Attachment A – 5: Storm Water Pollution Prevention Plan (SWPPP) and In-Water Pollution Prevention Plan (IWPPP)

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND IN-WATER POLLUTION PREVENTION PLAN (IWPPP)

Project Title: Kaipapa'u Stream Bridge Replacement

Federal Aid Project No. BR-083-1(48)

DOH WQC0808
DA File No. POH-2005-00342
DOH NGPC File No. HNH-E2T4-KBTK9
Prepared by: Department of Transportation, Highways Division, Design Branch
Date: November 30, 2018

Storm Water Pollution Prevention Plan (SWPPP) and In-Water Pollution Prevention Plan (IWPPP)

DOH WQC0808

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Notice of General Permit Coverage (NGPC) File No. HNH-E2T4-KBTK9
Preparation Date 11/30/2018

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7.0 Preface

The following documents are referenced throughout the SWPPP/IWPPP:

1) *Hawaii Administrative Rules, Chapter 11-55*
2) *HDOT Construction Best Management Practices Field Manual*
3) *Hawaii Standard Specifications for Road and Bridge Construction dated 2005 and applicable special provisions.*
4) *An Integrated Storm Water Management Approach and a Summary of Clear Water Diversion and Isolation Best Management Practices for Use in the State of Hawaii, by the Department of Transportation and Federal Highway Administration, Practitioners Guide (Practitioners Guide), April 2016 (Version 1, Draft)*

7.0.1 Notes for Contractor/HDOT Construction Personnel

Items in red need to be updated by the Contractor once the project is awarded prior to construction. The Contractor shall be responsible for updating the SWPPP/IWPPP during construction.

The Contractor shall implement or modify structural BMPs identified by designer in site plan. The Contractor shall design and implement the in water isolation and confinement BMPs for areas within the Army Corps Jurisdiction.

The Contractor shall keep an accurate account of the type(s) and estimated quantities (in cubic yards) of the BMPs placed and/or installed within the in-water work area (i.e. canal, stream, river), particularly any type of dredged and/or fill material (e.g., sand, soil, rock, gravel, concrete, etc.) discharged below the HTL/MHHW elevation used to divert flow/tidal waters away from in-water work areas, or to construct temporary access ramps, or for any other purpose in-water work areas. Submit to the Engineer within 7 calendar days of the reporting date.

Note: HDOT has permitted all outfalls and disturbed potential Contractor Staging/Storage Areas within the project limits. The Contractor may use any disturbed area acceptable to the Engineer for Staging/Storage. Staging/Storage Areas outside disturbed areas or outside the project limits may require a new National Pollutant Discharge Elimination System (NPDES) Permit submittal. See permitting requirements in Section 209 of the Special Provisions.

Outfall 1 & 2 (Kaipapa'u Stream) discharges to waters not impaired for nutrients or sediments. The following applies to construction areas discharging to these outfalls:

1) *Construction BMPs shall be inspected weekly. For more details see Section 7.2.12 of this SWPPP/IWPPP.*

2) *Immediately initiate and complete stabilization within 14 calendar days on areas of the site in which earth-disturbing activities have temporarily or permanently ceased. For more details see Section 7.2.10.2 of the SWPPP/IWPPP.*

The following applies to construction areas discharging to Kaipapa'u Stream:

A variety of best management practices (BMPs) will be implemented to protect Waters of the U.S. from stormwater and non-stormwater related discharge or discharge from the construction site. In addition to the BMPs listed below, refer to BMPs identified in the Practitioners Guide. BMPs will be detailed in the storm water pollution prevention plan (SWPPP) and updated In-water pollution prevention plan (IWPPP) processes. These include:

1) *Comply with all requirements of the water quality standards in the Hawaii Administrative Rules (HAR), Chapter 11-54, and the Section 401 Water Quality Criteria (WQC) and all information submitted to the State of Hawaii Department of Health-Clean Water Brank (DOH-CWB) for compliance with the Notification and Reporting Requirements. Ensure that the activity will not result in non-compliance or violations to the applicable State WQS. Discharges associated with the proposed construction activities will be conducted in a manner that complies with "Basic Water Quality Criteria Applicable to All Waters" as specified in HAR, Chapter 11-54-4.*

2) *Obtain NPDES permit for storm water discharges associated with construction activities when the proposed construction activities will disturb one (1) or more acres of land area before initiating any construction activities.*

3) *Apply best degree of treatment or control measures to the potential water pollutant discharges associated with the proposed construction activity (ies) that assures the discharges will meet requirements compatible with the basic water quality criteria applicable to all waters, uses and specific water quality criteria and recreational criteria established for the class of the receiving State waters. Best Management Practices (BMPs) shall be properly implemented and maintained during the entire construction period. Isolate and confine all in-water work areas throughout the entire water column (surface to bottom) such that all potential water pollutants will not leave or enter the work area. The entire volume of water in the in-water work area*

needs to be isolated and confined. Utilize BMPs that are inert and not themselves sources of pollution. (Examples of inappropriate in-water BMPs include, but are not limited to: compost biosocks since it is a source of nutrients; silt fence since the material is porous; and a soil berm since the soil particles will erode away). Ensure that all material(s) placed or to be placed in State waters are free of waste material, heavy metals, organic materials, debris and ay water pollutants at toxic or potentially hazardous concentrations to aquatic life as specified in HAR, 11-54-4(b).

4) *Deploy all BMPs around the perimeter of the project prior to the commencement of any construction work. These BMPs will be properly maintained throughout the entire period of in-water work and will not be removed until the in-water work is completed and the water quality in the in-water work area has returned to its pre-construction condition as demonstrated by the monitoring results (if applicable).*

5) *Isolate and confine in-channel construction activities using a stream diversion method chosen by the contractor within the Practitioners Guide.*

6) *Isolate and confine all upland activity to contain and retain water pollutants upland and not allow them to enter State waters, including the designated in-water work area. When it is necessary to conduct stream work, the workspace shall be isolated to avoid construction activities in flowing water in compliance with Practitioners Guide. The proposed project shall maintain aquatic organism passage (AOP) through the project area. Adequate water depth and channel width must be maintained at all times for passing design flood discharges. Prior to construction activities, isolate the workspace from flowing water to prevent sedimentation and turbidity and avoid impacts to aquatic organisms and water quality. The diversion or isolation BMPs shall remain in place during the life of the project and be removed immediately after work is completed in a manner that would allow flow to resume with the least disturbance to the substrate.*

7) *For a stream, ditch, or gulch allow unimpeded flow around the isolated and confined in-water work area to allow for aquatic animal migration and/or to prevent downstream flooding situations. The unimpeded flow shall be equivalent to the 2-year 24-hour duration storm event and/or the existing flow capacity of the waterbody, whichever is smaller.*

8) *Collect water pollutants from localized work areas and do not allow these water pollutants to enter or re-enter State waters, including the in-water work area. Examples of water pollutants include, but are not limited to, airborne particulate,*

dust, concrete slurry, concrete chips, concrete surface preparation washing effluent, construction debris, etc.

9) *Construction debris will be contained and prevented from entering or re-entering State waters. During bridge removal, construct structurally adequate debris shields to contain debris. Do not permit debris to enter waterways, travel lanes open to public traffic, or areas designated not to be disturbed. If portions of the existing bridge do fall into a stream during demolition, they will be removed from the stream without dragging the material along the streambed.*

10) *Immediately cease construction work if water quality monitoring or daily inspection or observation results indicate that noncompliance to HAR, Chapter 11-54-4(a) or Chapter 11-54-4(b), will occur or is occurring. The construction activity shall not resume until adequate measures are implemented and appropriate corrective actions are taken and water quality monitoring demonstrates that the non-compliance has ceased. Note: These actions shall not preclude the DOH-CWB from taking enforcement action authorized by law.*

11) *Do not disturb the area beyond the construction limits. Trees, shrubs or vegetated areas temporarily damaged by construction operations will be re-vegetated.*

12) *Apply permanent soil stabilization as soon as practicable after final grading but no later than 14 days, or 7 days for impaired waters, after completion of earth disturbing activities.*

13) *Apply turf establishment to finished slopes and ditches immediately but no later than 7 days after completion of earth disturbing activities.*

14) *Provide certified weed free permanent and temporary erosion control measures to minimize erosion and sedimentation during and after construction according to the contract erosion control plan, contract permits, and Special Provision Sections 209, 619 and 641).*

15) *Protect and care for seeded areas, including watering when needed until final acceptance. Repair all damages to seeded areas by reseeding, re-fertilizing and re-mulching.*

16) *Ensure that all temporarily constructed structures, such as the silt containment device(s), floating oil and grease as well as construction debris containment device(s), berm, cofferdam, sheet pile, stream flow diversion structure(s), and/or sediment and soil erosion control structure(s), etc., are properly removed immediately after the completion of the construction work and when the affected*

water body has returned to its pre-construction condition or better, as demonstrated by the monitoring results, including color photographs.

17) *Ensure that the proposed construction activities related discharges not covered under the NWPs will also comply with State water pollution control permitting requirements under NPDES as established in HAR, Chapter 11-55.*

18) *Pesticide application in State waters shall comply with HAR, §§11-54-4(a), 11-54-4(b), 11-54-4(c), 11-54-4(f) and/or Chapter 11-55, Appendix M - NPDES General Permit Authorizing Point Source Discharges from the Application of Pesticides.*

19) *Ensure that no concrete truck wash water is disposed by percolation into the ground.*

20) *Maintain and require all of their contractor(s) and the subcontractor(s) that are performing work covered under this Section 401 WQC, to maintain at the construction site or in the nearby field office, a copy of this letter, all Notification and Compliance Reporting Requirements, and all records demonstrating that every requirement of this Section 401 WQC has been complied with.*

21) *Ensure that all areas temporarily impacted, either directly or indirectly, by the project construction activities are fully restored to its pre-construction conditions. For example: Incidental construction debris is cleaned up prior to removal of BMPs.*

22) *Discontinue work during storm events or during flood condition.*

23) *Modify environmental protection measures, including BMPs and monitoring requirements, when instructed by the DOH-CWB for corrective action/remedial actions.*

24) *Allow the DOH-CWB to conduct routine inspections of the construction site in accordance with Hawaii Revised Statutes (HRS) §342D-8.*

25) *Complete and submit a Solid Waste Disclosure Form for Construction Sites to the DOH, Solid and Hazardous Waste Branch, Solid Waste Section. The form can be downloaded at: http://health.hawaii.gov/shwb/files/2013/06/swdiscformnov2008.pdf.*

26) *Do not stockpile, store, or place construction material or construction activity-related materials in State waters or in ways that will disturb or adversely impact the aquatic environment.*

27) *Dispose of construction debris, waste products, vegetation and/or dredged material removed from the construction site at upland State and County approved sites.*

28) *Contain on land and not allow to enter or re-enter State waters any runoff, return flow, or airborne particulate pollutants, if any, from the excavated/dredged material dewatering process or from the stockpiling site.*

29) *Ensure that their discharge activity shall not interfere with or become injurious to any designated uses (HAR, §11-54-1 and HAR, §11-54-3), or existing uses (HAR, § 11-54-1 and HAR, § 11-54-1 .1). The owner of the discharge shall maintain and protect all designated and existing uses.*

30) *Do not discharge any effluent associated with the proposed construction activities, such as dewatering effluent, effluent resulting from hydroblasting, saw cutting, concrete surface preparation, rock washing, concrete and rock truck washing effluent or any other similar regulated activity(ies) shall be properly contained, collected and prevented from entering, either directly or indirectly, State waters, except for those discharges that have received authorization issued by the DOH-CWB under the NPDES Permit as applicable.*

31) *Implement appropriate and effective measure(s) to properly contain/collect the potential water pollutant discharges resulting from the application of concrete corrosion inhibitor; or from the scrubbing, chipping, cutting, rebar reinforcing, grouting, filling activities needed for the permitted construction activity (ies).*

32) *In Hawaii, the Commission on Water Resource Management (CWRM) issues permits regulating withdrawals of surface and groundwater. If water drafting is necessary, the Contractor will ensure this water use is approved in accordance with a stormwater use permit obtained from the CWRM (HRS §174C-48(1987)).*

33) *Structures designed to minimize sediment and pollutant runoff from sensitive areas such vehicle and fuel storage areas, hazardous materials storage sites, and erosion control structures shall be visually monitored daily, especially following precipitation events to ensure these structures are functioning properly.*

34) *Maintain temporary erosion control measures in working condition until the project is complete or the measures are no longer needed as outlined in Special Provision Section 209 and the SWPPP/IWPPP.*

35) *For dewatering that may be required during excavation or construction of the project, a NPDES General Permit for Construction Activity Dewatering would be required for discharging dewatering effluent into waters of the US. The permit will require appropriate BMPs, an erosion control plan, and a water quality monitoring plan to mitigate any impacts on receiving waters.*

36) *Develop a Rain Event Action Plan (REAP) prior to Notice to Proceed. The REAP will be reviewed and structured to address project specific actions that are needed to prevent pollutants from reaching the creeks and rivers during the rain event. The REAP will be executed within 48 hours prior to a forecast rain event of 50% chance of precipitation or more. BMPs in the REAP include:*

    a. *When the trees are cleared, the slash will be chipped and placed as mulch on the area that has been cleared to prevent raindrop erosion.*

    b. *Any area that has soil disturbances will be stabilized prior to rain events with mulch, wood chips, or other protective covers.*

    c. *Sediment traps will be placed to collect the water and allow sediment to settle out. If sediment traps are not possible, other settling and filtering devices will be used to slow water down and remove sediments.*

    d. *Operations will shut down during extreme rain events.*

    e. *Fueling and repair areas will be covered and surrounded by a berm.*

    f. *Exposed soil will be covered and stabilized.*

    g. *Treated materials will be covered or placed in a shed.*

    h. *Dumpsters will be covered at all times.*

    i. *Drain holes will be plugged.*

    j. *Control perimeters will be established around stockpiles of material.*

37) *Submit a Spill Prevention, Control, and Countermeasure (SPCC) Plan with the Water Pollution, Dust, and Erosion Control Submittals.*

38) *Any spill of petroleum products, hazardous materials, or other chemical or biological products released from stationary sources or construction, fleet, or other support vehicles shall be properly cleaned, mitigated, and remedied, if necessary. Any spill of petroleum products or a hazardous material shall be reported to the appropriate federal, state, and local authorities, if the spill is a reportable quantity. Response shall occur in accordance with federal, state, and local regulations.*

39) *In general, when gasoline, diesel fuel, antifreeze, hydraulic fluid or any other chemical contained within the vehicle is released to the pavement or the ground, proper, corrective, clean-up and safety actions specified in the SPCC and SWPPP will be immediately implemented. All vehicles with load rating of two tons or greater*

will carry, at minimum, enough absorbent materials to effectively immobilize the total volume of fluids contained within the vehicle.

40) *Repair leaks immediately on discovery. Equipment that leaks will not be used. Oil pans and absorbent material will be in place prior to beginning repair work. The contractor will be required to provide the "on-scene" capability of catching and absorbing leaks or spillage of petroleum products including antifreeze from breakdowns or repair actions with approved absorbent materials. A supply of acceptable absorbent materials at the job site in the vent of spills, as defined in the SWPPP will be available. Sand and soil are not approved absorbent materials. Soils contaminated with fluids will be removed, placed in appropriate safety containers, and disposed of according to state and/or federal regulations.*

41) *Collect and dispose of all waste fuels, lubricating fluids, and other chemicals in a manner that ensures that no adverse environmental impact will occur. Construction equipment will be inspected daily to ensure hydraulic, fuel and lubrication systems are in good condition and free of leaks to prevent these materials from entering any stream. Vehicle servicing and refueling areas, fuel storage areas, and construction staging and materials storage areas will be sited a minimum of (50 feet) 15 meters from ordinary high water, typically referred to as the Q2 elevation, wetlands, and contained properly to ensure that spilled fluids or stored materials do not enter any stream or wetland.*

42) *Attachment A shows the locations of sediment and erosion control features. The Contractor shall add additional BMPs to facilitate different phases of construction or to accommodate Contractor's means and methods. These BMPs shall be tracked on the projects SWPPP/IWPPP.*

7.2.1A (WQC Section 5) - Emergency Contacts

Provide the name and two (2) phone numbers of at least two persons who may be contacted in case of emergency regarding "discharges" into the navigable waters. The Contractor shall include their personnel information once the project is awarded.

1) Name: George Abcede

Company: Hawaii Department of Transportation

Position: O'ahu District Engineer

Contact Number: (808) 831-6700 Ext. 126

2) Name: Contractor Representative

Company: Contractor

Position: Contractor

Contact Number: (808)692-XXXX Contact Alternate (Cell) Phone number: (808)xxx-xxxx

7.2.1 Storm Water Team

The permittee shall assemble and oversee a "storm water team," which is responsible for the development of the SWPPP/IWPPP, any later modifications to it, and for compliance with the requirements in this permit.

The SWPPP/IWPPP must identify the personnel (by name or position) that are part of the storm water team, as well as their individual responsibilities. Each member of the storm water team must have ready access to an electronic or paper copy of applicable portions of this permit, the most updated copy of the SWPPP/IWPPP, and other relevant documents or information that must be kept with the SWPPP/IWPPP.

The Contractor shall include their personnel information once the project is awarded.

1) Name: : Li Nah Okita

Company: Hawaii Department of Transportation

Position: HDOT Project Manager

Contact Number: (808) 692-7581

Responsibilities: Develop SWPPP/IWPPP during the design process

2) Name: George Abcede

Company: Hawaii Department of Transportation

Position: O'ahu District Engineer

Contact Number: (808) 831-6700 Ext. 126

Responsibilities: Authorized Representative for the project

3) Name:

Company: Hawaii Department of Transportation

Position: HDOT Construction Project Engineer

Contact Number: (808)xxx-xxxx

Responsibilities:

4) Name:

Company: Hawaii Department of Transportation

Position: HDOT Construction Project Engineer

Contact Number: (808)xxx-xxxx

Responsibilities:

5) Name:

Company: Contractor

Position: Contractor Designated Representative

Contact Number: (808)xxx-xxxx

Responsibilities:

6) Name:

Company: Contractor

Position: Contractor

Contact Number: (808)xxx-xxxx

Responsibilities:

7) Name:

Company: Contractor

Position: Contractor

Contact Number: (808)xxx-xxxx

Responsibilities:

7.2.2A (WQC Section 1) - Army Corps Pre-Construction Notification

Check all NWP or Federal Authorization Applicable for this project:

☑ *NWP 3 – Maintenance*

☐ *NWP 5 – Scientific Measurement Devices*

☐ *NWP 6 – Survey Activities*
☐ *NWP 12 – Utility Line Activities*
☐ *NWP 13 – Bank Stabilization Activities*
☑ *NWP 14 – Linear Transportation Projects*
☐ *NWP 23 – Approved Categorical Exclusions*
☐ *NWP 33 – Temporary Construction Access and Dewatering*
☐ *Section 10 Rivers and Harbors Act Authorizations*
☐ *Individual 404 Permit Authorizations*
☐ *Other* _____

See Attachment K for PCN

Are there any Special Conditions?
☒ *Yes (See Attachment K for Special Conditions)*
☐ *No*

7.2.2 Nature of Construction Activities Individual Form C.6

What is the function of the construction activity (Please check all applicable activity(ies))?
☐ *Residential* ☐ *Commercial* ☐ *Industrial* ☑ *Road Construction* ☐ *Linear Utility*
☐ *Other (please specify):*_____

For construction site estimates, see NPDES Individual Form C, Section C.3.

What is being constructed? *The existing Kaipapa'u Stream Bridge is deficient due to age and dilapidation, and requires demolition and replacement. The project area required for construction would be approximately 1.6 acres. The project's scope of work includes installation of erosion controls, clearing, grubbing, grading, temporary placement of sand bags to redirect the stream during construction relocation and installation of waterlines and electrical lines, construction and use of a temporary detour roadway and Acrow bridge, demolition of the existing bridge and construction of a new bridge, partial demolition and reconstruction of the abutments, removal of the existing center pier wall, excavation & construction of eight new drilled shafts outside the stream channel, maintenance dredging, and bank stabilization with shotcrete and dumped rip-rap. All excavated material (soils & dewatering effluent) will be placed in a temporary retention area for treatment and disposal. No excavated material will discharge to the stream.*

The replacement of the Kaipapa‘u Stream Bridge and maintenance work will be completed through phased construction and demolition. Silt fences will be installed on down slope portions of the project site. A staging area, temporary dewatering basin, temporary concrete wash-out basin, and stabilized construction entrances will be prepared.

Sandbags will be used to divert normal-stream flow around the work area. The temporary placement of sandbags to redirect the stream during construction of the temporary detour road (sandbag diversion approximately 610 feet long) and new bridge (sandbag diversion approximately 600 feet long) and will be designed based on the Contractor's means and methods. It is assumed that 7 sandbags (1-foot-wide each) will be placed at the base (4 sandbags on the side of the channel closer to the work area, and 3 sandbags on the other side of the temporary channel). Placement of the temporary sandbag diversion will require approximately 25 cubic yards (CY) of temporary fill placed within the Mean Higher High Water (MHHW) and 5 CY of temporary fill placed within the Ordinary High Water Mark (OHWM).

A temporary construction entrance ramp will be constructed on the mauka and makai portions of the stream comprised of dumped rip-rap. There will be no interruption of stream flow. In-stream work will be completed during the low rainfall season (August to October), and during fair weather conditions.

Approximately 270 CY of maintenance dredging will be performed to remove accumulated sediment and debris from under and around the bridge partially within the MHHW. Approximately 5 CY is located within the MHHW of Kaipapa‘u Stream. The excavated spoils and demolition debris will not be discharged into the stream. Spoils will be dewatered in a detention basin and dried debris will be disposed of off-site at a County-approved landfill. Removed material will be contained in a temporary stockpile site with implemented BMPs to contain and prevent material from comingling with storm water runoff and entering into State waters. A solid waste disclosure form will be submitted to the Department of Health (DOH) Solid Waste Branch.

The temporary Acrow bridge will be 90 feet long by 42 feet wide, or approximately 3,780 square feet, and constructed with pre-cast concrete pier columns supporting the steel deck. The bridge will be comprised of two lanes and a pedestrian walkway on the makai side of the Kaipapa‘u Stream Bridge to mitigate traffic impacts during construction. The Acrow bridge will be constructed and installed in two 45-foot spans and supported by five pre-cast concrete piers, one of which is located within the MHHW. Placement of the one pier in the MHHW will require 1 CY of temporary fill below the MHHW. Temporary dumped rip-rap will be placed around the Acrow bridge pier within the MHHW and be sized approximately 54 feet long by 15 feet wide by 2 feet

deep, or 810 square feet, with a volume of 50 CY. A 6-foot temporary layer of filter rock will be placed under the rip-rap with a volume of approximately 13 CY. Upon completion of the bridge replacement, the Acrow bridge and piers will be removed and disturbed areas restored to their pre-construction condition.

Demolition of the existing Kaipapa'u Stream Bridge will include the removal of the existing concrete center pier wall, of which approximately 5 CY is located within the MHHW (26 feet long by 4 feet wide or approximately 104 square feet).

The new replacement bridge will be 110 feet long by 57 feet wide, or approximately 6,270 square feet, and include two 12-foot travel lanes plus two 8.5-foot shoulders, two 5-foot pedestrian walkways/bicycle lanes, reinforced guardrails, and drainage features. The new bridge will be constructed using prestressed concrete planks and cast-in-place bridge decks. The new right-of-way (ROW) will be 66 feet wide. The project will involve partial demolition and reconstruction of the abutments requiring excavation and construction of eight new 4-foot drilled shafts outside of the OHWM and MHHW. All work proposed for the reconstruction of the Kaipapa'u Stream Bridge would be completed above and along the outer banks of the streams and no work is proposed within the stream. The new bridge would accommodate utilities currently attached to the existing bridge. No debris would be allowed to fall into or enter the stream.

The north bank makai of the bridge will be stabilized with dumped rip-rap outside of the MHHW. In addition to stabilization, the dumped rip-rap will provide construction access to the stream for mechanical equipment.

A section of the existing wall running along the northern bank mauka of the bridge collapsed during a major storm in 2008. Emergency repairs were conducted to create a wall of sandbags. The existing sandbag wall, located outside the OHWM, will be stabilized with the placement of basalt boulders at the toe of the sandbags. The existing sandbags will then be covered with shotcrete. Work for the stabilization of the wall will be performed above the OHWM. No debris would be allowed to fall into or enter the stream.

Portions of an existing 12-inch diameter waterline beneath Kaipapa'u Stream will be repaired. The portions of the 12-inch waterline to be replaced are located outside the stream (see Attachment B, Construction Drawings, C-20, C-28) and will be repaired via open trench (approximately 85 linear feet). The existing 12-inch waterline under the stream will be temporarily removed from service during the repairs and then reconnected and placed back into service following completion of the 12-inch waterline work. During repairs a temporary 12-inch 125-foot-long or 125 square foot waterline will be placed on the existing pedestrian bridge.

The replacement of an existing 16-inch diameter will require the removal of the existing waterline, placement of a temporary waterline, and installation of the new 16-inch diameter waterline over the stream. The temporary 16-inch diameter 250-foot-long or 333 square foot waterline will be placed on the temporary detour bridge during construction. The new permanent 16-inch diameter 155 feet long or 207 square feet waterline will be installed over the stream within the new bridge 3.2-foot-wide concrete bridge encasement. Following the installation of the 16-inch permanent waterline the temporary waterline will be removed.

Above the MHHW and OHWM, the project will also include the reconstruction of the 6-foot-high concrete wall with wood fence panels on the northern side of the bridge, replacement of fencing, acquisition of two properties (Tax Map Keys (TMKs) 5-4-18: 3 and 5-4-11: 20), removal of an existing septic system and leaching field on TMK: 5-4-11: 20, and demolition of two buildings on TMK 5-4-18: 3 and one building on TMK 5-4-11: 20. Acquisition of property and demolition of structures is required for construction access and for the installation of waterlines to be supported on the outside edges of the new bridge.

In-water work would only be required for the minor maintenance dredging, removal of the existing bridge center pier wall, temporary placement of sandbags to divert the steam around the open work area, and temporary placement of one Acrow bridge pier within Kaipapa'u Stream.

The sequencing of construction activity is as follows:

- *Install best management practices (BMPs)/erosion control measures (see Attachment A-1, Sheet C-17).*
- *Install temporary 12" water line and relocate existing 12" water line (see Attachment A-1, Sheets C-20, C-28, and C-29).*
- *Relocate electrical utilities.*
- *Construct trial and load test drilled shafts and perform load test.*
- *Construct detour roadway and temporary Acrow bridge.*
- *Demolish existing Kaipapa'u Stream Bridge. Expose existing 16" water line jacket and concrete support system.*
- *Construct Phase 1 of new Kaipapa'u Stream Bridge (see Attachment A-1, Sheets S0.7, S0.7A, S0.7B).*
- *Partially remove detour roadway and temporary bridge. Construct temporary pavement transitions, signing and pavement markings.*
- *Construct Phase 2 of new Kaipapa'u Stream Bridge (see Attachment A-1, Sheets S0.8, S0.8A, S0.8B).*
- *Remove remainder of detour roadway and temporary bridge.*

- *Construct sand bags and shotcrete lining along north bank above stream, upstream of Kaipapa‘u Stream Bridge (see Attachment A-1, Sheet C-18).*
- *Construct dumped riprap along north and south bank above stream, downstream of Kaipapa‘u Stream Bridge (see Attachment A-1, Sheets C-16 and C-18).*
- *Construct AC pavement (see Attachment A-1, Sheet C-16).*
- *Construct final signing and pavement markings.*
- *Remove temporary BMPs.*

On-site staging areas will be used as designated areas where vehicles, supplies and construction equipment are positioned for access and use during the construction process. The locations of the staging and storage areas may be changed by the Contractor depending on his construction means and methods. Equipment may include, but is not limited to: bulldozers, excavators, drilling rig, loaders, grader, compaction rollers, backhoe, cranes, trucks delivering supplies, pneumatic hand-operated tools, dewatering pumps, asphaltic rock products and fill material, and related construction materials which will include the following: Concrete and shotcrete, asphaltic Concrete, precast structures, pipes, paints (enamel and latex), cleaning solvents, rebar, wood, tar, masonry block, steel sheet piles, rocks/boulders, sandbags, soil fill material, and acrow steel bridge deck.

7.2.2B (WQC Section 10 and Section 12) – Receiving State Water(s) Information

a. Identify the receiving State water which the project will be conducted in. The receiving State water must be a surface water. This should include only the coordinates of the work subject to the Army Corps 404 Permit/Section 10 Rivers and Harbors Act Authorization. Use Section B below for the coordinates of discharges from areas not associated with the federal permit or license (Staging and Storage Areas, other work such as resurfacing, etc.) or refer to the NPDES Documents if there is a NPDES Permit/NGPC.

1) Discharge Point Label: Outfalls 1 & 2 (Kaipapa'u Stream)

Latitude: 21.61717846380141 ° N Longitude: -157.9142857880188 ° W to
Latitude: 21.617151034652878 ° N Longitude: -157.91334701486358 ° W

Receiving Water Name: Kaipapa'u Stream
Receiving State Waters Classification: Class 2, Inland
Is the receiving State Water on the Section 303(d) List?: ☑ Yes ❑ No
If the Receiving Water is on the Section 303(d) List, provide the impairment pollutants: Insufficient data.

b. Provide the Outfall coordinates of any outfalls for work outside of the Army Corps 404 Permit/Section 10 Rivers and Harbors Act Authorization. Indicate if the Receiving State Water is on the Section 303(d) list and the impairment pollutants if any.

N/A

☒ *The Topographic Map showing the Locations of the Outfalls is included in Attachment A-2*

7.2.2C (WQC Section 12) – Project Scope

Describe the overall project scope and activities.
a. The overall project description should include: the project activities both in and out of the navigable waters, the construction or operation of facilities which may result in any direct and/or indirect "discharges" into State waters.

The proposed project includes replacing the existing bridge with a new bridge that will be 110 feet long by 57 feet wide and include two 12-foot travel lanes plus two 8.5-foot shoulders, two 5-foot pedestrian walkways/bicycle lanes, reinforced guardrails, and drainage features. The new bridge will be constructed using prestressed concrete planks and cast-in-place bridge decks. The new right-of-way (ROW) will be 66 feet wide. The project will involve partial demolition and reconstruction of the abutments. The new bridge will include excavation & construction of eight new 4-foot drilled shafts outside of the Ordinary High Water Mark (OHWM) and Mean Higher High Water (MHHW).

Demolition of the existing Kaipapa'u Stream Bridge will include the removal of the existing concrete center pier wall, of which approximately 5 cubic yards (CY) is located within the MHHW.

Approximately 270 CY of maintenance dredging will be performed to remove accumulated sediment and debris from under and around the bridge partially within the MHHW. Approximately 5 CY is located within the MHHW of Kaipapa'u Stream.

The replacement of the Kaipapa'u Stream Bridge and maintenance work will be completed through phased construction and demolition. The stream will be diverted around the work area. The temporary placement of sand bags will be used to redirect the stream during construction, with 25 CY of temporary fill placed within the MHHW and 5 CY of temporary fill placed within the OHWM. There will be no interruption of stream flow. In-stream work will be completed during the low rainfall season (August to October), and during fair weather conditions.

