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STAFF REPORT

Application No.: **9-20-0275**

Consistency Certification No.: **CC-0002-20**

Applicant: **RTI Infrastructure**

Location: In state and federal waters offshore of San Luis Obispo County to the edge of the continental shelf; and at an existing landing at Pismo State Beach in Grover Beach, San Luis Obispo County, connecting to terrestrial fiber optic infrastructure.

Project Description: Install four steel pipes extending from a landing site in Grover Beach approximately 3,600 feet offshore to serve as conduits for fiber optic cables. Install and operate a submarine fiber optic cable extending from one of the four landing pipes through state and federal waters and terminating in Singapore. Connect the cable to terrestrial infrastructure approved by the City of Grover Beach (**Exhibits 1 and 2**).

Staff Recommendation: Approval with conditions (CDP); Concurrence with conditions (Consistency Certification).

SUMMARY OF STAFF RECOMMENDATION

RTI Infrastructure proposes the installation of four steel bore pipes and a fiber optic cable (extending through state and federal waters and ultimately terminating in Singapore) as part of a multi-phase project landing in Grover Beach to install and operate up to four trans-Pacific submarine fiber optic cables (**Exhibit 1**). The proposed project includes installation by horizontal directional drilling of four steel landing pipes, extending from the cable landing site to approximately 3,600 feet offshore, through which cables would pass and connect to terrestrial infrastructure approved by the City of Grover Beach. Three of these landing pipes would be reserved for future use, as the proposed project includes construction and operation of just one fiber optic cable. These findings cover a combined coastal development permit and federal consistency certification; the standard of review for both is Chapter 3 of the Coastal Act.

The key Coastal Act issues raised by this project are the potential for adverse impacts to marine resources and commercial fishing. To minimize adverse effects to marine resources, the staff recommends the Commission adopt several conditions designed to protect marine habitats and sensitive species. These include **Special Condition 4** requiring RTI Infrastructure to submit a Marine Wildlife Monitoring and Contingency Plan (MWMCP), **Special Condition 5** that requires the cable to be buried to a depth of one meter, and **Special Condition 6** would require RTI Infrastructure to avoid and eliminate cable suspensions. **Special Condition 12** would require RTI Infrastructure to eventually remove the cable from state waters. In addition, **Special Conditions 13** and **14** would require RTI Infrastructure to quantify impacts to hard bottom substrate, if any, and mitigate for those impacts through payment of a hard bottom mitigation fee to be used to remove derelict fishing gear from waters off of Southern California. Further, **Special Conditions 15 and 18** would require RTI Infrastructure to submit plans to protect against the discharge of hazardous and non-hazardous substances into the marine environment. With these conditions in place, staff recommends that the Commission find the proposed project consistent with Sections 30230, 30231 and 30232 of the Coastal Act.

The proposed project also has the potential to result in conflicts with and impacts to commercial and recreational fishing. To minimize this potential, **Special Conditions 7, 8**, and **9** would require RTI Infrastructure to notify fisherman of the location of the installed cable and any areas of exposed or suspended cable. In addition, **Special Condition 19** would require RTI Infrastructure to adhere to the requirements included in a Fishing Agreement between fiber optic cable companies and the fishing industry. As conditioned, staff recommends that 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 **approve** coastal development permit application 9-20-0275, as conditioned, and **conditionally concur** with consistency certification CC-0002-20. The motions are on page 4.

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APPENDICES

EXHIBITS

I. MOTION AND RESOLUTION

1. Coastal Development Permit

Motion:

*I move that the Commission **approve** Coastal Development Permit No. 9-20-0275 pursuant to the staff recommendation.*

Staff Recommendation:

Staff recommends a YES vote on the foregoing motion. Passage of this motion will result in approval of the permit as conditioned 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 9-20-0275 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.

2. Consistency Certification

Motion:

*I move that the Commission **conditionally concur** with Consistency Certification CC-0002-20 on the grounds that, if modified in accordance with the conditions listed in the staff report, the project described therein would be consistent with the enforceable policies of the California Coastal Management Program (CCMP).*

Staff Recommendation:

Staff recommends a YES vote on the motion. Passage of this motion will result in a concurrence with the consistency 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 Consistency Certification CC-0002-20 on the grounds that, if modified in accordance with the conditions listed in the staff report, the project described therein would be consistent with the enforceable policies of the CCMP.*

II. APPLICANT'S CONSISTENCY CERTIFICATION

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

III. STANDARD CONDITIONS

The Coastal Development Permit (CDP) No. 9-20-0275 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.

IV. SPECIAL CONDITIONS

Both CDP No. 9-20-0275 and Consistency Certification (CC) No. CC-0002-20 are subject to the following special conditions:

1. **Performance Bond.** PRIOR TO ISSUANCE OF THIS PERMIT, the applicant shall provide a surety bond or other security device guaranteed by The Permittee and that is acceptable to the Executive Director of the Commission (hereinafter Executive Director), for $500,000, and naming the 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 the cable has 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 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: Clean Water Act Section 401 water quality certification.
   b. California State Lands Commission: lease for marine portion of project in state waters, granted at the State Lands Commission June 23, 2020 meeting.
   c. California Department of Parks and Recreation: easement and special use permit.
   d. 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.
   e. City of Grover Beach: Coastal Development Permit for terrestrial portion of project, granted on June 24, 2020.

3. **Mitigated Negative Declaration Mitigation Measures.** This permit incorporates those mitigation measures identified in the April 2020 Mitigated Negative Declaration for the RTI Infrastructure, Inc. Grover Beach Subsea Fiber Optic Cables Project (State Clearinghouse No. 2020040309) concerning marine habitats, biological resources, fishing, public access, cultural resources and hazards that are attached to this report as **Exhibit 6.**

4. **Marine Wildlife Monitoring and Contingency Plan (MWMCP**). AT LEAST 60 DAYS PRIOR TO THE START OF CABLE INSTALLATION ACIVITIES, 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 cable or lines, the observer shall immediately notify NMFS and the Executive Director, so appropriate response measures can be implemented. Similarly, if any 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 two nautical miles per hour (knots), with the speed of Project support vessels while assisting the cable-laying vessel limited to three to five 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 one meter in waters up to 1800 meters deep, except where precluded by seafloor substrates. Where a one-meter burial depth cannot be achieved, the Permittee shall bury the cable 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 an ROV to reposition and/or bury to one 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 19**), 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 19**) 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 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 one 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 one 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**. Five years after 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 1800-meter depth contour to verify that the cable has remained buried consistent with the cable installation report required by **Special Condition 10**. The survey shall be conducted by a third party, approved by the Executive Director, using an 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 video recorded during the cable survey. The video 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 the previously buried cable has become unburied; an act of God, such as a severe earthquake in the vicinity of the cable 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 ten days of the reporting or other identification of a qualifying event. This notification shall describe the location and nature of the qualifying event and the proposed survey, including survey location and timing. Following Executive Director approval of the proposed survey, the applicant 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 Executive Director determines that the initial five year survey demonstrates that a segment(s) of a cable is no longer buried consistent with the cable installation report required by **Special Condition 10**, 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 State Lands Commission lease, the Permittee shall apply for an amendment to this permit to remove the cable(s) from the territorial waters of the State 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. **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, if any, 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. 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 one meter from the seafloor.

