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IN REPLY REFER TO:
HAR-ESP
4094.14

October 14, 2013

Mr. George Young, P.E.
Chief, Regulatory Branch
Department of the Army
U.S. Army Engineer District, Honolulu
Building 252, CEPOH-EC-R
Fort Shafter, Hawai'i 96858-5440

Dear Mr. Young:

Subject: Department of the Army Section 404 Permit Application for Pier 4 Interisland
Cargo Terminal, South Hilo District, Hawai'i – Job HMP 60901; TMK: (2) 1-
007:007, 011, and 037

The Department of Transportation, Harbors Division (DOT-H) is responding and submitting additional information to the Department of the Army's (DA) July 18, 2013 letter which detailed public notice comments to the DA Section 404 Permit application for the above project. DOT-H was able to contract, but unable to conduct and complete the biological assessment survey required for Item 5, and respectfully requests a time extension until December 2, 2013 to submit the results of this survey.

Responses address agency comments that are in bold text below.

1. **A revised and clear statement of the Purpose and Need for the proposed action is needed, including the need for a pier 600 feet in length. This directly relates to the alternatives analysis which should consider the evaluation of alternative pier designs with smaller impacts to the aquatic environment.**

Block 19. Project Purpose revised as follows:

Hilo Harbor has three piers used for berthing of vessels and associated landside yards used for commercial operations. The entire project is known as the *Pier 4 Interisland Barge Terminal* and includes three major components:

- a. Construction of a 600-foot long wharf. This would allow the berthing of a single interisland barge.
- b. Dredging of approximately 165,000 cubic yards of materials. This would allow barge access to Pier 4. This work is completed.

- c. Reconstructing and expanding the existing yard. Other improvements include upgrading utilities and lighting, construction of a new comfort station, perimeter security fencing and a new terminal gate to improve traffic movement. Construction on these projects will start during the second-half of 2013.

Project Purpose. The proposed action will provide a new 600-foot long pier to support the Pier 4 Interisland Barge Terminal with sufficient barge berthing capacity. This action is necessary to support landside cargo storage space to increase existing cargo terminal capacity and increase operational efficiencies.

Project Need. The proposed action is needed to accommodate the anticipated demand of interisland cargo volumes associated with projected growth of the Hawai'i Islands and to replace the inter-island Pier 2 which cannot accommodate modern container handling equipment.

Additional Information. The proposed Pier 4 project is part of the *Hawai'i Island Commercial Harbors 2035 Master Plan* for Hilo Harbor. Other recommended improvements include an expanded and upgraded 26 acre storage yard adjacent to Pier 4, a new 830-foot long Pier 5 dedicated to passenger operations for cruise ships on the west side of the harbor, including dredging required for this new pier. DOT-H has completed numerous special and technical studies for phased and full build of Hilo Harbor. In addition, numerous stakeholder and public information meetings were held to understand the special needs and requirements of harbor users. Moffat and Nichol's *Berth Occupancy and Capacity* analysis for Hilo Harbor, took into account the various cargo sectors, projected changes in each sector and used a model to predict berth capacity. Primary uses for this future pier were identified as Young Brothers containers, automobiles, break bulk (Hawaiian Cement, Mid Pac, and Big Island Energy) and other roll-on/roll-off (RO/RO) cargo. The study determined a 602 foot long pier at Pier 4 was needed to accommodate one 400 foot barge, including 50 foot mooring allowances on each end of the barge, and a 100 foot long tug including mooring allowances. Summaries of the various special and technical studies and a description of the public information process are contained in Appendix 3 of Attachment J - *Hawai'i Island Commercial Harbors 2035 Master Plan Update*. In the future Young Brothers has plans to use 4 by 1 barges, which are approximately 390 feet long by 100 feet wide. The Pier 4 project is tentatively scheduled to start in August 2014 and end in February 2016.

The Alternatives section of attached Questionnaire contains an analysis of alternatives considered for this proposed action, including the need for a pier 600 feet in length. The alternative sites considered for Pier 4 during the *Hawai'i Island Commercial Harbors 2020 Master Plan* included:

- a. *Radio Bay, located east of Pier 1.* The area is deemed too small and the entrance channel too narrow for interisland barge operations. In addition, this location is located away from the current interisland barge operations.

