STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ADDENDUM NO. 1
for
LEEWARD BIKEWAY
PHILIPPINE SEA ROAD TO WAIPAHU DEPOT STREET
FEDERAL-AID PROJECT NO. STP-BW-0300(8)
DISTRICT OF EWA
ISLAND OF OAHU

This Addendum shall make the following amendments to the Bid Documents:

A. NOTICE TO BIDDERS

Prospective bidders are hereby notified that receiving of sealed bids scheduled for November 14, 2019 will be postponed and rescheduled for 2:00 P.M., November 21, 2019. The attached NOTICE TO BIDDERS dated r11/1/19 shall be incorporated and made a part of the NOTICE TO BIDDERS.

B. TABLE OF CONTENTS

1. Delete TABLE OF CONTENTS, dated 7/30/19 and replace it with the attached TABLE OF CONTENTS dated r11/1/19.

C. SPECIFICATIONS

1. Delete Section 108, dated 7/30/19 and replace it with the attached Section 108 dated r11/1/19.

2. Delete Section 202, dated 7/30/19 and replace it with the attached Section 202, dated r11/1/19.

3. Delete Section 505, dated 7/30/19 and replace it with the attached Section 505, dated r11/1/19.

4. Delete Section 607, dated 7/1/18 and replace it with the attached Section 607, dated r11/1/19.

5. The attached Section 616 - Irrigation System shall be incorporated and made part of the Specifications.

6. Delete Section 619, dated 7/30/19 and replace it with the attached Section 619, dated r11/1/19.

7. Delete Section 641, dated 7/30/19 and replace it with the attached Section 641, dated r11/1/19.

8. Delete Section 655, dated 7/1/18 and replace it with the attached Section 655, dated r11/1/19.

9. The attached Section 659 - Miscellaneous Mitigation Measures shall be incorporated and made part of the Specifications.

D. FEDERAL WAGE RATES

1. Delete FEDERAL WAGE RATES, dated 9/20/19, and replace it with the attached FEDERAL WAGE RATES dated 10/25/19.

E. PROPOSAL SCHEDULE

1. Delete PROPOSAL SCHEDULE Pages P-8 through P-15, dated 8/8/19, and replace them with the attached PROPOSAL SCHEDULE pages P-8 through P-15, dated r11/1/19.

F. PLANS

1. Replace Plan Sheet Nos. 3, 12, 24, 51, 74, 78, 102, 103, 104, 159, 161, with the attached Plan Sheets Nos. ADD.3, ADD.12, ADD.24, ADD.51, ADD.74, ADD.78, ADD.102, ADD.103, ADD.104, ADD.159 and ADD.161.

2. The attached Plan Sheet Nos. ADD.17, ADD.42, ADD.100S-1, and ADD.76 shall be incorporated and made part of the Plans.

The following is provided for information:

G. PRE-BID MEETING NOTES

1. Attached are the October 17, 2019 Pre-Bid Meeting Notes and signed Attendance Sheet for your information.

H. ARCHAEOLOGICAL MONITORING PLAN (DRAFT)

1. Attached is the Draft of the Archaeological Monitoring Plan for reference.

I. MEMORANDUM OF AGREEMENT (MOA) AND AMENDMENT TO MOA (DRAFT).

1. Attached is the Memorandum of Agreement for reference.

2. Attached is the Draft of the Amendment to the Memorandum of Agreement for reference.

J. RFI QUESTIONS AND RESPONSES

1. Attached are the RFI Questions and Responses.

K. PAVEMENT JUSTIFICATION REPORT

1. Attached is the Pavement Justification Report for reference.

Please acknowledge receipt of this Addendum No.1 by recording the date of its receipt in the space provided on page P-4 of the Proposal.

JADE T. BUTAY
Director of Transportation

NOTICE TO BIDDERS

The receiving of sealed bids for **LEEWARD BIKEWAY PHILIPPINE SEA ROAD TO WAIPAHU DEPOT STREET, FEDERAL-AID PROJECT NO. STP-BW-0300(8), DISTRICT OF EWA, ISLAND OF OAHU**, at the Contracts Office, Department of Transportation, 869 Punchbowl Street, Honolulu, Hawaii 96813, scheduled for 2:00 P.M., November 14, 2019, is hereby POSTPONED UNTIL 2:00 P.M., November 21, 2019, at which time and place they will be publicly opened and read.

JADE T. BUTAY
Director of Transportation

TABLE OF CONTENTS

DIVISION 300 – BASIS		
Section	**Description**	**Pages**
304	Aggregate Base Course	304-1a
305	Aggregate Subbase Course	305-1a
321	Triaxial Geogrid	321-1a – 321-3a

DIVISION 400 – PAVEMENTS		
Section	**Description**	**Pages**
401	Hot Mix Asphalt Pavement	401-1a – 401-3a
412	Paving Fabric	412-1a

DIVISION 500 – STRUCTURES		
Section	**Description**	**Pages**
501	Steel Structures	501-1a – 501-4a
503	Concrete Structures	503-1a – 503-2a
504	Prestressed Concrete Members	504-1a
505	Piling	505-1a – 505-3a

DIVISION 600 - INCIDENTAL CONSTRUCTION		
Section	**Description**	**Pages**
602	Reinforcing Steel	602-1a – 602-2a
603	Culverts and Storm Drains	603-1a – 603-2a
604	Manholes, Inlets and Catch Basins	604-1a
605	Underdrains	605-1a
607	Chain Link Fences and Gates	607-1a
616	Irrigation System	616-1a
617	Planting Soil	617-1a
619	Planting	619-1a – 619-3a
622	Roadway and Sign Lighting System	622-1a – 622-2a
626	Manholes and Valve Boxes for Water and Sewer Systems	626-1a
629	Pavement Markings	629-1a – 629-5a
631	Traffic Control, Regulatory, Warning, and Miscellaneous Signs	631-1a – 631-2a
634	Portland Cement Concrete Sidewalks	634-1a
638	Portland Cement Concrete Curb and Gutter	638-1a – 638-2a
641	Hydro-Mulch Seeding	641-1a
650	Curb Ramps	650-1a
655	Dumped Riprap	655-1a

Standard Form - LLL and LLL-A

Statement of Compliance
Form WH-348

Chapter 104, HRS Compliance Certificate

END OF TABLE OF CONTENTS

Amend **Section 108** – **PROSECUTION AND PROGRESS** to read as follows:

"108 – PROSECUTION AND PROGRESS

108.01 Notice to Proceed (NTP). A Notice To Proceed will be issued to the Contractor not more 30 days after the contract certification date. The Engineer may suspend the contract before issuing the Notice To Proceed, in which case the Contractor's remedies are exclusively those set forth in Subsection 108.10 – Suspension of Work.

The Contractor shall be allowed up to 60 calendar days after the Notice to Proceed to begin physical work. The Start Work Date will be established when this period ends or on the actual day that physical work begins, whichever is first. Charging of Contract Time will begin on the Start Work Date. The Contractor shall notify the Engineer, in writing, at least five working days before beginning physical work.

In the event that the Contractor fails to start physical work within the time specified, the Engineer may terminate the contract in accordance with Subsection 108.11 – Termination of Contract for Cause.

During the period between the Notice to Proceed and the Start Work Date the Contractor should adjust work forces, equipment, schedules, and procure materials and required permits, prior to beginning physical work.

Any physical work done prior to the Start Work Date will be considered unauthorized work. If the Engineer does not direct that the unauthorized work be removed, it shall be paid for after the Start Work Date and only if it is acceptable.

In the event that the Engineer establishes, in writing, a Start Work Date that is beyond 60 calendar days from the Notice to Proceed date, the Contractor may submit a claim in accordance with, Subsection 107.15 – Disputes and Claims for increased labor and material costs which are directly attributable to the delay beyond the first 60 calendar days after the NTP date.

The Contractor shall notify the Engineer at least 24 hours before restarting physical work after a suspension of work pursuant to Subsection 108.10 – Suspension of Work.

Once physical work has begun, the Contractor shall work expeditiously and pursue the work diligently to completion with the contract time. If a portion of the work is to be done in stages, the Contractor shall leave the area safe and usable for the user agency and the public at the end of each stage.

108.02 Prosecution of Work. Unless otherwise permitted by the Engineer, in writing, the Contractor shall not commence with physical construction unless sufficient materials and equipment are available for either continuous construction or completion of a specified portion of the work.

108.03 Preconstruction Submittals. The awardee shall submit to the Engineer for information and review the pre-construction submittals within 30 calendar days from notice to proceed. Until the items listed below are received and found acceptable by the Engineer, the Contractor shall not start physical work unless otherwise authorized to do so in writing and subject to such conditions set by the Engineer. Charging of Contract Time will not be delayed, and additional contract time will not be granted due to Contractor delay in submitting acceptable preconstruction submittals. No progress payment will be made to the Contractor until the Engineer acknowledges, in writing, receipt of the following preconstruction submittals acceptable to the Engineer:

(1) List of the Superintendent and other Supervisory Personnel, and their contact information.

(2) Name of person(s) authorized to sign for the Contractor.

(3) Work Schedule including hours of operation.

(4) Initial Progress Schedule (See Subsection 108.06 – Progress Schedule).

(5) Water Pollution and Siltation Control Submittals, including Site-Specific Best Management Practice Plan.

(6) Solid Waste Disposal form.

(7) Tax Rates.

(8) Insurance Rates.

(9) Certificate of Insurance, satisfactory to the Engineer, indicating that the Contractor has in place all insurance coverage required by the contract documents.

(10) Schedule of agreed prices.

(11) List of suppliers.

(12) Traffic Control Plan, if applicable.

108.04 Character and Proficiency of Workers. The Contractor shall at all times provide adequate supervision and sufficient labor and equipment for prosecuting the work to full completion in the manner and within the time required by the contract. The superintendent and all other representatives of the Contractor shall act in a civil and honest manner in all dealings with the Engineer, all other State officials and representatives, and the public, in connection with the work.

All workers shall possess the proper license, certification, job classification, skill, training, and experience necessary to properly perform the work assigned to them.

The Engineer may direct the removal of any worker(s) who does not carry out the assigned work in a proper and skillful manner or who is disrespectful, intemperate, violent, or disorderly. The worker shall be removed forthwith by the Contractor and will not work again without the written permission of the Engineer.

108.05 Contract Time.

(A) Calculation of Contract Time. When the contract time is on a working day basis, the total contract time allowed for the performance of the work will be the number of working days shown in the contract plus any additional working days authorized in writing as provided hereinafter. The count of elapsed working days to be charged against contract time, will begin from the Start Work Date and will continue consecutively to the date of Substantial Completion. When multiple shifts are used to perform the work, the State will not consider the hours worked over the normal eight working hours per day or night as an additional working day.

When the contract is on a calendar day basis, the total contract time allowed for the performance of the work will be the number of days shown in the contract plus any additional days authorized in writing as provided hereinafter. The count of elapsed days to be charged against contract time will begin from the Start Work Date and will continue consecutively to the date of Substantial Completion. The Engineer will exclude days elapsing between the orders of the Engineer to suspend work and resume work for suspensions not the fault of the Contractor.

(B) Modifications of Contract Time. Whenever the Contractor believes that an extension of contract time is justified, the Contractor shall serve written notice on the Engineer not more than five working days after the occurrence of the event that causes a delay or justifies a contract time extension. Contract time may be adjusted for the following reasons or events, but only if and to the extent the critical path has been affected:

(1) Changes in the Work, Additional Work, and Delays Caused by the State. If the Contractor believes that an extension of time is justified on account of any act or omission by the State, and is not adequately provided for in a field order or change order, it must request the additional time as provided above. At the request of the Engineer, the Contractor must show how the critical path will be affected and must also support the time extension request with schedules, as well as statements from its subcontractors, suppliers, or manufacturers, as necessary.

Claims for compensation for any altered or additional work will be determined pursuant to Subsection 104.02 – Changes.

Additional time to perform the extra work will be added to the time allowed in the contract without regard to the date the change directive was issued, even if the contract completion date has passed. A change requiring time issued after contract time has expired will not constitute an excusal or waiver of pre-existing Contractor delay.

(2) Delay for Permits. For delays in the routine application and processing time required to obtain necessary permits, including permits to be obtained from State agencies, the Engineer may grant an extension provided that the permit takes longer than 30 days to acquire and the delay is not caused by the Contractor, and provided that as soon as the delay occurs, the Contractor notifies the Engineer in writing that the permits are not available. Permits required by the contract that take less than 30 days to acquire from the time which the appropriate documents are granted shall be acquired between Notice to Proceed and Start Work Date or accounted for in the contractor's progress schedule. Time extensions will be the exclusive relief granted on account of such delays.

(3) Delays Beyond Contractor's Control. For delays caused by acts of God, a public enemy, fire, inclement weather days or adverse conditions resulting therefrom, earthquakes, floods, epidemics, quarantine restrictions, labor disputes impacting the Contractor or the State, freight embargoes and other reasons beyond the Contractor's control, the Contractor may be granted an extension of time provided that:

(a) In the written notice of delay to the Engineer, the Contractor describes possible effects on the completion date of the contract. The description of delays shall:

1. State specifically the reason or reasons for the delay and fully explain in a detailed chronology how the delay affects the critical path.

2. Include copies of pertinent documentation to support the time extension request.

3. Cite the anticipated period of delay and the time extension requested.

4. State either that the above circumstances have been cleared and normal working conditions restored

as of a certain day or that the above circumstances will continue to prevent completion of the project.

(b) The Contractor shall notify the Engineer in writing when the delay ends. Time extensions will be the exclusive relief granted and no additional compensation will be paid the Contractor for such delays.

(4) Delays in Delivery of Materials or Equipment. For delays in delivery of materials or equipment, which occur as a result of unforeseeable causes beyond the control and without fault of the Contractor, its subcontractor(s) or supplier(s), time extensions shall be the exclusive relief granted and no additional compensation will be paid the Contractor on account of such delay. The delay shall not exceed the difference between the originally scheduled delivery date and the actual delivery date. The Contractor may be granted an extension of time provided that it complies with the following procedures:

(a) The Contractor's written notice to the Engineer must describe the delays and state the effect such delays may have on the critical path.

(b) The Contractor, if requested, must submit to the Engineer within five days after a firm delivery date for the material and equipment is established, a written statement regarding the delay. The Contractor must justify the delay as follows:

1. State specifically all reasons for the delay. Explain in a detailed chronology the effect of the delay on the critical path.

2. Submit copies of purchase order(s), factory invoice(s), bill(s) of lading, shipping manifest(s), delivery tag(s), and any other documents to support the time extension request.

3. Cite the start and end date of the delay and the time extension requested.

(5) Delays for Suspension of Work. When the performance of the work is totally suspended for one or more days (calendar or working days, as appropriate) by order of the Engineer in accordance with Subsections 108.10(A)(1), 108.10(A)(2), or 108.10(A)(5) the number of days from the effective date of the Engineer's order to suspend operations to the effective date of the Engineer's order to resume operations shall not be counted as

contract time and the contract completion date will be adjusted. During periods of partial suspensions of the work, the Contractor will be granted a time extension only if the partial suspension affects the critical path. If the Contractor believes that an extension of time is justified for a partial suspension of work, it must request the extension in writing at least five working days before the partial suspension will affect the critical operation(s) in progress. The Contractor must show how the critical path was increased based on the status of the work and must also support its claim if requested, with statements from its subcontractors. A suspension of work will not constitute a waiver of pre-existing Contractor delay.

(6) Contractor Caused Delays. No time extension will be granted under the following circumstances:

(a) Delays within the Contractor's control in performing the work caused by the Contractor, subcontractor, supplier, or any combination thereof.

(b) Delays within the Contractor's control in arrival of materials and equipment caused by the Contractor, subcontractor, supplier, or any combination thereof, in ordering, fabricating, and delivery.

(c) Delays requested for changes which do not affect the critical path.

(d) Delays caused by the failure of the Contractor to make submittals in a timely manner for review and acceptance by the Engineer, such as but not limited to shop drawings, descriptive sheets, material samples, and color samples except as covered in Subsection 108.05(B)(3) and 108.05(B)(4).

(e) Delays caused by the failure to submit sufficient information and data in a timely manner in the proper form in order to obtain necessary permits related to the work.

(f) Failure to follow the procedure within the time allowed by contract to request a time extension.

(g) Failure of the Contractor to provide evidence sufficient to support the time extension request.

(7) Reduction in Time. If the State deletes or modifies any portion of the work, an appropriate reduction of contract time may be made in accordance with Subsection 104.02 - Changes.

108.06 Progress Schedules.

(A) Forms of Schedule. All schedules shall be submitted using the specific computer program designated in the bid documents. If no such scheduling software program is designated, then all schedules shall be submitted using the latest version of Microsoft Project by Microsoft or approved equivalent software program.

Schedule submittals shall be as follows:

(1) For Contracts $2,000,000 or less or For Contract Time 100 Working Days or 140 Calendar Days or Less. For contracts of $2,000,000 or less or for contract time of 100 working days or 140 calendar days or less, the progress schedule will be a Time Scaled Logic Diagram (TSLD). The Contractor shall submit a TSLD submittal package meeting the following requirements and having these essential and distinctive elements:

(a) The major features of work, such as but not limited to BMP installation, grubbing, roadway excavation, structure excavation, structure construction, shown in the chronological order in which the Contractor proposes to work that feature or work and its location on the project. The schedule shall account for normal inclement weather, unusual soil or other conditions that may influence the progress of the work, schedules, and coordination required by any utility, off or on site fabrications, and other pertinent factors that relate to progress;

(b) All features listed or not listed in the contract documents that the Contractor considers a controlling factor for the timely completion of the contract work.

(c) The time span and sequence of the activities or events for each feature, and its interrelationship and interdependencies in time and logic to other features in order to complete the project.

(d) The total anticipated time necessary to complete work required by the contract.

(e) A chronological listing of critical intermediate dates or time periods for features or milestones or phases that can affect timely completion of the project.

(f) Major activities related to the location on the project.

(g) Non-construction activities, such as submittal and acceptance periods for shop drawings and material, procurement, testing, fabrication, mobilization, and demobilization or order dates of long lead material.

(h) Set schedule logic for out of sequence activities to retain logic. In addition, open ends shall be non-critical.

(i) Show target bars for all activities.

(j) Vertical and horizontal sight lines both major and minor shall be used as well as a separator line between groups. The Engineer will determine frequency and style.

(k) The file name, print date, revision number, data and project title and number shall be included in the title block.

(l) Have columns with the appropriate data in them for activity ID, description, original duration, remaining duration, early start, early finish, total float, percent complete, resources. The resource column shall list who is responsible for the work to be done in the activity. These columns shall be to the left of the bar chart.

(2) For Contracts Which Have A Contract Amount More Than $2,000,000 Or Having A Contract Time Of More Than 100 Working Days Or 140 Calendar Days. For contracts which have a contract amount more than $2,000,000 or contract time of more than 100 working days or 140 calendar days, the Contractor shall submit a Timed-Scaled Logic Diagram (TSLD) meeting the following requirements and having these essential and distinctive elements:

(a) The information and requirements listed in Subsection 108.06(A)(1) – For Contracts $2,000,000 or Less or For Contract Time 100 Working Days or 140 Calendar Days or Less.

(b) Additional reports and graphics available from the software as requested by the Engineer.

(c) Sufficient detail to allow at least weekly monitoring of the Contractor and subcontractor's operations.

(d) The time scaled schematic shall be on a calendar or working days basis. What will be used shall be determined by how the contract keeps track of time. It will be the same. Plot the critical calendar dates anticipated.

(e) Breakdown of activity, such as forming, placing reinforcing steel, concrete pouring and curing, and stripping in concrete construction. Indicate location of work to be done in such detail that it would be easily determined where work would be occurring within approximately 200 feet.

(f) Latest start and finish dates for critical path activities.

(g) Identify responsible subcontractor, supplier, and others for their respective activity.

(h) No individual activity shall have duration of more than 20 calendar days unless requested and approved by the Engineer.

(i) All activities shall have work breakdown structure codes and activity codes. The activity codes shall have coding that incorporates information for phase, location, who is responsible for doing work and type of operation and activity description.

j) Incorporate all physical access and availability restraints.

(B) Inspection and Testing. All schedules shall provide reasonable time and opportunity for the Engineer to inspect and test each work activity.

(C) Engineer's Acceptance of Progress Schedule. The submittal of, and the Engineer's receipt of any progress schedule, shall not be deemed an agreement to modify any terms or conditions of the contract. Any modifications to the contract terms and conditions that appear in or may be inferred from an acceptable schedule will not be valid or enforceable unless and until the Engineer exercises discretion to issue an appropriate change order. Nor shall any submittal or receipt imply the Engineer's approval of the schedule's breakdown, its individual elements, any critical path that may be shown, nor shall it obligate the State to make its personnel available outside normal working hours or the working hours established by the Contract in order to accommodate such schedule. The Contractor has the risk of all elements (whether or not shown) of the schedule and its execution. No claim for additional compensation, time, or both, shall be made by the Contractor or recognized by the Engineer for delays during any period for which an acceptable progress schedule or an updated progress schedule as required by Subsection 108.06(E) – Contractor's Continuing Schedule Submittal Requirements had not been submitted. Any acceptance or approval of the schedule shall be for general format only and shall not be deemed an agreement by the State

that the construction means, methods, and resources shown on the schedule will result in work that conforms to the contract requirements or that the sequences or durations indicated are feasible.

(D) Initial Progress Schedule. The Contractor shall submit an initial progress schedule. The initial progress schedule shall consist of the following:

(1) Four sets of the TSLD schedule.

(2) All the software files and data to re-create the TSLD in a computerized software format as specified by the Engineer.

(3) A listing of equipment that is anticipated to be used on the project. Including the type, size, make, year of manufacture, and all information necessary to identify the equipment in the Rental Rate Blue Book for Construction Equipment.

(4) An anticipated manpower requirement graph plotting contract time and total manpower requirement. This may be superimposed over the payment graph.

(5) A Method Statement that is a detailed narrative describing the work to be done and the method by which the work shall be accomplished for each major activity. A major activity is an activity that:

(a) Has a duration longer than five days.

(b) Is a milestone activity.

(c) Is a contract item that exceeds $10,000 on the contract cost proposal.

(d) Is a critical path activity.

(e) Is an activity designated as such by the Engineer.

Each Method Statement shall include the following items needed to fulfill the schedule:

(a) Quantity, type, make, and model of equipment.

(b) The manpower to do the work, specifying worker classification.

(c) The production rate per eight hour day, or the working hours established by the contract documents needed to

meet the time indicated on the schedule. If the production rate is not for eight hours, the number of working hours shall be indicated.

(6) Two sets of color time-scaled project evaluation and review technique charts ("PERT") using the activity box template of Logic – Early Start or such other template designated by the Engineer.

If the contract documents establish a sequence or order for the work, the initial progress schedule shall conform to such sequence or order.

(E) Contractor's Continuing Schedule Submittal Requirements. After the acceptance of the initial TSLD and when construction starts, the Contractor shall submit four plotted progress schedules, two PERT charts, and reports on all construction activities every two weeks (bi-weekly). This scheduled bi-weekly submittal shall also include an updated version of the project schedule in a computerized software format as specified by the Engineer. The submittal shall have all the information needed to re-create that time period's TSLD plot and reports. The bi-weekly submittal shall include, but not limited to, an update of activities based on actual durations, all new activities and any changes in duration or start or finish dates of any activity.

The Contractor shall submit with every update, in report form acceptable to the Engineer, a list of changes to the progress schedule since the previous schedule submittal. The Engineer may change the frequency of the submittal requirements but may not require a submittal of the schedule to be more than once a week. The Engineer may decrease the frequency of the submittal of the bi-weekly schedule.

The Contractor shall submit updates of the anticipated work completion graph, equipment listing, manpower requirement graph or method statement when requested by the Engineer. The Contractor shall submit such updates within 4 calendar days from the date of the request by the Engineer.

The Engineer may withhold progress payment until the Contractor is in compliance with all schedule update requirements

(F) Float. All float appearing on a schedule is a shared commodity. Float does not belong to or exist for the exclusive use or benefit of either the State or the Contractor. The State or the Contractor has the opportunity to use available float until it is depleted. Float has no monetary value.

(G) Scheduled Meetings. The Contractor shall meet on a bi-weekly basis with the Engineer to review the progress schedule. The

Contractor shall have someone attending the meeting that can answer all questions on the TSLD and other schedule related submittals.

(H) Accelerated Schedule; Early Completion. If the Contractor submits an accelerated schedule (shorter than the contract time), the Engineer's review and acceptance of an accelerated schedule does not constitute an agreement or obligation by the State to modify the contract time or completion date. The Contractor is solely responsible for and shall accept all risks and any delays, other than those that can be directly and solely attributable to the State, that may occur during the work, until the contract completion date. The contract time or completion date is established for the benefit of the State and cannot be changed without an appropriate change order or Substantial Completion granted by the State. The State may accept the work before the completion date is established, but is not obligated to do so.

If the TSLD indicates an early completion of the project, the Contractor shall, upon submittal of the schedule, cooperate with the Engineer in explaining how it will be achieved. In addition, the Contractor shall submit the above explanation in writing which shall include the State's part, if any, in achieving the early completion date. Early completion of the project shall not rely on changes to the Contract Documents unless approved by the Engineer.

(I) Contractor Responsibilities. The Contractor shall promptly respond to any inquiries from the Engineer regarding any schedule submission. The Contractor shall adjust the schedule to address directives from the Engineer and shall resubmit the TSLD package to the Engineer until the Engineer finds it acceptable.

The Contractor shall perform the work in accordance with the submitted TSLD. The Engineer may require the Contractor to provide additional work forces and equipment to bring the progress of the work into conformance with the TSLD at no increase in contract price or contract time whenever the Engineer determines that the progress of the work does not insure completion within the specified contract time.

108.07 Weekly Meeting. In addition to the bi-weekly schedule meetings, the Contractor shall be available to meet once a week with the Engineer at the time and place as determined by the Engineer to discuss the work and its progress including but not limited to, the progress of the project, potential problems, coordination of work, submittals, erosion control reports, etc. The Contractor's personnel attending shall have the authority to make decisions and answer questions.

The Contractor shall bring to weekly meetings a detailed work schedule showing the next three weeks' work. Number of copies of the detailed work schedule to be submitted will be determined by the Engineer. The three-week

schedule is in addition to the TSLD and shall in no way be considered as a substitute for the TSLD or vice versa. The three-week schedule shall show:

(a) All construction events, traffic control and BMP related activities in such detail that the Engineer will be able to determine at what location and type of work will be done for any day for the next three weeks. This is for the State to use to plan its manpower requirements for that time period.

(b) The duration of all events and delays.

(c) The critical path clearly marked in red or marked in a manner that makes it clearly distinguishable from other paths and is acceptable to the Engineer.

(d) Critical submittals and requests for information (RFI's).

(e) The project title, project number, date created, period the schedule covers, Contractor's name and creator of the schedule on each page.

Two days prior to each weekly meeting, the Contractor shall submit a list of outstanding submittals, RFIs and issues that require discussion.

108.08 Liquidated Damages for Failure to Complete the Work or Portions of the Work on Time. The actual amount of damages resulting from the Contractor's failure to complete the contract in a timely manner is difficult to accurately determine. Therefore the amount of such damages shall be liquidated damages as set forth herein and in the special provisions. The State may, at its discretion, deduct the amount from monies due or that may become due under the contract.

When the Contractor fails to reach substantial completion of the work for which liquidated damages are specified, within the time or times fixed in the contract or any extension thereof, in addition to all other remedies for breach that may be available to the State, the Contractor shall pay liquidated damages to the State, in the amount of $ 5,000.00 per calendar day.

(A) Liquidated Damages Upon Termination. If the State terminates on account of Contractor's default, liquidated damages may be charged against the defaulting Contractor and its surety until final completion of work.

(B) Liquidated Damages for Failure to Complete the Punchlist. The Contractor shall complete the work on any punchlist created after the pre-final inspection, within the contract time or any extension thereof.

When the Contractor fails to complete the work on such punchlist within the contract time or any extension thereof, the Contractor shall pay

liquidated damages to the State of 20 percent of the amount of liquidated damages established for failure to substantially complete the work within contract time. Liquidated damages shall not be assessed for the period between:

(1) Notice from the Contractor that the project is substantially complete and the time the punchlist is delivered to the Contractor.

(2) The date of the completion of punchlist as determined by the Engineer and the date of the successful final inspection, and

(3) The date of the Final Inspection that results in Substantial Completion and the receipt by the Contractor of the written notice of Substantial Completion.

(C) Actual Damages Recoverable If Liquidated Damages Deemed Unenforceable. In the event a court of competent jurisdiction holds that any liquidated damages assessed pursuant to this contract are unenforceable, the State will be entitled to recover its actual damages for Contractor's failure to complete the work, or any designated portion of the work within the time set by the contract.

