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STAFF REPORT: REGULAR CALENDAR

Application No.:	**5-15-0605**
Applicant:	**City of Los Angeles, Department of Public Works**
Location:	State waters offshore of 12000 Vista Del Mar in Playa Del Rey, Los Angeles County (Exhibit 1).
Project Description:	Replacement of gravel and larger rocks that support the Hyperion Treatment Plant's 1-mile outfall, and repair of portions of the concrete encasement (Exhibits 1 and 2).
Staff Recommendation:	Approval with conditions

SUMMARY OF STAFF RECOMMENDATION

The City of Los Angeles, Department of Public Works ("City") proposes to repair and maintain the Hyperion Treatment Plant's (HPT's) one mile long outfall pipe (Exhibit 1), by providing additional lateral support through filling voids that have developed around and beneath the outfall. The City would place approximately 5005 cubic yards of gravel and 24-inch rock under

and along a 260 foot section of the encased portion of the outfall, and around several pylons supporting the unencased portion of the outfall (Exhibits 2 and 3). In addition to this ballasting work, repairs would be made to sections of damaged concrete pipe encasement, pylons and pipeline (Exhibits 2 and 4).

The key Coastal Act issue raised by this project is the potential for adverse effects to marine resources including marine mammals, hard bottom habitat, eelgrass and commercially or recreationally important fish and invertebrate species. To address these concerns, the City included several mitigation measures in the project description to avoid areas of hard bottom habitat, eelgrass, kelp and other sensitive habitat areas, and to reduce turbidity impacts from placement of rock on the seafloor. To ensure conformance with Coastal Act policies, the Commission staff further recommends several conditions designed to protect marine habitats, sensitive species and coastal waters. These include **Special Condition 1**, which would require the City to submit a Marine Wildlife Monitoring and Contingency Plan (MWMCP), and **Special Conditions 2 and 3**, which would require the City to perform pre- and post-project marine surveys to ensure that the method of repair and maintenance maintains marine resources and sustains the biological productivity of coastal waters. **Special Condition 4** would require the City to submit an anchoring plan designed to avoid sensitive habitats, and **Special Conditions 5 and 6** would require the City to submit for the Executive Director's review and approval a project-specific spill response plan and a Critical Operations and Curtailment Plan. These conditions would define the limiting conditions of sea state, wind, or any other weather conditions that would hinder safe operation of vessels and equipment or a potential spill cleanup. Finally, **Special Condition 7** would require the City to conduct all in-water activities outside the spiny lobster fishing season. The Commission staff recommends the Commission find that the proposed project, as conditioned, would be consistent with Sections 30230, 30231, 30232 and 30234.5 of the Coastal Act.

The Commission staff therefore recommends that the Commission **approve** coastal development permit application 5-15-0605, as conditioned.

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APPENDICES

EXHIBITS

I. MOTION AND RESOLUTION

Motion:

> *I move that the Commission **approve** Coastal Development Permit 5-15-0605 subject to the conditions set forth in the staff recommendation.*

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

Resolution:

> *The Commission hereby approves Coastal Development Permit 5-15-0605 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.*

II. STANDARD CONDITIONS

The coastal development permit (5-15-0605) 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.

III. SPECIAL CONDITIONS

1. **Marine Wildlife Monitoring and Contingency Plan (MWMCP**). AT LEAST 60 DAYS PRIOR TO THE START OF PROJECT ACTIVITIES, the City of Los Angeles shall submit a MWMCP to the Executive Director for his review and approval. Construction shall not commence until the Executive Director has approved the MWMPC. The City shall implement the MWMCP during all in-water project activities. The MWMCP shall include the following elements, and shall be implemented in a manner consistent with vessel and worker safety:
   - Prior to the start of offshore activities the City 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.
   - At least one National Marine Fisheries Service (NMFS)-qualified marine mammal observer shall be located on the main project vessel to conduct observations during specific project activities, including vessel transit, anchoring or anchor repositioning, installation of equipment in the water column, placement of rocks that involve equipment entering and exiting the water, or any other activity that has the potential to harm marine mammals or sea turtles. The MWMCP shall identify the appropriate number and placement of observers to ensure adequate coverage during all in-water project activities unless the MWMCP identifies adequate justification for specific in-water project activities that do not warrant an observer due to negligible potential for impacts.
   - Shipboard observers shall maintain a daily sighting report 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 if night-time operations are proposed).
   - 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 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. The MWMCP shall include a discussion of the need for protective measures (including cessation or reduction of activities, until the zone is cleared) in the event that a marine mammal or sea turtle enters either zone.
   - During transit to and from the project site:

  - If a vessel is travelling parallel to a whale, the vessel shall operate at a constant speed that is not faster than the whale.
  - Vessel operators will coordinate with the observer to make every effort to ensure that female whales are not separated from their calves.
  - Vessel operators will not herd or drive whales away, or otherwise attempt to influence whale swim patterns.
  - If a whale engages in defensive action, support vessels will drop back until the animal moves out of the area.
  - Vessel speeds shall be limited to 3 to 5 knots to minimize the likelihood of collisions with marine mammals and sea turtles.
- In the event that any project activities result in a collision or any observable harassment or harm to a marine mammal, the observer shall immediately notify the Executive Director, NMFS, and CDFW.
- Propeller and other noises associated with project activities shall be minimized to the maximum extent feasible.
- The MWMPC shall also contain a commitment to prepare a post-construction monitoring plan. This final report shall summarize the results of monitoring activities, and shall be submitted to the Executive Director and other appropriate agencies no more than 90 days following completion of project activities.

2. **Pre-Construction Marine Biological Survey.** NO MORE THAN 90 DAYS PRIOR TO COMMENCEMENT OF OFFSHORE ACTIVITIES, the City of Los Angeles shall conduct a Pre-Construction Marine Biological Survey of the project area that identifies hard bottom habitat areas, areas where eelgrass and kelp are present and locations of existing outfalls and rock ballast areas. Results of the survey (including a map of all identified resources) shall be submitted to the Executive Director. For any hard bottom, eelgrass or kelp identified, the City shall analyze whether such habitats could be avoided, or if not, how impacts could be minimized to the extent feasible.

3. **Post-Project Survey and Report.** If the Pre-Construction Survey does identify areas of hard bottom, eelgrass or kelp in the project vicinity, NO MORE THAN 30 DAYS FOLLOWING COMPLETION OF PROJECT ACTIVITIES, the City of Los Angeles shall perform a post-installation survey along the project area to document the total area of kelp, eelgrass, rocky substrate or other sensitive resource identified by the Post-Construction Marine Biological Survey that was affected by the project. NO MORE THAN 60 DAYS FOLLOWING COMPLETION OF THE POST-PROJECT SURVEY, the City of Los Angeles shall prepare and submit a post-Project technical report to the Executive Director for review and approval. This report shall include, at a minimum, the following:
   - A map of the project area and locations of all affected areas;
   - Quantification of seafloor impacts and estimated numbers and species of organisms affected;
   - If the post-installation survey documents impacts to rocky habitat, the City of Los Angeles shall prepare, for Executive Director review and approval, a restoration proposal that is based on the results of the survey and provides mitigation that is proportional to the actual amount of rocky habitat that was adversely affected. The

proposal shall contain direct restoration actions that repair or restore affected areas, unless the Executive Director determines that the impact is so minimal such that no restoration/mitigation is required. The City of Los Angeles shall implement the restoration proposal within 60 days of approval by the Executive Director.

- If the post-installation survey documents impacts to eelgrass, the City of Los Angeles shall prepare, for Executive Director review and approval, an eelgrass mitigation plan that adheres to the 2014 California Eelgrass Mitigation Policy and includes a requirement to use only native eelgrass (e.g., *Zostera marina*) for restoration purposes. The City of Los Angeles shall implement the eelgrass mitigation plan within 60 days of approval by the Executive Director.
- A schedule for implementing, completing, and monitoring the required restoration, in accordance with the time frames spelled out in the above-referenced Eelgrass Mitigation Policy.