- b. *Finger pier perpendicular to the shoreline of the proposed Pier 4.* This configuration was considered but presented operational problems because of the constrained space in the area and would interfere with future Pier 5 plans.
- c. *Other areas within Hilo Harbor were considered.* However, these would have caused more adverse impacts to the environment as this would require development in undisturbed areas in the harbor. In addition, the ocean floor where Pier 4 is planned for construction was recently dredged to accommodate the construction of Pier 4 under USACE Permit No. POH-2006-00338.

2. The exact area (in acres and/or square feet) of permanent and temporary impacts (the "footprint" of the proposed fills for the pier construction) in total needs to be provided. A project drawing that clearly and simply depicts this is needed.

The exact area (in acres and square feet) of permanent and temporary impacts are provided in Block 22.

Block 22 – Surface Area in Acres of Wetlands or Other Waters filled

Type	Amount [SF]	Amount [Acres]
Concrete Fill	600	0.01
Concrete Piles (incl. crib piles)	5,273	0.12
Concrete Bulkhead Wall	6,520	0.15
Cement Grout	815	0.02
Armor Stone	4,888	0.11
ACB Mattress	12,480	0.29
Crushed Rock (type 1 backfill)	16,224	0.37
Gravel (types 2,3,4 backfill)	47,168	1.08
Steel Sheet Piles (temporary)	272	0.01
Steel Sheet Piles (permanent)	110	0.003
Manta Ray Anchors	102	0.002
Geotextile Filter Cloth	12,848	0.29
Total Fill (permanent)	107,027	2.45
Total Fill (temporary)	272	0.01
Total Area Impacted (Including any fill overlaps)	32,400	0.74

A color-coded project plan and 2 typical cross section plans are provided in Exhibit 10 (attached).

3. **A description of construction methods which includes a discussion of the anchoring systems for the barges to be utilized is needed. An illustration of the anchoring system placement needs to be supplied to compare in relation to the proposed pier footprint.**

Attachment B of the application describes the construction methods and sequence I including a discussion of the construction barge anchoring system. Barge anchors will only be allowed in previously dredged areas of Hilo Harbor. Figure 7 of Attachment F of the application, *Preliminary Site-Specific Best Management Practices Plan* shows the proposed *Overall Pier Deck Plan* with positions of proposed working and material barges used to install pier foundation components.

4. **A drawing of previously authorized dredging footprint with the proposed pier superimposed needs to be provided to evaluate impacts within and beyond the previously impacted area.**

Exhibit 3 General Site Plan (attached) shows the previously authorized dredging footprint with the proposed pier superimposed in blue.

5. **A biological assessment based on an in-water survey of the proposed project impact area (including footprint of new fill, anchor footprints, and areas that may be affected by sedimentation and turbidity) needs to be provided to evaluate impacts to benthic habitats.**

Oceanit will conduct an in-water survey of the shoreline area of about 600 feet extending off shore about 200 feet. This encompasses the proposed project impact area, including the footprint of the new fill area, possible barge anchor footprints and areas that may be affected by sedimentation and turbidity. The biological assessment report shall include a quantitative analysis of the species found including fish and algae, corals and non-coral invertebrates. Physical characteristics of the benthic substrate will be also be measured and photographs will be taken during the surveys and included in the report.

6. **An expanded impacts analysis should be provided which examines the direct, indirect, and particularly, the cumulative impacts of current and future projects and operations within Hilo Harbor.**

Direct, indirect and cumulative impacts are discussed in Section E of the questionnaire and shown below.

Air Quality. The average annual Air Quality Index (AQI) of Hilo Town between 1999 and 2009 ranged between 21 and 25. This indicates the area enjoys good air quality and air pollution poses little or no risk. The proposed project will have a temporary adverse effect on air quality at the project site during construction. Some air quality effects that

cannot be avoided include the creation of dust and emissions from construction vehicles, equipment, and commuting workers. Mitigation measures such as dust screens, frequent watering and rapid repaving may be required. Limiting of construction motor vehicle activity to off-peak hours may also be imposed to reduce exhaust emissions. After completion of construction of Pier 4, minimal long-term effects on air quality or ambient carbon monoxide concentration levels may occur as a result of an increase in harbor traffic volume. All construction projects at Hilo Harbor will require specific mitigation measures like those mentioned above for the Pier 4 project. Therefore, the cumulative impacts of current and future harbor improvement projects on air quality should be minimal.

Climate. Proposed improvements at Pier 4 or future Hilo Harbor projects will have no effect on the climate in the area.

