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5-21-0866 (OCTA & SCRRA)

NOVEMBER 5, 2026

APPENDICES

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Appendix A - Special Conditions

1. Authorization Term.

A. Authorization Period. This permit authorizes shoreline protective devices, including rock revetment, seawall, and tieback anchor system, and related maintenance in accordance with **Special Conditions 4 and 8** solely for the protection of the existing railroad between Mile Posts 203.83 to 204.40 and 206.00 to 207.25 for a period of ten (10) years (i.e. until November 5, 2036). This authorization period may be extended by the Executive Director for up to five (5) years if the Permittees place or fund the placement of sand on public beaches in front of the railroad within the City of San Clemente and/or City of Dana Point at a ratio of one (1) year time extension for 70,000 cubic yards of sand. Requests for continued authorization shall be submitted in writing for review and approval of the Executive Director one (1) year prior to the expiration of the initial authorization term. Proposals for additional sand placement or funding for sand shall be conducted in a manner and location as deemed appropriate to the circumstances at that future time. Sand placement must be conducted through permitted sand placement programs including, but not limited to, the City of San Clemente and Orange County Sand Compatibility and Opportunistic Use Programs and the final approved Capistrano Beach County Park Monitoring and Maintenance Plan/Capistrano Beach Sand Compatibility and Use Guidelines. No placement of sand that could impact the equilibrium footprint of the initial sand placement (as defined in the final approved Marine Ecosystem Monitoring Plan, **Special Condition 9**) shall occur within three (3) years of the initial sand placement described in **Special Condition 3.A.1**. The Permittees shall notify the Executive Director ten (10) days prior to each sand placement event and, within ten (10) days following each sand placement event, confirm the sand placement location, methods, and total volume in cubic yards and include any request to extend the authorization term of this permit for sand placement as outlined in this condition.

B. If the Permittees propose to retain any portion of the shoreline protective devices beyond the authorization period (including approved extensions) in this permit as described in subsection A of this Special Condition, then the Permittees shall submit a complete Coastal Development Permit (CDP) or amendment application to the California Coastal Commission no later than one (1) year prior to the termination of the authorization period. The Permittees shall include in this application, as outlined in the special conditions of this permit, a new proposed mitigation program informed by the Final Sand Monitoring Report (**Special Condition 3.A.2**), Lower-cost Transit Investigation and Report (**Special Condition 3.A.3**), Public Information Improvements (**Special Condition 3.A.4**), the Revetment Footprint Minimization Analysis (**Special Condition 3.A.5**), Coastal Trail Feasibility Analysis (**Special Condition 3.A.6**), and the Long-term Railroad Adaptation Study (**Special Condition 3.A.10**) that corrects any nonconformities with the Limit Lines and/or the As-Built Plans approved pursuant

to **Special Condition 8,** addresses other coastal resource impacts that resulted from nonconformities with the approved Railroad Maintenance Program (**Special Condition 4**), and takes into account the results of the Biological Monitoring and Mitigation Plan. The Mitigation Program shall include an evaluation of alternatives to the shoreline protective devices that reduce impacts to sand supply, public access and recreation, and any other relevant coastal resources present at the site at that time. The information concerning these alternatives must be sufficiently detailed to enable the Coastal Commission to evaluate the feasibility of each alternative for addressing site-specific issues under the Coastal Act. The New Mitigation Program shall also include mitigation for the effects of any remaining portion of the shoreline protective devices on relevant coastal resources, including sand supply, public access and recreation, surf conditions, during the expected life of the remaining shoreline protective devices beyond, but not including the initial period of authorization.

C. Removal and Restoration. The Permittees shall be required to remove the development authorized in this Permit in the following situations: (a) the Permittees fail to submit a permit or amendment application requesting retention of the shoreline protective devices beyond the authorization period; (b) the submitted permit or amendment application is denied; or (c) the existing railroad is removed, relocated, or abandoned. Within 90 days of the termination of the initial authorization period or the removal, relocation, or abandonment of the existing railroad, whichever comes first, the Permittees shall submit, to the Executive Director, a plan for removal of the development, as feasible, authorized by this permit and restoration of all affected areas to their prior condition or better. The Executive Director shall determine whether a new CDP or an amendment to this CDP is necessary to authorize such removal and restoration activities. Removal of development shall be completed within 180 days of the Executive Director's approval and authorization of the removal plan, unless extended for good cause by the Executive Director or as otherwise required by a CDP or CDP amendment for removal and restoration of the development.

2. **Deadline Adjustments and Extensions**. Adjustments or extensions to deadlines specified in the Special Conditions of this Permit may be allowed by the Executive Director if the Executive Director determines that any deadline adjustment or extension are appropriate in light of circumstances, including that the Permittees have shown diligence in pursuing the development and meeting all terms and conditions of this CDP.

3. **Mitigation Program for Shoreline Armoring Impacts.**

A. WITHIN 30 DAYS OF COMMISSION APPROVAL OF THIS PERMIT, the Permittees shall submit, for review and written approval of the Executive Director, a Mitigation Program for Shoreline Armoring Impacts that includes, at a minimum, all of the following components:

1. **Sand Placement.** The Permittees shall place at least 690,000 cubic yards of beach-compatible sand in accordance with the final approved Sand Source, Transport, and Placement Plan (**Special Condition 6**) WITHIN ONE YEAR OF COMMISSION APPROVAL OF THIS PERMIT, i.e. by November 5, 2027, unless extended for good cause by the Executive Director or extended through a valid CDP or CDP amendment.
2. **Sand Monitoring.** A Sand Monitoring Plan to assess placed sand's equilibration, longshore and cross-shore sand transport, and beach widths at the beach(es) at and around the project site from placement of sand until the authorization term expires. The Plan shall include:
    i. A report for Executive Director review and approval that analyzes the expected movement of sand following placement in the identified nourishment areas and verifies that sand movement under worst-case conditions will not adversely impact the hard substrate, canopy-forming kelp, or other associated biota of Wheeler North Reef (i.e., through burial). Worst-case conditions shall generally be understood to mean the oceanographic and physical conditions that have the greatest likelihood of deposition, at the deepest reaches, offshore and include an assessment of the theoretical maximum depth of closure for the proposed sand.
    ii. Monitoring and analytical methods adequate to answer the following management questions:
        a. How did the placed sand perform in terms of beach creation and persistence?
        b. Where did the placed sand move and under what oceanographic conditions?
        c. At what approximate beach width did people stop placing towels down seaward of the shoreline protective devices? How long was the beach passable by lifeguard vehicles on the sand seaward of the shoreline protective devices? How long was it passable for pedestrians?
        d. Is direct sand placement a viable strategy to maintain lateral access along the shoreline fronting the subject armoring in the long-term?
        e. What measures would improve performance of sand placement in terms of beach creation and persistence for example, increasing median grain size, increasing volume, changing placement frequency or locations?

        At a minimum, monitoring shall be conducted through the use of a minimum of 18 transects, spaced to capture the bounds of the sand placement fronting Areas 1 & 2, Area 4, and Cyprus Shores, to monitor subaerial beach profiles from the railroad centerline to mean lower low water. Subaerial beach profiles shall be monitored at least monthly. At least six transects at both Areas 1 & 2 and Area 4 shall

extend monitoring of the beach profile to the depth of closure and shall be monitored at least twice annually (once in April or May and once in September or October). Surveys shall be conducted before placement of sand at most six months prior and continue through the authorization term. The results of the monitoring shall inform a final Sand Monitoring Report that will analyze the expected volume of sand and frequency of placement events required to maintain a passable beach seaward of the railroad at the project site.

iii. The Permittees shall submit annual reports on the performance of the sand to the Executive Director by June 15. The reports shall include a summary of key metrics such as beach width, shorezone volume, for the most recent surveys and trends over time as well as notable events such as sand placement by other entities and extreme oceanographic conditions.

iv. ONE YEAR PRIOR TO EXPIRATION OF THIS PERMIT, i.e. by November 5, 2035, unless extended by the Executive Director pursuant to **Special Condition 2** or for good cause, the Permittees shall submit a Final Monitoring Report with the final results of the Sand Monitoring Plan which shall include a summary of the findings as they related to the above management questions and recommendations for how to improve the performance of sand placement on beach creation and persistence.

3. **Lower-Cost Transit Investigation and Report.**

i. UPON COMMISSION APPROVAL OF THIS PERMIT, the Permittees shall initiate an investigation into the feasibility of expanding Metrolink's Low-Income Fare Discount Program ("Mobility-4-All"), which provides a fare discount to lower income riders. This feasibility study shall, at minimum:

a. Evaluate current usage, capacity, and funding constraints associated with the Low Carbon Transit Operations Program (LCTOP) and any related fare-subsidy programs;

b. Provide an update on the Permittees' progress in implementing the recommendations adopted in Metrolink's 2021 Accessibility and Affordability Study, including but not limited to recommendations related to fare affordability, accessibility improvements, and equity-based service policies;

c. Assess the feasibility of expanding eligibility to include individuals enrolled in the following assistance programs: CARE/FERA; Medicaid/Medi-Cal; Women, Infants and Children Program (WIC); Healthy Families A & B; National School Lunch Program (free lunch); Food Stamps/Supplemental Nutrition Assistance Program (SNAP); CalFresh; Low Income Home Energy Assistance Program (LIHEAP); Head Start (Tribal income-eligible only); Supplemental Security

Income (SSI); Bureau of Indian Affairs General Assistance; Temporary Assistance for Needy Families (TANF) or Tribal TANF; Orange County Rental Assistance Programs; and applicants or occupants of affordable housing.

ii. WITHIN ONE YEAR OF COMMISSION APPROVAL OF THIS PERMIT, the Permittees shall submit the results of the feasibility investigation required by subsection a of this Special Condition through a new CDP or CDP amendment application. The application shall include, if feasible, implementation of the expanded Low-Income Fare Discount Program within one year of the application's approval or, if infeasible, implementation of equivalent public access mitigation such as measures that improve transportation access, affordability, or connectivity for low-income and transit-dependent communities.

4. **Public Information Improvements.**

i. WITHIN 90 DAYS OF COMMISSION APPROVAL OF THIS PERMIT, the Permittees shall publish, after review and written approval of the initial content by the Executive Director, a Public Information Portal for public engagement with the ongoing development and resiliency planning at the project site. The content shall include, but is not limited to, a map viewer showing all development at the project site, including the locations and extent of maintenance events, the Limit Lines of the shoreline protective devices as defined in this staff report, updates on construction timing and any related access limitations, any publicly available real-time or regularly updated sand monitoring data, and all final reports, analyses, and studies required by the special conditions of this permit.

ii. Reporting. BEFORE JANUARY 1, 2028 AND EVERY THREE YEARS THEREAFTER, the Permittees shall submit a report to the Executive Director on the project status, that includes but is not limited to an update on the status of the Long-Term Rail Adaptation Study (LTRAS), recent development conducted, sand monitoring data, progress on public access mitigation, and any repair/maintenance activities conducted pursuant to the Railroad Maintenance Program (**Special Condition 4**) since the last Commission hearing on this project. These reports shall be presented to the Commission as an informational item at an agendized and noticed public hearing.

iii. The Permittees shall install and/or fund installation of a minimum of three educational signs in languages appropriate for the San Clemente area at each of the two project areas (north and south of the San Clemente Pier) in coordination with the City of San Clemente and California State Parks. WITHIN 180 DAYS OF COMMISSION APPROVAL OF THIS PERMIT, the Permittees shall submit a Final Signage Plan for review and approval of the Executive Director that does not adversely impact coastal resources.

iv. The public information resources provided by this section shall be maintained for the authorization period described in **Special Condition 1**, at a minimum.

5. **Cyprus Shore Revetment Footprint Minimization.**

i. WITHIN 180 DAYS OF COMMISSION APPROVAL OF THIS PERMIT, the Permittees shall submit a Revetment Footprint Minimization Analysis for the Cyprus Shore area (Mile Post 206.60 to 207.10), as outlined herein, along with a new CDP or CDP amendment application that includes a site-specific geotechnical study that evaluates the potential for revetment footprint to be minimized through restacking and/or partial removal of rock. The geotechnical study shall address the following information to the maximum extent feasible:

a. Determine the basal rupture surface geometry of the Cyprus Shores Landslide using appropriate subsurface investigation methods.

b. Determine the pore pressures at the basal rupture surface by installation of vibrating wire piezometers in that sliding surface shear zone.

c. Sample basal rupture surface gouge material and test that material to determine the residual shear strength using torsional ring shear testing (ASTM Standard Test Method D6467).

d. Using the results of Items a., b., and c., a licensed geotechnical engineer or engineering geologist shall complete a limit equilibrium slope stability analysis for the Cyprus Shores Landslide that addresses the temporary stability of the landslide during the process of re-stacking the revetment rock. The slope stability analysis shall include recognition that revetment rock would be removed in small cells and re-stacked before moving on to another cell. The analysis should also evaluate the stability of the west end slopes with restacking of the current revetment rock into a different geometry that reduces the seaward footprint of the revetment. The geotechnical engineer shall provide recommendations for temporary slope inclinations for the surrounding sand deposits during the restacking process. The licensed professional engineering geologist and licensed geotechnical engineer who performed the investigation shall stamp and sign a report summarizing the results of the above investigation.

ii. The Permittees shall implement footprint minimization identified as feasible in the Revetment Footprint Minimization Analysis within one year of issuance of the CDP or CDP amendment required per subsection i. of this condition, or as required by that CDP.

6. **Area 4 Riprap Removal.** WITHIN 90 DAYS OF SEAWALL COMPLETION, the Permittees shall remove all riprap seaward of the seawall above +5 feet NAVD88 within the railroad right-of-way that is not required for flanking protection at the up and downcoast ends. The Permittees shall notify the Executive Director ten (10) days prior to proposed initiation of removal activities. Such activities shall conform with the requirements of this permit, including but not limited to the construction best management practices outlined in **Special Condition 7**.

7. **Area 4 and Cyprus Shores Coastal Trail.**

   i. WITHIN ONE YEAR OF COMMISSION APPROVAL OF THIS PERMIT, i.e. by November 5, 2027, the Permittees shall submit a CDP or CDP amendment application for the construction of a Coastal Trail segment within Area 4 and, if feasible, Cyprus Shores. The CDP or CDP application shall include a feasibility analysis of alternative trail alignments including, but not limited to, a trail alignment cantilevered on the seaward side of the seawall and an at-grade trail on the inland side of the railroad tracks. The analysis shall also evaluate the feasibility of designing the trail or portions of the trail to meet Americans with Disabilities Act requirements.

   ii. The Permittees shall implement a trail alignment identified as feasible WITHIN FIVE YEARS OF COMMISSION APPROVAL OF THIS PERMIT, i.e. by November 5, 2031. If infeasible, the Permittees shall submit a plan to implement equivalent mitigation with the CDP or CDP amendment application.

