

CALENDAR ITEM

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**GENERAL LEASE – BEACH REPLENISHMENT AND
PROTECTIVE STRUCTURE USE**

APPLICANT:

Broad Beach Geologic Hazard Abatement District (BBGHAD)

PROPOSED PROJECT:

The BBGHAD is seeking approval from the Commission, through issuance of a lease, for portions of the proposed Project, hereafter referred to as Alternative 4c, on State sovereign lands in Malibu, Los Angeles County.

Alternative 4c seeks to restore the beach and dune ecosystem at Broad Beach to simultaneously protect the homes and septic systems, landward of the existing revetment, and establish a public beach waterward of the dunes. Alternative 4c would reduce the initial nourishment volume proposed in the 2014 Revised Analysis of Public Trust Resources (APTR) from 600,000 cubic yards (cy) to 300,000 cy with a more robust monitoring program that will provide decision-making agencies with information necessary to manage any environmental impacts that may develop during the lease term. Moreover, the extensive monitoring information will allow an adaptive management approach to ensure that the project goals and the broader Public Trust interests are properly balanced and in the best interests of the State.

In comparison to the 2014 APTR Project Description, Alternative 4c provides a significantly reduced beach footprint, associated with the reduced initial nourishment volume, which avoids particularly vulnerable habitat at the west end of Broad Beach and reduces the impacts associated with sand burial in the intertidal and subtidal zones. However, Alternative 4c allows for a more frequent nourishment schedule including, the deposition of 300,000 cubic yards of sand during Project construction, up to 300,000 cubic yards of sand during subsequent major renourishment events at year 5 and 10, and up to 75,000 cubic yards of sand during each interim nourishment event. The nourishment schedule provided in Alternative 4c may result in the placement of a greater total volume of

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sand, over a 10-year period, than was contemplated in the original APTR. In fact, the current project may allow for as much as 1.425 million cy over 10-years, whereas the 2014 APTR Project Description anticipated a total of 1.05 million cy over a 10 year term. Consequently, the intensity of impacts to Public Trust resources associated with sand importation and beach nourishment could increase over the 10-year period. However, it is anticipated that the more frequent nourishment schedule will help to ensure a more consistent wide, sandy beach profile benefitting public access and recreation.

The Project, as proposed by the BBGHAD, consists generally of the following elements:

- Continued use and maintenance of an existing 4100 linear foot rock revetment, portions of which encroach on sovereign lands under the Commission's jurisdiction;
- Relocation of 1,600 linear feet at the eastern end of the revetment, from 30760 Broad Beach Road to 30980 Broad Beach Road, to a more landward location off of State land, as shown in Exhibit B1.
- Reduced footprint to avoid sensitive habitat at the western end of Broad Beach
- An agreement to maintain a beach and dune system subject to objective triggers for nourishment and backpassing. This includes major nourishment of 300,000 cy, backpassing of up to 25,000 cy, and interim nourishments of up to 75,000 cy;
- An increased commitment for interim nourishment to keep the revetment buried; and
- Future monitoring activities.

On October 9, 2015, the California Coastal Commission (CCC) authorized Coastal Development Permit (CDP) No. 4-15-0390, which authorized the previously identified project elements outlined in Alternative 4c. The CDP also imposed various other Special Conditions, including development of the following:

- A Science Advisory Panel (SAP) to oversee development and implementation of a Marine Habitat Monitoring and Mitigation Plan
- A Dune Habitat and Restoration and Monitoring Program
- An Adaptive Management and Reporting Plan
- A Sediment Sampling and Analysis Plan
- A Public Access Management Plan

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- A Septic Conversion Implementation Study
- Strict sand requirements for nourishment activities.

Recently, securing sand sources for the Project have become an additional challenge. The BBGHAD's Project still intends to use sand from one or more sand quarries located in and around the city of Moorpark, in Ventura County. These quarries are capable of providing the volume and quality of sand needed for the Project; however, a dispute between the City of Moorpark, the City of Fillmore, and Ventura County regarding trucking routes for the sand has led to litigation which may impact the BBGHAD's ability to secure the necessary sand from the selected quarries. As such, the BBGHAD is reviewing alternate sand sources, including a waterway in Santa Ana, Calleguas Creek in Ventura, and a variety of alternate quarries. Whatever sand source is settled on will need to meet the grain size envelope and technical standards established in the CCC CDP.

For additional details on the proposed Project, Commission staff has prepared Alternative 4c Project Update – Project by the Numbers, attached as Exhibit C. The full Alternative 4c Project Update Report is available on the Commission's website at http://www.slc.ca.gov/Info/CEQA/Broad_Beach.html.

PROPOSED LEASE:

AREA, LAND TYPE, AND LOCATION:

23.07 acres, more or less, of sovereign land in the Pacific Ocean, city of Malibu, Los Angeles County.

AUTHORIZED USE:

Use and maintenance of portions of existing rock revetment shoreline protective structures (revetment); relocation of portions of existing revetment along the eastern end; placement of up to 300,000 cubic yards of sand for initial beach nourishment and dune construction; backpassing of up to 25,000 cubic yards of sand per backpassing event annually as needed; placement of up to 75,000 cubic yards of sand per subsequent interim nourishment event as needed; placement of up to 300,000 cubic yards of sand per major renourishment event as needed; use and maintenance of portions of two existing vertical access stairs from two dedicated vertical access ways; construction, use and maintenance of four storm drain outfalls to be filled with sand during the dry season and excavated during the storm season; construction, use and maintenance of bollard fencing and signage for dune habitat.

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LEASE TERM:

10 years, beginning August 9, 2016.

CONSIDERATION:

Rent: Variable based on encroachment. See specific lease provisions below.

Compensation for the Unauthorized Occupation of State Land: \$500,000.

SPECIFIC LEASE PROVISIONS:

Insurance: In an amount no less than \$10,000,000 per occurrence.

Bond: \$1,350,000; decreasing to \$850,000 upon revetment relocation.

Other:

- Lessee shall pay consideration in the total amount of \$500,000 for the unauthorized occupation of state-owned lands prior to the beginning date of this Lease. Said compensation shall be paid in \$50,000 increments, annually, on or before the anniversary date of the Lease.
- Lessor agrees to give Lessee a grace period from the authorization date of this Lease to December 31, 2019, to allow Lessee sufficient time to obtain all necessary Project permits and authorizations and to commence initial Project construction.
- Should Lessee complete Project construction within the grace period, including revetment relocation as described in the Lease, Lessor and Lessee agree that the placement of sand for beach nourishment and dune construction on sovereign land shall be treated as public benefit and consideration under the terms of this Lease and no monetary rent shall be owed retroactively or otherwise for existing revetment encroachment, so long as a minimum 10-foot wide continuous band of dry beach area is maintained along the waterward edge of the revetment, to allow the public unrestricted access to pass and repass along the beach.
- Lessee agrees to relocate the existing revetment off of sovereign land, within the grace period, from 30760 Broad Beach Road to 30980 Broad Beach Road.

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- In the event that Lessee completes the revetment relocation, as described in the Lease, during the grace period, but fails to complete the remainder of the Project, Lessee shall owe monetary rent, going forward, of \$7,929 per month based on reduced encroachment and the public use of private land seaward of the relocated revetment.
- In the event that Lessee fails to commence any Project construction within the grace period, including revetment relocation, Lessee shall owe rent in the amount of \$27,430 per month, for the full degree of encroachment, as described in the Lease, without offset or discount retroactive to the beginning date of the lease, and for each subsequent period during which no public benefit exists.
- Lessee is authorized to deposit up to 1,425,000 cubic yards of sand within the Lease Premises during the term of the lease, subject to the terms and conditions of all other permits and approvals of all agencies with approval authority over the Project. Lessee shall provide written notice to Lessor at least 90 days prior to placement of any additional sand in excess of 1,425,000 cubic yards. Lessor, through the Executive Officer or the Executive Officer's designee, may authorize up to 300,000 cy of sand in addition to the anticipated maximum volume, but may require additional review before granting authorization, as provided in the Lease.
- Lessor hereby reserves all rights and interest to the various Lateral Access Easements held by the California State Lands Commission that may be impacted by the Broad Beach Project for the term of this lease.
- The Lessee hereby agrees to ensure that each owner of property on which the approved revetment will lie (31350 to 30760 Broad Beach Road) executes a License Agreement in favor of Lessor in accordance with Sections 13-15 of the CDP.
- Lessee shall comply with all Avoidance and Minimization Measures (AMMs) for the Project as identified in Exhibit E. Lessor, through the Executive Officer or the Executive Officer's designee, may modify, substitute or eliminate any AMMs if Lessor determines, at its sole discretion that such AMMs no longer apply or are substantially covered by other permitting agency conditions.

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- Lessee shall not prohibit, interfere, or otherwise restrict the public's access, use, and enjoyment of any areas of state-owned lands or public easements within or adjacent to the Lease Premises or Project area.

BACKGROUND:

Shoreline erosion along Broad Beach has been occurring since the early 1970s, with sand loss estimated at an average of approximately 35,000 to 45,000 cubic yards (cy) annually. Since that time, homeowners along Broad Beach have attempted to protect their upland properties with various shoreline protective devices including sand bags, vertical timber pilings, concrete seawalls, caissons, and rock revetments.

By 2007-2008, Broad Beach homeowners responded to significant erosion caused by winter storms by installing geotextile and sand bag revetments, but those efforts proved largely ineffective. Because of damage to a few homes, and the potential for greater damage in the future, the Trancas Property Owners' Association (TPOA) sought to construct a rock revetment at Broad Beach. In 2009, the TPOA applied for two emergency CDPs (ECDPs) to construct a rock riprap revetment: ECDP #09-021, issued on December 30, 2009, by the City under the City's Local Coastal Program; and ECDP #4-10-003-G, issued on January 25, 2010, by the CCC. The ECDPs allowed for the emergency construction of an approximately 4,100-foot-long rock revetment on Broad Beach adjacent to residences at 30760-31346 Broad Beach Road. Construction occurred between February 17 and April 25, 2010. The revetment rises approximately 12 to 15 feet above average low tide elevation, is approximately 22 to 38 feet wide at its base, and covers a land area of approximately 3.02 acres, including both private property and State-owned sovereign land. The ECDPs also required that the Applicant file a CDP application after construction completion to seek longer-term permitting for a long-term solution to the shoreline erosion.

The location and extent of the State's fee-owned sovereign lands are generally defined by reference to the ordinary high water mark of tide and submerged lands, as measured by the mean high tide line (MHTL). The boundary remains ambulatory except where there has been fill or artificial accretion or the boundary has been fixed by agreement or court decision.

The Applicant's engineers conducted a MHTL survey on October 15, 2009, that was used as a guide to locate the revetment toe when the rock was placed during construction of the emergency revetment between February and April

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2010. The Commission's MHTL survey at Broad Beach was conducted January 19 to 20, 2010, just prior to installation of the emergency revetment. The results of the Commission survey located the MHTL more landward of the Applicant's MHTL, as shown in Exhibits B1 and B2. While the Commission staff's surveyed MHTL location is more landward of the TPOA's surveyed MHTL location, both surveys confirm an unpermitted private encroachment onto sovereign land.

Commission staff believes that the January 2010 MHTL survey is the best evidence of the location of the boundary between the State's sovereign land and the private uplands immediately prior to the installation of the revetment. Consequently, the January 2010 MHTL survey is the basis for the analyses of the Project's impacts on Public Trust resources and values conducted by Commission staff.

Portions of the existing revetment encroach on and directly impair approximately 20 of the 51 Lateral Access Easements (LAEs) held by the Commission along Broad Beach. These LAEs were dedicated on private upland property in perpetuity by upland property owners to provide alternative lateral access to the public along Broad Beach in the event physical conditions at Broad Beach prevent lateral access along the beach on public property. Similar easements not held by the Commission exist in the proposed Project area in the form of deed restrictions or other legal documents. These other easements provide for public access that was dedicated prior to the existing LAE program and are not held by a specific state or local agency. The proposed Project would also encroach on or impair 15 of these other easements.