14. **Hard Bottom Mitigation Fund.** The applicant shall compensate for all project-related impacts to hard bottom habitat, if any, 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 $14.71 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 twice the width of the cable. 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 13**. The applicant shall provide evidence of this payment to the Executive Director within the same time frame.

15. **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 also shall 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.

16. **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 five-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.

17. **Marine Discharge**. There shall be no marine discharge of sewage or bilge/ballast water from vessels either installing or repairing the cable. A zero-discharge policy shall be adopted for all project vessels.

18. **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. At a minimum, the plan shall include:

    a. An evaluation of a worst-case spill volume;

    b. Clear identification of the trajectory and depth of marine bores;

    c. A commitment to use water as a drilling fluid for the last 60-100 feet of the bore before the drill punches out to the ocean bottom;

    d. Measures describing training of personnel, monitoring procedures, equipment, materials and procedures in place for the prevention, containment, clean up, and disposal of release drilling muds, and agency notification protocols;

    e. Methods for detecting the accidental release of drilling fluids that include: (1) continuous monitoring of drilling pressures to ensure they do not exceed those needed to penetrate the geologic formation; (2) continuous monitoring of mud returns at the entry pit to determine if mud circulation has been lost; and (3) a protocol for using fluorescent dye to detect a frac-out on the sea floor;

    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 the beach (e.g., isolating the area through construction of temporary berms, use of silt fences, straw bales, absorbent pads, or straw wattles); and

    h. Protocols the Permittee will follow if there is a fluid release in marine waters (e.g., immediately erect an underwater boom/curtain or other method of isolating and containing the release).

    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 Commission, State Lands Commission, CDFW Office of Spill Prevention and Response, and the National Marine Fisheries Service regarding appropriate incident-specific actions to be undertaken before HDD activities can be renewed.

19. **Compliance with Fishing Agreement Requirements**. AT LEAST 30 DAYS PRIOR TO THE COMMENCEMENT OF OFFSHORE ACTIVITIES, the Permittee

shall provide the Executive Director with proof of having formally joined the Fishing Agreement, attached as **Exhibit 7**, between area fishing organizations and cable companies. In a manner consistent with the requirements of the Fishing Agreement, 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, and shall abide by the other terms of the Fishing Agreement.

20. **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.

21. **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., involving a whale), the Permittee shall use all feasible measures to retrieve the fishing gear or inanimate object. In the event of an entanglement involving a whale, the Permittee shall notify the NOAA stranding coordinator. 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.

22. **Elimination of Future Hazards.** Within 30 days of discovering that a project component installed in terrestrial, beach or intertidal areas and approved under this CDP 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

A. PROJECT DESCRIPTION

RTI Infrastructure proposes to install four landing pipes and one fiber optic cable as part of a multi-phase project to install and operate up to four transpacific submarine fiber optic cables landing at Pismo State Beach in Grover Beach with the purpose of connecting the United States to Singapore, Hong Kong, Guam, and Australia (**Exhibit 1**). The proposed cable, known as the Bay to Bay Express (BtoBE) system, would extend through state and federal waters (**Exhibit 2**) and connect to Singapore. The proposed project includes installation, using horizontal directional drilling techniques, of

four steel landing pipes which would extend approximately 3,600 feet offshore from the cable landing site (**Exhibit 3**). The proposed cable would use one of these landing pipes, with the other three reserved for future use. The proposed cable would connect with terrestrial fiber optic cable infrastructure under the jurisdiction of the City of Grover Beach and located in a parking lot adjacent to and east of Fin's Seafood Restaurant. The four landing pipes and fiber optic cable are described in more detail below.

The four steel landing pipes are proposed to be approximately five to six inches in diameter, 3600 feet long, and would be buried at least 35 feet below the ocean bottom. The landing pipes would surface offshore at a water depth of approximately 33 feet. The MND for the proposed project describes the horizontal directional drilling technique proposed for the steel landing pipes as follows:

> *The HDD would be guided by a drill head fitted with a steering tool using magnetometers and inertial devices to track the direction of advance (horizontal and vertical) and the absolute location. Two types of drill heads could be used, depending on geologic conditions:*
>
> - *Spud Jet. Spud jets force the drilling fluid through the jet bit to erode the earth material and create the bore hole into which the conduit is inserted. This type of drill head is used in soft soils such as sands, silts, and clays—the expected composition of material to be encountered during marine steel bore pipe installation.*
> - *In-hole mud motor. This would use drilling fluids to rotate a drill head through hard rock such as limestone, sandstone, and granite; this type of head would be used if such conditions were encountered.*
>
> *The landing pipe would be advanced in 30-foot sections through the boreholes as they are created. Surveys would be conducted in 15- and 30-foot increments to verify the drill position and path. The HDD machine would occupy the bore entry site, drilling steel casing into the ground at an angle. Once the bore pipe reaches the desired depth, the direction would level out as the drilling continues to push the pipe horizontally through the ground. Once the landing pipe would reach the appropriate distance offshore, the drill head would be guided to the surface… This operation would happen four times to install four independent landing pipes for each fiber optic cable….The drill head would say at the exit point of the landing pipe offshore…until…divers would take it off and install a flapper valve so that ocean water does not enter into the landing pipe…*

Construction staging for the installation of the landing pipes would occur in the parking lot adjacent to and east of Fin's Seafood Restaurant that is under the jurisdiction of the California Department of Parks and Recreation, which anticipates granting RTI a special use permit and easement for the project in July 2020.

RTI Infrastructure proposes to install the BtoBE cable along the alignment shown in **Exhibit 2**. As illustrated in **Exhibits 4 and 5**, this alignment was selected to avoid marine features such as the Point Buchon State Marine Reserve, Point Buchon State Marine Conservation Area, and Habitat Areas of Particular Concern such as mapped sea grass, rocky reefs, kelp beds, and particularly designated areas.

