

SPECIFICATIONS AND PROPOSAL

FOR

REPAIR DISTRICT OFFICE,

HILO HARBOR, HAWAII, HAWAII

JOB H. C. 50134

**STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HARBORS DIVISION**

ARTICLE I - PROJECT DESCRIPTION

1.1 GENERAL - The work to be done on this project includes furnishing all labor, materials and equipment necessary to perform wood and concrete repairs at the office at Hilo Harbor, Hawaii.

Bidders are advised to examine the existing conditions at the proposed project site to familiarize themselves with the nature and extent of work involved and working conditions. Appointments may be made with the Harbors Division Project Engineer for clarification of the work involved or definition of the limits of the work.

Approximate repair locations are indicated on the plans. Actual methods of repair may vary from that indicated on the drawings. The Harbors Division Construction Engineer reserves the right to alter repair methods, sizes, and locations to suit field conditions.

1.2 SCOPE OF WORK - The work to be done includes, but is not necessarily limited to, the following major items of work:

- A. Mobilization and demobilization.
- B. Providing a Best Management Practices (BMP) Plan
- C. Performing repairs to wood framing members.
- D. Performing repairs to spalled concrete post base pedestals.

1.3 LICENSING

To be eligible for award, bidders must possess a valid State of Hawaii General Engineering Contractor "B" license at the time of bid opening.

1.4 HARBOR OPERATIONS AND WORK SCHEDULE - The Contractor shall coordinate its work so as to minimize interference with harbor operations. The work schedule shall be coordinated with the Harbors Division Hawaii District Manager and the Construction Engineer and shall be subject to their approval. All work shall be scheduled to minimize interference with any operations in the project area.

Careful coordination of the work will be required to allow continuous use of the project location and adjacent areas. The Contractor shall be responsible for coordination with the tenants and the Harbors Division on a daily basis regarding scheduling of all work at no additional cost to the State.

The ramp on the north end of the building may be out of service during repairs. Contractor shall notify the tenants of the shutdown at least 2 weeks prior and shall install appropriate signage.

All work shall be scheduled with the Harbors Division Hawaii District Manager, and the Harbors Division Construction Engineer. The Contractor shall give the Harbors Division Hawaii District Manager and the Construction Engineer at least 2 weeks prior notice whenever its work will turn of any utilities to the office.

1.5 HARBOR SECURITY - The Contractor shall submit required documentation of all Contractor and subcontractor's employees, their representatives, suppliers, manufacturers, and alike, and of all necessary vehicles needing access to the project site to the Harbors Division Construction Engineer and Hawaii District Manager before starting work on the project. The documentation will include the following:

- A. Authorized personnel's first name, middle initial(s), and last name by company name.
- B. Vehicle(s) license plate number(s) by company name.
- C. The Contractor may be directed to use a specified entrance to enter and exit the harbor. Upon every entry, each employee must present and possess a photo identification (ID) card.
- D. All Contractor's and sub-contractor's employees, their representatives, suppliers, manufacturers, and authorized personnel needing access to the project site shall wear their photo ID card at all times.
- E. Contractor's vehicles must be identified with a company logo and will be subject to search. Any employee's personal belongings will also be subject to search.
- F. If the Contractor wishes to remove any fencing or open any locked gates, they shall coordinate with and request approval from the Harbors Division Construction Engineer and Hawaii District Manager. If approval is granted, the Contractor shall then be responsible for securing open fencing or gate(s) immediately after entering, or posting security personnel to monitor ingress and egress. Inspections of vehicles and equipment moving through the access points will be done in accordance with current MARSEC level and directives.
- G. If security personnel are required, the Contractor shall hire the same contract security that provides service to the State of Hawaii, Department of Transportation, Harbors Division. In the event that the security contract for Harbors changes, contractor must hire the new security contractor.
- H. By the end of each day, the Contractor shall re-erect and restore all fencing/barrier/perimeter security measures to the satisfaction of the Harbors Division Construction Engineer and the Hawaii District Manager. Electricity and lighting shall also be restored and in satisfactory working order, to no less than pre-construction conditions, by the end of each day, to the satisfaction of the Harbors Division Construction Engineer and District Manager.

- I. Under no circumstances shall perimeter security be compromised. If determined by the State, and solely by the State, that the contractor has left the project site in a condition that compromises security of the harbor, the State reserves the right to make the necessary arrangements to provide and enhance perimeter security, including restoration of electrical power and lighting, at the sole expense of the Contractor.
- J. At times, the maritime security level for the State of Hawaii and/or the general color-coded security level for State of Hawaii may be temporarily elevated. In these events, the contractor may be prohibited to access the project site and may be required to stop work as directed by either the Harbors Division Construction Engineer or Hawaii District Manager. The Harbors Division will consider impacts to the work and schedule as a result of prolonged work stoppages.
- K. Maritime Security Awareness training is mandatory for all personnel entering the Harbor facility. The Contractor shall be responsible to ensure all of its employees, representatives, subcontractors, vendors, and all alike, requiring access to the harbor area for this project, have been trained and possess the required maritime security card before entering the Harbor's property. Prior to starting work on this project, the Contractor shall provide a list of names (full legal name) and birth dates of all employees, representatives, subcontractors, vendors, and all alike, as well as their vehicles license number, year, make, color and model that will be entering the project site, together with a letter attesting that all personnel have received this training to the Harbors Division Hawaii District Manager and Construction Engineer. All employees, representatives, subcontractors, vendors, and all alike, shall wear their respective company's identification card bearing the company's name, the individual's first and last name, and middle initial(s), and a recent photograph of the individual on the front of the identification card at all times while on Harbor's property.

With the possible exception of Item J above, all other requirements indicated shall be considered incidental to the project and shall be provided by the contractor at no cost to the State.

The Contractor's personnel requiring unescorted access to secure areas of maritime facilities will be required to obtain a Transportation Worker Identification Credential (TWIC). The project area has been deemed to be within a secured area. TWIC was established by Congress through the Maritime Transportation Security Act and is administered by the Transportation Security Administration (TSA) and U.S. Coast Guard. To obtain a TWIC, the applicant must provide biographic and biometric information such as fingerprints, sit for a digital photograph and successfully pass a security threat assessment conducted by TSA. The Contractor will be responsible to obtain and pay for all costs associated in providing their appropriate employees with TWIC. Information regarding TWIC is available on the TSA website at http://www.tsw.dhs.gov/what_we_do/layers/twic/index/shtm.

1.6 STORAGE AREA - Arrangements for work and storage areas shall be made with the Harbors Division Hawaii District Manager and the Construction Engineer. The Contractor shall

be responsible for maintaining the work and storage areas and, if necessary, shall restore these areas to their original condition at no cost to the State in the event any damage results from its operations.

1.7 LIABILITY AND RESPONSIBILITY - The Contractor shall provide, erect and maintain warning signs, lights, barricades, fences, watchmen and/or all other means as necessary to prevent unauthorized persons from wandering onto the job site where they may suffer injury or create a hazard to the construction operations or the work in progress. The Contractor shall also take all reasonable precautions for safety in its operations and to prevent injury to its employees and to others at the job site.

The Contractor shall be responsible for any and all damages to harbor facilities caused by its operations. The Contractor shall, at its own expense, make prompt restitution for damages to the harbor facility caused by its operations or negligence. The Contractor shall hold the State harmless from all claims for loss or injury.

The Contractor shall remove defective work and replace the required work at no cost to the State.

The Contractor shall verify conditions in the field prior to ordering any materials. The existing conditions are based on the best available information. The Contractor shall make no claim for extra compensation should actual existing conditions differ from those shown on the plans and specifications.

1.8 PERMITS - The Contractor will require permits for all welding and burning operations, if welding is contemplated. The Contractor shall obtain the required work permits from the Harbors Division Hawaii District Manager.