108.09 Rental Fees for Unauthorized Lane Closure or Occupancy. In addition to all other remedies available to the State for Contractor's breach of the terms of the contract, the Engineer will assess the rental fees in the amount of $500 for every one-to fifteen-minute increment for each roadway lane closed to public use or occupied beyond the time periods authorized in the contract or by the Engineer. The maximum amount assessed per day shall be $5,000. The State may, at its discretion, deduct the amount from monies due or that may become due under the contract. The rental fee may be waived in whole or part if the Engineer determines that the unauthorized period of lane closure or occupancy was due to factors beyond the control of the Contractor. Equipment breakdown is not a cause to waive liquidated damages.

108.10 Suspension of Work.

(A) Suspension of Work. The Engineer may, by written order, suspend the performance of the work, either in whole or in part, for such periods as the Engineer may deem necessary, for any cause, including but not limited to:

(1) Weather or soil conditions considered unsuitable for prosecution of the work.

(2) Whenever a redesign that may affect the work is deemed necessary by the Engineer.

(3) Unacceptable noise or dust arising from the construction even if it does not violate any law or regulation.

(4) Failure on the part of the Contractor to:

(a) Correct conditions unsafe for the general public or for the workers.

(b) Carry out orders given by the Engineer.

(c) Perform the work in strict compliance with the provisions of the contract.

(d) Provide adequate supervision on the jobsite.

(5) The convenience of the State.

(B) Partial and Total Suspension. Suspension of work on some but not all items of work shall be considered a "partial suspension". Suspension of work on all items shall be considered "total suspension". The period of suspension shall be computed from the date set out in the written order for work to cease until the date of the order for work to resume.

(C) Reimbursement to Contractor. In the event that the Contractor is ordered by the Engineer in writing as provided herein to suspend all work under the contract for the reasons specified in Subsections 108.10(A)(2), 108.10(A)(3), or 108.10(A)(5) of the "Suspension of Work" paragraph, the Contractor may be reimbursed for actual direct costs incurred on work at the jobsite, as authorized in writing by the Engineer, including costs expended for the protection of the work. An allowance of 5 percent for indirect categories of delay costs will be paid on any reimbursed direct costs, including extended branch and home-office overhead and delay impact costs. No allowance will be made for anticipated profits. Payment for equipment which is ordered to standby during such suspension of work shall be made as described in Subsection 109.06(H) - Idle and Standby Equipment.

(D) Cost Adjustment. If the performance of all or part of the work is suspended for reasons beyond the control of the Contractor except an adjustment shall be made for any increase in cost of performance of this contract (excluding profit) necessarily caused by such suspension, and the contract modified in writing accordingly.

However, no adjustment to the contract price shall be made for any suspension, delay, or interruption:

(1) For weather related conditions.

(2) To the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor.

(3) Or, for which an adjustment is provided for or excluded under any other provision of this Contract.

(E) Claims for Adjustment. Any adjustment in contract price made shall be determined in accordance with Subsections 104.02 – Changes and 104.06 – Methods of Price Adjustment.

Any claims for such compensation shall be filed in writing with the Engineer within 30 days after the date of the order to resume work or the claim will not be considered. The claim shall conform to the requirements of Subsection 107.15(D) – Making of a Claim. The Engineer will take the claim under consideration, may make such investigations as are deemed necessary and will be the sole judge as to the equitability of the claim. The Engineer's decision will be final.

(F) No Adjustment. No provision of this clause shall entitle the Contractor to any adjustments for delays due to failure of its surety, the cancellation or expiration of any insurance coverage required by the contract documents, for suspensions made at the request of the Contractor, for any delay required under the contract, for suspensions, either partial or whole, made by the Engineer under Subsection 108.10(A)(4) of the "Suspension of work" paragraph.

108.11 Termination of Contract for Cause.

(A) Default. If the Contractor refuses or fails to perform the work, or any separable part thereof, with such diligence as will assure its completion within the time specified in this contract, or any extension thereof, or commits any other material breach of this contract, and further fails within seven days after receipt of written notice from the Engineer to commence and continue correction of the refusal or failure with diligence and promptness, the Engineer may, by written notice to the Contractor, declare the Contractor in breach and terminate the Contractor's right to proceed with the work or the part of the work as to which there has been delay or other breach of contract. In such event, the State may take over the work, perform the same to completion, by contract or otherwise, and may take possession of, and utilize in completing the work, the materials, appliances, and plants as may be on the site of the work and necessary therefore. Whether or not the Contractor's right to proceed with the work is terminated, the Contractor and the Contractor's sureties shall be liable for any damage to the State resulting from the Contractor's refusal or failure to complete the work within the specified time.

(B) Additional Rights and Remedies. The rights and remedies of the State provided in this contract are in addition to any other rights and remedies provided by law.

(C) Costs and Charges. All costs and charges incurred by the State, together with the cost of completing the work under contract, will be deducted from any monies due or which would or might have become due to the Contractor had it been allowed to complete the work under the contract. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay the State the amount of the excess.

In case of termination, the Engineer will limit any payment to the Contractor to the part of the contract satisfactorily completed at the time of termination. Payment will not be made until the work has satisfactorily been completed and all required documents, including the tax clearance required by Subsection 109.11 – Final Payment are submitted by the Contractor. Termination shall not relieve the Contractor or Surety from liability for liquidated damages.

(D) Erroneous Termination for Cause. If, after notice of termination of the Contractor's right to proceed under this section, it is determined for any reason that good cause did not exist to allow the State to terminate as provided herein, the rights and obligations of the parties shall be the same as, and the relief afforded the Contractor shall be limited to, the provisions contained in Subsection 108.12 – Termination for Convenience.

108.12 Termination For Convenience.

(A) Terminations. The Director may, when the interests of the State so require, terminate this contract in whole or in part, for the convenience of the State. The Director will give written notice of the termination to the Contractor specifying the part of the contract terminated and when termination becomes effective.

(B) Contractor's Obligations. The Contractor shall incur no further obligations in connection with the terminated work and on the date set in the notice of termination the Contractor shall stop work to the extent specified. The Contractor shall also terminate outstanding orders and subcontracts as they relate to the terminated work. The Contractor shall settle the liabilities and claims arising out of the termination of subcontracts and orders connected with the terminated work subject to the State's approval. The Engineer may direct the Contractor to assign the Contractor's right, title, and interest under terminated orders or subcontracts to the State. The Contractor must still complete the work not terminated by the notice of termination and may incur obligations as necessary to do so.

(C) Right to Construction and Goods. The Engineer may require the Contractor to transfer title and to deliver to the State in the manner and to the extent directed by the Engineer, the following:

(1) Any completed work.

(2) Any partially completed construction, goods, materials, parts, tools, dies, jigs, fixtures, drawings, information, and contract rights (hereinafter called "construction material") that the Contractor has specifically produced or specially acquired for the performance of the terminated part of this contract.

(3) The Contractor shall protect and preserve all property in the possession of the Contractor in which the State has an interest. If the Engineer does not elect to retain any such property, the Contractor shall use its best efforts to sell such property and construction materials for the State's account in accordance with the standards of HRS Chapter 490:2-706.

(D) Compensation.

(1) The Contractor shall submit a termination claim specifying the amounts due because of the termination for convenience together with cost or pricing data, submitted to the extent required by HAR Subchapter 15, Chapter 3-122. If the Contractor fails to file a termination claim within one year from the effective date of termination, the Engineer may pay the Contractor, if at all, an amount set in accordance with Subsection 108.12(D)(3).

(2) The Engineer and the Contractor may agree to a settlement provided the Contractor has filed a termination claim supported by cost or pricing data submitted as required and that the settlement does not exceed the total contract price plus settlement costs reduced by payments previously made by the State, the proceeds of any sales of construction, supplies, and construction materials under Subsection 108.12(C)(3), and the proportionate contract price of the work not terminated.

(3) Absent complete agreement, the Engineer will pay the Contractor the following amounts less any payments previously made under the contract:

(a) The cost of all contract work performed prior to the effective date of the notice of termination work plus a 5 percent markup on the actual direct costs, including amounts paid to subcontractor, less amounts paid or to be paid for completed portions of such work; provided, however, that if it appears that the Contractor would have

sustained a loss if the entire contract would have been completed, no markup shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss. No anticipated profit or consequential damage will be due or paid.

(b) Subcontractors shall be paid a markup of 10 percent on their direct job costs incurred to the date of termination. No anticipated profit or consequential damage will be due or paid to any subcontractor. These costs must not include payments made to the Contractor for subcontract work during the contract period.

(c) The total sum to be paid the Contractor shall not exceed the total contract price reduced by the amount of any sales of construction supplies, and construction materials.

(4) Cost claimed, agreed to, or established by the State shall be in accordance with HAR Chapter 3-123.

108.13 Pre-Final and Final Inspections.

(A) Inspection Requirements. Before the Engineer undertakes a final inspection of any work, a pre-final inspection must first be conducted. The Contractor shall notify the Engineer that the work has reached substantial completion and is ready for pre-final inspection.

(B) Pre-Final Inspection. Before notifying the Engineer that the work has reached substantial completion, the Contractor shall inspect the project and test all installed items with all of its subcontractors as appropriate. The Contractor shall also submit the following documents as applicable to the work:

(1) All written guarantees required by the contract.

(2) Two accepted final field-posted drawings as specified in Section 648 – Field-Posted Drawings;

(3) Complete weekly certified payroll records for the Contractor and Subcontractors.

(4) Certificate of Plumbing and Electrical Inspection.

(5) Certificate of building occupancy as required.

(6) Certificate of Soil and Wood Treatments.

(7) Certificate of Water System Chlorination.

(8) Maintenance Service Contract and two copies of a list of all equipment installed.

(9) Current Tax clearance. The contractor will be required to submit an additional tax clearance certificate when the final payment is made.

(10) And any other final items and submittals required by the contract documents.

(C) Procedure. When in compliance with the above requirements, the Contractor shall notify the Engineer in writing that the project has reached substantial completion and is ready for pre-final inspection.

The Engineer will then make a preliminary determination as to whether or not the project is substantially complete and ready for pre-final inspection. The Engineer may, in writing, postpone until after the pre-final inspection the Contractor's submittal of any of the items listed in Subsection 108.13(B) – Pre-Final Inspection, herein, if in the Engineer's discretion it is in the interest of the State to do so.

If, in the opinion of the Engineer, the project is not substantially complete, the Engineer will provide the Contractor a punchlist of specific deficiencies in writing which must be corrected or finished before the work will be ready for a pre-final inspection. The Engineer may add to or otherwise modify this punchlist from time to time. The Contractor shall take immediate action to correct the deficiencies and must repeat all steps described above including written notification that the work is ready for pre-final inspection.

After the Engineer is satisfied that the project appears substantially complete a final inspection shall be scheduled within ten working days after receipt of the Contractor's latest letter of notification that the project is ready for final inspection.

If, as a result of the pre-final inspection, the Engineer determines the work is not substantially complete, the Engineer will inform the Contractor in writing as to specific deficiencies which must be corrected before the work will be ready for another pre-final inspection. If the Engineer finds the work is substantially complete but finds deficiencies that must be corrected before the work is ready for final inspection, the Engineer will prepare in writing and deliver to the Contractor a punchlist describing such deficiencies.

At any time before final acceptance, the Engineer may revoke the determination of substantial completion if the Engineer finds that it was not

warranted and will notify the Contractor in writing the reasons therefore together with a description of the deficiencies negating the declaration.

When the date of substantial completion has been determined by the State, liquidated damages for the failure to complete the punchlist, if due to the State will be assessed in pursuant to Subsection 108.08(B) - Liquidated Damages for Failure to Complete the Punchlist.

(D) Punchlist; Clean Up and Final Inspection. Upon receiving a punchlist after pre-final inspection, the Contractor shall promptly devote all required time, labor, equipment, materials and incidentals to correct and remedy all punchlist deficiencies. The Engineer may add to or otherwise modify this punchlist until substantial completion of the project.

Before final inspection of the work, the Contractor shall clean all ground occupied by the Contractor in connection with the work of all rubbish, excess materials, temporary structures and equipment, shall remove all graffiti and defacement of the work and all parts of the work and the worksite must be left in a neat and presentable condition to the satisfaction of the Engineer.

Final inspection will occur within ten working days after the Contractor notifies the Engineer in writing that all punchlist deficiencies remaining after the pre-final inspection have been completed and the Engineer concurs. If the Engineer determines that deficiencies still remain at the final inspection, the work will not be accepted and the Engineer will notify the Contractor, in writing, of the deficiencies which shall be corrected and the steps above repeated.

If the Contractor fails to correct the deficiencies and complete the work by the established or agreed date, the State may correct the deficiencies by whatever method it deems appropriate and deduct the cost from any payments due the Contractor.

108.14 Substantial Completion and Final Acceptance.

(A) Substantial Completion. When the Engineer finds that the Contractor has satisfactorily completed all work for the project in compliance with the contract, with the exception of the planting period and the plant establishment period, the Engineer will notify the Contractor, in writing, of the project's substantial completion, effective as of the date of the final inspection. The substantial completion date shall determine end of contract time and relieve contractor of any additional accumulation of liquidated damages for failure to complete the punchlist.

(B) Final Acceptance. When the Engineer finds that the Contractor has satisfactorily completed all contract work in compliance with the contract including all plant establishment requirements, and all the

materials have been accepted by the State, the Engineer will issue a Final Acceptance Letter. The Final Acceptance date shall determine the commencement of all guaranty periods subject to Subsection 108.16 – Contractor's Responsibility for Work; Risk of Loss or Damage.

108.15 Use of Structure or Improvement. The State has the right to use the structure, equipment, improvement, or any part thereof, at any time after it is considered by the Engineer as available. In the event that the structure, equipment or any part thereof is used by the State before final acceptance, the Contractor is not relieved of its responsibility to protect and preserve all the work until final acceptance.

108.16 Contractor's Responsibility for Work; Risk of Loss or Damage. Until the written notice of final acceptance has been received, the Contractor shall take every precaution against loss or damage to any part of the work by the action of the elements or from any other cause whatsoever, whether arising from the performance or from the non-performance of the work. The Contractor shall rebuild, repair, restore and make good all loss or damage to any portion of the work resulting from any cause before its receipt of the written notice of final acceptance and shall bear the risk and expense thereof.

The risk of loss or damage to the work from any hazard or occurrence that may or may not be covered by a builder's risk policy is that of the Contractor and Surety, unless such risk of loss is placed elsewhere by express language in the contract documents.

The Contractor shall take every precaution against loss or damage to any part of the historic properties within the project limits, arising from the performance or from the non-performance of the work. The Contractor shall rebuild, repair, restore and make good all loss or damage to any portion of the historic properties in accordance with the Memorandum of Agreement Among the Federal Highways Administration, the Hawaii State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the Leeward Bikeway, Philippine Sea Road to Waipahu Depot Street executed on June 24, 2019, and including all subsequent amendments (known hereafter as the MOA) as a result of its willful or unintentional actions before its receipt of the written notice of final acceptance and shall bear the risk and expense thereof.

The cost for repair of damage to historic properties within the project limits caused by the Contractor during construction shall be the sole responsibility of the Contractor. In addition, no time extension will be granted and no additional compensation will be paid to the Contractor for the activities and duration associated with the repair of damage caused by the Contractor during construction.

108.17 Guarantee of Work.

(1) Regardless of, and in addition to, any manufacturers' warranties, all work and equipment shall be guaranteed by the Contractor against defects in materials, equipment or workmanship for one year from the date of final acceptance or as otherwise specified in the contract documents.

(2) When the Engineer determines that repairs or replacements of any guaranteed work and equipment is necessary due to materials, equipment, or workmanship which are inferior, defective, or not in accordance with the terms of the contract, the Contractor shall, at no increase in contract price or contract time, and within five working days of receipt of written notice from the State, commence to all of the following:

(a) Correct all noted defects and make replacements, as directed by the Engineer, in the equipment and work.

(b) Repair or replace to new or pre-existing condition any damages resulting from such defective materials, equipment or installation thereof.

(3) The State will be entitled to the benefit of all manufacturers and installers warranties that extend beyond the terms of the Contractor's guaranty regardless of whether or not such extended warranty is required by the contract documents. The Contractor shall prepare and submit all documents required by the providers of such warranties to make them effective, and submit copies of such documents to the Engineer. If an available extended warranty cannot be transferred or assigned to the State as the ultimate user, the Contractor shall notify the Engineer who may direct that the warranted items be acquired in the name of the State as purchaser.

(4) If a defect is discovered during a guarantee period, all repairs and corrections to the defective items when corrected shall be guaranteed for a new duration equal to the original full guarantee period. The running of the guarantee period shall be suspended for all other work affected by any defect. The guarantee period for all other work affected by any such defect shall restart for its remaining duration upon confirmation by the Engineer that the deficiencies have been repaired or remedied.

(5) Nothing in this section is intended to limit or affect the State's rights and remedies arising from the discovery of latent defects in the work after the expiration of any guarantee period.

108.18 No Waiver of Legal Rights. The following will not operate or be considered as a waiver of any portion of the contract, or any power herein reserved, or any right to damages provided herein or by law:

(1) Any payment for, or acceptance of, the whole or any part of the work.

(2) Any extension of time.

(3) Any possession taken by the Engineer.

A waiver of any notice requirement or of any noncompliance with the contract will not be held to be a waiver of any other notice requirement or any other noncompliance with the contract.

108.19 Final Settlement of Contract.

(A) Closing Requirements. The contract will be considered settled after the project acceptance date and when the following items have been satisfactorily submitted, where applicable:

(1) All written guarantees required by the contract.

(2) Complete and certified weekly payrolls for the Contractor and its subcontractor's.

(3) Certificate of plumbing and electrical inspection.

(4) Certificate of building occupancy.

(5) Certificate for soil treatment and wood treatment.

(6) Certificate of water system chlorination.

(7) Tax clearance.

(8) All other documents required by the Contract or by law.

(B) Failure to Meet Closing Requirements. The Contractor shall meet the applicable closing requirements within 60 days from the date of Project Acceptance or the agreed to Punchlist complete date. Should the Contractor fail to comply with these requirements, the Engineer may terminate the contract for cause."

END OF SECTION 108

SECTION 202 – REMOVAL OF STRUCTURES AND OBSTRUCTIONS

Make the following amendments to said Section:

(I) Amend **202.04 – Measurement** by revising lines 119 to 120 to read as follows:

"**202.04 Measurement.** If the proposal provides a contract item for the removal of structure and obstructions, the Engineer will measure the removal of structures and obstructions by the square yard, each, or linear foot.

The Engineer will not measure the removal of structures and obstructions when contracted on a lump sum basis."

(II) Amend **202.05 – Payment** by revising lines 122 to 131 to read as follows:

"**202.05 Payment.** If the proposal does not show a contract item for the removal of structures and obstructions, the Engineer will not pay for the removal of structures and obstructions separately. The Contractor shall consider them incidental to the various contract items.

The Engineer will pay for specific items stipulated for removal and disposal at the contract price bid per unit specified in the proposal. The price shall be full compensation for removal and disposal of that items, excavation, backfill, salvage of materials removed. Salvaging of materials removed includes their custody, preservation, storage on the right-of-way. Also, the price shall be full compensation for equipment, tools, labor materials and incidentals necessary to complete the work.

The Engineer will pay for the following pay item when included in the proposal schedule.

Pay Item	Pay Unit
Removal and Disposal of Obstructions	Lump Sum
Removal of Existing Waikele Stream Bridge	Lump Sum
Removal of Existing Kapakahi Stream Bridge	Lump Sum
Removal and Disposal of Existing Railroad Tracks	Linear Foot
Removal of Temporary Utility Supports Waikele Stream Bridge	Lump Sum
Removal of Temporary Utility Supports Kapakahi Stream Bridge	Lump Sum

Removal of Asphalt Concrete	Square Yard
Removal of Existing Concrete	Square Yard
Removal of Existing 3’ High Metal Fence	Linear Foot
Removal of Existing 6’ High Chain-Link Fence	Linear Foot
Removal of Existing Pavement Markings	Linear Foot
Removal and Relocation of Existing Cattle Gate	Each
Removal of Existing Curb	Linear Foot
Removal of Existing Curb and Gutter	Linear Foot”

END OF SECTION 202

SECTION 505 – PILING

Make the following amendments to said Section:

(I) Amend **Section 505.03(E)(3) Drilling**, by revising lines 429 to 431 to read as follows:

> **"(3) Predrilling.** Drill in locations where piles will be driven through embankments that are more than 5 feet deep or when required in the contract documents prior to impact driving."

(II) Amend **Section 505.03(E)(3) Drilling**, by revising lines 440 to 441 to read as follows:

> "Predrilling in a manner that will not impair carrying capacity of piles already in place or safety of existing adjacent structures."

(III) Amend **Section 505.03(E)(3) Drilling**, by replacing lines 456 to 462 to read as follows:

> "Predrilled holes through natural ground only when required in the contract documents. For piles driven through natural ground, make drilled holes sufficiently large to allow penetration of piles to specified depth, but not larger than diameter or diagonal of pile cross-section. If subsurface obstructions are encountered, such as boulders or rock layers, hole diameter may be increased to the least dimension adequate for pile installation."

(IV) Amend **Section 505.04 Measurement**, by revising lines 966 to 976 to read as follows:

"**505.04 Measurement.**

> **(A)** Furnishing pile predrilling and driving equipment on a lump sum basis. Measurement for payment will not apply.
>
> **(B)** The Engineer will measure piles, furnished and driven, in place complete and predrilling for piling, including completion of disposing of material resulting from predrilling holes, per linear foot in accordance with the contract documents.
>
> **(C)** The Engineer will measure pile cutting, pile load test, and splicing per each in accordance with the contract documents.

(D) The Engineer will not measure Archiving of Pile Driving Records as described in Section 503.03(H)(9) for payment. The cost for that work shall be incidental to the 16.5-inch Precast Prestressed Concrete Pile."

(V) Amend **Section 505.05 Payment.**, by revising lines 983 to 1059 to read as follows:

"The Engineer will pay for the following pay items when included in the proposal schedule:

Pay Item	**Pay Unit**
Furnishing Pile Predrilling and Driving Equipment	Lump Sum

The Engineer will pay for:

(A) 60 percent of the contract bid price when pile predrilling and driving equipment is on job site, assembled, and ready to be operated.

(B) 40 percent of the contract bid price upon completion of pile driving operation.

16.5-inch Precast Prestressed Concrete Pile	Linear Foot
Predrilling	Linear Foot
Pile Cutting	Each

The Engineer will pay for contract bid price upon completion of furnishing pile cutting.

Dynamic Pile Load Test	Each

The Engineer will pay for:

(A) 70 percent of the contract bid price upon completion of driving test pile.

(B) 10 percent of the contract bid price upon completion of performing static and dynamic pile load tests, when required.

(C) 10 percent of the contract bid price upon completion of removing test piles that are not part of the completed structure.

(D) 10 percent of the contract bid price upon completion of cutting piles.

Splices Each

The Engineer will pay for contract bid price upon completion of furnishing splices.

The Engineer will not pay for Archiving of Pile Driving Records separately and will consider the cost for Archiving of Pile Driving Records as included in the contract price for 16.5-inch Precast Prestressed Concrete Pile. The cost is for the work prescribed in this section and the contract documents."

END OF SECTION 505

SECTION 607 – CHAIN LINK FENCES AND GATES

Make the following amendment to said Section:

(I) Amend **607.04 - Measurement** by replacing lines 105 to 106 to read:

"**607.04 Measurement.** The Engineer will measure fence by the linear foot. Measurement will be along the top of the fence from outside to outside of end post for each continuous run of fence.

The Engineer will measure gates per each as complete units of the size and type specified in the proposal, complete in place."

(II) Amend **607.05 – Payment** by revising lines 108 to 115 to read as follows:

"**607.05 Payment.** The Engineer will pay for the accepted quantities of fence at the contract unit price per linear foot of the types and sizes specified in the proposal, complete in place.

The Engineer will pay for the accepted quantities of gate at the contract unit price per each types and sizes specified in the proposal, complete in place

The Engineer will pay for following pay items when included in proposal schedule:

Pay Item	**Pay Unit**
6 – Feet High, Chain Link Fence	Linear Foot"

END OF SECTION 607

SECTION 616 – IRRIGATION SYSTEM

Make the following amendments to said Section:

(I) Amend **616.05 – Payment** by revising lines 943 to 962 to read as follows:

"**616.05 Payment.** The Engineer will pay for accepted pay items listed below at contract price per pay unit, as shown in the proposal schedule. Payment will be full compensation for work prescribed in this section and contract documents.

Engineer will pay for the following pay item when included in the proposal schedule:

Pay Item	**Pay Unit**
Permanent Irrigation System (Extension)	Lump Sum

Contractor shall pay for water used before acceptance of project or until termination of maintenance period for plantings, whichever is later."

END OF SECTION 616

SECTION 619 – PLANTING

Make the following amendments to said Section:

(I) Amend **Subsection 619.02(H)(3) – Application Records** from lines 207 to 210 to read:

"**(3) Application Records.** Records shall be kept by Contractor of dates of application, type of fertilizer or manure used, quantities, and areas that were covered and shall be submitted to Engineer within 24 hours of application. Document if rates and amounts of fertilizer deviate from manufacturer's specifications."

(II) Amend **Subsection 619.03(A) – Codes and Standards** from lines 262 to 264 to read:

"**(A) Quality Assurance.**

(1) Codes and Standards. Perform work in accordance with applicable laws, codes, and regulations. Provide inspections and permits required by Federal, State, and local governmental authorities.

(2) Qualifications. To become qualified in the work class of Landscaping, the applicant shall provide a letter containing the following:

(a) A statement declaring at least five continuous years of experience of a scope similar to that required for the work, including installing temporary irrigation (where applicable), hydro-mulch application, soil preparation, and plant installation and establishment.

(b) The letter must be signed and dated by the Owner of the Company or Company Officer.

(c) Produce a list of completed projects similar to the scope and size of the required work to substantiate the experience. The list shall contain a minimum of five different landscape projects, excluding single-family residential landscape. A minimum of five different landscape projects shall be rated positive on a performance evaluation by the references in the list below. Names and references must be current and verifiable. Use separate sheets of paper that contain all of the following information:

1. Project name

2. Location of project (city, state)

3. Owner

4. Owner Contact (name and current phone number)

5. Architect or Engineer Company Name

6. Architect or Engineer Contact (name and current phone number)

7. Construction Manager (name and current phone number)

8. Description of Project, Scope of Work Performed

9. Total Value of Construction (including change orders)

10. Original Scheduled Completion Date

11. Actual Date of Completion

(d) Approval. The Contractor shall submit the items under this section to the Engineer for approval prior to construction. If the applicant does not have proof of five continuous years of experience with a minimum of five completed projects similar in scope and size, the Contractor shall remove the applicant from the project upon receipt of a written notice from the Engineer. Requests to substitute an applicant will be allowed under Subsection 105.16 Subcontracts."

(III) Amend **Subsection 619.03(I) – Adding Fertilizer and Amendments** by revising the section from lines 310 to 314 to read:

"(**1)** Uniformly distribute fertilizer and amendments over planting areas as recommended by the Soil Analysis Report as specified in Section 617 – Planting Soil. Document if rates and amounts of fertilizer deviate from manufacturer's specifications. Rototill top four inches of soil to evenly incorporate fertilizer and amendments. Rototill before installing drip irrigation system."

(IV) Amend **Subsection 619.03(T)(3) – Fertilizing** by adding the following paragraph after line 478:

"Submit recommendations from a licensed Landscape Architect when deviating from the application rates and amounts above. Document if the rates and amounts of fertilizer deviate from manufacturer's specifications."

(V) Amend **Subsection 619.04 - Measurement** by revising the section from lines 538 to 539 to read:

"**619.04 Measurement**. The Engineer will measure Planting per square foot of finished planting, in accordance with the contract documents."

(VI) Amend **Subsection 619.05 – Payment** by revising the section from lines 548 to 556 to read:

"Pay Item	**Pay Unit**
Dwarf Naupaka	Square Foot"

END OF SECTION 619

SECTION 641 – HYDRO-MULCH SEEDING

Make the following amendments to said Section:

(I) Amend **Subsection 641.02(B) – Fertilizer** by revising the section from line 33 to 36 to read:

> "**(B) Fertilizer.** Proper fertilizer shall be used in hydro-mulch mix, depending on condition of soil. Apply at rates and in amounts consistent with manufacturer's specifications. Contractor shall provide a Soil Analysis Report, if requested by Engineer, and shall use report to determine quantity and ratio of fertilizer for sustained growth of grass. Submit recommendations from a licensed Landscape Architect when deviating from the application rates and amounts above."

(II) Amend **Subsection 641.03(A) – Seeding** by revising the first paragraph from line 100 to 103 to read:

> **"(A) Seeding.** Apply seeded mulch within the timeframe in Subsection 209.03(B) – Construction Requirements, if temporary stabilization will not be utilized, after completion of slopes or portion of slope when exposed face attains height of 15 feet. Notify Engineer not less than 24 hours ahead of hydro-mulch seeding operation. Do not hydro-mulch until the Engineer inspects and accepts areas for planting."