Before installation, RTI Infrastructure will conduct a pre-lay grapnel run to clear seafloor debris from the cable corridor. Anything that the grapnel snags, such as discarded fishing gear, will be retrieved and disposed of onshore.

Following the pre-lay grapnel run and beginning at the seaward extent of the installed bore pipe, RTI Infrastructure will install the cable. Divers, Remotely Operated Vehicles (ROVs), or a cable plow towed by the cable lay vessel will be employed, depending on water depths. Installation will occur by creating a furrow under the cable, allowing it to drop into the furrow, and allowing disturbed sediments to resettle, burying the cable to a depth of three to four feet (1 to 1.2 meters). Where the plow is not able to achieve the targeted burial depth due to bottom conditions, an ROV will attempt to bury the cable. Deeper than 5,904 feet (1,800 meters) feet, the cable will be laid directly on the seafloor.

RTI Infrastructure estimates that construction of the proposed project will take approximately six weeks. Installation of the marine portion of the cable will occur 24 hours per day and seven days per 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. Repairs would include cable recovery by use of a grapnel, divers, and/or an ROV, depending on water depths. Once at the ocean surface, 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.

RTI Infrastructure estimates that the cable would have a life of 25 years. Within 90 days of either taking the cable out of service or expiration of the project lease, RTI Infrastructure would notify the City, the Commission, and other agencies of the proposed disposition of the inactive cable.

B. Prior Fiber Optic Cable Projects Approved by the Commission

Since 2016, the Commission has approved other fiber optic cable projects in southern California:

- In July 2016, the Commission approved the installation of a 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/CC-0001-16).

- In February 2018, the Commission approved a fiber optic cable and 4-cable landing site at Dockweiler State Beach (9-17-0389/CC-0004-17).
- In November 2018, the Commission approved a second fiber optic cable at Dockweiler State Beach (9-18-0647/CC-0006-18).
- In February 2019, the Commission approved a second fiber optic cable at Hermosa Beach (9-18-0593/CC-0008-18).
- In March 2019, the Commission approved a third fiber optic cable at Hermosa Beach (9-18-1211/CC-0010-18).
- In February 2020, the Commission approved a fourth fiber optic cable at Hermosa Beach (9-19-0880/CC-0004-19).

C. Other Agency Approvals and Tribal Consultations

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

The RWQCB regulates waste discharges into receiving waters in the project area. RTI Infrastructure has applied for a Section 401 water quality certification for the proposed project, anticipated for issuance in July 2020.

U.S. Army Corps of Engineers (Corps)

The Corps has regulatory authority over the 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 Applicant requested federal authorization from the Corps, which anticipated issuing a permit in July 2020, contingent upon Commission authorization of the proposed project.

State Lands Commission

The State Lands Commission adopted the project Mitigated Negative Declaration and approved issuance of a lease for the proposed project at its June 23, 2020 meeting.

California Department of Parks and Recreation

RTI Infrastructure applied for an easement and special use permit from the California Department of Parks and Recreation, anticipated for issuance in July 2020.

City of Grover Beach

The City of Grover Beach approved a Coastal Development Permit for the terrestrial portion of the project on June 24, 2020.

Tribal Outreach and Consultations

During the review of this project, Commission staff reached out to representatives from Native American Tribes understood to have current and historic connections to the project area: the Barbareno/Ventureno Band of Mission Indians; Chumash Council of Bakersfield; Coastal Band of the Chumash Nation; Northern Chumash Tribal Council; Salinan Tribe of Monterey and San Luis Obispo Counties; San Luis Obispo County Chumash Council; Santa Ynez Band of Chumash Indians; Xolon-Salinan Tribe; and yak tityu tityu tak tilhini – Northern Chumash Tribe. Contact information for these Tribal Representatives was provided by the Native American Heritage Commission.

Commission staff received two responses from these contacts, from the Tribal Administrator for the Salinan Tribe of Monterey and San Luis Obispo Counties (Tribal Administrator) and from the Northern Chumash Tribal Council. The Tribal Administrator expressed concern with the manner in which the project MND described the initial contact with Native American people along this portion of the California coast and requested that the MND specifically reference and appropriately describe contact with the Salinan People. In addition, the Tribal Administrator and the Northern Chumash Tribal Council requested that ground disturbance activities be accompanied by a Tribal monitor. Staff provided State Lands Commission staff with these comments. The requirement for Tribal monitoring is included in the Mitigated Negative Declaration and, through **Special Condition 3**, is incorporated into this CDP.

At the time of publication of this staff report, no other Tribal questions or concerns had been brought to the attention of Commission staff. Any concerns raised subsequent to the publication of this report will be included in an addendum to this staff report.

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.*
>
> *…*

The proposed project includes the construction of a cable on the seafloor and constitutes fill of open coastal waters. Thus, the project is subject to three requirements of Coastal Act Section 30233(a). 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 B to BE cable, the purpose of which is to provide ocean connectivity between the United States and Singapore, 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 BtoBE cable meets the allowable use test of Coastal Act Section 30233(a).

Alternatives

The Commission must find that there is no feasible less environmentally damaging alternative to the proposed project, in this case by assessing two components of the proposed project: its landing site and offshore route.

Alternatives to the Proposed Landing Site

The proposed cable landing site would connect to terrestrial fiber optic cable infrastructure at the landing site shown in **Exhibit 2**. As shown in **Exhibits 4 and 5** and described in the marine resources survey completed for the project (Applied Marine Sciences 2019a and Applied Marine Sciences 2019b), this landing site avoids the need to route the cable through protected offshore areas (marine reserves and conservation areas) and nearshore kelp and surfgrass (*Phyllospadix* spp.) areas that are north of the landing site. An alternative site would involve new construction or use of a different but already constructed landing site; there is no other already constructed site with availability for a cable to land along the southern or central California coast. Use of a different landing site would involve the same construction activities and impacts associated with the proposed project, and would not be considered less environmentally damaging. For these reasons, the Commission finds that there is no feasible less environmentally damaging alternative landing location to the proposed project.

Alternative Offshore Routes

As shown in **Exhibits 4 and 5**, the proposed cable route avoids protected marine features such as state marine reserves and conservation areas. As described in the project's vessel anchoring plan, vessel anchorage and cable installation activities would avoid mapped kelp beds in the vicinity of the seaward location of the bore pipe. No impacts to particularly sensitive hard substrate benthic communities are anticipated along the proposed cable route, according to geophysical survey information acquired as part of project planning. Therefore, the Commission finds that the proposed project is the least environmentally damaging feasible alternative and meets the second test of Coastal Act Section 30233(a).

