshore environment could directly destroy a previously unrecorded historic or archaeological resource, including human remains, or disrupt the site such that the historic or archaeological context of the resource is altered adversely.

Onshore Resources

The EIR documents several potential cultural resources within the Project vicinity. A cultural resources record search, archival research and a pedestrian survey identified no known historic or archeologic resources within the Project vicinity. The EIR states that the potential for buried cultural resources along the terrestrial route is low due to significant landform alteration and the “dynamic and shifting nature of beach sands.” The EIR also documents a consultation with the Native American Heritage Commission (NAHC) that failed to identify any Native American cultural resources. TE SubCom also contacted five Native American individuals and groups that the NAHC identified as potentially interested parties. TE SubCom received two responses, one from Andrew Salas representing the Gabrieleno band of Mission Indians – Kizh Nation and the second from Robert Dorame, representing the Gabrielino Tongva California Indians of California Tribal Council. Both commenters requested the presence of a Native American monitor and an archeological monitor during any ground disturbing activities. Mr. Dorame also stated that he had grown up in the area and was aware of cultural artifacts that may not be included in the South Central Cultural Resources Information Center database. In addition, a paleontological resources records search and analysis revealed that the likelihood of encountering buried paleontological deposits is considered low in this area.

The proposed project includes ground disturbing activities associated with installation of the terrestrial conduit system, installation of the ocean ground beds and HDD activities that could adversely impact buried archeological or paleontological resources. To minimize the potential for damage to these resources, the EIR includes Mitigation Measure CR-1 that requires TE SubCom to develop a Cultural and Paleontological Resource Management Plan that includes provisions for awareness training, monitoring of all ground-disturbing activities by an archeologist and a Native American monitor, procedures to follow in the event that previously unknown resources are discovered, and a process for collection and reporting of any appropriate artifacts. The EIR also required CR-3 that describes procedures to follow if human remains are recovered. These mitigation measure are incorporated into this CDP under **Special Condition 3** (see [Exhibit 9](#)).

Offshore Resources

In the offshore environment, project-related activities have the potential to disturb, disrupt or degrade prehistoric sites and watercraft and historic shipwrecks found on or within ocean sediments. Impacts from HDD boring activities, the pre-lay grapnel run, and cable installation, burial and repair activities have the potential to displace or destroy elements of these resources that could result in the loss of important information about the historical or cultural context of the

resource. Preliminary records searches indicate a total of 66 shipwrecks within 10 nmi of the proposed cable route, including 4 within 2 nmi. A marine survey using sidescan sonar and magnetometer data identified seven submerged obstructions near the proposed PLCN route. Based on these data, TE SubCom adjusted the cable route to avoid all obstructions, resulting in a minimum separation of 3600 feet between the cable and the nearest obstruction. With these adjustments implemented, the proposed project will avoid impacts to marine cultural or paleontological resources.

The Commission finds that with measures in place to address previously unknown cultural resources that may be encountered during onshore construction, the project will not adversely impact cultural resources and is therefore, as conditioned, consistent with Section 30244 of the Coastal Act.

J. GEOLOGY AND HAZARDS

Coastal Act Section 30253 states, in part, that:

New development shall...:

(a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.

(b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

Geologic conditions vary widely along the terrestrial cable route, at Dockweiler State Beach and along the HDD bore trajectory, and along the submarine cable routes. The terrestrial portion of the cable route ranges in slope from level to gently sloping and is underlain by beach and dune sands with small amounts of silts and clays. The onshore portions of the project do not cross any active fault and are not located in a designated Alquist-Priolo Earthquake Fault Zone, although the region is subject to strong ground shaking from faults in the region. Liquefaction of the unconsolidated beach sands may be expected during severe ground shaking. The Project itself, however, will not cause or increase the likelihood that liquefaction will occur. Onshore project components will be buried and will not expose people or structures to risk of injury.

In the offshore environment, the marine portion of the project is located in a seismically active area that may experience strong ground shaking due to activity on nearby faults. It is standard practice to cease installation activities, including returning divers to support vessels, in the event of an earthquake. For the most part, offshore cable will be buried and won't contribute to increased risk of injury. Seismic activity could result in liquefaction of soils, however impacts associated with liquefaction are not expected to be significant.

The proposed cable route was engineered to avoid several significant geologic features that could impact the cable, including submarine canyons, steep slopes, and rocky substrates. From the HDD "punch-out" location offshore, the PLCN cable route crosses several offshore faults, although none have been active within the last 11,000 years. Although the offshore portions of

the cable will cross areas that may be subject to landslides on the seafloor, project activities are not expected to result in significant impacts to people or structures.