4. **Anchoring Plan**. AT LEAST 30 DAYS PRIOR TO THE COMMENCEMENT OF OFFSHORE ACTIVITIES, the City of Los Angeles shall prepare and submit an Anchoring Plan to the Executive Director for his review and approval that describes how, based on the results of the Pre-Construction Marine Biological Survey (Special Condition 2), the City of Los Angeles will avoid placing anchors on sensitive ocean floor habitats. The Plan shall include at least the following information:
   - A list of all vessels that will anchor during the Project and the number and size of anchors to be set;
   - Detailed maps showing proposed anchoring sites that are located at least 40 feet (12 meters) from rocky habitat identified during the Pre-Construction Marine Biological Survey;
   - A description of the navigation equipment that would be used to ensure anchors are accurately set; and
   - Anchor handling procedures that would be followed to prevent or minimize anchor dragging, such as placing and removing all anchors vertically.

5. **Spill Response Plan (SRP).** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the City of Los Angeles shall submit a project-specific SRP to the Executive Director for his review and approval. The SRP shall identify the worst case spill scenario, list and identify the location of adequate oil spill response equipment (including booms), appropriate protocols and response times for deployment. The SRP shall assure that: (a) 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 or transferred onshore for treatment; (b) response drills will be conducted in accordance with Federal and State requirements; and (c) contracts with off-site spill response companies will be in-place and will provide additional containment and clean-up resources as needed. In addition, the SRP shall include a provision stating that in the event that the Regional Water Quality Control Board requires any corrective action due to noncompliance with the City's 401 Water Quality Certification, the City will notify the Executive Director of the need for corrective action and how it intends to comply with the 401 Water Quality Certification. Such corrective action shall not be incorporated into the project until the permittees obtain a Commission

amendment to this permit, unless the Executive Director determines that no amendment is legally required.

6. **Critical Operations and Curtailment Plan (COCP).** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the City of Los Angeles shall submit a COCP to the Executive Director for his review and 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 would hinder potential spill cleanup, or in any way pose a threat to personnel or the safety of the environment. The COCP shall provide for a minimum ongoing 5-day advance favorable weather forecast during offshore operations. The plan shall also identify the onsite person with authority to determine critical conditions and suspend work operations when needed.

7. **Avoidance of Lobster Fishing Season.** The City shall conduct all in-water work outside the fishing season for spiny lobster (October 3, 2015 until March 16, 2016).

IV. FINDINGS AND DECLARATIONS

A. PROJECT DESCRIPTION

The City of Los Angeles, Department of Public Works ("City") proposes to repair and maintain the Hyperion Treatment Plant's ("HPT's") one mile long outfall pipe to ensure its continued integrity. The HPT, sited in Playa Del Rey (see Exhibit 1), has two outfalls; the five-mile outfall serves as the main discharge pipe for the HPT, and the one-mile outfall is maintained as a backup. The one-mile outfall, consisting of approximately 1550 feet of concrete encased pipeline and approximately 3730 feet of elevated, pylon supported pipeline, was built in the 1950s when the HPT was initially constructed. Since its initial construction, long-term changes in the beach profile and localized scour due to wave energy and flow patterns have resulted in undercutting of the outfall (i.e., erosion of sand underneath the pipeline). In 2001, the Commission authorized the City (CDP 5-00-316) to fill voids underneath an approximately 250 foot section of the one mile outfall with gravel and ballast rock to provide lateral support to the pipeline. Underwater diver surveys conducted in 2006 and 2009 showed that the rock ballast placed in 2001 was in good condition. However, undercutting of the pipeline has continued to progress inshore of the repair area, creating significant voids under the outfall along an approximately 260 foot reach.

To provide additional lateral support to the outfall, the City proposes to place approximately 1800 cubic yards of 24-inch rock and 2,205 cubic yards of 2-inch gravel, along 260 feet of the north side of the outfall and 201 feet of the south side of the outfall (see Exhibits 2 and 3). The total footprint of rock to be placed on the seafloor is estimated at 13,738 square feet. In-water work will take place over a 3-4 month period between June and September. Gravel will be placed using a tremie system with support from a dive crew. This involves extending a section of pipe from a barge through the water column and into the undercut areas. Gravel will then be pumped through the pipe and directed by divers into the undercut area beneath the outfall. Larger rocks will be placed by a clamshell bucket. In the upper 102 feet of the undercut area where diver access is limited, geotextile bags will be rolled out below the outfall and pumped full of sand to completely fill the void. The rock placement area will be confined to within 40 feet of the pipeline and will have side slopes of 1:2.5 (see Exhibit 3). The City also proposes to

fill existing voids around five of the pylons supporting the unencased section of outfall (see Exhibits 2 and 4). Voids around each pylon will be filled in with 2-inch gravel, including a 10 ft. wide gravel apron around the pile cap, for a total of 1000 cubic yards of fill material, covering approximately 8,250 square feet. In addition to ballasting work, repairs will be made to sections of damaged concrete pipe encasement, pylons and pipeline. Repairs will be made by pumping concrete into watertight forms mounted onto each repair area. Epoxies or grouted rock will not be used. The City will continue to use the outfall as a back-up during wet weather and emergency conditions only.

B. OTHER AGENCY APPROVALS

Los Angeles Regional Water Quality Control Board

The Los Angeles Regional Water Quality Control Board issued a Clean Water Act Section 401 Water Quality Certification for the proposed project on July 22, 2015.

California State Land Commission (CSLC)

The project is located within sovereign lands that were legislatively granted to the City of Los Angeles pursuant to Chapter 651, Statutes of 1929 and as amended. Thus, the proposed project does not require a permit from the CSLC.

California Department of Fish and Wildlife (CDFW)

The CDFW reviewed an amended Essential Fish Habitat analysis submitted by the applicant. On June 5, 2015, CDFW notified the applicant that it was satisfied with the submittal and had no further concerns with the proposed project.

U.S. Army Corps of Engineers (USACE)

The USACE granted the City a Clean Water Act Section 401 Water Quality Certification under Nationwide Permit No 3: Maintenance, issued July 2, 2015.

C. Commission's Permit Authority for Repair and Maintenance Activities

This proposal consists of repair and maintenance activities. Coastal Act Section 30610(d) generally exempts from Coastal Act permitting requirements the repair or maintenance of structures that does not result in an addition to, or enlargement or expansion of, the structure being repaired or maintained. However, the Commission retains authority to review certain extraordinary methods of repair and maintenance of existing structures that involve a risk of substantial adverse environmental impact as described in Section 13252 of the Commission's regulations.

Section 30610 of the Coastal Act provides, in relevant part:

> *Notwithstanding any other provision of this division, no coastal development permit shall be required pursuant to this chapter for the following types of development and in the following areas: . . .*
>
> *(d) Repair or maintenance activities that do not result in an addition to, or enlargement or expansion of, the object of those repair or maintenance activities; provided, however,*

> *that if the commission determines that certain extraordinary methods of repair and maintenance involve a risk of substantial adverse environmental impact, it shall, by regulation, require that a permit be obtained pursuant to this chapter.*

Section 13252 of the Commission administrative regulations (14 CCR 13000 *et seq*.) provides, in relevant part (emphasis added):

> *(a) For purposes of Public Resources Code section 30610(d), the following extraordinary methods of repair and maintenance shall require a coastal development permit because they involve a risk of substantial adverse environmental impact:…*
>
> *(1) Any method of repair or maintenance of a seawall revetment, bluff retaining wall, breakwater, groin, culvert, outfall, or similar shoreline work that involves:*
>
> *(A) Repair or maintenance involving substantial alteration of the foundation of the protective work including pilings and other surface or subsurface structures;*
>
> *(B) The placement, whether temporary or permanent, of rip-rap, artificial berms of sand or other beach materials, or any other forms of solid materials, on a beach or in coastal waters…;*
>
> *(D) The presence, whether temporary or permanent, of mechanized construction equipment or construction materials on any sand area, bluff, or environmentally sensitive habitat area, or within 20 feet of coastal waters or streams.*
>
> *All repair and maintenance activities governed by the above provisions shall be subject to the permit regulations promulgated pursuant to the Coastal Act, including but not limited to the regulations governing administrative and emergency permits.* …

The proposed project qualifies as a repair and maintenance project under Section 30601(d) of the Coastal Act and Section 13252 of the Commission's regulations because the project: (a) does not involve an addition to or enlargement or expansion of the outfall and (b) does not involve replacement of 50% or more of the outfall. Although the proposed repair and maintenance activities will not add to or enlarge the subject outfalls, the proposed work involves maintenance and repairs to an ocean outfall and construction within coastal waters. The proposed repair project therefore requires a coastal development permit under CCR Section 13252.