Mitigation

Sections E and F of this report describe feasible mitigation measures requiring RTI Infrastructure to: avoid and eliminate cable suspensions; submit plans to minimize impacts from anchoring, hazardous material spills, and stormwater runoff; and mitigate for impacts to hard bottom habitat. With the imposition of these mitigation measures, the Commission finds that the third test of Coastal Act Section 30233(a) has been met.

On this basis and based on the findings regarding alternatives and the allowable use test, the Commission finds that the 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 proposed cable route extends from Grover Beach through state and federal waters out to the edge of the Outer Continental Shelf (**Exhibit 2**). As discussed below, the project has the potential to result in impacts to marine mammals and sea turtles, fish, benthic habitat (soft and hard substrate areas), and marine water quality.

1. Marine Mammal and Sea Turtle Impacts

The proposed project has the potential to adversely affect whales and other marine wildlife through entanglement with the project cable, entanglement with “ghost nets” or abandoned fishing gear, collision with project vessels, and effects from vessel-related noise.

Potential Entanglement with the Project Cable

Marine mammals that live or migrate through the project area may become entangled in insufficiently buried cable or in cable suspensions. Whale species with a moderate to high likelihood of being present offshore the central California coast include gray whales (*Eschrichtius robustus*), humpback whales (*Megaptera novaeangliae*), blue whales (*Balaenoptera musculus*), fin whales (*B. physalus*), (*Orincus orca*). Sperm whales (*Physeter microcephalus*) are rarely observed offshore this portion of the California coast. Several species of dolphins and porpoises, including bottlenose dolphins (*Tursiops truncates*) and short-beaked common dolphins (*Delphinus delphus)*, are found, as are pinnipeds (sea lions and seals), sea otters, and occasionally sea turtles.

Because of their behavior and migration patterns, two of these species—the California gray whale and sperm whale—have the greatest risk of cable entanglement. Approximately 20,000 gray whales annually migrate between Alaskan waters and Baja California. Since gray whales feed on the seafloor, gray whales may face the highest risk of entanglement with insufficiently buried or exposed cables. Sperm whales are much less abundant than gray whales, numbering approximately 1,200 individuals offshore California (E&E 2001). Sperm whales typically inhabit deep open waters, and are the deepest diving of all cetaceans, regularly diving 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.

RTI Infrastructure proposes to bury the cable along its entire alignment out to the outer continental shelf. However, if unexpected seafloor conditions are encountered, there is potential for portions of the cable to be suspended. In addition, there is entanglement risk during cable installation as cable is spooled out from the cable-laying vessel and traverses the length of the water column before it is buried in seafloor sediments.

To minimize the potential for entanglement, the Commission is imposing several conditions. **Special Condition 3** requires RTI Infrastructure to implement the MND mitigation measures related to marine resources (**Exhibit 6**), including requiring a biologist for marine mammal and sea turtle monitoring and decreasing speeds when marine mammals and sea turtles are present. Further, **Special Condition 4** requires RTI Infrastructure to submit a Marine Wildlife Monitoring and Contingency Plan (MWMCP) to the Executive Director for review and approval. The MWMCP will expand upon the MND measures by including marine wildlife training for project personnel and reduced vessel speed during all cable-laying activities. In addition, the MWMCP will include two NMFS-approved marine mammal observers who will have the authority to stop any activity that could result in harm to a marine mammal or sea turtle.

Special Condition 5 requires RTI Infrastructure to bury the cable to a depth of one meter where feasible. To minimize the occurrence of suspended cable, **Special Condition 6** requires RTI Infrastructure to submit to the Executive Director for review and approval a Cable Slack Management Plan describing the installation measures that will identify and eliminate, where feasible, segments of cable that are suspended above

the seafloor. **Special Condition 12** requires RTI Infrastructure 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 termination of the project lease from the State Lands Commission. To ensure compliance with these and other conditions, **Special Condition 1** requires RTI Infrastructure to post a performance bond in the amount of $500,000 to cover its cable operations in state and federal waters.

Entanglement with Ghost Nets and Abandoned Fishing Gear

When fishing gear snags on cables or other bottom features, fishermen generally abandon their gear in place. This abandoned gear can entangle marine mammals and fish, preventing them from feeding and causing them to drown. Several design aspects of the proposed project reduce the potential for gear snags on the proposed cable. Foremost, RTI Infrastructure anticipates burying the cable beneath the seafloor surface. Additionally, **Special Condition 8** requires RTI Infrastructure to provide the local fishing entities who are signatories to the Central California Joint Cable Fisheries Liaison Committee Agreement with as-built plans of the installed cable, including burial depths and the locations of any cable suspensions. **Special Condition 9** requires RTI Infrastructure to provide NOAA with information necessary to update nautical charts to reflect the position and burial status of the installed cable. Finally, **Special Condition 21** requires RTI Infrastructure to remove snagged fishing gear no later than six weeks after its discovery or notice of an incident. Within two weeks of completing a recovery operation, RTI Infrastructure is required to submit to the Executive Director a report describing the nature and location of the entanglement and the retrieval method used.

Marine Mammal or Sea Turtle Collision with Project Vessels

Impacts to marine mammals and sea turtles could result from collisions with project vessels during marine operations associated with the proposed project. However, the slow vessel speeds during cable installation activities (in general, 0.5 to 1.5 knots) limit much of the potential for such collisions. Marine mammal monitoring protocols required by **Special Condition 4** also will help to reduce collision risk. With these conditions in place, potential adverse effects to marine mammals and sea turtles from collisions with project vessels will be minimized.

Marine Mammal Effects from Project-Related Vessel Noise

Underwater noise from cable installation could result in effects to marine mammals and sea turtles. However, the time- and geography-limited nature of project activities will limit the potential for underwater noise effects. Vessel speed restrictions and implementation of the marine mammal monitoring program required in **Special Condition 4** will further limit exposure of marine mammals to noise levels that would be sufficiently high to result in adverse effects.

2. Fish

Common fish species offshore this portion of the California coast include pelagic species (found in the water column) such as small schooling species such as Pacific sardine (*Sardinops sagax*) and northern anchovy (*Engraulis mordax*), as well as schooling predators including bluefin tuna (*Thunnus thynnus*), thresher shark (*Alopias*

yulpinus) and swordfish (*Xiphias gladius*). Other common fish species include mako shark (*Isurus oxyrinchu*), leopard shark (*Triakis semifasciata*), Chinook salmon (*Oncorhynchus tshawytscha*), squid (*Doryteuthis opalescens*), smelt (*Spirinchus stark*), mackerels (Trachurus spp.), and various perches (Embiotocidae).