The construction of a temporary Acrow bridge makai of the bridge will facilitate the movement of vehicular and pedestrian traffic during construction. The temporary bridge will be comprised of two lanes and a pedestrian walkway on the makai side of the Kaipapa'u Stream Bridge to mitigate traffic impacts during construction. The Acrow bridge will be constructed and installed in two segments supported by five pre-cast concrete piers, one of which is located within the

MHHW and will require 1 CY of temporary fill below the MHHW. Temporary dumped rip-rap will be placed around the Acrow bridge pier within the MHHW and be sized approximately 54 feet long by 15 feet wide by 2 feet deep, or 810 square feet, with a volume of 50 CY. A 6-foot temporary layer of filter rock will be placed under the rip-rap with a volume of approximately 13 CY. Upon completion of the bridge replacement, the Acrow bridge and piers and sand bags used to redirect the stream will be removed and disturbed areas restored to their pre-construction condition.

The stream bank will be stabilized on the north bank downstream of the bridge outside of the MHHW. In addition to stabilization, dumped rip-rap will provide access to the stream for mechanical equipment.

A section of an existing wall running along the northern bank upstream of the bridge collapsed during a major storm in 2008. Emergency repairs were conducted to create a wall of sand bags. The existing sandbag wall will be stabilized with the placement of basalt boulders at the toe of the sandbags. The existing sandbags will then be covered with shotcrete. Work on the stabilization of the stream wall will be performed above the OHWM.

Portions of an existing 12-inch diameter waterline beneath Kaipapa'u Stream will need to be repaired. The portions of the 12-inch waterline to be replaced are located outside the stream (see Attachment B, Construction Drawings, C-20, C-28) and will be repaired via open trench (approximately 85 linear feet). The existing 12-inch waterline under the stream will be temporarily removed from service during the repairs and then reconnected and placed back into service following completion of the 12-inch waterline work. During repairs a temporary 12-inch 125-foot-long or 125 square foot waterline will be placed on the existing pedestrian bridge.

The replacement of an existing 16-inch diameter will require the removal of the existing waterline, placement of a temporary waterline, and installation of the new 16-inch diameter waterline over the stream. The temporary 16-inch diameter 250-foot-long or 333 square foot waterline will be placed on the temporary detour bridge during construction. The new permanent 16-inch diameter 155 feet long or 207 square feet waterline will be installed over the stream within the new bridge 3.2-foot-wide concrete bridge encasement. Following the installation of the 16-insh permanent waterline the temporary waterline will be removed.

Above the MHHW and OHWM, the project will also include the reconstruction of the 6-foot-high concrete wall with wood fence panels on the northern side of the bridge, replacement of fencing, acquisition of two properties (Tax Map Keys (TMKs) 5-4-18: 3 and 5-4-11: 20), removal of an existing septic system and leaching field on TMK: 5-4-11: 20, and demolition of two buildings on TMK 5-4-18: 3 and one building on TMK 5-4-11: 20. Acquisition of property and demolition of structures is required for construction access and for the installation of waterlines to be supported on the outside edges of the new bridge.

In-water work would only be required for the minor maintenance dredging, removal of the existing bridge center pier wall, temporary placement of sandbags to divert the steam around the open work area, and temporary placement of one Acrow bridge pier within Kaipapa'u Stream.

7.2.3 Emergency Related Projects

Note: This Section is only applicable to Construction Activities NPDES/NGPC Permits

☒ *Not Applicable*
☐ *Applicable (If this box is checked, provide additional information as described below)*

If conducting earth-disturbing activities in response to a public emergency (see section 1.3.), the permittee shall document the cause of the public emergency (e.g., natural disaster, extreme flooding conditions, etc.), information substantiating its occurrence (e.g., state disaster declaration or similar state declaration), and a description of the construction necessary to reestablish effected public services. The declaration of emergency or imminent threat to public health is required to be from the state governor or the director. See Attachment H for additional information.

7.2.4 Identification of Prime Contractor and Other Site Contractors

The SWPPP/IWPPP must include a list of both the prime contractor and all other contractors (e.g., sub-contractors) who will be engaged in construction activities at the site, and the areas of the site over which each contractor has control. List prime contractor and sub-contractors below and attach map showing areas of control in ***Attachment A. Complete and attach a Subcontractor Certification/Agreement in Attachment D.***

The general contractor information will be submitted at least 30 calendar days before the start of construction activities.	
(General Contractor Company Name)	
(General Contractor Contact Person Name)	
(General Contractor Mailing Address)	
(General Contractor Mailing City)	*(General Contractor Mailing State and Zip Code)*
(General Contractor Telephone Number)	
(General Contractor Email Address)	

(Sub-Contractor #1 Company Name, as needed)	
(Sub-Contractor Contact Person Name)	
(Sub-Contractor Mailing Address)	
(Sub-Contractor Mailing City)	*(Sub-Contractor Mailing State and Zip Code)*
(Sub-Contractor Telephone Number)	
(Sub-Contractor Email Address)	

(Sub-Contractor #2 Company Name, as needed)	
(Sub-Contractor Contact Person Name)	
(Sub-Contractor Mailing Address)	
(Sub-Contractor Mailing City)	*(Sub-Contractor Mailing State and Zip Code)*
(Sub-Contractor Telephone Number)	
(Sub-Contractor Email Address)	

(Sub-Contractor #3 Company Name, as needed)	
(Sub-Contractor Contact Person Name)	
(Sub-Contractor Mailing Address)	
(Sub-Contractor Mailing City)	*(Sub-Contractor Mailing State and Zip Code)*
(Sub-Contractor Telephone Number)	
(Sub-Contractor Email Address)	

❑ *Attach maps showing areas of Contractor/Subcontractor Control in Attachment A.*

❑ *Complete and attach a Subcontractor Certification/Agreement in Attachment D.*

7.2.5 Sequence and Estimated Dates of Construction Activities

Separate the schedule for In-Water and Land-Based work. In Attachment C, attach the proposed construction schedule which shall include, at a minimum:
The Contractor shall submit to the Engineer an update of the dates in the SWPPP/IWPPP once the project is awarded.

Land Based (HAR 11-55)

☒ *Installation of storm water control measures, and when they will be made operational, including an explanation of how the sequence and schedule for installation of storm water control measures complies with section 5.1.1.3.1. and of any departures from manufacturer specifications pursuant to section 5.1.1.3.2., including removal procedures of the storm water control measures after construction has ceased.*

☒ *Commencement and duration of earth-disturbing activities, including clearing and grubbing, mass grading, site preparation (i.e., excavating, cutting and filling), final grading, and creation of soil and vegetation stockpiles requiring stabilization.*

☒ *Cessation, temporarily or permanently, of construction activities on the site, or in designated portions of the site.*

☒ *Final or temporary stabilization of areas of exposed soil. The dates for stabilization must reflect the applicable deadlines to which the permittee is subject to in section 5.2.1.*

☒ *Removal of temporary storm water conveyances/channels and other storm water control measures, removal of construction equipment and vehicles, and cessation of any pollutant-generating activities.*

In-Water (CWA Section 404 and Section 401 WQC and HAR 11-54)

☒ *Date BMP measures to isolate and contain work areas are installed.*

☒ *Commencement and duration of In-Water construction activities.*

☒ *Cessation, temporarily or permanently, of construction activities on the site, or in designated portions of the site.*

☒ *Removal of temporary storm water conveyances/channels and other storm water control measures, removal of construction equipment and vehicles, and cessation of any pollutant-generating activities.*

7.2.6.1 Property Boundary Maps

Boundaries of the property and of the locations where construction activities will occur. Attach, title, and identify all maps (pdf - minimum 300 dpi) listed below, in Attachment A.

a. *Legal boundaries of the project. See NPDES Form C, Section C.8 or See Attachment A-1 Erosion and Sediment Control Plan Sheets*
b. *Locations where earth-disturbing activities will occur, noting any sequencing of construction activities. See NPDES Form C, Section C.8 or See Attachment A-1 Erosion and Sediment Control Plan Sheets*
c. *Pre-Construction Topography including approximate slopes and drainage patterns for the entire Facility/Project site to the receiving storm water drainage system (if applicable) or to the receiving State water(s) (with flow arrows). Note areas of steep slopes (15% or greater in grade). See NPDES Form C, Section C.8 or See Attachment A-1 Erosion and Sediment Control Plan Sheets*
d. *During-Construction Topography (after major grading activities) including approximate slopes and drainage patterns for the entire Facility/Project site to the receiving storm water drainage system (if applicable) or to the receiving State water(s) (with flow arrows) Note areas of steep slopes (15% or greater in grade). See NPDES Form C, Section C.8 or See Attachment A-1 Erosion and Sediment Control Plan Sheets*
e. *Post-Construction Topography including approximate slopes and drainage patterns for the entire Facility/Project site to the receiving storm water drainage system (if applicable) or to the receiving State water(s) (with flow arrows). Note areas of steep slopes (15% or greater in grade). See NPDES Form C , Section C.8 or See Attachment A-1 Erosion and Sediment Control Plan Sheets*
f. *Locations where sediment, soil, or other construction materials will be stockpiled 7.2.6.1c. See SWPPP/IWPPP Attachment A. Stockpile locations may be changed by the Contractor depending on his construction means and methods. The Contractor shall submit to the Engineer for his review and acceptance the locations of stockpiles once the project is awarded and will be included in the SWPPP/IWPPP. The Contractor shall submit to the Engineer for his review and acceptance any updates/changes to stockpile areas during construction for inclusion in the SWPPP/IWPPP.*
g. *Locations of any contaminated soil or contaminated soil stockpiles 7.2.6.1d. No areas of contaminated soil are expected to be encountered in the area. If any areas are encountered, the locations will be included in the SWPPP/IWPPP.*

h. *Locations of any crossings of state waters 7.2.6.1e. Kaipapa'u Stream is shown in NPDES Form C, Attachment A or See Attachment A-1 Erosion and Sediment Control Plan Sheets .*

i. *Designated points on the site where vehicles will exit onto paved roads 7.2.6.1f. See SWPPP/IWPPP Attachment A. Stabilized entrance locations may be changed by the Contractor depending on his construction means and methods. The Contractor shall submit to the Engineer the locations of stabilized entrances once the project is awarded for his review and acceptance and will be included in the SWPPP/IWPPP. The Contractor shall submit to the Engineer for his review and acceptance any updates/changes to stabilized entrances during construction for inclusion in the SWPPP/IWPPP.*

j. *Location(s) of impervious structures (including buildings, roads, parking lots, etc.) after construction is completed 7.2.6.1g. See NPDES Form C, Section C.8 or See Attachment A-1 Erosion and Sediment Control Plan Sheets*

k. *Locations of construction support activity areas covered by this permit 7.2.6.1h. See SWPPP/IWPPP Attachment A. The locations of the staging and storage areas may be changed by the Contractor depending on his construction means and methods. The Contractor shall submit to the Engineer the locations of his staging and storage areas for his review and acceptance once the project is awarded. The Contractor shall submit to the Engineer any updates/changes to staging and storage areas during construction for his review and acceptance and inclusion in the SWPPP/IWPPP.*

7.2.6.1A (WQC Section 1) - Jurisdictional Waters of the U.S. (Army Corps Jurisdiction) Boundary Maps

Boundaries of the property and of the locations where construction activities will occur. Attach, title, and identify all maps (pdf - minimum 300 dpi) listed below, in Attachment A.

a. *Map showing the Jurisdiction Line between In-Water and Land Based BMPs See Attachment A-3 Army Corps Jurisdictional Boundary Map*

Note: The Army Corps Jurisdiction Boundary distinguishes where In-Water and Land-Based BMPs (and the associated Inspection, Stabilization Schedules, etc.) apply.

Prior to commencement of the authorized work in wetlands, other special aquatic sites and other waters, the Contractor shall clearly identify (demarcate) in the field the geographic limits of such waters (i.e., High Tide Line, Mean High Water Mark, Ordinary High Water Mark, approved wetland boundary) affected by the authorized work and as approved by the Army Corps and demarcated above. The delineation of these geographic bounds shall be accomplished by staking, flagging, painting, silt fencing, signage, buoys, etc. and in all cases shall be maintained and remain observable throughout the construction period. The Contractor shall

also demarcate in the field the project limits of the Corps-authorized fill footprint to ensure that dredged or fill material is not discharged beyond the authorized limits. The permittee is prohibited from conducting any activity occurring in or affecting wetlands, other special aquatic sites and other waters that requires prior authorization from the Corps, outside of the permitted limits of disturbance (as shown on the permit drawings).

7.2.6.2 to 7.2.6.8 State Waters and BMP Maps

Attach, title, and identify all maps (pdf - minimum 300 dpi) listed below, in Attachment A.

Please reference which maps account for the features listed below.

a. *Locations of all state waters, including wetlands that exist within or in the immediate vicinity of the site and indicate which waterbodies are listed as impaired 7.2.6.2. See NPDES Form C, Section C.8 or See Attachment A-1 Erosion and Sediment Control Plan Sheets*
b. *The boundary lines of any natural buffers provided consistent with section 5.1.2.1.1, 7.2.6.3. Natural buffers are not feasible in the vicinity of Kaipapa'u Stream. See Section 7.2.9.*
c. *Topography of the site, existing vegetative cover (e.g., forest, pasture, pavement, structures), and drainage pattern(s) of storm water onto, over, and from the site property before and after major grading activities 7.2.6.4. See NPDES Form C, Section C.8 or See Attachment A-1 Erosion and Sediment Control Plan Sheets*
d. *Storm water discharge locations, including: a) Locations of any storm drain inlets on the site and in the immediate vicinity of the site to receive storm water runoff from the project; See NPDES Form C, Section C.8 or See Attachment A-1 Erosion and Sediment Control Plan Sheets.*

   and b) Locations where storm water will be discharged to state waters (including wetlands)7.2.6.5. See NPDES Form C, Section C.8 or See Attachment A-1 Erosion and Sediment Control Plan Sheets.
e. *Locations of all potential pollutant-generating activities identified in section 7.2.7, 7.2.6.6. See SWPPP/IWPPP Attachment A (Construction Activity BMP Map – See Attachment A-1 Erosion and Sediment Control Plan Sheets)*
f. *Locations of storm water control measures 7.2.6.7. See SWPPP/IWPPP Attachment A. The Contractor may change the locations of storm water control measures by construction activity and construction sequence depending on his construction means and methods. The Contractor shall submit changes to the Engineer for his review and acceptance once the project is awarded. The Contractor shall submit a separate map for each phase of construction which changes the drainage pattern. The Contractor shall submit to the Engineer for his review and acceptance any updates/changes to storm water control*

measures during construction for inclusion in the SWPPP/IWPPP. (For maps by Construction Activity and Construction Sequence see Attachment A-1 Erosion and Sediment Control Plan Sheets)

g. *Locations where chemicals will be used and stored 7.2.6.8. For locations where chemicals will be used, see SWPPP/IWPPP Attachment A Plan Sheets. The table below shows possible chemicals which may be used on site and which construction activity they are associated with. The locations where chemicals may be used and stored may be changed by the Contractor depending on his construction means and methods. The Contractor shall submit to the Engineer for his review and acceptance any updates/changes to locations where chemicals will be used and stored during construction for inclusion in the SWPPP/IWPPP.*

Chemical	***Location***	***Major Construction Activity***
Hydraulic oils/ fluids	• *Vehicle Refueling area* • *Leaks from broken hoses on equipment* • *Vehicles shall be maintained off site. If a maintenance area is necessary on-site, the Contractor shall submit to the Engineer the locations and BMPs for his review and acceptance for inclusion in the SWPPP/IWPPP.*	*Bridge Demolition and Construction*
Antifreeze/Coolants	• *Vehicle Refueling area* • *Leaks from broken hoses on equipment* • *Vehicles shall be maintained off site. If a maintenance area is necessary on-site, the Contractor shall submit to the Engineer the locations and BMPs for his review and acceptance for inclusion in the SWPPP/IWPPP.*	*Bridge Demolition and Construction*
Glue, Adhesives	• *Bridge construction*	*Bridge Demolition and Construction*
Concrete Curing Compounds/ Form Release Oils	• *Bridge construction involving concrete*	*Bridge Demolition and Construction*
Pesticides	• *Landscaping areas*	*Landscaping*
Herbicides	• *Landscaping areas*	*Landscaping*
Insecticides	• *Landscaping areas*	*Landscaping*
Fertilizers	• *Landscaping areas*	*Landscaping*

7.2.7 Construction Site Pollutants

For each pollutant-generating activity, an inventory of pollutants or pollutant constituents (e.g., sediment, fertilizers and/or pesticides, paints, solvents, fuels) associated with that activity, which could be exposed to rainfall and could be discharged from the construction site. The Contractor shall take into account where potential spills and leaks could occur that contribute pollutants to storm water discharges. The Contractor shall also document for the Engineer's review and acceptance any departures from the manufacturer's specifications for applying fertilizers containing nitrogen and phosphorus, as required in Section 5.3.5.1 under Attachment H.

All solid waste shall be disposed of at DOH, Solid and Hazardous Waste Branch (SHWB), Solid Waste Section (SWS) permitted facilities. If not, contact the SHWB-SWS at (808) 586-4226 as additional permits may be required.

Source/Material	***Description of How Potential Pollutant Source will be Prevented from Discharging with Storm Water Runoff***	***Major Construction Activity***
Construction debris, green waste, general litter	• *See Section 7.2.10 for Site Specific BMPs*	*Bridge Demolition and Construction*
Materials associated with the operation and maintenance of equipment, such as oil, fuel, and hydraulic fluid leakage	• *See Section 7.2.10 for Site Specific BMPs*	*Bridge Demolition and Construction*
Soil erosion from the disturbed areas	• *See Section 7.2.10 for Site Specific BMPs*	*Bridge Demolition and Construction*
Sediment from soil stockpiles	• *See Section 7.2.10 for Site Specific BMPs*	*Bridge Demolition and Construction*
Emulsified asphalt or prime/tack coat	• *See Section 7.2.10 for Site Specific BMPs*	*Bridge Demolition and Construction*

Materials associated with painting, such as paint and paint wash solvent	• *See Section 7.2.10 for Site Specific BMPs*	*Bridge Demolition and Construction*
Industrial chemicals, fertilizers, and/or pesticides	• *See Section 7.2.10 for Site Specific BMPs*	*Bridge Demolition and Construction*
Hazardous waste (Batteries, Solvents, Treated Lumber, etc.)	• *See Section 7.2.10 for Site Specific BMPs*	*Bridge Demolition and Construction*
Metals and Building Materials	• *See Section 7.2.10 for Site Specific BMPs*	*Bridge Demolition and Construction*
Existing Pollution Sources	• *See Section 7.2.10 for Site Specific BMPs*	*Bridge Demolition and Construction*
Other (Contaminated Soil)	• *See Section 7.2.10 for Site Specific BMPs*	*Bridge Demolition and Construction*

7.2.8 –Sources of Non-Storm Water

The SWPPP/IWPPP must also identify all sources of non-storm water and information, including, but not limited to, the design, installation, and maintenance of the control measures to prevent its discharge.

All solid waste shall be disposed of at DOH, Solid and Hazardous Waste Branch (SHWB), Solid Waste Section (SWS) permitted facilities. If not, the Contractor shall contact the SHWB-SWS at (808) 586-4226 and notify the Engineer for his agreement the disposal locations. Additional permits may be required.

Source	***Description of How Potential Non-Storm Water Pollution Source will not be Discharged to State Waters***	***Major Construction Activity***
Dust Control Water	• *See Section 7.2.10 for Site Specific BMPs*	*Bridge Demolition and Construction*

Source	***Description of How Potential Non-Storm Water Pollution Source will not be Discharged to State Waters***	***Major Construction Activity***
Concrete Truck Wash Water	• *See Section 7.2.10 for Site Specific BMPs*	*Bridge Demolition and Construction*
Sediment Track Out	• *See Section 7.2.10 for Site Specific BMPs*	*Bridge Demolition and Construction*
Irrigation Water	• *See Section 7.2.10 for Site Specific BMPs*	*Bridge Demolition and Construction*
Hydrotesting Effluent	• *See Section 7.2.10 for Site Specific BMPs*	*Bridge Demolition and Construction*
Dewatering Effluent	• *See Section 7.2.10 for Site Specific BMPs*	*Bridge Demolition and Construction*
Saw-cutting Slurry	• *See Section 7.2.10 for Site Specific BMPs*	*Bridge Demolition and Construction*
Concrete Curing Water	• *See Section 7.2.10 for Site Specific BMPs*	*Bridge Demolition and Construction*
Plaster Waste Water	• *See Section 7.2.10 for Site Specific BMPs*	*Bridge Demolition and Construction*
Water-Jet Wash Water	• *See Section 7.2.10 for Site Specific BMPs*	*Bridge Demolition and Construction*
Sanitary/Septic Waste	• *See Section 7.2.10 for Site Specific BMPs*	*Bridge Demolition and Construction*

7.2.9 –Buffer Documentation

Note Exception 3 exempts Buffers for areas subject to an Army Corps 404 Permit. For project work outside of the Army Corps Jurisdiction, the Designer needs to document buffer requirements.

If required to comply with section 5.1.2.1. because a state water is located within 50 feet of the project's earth disturbances, describe which compliance alternative has been selected for the site, and comply with any additional requirements to provide documentation in Section 5.1.2.1. Delineate, and clearly mark off, with flags, tape, or other similar marking device all natural buffer areas. Use velocity dissipation devices if necessary to prevent erosion caused by storm water within the buffer. Ensure all discharges are first treated by erosion and sediment controls.

☐ *Option 1*

Provide and maintain a 50-foot undisturbed natural buffer and sediment control.
Note: If the earth disturbances are located 50 feet or further from a state water and have installed sediment control, then the permittee has complied with this alternative. If the buffer is located outside State Highways Right of Way, include written permission from the owner of the land in SWPPP/IWPPP Attachment H.

Width of Buffer_____feet

☐ *Option 2*

Provide and maintain an undisturbed natural buffer that is less than 50 feet and double sediment control (e.g., double perimeter control) spaced a minimum of 5 feet apart.

Width of Buffer_____feet

☒ *Option 3*

If it is infeasible to provide and maintain an undisturbed natural buffer of any size, the permittee shall provide and maintain double sediment control (e.g., perimeter control) spaced a minimum of 5 feet apart and complete stabilization within 7 calendar days of the temporary or permanent cessation of earth-disturbing activities. <u>See Exceptions below.</u>

☐ *Exception 1*

There is no discharge of storm water to state waters through the area between the site and any state waters located within 50 feet of the site, the permittee is not required to comply with the requirements in this section. This includes situations where control measures have been implemented, such as a berm or other barrier, that will prevent such discharges.

☒ *Exception 2*

For "linear construction projects" where "linear construction projects" means the construction of roads, bridges, conduits, substructures, pipelines, sewer lines, towers, poles, cables, wires,

connectors, switching, regulating and transforming equipment and associated ancillary facilities in a long, narrow area, the permittee is not required to comply with the requirements in this section if site constraints (e.g., limited right-of-way) prevent the permittee from meeting any of the compliance alternatives in section 5.1.2.1.1., provided that, to the extent practicable, the permittee limit disturbances within 50 feet of state waters and/or the permittee provide erosion and sediment controls to treat storm water discharges from earth disturbances within 50 feet of the state water. The permittee shall also document below the rationale as to why it is infeasible to comply with the requirements in section 5.1.2.1.1., and describe any buffer width retained and/or erosion and sediment controls installed below.

The Kaipapa'u Stream Bridge crosses Kaipapa'u Stream. The existing bridge will be demolished and a new bridge constructed. The bridge work over the Kaipapa'u Stream is covered by the Army Corps 404 permit. Disturbance will be limited to that required to complete the project and erosion and sediment BMPs applied.

☒ *Exception 3*

The following disturbances within 50 feet of a state water are exempt from the requirements in this Part: construction approved under a CWA 404 permit; or construction of a water-dependent structure or water access area (e.g., pier, boat ramp, trail).

The minor maintenance dredging along the stream channel banks of Kaipapa'u Stream, reconstruction of Kaipapa'u Stream Bridge and associated in-water work is covered by the Army Corps 404 permit.

The permittee shall document in the SWPPP/IWPPP if any of the above disturbances will occur within the buffer area on the site below.
N/A

7.2.10 Storm Water Control Measures

Please refer to Hawaii Department of Transportation Construction Best Management Practices Field Manual dated January 2008 and Supplemental Sheets. For any conflicting requirements between the Manual and applicable bid documents, the applicable bid documents will govern. Should a requirement not be clearly described within the applicable bid documents, the Contractor shall notify the Engineer immediately for interpretation. For the purposes of clarification under "applicable bid documents" include the construction plans, standard specifications, Special Provisions, Permits, and the SWPPP/IWPPP.

Land Based BMP Details

Complete the table below. Note: Bold text in the table are requirements of HAR 11-55. The Designer will provide an installation detail of all proposed BMPs (From HDOT Construction BMP Field Manual) identified in Section 7.2.6.7, including the proposed BMPs that will be used to mitigate the potential pollutants identified in Sections 7.2.7 and 7.2.8. Attach the details and design calculations, if applicable, in SWPPP/IWPPP Attachment A (7.2.10.1a). The Contractor shall include the specific product sheets (e.g. Tru-Dam or Gutter Buddy, etc.) and any changes to the proposed BMPs above for the Engineer's review and acceptance.

Check the appropriate boxes below verifying the following requirements are met. If not applicable indicate on the blank lines below (7.2.10.1):

☒ *The specific perimeter sediment controls will be installed and made operational prior to conducting earth-disturbing activities in any given portion of the site that will receive storm water from earth-disturbing activities are described below (7.2.10.1b). Perimeter sediment control devices will be made operational or See below.*

☒ *If contaminated soil exists on-site, control measures will be taken to either prevent the contact of storm water with the contaminated soil, including any contaminated soil stockpiles, or prevent the discharge of any storm water runoff which has contacted contaminated soil or any contaminated soil stockpiles are described below (7.210.1.c). N/A Soil contamination is not anticipated on site. The Contractor shall add the BMP measures and locations if any contamination is found on-site for the Engineer's review and acceptance.*

☒ *For exit points on the site (or any areas which exit onto a paved street), stabilization techniques and any additional controls that are planned to remove sediment prior to vehicle exit consistent with Section 5.1.2.3 will be taken and are described below (7.2.10.1d). Stabilized entrance locations may be changed by the Contractor depending on his construction means and methods. The Contractor shall submit to the Engineer for his review and acceptance the locations of stabilized entrances once the project is awarded for inclusion in the SWPPP/IWPPP. The Contractor shall submit to the Engineer for his review and acceptance any updates/changes to stabilized entrances during construction for inclusion in the SWPPP/IWPPP.*

☒ *The project is linear, and the use of perimeter controls on portions of the site is impracticable for the following reasons (7.2.10.1e): N/A or the limits of the site (State Highways Right of Way) include connections to other C&C of Honolulu or HDOT roadways. Installing sediment controls in these areas would not be possible without closing vehicle traffic.*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
Construction debris, green waste, general litter	• *Separate contaminated clean up materials from construction and demolition (C&D) wastes.* • ***Provide waste containers (e.g., dumpster or trash receptacle) of sufficient size and number to contain construction and domestic wastes.*** • *Inspect construction waste and recycling areas regularly.* • *Schedule solid waste collection regularly.* • *Schedule recycling activities based on construction/demolition phases.* • *Empty waste containers weekly or when they are two-thirds full, whichever is sooner.* • ***Do not allow containers to overflow. Clean up immediately if they do.*** • ***On work days, clean up and dispose of waste in designated waste containers.*** • *See Solid Waste Management Section SM-6 for additional requirements.* • *Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable.* • *The Contractor shall submit for the Engineer's review and acceptance and SWPPP/IWPPP inclusion a Litter Management Plan.*	*See Solid Waste Management Section SM-6. Protect Storm Drain Inlets SC-2, and Perimeter Sediment Controls where applicable.* *Contractor to include Litter Management plan once the project is awarded.*
Materials associated with the operation and maintenance of equipment, such as oil, fuel, and hydraulic fluid leakage	• *Use off-site wash racks, repair and maintenance facilities, and fueling sites when practical.* • ***Designate bermed wash area if cleaning on site is necessary.*** • ***Place drip pans or drop cloths under vehicles and equipment to absorb spills or leaks.*** • ***Provide an ample supply of readily available spill cleanup materials.*** • ***Clean up spills immediately, using dry clean-up methods where possible, and dispose of used***	*See Vehicle and Equipment Cleaning, Maintenance, and Refueling, Sections SM-11, SM-12, and SM-13, and Material Delivery, Storage and Material Use Sections SM-2 and SM-3, and* ***Spill Prevention and Control SM-10.***

