

**STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HARBORS**

**ADDENDUM NO. 1
FOR
NEW BOAT LIFT IMPROVEMENTS
PIER 1, HILO HARBOR, HAWAII
JOB P50217R**

SEPTEMBER 14, 2026

This Addendum shall make the following amendment(s) to the Solicitation:

A. SPECIFICATIONS

1. Delete **ARTICLE XXIII MICROPILE**, in its entirety and replace it with attached **ARTICLE XXIII MICROPILE**, dated r09/14/2026.

B. PROPOSAL SCHEDULE

1. Delete **PROPOSAL SCHEDULE** Pages P-9 to P-11, and replace it with attached **PROPOSAL SCHEDULE** Pages P-9 to P-11, dated r09/14/2026.

The following is provided for information.

C. RESPONSES TO REQUESTS FOR INFORMATION (RFI'S/QUESTIONS)

1. The attached **RESPONSES TO REQUESTS FOR INFORMATION** are provided for information.

Please acknowledge receipt of this **ADDENDUM NO. 1** by recording the date of its receipt in the space provided on the **PAGE P-4** of the Proposal.



NIKO G. SALVADOR
Harbors Engineering Program Manager

ARTICLE XXIII – MICROPILE

23.1 GENERAL CONDITIONS

- A. This section shall govern constructing micropiles to the required locations, capacity and dimensions, in place complete, as indicated on the plans and as specified herein. The work shall consist of installing pre-production micropiles, installing production micropiles, welding steel plates to the top of the micropiles, constructing the reinforced concrete pile caps specified herein and shown on the plans.. The Contractor shall furnish all labor, materials, testing, special inspection and equipment required for completing the work.

23.2 REFERENCES: The latest publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

A. American Society for Testing and Materials (ASTM)

1. ASTM A 955 - Deformed and Plain Stainless-Steel Bars for Concrete Reinforcement
2. ASTM C 109 – Compressive Strength of Hydraulic Cement Mortars (Using 2-inch or 50 mm Cube Specimens)
3. ASTM C 845 – Expansive Hydraulic Cement
4. ASTM C 1107 – Packaged Dry, Hydraulic-Cement Grout (Nonshrink)
5. ASTM D 1143 – Standard Test Methods for Deep Foundations Under Static Axial Compressive Load
6. API RP 13B-1 – Recommended Practice for Field Testing Water-based Drilling Fluids

- B. Geotechnical Engineering Exploration Report by Kokua Geotech, dated October 18, 2024 (attached at the end of this Article)

23.3 SUBMITTALS: Submit the following in accordance with Article XI, Required Submittals, at least 30 workdays before beginning the applicable work:

- A. Product Data and Certifications: Submit manufacturer's product data, material certificates, and mill test reports for micropile casing, reinforcement, couplers, centralizers, corrosion-protection materials, grout admixtures, and accessories. Identify the cement manufacturer, brand, type, mill location, and quantity.
- B. Micropile Shop Drawings and Calculations: Submit shop drawings and supporting calculations prepared, signed, and sealed by a qualified

professional engineer licensed in the State of Hawaii and experienced in micropile foundation design. Include micropile dimensions, casing and reinforcement, splices and couplers, centralizers, corrosion protection, foundation connections, weld details, and installation requirements.