In soft substrate areas, the most common benthic habitat in the proposed cable route, fish species include flounders (Pleuronectoidei), soles (Soleidae), sanddabs (Citharichthys spp.), eelpouts (Zoarcidae), hagfish (Myxinae), combfish (Zaniolepsis spp.), and skates and rays (Rajidae). Fish that typically associate with hard substrate habitats include multiple species of rockfish (Sebastes spp.), lingcod (*Ophiodon elongates*), staghorn sculpin (*Leptocottus armatus*), and wolf eels (*Anarrhichthys ocellatus*).

The proposed project is not likely to directly adversely affect individual fish. The cable installation vessel will move slowly allowing mobile species to flee, and vessel speeds will not result in noise levels that would cause injury. During installation in areas with soft substrate, fish will likely avoid areas with temporary turbidity increases. Disturbed sediment is likely to settle relatively quickly (within a matter of hours), and the narrow project footprint will not substantially limit available fish habitat. Thus, such impacts would not be significant. **Special Condition 16** requires RTI Infrastructure to submit a Critical Operations and Curtailment Plan describing the sea and weather conditions under which project activities can safely proceed, thus minimizing sediment dispersal by avoiding periods of storms or heavy seas.

3. Benthic habitat: Soft Substrate Areas

RTI Infrastructure summarized data collected during the geophysical survey of the project route and other studies to characterize seafloor habitats and associated biota (Applied Marine Sciences 2019a and Applied Marine Sciences 2019b). According to these data, the seafloor habitat along the route consists of unconsolidated, soft-bottom habitats (e.g., gravel, coarse-grained and mixed sediments, sand, and mud), and the species found in such habitats are typical of the high-energy and dynamic environments of the California coast. Examples of dominant species present at shallow water depths (subtidal to 30 meters or 98.4 feet) include several species of red algae and ornate tube worm (*Diopatra ornata*), crabs (*Cancer* spp.), octopus (*Octopus* spp*.)*, white sea pen (*Stylatula elongata*), sea cucumber (*Parastichopus californicus*), and sunflower star (*Pycnopodia helianthoides*). In coarser sand habitats, the invertebrate community is dominated by ornate tubeworms and narrow bands of sand dollars (*Dendraster excentricus*). From 30-150 meter (98.4-410 feet) depths, sea pens, several species of anemones, sea slug (*Pleurobranchea californica*), and sand star (*Luidia foliolata*) are present. Deeper species include sea urchins, sea pens, octopus, sea stars, and small polychaetes and crustaceans. In deeper areas (below roughly 600 meters or 1,968 feet), low oxygen conditions likely contribute to decreased abundance and biomass of invertebrates. According to the MND and the marine resources summary (Applied Marine Sciences 2019a and Applied Marine Sciences 2019b), no threatened or endangered soft-bottom species were identified along the proposed cable route.

In evaluating the significance of potential impacts on soft-bottom habitat and associated biota, the MND states that effects to soft sediment biota from the proposed cable are anticipated to be minimal and short-term. In addition to being a relatively small area of disturbance compared to the preponderance of soft-bottom habitats offshore the central coast of California, potentially affected benthic infauna are common species that would readily repopulate the disturbed area after the cable is installed. Because the benthic habitat disturbance does not involve the removal of sediment, and due to the proximity of the disturbed sediments to undisturbed sediments, the amount of time required for benthic organisms to recover would be minimized (Applied Marine Sciences 2015).

Bull kelp in areas of loose silty sand has been mapped near the location of the steel bore pipe contact with the seafloor and near the proposed cable route, up to approximately 82 feet (25 meters) water depth (Applied Marine Sciences 2019b). To avoid impacts to this kelp species, the cable route avoids the mapped kelp areas. Additionally, an anchoring plan prepared by RTI Infrastructure provides for vessel anchor sets that avoid kelp areas.

4. Benthic Habitat: Hard Substrate Impacts

Cable-laying operations can adversely affect hard substrate habitat and associated biota, if present. Hard substrates provide habitat and shelter for numerous sessile organisms, fish, and mobile invertebrates such as lobsters and crabs. In shallow waters (less than 200 meters or 656 feet), giant kelp, eelgrass and anemones such as *Corynactis californica* are present. At these depths and deeper, if there are favorable high relief substrates, current speeds, and sedimentation rates, hard and soft corals can occur. In waters greater than 600 meters (1,968 feet), species include anemones, amphipods, polychaetes, gorgonians, sponges, shrimp, crinoids, brittle stars, and sea stars. Adverse effects on hard substrate habitats are potentially significant because: (a) deepwater reefs are relatively rare along this portion of the California coast; (b) they support a diverse assemblage of invertebrates; (c) they attract fish as a nursery ground, food source, and shelter; and (d) epibiota on rocky substrates are sensitive to disturbance.

Additional adverse effects to hard substrate could occur during cable installation and subsequent movement of the installed cable on the seafloor (i.e., from currents and wave action). In their study on the environmental impacts of a one- to three-inch submarine cable in Half Moon Bay, Kogan et al. (2006) found scrapes and vertical grooves in rocky substrate along the cable route, and typical epifaunal organisms were absent. Placement of the project cable on rocky substrates can disrupt associated bottom communities, 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.

Based on geophysical survey data, the proposed cable route will avoid hard substrate areas. However, it is possible that the cable could cross areas of hard substrates that were not accurately mapped. To address this possibility, **Special Condition 14** requires

RTI Infrastructure to conduct a post-lay burial survey that includes quantification of any impacts to hard substrate areas. Should the post-lay burial survey show that impacts to hard substrate did occur, RTI Infrastructure would be required to mitigate those impacts, similar to previous submarine cable projects approved by the Commission.

In previous marine cable approvals, the Commission has estimated the area of impact by multiplying the length of cable installed over hard substrate by double the cable width to account for limited cable movement following installation, and then has required project applicants to pay a hard substrate mitigation fee to compensate for adverse effects to hard substrate and associated biota. These mitigation funds have been directed to the UC-Davis Wildlife Health Center's California Lost Fishing Gear Recovery Project for removal of lost or discarded commercial fishing gear. Such gear is hazardous to divers and wildlife including seabirds, fish, turtles, sea otters, and other marine mammals. Derelict fishing gear can continue to "catch" fish and marine animals, and it can damage the habitat upon which it becomes entangled or upon which it rests.