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	materials properly. • ***Do not clean surfaces or spills by hosing the area down.*** • ***Eliminate the source of the spill to prevent a discharge or a continuation of an ongoing discharge.*** • *Inspect on-site vehicles and equipment regularly and immediately repair leaks.* • *Regularly inspect fueling areas and storage tanks.* • *Train employees on proper maintenance and spill practices and procedures and fueling and cleanup procedures.* • ***Store diesel fuel, oil, hydraulic fluid, or other petroleum products or other chemicals in water-tight containers and provide cover or secondary containment.*** • *Do not remove original product labels and* ***comply with manufacturer's labels for proper disposal.*** • *Dispose of containers only after all the product has been used.* • ***Dispose of or recycle oil or oily wastes according to Federal, State, and Local requirements.*** • ***Store soaps, detergents, or solvents under cover or other means to prevent contact with rainwater.*** • *See Vehicle and Equipment Cleaning, Maintenance, and Refueling, Sections SM-11, SM-12, and SM-13 and Material Use Section SM-3 for additional requirements.*	
Soil erosion from the disturbed areas	• *Provide Soil Stabilization, Slope Protection, Storm Drain Inlet Protection SC-2, Perimeter Controls and Sediment Barriers, Sediment*	*Soil Stabilization* 1. *SM-21 Topsoil Management* 2. *EC-5 Seeding and*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	Basins and Detention Ponds, Check Dams SC-9 ,Level Spreader SC-10, Paving Operations SM-19, Construction Road Stabilization EC-1, Controlling Storm Water Flowing Onto and Through the Project, Post-Construction BMPs, and Non-Structural BMPs (Employee Training SM-1, Scheduling SM-14, Location of Potential Sources of Sediment SM-15, Preservation of Existing Vegetation SM-16) **.** • ***Delineate, and clearly mark off, with flags, tape, or other similar marking device all natural buffer areas defined in the SWPPP/IWPPP.*** • ***Preserve native topsoil where practicable.*** • ***In areas where vegetative stabilization will occur, restrict vehicle/equipment use in areas to avoid soil compaction or condition soil to promote vegetative growth.*** • ***For Storm Drain Inlet Protection, clean, or remove and replace, the protection measures as sediment accumulates, the filter becomes clogged, and/or performance is compromised.*** • ***Where there is evidence of sediment accumulation adjacent to the inlet protection measure, remove the deposited sediment by the end of the same day in which it is found or by the end of the following work day if removal by the same day is not feasible.***	*Planting* 3. *EC-6 Mulching* 4. *EC-7 Geotextiles and Mats* *Slope Protection* 1. *EC-5 Seeding and Planting* 2. *EC-6 Mulching* 3. *EC-7 Geotextiles and Mats* 4. *EC-9 Slope Roughening, Terracing, and Rounding* 5. *SC-11 Slope Drains and Subsurface Drains* 6. *SC-12 Top and Toe of Slope Diversion Ditches and Berms* 7. *SC-2 Storm Drain Inlet Protection* *Perimeter Controls and Sediment Barriers* 1. *SC-1 Silt Fence* 2. *SC-5 Vegetated Filter Strips and Buffers* 3. *SC-8 Compost Filter Berm* 4. *SC-13 Sandbag Barrier* 5. *SC-14 Brush/Rock Filter* *Sediment Basins and Detention Ponds* 1. *SC-15 Sediment Trap* 2. *SC-16 Sediment Basin* 3. *SC-9 Check Dams* 4. *SC-10 Level Spreader* 5. *SM-19 Paving Operations EC-1 Construction Road Stabilization* *Controlling Storm Water Flowing onto and Through*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	• ***Sediment basins shall be designed and maintained in accordance with HAR 11-55.*** • ***Minimize disturbance on steep slopes (Greater than 15% in grade).*** • ***If disturbance of steep slopes are unavoidable, phase disturbances and use stabilization techniques designed for steep grades.*** • ***For temporary drains and swales use velocity dissipation devices within and at the outlet to minimize erosive flow velocities.***	*the Project* 1. *EC-8 Run-On Diversion* 2. *SC-6 Earth Dike* 3. *SC-7 Temporary Drains and Swales* *Post Construction BMPs* 1. *EC-4 Flared Culvert End Sections* 2. *SC-3 Rip-Rap and Gabion Inflow Protection* 3. *SC-4 Outlet Protection and Velocity Dissipation Devices* 4. *SM-21 Topsoil Management* *Non-Structural BMPs* 1. *SM-1 Employee Training* 2. *SM-14 Scheduling* 3. *SM-15 Location of Potential Sources of Sediment* 4. *SM-16 Preservation of Existing Vegetation*
Sediment from soil stockpiles	• *Locate stockpiles a minimum of 50 feet or as far as practicable from concentrated runoff* ***or outside of any natural buffers identified on the SWPPP/IWPPP****.* • *Place bagged materials on pallets and under cover.* • *Provide physical diversion to protect stockpiles from concentrated runoff.* • ***Cover stockpiles with plastic or comparable material when practicable.*** • ***Place silt fence, fiber filtration tubes, or straw wattles around stockpiles.*** • ***Do not hose down or sweep soil or sediment accumulated on pavement or other impervious surfaces into any storm water conveyance (unless connected to a sediment basin,***	*See Protection of Stockpiles Section SM-4. Protect Storm Drain Inlets SC-2, and Perimeter Sediment Controls where applicable.*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	sediment trap, or similarly effective control), storm drain inlet, or state water. • ***Unless infeasible, contain and securely protect stockpiles from the wind.*** • *Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable.* • *See Protection of Stockpiles Section SM-4 for additional requirements.*	
Emulsified asphalt or prime/tack coat	• *Provide training for employees and contractors on proper material delivery and storage practices and procedures.* • *Restrict paving operations during wet weather to prevent paving materials from being discharged.* • *Use asphalt emulsions such as prime coat when possible.* • *Protect drain inlet structures and manholes during application of tack coat, seal coat, slurry seal, and fog seal.* • ***Keep ample supplies of drip pans and absorbent materials on site.*** • *Inspect inlet protection devices.* • *See Material Delivery and Storage Section SM-2 and Paving Operations Section SM-19 for additional requirements.* • *Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable.*	*See Material Delivery and Storage Section SM-2* ***and Material Use Section SM-3****, Paving Operations Section SM-19, Protect Storm Drain Inlets SC-2, and Perimeter Sediment Controls where applicable.*
Materials associated with painting, such as paint and paint wash solvent	• *Hazardous chemicals shall be well-labeled and stored in original containers.* • ***Keep ample supply of cleanup materials on site.*** • *Dispose container only after all of the product has been used.* • *Remove as much paint from brushes*	*See Material Delivery and Storage Section SM-2, Material Use Section SM-3, Hazardous Waste Management Section SM-9, Waste Management, Spill Prevention and Control Section SM-10, and Structure*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	on painted surface. • *Rinse from water-based paints shall be discharged into the sanitary sewer system where possible. If not,* ***direct all washwater into a leak-proof container or leak-proof pit. The container or pit must be designed so that no overflows can occur due to inadequate sizing or precipitation.*** • ***Locate on-site wash area a minimum of 50 feet away or as far as practicable from storm drain inlets, open drainage facilities, or water bodies.*** • ***Do not dump liquid wastes into the storm drainage system.*** • *Filter and re-use solvents and thinners.* • *Dispose of oil-based paints and residue as a hazardous waste.* • *Ensure collection, removal, and disposal of hazardous waste complies with regulations.* • ***Immediately clean up spills and leaks.*** • *Properly store paints, solvents, and epoxy compounds.* • *Properly store and dispose waste materials generated from painting and structure repair and construction activities.* • *Mix paints in a covered and contained area when possible to minimize adverse impacts from spills.* • *Do not apply traffic paint or thermoplastic if rain is forecasted.* • *See Material Delivery and Storage Section SM-2, Material Use SM-3, Waste Management, Hazardous Waste Management Section SM-9, Waste Management, Spill Prevention and Control Section SM-10, and Structure Construction and Painting Section SM-20 for additional requirements.*	*Construction and Painting Section SM-20, Protect Storm Drain Inlets SC-2, and Perimeter Sediment Controls where applicable.*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	• *Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable.*	
Industrial chemicals, fertilizers, and/or pesticides	• *Hazardous chemicals shall be well-labeled and stored in original containers.* • ***Keep ample supply of cleanup materials on site.*** • ***Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly.*** • ***Do not clean surfaces or spills by hosing the area down.*** • ***Eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge.*** • *Dispose container only after all of the product has been used.* • *Retain a complete set of safety data sheets (formerly MSDS) on site.* • ***Store industrial chemicals in water-tight containers and provide either cover or secondary containment.*** • ***Provide cover when storing fertilizers or pesticides to prevent these chemicals from coming into contact with rainwater.*** • *Restrict amount of pesticide prepared to quantity necessary for the current application.* • ***Do not apply fertilizers or pesticides during or just before a rain event.*** • ***Do not apply to stormwater conveyance channels with flowing water*** • ***Comply with fertilizer and pesticide manufacturer's recommended usage and disposal instructions. Document departures from manufacturer's specifications in Attachment H.*** • ***Apply fertilizers at the appropriate time of year for the location, and preferably timed to coincide as closely as possible to the period of***	*See Material Delivery and Storage Section SM-2, Material Use Section SM-3, and Hazardous Waste Management Section SM-9, and* ***Spill Prevention and Control SM-10***

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	maximum vegetation uptake and growth. • ***Follow federal, state, and local laws regarding fertilizer application.*** • ***Do not dispose of toxic liquid wastes (solvents, used oils, and paints) or chemicals (additives, acids, and curing compounds) in dumpsters allocated for construction debris.*** • ***Ensure collection, removal, and disposal of hazardous waste complies with regulations. Hazardous waste that cannot be reused or recycled shall be disposed of by a licensed hazardous waste hauler.*** • *See Material Delivery and Storage Section SM2, Material Use SM-3, and Waste Management, Hazardous Waste Management Section SM-9 for additional requirements.*	
Hazardous waste (Batteries, Solvents, Treated Lumber, etc.)	• *Do not dispose of toxic materials in dumpsters allocated for construction debris.* • ***Ensure collection, removal, and disposal of hazardous waste complies with regulations.*** • ***Hazardous waste that cannot be reused or recycled shall be disposed of by a licensed hazardous waste hauler.*** • *Segregate and recycle wastes from vehicle/equipment maintenance activities such as used oil or oil filters, greases, cleaning solutions, antifreeze, automotive batteries, and hydraulic and transmission fluids.* • ***Store waste in sealed containers, which are constructed of suitable materials to prevent leakage and corrosion, and which are labeled in accordance with applicable Resource Conservation and Recovery Act (RCRA) requirements and all other applicable federal,***	*See Hazardous Waste Management Section SM-9 and Vehicle and Equipment Maintenance SM-12*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	state, and local requirements. • ***All containers stored outside shall be kept away from surface waters and within appropriately-sized secondary containment (e.g., spill berms, decks, spill containment pallets). Provide cover if possible.*** • ***Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly.*** • ***Do not clean surfaces or spills by hosing the area down.*** • ***Eliminate the source of the spill to prevent a discharge or a continuation of an ongoing discharge.*** • ***Ensure collection, removal, and disposal of hazardous waste complies with manufacturer's recommendations and is in compliance with federal, state, and local requirements.*** • *See Hazardous Waste Management Section SM-9 and Vehicle and Equipment Management, Vehicle and Equipment Maintenance SM-12 for additional requirements.*	
Metals and Building Materials	• *Inspect construction waste and recycling areas regularly.* • *Schedule solid waste collection regularly.* • ***If building materials or metals are stored on site (such as rebar or galvanized poles) store under cover under tarps or in containers.*** • *Minimize the amount of material stored on site.* • ***Do not stockpile uncovered metals or other building materials in close proximity to discharge points.*** • *See Solid Waste Management Section SM-6 for additional requirements.*	*See Solid Waste Management Section SM-6*
Contaminated Soil	• *See Waste Management,*	*See Waste Management,*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	Contaminated Soil Management Section SM-8 and/or Hazardous Waste Management Section SM-9 for additional requirements. • ***At minimum contain contaminated material soil by surrounding with impermeable lined berms or cover exposed contaminated material with plastic sheets.***	*Contaminated Soil Management Section SM-8 and/or Hazardous Waste Management Section SM-9*
Dust Control Water	• *Do not over spray water for dust control purposes which will result in runoff from the area.* • ***Apply water as conditions require.*** • *Washing down of debris or dirt into drainage, sewage systems, or State waters is not allowed.* • *See Dust Control Section SM-18 for additional requirements.*	*See Dust Control Section SM-18*
Concrete Truck Wash Water	• *Disposal of concrete truck wash water via percolation is prohibited.* • *Wash concrete-coated vehicles or equipment off-site or in the designated wash area.* • *Locate on-site wash area a minimum of 50 feet away* ***or as far as practicable*** *from storm drain inlets, open drainage facilities, or water bodies.* • *Runoff from the on-site concrete wash area shall be contained in a temporary pit or level bermed area where the concrete can set.* • ***Design the area so that no overflow can occur due to inadequate wash area sizing or precipitation.*** • *The temporary pit shall be lined with plastic to prevent seepage of wash*	*See Waste Management, Concrete Waste Management Section SM-5*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	water into the ground. • *Allow wash water to evaporate or collect wash water and all concrete debris in a concrete washout system bin.* • ***Do not dump liquid wastes into storm drainage system.*** • ***Dispose of liquid and solid concrete wastes in compliance with federal, state, and local standards.*** • *See Waste Management, Concrete Waste Management Section SM-5 for additional requirements.*	
Sediment Track-Out	• ***Include Stabilized Construction Entrance at all points that exit onto paved roads.*** • *A sediment trapping device is required if a wash rack is used in conjunction with the stabilized construction entrance/exit.* • *The pavement shall not be cleaned by washing down the street.* • *If sweeping is ineffective or it is necessary to wash the streets, wash water must be contained either by construction of a sump, diverting the water to an acceptable disposal area, or vacuuming the wash water.* • *Use BMPs for adjacent drainage structures.* • ***Remove sediment tracked onto the street by the end of the day in which the track-out occurs.*** • ***Restrict vehicle use to properly designated exit points.*** • *Include additional BMPs that remove*	*See Stabilized Construction Entrance Section EC-2*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	sediment prior to exit when minimum dimensions can not be met. • *See Stabilized Construction Entrance Section EC-2 for additional requirements.*	
Irrigation Water	• *Consider irrigation requirements.* • *Where possible, avoid species which require irrigation.* • *Design timing and application methods of irrigation water to eliminate the runoff of excess irrigation water into the storm water drainage system.* • *See Seeding and Planting Section EC-5 and California Stormwater BMP Handbook SD-12 Efficient Irrigation included in SWPPP/IWPPP Attachment A for additional requirements.*	*See Seeding and Planting Section EC-5 and California Stormwater BMP Handbook SD-12 Efficient Irrigation*
Hydrotesting Effluent	• *If work includes removing, relocation or installing waterlines, and Contractor elects to flush waterline or discharge hydrotesting effluent into State waters or drainage systems, the Contractor shall prepare and obtain HDOT acceptance of a NOI/NPDES Permit Form F application for HDOT submittal to DOH CWB at least 30 calendar days prior to the start of Hydrotesting Activities if necessary. Site specific BMPs will be included in the NOI/NPDES Permit Form F submittal.*	*Site specific BMPs will be included in the NOI/NPDES Permit Form F submittal.*
Dewatering Effluent	• *If excavation or backfilling operations require dewatering, and Contractor elects to discharge*	*See Dewatering Operations SM-17. Site specific BMPs will be included in the*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	dewatering effluent into State waters or existing drainage systems, Contractor shall prepare and obtain HDOT acceptance of a NOI/NPDES Permit Form G application for HDOT submittal to DOH CWB at least 30 calendar days prior to the start of Dewatering Activities if necessary. See Site Planning and General Practices, Dewatering Operations Section SM-17 for additional requirements.	*NOI/NPDES Permit Form G submittal.*
Saw-cutting Slurry	• *Saw cut slurry shall be removed from the site by vacuuming.* • *Provide storm drain protection during saw cutting. See Paving Operations Section SM-19 for additional requirements.* • *Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable.*	*See Paving Operations Section SM-19, Storm Drain Inlet Protection SC-2, Perimeter sediment controls where applicable*
Concrete Curing Water	• *Avoid overspraying of curing compounds.* • *Apply an amount of compound that covers the surface, but does not allow any runoff of the compound.* • *See California Stormwater BMP Handbook NS-12 Concrete Curing included in SWPPP/IWPPP Attachment A for additional requirements.*	*See California Stormwater BMP Handbook NS-12 Concrete Curing*
Plaster Waste Water	• ***Direct all washwater into a leak-proof container or leak-proof pit. The container or pit must be designed so that no overflows can occur due to inadequate sizing or precipitation.***	*See Material Delivery and Storage Section SM-2, Material Use Section SM-3, and Hazardous Waste Management Section SM-9*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	• ***Locate on-site wash area a minimum of 50 feet away or as far as practicable from storm drain inlets, open drainage facilities, or water bodies.*** • *Any significant residual materials remaining on the ground after the completion of construction shall be removed and properly disposed. If the residual materials contaminate the soil, then the contaminated soil shall also be removed and properly disposed of.* • ***Plaster waste water shall not be allowed to flow into drainage structures or State waters.*** • *See Material Delivery and Storage Section SM-2, Material Use SM-3, and Hazardous Waste Management Section SM-9 for additional requirements.*	
Water-Jet Wash Water	• *For Water-Jet Wash Water used to clean vehicles, use off site wash racks or commercial washing facilities when practical.* • *See Vehicle and Equipment Cleaning Section SM-11 for additional information.* • *For Water-Jet Wash Water used to clean impervious surfaces, the runoff shall not be allowed to flow into drainage structures or State Waters.*	*See Vehicle and Equipment Cleaning Section SM-11*
Sanitary/Septic Waste	• *Locate Sanitary facilities in a convenient place away from drainage facilities.* • ***Position sanitary facilities so they are secure and will not be tipped over or knocked down.***	*See Sanitary/Septic Waste Section SM-7.*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	• *Wastewater shall not be discharged to the ground or buried.* • *A licensed service provider shall maintain sanitary/septic facilities in good working order.* • *Schedule regular waste collection by a licensed transporter.* • *See Sanitary/Septic Waste Section SM-7 for additional requirements.*	

In-Water BMP Details (WQC)

Complete the table below.

These BMPs are meant to be used in areas within the Army Corps Jurisdiction. These BMPs include operations over State Waters.

The Contractor shall include the Site-Specific BMP Plan for the Engineer's review and acceptance. The plan should be based on the approved BMPs listed in the "An Integrated Storm Water Management Approach and a Summary of Clear Water Diversion and Isolation Best Management Practices for Use in the State of Hawaii, by the Department of Transportation and the Federal Highways Administration Practitioners Guide and applicable sections of the latest HDOT Construction Best Management Practices Field Manual. Submit BMPs not included in the Practitioners Guide to the HDOT Engineer for acceptance.

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
Construction debris (including demolition debris), general litter	• *Keep work area clean of all trash and potential pollutants.* • *Use containment systems which prevent pollutants from reaching State Waters* • *Stockpile accumulated debris and waste generated during demolition away from watercourses.*	*See Section 5.1- Working on or Over Water; Including Material and Equipment Use on Water, and Section 5.2 - Demolition Over or Adjacent to Water*
Materials associated with the operation and maintenance of	• *Heavy equipment driven in wet portions of a water body to accomplish work should be completely clean of petroleum residue, and water levels*	*See Section 5.1 – Working on or Over Water; Including Material and*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
equipment, such as oil, fuel, and hydraulic fluid leakage	*should be below the fuel tanks, gearboxes, and axles of the equipment unless lubricants and fuels are sealed such that inundation by water will not result in discharges of fuels, oils, greases, or hydraulic fluids.* • *Excavation equipment buckets may reach out into the water for the purpose of removing or placing fill materials. Only the bucket of the crane/ excavator/backhoe may operate in a water body. The main body of the crane/excavator/backhoe should not enter the water body except as necessary to cross the stream to access the work site.* • *Stationary equipment such as motors and pumps located within or adjacent to a water body, should be positioned over drip pans.* • *The exterior of vehicles and equipment that will encroach on a water body within the project should be maintained free of grease, oil, fuel, and residues and may require vegetable based hydraulic oil.* • *Equipment should not be parked below the high water mark unless allowed by a permit.* • *See Clear Water Diversion (Limitations) for additional requirements.*	*Equipment Use on Water and Sections 5.5.5 and 5.5.6 - Clear Water Diversions (Standards and Specifications and General Considerations)*
Soil and sediment from the disturbed areas including dredged spoils and rock/sand fill	• *Streambank Stabilization Techniques* • *Clear Water Diversion and Isolation Techniques* • *Stream Diversion Techniques* • *In-Stream Construction Sediment Control*	*See: Section 5.4 - Streambank Stabilization* *Section 5.6 – Filter Fabric Isolation Technique* *Section 5.7 – Turbidity Curtain Isolation Technique*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
		Section 5.8 – K-Rail (Jersey Barrier) River Isolation Technique *Section 5.9 – Cofferdam and/or Sheet Pile Isolation technique* *Section 5.10 - Gravel/Rock Berm with Impermeable Membrane Isolation Technique* *Section 5.11 – Gravel bag or Sandbag Isolation Technique* *Section 5.12 – Pipe Piles and Caisson Isolation Technique* *Section 5.13 - Stream Diversion Techniques: Pumped, Pipe/Flume, and Excavated* *Section 5.14 – In-stream Construction Sediment Control* *Section 5.15 – Washing Fines (Streambed Restoration Technique)*
Materials associated with painting, such as paint and paint wash solvent	• *Properly design and install containment systems prior to work* • *Shrouds of appropriate material should be used to prevent paint overspray from entering surface waters* • *Special attention should be given to existing and forecasted wind and weather conditions to prevent pollutant discharges to surface waters*	*See Section 5.1 – Working On or Over Water; Including Material and Equipment Use on Water*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
Concrete	• *Clear Water Diversion and Isolation Techniques* • *Stream Diversion Techniques*	*Section 5.6 – Filter Fabric Isolation Technique* *Section 5.7 – Turbidity Curtain Isolation Technique* *Section 5.8 – K-Rail (Jersey Barrier) River Isolation Technique* *Section 5.9 – Cofferdam and/or Sheet Pile Isolation technique* *Section 5.10 - Gravel/Rock Berm with Impermeable Membrane Isolation Technique* *Section 5.11 – Gravel bag or Sandbag Isolation Technique* *Section 5.12 – Pipe Piles and Caisson Isolation Technique* *Section 5.13 - Stream Diversion Techniques: Pumped, Pipe/Flume, and Excavated*
Hydrotesting Effluent	• *If work includes removing, relocation or installing waterlines, and Contractor elects to flush waterline or discharge hydrotesting effluent into State waters or drainage systems, the Contractor shall prepare and obtain HDOT acceptance of a NOI/NPDES Permit Form F application for HDOT*	*N/A*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	submittal to DOH CWB at least 30 calendar days prior to the start of Hydrotesting Activities if necessary. Site specific BMPs will be included in the NOI/NPDES Permit Form F submittal.	
Dewatering Effluent	• *If excavation or backfilling operations require dewatering, and Contractor elects to discharge dewatering effluent into State waters or existing drainage systems, Contractor shall prepare and obtain HDOT acceptance of a NOI/NPDES Permit Form G application for HDOT submittal to DOH CWB at least 30 calendar days prior to the start of Dewatering Activities if necessary. See Site Planning and General Practices, Dewatering Operations Section SM-17 for additional requirements.*	*See Dewatering Operations SM-17.*
Other Pollutants (Including Chemicals and Pesticides)	• *If the Contractor elects to apply pesticides directly over water, Contractor shall prepare and obtain HDOT acceptance of a NOI/NPDES Permit Form M application for HDOT submittal to DOH CWB at least 30 days prior to the start of pesticide application activities.*	*N/A*

7.2.10.2 – Stabilization Practices

(Note: See Army Corps 2017 Nationwide Permit Honolulu District, Regional Condition 8, Section 3a. Post-Construction BMPs regarding use of native plants appropriate for current site conditions to be used for re-vegetation for the purposes of restoring areas temporarily disturbed by the authorized work.)

Describe the specific vegetative and/or non-vegetative practices that will be used to comply with the requirements in HAR 11-55, section 5.2., including if the permittee will be complying with the stabilization deadlines specified in HAR 11-55, section 5.2.1.3.2. Document the circumstances that prevent the permittee from meeting the deadlines specified in sections 5.2.1.1. and/or 5.2.1.2.

The term "immediately" is used to define the deadline for initiating stabilization measures. In the context of this SWPPP/IWPPP section, "immediately" means as soon as practicable, but no later than the end of the next work day, following the day when the earth-disturbing activities have temporarily or permanently ceased (5.2.1.1).

For the purposes of this SWPPP/IWPPP section, any of the following types of activities constitutes initiation of stabilization (5.2.1.1):

a) Prepping the soil for vegetative or non-vegetative stabilization;
b) Applying mulch or other non-vegetative product to the exposed area;
c) Seeding or planting the exposed area;
d) Starting any of the activities in a) – c) on a portion of the area to be stabilized, but not on the entire area; and
e) Finalizing arrangements to have stabilization product fully installed in compliance with the applicable deadline for completing initial stabilization activities.

For the purposes of this SWPPP/IWPPP section, any of the following types of activities constitutes completion of initial stabilization activities (5.2.1.1):

a) For vegetative stabilization, all activities necessary to initially seed or plant the area to be stabilized; and/or
b) For non-vegetative stabilization, the installation or application of all such non-vegetative measures.

If the Contractor is unable to meet the deadlines above due to circumstances beyond the Contractor's control, and the Contractor is using vegetative cover for temporary or permanent stabilization, the Contractor may comply with the following stabilization deadlines instead as agreed to by the Engineer (5.2.1.3.1):

5.2.1.3.1.1.
Immediately initiate, and complete within the timeframe shown below, the installation of temporary non-vegetative stabilization measures to prevent erosion;

5.2.1.3.1.2.
Complete all soil conditioning, seeding, watering or irrigation installation, mulching, and other required activities related to the planting and initial establishment of vegetation as soon as conditions or circumstances allow it on the site; and

5.2.1.3.1.3.
The Contractor shall notify and provide documentation to the Engineer the circumstances that prevent the Contractor from meeting the deadlines required in sections 5.2.1.1. and/or 5.2.1.2. and the schedule the Contractor will follow for initiating and completing initial stabilization and as agreed to by the Engineer. Include this information in the SWPPP/IWPPP below.

The Contractor shall follow the applicable requirements of the specifications and special provisions including Sections 209, 619 and 641.

Final Stabilization
To be considered adequately stabilized, the permittee shall meet the criteria below depending on the type of cover the permittee is using, either vegetative or non-vegetative.

5.2.2.1. Vegetative stabilization.

5.2.2.1.1.1.
If the permittee is stabilizing any exposed portion of the site through the use of seed or planted vegetation, the permittee shall provide established uniform vegetation (e.g., evenly distributed without large bare areas), which provides 70 percent or more of the density of coverage that was provided by vegetation prior to commencing earth-disturbing activities. The permittee should avoid the use of invasive species; (HDOT requires 98% coverage for permanent hydromulch per specification and special provision sections 619 and 641.) The Designer needs to meet the 70% requirement above when designing plantings and ground cover which do not involve hydromulch. If the Designer uses a soil test to determine amounts, rates, and type of fertilizer, and the amount and rate is not consistent with manufacturer's specifications, the Designer should document this in the SWPPP/IWPPP in Attachment H.

5.2.2.1.1.2.
For final stabilization, vegetative cover must be perennial; and

5.2.2.1.1.3.
Immediately after seeding or planting the area to be vegetatively stabilized, to the extent necessary to prevent erosion on the seeded or planted area, the Contractor shall install non-vegetative erosion controls that provide cover (e.g., mulch, rolled erosion control products) to the area while vegetation is becoming established.

5.2.2.2. Non-Vegetative Stabilization.
If the permittee is using non-vegetative controls to stabilize exposed portions of the site, or if the Contractor is using such controls to temporarily protect areas that are being vegetatively stabilized, the Contractor shall provide effective non-vegetative cover.

The stabilization schedule for this project is:
Outfalls 1 &, 2 (Kaipapa'u Stream) discharges to waters not impaired for nutrients or sediments. The following applies to construction areas discharging to these outfalls:

> *Immediately initiate and complete stabilization within 14 calendar days on areas of the site in which earth-disturbing activities have temporarily or permanently ceased.*

All areas of soil disturbance will be stabilized. Kaipapa'u Stream while listed on the Hawai'i Department of Health (DOH) 2018 list of impaired waters in Hawai'i, prepared under Clean Water Act §303(d) (DOH, 2018), has not been evaluated as there is insufficient data. HDOT will comply with the deadlines in HAR Section 5.2.1.3.2, with completion of initial plantings within 14 calendar days of completion of prepping the soil for planting.

The Contractor shall notify the Engineer for his agreement if any stabilization practices or timetables to complete stated above will not be followed and document the reasons in the SWPPP/IWPPP below.

The deadlines for initiating and completing stabilization in sections 5.2.1.1. and/or 5.2.1.2. cannot be met because of the following (Note: Document location(s), reasons, and schedule) N/A

7.2.10.3 – Post Construction Measures

Descriptions of measures that will minimize the discharge of pollutants via storm water discharges after construction operations have been finished. Examples include: open, vegetated swales and natural depressions; structures for storm water retention, detention, or recycle; velocity dissipation devices to be placed at the outfalls of detention structures or along with the length of outfall channels; and other appropriate measures. All projects require post construction BMPs to minimize the discharge of pollutants via storm water discharges after construction operations have been finished. Examples include: open, vegetated swales and natural depressions; structures for storm water retention, detention, or recycle; velocity dissipation devices to be placed at the outfalls of detention structures or along with the length of outfall channels; and other appropriate measures. All projects require post-construction BMPs to minimize the discharges of pollutants via storm water discharges after construction operations have finished.

Following the reconstruction of the Kaipapa'u Stream Bridge storm water discharges are not expected to generate significant concentrations of runoff that would adversely affect surrounding

or coastal ecosystems. Storm water will sheet-flow off the bridge surface and percolate into adjacent groundcover areas.

7.2.11.1 – Spill Prevention and Response Procedures

The SWPPP/IWPPP must describe procedures that the permittee will follow to prevent and respond to spills and leaks consistent with section 5.3., including:

a. Procedures for expeditiously stopping, containing, and cleaning up spills, leaks, and other releases. Identify the name or position of the employee(s) responsible for detection and response of spills or leaks; and

b. Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity consistent with section 5.3.4. and established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302, occurs during a 24-hour period. The Contractor shall post contact information in locations that are readily accessible and available.

Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 occurs during a 24-hour period, the Contractor shall notify the National Response Center (NRC) at (800) 424-8802, the Clean Water Branch during regular business hours at 586-4309, and the Hawaii State Hospital Operator at 247-2191, the Clean Water Branch (DOH-CWB) via email at cleanwaterbranch@doh.hawaii.gov during non-business hours immediately, and the Engineer. The Contractor shall also provide to the Engineer, within 7 calendar days of knowledge of the release, a description of the release, the circumstances leading to the release, and the date of the release. The Engineer will provide this information to the DOH-CWB. The Engineer will provide information to the NRC if requested. State and local requirements may necessitate additional reporting of spills or discharges to local emergency response, public health, or drinking water supply agencies (HAR 11-55 5.3.4). The Contractor shall submit to the Engineer information necessary to complete the reporting requirements.

☒ *The Spill Prevention and Response Procedures are included in SWPPP/IWPPP Attachment F.*

The Contractor shall update the Spill Prevention and Response Procedures in the SWPPP/IWPPP once the project is awarded for the Engineer's review and acceptance.

7.2.11.2 – Waste Management Procedures

The SWPPP/IWPPP must describe procedures for how the permittee will handle and dispose of all wastes generated at the site, including, but not limited to, clearing and demolition debris, sediment removed from the site, construction and domestic waste, hazardous or toxic waste, and sanitary waste.

☒ *The Waste Management Procedures are included in SWPPP/IWPPP Attachment G.*

The Contractor shall update the Waste Management Procedures in the SWPPP/IWPPP once the project is awarded for the Engineer's review and acceptance.

7.2.12 – Procedures for Inspection, Maintenance, and Corrective Action for Land-Based Work Areas

The SWPPP/IWPPP must describe the procedures the permittee will follow for maintaining the storm water control measures, conducting site inspections, and, where necessary, taking corrective actions, in accordance with section 5.1.1.4., section 5.3.2., section 9, and section 10 of the permit. The following information must also be included in the SWPPP/IWPPP:

a. Personnel responsible for conducting inspections: Field Office Engineer and/or Inspector, and/or Contractor Representatives. Field Office Engineer and/or Inspector, and/or Contractor Representatives will be included in the SWPPP/IWPPP once the contract is awarded.

Qualifications: HDOT construction staff and HDOT Contractors attend Stormwater BMP Classes annually. Contractor representatives selected for the inspection and maintenance responsibilities shall receive training from the Contractor. The Contractor's Representatives shall be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order. The Contractor's Representative(s) inspecting the site shall be knowledgeable in the principles and practice of erosion and sediment controls and pollution prevention, who possesses the skills to assess conditions at the construction site that could impact storm water quality, and the skills to assess the effectiveness of any storm water controls selected and installed to meet the requirements of this permit.

b. The inspection schedule the permittee will be as follows, which is based on whether the site is subject to section 9.1.2. or section 9.1.3., and whether the site qualifies for any of the allowances for reduced inspection frequencies in 9.1.4. If the permittee will be conducting inspections in accordance with the inspection schedule in section 9.1.2.a. or section 9.1.2.b., the location of the rain gauge on the site or the address of the weather station the permittee will be using to obtain rainfall data;

Describe the inspection schedules and procedures you have developed for the site. Include the maintenance requirements for each BMP (e.g., level of sediment buildup allowed):

All Construction BMPs shall be inspected weekly, and within 24 hours of any rainfall event of 0.25 inches or greater in a 24 hour period. The Contractor shall submit a copy of the SWPPP/IWPPP Inspection and Maintenance Report Form to the Engineer within 24 hours of the inspection.