On September 12, 2011, the Broad Beach Geologic Hazard Abatement District was authorized by vote of the Malibu City Council. On November 18, 2011, the TPOA provided staff with a written notice that it had assigned its interest in the Project to the BBGHAD, and requested that the Commission "...recognize and accept this assignment... and otherwise deem the BBGHAD the Project Applicant for all purposes." Under Public Resources Code section 26525, a GHAD can be formed for the prevention, mitigation, abatement, or control of a geologic hazard, and for the mitigation or abatement of structural hazards that are partly or wholly caused by geologic hazards.

On March 29, 2012, Commission staff received all documents required to transfer TPOA application materials to the BBGHAD, which then became the Applicant for the Project. On June 29, 2014, the BBGHAD, as the lead agency under the California Environmental Quality Act (CEQA), approved the proposed Project, determining that the Project was statutorily exempt under CEQA. Public

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Resources Code sections 26601 and 21080, subdivision (b)(4), provide that an “[i]mprovement¹ caused to be undertaken ... and all activities in furtherance thereof or in connection therewith, shall be deemed to be specific actions necessary to prevent or mitigate an emergency....” These statutes provide that activities undertaken by the BBGHAD to prevent or mitigate damage to upland property (the Project) due to coastal erosion (the emergency) are exempt from review under CEQA.

The Broad Beach area also lies within the Point Dume State Marine Conservation Area and is upcoast of the Point Dume State Marine Reserve , both of which Marine Protected Areas are created pursuant to the Marine Life Protection Act (see Pub. Resources Code, § 36700 et seq.).

STAFF ANALYSIS AND RECOMMENDATION:

Authority:

Public Resources Code sections 6005, 6216, and 6301; California Code of Regulations, title 2, section 2000, subdivision (b).

Sea-Level Rise and Protective Structures:

A tremendous amount of State-owned lands and resources under the Commission’s jurisdiction will be impacted by rising sea levels. Because of their nature and location, the State’s sovereign lands and resources at Broad Beach are already vulnerable to a range of natural events, such as storms and extreme high tides. As sea levels continue to rise, staff anticipates receiving more applications for shoreline protective structures and large-scale beach nourishment projects to protect upland development from erosion. The objective of shoreline protective structures is to prevent the beach from naturally retreating. In many circumstances, at least portions of these protective structures and beach nourishment projects will be proposed on sovereign lands. Commission staff acknowledges that shoreline protective structures are necessary in some circumstances to protect existing structures. However, it is equally important to assess whether portions of protective structures are actually necessary and can be installed or moved more landward or removed completely to maximize or uncover beach area and improve lateral beach public access.

¹ Public Resources Code section 26505 provides in part that “[i]mprovement” means any activity that is necessary or incidental to the prevention, mitigation, abatement, or control of a geologic hazard, including, but not limited to...Construction...Maintenance, repair, or operation of any improvement....”

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The State of California released the final “Safeguarding California: Reducing Climate Risk, an Update to the 2009 California Climate Adaptation Strategy” (Safeguarding Plan) on July 31, 2014, to provide policy guidance for state decision-makers as part of continuing efforts to prepare for climate risks. The Safeguarding Plan sets forth actions needed to safeguard ocean and coastal ecosystems and resources as part of its policy recommendations for state decision-makers. On hazard avoidance for new development, the Safeguarding Plan calls on decision-makers to carefully consider, in light of principles described in the Safeguarding Plan, whether there is a “compelling need” for significant new structures or infrastructure prior to authorizing their construction. Specifically, the Safeguarding Plan acknowledges that shoreline protective structures result in the loss of beach and lateral beach public access and asks agencies to take steps to minimize the adverse effects of sea-level rise, erosion, and storms. According to the Safeguarding Plan, “[t]he loss of beaches due to armoring and sea-level rise will in turn result in loss of public beach access, tourism losses, losses of marine mammal haul-out area and sandy beach habitat, and loss of beach buffering capacity against future bluff erosion.”

Broad Beach has been and will continue to be subjected to both the incremental effects of sea-level rise generally, as well as the effects of climate change-related storm/wave events and changing precipitation patterns that may increase in frequency and intensity. In recent years, Broad Beach and the adjacent residences experienced significant damage during storm events associated with El Niño (e.g., 1997-1998 and 2009-2010), although the 2015-2016 El Niño resulted in little if any reported damage at Broad Beach. The combination of natural forces, along with the effects related to the placement of the revetment itself, will continue to pose a significant erosion management challenge, and have adverse effects on public access and beach habitats.

The proposed beach restoration and ongoing augmentation efforts are expected to help mediate some of the adverse effects commonly associated with shoreline protection structures by creating and maintaining a sandy beach that provides access and helps attenuate damaging effects of storm-related waves; however, the longevity and performance of the proposed beach restoration is uncertain, and may only be sustainable for the next 10 to 20 years, particularly if significant storms or additional El Niño years result in substantial erosion events. Sea-level rise projections for the longer term will not only continue to move the mean

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high tide line landward, thus affecting the boundary between sovereign and private lands, but will also make it increasingly difficult to maintain the beach through restoration and augmentation efforts.

In its 2012 report, for example, the National Research Council found that tide gauge measurements show the average annual rate of sea-level rise has increased during the last two to three decades as compared to the average rate over the last century. Relative to the year 2000, the National Research Council predicts sea levels could rise in the southern part of the state by 5 to 24 inches by the year 2050 and from 17 to 66 inches by 2100. Thus, while the issue of sea-level rise may not appear significant over the 10-year lease period, the problem of how to protect the homes and their septic systems will still exist over the long term. As a result, Commission staff believes the proposed restoration project should be viewed as an interim measure to protect the residences and the septic systems while a permanent solution is developed.

Public Trust and State's Best Interests Analysis:

While the proposed Project is statutorily exempt from CEQA, Commission staff concluded that an evaluation of the potential impacts to State sovereign lands and Public Trust resources necessitated the development of a comprehensive analytical document to inform the Commission's review and consideration of the Project. As such, staff prepared the 2014 Revised Analysis of Impacts to Public Trust Resources and Values (APTR) document, to analyze Project elements and their potential to adversely impact Public Trust resources.² The 2016 Project Update is an extension of the previous work and includes additional information and project modifications as required by the CDP. Neither the 2014 APTR nor the Project Update are a CEQA document and neither need to be approved or certified by the Commission prior to taking action on the proposed Project.

The BBGHAD Project requires a complex balancing of Public Trust needs and values in and around the Project location. As clearly outlined in the 2014 APTR and the recent Project Update, the Project will impact terrestrial and marine resources in a discrete location. More specifically, the placement of large volumes of sand, the construction equipment needed to transport and grade the sand, and the expectation that

² The APTR is on file in the Sacramento Office of the Commission and is available on the Commission's website at http://www.slc.ca.gov/Info/CEQA/Broad_Beach.html.

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continuous nourishment activities will be needed to recreate a beach profile sufficient to provide public access and recreation ensure that existing ecosystems will be disturbed over the term of the lease. Greater detail regarding the disturbances caused by the Project can be found in the [Broad Beach Restoration Project \(Alternative 4c\) - Project Update Report](#), which is available on the Commission's website.³ However, through ongoing analyses of the current Project, Commission staff has developed a list of Avoidance and Minimization Measures (AMMs) that will assist in minimizing potential impacts to Public Trust resources. These impacts and associated AMMs are described in Exhibits C and E. Within the context of the AMMs and permit conditions imposed by other regulatory agency actions, Commission staff believes that the impacts to Public Trust resources will be minimized or avoided.

The other critical Public Trust considerations associated with the Project revolve around public access and recreation at the Project site. Broad Beach is just up coast from Zuma Beach, one of the largest and most popular beaches in Los Angeles County. Historically, Broad Beach supported a wide sandy beach that was available to the public for recreational uses. Since the 1970's erosion has all but eliminated any remnant of dry sandy beach for recreational use. Additionally, the presence of the rock revetment, which to date has provided a private benefit to the upland homeowners and a public benefit by protecting septic systems waterward of the homes, represents an impediment to public access and enjoyment of Broad Beach. Currently, the beach is only passable in low tide conditions and the rock revetment cannot be safely navigated when the tides come in. While there are vertical access points and a checkerboard of lateral access easements along the beach, they mean very little when there is nowhere to safely walk or recreate throughout significant portions of each day. The Project, if it performs as anticipated, will provide a wide, sandy beach allowing the public to access, recreate and enjoy this area of the California coast from the east end of Zuma Beach to the west end of Broad Beach.

In the event that the beach erodes or fails to provide at least 10 feet of dry sandy beach, for recreational uses, Commission staff and CCC staff sought to ensure that lateral access, landward of the revetment, would be available to the public. More specifically, the agreed upon solution is the development of an irrevocable license that provides for public access

³ See footnote 2, above.

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landward of the 2010 mean high tide line (MHTL) if three of the beach profile reports during any five-year period demonstrate that less than 10 feet of dry sandy beach has been available for public access seaward of the revetment. Additional explanation and specificity can be found in CDP No. 4-15-0390 Special Conditions 13 through 15. While a dedicated easement landward of the easement would have ensured public access, it was balanced against the property interests of the homeowner, who determined that an easement was untenable. The current license agreement, coupled with the BBGHADs obligation to maintain a 10 foot wide strip of dry sandy beach waterward of the revetment or to pay rent for the encroachment, ensures that during the limited 10-year term of the lease a mechanism to provide public access exists, should the beach erode and nourishment is not provided, and that the State receive compensation if the public benefit ceases.

Finally, the BBGHAD Project has provided an opportunity for the State to develop significant volumes of scientific data regarding beach nourishment activities and coastal processes. The data collection aspects of this Project are fairly unique and will benefit the State by providing agencies with scientific data and coastal engineering information, not currently available that can be applied to future nourishment projects, future mitigation measures and future project development.

On balance, Commission staff believes that the Project, once constructed and maintained, will provide a regional and statewide public benefit by recreating a wider beach that is capable being used and enjoyed by the people of California. Given the short duration of the proposed lease, the minimization and avoidance of impacts to terrestrial and marine Public Trust resources embodied in the Commission's AMMs, and the benefits associated with the robust monitoring plans and data collection, Commission staff believes that the Project is consistent with the common law Public Trust Doctrine and is in the State's best interests. In the alternative, the project will not substantially interfere with Public Trust uses, during the lease term, and strikes an appropriate balance among competing Public Trust uses and interests at this location.

OTHER PERTINENT INFORMATION:

1. Applicant has the right to use the upland adjoining the lease premises.
2. Pursuant to the California Constitution and, specifically, Public Resources Code section 6503, when leasing lands under its jurisdiction, the

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Commission “shall appraise the lands and fix the annual rent or other consideration therefor.” Additionally, California Code of Regulations, title 2, section 2003, subdivision (e)(4), provides that rental for the use of State land “...may be discounted or waived for use of sovereign lands if the Commission, at its sole discretion, determines that a significant regional or statewide public benefit is provided or accrues from such use.”

3. This action is consistent with Strategy 1.1 of the Commission’s Strategic Plan to deliver the highest levels of public health and safety in the protection, preservation and responsible economic use of the lands and resources under the Commission’s jurisdiction; and Strategy 1.3 to protect, expand, and enhance appropriate public use and access to and along the State’s inland and coastal waterways.
4. The staff recommends that the Commission find that this activity is exempt from the requirements of CEQA as a statutorily exempt project. The project is exempt because it involves a specific action to prevent or mitigate an emergency.

Authority: Public Resources Code section 21080, subdivision (b)(4) and California Code of Regulations, title 14, section 15269, subdivision (c).