Stability of Landing Site

There are no significant concerns with the geological stability of the landing site at Dockweiler Beach in terms of shoreline retreat associated with coastal erosion or sea level rise, since there is no coastal bluff present and project-related infrastructure will be installed outside of the tidal zone. Terrestrial construction activities including excavation and trenching could potentially aggravate erosion by exposing additional volumes of sediment to weather and the tides. However, construction activities are located outside of the tidal range, and should not be exposed to tidal flows. To minimize impacts associated with terrestrial erosion, **Special Condition 20** requires TE SubCom to submit to the Executive Director for review and approval a SWPPP which incorporates erosion control measures for all activities. The four marine bores will be installed using HDD which will minimize the potential for erosion.

The EIR included a sea level rise analysis prepared by TE SubCom. TE SubCom used the Coastal Storm Modeling System (CoSMos), developed by the USGS to model the effects of a conservative projection of 1.75 meters of sea level rise. This projection constitutes a worst case scenario of potential sea level rise expected by the year 2100 and does not take into account future beach replenishment projects that could be implemented to reverse beach loss. As shown in [Exhibit 16](#), modeling results show that project components seaward of the proposed beach manhole and ocean ground beds would be inundated. However, all infrastructure at the landing site, including the beach manholes and ocean ground beds are designed to withstand seawater and would, thus, not pose a danger to the public or result in harm to other project components. However, as the sea level rises, wind and wave action under normal and extreme conditions will reach farther and farther inland, leaving open the potential for increased erosion and deposition of beach sand on the landward edge of Dockweiler State Beach. Under these future ocean and weather conditions, there is a potential that project components buried under the beach, such as the cable, beach manholes and ocean groundbeds, as well as portions of the terrestrial cable could become unburied, resulting in a hazard to the public. To address this concern, **Special Condition 27** requires that for as long as the cable and associated infrastructure are present, should any of the project components become unburied, TE SubCom will be responsible for reburying the exposed project components. With **Special Conditions 20** and **27** in place, the proposed landing site will not contribute to erosion and will minimize the potential for future hazards.

Geologic Processes and the Submarine Cable

The safety of the submarine cables along their routes offshore is of concern because, as described in the Section E, repair operations have the capacity to adversely impact marine organisms. Accordingly, to limit the need to conduct repair operations, the potential for breaks or damage to the cable related to erosion, scour, unstable soils, seismic activity or other hazards should also be minimized. To address these concerns, **Special Condition 5** requires TE SubCom to bury the cable to a depth of 1 meter where feasible. Burying the cable will protect it from scour and erosion associated with marine currents and waves. TE SubCom estimates that it can bury the cable along approximately 60-80% of the route. Further, the route was engineered to avoid potential hazards, including areas of potential geologic instability.

Even with these measures in place, it is possible that the cable could sustain impacts associated with geologic processes. Given submarine currents present on the continental shelf, burial to the 1.0-meter depth may not be sufficient in all locations to prevent exposure of the cable by scouring. Further, the relatively steep slopes (up to 15 %) on which the cables are to be installed could be subject to slumping and/or sliding, which could expose or break the cables. Exposure of the cable on the seafloor could subject it to damage by anchoring or trawling operations. To identify areas of cable that may have been exposed, **Special Condition 11** requires that within five years of initial installation of the cable, TE SubCom shall survey the portion of the cable route from the mean high tide line to the 1000-fathom depth to verify that the cables have remained buried consistent with the as-built cable burial plan required by **Special Condition 8**. If the surveys show that previously buried portions of the cable have become exposed, TE SubCom must submit a plan to re-bury those cable segments, thus reducing the potential for future damage or breaks in the cable. If the survey shows that the cable remains buried, TE SubCom would be required to conduct a subsequent survey only after an incident, such as a gear snag, or an earthquake or tsunami, which could result in exposure of sections of the cable.

Potential Impacts Related to Horizontal Directional Drilling Activities

One of the primary geologic concerns related to the proposed project is that horizontal directional drilling operations could result in release of drilling fluids (bentonite) into the nearshore or marine environment. Most likely is the release of bentonite through fractured bedrock and sediments, or as a result of a “frac-out,” in which the drilling bore creates fractures that extend to the seafloor as a result of drilling fluid pressures that exceed the strength of the rocks or sediments being drilled. Such inadvertent release of drilling fluid to the seafloor results from drilling through brittle, fractured and/or poorly consolidated rocks or sediments, the maintenance of too-high fluid pressures in the bore during drilling, and/or drilling at too shallow a depth below the seafloor.