In considering a permit application for a repair or maintenance project pursuant to the above-cited authorities, the Commission reviews whether the proposed method of repair or maintenance is consistent with the Chapter 3 policies of the Coastal Act. The Commission's evaluation of such repair and maintenance projects does not extend to an evaluation of the conformity with the Coastal Act of the underlying existing development.

D. MARINE RESOURCES AND WATER QUALITY

Coastal Act Section 30230 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.*

Coastal Act Section 30231 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 project site provides habitat for a wide variety of species, including some sensitive species and those important to commercial and recreational fishing interests. Work on the project will occur in nearshore waters off Playa Del Rey in Santa Monica Bay. Santa Monica Bay supports several types of valuable marine habitats including rocky intertidal, rocky subtidal, coastal marsh, kelp forest and eelgrass beds, and supports special-status species. Although not located within a State or federal Marine Protected Area, the project site is close to the Point Dume State Marine Reserve, Point Dume State Marine Conservation Area, Point Vicente State Marine Conservation Area and the Abalone Cove State Marine Conservation Area (see Exhibit 5a). Santa Monica Bay also serves as an important commercial fishery for a variety of fish and invertebrate species.

Endangered, Threatened, and Sensitive Marine Species

Marine mammals: Several studies have identified at least twenty-nine species of marine mammals that live in or migrate through Southern California waters. The project area serves as habitat for a variety of these marine mammals. The most common include several mysticete whales – the California gray whale (*Eschrichtius robustus*), the blue whale (*Balaenoptera musculus*), humpback whale (*Megaptera novaeangliae*), and Minke whales (*Balaenoptera acutorostrata*); toothed whales – bottlenose dolphin (*Tursiops truncate*), common dolphins (*Delphinus capensis* and *D. delphis*), Dall's porpoise (*Phocoenoides dalli*), Pacific white-sided

dolphin (*Lagenorhynchus obliquidens*), Risso's dolphin (*Grampus griseus*), and others[1]; and three pinniped species – California sea lions (*Zalophus californianus*), harbor seals (*Phoca vitulina*), and northern elephant seals (*Mirounga angustirostris*)[2]. In addition to the protection provided these species under the Coastal Act, all marine mammals are protected under the federal Marine Mammal Protection Act (MMPA), which prohibits the intentional taking[3] of any marine mammal without a permit, and several of the marine mammal species found in the project area are protected under the federal Endangered Species Act (ESA), including the humpback whale and blue whale, which are listed as endangered.

Potential project-related impacts to marine mammals include disturbance due to construction-related noise and collision or interaction with vessels or equipment during transit to/from the project site and during project, as follows:

- Noise: Noise-related impacts would result from activities of the vessels involved in the project over an approximately three to four month period. The change from existing conditions should be minor, as fishing and other vessels regularly transit the area, and most marine mammals have habituated to vessels and would likely alter their course or change their swimming speed in response to noise or proximity of vessels.

- Collisions and other impacts: Marine mammals could collide with project-related vessels or in-water equipment. For the majority of the project duration, the barge and other project vessels will be stationary, thus limiting the potential for collisions or other impacts to marine wildlife. However, the potential for impacts increases during transit to and from the project site or when equipment is moved in and out of the water. In addition to collisions, potential impacts include separation of pods or mother/calf pairs as marine mammals seek to avoid project-related vessels and activities.

To minimize the potential for collisions and to ensure marine mammals are protected in conformity with Coastal Act policies, **Special Condition 1** requires that at least 60 days prior to any in-water construction, the City shall submit a Marine Wildlife Monitoring and Contingency Plan (MWMCP) for the Executive Director's review and approval. The MWMCP must include provisions for marine wildlife training for project personnel, reduced vessel speed during transit to and from the project site, and minimization of propeller noise. In addition, the MWMCP must also describe a marine wildlife monitoring program that includes at least one NMFS-qualified marine mammal observer responsible for monitoring a 500-1640 foot radius around the Project vessels. The observers will compile daily sightings reports that will be submitted to the Executive Director and other agencies and will have the authority to stop any activity that could result in harm to a marine mammal or sea turtle.

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[1] Bearzi, M and C Saylan. 2011. Cetacean ecology for Santa Monica Bay and nearby areas, California, in the context of the newly established MPAs. Bulletin of the Southern California Academy of Sciences 110(2):35-51.

[2] Bearzi, M, C Saylan, and C Barroso. 2008. Pinniped ecology in Santa Monica Bay, California. Acta Zoologica Sinica 54(1):1-11

[3] The definition of "take" under the MMPA includes intentional or unintentional harassment, any act that could cause injury or death, or any disruption of behavioral patterns, of the animal.

Hard Bottom Habitat

The proposed repair and maintenance will disturb areas of the seafloor and has the potential to disturb sensitive hard bottom habitat areas. Hard bottom habitat is considered higher value habitat for several reasons: (1) it is not as common as soft bottom habitat; (2) it supports a diverse assemblage of epifaunal (organisms that live on the substrate) invertebrates; and (3) it serves as a nursery, food source, and shelter for numerous species of fish. It is also more sensitive to disturbance than soft bottom areas, and does not recover as quickly from mechanical disturbance or increased sediment loads. Soft bottom habitat also supports a wide variety of epifaunal and infaunal (organisms that live in the substrate) species; however, these species are generally more tolerant of environmental changes and recover quickly in areas of disturbed soft bottom habitat. Even so, many infaunal species have limited mobility and individuals are not likely to evade disturbance to the area.

Aside from the outfall and surrounding ballasted area, the seafloor around the project area is predominantly sandy bottom. The City submitted a map of known hard-bottom areas in Santa Monica Bay showing that the proposed project avoids these areas (Exhibit 5b). However, it is possible that smaller outcrops of rocky bottom are present near the project site that could be affected by project activities. To minimize potential impacts, the City proposed a number of measures designed to avoid or minimize direct and indirect impacts to hard bottom habitat, including:

- Anchor barges and other vessels associated with the project will be sited away from natural or artificial structures supporting sensitive marine habitat;
- Gravel will be pumped under the outfall to limit spillover effects in surrounding areas; and
- Rock ballast will be placed by clamshell bucket and will be confined to within 40 feet of the outfall pipe to minimize disturbance to surrounding habitat.

To further ensure that hard bottom habitat is avoided to the maximum extent feasible, and that marine resources and the biological quality of coastal waters are sustained, **Special Conditions 2 and 3** require the City to conduct pre and post-construction marine biological surveys to identify any hard bottom areas in the project vicinity so they can be avoided, or if unavoidable, quantified. **Special Condition 3** further requires the City to submit a post-project technical report to the Executive Director for review and approval that documents any actual impacts to hard bottom habitat and includes a requirement to submit a restoration proposal to mitigate actual impacts to hard bottom habitat. Finally, **Special Condition 4** requires the City to submit for the Executive Director's review and approval an anchoring plan demonstrating that hard bottom substrate areas will be avoided, and listing equipment and procedures to be used to ensure anchors will be accurately placed.

Eelgrass

Although eelgrass (*Zostera marina and Z. pacifica*) is known to occur in Santa Monica Bay, comprehensive mapping of eelgrass has not occurred. In general, eelgrass is found in nearshore areas to depths of approximately 6 meters (approximately 20 feet), although in Southern California, eelgrass has been documented in some protected outer coast locations to a depth of 30

meters (approximately 98 feet)[4]. Thus, with the project area spanning depths of 7 to 15 meters (23-49 feet), it is possible that patches of eelgrass are present in or near the project area. The project could adversely affect eelgrass due to turbidity impacts, vessel anchoring, and placement of rock.

To minimize impacts to eelgrass, **Special Condition 2** requires the City to conduct a pre-construction marine survey no more than 90 days prior to the commencement of construction activities to identify sensitive habitats, including eelgrass habitat. If eelgrass is identified during the pre-construction survey, **Special Condition 4** requires the City to make any feasible adjustments to anchor locations and **Special Condition 3** requires the City to conduct a post-construction marine biological survey to characterize and quantify any impacts to eelgrass and other sensitive habitats that could not be avoided. **Special Condition 3** further requires the City to submit a post-project technical report for Executive Director's review and approval that describes the extent of any project-related impacts to eelgrass and other habitats and proposes any mitigation as necessary. If impacts to eelgrass do occur, the condition requires the City to adhere to mitigation measures prescribed in the California Eelgrass Mitigation Policy (CEMP), which will result in appropriate restoration. This policy, developed by the National Marine Fisheries Service, establishes survey protocols, mitigation ratios, planting techniques, monitoring requirements, and other measures for eelgrass mitigation work. The Commission has previously found past monitoring and mitigation conducted in accordance with the CEMP to satisfy the requirements of the Coastal Act to maintain marine resources and sustain the biological productivity and quality of coastal waters (Coastal Act Sections 30230 and 30231), with respect to eelgrass.