8. **Coordination on Coastal Resiliency.** BY ACCEPTANCE OF THIS PERMIT, the Permittees commit to supporting local, regional, state, and national efforts to place sand seaward of the tracks and pursue coastal resiliency in manners such as facilitating access through the railroad right-of-way when needed, pursuing transportation-related grants for such projects, partnering with other entities on beach nourishment and/or climate change-related studies, contributing staff and other resources to regional efforts including the creation of a regional sediment management authority who can manage and coordinate resources across city, county, and state entities to pursue beach replenishment and responsible sediment management practices, and support efforts to acquire additional Hopper Dredger(s) that would be available on the West Coast.

9. **Mitigation for Past Emergency Work.** By acceptance of this permit, the Permittees acknowledge and agree to undertake, in addition to the sand placement described in **Special Condition 3.A.1**, above, placement of 85,000 cubic yards of sand or funding of sand placement on public beaches in front of the railroad within the City of San Clemente and/or City of Dana Point. Sand placement must be conducted through permitted sand placement programs including, but not limited to, the City of San Clemente and Orange County Sand Compatibility and Opportunistic Use Programs and the final

approved Capistrano Beach County Park Monitoring and Maintenance Plan/Capistrano Beach Sand Compatibility and Use Guidelines. The additional placement of 85,000 cubic yards is subject to the following parameters. The additional placement of sand described in this section may occur through multiple events, however, the cumulative required amount shall be placed during the initial ten (10) year term of this permit (i.e. by November 5, 2036). No placement of sand that could impact the equilibrium footprint of the initial sand placement (as defined in the final approved Marine Ecosystem Monitoring Plan, **Special Condition 9**) shall occur within three (3) years of the initial sand placement described in **Special Condition 3.A.1**, above. Prior to the additional placement of sand described in this section, the Permittees shall submit a written plan for placement to the Executive Director for review and approval. The Permittees shall notify the Executive Director ten (10) days prior to each sand placement event and, within ten (10) days following each sand placement event, confirm the sand placement location, methods, and total volume in cubic yards in a written report to the Executive Director.

10. **Long-term Railroad Adaptation Study (LTRAS)**. NO LATER THAN NOVEMBER 5, 2030, the Permittees shall submit, for review and written approval of the Executive Director, a Long-Term Railroad Adaptation Study (LTRAS) prepared either by the Permittees or by CalSTA or Caltrans on behalf of the Permittees, consistent with the following terms:

    i. WITHIN 90 DAYS OF COMMISSION APPROVAL OF THIS PERMIT, the Permittees shall:

        a. Identify members for a working group and convene the initial working group meeting. The Working group shall include both a technical advisory committee of technical experts, and a steering committee that includes, at minimum, affected rail owners and operators (passenger and freight), local and regional government representatives, Coastal Commission, Caltrans, and State Parks representatives, affected tribal governments, and community-based organizations, including those representing inland and environmental justice communities. The list of proposed working group members shall be submitted to the Executive Director for review and written approval prior to convening the initial meeting.

        b. Prepare and submit for review and approval of the Executive Director a draft Community Engagement Plan (CEP) with the goal and purpose of effectively reaching and meaningfully engaging environmental justice communities in the planning and decision-making process for the functioning and future of the corridor. The draft CEP shall include outreach methodology with culturally appropriate outreach methods, which may include digital, paper, and in-person options, and a language access protocol that outlines how materials will be developed, such as translation into non-English languages (including at a minimum Spanish), tailored to be

culturally relevant, and written in plain language to prevent educational and cultural barriers from engagement. The draft CEP shall identify key community-based organizations, local governments, Environmental Justice community representatives, and other stakeholders who will be proactively engaged throughout the planning process. The methodology shall include an engagement timeline that aligns with major LTRAS milestones, identifying when draft materials will be shared and when input opportunities occur. The draft CEP shall identify how community input will be incorporated into the working group's deliberations, including: (1) required presentation of CEP findings at each major working group milestone; (2) a mechanism for the working group to provide written responses to substantive community concerns; and (3) documentation in the LTRAS of how community feedback influenced the screening, modification, or elimination of alternatives. The draft CEP shall also include a description of how community input was incorporated into alternative development and screening.

ii. WITHIN ONE YEAR OF COMMISSION APPROVAL OF THIS PERMIT, i.e. by November 5, 2027, the Permittees shall:

   a. Convene a minimum of two hybrid working group meetings (1 inland and 1 on the coast) and,

   b. In coordination with the working group, shall generate, and submit to the Executive Director, an Interim LTRAS that identifies:

      1. A detailed set of LTRAS milestones necessary to complete the LTRAS by November 5, 2030, including a funding outline for the planning and environmental phases.

      2. A draft alternatives analysis for relocation (including identification of alternative railroad alignments), decommission and removal, and adaptation-in-place of the railroad tracks that evaluates all components described in subsection A.10.iii below and considers all factors described in subsection A.10.iv below.

      3. A final Community Engagement Plan.

   c. No later than January 1, 2028, the Permittees shall present the findings of the Interim LTRAS to the Commission as an informational item at an agendized and noticed public hearing.

iii. The LTRAS shall evaluate relocation of the railroad and shall, at minimum, evaluate the following:

   a. Relocation alternatives: Provide a clear long-term (at least through 2130) analysis of providing necessary rail service along the LOSSAN Corridor between Doheny State Beach and U.S. Marine Corps Base Camp Pendleton at a minimum of two inland sites that

avoid or minimize coastal hazard threats. The analysis shall provide details regarding the mechanisms, costs, funding options, timing, and impacts for each potential relocation alternative, as follows:

1. Mechanisms: A feasibility analysis of relocation alternatives that assesses and considers all potential technical constraints—including design, geotechnical, and engineering constraints—and relevant resource agency requirements (including those enumerated in **Special Conditions 15 and 16**).
2. Costs: Expected costs to plan, permit, decommission, and relocate the existing railroad segment(s) and to restore the existing alignment to a natural or, if infeasible, near-natural condition upon removal.
3. Funding: An evaluation of the manners in which the Permittees or successors in interest and other relevant parties could seek funding from federal, state, municipal, and/or private partnerships for each of the studied railroad relocation alternatives.
4. Timing: A timeline of potential major relocation-related events, including expected timeframes for land acquisition, planning, permitting, design, construction, and eventual operation for each of the studied railroad relocation alternatives.
5. Impacts: Identification of the least-environmentally damaging feasible relocation alternatives, including the benefits and adverse impacts to public access and recreation, sensitive resources that may constitute ESHA, wetlands, sand supply, and other coastal resources resulting from each of the railroad realignment alternatives.

b. Adaptation-in-place. If relocation or decommissioning and removal of this railroad segment is determined to be infeasible, the Permittees shall identify alternative strategies for adapting the railroad corridor in-place to maintain any necessary rail operations in a manner safe from flooding and other coastal hazards while ensuring protection of coastal resources such as beaches over the long-term (at least through 2130). The evaluation of alternatives for adaptation-in-place of the current railroad alignment shall address any coastal hazard vulnerabilities identified, including but not limited to alternatives involving accommodation strategies (e.g., elevation of track and other components), protection measures (e.g., shoreline armoring, sand retention, nature-based adaptation strategies, or other natural or engineered features), or other alternatives. Alternatives may include a combination of strategies phased over time. The evaluation shall include the following:

1. Mechanisms: A feasibility analysis of adaptation alternatives that assesses and considers all potential technical constraints—including design, geotechnical, and engineering constraints—and relevant resource agency requirements (including those enumerated in **Special Conditions 15 and 16**). The analysis shall describe all specific design elements and adaptation measures considered, including how different strategies may be used in combination and over time, to ensure the integrity and continued operation of the railroad while protecting coastal resources. The analysis shall also describe any anticipated additional development along the corridor or surrounding areas to serve the railroad in its future operations, and an explanation as to how such associated development would fit into the overall, long-term adaptation approach. Each alternative shall include an evaluation of the impacts to coastal resources and non-armoring adaptation shall be prioritized.
2. Costs: A cost-benefit analysis that addresses the costs associated with continued facility maintenance and upgrades, including any protection measures or other strategies necessary to address coastal hazards (as exacerbated by sea level rise) at the site, including continued monitoring and mitigation requirements for public access impacts, in comparison to relocation alternatives, and costs associated with environmental review, permitting, and mitigation.
3. Funding: An evaluation of the manners in which the Permittees or successors in interest or related parties could seek funding from federal, state, municipal, and/or private partnerships for each of the studied railroad adaptation-in-place alternatives.
4. Timing: A timetable for implementation based on projections of sea level rise and anticipated impacts from coastal hazards. If adaptation strategies would be implemented in response to defined triggers, such as amounts of sea level rise and/or risk to the railroad and associated infrastructure and operations, the timetable should identify the time horizons over which such triggers are anticipated to occur. The timetable shall take into consideration expected timeframes for any necessary land acquisition, planning, permitting, design, mitigation, and construction.
5. Impacts: Identification of the least-environmentally damaging feasible alternatives, including the benefits and adverse impacts to public access and recreation, sand supply, and other coastal resources resulting from each of the adaptation strategies.

iv. The LTRAS shall also include and address the following:

a. Previous relocation studies, including but not limited to, the April 2003 LOSSAN Corridor DRAFT Strategic Plan.[1]

b. Previous research, including but not limited to, the ongoing UC Irvine Sediment-by-rail logistics project, to evaluate options to deliver sand from inland sources to the beach via rail (e.g. rail spur at Doheny State Beach, specialized rail cars and/or top mounted excavators that are able to transport and dump sand, rail car dumper, etc.).

c. Ongoing long-term sea level rise adaptation planning efforts by the City of San Clemente and any relevant long-term planning and regional coordination with the County of Orange and neighboring local jurisdictions.

d. Outreach and coordination with other relevant agencies, Native American tribes, and stakeholders including, but not limited to, the Federal Railroad Authority, U.S. Department of Transportation, U.S. Army Corps of Engineers, National Railroad Passenger Corporation (Amtrak), California Department of Transportation, Juaneño- and Luiseño-affiliated Native American Tribes, California State Lands Commission, California Department of Parks and Recreation, San Diego Association of Governments (SANDAG), Burlington Northern and Santa Fe (BNSF) Railway, Save our Beaches San Clemente, and The Surfrider Foundation.

e. Current and future coastal hazards including flood and erosion hazards caused by tidal inundation, extreme tides and storms, overtopping of shoreline armoring, elevated groundwater and/or reduced or inadequate drainage, which takes into account sea level rise through at least 2130, considering intermediate-high and high sea level rise scenarios for the area, and based on the best available science at the time of plan preparation and any data gathered as part of the monitoring required by **Special Conditions 3.A.2 and 9**.

f. Economic impacts resulting from the railroad's shoreline protection with an emphasis on beach tourism and including temporary rail closures required to install such measures.

g. A community impact analysis of the potential effects of each alternative on local and inland communities, with a component specifically analyzing low-income, and disadvantaged communities in the surrounding and service area using identified using tools such as CalEnviroScreen or similar screening tools and informed by input from the working group. The analysis shall evaluate the distribution of environmental burdens and benefits and shall

[1] https://railroads.dot.gov/sites/fra.dot.gov/files/2020-08/lossanplan1.pdf

consider direct and indirect impacts associated with each alternative, including, but not limited to, coastal access and recreation, transportation opportunities, access to employment and education, environmental health conditions, cumulative impacts and their distribution amongst communities. This analysis shall include qualitative feedback received through the Community Engagement Plan and shall summarize how that feedback influenced the development, modification, or screening of alternatives, and identify remaining concerns and potential solutions, where feasible.

v. No later than January 1, 2031, the Permittees shall present the findings of the final LTRAS to the Commission as an informational item at an agendized and noticed public hearing.

B. The final approved Mitigation Program shall expire at the end of the authorization term of this permit, as defined in **Special Condition 1**. AT LEAST ONE YEAR PRIOR TO EXPIRATION OF THIS PERMIT, i.e. by November 5, 2035 unless extended by the Executive Director pursuant to **Special Condition 2** or for good cause, the Permittees shall submit a Mitigation Program report that describes the shoreline protective devices onsite and outlines their impacts on coastal resources, summarizes consistency with the terms of this permit, and contains recommendations for mitigation strategies that the Permittees could implement to address the continued impact of the subject shoreline protective devices on coastal resources and public access.

4. Railroad Maintenance Program.

A. This CDP authorizes limited future repair and maintenance of the rock revetment located between Mile Posts 203.80 to 204.40 and 206.00 to 207.20 as described in this special condition. The Permittees may place a total of 15,000 tons of riprap (no more than 300 tons per 100 linear feet), inclusive of any riprap placed pursuant to G-5-26-0068. The authorization period for the Railroad Maintenance Program shall expire on July 5, 2027. No additional riprap may be placed beyond the tonnage limit or authorization period described in this condition.

B. The Permittees may request further authorization of the Railroad Maintenance Program either through an amendment of this CDP or through a new CDP. Any CDP for continued authorization for the Railroad Maintenance Program may request an authorization period consistent with **Special Condition 1.A** above. Any application to amend this Permit to continue the Railroad Maintenance Program must include the proposed cap on placement of tonnage of new rock on an annual basis and maximum number of tons per 100 linear feet.

C. “Repair and maintenance” as understood for the purpose of this condition means the minimum necessary development required to address an imminent threat to the rail that would otherwise require a CDP or emergency CDP. Repair and maintenance activities shall be the minimum necessary to prevent damage to the railroad infrastructure (i.e. tracks and utilities) and maintain safe rail operation.

Repair and maintenance activities include sand, restacking of existing riprap, and placement of new rock consistent with the size and material of existing riprap.

D. Placement of new riprap shall avoid additional encroachment onto the beach (exceedance of the Limit Lines and/or the As-Built Plans approved pursuant to **Special Condition 8**) to the maximum extent feasible.

E. Reporting. The Permittees shall track and report the final repair/maintenance activities conducted, with photographic evidence, including the nature of the threat warranting action, location of restacked rock, amount of sand and/or rock placed in cubic yards and tons, respectively, any related rail closures, and construction access, staging, and methods used WITHIN 30 DAYS OF COMPLETION OF THE ACTIVITIES. In the report, the Permittees shall identify and highlight any encroachment of rock beyond the Limit Lines and/or the As-Built Plans approved pursuant to **Special Condition 8**. By July 5, 2027, unless extended by the Executive Director pursuant to **Special Condition 2** or for good cause, the Permittees shall submit a summary report of the repair and maintenance activities and, for any nonconformities with the Limit Lines and/or the As-Built Plans approved pursuant to **Special Condition 8** and/or work that exceeds 50% of the existing permitted and existing authorized prior to enactment of the Coastal Act tonnage or volume of the underlying section of armoring, a CDP or CDP amendment application to mitigate for any impacts to coastal resources.