Maintenance requirements for specific BMPs are included in the HDOT Construction BMP Field Manual, Practitioner's Guide, and/or manufacturer's specification. The Contractor shall initiate work to fix the problem immediately after discovering the problem, and complete such work by the close of the next work day, if the problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance. In this section, immediately means the Contractor shall take all reasonable measures to minimize or prevent discharge of pollutants until a permanent solution is installed and made operational. If a problem is identified at a time in the day in which it is too late to initiate repair, initiation of repair shall begin on the following work day. When installation of a new pollution prevention control or a significant repair is needed, the Contractor shall install the new or modified control and make it operational, or complete the repair, by no later than 7 calendar days from the time of discovery. If it is infeasible to complete the installation or repair within 7 calendar days, the Contractor shall provide notice to the Engineer and document why it is infeasible to complete the installation or repair within the 7 calendar day timeframe and document the schedule for installing the storm water control(s) and making it operational as soon as practicable after the 7 calendar day timeframe and as agreed to by the Engineer. Where these actions result in changes to any of the pollution prevention controls or procedures documented in the SWPPP/IWPPP, modify the SWPPP/IWPPP accordingly. The Contractor will attach product specific maintenance practices in the SWPPP/IWPPP once the project is awarded.

c. Use the Corrective Action Report Form for any the following (10.2.1 and 10.4.1):

- *A required storm water control was never installed, was installed incorrectly, or not in accordance with the requirements in HAR sections 5 and/or 6.*

- *The Contractor/Engineer becomes aware that the storm water controls installed and being maintained are not effective enough for the discharge to meet applicable water quality standards or applicable requirements in HAR section 6.1.*
- *One of the prohibited discharges below is occurring or has occurred:*
    - *Wastewater from washout of concrete*
    - *Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials*
    - *Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance*
    - *Soaps, solvents, or detergents used in vehicle and equipment washing*
    - *Toxic or hazardous substances from a spill or other release*
- *Corrective actions required by the Department of Health or EPA*

Note: Corrective actions must be included with the monthly compliance report in Attachment J.

d. Any inspection or maintenance checklists or other forms that will be used.

☒ *The Inspection Report Form provided in SWPPP/IWPPP Attachment E will be used.*

☒ *The Corrective Action Report Form provided in SWPPP/IWPPP Attachment I will be used.*

7.2.12A (WQC) – Procedures for Inspection, Maintenance, and Corrective Action for In-Water Work Areas

Maintenance requirements for specific BMPs are included in the Practitioners Guide and/or manufacturer specification.

a. Personnel responsible for conducting inspections: *Field Office Engineer and/or Inspector, and/or Contractor Representatives. Field Office Engineer and/or Inspector, and/or Contractor Representatives will be included in the SWPPP/IWPPP once the contract is awarded.*

Qualifications: HDOT construction staff and HDOT Contractors attend Stormwater BMP Classes annually. Contractor representatives selected for the inspection and maintenance responsibilities shall receive training from the Contractor. The Contractor's Representatives shall be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order. The Contractor's Representative(s) inspecting the site shall be knowledgeable in the principles and practice of erosion and sediment controls and pollution prevention, who possesses the skills to assess conditions at the construction site that could impact storm water quality, and the skills to assess the

effectiveness of any storm water controls selected and installed to meet the requirements of this permit.

b. Schedule for Inspection of In-Water work.

1) Inspect In-Water areas Daily using the Inspection Form in Attachment E-4.

c. Procedures for Corrective Actions for In-Water Work

Procedures for Action When a Plume is Observed

1) If a Plume is observed outside the confined work area, the Contractor shall stop work immediately and investigate the cause of the problem.

2) If possible, isolate and contain the area where the plume is emanating from.

3) If the discharge poses an immediate threat to the public or environment call 911 immediately and follow the procedures in the project's Emergency Spill Response Plan.

4) HDOT will notify DOH CWB within 24 hours on the E-permitting Portal any instance of non-compliance.

5) The Contractor shall initiate work to fix the problem immediately after discovering the problem, and complete such work by the close of the next work day, if the problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance. In this section, immediately means the Contractor shall take all reasonable measures to minimize or prevent discharge of pollutants until a permanent solution is installed and made operational. If a problem is identified at a time in the day in which it is too late to initiate repair, initiation of repair shall begin on the following work day. When installation of a new pollution prevention control or a significant repair is needed, the Contractor shall install the new or modified control and make it operational, or complete the repair, by no later than 7 calendar days from the time of discovery. If it is infeasible to complete the installation or repair within 7 calendar days, the Contractor shall provide notice to the Engineer and document why it is infeasible to complete the installation or repair within the 7 calendar day timeframe and document the schedule for installing the storm water control(s) and making it operational as soon as practicable after the 7 calendar day timeframe and as agreed to by the Engineer. Where these actions result in changes to any of the pollution prevention controls or procedures documented in the IWPPP, modify the IWPPP accordingly. In-Water work shall not resume until repairs are completed. The Contractor will attach product specific maintenance practices in the IWPPP once the project is awarded.
Note: A plume is defined as an event in which a project discharge violates the State Water Quality Standards. See the Practitioner's Guide Sections 2.5 and 2.6 for further guidance.

Procedures for Action When a Storm Water Control or BMP is damaged or needs maintenance

1) If a discharge is occurring, follow the course of action above for when a plume is observed.

2) If no discharge is occurring, the Contractor shall initiate work to fix the problem immediately after discovering the problem, and complete such work by the close of the next work day, if the problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance. In this section, immediately means the Contractor shall take all reasonable measures to minimize or prevent discharge of pollutants until a permanent solution is installed and made operational. If a problem is identified at a time in the day in which it is too late to initiate repair, initiation of repair shall begin on the following work day. When installation of a new pollution prevention control or a significant repair is needed, the Contractor shall install the new or modified control and make it operational, or complete the repair, by no later than 7 calendar days from the time of discovery. If it is infeasible to complete the installation or repair within 7 calendar days, the Contractor shall provide notice to the Engineer and document why it is infeasible to complete the installation or repair within the 7 calendar day timeframe and document the schedule for installing the storm water control(s) and making it operational as soon as practicable after the 7 calendar day timeframe and as agreed to by the Engineer. Where these actions result in changes to any of the pollution prevention controls or procedures documented in the IWPPP, modify the IWPPP accordingly. The Contractor shall attach product specific maintenance practices in the IWPPP once the project is awarded.

d. Use the Corrective Action Report Form for any the following (HAR 10.2.1 and 10.4.1):

- *One of the prohibited discharges below is occurring or has occurred:*
  - *A plume is observed*
  - *Wastewater from washout of concrete*
  - *Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials*
  - *Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance*
  - *Soaps, solvents, or detergents used in vehicle and equipment washing*
  - *Toxic or hazardous substances from a spill or other release*
- *Corrective actions required by the Department of Health or EPA*

Note: Corrective actions must be included with the monthly compliance report in Attachment J and be submitted on the E-Permitting Portal.

e. Any inspection or maintenance checklists or other forms that will be used.

☒ *The Inspection Report Form provided in SWPPP/IWPPP Attachment E-4 will be used.*

☒ *The Corrective Action Report Form provided in SWPPP/IWPPP Attachment I will be used.*

7.2.13 – Staff Training

The SWPPP/IWPPP must include documentation that the required personnel were trained in accordance with the following:

Prior to the commencement of earth-disturbing activities or pollutant-generating activities, whichever occurs first, the permittee shall ensure that the following personnel understand the requirements of this permit and their specific responsibilities with respect to those requirements:

a. Personnel who are responsible for the design, installation, maintenance, and/or repair of storm water controls (including pollution prevention measures);

b. Personnel who are responsible for the application and storage of chemicals (if applicable);

c. Personnel who are responsible for conducting inspections as required in Part 4.1.1; and

d. Personnel who are responsible for taking corrective actions as required in Part 5.

The Contractor is responsible for ensuring that all activities on the site comply with the requirements of this permit. The Contractor is not required to provide or document formal training for subcontractors or other outside service providers, but must ensure that such personnel understand any requirements of the permit that may be affected by the work they are subcontracted to perform.

At a minimum, personnel must be trained to understand the following if related to the scope of their job duties (e.g., only personnel responsible for conducting inspections need to understand how to conduct inspections):
a. The location of all storm water controls on the site required by this permit, and how they are to be maintained;
b. The proper procedures to follow with respect to the permit's pollution prevention requirements; and
c. When and how to conduct inspections, record applicable findings, and take corrective actions.

The Engineer will discuss the roles and responsibilities of HDOT and the Contractor in the SWPPP/IWPPP during the Water Pollution, Dust, and Erosion Control Meeting.

☒ *The Contractor Certification is included in Attachment B.*

7.2.14 – Documentation of Compliance with Safe Drinking Water Act Underground Injection Control (UIC) Requirements for Certain Subsurface Storm Water Controls

Document any contact with the DOH Safe Drinking Water Branch if any of the following storm water controls are used at the site:

❑ *Infiltration trenches (if storm water is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system);*

❑ *Commercially manufactured precast or pre-built proprietary subsurface detention vaults, chambers, or other devices designed to capture and infiltrate storm water flow;*

❑ *Drywells, seepage pits, or improved sinkholes (if storm water is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system).*

If any of the boxes above are checked, attach documentation in SWPPP/IWPPP Attachment H.

These devices are not part of the design plans. If the Contractor elects to install any of these devices for erosion control purposes, the Contractor shall attach the necessary documentation once the project is awarded.

7.2.15 –Other State, Federal, or County Permits

Note: Army Corps Permit and 401 WQC are included previously.

Include in SWPPP/IWPPP Attachment H any of the following permits or approvals:

❑ *Attach the Drainage System Owner(s) Approval to Discharge, in Attachment N/A.*

❑ *Check this box if the Certifying Person is responsible for the overall operation and maintenance of the Separate Drainage System and approves of the storm water discharge into their drainage system. N/A.*

County-approved Erosion and Sediment Control Plan and/or Grading Permit

a. *Is a County-approved Erosion and Sediment Control Plan and/or Grading Permit, where applicable for the activity and schedule for implementing each control, required?*
   - ☑ *Yes. Please complete Section b below and skip Section c.*
   - ☐ *No. Please complete Section c below and skip Section b.*

b. *Is a copy County-approved Erosion and Sediment Control Plan and/or Grading Permit, as appropriate for the activity and schedule for implementing each control, attached?*
   - ☐ *Yes, see Attachment* _____
   - ☑ *No, the County-approved Erosion and Sediment Control Plan and/or Grading Permit, as appropriate for the activity and schedule for implementing each control, will be submitted at least 30 calendar days before the start of construction activities.*

c. *Please select and complete at least one (1) of the following items to demonstrate that a County-approved Erosion and Sediment Control Plan and/or Grading Permit, as appropriate for the activity and schedule for implementing each control, is not required.*
   - ☐ *See Attachment* _____ *for the County written determination.*
   - ☐ *Provide the County contact person information (Name, Department, Phone Number, and Date Contacted):* _____
   - ☐ *Other (specify):* _____

☑ *NPDES Permit or NGPC for Hydrotesting Activities (Form F)*

☑ *NPDES Permit or NGPC for Dewatering Activities (Form G)*

☑ *List other permits below (No copy necessary in Attachment H)*
- ☐ *Stream Channel Alteration Permit*
- ☐ *Conservation District Use Permit (CDUP)*
- ☒ *Other Permit(s) (<u>List below</u>)*

<u>POH-2005-00342 (pending); Special Management Permit (Resolution 278-CD1); U. S. Coast Guard Clearance (obtained); Section 106, National Historic Preservation Act, Consultation (completed); Section 7, Endangered Species Act, Consultation (completed); Section 4(f) Department of Transportation Act, Consultation (completed); Stream Channel Alteration Permit (exempt per Senate Bill 1016 SD1 HD1); Section 401 Water Quality Certification (exempt per Senate Bill 1016 SD1 HD1); HDOT Plan Review (pending); Grading Permit (pending); Coastal Zone Management Federal Consistency Review (pending)</u>

7.2.16 –Other Information As Requested by the Director

☒ *Does DOH require any additional information per section 7.2.16? If so attach in Attachment H.*

N/A

7.2.17 Certification of the CWB SWPPP/IWPPP

The certifying person and duly authorized representative shall meet the requirements of Hawaii Administrative Rules 11-55, Appendix A, Section 15.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____ *Date:* _____

Person Name: Jade T. Butay

Person Position Title: Director of Transportation

Person Company or Agency: Department of Transportation

Department: Department of Transportation

Division: Department of Transportation, Highways Division

Phone Number: (808) 587-2150 *Fax No.:* (808) 587-2167

Person Email: Jade.Butay@hawaii.gov

7.2.18 Post-Authorization Additions to the SWPPP/IWPPP

After the issuance of the NGPC include the following documents as part of the SWPPP/IWPPP in Attachment K:

a. A copy of the NPDES submitted to the department along with any correspondence exchanged between HDOT and DOH related to coverage under this permit;

b. A copy of the NGPC and all attachments included with the NGPC (an electronic copy easily available to the storm water team is acceptable)

c. A copy of the 401 WQC submitted to the department along with any correspondence exchanged between HDOT and DOH related to coverage under this permit;

d. A copy of the 401 WQC and all attachments included with the 401 WQC (an electronic copy easily available to the storm water team is acceptable)

7.4 Required SWPPP/IWPPP Modifications

Modify the SWPPP/IWPPP, including the site map(s), in response to any of the following conditions:

7.4.1.1.
Whenever new contractors become active in construction activities on the site, or changes are made to the construction plans, storm water control measures, pollution prevention measures, or other activities at the site that are no longer accurately reflected in the SWPPP/IWPPP. This includes changes made in response to corrective actions triggered under section 10. The permittee does not need to modify the SWPPP/IWPPP if the estimated dates in section 7.2.5. change during the course of construction;

7.4.1.2.
To reflect areas on the site map where operational control has been transferred (and the date of transfer) since initiating permit coverage;

7.4.1.3.
If inspections or investigations by site staff, or by local, state, or federal officials determine that SWPPP/IWPPP modifications are necessary for compliance with this permit;

7.4.1.4.
Where DOH determines it is necessary to impose additional requirements on the discharge, the following must be included in the SWPPP/IWPPP:

a. A copy of any correspondence describing such requirements; and

b. A description of the storm water control measures that will be used to meet such requirements.

7.4.1.5.
To reflect any revisions to applicable federal, state, and local requirements that affect the storm water control measures implemented at the site; and

7.4.2. Deadlines for SWPPP/IWPPP modifications.
The permittee shall complete required revisions to the SWPPP/IWPPP within 7 calendar days following the occurrence of any of the conditions listed in section 7.4.1.

7.4.3. SWPPP/IWPPP modification records.
The permittee shall maintain records showing the dates of all SWPPP/IWPPP modifications. The records must include a signature of the person authorizing each change (see section 7.2.17), date, and a brief summary of all changes. Log all changes and include relevant attachments in Attachment L.

7.4.4. Certification requirements.
All modifications made to the SWPPP/IWPPP consistent with section 7.4. must be certified, signed, and dated by the Certifying Person that meets the requirements in section 15 of appendix A, chapter 11-55 or the duly authorized representative that meets the requirements of 11-55-07(b). (See section 7.2.17)

7.4.5. Required notice to other contractors.
Upon determining that a modification to the SWPPP/IWPPP is required, if there are multiple contractors covered under this permit, the Contractor shall immediately notify any contractors who may be impacted by the change to the SWPPP/IWPPP.

13.0 Monthly Compliance Report Submittal Requirements

Submit to the Engineer a monthly compliance report, which shall include but is not limited to information as required in the NGPC, any updates to NOI information already on file with DOH, and any incidences of non-compliance and corrective actions. Submit this information within 2 working days of the end of the month. The monthly compliance report shall be kept on-site and available by the end of the next business day when requested by DOH. Upon DOH receiving EPA's Cross-Media Electronic Reporting Regulation (CROMERR), the monthly compliance reports shall be submitted through the e-Permitting Portal. Any comments provided by DOH shall be answered in the time specified and to the satisfaction of DOH. If the activity is in compliance and none of the information on file with DOH requires updating, or there were no incidences of non-compliance, preparation of the monthly compliance information is still required which states that there were "no changes, updates, or any incidences of non-compliance to report.

Note: EPA's Cross-Media Electronic Reporting Regulation (CROMERR) sets performance-based, technology-neutral standards for systems that states, tribes, and local governments use to receive electronic reports from facilities they regulate under EPA-authorized programs and requires program modifications or revisions to incorporate electronic reporting. CROMERR also addresses electronic reporting directly to EPA.

☒ *HDOT's form in Attachment J will be used.*

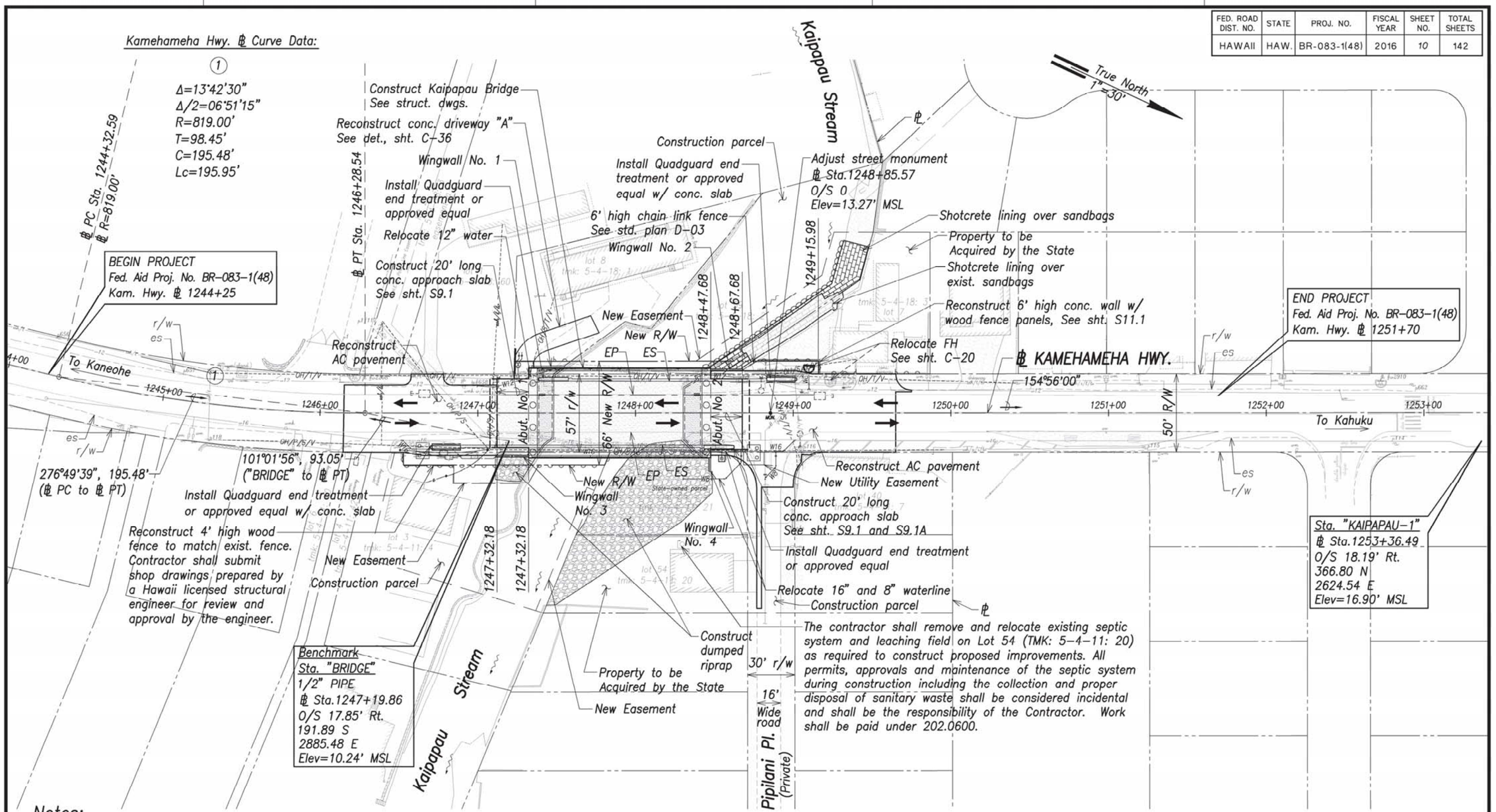
SWPPP/IWPPP Attachments

Attachment A – ***Contractor/Sub-Contractor Control Maps, Property Boundary Maps, State Waters and BMP Maps, and BMP Details (SWPPP/IWPPP Sections 7.2.4, 7.2.6.1,7.2.6.2 to 7.2.6.8 & 7.2.10)***

MAPS SHOWING LOCATIONS OF CONTRACTOR/SUB-CONTRACTOR CONTROL, PROJECT SITE MAPS, CONSTRUCTION PLANS/DRAWINGS, BMP LOCATION MAPS, AND BMP DETAILS

Attachment A-1
Erosion and Sediment Control Plan Sheets

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2016	10	142



Notes:

1. See sheet C-10 for construction phasing and sheet C-29 for 16" waterline phasing.
2. The Contractor shall comply with Environmental Permit Conditions.
3. Kaipapau Stream is able to convey a 2-year storm, 1-hour storm. The stream frequently overtops. It is critical that the Contractor shall ensure that the flow capacity of the Kaipapau Stream is not reduced during a storm event. Equipment and materials within the stream during a storm event shall be removed immediately. Final damages that occur due to the contractor equipment and materials blocking flow during a rain storm will be the contractor's responsibility.
4. The Contractor shall construct a temporary detour road, temporary detour waterline, and other temporary improvements. See sht. C-10.

GENERAL SITE PLAN

SCALE 1"=30'

Graphic Scale:

1" = 30' 30' 15' 0 30' 60'

Scale in Feet

APPROVED:

Manager and Chief Engineer, BWS (for work affecting BWS facilities State R/W & BWS easements only) DATE

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

4/30/16

SIGNATURE LIC. EXPIRATION

R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL SITE PLAN

Kamehameha Highway
Kaipapau Stream Bridge Replacement
Federal Aid Project No. BR-083-1(48)

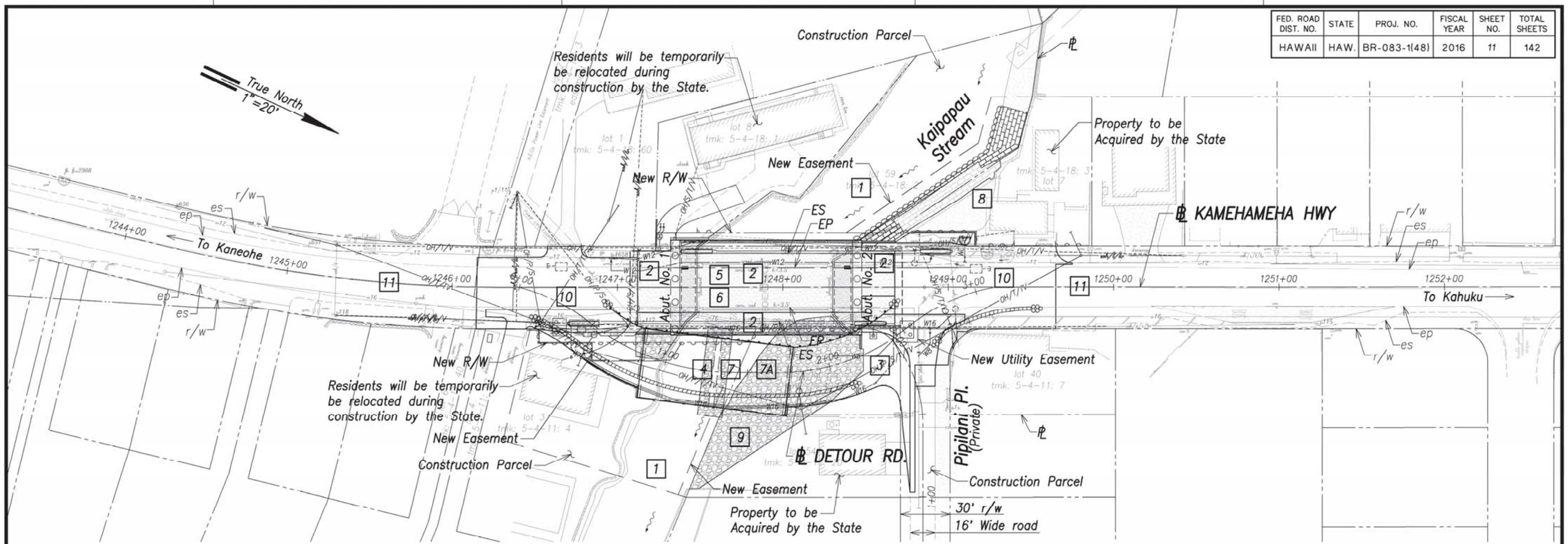
Scale: As Noted Date: April 2015

SHEET No. C-9 OF SHEETS

ORIGINAL PLAN
SURVEY PLOTTED BY DATE
DRAWN BY RST
TRACED BY
DESIGNED BY WC
NOTE BOOK
QUANTITIES BY
CHECKED BY
No.

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2016	11	142



OVERALL CONSTRUCTION PHASING PLAN

Scale: 1"=20'

Phasing Notes:

1. For electrical phasing see electrical drawings.
2. For structural phasing see structural drawings.
3. The Contractor shall perform work to ensure continuous traffic and pedestrian flow.
4. Phasing indicated shall not be modified unless approved in writing by the Engineer.
5. The Contractor shall ensure that water and other utility line construction are fully coordinated with Board of Water Supply and Private Utility Companies.
6. All temporary measures required shall be considered incidental to the various items of work.
7. For water line phasing see sht. C-28 and C-29.

Suggested Construction Sequence of Major Constuction Items:

1. Install best management practices/erosion control measures. See Notes sheets and sht. C-17.
2. Install temporary 12" waterline and relocate existing 12" water line. See 12" Waterline Plan and Profile, sht. C-20. Relocate electrical utilities. See electrical drawings for temporary and permanent electrical relocation phasing.
3. Construct trial and load test drilled shafts and perform load test. See structural drawings.
4. Construct detour roadway and temporary bridge. See sht. C-22 to C-27 and stuctural drawings.
5. Demolish existing Kaipapau Stream bridge. See sht. C-15 and structural drawings. Expose existing 16" water line jacket and concrete support system.
6. Construct Phase 1 new Kaipapau Stream bridge. See Construction Sequence, Phase 1 of structural drawings, shts. S0.7, S0.7A, and S0.7B.
7. Partially remove Detour roadway and temporary bridge. Construct temporary pavement transitions, signing and pavement markings. Temporary work shall be considered incidental to the various items of work. Construct Phase 2 of new Kaipapau Stream bridge. See Construction Sequence, Phase 2 of structural drawings, shts. S0.8, S0.8A, and S0.8B..

7A. Remove remainder of Detour roadway and temporary bridge.

8. Construct sand bags and shotcrete lining along north bank, upstream of Kaipapau Stream bridge. See sht. C-18.
9. Construct dumped riprap along north and south bank, downstream of Kaipapau Stream bridge. See sht. C-16 and C-18.
10. Construct AC pavement. See sht. C-16. The contractor shall submit a pavement phasing plan and schedule for Engineer's review and approval.
11. Construct final signing and pavement markings. See sht. C-21.

Graphic Scale:
1" = 20' 20' 10' 0 20' 40'
Scale in Feet

ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY RST
TRACED BY
DESIGNED BY WC
QUANTITIES BY
CHECKED BY

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4/30/16
SIGNATURE LIC. EXPIRATION
R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

OVERALL CONSTRUCTION PHASING PLAN

Kamehameha Highway
Kaipapau Stream Bridge Replacement
Federal Aid Project No. BR-083-1(48)

Scale: As Noted Date: April 2015

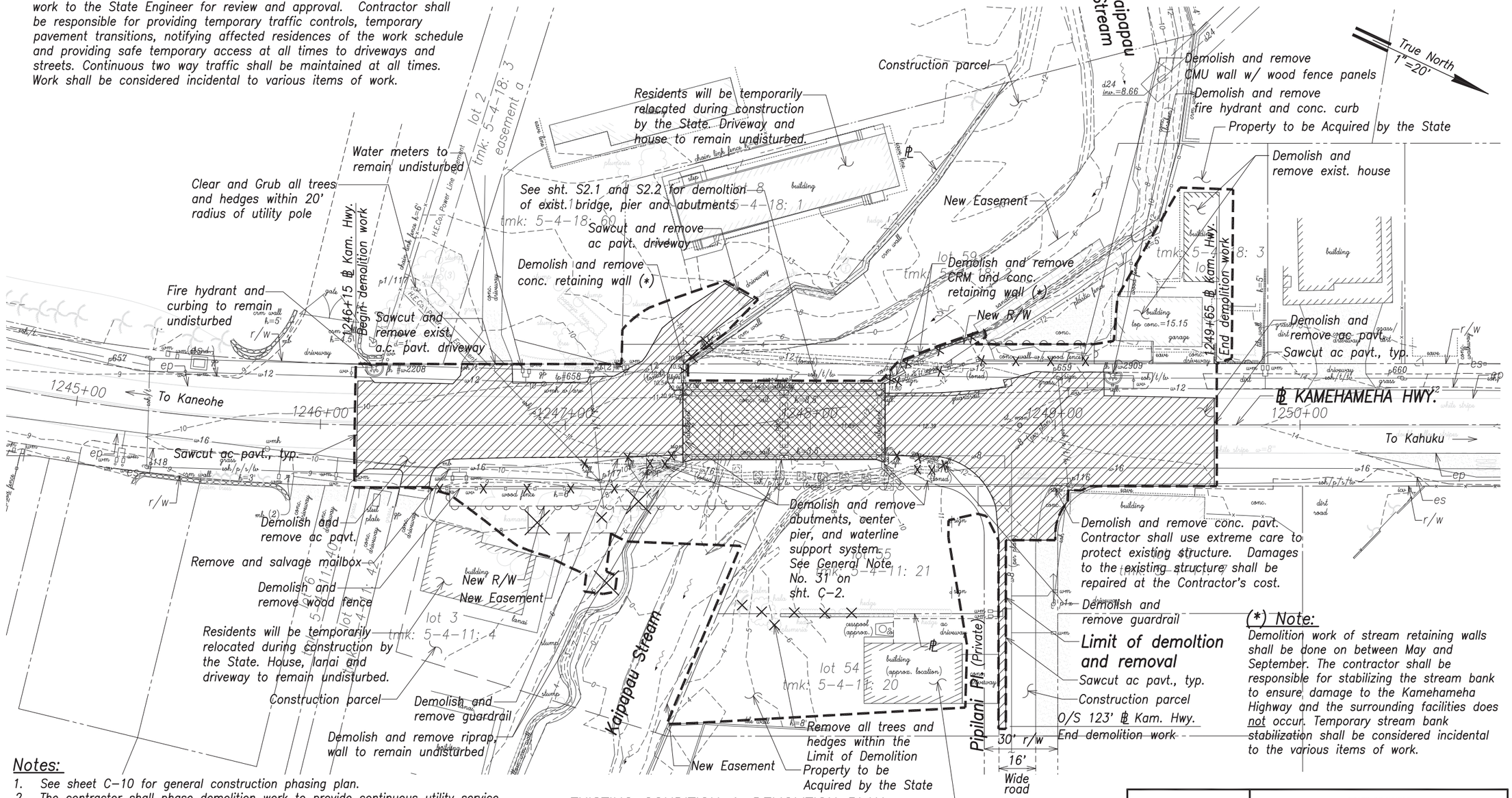
SHEET No. C-10 OF SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2016	16	142

Phasing Note:

Contractor shall submit a phasing plan and schedule for demolition work to the State Engineer for review and approval. Contractor shall be responsible for providing temporary traffic controls, temporary pavement transitions, notifying affected residences of the work schedule and providing safe temporary access at all times to driveways and streets. Continuous two way traffic shall be maintained at all times. Work shall be considered incidental to various items of work.



Notes:

1. See sheet C-10 for general construction phasing plan.
2. The contractor shall phase demolition work to provide continuous utility service.
3. See C-20 and C-32 for waterline demolition work.
4. See C-21 for signing and striping demolition work.
5. See electrical drawings for electrical demolition and temporary relocation work.
6. See structural drawings for structural demolition work.
7. Traffic controls, detour, and best management practices shall be in place prior to the start of demolition work.
8. The contractor shall demolish and remove everything within the Limit of Demolition and Removal unless otherwise indicated to remain.
9. See General Note No. 30 on sht. C-2.

