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CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME	: Tisbury Marine Terminal
PROJECT MUNICIPALITY	: Tisbury
PROJECT WATERSHED	: Islands
EEA NUMBER	: 16190
PROJECT PROPONENT	: Tisbury Marine Terminal, LLC
DATE NOTICED IN MONITOR	: April 22, 2020

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G. L. c. 30, ss. 61-62I) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **does not require** an Environmental Impact Report (EIR). However, as described below, this Certificate identifies concerns raised by State Agencies that should be addressed during the permitting process. Comments from State Agencies also identify additional measures that could be incorporated into the design to reduce project impacts and increase the resiliency of the project. I expect that the Proponent will consider these measures as the project design progresses.

Project Description

As described in the Environmental Notification Form (ENF), the project consists of improvements to and expansion of an existing marine industrial site to improve existing marine industrial activities as well as accommodate Operations and Maintenance (O&M) activities for offshore wind projects. Improvements to the existing Tisbury Marine Terminal (TMT) operations will occur on the southern section of the site. The proposed construction of an O&M support building and related infrastructure for offshore wind will be located in the northern section of the project site. The expansion on the north side will include the construction of three deep water berthing areas to accommodate

berthing of O&M crew transfer vessels (CTV) and service accommodation transfer vessels (SATV). The project includes the following specific components:

- **Replacement and realignment of an existing solid fill pier:** The existing 3,552 square foot (sf) solid-fill pier will be replaced with a new 3,330 sf solid fill pier with concrete deck and steel sheet-pile bulkhead. The new structure will be realigned slightly from its existing location so that it will be perpendicular to the shoreline.
- **Improvements to barge access berthing area:** The existing TMT barge ramp will be replaced and two new barge ramps will be constructed. Each ramp will be 40 feet long 20 feet wide (800 SF each). The ramps will be located largely landward of the bulkhead, each surrounded by a concrete perimeter wall, but portions will also extend over the water with support/guide piles. The replacement and two new steel barge ramps will allow for increased efficiencies and volume of material transfer for TMT operations by providing for simultaneous loading and unloading operations.
- **Steel solid fill bulkhead improvements and expansion:** The existing 209 linear foot (lf) bulkhead will be reinforced with new steel sheet piles to be installed seaward of the bulkhead. The solid fill bulkhead will be extended approximately 70 lf to east/northeast of the solid fill pier to accommodate an additional barge ramp as described above. The solid fil bulkhead extension includes a 35-lf return and then travels along the shoreline approximately 283 lf to Beach Road.
- **Creation of three O&M berthing areas and operations support deck:** Three deep water berths will be constructed to accommodate O&M vessels. The berths will be bounded on the southeastern end by an approximately 185 ft long by 35 ft wide pile supported bulkhead. This bulkhead includes 80 lf of underwater "environmental windows," which are constructed by keeping the top of sheets just above the existing ocean floor on the south side of the bulkhead (the north side ocean floor will be dredged) resulting in openings that provide water and sediment circulation. This bulkhead is intended to minimize intertidal dredging that would otherwise be required through the dredging of side slopes needed to create the berths and to minimize the frequency of required maintenance dredging within the berthing areas. Two of the berths will be approximately 57 ft wide and the remaining berth will be approximately 70 feet wide. A floating dock (1,704 sf) supported by five steel piles will provide access to the vessels and act as a wave attenuator between berthing areas as it will separate the two 57-foot wide berthing areas. Three dolphin pile clusters will be installed to separate the smaller berthing area from the larger berthing area.
- **Construction of O&M support deck:** A 30,577 sf support deck will tie into the bulkhead as described above. The deck will include and approximately 6,510 sf concrete deck immediately adjacent to the berthing areas which will be supported by steel pipe piles. The deck will enable this area of the pier to service high capacity live loads of up to 700 pounds per square foot (PSF) and allow for a crawler crane and other offshore wind support equipment and materials to be loaded/offloaded at this location. The concrete deck will also support a 3,000-gallon fuel tank so that vessels can refuel on site. The remaining section (24,067 sf) of the pile-supported operations deck will be utilized for storage of materials and personnel parking and consist of timber decking which will support up to a maximum live load capacity of 250 PSF. This portion of the deck will be supported by 156 12-inch diameter greenheart timber piles. The new operations support

deck (including both concrete and timber deck sections) will have a top finish elevation of 6.0 feet NAVD88.