F. Access and Staging. Construction access and staging shall avoid use of habitat areas, the beach, and public accessways to the maximum extent feasible. Where infeasible, access and staging shall be consistent with the requirements of **Special Condition 7.A** of this permit.

G. Construction Best Management Practices. Construction best management practices shall be implemented consistent with the requirements of **Special Condition 7.B** of this permit.

H. Other Agency Approvals. The Permittees acknowledge that these armoring repair/maintenance stipulations do not obviate the need to obtain permits and/or authorizations from other agencies for any future maintenance or repair.

I. Revetment Monitoring Program. UPON COMPLETION OF REVETMENT RESTACKING, the Permittees shall establish a Revetment Monitoring Program that includes, at a minimum, the following:

    1. Post-construction evaluation and annual reports to the Executive Director on revetment condition, performance, rock migration, and any weathering or damage affecting function.

    2. Benchmarks and measurements to document revetment height and seaward extent.

    3. Monitoring of beach profile changes and their potential impacts on the development approved by this CDP.

The Revetment Monitoring Program will expire in accordance with **Special Condition 1**.

5. Final Seawall Plans.

A. AT LEAST THREE MONTHS PRIOR TO CONSTRUCTION OF THE SEAWALL, the Permittees shall submit for review and written approval of the Executive Director, one electronic copy and two paper copies of Seawall Plans in substantial conformance with the plan titled “Area 4 Shoreline Protection Structure Plan, Profile, and Typical Sections” by S. Magallon, dated September 25, 2026. The plans shall include:

1. A seawall alignment located as far landward to the maximum extent feasible. If temporary full closure of rail operations is required for seawall construction, then the seawall alignment shall be moved inland from the alignment depicted in the plans dated September 25, 2026.
2. Geotechnical Report Recommendations. The Permittees shall submit engineering geologic soils and geotechnical reports including geologic cross sections along the proposed wall alignment, providing recommendations for seismic criteria and site preparation, structural fills, compaction standards, seismic design parameters, foundation design, drainage, and all other necessary geologic, geotechnical, and structural engineering recommendations. The Permittees shall submit evidence that an appropriate licensed professional has reviewed and approved all final design and construction plans, including structural, grading, and drainage plans, and certified that each of those final plans is consistent with all of the recommendations specified in the above referenced plan(s). If after review of the required geological and geotechnical reports, the proposed development is not consistent with the geotechnical recommendations, a CDP amendment is required to address necessary modifications, unless the Executive Director determines that no CDP amendment is necessary.
3. A Final Seawall Materials Plan identifying all materials proposed for construction of the seawall and modification of the culverts in Area 4, including pile materials, materials filling the interstitial spaces between piles, any fill materials within the piles, and any surficial coatings, sealants, or other treatments proposed for the seawall. The seawall shall be designed to include, or mimic, the native materials and appearance of the natural environment, or be otherwise visually treated to minimize impacts to visual resources. The Plan shall include detailed material specifications, product information, and applicable safety data sheets and shall conform to the following requirements:
    i. Recommended Materials. To minimize the discharge of plastics, chemical contaminants, and other potentially harmful materials into coastal waters, the seawall shall be constructed using durable, non-plastic and non-preservative-treated materials, including reinforced concrete or marine-

grade steel, to the maximum extent feasible. The use of pressure-treated wood and plastic or polymer-based materials shall be avoided to the maximum extent feasible.

ii. Restricted Materials. Materials with the potential to release chemical contaminants or plastic particles into coastal waters, including pressure-treated wood, PVC, HDPE, fiberglass-reinforced plastics, polymer-based fillers, and polymer coatings, shall be avoided to the maximum extent feasible. Creosote-treated wood and materials containing intentionally added per- and polyfluoroalkyl substances (PFAS) shall also be avoided. Where the use of these materials is proposed, the Permittees shall demonstrate that less environmentally harmful alternatives are infeasible and that the selected materials minimize potential adverse impacts to coastal water quality and marine resources. Consideration shall be given to chemical leaching, abrasion, fragmentation, degradation, and long-term environmental performance.

iii. Coatings, Sealants, and Fill Materials. Coatings, sealants, grouts, and other fill materials shall be limited to those necessary for structural integrity, durability, or functionality. Where such materials are proposed, the Permittees shall select products appropriate for marine exposure that minimize the potential for chemical leaching, flaking, fragmentation, and other pollutant releases. Materials requiring curing shall be fully cured before exposure to coastal waters, consistent with manufacturer specifications.

iv. Materials Documentation. The Plan shall identify the proposed materials and their intended uses and include applicable product specifications, safety data sheets, and available information regarding environmental performance, including potential leaching, degradation, and release of chemical constituents or plastic particles under anticipated marine exposure conditions.

v. Alternatives Analysis and End-of-Life Management. For any proposed material that does not meet the recommended materials criteria, the Plan shall include an alternatives analysis demonstrating why less environmentally harmful materials are infeasible. The analysis shall consider structural requirements, durability, environmental performance, maintenance needs, expected service life, and end-of-life removal and disposal. Preference shall be given to materials that can be readily recovered, reused, or recycled and that minimize the potential for pollutant releases during construction, maintenance, removal, and disposal. The Plan shall identify appropriate handling and disposal methods for materials that may contain hazardous constituents, wood preservatives, plastics, or other potentially harmful substances.

The Executive Director may approve the Final Seawall Materials Plan upon determining that the proposed materials and associated measures minimize

potential adverse impacts to coastal water quality and marine resources, consistent with the requirements of this condition and applicable Coastal Act and certified Local Coastal Program policies.

4. Public Safety Requirements. Any signs or fencing required to protect the public from railroad activities shall be the minimum necessary to ensure public safety and shall minimize adverse impacts to visual resources from public viewpoints, including from the train and beach.
5. Final construction details including construction methods, timing, staging, and access consistent with **Special Condition 7**.
6. Seawall Removal Plan. A Seawall Removal Plan that evaluates the physical and financial feasibility of removing the entire seawall structure at the end of its useful life or when removal is otherwise required. The Plan shall describe the methods and sequencing for removal of all seawall components, including piles, caps, wall panels or infill, coatings, and any fill materials within or behind the structure, and restoration of the affected area in a manner that protects coastal resources. The Plan shall include the following:
    i. Removal Methods and Resource Protection. Proposed removal methods, equipment, staging and access areas, and measures to minimize disturbance to coastal waters, sediment, and adjacent habitats, including containment and recovery of debris, sediment, and potentially harmful materials during removal.
    ii. Materials Management and Disposal. Identification of anticipated demolition materials, including concrete, steel, plastics, polymer-based materials, preservative-treated wood, coatings, and pile fill, as applicable, and proposed methods for their separation, handling, transport, reuse, recycling, or disposal at appropriately authorized facilities. Demolition debris and pile fill shall not be deposited or left in coastal waters or adjacent habitats. Materials potentially containing hazardous constituents shall be characterized and managed in accordance with applicable requirements.
    iii. Site Restoration Materials. Restoration shall prioritize natural, non-plastic materials and methods appropriate to the surrounding coastal environment. The use of plastic netting, synthetic erosion control blankets, polymer-based stabilization materials, and other plastic-containing restoration products shall be avoided to the maximum extent feasible. Where such materials are necessary, the Plan shall demonstrate why less environmentally harmful alternatives are infeasible and identify measures to prevent their degradation, dispersal, or release into coastal waters.
    iv. Restoration and Feasibility. The Plan shall identify the proposed final site conditions, measures to restore affected coastal resources, and any necessary post-removal monitoring. The Plan shall include an evaluation

of the technical feasibility and estimated costs of removal, materials management, disposal, and site restoration.

B. PRIOR TO COMMENCEMENT OF CONSTRUCTION OF THE SEAWALL, the Permittees shall submit, for the review and written approval of the Executive Director, a Seawall Maintenance Plan that outlines procedures for monitoring, inspecting, maintaining, and repairing the seawall. The Plan shall include the timing, frequency, and methods of inspection of all seawall components, including caps, piles, wall panels or infill between piles, cathodic protection, joints, and connections; conditions that would trigger maintenance or repair; anticipated maintenance activities and associated materials, including coatings, sealants, and repair compounds; and staging and access requirements.

   All maintenance and repair activities shall be consistent with the materials requirements established in the approved Final Seawall Materials Plan. Durable, non-plastic, and non-preservative-treated materials shall be used to the maximum extent feasible. The use of pressure-treated wood, plastic or polymer-based materials, and coatings or sealants with the potential to release pollutants into coastal waters shall be avoided to the maximum extent feasible. Where less environmentally harmful alternatives are infeasible, the Plan shall identify appropriate materials and measures to minimize potential leaching, degradation, and pollutant releases. The Plan shall also address containment, collection, and proper disposal of maintenance debris and replaced materials to prevent discharges to coastal waters.

C. The Permittees shall undertake development in conformance with the approved final plans unless the Commission amends this permit or the Executive Director issues a written determination that no amendment is legally required for any proposed minor deviations.

6. **Final Sand Source, Transport, and Placement Plan.** WITHIN 90 DAYS OF COMMISSION APPROVAL OF THIS PERMIT, the Permittees shall provide for review and written approval of the Executive Director, a Final Sand Source, Transport, and Placement Plan (Final Sand Plan) that substantially conforms with the 30% design plans by Coastal Frontiers, dated April 29, 2026 and includes, at a minimum:

   A. Sand Sources and Placement Methods. Final site plans identifying sand source areas, transportation routes, staging and stockpile areas, and placement areas, along with a description of excavation, transport, handling, and placement methods

   B. Anchoring Plan. An anchoring and operations plan that describes how the Permittees will avoid placing anchors on sensitive ocean floor habitats wherever feasible. The Plan shall include at least the following:

      1. A list of all vessels that will anchor during the Project and the number and size of anchors to be set;

2. Detailed maps showing proposed anchoring sites and rocky and reef habitat identified during the pre-project survey;
3. A description of the navigation equipment that would be used to ensure anchors are accurately set; and
4. Anchor handling procedures that would be followed to prevent or minimize anchor dragging, such as placing and removing all anchors vertically.
5. The Plan shall demonstrate that any equipment deployed offshore under this permit, including, but not limited to, pipelines, barges, anchors, etc., shall not come into contact with the hard substrate of Wheeler North Reef, and will avoid adverse impacts to canopy-forming kelp and other associated biota.

C. Sediment Suitability. Documentation demonstrating that all proposed sand sources are physically and chemically suitable for beach nourishment and will not adversely affect coastal water quality or marine resources. The documentation shall include representative sediment characterization and testing for grain size, fines content, and potential contaminants of concern, as appropriate for the source and its historical uses. Previously completed testing may be used where demonstrated to remain representative and applicable to the proposed placement. Only sediment determined suitable for beach nourishment and approved by the Executive Director shall be placed. Sand shall be free of visible trash, debris, plastics, and other anthropogenic materials. Any such materials encountered during excavation, transport, or placement shall be promptly removed and properly disposed of.

D. Beach Nourishment Turbidity Control Plan. A plan identifying measures to minimize sediment suspension, turbidity, and sediment-laden runoff to coastal waters. The Plan shall include:

1. Water Quality BMPs. Measures to minimize sediment suspension and transport, including controlled placement rates, minimizing unnecessary sediment handling, avoiding direct placement into coastal waters where feasible, conducting work during favorable tidal and weather conditions, and using appropriate turbidity controls (e.g., temporary berms, settling areas, or silt curtains where effective). Stockpiles, staging areas, and transportation routes shall be managed to prevent erosion and discharge of sediment or other pollutants to coastal waters or storm drains.
2. Turbidity Monitoring and Adaptive Management. Monitoring of background and project-related turbidity at representative locations, with established monitoring methods, frequencies, applicable water quality thresholds, and corrective-action procedures. If thresholds are exceeded or adverse impacts to coastal resources are observed, placement activities shall be modified, additional BMPs implemented, or work suspended until acceptable conditions are restored.

3. Implementation Details. A description of proposed BMPs, maps showing structural controls and monitoring locations, and engineered drawings of structural controls, where applicable.

E. Schedule for Sand Placement. A timeline for sand placement and associated local tide calendar. Per **Special Condition 3.A.1**, the sand shall be placed within one year of Commission approval of this CDP unless extended for good cause by the Executive Director or through a new CDP or CDP amendment.

F. Mean High Tide Line Survey (MHTL). The Schedule for Sand Placement shall include a MHTL survey prepared by a licensed professional land surveyor based on field data collected as close to (prior to) sand placement as possible. The MHTL Survey shall extend the full length of authorized development and be consistent with the following:

1. The survey shall include the location of the revetment, the current sand/cobble level, and the proposed location of any new rock and shoreline protective device.
2. The survey shall be conducted in consultation with the California State Lands Commission (CSLC) staff. Prior to submitting this survey to the Executive Director, it must be approved by the CSLC as compliant with the CLSC survey standards.
3. Use either the published Mean High Water (MHW) elevation from a National Oceanic and Atmospheric Agency published tide station closest to the project or a linear interpolation between two adjacent tide stations, depending on the most appropriate approach in light of tidal regime characteristics.
4. Use the most current tidal epoch.
5. Use local, published control benchmarks to determine elevations at the survey site. Control benchmarks are the monuments on the ground that have been precisely located and referenced to the local tide stations and vertical datum used to calculate the MHTL elevation.
6. Match elevation datum with tide datum.
7. Reference all elevations and contour lines to the North American Vertical Datum 1988 (NAVD88).
8. Note survey date, datum, and MHW elevation.

G. For offshore sand operatons:

1. The selected temporary pipeline alignments shall:
   i. Avoid contact with Wheeler North Reef and its associated biota, to the maximum extent feasible. Where infeasible, the Final Sand Plan shall include a detailed explanation for why impacts cannot be avoided.
   ii. Avoid contact with hard substrate and avoid adverse impacts to canopy-forming kelp and other associated biota to the extent feasible. If avoidance

is not feasible, the Final Sand Plan shall include a detailed explanation for why impacts cannot be avoided and shall, instead, select the alignments that minimize coastal resource impacts and include a plan for mitigation for the anticipated impacts.

iii. No less than 60 days before the temporary pipelines are placed, an autonomous underwater vehicle or similar methodology shall be used to determine the marine resources along each proposed pipeline route. Prior to pipeline placement, the pipeline route shall be rerouted where feasible to avoid sensitive marine resources (e.g, surfgrass, kelp, rocky reef). Where avoidance of marine resources is not feasible, mitigation shall be included in and shall be conducted in accordance with the Marine Ecosystem Monitoring and Mitigation Plan described in **Special Condition 9**. A post-project survey of the marine resources along each utilized pipeline route shall take place no more than 30 days after each pipeline is removed from the sea floor. A description of the mapping methodology, timing, the marine resources within or adjacent to the sand pipeline routes, and any accompanying figures, maps, and photos shall be included in the Marine Ecosystem Monitoring and Mitigation Plan and in a final report to the Executive Director.