Natural Hazards. The Island of Hawai'i is susceptible to five main types of natural hazards; tsunami, volcanic eruption, earthquakes, hurricanes and flooding. Areas of Hilo Harbor are susceptible to a 100-year flood, 100-year coastal flood with velocity (wave action) with base flood elevations determined, flood depths of 1-3 feet indicating areas of ponding, and 500-year flood. Portions of Hilo Harbor are in a designated Tsunami Inundation Zone. The harbor is also located in a Lava Flow Hazard Zone 3. Any current or future improvement projects implemented at Hilo Harbor will be susceptible to these natural hazards. To mitigate damage from earthquakes and hurricanes, any planned harbor improvements shall be designed to present codes which offer some protection from damage. At Hilo Harbor, design of new piers will consider the impacts of harbor surge and wind conditions.

Emergency Planning. The need to plan and develop evacuation plans and procedures for residences and properties adjacent to the harbor during different kinds of emergencies was brought up by public meeting participants (May 19, 2009). Emergencies include natural hazards like tsunamis, flooding or earthquakes, as well as incidents involving tank farms or fuel storage containers. On an ongoing basis, personnel at Hilo Harbor shall coordinate with the County of Hawaii Civil Defense to implement established procedures in the event of a flood or tsunami. Development of contingency plans for loss of one or both harbors at Kawaihae or Hilo was also a concern that was voiced at this meeting.

Scenic Resources and Visual Corridors. The proposed project will not affect visual corridors or views towards the harbor or Hilo Bay.

Traffic and Circulation. Improvement projects that DOT-H is committed to in the near-term were presented in the *Hawai'i Island Commercial Harbors 2035 Master Plan Update*. These included traffic circulation modifications at the Kuhio Street entrance to the harbor designed to improve pedestrian safety and improve vehicular flow in the area. In addition, a new gated paved road at Kumau Street is also proposed to help separate incompatible uses such as cargo operation vehicles from cruise ship related traffic. At a May 19, 2009 public information meeting, other possible solutions identified and discussed to alleviate traffic problems included scheduling of trucks throughout the day

or nighttime scheduling. Also discussed at this meeting was the need for a contingency plan in the event the harbor's main entrance was blocked. This involved opening Kahanu Street as an alternative route. The cumulative impacts of current and future pier, storage yard or storage shed projects at Hilo Harbor on traffic and circulation shall be mitigated by proposed traffic improvement modifications.

Public Health, Safety and Security. By separating cargo operations and passenger activities road and entry project improvements will decrease congestion and improve public safety. Operators are considering automated checks of entering and exiting vehicles for security processing.

Hydrology, Ground Water and Surface Water. Rainfall in this watershed is the highest on the island of Hawai'i, ranging from 120 inches per year on the coast to 240 inches per year on the lower slopes of Mauna Kea and Mauna Loa. Hilo Bay is a major catchment area for one of the great basal ground water spring areas of the world, resulting in nearly constant flows of fresh basal ground water into Hilo Bay.

No new liquid bulk facilities are proposed for Hilo Harbor under the 2020 Master Plan, or updated plans. There is no known leakage of petroleum products from existing fuel facilities. The Pier 4 project and future harbor improvements will have no impact on ground water resources.

Grading of areas to be paved may affect drainage at the harbors. The addition of paved areas adjacent to Hilo Harbor will increase surface runoff, but is not expected to result in significant adverse impacts. With Hilo's abundant rainfall and surface runoff from streams periodic flooding may occur. Increased activity in newly paved terminal areas will increase the amount of oil on the pavement from vehicles and equipment.

Paragraph 8 of this letter addresses how stormwater runoff will be handled during construction. It also describes Permanent Best Management Practices (BMPs) that should be implemented once construction is completed to prevent direct discharge of surface stormwater into the harbor.

Recreation (Kayaking and Fishing)

No additional impact is expected for recreational vessels like kayaks in Hilo Harbor since the 2020 Master Plan/EIS. Fishing vessels can continue to use Radio Bay for mooring.

For many years the Hilo Harbor area was open to the public, and recreational fishing off of the piers was encouraged when the piers were not in use or at night with a 'fishing permit.' According to DOT-H Hawai'i District Office, Commercial Harbors currently do not allow recreational fishing on controlled access piers.