Essential Fish Habitat

The project area is part of a larger area that is considered Essential Fish Habitat (EFH) pursuant to the federal Magnuson Fishery Conservation and Management Act and the Sustainable Fisheries Act for Pacific Groundfish, Coastal Pelagic Species and Highly Migratory Species. Potential impacts to these species include direct impacts such as injury or mortality from the placement of gravel and rocks on the sea floor, indirect impacts from turbidity, or temporary displacement of habitat. Because project activities are concentrated at the sea floor, the potential for adverse impacts is greater for species that are found on the sea floor. However, a majority of the species included in the EFH designation for the project area are found in the water column. These species will likely avoid the immediate project area due to noise and the presence of equipment. Due to the small footprint of the project and the existence of plentiful suitable habitat nearby, impacts to these species will not be significant. One species included in the EFH designation, the market squid, is typically found on the sea floor and thus has a higher potential to experience project-related impacts. Adult market squid are generally found beyond the Continental Shelf and have a single spawning period that occurs between November and April. They move closer inshore to lay eggs in capsule clusters on sandy substrate at depths between 20 and 70 meters. The proposed project will occur at a maximum depth of approximately 15 meters and will take place between June and September, thus avoiding the market squid spawning season. .

[4] Engle, JM and Miller, KA. 2003. Distribution and Morphology of Eelgrass (Zostera Marina L) at the California Channel Islands. Proceedings of the 6th California Islands Symposium, December 1-3, 2003.

The City submitted an EFH analysis to the California Department of Fish and Wildlife (CDFW) that addressed the species discussed above. The CDFW requested the City to include additional analysis on black and white abalone and gorgonian corals. The City submitted additional analysis that concluded that the depth range of the proposed project excluded the habitat range of both black and white abalone. The City also concluded that the proposed project could result in impacts to one or two species of gorgonian corrals, but maintained that these species are abundant in this area and are not considered sensitive. The CDFW concurred with the City's conclusions that the proposed project would not significantly impact EFH. In addition, several of the mitigation measures and conditions described elsewhere in this report will result in avoidance and minimization of potential adverse effects on essential fish habitat.

Marine Water Quality Impacts

The proposed method of repair and maintenance could result in impacts to marine water quality from increased turbidity or accidental releases of hazardous materials from project vessels. The placement of rock on the ocean floor is likely to result in localized increases in turbidity; however these impacts would be minor and short-term. Although small amounts of sand will be suspended into the water column, the suspended material will settle quickly within a few feet of the area of disturbance. To further reduce the potential for impacts related to turbidity, the City will wash any ballast dust off gravel and rocks before placement into the ocean. Another potential source of turbidity is anchoring of project-related vessels on the sea floor. To minimize impacts related to anchoring, **Special Condition 4** requires the City to submit an anchoring plan to the Executive Director for review and approval that includes procedures that will minimize anchor dragging and the suspension of sediment, such as through vertical placement and removal of anchors.

Impacts to marine water quality could also result from unintended releases of fuel, sewage or other contaminants from project vessels and equipment. To minimize the potential for these types of releases, the City has proposed the following best management practices:

- Pollutants will be cleaned from all construction-related materials and equipment to be placed in the water prior to use.
- Discharge of diesel, gasoline and oil contaminants from working barges, support vessels and equipment will be avoided. A contingency plan will be developed to control any accidental spills of petroleum products. Absorbent pads and containment booms will be stored on-site to facilitate the clean-up of petroleum spills.
- Discharge of sewage from septic handling systems including pump-out stations will be avoided. A contingency plan will be developed to control accidental discharge and spills of sewage.
- The project manager and equipment operators shall perform daily pre-work equipment inspections for cleanliness and leaks. All equipment operations shall be postponed or halted should a leak be detected, and shall not proceed until the leak is repaired and equipment cleaned.

Further, the Los Angeles Regional Water Quality Control Board (RWQCB) issued a Clean Water Act Section 401 Water Quality Certification for the proposed project that requires the City to implement the above best management practices and includes additional conditions of

approval designed to protect water quality. These conditions include requiring the City to comply with water quality objectives, prohibitions and policies in the Water Quality Control Plan, Los Angeles Region (1994), prohibiting discharges related to fueling, maintenance and operation of equipment, and requiring ocean water quality monitoring for several constituents, including turbidity. If results of water quality monitoring show that project activities have resulted in non-compliance with water quality objectives, the RWQCB may institute corrective and/or enforcement actions.

To ensure the project conforms to Coastal Act policies, **Special Condition 5** requires the City to submit a project-specific Spill Response Plan to the Executive Director for review and approval. The Plan shall clearly identify the worst case spill scenario, list and identify the location of spill response equipment, and include a plan for conducting training and response drills. In addition, the plan must include a provision stating that the City will notify the Executive Director of any corrective actions imposed by the RWQCB. Further, **Special Condition 6** requires the City to implement an Executive Director-approved Critical Operations and Curtailment Plan (COCP). The COCP defines the limiting conditions of sea state, wind, or any other weather conditions that would hinder safe operation of vessels and equipment or a potential spill cleanup.

Thus, although the project will result in the suspension of sediment in the water column, the resulting turbidity would be localized and short-lived. In addition, as conditioned, the project includes adequate measures to ensure that the quality of coastal waters would be maintained and would protect against the spillage of oil or other hazardous materials. .

Conclusion

By maintaining the integrity of the outfall, the project would protect water quality by reducing the potential for accidental sewage spills in the Bay. In addition, for the reasons and with the measures described above, the Commission finds that, as conditioned, the proposed project would be carried out in a manner that would maintain and protect marine resources and would sustain the biological productivity and quality of coastal waters, and would therefore be consistent with Coastal Act Sections 30230, 30231 and 30232.

E. PLACEMENT OF FILL IN COASTAL WATERS

Section 30233(a) of the Coastal Act states:

> *The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:*
>
> *(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.*
>
> *(2) Maintaining existing, or restoring previously dredged depths on existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.*

(3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.

(4) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

(5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

(6) Restoration purposes.

(7) Nature study, aquaculture, or similar resource dependent activities.

The proposed project includes fill in the form of gravel and rocks to coastal waters offshore of the HTP. The City estimates approximately 5005 cubic yards of material will be used to provide lateral support to a section of the encased outfall pipeline and to five pylons supporting the unencased section of pipeline. Projects that include fill of coastal waters must meet the three tests of Coastal Act Section 30233(a). The first test requires that the proposed activity fit into one of seven categories of uses enumerated in Coastal Act Section 30233(a)(1-7). However, in this case, because the Commission is solely reviewing the method by which the applicant executes the repair and maintenance activities, the first test under Section 30233(a) is not applicable to the already existing use. The second test requires that there be no feasible less environmentally damaging alternative. The third and final test mandates that feasible mitigation measures be provided to minimize the project's adverse environmental effects.

As discussed in Section A, the purpose of the proposed project is to ensure the stability and continued operation of an existing outfall pipe. Allowing the undercutting and voids to remain increases the possibility of a breach of the outfall pipeline. This type of breach could lead to the release of raw or treated sewage close to the shoreline, potentially resulting in contamination of beaches and inshore waters in the vicinity. Therefore, avoiding the work, or the "no project" alternative, is not an environmentally preferable option. In addition, because the proposed work involves repair and maintenance of existing infrastructure, there are no alternative locations for the project that could entirely avoid coastal waters. Finally, the proposed project has been designed to minimize offshore impact footprint to the maximum extent possible while still providing adequate support for the outfall and stability to the ballasted area itself. Thus, there is no feasible less environmentally damaging alternative and the Commission finds this project consistent with the second test of Coastal Act Section 30233(a).