H. Final Beach Nourishment Staging and Access Plans consistent with **Special Condition 7**.

I. The Permittees shall undertake development in conformance with the approved final plans unless the Commission amends this permit or the Executive Director issues a written determination that no amendment is legally required for any proposed minor deviations.

7. Construction Best Management Practices. BY ACCEPTANCE OF THIS PERMIT, the Permittees agree to comply with the following construction phase-related requirements:

A. Construction Staging and Access Best Management Practices. The Construction Staging and Access components of the Railroad Maintenance Program (**Special Condition 4**)**,** Final Seawall Plan (**Special Condition 5**), and Sand Source, Transport, and Placement Plan (**Special Condition 6**) shall include and comply with the following:

1. The locations and durations of construction timing, construction sites, construction access routes, and construction staging areas. Impacts to coastal resources, including public access and biological resources, shall be minimized including, at a minimum, as follows:

i. Where feasible, the Permittees shall avoid construction of the shoreline protective devices on weekends during the peak season, defined as the period starting the day before Memorial Day weekend and ending the day after Labor Day weekend.

ii. Staging and storage of construction equipment and shoreline protective device materials (including debris) shall not take place on the beach or public access ways and shall avoid impacts to sensitive habitat areas to the maximum extent feasible. Any inadvertent adverse impacts to sensitive habitat areas caused by construction staging or access shall be accounted for in the Construction Impact Validation and Compensatory Mitigation Ratios for Terrestrial Habitat condition (**Special Condition 12**) and mitigated pursuant to the final approved Terrestrial Ecosystem Mitigation and Monitoring Plan (**Special Condition 13**). Adverse impacts include, but are not limited to, vegetation crushing, removal, or death. Such mitigation shall require an amendment to this permit or a new permit unless the Executive Director determines that no permit is legally required. Staging and storage of construction equipment and materials shall occur in inland areas at least 50 feet from coastal waters, drainage courses, and storm drain inlets, if feasible. Upon a showing of infeasibility, the Permittees may submit a request for review and written approval to the Executive Director for staging and storage of construction equipment and materials closer than 50 feet from coastal water, drainage courses, and storm drain inlets. Construction is prohibited outside of the defined construction, staging, and storage areas.

iii. Staging areas, maintenance areas, and access routes should be limited to areas of the beach that are regularly groomed and shall not cross or disturb sand dunes. The permittees shall maintain a 50-foot buffer between sand dunes and staging areas, maintenance areas, and access routes, if feasible. Upon a showing of infeasibility, the Permittees may submit a request for review and written approval to the Executive Director for staging, maintenance, and access closer than 50 feet from sand dunes.

iv. Staging areas, maintenance areas, and access routes shall not cross or disturb sensitive habitat areas as designated by the U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, and City of San Clemente. The permittees shall maintain a 50-foot buffer between designated California least tern and western snowy plover habitat areas and staging areas, maintenance areas, and access routes, if feasible. Upon a showing of infeasibility, the Permittees may submit a request for review and written approval to the Executive Director for staging, maintenance, and access closer than 50 ft. From designated California least tern and western snowy plover habitat areas.

v. Staging areas, maintenance areas, and access routes shall minimize crossings or disturbance of the wrack zone. Wrack shall be separated and retained, to the maximum extent feasible, in areas where discharge operations will result in the loss or disturbance of wrack. Wrack shall be moved to the side during excavation and discharge operations and other project activities, and replaced in its original location/configuration, to the

maximum extent feasible, at the completion of project operations where possible.

vi. Vehicles associated with the transport of sediment along the beach shall not exceed a speed of 10 miles per hour in potential sensitive habitat areas and 15 miles per hour in all other beach areas. A qualified biological monitor shall be onboard any vehicle that may cross through potential sensitive habitat area.

vii. Where public parking areas are needed for construction staging or storage, the number of public parking spaces (on and off-street) utilized shall be the minimum necessary to implement the project. Every effort shall be made to minimize the number and duration of public parking spaces used for construction staging and storage.

viii. Safe public access to and around construction areas and staging areas shall be maintained during all project operations. The plan shall include a description of the methods (such as signs, fencing, etc.) by which safe public access to and around construction areas and/or staging areas shall be maintained during all project operations. All construction methods to be used, including all methods to keep the construction areas separated from public recreational use areas (e.g., using unobtrusive fencing or equivalent measures to delineate construction areas), shall be clearly identified on the construction site map.

ix. Lateral access along the shoreline shall be maintained at all times throughout construction, unless dangerous.

x. The San Clemente Coastal Trail and other public access pathways proposed for construction access routes shall remain open to pedestrians throughout the construction period. If short-term temporary closure of minor trail/pathway segments are deemed necessary at some point during the construction period, the relevant Construction Staging and Access Plans shall detail pedestrian detour routes, including signage and timing details. The route shall be the shortest detour possible for the shortest period of time feasible.

xi. The construction staging areas will gradually be reduced as less materials and equipment are necessary.

xii. All beaches, beach access points, and other recreational use areas impacted by construction activities shall be restored to their pre-construction condition or better within three days of completion of construction. Any beach sand impacted shall be filtered as necessary to remove all construction debris from the beach.

B. Onshore Construction Best Management Practices.

1. All construction operations on the beach, including operation of heavy equipment and material placement in the surf zone, shall be limited to the minimum footprint necessary for surf zone placement. In addition, no

machinery shall be placed or otherwise located in the intertidal zone at any time, except for the minimum necessary extent and duration to implement the project. No machinery shall be stored in the intertidal zone. Construction equipment shall not be cleaned on the beach or in any beach parking lots;

2. All construction activities shall take place during daylight hours (i.e., no earlier than one hour before sunrise and no later than one-hour after sunset). Lighting of the beach and/or intertidal area is prohibited;
3. Construction activities shall be implemented in a manner that avoids the removal or disturbance of wrack to the maximum extent feasible. However, if construction activities cannot feasibly avoid removal or disturbance of wrack located within the construction area or along the access route, it shall be removed for the duration of the construction work, and subsequently relocated to the area from which it was removed upon completion of the work. Unless temporarily relocated for the duration of construction work, this permit does not allow for the removal of wrack from this area. Debris that is entangled in the wrack, and which poses a clear threat to public safety, may be removed by hand as needed;
4. All excavated beach sand shall be redeposited on the beach within the immediate vicinity of the construction area;
5. Trash shall not be present in sediments to be placed on the beach;
6. No demolition or construction materials, debris, or waste shall be placed or stored where it may enter sensitive habitat, receiving waters or a storm drain, or be subject to wave, wind, rain, or tidal erosion and dispersion;
7. All debris resulting from demolition or construction activities shall be removed from the project site within 24 hours of completion of the project;
8. Demolition or construction debris and sediment shall be removed from work areas each day that demolition or construction occurs to prevent the accumulation of sediment and other debris that may be discharged into coastal waters;
9. All trash and debris shall be disposed in the proper trash and recycling receptacles at the end of every construction day;
10. The permittees shall provide adequate disposal facilities for solid waste, including excess concrete, produced during demolition or construction;
11. Debris shall be disposed of at a legal disposal site or recycled at a recycling facility. If the disposal site is located in the Coastal Zone, a coastal development permit or an amendment to this permit shall be required before disposal can take place unless the Executive Director determines that no amendment or new permit is legally required;
12. The use of temporary erosion and sediment control products (such as fiber rolls, erosion control blankets, mulch control netting, and heavy-duty silt fences) that incorporate plastic netting shall be prohibited to minimize wildlife

entanglement and plastic debris pollution. Only 100% biodegradable (not photodegradable) natural fiber netting shall be allowed;

13. All stockpiles and construction materials shall be covered, enclosed on all sides, shall be located as far away as possible from drain inlets and any waterway, and shall not be stored in contact with the soil;
14. Machinery and equipment shall be maintained and washed in confined areas specifically designed to control runoff. Thinners or solvents shall not be discharged into sanitary or storm sewer systems;
15. The discharge of any hazardous materials into any receiving waters is prohibited;
16. Spill prevention and control measures shall be implemented to ensure the proper handling and storage of petroleum products and other construction materials. Measures shall include a designated fueling and vehicle maintenance area with appropriate berms and protection to prevent any spillage of gasoline or related petroleum products or contact with runoff. The area shall be located as far away from the receiving waters and storm drain inlets as possible;
17. Best Management Practices (BMPs) and Good Housekeeping Practices (GHPs) designed to prevent spillage and/or runoff of demolition or construction-related materials, and to contain sediment or contaminants associated with demolition or construction activity, shall be implemented prior to the on-set of such activity; and
18. All BMPs shall be maintained in a functional condition throughout the duration of construction activity.

C. Offshore Construction Best Management Practices.

1. Spill Prevention and Response Plan. WITHIN 90 DAYS OF COMMISSION APPROVAL, the Permittees 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 Permittees will implement to avoid spills and clearly identify responsibilities of onshore and offshore contractors and the Permittees 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.
2. Marine Mammal Precautions.

i. A marine mammal monitor approved by the Executive Director shall be present at all times during offshore project activities. The monitor shall ensure that the Permittees and their contractors fully comply with the conditions of this permit related to biological protection.

ii. Offshore project activities shall be suspended if any marine mammals are observed within a 500-foot radius of the work site. Offshore project activities may resume once the mammals are outside of this safety zone. The marine mammal monitor will be responsible for monitoring this zone during all offshore project activities. In the event that the monitor determines a marine mammal has entered or is likely to enter this zone, the monitor shall have the authority to suspend offshore project activities until the marine mammal has passed outside of this zone.

iii. The permittees shall submit a technical report of all data and observations of marine mammals and protected species and any potential incidents to the Executive Director no more than 30 days following completion of project activities.

3. Marine Discharge. There shall be no marine discharge of sewage or bilge/ballast water from vessels. A zero-discharge policy shall be adopted for all project vessels.

4. Limitations on Night Operations. Project activities shall be limited to daylight hours to the maximum extent feasible. Night-lighting required for Project activities shall be shielded and directed to the immediate work area to minimize light spillage into surrounding areas. Night lighting of any project vessels remaining on site shall be limited to that necessary to maintain navigational safety and to serve the nighttime site monitors who will be present on board.

5. Anchoring. The Permittees shall comply with the requirements of the final approved Anchoring Plan (**Special Condition 6.B**).

8. **As-Built Plans.** WITHIN 90 DAYS OF COMPLETION OF CONSTRUCTION, the Permittees shall submit one electronic copy and two paper copies of complete As-Built Plans to the Executive Director for review and written approval showing all elements of the subject development as built, including in relation to all property lines, right-of-way lines, and adjacent development. The As-Built Plans shall also depict the Revetment Limit Line established pursuant to Consistency Certification No. CC-033-03 within the project area, clearly distinguish that line from the as-built seaward extent of the revetment, and identify the location and extent of any revetment seaward of that line. The As-Built Plans shall be substantially consistent with the Executive Director-approved Final Plans required by **Special Conditions 5 and 6** and the terms and conditions of this CDP, and any inconsistencies shall be highlighted. The As-Built Plans shall include color photographs (in both color hard copy 8½ x 11 and digital jpg formats) that clearly show the as-built project and that are accompanied by a site

plan that notes the location of each photographic viewpoint and the date and time of each photograph. At a minimum, the photographs shall be from upcoast, seaward, inland, and downcoast viewpoints on the beach, and from a sufficient number of other viewpoints so as to provide complete photographic coverage of the approved development. Such photographs shall be at a scale that allows comparisons to be made with the naked eye between photographs taken in different years and from the same vantage points; recordation of GPS coordinates would be desirable for this purpose. The As-Built Plans shall include vertical and horizontal reference data from inland surveyed benchmarks (which shall be clearly identified) for use in future monitoring efforts. The As-Built Plans shall be submitted with certification by a licensed civil engineer with experience in coastal structures and processes, acceptable to the Executive Director, verifying that the project has been constructed in conformance with the Executive Director-approved Final Plans (see **Special Conditions 5 and 6**) and the terms and conditions of this CDP. Any substantial nonconformities with the approved plans and/or terms and conditions of this CDP, as determined by the Executive Director, shall be corrected through submittal of a CDP or CDP amendment within one year of impact.

9. **Marine Ecosystem Monitoring and Mitigation Plan.** AT LEAST THREE MONTHS PRIOR TO COMMENCEMENT OF SAND PLACEMENT, the Permittees shall submit to the Executive Director, for review and written approval, a final Marine Ecosystem Monitoring and Mitigation Plan (MEMMP) for monitoring the physical features and biological communities of subtidal hard bottom (e.g., bedrock pavement, fragmented bedrock, sand scoured reef) and rocky intertidal habitats. The monitoring plan shall provide an overall framework to guide monitoring of the physical features and biological communities associated with these marine ecosystems, in the proposed equilibrium footprint, sand placement pipeline corridors, and immediately adjacent to the North Beach, Areas 1, 2 and 4, and Cyprus Shores replenishment footprints, as well as a minimum of two (2) reference sites for each respective ecosystem. The plan shall also provide feasible mitigation options for potential impacts to these intertidal and subtidal marine ecosystems. The monitoring plan shall be developed in consultation with state and federal agencies including Commission staff, the California Department of Fish and Wildlife, California State Lands Commission, U.S. Fish and Wildlife Service, National Marine Fisheries Service, and U.S. Army Corps of Engineers.