In CDP/Consistency Certification no. E-08-021/CC-005-09, the Commission approved a mitigation fee of $100,000 to the Recovery Project as compensation for impacts to 5,500 square feet of hard substrate. In subsequent marine cable projects, the Commission relied on this fee to impact ratio to calculate compensatory funds. In 2016, Commission staff analyzed data provided by the Recovery Project to determine that it was able, on average, to achieve marine habitat enhancement at a mitigation to impact ratio of 2.7 to 1 for a cost of $12.38/square foot ($14.71 in 2020 dollars).

For cable projects approved in 2016 or after, including the projects listed in Section V.B, the Commission has applied this $12.38 cost per square foot ratio (adjusted for inflation) to calculate the mitigation fee for project-specific impacts to hard bottom substrate. Additionally, the Commission has applied a 3:1 mitigation to impact-area ratio, since the Recovery Project removes chronic sources of habitat and wildlife disturbance and loss but does not further restore habitat. The actual "restoration" of habitat is achieved through natural recruitment of organisms over time (Lissner et al. 1991). Compensating for a time lag between an impact and restoration is a key consideration when the Commission applies mitigation ratios larger than 1:1. Additionally, unlike terrestrial mitigation where the Commission generally requires conservation easements or similar future protection measures, comparable measures are not available to perpetually protect marine mitigation sites. Future anthropogenic disturbance of a Recovery Project site could occur; for example, fishing gear could be re-deployed at the site. Such long term uncertainty also justifies applying a 3:1 mitigation ratio.

These considerations are incorporated into **Special Condition 14,** which requires RTI Infrastructure to compensate for hard bottom habitat impacts, if any, through payment of a compensatory mitigation fee. The fee will be calculated by applying a 3:1 mitigation ratio to the square footage of impacted hard bottom (based on the post-lay burial survey required by **Special Condition 13**) and using a rate of $14.71 per square foot. The total square footage of hard bottom impact will be calculated by multiplying the linear distance of cable laid on or suspended over hard bottom by twice its width. The

mitigation work will be carried out pursuant to a Memorandum of Agreement (MOA) by and between the Commission and the Regents of the University of California on behalf of the Recovery Project. Upon receipt of mitigation funds, the Recovery Project will submit a spending plan to the Executive Director for review and approval.

With these conditions in place, the Commission finds that removing lost fishing gear and other debris will offset impacts to hard substrate areas, if any, caused by cable-laying activities. Thus, impacts to hard bottom habitat and the associated benthic species will be minimized, consistent with the requirement in Section 30230 of the Coastal Act that marine resources be maintained, enhanced, and where feasible, restored.

5. Marine Water Quality Impacts

The project is proposed for a portion of the central California Coast where water transport is dominated by the broad, southward flowing California Current. Water quality is affected by general oceanographic conditions as well as terrestrial point and non-point sources of pollutants. Potential marine water quality effects from the proposed project include: (1) increased turbidity during cable installation and the suspension and resettling of contaminated sediments; (2) the release of fuel, sewage or bilge/ballast water from project vessels; (3) increased erosion, sedimentation, and other effects from terrestrial construction; and (4) inadvertent release of drilling materials (frac-outs) during installation of steel bore pipes.

Turbidity and Redistribution of Contaminated Sediments

Water jetting operations and use of the cable plow will result in localized increases in turbidity. Project corridor sediments largely consist of sand and will settle rapidly following disturbance, resulting in minor, temporary (up to a few hours) water quality impacts. Disturbed sediments could include contaminants, resulting in their potential dispersal and subsequent uptake by benthic organisms. However, no substrate areas with known contamination have been identified along the proposed cable route. In addition, project construction is not likely to result in significant redistribution of sediments, and any sediment resuspension will be minor and temporary.

Project Vessel Releases

Project vessels could accidentally discharge fuel, sewage, bilge water, debris, or ballast water. Although the likelihood of such a spill occurring is low, the project MND includes measures (incorporated into this permit by **Special Condition 3**) to reduce the risk of a vessel spill, including Spill Contingency and Hazardous Materials Management Plans **(Exhibit 6)**. In addition, **Special Condition 15** requires RTI Infrastructure to submit a Spill Prevention and Response Plan for Executive Director approval which is required to demonstrate that adequate spill response equipment is available for the worst-case spill scenario. **Special Condition 16** requires RTI Infrastructure to implement an Executive Director-approved Critical Operations and Curtailment Plan (COCP) that defines the limiting weather conditions that would hinder safe operation of vessels or a potential spill cleanup. Finally, **Special Condition 17** requires implementation of a zero discharge policy for all project vessels.

Water Quality Effects from Terrestrial Activities
Terrestrial activities associated with the construction of the proposed project could result in enhanced erosion and stormwater discharges to sensitive habitats. However, as described in the MND, the proposed project will include water quality control measures and best management practices to address potential erosion and stormwater effects. Additionally, inadvertent releases of oil or other hazardous material from construction-related vehicles or equipment could degrade water quality of nearby ground or surface waters. To minimize the likelihood of such a spill, the MND includes measures (incorporated into this permit by **Special Condition 3**) that require RTI Infrastructure to develop a Spill Contingency Plan for terrestrial construction activities, conduct worker training, maintain equipment to avoid leaks, and employ safe refueling practices (**Exhibit 6**). Implementation of these measures will minimize the potential for an inadvertent release of hazardous materials during construction activities.

Frac-outs during HDD Operations
RTI Infrastructure will use a non-toxic drilling fluid containing bentonite during HDD operations proposed to construct the steel landing pipes. These operations could result in the inadvertent release of drilling fluids (i.e., a frac-out) onto the beach or ocean bottom above the bore. Although it does not pose an acute toxicity threat, bentonite releases can smother benthic organisms and contribute to localized turbidity. **Special Condition 18** requires an Inadvertent Release Contingency Plan with provisions to use water as a drilling fluid for the last 60-100 feet of the HDD bore, implement a monitoring procedure using fluorescent dye to detect a frac-out occurring on the seafloor where visibility is poor, 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; in the event a frac-out does occur, RTI Infrastructure will have procedures in place to ensure that any impacts are temporary and minor.

6. Conclusion
For the reasons discussed above, the Commission finds that the proposed project, as conditioned by **Special Conditions 1 through 22**, 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(b) states:

> *(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 proposed project includes the installation of four steel bore pipes beneath the beach (see **Exhibit 3**) which, in this area, is heavily used for recreational purposes and primarily unvegetated. No special status plant species were identified in the project area during a spring 2019 biological survey of the project site.