A Building Permit from the County of Hawaii will not be required for this project.

1.9 BEST MANAGEMENT PRACTICES - The Contractor must follow standard best management practices for air pollution, water pollution, noise and solid waste control, as required by Federal, State and County regulations, to protect the environment from the effects of construction activity, including prohibiting any construction debris or other deleterious materials to fall, flow or otherwise enter the water.

The Contractor shall submit a best management practices (BMP) plan to the Harbors Division Construction Engineer before work is started. The plan shall describe and detail all methods and procedures to be used to prevent air and water pollution, including preventing any materials, wastes and debris from entering the water to the satisfaction of the Harbors Division and the State of Hawaii Department of Health (DOH). The Contractor shall revise the plan should it be determined by the Harbors Division Construction Engineer and DOH that the plan is insufficient to prevent pollution of the waters at no additional cost to the State.

1.10 APPROVED EQUAL - The term “approved equal” as used in these specifications refers to the use of alternate equipment, articles or materials of equal quality and characteristics for the purpose intended. An approved equal will be permitted, upon approval of the Director prior to bid opening, in accordance with the General Provisions.

1.11 STANDARD SPECIFICATIONS - The term "Standard Specifications" as used in these Technical Provisions of these Specifications, shall mean the "Hawaii Standard Specifications for Road and Bridge Construction, 2005, Department of Transportation Highways Division, Honolulu, Hawaii."

1.12 PROJECT COMPLETION TIME - All work on this project shall be completed within FORTY (40) working days from the date indicated on the Notice to Proceed from the Department of Transportation, Harbors Division.

1.13 FAILURE TO COMPLETE ON TIME AND LIQUIDATED DAMAGES - The Contractor shall complete the work within the time specified in the solicitation. The time shall commence from the date indicated in the “Notice to Proceed” letter from the Harbors Division Construction Engineer.

Completion of the work within the required time is important since delay in the prosecution of the work will inconvenience the public and interfere with business.

If the Contractor fails to complete the work on time, damages will be sustained by the State. Since the amount of damages, exclusive of the actual cost of engineering, inspection and superintendence, including necessary travel expenses, are difficult, if not impossible of definite ascertainment and proof, damages are hereby agreed upon, liquidated and fixed at the appropriate sum set forth in the Schedule of Liquidated Damages below for each and every working/calendar day which the Contractor has delayed in the completion of the project; and the Contractor shall pay that amount as liquidated damages and not by way of penalty; and in case the same are not paid, the State may deduct the amount thereof from any monies due or that may become due the Contractor.

If the work called for under the project is not finished and completed in all parts and requirements within the time specified, the State shall, in addition to the right to assess the Contractor liquidated damages, assess the Contractor and deduct from any payment, the actual cost of engineering, inspection and superintendence, including necessary traveling expenses which are directly chargeable to the project and which occur during the period of the delay, except that the cost of final surveys and the preparation of final estimates shall not be included in such charges.

SCHEDULE OF LIQUIDATED DAMAGES			
Total Amount Including Extras		Amount of Liquidated Damages	
For More Than	To and Including	Per Working Day	* Per Calendar Day

\$0.00	\$25,000.00	\$63.00	\$45.00
\$25,000.00	\$50,000.00	\$105.00	\$75.00
\$50,000.00	\$100,000.00	\$154.00	\$110.00
\$100,000.00	\$500,000.00	\$210.00	\$150.00
\$500,000.00	\$1,000,000.00	\$315.00	\$225.00
* This schedule to be used only when the work is not completed within the specified number of calendar days			

1.14 AS BUILT DRAWINGS - The Contractor shall keep one set of drawings at the job site and make all field changes thereon. After completion of the project, two (2) sets of drawings marked up with all the field changes shall be submitted to the Harbors Division Construction Engineer.

1.15 PAYMENT - Payment shall be made as specified below. Such payment shall include furnishing all labor, material, equipment and other expenses required to complete each item in accordance with the plans and specifications. The Best Management Practices (BMP) plan, including temporary water pollution, dust, and erosion measures shall be considered incidental to the pay item below.

Item 1 – Office Repairs. Payment shall be made at the lump sum price bid in the HIePRO solicitation. Such payment shall include the repair of the items shown on the project plans including post base spall repairs (12 ea.); floor stiffening at pipe penetrations (4 locations); plank ledger repairs (5 ea.) plank; broken plank repair (1 ea.); fascia beam replacement (63 lineal ft.); and cracked fascia beam repair (12 lineal ft.); and all other incidental work required to complete this item.

ARTICLE II - MOBILIZATION AND DEMOBILIZATION

2.1 GENERAL - The work consists of furnishing at the job site, plant, equipment, materials, labor and appliances and performing all work in connection with mobilization and demobilization for the job in accordance with this article of the specifications.

2.2 DESCRIPTION

- A. Mobilization shall include setting up, ready for use, all plant, equipment and necessary materials at the job site.
- B. Providing temporary barricades as required for Harbor operations during construction.
- C. Demobilization shall include the removal of all the Contractor's plant and equipment and surplus material from the job site. The cleanup of the job site, satisfactory to the Harbors Division Construction Engineer, shall also be included in this article.

2.3 PAYMENT - Payment for Mobilization and Demobilization shall not be measured and paid for separately but shall be considered incidental to the applicable item described in Article I of these Specifications.

ARTICLE III – TEMPORARY STORMWATER POLLUTION, DUST, AND EROSION CONTROL

3.1 DESCRIPTION - This section is required for all work, including the Contractor's storage sites. It describes the following:

- A. A detailed site-specific Best Management Practice (BMP) Plan including diagrams and narratives; constructing, maintaining, and repairing temporary stormwater pollution, dust, and erosion control measures at the project site including local material sources, work areas and access roads; removing and disposing of wastes and hazardous wastes; and control of fugitive dust (defined as uncontrolled emission of solid airborne particulate matter from any source other than combustion). Additionally, all projects at Honolulu and Kalaeloa Barbers Point Harbors are subject to State of Hawaii, Department of Transportation (HDOT) Harbors Division, Storm Water Management Plan (SWMP) requirements, unless exempted, and are subject to Harbors BMP inspections. If any requirement conflicts with those administered by State of Hawaii, Department of Health (HDOH), the contractor shall follow the more stringent requirement.
- B. Compliance with applicable federal and other state permit conditions.
- C. Work associated with dewatering and hydrotesting activities and compliance with conditions of the NPDES general permit coverage authorizing discharges associated with construction activity dewatering and hydrotesting.
- D. An application has been submitted to the US Army Corps of Engineers to obtain the necessary environmental permits to perform the work. In addition to the BMP's described in this Section, the Contractor shall also follow all additional BMP's required by the environmental permit. More information will be provided at the pre-bid meeting.

3.2 GENERAL REQUIREMENTS - In order to provide for the control of water pollution, dust, and erosion arising from the construction activities of the Contractor and his subcontractors in the performance of this contract, the work performed shall comply with all applicable federal, state, and local laws and regulations concerning water pollution control including, but not limited to, the following regulations:

- A. State of Hawaii, HDOH Hawaii Administrative Rules (HAR) Chapter 11-54 – Water Quality Standards and Chapter 11-55 – Water Pollution Control.
- B. For Oahu projects ONLY, HDOT Harbors Division, Storm Water Management Plan.
- C. For Oahu projects ONLY, City and County of Honolulu (CCH), Rules Relating to Soil Erosion Standards and Guidelines.