5. This activity involves lands identified as possessing significant environmental values pursuant to Public Resources Code section 6370 et seq., but such activity will not affect those significant lands. Based upon the staff’s consultation with the persons nominating such lands and through the CEQA review process, it is the staff’s opinion that the project, as proposed, is consistent with its use classification.

APPROVALS OBTAINED:

Broad Beach Geologic Hazard Abatement District
California Coastal Commission

FURTHER APPROVALS REQUIRED:

See Exhibit D

EXHIBITS:

- A. Land Description
- B1. Project Site and Location Map
- B2. Proposed Revetment Relocation Site and Location Map
- C. Alternative 4c Project Update - Project by the Numbers (2016)

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- D. Local, State, and Federal Agency Approvals and Consultations Required
- E. Appendix B: Broad Beach 2016 Monitoring Implementation Program (AMM Summary)

RECOMMENDED ACTION:

It is recommended that the Commission:

CEQA FINDING:

Find that the activity is exempt from the requirements of CEQA pursuant to California Code of Regulations, title 14, section 15061 as a statutorily exempt project pursuant to Public Resources Code sections 26601 and 21080, subdivision (b)(4), and California Code of Regulations, title 14, section 15269, subdivision (c), specific actions necessary to prevent or mitigate an emergency.

PUBLIC TRUST AND STATE'S BEST INTERESTS ANALYSIS:

Find that the proposed lease for proposed Project will not substantially interfere with the Public Trust needs and values at this location, at this time or for the foreseeable term of the lease, is consistent with the common law Public Trust Doctrine, and is in the best interests of the State.

SIGNIFICANT LANDS INVENTORY FINDING:

Find that this activity is consistent with the use classification designated by the Commission for the land pursuant to Public Resources Code section 6370 et seq.

AUTHORIZATION:

1. Authorize acceptance of compensation for the unauthorized use and occupation of sovereign lands in the amount of \$500,000, to be paid in \$50,000 increments annually for the term of the lease.
2. Authorize issuance of a General Lease – Beach Replenishment and Protective Structure Use to the Broad Beach Geologic Hazard Abatement District beginning August 9, 2016, for a term of 10 years, for the use and maintenance of portions of existing rock revetment shoreline protective structures; relocation of portions of existing revetment along the eastern end; placement of up to 1,425,000 cubic yards of sand within the Lease Premises during the term of the lease, subject to the terms and conditions of all other permits and approvals of all agencies with approval authority

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over the Project; use and maintenance of portions of two existing vertical access stairs from two dedicated vertical access ways; construction, use and maintenance of four storm drain outfalls to be filled with sand during the dry season and excavated during the storm season; construction, use and maintenance of bollard fencing and signage for dune habitat; as described in Exhibit A, and as shown on Exhibit B1 and Exhibit B2 (for reference purposes only) attached and by this reference made a part hereof; consideration is the public use and benefit, with monthly rent varying based on the degree of encroachment and public benefit conferred, with the State reserving the right to fix a different rent periodically during the lease term as provided in the Lease; insurance in an amount no less than \$10,000,000 per occurrence; surety in an amount of \$1,350,000, to be reduced to \$850,000 upon revetment relocation as described in the Lease.

3. Authorize the Executive Officer or her designee to adjust the rental amount and modify Exhibits A and B in the lease as needed upon review and approval of the as-built location of the relocated rock revetment as provided in the Lease.
4. Authorize the Executive Officer or her designee to allow placement of up to 300,000 cy of sand in addition to the anticipated maximum volume.
5. Authorize the Executive Officer or her designee to make non-substantive modifications to the proposed lease prior to execution, as needed.

EXHIBIT A

W 26420

LAND DESCRIPTION

Four (4) parcels of tide and submerged land, whether filled or unfilled, situate in the bed of the Pacific Ocean and adjacent to those lands as patented in Rancho Topanga Malibu Sequit, approved August 19, 1872, County of Los Angeles, State of California, and more particularly described as follows:

Parcel 1 – Revetment Encroachment Area 1

Bounded on the northeast by the ordinary high water mark of said ocean; bounded on the southwest by a line lying parallel with and 20 feet southwesterly from the ordinary high water mark of said ocean; bounded on the northwest by a line lying parallel with and 100 feet southeasterly from the southeasterly line and the southwesterly prolongation thereof, of that parcel as described in "Exhibit A" of that Quitclaim Deed recorded April 8th, 2010 in Document No. 20100480006, Official Records of said county; bounded on the southeast by a line lying parallel with and 10 feet southeasterly from the southeasterly line and the southwesterly prolongation thereof, of that parcel as described in "Exhibit A" of that Grant Deed recorded October 25, 2013 in Document No. 20131529517, Official Records of said county.

Parcel 2 – Revetment Encroachment Area 2

Bounded on the northeast by the ordinary high water mark of said ocean; bounded on the southwest by a line lying parallel with and 35 feet southwesterly from the ordinary high water mark of said ocean; bounded on the northwest by the northwesterly line and the southwesterly prolongation thereof, of that parcel as described in "Exhibit A" of that Grant Deed recorded March 4th, 2011 in Document No. 20110342456, Official Records of said county; bounded on the southeast by a line lying parallel with and 20 feet southeasterly from the southeasterly line and the southwesterly prolongation thereof, of that parcel as described in "Exhibit A" of that Quitclaim Deed recorded April 8th, 2010 in Document No. 20100480006, Official Records of said county.

Parcel 3 – Revetment Encroachment Area 3

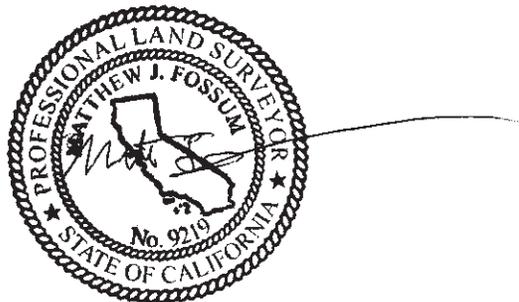
Bounded on the north and northeast by the ordinary high water mark of said ocean; bounded on the south and southwest by a line lying parallel with and 35 feet southerly and southwesterly from the ordinary high water mark of said ocean; bounded on the west by the westerly line and the southerly prolongation thereof, of "Parcel 1" as described in "Exhibit A" of that Grant Deed recorded December 13, 2012 in Document No. 20121928708, Official Records of said county; bounded on the southeast by the northwesterly line and the southwesterly prolongation thereof, of that parcel as described in "Exhibit A" of that Grant Deed recorded March 4th, 2011 in Document No. 20110342456, Official Records of said county.

Parcel 4 – Beach Replenishment, Dune and Temp. Construction Areas

Bounded on the north and northeast by the ordinary high water mark of said ocean; bounded on the south and southwest by a line lying parallel with and 200 feet southerly and southwesterly from the ordinary high water mark of said ocean; bounded on the west by a line lying parallel with and 20 feet westerly from the westerly line and the southerly prolongation thereof, of "Parcel 1" as described in EXHIBIT "ONE" of that Grant Deed recorded January 28, 2003 in Document No. 20030254326, Official Records of said county; bounded on the southeast by a line lying parallel with and 550 feet southeasterly from the southeasterly line and the southwesterly prolongation thereof, of that parcel as described in "Exhibit A" of that Grant Deed recorded October 25, 2013 in Document No. 20131529517, Official Records of said county.

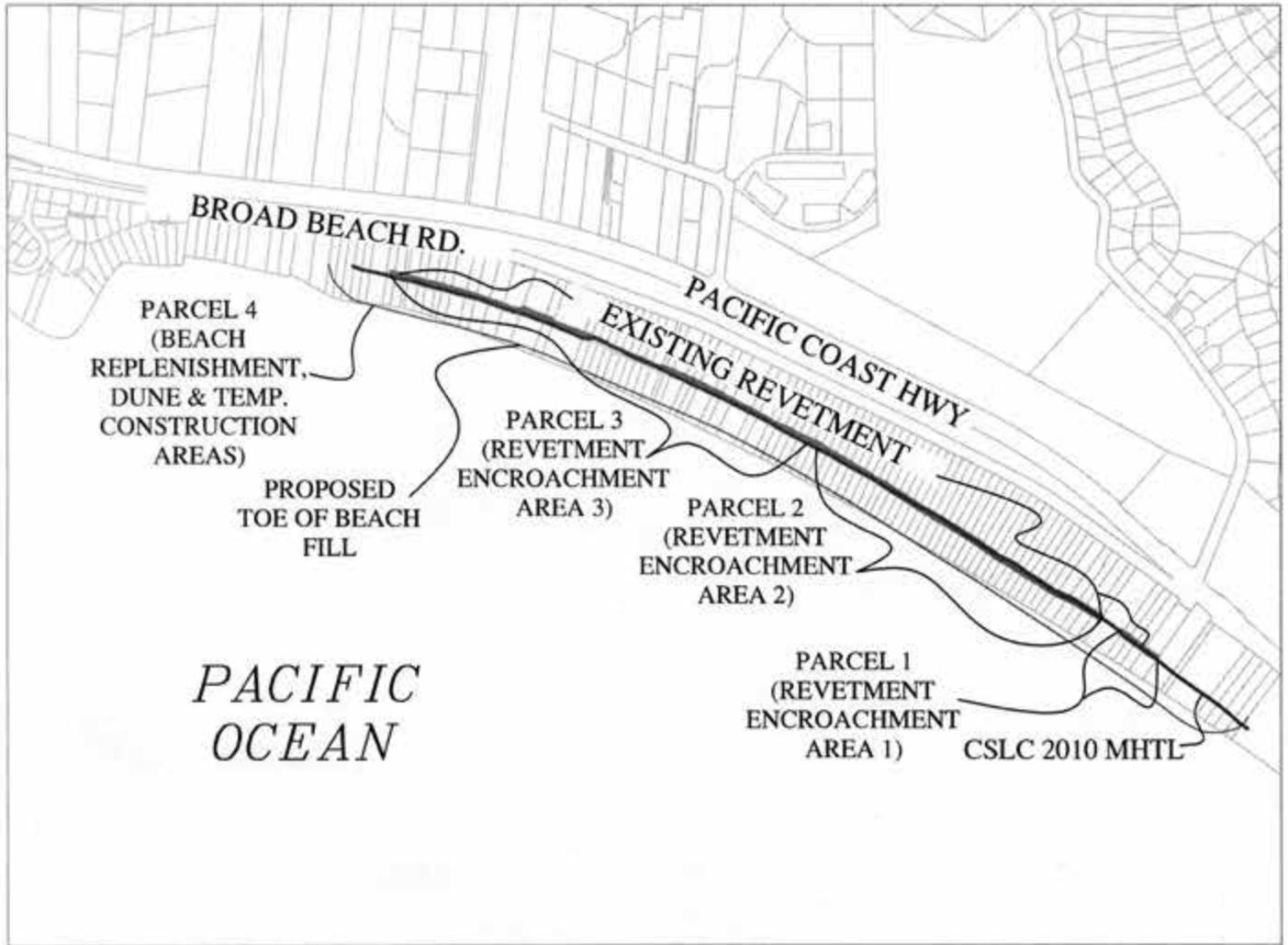
END OF DESCRIPTION

PREPARED 8/04/16 BY THE CALIFORNIA STATE LANDS COMMISSION BOUNDARY UNIT



NO SCALE

SITE



Broad Beach, Malibu

NO SCALE

LOCATION



MAP SOURCE: USGS QUAD

Exhibit B-1

W 26420
 BROAD BEACH GEOLOGIC
 HAZARD ABATEMENT DISTRICT
 GENERAL LEASE -
 BEACH REPLENISHMENT &
 PROTECTIVE STRUCTURE USE
 LOS ANGELES COUNTY