- C. Welding Certifications: Submit current certifications for welding procedures and personnel.
- D. Grout Mix Design: Submit the proposed grout mix, including materials, proportions, and design compressive strength. Submit revised mix designs when changes in materials, site conditions, weather, or test results require adjustments.
- E. Installation Plan: Submit the manufacturer's recommendations and a detailed description of the proposed installation methods, including drilling, handling, casing and reinforcement placement, grouting, equipment type and capacity, and procedures for addressing anticipated subsurface conditions.
- F. Load-Testing Plan: Submit the proposed micropile load-testing procedure and reaction system, including supporting calculations, prepared, signed, and sealed by a qualified professional engineer licensed in the State of Hawaii and experienced in micropile load testing. Include the test arrangement, reaction supports or anchors, reaction-frame capacity, equipment and calibration information, loading and unloading sequence, hold periods, instrumentation, data-recording procedures, and proposed acceptance criteria.
- G. Test Reports: Submit certified grout-strength test reports in accordance with ASTM C109.
- H. Installation Records: Submit micropile installation records as specified herein.
- I. Qualifications:
 - 1. At the time of bid, the micropile Contractor shall have at least five years of experience installing permanent micropiles and shall have successfully completed at least five projects involving similar scope and subsurface conditions. Submit a project list with descriptions and references, including each reference's name, company, and current telephone number.
 - 2. Before beginning micropile work, submit the names and experience records of the proposed drill operators and on-site supervisors. Each shall have at least five years of micropile-installation experience and direct experience on at least five projects of similar scope and subsurface conditions.
 - 3. Consultants or manufacturer's representatives shall not be used to satisfy the Contractor's or field personnel's experience requirements.

4. Do not order materials or begin micropile work until the State has accepted the Contractor's qualifications and proposed installation methods.
5. The State may suspend micropile work if accepted personnel are replaced with unqualified personnel. The Contractor shall be responsible for resulting costs, and no adjustment of Contract Time will be allowed.

23.4 DEFINITION

- A. Micropiles shall be defined as small diameter, high capacity drilled and grouted piles. Each pile shall consist of permanent steel casing, an inner steel reinforcement, centralizers, and cement grout that is tremmied into the drill holes as the steel casings are partially withdrawn and/or injected during post grouting.

23.5 SITE CONDITIONS

- A. The project site is located on the southeastern side of the existing Pier 1 Container Terminal at Hilo Harbor. The site is relatively flat, with an asphalt-paved access road and parking areas behind the existing sheet-pile bulkhead wall. The new boat lift foundations will be installed on the harbor side of the bulkhead wall, where the harbor floor is approximately 20 feet below the top of the wall, ranging from approximately Elevation +8 feet MSL at the top of the wall to Elevation -12 feet MSL at the harbor floor. All required safety systems for equipment and personnel shall be incidental to the work.

23.6 INSPECTION

- A. Inspections shall be provided by a Civil Engineer, licensed in the State of Hawaii with at least 8 years of experience practicing geotechnical engineering, specifically micropile construction and installation. The Engineer shall be retained by the Contractor but not on the staff of the Contractor, at no cost to the State. The Engineer shall observe the installation of the micropiles and observe the performance of the load test by the Contractor. The Special Inspector shall document the installation and testing, evaluate compliance with the Contract Documents, and submit written findings to the State. Final acceptance or rejection of the micropiles shall be determined by the State. The Contractor shall notify the Civil Engineer a minimum of 5 days prior to starting work. Micropile installation, including the performance of the load test shall not be conducted without the presence of the Civil Engineer.

23.7 MICROPILE RECORDS

- A. Prior to the start of the micropile construction, the Contractor shall submit the following to the State for review:
 1. Proposed reaction frame and associated equipment including calibration data for jack pressure gauge and load cell to be used for the reaction

micropile load test. The calibration tests shall be performed on the jack and pressure gauge as a unit by an independent testing laboratory within 180 calendar days of the static load testing.

B. During micropile installations, the Contractor shall maintain and submit to the State the following information within two (2) workdays after the completion of each micropile:

1. Detailed drilling records and logs of the date of drilling, equipment used, driller's name, actual hole sizes and depths, drilling rates and any unusual conditions.
2. Grouting records indicating the grouting dates, cement type, grout mix, measured specific gravity, quantity injected, and grout pressures at the point of injection, including any post grouting performed. The grout pump or pump line shall be equipped with a metering device to measure the flow rate of the grout pumped into the micropile. The metering device shall be working properly at all times. Micropile installation shall be suspended if the metering device is not working properly.
3. As-built drawings showing the micropile locations, elevations of top and bottom of the casing and reinforcing steel, total pile length, and casing length.