- **Construction of wave fence:** A steel sheet pile wave fence will extend approximately 202 lf into the harbor from the face of the pile supported bulkhead and provide protection to the berthing area from storm-generated waves during high northeast winds and coastal storm events. The wave fence will have a top elevation of 10 feet NAVD88 and help reduce reflected/refracted waves by utilizing pile-supported sheet piles with deep connecting cavities and framed with a timber cap and fender piles. A 6-foot wide catwalk to provide access to the vessels will be constructed along the full length of the wave fence to provide crew access.
- C**onstruction of an O&M support building and access way:** A 10,111 sf marine support building is proposed to provide material storage for components required for O&M operations as well as crew facilities and offices. Because of the building's location on coastal dune, it will be raised on 136 piles to an elevation of 11ft NAVD88. The proposed internal access way located adjacent to the building will allow for access to/from Beach Road for deliveries of materials to the building, which will contain several loading bay areas.
- **Dredging:** Improvement dredging is proposed generally within the O&M berthing area and expanded TMT operations area to an elevation of -18.4 feet NAVD88 with a 1-foot allowable over dredge to -19.4 ft NAVD88. An estimated 14,759 cubic yards (cy) of sediment is anticipated to be dredged from an approximately 42,609 sf area, with a typical 3:1 (horizontal:vertical) side slope. Approximately 5,923 cy of maintenance dredging is proposed within an approximately 28,141 sf area.
- **Public Access:** The project includes the construction of an 800-sf public deck which will extend off of Beach Road into Vineyard Harbor and will provide pedestrians access to the waterfront.

Project Site

The existing 1.4-acre marine terminal is located on Vineyard Haven Harbor and provides critical services to the entire island of Martha's Vineyard including receiving fuel, building materials and other cargo. The site has been in operation since the late 1800s. The project site consists of maintained gravel surfaces extending to the edge of the existing solid fill pier and northerly to a sandy coastal beach. The current TMT operations are located within a Waterfront/Commercial zoned district which allows for industrial uses to occur along the waterfront.

According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) 25007C0103J and 25007C0104J effective July 20, 2016, the entire project area is located within a designated Velocity Zone (VE Zone) with a Base Flood Elevation (BFE) of El. 13 ft NAVD88 and AE Zone with a BFE of 11 ft NAVD88.

The project site includes a variety of coastal resource areas including coastal ceach, coastal dune, rocky intertidal shore, land under the ocean (LUO), barrier beach, land containing shellfish, land subject to coastal storm flowage (LSCSF), and is also within the 100-foot buffer zone to these resource areas. Other regulated areas within the proposed project area include historically mapped eelgrass and Natural Heritage and Endangered Species Program (NHESP) Priority and Estimated Habitat for rare species.

The proposed O&M berthing area and wave fence extends into a portion of Priority Habitat. Nearshore waters along Beach Road to the east of the project site have been aerially mapped by the Massachusetts Department of Environmental Protection (MassDEP) as eel grass (*Zostera marina*) habitat. Eel grass meadows provide one of the most productive habitats for numerous marine species and are designated "special aquatic sites" under the Federal Clean Water Act 404(b)(1) guidelines. The footprint for the in-water component of the project is within and adjacent to mapped shellfish habitat for quahog (*Mercenaria mercenaria*), bay scallop (*Argopecten irradians*), and blue mussel (*Mytilus edulis*). This area is also in the juvenile cod (*Gadus morhua*) Habitat Area of Potential Concern (HAPC) designated by the New England Fishery Management Council (2017). Vineyard Haven Harbor provides spawning habitat for winter flounder (*Pseudopleuronectes americanus*).

Environmental Impacts and Mitigation

As described in the ENF, the project will impact 68,466 sf of LUO; 5,656 sf of coastal beach, 34,638 sf of coastal dune, 76,342 sf of LCSF, and 40,294 sf of LSCSF.[1] The project involves dredging approximately 20,682 cy of sediment. The project will alter 1 acre of land and create 0.23 acres of new impervious area on the site (0.36 acres total).

Measures to avoid, minimize and mitigate damage to the environment include sediment and erosion control measures during the construction period and adherence to Time of Year (TOY) restrictions. The ENF also indicates that site selection and design choices were made in a manner that best meets project goals while minimizing environmental impacts.