(III) Amend **Subsection 641.04 – Measurement** by revising the section from line 173 to 174 to read:

"**641.04 Measurement**. The Engineer will measure hydro-much seeding per square foot of finished seeding, in accordance with the contract documents."

(IV) Amend **Subsection 641.05 - Payment** by revising the section from line 176 to 185 to read:

"**641.05 Payment.** The Engineer will pay for the accepted hydro-mulch seeding at the contract price per square foot. Payment will be full compensation for the work prescribed in this section and the contract documents.

The Engineer will pay for the following pay item when included in the proposal schedule:

Pay Item	**Pay Unit**
Hydro-Mulch Seeding	Square Foot"

END OF SECTION 641

SECTION 655 – DUMPED RIPRAP

Make the following amendments to said Section:

(I) Amend **655.02 – Materials** by revising line 9 to read as follows:

"Geotextiles for Permanent Erosion Control Applications 716.07"

(II) Amend **655.04 – Measurement** by revising lines 34 to 35 to read as follows:

"**655.04 Measurement**. The Engineer will measure dumped riprap per cubic yard in accordance with contract documents."

(III) Amend **655.05 – Payment** by revising lines 37 to 45 to read as follows:

"**655.05 Payment.** The Engineer will pay for the accepted dumped riprap per cubic yard. Payment will be full compensation for the work prescribed in this section and contract documents.

The Engineer will pay for following pay item when included in the proposal schedule:

Pay Item	**Pay Unit**
Dumped Riprap	Cubic Yard"

END OF SECTION 655

Make the following Section a part of the Standard Specifications:

"**SECTION 659 – MISCELLANEOUS MITIGATION MEASURES**

659.01 Description. This work includes mitigation measures as stated in the final Memorandum of Agreement (MOA), its associated addenda, and as directed by the Engineer.

659.02 Construction Requirements. HDOT has contracted with a qualified Historic Architect and will provide the design(s) and content for the interpretive signs, signage plan and interpretive brochure. Contractor shall be responsible for the manufacturing, delivery, storage and installation/distribution of the various items to the specified locations as necessary and as described in the MOA.

The Contractor shall salvage approximately five-foot long end sections of both the mauka and makai steel plate girder walls from the east end of the Kapakahi Stream bridge and deliver to the Hawaiian Railway Society yard as stated in the MOA.

659.03 Method of Measurement. The Engineer will measure mitigation measures, on a force account basis according to Subsection 109.06 - Force Account Provisions and Compensation and as ordered by the Engineer.

659.04 Basis of Payment. The Engineer will pay for the accepted mitigation measures, on a force account basis according to Subsection 109.06 - Force Account Provisions and Compensation. An estimated amount for the force account is allocated in the proposal schedule under Miscellaneous Mitigation Measures, but the actual amount to be paid will be the sum shown on the accepted force account records, whether this sum be more or less than the estimated amount allocated in the proposal schedule.

Payment will be full compensation for the work prescribed in this section, by the Engineer, and in Subsection 109.06 - Force Account Provisions and Compensation.

The Engineer will make payment under:

Pay Item	**Pay Unit**
Miscellaneous Mitigation Measures	Force Account

The Engineer will not pay for work required that is due to the Contractor's convenience, negligence, carelessness or failure to properly execute stated tasks."

END OF SECTION

"General Decision Number: HI20190001 10/25/2019

Superseded General Decision Number: HI20180001

State: Hawaii

Construction Types: Building, Heavy (Heavy and Dredging), Highway and Residential

Counties: Hawaii Statewide.

BUILDING CONSTRUCTION PROJECTS; RESIDENTIAL CONSTRUCTION PROJECTS (consisting of single family homes and apartments up to and including 4 stories); HEAVY AND HIGHWAY CONSTRUCTION PROJECTS AND DREDGING

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate,if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act

Addendum No. 1

itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/04/2019
1	01/18/2019
2	01/25/2019
3	02/01/2019
4	02/22/2019
5	03/01/2019
6	05/31/2019
7	07/26/2019
8	09/20/2019
9	10/04/2019
10	10/18/2019
11	10/25/2019

ASBE0132-001 08/31/2015

	Rates	Fringes
Asbestos Workers/Insulator Includes application of all insulating materials, protective coverings, coatings and finishes to all types of mechanical systems. Also the application of firestopping material for wall openings and penetrations in walls, floors, ceilings and curtain walls	$ 39.65	23.50

BOIL0627-005 01/01/2013

	Rates	Fringes
BOILERMAKER	$ 35.20	27.35

BRHI0001-001 01/01/2019

	Rates	Fringes
BRICKLAYER		
Bricklayers and Stonemasons	$ 43.66	24.32
Pointers, Caulkers and Weatherproofers	$ 43.60	24.32

BRHI0001-002 09/04/2018

	Rates	Fringes
Tile, Marble & Terrazzo Worker		
Terrazzo Base Grinders	$ 39.89	28.11
Terrazzo Floor Grinders and Tenders	$ 38.34	28.11
Tile, Marble and Terrazzo Workers	$ 41.70	28.11

CARP0745-001 09/03/2018

	Rates	Fringes
Carpenters:		
Carpenters; Hardwood Floor Layers; Patent Scaffold Erectors (14 ft. and over); Piledrivers; Pneumatic Nailers; Wood Shinglers and Transit and/or Layout Man	$ 49.45	21.75
Millwrights and Machine Erectors	$ 49.70	21.75
Power Saw Operators (2 h.p. and over)	$ 49.60	21.75

Addendum No. 1

CARP0745-002 09/03/2018

	Rates	Fringes
Drywall and Acoustical Workers and Lathers	$ 49.70	21.75

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* ELEC1186-001 08/26/2019

	Rates	Fringes
Electricians:		
Cable Splicers	$ 55.88	22.88
Electricians	$ 50.80	22.03
Telecommunication worker	$ 30.94	12.30

ELEC1186-002 08/26/2019

	Rates	Fringes
Line Construction:		
Cable Splicers	$ 55.88	22.88
Groundmen/Truck Drivers	$ 38.10	19.93
Heavy Equipment Operators	$ 45.72	21.19
Linemen	$ 50.80	22.03
Telecommunication worker	$ 31.69	12.49

ELEV0126-001 01/01/2019

	Rates	Fringes
ELEVATOR MECHANIC	$ 59.20	33.705

a. VACATION: Employer contributes 8% of basic hourly rate for 5 years service and 6% of basic hourly rate for 6 months to 5 years service as vacation pay credit.

b. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, the Friday after Thanksgiving Day and Christmas Day.

Addendum No. 1

ENGI0003-002 09/03/2018

	Rates	Fringes
Diver (Aqua Lung) (Scuba))		
Diver (Aqua Lung) (Scuba) (over a depth of 30 feet)	$ 66.00	31.26
Diver (Aqua Lung) (Scuba) (up to a depth of 30 feet)	$ 56.63	31.26
Stand-by Diver (Aqua Lung) (Scuba)	$ 47.25	31.26
Diver (Other than Aqua Lung)		
Diver (Other than Aqua Lung)	$ 66.00	31.26
Diver Tender (Other than Aqua Lung)	$ 44.22	31.26
Stand-by Diver (Other than Aqua Lung)	$ 47.25	31.26
Helicopter Work		
Airborne Hoist Operator for Helicopter	$ 45.80	31.26
Co-Pilot of Helicopter	$ 45.98	31.26
Pilot of Helicopter	$ 46.11	31.26
Power equipment operator - tunnel work		
GROUP 1	$ 42.24	31.26
GROUP 2	$ 42.35	31.26
GROUP 3	$ 42.52	31.26
GROUP 4	$ 42.79	31.26
GROUP 5	$ 43.10	31.26
GROUP 6	$ 43.75	31.26
GROUP 7	$ 44.07	31.26
GROUP 8	$ 44.18	31.26
GROUP 9	$ 44.29	31.26
GROUP 9A	$ 44.52	31.26
GROUP 10	$ 44.58	31.26
GROUP 10A	$ 44.73	31.26
GROUP 11	$ 44.88	31.26
GROUP 12	$ 45.24	31.26
GROUP 12A	$ 45.60	31.26

Addendum No. 1

Power equipment operators:

GROUP 1	$ 41.94	31.26
GROUP 2	$ 42.05	31.26
GROUP 3	$ 42.22	31.26
GROUP 4	$ 42.49	31.26
GROUP 5	$ 42.80	31.26
GROUP 6	$ 43.45	31.26
GROUP 7	$ 43.77	31.26
GROUP 8	$ 43.88	31.26
GROUP 9	$ 43.99	31.26
GROUP 9A	$ 44.22	31.26
GROUP 10	$ 44.28	31.26
GROUP 10A	$ 44.43	31.26
GROUP 11	$ 44.58	31.26
GROUP 12	$ 44.94	31.26
GROUP 12A	$ 45.30	31.26
GROUP 13	$ 42.22	31.26
GROUP 13A	$ 42.49	31.26
GROUP 13B	$ 42.80	31.26
GROUP 13C	$ 43.45	31.26
GROUP 13D	$ 43.77	31.26
GROUP 13E	$ 43.88	31.26

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Fork Lift (up to and including 10 tons); Partsman (heavy duty repair shop parts room when needed).

GROUP 2: Conveyor Operator (Handling building material); Hydraulic Monitor; Mixer Box Operator (Concrete Plant).

GROUP 3: Brakeman; Deckhand; Fireman; Oiler; Oiler/Gradechecker; Signalman; Switchman; Highline Cableway Signalman; Bargeman; Bunkerman; Concrete Curing Machine (self-propelled, automatically applied unit on streets, highways, airports and canals); Leveeman; Roller (5 tons and under); Tugger Hoist.

GROUP 4: Boom Truck or dual purpose ""A"" Frame Truck (5 tons or less); Concrete Placing Boom (Building Construction); Dinky Operator; Elevator Operator; Hoist and/or Winch (one

Addendum No. 1

drum); Straddle Truck (Ross Carrier, Hyster and similar).

GROUP 5: Asphalt Plant Fireman; Compressors, Pumps, Generators and Welding Machines (""Bank"" of 9 or more, individually or collectively); Concrete Pumps or Pumpcrete Guns; Lubrication and Service Engineer (Grease Rack); Screedman.

GROUP 6: Boom Truck or Dual Purpose ""A""Frame Truck (over 5 tons); Combination Loader/Backhoe (up to and including 3/4 cu. yd.); Concrete Batch Plants (wet or dry); Concrete Cutter, Groover and/or Grinder (self-propelled unit on streets, highways, airports, and canals); Conveyor or Concrete Pump (Truck or Equipment Mounted); Drilling Machinery (not to apply to waterliners, wagon drills or jack hammers); Fork Lift (over 10 tons); Loader (up to and including 3 and 1/2 cu. yds); Lull High Lift (under 40 feet); Lubrication and Service Engineer (Mobile); Maginnis Internal Full Slab Vibrator (on airports, highways, canals and warehouses); Man or Material Hoist; Mechanical Concrete Finisher (Large Clary, Johnson Bidwell, Bridge Deck and similar); Mobile Truck Crane Driver; Portable Shotblast Concrete Cleaning Machine; Portable Boring Machine (under streets, highways, etc.); Portable Crusher; Power Jumbo Operator (setting slip forms, etc., in tunnels); Rollers (over 5 tons); Self-propelled Compactor (single engine); Self-propelled Pavement Breaker; Skidsteer Loader with attachments; Slip Form Pumps (Power driven by hydraulic, electric, air, gas, etc., lifting device for concrete forms); Small Rubber Tired Tractors; Trencher (up to and including 6 feet); Underbridge Personnel Aerial Platform (50 feet of platform or less).

GROUP 7: Crusher Plant Engineer, Dozer (D-4, Case 450, John Deere 450, and similar); Dual Drum Mixer, Extend Lift; Hoist and/or Winch (2 drums); Loader (over 3 and 1/2 cu. yds. up to and including 6 yards.); Mechanical Finisher or Spreader Machine (asphalt), (Barber Greene and similar) (Screedman required); Mine or Shaft Hoist; Mobile Concrete Mixer (over 5 tons); Pipe Bending Machine (pipelines only); Pipe Cleaning Machine (tractor propelled and supported);

Addendum No. 1

Pipe Wrapping Machine (tractor propelled and supported); Roller Operator (Asphalt); Self-Propelled Elevating Grade Plane; Slusher Operator; Tractor (with boom) (D-6, or similar); Trencher (over 6 feet and less than 200 h.p.); Water Tanker (pulled by Euclids, T-Pulls, DW-10, 20 or 21, or similar); Winchman (Stern Winch on Dredge).

GROUP 8: Asphalt Plant Operator; Barge Mate (Seagoing); Cast-in-Place Pipe Laying Machine; Concrete Batch Plant (multiple units); Conveyor Operator (tunnel); Deckmate; Dozer (D-6 and similar); Finishing Machine Operator (airports and highways); Gradesetter; Kolman Loader (and similar); Mucking Machine (Crawler-type); Mucking Machine (Conveyor-type); No-Joint Pipe Laying Machine; Portable Crushing and Screening Plant; Power Blade Operator (under 12); Saurman Type Dragline (up to and including 5 yds.); Stationary Pipe Wrapping, Cleaning and Bending Machine; Surface Heater and Planer Operator, Tractor (D-6 and similar); Tri-Batch Paver; Tunnel Badger; Tunnel Mole and/or Boring Machine Operator Underbridge Personnel Aerial Platform (over 50 feet of platform).

GROUP 9: Combination Mixer and Compressor (gunite); Do-Mor Loaderand Adams Elegrader; Dozer (D-7 or equal); Wheel and/or Ladder Trencher (over 6 feet and 200 to 749 h.p.).

GROUP 9A: Dozer (D-8 and similar); Gradesetter (when required by the Contractor to work from drawings, plans or specifications without the direct supervision of a foreman or superintendent); Push Cat; Scrapers (up to and including 20 cu. yds); Self-propelled Compactor with Dozer; Self-Propelled, Rubber-Tired Earthmoving Equipment (up to and including 20 cu. yds) (621 Band and similar); Sheep's Foot; Tractor (D-8 and similar); Tractors with boom (larger than D-6, and similar).

GROUP 10: Chicago Boom; Cold Planers; Heavy Duty Repairman or Welder; Hoist and/or Winch (3 drums); Hydraulic Skooper (Koehring and similar); Loader (over 6 cu. yds. up to and including 12 cu. yds.); Saurman type Dragline (over 5 cu. yds.); Self-propelled, rubber-tired Earthmoving Equipment

Addendum No. 1

(over 20 cu. yds. up to and including 31 cu. yds.) (637D and similar); Soil Stabilizer (P & H or equal); Sub-Grader (Gurries or other automatic type); Tractors (D-9 or equivalent, all attachments); Tractor (Tandem Scraper); Watch Engineer.

GROUP 10A: Boat Operator; Cable-operated Crawler Crane (up to and including 25 tons); Cable-operated Power Shovel, Clamshell, Dragline and Backhoe (up to and including 1 cu. yd.); Dozer D9-L; Dozer (D-10, HD41 and similar) (all attachments); Gradall (up to and including 1 cu. yd.); Hydraulic Backhoe (over 3/4 cu. yds. up to and including 2 cu. yds.); Mobile Truck Crane Operator (up to and including 25 tons) (Mobile Truck Crane Driver Required); Self-propelled Boom Type Lifting Device (Center Mount) (up to and including 25 tons) (Grove, Drott, P&H, Pettibone and similar; Trencher (over 6 feet and 750 h.p. or more); Watch Engineer (steam or electric).

GROUP 11: Automatic Slip Form Paver (concrete or asphalt); Band Wagon (in conjunction with Wheel Excavator); Cable-operated Crawler Cranes (over 25 tons but less than 50 tons); Cable-operated Power Shovel, Clamshell, Dragline and Backhoe (over 1 cu. yd. up to 7 cu. yds.); Gradall (over 1 cu. yds. up to 7 cu. yds.); DW-10, 20, etc. (Tandem); Earthmoving Machines (multiple propulsion power units and 2 or more Scrapers) (up to and including 35 cu. yds.,"" struck"" m.r.c.); Highline Cableway; Hydraulic Backhoe (over 2 cu. yds. up to and including 4 cu. yds.); Leverman; Lift Slab Machine; Loader (over 12 cu. yds); Master Boat Operator; Mobile Truck Crane Operator (over 25 tons but less than 50 tons); (Mobile Truck Crane Driver required); Pre-stress Wire Wrapping Machine; Self-propelled Boom-type Lifting Device (Center Mount) (over 25 tons m.r.c); Self-propelled Compactor (with multiple-propulsion power units); Single Engine Rubber Tired Earthmoving Machine (with Tandem Scraper); Tandem Cats; Trencher (pulling attached shield).

GROUP 12: Clamshell or Dipper Operator; Derricks; Drill Rigs; Multi-Propulsion Earthmoving Machines (2 or more Scrapers)

Addendum No. 1

(over 35 cu. yds ""struck""m.r.c.); Operators (Derricks, Piledrivers and Cranes); Power Shovels and Draglines (7 cu. yds. m.r.c. and over); Self-propelled rubber-tired Earthmoving equipment (over 31 cu. yds.) (657B and similar); Wheel Excavator (up to and including 750 cu. yds. per hour); Wheel Excavator (over 750 cu. yds. per hour).

GROUP 12A: Dozer (D-11 or similar or larger); Hydraulic Excavators (over 4 cu. yds.); Lifting cranes (50 tons and over); Pioneering Dozer/Backhoe (initial clearing and excavation for the purpose of providing access for other equipment where the terrain worked involves 1-to-1 slopes that are 50 feet in height or depth, the scope of this work does not include normal clearing and grubbing on usual hilly terrain nor the excavation work once the access is provided); Power Blade Operator (Cat 12 or equivalent or over); Straddle Lifts (over 50 tons); Tower Crane, Mobile; Traveling Truss Cranes; Universal, Liebher, Linden, and similar types of Tower Cranes (in the erection, dismantling, and moving of equipment there shall be an additional Operating Engineer or Heavy Duty Repairman); Yo-Yo Cat or Dozer.

GROUP 13: Truck Driver (Utility, Flatbed, etc.)

GROUP 13A: Dump Truck, 8 cu.yds. and under (water level); Water Truck (up to and including 2,000 gallons).

GROUP 13B: Water Truck (over 2,000 gallons); Tandem Dump Truck, over 8 cu. yds. (water level).

GROUP 13C: Truck Driver (Semi-trailer. Rock Cans, Semi-Dump or Roll-Offs).

GROUP 13D: Truck Driver (Slip-In or Pup).

GROUP 13E: End Dumps, Unlicensed (Euclid, Mack, Caterpillar or similar); Tractor Trailer (Hauling Equipment); Tandem Trucks hooked up to Trailer (Hauling Equipment)

Addendum No. 1

BOOMS AND/OR LEADS (HOURLY PREMIUMS):

The Operator of a crane (under 50 tons) with a boom of 80 feet or more (including jib), or of a crane (under 50 tons) with leads of 100 feet or more, shall receive a per hour premium for each hour worked on said crane (under 50 tons) in accordance with the following schedule:

Booms of 80 feet up to but not including 130 feet or Leads of 100 feet up to but not including 130 feet	0.50
Booms and/or Leads of 130 feet up to but not including 180 feet	0.75
Booms and/or Leads of 180 feet up to and including 250 feet	1.15
Booms and/or Leads over 250 feet	1.50

The Operator of a crane (50 tons and over) with a boom of 180 feet or more (including jib) shall receive a per hour premium for each hour worked on said crane (50 tons and over) in accordance with the following schedule:

Booms of 180 feet up to and including 250 feet	1.25
Booms over 250 feet	1.75

ENGI0003-004 09/04/2017

	Rates	Fringes
Dredging: (Boat Operators)		
Boat Deckhand	$ 41.22	30.93
Boat Operator	$ 43.43	30.93
Master Boat Operator	$ 43.58	30.93
Dredging: (Clamshell or Dipper Dredging)		
GROUP 1	$ 43.94	30.93
GROUP 2	$ 43.28	30.93
GROUP 3	$ 42.88	30.93

Addendum No. 1

GROUP 4.....$ 41.22 30.93

Dredging: (Derricks)

GROUP 1.....$ 43.94 30.93

GROUP 2.....$ 43.28 30.93

GROUP 3.....$ 42.88 30.93

GROUP 4.....$ 41.22 30.93

Dredging: (Hydraulic Suction

Dredges)

GROUP 1.....$ 43.58 30.93

GROUP 2.....$ 43.43 30.93

GROUP 3.....$ 43.28 30.93

GROUP 4.....$ 43.22 30.93

GROUP 5.....$ 37.88 26.76

Group 5.....$ 42.88 30.93

GROUP 6.....$ 37.77 26.76

Group 6.....$ 42.77 30.93

GROUP 7.....$ 36.22 26.76

Group 7.....$ 41.22 30.93

CLAMSHELL OR DIPPER DREDGING CLASSIFICATIONS

GROUP 1: Clamshell or Dipper Operator.

GROUP 2: Mechanic or Welder; Watch Engineer.

GROUP 3: Barge Mate; Deckmate.

GROUP 4: Bargeman; Deckhand; Fireman; Oiler.

HYDRAULIC SUCTION DREDGING CLASSIFICATIONS

GROUP 1: Leverman.

GROUP 2: Watch Engineer (steam or electric).

GROUP 3: Mechanic or Welder.

GROUP 4: Dozer Operator.

GROUP 5: Deckmate.

GROUP 6: Winchman (Stern Winch on Dredge)

GROUP 7: Deckhand (can operate anchor scow under direction of

Deckmate); Fireman; Leveeman; Oiler.

DERRICK CLASSIFICATIONS

GROUP 1: Operators (Derricks, Piledrivers and Cranes).

GROUP 2: Saurman Type Dragline (over 5 cubic yards).

Addendum No. 1

GROUP 3: Deckmate; Saurman Type Dragline (up to and including 5 yards).

GROUP 4: Deckhand, Fireman, Oiler.

ENGI0003-044 09/03/2018

	Rates	Fringes
Power Equipment Operators (PAVING)		
Asphalt Concrete Material Transfer	$ 42.92	32.08
Asphalt Plant Operator	$ 43.35	32.08
Asphalt Raker	$ 41.96	32.08
Asphalt Spreader Operator	$ 43.44	32.08
Cold Planer	$ 43.75	32.08
Combination Loader/Backhoe (over 3/4 cu.yd.)	$ 41.96	32.08
Combination Loader/Backhoe (up to 3/4 cu.yd.)	$ 40.98	32.08
Concrete Saws and/or Grinder (self-propelled unit on streets, highways, airports and canals)	$ 42.92	32.08
Grader	$ 43.75	32.08
Laborer, Hand Roller	$ 41.46	32.08
Loader (2 1/2 cu. yds. and under)	$ 42.92	32.08
Loader (over 2 1/2 cu. yds. to and including 5 cu. yds.)	$ 43.24	32.08
Roller Operator (five tons and under)	$ 41.69	32.08
Roller Operator (over five tons)	$ 43.12	32.08
Screed Person	$ 42.92	32.08
Soil Stabilizer	$ 43.75	32.08

IRON0625-001 09/01/2019

	Rates	Fringes
Ironworkers:	$ 41.50	37.55

a. Employees will be paid $.50 per hour more while working in tunnels and coffer dams; $1.00 per hour more when required to work under or are covered with water (submerged) and when they are required to work on the summit of Mauna Kea, Mauna Loa or Haleakala.

LABO0368-001 09/02/2019

	Rates	Fringes
Laborers:		
Driller	$ 39.05	21.52
Final Clean Up	$ 29.25	17.22
Gunite/Shotcrete Operator and High Scaler	$ 38.55	21.52
Laborer I	$ 38.05	21.52
Laborer II	$ 35.45	21.52
Mason Tender/Hod Carrier	$ 38.55	21.52
Powderman	$ 39.05	21.52
Window Washer (bosun chair)	$ 37.55	21.52

LABORERS CLASSIFICATIONS

Laborer I: Air Blasting run by electric or pneumatic compressor; Asphalt Laborer, Ironer, Raker, Luteman, and Handroller, and all types of Asphalt Spreader Boxes; Asphalt Shoveler; Assembly and Installation of Multiplates, Liner Plates, Rings, Mesh, Mats; Batching Plant (portable and temporary); Boring Machine Operator (under streets and sidewalks); Buggymobile; Burning and Welding; Chainsaw, Faller, Logloader, and Bucker; Compactors (Jackson Jumping Jack and similar); Concrete Bucket Dumpman; Concrete Chipping; Concrete Chuteman/Hoseman (pouring concrete) (the handling of the chute from ready-mix trucks for such jobs as walls, slabs, decks, floors, foundations, footings, curbs, gutters, and sidewalks); Concrete Core Cutter (Walls, Floors, and Ceiling); Concrete Grinding or Sanding; Concrete: Hooking on, signaling, dumping of concrete for

treme work over water on caissons, pilings, abutments, etc.; Concrete: Mixing, handling, conveying, pouring, vibrating, otherwise placing of concrete or aggregates or by any other process; Concrete: Operation of motorized wheelbarrows or buggies or machines of similar character, whether run by gas, diesel, or electric power; Concrete Placement Machine Operator: operation of Somero Hammerhead, Copperheads, or similar machines; Concrete Pump Machine (laying, coupling, uncoupling of all connections and cleaning of equipment); Concrete and/or Asphalt Saw (Walking or Handtype) (cutting walls or flatwork) (scoring old or new concrete and/or asphalt) (cutting for expansion joints) (streets and ways for laying of pipe, cable or conduit for all purposes); Concrete Shovelers/Laborers (Wet or Dry); Concrete Screeding for Rough Strike-Off: Rodding or striking-off, by hand or mechanical means prior to finishing; Concrete Vibrator Operator; Coring Holes: Walls, footings, piers or other obstructions for passage of pipes or conduits for any purpose and the pouring of concrete to secure the hole; Cribbers, Shorer, Lagging, Sheeting, and Trench Jacking and Bracing, Hand-Guided Lagging Hammer Whaling Bracing; Curbing (Concrete and Asphalt); Curing of Concrete (impervious membrane and form oiler) mortar and other materials by any mode or method; Cut Granite Curb Setter (setting, leveling and grouting of all precast concrete or stone curbs); Cutting and Burning Torch (demolition); Dri Pak-It Machine; Environmental Abatement: removal of asbestos, lead, and bio hazardous materials (EPA and/or OSHA certified); Falling, bucking, yarding, loading or burning of all trees or timber on construction site; Forklift (9 ft. and under); Gas, Pneumatic, and Electric tools; Grating and Grill work for drains or other purposes; Green Cutter of concrete or aggregate in any form, by hand, mechanical means, grindstone or air and/or water; Grout: Spreading for any purpose; Guinea Chaser (Grade Checker) for general utility trenches, sitework, and excavation; Headerboard Man (Asphalt or Concrete); Heat Welder of Plastic (Laborers' AGC certified workers) (when work involves waterproofing for waterponds, artificial lakes and reservoir) heat welding for sewer pipes and fusion of HDPE pipes; Heavy Highway Laborer (Rigging, signaling, handling,

Addendum No. 1

and installation of pre-cast catch basins, manholes, curbs and gutters); High Pressure Nozzleman - Hydraulic Monitor (over 100# pressure); Jackhammer Operator; Jacking of slip forms: All semi and unskilled work connected therewithin; Laying of all multi-cell conduit or multi-purpose pipe; Magnesite and Mastic Workers (Wet or Dry)(including mixer operator);Mortar Man; Mortar Mixer (Block, Brick, Masonry, and Plastering); Nozzleman (Sandblasting and/or Water Blasting): handling, placing and operation of nozzle; Operation, Manual or Hydraulic jacking of shields and the use of such other mechanical equipment as may be necessary; Pavement Breakers; Paving, curbing and surfacing of streets, ways, courts, under and overpasses, bridges, approaches, slope walls, and all other labor connected therewith; Pilecutters; Pipe Accessment in place, bolting and lining up of sectional metal or other pipe including corrugated pipe; Pipelayer performing all services in the laying and installation of pipe from the point of receiving pipe in the ditch until completion of operation, including any and all forms of tubular material, whether pipe, HDPE, metallic or non-metallic, conduit, and any other stationary-type of tubular device used for conveying of any substance or element, whether water, sewage, solid, gas, air, or other product whatsoever and without regard to the nature of material from which tubular material is fabricated; No-joint pipe and stripping of same, Pipewrapper, Caulker, Bander, Kettlemen, and men applying asphalt, Laykold, treating Creosote and similar-type materials (6-inch) pipe and over); Piping: resurfacing and paving of all ditches in preparation for laying of all pipes; Pipe laying of lateral sewer pipe from main or side sewer to buildings or structure (except Contactor may direct work be done under proper supervision); Pipe laying, leveling and marking of the joint used for main or side sewers and storm sewers; Laying of all clay, terra cotta, ironstone, vitrified concrete, HDPE or other pipe for drainage; Placing and setting of water mains, gas mains and all pipe including removal of skids; Plaster Mortar Mixer/Pump; Pneumatic Impact Wrench; Portable Sawmill Operation: Choker setters, off bearers, and lumber handlers connected with clearing; Posthole Digger (Hand Held, Gas,

Air and Electric); Powderman's Tender; Power Broom Sweepers (Small); Preparation and Compaction of roadbeds for railroad track laying, highway construction, and the preparation of trenches, footings, etc., for cross-country transmission by pipelines, electrical transmission or underground lines or cables (by mechanical means); Raising of structure by manual or hydraulic jacks or other methods and resetting of structure in new locations, including all concrete work; Ramming or compaction; Rigging in connection with Laborers' work (except demolition), Signaling (including the use of walkie talkie) Choke Setting, tag line usage; Tagging and Signaling of building materials into high rise units; Riprap, Stonepaver, and Rock Slinger (includes placement of stacked concrete, wet or dry and loading, unloading, signaling, slinging and setting of other similar materials); Rotary Scarifier (including multiple head concrete chipping Scarifier); Salamander Heater, Drying of plaster, concrete mortar or other aggregate; Scaffold Erector Leadman; Scaffolds: (Swing and hanging) including maintenance thereof; Scaler; Septic Tank/Cesspool and Drain Fields Digger and Installer; Shredder/Chipper (tree branches, brush, etc.); Stripping and Setting Forms; Stripping of Forms: Other than panel forms which are to be re-used in their original form, and stripping of forms on all flat arch work; Tampers (Barko, Wacker, and similar type); Tank Scaler and Cleaners; Tarman; Tree Climbers and Trimmers; Trencher (includes hand-held, Davis T-66 and similar type); Trucks (flatbed up to and including 2 1/2 tons when used in connection with on-site Laborers'work; Trucks (Refuse and Garbage Disposal) (from job site to dump); Vibra-Screed (Bull Float in connection with Laborers' work); Well Points, Installation of or any other dewatering system.