C. Immediately report to the State any unusual conditions encountered during the micropile construction.

23.8 MICROPILE LENGTHS AND QUANTITY

- A. Base bids upon the number, size, and lengths of micropiles indicated in the Contract Documents. The micropiles indicated in the Contract Documents shall be included in the lump-sum price for Bid Item No. 3, Installation of Boat Lift System.
- B. If additional micropile length beyond that indicated in the Contract Documents is required due to subsurface conditions, the additional length shall be installed only as directed and approved by the State. Unauthorized additional length, overdrilling, abandoned micropiles, replacement micropiles, or additional work resulting from the Contractor's means and methods shall not be eligible for additional payment.

23.9 MATERIALS

- A. Grout: ASTM C 1107 or C845, Type K, hydraulic-cement grout or expansive hydraulic cement, a minimum compressive strength (from cubes) of 5,000 psi at 28 days in accordance with ASTM C109. The grout shall contain suitable admixtures to control bleeding and improve flowability.

- C. Water: Clean, fresh, potable, and free from injurious amounts of mineral and organic substances.
- D. Reinforcing Steel: All-thread reinforcing steel shall conform ASTM A955, Grade 75, Type 316L stainless steel encased in pre-grouted poly corrugated tubes from the manufacturer.
- E. Reaction Micropile Reinforcing Steel: All-thread reinforcing steel shall conform ASTM A615, Grade 75.
- F. Permanent Micropile Steel Casing: Conform to the physical properties of ASTM A312, Type 316L, with a minimum 7-inch outside diameter and a minimum nominal wall thickness of 3/8 inch.
- G. Reaction Micropile Steel Casing: Conform to the physical properties of ASTM A53, Type E or S, Grade B.
- H. Centralizers: Fabricated from plastic or material that is non-detrimental to the reinforcing steel and poly corrugated sheathing. Wood shall not be used. The centralizer shall be able to support the reinforcing so a minimum of 2-inch of grout cover is provided around the reinforcing bar for the micropiles, 1-inch of grout cover is provided around the poly corrugated sheathing for the s, and shall permit grout to freely flow up the drill hole.
- G. Other Materials: All other materials, not specifically described but may be required for a complete and proper installation of all micropiles shall be selected by the Contractor, subject to the acceptance of the State.

23.10 CONSTRUCTION DETAILS

- A. Protection of Existing Structures: The Contractor shall control his operations to prevent damage to existing structures and utilities. Preventive measures shall include, but are not limited to, selecting construction methods and procedures that will reduce the amount of cave-ins, over-cuts, and excessive grout losses, and monitoring and controlling the vibrations from construction activities such as drilling of micropiles.
- B. sSubsurface Site Conditions: Subsurface information is based on one boring performed within the paved parking area behind the existing bulkhead wall. The boring encountered surface fill extending to approximately 10 feet below the existing ground surface, underlain by lagoonal deposits extending to approximately 35 feet below the existing ground surface. The lagoonal deposits generally consisted of medium dense clayey sand and gravel and soft to medium stiff silty clay with some sand. Medium dense to very dense coralline detritus, generally consisting of sand with a little silt, was encountered below the lagoonal deposits and extended to the maximum explored depth of approximately 43.5 feet. Groundwater was encountered approximately 7.2 feet below the existing ground surface and is expected to

fluctuate with the tide. Conditions at the underwater micropile locations may vary from those encountered in the boring.