Jurisdiction and Permitting

This project is subject to MEPA review and preparation of an ENF pursuant to 301 CMR 11.03(3)(b)(6) 301 CMR 11.03(3)(b)(1)(a), 11.03(3)(b)(1)(e), 11.03(3)(b)(1)(f); 11.03(3)(b)(3) and 11.03(3)(b)(6) because it requires a State Agency Action and involves the alteration of a coastal dune, barrier beach or coastal bank; involves new fill or structure or expansion of existing fill or structure in a velocity zone or regulatory floodway; alteration of 1/2 or more acres of any other wetlands; dredging of 10,000 or more cy of material; and construction, reconstruction or expansion of a solid fill structure of 1,000 or more sf base area. The project requires a 401 Water Quality Certification (WQC) and Chapter 91 (c.91) License from MassDEP.

The project requires an Individual Permit from the U.S. Army Corps of Engineers (ACOE) and Federal Consistency Review by the Office of Coastal Zone Management (CZM). The project requires an Order of Conditions from the Tisbury Conservation Commission, or in the case of an appeal, a Superseding Order of Conditions from MassDEP. The project also requires Development of Regional Impact Review by the Martha's Vineyard Commission.

The project is not receiving Financial Assistance from the Commonwealth. Therefore, MEPA jurisdiction for any future review would be limited to those aspects of the project that are within the subject matter of any required or potentially required Agency Actions and that may cause Damage to the Environment, as defined in the MEPA regulations.

[1] Based on revised impact information provided in the supplemental information distributed on 05/08/2020.

Review of the ENF

The ENF provided a description of existing and proposed conditions, preliminary project plans, and an alternatives analysis, and identified measures to avoid, minimize and mitigate environmental impacts. The ENF included the results of a sediment transport analysis which was undertaken to analyze the impact of the proposed bulkhead structures and wave fence on the adjacent coastal resources. The comment period was extended by one week and closed on May 12, 2020 to facilitate the review of supplemental information that was submitted to the distribution on May 8, 2020. The supplemental information identified measures that would be taken to increase the resiliency of the proposed infrastructure, identified the presence of coastal dune on the project site, and disclosed impacts to coastal dune not originally identified in the ENF. I received a number of letters of support including from the Town of Tisbury's Board of Selectmen and Senator Julian Cyr and Representative Dylan Fernandes. Comments from State Agencies identify additional analysis that must be provided during the permitting process including how the project will meet the performance standards for impacts to coastal beach and coastal dune.

Alternatives Analysis

The ENF included an alternatives analysis which considered alternative site locations and designs as well as dredge disposal alternatives. As described in the ENF, A No-Build Alternative was dismissed because it would not achieve the project goals of providing an on-island support for offshore wind O&M activities and the associated jobs and economic growth that are likely to result from the project. O&M infrastructure on Martha's Vineyard would provide a much closer support base than mainland locations to off-shore wind farms. Additionally, as described in the ENF, the No-Build alternative would result in the continued deterioration of infrastructure to support existing industrial operations and would not improve the efficiency of operations, potentially compromising existing loading/off-loading services critical to island operations.

The ENF considered alternative on-island locations including within the harbors of Oak Bluffs, Edgartown and Menemsha. As described in the ENF, these harbors do not have available navigable working waterfront space or the potential for the development/expansion of existing marine terminal operations such as the TMT. The ENF also considered the use of a floating dock system to support O&M activities for daily transfer of crew and materials as a way to reduce impacts to coastal wetland resources. However, this alternative was dismissed because of the exposure to storm-driven waves from the northeast. The Proponent determined that it is not safe, practical or feasible to use floating docks to adequately station and operate a floating O&M facility at the project site or any other island location. The ENF indicated that locating the O&M infrastructure at the TMT is the Preferred Alternative because it is an existing serviceable marine industrial property that can accommodate offshore wind support operations through improvements to existing infrastructure and expansion for construction of new infrastructure. The project site is in relatively close proximity to the proposed wind farms (approximately 30 nautical miles), and the TMT waterfront is located nearby the existing authorized federal 17-ft deep navigation channel. The proximity to safe, deep-water navigable channels is essential to supporting vessel excursions to/from the wind farms.