Cultural Resources (Traditional Gathering). With the exception of fishing, traditional cultural practices are not in evidence, as Hilo Harbor is not a significant historical habitation site. This is because of the high degree of disturbance from natural forces such

as tsunamis and harbor construction. After approval of the 2020 Master Plan in 2001, recreational fishing has since been restricted on controlled access piers.

Indirect impacts:

The proposed project will improve cargo operations in and out of Hilo Harbor, allow better separation of cargo operations from passenger activities, decrease congestion, improve safety and will eventually encourage growth in residential, agricultural, urban, industrial or resort activities. See Attachment J - *Hawai'i Island Commercial Harbors 2035 Master Plan Update*.

Cumulative impacts:

Although the previous projects (existing piers) and the proposed new Pier 4 do have some common purposes they are generally all different in size and functional capabilities.

Pier 1 is 1,265 feet long and is shared by interisland container barges, cargo ships, and large cruise ships up to 965 feet long. Matson Navigation Company (Matson) services container barges at Pier 1 using top-pick and forklifts to move containers on and off of barges. Pasha Hawai'i Transport Lines (Pasha) operates Roll-on/Roll-off (RO/RO) movements at Pier 1. The back side of Pier 1 (adjacent to Radio Bay) contains a number of berths for transient and other smaller vessels.

Pier 2 is 703 feet long and is used by Young Bros. (YB) interisland cargo barges and cement barges. YB employs a RO/RO operation.

Pier 3 is 637 feet long and is primarily used by various fuel barges.

After construction of the Pier 4 Interisland Barge Terminal project, other related activities in the area may include a 250-foot westward extension of this pier to accommodate a second barge and a RO/RO improvement to the east between the existing Pier 3 and the proposed Pier 4. In the range-range future, the construction of a new 830-foot Pier 5 dedicated for cruise ships. See Attachment J - *Hawai'i Island Commercial Harbors 2035 Master Plan Update*.

A table showing current, committed (for the near-term) and future (by 2035) improvements for Hilo Harbor was provided. A discussion of cumulative impacts of these projects was provided including disruption of harbor fill sites and dredging spoils, surface water runoff, ground contamination, natural hazards, solid waste, hazardous materials, noise impacts, air quality, water quality and alien species.

Disruption of Harbor Fill Sites and Dredging Spoils. Dredging in Hilo Harbor to a depth of 35 feet was required for the proposed Pier 4 improvements. Similar dredging efforts will be required for the future expansion of Pier 4, as well as the future Pier 5 project for cruise ships. This will result in disruption of fill soils at the proposed sites, including pile

driving, drilling and excavation for piers, utilities and drainage improvements. Proper disposal of dredging spoils in a U.S. Environmental Protection Agency approved dump site will also be required.

Surface Water Runoff. The addition of hard paved areas at Piers 4 and 5 will increase surface water runoff, but is not expected to result in significant adverse impacts. Proper implementation of approved temporary Best Management Practices (BMPs) during construction and permanent BMPs will prevent direct discharge into Hilo Harbor. The abundant rainfall of the Hilo area, periodic flooding and increased activity in newly paved terminal areas will increase the amount of oil on the pavement from vehicles and equipment, which could flow in surface water runoff directly into Hilo harbor.

Ground Contamination. New liquid bulk fuel hatches have been alternately proposed at Pier 2 and Pier 4. In addition, Hilo Harbor has existing fuel hatches at Pier 3 and underground pipelines that transport petroleum products. All of these fuel handling facilities have the potential to leak and cause ground contamination. Although no leakage was found during a Phase I Environmental Site Assessment in August 2000 (R.M. Towill Corporation), it is possible that subsurface contamination exists either on site or from the adjacent fuel handling facilities. If present, contamination in soils may be encountered during construction of proposed piers or building facilities. The Hilo Harbor area is not a groundwater source for drinking water (R.M. Towill Corporation. 2000a).

Natural Hazards. The Island of Hawai'i is susceptible to five main types of natural hazards; tsunami, volcanic eruption, earthquakes, hurricanes and flooding. Areas of Hilo Harbor are susceptible to a 100-year flood, 100-year coastal flood with velocity (wave action) with base flood elevations determined, flood depths of 1-3 feet indicating areas of ponding, and 500-year flood. Portions of Hilo Harbor are in a designated Tsunami Inundation Zone. The harbor is also located in a Lava Flow Hazard Zone 3. Natural hazards such as hurricanes, flooding and tsunami are unavoidable for coastal harbor areas and any improvements implemented at Hilo Harbor, will be susceptible to these natural hazards.