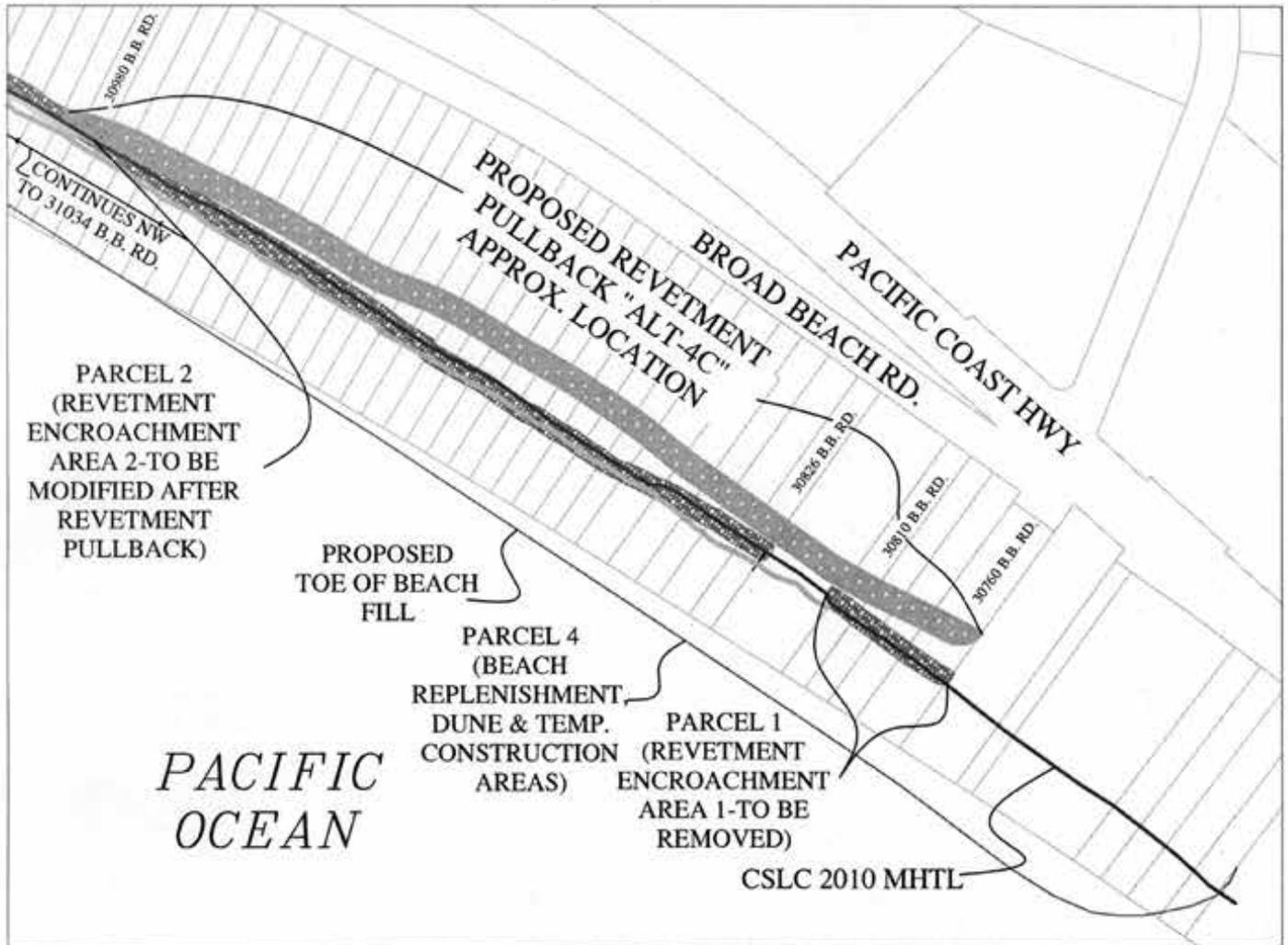


MJF 8/04/16

This Exhibit is solely for purposes of generally defining the lease premises, is based on unverified information provided by the Lessee or other parties and is not intended to be, nor shall it be construed as, a waiver or limitation of any State interest in the subject or any other property.

NO SCALE

SITE



Broad Beach, Malibu

NO SCALE

LOCATION



MAP SOURCE: USGS QUAD

Exhibit B-2

W 26420

BROAD BEACH GEOLOGIC
HAZARD ABATEMENT DISTRICT
GENERAL LEASE -
BEACH REPLENISHMENT &
PROTECTIVE STRUCTURE USE
LOS ANGELES COUNTY



MJF 8/04/16

This Exhibit is solely for purposes of generally defining the lease premises, is based on unverified information provided by the Lessee or other parties and is not intended to be, nor shall it be construed as, a waiver or limitation of any State interest in the subject or any other property.

Exhibit C to August 9, 2016 Calendar Item 56

Table 1-1 Alternative 4c Project Update – Project by the Numbers

Project Setting	
Beach length (from Lechuza Point to Trancas Creek Lagoon)	~6,200 feet
Estimated volume of sand lost from Broad Beach: 1974-2009	± 600,000 cy
Current sand loss rate at Broad Beach	40,000-45,000 cy/yr
Number of lots bordering Broad Beach	121
Number of residences bordering Broad Beach	109
Number of residences located landward of existing revetment	76
Number of Lateral Access Easements (LAEs) on Broad Beach	51
Number of vertical public access ways (from street to Broad Beach)	2
Existing Temporary Emergency Rock Revetment Data	
Number of acres of beach covered by revetment	~3.02 acres
Length	4,100 feet
Width	22-38 feet
Height (average above MLLW where revetment exists)	12-15 feet
Volume of boulders used to build revetment ¹	36,000 tons
Acres of Public Trust lands under CSLC jurisdiction covered by revetment ²	1.16 acres
Acres of LAEs covered or impacted by revetment ²	0.73-1.04 acre
Estimated Project Size and Acreage	
Total area of beach and sand dunes proposed for restoration	23 acres
Total volume of sand: initial restoration work	300,000 cy
Volume of sand per interim nourishment event	up to 75,000 cy
Width of restored dry sandy post-construction beach	± 70 feet
Width of restored post-construction sand dune	± 50-130 feet
Height of restored post-construction sand dune	≤ 17 feet
Area required for staging: Zuma Beach Parking Lot	1.4-1.9 acres
Area required for sand stockpile: Zuma Beach (along 1,000 feet of beach)	5 acres
Estimated Project Timing (Beach Nourishment and Dune Construction Elements)	
Project life (after initial restoration and supplementary renourishment)	10 years
Approximate interval between major renourishment cycles	± 5 years
Project duration (Construction activities)	8 months (total)
• Revetment relocation	1-2 months
• Beach nourishment and dune construction	5 months
• Planting, fencing, signage, and irrigation placement in dune systems	1 month
Construction Staging and Sand Transport Information: Initial Nourishment Project	
Duration of hauling of inland quarry material to Broad Beach	4 months
Number of truck trips required between inland quarries and Broad Beach.	~21,500 ³
Estimated distance between quarry sand sources and Project site	~40-45 miles
Acronyms: cy=cubic yards; MLLW=Mean Lower Low Water; yr=year.	
¹ Larger (> 2-ton) boulders are located at the revetment's west end (due to increased erosion hazard).	
² Based on Mean High Tide Line (MHTL) survey conducted in January 2010.	
³ Number is based on 300,000 cy of sand being transported by trucks with a 14-cy carrying capacity.	

Exhibit D to August 9, 2016 Calendar Item 56

Local, State, and Federal Agency Approvals and Consultations Required:

The status of required Project authorizations are as follows:

Federal	<p>U.S. Army Corps of Engineers (USACE): The USACE is processing a Standard Individual Permit, and an Environmental Assessment in accordance with the National Environmental Policy Act (NEPA), for the Project, both of which have not been acted on by the USACE as of July 2016; permit approval might occur near end of 2016. As the NEPA lead agency, USACE initiates the NEPA consultation process with the U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), and other federal agencies during preparation of the NEPA document. Informal consultation has and continues to be ongoing between CSLC and USACE staff. The USACE is also currently working with the Commission, CCC, CDFW, Los Angeles Regional Water Quality Control Board (LARWQCB), NMFS, and U.S. Environmental Protection Agency to coordinate a long-term marine habitat monitoring and mitigation plan.</p>
	<p>USFWS: As of July 2016, the USACE and USFWS have commenced formal Section 7 Endangered Species Act (ESA) consultation in accordance with NEPA for terrestrial species (including Western snowy plover and/or other federally listed species). A Biological Opinion from the USFWS is expected for Western snowy plover and designated critical habitat at the east end of the Broad Beach area. Informal consultation has also occurred between CSLC and USFWS staffs.</p>
	<p>NMFS: No discretionary action required. As of July 2016, the USACE and NMFS have commenced formal Section 7 ESA and Magnuson-Stevens Fisheries Conservation and Management Act consultation in accordance with NEPA for marine species. Ongoing consultation has and continues to occur between CSLC and NMFS staff regarding marine resource impacts. NMFS is also currently working the CSLC and other agencies to coordinate a long-term marine habitat monitoring and mitigation plan.</p>
State	<p>BBGHAD: As the public agency responsible for carrying out the Project (see State CEQA Guidelines, § 15051, subd. (a)), the BBGHAD formally approved the final project description on June 29, 2014. The subsequent modification known as Alternative 4c was approved by the California Coastal Commission at its October 2015 meeting.</p>
	<p>CCC: Conditional Coastal Development Permit (CDP) approved by Commission on October 9, 2015; Applicant required to comply with permit conditions and receive permit issuance by October 9, 2017, unless an extension is authorized by the Executive Director. See Background section for additional information on the CCC.</p>
	<p>CDFW: Discretionary action undetermined. CDFW has not provided further direction on whether a Section 1602 Streambed Alteration Agreement application is required for construction activity at the mouth of Trancas Creek. Ongoing consultation has occurred between CSLC and CDFW staff regarding concerns with the Point Dume State Marine Conservation Area and marine resource impacts.</p>
	<p>California Department of Transportation (Caltrans): Encroachment Permit is required; status unknown as of July 2016.</p>
	<p>Regional Water Quality Control Board (RWQCB): 401 Water Quality Certification approval is required, and has not yet been issued as of July 2016; approval might occur near end of 2016.</p>
Local/Regional	<p>City of Malibu: A grading permit for dune construction and authorization for construction staging noise at Zuma Beach parking lot until 9:00 p.m.; status unknown as of July 2016. (Pursuant to California Coastal Act § 30601.3, the CCC is processing a single, consolidated CDP, as agreed to by the BBGHAD, City of Malibu, and CCC.)</p>
	<p>County of Los Angeles Department of Beaches and Harbors: Right of Entry permit required for use of Zuma Beach and parking lot; status unknown as of July 2016.</p>

EXHIBIT E

APPENDIX B: BROAD BEACH 2016 MONITORING IMPLEMENTATION PROGRAM

This Monitoring Implementation Program (MIP) provides a summary of each Avoidance and Minimization Measure (AMM) for the Project and specifies the monitoring implementation responsibility for each measure. The California State Lands Commission (CSLC) will implement a program for monitoring implementation of AMMs for Alternative 4c, to ensure that the AMMs are implemented as defined in the Revised Analysis of Impacts to Public Trust Resources and Values (APTR) and the Project Update report.

1.1 MONITORING IMPLEMENTATION RESPONSIBILITIES

1.1.1 Monitoring Authority

The purpose of the MIP is to ensure that measures provided in the Revised APTR and this Project Update report are implemented to minimize or avoid adverse effects. A MIP is a working guide to facilitate not only the implementation of AMMs by the Applicant, but also the monitoring, compliance and reporting activities of the CSLC, or any monitors it may designate.