The alternatives analysis also considered four different structural alternatives for the preferred location at the TMT. Structural Alternative 1 consists of improvements to and re-purposing of the

existing TMT operations without expanding the marine terminal. This alternative includes improvements to the existing sheet pile bulkhead along the TMT shoreline; reconstruction/realignment of the existing solid-fill pier; and reconstruction of the existing barge ramp located southwest of the solid-fill pier. The proposed improvements would allow current operations to be performed with O&M needs being supported by the existing berthing area when available. However, this alternative would not fully meet the operational needs of the proposed O&M operations. Specifically, this alternative does not provide adequate serviceability/capacity to support the use/access needs of the O&M operations associated with offshore wind since the existing industrial shoreline area is continuously in use, and there are no vacant areas for berthing the CTV and SATV vessels concurrent with TMT barges. The O&M operations require the ability to function on an uninterrupted, daily basis. Interference from on-going daily island commerce at the TMT facility significantly reduces the viability of this alternative. Additionally, O&M operations will require a support building that will include office for personnel and warehouse space for storage equipment and materials. This alternative would result in the least amount of wetland resource impacts; however, it was dismissed because it would not meet the project goals due to the constraints of shared space for TMT operations and the O&M facility.

Structural Alternative 2 is consistent with all of the components included in the Preferred Alternative as described above; however, the proposed pile supported O&M operations deck would be replaced with a solid fill structure. A bulkhead would be constructed within the general footprint of the proposed deck. Structurally unsuitable soils would be removed from the area landward of the bulkhead. The unsuitable material excavated on-site would be removed and disposed of at an approved facility and replaced with structural backfill or suitable dredged sediment. Utilities, including the spill prevention and storm water systems, would be installed below finished grade to provide frost protection as well as sufficient cover from the proposed site loadings. This alternative would involve significant impacts to areas delineated as Land Under Ocean and Coastal Beach which include both sub-tidal and intertidal areas. Approximately 5,800 SF of Coastal Beach and 17,800 SF of Land Under Ocean resource areas will be adversely impacted by the solid fill in Alternative 2.

Structural Alternative 3 is similar to the Preferred Alternative but would reduce the number of O&M berthing spaces from three to one. This alternative would provide a new berthing space for existing TMT operations adjacent to the reconstructed solid fill pier. The berthing area adjacent to the reconstructed solid-fill pier will be utilized by TMT exclusively. The second berth will be situated adjacent to the proposed O&M operations deck and would be available to support offshore wind operations. The berthing area for the offshore wind vessels would need to be designed to accommodate the larger SATV and include a wave fence for protection against the storm events. Under this alternative, only one vessel can off load or load for the O&M facility operations. The single berthing area would be approximately 70 ft wide by 165 ft long as required to accommodate larger SATV vessels. The bulkhead extending from the TMT solid-fill pier will extend approximately 150 linear feet to the northeast to a wave fence.

The Preferred Alternative provides the required berthing areas for both existing TMT and new O&M offshore wind operations. A pile supported operations deck will significantly reduce impacts to coastal wetland resource areas when compared to a solid fill structure. As described above, the pile supported bulkhead extending from the solid-fill pier will extend approximately 185 linear feet to the northeast to a wave fence. The bulkhead includes 80 linear feet of “environmental windows,” which are constructed by keeping the top of the sheet piles just above the existing grade of the ground floor to the

south of the bulkhead (the north side will be dredged) resulting in openings that provide water circulation.

Wetlands, Waterways and Fisheries

The Tisbury Conservation Commission will review the project for its consistency with the Wetlands Protection Act (WPA) and implementing regulations (310 CMR 10.00). As noted above, the project will result in significant impacts to coastal wetland resources including Coastal Beach, Coastal Dune, LCSF, LSCSF and LUO. Comments from MassDEP indicate that additional information will need to be provided during the permitting process to demonstrate how the project will meet applicable performance standards for Coastal Beach and Coastal Dune.