- D. For Oahu projects ONLY, CCH, Storm Water BMP Manual for Construction.
- E. 40 CFR Part 110, Environmental Protection Agency (EPA) Discharge of Oil.
- F. 40 CFR Part 117, EPA Determination of Reportable Quantities for Hazardous Substances.
- G. 40 CFR Part 261, EPA Identification and Listing of Hazardous Waste.
- H. 40 CFR Part 302, EPA Designation, Reportable Quantities, and Notification.
- I. 49 CFR Part 171, U.S. Department of Transportation Hazardous Materials Regulations.

3.3 MATERIALS - Materials shall conform to the following when applicable:

- A. Slope Drains. Slope drains may be constructed of pipe, fiber, mats, erosion control fabric, geotextiles, rubble, Portland cement concrete, bituminous concrete, plastic sheets, or other materials acceptable to the Harbors Division Construction Engineer.
- B. Grass. Grass shall be quick growing species such as rye grass, Italian grass, or cereal grasses. Grass shall be suitable to the area and provide a temporary cover that will not compete later with permanent cover. Alternative grasses are allowable if acceptable to the Harbors Division Construction Engineer.
- C. Fertilizer and Soil Conditions. Fertilizer and soil conditioners shall be a standard commercial grade acceptable to the Harbors Division Construction Engineer.
- D. Silt Fences. Silt fences shall be synthetic filter fabric mounted on posts and embedded in compacted ground in compliance with American Society for Testing and Materials (ASTM) D6462, Standard Practice for Silt Fence Installation.
- E. Berms. Berms shall be gravel or sand wrapped with geotextile material. Alternate materials are allowable if acceptable to the Harbors Division Construction Engineer.
- F. Alternate materials or methods to control, prevent, remove, and dispose of pollution are allowable if acceptable to the Harbors Division Construction Engineer.

3.4 CONSTRUCTION

- A. Preconstruction Requirements.

1. Temporary Stormwater Pollution, Dust, and Erosion Control Meeting.
The contractor shall be required to submit a site-specific BMP Plan to the Harbors Division Construction Engineer and address all comments by the Harbors Division Construction Engineer. After the Plan is accepted in writing by the Harbors Division Construction Engineer, the Contractor shall schedule a meeting with the Harbors Division Construction Engineer before the start of construction work to discuss the sequence of work, and plans and proposals for water pollution, dust, and erosion control.
2. Temporary Stormwater Pollution, Dust, and Erosion Control Submittals.
The Contractor shall submit the site-specific BMP Plan for approval by the Harbors Division Construction Engineer prior to the start of work.
 - a. Written site-specific BMP Plan shall include the following as applicable:
 - 1) Identification of potential pollutants and their sources and other factors that may cause water pollution, dust, and erosion.
 - 2) A list of all material and heavy equipment to be used during construction. Vehicles and equipment shall be well maintained and free from any type of fluid leaks.
 - 3) Construction schedule.
 - 4) Name(s) of specific individual(s) designated responsible for water pollution, dust and erosion controls on the project site. Include home, business, and cellular telephone numbers, fax numbers, and e-mail addresses.
 - 5) Descriptions of the methods and devices used to eliminate certain pollutants (e.g., wastewater, fuels, solvents, detergents, toxic or hazardous substances) from discharging into state waters and drainage systems, and provide details of BMP to be installed or utilized. Indicate approximate dates when BMP will be installed and removed.
 - 6) Description of maintenance and subsequent removal of any erosion or siltation control devices.
 - 7) Method(s) of removal and disposal of solid and regulated hazardous wastes encountered or generated during construction. The Contractor is advised to procure regulated hazardous materials on an as-needed basis, as

feasible. All excess regulated hazardous materials at the conclusion of this project shall remain the property of the Contractor and shall be removed from HDOT Harbors Division property upon the completion of the project.

- 8) Method(s) of removing and disposing concrete and asphalt pavement cutting slurry, concrete curing water, and hydrodemolition water.
- 9) Method(s) of containing, removing and disposing of demolition dust and debris to minimize the discharge of these pollutants into state waters and drainage systems.
- 10) Spill kit contents and location.
- 11) Fugitive dust control, including dust from grinding, sweeping, or brooming off operations or combination thereof.
- 12) Method(s) of storing and handling of regulated hazardous materials (e.g. oils, paints) and other products used for the project. Safety Data Sheets (SDS) for all regulated hazardous materials used during construction activities shall be kept on-site throughout the duration of the project and readily available upon inspection. All containers of regulated hazardous materials should be provided with secondary containment during storage. Regulated hazardous materials not specifically needed in the execution of this project shall not be brought or stored on site. As feasible, the Contractor is encouraged to use products that do not contain any regulated constituents. The use of green products is encouraged.
- 13) Method(s) of concrete washout/waste control.
- 14) Method(s) of managing material stockpiles to minimize erosion and dust.
- 15) Good housekeeping practices.
 - a) Minimize tracking of sediment offsite from project entrances and exits.
 - b) Litter management. The Contractor shall have a comprehensive housekeeping policy and shall actively enforce housekeeping requirements.

Housekeeping items include, but are not limited to, cups, cans, bottles and other forms of lightweight litter, unattended containers of hazardous materials, concrete debris (e.g. dust, chips, and other sweepings), and discarded articles of disposable Personal Protective Equipment (e.g., earplugs, dust masks, and gloves). Employees who are specifically tasked with housekeeping duties shall be identified by name.

- c) The Contractor should provide and maintain covered waste receptacles. No construction debris or other refuse that is generated as a result of project activities is to be disposed in HDOT Harbors Division-owned waste receptacles.

16) Provide plan(s)/drawing(s) showing location of followings when applicable:

- a) Boundaries of the property and the locations where construction activities will occur, including:
 - i. Locations where earth-disturbing activities will occur (noting any sequencing of construction activities);
 - ii. Approximate slopes and drainage patterns with flow arrows before and after the construction;
 - iii. Locations where sediment, soil, or other construction materials will be stockpiled;
 - iv. Locations of any contaminated soil or contaminated soil stockpiles;
 - v. Locations of any crossings of state waters;
 - vi. Designated points on the site where vehicle will exit onto paved roads;
 - vii. Locations of structures and other impervious surfaces upon completion of construction; and

- viii. Locations of construction support activity areas covered by the permit.
 - b) Locations of all state waters, including wetlands and indicate which water bodies are listed as impaired.
 - c) The boundary lines of any natural buffers.
 - d) Topography of the site, existing vegetative cover, and features (e.g., forest, pasture, pavement, structures), and drainage pattern(s) of storm water onto, over, and from the site property before and after major grading activities.
 - e) Storm water discharge locations, including locations of any storm drain inlets on-site and in the immediate vicinity of the site to receive storm water runoff from the project; and locations where storm water will be discharging to state waters (including wetlands).
 - f) Locations of all potential pollutant-generating activities.
 - g) Locations of storm water control measures; and
 - h) Locations where chemicals will be used and stored.
- 17) Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Parts 110, 117, or 302, occurs during a 24-hour period. Contact information must be in locations that are readily accessible and available.
- 18) The Contractor shall date and sign the site-specific BMP Plan.
- b. The Contractor shall keep the approved Plan on-site or an easily accessible location throughout the duration of the project. Revisions to the Plan shall be included with the original plan. Modify contract documents to conform to revisions. Include actual date of installation and removal of BMP. Obtain written acceptance by the Harbors Division Construction Engineer before revising BMP. An updated Plan shall be kept on-site throughout the remainder duration of the project.

The Contractor shall follow guidelines in the “*The City and County of Honolulu Storm Water Best Management Practice Manual – Construction,*” (dated November 2011) in developing, installing, and maintaining BMP for the project. Additionally, the Contractor shall follow City and County of Honolulu *Rules Relating to Soil Erosion Standards and Guidelines* (dated April 1999) for all projects on Oahu, and use respective Soil Erosion Guidelines for Maui, Kauai and Hawaii County projects. Information can be found at the respective County websites.