To minimize the potential impacts associated with a frac-out, TE SubCom included an applicant measure to prepare and implement an Inadvertent Release Contingency Plan. In addition, the EIR included Mitigation Measure MBIO-4 which requires TE SubCom to add the use of fluorescent dye to improve detection of a frac-out in the marine environment. **Special Condition 3** incorporates this mitigation measure included in the EIR into this CDP. In addition, **Special Condition 16** adds additional requirements to the Inadvertent Release Contingency Plan to ensure it is consistent with Coastal Act requirements and past Commission approvals. Specifically, **Special Condition 16** requires that the Inadvertent Release Contingency Plan also includes provisions to use water as a drilling fluid for the last 60-100 feet of the HDD bore, a monitoring procedure using fluorescent dye to detect a frac-out occurring on the seafloor where visibility is poor (consistent with MBIO-4), and protocols to be followed in the event of a loss of drilling pressure and a confirmed frac-out. With these measures in place, the potential for a frac-out will be minimized and in the event a frac-out does occur, TE SubCom will have procedures in place to ensure that any impacts are temporary and minor.

As conditioned, the Commission finds the proposed project will minimize risks from geologic hazards to life and property and is therefore consistent with Section 30253 of the Coastal Act.

K. CALIFORNIA ENVIRONMENTAL QUALITY ACT

Section 13096 of the Commission's Code of Regulations requires Commission approval of Coastal Development Permits to be supported by a finding showing the permit amendment, as conditioned, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

The City of Los Angeles, acting as lead CEQA agency, certified an Environmental Impact Report for the proposed project on November 3, 2017.

The proposed development has been conditioned in order to be found consistent with the Chapter 3 policies of the Coastal Act. Mitigation measures, including conditions addressing marine resources, dredge and fill of coastal waters, water quality, ESHA, public access, cultural resources and hazards will ensure that the project does not result in any significant adverse environmental impacts. As conditioned, there are no feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impact which the activity may have on the environment. Therefore, the Commission finds that the proposed project is the least environmentally-damaging feasible alternative and is consistent with the requirements of the Coastal Act to conform to CEQA.

L. FEDERAL CONSISTENCY

The Commission's action in this case authorizes both a CDP for the proposed project and results in a conditional concurrence with TE SubCom's federal consistency certification. In the case of a conditional concurrence with a consistency certification, the following procedures are triggered under the federal consistency regulations (15 CFR Part 930):

930.4 Conditional Concurrences.

(a) Federal agencies, applicants, persons and applicant agencies should cooperate with State agencies to develop conditions that, if agreed to during the State agency's consistency review period and included in a Federal agency's ...approval under subparts D [or] E ... of this part, would allow the State agency to concur with the federal action. If instead a State agency issues a conditional concurrence:

(1) The State agency shall include in its concurrence letter the conditions which must be satisfied, an explanation of why the conditions are necessary to ensure consistency with specific enforceable policies of the management program, and an identification of the specific enforceable policies. The State agency's concurrence letter shall also inform the parties that if the requirements of paragraphs (a)(1) through (3) of the section are not met, then all parties shall treat the State agency's

conditional concurrence letter as an objection pursuant to the applicable Subpart and notify, pursuant to §930.63(e), applicants, persons and applicant agencies of the opportunity to appeal the State agency's objection to the Secretary of Commerce within 30 days after receipt of the State agency's conditional concurrence/objection or 30 days after receiving notice from the Federal agency that the application will not be approved as amended by the State agency's conditions; and

(2) The ... applicant (for Subparts D and I), ... shall modify the applicable plan, project proposal, or application to the Federal agency pursuant to the State agency's conditions. The Federal agency, applicant, person or applicant agency shall immediately notify the State agency if the State agency's conditions are not acceptable; and

(3) The Federal agency (for Subparts D, E, F and I) shall approve the amended application (with the State agency's conditions). The Federal agency shall immediately notify the State agency and applicant or applicant agency if the Federal agency will not approve the application as amended by the State agency's conditions.

(b) If the requirements of paragraphs (a)(1) through (3) of this section are not met, then all parties shall treat the State agency's conditional concurrence as an objection pursuant to the applicable Subpart.

If the applicant were to not agree to the conditions, the consistency regulations require the Commission to notify the applicant as follows:

Right of Appeal.

Pursuant to subsection (a)(1) quoted in the prior section and Subpart H of the federal consistency regulations, within 30 days from receipt of notice of a Commission conditional concurrence to which the does not agree, TE SubCom may request that the Secretary of Commerce override this objection. 15 CFR §§ 930.4(a)(1) & 930.125(a). In order to grant an override request, the Secretary must find that the proposed activity for which TE SubCom submitted a consistency certification is consistent with the objectives or purposes of the Coastal Zone Management Act, or is necessary in the interest of national security. A copy of the request and supporting information must be sent to the California Coastal Commission and U.S. Army Corps of Engineers. The Secretary may collect fees from TE SubCom for administering and processing its request.