According to the MND, no western snowy plover (*Charadrius niviosus nivosus*) nests were documented within 1.7 miles of the cable landing site during a 2019 State Parks survey, and no California least tern (*Sternula antillarum browni*) nests were identified closer than 4.3 miles from the site during the same survey. Sandy beach areas west of the cable landing location could provide wintering habitat for these two special status species. The project MND states that "…beach/dune habitat would be avoided by HDD to install the landing pipes beneath the beach. Boring equipment would be located within a developed parking lot and in a heavily used recreation area more than 400 feet from dune habitat…" To minimize the potential for any impacts to these species, the MND includes measures to avoid disturbing roosting western snowy plovers or California least terns (see **Exhibit 6),** or other nesting birds, such as requiring a biologist to conduct biological surveys and monitor the project site during construction (with the authority to halt construction and discuss appropriate, species-specific protection measures). With this measure in place as required by **Special Condition 3**, snowy plovers and least terns will be protected against disturbance-related impacts associated with construction of the proposed project.

With the incorporation of **Special Condition 3,** the Commission finds that habitat supporting special-status species and nesting birds would be protected against disruption of habitat values, and thus, that the proposed project would be 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.*

The proposed project could adversely affect fishing through temporary preclusions of fishing activity associated with cable installation or through interactions between cables and fishing gear, particularly bottom trawls.[1] A portion of the cable route is proposed for an area where bottom trawling is prohibited (the East San Lucia Bank Essential Fish Habitat Conservation Area, shown on **Exhibit 5**), but trawling could occur in other locations along the cable route. In areas where the cable is not buried, is insufficiently

[1] Bottom longlines also have a high potential for interacting with cables on the seafloor, but this type of fishing gear is now prohibited in California.

buried, or becomes exposed, bottom trawls may be snagged, damaged, or abandoned, resulting in gear damage or loss and subsequent financial losses.

Commercial fishing will be precluded from the cable installation corridor during cable installation, which is anticipated to last up to 30 days. 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 a buoy marking the position of a cable when being laid or out of order. This de facto fishing preclusion will be temporary and will cover a small, constantly changing area as the cable is laid and/or buried. Ample fishing and boating areas unaffected by this vessel exclusion zone will remain in the immediate vicinity and will minimize impacts to fisherman from cable-laying activities.

To minimize the potential for gear snags, **Special Condition 5** requires RTI Infrastructure to bury the cable to a depth of one meter in waters up to 1,800 meters, except where precluded by seafloor conditions. Where a one-meter burial depth cannot be achieved, RTI Infrastructure will bury the cable to the maximum depth feasible. Buried cable will minimize the potential for fishing gear entanglement and gear damage or loss. RTI Infrastructure will lay the cable on the seafloor and will not attempt to bury it in waters greater than 1,800 meters in depth, but the types of fishing equipment in such areas are not expected to interact with the cable on the seafloor.

Additionally, specifically for the BtoBE cable **Special Condition 19** requires RTI Infrastructure to join and abide by the terms of the Central California Joint Cable Fisheries Liaison Committee Agreement (Fishing Agreement), included as **Exhibit 7**. The Fishing Agreement is signed by companies operating cables offshore this portion of the California coast and fishing entities, and it provides the fishing industry with a forum to address issues with cable installation and operation and compensate fishermen for gear loss. It also requires cable companies to provide funding for administering the Fishing Agreement, contains communication and coordination measures the cable companies are to undertake to address project-related fishing issues and concerns, and provides funding to be allocated toward projects that address fishing-related interests, per the terms of the Fishing Agreement.

To further minimize the potential for exposed cable, **Special Condition 6** requires RTI Infrastructure to submit a Cable Slack Management Plan to the Executive Director for review and approval, describing how RTI Infrastructure will identify and eliminate cable suspensions during installation. **Special Condition 7** requires RTI Infrastructure to provide radio announcements of cable installation activities and weekly notices of preliminary as-built coordinates of any unburied or exposed cable sections during cable installation to the Executive Director, the U.S. Coast Guard (for publication in a *Notice to Mariners*), and the signatories of the Fishing Agreement. **Special Condition 8** requires RTI Infrastructure to submit to the signatories of the Fishing Agreement electronic and hard copy final as-built plans on NOAA navigation charts. **Special Condition 9** requires RTI Infrastructure, within 60 days of cable installation, to submit evidence to the

Executive Director that the company has submitted the geographical coordinates of the as-built cable to enable NOAA to update its navigational charts.

To make sure that the cable remains buried, **Special Condition 11** requires a re-survey of the cable no later than five years following its installation. Following this re-survey, **Special Condition 11** requires that after any event that has the potential to affect the cable, RTI Infrastructure will survey those potentially affected portions of the cable route from the mean high tide line to the seaward limit of the territorial waters of the State of California. The purpose of this survey will be to verify that the cable has remained buried consistent with the as-built cable burial plan required by **Special Condition 8**. Within 30 days of survey completion, RTI Infrastructure is required to submit to the Executive Director a report describing survey results. If the survey indicates that there has been significant change to the burial status of the cable, RTI Infrastructure is required to submit to the Executive Director a re-burial plan.

To further ensure that impacts to fisherman are minimized, **Special Condition 20** requires RTI Infrastructure to provide notice of proposed cable 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. Finally, within 90 days of either taking a cable out of service or after the expiration or termination of RTI Infrastructure's lease from the City, **Special Condition 12** requires RTI Infrastructure to apply for an amendment to this permit to remove the cable from the seafloor.

With implementation of these special conditions, the Commission finds that project-related impacts to commercial and recreational fishing will be minimized and fishing activities protected, and thus, 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.*

As described previously, recreational boaters must avoid the preclusion zones created by cable installation and repair activities, which will be temporary and will cover a small and constantly changing area. Ample access to other recreation and boating areas will

remain. Once the cable is laid, full access will be restored. Thus, the effect of project-related boating disruption is minor and temporary.

The construction staging area for the marine portion of cable installation is anticipated to require approximately three to four weeks for the installation of the steel bore pipe, and would occupy an approximately 100 foot by 150 foot area of the existing parking area east of Finn's Restaurant. Ample parking would remain in the vicinity of Fin's Restaurant during the temporary time that the staging area would be in use.