B. Construction Requirements are as follows.

1. No work shall be allowed to begin until submittals detailed in Subsection 3.4.A.2 - Temporary Stormwater Pollution, Dust, and Erosion Control Submittals are completed and accepted in writing by the Harbors Division Construction Engineer. The Contractor shall prevent pollutants from entering state waters. These efforts shall address areas such as those that drain to water, are over water, or drain to storm drains in the area of the project site. The Contractor shall design, operate, implement, and maintain the Plan to ensure that storm water discharges associated with construction activities will not cause or contribute to a violation of applicable state water quality standards.
2. All projects at Honolulu and Kalaehoa Barbers Point Harbors are subject to HDOT Harbors Division SWMP requirements for construction at those harbors unless the project meets a specified exemption class. The requirements include, but are not limited to, construction site BMP initial, recurring (i.e. every two weeks from October through March and every two months otherwise), and final inspections at the frequencies outlined in the SWMP. No grading or land disturbance activities are allowed until the initial BMP inspection is completed and required BMPs are found to be properly installed.
3. Address all comments received from the Harbors Division Construction Engineer.
4. Modify and resubmit plans and construction schedules to correct conditions that develop during construction which were unforeseen during the design and pre-construction stages.
5. Coordinate temporary control provisions with permanent control features throughout the construction and post-construction period.
6. BMP shall be in place and operational until the construction is completed and accepted by Harbors.

7. Install and maintain either or both stabilized construction entrances and wheel washes to minimize tracking of dirt and mud onto roadways. Restrict traffic to stabilized construction areas only. Clean dirt, mud, or other material tracked onto the road immediately. Modify stabilized construction entrances to prevent mud from being tracked onto roadways.
8. Chemicals may be used as soil stabilizers for either or both erosion and dust control if acceptable to the Harbors Division Construction Engineer.
9. Cover exposed surface of materials completely with tarpaulin or similar device when transporting aggregate, soil, excavated material or material that may be a source of fugitive dust.
10. Cleanup and remove any pollutant that can be attributed to the Contractor.
11. Install or modify BMP due to change in the Contractor's means and methods, or for omitted condition that should have been allowed for in the accepted site-specific BMP Plan or a BMP that replaces an accepted site-specific BMP that is not satisfactorily performing.
12. Properly maintain BMP.
13. Remove, replace or relocate any BMP that must be removed, replaced or relocated due to potential or actual flooding, or potential danger or damage to the project or public.
14. The Contractor's designated representative specified in Subsection 3.4.A.2.a.(4) shall address any BMP concerns brought up by the Construction Engineer within 24 hours of notification, including weekends and holidays. Should the Contractor fail to satisfactorily address these concerns, the Harbors Division Construction Engineer reserves the right to employ outside assistance or use the Harbors Division Construction Engineer's own labor forces to provide necessary corrective measures. The Harbors Division Construction Engineer will charge the Contractor such incurred costs plus any associated project engineering costs. The Harbors Division Construction Engineer will make appropriate deductions from the Contractor's monthly progress estimate. Failure to apply BMP shall result in either or both the establishment and increase in the amount of retainage due to unsatisfactory progress or withholding of monthly progress payment. Continued failure to apply BMP may result in one or more of the following: the Contractor being fully responsible for all additional costs incurred by HDOT Harbors Division including any fines levied by HDOH, suspension of the Contract, or cancellation of the Contract.

- C. **Hydrotesting Activities.** If work includes removing, relocation or installing waterlines, and the Contractor elects to flush waterline or discharge hydrotesting effluent into state waters or drainage systems, obtain a Notice of General Permit Coverage (NGPC) authorizing discharges associated with hydrotesting waters from the HDOH Clean Water Branch (CWB). If a permit is required, prepare and submit permit application (CWB-Notice of Intent (NOI) Form F) to the HDOH CWB.

Do not begin hydrotesting activities until the HDOH CWB has issued a NGPC. Hydrotesting operations shall be in accordance with conditions in the NGPC. Submit a copy of the NPDES Hydrotesting Waters Application and Permit to the Harbors Division Construction Engineer.

- D. **Dewatering Activities.** If excavation or backfilling operations require dewatering, and the Contractor elects to discharge dewatering effluent into state waters or existing drainage systems, obtain an NGPC authorizing discharges associated with construction activity dewatering from the HDOH CWB. If a permit is required, prepare and submit permit application (CWB-NOI Form G) to the HDOH CWB.

Do not begin dewatering activities until the HDOH-CWB has issued an NGPC. Conduct dewatering operations in accordance with the conditions in the NGPC. Submit a copy of the NPDES Dewatering Application and Permit to the Harbors Division Construction Engineer.

3.5 PAYMENT - Payment for Temporary Stormwater Pollution, Dust and Erosion Control shall not be measured and paid for separately but shall be considered incidental to the applicable item described in Article I of these Specifications.

No progress payment will be authorized until the Harbors Division Construction Engineer accepts in writing the site-specific BMP Plan or when the Contractor fails to maintain the project site in accordance with the accepted BMP Plan.

The Contractor shall reimburse the State of Hawaii within 30-day for the full amount of all outstanding costs incurred by the State of Hawaii for all citations or fines received as a result of the Contractor's non-compliance with regulations.

ARTICLE IV – CONCRETE SPALL REPAIR WORK

4.1 GENERAL

- A. Work under this Article includes furnishing all labor, materials and equipment necessary to repair the spalled concrete post bases at the office ramp.
- B. In general, the work includes, but is not necessarily limited to, the following:
 - 1. Removal of loose and deteriorated concrete surrounding reinforcing steel in the designated repair areas.
 - 2. Preparing concrete repair area.
 - 3. Cleaning reinforcing steel to remain.
 - 4. Applying reinforcing steel coating to all existing reinforcing steel.
 - 5. Installing formwork.
 - 6. Placing concrete.
 - 7. Removing formwork.
- C. All work shall be in accordance with the following sections of the Standard Specifications except as modified or supplemented herein:

Section 503 Concrete Structures
Section 601 Structural Concrete
Section 602 Reinforcing Steel
Section 711 Concrete Curing Materials and Admixtures

Sections on Materials referenced in the above sections are hereby incorporated.

4.2 MATERIALS

- A. Concrete for form and pour repairs shall be Planitop 15 by Mapei, Sikacrete 211 SCC Plus by Sika, FX-261 by Simpson Strong-Tie, or approved equal. Precast concrete pier blocks with metal brackets may be used as an alternate to form and pouring concrete pedestals.
- B. Reinforcing Steel Anti-Corrosion Coating – Anti-corrosion coating with a minimum 7-day open time for reinforcing steel shall be Mapefer 1K by Mapei, Sika Armatec 110 Epocem by Sika, FX-408 by Simpson Strong-Tie, or approved equal.

- C. Epoxy Grout - Epoxy for grouting of dowels shall be Set XP by Simpson Strong-Tie Co., Sikadur AnchorFix-3001 by Sika Corp, or approved equal.
- D. Curing Compound for concrete repairs on shall be approved by the Harbors Division Construction Engineer.
- E. Forms shall conform to Section 503.03.C “Forms” of the Standard Specifications.
- F. Snap ties and inserts shall be plastic or stainless steel. All loose reinforcing steel shall be secured with ties at all intersections with adjacent reinforcing steel.