Solid waste will be generated during construction of all of the proposed Hilo Harbor projects. The Contractor should be required to implement a demolition recycling program in order to effectively recover building materials which could contain potentially hazardous substances (batteries, mercury containing thermostats, asbestos, liquid wastes, oils, paints, solvents, refrigerant fluids, tires and liquid filled transformers) and prevent them from being disposed of in an unlined landfill.

The proposed Pier 4 inter-island cargo terminal, its new storage yard, and future extension of Pier 4 will increase commercial maritime activity and generate additional solid waste. Activities associated with the proposed maintenance building and storage and shed improvements at Pier 1 will also add to the solid waste generated. The largest contributor of solid waste will be from the inter-island cruise ship operations at Pier 5. The County of Hawai'i is currently evaluating several alternatives for handling

solid waste after the Hilo Landfill closes. The most likely scenario for handling Hilo's solid waste is to use a central processing station, in which solid waste is sorted then transferred 90 miles by truck to the West Hawai'i Landfill.

Hazardous Materials. A number of hazardous material concerns were identified during the Phase 1 - Environmental Site Assessment conducted at Hilo Harbor in 2000. There are a large number of aboveground and underground storage tanks in the harbor vicinity and a large system of piping that carries petroleum from ships at the piers to the storage tanks. Leaking tanks and piping system are a potential source of contamination of the soil and groundwater in this area. No evidence was noted to verify this possibility, since no sub-surface investigations were performed for the Phase I Environmental Site Assessment. If fuel hatches at Piers 2 and 4 with associated underground pipelines are required further exposure to contamination will result.

Some of the existing buildings at the harbor contain asbestos-containing materials. No thorough study was performed to determine the extent of the presence of asbestos or lead-based paint. (R.M. Towill Corporation, RMTC, 2000). Appropriate mitigative measures will need to be taken prior to proposed improvements, like those at Pier 1 where a portion of an existing shed's roof will be replaced and interior modifications will be made.

Noise Impacts. Unavoidable, but temporary noise impacts will be generated during the construction of all of the proposed harbor improvement projects. The quality of the acoustic environment may be degraded to unacceptable levels during periods of construction because noise from construction activities is predicted to be audible at adjoining properties. However, none of these noise impacts will occur within the standard 50 feet from a noise sensitive receptor. Construction related noise will be generated by on-site equipment, (pumps, generators, compressors, jack hammers, rock drills, demolition equipment, and power tools) and vehicles (i.e.; trucks, front loaders, backhoes, tractors, graders, pavers or concrete mixers). Installation of steel sheet piles is proposed for Pier 4 and may be used for the construction of the future Pier 4 extension and the new Pier 5. At these project sites the anticipated noise levels generated will range from 80 dB at a 1,000 foot distance to 90 dB at a 250 foot distance, without mitigation measures (Ebisu, 1999).

Future noise sources include harbor vehicles such as heavy trucks, forklifts, sweepers, and buses for conduct of maintenance activities and transport of materials and personnel to and from harbor projects. Mechanical equipment such as emergency electrical generators, air conditioning cooling towers, air-conditioning compressors, exhaust fans, and other ventilation systems will be the primary fixed on-site noise sources expected to be located at the harbor project sites. Tour buses entering the proposed passenger terminal at Pier 5 will increase traffic noise when cruise ships arrive and depart. Cruise ship whistles or horns at approximately 85 dB (at a 1,000 foot distance) will be audible to residences along Keaa Street, south of the harbor.

Air Quality. In the short-term, air quality will be impacted primarily by construction activities at the project sites. Heavy equipment and construction vehicular activity will increase pollutant concentrations at the project sites and adjacent streets. Construction activities will generate fugitive dust emissions resulting in an increase of particulate matter (PM₁₀) levels in the project area. Carbon monoxide emissions from large diesel engines are generally about equal to those from a single automobile; however nitrogen dioxide emissions can be quite high. Fortunately, nitrogen dioxide from other sources in the area should be relatively low, so the overall impact of exhaust pollution from construction equipment should be minor.

Water Quality. During construction of all of the proposed improvement projects there is ongoing concern of the potential for leakage of petroleum or other toxic liquid bulk materials into the harbor, as discussed in the Hazardous Material section.