The CSLC may delegate duties and responsibilities for monitoring to environmental monitors or consultants as deemed necessary. Some monitoring responsibilities will be assumed by responsible agencies within affected jurisdictions, such as the city of Malibu and the California Coastal Commission (CCC). The CSLC will ensure that persons delegated monitoring and compliance duties are qualified.

Any AMM study or plan that requires the approval of the CSLC or CSLC staff must allow at least 60 days for adequate review time. When an AMM requires that a monitoring program be developed during the design phase of the Project, the Applicant must submit the final program to the CSLC or CSLC staff for review and approval for at least 60 days before construction begins. Other agencies and jurisdictions may require additional review time. The environmental monitor assigned to each spread is responsible for ensuring that the Applicant obtains appropriate agency reviews and approvals before construction begins.

The CSLC or its designee will also ensure that any deviation from the procedures identified under the monitoring program is approved by the CSLC. The environmental monitor assigned to the construction spread shall report any deviation or correction immediately to the CSLC or its designee.

1.1.2 Enforcement Responsibility

The CSLC or its designee will be responsible for enforcing the procedures approved for monitoring through the environmental monitor assigned to each construction spread. Any assigned environmental monitor shall note problems with monitoring, notify appropriate agencies or individuals about any problems, and report the problems to the CSLC or its designee(s).

1.1.3 Funding and Implementation Responsibility

The Applicant is responsible for funding and successfully implementing all AMMs in the MIP, and assuring that these requirements are met by all construction contractors and field personnel. Standards for successful avoidance or minimization of impacts are implicit in many AMMs that include requirements such as obtaining permits or avoiding a specific impact entirely. Other AMMs include detailed success criteria. Additional impact avoidance and minimization success thresholds will be established by applicable agencies with jurisdiction through the permit process and through the review and approval of specific plans for the implementation of AMMs.

1.2 GENERAL MONITORING PROCEDURES

1.2.1 Environmental Monitors

Several of the monitoring procedures will be conducted during the construction phase of the Project. The CSLC and the environmental monitor(s) are responsible for integrating the avoidance and minimization monitoring procedures into the construction process in coordination with the Applicant. To oversee the monitoring procedures and to ensure success, the environmental monitor assigned to each construction spread must be on site during construction activities that have the potential to create a major impact or an impact for which mitigation is required. The environmental monitor is responsible for ensuring that all procedures specified in the monitoring program are followed.

1.2.2 General Reporting Procedures

Individuals performing site visits and specified monitoring procedures will be reported to the environmental monitor assigned to the relevant construction spread. The individual conducting the visit or procedure will submit a monitoring record form to the environmental monitor so details of the visit are recorded and progress is tracked. The environmental monitor will develop and maintain a checklist to track all procedures required for each mitigation measure, and to ensure that the timing specified for the procedures is adhered to. The environmental monitor will note any problems that may occur and take appropriate actions as directed by CSLC to rectify the problems.

1.2.3 Public Access to Records

The public will be allowed access to records and reports used to track the monitoring program. Monitoring records and reports will be made available for public inspection by the CSLC or its designee on request.

1.3 MONITORING TABLE

For each AMM, the Monitoring Table identifies 1) the full text of the AMM, 2) the location where the impact occurs, 3) the monitoring and reporting action to be performed by the monitoring agency, 4) how effectiveness of the AMM will be determined, 5) the responsible agency¹ for monitoring the AMM, and 6) the approximate timing of when the agency implementing the AMM should provide plans.

¹ The responsible agency column also identifies AMMs that are satisfied by conditions covered in the California Coastal Commission Coastal Development Permit (CCC CDP).

Table B-1. 2016 Monitoring Table

Avoidance and Minimization Measure (AMM)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Recreation and Public Access					
<p>AMM REC-1: Public Access during Construction and Renourishment. At least 2 weeks prior to commencing construction and renourishment operations, the construction contractor shall post signs notifying the public of the scheduled dates of nourishment operations at the public access points and at other highly visible locations along the beach. Construction contractors shall be responsible for maintaining the beach in acceptable condition for public use outside of construction activities (e.g., weekends) to the maximum extent feasible. Lateral access along the west end of Zuma Beach and Broad Beach shall be restored as soon as possible to permit continued, safe public passage. Construction monitors shall be employed to manage public access during construction activities.</p>	Broad Beach public trust land	Maintenance of beach access by construction contractor	Protect public access during construction and renourishment	CSLC; CCC CDP Special Condition 15A.	During initial construction and renourishment operations
<p>AMM REC-2: Public Access during Backpassing. At least 2 weeks prior to commencing backpassing operations, the construction contractor shall post signs notifying the public of the scheduled dates of backpassing at the public access points and at other highly visible locations along the beach. The construction contractors shall be responsible for maintaining lateral beach access to the maximum extent feasible to permit safe public passage (e.g., designated public access points, flagman, and construction vehicle management).</p>	Broad Beach public trust land	Maintenance of beach access by construction contractor	Protect public access during backpassing	CSLC; CCC CDP Special Condition 15A.	During annual backpassing operations
<p>AMM REC-3: Beach Profile Reporting. The Applicant shall submit annual monitoring reports prepared by an approved third party monitor to CSLC staff. Monitoring reports shall provide beach profile information obtained during that period, consistent with monitoring procedures outlined in Section 2.2.9, <i>Long-Term Beach Profile Monitoring and Beach Measurements</i>, of California State Lands Commission's <i>Analysis of Public Trust Resources and Values</i>. In addition to the spring and fall full beach profile measurements, a third full beach profile measurement shall be taken immediately after any backpassing event. Monitoring reports shall identify action items for subsequent periods, including but not limited to the initiation of backpassing or renourishment.</p>	Broad Beach public trust land and intertidal waters	Submittal of monitoring reports by Applicant	Ensure backpassing or renourishment events are performed when necessary	CSLC; CCC CDP Special Condition 4C(6).	Quarterly after completion of initial construction, and additionally after backpassing events

Table B-1. 2016 Monitoring Table

Avoidance and Minimization Measure (AMM)	Location	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<p>AMM REC-4a: Requirement of Additional Nourishment. Additional nourishment events beyond those proposed by the Applicant may be required within the 10-year Project lifetime or the public benefits associated with the Project may be lost.</p>	<p>Broad Beach public trust land and private land</p>	<p>Review by CSLC staff of beach profile reporting</p>	<p>Ensure sustained renourishment of public beach/dunes</p>	<p>CSLC; CCC CDP Special Condition 4B.</p>	<p>After re-nourishment</p>
<p>Marine Biological Resources</p>					
<p>AMM MB-2b: Multi-Agency Collaboration for Sensitive Marine Habitat Impacts. Prior to commencement of construction activities, the Applicant shall work with jurisdictional marine habitat protection agencies, including CCC, CDFW, NMFS, USACE, and CSLC for review and endorsement of all marine habitat baseline surveys, impact analyses, and appropriate monitoring and any compensation for impacts to sensitive marine habitats and species. Prior to commencement of construction activities, the Applicant shall provide to CSLC staff a Final Marine Habitat Monitoring and Mitigation Plan approved by the CCC, and to the extent feasible, the USACE. The mitigation ratio for impacts upon subtidal and intertidal rocky habitat shall be mitigated at a minimum of 4:1. Adverse impacts upon eelgrass shall be mitigated according to the California Eelgrass Mitigation Policy. Upon detection of adverse impacts on other sensitive habitat types pursuant to the CCC's Final Marine Habitat and Monitoring Plan, the Applicant shall develop a habitat specific mitigation plan for each impacted habitat that will provide the overall framework to guide the mitigation work, for review and approval by CSLC.</p>	<p>Broad Beach public trust land and intertidal waters</p>	<p>1) Applicant to provide CCC approved Final Marine Habitat Monitoring and Mitigation Plan; and 2) applicant to provide CCC approved specific habitat mitigation plans, which may require a lease amendment prior to CSLC approval.</p>	<p>1) CSLC approval of and Project conformance with Final Marine Habitat Monitoring and Mitigation Plan and 2) conformance with specific habitat mitigation plans</p>	<p>CSLC; CCC CDP Special Condition 6.</p>	<p>1) Prior to construction; 2) When specific habitat mitigation plans are required pursuant to CCC's CDP and Final Marine Habitat Monitoring/ Mitigation Plan</p>
<p>AMM MB-3: Monitoring for Grunion. If possible, construction activities shall be conducted outside the spawning season for grunion (March through August). If construction cannot be avoided during this period, pre-construction biological surveys for spawning grunion shall be conducted by a certified biologist. If spawning is observed, construction will halt in that area, and the spawning area plus a 250-foot buffer to each side of the spawning area will be protected from Project activities until the next predicted run in which no grunion are observed.</p>	<p>Broad Beach public trust land and intertidal waters</p>	<p>Monitoring for sensitive species by certified biologist</p>	<p>Minimize disturbance of sensitive species and habitat</p>	<p>CSLC; CCC CDP Special Condition 7C.</p>	<p>Prior to construction</p>

Table B-1. 2016 Monitoring Table

Avoidance and Minimization Measure (AMM)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<p>AMM MB-5a: Backpassing Management Plan. The Applicant shall retain a qualified biologist to prepare an initial backpassing management plan, with input from project engineers, to guide backpassing over the life of the project. This plan shall be designed to protect undisturbed beach habitat areas while also achieving the Project objectives for ongoing beach nourishment. This plan shall be prepared and submitted for review and approval to the California State Lands Commission (CSLC) staff, California Department of Fish and Wildlife (CDFW), and the California Coastal Commission (CCC) prior to commencement of Project construction activities. The plan shall have the following goals and standards:</p> <ul style="list-style-type: none"> • Protection of sandy beach habitat during backpassing events. • Minimizing the aerial extent of beach disturbance (i.e., areas of excavation or fill) while maximizing sand availability for backpassing consistent with this goal and maintaining an acceptable beach profile and proportionate beach width. • Protection of contiguous areas of macro-invertebrate habitat, particularly within the lower, mid and upper intertidal zones. • Protection and retention of areas of beach wrack • Prior to backpassing, relocation of all beach wrack from areas proposed for excavation or fill to areas that will remain undisturbed using hand crews or light equipment only. • Retention of areas of undisturbed connectivity between portions of the dune habitat and the intertidal zone. • Avoidance of backpassing in spring and early summer to avoid periods of high macro-invertebrate productivity. • Consistent with approved nourishment plans, sand transported from backpassing will be placed high on the beach profile to minimize loss to coastal processes and impacts to rocky intertidal habitat • Backpassing vehicle corridors shall be clearly defined and limited to minimize beach disturbance 	<p>Broad Beach public trust land and private land</p>	<p>1) Plan review and approval by regulating agencies 2) Preparation of a Backpassing Management Plan by a qualified biologist</p>	<p>Minimize disturbance of sensitive species and habitat</p>	<p>CSLC, CDFW; CCC CDP Special Condition 4A.</p>	<p>Prior to construction</p>