   A. Marine Ecosystem Monitoring. The Plan shall describe the sampling methods, analytical techniques, criteria, and assessment approaches for determining whether the approved project has exerted adverse impacts upon the respective marine ecosystems. The terms ‘direct’ and ‘indirect’ as they relate to definition of adverse impacts shall refer to the spatial (within and outside of permitted replenishment footprint areas) and temporal (whether immediate or delayed) nature of any observed changes, as well as their severity (sub-lethal or lethal, temporary or permanent). The Plan shall include clear and specific identification of the potential impact areas to subtidal hard bottom and rocky intertidal within

the delineated areas described below. It shall also specify two (2) reference sites for each of the ecosystems (rocky intertidal and subtidal hard bottom), which are preferably located together. Reference site locations shall be based on similarity to the respective marine ecosystems in the project area and proximity to the project area. In addition, the Plan shall include, at a minimum, the following:

1. The Sand Equilibrium Footprint. The Plan shall include a figure of the expected sand equilibrium footprint and a narrative describing the model parameters and assumptions. The marine ecosystem monitoring locations shall be established in two areas: within the expected sand equilibrium footprint and areas within an extended boundary of the equilibrium footprint. That boundary shall be delineated as no less than an additional ¼ mile in the longshore direction reaching both upcoast and downcoast, and offshore to -35 feet MLLW from the equilibrium footprint. This area shall be extended further out if models or monitoring at any point indicate sand is migrating beyond the expected equilibrium footprint.
2. Existing Conditions. The Plan shall include a description and historical review of the extent, physical structures, and biological communities of the rocky intertidal (i.e., rock size and type, algae and seagrasses, sessile and motile invertebrates), and subtidal hard bottom (i.e., rock size and type, algae and seagrasses, sessile and motile invertebrates) marine ecosystems in the vicinity of the beach replenishment project sites. The historical review shall include a summary of past quantitative survey and monitoring work (e.g., annual kelp canopy areal extent data, nearshore monitoring for the Orange County Sand Compatibility and Opportunistic Use Program, Multi-Agency Rocky Intertidal Network survey work) conducted on these ecosystems, in order to document trends in areal extent, species composition, and community structure and dynamics for comparison with the post-project monitoring results.
3. Monitoring Objectives. The monitoring objectives shall include:
    i. Fine-scale mapping of physical structures via remote-sensing techniques associated with the rocky intertidal and subtidal hard bottom ecosystems, within the expected sand equilibrium footprint, its extended boundary per subsection 1(a) of this condition, and at a minimum of two (2) reference sites;
    ii. Quantitative characterization of biological communities via in situ field methods for rocky intertidal and subtidal hard bottom ecosystems including algal, surfgrass, and invertebrate (infaunal for beaches, sessile and motile for rocky ecosystems) components, within the expected sand equilibrium footprint, its extended boundary per subsection 1(a) of this condition, and at a minimum of two (2) reference sites;
    iii. Identification of any direct or indirect adverse impacts (with respect to space, time, and severity) to rocky intertidal or subtidal hard bottom ecosystems resulting from the project; and

iv. Identification of likely causes of any documented adverse impacts to the rocky intertidal, or subtidal hard bottom ecosystems, including but not limited to burial, scouring, and turbidity.

4. Monitoring Design. Monitoring shall be divided into two (2) distinct phases utilizing the same monitoring design. The fall season shall be defined as from September 1 to November 30.

   i. Fall pre-construction monitoring was completed in October 2025 to establish pre-project baseline conditions. For areas unable to be mapped in October 2025, other existing mapping sources shall be used to supplement, characterize, and quantify the subtidal hard bottom and rocky intertidal habitats. Should the proposed sand placement commence on or after September 1, 2027, another fall pre-construction monitoring survey shall occur prior to sand placement.

   ii. Post-construction annual fall monitoring shall be completed for no less than two (2) years following the completion of all sand placement activities. If the monitoring results are inconclusive after Year 2, the Permittee may extend monitoring efforts for one additional year consistent with (g) below, in consultation with the Executive Director.

5. Monitoring Methods. The Plan shall include detailed monitoring methods including supporting rationale for how they will monitoring objectives and a schedule for their execution; specifically, methods to monitor for and quantify potential direct and indirect adverse impacts to rocky intertidal and subtidal hard bottom ecosystems within the expected sand equilibrium footprint, its extended boundary per subsection 1(a) of this condition, and at a minimum of two (2) reference sites. At a minimum, the Permittees shall incorporate the following methods in the final plan:

   i. Remote-Sensing Census of Physical Structures. Remote-sensing census techniques shall be used to map rocky intertidal and subtidal hard bottom ecosystems in the expected sand equilibrium footprint, its extended boundary per subsection 1(a) of this condition, and at a minimum of two (2) reference sites outside the influence of the project areas, with the highest accuracy possible. This shall address areas of: 1) rocky intertidal, including areas with and without surfgrass; 2) subtidal hard bottom, including areas with and without kelp; and 3) kelp canopy, via aerial imagery; and

   ii. In Situ Intertidal and Subtidal Field Sampling. The intertidal and subtidal field sampling methods employed shall be capable of characterizing finer-scale physical structures and the biological communities of the rocky intertidal and subtidal hard bottom ecosystems. Physical sampling shall document substrate relief and rugosity, available crevices and vertical surfaces, and sand cover. Biological sampling shall document the beach infaunal invertebrate and rocky intertidal and subtidal hard bottom algal, surfgrass, and invertebrate (sessile and motile) community structures. The intertidal and subtidal field sampling of rocky intertidal and subtidal hard

bottom ecosystems shall be designed to detect, at a minimum, a 20% change between the respective impact and reference sites. The proposed replication shall be based on preliminary sampling data and a statistical power analysis.

6. Criteria for Detecting Adverse Impacts. The plan shall include criteria (relative or fixed) for determining whether the project has resulted in direct or indirect adverse impacts (spatial, temporal, or varying degrees of severity) upon rocky intertidal or subtidal hard bottom ecosystems. The criteria shall be compatible with quantitative assessment and shall include estimates of the areas of ecosystem lost or significantly impacted as a result of the project (e.g., substrate relief and rugosity, available crevices and vertical surfaces, sand cover, and habitat-forming species such as kelp and surfgrass). The criteria shall also address significant changes in the structure and function of the biological communities (e.g., number and abundances of algal and invertebrate species, invasive species, recruitment, guild, algal and surfgrass cover) due to adverse impacts resulting from the project.
7. Quantitative Criteria Assessment. An integrated assessment approach based upon annual monitoring results shall be developed to determine whether the project has resulted in adverse impacts to the rocky intertidal or subtidal hard bottom ecosystems. When assessing census criteria relative to the reference sites, and in order to safeguard against the potential asymmetry of false positive and false negative errors in census data, these errors shall be measured and taken into account. Individual sampling criteria shall be assessed by any statistically significant differences relative to the reference sites. Where α is between 0.000-0.500, and $\alpha <$ effect size, it shall be concluded that the respective criteria is unmet and therefore out of compliance, and when $\alpha >$ effect size, the respective criteria is met and shall be considered in compliance. Where $\alpha > 0.500$ and effect size > 0.500, compliance with the respective criteria shall be considered inconclusive and may either be interpreted as an adverse impact necessitating full mitigation, or alternatively, monitoring may be extended for one additional year in an effort to resolve the uncertainty. It shall be assumed that any statistically significant adverse impact that is detected is a result of the project unless the Permittee can provide compelling evidence to the contrary (e.g., development of local urchin barrens, wastewater spills, or other localized catastrophic events). An assessment with respect to potential mitigation requirements shall be made following the final year of monitoring.
8. Monitoring Reports. Annual reports shall include a review of all previous monitoring and provide results from the most recent event and shall be submitted no later than March 31 of the following year for review and approval by the Executive Director. A report at the end of the monitoring term shall determine whether any adverse impacts to marine ecosystems have occurred as a result of the project. If adverse impacts are determined to have occurred

after the review, the Executive Director will assess the need for compensatory mitigation.

B. Marine Ecosystem Mitigation. If it is determined that compensatory mitigation is necessary, the required mitigation ratio shall be 2:1 for in-kind mitigation and 4:1 for out-of-kind mitigation. The Permittees will not proceed to implement out-of-kind mitigation without showing to the satisfaction of the Executive Director that in-kind mitigation is infeasible. All mitigation shall take place as proximate to the impacted area as feasible. In response to any mitigation assessed, the Permittees shall develop an ecosystem-specific mitigation and monitoring plan for each impacted ecosystem, which shall provide the overall framework to guide the mitigation work and associated monitoring, for review and approval of the Executive Director. The supplemental mitigation and monitoring program shall be processed as a CDP or CDP amendment unless the Executive Director determines that no CDP is required.

10. **Grunion Monitoring and Avoidance Plan.** BY FEBRUARY 1, 2027, the Permittees shall submit to the Executive Director for review and written approval, a Grunion Monitoring and Avoidance Plan that provides for the following:

A. Should sand placement activities be necessary below the high tide line between March 1 and May 28, the Permittees shall avoid impacts to mature and/or spawning grunion and to grunion eggs. The Permittees shall retain the services of a biologist with appropriate qualifications. The annually published California Department of Fish and Wildlife (CDFW) expected grunion runs shall be used to determine possible grunion spawning periods. The plan shall, at a minimum, include:

1. Sand placement sites shall be monitored for grunion runs beginning at least two weeks prior to commencement of sand placement activities, and throughout the period of planned sand placement work from March 1 through May 28. Monitoring is not necessary in areas where there is no sand, such as areas supporting 100% cobble or bluff backed beaches with no sand exposed during high tide.

2. Grunion monitoring shall be conducted by a qualified biologist for 30 minutes prior to, and two hours following, the predicted start of each daily spawning event. Sufficient qualified biologists shall be employed to ensure that the entire proposed sand placement site is monitored during the predicted grunion run. The magnitude and extent of a spawning event shall be defined in 300-foot segments of beach using the Walker Scale. Every individual fish (males and females) shall be counted to determine the Walker Scale value (e.g. 0, 1, 2, 3, 4, or 5) of each 300-foot segment within the proposed work area. Sand placement activities shall be modified according to the following plan:

i. If a grunion run consisting of 0-100 individual fish per 300-foot segment (Walker Scale 0 or 1) is reported within two weeks prior to, or during, sand

placement work, the Permittees do not need to take any avoidance action for grunion eggs. No mature grunion may be buried or harmed as a result of sand placement.

ii. Within two weeks prior to proposed work, if a grunion run consisting of 100 or more individual fish per 300-foot segment (Walker Scale 2, 3, 4, or 5) is reported, the Permittees shall avoid work, including construction access routes and activities, on the respective beach segment(s) and additionally, shall avoid a 100-foot buffer on either side of the segment(s), for a minimum of two weeks, to ensure that no grunion eggs are buried or disturbed. These areas shall be memorialized through multiple GPS coordinates and marked with irrigation flags for a minimum of two weeks when the next scheduled grunion run will be monitored. The Permittees shall adapt the sand placement schedule to avoid operations on such beach segments and their associated buffers. No mature grunion may be harmed as a result of sand placement.

iii. If sand placement has already commenced, and a grunion run consisting of 100 to 500 individual fish, in one or more 300-foot segment (Walker Scale 2) in the work area is reported, the Permittees shall avoid impacts to grunion eggs to the greatest extent feasible and then shall minimize impacts to grunion eggs through such measures as alteration of the pipeline route, sand discharge points, sand spreading areas, and sand placement locations.

iv. If sand placement has already commenced, and a grunion run consisting of 500 or more individual fish per segment (Walker Scale 3, 4, or 5) is reported, the Permittees shall avoid work, including construction access routes and activities, on the respective beach segment(s) and additionally, shall avoid a 100-foot buffer on either side of the segment(s), for a minimum of two weeks, to ensure that no grunion eggs are buried or disturbed. These areas shall be memorialized through multiple GPS coordinates and marked with irrigation flags for a minimum of two weeks when the next scheduled grunion run will be monitored. The applicant shall adapt the sand placement schedule to avoid operations on such beach segments and their associated buffers. No mature grunion may be harmed as a result of sand placement.

11. Bird Monitoring and Avoidance. The following conditions provide for nesting and roosting bird protection for project activities as follows:

A. If project activities must occur during bird nesting season (February 1 through August 31), a qualified biologist, with experience conducting bird surveys, shall survey for active nests within 72 hours prior to commencement of project activities to detect any nesting activity within 500 ft., as feasible, of the project area. If an active songbird nest(s) is located within 300 ft. of construction activities (500 ft. for raptors), the qualified biologist shall halt construction activities to enable the Permittees to employ best management practices (BMPs) to ensure that construction activities do not disturb or disrupt nesting activities.

Noise levels at active nest sites must not exceed 65 dB unless a noise study has determined that ambient noise in the immediate area exceeds that level. If this is the case, noise levels at the nest site must not exceed the ambient noise level measured. Noise reducing BMPs may include using alternative equipment, equipment noise buffering, sound blankets, etc. Alternatively, construction activities and schedules may be adjusted to avoid active nest areas until the respective young birds have fledged. Unrestricted construction activities may resume when no active nests remain in the construction area. Results of nesting bird surveys, ambient noise surveys, and any follow-up construction avoidance measures shall be documented in monthly reports by the qualified biologist and submitted to the Coastal Commission Executive Director throughout the bird breeding season.

B. No activities are allowed within 100 feet of active roost areas for the western snowy plover or California least tern unless measures are implemented to minimize the noise and disturbance to those adjacent birds until subsequent monitoring indicates that western snowy plover and California least tern are no longer present. If these conditions cannot be met, the following measures will be implemented:

    1. A qualified biologist will report the roost site to the U.S. Fish and Wildlife Service. After initial identification of the roost, no project materials, equipment, or workers will approach within 100 feet of roosting western snowy plover or California least terns. Roost monitoring will occur with binoculars. The qualified biologist will use the distance to the project limits and local topography to determine if construction activities are likely to disturb the roost.
    2. Where damage or disturbance of any western snowy plover or California least tern roosting is likely, the qualified biologist will implement further measures to avoid the likelihood of roost disturbance, including temporarily halting construction activities until the birds depart for the season, with construction activities directed to other areas that will not disturb the roost, as directed by the designated qualified biologist.
    3. A qualified biologist will monitor the roost and construction activity to minimize potential construction-related disturbance and prepare weekly reports summarizing the status of the roost. A post-construction report will be submitted to the U.S. Fish and Wildlife Service summarizing the roost status reports and outcomes within 6 months of project completion.

12. **Construction Impact Validation and Compensatory Mitigation Ratios for Terrestrial Habitat**. NO LESS THAN 90 DAYS AFTER CONCLUSION OF CONSTRUCTION IN ANY SPECIFIED WORK AREA, the Permittees shall submit an Impact Validation Report comparing the extent and nature of any and all impacts as estimated by the Permittee in available and future pre-project conditions reports or other available sources with those actually observed following construction, the latter of which final compensatory mitigation requirements will be based on. Any sensitive species detections not previously documented in submitted materials shall

be clearly reported, including with annotations identifying occurrences as new, and shall be additionally submitted to CDFW and/or USFWS, as appropriate, and to the California Natural Diversity Database (CNDDB). Photos shall be taken from designated points across the survey area, at spacings and perspectives sufficient to represent existing conditions and support impact evaluations. In addition, post-construction surveys, final impact assessments, and compensatory mitigation requirements shall follow as:

A. Post-Construction Surveys. For each habitat, post-construction surveys shall document, at a minimum: the dates of initial and final project-related disturbance to the habitat, the physical extent and acreage of all work areas; the general nature of activities that occurred within each area; and any vegetation clearance, death, significant woody vegetation removal, or ground disturbance. Post-construction surveys shall be completed within 30 days of completion of construction activities.

B. Permanent Impacts. All impacts to ESHA and wetlands shall be recognized as permanent and mitigated for, consistent with the following:

    1. A minimum ratio of 3:1 for ESHA impacts and a minimum of 4:1 for wetland impacts, where these base ratios assume compensation as habitat creation or substantial restoration. Alternatively, enhancement or preservation strategies may be proposed at no less than double or triple the base ratios, respectively.

    2. All habitat mitigation for permanent impacts shall occur within areas that are or will be protected, as consistent with **Special Condition 13**.