Laborer II: Asphalt Plant Laborer; Boring Machine Tender; Bridge Laborer; Burning of all debris (crates, boxes, packaging waste materials); Chainman, Rodmen, and Grade Markers; Cleaning, clearing, grading and/or removal for streets, highways, roadways, aprons, runways, sidewalks, parking areas, airports, approaches, and other similar installations; Cleaning or reconditioning of streets, ways,

Addendum No. 1

sewers and waterlines, all maintenance work and work of an unskilled and semi-skilled nature; Concrete Bucket Tender (Groundman) hooking and unhooking of bucket; Concrete Forms; moving, cleaning, oiling and carrying to the next point of erection of all forms; Concrete Products Plant Laborers; Conveyor Tender (conveying of building materials); Crushed Stone Yards and Gravel and Sand Pit Laborers and all other similar plants; Demolition, Wrecking and Salvage Laborers: Wrecking and dismantling of buildings and all structures, with use of cutting or wrecking tools, breaking away, cleaning and removal of all fixtures, All hooking, unhooking, signaling of materials for salvage or scrap removed by crane or derrick; Digging under streets, roadways, aprons or other paved surfaces; Driller's Tender; Chuck Tender, Outside Nipper; Dry-packing of concrete (plugging and filling of she-bolt holes); Fence and/or Guardrail Erector: Dismantling and/or re-installation of all fence; Finegrader; Firewatcher; Flagman (Coning, preparing, stablishing and removing portable roadway barricade devices); Signal Men on all construction work defined herein, including Traffic Control Signal Men at construction site; General Excavation; Backfilling, Grading and all other labor connected therewith; Digging of trenches, ditches and manholes and the leveling, grading and other preparation prior to laying pipe or conduit for any purpose; Excavations and foundations for buildings, piers, foundations and holes, and all other construction. Preparation of street ways and bridges; General Laborer: Cleaning and Clearing of all debris and surplus material. Clean-up of right-of-way. Clearing and slashing of brush or trees by hand or mechanical cutting. General Clean up: sweeping, cleaning, wash-down, wiping of construction facility and equipment (other than ""Light Clean up (Janitorial) Laborer. Garbage and Debris Handlers and Cleaners. Appliance Handling (job site) (after delivery unlading in storage area); Ground and Soil Treatment Work (Pest Control); Gunite/Shotcrete Operator Tender; Junk Yard Laborers (same as Salvage Yard); Laser Beam ""Target Man"" in connection with Laborers' work; Layout Person for Plastic (when work involves waterproofing for waterponds, artificial lakes and reservoirs); Limbers, Brush Loaders,

Addendum No. 1

and Pilers; Loading, Unloading, carrying, distributing and handling of all rods and material for use in reinforcing concrete construction (except when a derrick or outrigger operated by other than hand power is used); Loading, unloading, sorting, stockpiling, handling and distribution of water mains, gas mains and all pipes; Loading and unloading of all materials, fixtures, furnishings and appliances from point of delivery to stockpile to point of installation; hooking and signaling from truck, conveyance or stockpile; Material Yard Laborers; Pipelayer Tender; Pipewrapper, Caulker, Bander, Kettlemen, and men applying asphalt, Laykold, Creosote, and similar-type materials (pipe under 6 inches); Plasterer Laborer; Preparation, construction and maintenance of roadbeds and sub-grade for all paving, including excavation, dumping, and spreading of sub-grade material; Prestressed or precast concrete slabs, walls, or sections: all loading, unloading, stockpiling, hooking on of such slabs, walls or sections; Quarry Laborers; Railroad, Streetcar, and Rail Transit Maintenance and Repair; Roustabout; Rubbish Trucks in connection with Building Construction Projects (excluding clearing, grubbing, and excavating); Salvage Yard: All work connected with cutting, cleaning, storing, stockpiling or handling of materials, all cleanup, removal of debris, burning, back-filling and landscaping of the site; Sandblasting Tender (Pot Tender): Hoses and pots or markers; Scaffolds: Erection, planking and removal of all scaffolds used for support for lathers, plasters, brick layers, masons, and other construction trades crafts; Scaffolds: (Specially designed by carpenters) laborers shall tend said carpenter on erection and dismantling thereof, preparation for foundation or mudsills, maintenance; Scraping of floors; Screeds: Handling of all screeds to be reused; handling, dismantling and conveyance of screeds; Setting, leveling and securing or bracing of metal or other road forms and expansion joints; Sheeting Piling/trench shoring (handling and placing of skip sheet or wood plank trench shoring); Ship Scalers; Shipwright Tender; Sign Erector (subdivision traffic, regulatory, and street-name signs); Sloper; Slurry Seal Crews (Mixer Operator, Applicator, Squeegee Man, Shuttle Man, Top Man); Snapping of wall ties and removal of

Addendum No. 1

tie rods; Soil Test operations of semi and unskilled labor such as filling sand bags; Striper (Asphalt, Concrete or other Paved Surfaces); Tool Room Attendant (Job Site); Traffic Delineating Device Applicator; Underpinning, lagging, bracing, propping and shoring, loading, signaling, right-of-way clearance along the route of movement, The clearance of new site, excavation of foundation when moving a house or structure from old site to new site; Utilities employees; Water Man; Waterscape/Hardscape Laborers; Wire Mesh Pulling (all concrete pouring operations); Wrecking, stripping, dismantling and handling concrete forms an false work.

LABO0368-002 09/02/2019

	Rates	Fringes
Landscape & Irrigation Laborers		
GROUP 1	$ 26.15	13.45
GROUP 2	$ 27.15	13.45
GROUP 3	$ 21.55	13.45

LABORERS CLASSIFICATIONS

GROUP 1: Installation of non-potable permanent or temporary irrigation water systems performed for the purposes of Landscaping and Irrigation architectural horticultural work; the installation of drinking fountains and permanent or temporary irrigation systems using potable water for Landscaping and Irrigation architectural horticultural purposes only. This work includes (a) the installation of all heads, risers, valves, valve boxes, vacuum breakers (pressure and non-pressure), low voltage electrical lines and, provided such work involves electrical wiring that will carry 24 volts or less, the installation of sensors, master control panels, display boards, junction boxes, conductors, including all other components for controllers, (b) and metallic (copper, brass, galvanized, or similar) pipe, as well as PVC or other plastic pipe including all

Addendum No. 1

work incidental thereto, i.e., unloading, handling and distribution of all pipes fittings, tools, materials and equipment, (c) all soldering work in connection with the above whether done by torch, soldering iron, or other means; (d) tie-in to main lines, thrust blocks (both precast and poured in place), pipe hangers and supports incidental to installation of the entire irrigation system, (e) making of pressure tests, start-up testing, flushing, purging, water balancing, placing into operation all irrigation equipment, fixtures and appurtenances installed under this agreement, and (f) the fabrication, replacement, repair and servicing oflandscaping and irrigation systems. Operation of hand-held gas, air, electric, or self-powered tools and equipment used in the performance of Landscape and Irrigation work in connection with architectural horticulture; Choke-setting, signaling, and rigging for equipment operators on job-site in the performance of such Landscaping and Irrigation work; Concrete work (wet or dry) performed in connection with such Landscaping and Irrigation work. This work shall also include the setting of rock, stone, or riprap in connection with such Landscape, Waterscape, Rockscape, and Irrigation work; Grubbing, pick and shovel excavation, and hand rolling or tamping in connection with the performance of such Landscaping and Irrigation work; Sprigging, handseeding, and planting of trees, shrubs, ground covers, and other plantings and the performance of all types of gardening and horticultural work relating to said planting; Operation of flat bed trucks (up to and including 2 1/2 tons).:

GROUP 2. Layout of irrigation and other non-potable irrigation water systems and the layout of drinking fountains and other potable irrigation water systems in connection with such Landscaping and Irrigation work. This includes the layout of all heads, risers, valves, valve boxes, vacuum breakers, low voltage electrical lines, hydraulic and electrical controllers, and metallic (coppers, brass, galvanized, or similar) pipe, as well as PVC or other plastic pipe. This work also includes the reading and interpretation of plans and specifications in connection with the layout of Landscaping, Rockscape,

Addendum No. 1

Waterscape, and Irrigation work; Operation of Hydro-Mulching machines (sprayman and driver), Drillers, Trenchers (riding type, Davis T-66, and similar) and fork lifts used in connection with the performance of such Landscaping and Irrigation work; Tree climbers and chain saw tree trimmers, Sporadic operation (when used in connection with Landscaping, Rockscape, Waterscape, and Irrigation work) of Skid-Steer Loaders (Bobcat and similar), Cranes (Bantam, Grove, and similar), Hoptos, Backhoes, Loaders, Rollers, and Dozers (Case, John Deere, and similar), Water Trucks, Trucks requiring a State of Hawaii Public Utilities Commission Type 5 and/or type 7 license, sit-down type and ""gang"" mowers, and other self-propelled, sit-down operated machines not listed under Landscape & Irrigation Maintenance Laborer; Chemical spraying using self-propelled power spraying equipment (200 gallon capacity or more).

GROUP 3: Maintenance of trees, shrubs, ground covers, lawns and other planted areas, including the replanting of trees, shrubs, ground covers, and other plantings that did not ""take"" or which are damaged; provided, however, that re-planting that requires the use of equipment, machinery, or power tools shall be paid for at the rate of pay specified under Landscape and Irrigation Laborer, Group 1; Raking, mowing, trimming, and runing, including the use of ""weed eaters"", hedge trimmers, vacuums, blowers, and other hand-held gas, air, electric, or self-powered tools, and the operation of lawn mowers (Note: The operation of sit-down type and ""gang"" mowers shall be paid for at the rate of pay specified under Landscape & Irrigation Laborer, Group 2); Guywiring, staking, propping, and supporting trees; Fertilizing, Chemical spraying using spray equipment with less than 200 gallon capacity, Maintaining irrigation and sprinkler systems, including the staking, clamping, and adjustment of risers, and the adjustment and/or replacement of sprinkler heads, (Note: the cleaning and gluing of pipe and fittings shall be paid for at the rate of pay specified under Landscape & Irrigation Laborer(Group 1); Watering by hand or sprinkler system and the peformance of other types of gardening, yardman, and horticultural-related work.

Addendum No. 1

LABO0368-003 09/02/2019

	Rates	Fringes
Underground Laborer		
GROUP 1	$ 38.65	21.47
GROUP 2	$ 40.15	21.47
GROUP 3	$ 40.65	21.47
GROUP 4	$ 41.65	21.47
GROUP 5	$ 41.90	21.47
GROUP 6	$ 42.00	21.47
GROUP 7	$ 42.25	21.47

GROUP 1: Watchmen; Change House Attendant.

GROUP 2: Swamper; Brakeman; Bull Gang-Muckers, Trackmen; Dumpmen (any method); Concrete Crew (includes rodding and spreading); Grout Crew; Reboundmen

GROUP 3: Chucktenders and Cabletenders; Powderman (Prime House); Vibratorman, Pavement Breakers

GROUP 4: Miners - Tunnel (including top and bottom man on shaft and raise work); Timberman, Retimberman (wood or steel or substitute materials thereof); Blasters, Drillers, Powderman (in heading); Microtunnel Laborer; Headman; Cherry Pickerman (where car is lifted); Nipper; Grout Gunmen; Grout Pumpman & Potman; Gunite, Shotcrete Gunmen & Potmen; Concrete Finisher (in tunnel); Concrete Screed Man; Bit Grinder; Steel Form Raisers & Setters; High Pressure Nozzleman; Nozzleman (on slick line); Sandblaster-Potman (combination work assignment interchangeable); Tugger

GROUP 5: Shaft Work & Raise (below actual or excavated ground level); Diamond Driller; Gunite or Shotcrete Nozzleman; Rodman; Groundman

GROUP 6: Shifter

GROUP 7: Shifter (Shaft Work & Raiser)

PAIN1791-001 01/01/2019

	Rates	Fringes
Painters:		
Brush	$ 38.35	29.39
Sandblaster; Spray	$ 38.35	29.39

PAIN1889-001 07/01/2019

	Rates	Fringes
Glaziers	$ 39.00	33.25

PAIN1926-001 03/03/2019

	Rates	Fringes
Soft Floor Layers	$ 34.15	29.32

PAIN1944-001 01/01/2019

	Rates	Fringes
Taper	$ 42.60	28.15

PLAS0630-001 09/02/2019

	Rates	Fringes
PLASTERER	$ 42.64	30.58

PLAS0630-002 09/02/2019

	Rates	Fringes
Cement Masons:		
Cement Masons	$ 41.10	30.68

Addendum No. 1

Trowel Machine Operators....$ 41.25 30.68

PLUM0675-001 01/06/2019

	Rates	Fringes
Plumber, Pipefitter, Steamfitter & Sprinkler Fitter...	$ 46.02	26.24

ROOF0221-001 09/01/2019

	Rates	Fringes
Roofers (Including Built Up, Composition and Single Ply).....	$ 41.15	18.98

SHEE0293-001 09/02/2018

	Rates	Fringes
Sheet metal worker.....	$ 42.55	27.44

SUHI1997-002 09/15/1997

	Rates	Fringes
Drapery Installer.....	$ 13.60	1.20
FENCE ERECTOR (Chain Link Fence).....	$ 9.33	1.65

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this

Addendum No. 1

contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198

indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date

for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an

interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

Addendum No. 1

PROPOSAL SCHEDULE					
ITEM NO.	**ITEM**	**APPROX. QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**
201.0100	Clearing and Grubbing	7.2	ACRE	$_____	$_____
202.0100	Removal and Disposal of Obstructions	L.S.	L.S.	L.S.	$_____
202.0200	Removal of Existing Waikele Stream Bridge	L.S.	L.S.	L.S.	$_____
202.0300	Removal of Existing Kapakahi Stream Bridge	L.S.	L.S.	L.S.	$_____
202.0400	Removal and Disposal Existing Railroad Tracks	54	L.F	$_____	$_____
202.0500	Removal of Temporary Utility Supports Waikele Stream Bridge	L.S.	L.S.	L.S.	$_____
202.0600	Removal of Temporary Utility Supports Kapakahi Stream Bridge	L.S.	L.S.	L.S.	$_____
202.0700	Removal of Asphalt Concrete	3,319	S.Y.	$_____	$_____
202.0800	Removal of Existing Concrete	83	S.Y.	$_____	$_____
202.0900	Removal of Existing 3' High Metal Fence	141	L.F.	$_____	$_____
202.1000	Removal of Existing 6' High Chain-Link Fence	720	L.F.	$_____	$_____
202.1100	Removal of Existing Pavement Markings	300	L.F.	$_____	$_____
202.1200	Removal and Relocation Existing Cattle Gate	1	E.A.	$_____	$_____

PROPOSAL SCHEDULE					
ITEM NO.	**ITEM**	**APPROX. QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**
202.1300	Removal of Existing Curb	150	L.F.	$_____	$_____
202.1400	Removal of Existing Curb and Gutter	95	L.F.	$_____	$_____
203.0100	Roadway Excavation	6,958	C.Y.	$_____	$_____
205.0100	Structure Excavation for Abutments Waikele Stream Bridge	130	C.Y.	$_____	$_____
205.0200	Structure Excavation for Abutments Kapakahi Stream Bridge	110	C.Y.	$_____	$_____
205.0300	Structure Backfill for Abutments Waikele Stream Bridge	40	C.Y.	$_____	$_____
205.0400	Structure Backfill for Abutments Kapakahi Stream Bridge	35	C.Y.	$_____	$_____
206.0100	Excavation for Subdrain	25	C.Y.	$_____	$_____
206.0200	Excavation for Drain Line	40	C.Y.	$_____	$_____
209.0000	Installation, Maintenance, Monitoring, and Removal of BMP	L.S.	L.S.	L.S.	$_____
209.0100	Additional Water Pollution, Dust, and Erosion Control	F.A.	F.A.	F.A.	$ 240,000.00
304.0100	Aggregate Base Course/Recycled Asphalt Pavement (RAP)	1,990	C.Y.	$_____	$_____
305.0100	Aggregate Subbase Course	5	C.Y.	$_____	$_____

PROPOSAL SCHEDULE					
ITEM NO.	**ITEM**	**APPROX. QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**
305.0200	Select Borrow (DPW)	100	C.Y.	$_____	$_____
321.0100	Triaxial Geogrid	8,855	S. Y.	$_____	$_____
401.0200	HMA Pavement, Mix No. V	2,165	Tons	$_____	$_____
412.0100	Paving Fabric	17,850	S.Y.	$_____	$_____
501.0100	Structural Steel - Temporary Utility Supports Waikele Stream Bridge	35,000	LBS	$_____	$_____
501.0200	Structural Steel - Temporary Utility Supports Kapakahi Stream Bridge	25,000	LBS	$_____	$_____
503.0100	Concrete for Abutment Waikele Stream Bridge	75	C.Y.	$_____	$_____
503.0200	Concrete for Abutment Kapakahi Stream Bridge	65	C.Y.	$_____	$_____
503.0300	Concrete for Culvert Top Slab Extension	0.5	C.Y.	$_____	$_____
503.0400	Concrete Deck Waikele Stream Bridge	40	C.Y.	$_____	$_____
503.0500	Concrete Deck Kapakahi Stream Bridge	38	C.Y.	$_____	$_____
503.0600	Concrete Diaphram Waikele Stream Bridge	7	C.Y.	$_____	$_____
503.0700	Concrete Utility Support Kapakahi Stream Bridge	3	C.Y.	$_____	$_____

PROPOSAL SCHEDULE					
ITEM NO.	**ITEM**	**APPROX. QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**
503.0800	Concrete for Temporary Utility Support Foundations Waikele Stream Bridge	4.5	C.Y.	$_____	$_____
503.0900	Concrete for Temporary Utility Support Foundations Kapakahi Stream Bridge	3.5	C.Y.	$_____	$_____
503.1000	Concrete for Approach Slab Waikele Stream Bridge	30	C.Y.	$_____	$_____
503.1100	Concrete for Approach Slab Kapakahi Stream Bridge	30	C.Y.	$_____	$_____
503.1200	CMU Retaining Wall	3,105	L.F.	$_____	$_____
504.0100	Prestressed Concrete Girders Waikele Stream Bridge	285	L.F.	$_____	$_____
504.0200	Prestressed Concrete Girders Kapakahi Stream Bridge	170	L.F.	$_____	$_____
505.0100	Furnishing Pile Predrilling and Driving Equipment	L.S.	L.S.	L.S.	$_____
505.0200	16.5-inch Precast Prestressed Concrete Pile	1,360	L.F.	$_____	$_____
505.0300	Predrilling	400	L.F.	$_____	$_____
505.0400	Splices	8	E.A.	$_____	$_____
505.0500	Pile Cutting	20	E.A.	$_____	$_____
505.0600	Dynamic Pile Load Test	8	E.A.	$_____	$_____

PROPOSAL SCHEDULE					
ITEM NO.	**ITEM**	**APPROX. QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**
602.0100	Reinforcing Steel for Abutment Waikele Stream Bridge	8,000	L.B.	$_____	$_____
602.0200	Reinforcing Steel for Abutment Kapakahi Stream Bridge	7,000	L.B.	$_____	$_____
602.0300	Reinforcing Steel for Concrete Deck Waikele Stream Bridge	9,000	L.B.	$_____	$_____
602.0400	Reinforcing Steel for Concrete Deck Kapakahi Stream Bridge	8,000	L.B.	$_____	$_____
602.0500	Reinforcing Steel for Diaphram Waikele Stream Bridge	1,200	L.B.	$_____	$_____
602.0600	Reinforcing Steel for Diaphram Kapakahi Stream Bridge	600	L.B.	$_____	$_____
602.0700	Reinforcing Steel for Temporary Utility Support Foundations Waikele Stream Bridge	800	L.B.	$_____	$_____
602.0800	Reinforcing Steel for Temporary Utility Support Foundations Kapakahi Stream Bridge	700	L.B.	$_____	$_____
603.0100	18 -Inch Reinforced Concrete Pipe, Class III	90	L.F.	$_____	$_____
604.0100	Catch Basin, DPW Type D, 3.0 feet to 4.0 feet	1	E.A.	$_____	$_____
604.0200	Modify Existing Catch Basin	L.S.	L.S.	L.S.	$_____
605.0100	6 -Inch Perforated Plastic Pipe, Underdrain	450	L.F.	$_____	$_____
607.0100	6-Feet High, Chain Link Fence	720	L.F.	$_____	$_____

PROPOSAL SCHEDULE					
ITEM NO.	**ITEM**	**APPROX. QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**
616.0100	Permanent Irrigation System (Extension)	L.S.	L.S.	L.S.	$_____
617.0100	Imported Planting Soil	1,000	S.Y.	$_____	$_____
619.0100	Dwarf Naupaka	5,650	S.F.	$_____	$_____
622.0100	Pullbox Modification	L.S.	L.S.	L.S.	$_____
622.0200	Cables	L.S.	L.S.	L.S.	$_____
622.0300	Traffic Signal Meter Equipment	1	E.A.	$_____	$_____
622.0400	Ductline	80	L.F.	$_____	$_____
622.0500	Miscellaneous and Testing	L.S.	L.S.	L.S.	$_____
626.0100	Adjusting Water Manhole Frame and Cover	1	E.A.	$_____	$_____
629.0100	12-Inch Pavement Striping (Type III Tape or Thermoplastic Extrusion)	12	L.F.	$_____	$_____
629.0200	4-Inch Pavement Striping (Type III Tape or Thermoplastic Extrusion)	60	L.F.	$_____	$_____
629.0300	Crosswalk Markings (Tape, Type III or Thermoplastic Extrusion)	410	L.F.	$_____	$_____
629.0400	Pavement Word (Paint, Tape, Type I Tape or Thermoplastic Extrusion)	5	E.A.	$_____	$_____

PROPOSAL SCHEDULE					
ITEM NO.	**ITEM**	**APPROX. QUANTITY**	**UNIT**	**UNIT PRICE**	**AMOUNT**
631.0100	Relocation of Existing Signs	25	E.A.	$_____	$_____
631.0200	Regulatory Sign (10 Square Feet or Less) w/ Post	15	E.A.	$_____	$_____
631.0300	Warning Sign (10 Square Feet or Less) w/ Post	41	E.A.	$_____	$_____
631.0400	Miscellaneous Sign (10 Square Feet or Less) w/ Post	1	E.A.	$_____	$_____
634.0100	Portland Cement Concrete Sidewalk	321	S.Y.	$_____	$_____
634.0200	Portland Cement Concrete Median	381	S.Y.	$_____	$_____
638.0100	Curb, Type Concrete	510	L.F.	$_____	$_____
638.0200	Curb and Gutter, Type Integral Reinforced	127	L.F.	$_____	$_____
641.0100	Hydro-mulch Seeding	135,900	S.F.	$_____	$_____
645.0100	Traffic Control	L.S.	L.S.	L.S.	$_____
645.0200	Additional Police Officers, Additional Traffic Control Devices, and Advertisement	F.A.	F.A.	F.A.	$12,000
650.0100	Curb Ramp, Type A	1	E.A.	$_____	$_____
650.0200	Curb Ramp, Type C	1	E.A.	$_____	$_____

PROPOSAL SCHEDULE

ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
650.0300	Detectable Warning Mat	4	E.A.	$_____	$_____
655.0100	Dumped Riprap	46	C.Y.	$_____	$_____
657.0100	Bollard, Fixed	9	E.A.	$_____	$_____
657.0200	Bollard, Removable	6	E.A.	$_____	$_____
658.0100	Archeological Monitoring	F.A.	F.A.	F.A.	$48,000
659.0100	Miscellaneous Mitigation Measures	F.A.	F.A.	F.A.	$250,000
680.0100	Rectangular Rapid Flashing Beacon LED Light Assembly	L.S.	L.S.	L.S.	$_____
699.0100	Mobilization (Not to Exceed 6 percent of the sum of all items excluding bid price of this item).	L.S.	L.S.	L.S.	$_____
	Sum of All Items				$ -

NOTE: Bidders must complete all unit prices and amounts. Failure to do so may be grounds for rejection of bid.

PRE-BID MEETING NOTES

Project: Leeward Bikeway, Philippine Sea Road to Waipahu Depot Street
Project No. STP-BW-0300 (8)
District of Ewa
Island of Oahu

Subject: Non-mandatory Pre-bid Conference

Date/Time: October 17, 2019 / 9:00 AM

Held: State Department of Transportation, Highways Division, 601 Kamokila Boulevard, Room 541, Kapolei, HI 96707

Present: See attached list of attendees

Discussed:

Sign-in sheet and Pre Bid Meeting Question Form were passed out to attendees.

A. Robert Sun opens meeting:

1. Anything said in the pre-bid meeting is for clarification only. The pre-bid documents will govern over anything said in the meeting.

2. Any discrepancies will be addressed by the addendum.

3. Bidders have until October 31, 2019 at 3:00 P.M. to submit any questions.

4. Bid opening is scheduled for 2:00 P.M., November 14, 2019.

5. Unusual conditions for this project:

    a. The project is located within the former Oahu Railway & Land (OR&L) Company's right-of-way. Being considered an eligible historic district, there may be things considered historic within the construction limits. Refer to Section 108 for any inadvertent findings. Contact the Department of Transportation if anything suspected to be historic is found.

    b. There will be archaeological monitoring near Waipahu Depot Street, and there's also a wildlife preserve area nearby.

    c. The project area is not one big segment, but rather two segments with a gap in between them. One segment is located near Waipahu Depot Street to West Loch and the other project area goes from Fort Weaver to Philippine Sea Road.

B. Open discussion to prospective bidders:

1. Q: Is the archaeological monitoring plan for the Railway?
   A: No. The archaeological monitoring plan is for an old Hawaiian fishpond near the Kapakahi Stream bridge. The archaeological monitoring will be included in the addendum.

2. Q: Is there any type of special work that needs to be done regarding the wildlife preserve, for example a Wildlife Monitoring Plan?
   A: No. The wildlife preserve is near but not within the project area. The only measure that needs to be taken is to use a dwarf naupaka strip to control runoff.

3. Q: Is there a construction order that the Contractor needs to follow (Kapakahi Stream Bridge first and then move over to Waikele Stream Bridge, as mentioned in note 21 from the general notes)?
   A: No. The order mentioned in note 21 is not an order for construction. It is for utility relocations that need to be coordinated to be completed. There are utilities attached to the bridges that need to come off temporarily supported while the bridge is being constructed. When the construction of the bridge is done, the utilities have to be relocated. If the contractor can construct both bridges at the same time it is fine.

4. Hawaiian Railway Society is contracted to do maintenance in the area between the train station and Fort Weaver Road. HDOT encourages coordination between the Contractor and the Hawaiian Railway Society during the project, as well as with the utility companies.