4.3 CONSTRUCTION METHODS

- A. Surface Preparation – The locations of post base spall repairs as specified on the drawings are intended to be approximate only. The actual amount and location of repairs shall be determined in the field. Removal and surface preparation shall be performed in the order listed below.
 1. All visible loose and deteriorated concrete shall be removed with suitable pneumatic or hand tools until only sound concrete remains.
 2. Such chipped areas and adjoining areas shall be further sounded by tapping with a light hammer. Areas emitting a hollow sound indicating unsound and delaminated concrete with voids shall be further chipped to sound concrete and beyond the extent of the corroded reinforcing.
 3. Partially exposed reinforcing steel or steel exposed during the concrete chipping process shall be fully exposed throughout their length within the repair area. There shall be a minimum of 3/4 inch of clear distance between the reinforcing steel and the chipped surface of the existing concrete for placing new patching compound or concrete.
 4. The edges of the repair shall be saw-cut and chipped as necessary to attain a minimum repair material depth of 3/4 inch and to prevent featheredge conditions.
 5. The repair area shall be cleaned of all dust and debris just prior to patching with high pressure, oil-free compressed air at a minimum of 100 psi with appropriate PPE’s and containment.
- B. Live Load Limitation - Any post base being repaired shall not be subjected to live loads during the period starting from the removal of existing concrete until the repair concrete has been allowed to cure for 24 hours. The Contractor shall provide shoring for severely spalled areas as necessary to prevent damage or collapse. When the ramp is shut down, Contractor shall provide signage including the following language “The ramp is closed for repairs. For accessible access to the Harbors Division Office, call 808-933-8850”.

- C. Cleaning Reinforcing Steel - All exposed concrete and reinforcing steel in the repair area shall be needle gunned to remove all scale, loose rust, debris and other bond-inhibiting materials. Any areas not patched more than 48 hours after cleaning shall be recleaned.
- D. Reinforcing Steel Coating - All exposed steel shall be liberally coated with anti-corrosion coating per manufacturer's recommendations.
- E. Epoxy Grouting - Blow holes completely clean of all concrete debris to allow for adequate bonding of the epoxy. The holes shall be filled with epoxy gel before inserting and turning the supplemental reinforcement to displace the grout.
- F. Formwork - Formwork shall be installed in accordance with Section 503.03.C - "Forms" of the Standard Specifications. The exact method of formwork requires the Harbors Division Construction Engineer's approval. All edges of new concrete repairs shall be chamfered.
- G. Patching Compound - The Contractor shall follow the manufacturer's recommendations for mixing and placing patching compound, including application of a slurry coat to prime the substrate and application of the repair material in lifts.
- H. Finish - Concrete finish shall match the existing concrete finish.
- I. Concrete Curing - Concrete repairs shall be cured by covering the surface with a curing compound approved by the Harbors Division Construction Engineer.
- J. Defective Work - After forms have been removed, the new repaired area shall be tested by tapping with a hammer. Any "hollow" sound emitted shall indicate the presence of voids and shall be sufficient cause for removal of new work and reconstruction. The method of repairing defects shall be subject to the approval of the Harbors Division Construction Engineer. All defects shall be corrected by the Contractor at no additional cost to the State.

4.4 PAYMENT - Payment for concrete spall repair work shall not be measured and paid for separately but shall be considered incidental to the applicable item described in Article I of these Specifications.

ARTICLE V – WOOD REPAIRS

5.1 GENERAL

- A. Work under this Article includes furnishing all labor, materials and equipment necessary to perform wood repairs as indicated on the drawings and specified herein. In general, the work includes, but is not necessarily limited to, the following:
 - 1. Adding blocking to stiffen floor planks at pipe penetrations.
 - 2. Repairing damaged floor planks including deteriorated edges.
 - 3. Repairing cracked or deteriorated fascia beams
- B. **Delivery and Storage:** Keep materials dry at all times. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber and provide air circulation within stacks.
- C. **Coordination:** Fit carpentry work to other work; scribe and cope as required for accurate fit. Correlate location of furring, rough bucks, blocking, and similar supports to allow proper attachment of other work.

5.2 MATERIALS

- A. **Grading Marks:** Factory mark each piece of lumber with type, grade, mill, and grading agency identification. Certificate of inspection and grading by a recognized agency may be submitted with each shipment in lieu of factory marking, at Contractor's option.
- B. **Framing Lumber:** Unless otherwise indicated on the structural drawings, all framing lumber shall be No. 1 Grade, Douglas Fir, (WCLB or WWPA).
- C. **Plywood:** Plywood floor sheathing shall be 3/4" tongue and groove APA rated sheathing, exposure 1, 48/24 span rating.
- D. **Fasteners and Anchorages:** Provide size, type, material, and finish as recommended by applicable standards, complying with applicable Federal Specifications and ANSI for nails, staples, screws, bolts, nuts, washers, and anchoring devices.
- E. Prefabricated framing hardware shall be Simpson Strong-Tie with ZMAX Coating, or approved equal. Install per manufacturer's printed installation instructions.
- F. **Roofing Felt** – Place a layer of 30# roofing felt between all wood members and concrete or masonry surfaces.

- G. Cold Galvanizing Compound – Cold galvanizing compound for coating existing steel connections shall be Z.R.C. Cold Galvanizing Compound by ZRC Worldwide, or approved equal.

5.3 CONSTRUCTION

A. Installation

1. Discard units of material with defects which might impair quality of work, and units which are too small to use in fabricating work with minimum joints or optimum joint arrangement.
2. Set carpentry work accurately to required levels and lines, with members plumb and true and accurately cut and fitted.
3. Securely attach carpentry work to substrate by anchoring and fastening as shown, or if not shown, as required by recognized standards. Countersink nail heads on exposed carpentry work and fill holes.
4. Use common wire nails, except as otherwise indicated. Select fasteners of size that will not penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting of wood; predrill as required.

B. Wood Framing

1. Remove and reinstall any utilities attached to wood members when necessary to perform the work. The Contractor shall give the Harbors Division Hawaii District Manager and the Construction Engineer at least 2 weeks prior notice whenever its work will turn off any utilities to the office
2. Provide framing members of sizes and at spacing shown on the drawings. Do not splice structural members between supports.
3. Anchor and nail as shown, or where not shown, as required and to comply with the current International Building Code.
4. Provide roofing felt below all wood plates resting on concrete.
5. Wood Nailers, Plates, Blocking, Rough Bucks, Furring, etc.: Provide wherever shown and where required for attachment of other work. Form to shapes and cuts as required for true line and level of work to be attached. Coordinate location with other work involved. Attach to substrates as required to support applied loading. Countersink bolts and nuts flush with surfaces, unless otherwise shown.

6. Plywood Sheathing: Install plywood sheathing repair in the direction indicated on the structural drawings.
7. Existing Steel Connections: Apply coat of cold galvanizing compound on all existing steel connections to remain.

5.4 PAYMENT – Payment for wood repairs shall not be measured and paid for separately but shall be considered incidental to the applicable item described in Article I of these Specifications.

ARTICLE VI – PAINTING

6.1 GENERAL

- A. The work to be done under this Article consists of surface preparation and painting all exterior wood surfaces at repair areas. All new members including those to be installed on the underside shall be painted on all sides.

6.2 MATERIALS

- A. The color and gloss of the finish paint for all repair surfaces to be painted shall match the existing color and gloss and approved by the Harbors Division Construction Engineer.
- B. All paint shall be delivered to the site in the manufacturer's sealed containers. Each container shall be labeled by the manufacturer with the label showing the name, brand, type of paint, color of paint, and the manufacturer's instructions for reducing consistency.
 - 1. Paint for repairs shall be Fortis 450 by Glidden Professional, or approved equal.
- C. The Contractor shall submit for approval five (5) copies of catalog cuts of the painting materials including primers and color samples as necessary to furnish for this project.
 - 1. Manufacturer's Product Data Sheets and Material Data Sheets: Manufacturer's Product Data Sheets and Material Data Sheets for the primers, paints, coatings, solvents, sealing and patching materials, sealants and caulking shall be submitted. Data sheets shall indicate thinning and mixing instructions, required film thickness (mil) and application instructions.
 - 2. Warranty: Provide a one (1) year warranty that the work performed under this section conforms to the contract requirements and is free of any defect of material or workmanship.