Table B-1. 2016 Monitoring Table

Avoidance and Minimization Measure (AMM)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<p>AMM MB-5c: Beach Habitat Management Plan. Prior to commencement of construction activities, the Applicant shall prepare and submit to CSLC staff a Beach Habitat Management Plan (BHMP). The BHMP will set forth measures to minimize the impacts of backpassing and maintain biological productivity of intertidal and high intertidal habitats, including but not limited to prohibition of grooming, creation and maintenance of areas of beach wrack and beach strand habitat on areas of the berm outside of backpassing borrow and deposition zones.</p>	<p>Broad Beach public trust land and intertidal waters</p>	<p>Plan review and approval by regulating agencies</p>	<p>Minimize disturbance to sensitive species and habitats</p>	<p>CSLC; CCC CDP Special Conditions 4 & 4A.</p>	<p>Prior to construction</p>
<p>Terrestrial Biological Resources</p>					
<p>AMM TBIO-1a. Implementation of a Comprehensive Dune Restoration Plan. In order of off-set past impacts to foredune habitats from installation of emergency sand bag and rock revetments, the Applicant shall prepare and implement a Comprehensive Dune Restoration Plan (Plan) for restoration of a minimum 3.2 acres of dune habitat at a 3:1 ratio. The Plan shall manage and implement the creation of the proposed new coastal dune system (as represented in Figure 1-2 of Alternative 4c). The Plan shall include, but not be limited to, the following measures:</p> <ul style="list-style-type: none"> • Conform to any conditions of approval pursuant to the California Coastal Commission’s (CCC) Coastal Development Permit for mitigation of ESHA related impacts. • If applicable, conform to U.S. Fish and Wildlife Service (USFWS) Biological Opinion requirements for protection of federal special status species and western snowy plover critical habitat. • In consultation with the California Department of Fish and Wildlife (CDFW) and USFWS, to the extent feasible, the Plan shall be designed and managed to support the state and federal special status species identified as impacted through installation of the emergency sand bag and rock revetments. • The Plan shall include a landscape plan that details specific planting plans, with native vegetation specific to foredune (e.g., red sand-verbena, pink sand-verbena, beach bur, and beach morning glory), dune crest, and back dune habitats. 	<p>Broad Beach public trust land and private land</p>	<p>1) Plan review and approval by regulating agencies 2) Site inspections and monitoring reports by a qualified biologist 3) Applicant to provide Coastal Commission approved Final Dune Habitat Restoration and Enhancement Plan</p>	<p>Mitigate long-term adverse impacts to the functional value of the dune system due to instillation of the emergency revetment. CSLC approval of and Project conformance with a Final Comprehensive Dune Restoration Plan.</p>	<p>CSLC, CCC, CDFW, USFWS; CCC CDP Special Condition 5.</p>	<p>1) Final Comprehensive Dune Restoration Plan required prior to construction 2) During construction and ongoing throughout Project</p>

Table B-1. 2016 Monitoring Table

Avoidance and Minimization Measure (AMM)	Location	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<ul style="list-style-type: none"> • The Plan shall require and outline specific measures for invasive species removal in on public and private lands in the degraded dune system (e.g., ice plant and pampas grass). It shall also outline specific measures regarding native species salvaging and re-vegetation, highlighting details regarding appropriate planting densities and planting methods. • The Plan shall outline that the Applicant is responsible for long-term monitoring and maintenance activities, including monitoring and survey methods, as well as detailed monitoring and maintenance schedules. • The Plan shall address the potential for dune habitat disturbance associated with vertical public and private access by limiting the number and frequency of walkways across the dune system. Access into the dune system shall be controlled through use of bollards, ropes, fencing, and signage. The Plan shall also address access for maintenance activities in and adjacent to the restored dune system. • The Plan shall establish a shared walkway across the landward edge of the restored dune system. Access ways across the dunes to the beach shall have a maximum of one shared private vertical access path (natural sand path only) for every two lots with less than 60-foot lot frontage width, and one non-shared path for every lot with 60 feet or more of lot frontage width. • The Plan shall detail specific adaptive management strategies, such as additional native vegetation installation or restoration and invasive species removal should monitoring find that restoration goals are not being met. 					
<p>AMM TBIO-2a. California State Lands Commission (CSLC)-Approved Biologist and Biological Monitors for Construction Activities. The Applicant shall retain a Project biologist and Project monitors approved by the CSLC staff, California Department of Fish and Wildlife (CDFW), U.S. Fish and Wildlife Service (USFWS), and California Coastal Commission (CCC) to supervise sand deposition and all other construction related activities. The biological monitors</p>	<p>Broad Beach public trust lands and intertidal waters, Zuma Beach</p>	<p>1) Preparation and submittal of Biological Monitoring and Reporting Plan 2) Plan review and approval by</p>	<p>Minimize disturbance to sensitive species and habitats</p>	<p>CSLC, CDFW, USFWS, and CCC CDP Special Condition 7.</p>	<p>1) Prior to construction 3) During construction</p>

Table B-1. 2016 Monitoring Table

Avoidance and Minimization Measure (AMM)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<p>shall be present to ensure that damage to any sensitive habitat or sensitive species is minimized and that construction crews strictly comply with all AMMs. Prior to commencement of construction and staging activities, the Applicant shall provide to CSLC staff a Biological Monitoring and Reporting Plan demonstrating conformance with the following requirements:</p> <ul style="list-style-type: none"> • If applicable, conform with USFWS Biological Opinion requirements pertaining to construction activities and access for protection of federal special status species and western snowy plover critical habitat. • If applicable, conform with CDFW Streambed Alteration Agreement conditions of approval for construction access across the mouth of Trancas Creek and all other construction activities. • Conform with all project construction conditions of approval pursuant to the CCC's Coastal Development Permit. • Prior to the commencement of construction-related activities, conduct protocol-level surveys for native plant species, with a special focus on sensitive species, in potential ESHA areas, beyond that which was surveyed by WRA, Inc. (2011, 2013). • Prior to the commencement of construction-related activities, conduct protocol-level surveys for globose dune beetle and western snowy plover. • Where feasible, prior to and during construction, collect and relocate sensitive plant, invertebrate, and reptile species that are likely to be impacted by the proposed nourishment and dune creation activities. • Conduct an additional protocol level survey for western snowy plover and California least tern prior to any construction during the breeding season between March and September. Should breeding individuals be identified, all work shall be halted and the Applicant shall immediately contact the USFWS and CDFW. Nourishment and dune construction activities shall resume only with approval from these agencies and the CCC and with 	<p>Parking Lot 12</p>	<p>regulating agencies 3) Presence of biological monitors during construction activities</p>			

Table B-1. 2016 Monitoring Table

Avoidance and Minimization Measure (AMM)	Location	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<p>implementation of mitigation measures provided by these agencies if applicable.</p> <ul style="list-style-type: none"> • Be present during all construction activities that may potentially cross ESHA as defined by in the Malibu Local Coastal Program, including the degraded dunes and Trancas Lagoon. • Ensure the implementation of all measures associated with AMM TBIO-1a, including the complete implementation of the Comprehensive Dune Restoration Plan, with associated maintenance and monitoring activities. The biological monitors shall record observations and the Project biologist shall submit a report prior to construction activities and if sensitive species are observed, regarding the implementation of and compliance with all construction-related AMMs. Additionally, this report shall include any relevant biological observations, including a list of species encountered at Broad Beach. These reports shall eventually be incorporated into a mid-Project Sensitive Biological Resources Report (see AMM TBIO-3c). 					
<p>AMM TBIO-2b. Sensitive Resources Impact Avoidance. In consultation with the California Department of Fish and Wildlife (CDFW), U.S. Fish and Wildlife Service (USFWS), and California Coastal Commission (CCC), the Project biologist and the Project engineer shall clearly designate all ESHAs, including areas within 100 feet of the Trancas Lagoon as “sensitive resource zones” on the Project maps and construction plans. The Applicant shall provide a Sensitive Resource Impact Avoidance Map to CSLC staff for review and approval prior to commencement of Project construction and staging activities. Construction equipment and operations shall be prohibited in these zones to avoid impacts to special-status biological resources. During construction, heavy equipment shall be operated in accordance with standard best management practices as well as the following measures:</p> <ul style="list-style-type: none"> • Vehicles and construction equipment shall be confined to a pre-defined equipment access path no greater than the minimum width necessary to complete the necessary construction activities. 	<p>Broad Beach public trust lands and intertidal waters, Zuma Beach Parking Lot 12</p>	<p>1) Designation of sensitive resource zones by qualified biologist and Project engineer 2) Prohibition or rescheduling of construction activities within sensitive resource zones</p>	<p>Minimize disturbance to sensitive species and habitats</p>	<p>CSLC in coordination with CDFW, USFWS, USACE; CCC CDP Special Conditions 4A, 7, 9 &10.</p>	<p>1) Prior to construction 2) During construction</p>

Table B-1. 2016 Monitoring Table

Avoidance and Minimization Measure (AMM)	Location	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<ul style="list-style-type: none"> The location of the sand stockpile shall be moved east toward Zuma Beach to an extent that would allow for passage of trucks and construction equipment without encroachment upon the delineated 100-foot ESHA buffer. If, given the proposed location of stockpiles and access points, trucks and construction equipment are unable to access the sand from the staging area without encroaching upon the 100-foot ESHA buffer, an alternate access point shall be selected along the eastern portion of Parking Lot 12. 					
<p>AMM TBIO-2c. Protect Stockpiles of Excavated Material. Inland sand shall not be stockpiled within sensitive resource zones, or within areas that may adversely affect Western snowy plover critical habitat as required by the U.S. Fish and Wildlife Service. Beach sand stockpiles should be protected to the extent feasible by synthetic impervious covers during short-term overnight and weekend storage to prevent erosion by wind and/or rainfall. This notation shall be included on Project construction plans.</p>	Zuma Beach sand stockpile area	Sand piles within designated areas only; protection and cover of sand stockpiles	Minimize disturbance to sensitive species and habitats	CSLC; CCC CDP Special Conditions 9 & 10.	During construction
<p>AMM TBIO-2d. Storage of Materials or Heavy Equipment Prohibited Outside of Staging Area. Overnight storage of materials other than sand stockpiling, or heavy equipment on the beach or outside of the construction staging area at Zuma Beach Parking Lot 12 shall be strictly prohibited. This notation shall be included on Project construction plans.</p>	Zuma Beach Parking Lot 12 and sand stockpile area	Overnight storage of materials and equipment in staging area only	Minimize disturbance to sensitive species and habitats	CSLC; CCC CDP Special Condition 10.	During construction
<p>AMM TBIO-3a. Biologist and Biological Monitors for Backpassing Activities. The Applicant shall retain a Project biologist and Project monitors approved by the California State Lands Commission (CSLC) staff, California Department of Fish and Wildlife (CDFW), U.S. Fish and Wildlife Service (USFWS), and California Coastal Commission to supervise backpassing and all other construction related activities. The Project monitor shall ensure that damage to any sensitive habitat or sensitive species within or adjacent to construction zones is minimized. Prior to commencement of construction and staging activities, the Applicant shall provide to</p>	Broad Beach public trust lands and private lands	1) Preparation and submittal of Biological Monitoring and Reporting Plan and its approval by CSLC and regulating agencies 2) Monitoring of construction and	Minimize disturbance to sensitive species and habitats	CSLC in coordination with CDFW, USFWS, CCC CDP Special Condition 7.	1) Prior to construction 2) During construction and backpassing

Table B-1. 2016 Monitoring Table

Avoidance and Minimization Measure (AMM)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<p>CSLC staff a Biological Monitoring and Reporting Plan demonstrating how the Project monitor will conform with the following requirements:</p> <ul style="list-style-type: none"> • If applicable, conform with USFWS Biological Opinion requirements pertaining to construction and backpassing activities for protection of federal special status species and western snowy plover critical habitat. • If applicable, conform with CDFW Streambed Alteration Agreement conditions of approval for construction access across the mouth of Trancas Creek and all other construction activities. • Conform with all project construction and backpassing conditions of approval pursuant to the CCC's Coastal Development Permit. • Conduct preconstruction trainings with the construction crew leaders so they can readily identify sensitive plant and wildlife species. • Conduct preconstruction surveys of the sandy beach and dune habitats as well as in the vicinity of Trancas Lagoon. • Flag the toe of the dune on the seaward side of all foredune vegetation. • Conduct a preconstruction meeting with all construction crew leaders and construction crewmembers to discuss the implementation of appropriate mitigation measures. 		backpassing activities by a qualified biologist and Project monitors			
<p>AMM TBIO-3b. Avoidance of Sensitive Resource Zones and Vegetation. Following the completion of pre-construction biological surveys, in consultation with the California Department of Fish and Wildlife (CDFW), U.S. Fish and Wildlife Service (USFWS), and California Coastal Commission, the Project biologist shall clearly designate "sensitive resource zones" on the Project maps and construction plans. These zones would include any ESHAs or otherwise sensitive biological resources. Sensitive resource zones are defined as areas where construction would be limited, depending on the particular environmental conditions and construction requirements. No native vegetation shall be impacted or removed during backpassing-related activities.</p>	Broad Beach public trust lands and private lands	Preparation and submittal of a Sensitive Resources Impact Avoidance Map for review and approval by CSLC	Comprehensive identification of sensitive resources on Map; Map approval by CSLC	CSLC in coordination with CDFW, USFWS, CCC CDP Special Conditions 4A, 7, 9 & 10.	Prior to commencement of initial project construction, and updated as needed prior to all subsequent project construction activities for