The project, as proposed, will impact approximately 5,656 sf of Coastal Beach. The impacts are associated with the installation of multiple bulkheads, dredging, and construction of the proposed access road. The performance standards for coastal beach (310 CMR 10.27(3)) require that any project on a coastal beach shall not have an adverse effect by increasing erosion, decreasing the volume, or changing the form of any such coastal beach or an adjacent or down drift coastal beach. The Proponent must demonstrate that the proposed work will not adversely impact the storm damage prevention and flood control function of the coastal beach. As noted above, the presence of coastal dune on the site was identified during the MEPA review process. As a result, the building design was revised to be a pile-supported structure instead of a solid foundation. The proposed project will impact an estimated 34,638 sf of coastal dune. These impacts are associated with the construction of an access road, filling required to grade the lot to el. 6 ft NAVD88, and construction of a pile supported O&M support building. The performance standards for coastal dune at 310 CMR 10.28(3) require that any alteration of, or structure on, a coastal dune shall not have an adverse effect on the coastal dune by: affecting the ability of waves to remove sand from the dune; disturbing the vegetative cover so as to destabilize the dune; causing any modification of the dune form that would increase the potential for storm or flood damage; or interfering with the landward or lateral movement of the dune. As described in MassDEP's comment letter, the dune has been used for industrial purposes for decades and therefore has minimal vegetative cover. However, during permitting, the Proponent must demonstrate that the proposed fill will be clean, granular sediment that can be moved by waves, and that the structure will not inhibit landward or lateral movement of the dune. The Proponent must also demonstrate that the proposed work will not adversely impact the storm damage prevention and flood control function of the coastal dune.

Comments from CZM note that the proposed operations support deck may interfere with the ability of the beach and dune to move and shift in response to tides, waves, and storms. The ability of these resource areas to slow down water as it moves across the site is important to providing storm damage protection and flood control to protect landward areas, including Beach Road, which is an important transportation link for the island. To reduce the impacts of the platform, the Proponent should consider elevating it a minimum of two feet above the existing dune grade to allow the beach and dune to provide the storm damage protection and flood control functions. Elevating the platform will also make it more resilient to coastal storms.

The project requires a c.91 License from MassDEP. As described in MassDEP's comment letter, MassDEP has determined that the Project which includes the reconstruction and continued use of the TMT for the transfer of fuel, bulk materials, cargo, etc. and a proposed O&M facility for offshore wind

projects would be classified as a water-dependent-industrial use pursuant to the Waterways Regulations at 310 CMR 9.12(2)(b). I refer the Proponent to comments from MassDEP which identify information that should be included with the c.91 License application including additional cross section views; detailed plans of the proposed marine support building which is partially located on historic filled tidelands; and section views of the barge loading ramps and public deck. The design and timing of the proposed work should be consistent with any TOY restriction as indicated by DMF which recommend that proposed in-water, silt-producing work should be conducted outside of the period between January 15 to May 31.

Comments from CZM recommend that in order to minimize impacts to coastal dune, any stairs or ramps should be pile-supported, without solid landing pads (e.g. concrete or pavement). Comments from CZM also indicate that the proposed accessway will impact existing vegetation in this area and will reduce the ability of the beach and dune areas to dissipate wave energy and provide storm damage protection and flood control to landward areas. During permitting, the Proponent should evaluate additional measures to reduce impacts of the accessway, including using existing access ways within the site and reducing the width of the proposed accessway.

The ENF did not include information on chemical testing or grain size analysis of the proposed dredge sediment. This information will be required during c. 91 and the 401 WQC permitting. The ENF did identify potential sediment management alternatives including on-site and off-site beneficial reuse, on-site fill or off-site disposal at an approved location.

Sediment Transport Analysis

As noted above, the ENF included a sediment transport analysis which provided an analysis of alterations to tidal circulation caused by the pile array and other structural elements (e.g. new bulkheads adjacent to O&M berthing area and wave fence), as well as changes to tidal and wave-induced sediment movement potentially caused by the proposed alterations. The analysis utilized the Delft3D modeling suite to provide detailed circulation and sediment transport information, including simulation of 'annualized' morphologic change (accretion and erosion patterns). The analysis included the following scenarios:

- Scenario 1: Existing Conditions
- Scenario 2: Full Bulkhead Structures and new solid fill pier location
- Scenario 3: Full Bulkhead Structures and new solid fill pier location with a revised bulkhead elevation to within 2 ft above existing sea bed grade (ranges between -5 ft and -7 ft NAVD88).
- Scenario 4: Full Bulkhead Structures and new solid fill pier location with a revised bulkhead elevation to within 2 ft above existing sea bed grade (ranges between -5 ft and -7 ft NAVD88) with a wave fence design allowing for a gap along the sea bed for circulation.
- Scenario 5: Full Bulkhead Structures and new solid fill pier location with a revised bulkhead elevation of -5 feet NAVD88 for 40 feet and -4 feet NAVD88 for an additional 40 feet. This is the Environmental Window Scenario and is identified as the preferred alternative for water circulation patterns and sediment transport patterns. Scenario 5 is the same as the Preferred Alternative.