The final test requires that feasible mitigation measures be provided to minimize the project's adverse effects. In other sections of this report, the Commission has identified feasible mitigation measures that will minimize the adverse environmental effects of the fill associated with the proposed project. For example, **Special Conditions 2 and 3** require the City of Los Angeles to conduct pre- and post-project marine surveys to determine the location of any sensitive habitats and/or species, including rocky reef areas, eelgrass beds and kelp forests that

have not already been identified. All project activities will be designed to avoid sensitive marine habitats and species. If the project does result in impacts to sensitive habitat areas, **Special Condition 3** requires the City to submit a restoration plan to the Executive Director for review and approval. These conditions, among others, minimize impacts from project-related fill of coastal waters. Thus, with the imposition of the conditions of this permit, the Commission finds that the third test of Coastal Act section 30233(a) has been met.

For the reasons described above, the Commission finds the project, as conditioned, consistent with Coastal Act Section 30233(a).

F. COMMERCIAL AND RECREATIONAL FISHING

Section 30234.5 of the Coastal Act states:

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

The project area supports a variety of fish and shellfish important to commercial and recreational fishing interests. The proposed project could affect commercial or recreational fishing in the area through direct impacts to the fished population or by temporarily limiting access to waters in the project area. An analysis of impacts to EFH is included in Section D, concluding that the project will not result in significant impacts to EFH. One species that supports an economically significant fishery but is not included in the EFH designation is the spiny lobster (*Panulirus interruptus*). Spiny lobsters are abundant in the project area and have colonized the voids on and under the outfall created by erosion and wave action (Exhibit 6). Filling these voids with gravel and rock will result in a loss of habitat and could possibly result in the injury or death of individuals. However, the habitat provided by the outfall is a tiny percentage of the overall habitat available in Santa Monica Bay, and thus the anticipated loss of habitat is not expected to be significant. Also, once equipment is mobilized to the site, and project activities begin, it is likely that lobsters inhabiting the vicinity of the outfall will move to better habitat to avoid project-related disturbance. Thus, impacts to the lobster population in the project vicinity will be minimal. Further, to avoid additional impacts to lobster fisherman that could result from limiting access to waters in the project area, **Special Condition 7** requires that the City of Los Angeles conduct all in-water project activities outside of the lobster fishing season, which extends in 2015-2016 from October 3, 2015 until March 16, 2016. The City has also committed to contacting local fishing and diving groups with the date, location and description of the project to ensure they are aware.

In addition, project-related measures and conditions to protect marine biological resources, water quality, and other coastal resources as described elsewhere in this report will also act to avoid and minimize impacts on commercial and recreational fishing. With the mitigation measure described above, and as conditioned, the Commission finds that the project would protect commercial and recreational fishing and is therefore consistent with Coastal Act Section 30234.5.

G. PUBLIC ACCESS AND RECREATION

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.*

The project could affect public access and recreation due to the presence of work vessels in areas used by the public in coastal waters and near a state beach. This area includes part of Dockweiler State Beach. Recreational activities in the area include beach use, surfing, boating and fishing.

The proposed project will take place entirely offshore at a minimum distance of 600 feet offshore. Thus, project activities will not directly interfere with public access and recreation on the beach and immediately offshore. Any indirect impacts due to noise or other disturbance from vessels located offshore will be short-term and minimal due to the short project duration and offshore project location. The City has also agreed to provide notice to local fishing and diving groups with the date, location and description of the project. Any impacts to boaters or recreational fisherman resulting from the temporary exclusion from the project area would be minimal due to the short project duration and ample areas up and down coast to enjoy these activities. Thus, the Commission finds that the proposed project will not significantly interfere with public access and recreation and is therefore consistent with Coastal Act Section 30220.

H. 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, 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 repair and maintenance has been conditioned in order to be found consistent with the Chapter 3 policies of the Coastal Act. The Commission incorporates it findings on Coastal Act consistency into this CEQA finding as if set forth in full. Mitigation measures, including conditions addressing marine resources, water quality, fill of coastal waters and recreational and commercial fishing 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. Therefore, the Commission finds that the proposed repair and maintenance is consistent with the requirements of the Coastal Act to conform to CEQA.

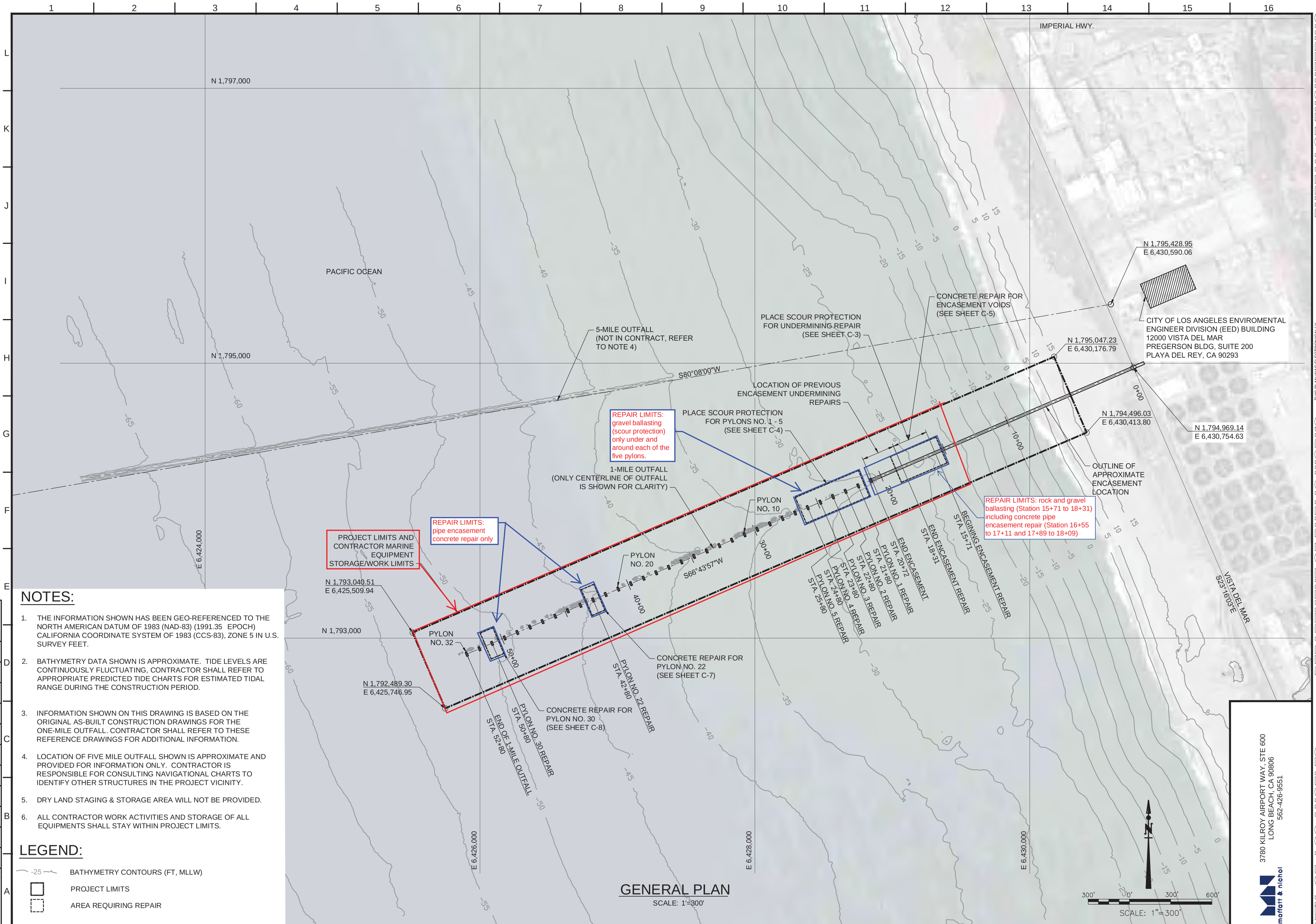
APPENDIX A: SUBSTANTIVE FILE DOCUMENTS

City of Los Angeles, Coastal Development Permit Application and accompanying documents. Originally submitted on May 15, 2015.

City of Los Angeles, email communications to Kate Huckelbridge and Mandy Revell on 7/8/2015, 7/23/2015, 7/29/2015, 8/10/2015, and 8/17/2015.

Figure 1. Map depicting project area of the 1-Mile Outfall structure in Santa Monica Bay.