6.3 CONSTRUCTION

- A. Protection
 - 1. The Contractor shall provide, erect and maintain safety barricades wherever the Contractor's operations create hazardous conditions in order to properly protect the public and tenants.
 - 2. The Contractor shall provide all necessary protection for wet paint surfaces.

3. The Contractor shall provide and install protective covering over walls, floor and other areas not to be painted. Protective coverings shall be clean sanitary drop cloth or plastic sheets. Paint applied to surfaces that are not scheduled for painting shall be completely removed and surfaces shall be returned to original condition.

B. Surface Preparation

1. All surfaces to be painted shall be properly prepared prior to painting and shall be inspected for approval by the Harbors Division Construction Engineer before painting will be allowed.
2. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.

C. Application

1. Mix and prepare and apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied. When painting bare wood and used as self-primer, use a minimum of two (2) coats.
2. Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
3. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm, and does not deform or feel sticky under moderate thumb pressure, and until application of another coat of paint does not cause undercoat to lift or lose adhesion.
4. Apply paints by brush or roller only per paint manufacturer's written instructions for best results.
5. Apply paint materials no thinner than manufacturer's recommended spreading rate to achieve dry film thickness indicated. Provide total dry film thickness of the entire system as recommended by manufacturer.
6. Apply all materials in strict accordance with the manufacturer's printed instructions with paint evenly spread and well applied with no drops, runs, or sags. Do not apply paint on wet or damp surfaces or until preceding coat of paint is thoroughly dry. Finishes are intended to thoroughly cover in the number of coats listed, using the quality of paint specified. If paints are thinner or other manufacturer's paints are used, apply sufficient additional coats as required to provide full and complete coverage, with no shadows, spots, streaks, voids, color bleed-through, or other defects.

7. The storage and handling of paints and thinners shall be in accordance with the safety provisions and codes covering such handling and storage.
8. After completion of final paint coat, all removed utilities and miscellaneous items shall be reinstalled.
9. Finish work shall be uniform and of approved color. The finish shall completely cover, be smooth and be free from runs, sags, drips, waves, laps or brush marks. Edges of paint adjoining other surfaces or materials shall be sharp and clean without overlapping.

D. Clean-Up

1. All paint, oil, etc., shall be cleaned off of pavement, floors, fixtures, walls or any portion of the building where paint has splashed or been spilled.
2. All unused rags, waste, and empty containers shall be removed from the work area at the end of each work day and precautions shall be taken to avoid the danger of fire.
3. The Contractor shall maintain the job site in a neat and orderly condition during the progress of the work. Upon completion the Contractor shall remove all surplus material, debris, equipment, tools, etc., belonging to it and leave the premises in a neat and orderly condition.
4. During the process of the work, waste, drippings, etc. shall be removed by the Contractor and the project site shall be left clean and orderly at the end of each work day.

6.4 PAYMENT – Payment for painting shall not be measured and paid for separately but shall be considered incidental to the applicable item described in Article I of these Specifications.

ARTICLE VII - MATERIAL SUBMITTALS AND SHOP DRAWINGS

7.1 GENERAL - This Article consists of a list of materials and shop drawings required for this project. As soon as possible after award of the contract, the Contractor shall submit for approval, the required material submittals and shop drawings to the Harbors Division Construction Engineer at 79 S. Nimitz Highway, Honolulu, Hawaii 96813. The Material Submittals and Shop Drawings submitted by the Contractor shall include all items listed below. Material Submittals and Shop Drawings not submitted as a complete package will not be reviewed by the Harbors Division and will be sent back as a non-submittal. The Contractor shall promptly order its materials after approval of its submittals.

7.2 MATERIAL SUBMITTALS - The Contractor shall submit for review and approval five (5) copies of manufacturer's specifications for the following items.

- A. Best Management Practices (BMP) Plan
- B. Concrete Post Base Spall Repair
 - 1. Patching Compound
 - 2. Reinforcing Steel Coating
 - 3. Epoxy for Grouting of Dowels
 - 4. Curing Compound
- C. Wood Submittals
- D. Painting Submittals

7.3 PAYMENT - Payment for Material Submittals and Shop Drawings shall not be made separately but shall be considered incidental to the item described in Article I of these Specifications.