5. Q. Does a Hawaiian Railway Society representative need to be present when the Contractor is digging?
   A. No. While the work is within the right-of-way, it is a few feet outside of where the train tracks are.

6. Let HDOT know if the Contractor finds any object that could be a historic artifact.

7. Q. Is the Archaeological Monitoring Plan done by the Railway Society?
   A. No. The Contractor is responsible for finding a subconsultant to do that work.

8. The Archaeological Monitoring Plan is only for the old Hawaiian fishpond by Kapakahi Stream Bridge.

9. Q. The Railway Society wanted a section of the bridge? Is there a pay item for this work?

A. Correct. For Kapakahi Stream Bridge, they wanted the end of the bridge to be transported to them for their preservation process in their museum. The Memorandum of Agreement specifying what they want will be included in the upcoming addendum. The pay item will be included in the addendum.

10. Q. If a representative from the Hawaiian Railway Society is there, can they stop the work?
A. No, only HDOT is authorized to stop the work.

11. Q. Can recycled asphalt be used in the aggregate base? Is there a spec section for it?
A. Yes, if it's not included in the Special Provisions, it is included in the Standard Specs.

Meeting Adjourned at 10:20 AM.

Prepared by: Robert Sun

LEEWARD BIKEWAY, PHILIPPINE SEA ROAD TO WAIPAHU DEPOT STREET

FEDERAL-AID PROJECT NO. STP-BW-0300(8)

PRE-BID MEETING
October 17, 2019

Contractor Name: _____

Questions/RFI's:

1. _____

2. _____

3. _____

4. _____

LEEWARD BIKEWAY, PHILIPPINE SEA ROAD TO WAIPAHU DEPOT STREET

FEDERAL AID PROJECT NO. STP-BW-0300(8)

PRE-BID MEETING

October 17, 2019
9:00 AM

NO.	NAME	COMPANY	PHONE NO.	EMAIL
1	ALEX NELSON	GOODFELLOW BROS.	763-9846	alex.nelson111@gmail.com
2	Robert Sun	HDOT	692-7578	robert.sun@hawaii.gov
3	Cliff Gonzales	GP	291-0480	cgonzales@gracepacific.com
4	Janet Bumanglag	GP	343305	jbumanglag@gracepacific.com
5	JOHN ROGERS	CITIZEN	8704540	jhr@hawaii.rr.com
6	ROBERTO MANCERA	FINLEY WILDER	377-2032	ROBERTO@FINLEYWILDERS.COM
7	RODA APRIL MERCADO	INDEX BUILDERS	650-9078	rfapril@indexbuilders.com
8	JASON AMES	GRACE PACIFIC	748-3881	james@gracepacific.com
9	Cole Millare	Grace Pacific	285-6822	cmillare@gracepacific.com
10	Nicholas Gregory	Mira Image	226-0405	ngregory@teammira.com
11	STACY ARMSTRONG	RM TOWILL CORP	842-1133	stanya@rmtowill.com
12	RANDALL YONG	RM TOWILL	842-1133	randally@rmtowill.com
13				
14				
15				
16				

An Archaeological Monitoring Plan for the HDOT Leeward Bikeway Project, Federal Aid Project No. STP-BW-0300(8)

TMKs: (1) 9-4-001:011 and (1) 9-4-011:104

Waikele Ahupua'a
'Ewa District
Island of O'ahu

DRAFT VERSION

Prepared By:

Samuel V. Connell, Ph.D.
and
Robert B. Rechtman, Ph.D.

Prepared For:

Hawaii State Department of Transportation, Highways Division
601 Kamokila Blvd., Rm 609
Kapolei, HI 96707

October 2019

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ASM Project Number 33370.00

An Archaeological Monitoring Plan for the HDOT Leeward Bikeway Project, Federal Aid Project No. STP-BW-0300(8)

TMKs: (1) 9-4-001:011 and (1) 9-4-011:104

Waikele Ahupua‘a
‘Ewa District
Island of O‘ahu

ASM affiliates

CHAPTERS

Page

FIGURES

Page

Page

TABLE

Page

1. INTRODUCTION

At the request of the Hawai‘i State Department of Transportation (HDOT) Highways Division, ASM Affiliates has prepared this Archaeological Monitoring Plan (AMP) for ground-disturbing activities across Tax Map Key (TMK) parcels (1) 9-4-001:011 and (1) 9-4-011:104 associated with the implementation of HDOT Leeward Bikeway Project (Federal Aid Project No. STP-BW-0300(8); Figures 1, 2, and 3) in the vicinity of Pouhala Fishpond (State Inventory of Historic Places [SIHP] Site 50-80-09-126, Figure 4). It is possible that the development work may minimally affect several of the TMK parcel that lie adjacent to the bikeway corridor. The Hawai‘i State Historic Preservation Officer (SHPO) concurred (Log No.: 2018.01453, 2018.01758; Doc. No.: 1807SH27) with a Federal Highway Administration (FHWA) commitment to prepare an Archaeological Monitoring Plan, which will be implemented during construction as a precautionary measure, over the Pouhala Fishpond to avoid potential effects to the fishpond.

In 2000, International Archaeological Research Institute, Inc. (IARII) completed an Archaeological Resources Survey of the project area (Dye 2000). The survey identified the Pouhala Fishpond (Site 50-80-09-126) as a known historic site within the vicinity of where the proposed bikeway corridor connects to the already existing Pearl Harbor Bike Path at Waipahu Depot Street and the Kapakahi Stream Bridge. The results of the IARII survey (ibid.) indicated fishpond sediments associated with the former Pouhala Fishpond may exist within the vicinity of the project area, and that construction of the Leeward Bikeway has the potential to impact this historic property.

This AMP contains a description of the project area and the proposed ground-disturbing activities, along with a discussion of the land-use history of the project area. Based on a review of previous archaeological studies conducted in the vicinity of the project area, and in accordance with Hawai‘i Administrative Rules (HAR) §13-279, anticipated historic properties that may be encountered during monitoring are discussed. Finally, the procedures and protocols for the archaeological monitoring and subsequent reporting are provided.

PROJECT AREA DESCRIPTION AND PROPOSED GROUND-DISTURBING ACTIVITIES

On the northwest corner of Waipi‘o Peninsula, the project area is located within the former OR&L railway right-of-way (ROW) in the immediate vicinity of the Pouhala Marsh Wildlife Sanctuary adjacent to the West Loch of the Pearl Harbor Navy Base (see Figure 1). Currently, the ROW is an overgrown single lane dirt track that extends between the Kapakahi Stream Bridge and the Waikele Stream Bridge. The Pouhala Fishpond complex which consists of a wetland marsh area, old rice fields (Figure 5) and possible fishpond walls (see Figure 4) is immediately adjacent on the *makai* side of the ROW (Figure 6). According to the Hawai‘i Soil Atlas, the soil in the direct project area is currently designated as Fill land, mixed (0-3% Slope). “These lands are generally found on coastal, low-lying areas, and were once used for disposal of dredging, garbage, and old sugar mill waste. They are now urban (Hawai‘i Soil Atlas accessed September 2019, https://gis.ctahr.hawaii.edu/SoilAtlas).” However, because this is the delta of the Kapakahi Stream and appears to be an area of lower elevation filled with water, the soil zone designation may include other soil types known to be in the vicinity and found in close proximity. According to Foote et al. (1972), four primary soil associations are found on the *mauka* end of the Waipi‘o Peninsula, including the Lualualei Series, Keaau Series, Honouliuli Series, and Pearl Harbor Series. All of these soil series appear in relatively flat areas (0-3% slope) usually in areas of high amounts of alluvial deposits. The Pearl Harbor Series soil, according to the Hawai‘i Soil Atlas, is a very poorly-drained soil found on the coastal flats of O‘ahu that is well-suited and still cultivated for wetland taro production. The Lualualei Series occurs on alluvial fans, described as having “deep nearly level moderately sloping, well-drained soils that have fine-textured or moderately fine- textured subsoil (Foote et al. 1972:84). Other soils seen in the vicinity of fishponds are the Keaau and Honoulili series clays. These are both characterized as being found on coastal plains and consisting of poorly drained alluvial clays deposited on top of reef limestone and coastal coral sand (Foote et al. 1972:64). The coastal ‘Ewa soils consist of calcareous sediment deposits made up of fossil reef and shellfish limestone interspersed with evidence of alluvial sedimentation. This alternating sequence of marine limestone and terrestrial sediments is derived from fluctuations in sea level during the Pleistocene allowing for the buildup of agriculturally rich volcanic alluvium coming from several rivers flowing into what is today Pearl Harbor (Stearns 1966).

The project area subject to monitoring for the Leeward Bikeway consists of the OR&L ROW extending between the current Kapakahi Stream and Waikele Stream bridges, herein called the study area. Development plans for the Bikeway (Figure 7) indicate that excavation below existing grade will take place, thus there is the potential to encounter historic resources. Archaeological monitoring will be perform during construction to address the potential for inadvertent discovery of historic resources in accordance with applicable provisions of Hawai‘i Administrative Rules (HAR) §13-275-12 and HAR §13-300-40.

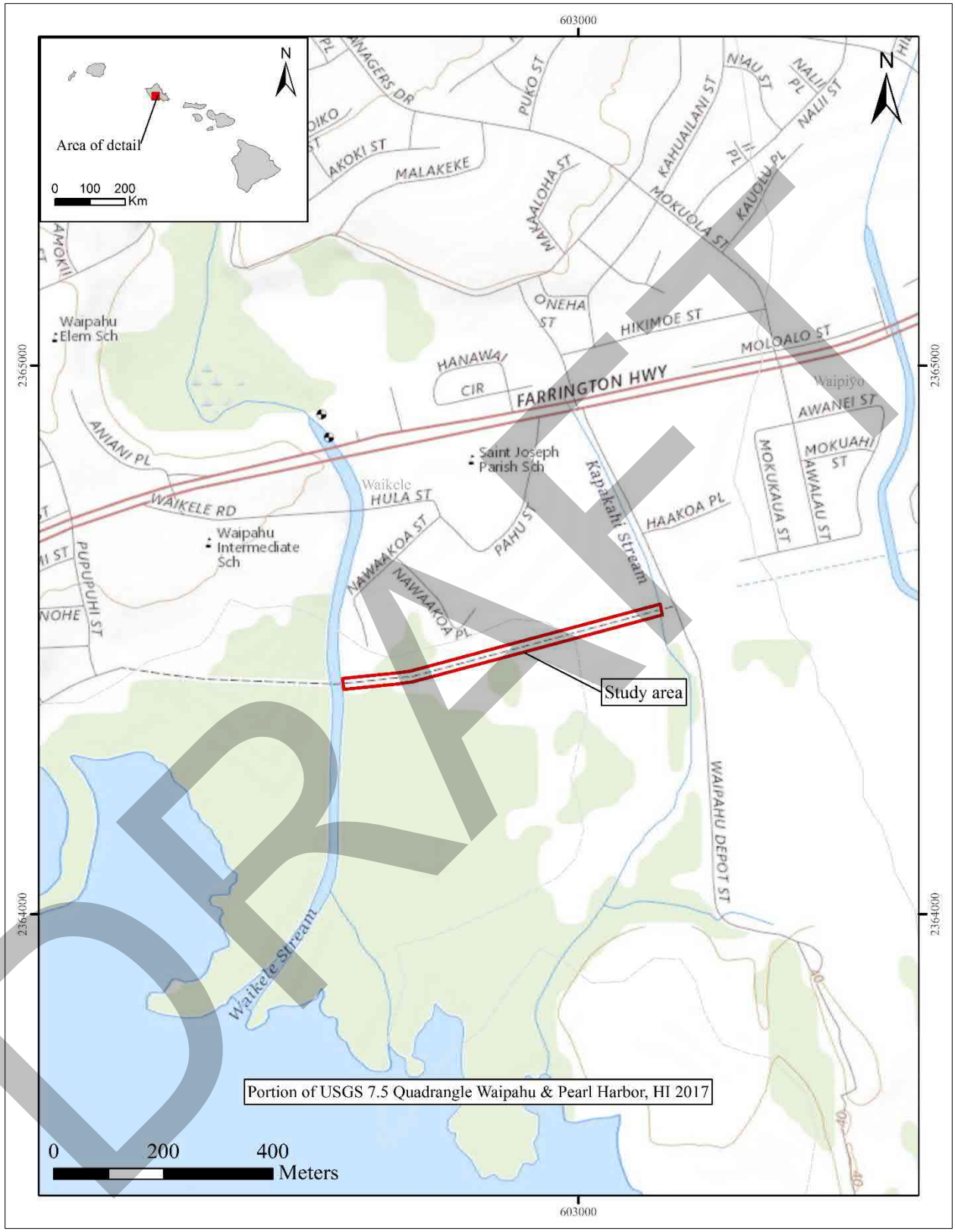

Figure 1. Portion of 2017 U.S.G.S. 7.5 quadrangle showing the study area location within the northwest corner of Waipi‘o Peninsula.

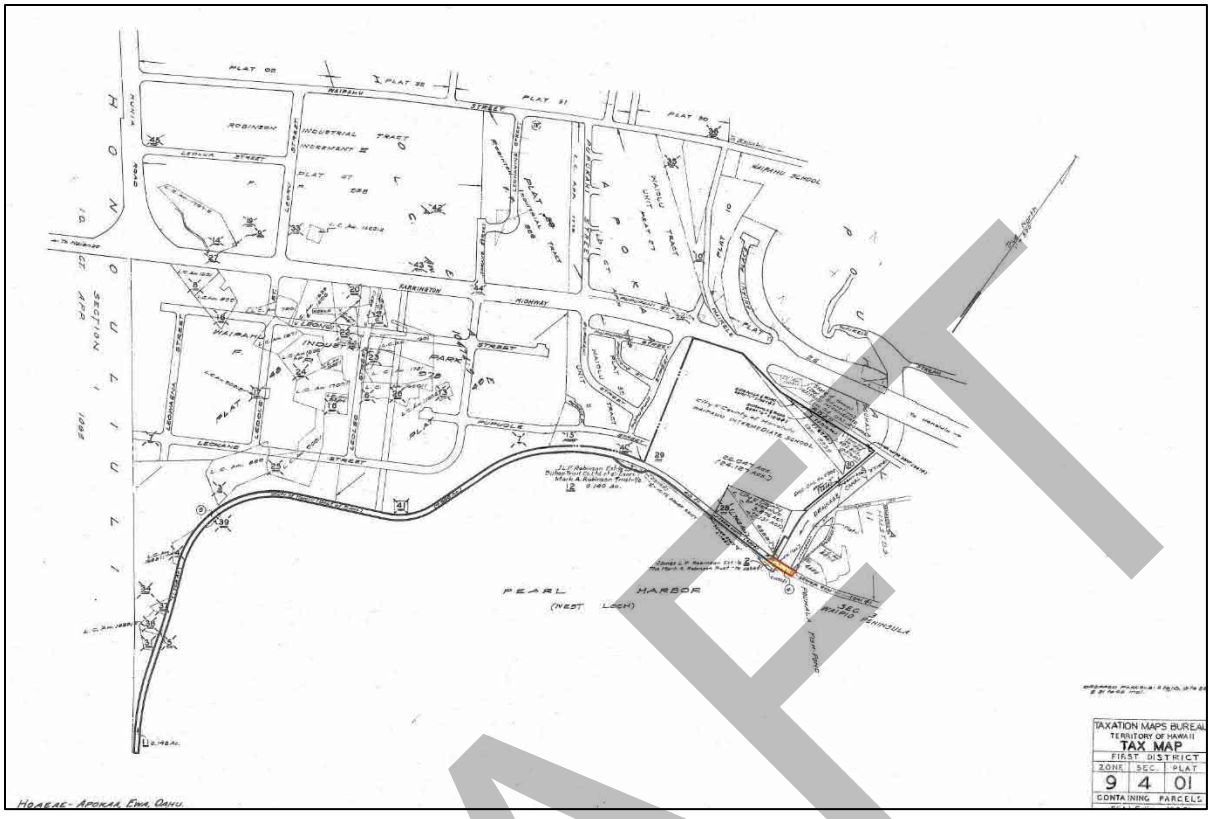

Figure 2. Tax Map Key (TMK: (1) 9-4-001 showing portion of Parcel 011 that will be subject to monitoring.

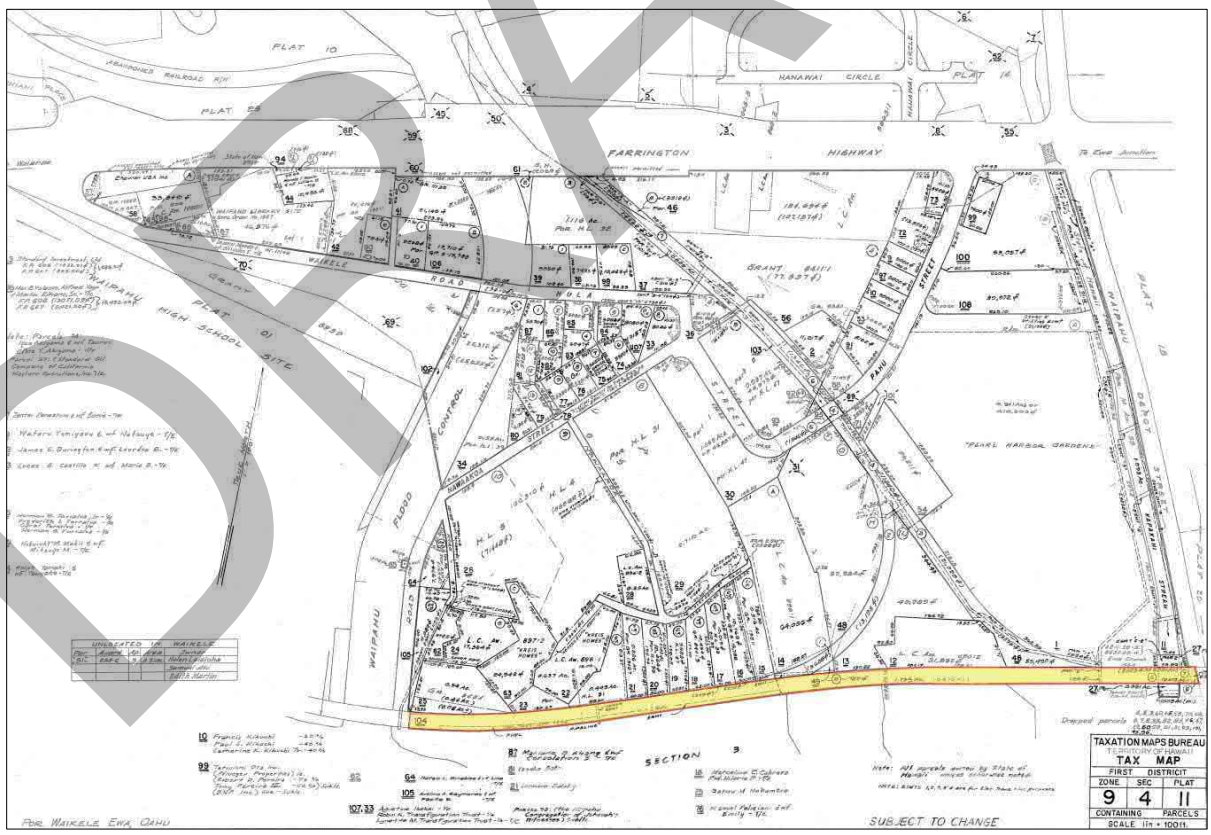

Figure 3. Tax Map Key (TMK): (1) 9-4-011 showing Parcel 104 that will be subject to monitoring.

Figure 4. Google Earth™ satellite image showing current study area between Kapakahi and Waikele Streams, adjacent to Pouhala Fishpond complex. Possible fishpond walls and rice fields are visible in the areas *makai* of Bikeway corridor.

Figure 5. Pouhala Fishpond complex and rice cultivation area in the background. Photograph taken facing west standing 30 meters south of bike path on the west side of Kapakahi Stream.

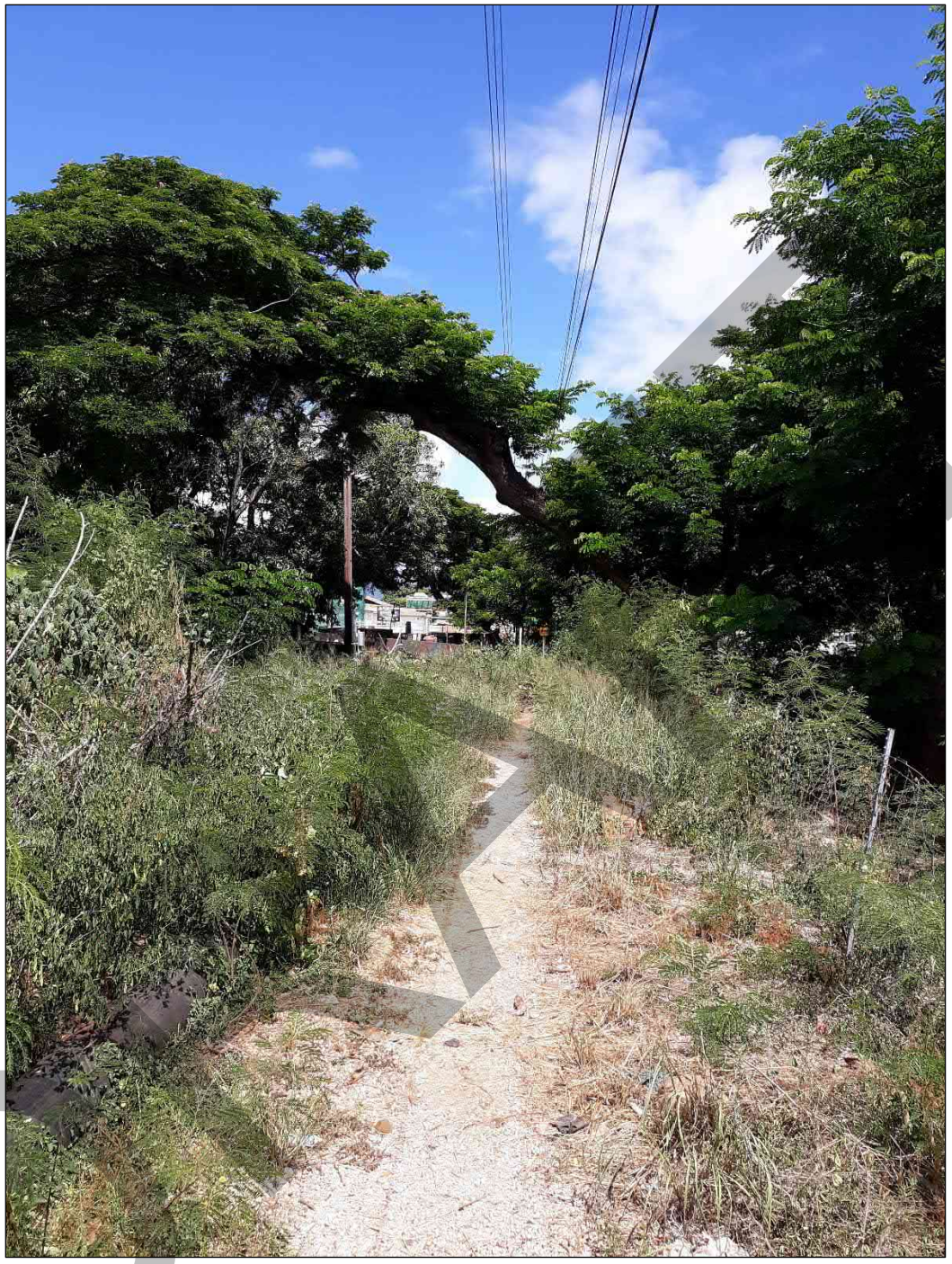

Figure 6. Eastern end of proposed Leeward Bikeway study area. Photograph taken standing approximately 100 feet west of the Kapakahi Stream Bridge.

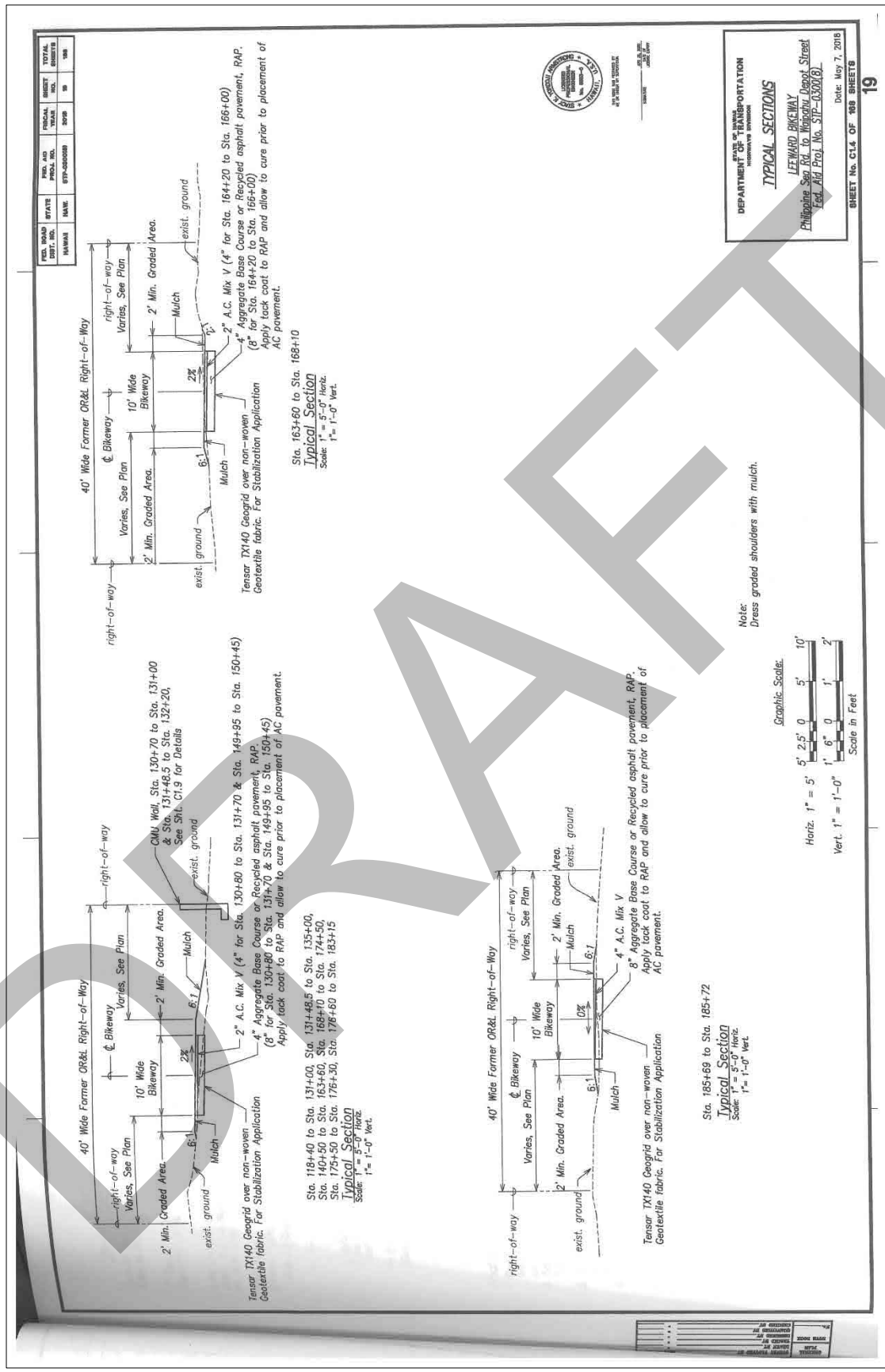

Figure 7. Bikeway plans showing typical cross-sections of the construction.

2. BACKGROUND

In order to provide an understanding of the archaeological resources known to exist within the vicinity of the project area and of any additional resources that may be encountered during the monitoring effort, a brief culture-historical background is presented. This is followed by a summary of prior archaeological studies that have been conducted in the project area vicinity.

A BRIEF HISTORY OF THE CURRENT STUDY AREA VICINITY

This brief history of the current project area vicinity borrows heavily and builds upon a previous report by Davis and Rechtman (2019). The project area is located within the *moku* (district) of ʻEwa, which translates literally as "crooked" (Pukui et al. 1974:28). ʻEwa extends eastward from Honouliuli Ahupuaʻa to Hālawa Ahupuaʻa and encompasses the estuary of Pearl Harbor, known to the ancient Hawaiians as "Ke-awa-lua- o-Puʻuloa, The- many (*lau*)-harbors (*awa*)-of Puʻuloa" (Handy and Handy 1991:469). Much of ʻEwa is watered by streams that flow from the Koʻolau Range, although the western plains are arid. The subject *ahupuaʻa* of Waikele translates literally as "muddy water" (Pukui et al. 1974:223), is likely a reference to its namesake Waikele Stream, which still flows to the west of the project area (see Figure 1). Associated *ahupuaʻa* also have toponyms tied to the significance of water, including Waipiʻo translated literally as "curved water" or waterfall, and Waiawa translated literally as "milkfish water" (ibid.).