Exhibit 1
5-15-0605



NOTES:

1. THE INFORMATION SHOWN HAS BEEN GEO-REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD-83) (1991.35 EPOCH) CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS-83), ZONE 5 IN U.S. SURVEY FEET.
2. BATHYMETRY DATA SHOWN IS APPROXIMATE. TIDE LEVELS ARE CONTINUOUSLY FLUCTUATING, CONTRACTOR SHALL REFER TO APPROPRIATE PREDICTED TIDE CHARTS FOR ESTIMATED TIDAL RANGE DURING THE CONSTRUCTION PERIOD.
3. INFORMATION SHOWN ON THIS DRAWING IS BASED ON THE ORIGINAL AS-BUILT CONSTRUCTION DRAWINGS FOR THE ONE-MILE OUTFALL. CONTRACTOR SHALL REFER TO THESE REFERENCE DRAWINGS FOR ADDITIONAL INFORMATION.
4. LOCATION OF FIVE MILE OUTFALL SHOWN IS APPROXIMATE AND PROVIDED FOR INFORMATION ONLY. CONTRACTOR IS RESPONSIBLE FOR CONSULTING NAVIGATIONAL CHARTS TO IDENTIFY OTHER STRUCTURES IN THE PROJECT VICINITY.
5. DRY LAND STAGING & STORAGE AREA WILL NOT BE PROVIDED.
6. ALL CONTRACTOR WORK ACTIVITIES AND STORAGE OF ALL EQUIPMENTS SHALL STAY WITHIN PROJECT LIMITS.

LEGEND:

-25 BATHYMETRY CONTOURS (FT, MLLW)
PROJECT LIMITS
AREA REQUIRING REPAIR

GENERAL PLAN

SCALE: 1"=300'

3780 KILROY AIRPORT WAY, STE 600
LONG BEACH, CA 90806
562-426-9551
moffatt & nichol

CITY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING

VERTICAL CONTROL: MEAN LOWER LOW WATER (1983-2001 EPOCH)
HORIZONTAL CONTROL: NAD83, ZONE 5, EPOCH 1991.35
SHEET TITLE: GENERAL PLAN
PROJECT: ONE-MILE OUTFALL REPAIRS
ADDRESS: HYPERION TREATMENT PLANT
12000 VISTA DEL MAR, PLAYA DEL REY, CA, 90293

GARY LEE MOORE, P.E. CITY ENGINEER
DESIGN GROUP
LIC. NO. 60242
DATE:
ENGINEER: OJ
DESIGNED BY: AH
DRAWN BY: KL
CHECKED BY:
APPROVED BY:

THIS PLAN WAS ELECTRONICALLY SIGNED AND STAMPED

REGISTERED PROFESSIONAL ENGINEER OMAR A. JARADAT No. CE 60242 EXP. 6/30/15 CIVIL STATE OF CALIFORNIA

NO. REVISIONS: DATE BY:

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CIP NO. 2437

LA DPW ENGINEERING Serving the Present Designing the Future

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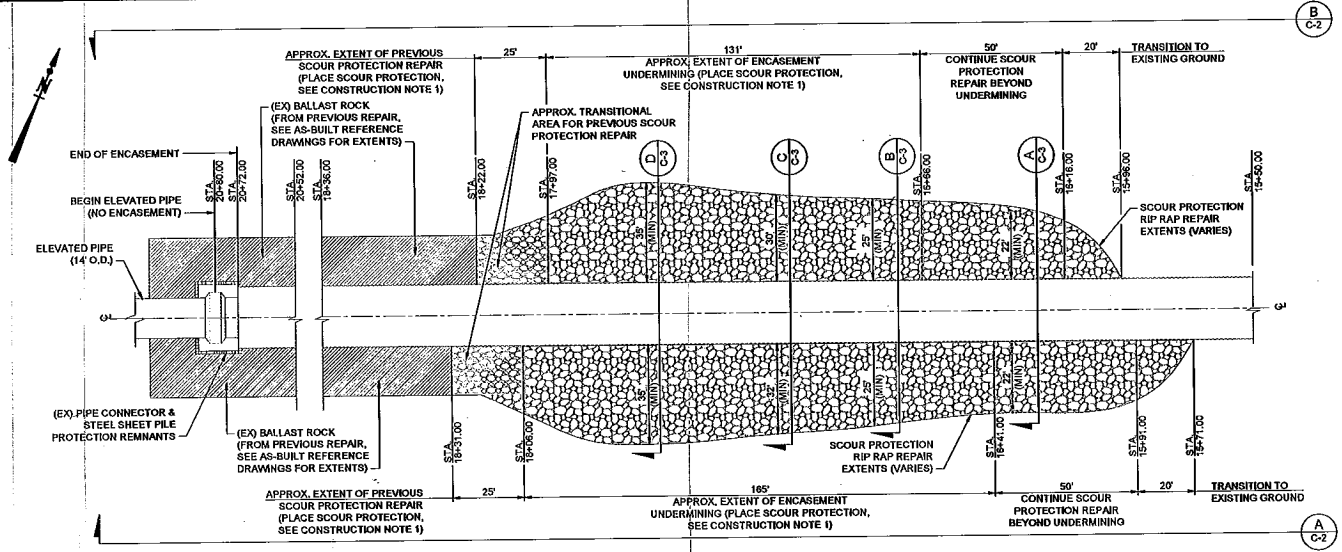
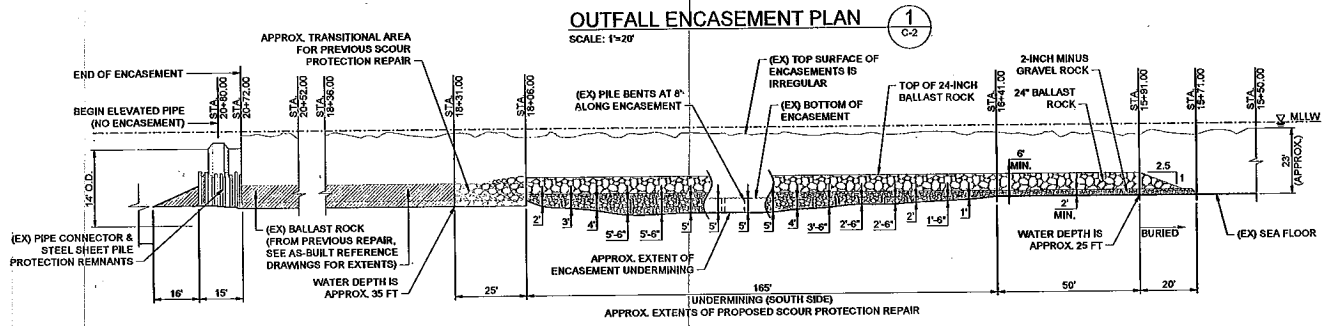
REVISION DATES (DESIGN STAGE ONLY)

Exhibit 2
5-15-0605



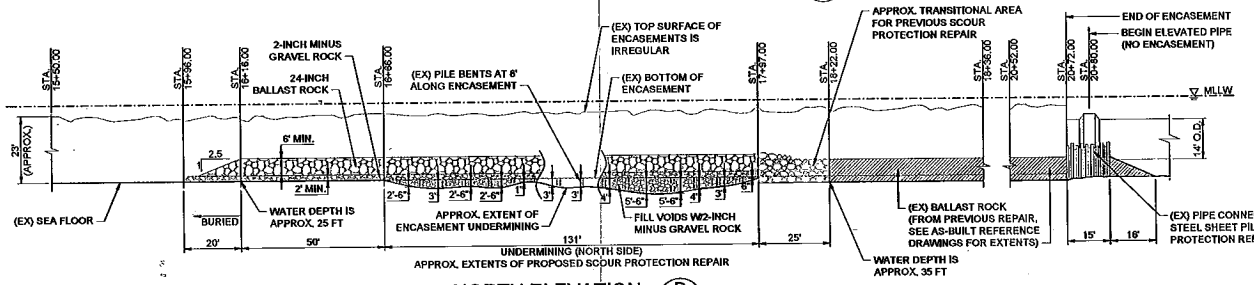
OUTFALL ENCASEMENT PLAN (1 / C-2)

SCALE: 1"=20'



SOUTH ELEVATION (A / C-2)

SCALE: 1"=20'



NORTH ELEVATION (B / C-2)