C. Revegetation Requirements. All vegetated areas, including ESHA, wetlands, and non-sensitive vegetation, shall be revegetated on-site where feasible at the conclusion of construction. Revegetation shall include, at a minimum, replanting or reseeding with locally and genetically appropriate native species. Revegetation information, including a timeline of revegetation actions, mapping, and photos taken from fixed points shall be included with the Impact Validation Report. Due to anticipated ongoing repair and maintenance activities into the future and the mitigation provisions above, revegetated areas described in the Impact Validation Report shall not be considered as sensitive habitat in future permits.

13. **Terrestrial Ecosystem Mitigation and Monitoring Plan**. PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittees shall submit, for the review and written approval of the Executive Director, a final Terrestrial Ecosystem Mitigation and Monitoring Plan (TEMMP) for the compensatory mitigation of any impacted wetlands and ESHA related to the ECDPs. The TEMMP shall be prepared by a qualified restoration ecologist approved by the Executive Director. Impact acreages, which shall be the basis of compensatory mitigation requirements, are estimated and shall be finalized per **Special Condition 12**.

A. TEMMP components. The TEMMP shall provide for, at a minimum: description and quantification of relevant development impacts; mitigation goals and objectives as supported by technical rationale; description of existing habitat at mitigation sites; mitigation design; site preparation and best management practices; erosion control measures; invasive species control; revegetation plans, including provision for the use of locally-sourced native stock; irrigation plans; a statistically robust sampling design; interim and final performance assessments and success criteria; annual and final reporting schedule; and adaptive management measures and remedial actions for non-performance.

B. Success criteria. Fixed or relative, quantitative interim and final success criteria relevant to the mitigation habitat types shall be identified and the supporting technical rationale described in the TEMMP. Criteria shall include target native vegetation cover where appropriate and that mitigation sites shall be maintained over the monitoring period at less than 5% cover of Cal-IPC ranked invasive species with no more than 1% of that being attributed to invasive species ranked as “high” by Cal-IPC.

C. Reporting. The following reports shall be provided for within the TEMMP and submitted per the specified schedules below:

    1. Additional Mitigation for Unanticipated On-site Impacts. WITHIN 90 DAYS OF COMPLETION OF CONSTRUCTION, a final “as-built” on-site habitat impact statement accounting for the extent and nature of actual construction impacts observed shall be submitted to the Executive Director. If the Executive Director determines the actual project impacts calculated in the as-built report substantially differ from anticipated impact amounts projected in the approved final TEMMP, the Permittees shall submit a revised TEMMP and/or supplemental mitigation and monitoring plan for the review and approval of the Executive Director proposing additional mitigation consistent with the mitigation ratios in **Special Condition 12** for the additional habitat impacts. The revised or supplemental plan shall be processed as an amendment to this CDP, unless the Executive Director determines that no amendment is legally required.

    2. Annual Monitoring and Final Monitoring Report. Annual reports documenting site conditions in comparison to interim success criteria shall be submitted by December 31 of each year for at least for five years, or three years following the cessation of any remedial or maintenance measures except weeding, whichever is longer. Any adaptive management or remedial actions taken shall be clearly documented in each annual report. In addition to annual monitoring reports, a final monitoring report shall be submitted for the review and approval of the Executive Director at the conclusion of all on-site mitigation efforts consistent with the monitoring schedule in the final approved TEMMP. The final monitoring report shall summarize all prior reports and provide a timeline of the overall progress and success and include sufficient detail to evaluate comprehensive mitigation compliance with the mitigation

program including the specified goals, objectives, and success criteria set forth in the approved final TEMMP.

D. Provisions for Possible Further Action.

1. Non-performance. If the final annual monitoring report indicates that the mitigation effort as approved in the TEMMP has been unsuccessful, in part or in whole, based on the approved success criteria, the Permittee shall submit WITHIN 90 DAYS a revised or supplemental TEMMP to compensate for those portions of the original program which did not meet the approved success criteria. The revised or supplemental TEMMP(s) shall be prepared by a qualified restoration ecologist approved by the Executive Director and shall specify measures to remediate those portions of the original approved TEMMP that have failed or have not been implemented in conformance with the original approved TEMMP. These measures, and any subsequent measures necessary to carry out the approved revised or supplemental TEMMP, shall be carried out in coordination with the direction of the Executive Director until the approved revised or supplemental TEMMP is established to the Executive Director's satisfaction. The revised TEMMP may be processed administratively by the Executive Director, unless the Executive Director determines that an amendment to the original CDP is necessary.

2. Excess Impacts. If final post-construction impact validation surveys pursuant to **Special Condition 12** indicate that additional compensatory mitigation is necessary, in part or in whole, the Permittee shall submit within 90 days a revised or supplemental TEMMP to compensate for those increases relative to the original estimates. The revised or supplemental TEMMP(s) shall be prepared by a qualified restoration ecologist approved by the Executive Director and shall specify plans to compensate for the additional acreage consistent with all requirements of this Special Condition, to be reviewed and approved by the Executive Director. The revised TEMMP may be processed administratively by the Executive Director, unless it is determined that an amendment to the original CDP is necessary.

3. Delayed mitigation delivery. If the required mitigation has not commenced within five (5) years of construction commencement, then the required mitigation acreages shall be required to be increased by 0.5 acres to the base mitigation ratio (e.g., 3:1 for ESHA becomes 3.5:1 after year 5, then 4:1 after year 6) for each portion of a year beyond the initial 5-year period. If such mitigation has not commenced within 10 years of construction commencement, mitigation under the approved TEMMP is not completed (e.g., met all success criteria in an approved Final Monitoring Report), or been underway for at least 3 years and is meeting designated success criteria in the approved TEMMP, then the required mitigation acreages shall follow the 0.5-acre increase per year and the Permittee shall additionally be required to submit a supplemental TEMMP to address the lack of performance within 90 days of the ten-year anniversary of construction commencement, for the review and approval of the Executive Director. The Executive Director may

apply a lesser rate of increase if the Permittees can demonstrate diligent pursuit of mitigation implementation that has been delayed by matters outside of Permittee control (e.g., litigation complications, etc.).

D. Partnering Agencies and/or Subcontractors. The Permittees remain responsible for meeting all CDP terms and conditions, including funding of the full cost and implementing all measures to minimize and fully mitigate project impacts to habitat. If the Permittee elects to enter into a binding agreement with a third-party agency or land management entity to carry out all or a portion of these TEMMP requirements, the Permittee shall submit draft agreement provisions to the Executive Director for review and approval prior to finalizing any such agreements.

E. Partnering Agencies and/or Subcontractors. The Permittees remain responsible for meeting all CDP terms and conditions, including funding of the full cost and implementing all measures to minimize and fully mitigate project impacts to habitat. If the Permittee elects to enter into a binding agreement with a third-party agency or land management entity to carry out all or a portion of these TEMMP requirements, the Permittee shall submit draft agreement provisions to the Executive Director for review and approval prior to finalizing any such agreements.

F. Consistency. The Permittees and approved third-party entities shall undertake development in accordance with the approved TEMMP. The Executive Director may approve minor adjustments to these terms if the Executive Director determines that the adjustments (1) are de minimis in nature and scope, (2) are reasonable and necessary, (3) do not adversely impact coastal resources, and (4) do not legally require an amendment.

14. Protection of Archaeological, Paleontological, and Tribal Cultural Resources. BY ACCEPTANCE OF THE COASTAL DEVELOPMENT PERMIT, the Permittees agree to all of the following:

A. The Permittees shall retain, at least 60 days prior to ground disturbance:

1. a minimum of one archaeological monitor that is a Qualified Archaeologist. A Qualified Archaeologist means an individual who meets the Secretary of the Interior's Professional Standards for an Archaeological Principal Investigator and/or is listed as Registered Professional Archaeologist. The Archaeologist(s) monitoring the site shall have experience monitoring for archaeological resources of the local area, be competent to identify significant resource types, and be aware of recommended procedures for the inadvertent discovery of archaeological resources and human remains;

2. a minimum of one Native American monitor from the Juaneño (Acjachemen)-affiliated tribes provided by the Native American Heritage Commission, unless the tribes state they are not interested in monitoring or they have not responded within 60 days. If more than one tribe requests to monitor, the Permittees shall ensure that each tribal group that requests to monitor has a

fair and equal opportunity to monitor with equal representation. All tribal monitors not monitoring under contract shall be allowed to be present onsite when monitoring occurs as volunteer observers. There shall be a sign-in sheet so that all monitors can review who was assigned during each day/week; and

3. a sufficient number of Archaeological and Native American monitors on site to assure that all ground disturbance activity that has any potential to uncover or otherwise disturb cultural deposits is monitored at all times.

B. Monitors shall be onsite during all “ground disturbance,” which includes but is not limited to: excavating, digging, trenching, plowing, drilling, tunneling, quarrying, grading, leveling, removing asphalt or cement, clearing, driving posts, augering, coring, backfilling, blasting, stripping topsoil, landscaping, and any other similar activity at the project site.

C. Prior to any ground disturbance, the Permittees shall notify the Archaeologist and Native American monitor(s) of the requirements and procedures, any archaeological monitoring or research plans, and past archaeological reports.

D. Prior to any ground disturbance, there shall be at least one training lead by the Archaeologist. The Archaeologist shall conduct a Worker Environmental Awareness Program (WEAP) and Cultural Resource Sensitivity Training for all project personnel prior to the start of construction. The training shall address the types of archaeological, paleontological, or Tribal Cultural Resources (TCRs) that may be encountered during ground-disturbing activities, as well as the proper procedures to follow in the event of a discovery. Once the ground-disturbing activities have commenced, the need for additional or supplemental worker trainings shall be determined by the qualified Archaeologist based upon consultation with project personnel.

E. In the event that a tribal cultural resource(s) is discovered during ground disturbance activities, all ground disturbance shall cease within a minimum of 50 feet of the find, or a larger buffer may be recommended by the Native American monitor(s). In the event that no Native American monitor has been retained per subsection 1.ii. above or the resources discovered are non-tribal archaeological resources, all ground disturbance shall cease within a minimum of 50 feet of the find, or a larger buffer may be recommended by the Archaeologist.

   The Permittees must notify the Executive Director as soon as possible, by phone or by email, within 2 calendar days of the find with information about what type of resources discovered.

   THIS PERMIT DOES NOT AUTHORIZE DATA RECOVERY OR SIGNIFICANCE TESTING OR ANY ADDITIONAL INVESTIGATIONS.

   If the resource(s) is found to be Archaeological or Tribal Cultural resource(s), the Permittees must submit an amendment to this permit or a new permit to either: revise the project to avoid impacting the resource or provide a plan for further

investigations and treatment plans developed by a qualified Archaeologist in coordination with affected the Tribal governments.

The treatment of human remains and of associated or unassociated funerary objects discovered during any ground disturbance activity shall comply with applicable State and Federal Laws. Should human remains be discovered on site, the onsite Archaeologist and Native American monitor(s) shall immediately halt all ground disturbance activities, establish an "exclusion zone" around the discovery area, and must notify the County Coroner within 24 hours of such discovery. The Native American Heritage Commission (NAHC) will identify the Native American most likely descendant (MLD) pursuant to Public Resources Code Section 5097.98. The Permittees shall comply with the requirements of Section 5097.98 and the requests of the MLD for treatment of the remains and/or funerary objects, which may be subject to an amendment to this permit or a new permit.

GROUND DISTURBANCE SHALL NOT RECOMMENCE WITHOUT AUTHORIZATION FROM THE EXECUTIVE DIRECTOR.

F. Paleontological Resource Mitigation Plan. If the resources found are identified by the Archaeologist as paleontological resources, prior to recovery, the Permittees shall provide a Paleontological Resources Mitigation Plan for the Executive Director's review and approval, which should include: a description of discovery procedures; sampling and data recovery procedures; procedures for the preparation, identification, analysis, and curation of fossil specimens and data recovered; and procedures for the preparation and distribution of a final paleontological discovery report documenting the paleontological find, consistent with the Society for Vertebrate Paleontology Standard Guidelines.

15. **Authority to Implement Conditions of Approval.** PRIOR TO ANY DEVELOPMENT OCCURING OUTSIDE OF THE RAILROAD RIGHT-OF-WAY, the Permittees shall submit for the review and approval of the Executive Director evidence that clearly demonstrates the legal right, interest, or entitlement to carry out the conditions of approval of CDP 5-21-0866, including but not limited to evidence the Permittees have acquired all necessary right-of-way and/or temporary construction easement(s) for properties on which the proposed development would be located.

16. **Other Agency Approvals.** By acceptance of this permit, the applicants agree to obtain all other Local, State, or Federal permits that may be necessary for any aspect of the proposed project, such as permits from the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, National Marine Fisheries Service, California State Lands Commission, California Department of Fish and Wildlife, Regional Water Quality Control Board, and/or City of San Clemente. Any proposed changes to the approved final plan that may be required by any other agency shall be reported to the Executive Director. No changes to the approved final plan shall

occur without a Commission amendment to this CDP unless the Executive Director determines that no amendment is legally required.

17. **Assumption of Risk.** By acceptance of this permit, the permittees acknowledge and agree (i) that the site may be subject to hazards, including but not limited to waves, storms, flooding, landslide, bluff retreat, erosion, and earth movement, all of which will may worsen with future sea level rise; (ii) to assume the risks to the permittee and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

18. **Liability for Costs and Attorney's Fees.** The Permittees shall reimburse the Commission in full for all Commission costs and attorneys' fees (including but not limited to such costs/fees that are: (a) charged by the Office of the Attorney General; and/or (b) required by a court) that the Commission incurs in connection with the defense of any action brought by a party other than the Permittees against the Commission, its officers, employees, agents, successors and/or assigns challenging the approval or issuance of this coastal development permit (CDP), the interpretation and/or enforcement of CDP terms and conditions, or any other matter related to this CDP. The Permittees shall reimburse the Commission within 60 days of being informed by the Executive Director of the amount of such costs/fees. The Commission retains complete authority to conduct and direct the defense of any such action against the Coastal Commission, its officers, employees, agents, successors and/or assigns.

Appendix B – Relevant Applicable LUP Policies

Coastal Hazards Policies

VIS-1 Visual Character and Aesthetic Resources Preservation. New development shall be designed to preserve the visual character and aesthetic resources of the City's coastal zone including preservation of the physical features of coastal bluffs and canyons, and where feasible, enhance and restore scenic and visual qualities of the coastal zone, including to and along the ocean and coastal bluffs, visually significant ridgelines, and coastal canyons, open spaces, prominent, mature trees on public lands, and designated significant public views (as identified on Figure 6-1 Scenic Gateways and Corridors, Figure 6-2-A Public View Corridors and Figure 6-2-B Public View Corridors). Where protection of visual character and aesthetic resources is not feasible, impacts should be mitigated.