During construction of all of the proposed improvement projects a temporary increase in turbidity in the water column when the bottom area of the harbor is disturbed by dredging and pier construction is expected. Turbidity also occurs during rough ocean conditions and when vessels enter or leave the harbor. Secondary impacts could include lowering of the Dissolved Oxygen (DO) levels and an increase in nitrogen and phosphorus levels in the disturbed area due to mixing of bottom sediments into the water column.

Construction activities that require dewatering in areas that may contain petroleum hydrocarbons may prompt the need for water treatment prior to release of the water to surface water or groundwater sources.

Alien Species. Proposed harbor improvements come with the drawback of increasing the probability of marine alien species entering the island by vessel traffic. This may impact nearshore marine ecosystems by displacing Hawaiian marine species. Alien species can be introduced a number of ways; 1) through cargo operations, 2) through ballast water discharge from a ship, 3) by release of "graywater" (water from drains on ships that can contain harmful chemicals), 4) by attaching to the bottom of ships' hulls in what is known as "hull-growth."

Nearly all of the overseas goods destined for Hawaii are received and inspected at Honolulu Harbor. The goods are then transferred to inter-island vessels rather than foreign vessels and transported to harbors on the Island of Hawaii. Consequently, Pier 4 improvements will not significantly increase the threat of alien species introduced at Hilo Harbor, because it will be used primarily for cargo that has already been inspected. The threat of alien species transported by water ballast discharge is also low because 99% of cargo vessels visiting Hilo Harbor are inter-island barges and tugboats and any ballast water in these vessels contains only local seawater. The ballast water is still somewhat of a threat because all organisms less than one centimeter in size that are adjacent to the vessel either swimming, stirred up from bottom sediments, or rubbed off harbor pilings could be ballasted into a vessel. Such organisms include viruses, bacteria, protozoa, fungi, algae, plants, zooplankton and fish. Plants that are commonly found in ballast

water include phytoplankton, especially diatoms and dinoflagellates. Ciguatera toxin is a poison caused by the nonindigenous marine dinoflagellate *Gambierdiscus toxicus*, which is found in association with certain red and brown algae. *Gambierdiscus toxicus* poisons fish and can cause poisoning in humans when contaminated fish are consumed.

Cruise ships might discharge graywater into harbors which is why monitoring of this is a function of the U.S. Coast Guard.

- 7. A discussion on the potential impacts from invasive species as a result of the construction of the additional pier at Hilo Harbor, both during and after construction, should be provided. This information may include the proposed implementation of a "Hazard Analysis and Critical Control Point" (HACCP) plan to manage the risk of invasive species introduction and spread. The USFWS also suggests the discussion of a biosecurity facility at Hilo Harbor to mitigate against impacts from invasive species from both marine and terrestrial environments.**

Nearly all of the overseas goods destined for Hawai'i are received and inspected at Honolulu Harbor. The goods are then transferred to interisland barges rather than foreign vessels and transported to the commercial harbors on Hawai'i Island. Consequently, the Pier 4 Interisland Barge Terminal project will not in itself significantly increase the threat of alien species introduced at Hilo Harbor, because it will be used primarily for cargo that has already been inspected.

DOT-H will continue to work with the Hawai'i Department of Agriculture (DOA) for the placement of space for potential biosecurity facilities in Hilo Harbor as well as other commercial harbors in the state. In addition, DOA has identified a potential site for its facility located offsite from Hilo Harbor. Implementation of HACCP as a method of invasive species management is at the discretion of DOA and not in DOT-H jurisdiction

- 8. A discussion on the discharge of stormwater from the pier and surrounding work areas and the stormwater management plan which will be implemented to prevent direct discharge into Hilo Harbor may be provided.**

To address stormwater runoff during construction, a NPDES permit was obtained from the Department of Health on July 23, 2013. Permanent Best Management Practices (BMPs) will also be implemented once construction is completed. A trench drain filter will be installed in three segments of the Pier 4 trench drain to clean any trash and debris, sediments, total suspended solids (TSS), as well as oils and grease including various hydrocarbons. The filter will be inspected monthly, as well as prior to any forecasted storms and after any major storm event. In addition, DOT-H will meet with the tenants utilizing Pier 4 and the adjacent container yard to inform them of additional BMP recommendations, such as vehicle maintenance to mitigate leaks, and proper storage of any metals, and materials associated with the operation and maintenance of equipment such as oil, fuel and hydraulic fluid leakage.