23.11 CONSTRUCTION METHODS

- A. General: The Contractor shall perform the micropile installations through whatever materials are encountered, to the locations, capacity, load test requirements, and dimensions as shown in the plans or otherwise required by the specifications. Install the reinforcements and grout within 48 hours after the holes are drilled to minimize potential for sloughing and caving. The Contractor's methods and equipment shall be suitable for the intended purpose and materials encountered.
- B. Drilling Equipment: Drilling equipment shall be capable of advancing straight and clean holes with a minimum grout bulb diameter of 7 inches through the materials encountered and to the required micropile tip elevation. The equipment shall be suitable for drilling through fill, compressible lagoonal deposits, coralline materials, and groundwater conditions. Sufficient casing and drilling equipment shall be available at the site to support the drill holes and maintain uninterrupted micropile installation. The Contractor shall provide equipment capable of penetrating hard layers, obstructions, or cavities that may be encountered.
- C. Grouting equipment: Grout shall be produced with high-speed, high-shear mixers. The grouting equipment shall be equipped with a pressure gauge to monitor grout pressures and a gauge to measure grout volume injected. An additional in-line pressure gauge shall be installed at the point of injection. Both pressure gauges shall be capable of measuring pressures of at least twice the actual grout pressures anticipated by the Contractor. The grouting equipment shall be capable of thoroughly mixing and producing a grout free of lumps and undispersed cement and shall be able to pump the grout in a continuous operation.

23.12 PERMANENT STEEL CASING

- A. Field welded splices for micropile casings shall be allowed. Welds shall be complete joint penetration welds and conform to the requirements of AWS D1.6 and AWS D10.11. If threaded splices are used, the minimum casing wall thickness shall be 0.710 inches.

23.13 SOIL CUTTINGS AND FLUIDS

- A. Suitable equipment and approved methods shall be used to contain and dispose the soil cuttings and fluids from the drilling and grouting in accordance with City, State and Federal environmental pollution regulations and requirements.

23.14 REINFORCING STEEL PLACEMENT

- A. Non-corrosive centralizers shall be used for reinforcing bars. The centralizers shall be placed at a spacing as required to maintain grout cover but not exceeding 9 feet. The bottom centralizer shall be located 24 inches of the bottom of the micropile and the top centralizer shall be located 12 inches from the top of the micropile or casing. The maximum distance between the center of the rebar and the center of the casing shall not exceed 1/8 inch.
- B. Reinforcing steel shall only be spliced with mechanical couplers specifically manufactured for splicing bars and capable of achieving and transmitting the ultimate tensile and compressive strength of the bar. The coupler material shall match the reinforcing steel properties. Contractor shall follow the reinforcing steel manufacturer's specifications for corrosion protection. The contractor shall submit mechanical coupler data to the State for approval.

23.15 GROUTING

- A. Advance the steel casing to the bottom of the micropile during drilling. Place grout from the bottom of the drill hole upward through grout tubes, pipes, drill rods, or other approved methods. The casing may be withdrawn during grouting, provided that a minimum grout head of 5 feet is maintained above the bottom of the casing at all times. Withdraw the casing above the required permanent casing depth and then plunge it back to the required depth. Permanent casing shall remain in place through the compressible lagoonal deposits to the top of the bonded zone within the coralline materials.
- B. No testing or any other type of loading shall be applied to the micropiles until the grout has reached the minimum 28-day compressive strength.

23.16 GROUT QUALITY CONTROL

- A. One set of grout specimens shall be taken for each micropile installed. Each set shall consist of six cubes. Grout specimens shall be cured under laboratory conditions. Cubes shall be tested in accordance with ASTM C 109. Strength tests shall be made for two cubes at 3 days, two cubes at 14 days, and two cubes at 28 days. If the strength tests of one or more cubes of a set from a micropile or are at 10 percent or more below the required compressive strength required at 28 days, the micropile or shall be abandoned and replaced by micropiles placed adjacent to the abandoned micropile or as directed by the State at the Contractor's expense. All tests shall be made by an independent testing laboratory (accredited testing laboratory) approved by the State and paid for by the Contractor. If a micropile is abandoned and moved, the contractor shall also revise all members, components, and the pipe alignment accordingly due to revised location at the Contractor's expense.

- B. The Contractor shall provide the State with mud balance specific gravity test results from one sample taken at the beginning of each micropile, and reaction micropile grout pour. The mud balance specific gravity testing procedures shall conform to API RP 13B-1.