HAZ-3 Development Exposure to Hazards. Minimize the exposure of new development to geologic, coastal (including inundation from sea level rise, wave up-rush, storm surge, and stream flooding), and fire hazards. Ensure that new bluff, canyon, or shoreline development will be safe from, and will not contribute to, geologic instability, erosion or other hazards over the life of the development, taking into account the effects of sea level rise on all relevant hazards. Ensure that new development does not contribute to the destruction of the site or the surrounding area.

HAZ-18 Limits on Bluff or Shoreline Protective Devices. Limit the use of protective devices to the minimum required to protect coastal-dependent uses, or existing structures or public beaches in danger of erosion, unless such devices are otherwise consistent with the public access and recreational policies of the Coastal Act and all relevant policies of the LCP. Protective devices shall be permitted when required to serve coastal dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Any approved protective devices shall also be designed to avoid, or mitigate where unavoidable, impacts on public access and recreation, habitat, scenic views, beach width and other coastal resources, and they shall not substantially impair public trust resources.

HAZ-21 Restrict Bluff/Canyon/Shoreline Retention Devices. When consistent with Policy GEN-8, the construction, reconstruction, expansion, and/or replacement of a bluff/canyon/ shoreline protective device, (i.e. revetments, breakwaters, groins, seawalls, bluff protective devices, deep piers/caissons, or other artificial structures as defined in Chapter 7 that alter natural landforms or alter bluff/canyon/shoreline processes), for coastal erosion control and hazards protection, are prohibited, except pursuant to a CDP where it can be shown that either the device fully complies with all relevant LCP policies and the coastal access and recreation policies of the Coastal Act, or all of the following are met:

a. The bluff, canyon or shoreline protective device is required for the protection of coastal-dependent uses, existing structure(s) (including a principal structures or residence or public beaches in danger from erosion,
b. Where there is no less environmentally damaging alternative to the bluff, canyon or shoreline protective device,
c. The device is sited to avoid sensitive resources,

d. The device is designed to eliminate or mitigate adverse impacts on local shoreline sand supply and public access and to avoid or, where avoidance is infeasible, to minimize and mitigate the encroachment on the public beach, and
e. The device is designed to minimize adverse visual impacts to the maximum extent feasible.

HAZ-22 CDP Application for New Bluff or Shoreline Protective Devices or Repair, Maintenance, or Expansion of Existing Shoreline Protective Devices. Any CDP application for a bluff, canyon or shoreline protective device constructed pursuant to policy HAZ-21 shall include:

a. A re-assessment of the need for the device, the need for any repair or maintenance of the device, and the potential for the device's removal based on changed conditions,
b. An evaluation of the age, condition, and economic life of the existing principal structure,
c. An analysis of changed geologic site conditions, including but not limited to, changes relative to sea level rise, implementation of a long-term large scale sand replenishment or shoreline restoration program,
d. An analysis of any impact to coastal resources, including but not limited to public access and recreation, and
e. A geologic analysis that: (1) describes the condition of the existing protective device, (2) identifies any impacts on public access and recreation, scenic views, sand supply and other coastal resources, (3) evaluates options to mitigate any previously unmitigated impacts of the structure or to modify, replace, or remove the existing protective device in a manner that would eliminate or reduce those impacts. In addition, any significant alteration or improvement to the principal existing structure shall trigger such review (i.e., the analysis of the bluff/canyon/shoreline protective device) and any unavoidable impacts shall be mitigated.

HAZ-23 CDP Application for Bluff, Canyon or Shoreline Protective Devices – Findings and Conditions for Approval. No permit shall be issued for retention, expansion, alteration or repair of a bluff, canyon or shoreline protective device unless the City finds:

a. That the criteria for issuance set forth in policy HAZ-21 are met,
b. That the bluff or shoreline protective device, or expansion thereof, is the minimum required to protect coastal-dependent uses, or existing principal structures pursuant to HAZ-18, or public beaches in danger of erosion,
c. That the device will minimize further alteration of the natural landform of the bluff/canyon/shoreline, and
d. That adequate minimization and mitigation for coastal resource impacts, including but not limited to impacts to the public beach, has been provided.

A condition of the CDP for all new development and Major Remodels on bluff, canyon or beach property shall require the property owner to record a deed restriction against the property, when consistent with Policy GEN-8, and in accordance with HAZ-18 that expressly waives any future right that may exist pursuant to Section 30235 of the Coastal

Act, to add new or additional bluff or shoreline protective devices. This policy requires the removal of any structures that become threatened by hazards if relocation is infeasible.

HAZ-24 Design of Bluff / Shoreline Protective Devices. Bluff / shoreline protective devices permitted pursuant to policies HAZ-21 through HAZ-23 shall be designed to be compatible with the surrounding vegetation and natural landforms. The design plan approved pursuant to the CDP shall demonstrate that:

a. The device will be colored/constructed with concrete or other approved material that has been colored with earth tones that are compatible with the adjacent area, and the color shall be maintained throughout the life of the structure;
b. The device will be textured for a natural look to blend with the surrounding soil and/or vegetation, as applicable.
c. Drought tolerant, non-invasive vegetation shall be used to cover and camouflage the structure, where such planting is feasible;
d. Mitigation measures shall be utilized to offset all unavoidable impacts to coastal resources on or adjacent to the development site.
e. Minimize and mitigate for the impairment and interference with shoreline sand supply and coastal waters;
f. Any geologic hazards presented by construction in or near earthquake or landslide hazard zones shall be addressed;
g. Public recreational access shall be protected and enhanced where feasible, including by minimizing the displacement of beach;
h. The device shall be, if necessary, designed to combine with drainage improvements to control erosion from surface and groundwater flows; and
i. The device shall incorporate soft structures and designs that mimic natural shoreline features, where feasible.

HAZ-26 Devices on Public Lands. Construction, reconstruction, expansion, and/or replacement of bluff, or shoreline protective devices on land in public ownership or control for the purpose of protecting existing development on private property or protecting development on public land shall be discouraged. However, where approvable pursuant to policies HAZ-21 through HAZ-23, such construction shall avoid siting on public land to the maximum extent feasible and shall protect public lands for general public use. To avoid impacts on public lands, consultation with other appropriate agencies, such as the Coastal Commission and State Lands Commission, shall be required during the permitting process.

HAZ-27 Monitoring. The CDP for any bluff, or shoreline protective device shall require the protective device to be regularly monitored by an engineer or engineering geologist familiar and experienced with coastal structures and processes. Monitoring reports to the City shall be required every five years for the life of the device, which monitoring shall, at the least, evaluate whether or not the device is still required to protect the structure it was designed to protect. The evaluation shall include items a-i under policy HAZ-23 as well as an assessment of the structural stability of the protective device, its need for maintenance and its ability to continue to perform the functions for which it was permitted.

HAZ-28 Expiration of Bluff and Shoreline Protective Devices. CDPs which authorize expansion, alteration, and/or repair of existing bluff or shoreline protective devices or new

bluff or shoreline protective devices shall, through conditions of approval, limit authorization of such devices to the life of the primary structure requiring protection, which authorization shall expire when the primary structure requiring protection is: 1) incorporated into a Major Remodel or redeveloped, 2) is no longer present, or 3) no longer requires a protective device, whichever occurs first. The property owner shall apply for a coastal development permit to remove the authorized bluff or shoreline protective device within six months of a determination by the City or Coastal Commission on appeal that the device is no longer authorized to protect the structure it was designed to protect because the structure is no longer present, is redeveloped, or no longer requires protection The removal of the bluff or shoreline protective devices for which authorization has expired shall be required prior to the commencement of construction of any new development on the site.

HAZ-30 Development and Uses in Hazard Areas. New development or re-development and land uses shall:

a. Minimize risks to life and property in areas of high geologic, coastal, and fire hazard.
b. Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs…

7.2 DEFINITIONS

"SHORELINE PROTECTIVE DEVICE" includes any type of shoreline armoring or protective structures, such as seawalls, revetments, riprap, breakwaters, groins, bluff protective devices, deep piers/caissons, bulkheads, or other structures built for the purpose of protecting land or structures against sea level rise, coastal hazards, and erosional forces.

Public Access Policies

PUB-36 Coastal Public Access. Establish, protect, maintain, and, where feasible, expand and enhance a system of public coastal access to the shoreline, beaches, tidelands, and recreational facilities…

PUB-39 New Development Public Access Requirements. New development proposed on property lying between the first public roadway and the shoreline shall provide both physical and visual public access to the shoreline and along the coast in proportion to the public access impact resulting from the new development…

Environmental Justice Policy

GEN-3 Environmental Justice. When acting on a CDP, the issuing agency, or the Coastal Commission on appeal, may consider environmental justice, or the equitable distribution of environmental benefits throughout the State. In all instances the standard of review for issuance of a CDP shall be the Coastal Act or certified LCP.

Biological Resource Policies

RES-62 ESHA Mitigation. Require mitigation in the form of habitat creation or substantial restoration for allowable impacts to ESHA and other sensitive resources that cannot be avoided through the implementation of siting and design alternatives. Priority shall be given to on-site mitigation. Off-site mitigation measures shall only be approved when it is not feasible to fully mitigate impacts on-site. Mitigation shall not substitute for implementation of a project alternative that would avoid impacts to ESHA.

RES-63 ESHA Mitigation Ratios. Apply the following mitigation ratios for allowable impacts to upland vegetation: 4:1 for Vernal Pools; 3:1 for Coastal Sage Scrub, California Buckwheat Scrub, and Arroyo Willow Thickets; 3:1 for Ephemeral Stream Channels; and 3:1 for Lemonade Berry Scrub, Quailbush Scrub, Giant Wild Rye Grassland, Maritime Succulent Scrub, Native Grassland, and Southern Mixed Chaparral. The ratios represent the acreage of the area to be restored/created to the acreage impacted.

RES-64 Habitat Mitigation Plan and Monitoring Plan. Development that would result in impacts to ESHA or Significant Biological Resources shall include a Mitigation Plan and a Mitigation Monitoring Plan as a filing requirement for a Coastal Development Permit application. Mitigation Monitoring Plans shall be for a minimum of 5 years of monitoring to ensure success criteria is met.

Visual Resource Policies

VIS-1 Visual Character and Aesthetic Resources Preservation. New development shall be designed to preserve the visual character and aesthetic resources of the City's coastal zone including preservation of the physical features of coastal bluffs and canyons, and where feasible, enhance and restore scenic and visual qualities of the coastal zone, including to and along the ocean and coastal bluffs, visually significant ridgelines, and coastal canyons, open spaces, prominent, mature trees on public lands, and designated significant public views (as identified on Figure 6-1 Scenic Gateways and Corridors, Figure 6-2-A Public View Corridors and Figure 6-2-B Public View Corridors). Where protection of visual character and aesthetic resources is not feasible, impacts should be mitigated.

HAZ-18 Limits on Bluff or Shoreline Protective Devices. Limit the use of protective devices to the minimum required to protect coastal-dependent uses, or existing structures or public beaches in danger of erosion, unless such devices are otherwise consistent with the public access and recreational policies of the Coastal Act and all relevant policies of the LCP. Protective devices shall be permitted when required to serve coastal dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Any approved protective devices shall also be designed to avoid, or mitigate where unavoidable, impacts on public access and recreation, habitat, scenic views, beach width and other coastal resources, and they shall not substantially impair public trust resources.

Water Quality Policies

RES-1 Uses within the Marine Environment. Uses of and within the marine environment shall be conducted to (1) maintain the long-term biological productivity of coastal waters,

(2) help ensure the continuation of a healthy, self-renewing marine ecosystem, and (3) help ensure the long-term survival of healthy populations of marine plants and animals.

RES-7 Material for Beach Replenishment. Material that is removed from erosion control/flood control facilities or other dredging activity that has been tested and found to be clean and suitable (determined by testing against USACE contamination and grain size thresholds) for beach replenishment shall be used for such purposes on appropriate beaches, or placed into suitable longshore current systems consistent with any existing Coastal Development Permit issued for opportunistic beach sand placement activities.

RES-19 Watershed Protection. Existing and new development shall not degrade San Clemente's coastal resources or water quality. The City shall require development projects to comply with water quality and watershed protection requirements per the San Diego Regional Municipal Separate Storm Sewer System (MS4) Storm Water Permit, (Order No. R9-2013-0001, as amended by Order No. R9-2015-0100 adopted November 18, 2015, or any amendment to or re-issuance thereof), approved by the San Diego Regional Water Quality Control Board. The City collaborates with Orange County jurisdictions on the development and implementation of watershed protection principles and implementation of best management practices for specific land uses.

RES-33 Stormwater Runoff Plans. All projects that require a Coastal Development Permit (CDP) and have the potential for adverse water quality or hydrology impacts to coastal waters shall prepare both a construction-phase and a post-development runoff plan. Runoff management shall be addressed early in the development's planning and design stages. As part of CDP approval, the City shall require that the runoff plans include stormwater pollution control and runoff control measures or systems, and a maintenance program, as necessary, for both the construction-phase and post-development runoff plans. The post-development maintenance program shall be for the life of the development. The level of detail provided to address the plan's requirements shall be commensurate with the type and scale of the development, and with the potential for adverse water quality and hydrology impacts to coastal waters.

RES-34 Minimizing Pollutants and Runoff. Site, design, and manage new development and improvements, including – but not limited to – landscaping, to protect coastal waters from nonpoint source pollution by minimizing the transport of pollutants in runoff and minimizing post-development changes in the site's runoff volume, flow rate, timing, and duration. Review new development and improvements for potential degradation of water quality and water resources.

RES-36 Minimization of Water Quality Impacts During Construction. Development shall minimize water quality impacts during construction by minimizing land disturbance and soil compaction, minimizing erosion and sedimentation, and minimizing the discharge of other pollutants resulting from construction activities…

RES-38 Best Management Practices for Development. To control pollutant discharges, minimize post-development changes in runoff flows, and provide long-term, post-construction erosion control and water quality protection in all physical development, Site Design strategies and Source Control BMPs shall be required for all new development and redevelopment…

Paleontological, Archaeological, and Tribal Cultural Resource Policies

CUL-1 Cultural Resources. Protect cultural resources, including historical, archaeological, and paleontological features in the Coastal Zone. Where necessary to protect cultural resources, new development shall include an appropriate predevelopment investigation to determine, in the least destructive manner, whether cultural resources are present. The pre-development investigation shall include recommendations as to how the site can be developed and designed to avoid or minimize significant impacts to cultural resources. In situ preservation and avoidance are the preferred alternative over recovery and/or relocation in the protection of paleontological and archaeological resources. When in situ preservation or site capping is not feasible, recovery and/or relocation may be considered. Native American tribal groups with cultural affiliation to the project site area as identified by the Native American Heritage Commission shall have the opportunity to review and comment on the predevelopment plan as required by AB52 (2014). Archaeologists and representatives from Native American tribal groups shall provide monitoring during grading/excavation and construction activities of any approved development that has the potential to adversely impact any on-site significant cultural resources.