Table B-1. 2016 Monitoring Table

Avoidance and Minimization Measure (AMM)	Location	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<p>Wetland areas shall be prohibited from use for disposal or temporary placement of excess sand. All equipment used in or near Trancas Lagoon shall be clean and free of leaks and/or grease. Emergency provisions shall be in place prior to the onset of construction and at all times during construction to deal with accidental spills. The Applicant shall provide a Sensitive Resource Impact Avoidance Map to the California State Lands Commission (CSLC) staff for review and approval prior to commencement of Project construction and staging activities.</p>					<p>new sensitive resources</p>
<p>AMM TBIO-3c. Sensitive Biological Resources Report. Starting one year from the date that Project construction commences at Broad Beach, the Applicant shall provide an annual Sensitive Biological Resources Report to CSLC. The report shall include the results of past protocol-level surveys, as well as biological surveys conducted prior to each backpassing event. The report shall assess the presence of sensitive species and habitat and analyze the trends in occurrence of sensitive species or habitat. The document shall also include any biologically relevant information gathered during construction monitoring activities. This report shall be used to direct the timing of future backpassing and renourishment events in order to minimize impacts to biological resources to the maximum extent feasible.</p>	<p>Broad Beach public trust lands and private lands</p>	<p>Preparation and submittal of Sensitive Biological Resources Report and its review and approval by CSLC; provide annual biological monitoring reports required by Coastal Commission CDP.</p>	<p>Determine timing of backpassing and renourishment events and minimize disturbance to sensitive species and habitats</p>	<p>CSLC; CCC CDP Special Conditions 4C(6), 5B(4), 6D(6) & 7.</p>	<p>Required annually 1 year from the date that Project construction commences at Broad Beach.</p>
<p>AMM TBIO-4a. Emergency Action Plan Measures Regarding Protection of Biological Resources. Before commencement of project construction and staging activities, the Applicant shall submit to the California State Lands Commission (CSLC) staff an Emergency Action Plan (EAP) to address protection of sensitive biological resources that would potentially be disturbed during a hazardous spill or subsequent cleanup activities. At a minimum, the EAP shall include:</p> <ul style="list-style-type: none"> • Industry-standard best management practices to avoid potential spills. 	<p>Broad Beach public trust lands and private lands</p>	<p>Preparation and Submittal of EAP and its review and approval by CSLC staff</p>	<p>Protect sensitive species and habitats</p>	<p>CSLC; CCC CDP Special Condition 7D.</p>	<p>Prior to construction</p>

Table B-1. 2016 Monitoring Table

Avoidance and Minimization Measure (AMM)	Location	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<ul style="list-style-type: none"> • Specific measures to avoid impacts on state and federal special status species and western snowy plover critical habitat, and ESHAs, during response as well as cleanup operations. • Identification, where feasible, of low-impact, site-specific, and species-specific remediation techniques. • Identification of standards of a spill response personnel-training program. • An outline of a restoration plan, including preemptive identification of access and staging points and procedures for timely reestablishment of functional habitat values. • A contact list, coordinated with related projects, of key points of contact and emergency response agencies to be retained at all job sites during construction activities. 					
<p>AMM TBIO-4b. Maintain Equipment and Adhere to Work Plan. All equipment used on-site shall be properly maintained such that no leaks of oil, fuel, or residues will occur. Provisions shall be in place to remediate any accidental spills, in both the terrestrial and marine environments. All equipment shall only be stored in the authorized equipment staging areas. The Applicant shall submit a work plan to the California State Lands Commission (CSLC) staff, California Coastal Commission (CCC), Los Angeles Regional Water Quality Control Board (LARWQCB), and LA County Department of Beaches and Harbors. The Plan must demonstrate conformance with LARWQCB permit requirements and any other agency requirements, and is subject to review and approval by the CSLC prior to the commencement of construction and staging activities. The Applicant shall also demonstrate to the approving agencies how construction personnel will be trained on the requirements of the work plan. The work plan shall include a list of all heavy equipment and shall require all equipment to be stored and fueled in the Zuma Beach Parking Lot 12, which shall be conspicuously demarcated. Heavy equipment and construction activities shall be restricted to the defined construction areas, as demarcated by the Project engineer. Additionally, vehicles and personnel shall only use existing access roads to the maximum</p>	<p>Broad Beach public trust lands and private lands, Zuma Beach Parking Lot 12, access roads near Broad Beach</p>	<p>1) Submittal and approval of work plan by regulating agencies 2) Adherence to work plan</p>	<p>Minimize disturbance to sensitive species and habitats</p>	<p>CSLC in coordination with CDFW, CCC, USFWS, LARWQCB; CCC CDP Special Condition 10.</p>	<p>1) Prior to construction 2) During construction</p>

Table B-1. 2016 Monitoring Table

Avoidance and Minimization Measure (AMM)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
degree feasible. The work plan shall be retained on the project site at all times during construction and staging activities.					
<p>AMM TBIO-5a. Maintain the Hydrology of Trancas Lagoon. Prior to commencement of construction and staging activities at Broad Beach, the Applicant shall prepare a Trancas Lagoon Beach Berm Management Plan (TLBBMP) in coordination with the Coastal Commission and any other jurisdictional agencies with conditions or regulations to mitigate adverse impacts on Trancas Lagoon tidal exchange and fish passage, for review and approval by CSLC prior to commencement of construction and staging activities. The TLBBMP shall include monthly surveys and an annual monitoring report pursuant to Special Condition 4.C.(4) and (6) of the Coastal Commission permit, and include adaptive management measures to offset adverse impacts on tidal exchange and fish passage if impacts are determined to be attributable to beach nourishment at Broad Beach through surveys, monitoring reports, and/or other substantial evidence.</p>	Broad Beach public trust lands, Trancas Lagoon	1) Provide and attain CSLC approval of TLBBMP; 2) conduct monthly visual surveys and provide annual monitoring report pursuant to Special Condition 4.C.(4) and (6) and Coastal Commission permit; 3) Coordinate with SMMRCD, Coastal Commission, and other jurisdictional agencies to develop beach nourishment adaptive management measures to offset adverse impacts.	1) Beach nourishment does not adversely affect implementation and attainment of Trancas Lagoon Restoration Project goals for tidal exchange and fish passage. 2) Restore sensitive habitats near or in Trancas Lagoon	CSLC, CCC, and other jurisdiction agencies with conditions or regulations to mitigate adverse impacts on Trancas Lagoon tidal exchange and fish passage; CCC CDP Special Conditions 4C(4) & 4C(6).	1) LTBBMP required prior to construction; 2) Monthly surveys and annual report required during construction and as required with Special Condition 4.C.(4) and (6) of Coastal Commission permit. 3) Development of beach nourishment adaptive management measures if adverse impacts determined after initial beach nourishment.
<p>AMM TBIO-7. Restrict Access Across the Newly Restored Dune System. Through Applicant consultation with the California</p>	Broad Beach	1) Preparation and submittal of	Protect dune habitat	CSLC in coordination	1) Prior to construction

Table B-1. 2016 Monitoring Table

Avoidance and Minimization Measure (AMM)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<p>Department of Fish and Wildlife (CDFW), U.S. Fish and Wildlife Service (USFWS), the California Coastal Commission (CCC), and California State Lands Commission (CSLC), access to and across the restored dune system shall be restricted to approved vertical access ways designated with a low-key rope and bollard fence as a means of protecting dune habitat and limiting the adverse impacts associated with increased private and public access to the restored dune system. Such a rope and bollard fence shall be placed along all approved vertical access ways in order to restrict all access to the dunes and accomplish the goal of reducing impacts to the proposed dune habitat. The Applicant shall provide a Dune Restoration Access Plan, approved by the specified agencies to CSLC staff prior to commencement of construction and staging activities.</p>	<p>public trust lands and private lands</p>	<p>Dune Restoration Access Plan 2) Plan review and approval by regulating agencies 3) Restriction of access across restored dune</p>		<p>with CDFW, USFWS, and CCC CDP Special Condition 5A(5).</p>	<p>2) Prior to construction 3) During Project-life</p>
Marine Water Quality					
<p>AMM MWQ-1a: Prepare and Implement Turbidity Monitoring Plan. A Turbidity Monitoring Plan shall be implemented during Project construction and nourishment/renourishment activities to monitor any effects to water clarity in offshore of and down coast from Broad Beach. The Plan shall be submitted to the California State Lands Commission (CSLC) staff for approval, in consultation with the Los Angeles Regional Water Quality Control Board and CA Coastal Commission, at least 2 weeks before Project mobilization and shall include, at a minimum, the following elements:</p> <ul style="list-style-type: none"> • Details on how the Applicant will continually evaluate construction-related turbidity relative to natural (background) turbidity occurring in unaffected areas during Project construction and nourishment/renourishment activities; • Requirements for a qualified observer to record turbidity from a suitable vantage point during each day of construction; and • Specific adaptive management activities and/or corrective action measures should include monitoring to indicate unacceptable turbidity levels above ambient conditions. 	<p>Broad Beach public trust lands and down coast beaches</p>	<p>1) Preparation and submittal of Turbidity Monitoring Plan 2) Recording of turbidity during dredging and construction by a qualified observer</p>	<p>Limit turbidity impacts and disturbance of sediment</p>	<p>CSLC, LARWQCB; CCC CDP Special Condition 7E.</p>	<p>Prior to construction</p>
<p>AMM MWQ-1b. Prepare Pollution Prevention Plan and Implement Best Management Practices (BMPs). The Applicant shall prepare a</p>	<p>Broad Beach</p>	<p>1) Preparation and submittal of</p>	<p>Limit accidental</p>	<p>CSLC; LARWQCB;</p>	<p>1) Prior to construction</p>

Table B-1. 2016 Monitoring Table

Avoidance and Minimization Measure (AMM)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<p>Pollution Prevention Plan, or Stormwater Pollution Prevention Plan (SWPPP), in accordance with Project plans and specifications and applicable regulations (e.g., State Construction Stormwater National Pollutant Discharge Elimination System permit requirements). The Plan shall be submitted to California State Lands Commission (CSLC) staff for review and approval at least 2 weeks prior to commencement of onsite Project activities. The Plan shall include a list of all heavy equipment and shall require all equipment to be stored and fueled in the Zuma Beach Parking Lot 12, which shall be conspicuously demarcated. The Project contractor shall ensure that the BMPs described in the Plan are implemented. Documentation that the BMPs are being implemented shall be maintained on site and shall be readily accessible for review by CSLC staff and any other authorities having jurisdiction. BMPs shall include, but not be limited to:</p> <ul style="list-style-type: none"> • Heavy equipment and construction activities shall be restricted to the defined construction areas, as demarcated by the Project engineer. Additionally, vehicles and personnel shall only use existing access roads to the maximum degree feasible. • All equipment used onsite shall be properly maintained such that no leaks of oil, fuel, or residues will occur. No vehicle fueling shall occur on the beach or dune areas. Provisions shall be in place to remediate any accidental spills, in both the terrestrial and marine environments. • Waste, such as removed materials, chemicals, litter, and sanitary waste at the Project site, shall be properly disposed of at a permitted off-site facility. 	<p>public trust lands, Zuma Beach Parking Lot</p>	<p>Pollution Prevention Plan or SWPPP 2) Implementation of BMPs by contractor</p>	<p>release of contaminants</p>	<p>CCC CDP Special Condition 10.</p>	<p>2) During construction</p>
<p>AMM MWQ-2: Construction Limitations. In the event that the Trancas Lagoon mouth is breached during the initial construction period or at any time during backpassing operations, the Broad Beach Geologic Hazard Abatement District (BBGHAD) will halt construction during high flow episodes where the body of construction equipment would come in contact with flow into or out of the Lagoon. Construction activities would be halted until the creek is</p>	<p>Mouth of Trancas Lagoon</p>	<p>Potential halt to construction</p>	<p>Reduce water quality impacts to Trancas Lagoon</p>	<p>CSLC</p>	<p>During construction and backpassing events</p>