9. **As with #7 and #8 above, those items as well as other Best Management Practices will be considered within the proposed mitigation for the permanent and temporary impacts during construction of Pier 4. A description of all proposed mitigation must be presented in a detailed but direct and organized mitigation plan. If, after the survey of aquatic resources is completed and the analysis of direct, indirect, and cumulative impacts is presented, it is determined by the Corps that compensatory mitigation is necessary, a detailed compensatory mitigation plan must be provided by the applicant.**

The *Preliminary Site-Specific BMP Plan* (i.e., temporary, during construction) has been updated and is included as Attachment F (attached) on the application. Proposed permanent BMPs are described in number 8 of this letter. An in-water survey will be conducted and an updated biological assessment report will be provided and is described in number 5 of this letter.

10. **Finally, FEMA requested a review of the City and County of Honolulu Flood Insurance Rate Maps to ensure compliance with the National Flood Insurance Program requirements. Specifically, FEMA emphasizes the construction of Pier 4 and associated facilities must not increase base flood elevation levels and requires a hydrologic and hydraulic analysis to demonstrate that the development would not cause any rise in base flood levels.**

The base flood elevation (BFE) is a computed elevation to which floodwater is anticipated to rise during the base flood. BFEs are shown on the Flood Insurance Rate Maps (FIRMs) and on the flood profiles. The effective FIRM for Hilo Bay is based on a 1970s tsunami inundation study prepared by USACE. The impact of the proposed 600-foot long by 54-foot wide Pier 4 on the regional Hilo Bay coastline will be negligible. The BFE at the Pier 4 project site is twelve based on the current FIRM map, the construction of Pier 4 and associated facilities will not increase the BFE.

Additional information is also requested by the Corps at this time to aid in required consultations. Specifically, this is for Section 7 of the Endangered Species Act (ESA) consultation and Section 106 of the National Historic Preservation Act (NHPA) consultation:

For consultation on species protected under the ESA, information on the effects of exposure to elevated noise levels on ESA-listed marine species that can be reasonably expected by the proposed project activities needs to be evaluated. Information is needed on the expected sound levels from activities such as pile driving and other in-water work.

The short-term construction-related effects on noise levels are increased noise generated by on-site equipment and vehicles. The loudest expected noise source during construction will be from predrilling operations for the concrete piles. The highest estimated sound

level from drilling rock in water in unweighted decibels (dB) is about 178 peak pressure). The pressure is referenced to 1 micropascal at 1 meter. Source: *Acoustic Analysis of Potential Impacts from the Kona Kai Ola Construction Project*, Marine Acoustics, Inc., June 2007.

The Marine Acoustics report referenced above recommended a 300 meter (984 feet) clear zone for marine mammals and sea turtles. No threatened or endangered species have been observed in the project area either during preliminary surveys or during the prior (2011-2012) dredging operation, and of these species, only sea turtles are likely to utilize the area for foraging. Therefore, if one is observed nearby during predrilling for the concrete piles, the Contractor shall stop work until the sea turtle leaves the area.

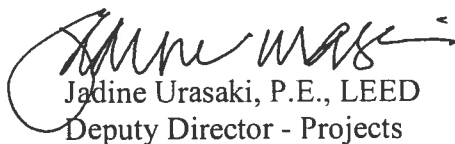
Two separate sets of silt or turbidity curtains are proposed to control the spread of sediment and turbidity during in-water construction. One set will encompass the area of work, and the other will surround the barges. The silt curtains will also create a barrier to protect sea life from entering an area of potential harm. Coordination with the U.S. Fish and Wildlife Service and National Marine Fisheries Service will be maintained during project construction.

For consultation under Section 106 of the NHPA, additional information on "Site 22486," as discussed in the DA permit application, is required. Until it is known if this site is still present within the project area, an effects determination on historic and/or cultural properties cannot be made. Any documentation from the 2001 Master Plan or an archaeological survey should be supplied if available to continue coordination with the State Historic Preservation Division.

The initial historical significance assessment by Haun and Associates was finalized on January 30, 2001 when the Department of Land and Natural Resources, State Historic Preservation Division (SHPD) granted concurrence of this assessment. The SHPD letter is attached.

Please advise whether additional information is needed to process the permit application. If you have any questions, please call Carter Luke, Harbor Engineering Program Manager at (808) 587-1861.

Sincerely,



Jadine Urasaki, P.E., LEED
Deputy Director - Projects

Attachments

c: Mitsunaga & Associates, Inc.