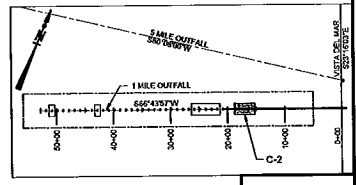
SCALE: 1"=20'

NOTES:

1. PLACEMENT OF SCOUR PROTECTION REPAIR INCLUDES THE FOLLOWING:
   - FILL VOIDS WITH 2 IN MINUS GRAVEL
   - PROVIDE MIN. 2 FT THICK 2 IN MINUS GRAVEL BASE AROUND ENCASEMENT UNDERMINING (MAXIMUM 2.5:1 SLOPE)
   - PLACE MIN 6 FT THICK 24 IN BALLAST ROCK OVER GRAVEL (MAXIMUM 2.5:1 SLOPE)
2. ACTUAL FIELD CONDITIONS OF EXISTING ENCASEMENT FOLLOW A SLIGHT INCLINATION, WHICH IS NOT REPRESENTED IN THESE DRAWINGS.
3. ALL HEIGHTS AND WIDTHS OF EXISTING ENCASEMENT VARY.
4. EXISTING CONCRETE ENCASEMENT AND SHEATHING REMNANTS ARE COVERED IN HEAVY MARINE GROWTH.
5. RANDOM SHEATHING REMNANTS MAY NEED TO BE REMOVED TO MAKE NECESSARY REPAIRS.
6. ALL DEPTHS SHOWN ARE APPROXIMATE.
7. ENCASEMENT UNDERMINING SHOWN IS BASED ON APPROXIMATE MEASUREMENTS FROM AN UNDERWATER INSPECTION IN MAY 2014. CONDITIONS ENCOUNTERED DURING CONSTRUCTION MAY VARY FROM PREVIOUS OBSERVATIONS.
8. LIMITS OF ROCK PLACEMENT SHOWN ARE APPROXIMATE AND BASED ON THE DEPTH OF UNDERMINING DURING THE MAY 2014 INSPECTION. ACTUAL LIMITS WILL VARY BASED ON THE DEPTH OF UNDERMINING AT THE TIME OF CONSTRUCTION.
9. CONTRACTOR SHALL PERFORM INSPECTIONS OF PLACEMENT OF SCOUR PROTECTION AT REGULAR INTERVALS TO VERIFY ROCK THICKNESS, EMBANKMENT SLOPE, AND THAT AREAS WITH UNDERMINING ARE SUFFICIENTLY FILLED AND PROTECTED. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

LEGEND:

- 2 IN MINUS GRAVEL (PROPOSED)
- 24 IN BALLAST ROCK (PROPOSED)
- EXISTING BALLAST ROCK



KEY PLAN

NOT TO SCALE

SCALE: 1"=20'

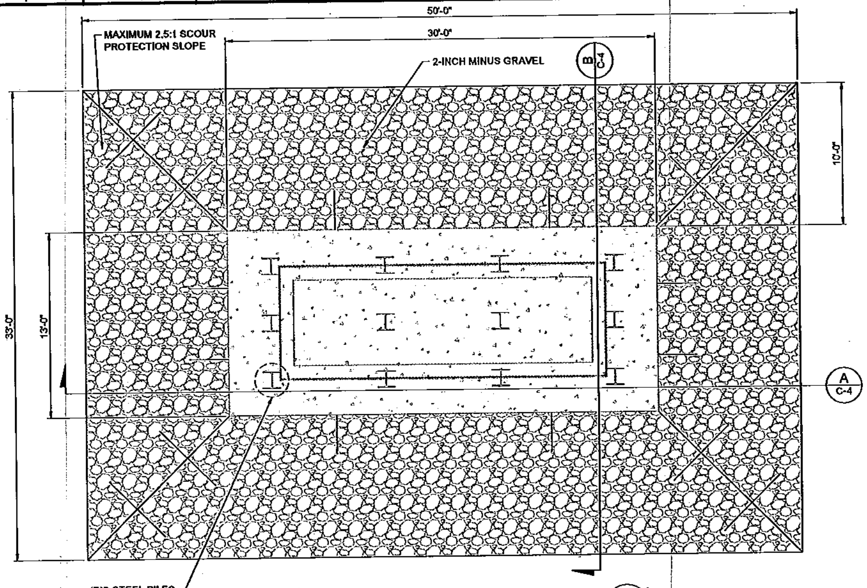
3780 KILROY AIRPORT WAY, STE 600
LONG BEACH, CA 90806
562-426-2651
moffatt & nichol

CITY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
GARY LEE MOORE, P.E.
CITY ENGINEER

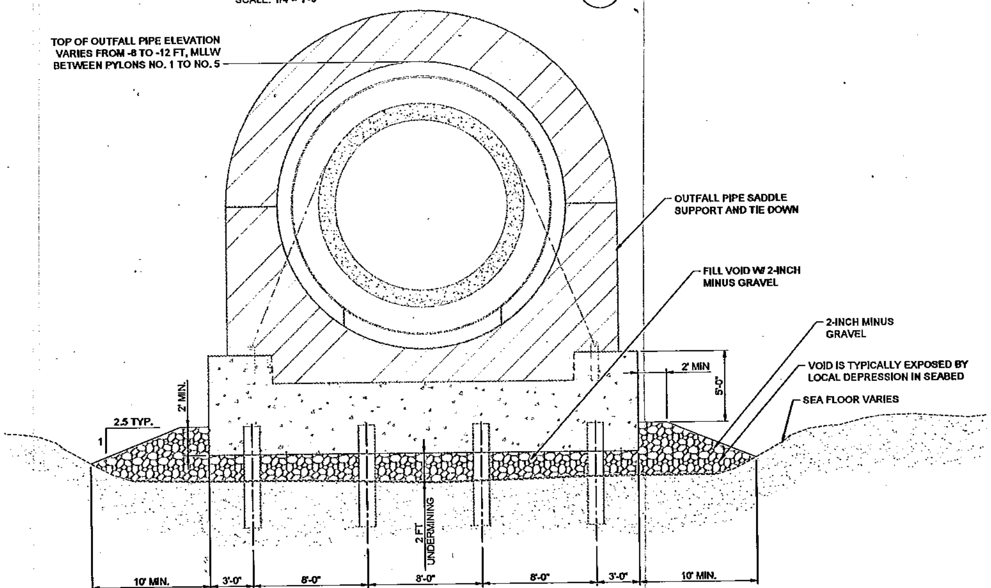
SHEET TITLE: ENCASEMENT SCOUR PROTECTION REPAIR PLAN AND ELEVATIONS
PROJECT: ONE-MILE OUTFALL REPAIRS
ADDRESS: HYPERION TREATMENT PLANT 12000 VISTA DEL MAR, PLAYA DEL REY, CA 90293

CIP NO. 2437
INDEX NO D-XXXXX

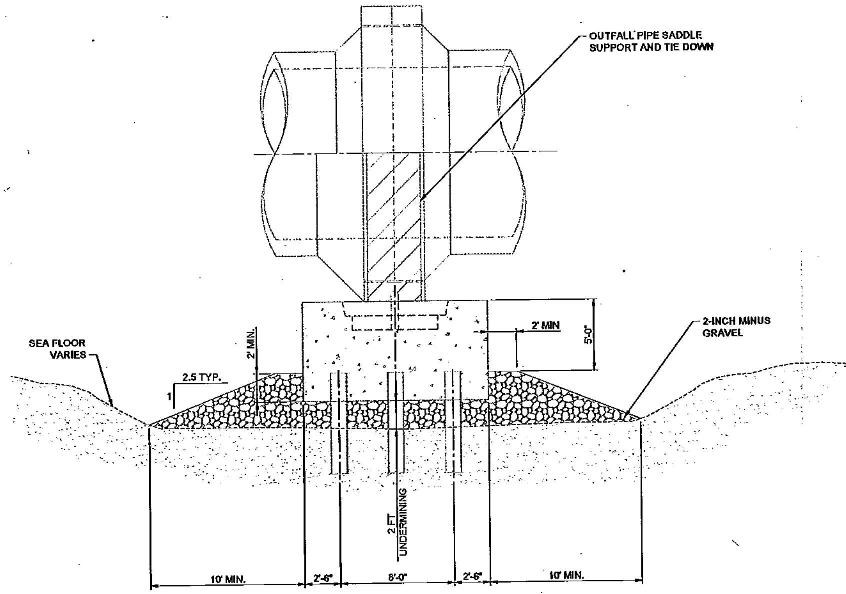
WORK ORDER NO. SZH11770
DRAWING NO. C-2
SHEET 4 OF 10 SHEETS