[Note: This right of appeal does not apply to the CDP, but only to the activity authorized under the consistency certification.]

APPENDIX A: SUBSTANTIVE FILE DOCUMENTS

Coastal Development Permit Application and Federal Consistency Certification Materials:

Application for Coastal Development Permit 9-17-0389, dated May 2, 2017.

TE SubCom, Hard Bottom and Burial Feasibility Study Analysis, October 3, 2017.

Response to Notice of Incompleteness, submitted June 30, 2017.

Response to Second Notice of Incompleteness, submitted October 20, 2017.

Consistency Certification CC-0001-16, dated October 20, 2017.

Environmental Documents:

City of Hermosa Beach, *Final EIR for the Transpacific Fiber Optic Cable Project*, March 2016.

City of Los Angeles, *Draft EIR for the Los Angeles Transpacific Telecommunications Cable Hub Project*, May 2017.

City of Los Angeles, *Final EIR for the Los Angeles Transpacific Telecommunications Cable Hub Project*, August 2017.

Ecology and Environment (E&E) for the City of Hermosa Beach. *Final Environmental Impact Report, prepared for the Tycom Transpacific Fiber Optic Cable and Hermosa Beach Landing Project*, November 2001.

Coastal Commission Documents:

Final Adopted Findings for CDP 9-16-0160/CC 0001-16 (MC Global).

Memo to Steve Hudson, South Central Coast District Manager from Jonna Engel, Ecologist Re: Potential Impacts of the Broad Beach Geologic Hazard Abatement District Proposed Project on Terrestrial and Marine Resources In and Adjacent to the Project Footprint, Broad Beach, Malibu, California. November 26, 2014.

Published Articles and Reports:

Cacchione, Drake, Field, and Tate. "Sea-floor gouges caused by migrating gray whales off northern California," *Continental Shelf research*, Vol. 7, No. 6, pp. 553-560.

Heezen, B.C. "Whales entangled in deep sea cables." *Deep-Sea Research* 4:105-115, 1957.

Kogan, Paul, Kuhn, Burton, Von Thun, Greene, and Barry, 2006. *ATOC/Pioneer Seamount cable after 8 years on the seafloor: Observations, environmental impact*. Continental Shelf Research, Vol. 26, pp. 771-787.

Lissner, Andrew, Taghon, Gary, Diener, Douglas, Schroeter, Stephen, Dixon, John, 1991. Recolonization of Deep-Water Hard-Substrate Communities: Potential Impacts from Oil and Gas Development. *Ecological Applications*, Vol. 1, No. 3 (August 1991), pp. 258-267.

Minerals Management Service, Department of the Interior. *Gray Whale Monitoring Study: Final Report*, prepared by MBC Applied Environmental Sciences, August 1989.

Rampal, G. *Undersea Fiber-Optic Cable Systems Undergoing Unprecedented Growth*, *Sea Technology*, Vol. 39, No. 3, 10-19, 1998.

Watson, Traci, "Rare Butterflies Flying High at Los Angeles Airport," *National Geographic Magazine*. April 2016.

Wood, M.P. and Carter L. "Whale Entanglements with Submarine Communication Cables." *IEEE Journal of Oceanic Engineering*, Vol. 33, No. 4, October 2008.

Other:

California Department of Fish and Wildlife, Data on Final California Commercial Landings, 2014. <https://www.wildlife.ca.gov/Fishing/Commercial/Landings#26004609-2014>.

Electronic communications from Denise Toombs & Nikki Payne, ERM, to Kate Huckelbridge, California Coastal Commission, dated 10/20/17, 11/13/17, 12/15/17, 1/9/18, 1/18/18, 1/19/18, 1/22/18, 1/25/18.

NOAA Office of Science and Technology, Commercial Fishery Statistics, 2016. <https://www.st.nmfs.noaa.gov/commercial-fisheries/index>

Personal Communication from Mike McCorkle, South Bay Cable/ Fisheries Liaison Committee, to Kate Huckelbridge, California Coastal Commission, dated 6/28/16.

Personal Communication from Peter Halmay, South Bay Cable/ Fisheries Liaison Committee, to Kate Huckelbridge, California Coastal Commission, dated 6/28/16.

"Seadoc 2009-2014," spreadsheet developed by Cassidy Teufel and Kate Huckelbridge, California Coastal Commission, dated 6/17/16.

U.S. Fish and Wildlife Service, El Segundo Blue Butterfly Recovery Plan. September 1998.

Center for Biological Diversity. El Segundo Blue Butterfly (http://www.biologicaldiversity.org/campaigns/esa_works/profile_pages/ElSegundoBlueButterfly.html).