Thus, for the reasons stated above, the Commission finds that project-related impacts to public access and recreation will be minimal and temporary and therefore concludes that the project is 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.*

Coastal Act Section 3060(h) states:

> *When acting on a coastal development permit, the issuing agency, or the commission on appeal, may consider environmental justice, or the equitable distribution of environmental benefits throughout the state.*

Project activities could disturb or damage shipwrecks, archeological and paleontological resources, or Native American artifacts by destroying a previously unrecorded resource, or disrupting the site such that the resource's historic or archaeological context is altered adversely.

Onshore Resources

A cultural resources record search and a pedestrian survey identified no historic resources within the Project vicinity. The MND for the proposed project documents project-related consultation with the Native American Heritage Commission and nine Native American tribes. Additionally, as described previously, during staff's coordination with Native American Tribes pursuant to the Commission's Tribal Engagement Policy, two Tribal representatives expressed concern for potential disturbance of tribal cultural resources as a result of construction of the proposed project. Subsequently, the MND includes a requirement that RTI Infrastructure prepare and implement a Cultural Resource Monitoring Plan to ensure that unanticipated discoveries of tribal cultural resources are identified and protected in place where possible and treated with respect and care if avoidance is infeasible. Through **Special Condition 3**, this requirement is incorporated into this CDP.

A paleontological resources records search resulted in a low likelihood of encountering buried paleontological deposits. However, the MND also identifies a general potential for previously undiscovered archeological resources or historical resources in the project area. To minimize the potential for damage to these resources, the MND includes several measures, incorporated into this CDP through **Special Condition 3,** that require RTI Infrastructure to monitor, evaluate, report, and appropriately care for any discovered resources through measures to be undertaken if a previously unknown cultural or tribal resource is discovered, if human remains are discovered, and preparation and implementation of a Cultural Resource Monitoring Plan including participation of a Native American Tribal monitor (see **Exhibit 6**).

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. RTI Infrastructure conducted an initial inventory of shipwrecks and downed aircraft within ten miles (16 km) of the project corridor by consulting several state and federal agency sources and databases, including the Bureau of Ocean Energy Management, NOAA, the National Register of Historic Places, California Historical Landmarks, and local archives. RTI Infrastructure also reviewed geophysical imaging survey data of the proposed route of the cable to identify potential shipwrecks (Macfarlane Archeological Consultants 2020). This survey did not reveal any areas suggestive of older channels or buried paleo-environments. The closest potential shipwreck is approximately 2300 meters (7545 feet), a distance beyond the recommended avoidance zone for potential shipwrecks (MacFarlane Archeological Consultants 2019).

The Commission finds that based on these factors and with the above-referenced measures, the project would not adversely impact archaeological, paleontological, or tribal cultural resources and is therefore consistent with Section 30244 of the Coastal Act as well as environmental justice principles as articulated in the Commission's Tribal Consultation Policy.

J. GEOLOGY

Coastal Act Section 30253 states:

> *New development shall…:*
>
> *(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 nearshore portions of the project do not cross any active fault; the closest known fault is the inactive Oceano Fault, approximately three miles distant from the landing

site. However, the region is subject to strong ground shaking from earthquake activity, during which liquefaction of unconsolidated beach sands could occur. Liquefaction of the upper several meters of sea floor sediments in which the cable is to be installed is also possible. The density of the cable is greater than that of liquefied sediments, and so the cable may sink within such sediments to a greater depth than at installation.

Stability of Landing Site
As described in the MND, there are no significant concerns with the stability of the landing site at Grover Beach related to coastal erosion or sea level rise. The proposed installation includes infrastructure that will be approximately 35 feet below the surface of the beach, beginning from a location approximately 1000 feet inland of the shoreline (**Exhibit 3**). In the unlikely event that cable infrastructure on the beach is exposed, **Special Condition 22** requires that RTI Infrastructure rebury project components should they become exposed in the future.

Geologic Processes and the Submarine Cable
To address potential effects on the submarine cable related to potential scour and erosion associated with marine currents and waves, **Special Condition 5** requires RTI Infrastructure to bury the cable to a depth of one meter where feasible. Even with this measure in place, it is possible that the cable could become damaged or exposed due to scouring from submarine currents. Areas of relatively steep slopes (up to 15 % grade) could be subject to slumping and/or sliding substrates, which could expose or break the cable. **Special Condition 11** requires that after any event that has the potential to affect the cable, RTI Infrastructure will survey the potentially affected portions of the cable route to verify that the cable has remained buried consistent with the as-built cable burial plan required by **Special Condition 8**. If the survey shows that previously buried portions of the cable have become exposed, RTI Infrastructure is required to submit to the Executive Director and then implement a re-burial plan.

With implementation of **Special Conditions 5, 8, 11, and 22**, the Commission finds that 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 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 and cultural resources will minimize all 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, and there are no remaining significant impacts 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 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 RTI Infrastructure'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 … 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 Subpart… D…), … 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 Subpart… D…) 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 not to agree to the conditions, the federal 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 RTI Infrastructure does not agree, RTI Infrastructure 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 RTI Infrastructure 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 Commission and the U.S. Army Corps of Engineers. The Secretary may collect fees from RTI Infrastructure 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 9-20-0275, dated May 14, 2020, and Consistency Certification CC-0002-20, dated May 05, 2020.

Electronic correspondence from Chris Brungardt, RTI Infrastructure, to John Weber, Coastal Commission staff, dated June 11, 2020.

Environmental Documents:

Applied Marine Sciences, Marine Aquatic Habitats and Biological Resources Offshore Grover Beach, California. Prepared for RTI Infrastructure, April 2019a.

Applied Marine Sciences, Marine Aquatic Habitats and Biological Resources Offshore Grover Beach, California: Addendum 1- BtoBE Cable Route Characterization. Prepared for RTI Infrastructure, April 2019b.

Applied Marine Sciences. 2015. Subtidal Habitats and Associated Macrobenthic and Fish Communities Observed Offshore Coastal California Along Fiber Optic Cable Routes. Prepared for ICF International. May, 2015.

State Lands Commission, *Initial Study/Mitigated Negative Declaration for RTI Infrastructure, Inc. Grover Beach Subsea Fiber Optic Cables Project.* April 2020.

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.

Macfarlane Archeological Consultants. Marine Remote Sensing Archaeological Survey Report: RTI-Bay to Bay Express (BtoBE) S2 and Opt1B Subsea Fiber Optic Cable System – 1.0 to 1360 meters water depth offshore Grover Beach, San Luis Obispo County, California. April 2020.

Published Articles and Reports:

Kogan, Paul, Kuhnz, 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.