As described in the sediment analysis report, wave-induced sediment transport along the beach system at the eastern extent of the TMT is minimal and structural alterations including construction of the proposed bulkhead and wave fence will have similar minimal effects on the stability and form of the overall beach system. The wave-induced sediment transport showed minimal change of sediment movement from the existing conditions to the Scenario 2 conditions. The modeling under scenario 3 showed greater changes from the existing conditions than Scenario 2 during strong flooding tide. The modeling showed increased flow velocities along both ends of the wave fence, less impact to water circulation in the berthing areas, and improved flow on the western side of the basin. There was not a significant change during the ebb tide. There is a difference from Scenario 2 to Scenario 3 with the lowering of the bulkhead leading to better circulation.

In Scenario 4, the gap between the sea floor and the bottom of the wave fence allows sediment and water to flow beneath the structure. The hydrodynamic model showed a slight increase in velocity near the northwestern end of the wave fence in flood tide, as seen in the previous scenario. There is some flow into the berthing areas, though not as much as the existing conditions. As in previous scenarios, there is not much difference from existing conditions during the ebb flow. The changes in sediment transport are similar to those in the previous scenarios with no movement 50' from the bulkhead and same change as the existing conditions.

Scenario 5 is similar to Scenario 3 with the addition of an opening in the bulkhead (environmental windows) allowing water flow though the bulkhead. Scenario 5 showed similar results to the previous scenarios with increased velocities around the northwest end of the wave fence during flood tide and similarly there is minimal difference to the existing conditions during ebb tide. Scenario 5 does significantly improve the circulation in the berthing areas in comparison to Scenario 2 (full structures). The hydrodynamic sediment transport was negligible in difference from Scenario 5 to existing conditions. The sediment transport changes were the same as seen in previous scenario modeling with no change within 50 feet of the bulkhead and beyond that the changes were similar to the existing conditions.

Comments from DMF note that the sediment transport analysis considered a wave attenuator design with a three-foot gap above the seafloor (Scenario 4). While the ENF reports that the model did not identify any "measurable" improvement in water circulation, DMF notes that the gap was estimated to increase wave energy under the attenuator and also increase the required dredging area relative to a design that extended to the seafloor. While a gap design may not have a large effect on circulation, it would benefit fisheries habitat by allowing organisms, particularly benthic fauna, to freely migrate between the project area and the adjacent habitat to the east of the project. A more detailed analysis that considers different gap heights would be beneficial as it may identify a height that could minimize wave energy and the need for additional dredging while still allowing for benthic habitat connectivity. If a continuous gap is not feasible, intermittent gaps similar to the proposed "environmental windows" for the bulkhead may provide some corridors for passage.

Comments from DMF also identify several additional alternatives that would reduce impacts from the project including shifting the project footprint seaward to potentially avoid the need for intertidal dredging. Design alternatives that would enhance marine habitat is also recommended. For cases where hard structures are necessary, alternative designs that promote colonization by native species (e.g., substrate for blue mussels) while still meeting project objectives would aid in limiting

negative impacts to marine habitat. For the proposed bulkhead landward of the new berthing spaces, the proposed "environmental windows" will increase water circulation and potentially light penetration at the edge of the deck. For the intertidal portion that is designed to be elevated above the substrate to limit infill of the dredged area, alternatives should be considered that still provide spacing between the deck and the bulkhead surface to allow additional light penetration under the deck.