ARTICLE VIII – PROJECT PHOTOGRAPHS

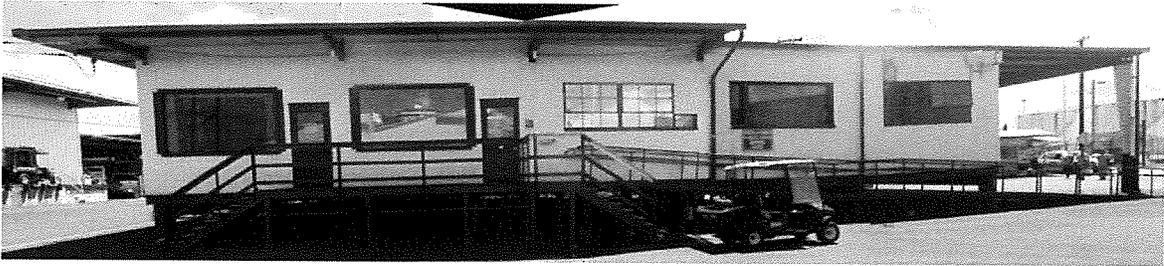


Photo 1: North Elevation

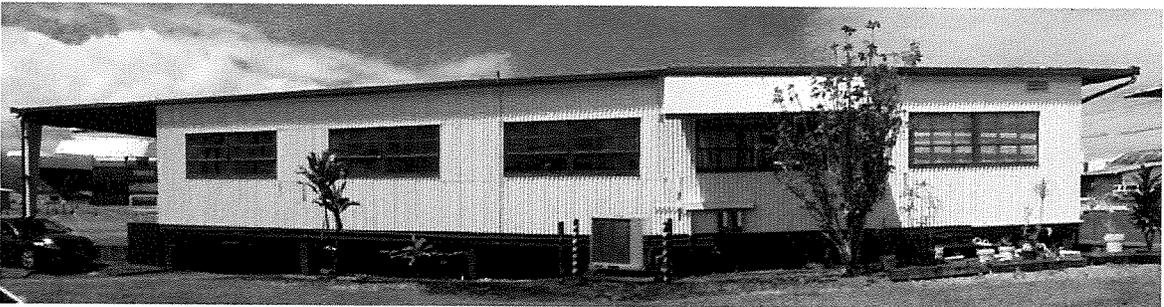


Photo 2: South Elevation

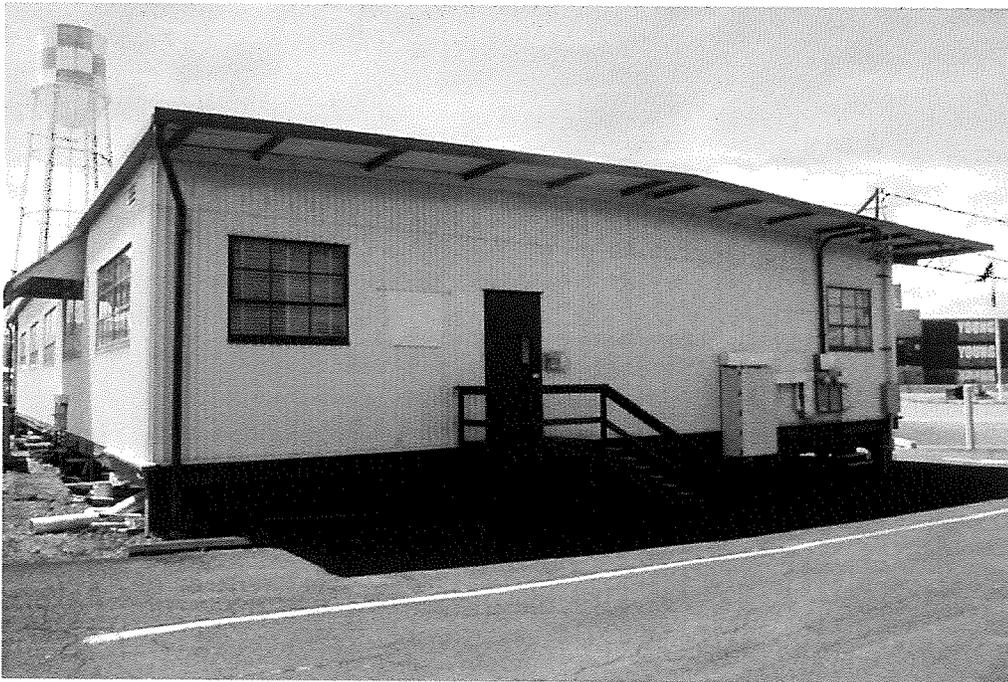


Photo 3: East Elevation

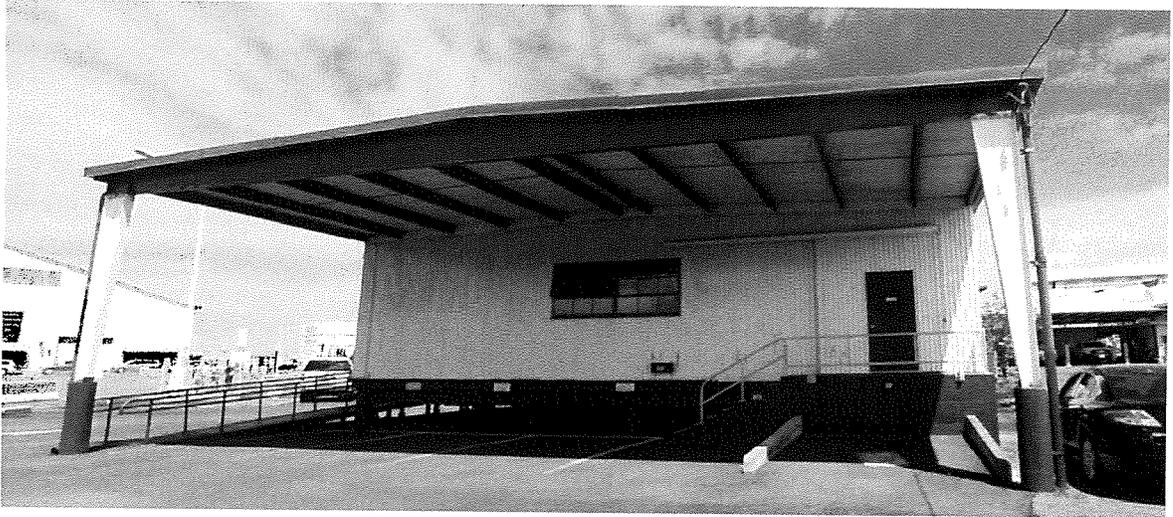


Photo 4: West Elevation



Photo 5: Typical Floor Framing



Photo 6: Damaged Plank Repair (Repair per sheet S-8)

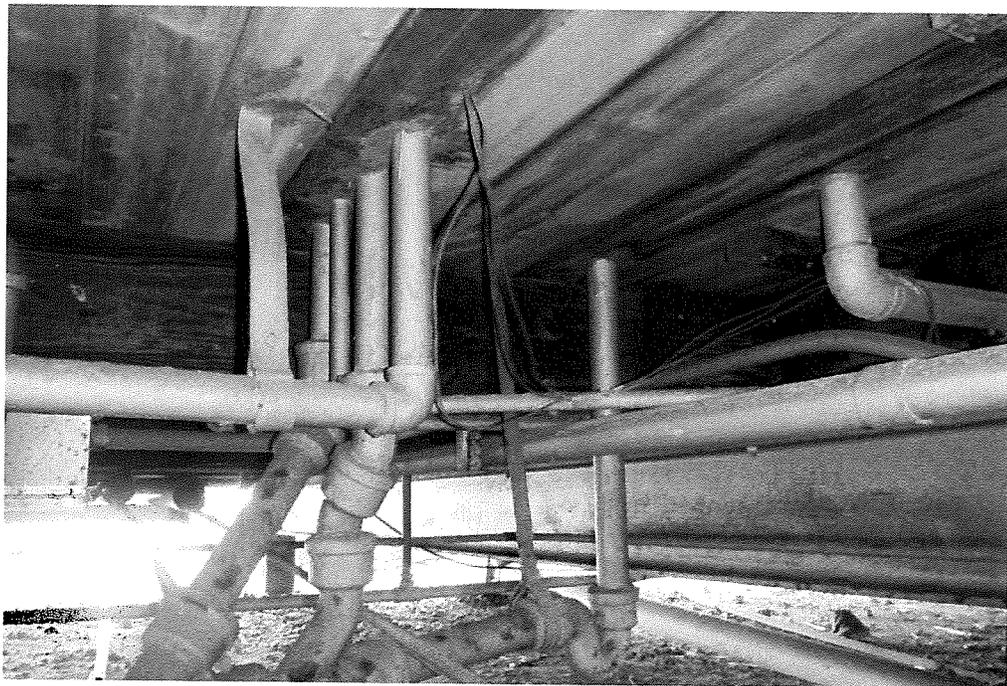


Photo 7: Location of Plank Stiffening (Repair per sheet S-9)

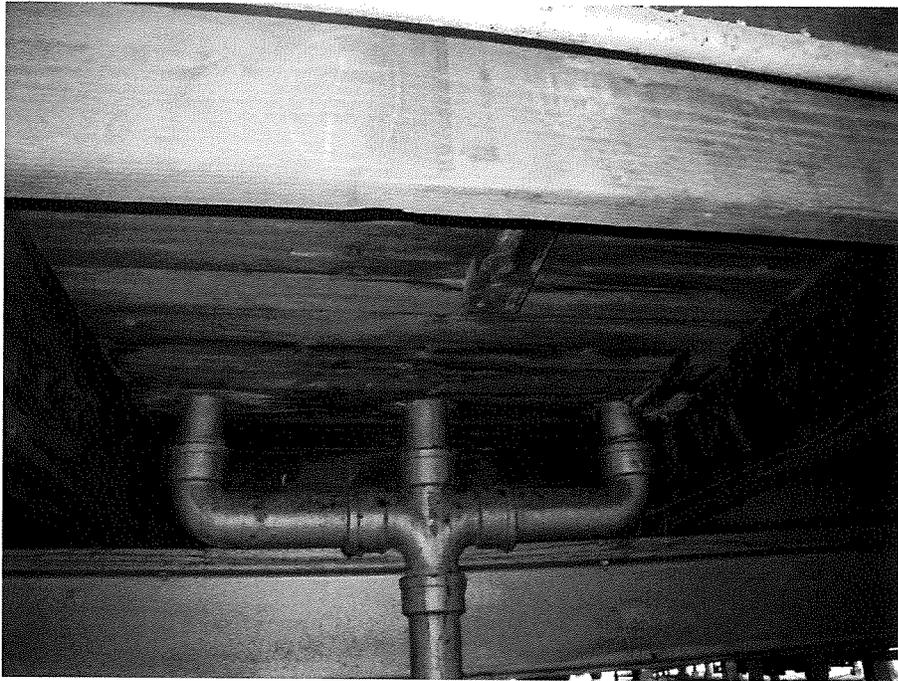


Photo 8: Location of Plank Stiffening (Repair per sheet S-9)