TYPICAL PLAN, PYLONS NO. 1 - 5 (1 / C-4)
SCALE: 1/4"= 1'-0"



TYPICAL SECTION, PYLONS NO. 1 - 5 (A / C-4)
SCALE: 1/4"= 1'-0"



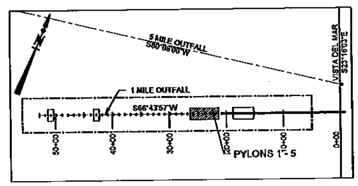
TYPICAL ELEVATION, PYLONS NO. 1 - 5 (B / C-4)
SCALE: 1/4"= 1'-0"

NOTES:

1. SCOUR PROTECTION REPAIRS AROUND PYLONS NO. 1 - 5 INCLUDE THE FOLLOWING:
   - FILL VOIDS WITH 2 IN MINUS GRAVEL
   - PLACE MINIMUM 10 FT WIDE GRAVEL APRON AROUND PILE CAP.
2. UNDERMINING AT PYLON NO. 1 THROUGH NO. 5 VARIES FROM ZERO TO 2 FEET BASED ON PREVIOUS INSPECTIONS. CONDITIONS ENCOUNTERED DURING CONSTRUCTION MAY VARY FROM PREVIOUS OBSERVATIONS.
3. EXTENT OF UNDERMINING VARIES FOR EACH PYLON NO. 1 THROUGH NO. 5. FOR PYLONS NOT UNDERMINED PLACE A 2 FT THICK BY 10 FT WIDE GRAVEL APRON AROUND ENTIRE PILE CAP.
4. ALL DEPTHS SHOWN ARE APPROXIMATE.
5. PYLON UNDERMINING SHOWN IS BASED ON APPROXIMATE MEASUREMENTS FROM AN UNDERWATER INSPECTION IN MAY 2014. CONDITIONS ENCOUNTERED DURING CONSTRUCTION MAY VARY FROM PREVIOUS OBSERVATIONS.
6. CONTRACTOR SHALL PERFORM INSPECTIONS OF PLACEMENT OF SCOUR PROTECTION AT REGULAR INTERVALS TO VERIFY ROCK THICKNESS, EMBANKMENT SLOPE, AND THAT AREAS WITH UNDERMINING ARE SUFFICIENTLY FILLED AND PROTECTED. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

LEGEND:

2-INCH MINUS GRAVEL



KEY PLAN
NOT TO SCALE

SCALE: 1/4"=1'-0"

moffatt & nichol
3780 KILROY AIRPORT WAY, STE 600
LONG BEACH, CA 90806
562-426-9551

CITY OF LOS ANGELES — DEPARTMENT OF PUBLIC WORKS — BUREAU OF ENGINEERING

GARY LEE MOORE, P.E. CITY ENGINEER
DESIGN GROUP
LIC NO. 60242
ENGINEER: OJ
DESIGNED BY: AH
DRAWN BY: KL
CHECKED BY:
APPROVED BY: OJ

SHEET TITLE: PYLON SCOUR PROTECTION REPAIR PLAN AND SECTIONS
PROJECT: ONE-MILE OUTFALL REPAIRS
ADDRESS: HYPERION TREATMENT PLANT 12000 VISTA DEL MAR, PLAYA DEL REY, CA. 90293

WORK ORDER NO. SZH11770
DRAWING NO. C-4
SHEET 6 OF 10 SHEETS

INDEX NO. D-XXXXX
CIP NO. 2437

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Exhibit 4
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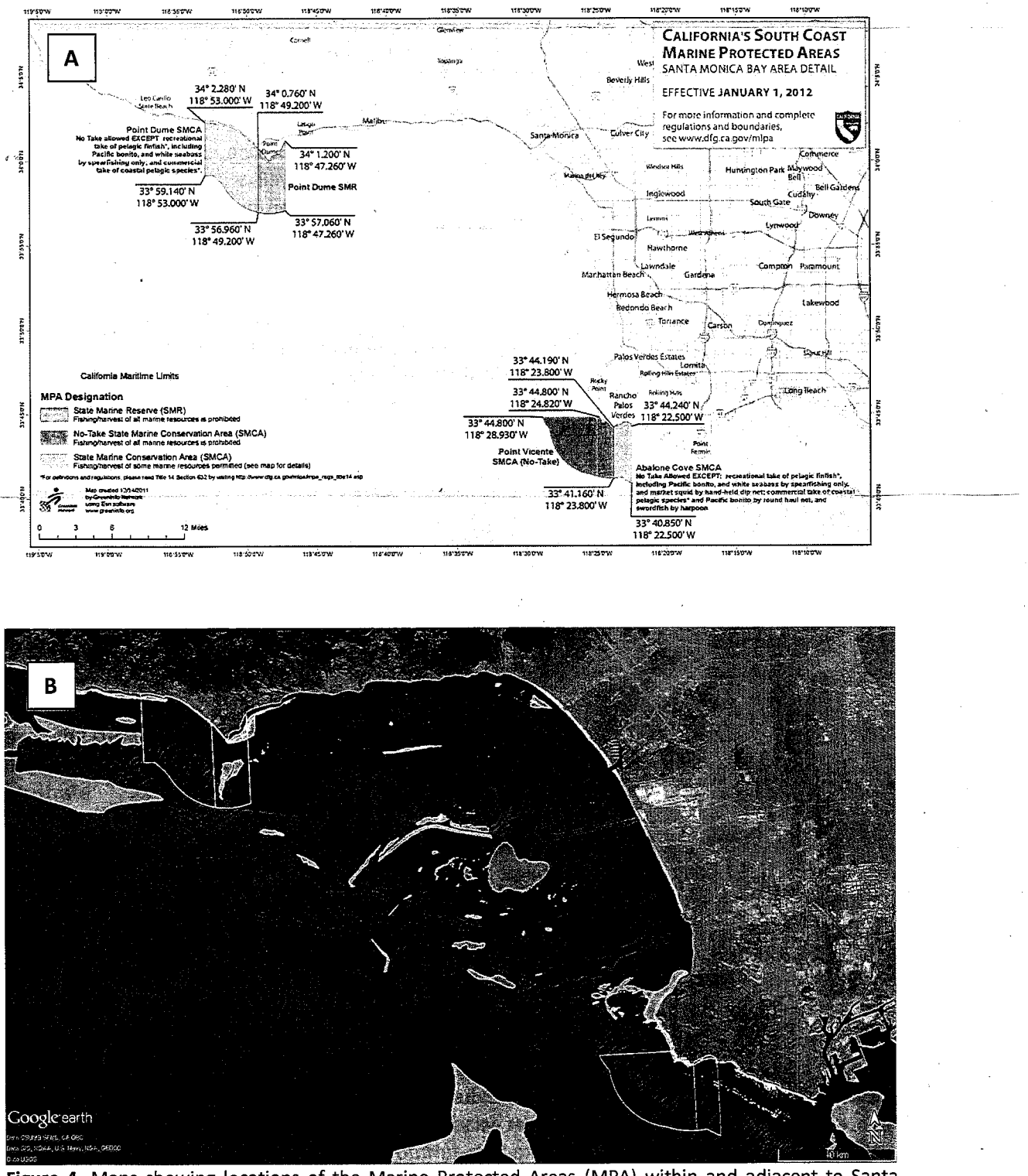

Figure 4. Maps showing locations of the Marine Protected Areas (MPA) within and adjacent to Santa Monica Bay. Top panel (**A**) was produced by California Department of Fish and Wildlife showing boundary coordinates and official names of each MPA. Bottom panel (**B**) identifies rocky (hard) substrate (lavender polygons), MPA boundaries (yellow polygons), and Hyperion 5- and 1-Mile Outfalls (red lines).

Lobster at pylon # 5

Figure 1. California spiny lobsters at pylon #5 of the 1-Mile Outfall during the 2009 annual outfall structural inspection.

Figure 2. Lobster observed on 1-Mile Outfall ballast during 2010 annual outfall structural inspection .

Exhibit 6
5-15-0605