The early inhabitants of Precontact Oʻahu settled along the shores of Puʻuloa where they engaged in traditional agricultural and aquacultural techniques —eloquently summed up by Handy and Handy as follows:

> The salient feature of ʻEwa, and perhaps its most notable point of difference, is its spacious coastal plain, surrounding the deep bays ("lochs") of Pearl harbor, which are actually the drowned seaward valleys of ʻEwa's main streams, Waikele and Waipiʻo. . .
>
> These bays offered the most favorable locality in all the Hawaiian Islands for the building of fishponds and fish traps into which deep-sea fish came on the inflow of tidal waters.
>
> The lowlands, bisected by ample streams, were ideal terrain for the cultivation of irrigated taro. The hinterland consisted of deep valleys running far back into the Koʻolau range. Between the valleys were ridges, with steep sides, but a very gradual increase of altitude. The lower parts of the valley sides were excellent for the culture of yams and bananas. (1991:469).

Waikele along with neighboring Waipiʻo and Hōʻaeʻae *ahupuaʻa* to the east and west, respectively, comprise the region of Waipahu which translates as "bursting water" (Pukui et al. 1974:227), yet another reference to the many freshwater springs in the area. Handy and Handy further discuss ancient land use in Waikele and Waipahu as follows:

> The area between the West Loch of Pearl harbor and Loko Eo (the fishpond at the north end of Waipiʻo peninsula) was terraced throughout, continuing for more than a mile up into Waikele Stream. The lower terraces were watered from the great spring at Waipahu. . . (1991:472).

In another volume, Handy provided the following descriptions:

> **Waikele.** In the flatland, where the Kamehameha Highway crosses the lower valley of Waikele Stream, there are the remains of terraces on both sides of the road, now planted to bananas, beans, cane, and small gardens. For at least 2 miles upstream there were small terrace areas. (Handy 1940:82)

A vivid description of Pouhala, linking the fishpond to the railway used for this bikeway project, is found in Sterling and Summers (1978:29) who cite Mary Kawena Pukui's story of the place (Pukui 1939:1258):

> After resting, we decided to go down to Lahilahi's (Webb) old house near Pouhala, an important fish pond in the olden days. . . . The railroad crosses the pond, cutting it in two, but [at] the old opening for the sluice gate that occupied the space in ancient times, there is now an ordinary wire screen held in a wooden frame. The water is no longer as clean as it was and long yellow mosses sway to and fro. Lahihali pointed out the lands that were once a series of small taro patches. One has some thrifty taro growing, another is only a small pond but the rest hold only tall green grasses that swayed to and fro in the wind. The taro patch was called Kapalaha. What a wonderful place it must have been with a fish pond and the sea in front and taro patches at the back door. "A fine place for crabbing," said Lahilahi, "and when it was the season for oama, plenty! Sometimes we would take our cooked ka-i taro down to the shore and eat them, with shell fish as we caught them. Delicious, Oh!"

The area around Pearl Harbor and the Waipiʻo Peninsula was known to be a prominent settlement for Precontact Oʻahu *aliʻi* [royalty] (McAllister 1933:106). The high concentration of productive agriculture and aquaculture in the

form of fishponds was an important factor. "The primary reason for 'Ewa's prominence in history and as an ali'i stronghold was undoubtedly the existence of the great number of fishponds at different points around Pearl Harbor, which was 'Ewa territory. Two of the largest were on the peninsula, and another was ***at its northwest corner*** [emphasis ours]" (Handy and Handy 1991:470).

The Pouhala Fishpond complex, referenced above as the fishpond in the northwest corner of Waipi'o Peninsula, is depicted on several historical maps: Hawai'i Registered Map 120 (Figure 8), Hawai'i Registered Map No. 1498 (RM 1498, Figure 9) and Hawai'i Registered Map 2578 (Figure 10). The 1875 map show several fishpond in the Pouhala vicinity, whose names on later maps were dropped or misspelled (e.g., Mokuula becoming Mokuola). The 1889 map clearly shows the fishpond complex extending further north than is visible today (see Figure 9), and the later 1915 map clearly shows the OR&L railway crossing 'Pouhala' Fishpond (see Figure 10). In fact, on the *mauka* side of the railway near the label 'Pouhala Fish Pond' is the label 'Old Fish Pond' (see Figure 10), confirming the above statement made to Mary Pukui by Lahilahi that the train split the fishpond in two. This is important because the project area is on top of the old railway ROW.

The attribution of fishponds to landed boundaries, in this case *'ili*, can be found on Registered Maps. During the early Historic Period, after he conquered O'ahu in 1795, Kamehameha divided the large *ahupua'a* on O'ahu into smaller *'ili 'āina* ('Ī'ī 1959), which had an impact on the soon to come *Māhele 'Āina* of 1848. The *ahupua'a* of Waikele appears to have been subdivided into *'ili* and awarded as such. The project vicinity falls within an area of the *'ili* Ohua and it appears to have included a smaller fishpond identified as Mokuola fishpond (see Figure 9). It should be noted that according to the directory of Hawaiian Place Names found at Ulukau: The Hawaiian Electronic Library, the 'Mokuola Fishpond' found referenced on RM 1498 (see Figure 9) is mislabeled (c.f., see Figure 8). The name of the fishpond should be written as 'Mokuula', referenced as "an unclaimed pond bounding Loko Kuhewa on the north and the kula of Moolea on the south. Boundary of the *'ili* Ohua adjoins "ka loko i kapaia o Mokuula" (BCT). LCAw 890:2 to Kuhano is bounded on the south by "Loko o Mokuula". Written "Loko Mokuola" on RM 1498, TMK 9301:13x. (Ulukau.org accessed 9/16/19 [http://www.ulukau.org/cgi-bin/hpn?e=q-0mahele--00-0-0--010---4----dtx--0-0l--1en-Zz-1---20-about-Mokuula--00031-000-10escapewin-00&a=d&c=mahele&cl=search&d=HASH01528e58f310d9e885da28b6]). It is of historical interest that the fishponds in this area were used as part of boundary designations, in this case the borders of the *'ili* Ohua.

The project area may also be associated with early rice field agriculture as evidenced by the aerial imagery (see Figure 4). After the *Māhele*, during the late 1800s, Waikele and neighboring Waipi'o were the site of the most productive rice fields in the Hawaiian Islands; "with the benefit of freshwater springs and the mountain waters of Waikele and Kipapa Streams, which merged to create the Kapakai Stream, wet crops and taro were easily cultivated" (Chong 1998:1). Chinese planters leased abandoned *lo'i* and unused *kuleana* lands from Hawaiian families located in Waikele and Waipi'o, taking advantage of the many artesian wells in 'Ewa district that were located between the coast and the inland plains. In 1892, 333 acres in Waikele and Waipi'o were dedicated to rice production:

> . . . most of it was worked by two dozen or so major rice cooperative companies and the balance cultivated by approximately three dozen smaller group or family operations. Many of these smaller operations combined their efforts during the planting and harvesting seasons and bonded socially through traditional arranged marriages between their children. (ibid.:16).

The Chinese rice planters irrigated their rice fields by channeling the waters of Waikele Stream, which was also referred to as Kapakai Creek and Kapakahi River; a waterway that was sometimes "a source of great woe and destruction" for "during floods the stream would change its course, overflow its banks and inundate the rice paddies while destroying homes and claiming lives in its rampant race for the sea" (Chong 1998:16). Chong reports that in 1890 "more than ten million pounds of rice were exported, raised on sixteen thousand acres of rice paddies" (ibid.:15), which marked the peak of Hawaiian rice production and ranked Hawai'i as the third largest U.S. rice producer behind Louisiana and South Carolina.

In addition to large-scale Chinese rice farming pursuits during the late 1800s and early 1900s, the landscape and demography of 'Ewa and much of O'ahu underwent further lasting changes as a result of the rise and fall of the commercial sugarcane industry and the development of Pearl Harbor as a naval stronghold. In 1884, King David Kalakaua and President Grover Cleveland of the U.S. negotiated a treaty (referred to as the Pearl Harbor Treaty) through which the U.S. acquired Pearl Harbor. According to a newspaper article titled "Honolulu and Pearl Harbor Vital Centers of America's Power in Pacific," beginning in the 1840s, members of the U.S. Government made it clear to all European countries who showed any interest in occupying the Hawaiian Islands that the U.S. would not allow it (The Evening Bulletin 1908:1). Then, as countries in Asia began to show interest, the U.S. shifted their focus to the east. As the Spanish-American war unfolded, the U.S. found it necessary "to acquire the sovereignty of the Hawaiian

Islands, both for the protection of the [U.S.] Pacific coast and in order to make it possible to maintain any naval base in the Far East" (ibid.). The same article states that Pearl Harbor was a position that offered "strategically and otherwise, the finest site for a naval and coaling station to be found in the whole Pacific" (ibid.). To that end, more than 600 acres had been acquired for the construction of a naval station and that almost 10 years had passed since the annexation of Hawai'i in 1898 without breaking ground. In 1908, an appropriation of $3,000,000.00 was made by Congress to straighten the channel and establish the extant Naval Base at Pearl Harbor (ibid.).

In 1888, a few years after the Pearl Harbor Treaty a developer named B.F. Dillingham promised investors that he would connect Honolulu with Pearl Harbor by means of a steam railroad. Thus, the Oahu Railway and Land Company or OR&L was born. Although railroads, largely associated with the sugar industry, were already in operation around Hawai'i Island, O'ahu was undeveloped in comparison and the Pearl Harbor region was not yet known as a sugar production area (Yardley 1981). According to Dillingham biographer Paul T. Yardley, "the great dry plains of Ewa produced nothing but cattle and firewood" (ibid.:130). The main landholders of 'Ewa, such as James Campbell, were all amenable to the planned railroad and the promise of increasing the value of their holdings. On March 8, 1889, the formal groundbreaking for the railway took place at Moanalua near the intersection of Middle Street and Kamehameha Highway.

By July 1, 1890, the railroad reached Hō'ae'ae (Yardley 1981:158), to the west of the direct APE. Later that same year, Dillingham shifted his focus to developing portions of Campbell's 60,000 acres in 'Ewa into sugar plantations and constructing a wharf in Honolulu Harbor that could accommodate ships loaded with sugar for export, as well as imports for transport by rail. Dillingham began by renting out portions of his acreage for other uses, which resulted in the establishment of Ewa Plantation Company in 1890, which included portions of Waikele.

According to the Hawaiian Sugar Planter's Association (HSPA) Archive Register of the Ewa Plantation Company (Campbell 1994), by 1910 "the Ewa Plantation Company community of 2,500 people contained several camps, the plantation store, kindergarten, clubhouse, hospital and dispensary, and several outlying camps" and "by 1923 Ewa Plantation was the first sugar company in the world to raise ten tons of sugar per acre and, by 1933, the plantation produced over 61,000 tons of sugar a year" (Campbell 1994:1). Ewa Plantation had 69 artesian wells and 5 surface wells in operation by 1933 and their harvesting operation had become fully mechanized by 1936 (ibid.).

Regarding the Waikele rice fields, during the decades leading up to World War II, rice production suffered a steady decline due to increasing rental costs, blight, insect infestations, and less demand for rice locally exacerbated by cheaper rice production on the mainland. First generation farmers encouraged their offspring to pursue business endeavors rather than continue rice farming; by 1942, only scant traces of the rice farming industry were evident in Waikele (Chong 1998).

When the U.S. entered World War II, "the Army took possession of over 500,000 acres of Ewa Plantation land" (Campbell 1994:2). The OR&L continued to flourish through the end of World War II and provided transport for millions of passengers and freight during the war, proving itself indispensable to the U.S. Army and Navy. However, after the war as infrastructure improvements to O'ahu roadways were implemented and a shift to automobiles, trucks, and buses for the transport of people and goods was underway, the OR&L could not compete (Yardley 1981). The year 1947 marked the close of the main line while limited operations between the docks and pineapple canneries continued before complete abandonment of the railway a few years later.

In contrast, "a good sugar crop and substantial investment in new equipment and development" were able to mitigate the effects of World War II on the sugar industry, 10 years after the attack on Pearl Harbor (Campbell 1994). Castle and Cooke Ltd. became the majority shareholder of Ewa Plantation Company stock in 1962. In 1970, Ewa Plantation was unable to renew its lease for the Campbell Estate lands and was forced to merge with Oahu Sugar Company (OSC), which had been acquired by AMFAC, Inc. roughly a decade prior to the merger (Yardley 1981). Because of the merger, OSC became "the second largest sugar plantation in Hawaii and the third largest in the U.S." (Yamamoto et al. 2005:43). By 1982, OSC covered 55 square miles of land with 15,488 cultivated acreage (ibid.). OSC continued to produce high yields well into the 1980s.

Land modifications associated with the development of the OR&L railway, the commercial cultivation of sugar as Ewa Plantation and later OSC, and the development of Pearl Harbor by the U.S. as a military stronghold have had a lasting impact on the landscape and demographics of the direct APE vicinity. More recently, as commercial sugar cultivation fell by the wayside, ongoing residential and commercial development associated with the population influx of military personnel and their families took hold. Such development is evidenced by the density of residential properties surrounding the project area.

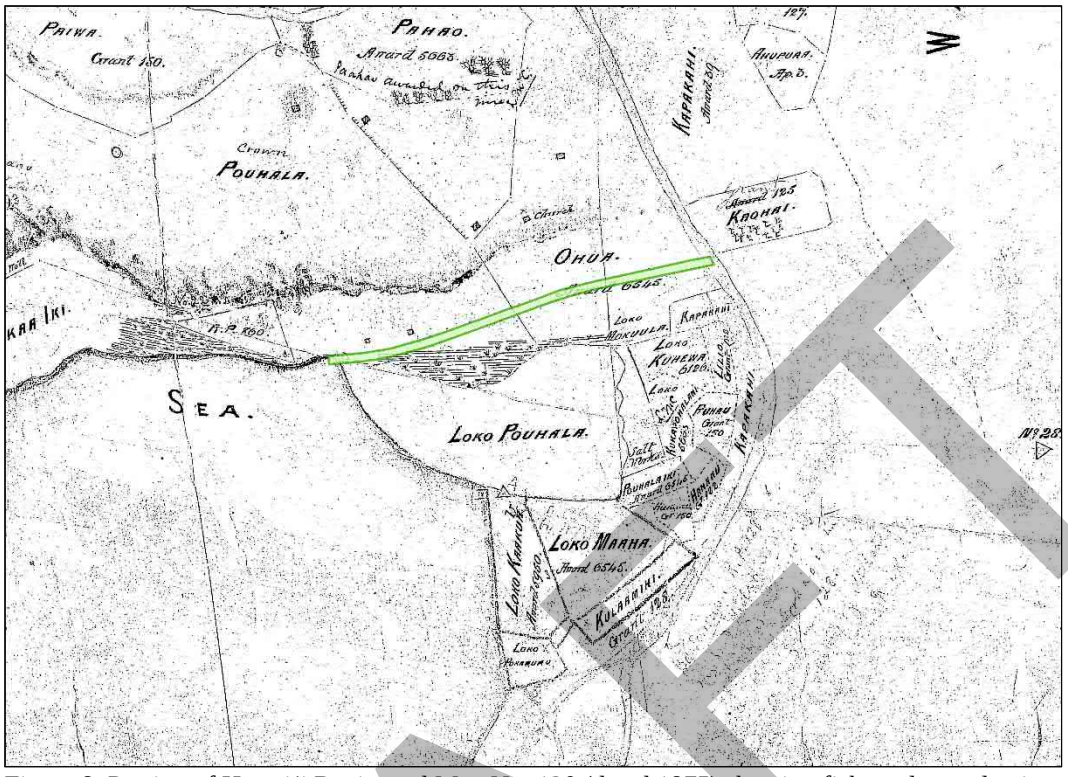

Figure 8. Portion of Hawai‘i Registered Map No. 120 (dated 1875) showing fishpond complex in the vicinity of Pouhala Fishpond.

Figure 9. Hawai‘i Registered Map 1498 (dated 1889) showing Pouhala Fishpond, note the other fishpond Loko Mokuola [Mokuula], which is also adjacent to the current study area.

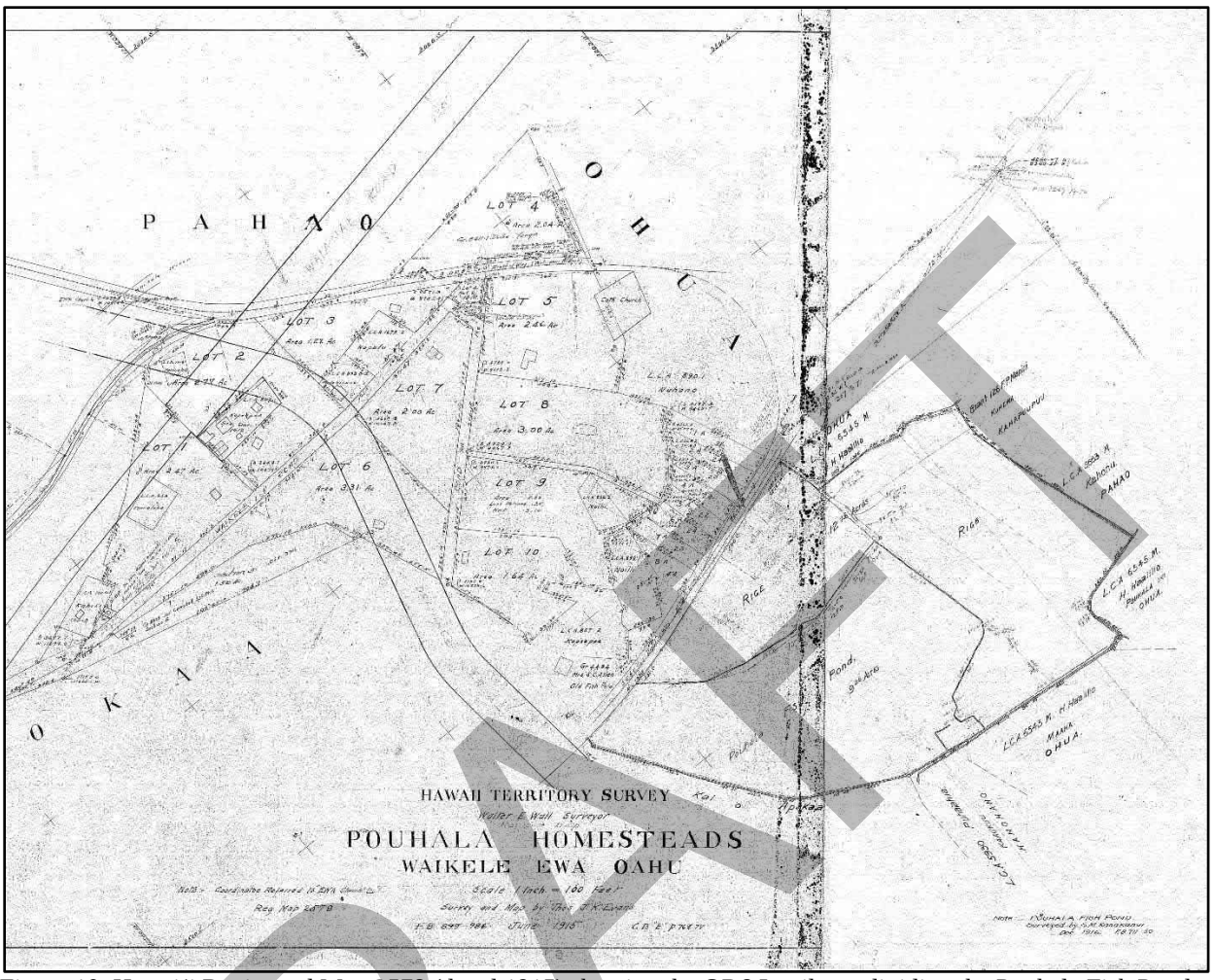

Figure 10. Hawai‘i Registered Map 2578 (dated 1915) showing the OR&L railway dividing the Pouhala Fish Pond (labeled as such). The label of “Old Fish Pond” can be seen on the *mauka* side of the railway to the right of the drainage canal which is the Waikele Stream. North is toward the upper left of the map.

PRIOR ARCHAEOLOGICAL STUDIES

An understanding of fishponds and the importance of aquaculture has been slow to develop in archaeology, as measurements of subsistence complexity and intensive food production have primarily focused on terrestrial-based agricultural productivity. The invention of fishponds was, according to Kirch (1985), a unique achievement among the Hawaiians. The artificial ecosystems maintained within complex arrangements of fishponds were highly productive. Waikele Ahupua’a with its several streams and fresh water sources flowing into a zone of shallow reefs provided an excellent ecosystem for a complex of several significant *loko* (fishponds). Pearl Harbor is a noted location of important Native Hawaiian fishponds, to include Loko Eo, Loko Hanaloa, Loko Puohala and Loko Ulumoku, among others (Kirch 1985; McAllister 1933). It has been estimated that the total amount of fish produced per year by Hawaiian fishponds weighed more than two million pounds (Kikuchi 1973). The most common form of fishpond is the *loko kuapā*, which is constructed using basalt and coral blocks that are formed into walls extending into the ocean to create a pool. Sluice gates are often built into the walls to control fish access but allow the tides to flow in and out. The two species of fish commonly raised in fishponds are *awa* or milkfish (*Chanos chanos*) and *‘ama‘ama* or mullet (*Mugil cephalis*), both of which do very well in brackish water (Kirch 1985). It is noted that Hawaiian fishponds were symbols of power, and all such resources may have been owned by chiefs and served their extensive households. “Fishponds became symbols of the chiefly right to conspicuous consumption and to ownership of the land and its resources. They were manifestations of the chief’s political power and his ability to control and tap his resources” (Kikuchi 1976:295).

Despite their significance, scant research has been done on the Pearl Harbor fishponds and little archaeological work has been done on the Waipi‘o Peninsula in the vicinity of the project area. Prior to this bikeway project, there were three archaeology projects of note conducted in the area (Table 1). (1) A reconnaissance survey and monitoring was done at the 7.93 acre Pupu‘ole Park (TMK: (1) 9-4-01) by Nagaoka and Davis (1989) in which no sites were recorded. Pupu‘ole Mini Park, as it is called today, lies 900 meters west of the current project area on the ‘Ewa side of the Waikele Stream along the bikeway route. (2) A significant survey and testing project by Pacific Legacy, Inc. (Goodman and Cleghorn 1998) was conducted as part of the construction of a sports complex east of Pouhala Marsh Wildlife Sanctuary and south of the Pearl Harbor bikeway. It was determined the area was covered by more than 3 meters of fill. (3) Survey of Waipio Peninsula for the Makalena Golf Course by Athens (1999), who conducted subsurface testing at Site 50-80-09-123 (Loko Eo). Paleoenvironmental coring at the pond found intact sediments at depths beginning at seven meters below the ground surface, a depth corresponding to 2,500 years ago, which is well before the islands were settled. A determination was made that there were no intact sediments associated with the use of Loko Eo as a fishpond.

In all three instances the assessment was that the area has been buried by several meters of fill hindering the possibility for discovery of potentially significant subsurface deposits. Nevertheless, the specific location of the current project area alongside the Kapahaki Stream next to Puohala Fishpond complex and historic rice fields and other potential walls is in our opinion indicative of a much higher potential for recovery of subsurface deposits. This is supported by the report submitted to the SHPO in 2000 by IARII (Dye 2000), which conducted an Archaeological Resources Survey as part of the Leeward Bikeway Environmental Assessment on behalf of HDOT. They determined that intact sediments may be recovered along the *mauka* edge of the abandoned Pouhala fishpond within the current project area.

The IARII survey notes, “Site 50-80-09-126, Puohala and Ulumoku (or Kaaukuu) fishponds, are located in the Waikele *ahupua‘a*. In 1900, the two ponds were divided into a number of smaller ponds, some of which were used for rice cultivation (McAllister 1933:106). Today, the area around the Pouhala pond is a low-lying wetland with poorly drained soils, portions of which are still used for small-scale agriculture. Ulumoku fishpond, south of the proposed bikeway route, has been deeply filled with urban waste. Fishpond sediments, if present today in the wetland, would be significant for the information of Hawaiian history and prehistory that they are likely to yield.” (Dye 2000:2). The determination of significance in reference to the Pouhala fishpond in the area of proposed monitoring is important.

Table 1. Archaeological studies conducted in the vicinity of the current project area.

Author(s)/Date	*Location*	*Nature of Work*	*Findings*
IARII 2000	Leeward Bikeway	Literature review	Puohala Fishpond
Athens 1999	Makalena Golf Course	Survey and cores samples	Loko Eo disturbed
Goodman and Cleghorn 1998	Waipi‘o Soccer Complex	Survey and testing	No remains encountered
Nagaoka and Davis 1989	Pupu‘ole Mini Park	Recon. and monitoring	No sites recorded

3. ANTICIPATED REMAINS

Based on the findings of previous archaeological work in the general vicinity of the Area of Potential Effect (APE) (Athens 1999; Dye 2000; Goodman and Cleghorn 1998; Nagaoka and Davis 1989), the likelihood of discovering any Precontact or Historic Period subsurface cultural deposits is low. In all three instances the assessment was that the area has been buried by several meters of fill, hindering the possibility for discovery of potentially significant subsurface deposits. Nevertheless, the specific location of the current study area between Waikele Stream and Kapahaki Stream, in the vicinity of Loko Puohala, Loko Mokuula, and Historic rice fields may be indicative of a higher potential for encountering subsurface deposits.

While the IARII survey report (Dye 2000) focused on Pouhala Fishpond, our research indicates that Mokuula Fishpond, identified on Hawai‘i Registered Maps (see Figures 8 and 9), may also be of relevance to this project. Satellite imagery depicts several possible rock alignment features extending into extending into the wetland areas in the immediate vicinity of the current study area (see Figure 4). Evidence associated with historic rice cultivation, although not explicitly identified as a potentially significant for the study area, seems to also be visible in the satellite imagery in the vicinity of the current study area (see Figure 4). These Historic Period agricultural practices were often undertaken in areas of earlier traditional taro farming (see discussion above and Handy and Handy 1991).

Project monitoring will pay paramount attention, therefore, to evidence which would indicate behaviors associated with the construction and use of a fishpond. Foremost would be evidence of historic fishpond seawalls (*kuapā)* constructed using basalt rocks and coral. Basal dimensions of walls more than two meters thick are the norm for fishponds. Fishponds can also have internal wall features designed to create a series of smaller ponds with graded percentages of salt water versus fresh water. Water would have flowed directly into the fishpond from Kapakahi Stream which has since been diverted via culvert. In addition, there can be associated structures to include fisherman’s huts, guard houses, and small ritual fishing shrines (*ko‘a*). Less common would be fisherman’s *heiau* on the edge of fishponds and fishtraps as well as *ahu* (cairns) associated with these features (see Greene 1993 for a thorough description of Kaloko Fishpond in the Kona District on the island of Hawai‘i). Additionally, Kirch (1985) notes that fishponds can have associated onsite activities such as processing and cooking fish and shellfish, and repairing fishing gear. Artifacts or features evidencing such activities have the potential to be identified within the current study area.

4. THE MONITORING EFFORT

Prior to the commencing any ground-disturbing activities, the project's Principal Archaeologist and archaeological monitor will meet with the prime contractor and construction crew to review procedures for archaeological monitoring. It will be explained that the monitoring archaeologist has the authority to halt ground-disturbing activities in the event that cultural resources are encountered. If cultural resources identified during monitoring are deemed significant, the SHPD will be notified and consultation will be coordinated as appropriate with interested parties and/or organizations. Scaled representative stratigraphic profiles will be prepared. Even in the absence of identified cultural deposits or features, at least one profile will be included in the Archaeological Monitoring Report for reference. Additionally, the SHPD will be notified upon the onset and completion of the monitoring activities, along with any change in status of the monitoring (i.e., a shift from on-site to on-call will only occur with the prior written approval from SHPD).

FIELD METHODS

A qualified archaeological monitor will be present on-site to observe all subsurface ground-disturbing activities until bedrock is reached or until excavation ceases, whichever occurs first. When on site, the monitor will keep a daily log of project activities performed and any discoveries made. The monitor will inspect all exposed soil, and the stratigraphic profiles of any deep cuts will be examined; stratigraphic profile drawings will be prepared showing representative soil profiles whether or not they contain cultural deposits. This practice will be followed in an effort to identify previously undiscovered and undisturbed cultural deposits, features, artifacts, and human skeletal material. If any such resources are encountered the following procedures will be initiated:

Cultural Deposits

If non-burial historic properties are identified by the monitor, the HDOT will notify the SHPD. All cultural deposits and sequences (including representative natural sequences) identified during the monitoring effort will be mapped, representative scaled profile drawings and plan views will be prepared, photographs will be taken, and the soils will be described in detail (using standard USDA soil descriptions and Munsell colors). Furthermore, their locations will be recorded with a GPS set to sub-1m accuracy, and the locations of these points will be recorded on a map and/or table and presented in the Archaeological Monitoring Report. If intact cultural deposits are discovered during monitoring, an assessment will be made as to their integrity and significance using the criteria enumerated in HAR §13-284-6(b). If the deposit is deemed significant and is likely to be further impacted by construction activities, work in the affected area will be curtailed, and the HDOT will develop an appropriate mitigation strategy in consultation with the SHPD.