Photo 9: Deteriorated Fascia Beam (Repair per sheet S-10)

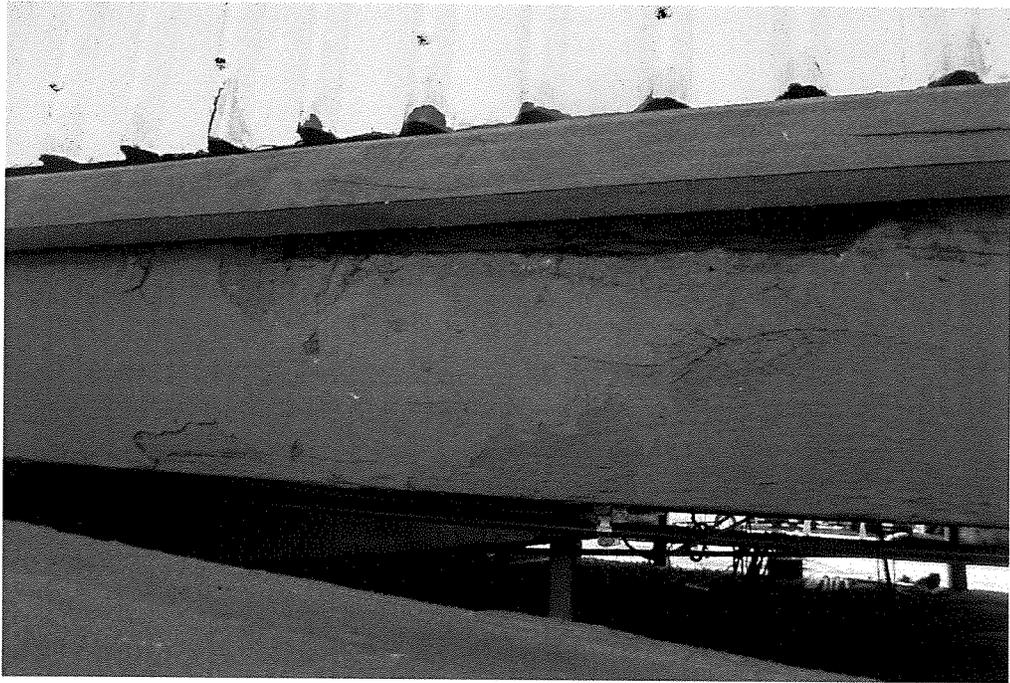


Photo 10: Deteriorated Fascia Behind Trim (Repair per sheet S-10)

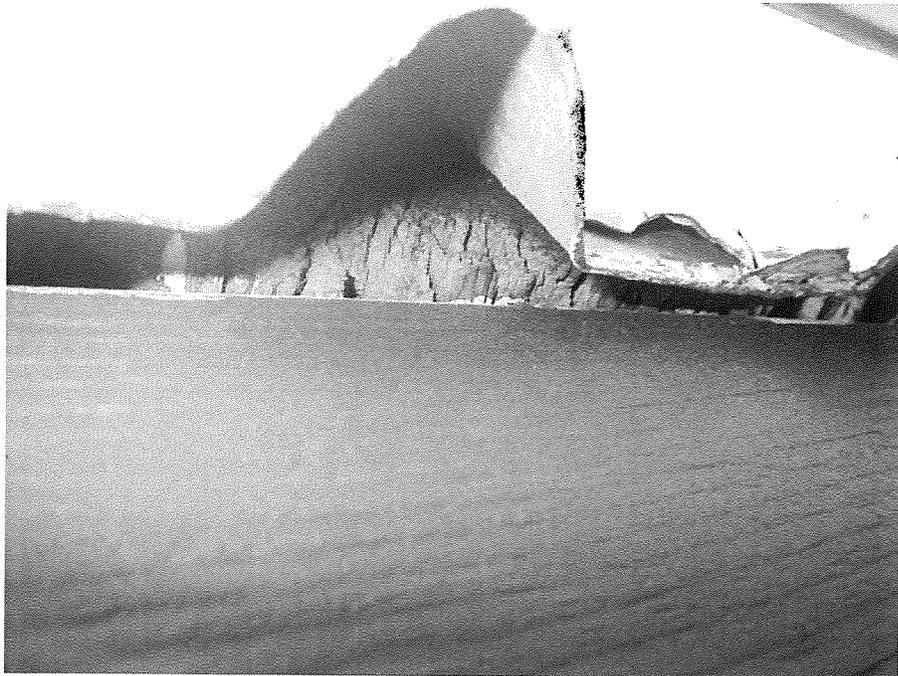


Photo 11: Deteriorated Plank Edges (Exterior View) (Repair per sheet S-11)



Photo 12: Deteriorated Planks (Repair per sheet S-11)

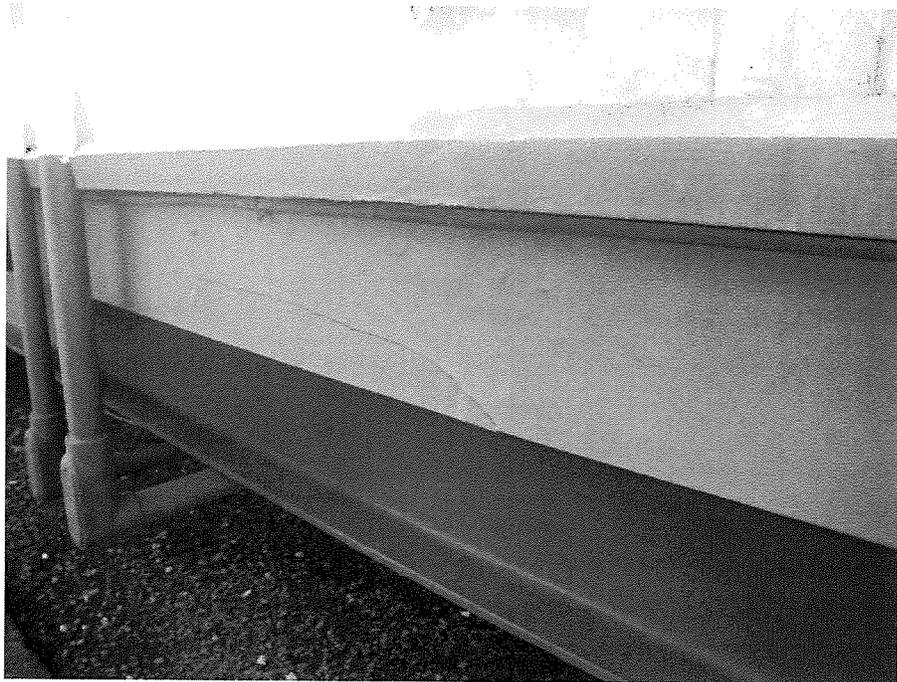


Photo 13: Cracked Fascia (Repair per sheet S-12)



Photo 14: Soffit View at Cracked Fascia (Repair per sheet S-12)



Photo 15: Ramp on North Elevation with Post Base Spall Repairs



Photo 16: Typical Post Base Spall Repair (Repair per sheet S-13)

PROPOSAL TO THE STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HARBORS DIVISION

PROJECT: REPAIR DISTRICT OFFICE
HILO HARBOR, HAWAII, HAWAII

JOB NO: H. C. 50134

COMPLETION TIME: All work shall be completed within TWENTY (20) WORKING
DAYS from the date indicated in the Notice to Proceed from the
Department.

DESIGN PROJECT MANAGER: MR. GREGG HIROKAWA
DEPARTMENT OF TRANSPORTATION
HARBORS DIVISION
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