EXISTING CONDITION & DEMOLITION PLAN

Scale: 1"=20'

Bridge Note:

The contractor shall perform photographic documentation of the existing Kaipapau Stream bridge acceptable to the State Historic Preservation Division (SHPD) prior to the start of bridge demolition. Work shall be considered incidental to the various items of work.

Graphic Scale:

1" = 20' 20' 10' 0 20' 40'

Scale in Feet

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY RSY	
NOTE BOOK	TRACED BY	
	DESIGNED BY WC	
No.	QUANTITIES BY	
	CHECKED BY	

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EXISTING CONDITION & DEMOLITION PLAN

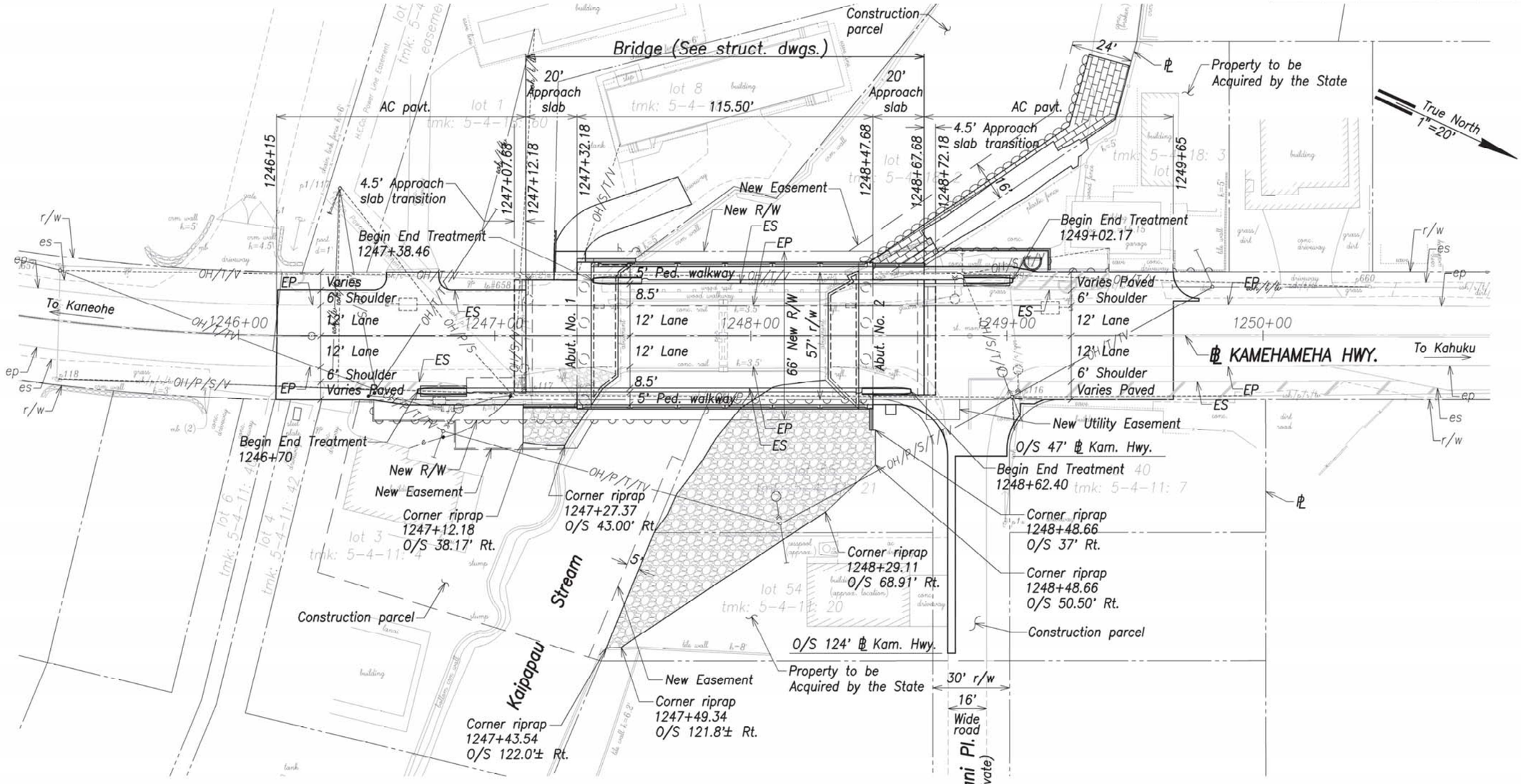
Kamehameha Highway
Kaipapau Stream Bridge Replacement
Federal Aid Project No. BR-083-1(48)

Scale: As Noted Date: April 2015

SHEET No. C-15 OF SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2016	17	142



SITE LAYOUT PLAN
SCALE 1"=20'

Pavement Note:

Contractor shall submit a pavement phasing plan and schedule for the AC pavement work to the State Engineer for review and approval. Contractor shall be responsible for providing temporary traffic controls, temporary pavement transitions, notifying affected residences of the work schedule and providing safe temporary access at all times to driveways and streets. Continuous two way traffic shall be maintained at all times. Work shall be considered incidental to various items of work.

Legend:

Dumped Riprap

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAFT BY RST	
	TRACED BY	
NOTE BOOK	DESIGNED BY MC	
	QUANTITIES BY	
No.	CHECKED BY	

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SITE LAYOUT PLAN

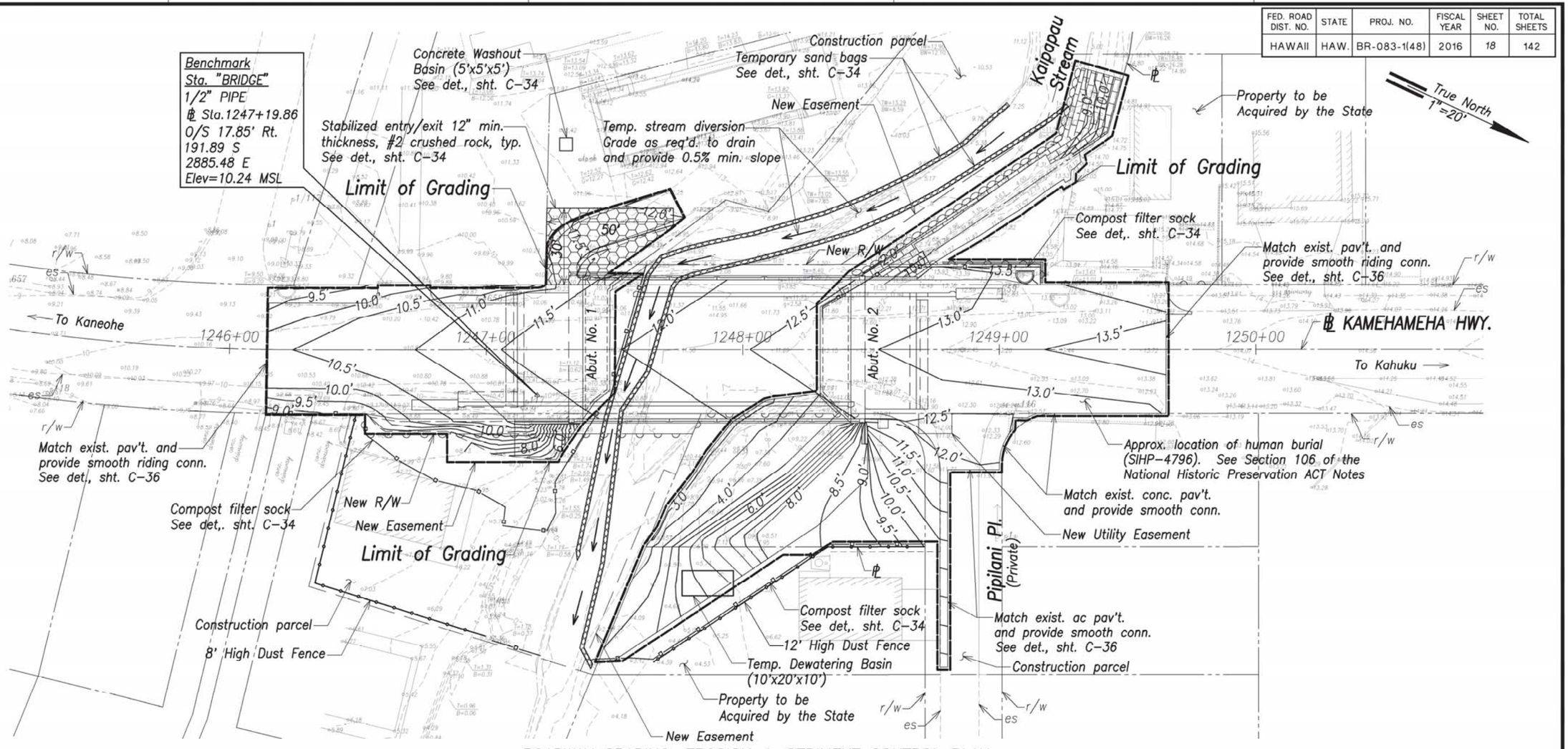
Kamehameha Highway
Kaipapau Stream Bridge Replacement
Federal Aid Project No. BR-083-1(48)

Scale: As Noted Date: April 2015

SHEET No. C-16 OF SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2016	18	142



ROADWAY GRADING, EROSION & SEDIMENT CONTROL PLAN

Scale: 1"=20'

Legend:

- Exist. Ground Contour
- Finished Grade Contour
- Limit of Grading
- Dust Fence
- Compost Filter Sock
- Top of Bank
- Bottom of Bank

Fill Condition Cut Condition

- Drainage Flow Direction
- Stabilized Entry/Exit

Notes:

1. For additional finished grade elevations, see sht. C-19.
2. For bridge deck elevations, see structural drawings.
3. For grading work under bridge, see sht. C-18.
4. The contractor shall be responsible for obtaining grading permit from the City and County of Honolulu, Department of Planning and Permitting.

Graphic Scale:

1" = 20' 20' 10' 0 20' 40'

Scale in Feet

ORIGINAL PLAN | NOTE BOOK | No. | SURVEY PLOTTED BY | DRAFT BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE

RMTC JOB NO. : 1-19548-0E

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

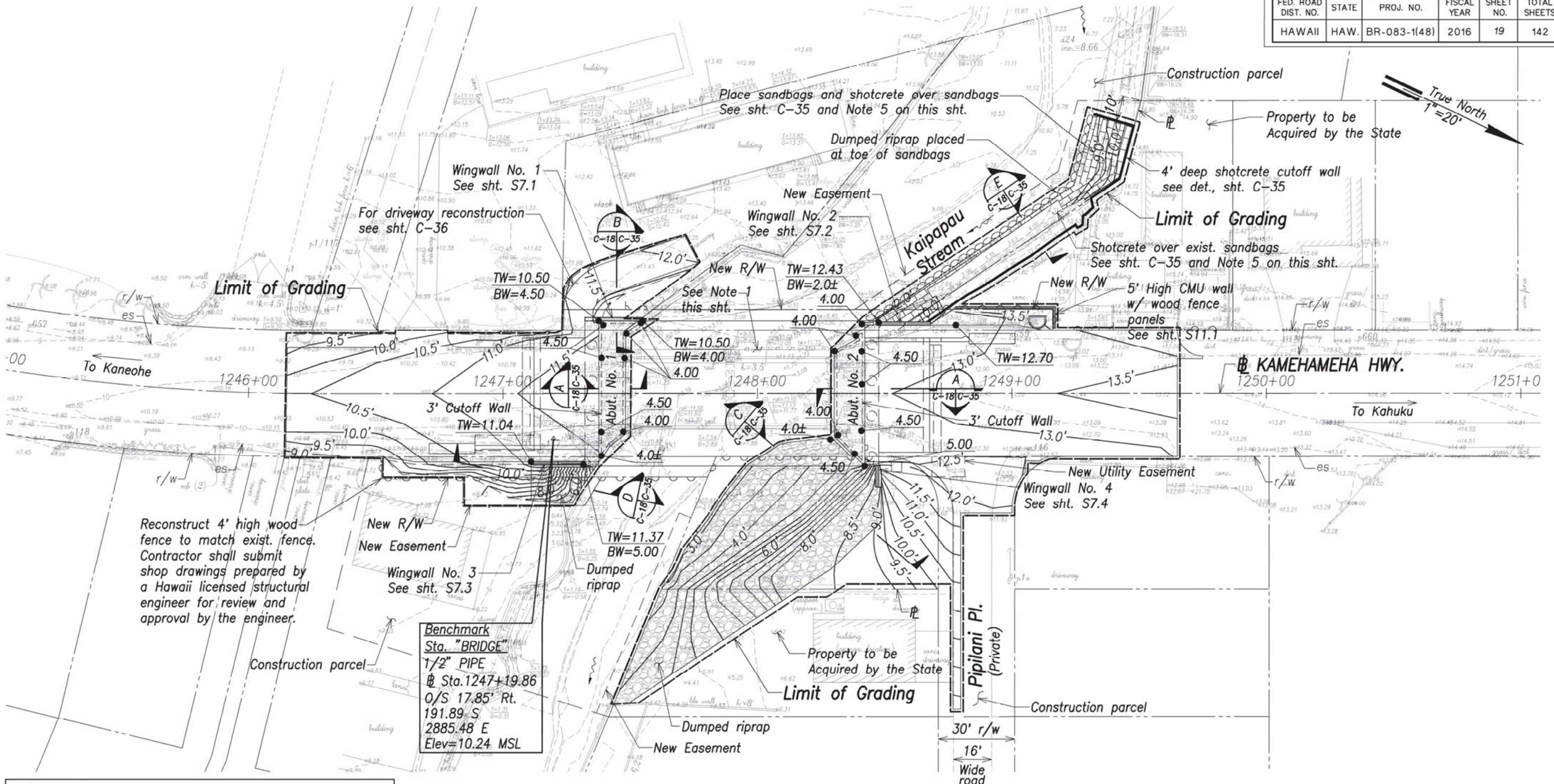
ROADWAY GRADING, EROSION & SEDIMENT CONTROL PLAN

Kamehameha Highway
Kaipapau Stream Bridge Replacement
Federal Aid Project No. BR-083-1(48)

Scale: As Noted Date: April 2015

SHEET No. C-17 OF SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2016	19	142



STREAM SITE & GRADING PLAN

Scale: 1"=20'

Legend:

- 4.00 — Finished spot elevation
- TW=10.79 / BW=4.50 — Top of wall spot elevation / Bottom of wall spot elevation
- 10 — Exist. Ground Contour
- 10.0' — Finished Grade Contour
- Top of Bank
- Bottom of Bank
- Fill Condition / Cut Condition
- Drainage Flow Direction

Notes:

1. For bridge deck elevations, see sheet S1.6.
2. The contractor shall phase work as required to construct each phase of improvements.
3. All temporary measures required shall be considered incidental to various items of work.
4. See sheet C-17 for temporary stream diversion work.
5. Shotcrete and wall construction shall be done immediately (within one week) after the demolition of the stream walls.

Graphic Scale:

1" = 20' — 20' 10' 0 20' 40' — Scale in Feet

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE | NOTE BOOK | No.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STREAM SITE & GRADING PLAN

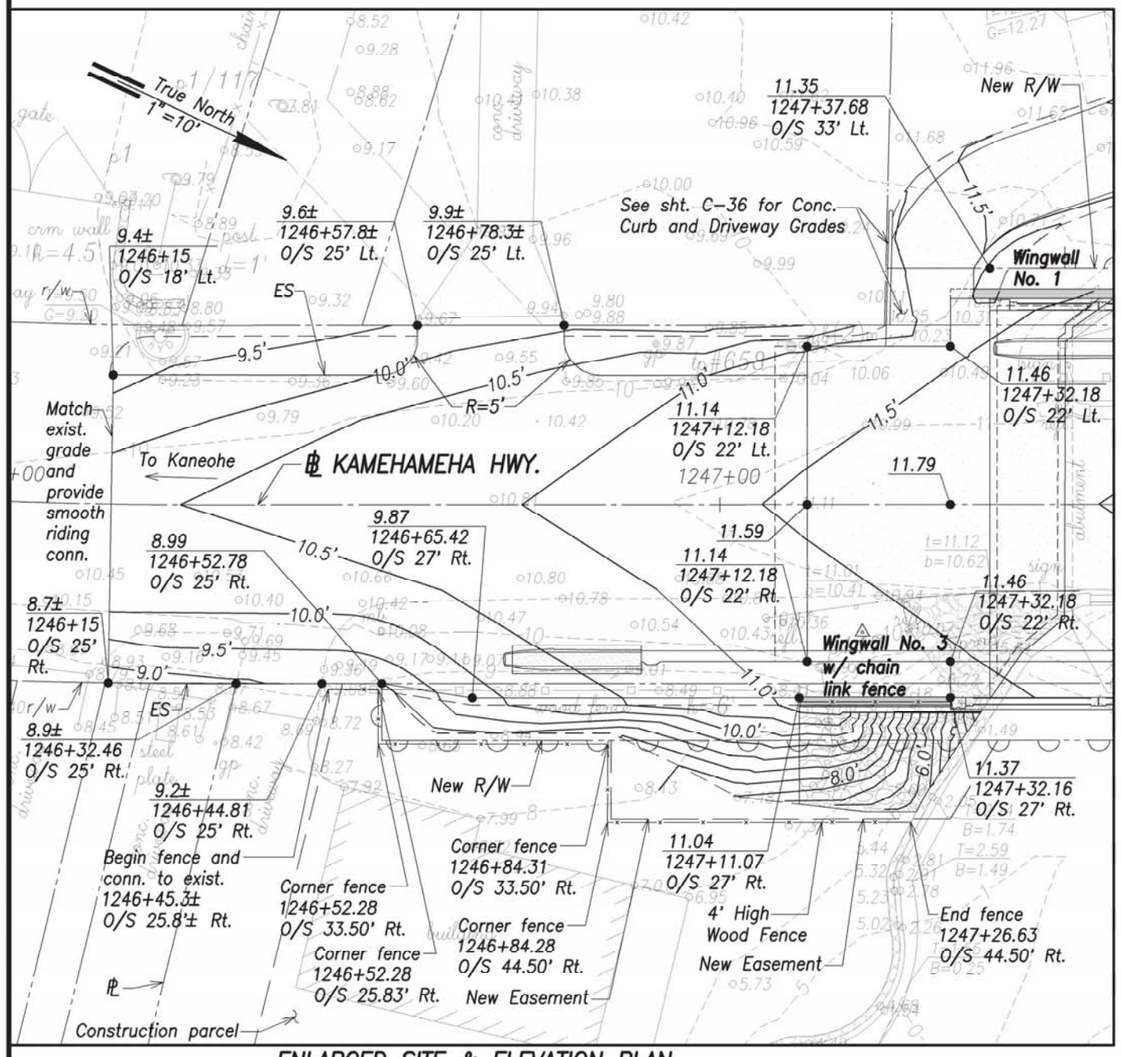
Kamehameha Highway
Kaipapau Stream Bridge Replacement
Federal Aid Project No. BR-083-1(48)

Scale: As Noted — Date: April 2015

SHEET No. C-18 OF SHEETS

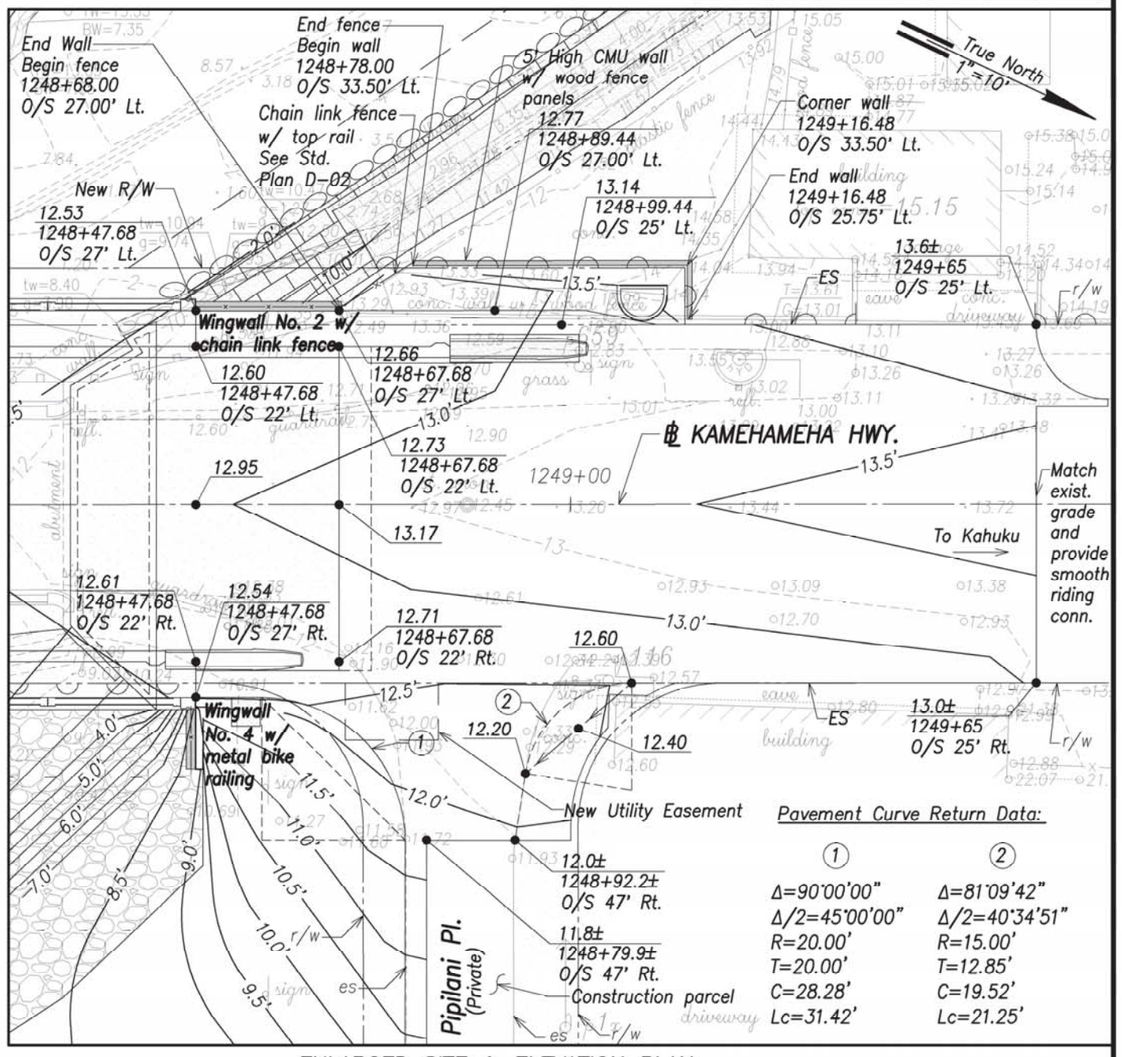
RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2016	20	142



ENLARGED SITE & ELEVATION PLAN (KANEOHE SIDE)

Scale: 1"=10'



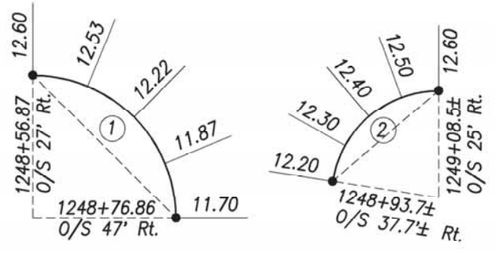
Pavement Curve Return Data:

①	②
Δ=90°00'00"	Δ=81°09'42"
Δ/2=45°00'00"	Δ/2=40°34'51"
R=20.00'	R=15.00'
T=20.00'	T=12.85'
C=28.28'	C=19.52'
Lc=31.42'	Lc=21.25'

ENLARGED SITE & ELEVATION PLAN (KAHUKU SIDE)

Scale: 1"=10'

Pipilani Place
Pavement Curve Return Grades:



Legend:

- Exist. Ground Contour
- Finished Grade Contour
- 10.00 / 2+37.40 / O/S 31.3' Rt. — Finished Grade Elevation
- ℄ Station / ℄ Offset

Graphic Scale:

1" = 10'

10' 5' 0 10' 20'

Scale in Feet

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAFT BY	RBY
	TRACED BY	
NOTE BOOK	DESIGNED BY	WC
	QUANTITIES BY	
No.	CHECKED BY	

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ENLARGED SITE & ELEVATION PLAN

Kamehameha Highway
Kaipapau Stream Bridge Replacement
Federal Aid Project No. BR-083-1(48)

Scale: As Noted Date: April 2015

SHEET No. C-19 OF SHEETS

RMTC JOB NO. : 1-19548-0E

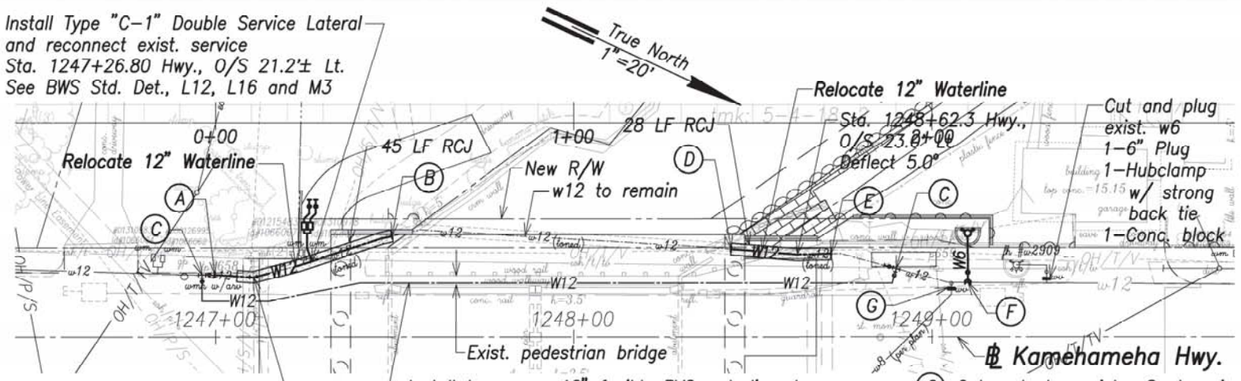
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2016	21	142

(A) Sta. 1246+99.7± Hwy.,
O/S 17.5'± Lt.
=Sta. 0+00.0± 12" W.L.
Deflect 4.0°

(B) Connect to exist. w12
Sta. 1247+49.3± Hwy.,
O/S 28.2'± Lt.
=Sta. 0+51.0± 12" W.L.
Materials for conn.
1–12" Sleeve, 12" long
8± LF 12" D.I.P., Cl. 52
Temp. for testing
1–12" Cap w/4" C.O.
1–Conc. block
Contractor to verify
invert and location

(C) Connect to exist. w12
Sta. 1246+96± Hwy.,
O/S 17.4'± Lt. and
Sta. 1248+90± Hwy.,
O/S 19.2'± Lt.
Materials for conn.
1–12" x 12" Tee
2–12" GV, 150#
2–Valve box w/ cover
1–Conc. block w/
struct. struts
Temp. for testing
1–12" Cap w/4" C.O.
1–Conc. block
Contractor to verify
invert and location

Install Type "C–1" Double Service Lateral and reconnect exist. service
Sta. 1247+26.80 Hwy., O/S 21.2'± Lt.
See BWS Std. Det., L12, L16 and M3



Sta. 1247+10.50 Hwy.,
O/S 16.70' Lt.
=Sta. 0+10.55 12" W.L.
1–12" 1/8 Bend (H & TV)
1–Conc. block

Install temporary 12" fusible PVC waterline. Lay temporary 12" waterline on existing pedestrian walkway. In areas outside of the existing pedestrian walkway and provide temporary ADA accessible route, place temporary waterline in shallow open trench and cover with steel plates. See Temporary Waterline Notes on this sheet.

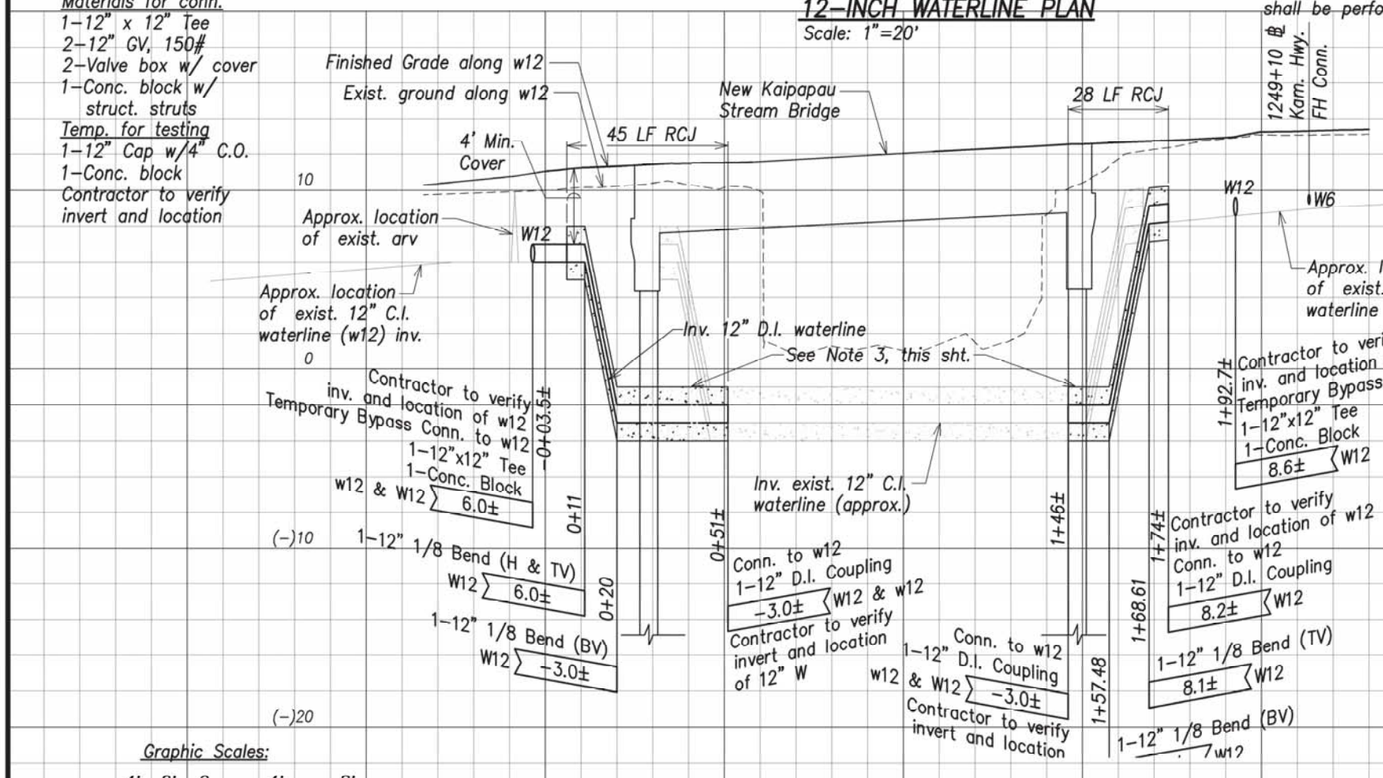
(D) Connect to exist. w12
Sta. 1248+43.9± Hwy.,
O/S 24.6'± Lt.
=Sta. 1+46.0± 12" W.L.
Materials for conn.
1–12" Sleeve, 12" long
8± LF 12" D.I.P., Cl. 52
Temp. for testing
1–12" Cap w/4" C.O.
1–Conc. block
Contractor to verify
invert and location

(E) Connect to exist. w12
Sta. 1248+71.9± Hwy.,
O/S 23.3'± Lt.
=Sta. 1+74± 12" W.L.
Materials for conn.
1–12" Sleeve, 12" long
8± LF 12" D.I.P., Cl. 52
1–12" 1/8 Bend (TV)
Temp. for testing
1–12" Cap w/4" C.O.
1–Conc. block
Contractor to verify
invert and location

(F) FH Connection
Sta. 1249+10 Hwy.
O/S 15.1'± Lt.
1–12" x 6" Tapping Tee (MJ x FE)
1–6" 1/4 Bend (BV)
1–6" GV (MJ x FE), Cl. 150
1–Valve box
1–FH (Ht.=6'–4")
1–FH Extension piece
1–FH Marker
1–FH Curb guard
14 LF 6" D.I.P. Cl. 52
1–Conc. block
1–Conc. block w/ struct. struts
See BWS Std. Det. FH4 and FH11
For Profile, see sht. C–37
Temp. for Testing
1–6" cap w/ 2–1/2" C.O.
1–Conc. block

(G) Cut and plug exist. w8 at main.
Remove valve and box. Salvage frame and cover.
1–8" Plug
1–Hubclamp w/ strong back tie
1–Conc. block
See sht. C–29 for Phase when work shall be performed.