Cultural Features

Subsurface cultural features observed will be fully described, drawn, and photographed. Provenience information will also be recorded and related to an established project datum ensuring accurate horizontal and vertical placement. The limits of the feature will be defined, if possible without further excavation, and any natural or cultural associations (including surrounding soil) will be noted. Locations of subsurface cultural features will be recorded with a GPS set to sub-1m accuracy and recorded on a map and/or table, and will be presented in the Archaeological Monitoring Report. Where appropriate, samples for further analyses will be recovered and processed.

Artifacts

Artifacts observed from disturbed soils will be collected and their general provenience recorded. All traditional Hawaiian artifacts and diagnostic Postcontact artifacts will be subjected to laboratory analysis. The precise locations of any *in situ* artifacts will be recorded and the items photographed and collected for laboratory analysis. The precise locations of any items found *in situ* will be recorded and the items photographed and recovered for subsequent laboratory analysis, and their locations recorded with a GPS set to sub-1m accuracy. The locations of these points will be recorded on a map and/or table and will be presented in the Archaeological Monitoring Report. Any observed associations will also be documented, and the surrounding soil will be fully described using standard USDA soil descriptions and Munsell colors.

Human Skeletal Remains

If human skeletal remains are encountered during the monitoring effort, the on-site monitor will halt all ground-disturbing activity in the immediate area of the discovery, stabilize the remains, and HDOT will contact the appropriate authorities, including staff from the Archaeology Branch and from the History and Culture Branch of the SHPD, the

appropriate on-site construction personnel, and the Police and Medical Examiner. If the skeletal material is determined to be Historic or Precontact (as opposed to recent), the HDOT will consult with and get direction from the SHPD on how to proceed with the discovery, and the human skeletal remains will be handled in compliance with HRS §6E-43, HAR §13-300, and SHPD directives. If the remains are determined to be of recent origin, the Honolulu Police Department will take jurisdiction.

TREATMENT OF COLLECTED REMAINS

All collected material will be temporarily stored within a secure location approved by the SHPD. The collected items will be recorded in a field catalog. Upon completion of the monitoring fieldwork, the disposition of the items will be as follows:

Cultural Material

All cultural material collected during monitoring will be analyzed (cleaned, weighed, measured, photographed, and illustrated if appropriate), and cataloged. Analysis will also include formal description and functional interpretation. The identification of artifacts, vertebrate faunal remains, and invertebrate faunal remains will include comparison with reference collections and materials, as needed.

Collected Samples

All collected samples will be initially processed by a qualified archaeologist before being submitted to the appropriate institutions for detailed analysis.

Human Skeletal Remains

If the SHPD determines that the removal of buried human skeletal remains is an appropriate course of action, then a Burial Site Component of a Data Recovery Plan will be developed in consultation with the SHPD as appropriate in accordance with Hawai‘i State law as outlined in HAR §13-300-40.

REPORTING

Following completion of archaeological monitoring, a draft monitoring report will be prepared and submitted to the SHPD for review and acceptance. This report will follow the specifications contained in HAR 13§13-279-5. If human remains are recovered as part of the monitoring project they will be summarized in the final monitoring report following procedures contained in HAR §13-300. A final monitoring report will be submitted to SHPD for review and acceptance within 180 days of completion of the monitoring fieldwork.

CURATION OF RECOVERED ITEMS

Any material collected during the monitoring effort will be curated by the archaeological consultant for a period of no more than one year following submission of the final monitoring report, during which time arrangements will be made for permanent curation in consultation with the landowner and the SHPD. It will be the landowner’s responsibility to secure permanent curation in an acceptable facility; included in this responsibility are the costs associated with long-term curation.

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MEMORANDUM OF AGREEMENT
AMONG THE FEDERAL HIGHWAY ADMINISTRATION
THE HAWAII STATE HISTORIC PRESERVATION OFFICER
AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE LEEWARD BIKEWAY
PHILIPPINE SEA ROAD TO WAIPAHU DEPOT STREET
Federal Aid Project No. STP-BW-0300(8)
District of Ewa, Oahu, Hawaii

WHEREAS, the Federal Highway Administration (FHWA) plans to provide assistance to the Project pursuant to the Federal-aid Highway Program as described in Title 23 USC § 101 et seq.; and

WHEREAS, FHWA has determined that the Project is an undertaking, as defined in 36 CFR § 800.16(y), and thus is subject to review under Section 106 of the National Historic Preservation Act (NHPA), 54 U.S.C. § 306108, and its implementing regulations, 36 CFR § 800; and

WHEREAS, the Hawaii Department of Transportation (HDOT) proposes to design and construct the Leeward Bikeway project (Project); and

WHEREAS, the undertaking consists of the construction of the Leeward Bikeway with project limits that include two sections connected by the existing approximately two-mile long West Loch Bike Path on either end to form a continuous path. The first section of the Leeward Bikeway would begin at Philippine Sea Road and extend approximately 10,500 feet east to connect with the southwest end of the West Loch Bike Path, and the second section of the Leeward Bikeway would begin at the northeast end of the West Loch Bike Path and extend approximately 6,900 feet east to its terminus at Waipahu Depot Street (see Exhibit 1); and

WHEREAS, the FHWA has defined the undertaking's area of potential effect (APE) as the area comprising portions of tax map keys (TMKs) (1) 9-1-017: 003, 008, 044, 045; (1) 9-4-001: 002, 011; (1) 9-4-011: 011, 104; (1) 9-1-064: 116; (1) 9-1-069: 002, 003, 010; (1) 9-1-126: 008, 013; (1) 9-3-001: 006, 021; and (1) 9-3-002: 029 (see Exhibit 2); and

WHEREAS, the FHWA has determined that the following properties within the APE are either listed on or eligible for listing on the National Register of Historic Places (NRHP): 1) former OR&L ROW; 2) Waikele Stream Bridge; 3) Kapakahi Stream Bridge; 4) Pouhala fishpond; and

WHEREAS, the FHWA has determined that the Pouhala fishpond is eligible for the NRHP under Criterion D; and

WHEREAS, the FHWA has determined that the undertaking will have an adverse effect on the Waikele Stream Bridge and the Kapakahi Stream Bridge which are individually eligible for the NRHP under Criteria A and C. The former OR&L ROW from Arizona Road to Lualualei Naval Road is listed on the NRHP as Reference No. 75000621 and it was further determined that the area owned by HDOT is a historic district eligible under Criteria A and B. Another portion of the former OR&L ROW from Arizona Road to Waipahu Depot Street is not listed on the NRHP. FHWA has evaluated the portion from Arizona Road to Waipahu Depot Street to be viewed as

part of the OR&L linear historic district. Since the bridges are contributing elements that would be removed as part of the undertaking, there is an adverse effect to the former OR&L ROW; and

WHEREAS, the FHWA has consulted with the Hawaii State Historic Preservation Officer (SHPO) and the SHPO concurred with the adverse effect determination by letter dated July 27, 2018 (Log No.: 2018.01453, 2018.01758, Doc. No.: 1807SH27, Archaeology); and

WHEREAS, the HDOT, as landowner, project proponent and applicant for Federal assistance, participated in consultation, is an invited signatory to this Memorandum of Agreement (MOA); and

WHEREAS, FHWA and HDOT have notified Native Hawaiian organizations (NHOs) and interested parties via U. S. Postal Service mail for the purpose of consultation regarding the effects of the undertaking on historic properties on November 30, 2017 (Reference No. HWY-DD 2.5673); and

WHEREAS, a Section 106 notice/advertisement was included in the December 5, 2017 Honolulu Star-Advertiser regarding the undertaking; and

WHEREAS, FHWA has consulted with the Hawaiian Railway Society (HWNRS), Historic Hawaii Foundation (HHF), Hawaii Bicycling League (HBL), National Trust for Historic Preservation (NTHP), and Clifford Ahuna regarding the effects of the undertaking on historic properties; and

WHEREAS, the above consulting parties were notified about the Leeward Bikeway Project and were provided opportunities to comment at the following Section 106 Consultation meetings held on the following dates and times:

October 25, 2017, 1:30 PM, HDOT 5th Floor Conference Room;
November 15, 2017, 9:00 AM, FHWA Conference Room;
December 20, 2017, 1:30 PM, HDOT 5th Floor Conference Room;
January 17, 2018, 1:30 PM, FHWA Conference Room;
February 14, 2018, 1:30 PM, HDOT 5th Floor Conference Room;
March 14, 2018, 2:00 PM, HDOT 5th Floor Conference Room;
April 11, 2018, 1:00 PM, HDOT 5th Floor Conference Room;
May 9, 2018, 1:00 PM, HDOT 5th Floor Conference Room;
August 14, 2018, 1:30 PM, FHWA Conference Room; and

WHEREAS, FHWA has invited the Hawaiian Railway Society (HWNRS), Historic Hawaii Foundation (HHF), Hawaii Bicycling League (HBL), National Trust for Historic Preservation (NTHP), and Clifford Ahuna to sign this MOA as concurring parties; and

WHEREAS, in accordance with 36 CFR § 800.6(a)(1), FHWA has notified the ACHP of its adverse effect determination with specified documentation, and the ACHP has chosen to participate in the consultation pursuant to 36 CFR § 800.6(a)(1)(iii); and

NOW, THEREFORE, the FHWA, SHPO, and ACHP agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

STIPULATIONS

The FHWA, with the assistance of HDOT, shall ensure the following measures are implemented:

I. DESIGN SPECIFICATIONS AND REVIEW FOR REPLACEMENT BRIDGES

A. Context Sensitive Design

1. The HDOT has developed conceptual bridge construction plans for the replacement of the Waikele and Kapakahi Stream Bridges using a context sensitive design process. The final designs of the replacement bridges shall be substantively as depicted in the drawings in the attached Exhibit 3 and shall include:

   a. The span length of both bridges will be longer than the original bridges to allow for the clear span of the Waikele and Kapakahi Streams and reduce need for structures in the water.

   b. The dimensions of the cross-sections of the replacement bridges, as much as practicable, shall match the width of the original bridges.

   c. The dimensions of the railings of the replacement bridges, as much as practicable, shall match the height of the original bridge parapets.

   d. Use of non-structural concrete stiffeners shall be applied to the faces of the parapets, matching the spacing and pattern of the historic use of parapet bracing that is present on the original steel plate girders.

2. The HDOT distributed on March 16, 2018, the conceptual bridge construction plans incorporating the context sensitive design to the signatories and consulting parties, and there is agreement with the proposed design dated August 30, 2016.

II. DOCUMENTATION

A. Historic American Engineering Record (HAER) Documentation

1. The HDOT shall prepare Historic American Engineering Record (HAER) Documentation Level III, for the recordation of the Waikele Stream Bridge and the Kapakahi Stream Bridge as mitigation to address the adverse effects of the demolition and rehabilitation of the bridges. The HAER document shall be prepared in accordance with its standards and specifications and by a historic preservation professional meeting the Secretary of the Interior's Professional Qualifications Standards (36 CFR 61) for History, Architectural History, Architecture, or Historic Architecture prior to the removal of historic features of the bridges.

2. HDOT shall ensure that all documentation activities will be performed or directly supervised by architects, historians, photographers and/or other professionals meeting the minimum qualifications in their field as specified in the Secretary of Interior's Professional Qualifications Standards (36 CFR 61; Appendix A).

3. HDOT shall provide originals of all records resulting from the documentation to the National Park Service (NPS) and shall consult with NPS regarding inclusion of the final document at the Library of Congress. HDOT shall also consult with NPS regarding other repositories for the final document.

4. Upon acceptance of the HAER documentation by NPS, HDOT shall provide the SHPO with the final HAER documentation and number; HDOT shall submit the final HAER documentation to SHPO in digital format complete with a State Inventory of Historic Places (SIHP) request.

5. HDOT shall complete the HAER documentation before the start of removal of the historic features of Waikele Stream Bridge and Kapakahi Stream Bridge.

III. PRESERVATION AND SALVAGE OF HISTORIC MATERIALS

A. The HDOT shall salvage approximately five-foot long end sections of both the mauka and makai steel plate girder walls from the east end of Kapakahi Stream Bridge. The sections shall be offered to HWNRS within 60 days of the demolition of the existing bridge.

1. The HDOT shall offer to meet with the HWNRS no later than 30 days prior to the beginning of demolition to determine the logistics for salvage and delivery of the two bridge end sections.

2. If HWNRS accepts the offer, the HDOT shall ask the HWNRS to provide the current points of contact for coordination with the HDOT for the salvage and delivery of the two bridge end sections.

3. If HWNRS elects not to accept the offer, the HDOT may dispose of the salvaged materials at its discretion.

B. The HDOT shall take reasonable care to salvage and transport the bridge end-sections for use by the HWNRS, but shall make no warranty for the condition of the bridge end-sections delivered to the HWNRS yard due to the age and dilapidated condition of the Kapakahi Stream Bridge structure.

IV. INTERPRETATION

A. Interpretive Signs

1. The HDOT shall prepare an Interpretive Signage Plan (Plan) using a qualified professional in architectural history or historic architecture, in accordance with "Archeology and Historic Preservation: Secretary of the Interior's Standards and

Guidelines [As Amended and Annotated]."[1] The qualified professional shall also have experience with the preparation of plans and specifications for the development of interpretive signs for pedestrian and/or bicycling related facilities.

2. The Plan shall describe the locations, content, and design of the interpretive signs.

3. The content of the interpretive signs shall include the following:

    a. Historic context for the areas through which the Leeward Bikeway traverses, including Native Hawaiian history, OR&L operations, Mr. Benjamin Franklin Dillingham's achievements, the sugar cane industry, military history, and design of the historic features associated with the bridges or other historic events, people or construction eras.

    b. Relevant information documented in HAER reports, archaeological inventory surveys, National Register of Historic Places nominations, the OR&L Bridge Inventory, the OR&L ROW inventory, and other historic research.

4. The design of the interpretive signs including the location, materials, dimension, general appearance and manufacturing specifications, shall consider the following:

    a. Safety for users of the Leeward Bikeway and to avoid conflicts with pedestrians, bicyclists, or other constraints.

    b. Quality of design, including readability and usefulness of the interpretive signs to convey information.

    c. Compatibility of the interpretive signs with the rural and natural environmental character of the area.

    d. Durability and life expectancy of the interpretive signs.

    e. Feasibility of installation and maintenance.

    f. Cost (the budgeted amount for the interpretive signage shall be $135,000.00).

5. The HDOT shall develop the Interpretive Signage Plan through consultation with the signatories and consulting parties to this MOA, and shall:

    a. Distribute the Interpretive Signage Plan materials to the signatories and consulting parties to this MOA at three stages (preliminary, interim, and pre-final) for review and comments.

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[1] https://www.nps.gov/history/local-law/arch_stnds_9.htm (as of March 2018).

b. Obtain written comments concerning the Plan from the signatories and consulting parties to this MOA within 30 days of receipt of the materials. Any party may request a meeting to discuss the materials within the 30-day review period.

c. Address the comments received in earlier phases when submitting subsequent review materials, with an explanation of how the comments were incorporated or reasons why, if the comments were not incorporated as applicable.

d. Have final approval authority over the content and design of the interpretative signs.

e. Provide electronic copies of the final Interpretive Signage Plan to the signatories and consulting parties within 60 days of approval.

6. The HDOT shall design, manufacture and install no fewer than eight (8) historic interpretive signs along the Leeward Bikeway in accordance with the Interpretive Signage Plan and prior to the completion of construction of the bikeway. The signs shall include: one sign for the Waikele Stream Bridge, and one sign for the Kapakahi Stream Bridge describing the history of the bridges; and, six (6) signs placed one every 0.5 miles along the route of the Leeward Bikeway. The locations of the signs may be adjusted to account for physical constraints and practical considerations, including the safe use of the bikeway and public accessibility to enjoy the signs.

B. Interpretive Brochure

1. The HDOT shall research, write, design and print an interpretive brochure to describe the historic context for the areas through which the Leeward Bikeway traverses, including Native Hawaiian history, OR&L operations, Mr. Benjamin Franklin Dillingham's achievements, the sugar cane industry, military history, and design of the historic features associated with the bridges or other historic events, people or construction eras. The brochure shall be developed and distributed no later than the completion of construction of the Leeward Bikeway.

2. The HDOT shall prepare the interpretive brochure using a historic preservation professional who meets the professional qualifications of the Secretary of the Interior's Professional Qualifications Standards (36 CFR 61) for History, Architectural History, Architecture, or Historic Architecture.

3. The HDOT shall include in the content of the interpretive brochure relevant information as documented in the HAER reports, archaeological inventory surveys, National Register of Historic Places nomination, OR&L Bridge Inventory, OR&L Right of Way inventory, and other historic research.

4. The HDOT shall approve the interpretive brochure based on criteria to include:

a. Quality of design, including readability and usefulness for conveying information. The brochure shall be 2 - 12 pages in length, as determined through consultation (see below).

b. Cost (the budgeted amount for the interpretive brochure shall be $16,000).

5. HDOT shall develop the Interpretive Brochure through consultation with the signatories and consulting parties as follows:

a. The HDOT shall distribute the interpretive brochure to the signatories and consulting parties at two stages (preliminary and pre-final) for review and comments.

b. The consulting parties shall provide written comments within 30 days of receipt of the materials. Any party may request a meeting to discuss the materials within the 30-day review period.

c. The HDOT shall address the comments received in earlier phases when submitting subsequent review materials.

d. The HDOT shall have final approval authority over the content and design of the interpretative brochure.

e. The HDOT shall provide electronic copies of the final interpretive brochure to the consulting parties within 60 days of final approval.

6. The HDOT shall distribute 25 copies each of the final interpretive brochure to the Ewa Beach Public Library, Hawai'i State Library, James Campbell High School, Ewa Beach Elementary School, Ewa Elementary School, the Hawaiian Railway Society, and the Historic Hawai'i Foundation.

V. INADVERTENT DISCOVERY AND UNANTICIPATED EFFECTS

A. An archaeological monitoring plan (AMP) that meets the requirements of Hawaii Administrative Rules (HAR) 13-279-4 will be prepared for implementation during any earth moving activities taking place over the Pouhala Fishpond for a distance of 50' in the Ewa direction starting at the Kapakahi Stream Bridge. HDOT shall submit the AMP to the State Historic Preservation P Division (SHPD) for review and acceptance prior to the start of any earth moving activities.

B. If historic properties, with the exception of human remains or burials, are identified or if unanticipated effects on historic properties are found, the HDOT shall notify SHPD and comply with HAR Chapter 13-280 "Rules Governing General Procedures for Inadvertent Discoveries of Historic Properties During a Project Covered by the Historic Preservation Review Process."

C. Following completion of archaeological monitoring, an archaeological monitoring report meeting the requirements of HAR Chapter 13-279-5 shall be submitted to SHPD for review and acceptance.

D. In the event that unidentified human skeletal remains are discovered, work in the vicinity of the find shall cease, the area shall be secured, the Police and SHPD shall be notified, and treatment shall proceed in accordance with HRS 6E-43.6 and HAR Chapter 13-300 "Rules of Practice and Procedure Relating to Burial Sites and Human Remains."

VI. REPAIR OF DAMAGE CAUSED BY CONTRACTOR DURING CONSTRUCTION

A. If damage to historic properties within the former OR&L ROW within the Area of Potential Effect occurs as a result from the willful or unintentional actions of the HDOT's Contractor, the Contractor shall cease all work in the area and immediately contact HDOT. The Contractor shall submit proposed plans and schedule for the repairs to HDOT for approval within 7 days of the incident. The repairs shall restore the historic property to a condition that is the same as or better than before the damage occurred in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties (36 CFR 68). If the Contractor does not submit the proposed plans and schedule within 7 days, the Contractor shall cease all work on the project until the proposed plans and schedule are received by HDOT.

B. The HDOT shall inform the SHPD, signatories, and consulting parties of the damage within 2 days of the Contractor's notification. SHPD will be allowed an opportunity to review the damage. The HDOT shall provide the proposed plans and schedule to SHPD for approval and comments. Any comments by SHPD regarding the proposed repairs shall be transmitted in an official SHPD letter within 14 days of receipt of the proposed plans and schedule. If no comments or approval is received within 14 days, HDOT may approve the Contractor's proposed plan and schedule.

C. Following approval of the Contractor's proposed plans and schedule by HDOT, HDOT will authorize the Contractor to start the work. HDOT shall inform SHPD when the Contractor is authorized to start work.

D. Following completion of the repairs, HDOT shall provide SHPD a report documenting compliance with the approved plans and allow SHPD an opportunity to inspect the repairs performed on the historic property. At a minimum, the report may be a letter with a written description and photo documentation of the repairs. If SHPD has any concerns with the repairs, either upon receipt of the report or inspection of the repairs, SHPD shall transmit a formal letter within 14 days of notification indicating any concerns. If no letter is received within 14 days, the repairs shall be considered complete.

E. If the Contractor fails to comply with the approved plans and schedule, the Contractor shall repair, restore and make good all loss or damage at no increase in contract time or contract price.

VII. DISPUTE RESOLUTION FOR SIGNATORIES AND CONSULTING PARTIES

Should any signatory or consulting party object at any time to any actions proposed or the manner in which the terms of this MOA are implemented, FHWA shall consult with such party to resolve the objection. If FHWA determines that such objection cannot be resolved, FHWA will:

A. Forward all documentation relevant to the dispute, including the FHWA's proposed resolution, to the ACHP. The ACHP shall provide FHWA with its advice on the resolution of the objection within 30 days of receiving adequate documentation. Prior to reaching a final decision on the dispute, FHWA shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP and signatories, and provide them with a copy of this written response. FHWA will then proceed according to its final decision.

B. If the ACHP does not provide its advice regarding the dispute within the 30-day time period, FHWA may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, FHWA shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories to the MOA, and provide them and the ACHP with a copy of such written response.

C. FHWA responsibilities to carry out all other actions subject to the terms of this MOA that are not the subject of the dispute remain unchanged.

VIII. RESOLVING PUBLIC OBJECTIONS

At any time during implementation of the terms of this Agreement, should any member of the public raise an objection in writing pertaining to such implementation to any signatory party to this Agreement, that signatory party shall immediately notify FHWA. FHWA shall:

A. Immediately notify the other signatory parties in writing of the objection. Any signatory party may choose to comment on the objection to FHWA.

B. Establish a reasonable time frame for this comment period. FHWA shall consider the objection, and in reaching its decision, FHWA will take all comments from the other parties into account.

C. Within 15 days following closure of the comment period, FHWA will render a decision regarding the objection and respond to the objecting party. FHWA will promptly notify the other signatory parties of its decision in writing, including a copy of the response to the objecting party. FHWA's decision regarding resolution of the objection will be final.

D. Following the issuance of its final decision, FHWA may authorize the action subject to dispute hereunder to proceed in accordance with the terms of that decision. Nothing in

this paragraph creates additional legal rights or responsibilities on the FHWA that are not already afforded under the NHPA.

E. FHWA's responsibility to carry out all other actions or terms of this MOA that are not the subject of the objection remain unchanged and may proceed.

IX. MONITORING AND REPORTING

At the end of each calendar year following the execution of this MOA, or until it expires or is terminated, the FHWA, with the assistance of HDOT, shall provide all parties to this MOA, a summary report (report) detailing work undertaken pursuant to its terms. The report shall summarize the implementation of the documents identified in the stipulations and any other agreed upon mitigation measures detailed in this MOA. The report shall also include any scheduling changes proposed, any problems encountered, and any disputes and objections received in HDOT's and the FHWA's efforts to carry out the terms of this MOA. A review meeting may be called by the FHWA or HDOT upon request of a signatory, invited signatory or consulting party to this MOA. A Final Report shall be prepared and transmitted to the parties participating in this MOA at the expiration of the MOA.

X. DURATION

This MOA will expire if its terms are not carried out within five (5) years from the date of its execution. Prior to such time, FHWA may consult with other signatories to reconsider the terms of the MOA and amend it in accordance with Stipulation VIII, below.

XI. AMENDMENTS

This MOA may be amended when such an amendment is agreed to in writing by all signatories, after consultation with the signatories. The amendment will be effective on the date a copy signed by all of the signatories is filed with the ACHP.

XII. TERMINATION

If any signatory to this MOA determines that its terms will not or cannot be carried out, that party shall immediately consult with the other signatories to attempt to develop an amendment per Stipulation VIII, above. If within 30 days (or another time period agreed to by all signatories) an amendment cannot be reached, any signatory may terminate the MOA upon written notification to the other signatories. Once the MOA is terminated, and prior to work continuing on the undertaking, the FHWA must either (a) execute an MOA pursuant to 36 CFR §800.6 or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR § 800.7. The FHWA shall notify the signatories as to the course of action it will pursue. Execution of this MOA by the FHWA, SHPO and the ACHP, and the implementation of its terms evidence that the FHWA taken into account the effects of this undertaking on historic properties and afforded the ACHP an opportunity to comment.

XIII. COUNTERPART SIGNATURES

This MOA may be executed in counterparts. Each signature page shall be incorporated into the MOA and considered a part of this MOA.

Execution of this MOA by the FHWA, HDOT, SHPO, and the ACHP and implementation of its terms evidence that FHWA has taken into account the effects of this undertaking on historic properties and afforded the ACHP an opportunity to comment.