Table B-1. 2016 Monitoring Table

Avoidance and Minimization Measure (AMM)	Location	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
no longer in a breached state and there is at least 30 feet of dry sand between the lagoon mouth and Pacific Ocean, and California State Lands Commission (CSLC) staff authorizes recommencement of construction activity.					
Scenic Resources					
AMM SR-2a: Beach Lighting Restriction. The lighting of the beach area for construction purposes is prohibited pursuant to Special Condition 9.b. of the Coastal Commission permit.	Broad Beach public trust lands	Beach construction activities limited to daylight hours	Conformance with Special Condition 9.b. of the Coastal Commission permit	CCC CDP Special Condition 9b.	During construction
AMM SR-2b: Nightly Equipment Removal. Mobile heavy equipment placed on the beach shall be returned to the staging area at the end of each workday, both for public safety and for aesthetic considerations.	Broad Beach public trust lands	Daily equipment removal by contractor	Reduce the amount of time equipment is visible	CSLC; CCC CDP Special Conditions 9b & 10a.	During construction
Air Quality					
AMM AQ-1c: Nitrogen Oxides (NO_x), Volatile Organic Compounds (VOCs), and Particulate Matter (PM) Control. The Applicant shall implement a NO _x reduction program including the following, or equivalent, measures: <ul style="list-style-type: none"> All off-road construction equipment shall be tuned and maintained according to manufacturers' specifications. Any temporary electric power shall be obtained from the electrical grid, rather than portable diesel or gasoline generators. All off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. 	Broad Beach public trust lands	Implementation of NO _x , VOC, and PM reduction program by contractor	Reduce NO _x , VOC, and PM emissions	CSLC and SCAQMD	During construction

Table B-1. 2016 Monitoring Table

Avoidance and Minimization Measure (AMM)	Location	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<ul style="list-style-type: none"> A copy of the certified tier specification, best available control technology documentation, or the CARB or SCAQMD operating permit for each piece of equipment shall be provided when each piece of equipment is mobilized. Use of 2010 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export) and if 2010 model year or newer diesel trucks cannot be obtained, use trucks that meet EPA 2007 model year NOx emissions requirements. 					
<p>AMM AQ-1d: Fugitive Dust Emission Control. The Applicant shall submit and implement a Fugitive Dust Control Plan that includes SCAQMD controls for fugitive dust, according to Rule 403. Fugitive dust control measures in the plan shall include the following:</p> <ul style="list-style-type: none"> Limit on-site vehicle speeds roads to 15 miles per hour (mph) with radar enforcement (57% reduction) and posting of speed limits. All trucks hauling sand and other loose materials are to be tarped with a fabric cover and maintain a freeboard height of 12 inches (91% reduction). Water storage piles by hand or apply cover when wind events are declared, according to SCAQMD Rule 403 when instantaneous wind speeds exceed 25 mph (90% reduction). Appoint a construction relations officer to act as a community liaison concerning on-site construction issues, such as dust generation. 	Broad Beach public trust lands	Preparation, review and approval of a Fugitive Dust Control Plan and its implementation by contractor	Reduce fugitive dust generation	CSLC	Prior to and during construction

Table B-1. 2016 Monitoring Table

Avoidance and Minimization Measure (AMM)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Traffic and Parking					
<p>AMM TR-1. Traffic Management Plan. The Project Applicant shall provide proof that a traffic management plan has been submitted for review and approval by the California State Lands Commission, California Department of Transportation (Caltrans), and the Los Angeles County Department of Beaches and Harbors. The plan shall include the following elements, considering the initial nourishment, the renourishment event, and backpassing events:</p> <ul style="list-style-type: none"> • Notification Posts. The Applicant shall post signage to notify beach users of construction areas and the presence and use of construction equipment. • Notification of Agencies. The plan shall identify concerned agencies and include procedures for notification of and coordination with such agencies. • Safety Cordoning. The Applicant shall cordon off construction areas where heavy equipment is being used, as necessary, to ensure safety of beach users. • Roadway Signage. The Applicant shall post adequate signage to notify motorists of the closure of Parking Lot 12, heavy truck traffic along constrained road segments (e.g., rural road intersections) and changes to the traffic configuration in the Broad Beach vicinity as well as locations of coastal access parking in the area. • Construction Manager. A construction manager shall be designated with authority over truck transportation with the authority to redirect or halt trucking as needed. The manager shall be provided with communication equipment (e.g., radios) to manage the trucking operation. 	<p>BBGHAD's Broad Beach Restoration Project Area</p>	<p>Plan review and approval by regulating agencies</p>	<p>Reduce impacts to transportation and circulation network in the vicinity of Broad Beach</p>	<p>CSLC</p>	<p>Prior to and During Construction</p>

Table B-1. 2016 Monitoring Table

Avoidance and Minimization Measure (AMM)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<ul style="list-style-type: none"> • Truck Communications. All trucks shall be equipped with radios or other communication equipment to permit contact and coordination with the construction manager. • Truck Idling Locations. The plan shall identify acceptable truck idling and pull over locations along Pacific Coast Highway (PCH) and other segments of the haul route. These areas shall be designated for use by trucks in case of equipment failures and excessive queuing occurring at the staging areas. • Driver Safety Briefing. All truck drivers shall receive a safety briefing on existing uses along the truck haul routes, particularly areas with significant pedestrian activity. • Control Access to Parking Lot 12. The Applicant shall ensure that appropriate measures are employed to prevent access (especially vehicular) to the staging area and parking lot 12 during periods when construction is not occurring in order to improve public safety. This could include signage and barriers. When safety is not an issue, public access shall otherwise be maintained to the maximum extent feasible. • Pedestrian and Bicycle Accommodations. The Applicant shall provide appropriate accommodations for bicyclists and pedestrians to ensure their safety within the modified traffic configuration and in the Broad Beach vicinity. • Damage Repair. The Applicant shall repair any damage to the PCH/Site Access connection or the construction staging area caused during the construction phase of the Project. 					
Noise					
<p>AMM N-1a: Use of Noise-Attenuating Devices on Construction Equipment. To the maximum extent feasible, equipment, and trucks used for Project construction shall use best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds).</p>	BBGHAD's Broad Beach restoration Project Area	Review and approval of final construction plans, including use of noise-attenuating devices.	Acceptable noise level would be experienced by the public	CSLC	Prior to and during construction

Table B-1. 2016 Monitoring Table

Avoidance and Minimization Measure (AMM)	Location	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Public Health and Safety Hazards					
<p>AMM HAZ-2: Develop Hazardous Material Spill Prevention Control and Countermeasure Plan (SPCCP). A Hazardous Material SPCCP shall be prepared prior to implementing the Project to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during Project construction and shall be submitted to California State Lands Commission staff at least 2 weeks before commencement of beach restoration activities. At a minimum, the SPCCP shall:</p> <ul style="list-style-type: none"> • Describe storage procedures, construction site housekeeping practices, and other Best Management Practices (BMPs). Common BMPs may include use of containment devices for hazardous materials, training of construction staff regarding safety practices to reduce the chance for spills or accidents, and use of nontoxic substances where feasible. • Identify processes for inspections and monitoring of BMPs to ensure minimal impacts to the environment occur. • Describe actions required if a reportable spill occurs, such as which authorities to notify and the proper clean-up procedures. • State procedures for containing, diverting, isolating, and cleaning up any spills that might occur, such that major adverse impacts on surface and groundwater quality would be minimized or avoided. 	Broad Beach public trust lands	Plan review and approval by regulating agencies	Reduce impacts on public health and safety from potential spills of hazardous materials	CSLC; CCC CDP Special Condition 10.	Prior to construction
<p>AMM HAZ-3a: Demarcation of Public Access Routes. Public access routes around construction areas shall be clearly marked.</p>	Broad Beach public trust lands	Demarcation of public access routes	Provide safe access to public trust resources	CSLC; CCC CDP Special Condition 15.	During construction
<p>AMM HAZ-3b: Provision of Contact for Reporting Hazards. The Applicant will provide the public with contact information in order to report immediate hazards related to the Project. This information shall be provided via public notice in a local paper and on signs at Broad Beach at least 1 week (7 days) prior to the commencement of any Project-related activities.</p>	BBGHAD's Broad Beach Restoration Project Area	Provision of public notice in local papers and on signs	Improve public safety	CSLC	Prior to construction

Table B-1. 2016 Monitoring Table

Avoidance and Minimization Measure (AMM)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<p>AMM HAZ-4: Response to Sediment Contamination. Nourishment activities shall be temporarily halted in the event that construction workers, personnel, or other persons identify any indication that hazardous or dangerous materials are present in the imported sediment, or if contaminated sand is inadvertently deposited at Broad Beach, pending an evaluation by the California State Lands Commission (CSLC) staff, in consultation with the California Department of Fish and Wildlife (CDFW) Office of Spill Prevention and Response, to determine the extent of the contamination and most appropriate remediation methods before nourishment activities would be allowed to resume.</p>	Broad Beach public trust lands	Potential halt of construction activities	Reduce impacts of hazardous or dangerous materials	CSLC in coordination with CDFW and OSPR; CCC CDP Special Condition 8A(2).	During construction
Utilities and Service Systems					
<p>AMM UTL-3: Master Drainage Plan (MDP). The Applicant shall prepare and submit a MDP to the California State Lands Commission (CSLC) staff for review and approval. This plan shall include measures to minimize potential for water backup in storm drains, and associated drainage/flooding concerns, as well as minimizing or avoiding damage to newly created dune Environmentally Sensitive Habitat Areas (ESHAs) and beach habitats. This MDP shall address all existing and proposed modifications to public storm drains and pipes in the lease area, including those seaward of the mean high tide line. It shall be prepared by a qualified Civil Engineer and be based upon data and analysis provided by a registered hydrologist. At a minimum, the MDP shall:</p> <ul style="list-style-type: none"> • Identify the exact location and size of all public drains along Broad Beach, including its relationship to State sovereign land and Lateral Access Easements (LAE), flow characteristics of each drain, particularly high flood flows (e.g., 100-year event) and potential for flooding or drainage problems or erosion of dune and beach areas. • Design plans (overhead and cross-sections) for proposed modifications to public storm drains, including existing storm drains incorporated into the project design. 	Broad Beach public trust lands	Preparation and submittal of MDP	Reduce adverse effects to public drainage systems such as water backup and flooding	CSLC in conjunction with local jurisdiction with authority over storm drain inlets along Broad Beach Road (city of Malibu and/or LA County Beaches and Harbors); CCC CDP Special Condition 5C(2).	Prior to construction

Table B-1. 2016 Monitoring Table

Avoidance and Minimization Measure (AMM)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<ul style="list-style-type: none"> • Identify specific drainage proposals for each storm drain and how they would affect public trust resources. • Identify measures to safely and adequately convey drainage through and across the proposed dune system and beach, including methods to avoid or minimize impacts to public trust resources and the ESHAs. 					