12–INCH WATERLINE PLAN
Scale: 1"=20'



Graphic Scales:
1" = 4' 4' 2' 0 4' 8' Scale in Feet
1" = 20' 20' 10' 0 20' 40' Scale in Feet

12–INCH WATERLINE PROFILE
Scales: 1"=20' Horiz.
1"=4' Vert.

Notes:
1. The existing waterlines shown on these plans were located using record drawings and toning information from the Board of Water Supply. The contractor shall make an independent check by probing the waterlines and coordinating with the Board of Water Supply to ascertain the exact locations of the waterlines. Any discrepancies shall be immediately brought to the attention of the Engineer prior to any work on the water system.
2. Demolish and remove existing waterline as required to construct waterline.
3. Dewatering for removal of water system shall be considered inciental to Item No. 202.0520.
4. Dewatering for installation of the temporary and pernanent water system shall be considered incidental to Item No. 624.1003 Water Systems. No additional compensation will be provided for dewatering.

Temporary Waterline Notes:
1. The temporary waterline shall be constructed, tested and in–service prior to starting construction of permanent water system. The contractor shall coordinate with the Board of Water Supply (BWS) for shut–down of the 12–inch waterline. The maximum down time shall be six (6) hours unless otherwise approved by the BWS. The contractor shall be responsible for providing advanced notification to all users affected by the waterline shut–down.
2. The temporary waterline shall not be in–service for more than two (2) months unless otherwise approved by the BWS.
3. Contractor to provide all fittings, bends as required and install temporary 3/4" ARV in cage at high point of temporary waterline
4. The contractor shall be responsible for providing safe temporary pedestrian access at all times that meets ADA requirements.
5. The contractor shall be responsible for providing traffic controls during temporary waterline installation.

APPROVED:

Manager and Chief Engineer, BWS DATE
(for work affecting BWS facilities
State R/W & BWS easements only)

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

12–INCH WATERLINE PLAN & PROFILE

Kamehameha Highway
Kaipapau Stream Bridge Replacement
Federal Aid Project No. BR–083–1(48)

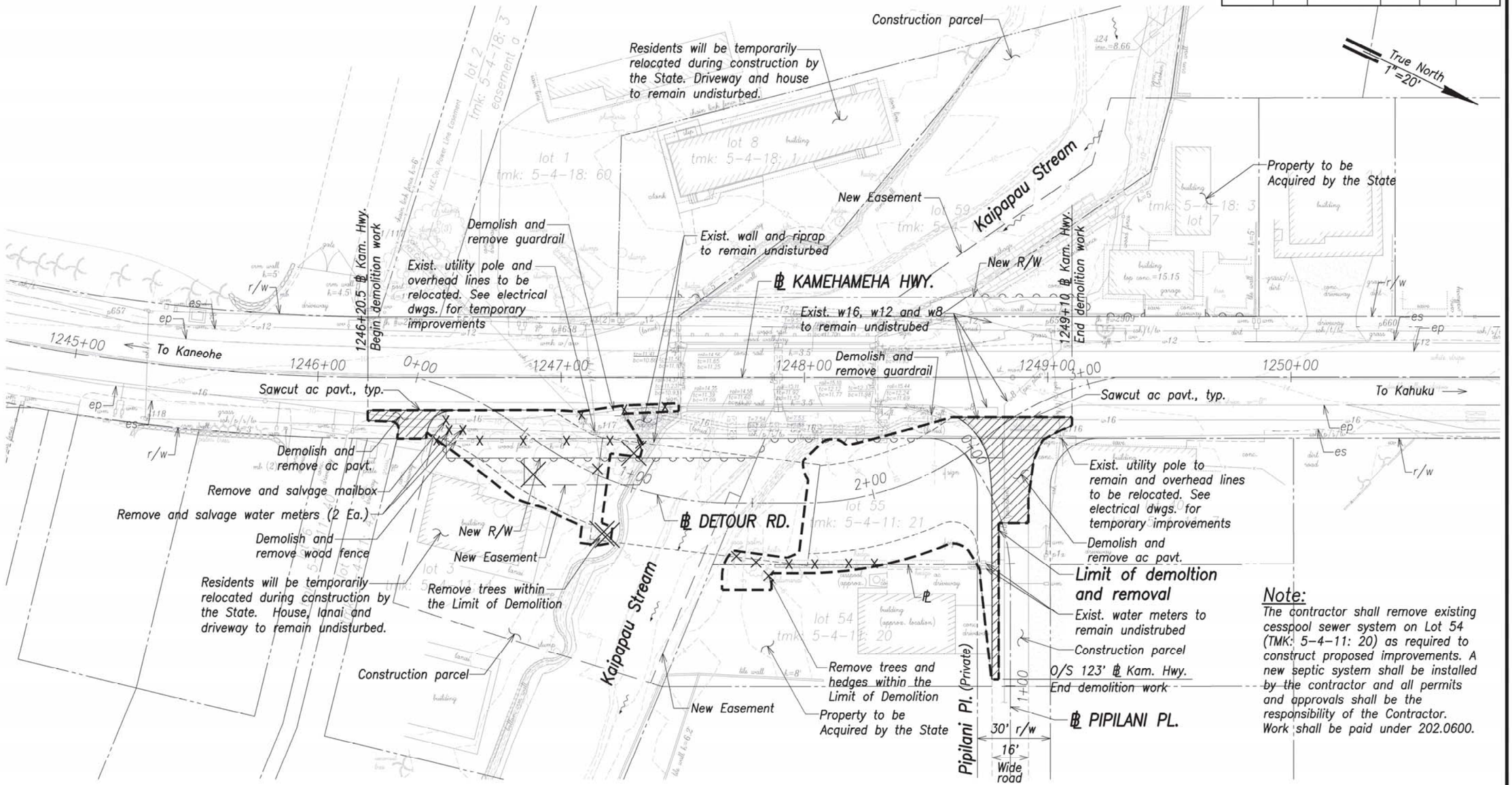
Scale: As Noted Date: April 2015

SHEET No. C–20 OF SHEETS

ORIGINAL PLAN | NOTE BOOK | No. | SURVEY PLOTTED BY RST | DRAWN BY | TRACED BY WC | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE

RMTC JOB NO. : 1–19548–0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2016	25	142



Note:
The contractor shall remove existing cesspool sewer system on Lot 54 (TMK: 5-4-11: 20) as required to construct proposed improvements. A new septic system shall be installed by the contractor and all permits and approvals shall be the responsibility of the Contractor. Work shall be paid under 202.0600.

DETOUR ROAD – EXISTING CONDITION & DEMOLITION PLAN

Scale: 1"=20'

Graphic Scale:
1" = 20' 20' 10' 0 20' 40'
Scale in Feet

ORIGINAL PLAN	SURVEY PLOTTED BY ____ DATE
	DRAWN BY ____ RSY
NOTE BOOK	TRACED BY ____
	DESIGNED BY ____ WC
No.	QUANTITIES BY ____
	CHECKED BY ____

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DETOUR RD. – EXISTING CONDITION & DEMOLITION PLAN

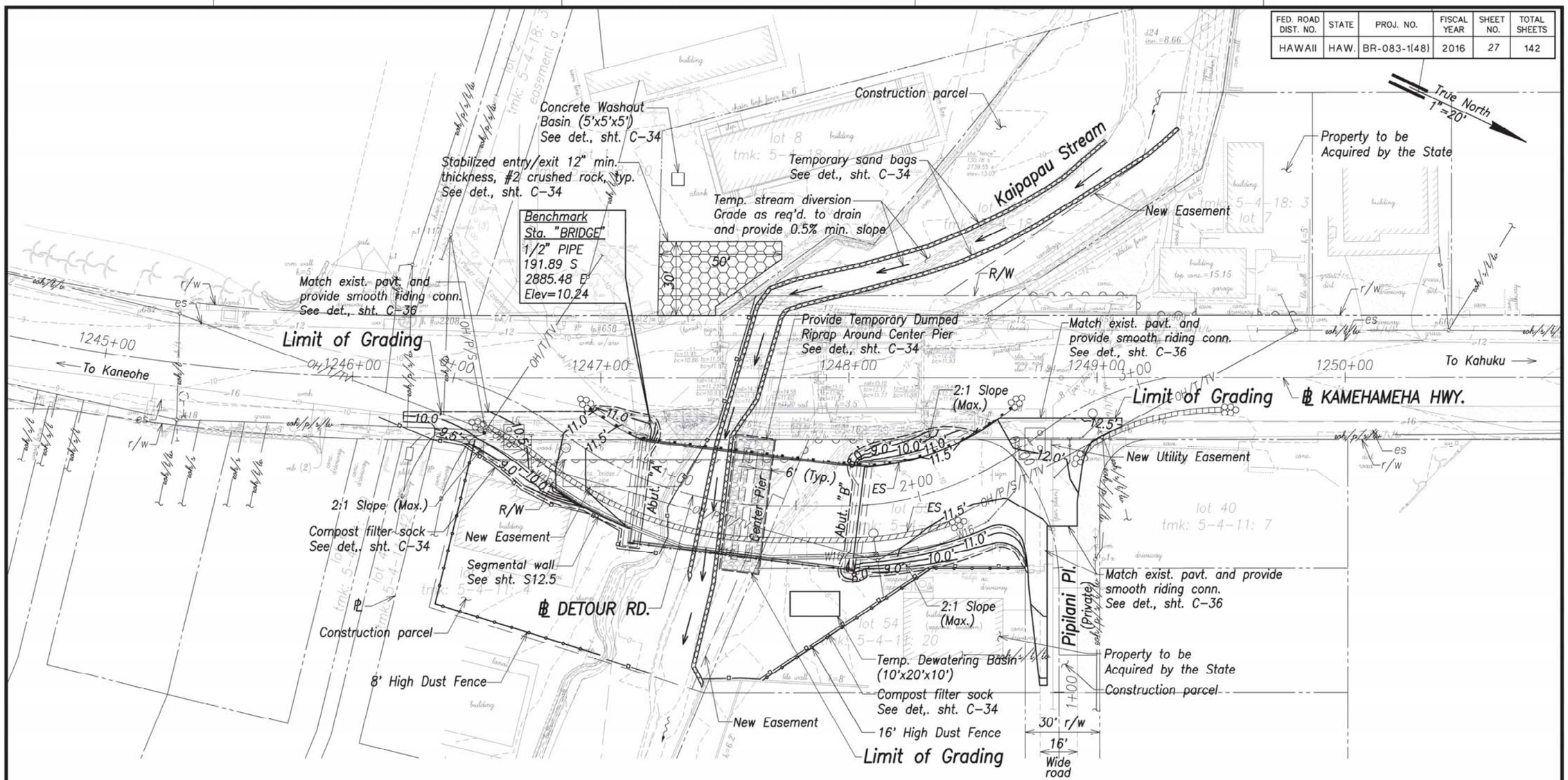
Kamehameha Highway
Kaipapau Stream Bridge Replacement
Federal Aid Project No. BR-083-1(48)

Scale: As Noted Date: April 2015

SHEET No. C-24 OF SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2016	27	142



DETOUR ROAD – GRADING, EROSION AND SEDIMENT CONTROL PLAN

Scale: 1"=20'

Legend:

- 10 — Exist. Ground Contour
- 10.0' — Finished Grade Contour
- Limit of Grading
- Dust Fence
- Compost Filter Sock
- Drainage Flow Direction
- Stabilized Entry/Exit

SURVEY PLOTTED BY — DATE
DRAWN BY — KST
TRACED BY
DESIGNED BY — WC
QUANTITIES BY
CHECKED BY
ORIGINAL PLAN
NOTE BOOK
No.

Graphic Scale:
1" = 20' — 20' 10' 0 20' 40' — Scale in Feet

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4/30/16
SIGNATURE — L.C. EXPIRATION
R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DETOUR ROAD-GRADING, EROSION AND SEDIMENT CONTROL PLAN

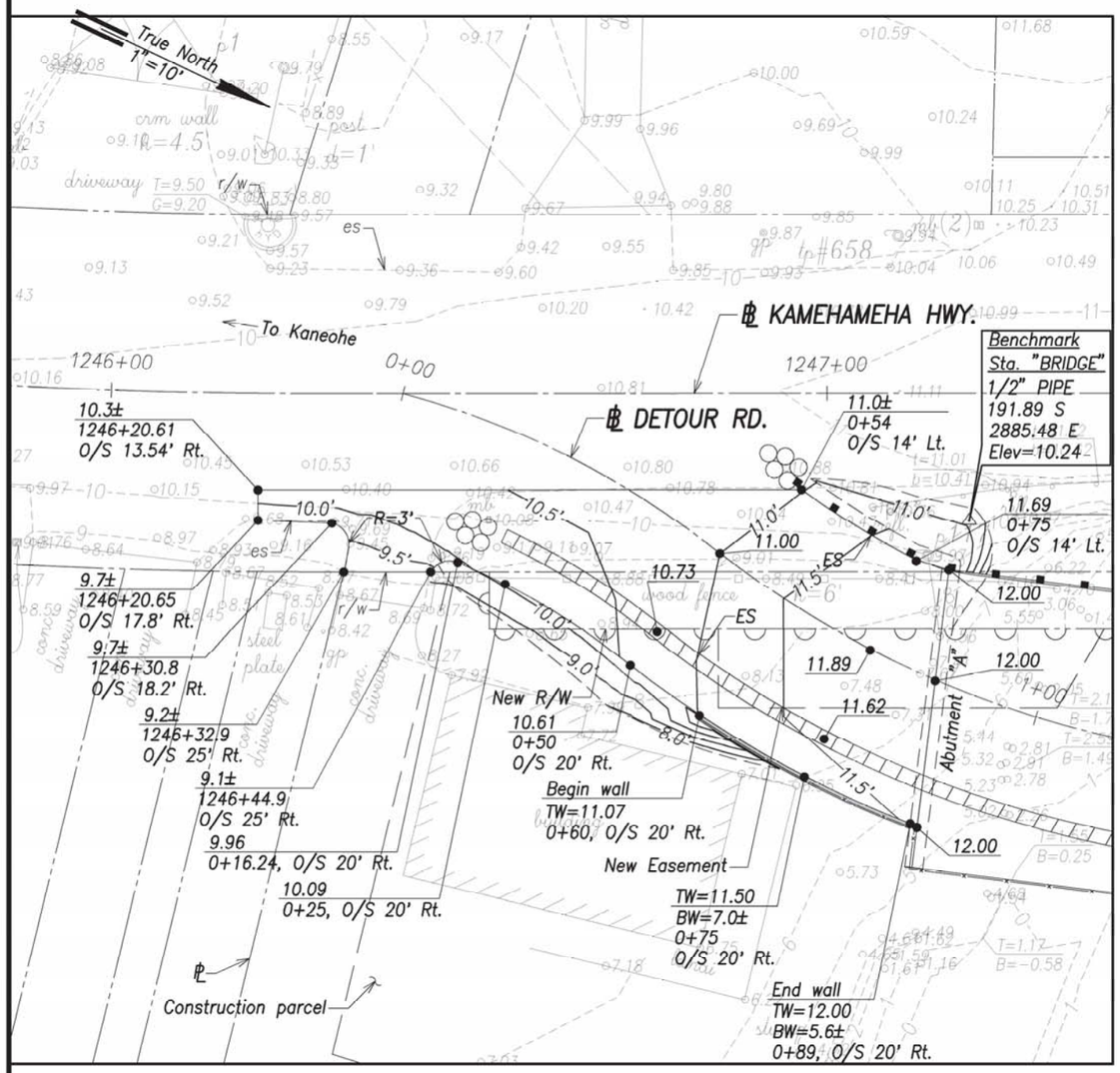
Kamehameha Highway
Kaipapau Stream Bridge Replacement
Federal Aid Project No. BR-083-1(48)

Scale: As Noted — Date: April 2015

SHEET No. C-26 OF SHEETS

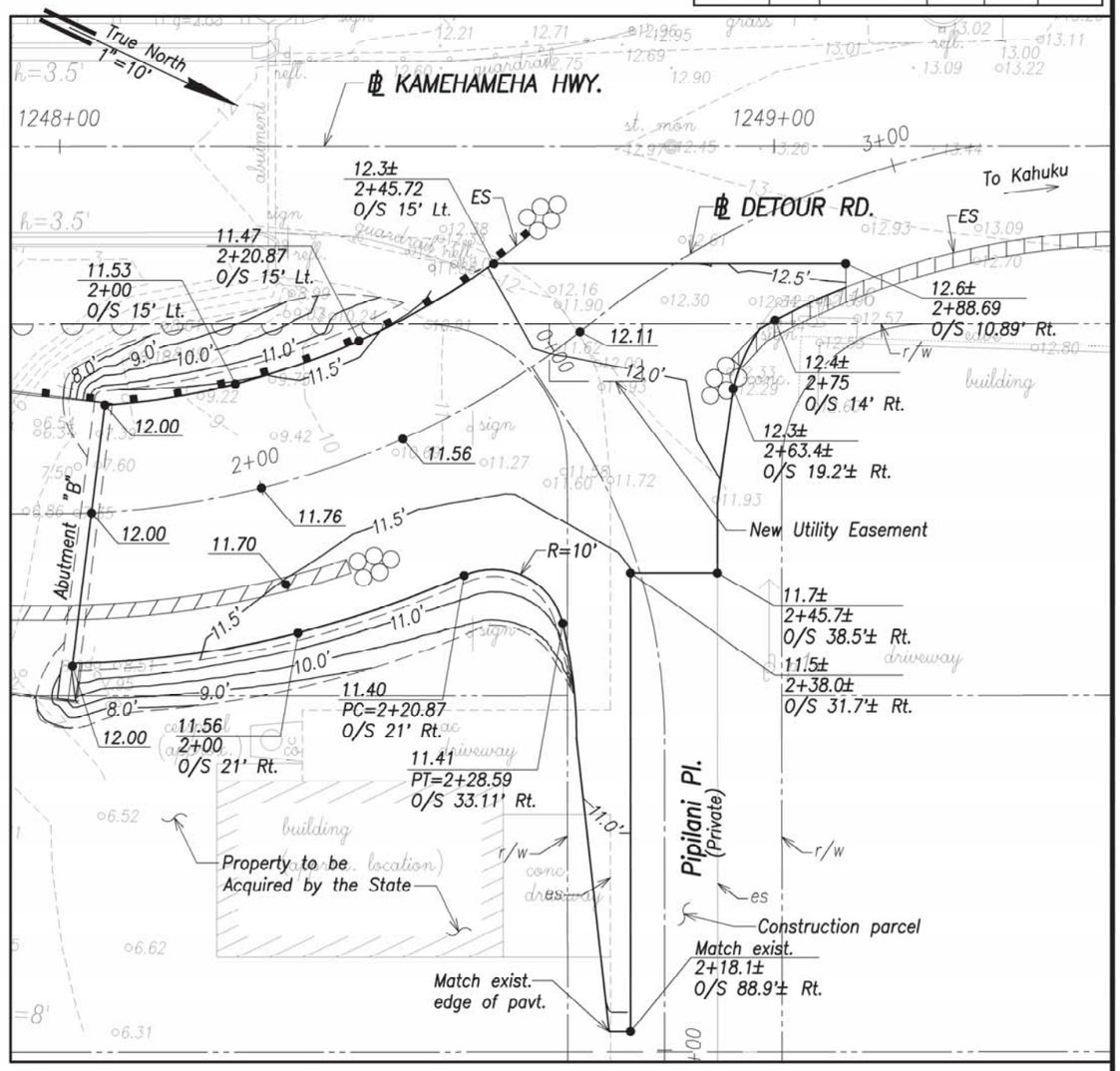
RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2016	28	142



DETOUR ROAD ENLARGED SITE & ELEVATION PLAN (KANEOHE SIDE)

Scale: 1"=10'



DETOUR ROAD ENLARGED SITE & ELEVATION PLAN (KAHUKU SIDE)

Scale: 1"=10'

Legend:

10	Exist. Ground Contour
10.0'	Finished Grade Contour
10.00 2+37.40 O/S 31.3' Rt.	Finished Grade Elevation ℄ Station ℄ Offset

Graphic Scale:

1" = 10' 10' 5' 0 10' 20'

Scale in Feet

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4/30/16
SIGNATURE L.C. EXPIRATION
R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DETOUR ROAD ENLARGED SITE & ELEVATION PLAN

Kamehameha Highway
Kaipapau Stream Bridge Replacement
Federal Aid Project No. BR-083-1(48)

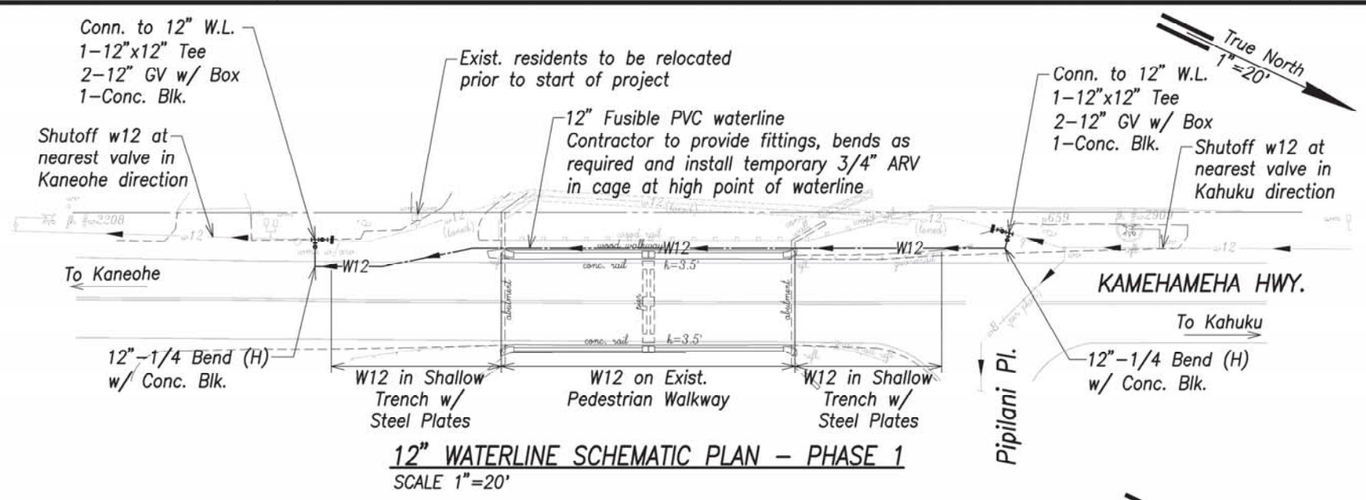
Scale: As Noted Date: April 2015

SHEET No. C-27 OF SHEETS

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE | RST | WC | No. | NOTE BOOK

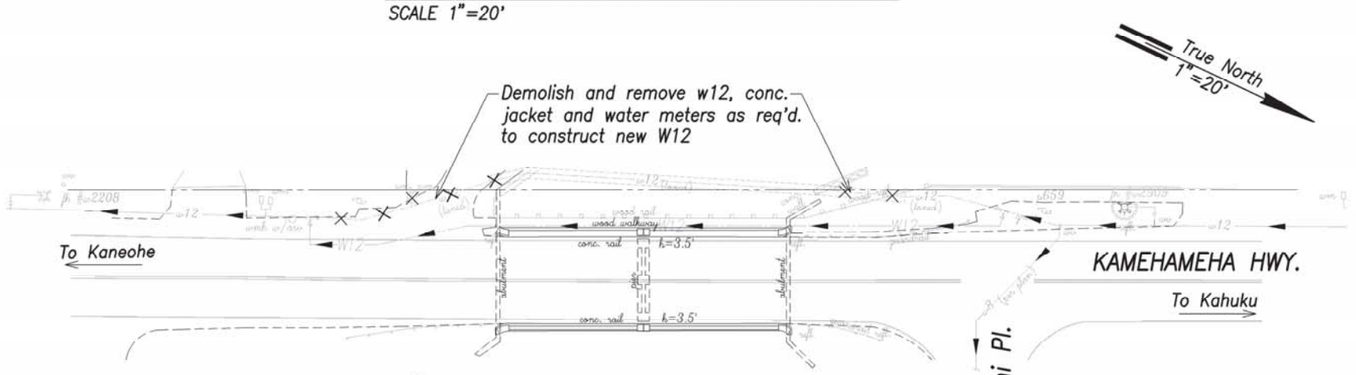
RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2016	29	142



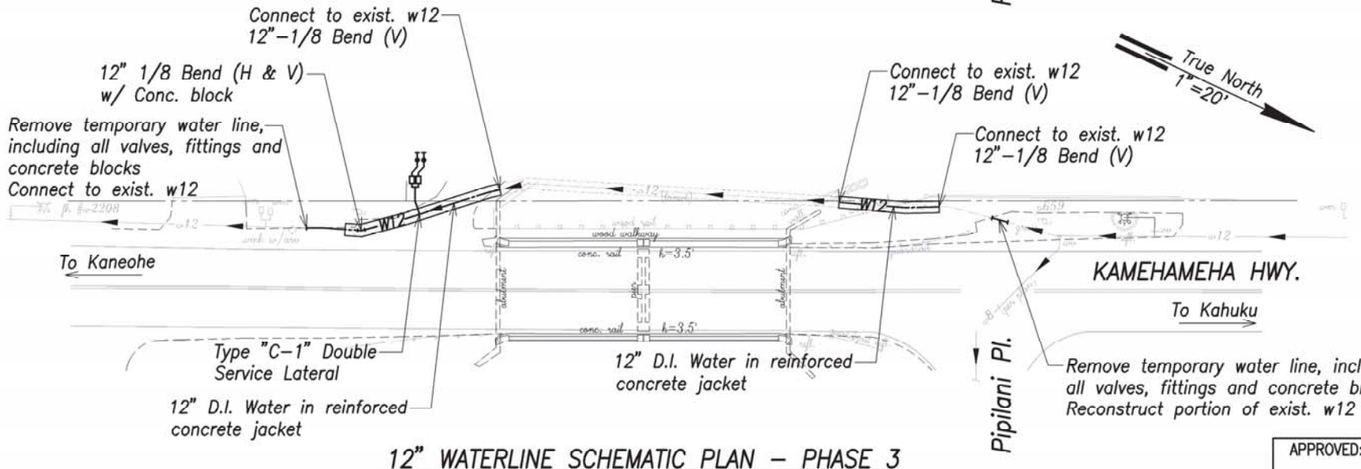
12" WATERLINE SCHEMATIC PLAN – PHASE 1

SCALE 1"=20'



12" WATERLINE SCHEMATIC PLAN – PHASE 2

SCALE 1"=20'



12" WATERLINE SCHEMATIC PLAN – PHASE 3

SCALE 1"=20'

Suggested Phasing for Work on 12" Waterline:

PHASE 1:

Construct temporary bypass waterline improvements shown on this sheet and perform pressure test and chlorination. Shutoff existing w12 by closing the nearest existing valves in the Kaneohe and Kahuku direction and make connections to the existing w12. (Note: Maximum allowable time for w12 shutdown is 6 hours.)

PHASE 2:

Excavate trench and construct shoring for new W12 improvements. Remove portions of existing w12 in concrete jacket required to construct new improvements.

PHASE 3:

Construct permanent waterline improvements shown on this sheet and perform pressure test and chlorination. Shutoff existing w12 by closing the nearest existing valves in the Kaneohe and Kahuku direction and make connections to the existing w12. Remove W12 bypass waterline, including all gate valves, fittings and concrete blocks on both sides of existing bridge. (Note: Maximum allowable time for w12 shutdown is 6 hours.)

Note:

The contractor shall check the invert and location of the existing 12–inch waterline prior to the start of waterline construction and adjust the invert of the new 12–inch waterline to match the existing invert for future connection.