23.17 CONSTRUCTION TOLERANCES

- A. The following construction tolerances apply to micropiles:
 - 1. The vertical alignment of the micropiles shall not deviate from plumb by more than 1/8 inch per foot of depth.
 - 2. The top elevation of the micropiles shall not deviate from the plan top of connection elevation by more than 1/4 inch.
 - 3. The rebar shall fully engage and extend past the top of the nut by at least 1 inch and shall maintain at least 1 inch of clearance from the bottom of the PVC pipe or pipe connection.

23.18 CLEAN UP

- A. Upon completion of work, remove all materials, tools, scaffolding, refuse and debris generated by the work from premises, leaving premises in clean and satisfactory condition.
- B. Daily Clean Up: Remove rubbish and debris from site daily, unless otherwise directed. Do not allow accumulations at the site. Store materials that cannot be disposed of daily in areas specified by the State.

23.19 MICROPILE LOAD TEST

- A. Two (2) production micropiles shall be installed and tested using the equipment and methods proposed by the Contractor.
- B. The Contractor shall furnish all materials, equipment and tools necessary to perform the load test. The Geotechnical Engineer retained by the Contractor will be present to observe the performance of the load test by the Contractor.
- C. The Contractor shall proof test the production micropile in accordance with ASTM D3689, Procedure A and as modified herein.
- D. The pullout tests should consist of subjecting the micropile to at least 150 percent of the design load. The micropile should be loaded in 12.5 percent design load increments, and each load should be held for at least 5 minutes. The maximum test load should be held for a minimum of 10 or 60 minutes. Pullout test on the selected micropiles is an integral part of the design of the micropile foundation system. Therefore, we recommend conducting the pullout tests under the observation of a Kokua Geotech LLC representative.

- E. Proof testing of micropiles with fifteen (15) minute load-holding periods is acceptable if the total movement measured between one minute and ten (10) minutes is less than 0.04 inches; Proof testing of micropiles with sixty (60) minutes load-holding periods is acceptable if the creep rate does not exceed 0.08 inches per log cycle of time.
- F. Within two (2) workdays after completion of the micropile load test, the Contractor shall submit detailed test results. Spreadsheet of load and deformation reading shall be submitted.

23.20 REVISED INSTALLATION PROCEDURE

- A. Should the load test fail to produce acceptable test results, the Contractor shall modify his installation procedures and install replacement production and reaction piles and perform additional compression load tests at his expense until acceptable results are obtained.
- B. Contractor shall submit a revised installation procedure to the State for review. Installation of the micropiles will not be permitted to continue until the revised procedure is accepted by the State.

23.21 BASIS OF MEASUREMENT AND PAYMENT

A. The micropiles, including the number, size, and lengths indicated in the Contract Documents, will not be measured separately for payment. All labor, materials, equipment, testing, inspection, and incidental work required to complete the micropile installation shall be included in the lump-sum price for Bid Item No. 3, Installation of Boat Lift System.

B. Additional micropile length authorized and accepted by the State will be measured along the micropile centerline beyond the length indicated in the Contract Documents and paid at the contract unit price per linear foot under Bid Item No. 6. The unit price shall include all labor, materials, equipment, casing, reinforcement, grout, connections, and incidental work required for installation. Unauthorized length and corrective work will not be measured or paid.

<u>ITEM NO.</u>	<u>PAY ITEM</u>	<u>PAY UNIT</u>
6	Additional micropile length authorized by the State	LF

END OF ARTICLE

NEW BOAT LIFT IMPROVEMENTS
PIER 1, HILO HARBOR, JOB P50217R
PROPOSAL SCHEDULE – HARBORS

<u>BID</u>					
ITEM NO.	DESCRIPTION	QTY (a)	UNIT	UNIT PRICE (b)	TOTAL (axb)
1	Mobilization and demobilization, as described in Article XII (not to exceed 6% of the sum of all items excluding the bid price of this item)	L.S.	L.S.	L.S.	\$ _____
2	Temporary Water Pollution, Dust, and Erosion Control Work, as described in Article XIII	L.S.	L.S.	L.S.	\$ _____
3	Installation of a New Pre-Engineered Elevator Boat Lift Structure, Foundations, Electrical Systems; in Place Complete	L.S.	L.S.	L.S.	\$ _____
4	Additional Water Pollution, Dust and Erosion Control and other Misc. Items	FA	FA	FA	\$ <u>50,000.00</u>
5	Security services initiated and requested by the State. It is not intended for security services required by the bidder for their work.	FA	FA	FA	\$ <u>50,000.00</u>
6	Additional micropile length authorized by the State	10	LF	\$ _____	\$ _____