Rare Species

As proposed, portions of the project will occur within Priority and Estimated Habitat for the Roseate Tern (*Sterna dougallii*) and Common Tern (*Sterna hirundo*), species state-listed as "Endangered" and "Special Concern", respectively. These species are protected pursuant to the Massachusetts Endangered Species Act (M.G.L c. 131A) and its implementing regulations (MESA, 321 CMR 10.00) as well as the Massachusetts Wetlands Protection Act and its implementing regulations (WPA, 310 CMR 10.37, 10.58(4)(b) and 10.59). The Roseate Tern is also listed as Endangered and protected pursuant to the U.S. Endangered Species Act (ESA, 50 CFR 17.11). The project will require a filing with NHESP for compliance with the Massachusetts Endangered Species Act (M.G.L c. 131A) and its implementing regulations (MESA, 321 CMR 10.00). Based on the information contained within the ENF and in advance of a formal filing pursuant to the MESA, comments from NHESP indicate that the project is not anticipated to result in a prohibited Take of state-listed species or their habitats. As review is not complete, no alteration to the soil, surface, or vegetation and no work associated with the proposed project shall occur on the property until NHESP has made a final determination.

Climate Change

Governor Baker's Executive Order 569: Establishing an Integrated Climate Change Strategy for the Commonwealth (EO 569; the Order) was issued on September 16, 2016. The Order recognizes the serious threat presented by climate change and direct Executive Branch agencies to develop and implement an integrated strategy that leverages state resources to combat climate change and prepare for its impacts. The Order seeks to ensure that Massachusetts will meet GHG emissions reduction limits established under the Global Warming Solution Act of 2008 (GWSA) and will work to prepare state government and cities and towns for the impacts of climate change. I note that the MEPA statute directs all State Agencies to consider reasonably foreseeable climate change impacts, including additional greenhouse gas emissions, and effects, such as predicted sea level rise, when issuing permits, licenses and other administrative approvals and decisions. M.G.L. c. 30, § 61.

Adaptation and Resiliency

As described in the ENF, the design life of the project is 50 years and the design of the bulkhead and pier expansion are based upon the current elevations of the existing site and Beach Road which range from 4 ft NAVD88 to 6 ft NAVD88. The Northeast Climate Science Center at the University of Massachusetts at Amherst has developed projections of sea level rise for Massachusetts. This data is available through the Climate Change Clearinghouse for the Commonwealth at www.resilientMA.org. According to the sea level rise projections for the Intermediate-High (IH) scenario the probabilistic projections for the next fifty years to 2070 is a sea level rise of 3.0 ft for nearest tidal stations in Nantucket, MA and Newport, RI. As described by the Proponent, the project design has considered sea level rise while maintaining a functional design for operations at the facility considering adjacent

property and road elevations. The structures will be built to withstand wave forces of a 50-year storm forces plus an additional 3.0 ft of additional surface load on the bulkhead structure. The existing site elevation generally ranges from 5 to 6 ft NAVD88. The site will be evenly graded to an elevation of 6 ft NAVD88 but will be able to accommodate future modifications to the site which may be made to raise the lot elevation an additional 3.0 ft to elevation 9.0 ft NAVD88.

The current 100-year storm BFE is 11 ft and 13 ft NAVD88, meaning all structures below these elevations (including the proposed O&M operations deck and associated bulkheads, berthing areas and other infrastructure) will be inundated under current conditions during a 100-yr storm event.

The proposed O&M marine support building will be located away from the in-water structures in a coastal dune. Although the State Building Code requires the top of the first floor to be one foot above the FEMA flood elevation, the FEMA flood elevation does not consider any future sea level rise. While the project design does locate the first floor of the O&M support building above the FEMA flood plain, the Proponent should consider incorporating sea level rise projections into final design and elevating the building further above the flood elevation to provide a factor of safety and improve resilience. The Proponent should coordinate with relevant agencies, such as MassDOT, on resiliency measures so that elevations of the building and surrounding roadways can be considered simultaneously. The project should be designed to enable future retrofits and upgrades that fully consider climate change impacts. I refer the Proponent to comments from CZM which identify additional design details that should be provided during permitting, including additional cross-sections and information to address how the building will be accessed from proposed grades. Comments from CZM also note that the existing conditions on the site include some beach grass and other vegetation. The proponent should develop a landscaping plan to incorporate as much native, salt-tolerant, deep-rooted vegetation on the site as possible to reduce erosion and dissipate flood waters moving across the site in coastal storms. Recommendations regarding plantings are available through CZM's *StormSmart Properties Fact Sheet #3: Planting Vegetation to Reduce Erosion and Storm Damage.*[2] Comments from CZM also express concern with the location of a 3,000-gallon fuel tank on the O&M support deck potentially located within the VE Zone. Subsequent correspondence with the Proponent indicates that the fuel tank will be located with the AE Zone and will comply with all applicable building code requirements and fire department regulations.[3]

Tisbury is a participant in the Commonwealth's Municipal Vulnerability Preparedness (MVP) program. The MVP program is a community-driven process to define natural and climate-related hazards, identify existing and future vulnerabilities and strengths of infrastructure, environmental resources and vulnerable populations, and develop, prioritize and implement specific actions the Town can take to reduce risk and build resilience. The Proponent should consult this plan as the design of the project is finalized.