Cul-4 Architectural, Historical, and Cultural Resource Preservation and Restoration. Provide for the identification, preservation and restoration of the sites, structures, districts and cultural landscapes which have architectural, historical, and/or cultural significance.

Appendix C – Armoring Impact Quantification & Potential In-Lieu Fee Estimates

Commission staff coastal engineer, Jeremy Smith, used the information provided by the applicants (Orange County Transportation Authority and Southern California Regional Rail Authority) to quantify the impacts of the armoring consistent with past Commission analysis and decisions of coastal armoring structures. The three kinds of impacts that are easily quantifiable include 1) the beach area occupied by an armoring structure (called "encroachment"), 2) the beach area prevented from being created by fixing of the backshore (called "passive erosion"), and 3) the beach-building material that would have entered the littoral system were the backshore not armored (called "sand retention").

The first two impacts represent direct loss of beach area (measured in square feet) and the third impact results in loss of beach area by reducing the beach building material (measured in cubic yards) available within the littoral system. Direct mitigation for encroachment would involve the creation of beach area through the removal of armoring structures on beaches. Direct mitigation for passive erosion involves the restoration of natural erosional processes along armored backshores. Direct mitigation for sand retention involves the replacement of sand supply through import of similar material to the littoral system. In recent decisions, the Commission has preferred the use of replacement cost approaches to develop in-lieu fees and assess what appropriate mitigation is for the loss of beach area and sand supply caused by armoring structures.

The impact estimates and estimation of potential in-lieu fees are summarized below.



Figure 1. Approximate locations of new or redeveloped reaches of coastal armoring. Note, width does not represent actual footprints. The two colors differentiate the areas identified and do not relate to the status of the armoring. Imagery source (Google Earth: February, 2025)

Because the subject permit application includes several related armoring activities constructed at different times, along considerable lengths of shoreline, and with different sizes, the armoring impacts and potential in-lieu fees are estimated separately for clarity. The seven unique reaches (i.e., not overlapping) include: North Beach, Area 1, Area 1A, Area 2, Area 4 (seawall), Cyprus Shore (rock dump) / Area 4 (rock restacking),

and Cyprus Shore (landslide area rock dump). These areas are shown on a map in Figure 1. However, the armoring in the subject permit application forms two continuous areas of substantially improved (redeveloped) or new armoring: an area north of San Clemente Pier between Mile Post 203.83 and Mile Post 204.40 and an area south of the pier between Mile Post 206.42 and 206.90. The permit application also includes approval of prior and proposed repair work that did not and is not expected to substantially improve armoring outside of these areas such as around Cottons Point and the area just south of the Calafia State Beach parking lot access point; those areas are not included in these estimates.

Table 1, below, summarizes the total impacts and potential in-lieu fees for the northern and southern armoring reaches and Table 2 on the following page summarizes the parameters and calculations used to quantify the estimated armoring impacts and potential in-lieu fees. The methods used to determine in-lieu fees are discussed in more detail later.

Table 1. Summary of impact and potential in-lieu fee (rounded nearest integer)

	Northern Armoring Reach	Southern Armoring Reach	Total
Encroachment (square feet)	80,638	71,581	152,218
Passive Erosion (square feet)	22,235	20,447	46,682
Total Beach Area Impacts (square feet)	102,873	92,028	194,901
Sand Retention (cubic yards)	62,023	43,453	105,476
Sand Retention In-Lieu Fee	$3,070,770	$2,151,343	$5,222,114
Beach Area Impact In-Lieu Fee using Real Estate Method	$53,957,917	$48,269,396	$102,227,314
Total Potential In-Lieu Fee (Sand + Real Estate Method)	**$57,028,688**	**$50,420,740**	**$107,449,427**

Table 2. Summary of parameters and calculations for impacts and potential in-lieu fees (orange cells are generally “inputs” and grey cells are generally “calculations”, shown for legibility)

	Northern Armoring Reach				Southern Armoring Reach			
Encroachment	North Beach	Area 1	Area 1A	Area 2	Area 4 (seawall)	C.S. (rock dump) / Area 4 (rock repair)	Cyprus Shore (landslide area rock dump)	
W (ft)	105	87	628	2195	1224	580	700	measured from as-builts (if constructed) or plans (if proposed)
E (ft)	24	24	23.2	28	6.7	36.5	60.3	measured from as-builts (if constructed) or plans (if proposed)
Ae (sf)	2,520.00	2,088.00	14,569.60	61,460.00	8,200.80	21,170.00	42,210.00	= W x E
Fixing Back Beach								
R (ft/yr)	0.66	0.66	0.66	0.66	0.66	0.66	0.66	best estimate using range of data including CoastSat, likely an underestimate
L (yr)	16	11	11	11	10	13	16	Based on approx. date of construction through 2036
W (ft)	105.00	87.00	628.00	2,195.00	1,224.00	580.00	700.00	
Aw (sf)	1,108.80	631.62	4,559.28	15,935.70	8,078.40	4,976.40	7,392.00	= R x L X W
Sand Retention								
W (ft)	105	87	628	2195	1224	580	700	
S (-)	0.790	0.790	0.790	0.790	0.790	0.790	0.790	best estimate assuming very high sand content under railroad and less sand in backing bluffs
L (yr)	16	11	11	11	10	13	16	
R (ft/yr)	0.66	0.66	0.66	0.66	0.66	0.66	0.66	
hs (ft)	20	20	20	20	20	20	20	approximate estimate
hu (ft)	72	74	74	76	64	47	44	approximates based on available digital elevation models
Rcu (ft)	0.66	0.66	0.66	0.66	0.66	0.66	0.66	same as R
Rcs (ft/yr)	0	0	0	0	0	0	0	assumes no sand from bluff erosion reaches beach with armoring
Vb (cy)	2,984.73	1,737.19	12,539.71	44,761.61	19,854.91	9,755.59	13,842.20	= (1/27) x S x W x L x [(R x hs) + (hu x 0.5x (R+(Rcu – Rcs)))]
POTENTIAL IN-LIEU FEE ESTIMATES								
Price of replacement sand ($/cy)	$49.51	$49.51	$49.51	$49.51	$49.51	$49.51	$49.51	based on average of three estimates from beach nourishment projects in San Clemente
Volume of sand retained (cy)	2,984.73	1,737.19	12,539.71	44,761.61	19,854.91	9,755.59	13,842.20	
In-lieu fee for sand retention	**$147,773.75**	**$86,008.22**	**$620,840.97**	**$2,216,147.34**	**$983,016.69**	**$482,999.12**	**$685,327.54**	
Encroachment Area (sf)	2,520	2,088	14,570	61,460	8,201	21,170	42,210	
Passive Erosion Area (sf)	1,109	632	4,559	15,936	8,078	4,976	7,392	
Total Area (sf)	3,629	2,720	19,129	77,396	16,279	26,146	49,602	
Price of replacement beach area ($/sf)	$524.51	$524.51	$524.51	$524.51	$524.51	$524.51	$524.51	based on inflation adjusted (to July 2026) land cost for 7 sales of blufftop in San Clemente (though all landward of railroad)
In-lieu fee for beach impacts (REAL ESTATE)	**$1,903,341.89**	**$1,426,467.89**	**$10,033,288.85**	**$40,594,818.61**	**$8,538,603.19**	**$13,714,048.26**	**$26,016,745.02**	

When estimating potential in-lieu fees for sand retention, the Commission has, for decades, used the cost of replacing that sand by transporting it to the site of impact. In recent years, where in-lieu fees for sand supply impacts are anticipated to go towards regional sand nourishment projects, the Commission has preferred to use a representative unit cost for delivering sand through those regional sand nourishment projects. In this case, the following information was used to derive an average unit cost for sand in the City of San Clemente of $49.51 per cubic yard.

Table 3. Summary of replacement sand unit costs for City of San Clemente

Informational Source	Site	Amount (cy)	Total Cost	Unit Cost	USD Year	Inflation Adjustment to Aug 2026
SANDAG RBSP III Feasibility Study	San Clemente North Beach	250,000	$10,408,610	$41.63	2025	$43.30
SANDAG RBSP III Feasibility Study	San Clemente State Beach	800,000	$34,436,834	$43.05	2025	$44.77
City Website	Pier Area	251,000	$14,317,000	$57.04	2024	$60.46

For beach area impacts (encroachment and passive erosion), there are a range of methods that the Commission has used over the decades to develop in-lieu fees and evaluate appropriate mitigation. An older method, called the “equivalent sand method” (see note at the bottom of Table 1), was developed in the 1990s and estimates how much sand would need to be placed to recreate an equivalent amount of the lost beach area elsewhere in the littoral cell. An area-to-volume conversion factor is used based on the volume of a column of sand with a top area of one square foot and a height that extends from the berm elevation down to the theoretical depth of closure (bottom of the active beach profile). In Southern California, this has often been assumed to be approximately 1 cubic yard per square foot based on an active beach profile height of 27 feet.

The Commission moved away from using this method in the mid-2000s because it is nearly impossible for long-term loss of beach space at a site of impact to be recreated through placement of the volume of sand estimated by the equivalent sand method. This is because the sand placed fronting the armoring is not in equilibrium with the beach on either end and the sand gets transported up and down coast through longshore transport where its benefits become diffuse and the sand is eventually lost to sinks such as submarine canyons. The low-elevation space created through erosion at the back of the beach allows sand to accumulate by creating distance from the active shoreline where wave energy can dissipate and sand can deposit. While included in this summary, use of the equivalent sand method to determine adequate mitigation is not recommended.

A more contemporary method the Commission has used to evaluate potential in-lieu fees for beach area impacts is called the **“real estate method”** and is based on the replacement cost of mitigating lost beach space through the acquisition of coastal property and preservation or restoration of natural erosional processes. This method represents a more accurate estimate of the replacement cost of beach space lost to fixing the backshore with armoring and is more consistent with the Commission’s focus on long-term planning. In this case, the cost of acquiring beachfront of blufftop land was estimated by looking at available sales data of blufftop property in San Clemente,

adjusting the sales price by a regional home price inflation index, and removing the inflation-adjusted assessed improvement cost to remove the cost of the residential structures, approximating a land cost. This land cost was then divided by the lot size and the average land cost per square foot of the seven available blufftop sales in San Clemente was used to estimate the replacement cost of the lost beach area (see Table 5). Ideally, more sales data would be used to have better confidence in the replacement cost figure and property that was not separated from the beach by public infrastructure (in this case, the railroad) would be used since purchasing property behind the railroad would not result in beach formation. While that data collection has not been done in this case, preliminary estimates suggest that if sales data were expanded to the Capistrano Bight, the replacement cost would increase by a factor of 1.7, suggesting the potential in-lieu fees estimated by this analysis likely represent a lower end estimate of the actual cost to directly replace the lost beach area.

While the Commission has typically not required payments of in-lieu fees from public agencies (and instead looked for public benefits that can be provided as part of proposed armoring projects), these potential in-lieu fees have been assessed to aide in determining appropriate mitigation (see for example CDP 2-21-0912 and CC-0005-21). In this case, OCTA, after coordinating with Commission staff, have proposed approximately 690,000 cubic yards of sand placement as part of the proposed project. To aide in evaluating how this sand compares to the impacts of the project, the in-lieu fee estimated by the real estate method is divided by the unit cost of sand to approximate how much sand the in-lieu fee could theoretically fund. A summary of these totals for the two separate armoring reaches is presented in the table below.

Table 4. Summary of real estate method in-lieu fee and an estimate of how much sand that in-lieu fee would fund.

	North of Pier Area	South of Pier Area	Total
Real Estate Method In-lieu Fee	$57,028,688	$50,420,740	$107,449,427
Volume of Sand Theoretically Funded by Real Estate Method In-lieu Fee	1,151,862	1,018,395	2,170,257

The Commission has also considered and, in some cases, used another approach to assessing potential in-lieu fees for beach loss based on the recreational value of beaches. More information about this approach can be found in a memo developed as part of the staff report for a revetment in Dana Point (CDP Application 5-21-0489). Due to capacity limitations, an analysis using the recreational value method was not able to be completed. However, an analysis by SANDAG for their Regional Beach Sand Project Phase III Feasibility Study included an analysis using similar methods used by the Commission (benefit-transfer method to develop day-use values) and estimated that the non-market value losses at similar areas (North Beach and San Clemente State Beach) from coastal erosion totaled approximately $132 million (2024 dollars) from 2023 to 2034 which is similar in magnitude to the in-lieu fee estimated by the real estate method.

Table 5. Recent Blufftop Lot Sales in San Clemente

Street Number	Street	Sale Price	Sale Date	Inflation Adjusted Sale Price	Lot Size (sf)	Building Size (sf)	Inflation Adjusted Assessed Improvement Value	Inflation Adjusted Land Cost	Inflation Adjusted Sale Cost per sf	Inflation Adjusted Land Cost per sf
326	Boca Del Canon	$7,400,000	Jul-24	$7,502,204	7,444	3,837	$614,490	$6,887,715	$1,007.82	$925.27
1814	Calle De Los Alamos	$5,850,000	Mar-25	$5,846,372	11,325	3,126	$355,759	$5,490,614	$516.24	$484.82
2014	Calle De Los Alamos	$6,650,000	Jan-25	$6,844,965	12,197	3,639	$850,380	$5,994,585	$561.20	$491.48
2016	Calle De Los Alamos	$6,250,000	Nov-25	$6,433,768	12,632	3,693	$554,802	$5,878,966	$509.32	$465.40
2018	Calle De Los Alamos	$4,500,000	Jul-25	$4,555,945	13,068	1,494	$130,029	$4,425,916	$348.63	$338.68
3822	Vista Blanca	$7,000,000	Jul-25	$7,087,026	13,504	7,912	$1,891,113	$5,195,913	$524.81	$384.77
3824	Vista Blanca	$10,100,000	Sep-25	$10,387,467	13,068	6,907	$2,792,905	$7,594,563	$794.88	$581.16

	Inflation Adjusted Sale Cost per sf	Inflation Adjusted Land Cost per sf
MEDIAN	$524.81	$484.82
MEAN	$608.99	$524.51
STD	$219.59	$193.23
N	7	7

Appendix D – Substantive File Documents

- Coastal Development Permit Application Nos. 5-21-0866, 5-23-0762, 5-24-0714, 5-24-0715 and associated file documents
- Consistency Certification No. CC-033-03 and associated file documents
- Railroad Emergency Stabilization Project – San Clemente Orange Subdivision MP 206.85 Alternatives Analysis, by HDR Engineering
- MP 206.8 Track Stabilization – Draft Alternative Analysis Report, by HDR Engineering, dated June 20, 2023
- Alternative Analysis Report – Area 4, by HDR Engineering, dated June 2025
- Alternative Analysis Report – Areas 1 and 2, by HDR Engineering, dated June 2025
- Alternatives Analysis for the San Clemente North Beach Revetment Emergency Repair and Restoration Project, by Metrolink