APPROVAL

The following organizations are identified as parties to this MOA:

Signatories:

Federal Highway Administration
Hawaii State Historic Preservation Officer
Advisory Council on Historic Preservation

Invited Signatory:

Hawaii Department of Transportation

Consulting Parties:

Hawaiian Railway Society
Historic Hawaii Foundation
Hawaii Bicycling League
National Trust for Historic Preservation
Clifford Ahuna

MEMORANDUM OF AGREEMENT
AMONG THE FEDERAL HIGHWAY ADMINISTRATION
THE HAWAII STATE HISTORIC PRESERVATION OFFICER
AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE LEEWARD BIKEWAY
PHILIPPINE SEA ROAD TO WAIPAHU DEPOT STREET
Federal Aid Project No. STP-BW-0300(8)
District of Ewa, Oahu, Hawaii

SIGNATORY:

FEDERAL HIGHWAY ADMINISTRATION

By: _____ Date: 4/25/19
Ralph Rizzo, Division Administrator

MEMORANDUM OF AGREEMENT
AMONG THE FEDERAL HIGHWAY ADMINISTRATION
THE HAWAII STATE HISTORIC PRESERVATION OFFICER
AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
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PHILIPPINE SEA ROAD TO WAIPAHU DEPOT STREET
Federal Aid Project No. STP-BW-0300(8)
District of Ewa, Oahu, Hawaii

SIGNATORY:

HAWAII STATE HISTORIC PRESERVATION OFFICER

By: _____ Date: 5.15.19
Alan Downer, Deputy State Historic Preservation Officer

MEMORANDUM OF AGREEMENT
AMONG THE FEDERAL HIGHWAY ADMINISTRATION
THE HAWAII STATE HISTORIC PRESERVATION OFFICER
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PHILIPPINE SEA ROAD TO WAIPAHU DEPOT STREET
Federal Aid Project No. STP-BW-0300(8)
District of Ewa, Oahu, Hawaii

SIGNATORY:

ADVISORY COUNCIL ON HISTORIC PRESERVATION

By: John M. Fowler Date: 6/24/19
John M. Fowler, Executive Director

MEMORANDUM OF AGREEMENT
AMONG THE FEDERAL HIGHWAY ADMINISTRATION
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PHILIPPINE SEA ROAD TO WAIPAHU DEPOT STREET
Federal Aid Project No. STP-BW-0300(8)
District of Ewa, Oahu, Hawaii

INVITED SIGNATORY:

HAWAII DEPARTMENT OF TRANSPORTATION

By: _____ Date: Apr 22, 2019
Jade T. Butay, Director of Transportation

MEMORANDUM OF AGREEMENT
AMONG THE FEDERAL HIGHWAY ADMINISTRATION
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PHILIPPINE SEA ROAD TO WAIPAHU DEPOT STREET
Federal Aid Project No. STP-BW-0300(8)
District of Ewa, Oahu, Hawaii

CONSULTING PARTY:

HAWAIIAN RAILWAY SOCIETY

By: _____ Date: _____
Robert Yatchmenoff, President

MEMORANDUM OF AGREEMENT
AMONG THE FEDERAL HIGHWAY ADMINISTRATION
THE HAWAII STATE HISTORIC PRESERVATION OFFICER
AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
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PHILIPPINE SEA ROAD TO WAIPAHU DEPOT STREET
Federal Aid Project No. STP-BW-0300(8)
District of Ewa, Oahu, Hawaii

CONSULTING PARTY:

HISTORIC HAWAII FOUNDATION

By: _____ Date: _____
Kiersten Faulkner, Executive Director

MEMORANDUM OF AGREEMENT
AMONG THE FEDERAL HIGHWAY ADMINISTRATION
THE HAWAII STATE HISTORIC PRESERVATION OFFICER
AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
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PHILIPPINE SEA ROAD TO WAIPAHU DEPOT STREET
Federal Aid Project No. STP-BW-0300(8)
District of Ewa, Oahu, Hawaii

CONSULTING PARTY:

HAWAII BICYCLING LEAGUE

By: _____ Date: 5/17/19
Daniel Alexander, Co-Executive Director

By: _____ Date: 5/17/19
Chad Taniguchi, Director Emeritus

MEMORANDUM OF AGREEMENT
AMONG THE FEDERAL HIGHWAY ADMINISTRATION
THE HAWAII STATE HISTORIC PRESERVATION OFFICER
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REGARDING THE LEEWARD BIKEWAY
PHILIPPINE SEA ROAD TO WAIPAHU DEPOT STREET
Federal Aid Project No. STP-BW-0300(8)
District of Ewa, Oahu, Hawaii

CONSULTING PARTY:

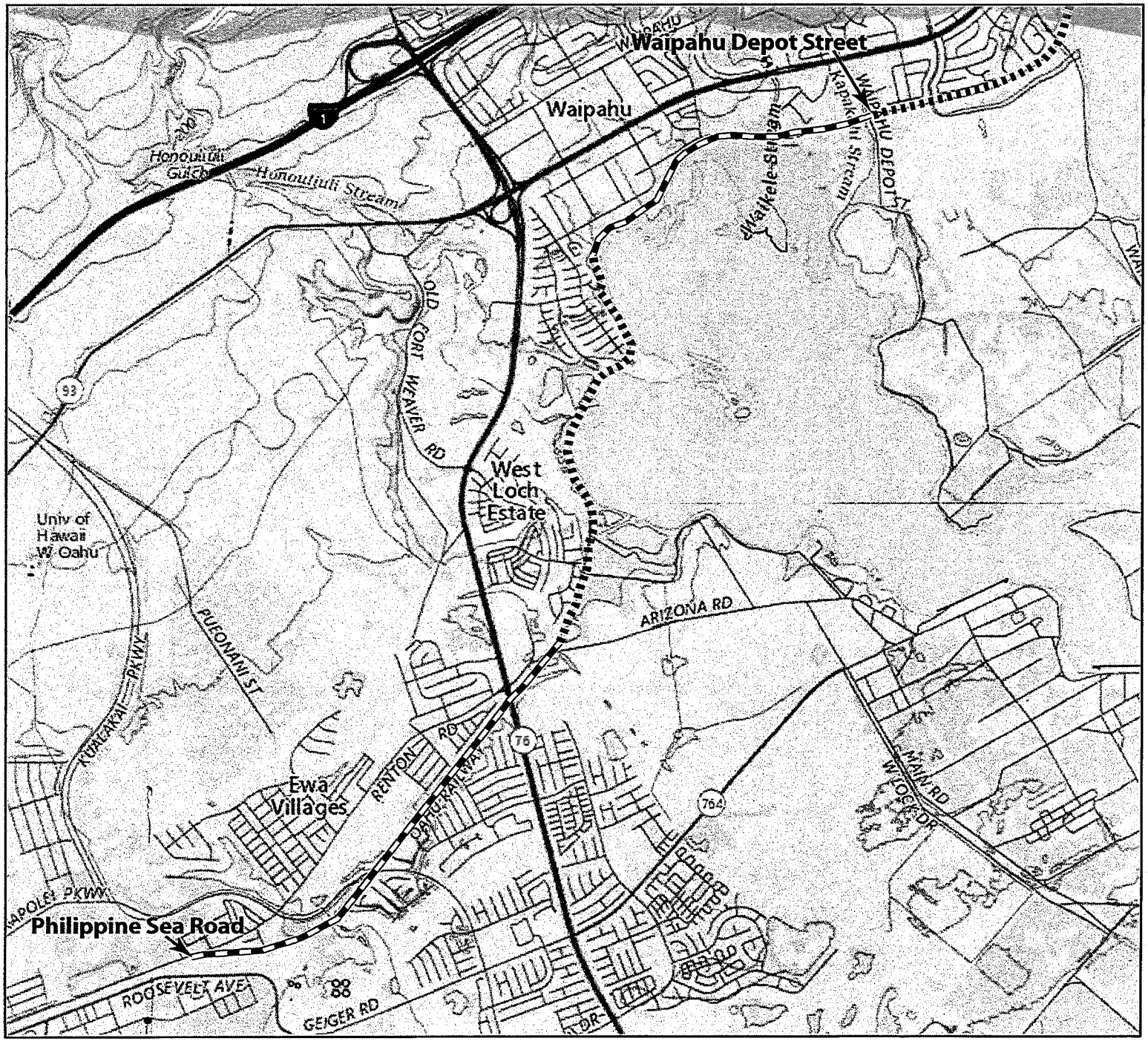
NATIONAL TRUST FOR HISTORIC PRESERVATION

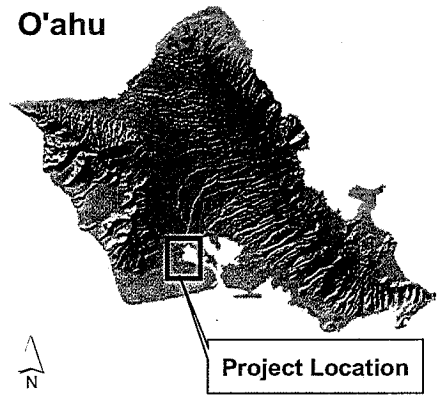
By: _____ Date: _____
Elizabeth S. Merritt, Deputy General Counsel

MEMORANDUM OF AGREEMENT
AMONG THE FEDERAL HIGHWAY ADMINISTRATION
THE HAWAII STATE HISTORIC PRESERVATION OFFICER
AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE LEEWARD BIKEWAY
PHILIPPINE SEA ROAD TO WAIPAHU DEPOT STREET
Federal Aid Project No. STP-BW-0300(8)
District of Ewa, Oahu, Hawaii

CONSULTING PARTY:

By: _____ Date: _____
Clifford Ahuna





Legend

- Former OR&L ROW
- Leeward Bikeway
- Existing West Loch Bike Path
- Existing Pearl Harbor Historic Trail

0 1,000 2,000 4,000 Feet

Project Location
Leeward Bikeway:
Philippine Sea Road to Waipahu Depot Street
Ewa District, O'ahu, Hawai'i

R. M. TOWILL CORPORATION

AMENDMENT TO
MEMORANDUM OF AGREEMENT
AMONG THE FEDERAL HIGHWAY ADMINISTRATION
THE HAWAII STATE HISTORIC PRESERVATION OFFICER
AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE LEEWARD BIKEWAY
PHILIPPINE SEA ROAD TO WAIPAHU DEPOT STREET
Federal Aid Project No. STP-BW-0300(8)
District of Ewa, Oahu, Hawaii

ACHP's Comments and Edits October 24, 2019

WHEREAS, the Leeward Bikeway Philippine Sea Road to Waipahu Depot Street Memorandum of Agreement ("Agreement") was executed on June 24, 2019;

WHEREAS, changes to the Agreement were proposed by the National Trust for Historic Preservation in a letter dated June 19, 2019 (Attachment 1);

NOW, THEREFORE, in accordance with Stipulation XI of the Agreement, the FHWA, the Hawaii State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation (ACHP) agree to amend the Agreement as follows:

1. Amend Stipulation VI so it reads as follows:

VI. REPAIR OF DAMAGE CAUSED BY CONTRACTOR DURING CONSTRUCTION

A. If damage to historic properties within the former OR&L ROW within the Area of Potential Effect occurs as a result from the willful or unintentional actions of the HDOT's Contractor, the Contractor shall cease all work in the area and immediately contact the HDOT Construction Resident Engineer. The Contractor shall submit proposed plans and schedule for the repairs to HDOT for approval within 5 business days of the incident. The repairs shall restore the historic property to a condition that is the same as or better than before the damage occurred in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties (36 CFR 68). If the Contractor does not submit the proposed plans and schedule within 5 business days, the Contractor shall cease all work on the project until the proposed plans and schedule are received by HDOT.

B. The HDOT shall inform the SHPD, signatories, and consulting parties of the damage within 2 business days of the Contractor's notification. SHPD and Hawaiian Railway Society (HWNRS) will be allowed an opportunity to review the damage.

The HDOT shall provide the proposed plans and schedule to HWNRS for review and comment. Any comments by HWNRS regarding the proposed repairs shall be transmitted to HDOT, with copies to all Consulting Parties, within 7 business days of

receipt of the proposed plans and schedule. If comments are received by HDOT within 7 business days, HDOT shall review the comments, respond to the comments, and determine if further consultation with HWNRS is necessary.

At the same time HDOT provides the proposed plans and schedule to HWNRS for review, the HDOT shall also provide the proposed plans and schedule to SHPD for review and approval ~~and comments~~. SHPD may consider comments from HWNRS in their review. Any comments by SHPD regarding the proposed repairs shall be transmitted to HDOT, with copies to all Consulting Parties, in an official SHPD letter within 10 business days of receipt of the proposed plans and schedule. If no comments or approval are ~~or approval is~~ received within 10 business days, HDOT may approve the Contractor's proposed plan and schedule.

If there is a disagreement with the HWNRS and/or SHPD, then FHWA shall follow the dispute resolution process in accordance with Stipulation VII.

C. Following approval of the Contractor's proposed plans and schedule by HDOT, HDOT will authorize the Contractor to start the work. HDOT shall inform SHPD and HWNRS prior to the date the Contractor is authorized to start work.

D. Following completion of the repairs, HDOT shall provide SHPD and HWNRS a report documenting compliance with the approved plans and allow SHPD and HWNRS an opportunity to inspect the repairs performed on the historic property. If SHPD and/or HWNRS would like to inspect the repairs, the SHPD and/or HWNRS shall coordinate a date and time with the HDOT Resident Construction Engineer to occur within 10 business days of notification that the repairs are complete. At a minimum, the report may be a letter with a written description and photo documentation of the repairs. If SHPD or HWNRS has any concerns with the repairs, either upon receipt of the report or inspection of the repairs, SHPD or HWNRS shall transmit written notification (email or letter) within 10 business days of notification indicating any concerns. If no written notification (email or letter) is received within 10 business days, the repairs shall be considered complete. If written notification is received from SHPD or HWNRS, HDOT shall review the comments regarding the repairs and determine if further consultation and/or corrective action is necessary. If no further consultation and/or corrective action is determined necessary by HDOT, HDOT shall notify the Consulting Parties of its decision.

E. If the Contractor fails to comply with the approved plans and schedule, the Contractor shall repair, restore and make good all loss or damage at no increase in contract time or contract price.

F. Amend Stipulation VII so it reads as follows:

VII. DISPUTE RESOLUTION FOR SIGNATORIES AND CONSULTING PARTIES

Should any signatory or consulting party object at any time to any actions proposed or the manner in which the terms of this MOA are implemented, the objecting party shall submit its objection in writing to both the Hawaii Division Administrator and the Federal Preservation Officer for FHWA and also notify all Consulting Parties. Both officials of FHWA shall consult with such party to resolve the objection. If FHWA determines that such objection cannot be resolved, FHWA will:

A. Forward all documentation relevant to the dispute, including the FHWA's proposed resolution, to the ACHP. The ACHP shall provide FHWA with its advice on the resolution of the objection within 30 days of receiving adequate documentation. Prior to reaching a final decision on the dispute, FHWA shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP and signatories, and provide them with a copy of this written response. FHWA will then proceed according to its final decision.

B. If the ACHP does not provide its advice regarding the dispute within the 30-day time period, FHWA may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, FHWA shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories to the MOA, and provide them and the ACHP with a copy of such written response.

C. FHWA responsibilities to carry out all other actions subject to the terms of this MOA that are not the subject of the dispute remain unchanged.

AMENDMENT TO
MEMORANDUM OF AGREEMENT
AMONG THE FEDERAL HIGHWAY ADMINISTRATION
THE HAWAII STATE HISTORIC PRESERVATION OFFICER
AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE LEEWARD BIKEWAY
PHILIPPINE SEA ROAD TO WAIPAHU DEPOT STREET

SIGNATORIES
Federal Highway Administration
Hawaii State Historic Preservation Division
Advisory Council on Historic Preservation

INVITED SIGNATORY
Hawaii State Department of Transportation

CONCURRING PARTIES
Hawaiian Railway Society
Historic Hawaii Foundation
Hawaii Bicycling League
National Trust for Historic Preservation
Clifford Ahuna

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REGARDING THE LEEWARD BIKEWAY
PHILIPPINE SEA ROAD TO WAIPAHU DEPOT STREET

SIGNATORY:

FEDERAL HIGHWAY ADMINISTRATION

By: _____ Date: _____
Richelle Takara, Acting Division Administrator

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REGARDING THE LEEWARD BIKEWAY
PHILIPPINE SEA ROAD TO WAIPAHU DEPOT STREET

SIGNATORY:

HAWAII STATE HISTORIC PRESERVATION OFFICER

By: _____ Date: _____
Alan Downer, Deputy State Historic Preservation Officer

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PHILIPPINE SEA ROAD TO WAIPAHU DEPOT STREET

SIGNATORY:

ADVISORY COUNCIL ON HISTORIC PRESERVATION

By: _____ Date: _____
John M. Fowler, Executive Director

AMENDMENT TO
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PHILIPPINE SEA ROAD TO WAIPAHU DEPOT STREET

INVITED SIGNATORY:

HAWAII DEPARTMENT OF TRANSPORTATION

By: _____ Date: _____
Jade T. Butay, Director of Transportation

AMENDMENT TO
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CONSULTING PARTY:

HAWAIIAN RAILWAY SOCIETY

By: _____ Date: _____
Robert Yatchmenoff, President

AMENDMENT TO
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AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
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PHILIPPINE SEA ROAD TO WAIPAHU DEPOT STREET

CONSULTING PARTY:

HISTORIC HAWAII FOUNDATION

By: _____ Date: _____
Kiersten Faulkner, Executive Director

AMENDMENT TO
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REGARDING THE LEEWARD BIKEWAY
PHILIPPINE SEA ROAD TO WAIPAHU DEPOT STREET

CONSULTING PARTY:

HAWAII BICYCLING LEAGUE

By: _____ Date: _____
Daniel Alexander, Co-Executive Director

By: _____ Date: _____
Chad Taniguchi, Director Emeritus

AMENDMENT TO
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AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE LEEWARD BIKEWAY
PHILIPPINE SEA ROAD TO WAIPAHU DEPOT STREET

CONSULTING PARTY:

NATIONAL TRUST FOR HISTORIC PRESERVATION

By: _____ Date: _____
Elizabeth S. Merritt, Deputy General Counsel

AMENDMENT TO
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CONSULTING PARTY:

By: _____ Date: _____
Clifford Ahuna

RFI Questions and Responses

1. In reviewing the Electrical Plans, there are notations referring to a New Traffic Signal Controller, specifically:

   1) Sheet E1.3 Drawing 160. "Traffic Signal One-Line Diagram" at top refers to a "New Traffic Signal Controller".

   2) Sheet E1.4 Drawing 161. "Electrical Site Plan - 2" shows the location of the "New Traffic Signal Controller".

   There is no Proposal Item that covers the "New Traffic Signal Controller". Unless it's meant to control the Rectangular Rapid Flash Beason system on Sheet C1.13 Drawing 28, which would then make it an RRFB Controller. Please confirm if a "New Traffic Signal Controller" is required for this project, and if so, a Proposal Item should be included for both the equipment and installation.

   RESPONSE: No Traffic Signal Controller is required. Revised Sheets E1.3 & E1.4 are included in this addendum.

2. Were there any written specifications or details of the location of this 6' fence or the 24' wide Chain Link Gate as per Item No. 607.0200.

   RESPONSE: 6' high fence is needed to close gap between new CMU wall and the existing chain link fence as shown on Sheet C3.1. 24' wide chain link fence gate is not needed. Item No. 607.0200 is removed and reflected in the proposal schedule included in this addendum.

3. On Sheet C2.1 it mentions "Install 3' High CMU wall with 3' High Chain Link Fence, See Detail on Sht. C1.10". Is there a line item for this portion of the work that can be inserted?

   RESPONSE: Item No. 607.01 revised to cover 3' high chain link fence and the CMU retaining wall work is under Item No. 503.12. The revised proposal schedule is included in this addendum.

4. This 3' high chain link fence states to See D.O.T. Std. Dwg. D-03 for Details. Do I use the same details when pricing out the 6' high chain link Fence?

   RESPONSE: Yes, use HDOT Std. Dwg. D-03.

5. Electrical plan E1.4 (Sheet 161) refers to traffic signal drawings for the new traffic signal work shown on the drawings. However, the bid plans do not have traffic signal drawings. Please provide them or advise accordingly.

   RESPONSE: No traffic signal work is required. Revised Sheets E1.3 & E1.4 are provided in this addendum.

6. For the Bikeway Pavement Connection at Exist. Conc. Bridge/Sidewalk detail it calls for 3'' AC and 12'' Aggregate Base Course. But on the Typical Section-17 it calls out for 4'' AC and 8'' Aggregate Base Course. Please Advise which detail is correct.

   RESPONSE: Typical Section 17 is correct. Revised sheet C1.9 is included with this addendum.

7. For the Bikeway Pavement Connection at Exist. A.C. Road detail it shows State Mix IV, but all the typical details shows State Mix V. Please advise which mix to use for this detail.

   RESPONSE: Mix V is correct. Revised sheet C1.9 is included with this addendum.

8. Regarding the same detail it shows 3'' AC and 12'' Aggregate Base Course, Is this detail correct? If so, where does this transition from 4'' AC and 8'' Base Course to 3'' AC and 12'' Base Course Begin?

   RESPONSE: See typical sections; pavement section is typically 2" AC and 4" base course. Within 20 ft of bridge approach slabs & culvert crossings the pavement section is 4" AC & 8". Revised sheet C1.9 and Pavement Justification Report are included with this addendum.

9. On Sheets 39-41, profile elevation call outs and line work do not seem to match. Does line work or call outs control? How can excavation/embankment quantities be verified? Are plan contours correct?

   RESPONSE: Profile elevation callouts are generated from surface which also generates the contour linework. Proposed grade contours appear correct. Contractor to verify quantities by their own means and methods.

10. On Sheets 47 & 48, finished contours and limits of grading extend into Kapolei Parkway. Is work to be done on Kapolei Parkway? Please confirm limits of grading.

    RESPONSE: Kapolei Parkway Work shown on sheets C5.1-C5.5. Work includes closure of the existing Park Row Extension and bike path connection will match existing grades of the sidewalk as shown on sheet C5.3

11. On Sheets 70-74, dwarf naupaka is called out, but there is no pay item for it. How will this part of the landscaping be paid for?

    RESPONSE: Pay item no. 619.0100 is revised to Dwarf Naupaka and is reflected in the proposal schedule included in this addendum.

12. On Sheet 158, a trench detail for a typical traffic signal duct section is shown. Will any trenching be required on this project?

    RESPONSE: Yes, there is trenching for new electrical conduits.

13. Proposal Item 617.0100 is for Imported Planting Soil (18,070 SY), but typical sections on Sheets 16-19 call for Seeded Hydromulch. Please provide clarification on where imported planting soil is to be used and the required thickness.

RESPONSE: Imported planting soil is for the strip of Dwarf Naupaka. 6" thickness. Revised quantity for proposal item 617.0100 is reflected in the proposal schedule included in this addendum.

14. Proposal Item 641.0100 is for Hydro-mulch Seeding (135,900 LS). Please provide clarification on the unit of measure and where hydro-mulch seeding takes place.

RESPONSE: Hydro-mulch seeding is for graded bank slopes along the bike path. Unit of measurement has been revised and is reflected in the proposal schedule included in this addendum.

15. Proposal Item 503.1200 CMU Retaining Wall has a quantity of 535 LF. Plan and Profile sheets show about 3,000 LF of CMU wall. Is there another item that the wall gets paid under? Please clarify.

RESPONSE: Revised proposal item 503.1200 is reflected in the proposal schedule included in this addendum.

16. Section 412 Paving Fabric calls out paving fabric between pavement layers, but only geotextile fabric and geogrid show up on the plans. Does the geotextile fabric in the plans refer to paving fabric? Does geotextile fabric get paid under Item 412.0100 Paving Fabric (17,850 SY)?

RESPONSE: Yes, geotextile fabric falls under item 412.0100

17. General Note 21 on Sheet 3 states a build order for the bridges and other work. Will Contractor be held to this build order?

RESPONSE: No, Note 21 is removed and revised Sheet 3 is included in this addendum.

18. General Note 22 on Sheet 3 refers to salvaging parts of the existing plate girder walls. Are these salvaged areas shown on the plans?

RESPONSE: No, Contractor to coordinate with Hawaiian Railway Society representative to determine which portion of existing plate girder walls are to be salvaged as required per the Memorandum of Agreement (MOA) included in this addendum.

19. General Note 22 on Sheet 3 states that Hawaiian Railway Properties (HRS) needs to be present when dismantling existing railway pieces. If pieces are found during excavation activities, will this stop the Contractor from performing work (similar to finding bones/remains)? Will additional days be added due to unforeseen circumstances?

RESPONSE: Salvage of historic material shall be in accordance with the Memorandum of Agreement Among the Federal Highways Administration, the Hawaii State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the Leeward Bikeway, Philippine Sea Road to Waipahu Depot Street executed on June 24, 2019, and including all subsequent amendments. If potential archaeological, historic, or burial artifacts are found during construction activities, the Contractor shall act in accordance with Section 107.13 of the 2005 Standard Specifications. Time extensions

shall be determined by the HDOT Engineer in accordance with Section 108 of the Special Provisions.

20. Various notes on Sheets 16-19 state that recycled asphalt pavement (RAP) can be used in place of aggregate base. Are there any specifications for the RAP material other than what appears on these pages?

    RESPONSE: See the Pavement Justification Report included with this addendum.

21. Will Contractor need to apply for a grading permit?

    RESPONSE: Yes, approved and signed plans by the Civil Engineering Branch (CEB), City and County of Honolulu, Department of Planning and Permitting will be provided for the Contractor to obtain a grading permit.

22. Plan Sheet C1.1 to C1.4 - Proposal Page P-10 Bid Item 401.0200 Please consider providing optional bid item for concrete bikeway. This would give HDOT the option to do AC or Concrete. We suggest updating proposal schedule bid item as follows:

    Option 1 - 2 inch AC Bike Path
    Option 2 - (thickness to be provided) inch Concrete Bike Path

    This will give HDOT the opportunity to evaluate cost vs the benefits for concrete such as longer life, less maintenance for a rigid pavement, etc. If concrete bikeway is something that HDOT would like a price to do, then please update proposal schedule with bid items above, and provide a concrete bikeway section, details, and specification.

    RESPONSE: No optional bid items for concrete will be added. Winning contractor can propose alternate bike path materials after award for HDOT to consider.

23. Plan Sheet E1.14 - Please be informed overhead powerline from pole P18 to P54 shown on plan sheet E1.14 will need to be temporarily relocated in order to maintain clearance with overhead powerlines to install girders, and installation of piles.

    RESPONSE: E1.14 indicates HECO will temporarily relocate overhead cables with temporary pole.

24. Notice to Bidders - Please consider extending bid date. The pedestrian bridge scope at Kapakahi Stream requires additional time for evaluating shoring, dewatering, and contractor coordination with public utilities per plan sheet C0.2 General Note 17.

    RESPONSE: The bid opening date has been postponed and rescheduled for 2:00P.M., November 21, 2019. Revised Notice to Bidders is included in this addendum.

25. Proposal page P-1 - The DBE participation 8.7% goal seems relatively high for this type of work. Please delay bid date to allow enough time to solicit DBE participation. It would be helpful if HDOT would provide a list of the DBE sub & suppliers that they used to set this goal.

RESPONSE: The DBE participation goal will not be changed. The bid opening date has been postponed and rescheduled for 2:00P.M., November 21, 2019. Revised Notice to Bidders is included in this addendum.

26. Under Dumped Rip Rap Spec 655.02 Reference (716.06) which is 600X Woven, or 1160N nonwoven but spec doesn't reference either woven or nonwoven. Per Plan Page C4.2 States 170N Nonwoven under riprap. What Fabric should be quoting under Dumped Rip rap?

    RESPONSE: Standard Specification 655 for Dumped Riprap, Material is revised to reference 716.07 – Geotextiles for Permanent Erosion Control Applications. The plan is also revised to callout "Mirafi FW700 or approved equal". The revised Special Provision and plan are included in this addendum.

27. Pile splicing – Please confirm the 8 each splices shown on the bid item schedule are required for the Kapakahi Bridge piles. Please specify the type of splice detail and anticipated splice elevation. (i.e. Tension or compression splice) This will impact schedule and pricing for this component of work.

    RESPONSE: No tension splice is required. 8 each splices shown on the bid item schedule are required for the Kapakahi Bridge.

28. PDA & Test Pile requirements – Please confirm that contractor can perform PDA on each abutment, then upon acceptance of the PDA testing, commence production piles. This is to eliminate the need for multiple mobilization/demobilization at each abutment locations. Please also confirm how many test piles at each abutment and test pile location.

    RESPONSE: Confirmed. Two test piles at each abutment are required.

29. Test pile – Please confirm all PDA piles (8 each per bid item schedule) require 15ft of extra pile length over the estimated pile tip elevation to cut-off elevation shown in the contract documents. Also, please confirm that a test pile can be utilized as a production pile.

    RESPONSE: Confirmed. A test pile can be used as a production pile, provided meeting design capacities.

30. Geotech foundation report – Please provide electronic copy of the geotechnical report provided by Geolabs.

    RESPONSE: Boring logs are included in the RFP documents. Geotechnical report will not be provided to the bidders.

PAVEMENT JUSTIFICATION REPORT

Leeward Bikeway Phase 1
Philippine Sea Road to Waipahu Depot Road
April 24, 2018
Prepared by Brandon H. Hee, P.E. (HWY-LG)

Introduction:

This report presents the results of our pavement engineering services performed for the proposed Leeward Bikeway – Philippine Sea Road to Waipahu Depot Road.

This report summarizes our findings from our review of available information, and presents our pavement engineering recommendations.

Project Considerations:

This project involves the construction of new pavements for bikes, with enough width for emergency vehicles for a distance of about 3.3 miles. However, existing short stretches of paved walkways near West Loch will not be altered. The project involves construction of two new bridges over Waikele Stream and Kapakahi Stream. Two other existing small culvert crossings located in Waipahu will be utilized for the bikeway.

Existing Site Conditions:

The soil conditions are anticipated to consist of stiff clay fill material over soft lagoonal soils in Waipahu, and dry, potentially collapsible sandy clay fill material over coralline formations or calcareous deposits in Ewa.

DISCUSSION AND RECOMMENDATIONS:

The following pavement section is recommended for Phase 1 of the Leeward Bikeway.

- 2" AC Mix V over 4" Aggregate Base Course over Tensar TX140 (or equivalent polypropylene geogrid with triangular openings) over a non-woven geotextile fabric (716.02) for the entire Phase 1, with the exception that the geogrid is not needed for the Ewa area west of Fort Weaver Road (approximately half the length of the project).

- Within 20 feet of approach slabs of the new bridges (Waikele Stream and Kapakahi Stream) and the existing culvert crossings, use the following: 4" AC Mix V over 8" Aggregate Base Course over Tensar TX140 (or equivalent polypropylene geogrid with triangular openings) over a non-woven geotextile fabric (716.02).

RAP mixed with basalt or coral may be used in-lieu of Aggregate Base Course, provided it meets the Special Provisions indicated for this project. However, should RAP be utilized, it will require placement of tack coat prior to paving of the AC pavement. RAP mixed with basalt or coral, and

Aggregate Base Course shall be compacted to at least 95 percent relative compaction as determined by AASHTO T180.

Mix V is recommended since there will be very little vehicle loading to properly knead the material, and therefore a finer mix with more asphalt content would be beneficial to help control block cracking that may occur as the AC dries and becomes more brittle.

Prior to placement of the non-woven geotextile fabric, the subgrade shall be scarified 6 inches deep, moisture conditioned to at least its optimum moisture, and compacted to at least 90 percent of its maximum dry density as determined by AASHTO T180. The subgrade shall be maintained at the optimum moisture content until the placement of the non-woven fabric and Aggregate Base Course is placed. This moisture conditioning is very important for the life of the bikeway pavement.

Should you have any questions or need additional information, please contact Brandon Hee at 832-3405 ext. 122.