TOTAL AMOUNT FOR COMPARISON OF BIDS

\$ _____

Notes:

1. Bids shall include all Federal, State, County and other applicable taxes and fees.
2. The TOTAL AMOUNT FOR COMPARISON OF BIDS shall be used to determine the lowest responsible bidder.
3. Bidders shall complete all unit prices and amounts. Failure to do so shall be grounds for rejection of bid.
4. The TOTAL AMOUNT FOR COMPARISON OF BIDS herein shall include all labor, materials, equipment, and incidentals necessary to construct all items, complete in place, all in accordance with the plans and specifications.
5. Submission of a Proposal is a warranty that the bidder has made an examination of the project site and is fully aware of all conditions to be encountered in performing the work and the requirements of the plans and specifications.
6. The bidder's attention is directed to Section 2.11 – BID SECURITY of the "General Provisions", as amended by the Special Provisions.
7. The state reserves the right to cancel this project at their sole discretion.
8. If the lowest TOTAL AMOUNT FOR COMPARISON OF BIDS is less than, or approximately equal to the funds available for this project, an award will be made to the lowest responsible bidder.
9. If the TOTAL AMOUNT FOR COMPARISON OF BIDS exceeds the funds available, the State reserves the right to negotiate with the lowest responsible bidder as permitted under Section 103D-302, Hawaii Revised Statutes, to further reduce the scope of work and award a contract thereafter. No additional compensation will be paid by the State for losses, including overhead and profit, resulting from reduced scope of work.
- 10. Bidders shall submit and upload the complete proposal to HlePRO prior to the bid opening date and time. Proposals received after said due date and time shall not be considered. Any additional support documents explicitly designated as confidential and/or proprietary shall be uploaded as a separate file to HlePRO. Bidders shall not include confidential and/or proprietary documents with the proposal. The record of each bidder and respective bid shall be open to public inspection. Original (wet ink, hard copy) proposal documents are not required to be submitted. Contract award**

shall be based on evaluation of proposals submitted and uploaded to HlePRO.

11. FAILURE TO UPLOAD THE COMPLETE PROPOSAL TO HlePRO SHALL BE GROUNDS FOR REJECTION OF THE BID.

12. If there is a conflict between the specification document and the HlePRO solicitation, the specifications shall govern and control, unless otherwise specified.

**Questions for solicitation: B27000211 P50217R NEW BOAT LIFT
IMPROVEMENTS AT PIER 1, HILO HARBOR HAWAII**

08/24/2026

1. In Section 23.8, the specifications say, “Base bids upon the number, size and lengths of micropiles as indicated in the contract documents. Should the total number of micropiles and length vary from that indicated in the contract documents and approved and accepted by the state, an adjustment in contract price will be made based on the unit price per linear foot.” However, the bid schedule on page p-9 of the proposal form does not list an option for the Contractor to submit a unit price per LF for the installation of micropiles. Please clarify if the bid schedule will be changed so that Contractors may submit a unit price per LF for the micropiles.

Response: The micropiles, as described in the bid documents, will be included as a lump sum under Pay Item No. 3, Installation of Boat Lift System. Considering the unknown underwater conditions, we will revise the bid schedule to include a separate pay item with a unit price per linear foot for any additional micropile length required during construction.

2. We are submitting a substitution request and availability notice to the Project Manager for TuffTex Materials products as specified in the solicitation.

Response: The proposed TuffTex Materials substitutions are not acceptable at this time. The information submitted is general and does not include sufficient project-specific information to demonstrate compliance with, or equivalency to, the Contract Documents.