Graphic Scale:

1" = 20' 20' 10' 0 20' 40'

Scale in Feet

ORIGINAL PLAN	SURVEY PLOTTED BY: RST	DATE
	DRAWN BY:	
	TRACED BY:	
NOTE BOOK	DESIGNED BY: WC	
	QUANTITIES BY:	
No.	CHECKED BY:	

APPROVED:

Manager and Chief Engineer, BWS (for work affecting BWS facilities State R/W & BWS easements only) — DATE

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4/30/16

SIGNATURE LIC. EXPIRATION

R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

12" WATERLINE PHASING PLAN

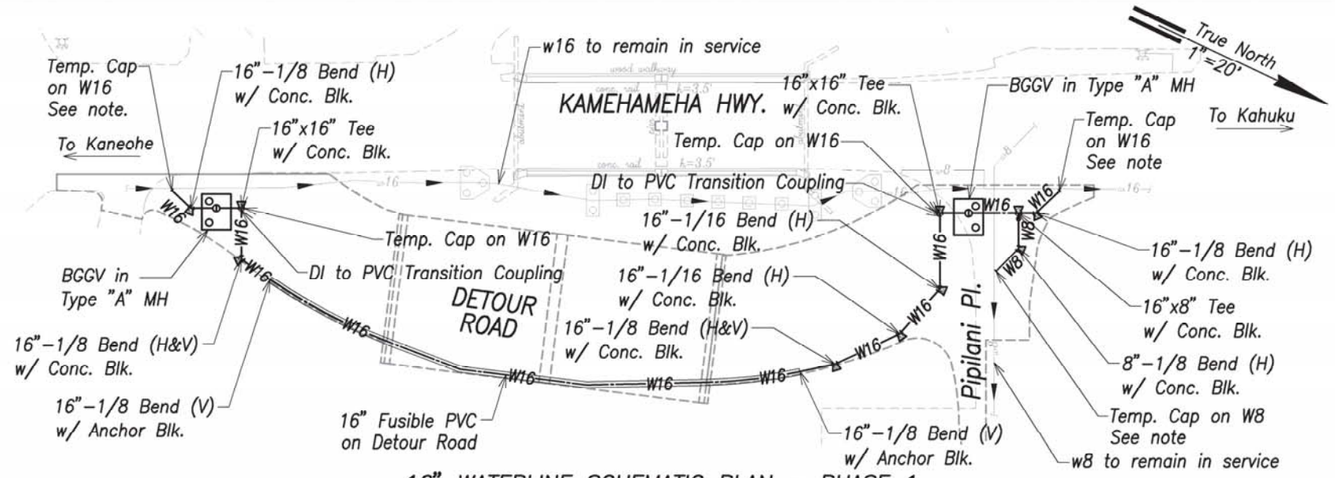
Kamehameha Highway
Kaipapau Stream Bridge Replacement
Federal Aid Project No. BR–083–1(48)

Scale: As Noted Date: April 2015

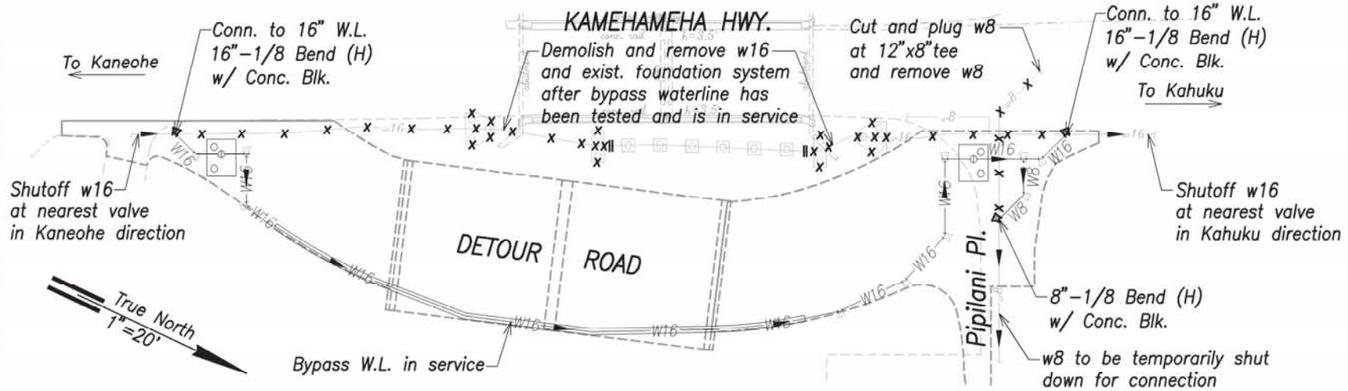
SHEET No. C-28 OF SHEETS

RMTC JOB NO. : 1–19548–0E

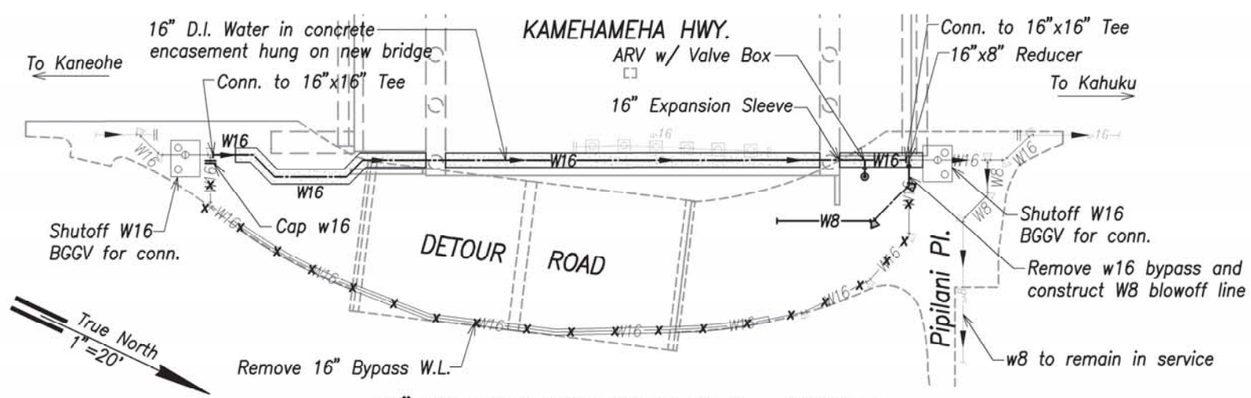
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2016	30	142



16" WATERLINE SCHEMATIC PLAN – PHASE 1
SCALE 1"=20'



16" WATERLINE SCHEMATIC PLAN – PHASE 2
SCALE 1"=20'



16" WATERLINE SCHEMATIC PLAN – PHASE 3
SCALE 1"=20'

Suggested Phasing for Work on 16" Waterline:

PHASE 1:
Existing w16 and w8 serving Pipilani Road shall remain in service at all times. Construct detour road and temporary bridge. Construct Phase 1 waterline improvements shown on this sheet and perform pressure test and chlorination.

PHASE 2:
Shutoff existing w16 by closing the nearest existing valves in the Kaneohe and Kahuku direction. Drain w16 using existing w8 blowoff line. Construct Phase 2 waterline improvements shown on this sheet. Open existing valves to restore water service. (Note: Maximum allowable time for w16 and w8 shutdown is 8 hours)

After temporary W16 waterline is in service, demolish and remove the existing w16 and existing foundation system shown in Phase 2 on this sheet. Abandon-in-place the existing w16 and existing foundation system under Kaipapau Stream. The contractor shall plug both ends of abandoned waterline.

PHASE 3:
Construct new bridge and Phase 3 waterline improvements, including W8 blowoff line and W16 encased in concrete between new bridge girders, as shown on this sheet. See structural drawings for details. Perform pressure test and chlorination. Shutoff W16 bypass waterline using bevel gear gate valves on both sides of new bridge. (Note: Maximum allowable time for W16 is 8 hours) Connect W16 on both sides of new bridge. Open bevel gear gate valves to restore water service.

After W16 waterline is in service, demolish and remove the bypass waterline.

Note:
The contractor shall check the invert and location of the existing 16-inch waterline prior to the start of waterline construction and adjust the invert of the new 16-inch waterline to match the existing invert for future connection.

Graphic Scale:
1" = 20' 20' 10' 0 20' 40'
Scale in Feet

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	RST
	TRACED BY	
NOTE BOOK	DESIGNED BY	WC
	QUANTITIES BY	
No.	CHECKED BY	

APPROVED:

Manager and Chief Engineer, BWS (for work affecting BWS facilities State R/W & BWS easements only) DATE

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R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

16" WATERLINE PHASING PLAN

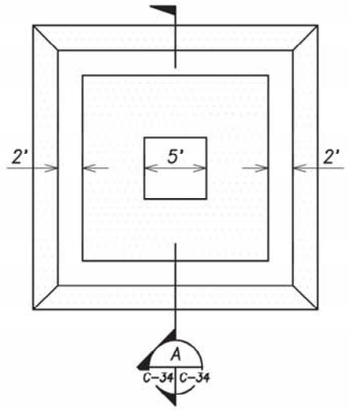
Kamehameha Highway
Kaipapau Stream Bridge Replacement
Federal Aid Project No. BR-083-1(48)

Scale: As Noted Date: April 2015

SHEET No. C-29 OF SHEETS

RMTC JOB NO. : 1-19548-0E

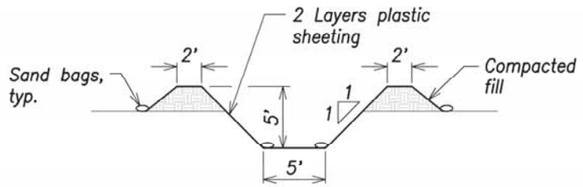
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2016	35	142



PLAN VIEW

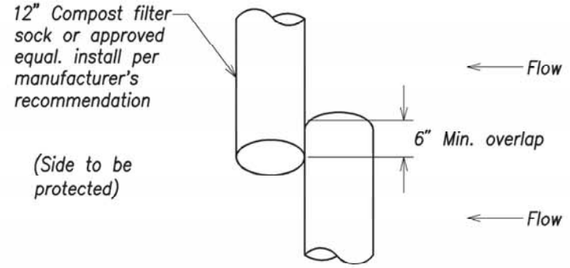
Notes:

1. Line basin with 2 layers of 4 mil. polyethylene plastic.
2. Place sand bags on top sheeting.
3. Clean out hardened concrete to maintain basin capacity.

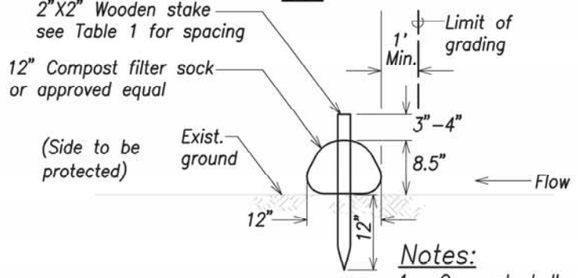


SECTION

CONCRETE WASH-OUT BASIN DETAIL
NOT TO SCALE



PLAN



SECTION

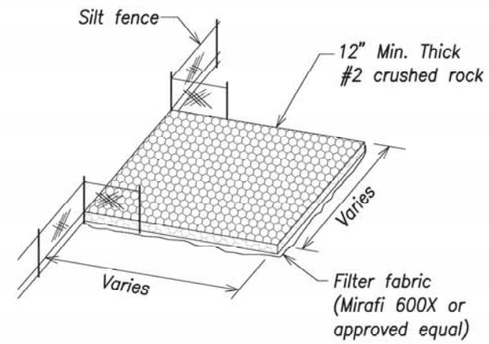
Notes:

1. Compost shall not contain biosolids and should be consistent with EPA guidelines as well as meet all local, state and federal quality requirements.
2. Contractor shall inspect compost filter socks when as required by the project SWPPP.

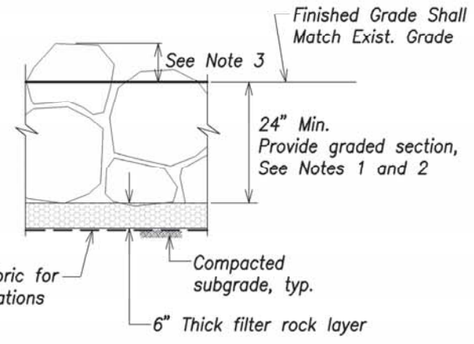
Table 1: Wooden stake anchor spacing

Slope	Anchor spacing
< 4:1	Not required
4:1 to 3:1	10' O.C.
> 3:1 to 2:1	5' to 10' O.C.
> 2:1	5' O.C.

COMPOST FILTER SOCK DETAIL
NOT TO SCALE



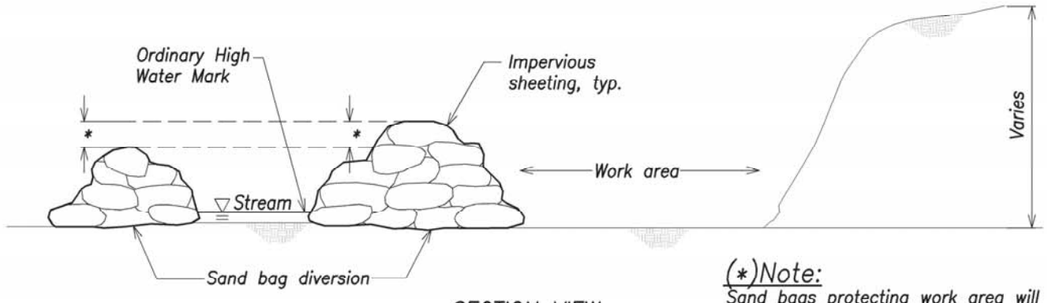
STABILIZED CONSTRUCTION ENTRANCE
Not To Scale



Notes:

1. Riprap shall be basalt rock and consist of 6"ø average stone size, 12"ø maximum stone size.
2. Riprap gradation:
   D_{85} = 9"
   D_{50} = 6"
   D_{15} = 4"
3. 6" Max. from highest adjacent rock finish top.

TEMPORARY DUMPED RIPRAP
Not to Scale



SECTION VIEW

SAND BAG DETAIL
Not To Scale

(*)Note:
Sand bags protecting work area will be constructed 1.5' higher than the opposite side to allow overflow of stream away from work area during high rainfall events.

ORIGINAL PLAN
SURVEY PLOTTED BY — DATE
DRAWN BY — RST
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DESIGNED BY — WC
NOTE BOOK
QUANTITIES BY
No. — CHECKED BY

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SIGNATURE — LIC. EXPIRATION
R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EROSION & SEDIMENT CONTROL DETAILS
Kamehameha Highway
Kaipapau Stream Bridge Replacement
Federal Aid Project No. BR-083-1(48)

Scale: As Noted — Date: April 2015

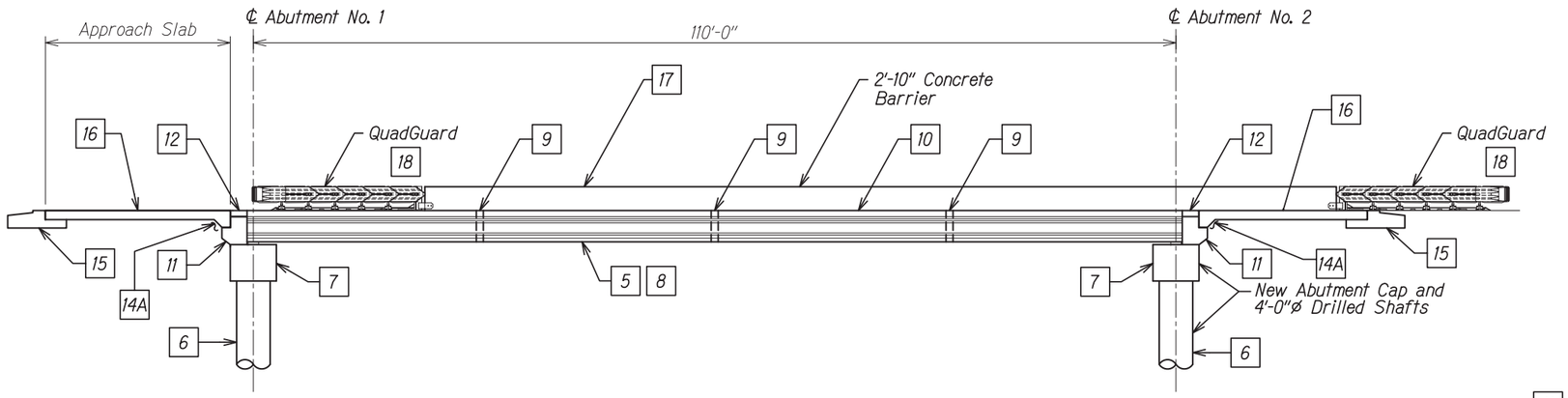
SHEET No. C-34 OF SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2016	62	148

To Kaneohe ←

→ To Kahuku



CONSTRUCTION SEQUENCE

Scale: 1/8" = 1'-0"

CONSTRUCTION SEQUENCE NOTES:

1. Order of construction sequence shall not be changed.
2. Each sequence stage shall be completely finished before proceeding to the next stage unless otherwise noted. The Engineer will be the sole judge of whether the sequence stage is complete, and may direct the Contractor to stop work on a sequence stage to complete work on the preceeding sequence stage.
3. Contractor shall submit overweight vehicular details for approval prior to their use.

LEGEND:

[#] Phase 1 Stages

CONSTRUCTION SEQUENCE ELEVATION

[1] Relocate existing utility lines.

[2] Construct trial and load test shafts. Perform load test.

[3] Install detour road and temporary bridge.

[4] Demolish existing bridge.

[5] Construct precast girders. (May be done concurrently with Stages 1 through 4.)

[6] Construct 4 ft diameter drilled shafts. Shaft numbers 1, 2, 3, 5, 6, 7.

[7] Cast Phase 1 drilled shaft cap beams, girder seats, and corbels for concrete encased ducts at least 7 days after the final drilled shaft concrete pour in Stage 6 or until the concrete in Stage 6 has attained a compressive strength of 4,500 psi, whichever occurs later.

[8] Erect Phase 1 precast girders at least 15 days after the concrete pour in Stage 7 or until the concrete in Stage 7 has attained a compressive strength of 5,000 psi, whichever occurs later. Place slush grout immediately prior to placement of precast girders.

[9] Construct Phase 1 intermediate diaphragms.

[10] Pour Phase 1 cast-in-place deck except areas over end beams and electrical duct encasement.

[11] Pour Phase 1 corbel and end beams to top of precast girder at least 30 days after the concrete pour in Stage 10. The concrete pour shall occur between midnight and 3:00 AM (3 hour window).

[12] Pour remainder of Phase 1 deck concrete a minimum of 24 hours after the concrete pour in Stage 11.

[13] Construct Phase 1 wing walls at least 8 days after the concrete pour in Stage 12 or after the concrete in Stage 12 has attained a compressive strength of 5,000 psi, whichever occurs later.

[14A] Backfill to Phase 1 limits and to bottom of approach slab at least 14 days after the concrete pour in Stage 13 or until the concrete in Stage 13 has attained a compressive strength of 5,000 psi, whichever occurs later. Maximum height difference of backfill between abutments shall not exceed 2 feet. Install concrete encased ducts behind abutments when backfill height is at the elevation of the bottom of the concrete encased electrical ducts. Continue backfilling after concrete for encased electrical ducts has attained its 28 day compressive strength.

[14B] Construct barrier wall.

[15] Construct Phase 1 sleeper slabs.

[16] Construct Phase 1 approach slabs.

[17] Construct mauka aesthetic railing, concrete barrier and fence wall.

[18] Install mauka quadguards.

[19] Install temporary barriers.

STEWART N. WILLIAMS
LICENSED PROFESSIONAL ENGINEER
No. 3908-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

4/30/16
SIGNATURE LIC. EXPIRATION
MITSUNAGA & ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONSTRUCTION SEQUENCE
PHASE 1

KAMEHAMEHA HIGHWAY
Kaipapau Stream Bridge Replacement
Federal Aid Proj. No. BR-083-1(48)

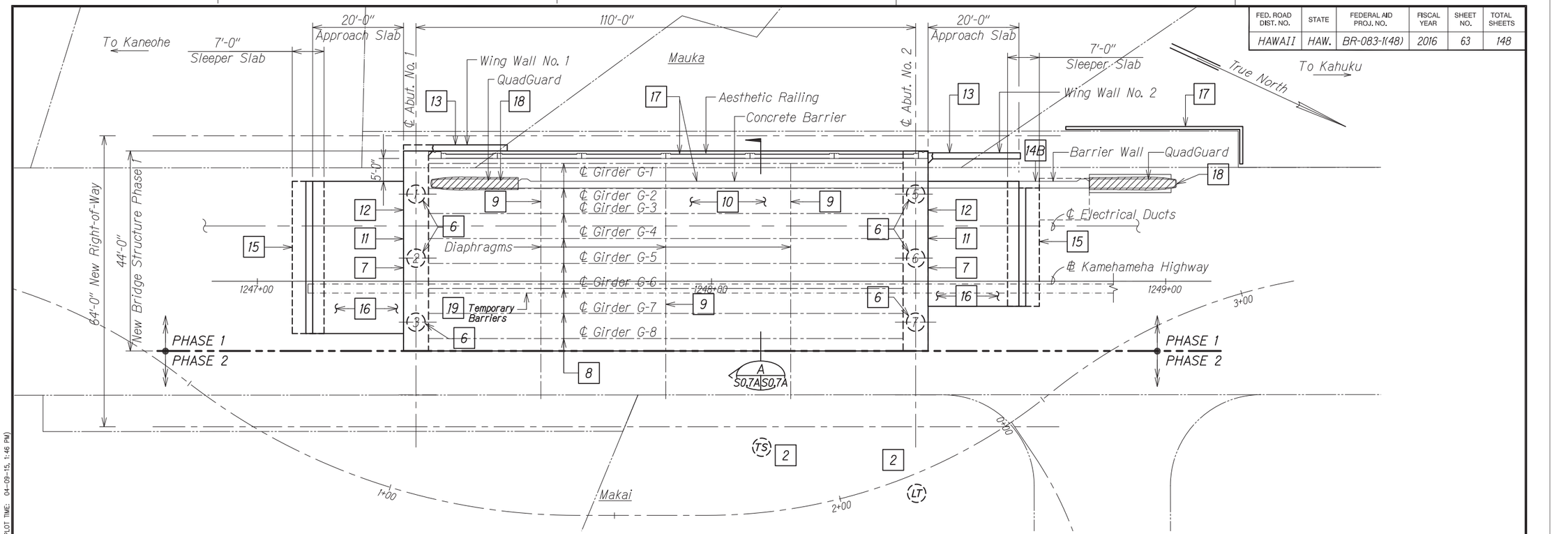
Scale: As Noted Date: April 2015

SHEET No. S0.7 OF 12 SHEETS

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE
NOTE BOOK | No.

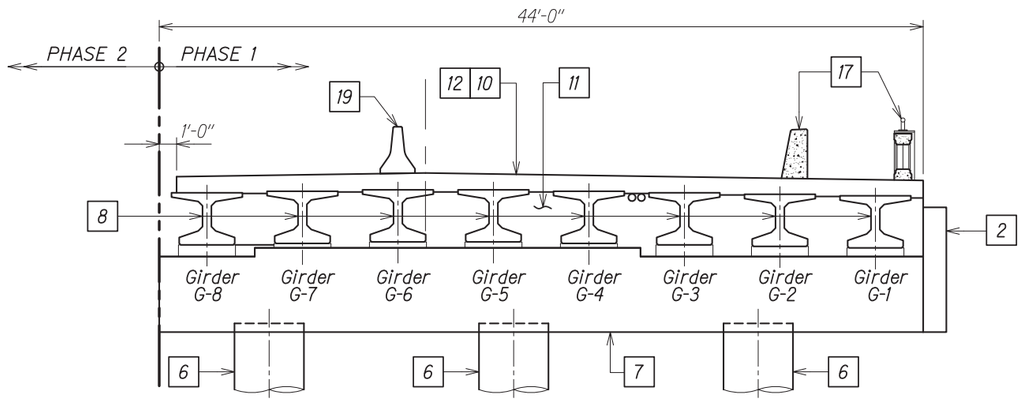
DRAWING NAME: K:\VERBATIM 12-10-14\B R I D G E\K A I 15-4-8\15-4-9 SW CADD PLOT\---1BI SW CADD 2015-04-10\KSB-S007.DWG PLOT TIME: 04-09-15, 10:52 AM)

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2016	63	148



PROPOSED CONSTRUCTION SEQUENCE PLAN (PHASE 1)

Scale: 3/32" = 1'-0"



CONSTRUCTION SEQUENCE (PHASE 1)

Scale: 1/4" = 1'-0"

A S0.7A S0.7A

LEGEND:

- # — Construction Sequence Stage
- (#) — Drilled Shaft ID
- (TS) — Trial Shaft
- (LT) — Load Test Shaft

STEWART N. WILLIAMS — LICENSED PROFESSIONAL ENGINEER — No. 3908-S — HAWAII, U.S.A.

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4/30/16
SIGNATURE — LIC. EXPIRATION
MITSUNAGA & ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONSTRUCTION SEQUENCE PHASE 1

KAMEHAMEHA HIGHWAY
Kaipapau Stream Bridge Replacement
Federal Aid Proj. No. BR-083-1(48)

Scale: As Noted Date: April 2015

SHEET No. S0.7A OF 12 SHEETS

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE
NOTE BOOK | No.

DRAWING NAME: K:\VERBATIM 12-10-14\B R I D G E\K A I 15-4-8\15-4-9 SW CADD PLOT\---1BI SW CADD 2015-04-10\KSB-S007A.DWG PLOT TIME: 04-09-15, 1:46 PM)

KAIPAPAU STREAM BRIDGE REPLACEMENT – OVERALL CONSTRUCTION SEQUENCE

	Structural Construction Stage	Description	References: Civil	Electrical	Geotech.	Structural	Waterline Work	Exist Bridge Open	Detour Open	Detour Off Peak Lane Closures Anticipated	Remarks
	Prior to Site Mobilization for Demolition	1. Prior to Site Mobilization, the Contractor shall submit required BMP's and other Municipal and National permit applications as indicated in the project Plans, Special Provisions and Specifications. 2. The Contractor shall submit Prefabricated Steel Beam Bridge Structural Computations and Erection drawings to the Owner for Review and Approval Prior to Fabrication.	Civil Sequence See C-10. See Civil 1			Structural Sequence S0.7,S0.7A, S0.8,S0.8A		Exist Bridge Open to Traffic			
	1	1. Install approved BMP measures. 2. Relocate Existing overhead utility lines. 3. Install temporary 12" fusible PVC waterline on existing (upstream) pedestrian walkway.	C-15,16,17, C-20, C-28, see Civil 2	E-8, E-9, E-10, E-11			Temporary 12" fusible PVC waterline				
	2	1. Construct Trial and Load Test shafts * 2. Perform Load Test. Demobilize drilled shaft equipment off site.	See Civil 3		Special drilling equipment*	S1.1, S8.3					*Special Provisions Section 511
	3	1. Install Detour Pier, Abutments and Temporary Bridge. Construct Civil Phase 1 waterline Improvements C-29; C-30. 2. Construct Detour Approach Retaining Wall, Fills and Roadway – chainlink fence see C-23. 3. Construct Civil Phase 2 waterline improvements–see C-29; C-31.	See Civil 4 C-23, C-29, C-30, C-31, C-32	E-10, E-11, E-15	Excavation Bracing–Spec. Prov. 205*	S12.1, S12.2 S12.3, S12.4 S12.5	Civil Phase 1 & 2 (W16) waterline work–see C-29, C-30.		Detour Open to Traffic		*Excavation Bracing anticipated upstream of detour.
	4	1. Relocate existing water line W12 (prior to existing bridge demolition) – see C-20, C-28. 2. Demolish existing bridge.	See Civil 5 C-20, C-28		Excavation Bracing–Spec. Prov. 205*	S2.1, S2.2	Relocate Exist W12 waterline C-20, C-28.	Exist Bridge Demolition			*Exc. Bracing upstream of existing.
	5	Construct precast girders. (May be done concurrently with stages 1 through 4.)	See Civil 6			S4.x series					
	6	Construct 4 ft. diameter drilled shafts. 1, 2, 3, 5, 6, 7. *			Special drilling equipment*	S1.1,S1.2,S6.1, S6.2,S8.1,S8.2					*Special Provisions Section 511
STRUCTURAL PHASE 1	7	Cast phase 1 drilled shaft cap beams, girder seats, and corbels for concrete encased ducts at least 7 days after the final drilled shaft concrete pour in stage 6 or until the concrete in stage 6 has attained a compressive strength of 4,500 psi, whichever occurs later.			Structure – Excavation Bracing per Spec Prov 205	S0.7, S0.7A, S6.x series					Marks 7 through 18 are PHASE 1. Structural see 20 for PHASE 2
	8	Erect phase 1 precast girders at least 15 days after the concrete pour in stage 7 or until the concrete in stage 7 has attained a compressive strength of 5,000 psi, whichever occurs later. Place slush grout immediately prior to placement of precast girders.			Required at Makai Limit	S0.7, S0.7A, S1.2, S1.3, S6.x series					
	9	Construct phase 1 intermediate diaphragms.				S0.7,S0.7A, S5.x series					
	10	Pour phase 1 cast-in-place deck except areas over end beams and duct encasement.				S0.7,S0.7A S1.6,S3.1,S3.2					
	11	Pour phase 1 end beams to top of precast girder and corbel at least 30 days after the concrete pour in Stage 10. The concrete pour shall occur between midnight and 3:00 AM (3 hours).				S0.7,S0.7A, S6.x series					Concrete Placement At Night
	12	Pour remainder of phase 1 deck concrete a minimum of 24 hours after the concrete pour in stage 11.									
	13	Construct phase 1 wing walls at least 8 days after the concrete pour in stage 12 or after the concrete in stage 12 has attained a compressive strength of 5,000 psi, whichever occurs later.				S0.7,S0.7A, S7.x series				Lane Closure Duration Approx 3 weeks each abutment with Further Lane Closure Duration Approx 2 weeks each approach	
	14	Backfill to phase 1 limits and to bottom of approach slab and at least 14 days after the concrete pour in Stage 13 or until the concrete in Stage 13 has attained a compressive strength of 5,000 psi, whichever occurs later. Maximum height difference of backfill between abutments shall not exceed 2 feet. Install concrete encased ducts when backfill height is at the elevation of bottom of concrete encased ducts. Continue backfilling after concrete for encased ducts has attained its 28 day compressive strength.		Signal Corps Work E-1, E-5 E-12, E-13, E-16		S0.7,S0.7A,S6.x S9.x					
	15	Construct phase 1 sleeper slabs.									
	16	Construct phase 1 approach slabs.		Signal Corps Work E-1, E-5 E-12,E-13,E-16							
	17	Construct mauka aesthetic railings and concrete barrier.									
	18	Install mauka quadguards.									
	19	Install Temporary Barriers and Temporary Striping on PHASE 1 of New Bridge.	See Civil for Barriers								

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2016	64	148

CONSTRUCTION SEQUENCE NOTES:

1. Order of construction sequence shall not be changed unless authorized in writing by the Engineer.
2. Each sequence stage shall be completely finished before proceeding to the next stage unless otherwise noted. The Engineer will be the sole judge of whether the sequence stage is complete, and may direct the Contractor to stop work on a sequence stage to complete work on the preceeding sequence stage.
3. Contractor shall submit overweight vehicular details for approval prior to their use.
4. Construction shall be conducted such that no construction debris, wash water or other contaminants shall enter the Stream Waters.
5. Closing of the Prefabricated Steel Beam Bridge Structure:
   (a) If for any reason or at any time, the Prefabricated Beam Bridge Structure's ability to safely carry traffic is in question, the Contractor shall be responsible for immediately taking the actions necessary to protect the public by closing, repairing and reopening the Prefabricated Steel Truss Bridge.
   (b) When the Contractor closes the Prefabricated Steel Beam Bridge Structure, the Contractor shall immediately notify the Engineer and the appropriate Law Enforcement Agency.
   (c) Closing of the Prefabricated Steel Beam Bridge shall be included as incidental to Maintenance of Traffic Control.
6. The Contractor shall phase 16 inch waterline (W16) to allow no more than 8 hours of down time. Liquidated Damages of $100,000 per day will be imposed if the Contractor exceeds the 8 hour restriction.

ORIGINAL PLAN
SURVEY PLOTTED BY ____ DATE
DRAWN BY BSY
TRACED BY
NOTE BOOK WC
DESIGNED BY
QUANTITIES BY
CHECKED BY
No.

STEWART N. WILLIAMS
LICENSED PROFESSIONAL ENGINEER
No. 3908-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

4/30/16
SIGNATURE LIC. EXPIRATION
MITSUNAGA & ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

OVERALL CONSTRUCTION SEQUENCE
STRUCTURAL PHASE 1

Kamehameha Highway
Kaipapau Stream Bridge Replacement
Federal Aid Project No. BR-083-1(48)

Scale: AS NOTED Date: April 2015

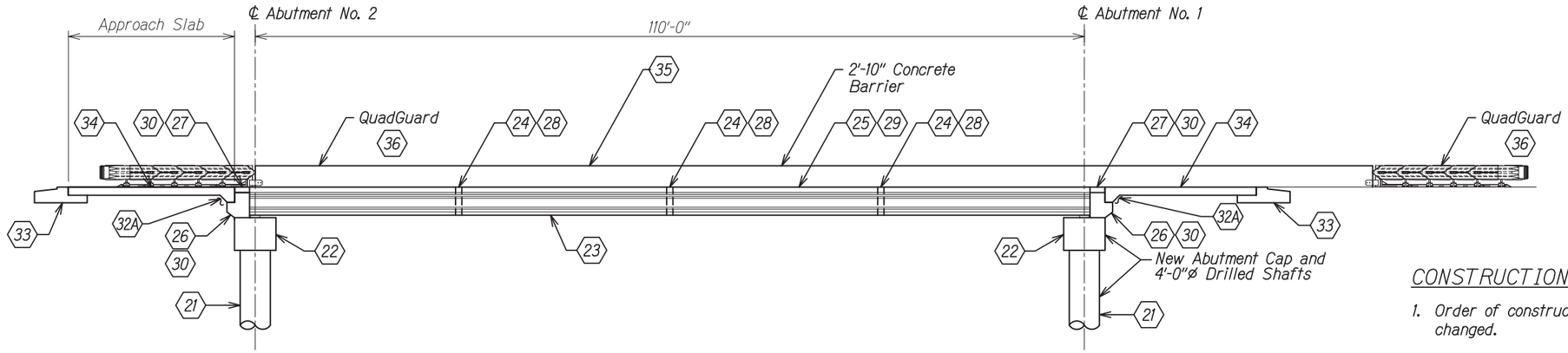
SHEET No. S0.7B OF 12 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2016	65	148

To Kaneohe ←

→ To Kahuku



CONSTRUCTION SEQUENCE

Scale: 1/8" = 1'-0"

CONSTRUCTION SEQUENCE NOTES:

1. Order of construction sequence shall not be changed.
2. Each sequence stage shall be completely finished before proceeding to the next stage unless otherwise noted. The Engineer will be the sole judge of whether the sequence stage is complete, and may direct the Contractor to stop work on a sequence stage to complete work on the preceeding sequence stage.
3. Contractor shall submit overweight vehicular details for approval prior to their use.