Construction Period

Comments from the Massachusetts Board of Underwater Archaeological Resources (BUAR) indicate that a review of records indicate that no submerged archaeological resources are known to exist at the project site. BUAR notes that the area is generally archaeologically sensitive and unknown

[2] https://www.mass.gov/service-details/stormsmart-properties-fact-sheet-3-planting-vegetation-to-reduce-erosion-and-storm
[3] Information provided by e-mail to the MEPA Office on 5/27/2020.

resources may be encountered during construction. If resources are encountered, the Proponent should consult with BUAR.

The project should utilize erosion control measures including turbidity curtains as necessary. All construction and demolition activities should be managed in accordance with applicable MassDEP's regulations regarding Air Pollution Control (310 CMR 7.01, 7.09-7.10), and Solid Waste Facilities (310 CMR 16.00 and 310 CMR 19.00, including the waste ban provision at 310 CMR 19.017). The project should include measures to reduce construction period impacts (e.g., noise, dust, odor, solid waste management) and emissions of air pollutants from equipment, including anti-idling measures in accordance with the Air Quality regulations (310 CMR 7.11). I encourage the Proponent to require that its contractors use construction equipment with engines manufactured to Tier 4 federal emission standards, or select project contractors that have installed retrofit emissions control devices or vehicles that use alternative fuels to reduce emissions of volatile organic compounds (VOCs), carbon monoxide (CO) and particulate matter (PM) from diesel-powered equipment. Off-road vehicles are required to use ultra-low sulfur diesel fuel (ULSD). If oil and/or hazardous materials are found during construction, the Proponent should notify MassDEP in accordance with the Massachusetts Contingency Plan (310 CMR 40.00). All construction activities should be undertaken in compliance with the conditions of all State and local permits. I encourage the Proponent to reuse or recycle construction and demolition (C&D) debris to the maximum extent.

Conclusion

The ENF has sufficiently defined the nature and general elements of the project for the purposes of MEPA review. Based on review of the ENF and comments received, and in consultation with State Agencies, I have determined that no further MEPA review is required; however, significant outstanding issues must be addressed during permitting. Additional analysis of less impactful alternatives, sediment analysis, and analysis of potential project impacts will be required during the permitting processes. MassDEP has sufficient regulatory authority to address these issues and condition permits as necessary. I anticipate that the Proponent will address the concerns highlighted in this Certificate and comment letters as part of these processes. The Proponent should continue to engage with CZM, DMF, and MassDEP through the local and State permitting process to ensure that appropriate mitigation measures are developed to avoid, minimize and mitigate Damage to the Environment. I note that the Proponent may be required to file a Notice of Project Change (NPC) if there is a material change to the project that will increase environmental impacts prior to the completion of Agency Actions for the project.

K. Theoharides

May 29, 2020
Date

Kathleen A. Theoharides

Comments received:

05/02/2020 Gerald Green

05/04/2020	Penny Weinstein
05/05/2020	Town of Tisbury – Office of Selectmen
05/06/2020	Kate Warner
05/07/2020	Anne Berwick
05/09/2020	Julie Livingston
05/09/2020	Tom Solidini
05/11/2020	Michael Jacobs
05/11/2020	Ron Dagostino
05/11/2020	Sen. Julian Cyr and Rep. Dylan Fernandes
05/12/2020	Dan Seidman
05/12/2020	Dana Heffner
05/12/2020	Robert J. Hannemann
05/12/2020	Alan H. Strahler
05/18/2020	Board of Underwater Archaeological Resources (BUAR)
05/19/2020	Division of Marine Fisheries (DMF)
05/19/2020	Natural Heritage and Endangered Species Program (NHESP)
05/20/2020	Office of Coastal Zone Management (CZM)
05/20/2020	Massachusetts Department of Environmental Protection (MassDEP) Southeaster Regional Office (SERO)

KAT/EFF/eff