LEGEND:

(#) Phase 2 Stages

CONSTRUCTION SEQUENCE ELEVATION

(20) Partially remove temporary bridge as required to construct Phase 2 of Kaipapau Stream Bridge

(21) Construct 4 ft diameter shafts – Shaft nos. 4 and 8.

(22) Cast Phase 2 drilled shaft cap beams, girder seats, and corbels for concrete jacketed waterline at least 7 days after the final drilled shaft concrete pour in Stage 21 or until the concrete in Stage 21 has attained a compressive strength of 4,500 psi, whichever occurs later.

(23) Erect Phase 2 precast girders at least 15 days after the concrete pour in Stage 22 or until the concrete in Stage 22 has attained a compressive strength of 5,000 psi, whichever occurs later. Place slush grout immediately prior to placement of precast girders.

(24) Construct Phase 2 intermediate diaphragms between girders G-9 and G-10, install dowels connecting G-10 and G-11, and install W16 with light-weight concrete jacket between girders G-10 and G-11.

(25) Pour Phase 2 cast-in-place deck except areas over end beams and closure pour.

(26) Pour Phase 2 corbel and end beams (except at closure pour) to top of precast girder at least 30 days after the concrete pour in Stage 25. The concrete pour shall occur between midnight and 3:00 AM (3 hour window).

(27) Pour remainder of Phase 2 deck concrete (except at closure pour) a minimum of 24 hours after the concrete pour in Stage 26.

(28) Pour Phase 2 intermediate diaphragms between girders G-8 and G-9 at least 4 days after the concrete pour in Stage 27.

(29) Pour Phase 2 cast-in-place deck closure except over end beams. Material for cast-in-place deck closure pour shall be VESLMC. (See Special Provisions).

(30) Pour Phase 2 corbel and end beam closure from top of drilled shaft cap beam to top of deck. Material for end beam closure pour shall be VESLMC. (See Special Provisions).

(31) Construct Phase 2 wing walls at least 8 days after the concrete pour in Stage 30 or after the concrete in Stage 30 has attained a compressive strength of 5,000 psi, whichever occurs later.

(32A) Backfill to bottom of approach slab at least 14 days after the concrete pour in Stage 31 or until the concrete in stage 31 has attained a compressive strength of 5,000 psi, whichever occurs later. Maximum height difference of backfill between abutments shall not exceed 2 feet. Install jacketed waterline behind abutments when backfill height is at the elevation of the bottom of the jacketed waterline. Continue backfilling after concrete for jacketed waterline has attained its 28 day compressive strength.

(32B) Construct Barrier Wall.

(33) Construct Phase 2 sleeper slabs.

(34) Construct Phase 2 approach slabs.

(35) Constuct Makai aesthetic railing and concrete barrier.

(36) Install Makai quadguards.

(37) Remove remainder of temporary bridge.

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MITSUNAGA & ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONSTRUCTION SEQUENCE
PHASE 2
KAMEHAMEHA HIGHWAY
Kaipapau Stream Bridge Replacement
Federal Aid Proj. No. BR-083-1(48)

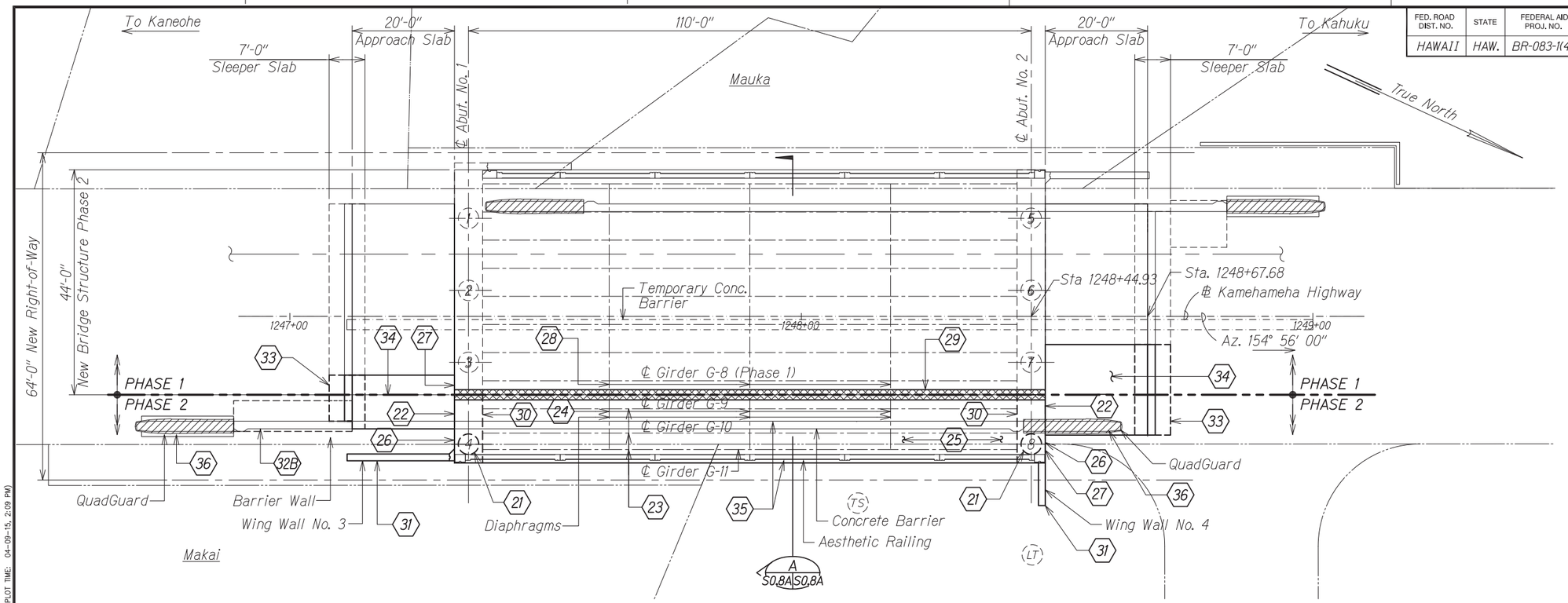
Scale: As Noted Date: April 2015

SHEET No. S0.8 OF 12 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
NOTE BOOK	TRACED BY	
	DESIGNED BY	
	QUANTITIES BY	
No.	CHECKED BY	

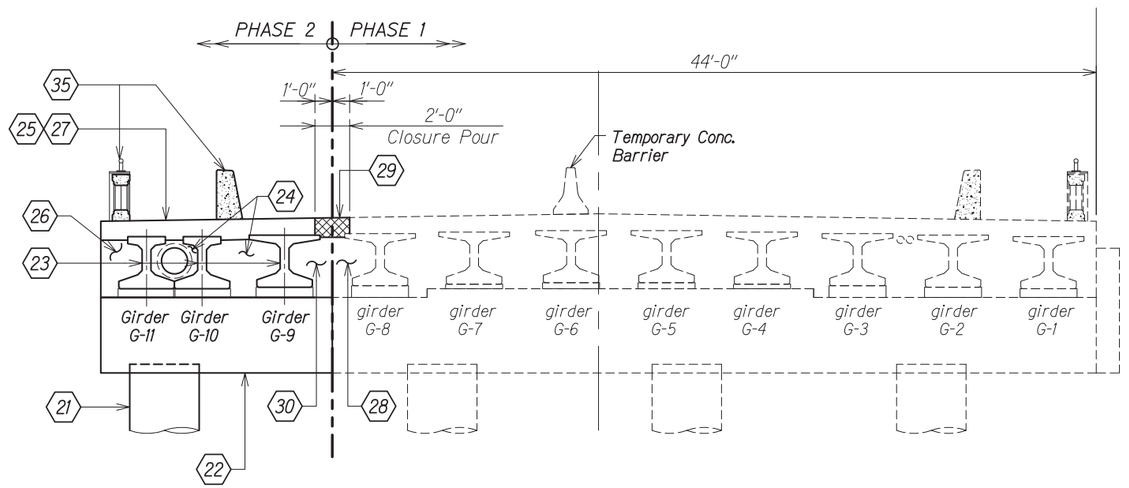
DRAWING NAME: K:\VERBATIM 12-10-14\B R I D G E\K A I 15-4-8\15-4-9 SW CADD PLOT\---1BI SW CADD 2015-04-10\KSB-S008.DWG PLOT TIME: 04-09-15, 11:03 AM)

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2016	66	148



PROPOSED CONSTRUCTION SEQUENCE PLAN (PHASE 2)

Scale: 3/32" = 1'-0"



CONSTRUCTION SEQUENCE (PHASE 2)

Scale: 1/4" = 1'-0"

A S6.3 S6.3

LEGEND:

- (#) Construction Sequence Stage
- (#) Drilled Shaft ID
- (TS) Trial Shaft
- (LT) Load Test Shaft
- Closure Pour

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONSTRUCTION SEQUENCE
PHASE 2

KAMEHAMEHA HIGHWAY
Kaipapau Stream Bridge Replacement
Federal Aid Proj. No. BR-083-1(48)

Scale: As Noted Date: April 2015

SHEET No. S0.8A OF 12 SHEETS

ORIGINAL PLAN	DATE
	SURVEY PLOTTED BY
NOTE BOOK	DRAWN BY
	TRACED BY
	DESIGNED BY
No.	QUANTITIES BY
	CHECKED BY

DRAWING NAME: K:\VERBATIM 12-10-14\BRIDGE\K A I 15-4-8\15-4-9 SW CADD PLOT\---1BI SW CADD 2015-04-10\KSB-S008A.DWG PLOT TIME: 04-09-15, 2:09 PM)

KAIPAPAU STREAM BRIDGE REPLACEMENT – OVERALL CONSTRUCTION SEQUENCE

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2016	67	148

Structural Construction Stage		Description	References: Civil	Electrical	Geotech.	Structural	Waterline Work	Exist Bridge Open	Detour Open	Detour Off Peak Lane Closures Anticipated	Remarks
	20	1. Open PHASE I of New Bridge to traffic. Close Temporary Bridge and Detour Roadway to traffic. 2. Remove Mauka portion of Temporary Bridge Only (Remainder to remain in place to support construction equipment for construction of PHASE 2 portion of New Bridge and to support temporary W16 until Final W16 is constructed).				S0.8, S0.8A		PHASE I of New Bridge Open to Traffic to allow Detour Closure	Close Detour and Remove Limited Portion of Temporary Bridge	Not Applicable	Close Detour; Open PHASE 1 of New Bridge: Start Construction of PHASE 2 of New Bridge
STRUCTURAL PHASE 2	21	Construct 4 ft. diameter drilled shafts – Shaft nos. 4 and 8.	See Civil 6		Special drilling equipment*	S1.1, S1.2, S6.1, S6.2, S8.1, S8.2			Detour Closed		*Special Provisions Section 511
	22	Cast Phase 2 drilled shaft cap beams, girder seats, and corbels for concrete jacketed waterline at least 7 days after the final drilled shaft concrete pour in stage 21 or until the concrete in stage 21 has attained a compressive strength of 4,500 psi, whichever occurs later.			Structure Excavation Bracing per Spec for 205 Required at Approaches.	S0.8, S0.8A, S6.x series					Special Provisions Section 205
	23	Erect Phase 2 precast girders at least 15 days after the concrete pour in stage 22 or until the concrete in stage 22 has attained a compressive strength of 5,000 psi, whichever occurs later. Place slush grout immediately prior to placement of precast girders.				S0.8, S0.8A, S1.2, S1.3, S6.x series	Civil Phase 3 (W16) waterline improvements seeC-29,C32				
	24	Construct Phase 2 intermediate diaphragms between girders G-9 and G-10 and light-weight W16 concrete jacket between girders G-10 and G-11.	C-29, C-30			S0.8,S0.8A, S5.x series					
	25	Pour Phase 2 cast-in-place deck except areas over end beams and closure pour.				S0.8,S0.8A S1.6,S3.1,S3.2					
	26	Pour Phase 2 end beams (except at closure pour) to top of precast girder and corbel at least 30 days after the concrete pour in Stage 25. The concrete pour shall occur between midnight and 3:00 AM (3 hours).				S0.8,S0.8A, S6.x series					Concrete Placement At Night
	27	Pour remainder of Phase 2 deck concrete (except at closure pour) a minimum of 24 hours after the concrete pour in stage 25.									
	28	Pour Phase 2 intermediate diaphragms between girders G-8 and G-9 at least 4 days after the concrete pour in stage 27.									
	29	Pour Phase 2 cast-in-place deck closure except over end beams. Material for cast-in-place deck closure pour shall be VESLMC.									
	30	Pour Phase 2 end beams closure from top of drilled shaft cap beam to top of deck. Material for end beam closure pour shall be VESLMC.									
	31	Construct Phase 2 wing walls at least 8 days after the concrete pour in stage 30 or after the concrete in stage 30 has attained a compressive strength of 5,000 psi, whichever occurs later.				S0.8,S0.8A, S7.x series					
	32	Backfill to bottom of approach slab at least 14 days after the concrete pour in Stage 31 or until the concrete in Stage 31 has attained a compressive strength of 5,000 psi, whichever occurs later. Maximum height difference of backfill between abutments shall not exceed 2 feet. Install jacketed waterline when backfill height is at the elevation of bottom of the jacketed waterline. Continue backfilling after concrete for jacketed waterline has attained its 28 day compressive strength.				S0.8,S0.8A,S6.x S9.x					
	33	Construct Phase 2 sleeper slabs.									
	34	Construct Phase 2 approach slabs.									
	35	Construct Makai aesthetic railings and concrete barrier.									
	36	Install Makai guadguards. Remove Detour; construct stream hardening. Remove Temporary Barriers at New Bridge. Open Phase 1 and Phase 2 of New Bridge to traffic.	See Civil 7 thru 12	Permanent Electrical Plan See E-12,E-13, E-14			Remove temp W16 at Closed Detour	PHASE I and PHASE 2 of New Bridge Open	Remove Remainder of Detour		

CONSTRUCTION SEQUENCE NOTES:

1. Order of construction sequence shall not be changed unless authorized in writing by the Engineer.
2. Each sequence stage shall be completely finished before proceeding to the next stage unless otherwise noted. The Engineer will be the sole judge of whether the sequence stage is complete, and may direct the Contractor to stop work on a sequence stage to complete work on the preceeding sequence stage.
3. Contractor shall submit overweight vehicular details for approval prior to their use.
4. Construction shall be conducted such that no construction debris, wash water or other contaminants shall enter the Stream Waters.
5. Closing of the Prefabricated Steel Beam Bridge Structure:
   (a) If for any reason or at any time, the Prefabricated Beam Bridge Structure's ability to safely carry traffic is in question, the Contractor shall be responsible for immediately taking the actions necessary to protect the public by closing, repairing and reopening the Prefabricated Steel Truss Bridge.
   (b) When the Contractor closes the Prefabricated Steel Beam Bridge Structure, the Contractor shall immediately notify the Engineer and the appropriate Law Enforcement Agency.
   (c) Closing of the Prefabricated Steel Beam Bridge shall be included as incidental to Maintenance of Traffic Control.
6. The Contractor shall phase 16 inch waterline (W16) to allow no more than 8 hours of down time. Liquidated Damages of $100,000 per day will be imposed if the Contractor exceeds the 8 hour restriction.

ORIGINAL PLAN | SURVEY PLOTTED BY | DATE
NOTE BOOK | DRAWN BY | BSY
No. | TRACED BY | WC
DESIGNED BY
QUANTITIES BY
CHECKED BY

STEWART N. WILLIAMS
LICENSED PROFESSIONAL ENGINEER
No. 3908-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

4/30/16
SIGNATURE | LIC. EXPIRATION
MITSUNAGA & ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

OVERALL CONSTRUCTION SEQUENCE
STRUCTURAL PHASE 2

Kamehameha Highway
Kaipapau Stream Bridge Replacement
Federal Aid Project No. BR-083-1(48)

Scale: AS NOTED | Date: April 2015

SHEET No. S0.8B OF 12 SHEETS

RMTC JOB NO. : 1-19548-0E

Attachment A-2
Map showing the Locations of the Outfalls

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2016	17	142

Ordinary High Water Mark
Tidally Influenced
Mean Higher High Water (1.50' MSL)
Bridge (See struct. dwgs.)
Construction parcel
Kaipapau Stream
24'
℄
Property to be Acquired by the State
True North 1"=20'
Discharge Point No. 1 (From)
Latitude 21.61717846380141
Longitude -157.9142857880188
20' Approach slab
AC pavt.
4.5' Approach slab transition
1246+15
1247+07.68
1247+12.18
1247+32.18
1248+47.68
1248+67.68
1248+72.18
1249+65
New Easement
New R/W
ES
EP
Begin End Treatment 1247+38.46
Begin End Treatment 1249+02.17
5' Ped. walkway
8.5'
12' Lane
12' Lane
12' Lane
8.5'
5' Ped. walkway
Abut. No. 1
Abut. No. 2
66' New R/W
57' r/w
To Kaneohe
To Kahuku
FP
Varies 6' Shoulder
12' Lane
12' Lane
6' Shoulder Varies Paved
Varies Paved 6' Shoulder
12' Lane
12' Lane
6' Shoulder Varies Paved
1246+00
1247+00
1248+00
1249+00
1250+00
℄ KAMEHAMEHA HWY.
New Utility Easement
o/S 47' ℄ Kam. Hwy.
Begin End Treatment 1246+70
Begin End Treatment 1248+62.40
New R/W
New Easement
Corner riprap 1247+12.18 O/S 38.17' Rt.
Corner riprap 1247+22.37 O/S 43.00' Rt.
Corner riprap 1248+48.66 O/S 37' Rt.
Corner riprap 1248+29.11 O/S 68.91' Rt.
Corner riprap 1248+48.66 O/S 50.50' Rt.
Construction parcel
Construction parcel
Kaipapau Stream
O/S 124' ℄ Kam. Hwy.
Property to be Acquired by the State
New Easement
Corner riprap 1247+49.34 O/S 121.8'± Rt.
Corner riprap 1247+43.54 O/S 122.0'± Rt.
30' r/w
16' Wide road
Pipilani Pl. (Private)
Discharge Point No. 2 (To)
Latitude 21.617151034652878
Longitude -157.91334701486358

SITE LAYOUT PLAN
SCALE 1"=20'

Pavement Note:
Contractor shall submit a pavement phasing plan and schedule for the AC pavement work to the State Engineer for review and approval. Contractor shall be responsible for providing temporary traffic controls, temporary pavement transitions, notifying affected residences of the work schedule and providing safe temporary access at all times to driveways and streets. Continuous two way traffic shall be maintained at all times. Work shall be considered incidental to various items of work.

Legend:
- Dumped Riprap
- Project Boundary
- Army Corps Jurisdiction
- Discharge Point

SURVEY PLOTTED BY ____ DATE
DRAWN BY ____ RST
TRACED BY ____
DESIGNED BY ____ WC
QUANTITIES BY ____
CHECKED BY ____
ORIGINAL PLAN
NOTE BOOK
No. ____

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."
4/30/16
SIGNATURE LIC. EXPIRATION
R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SITE LAYOUT PLAN

Kamehameha Highway
Kaipapau Stream Bridge Replacement
Federal Aid Project No. BR-083-1(48)

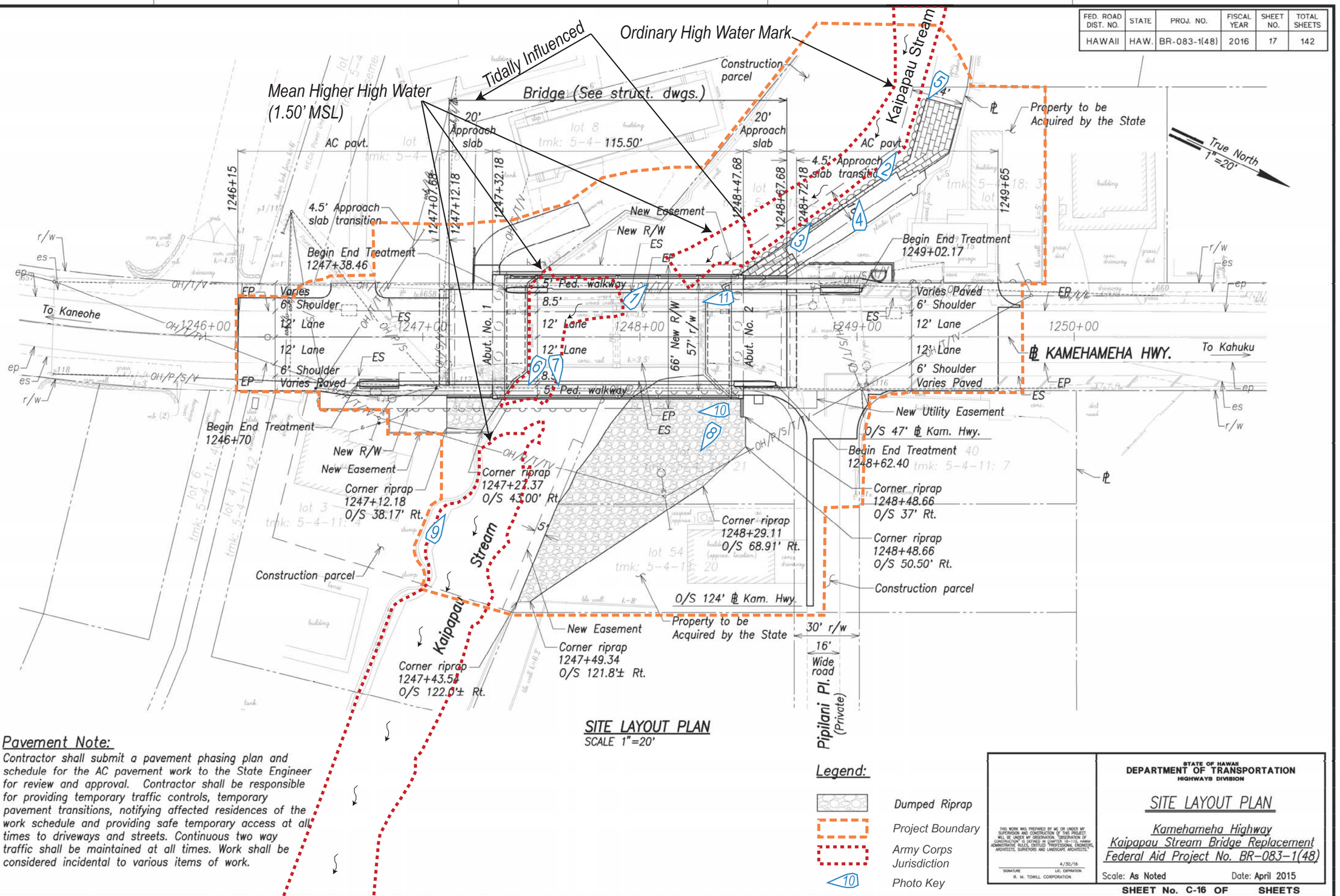
Scale: As Noted Date: April 2015

SHEET No. C-16 OF SHEETS

RMTC JOB NO. : 1-19548-0E

Attachment A-3
Army Corps Jurisdictional Boundary Maps

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2016	17	142



SITE LAYOUT PLAN
SCALE 1"=20'

Pavement Note:

Contractor shall submit a pavement phasing plan and schedule for the AC pavement work to the State Engineer for review and approval. Contractor shall be responsible for providing temporary traffic controls, temporary pavement transitions, notifying affected residences of the work schedule and providing safe temporary access at all times to driveways and streets. Continuous two way traffic shall be maintained at all times. Work shall be considered incidental to various items of work.

Legend:

- Dumped Riprap
- Project Boundary
- Army Corps Jurisdiction
- 10 Photo Key

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY RST	
NOTE BOOK	TRACED BY	
No.	DESIGNED BY WC	
	QUANTITIES BY	
	CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SITE LAYOUT PLAN

Kamehameha Highway
Kaipapau Stream Bridge Replacement
Federal Aid Project No. BR-083-1(48)

Scale: As Noted Date: April 2015

SHEET No. C-16 OF SHEETS

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4/30/16
SIGNATURE LIC. EXPIRATION
R. M. TOWILL CORPORATION

RMTC JOB NO. : 1-19548-0E

Kaipapa‘u Stream Bridge Replacement
Site Photos with Designated OHWM and MHHW

1. Kaipapa‘u Stream – Upstream View

2. Kaipapa‘u Stream Wall Repair – Close-up

3. Kaipapa'u Stream – Upstream from Project Site

4. Kaipapa'u Stream – Upstream View from Bridge – During Storm

5. Kaipapa‘u Stream Bridge – Upstream Side

6. Kaipapa‘u Stream –View Towards Ocean – After Storm

7. Kahuku Makai Bank – Downstream Side

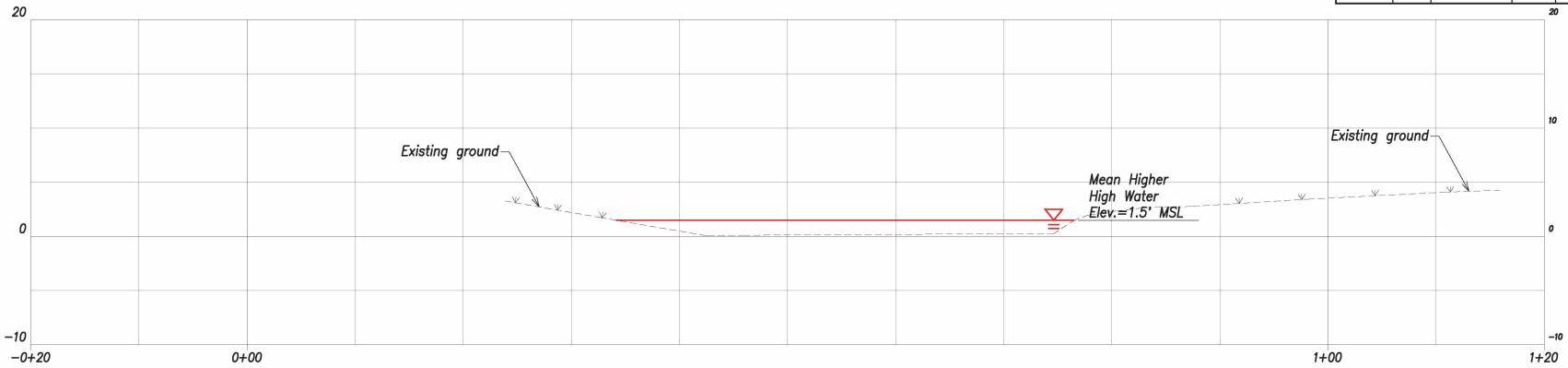
8. From Kahuku Makai Bank – View to Ocean – During Storm

9. Kaipapa‘u Stream Bridge – Downstream Side – After Storm

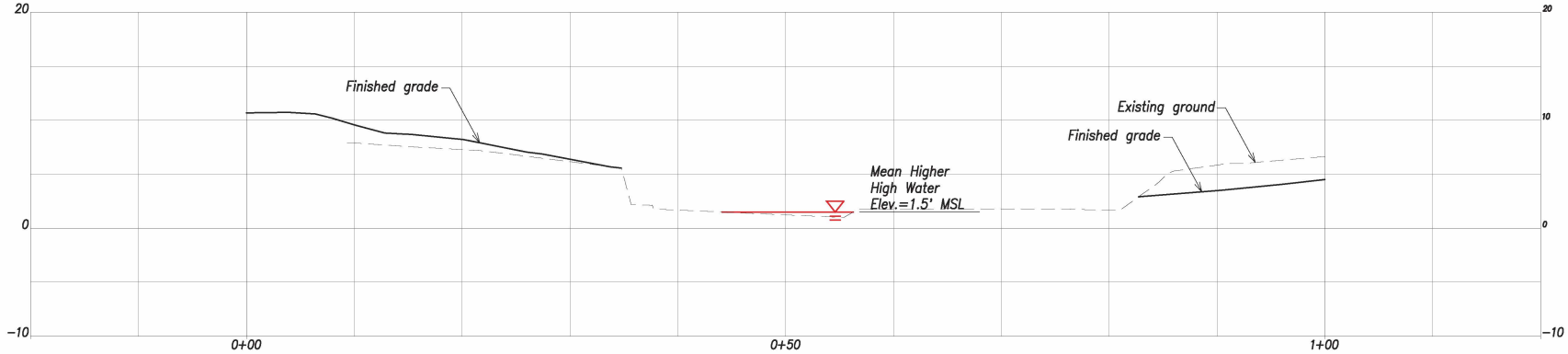
10. Kaipapa‘u Stream Bridge – Downstream Side – During Storm

11. Kaipapa‘u Stream Bridge – Looking to Kāne‘ohe – After Storm

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2015	2	xx



A 1 2 **SECTION**
Scale: 1"=5'



B 1 2 **SECTION**
Scale: 1"=5'

Graphic Scale:
1" = 5' 5' 0 5' 10'
Scale in Feet

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION. "SUPERVISION AND CONSTRUCTION" AS USED IN THIS PROJECT OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115 HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

4/30/14
SIGNATURE LIC. EXPIRATION
R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EXHIBIT 2
SECTIONS – 1
Kamehameha Highway
Kaipapau Stream Bridge Replacement
Project No. BR-083-1(48)

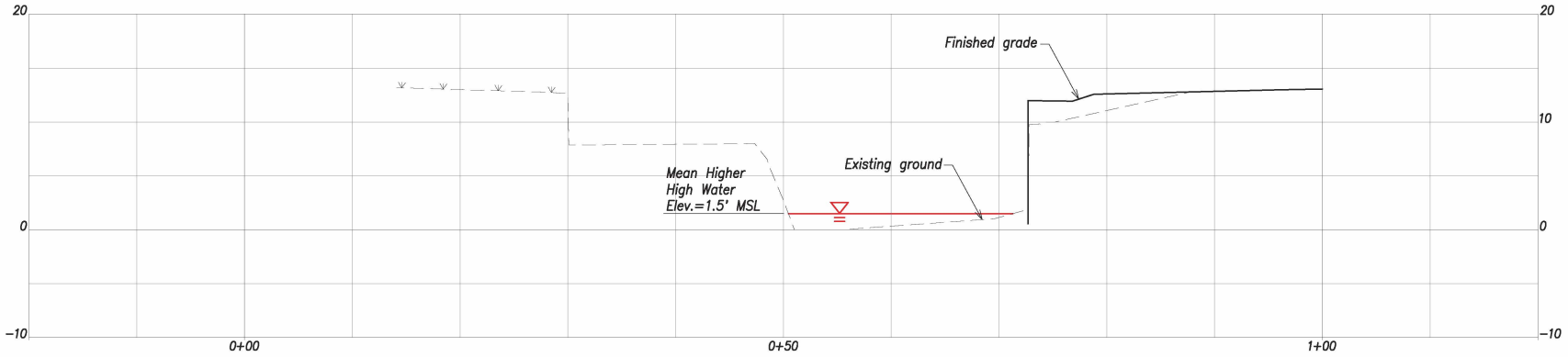
Scale: AS NOTED Date: DECEMBER 2013

SHEET No. 2 OF 4 SHEETS

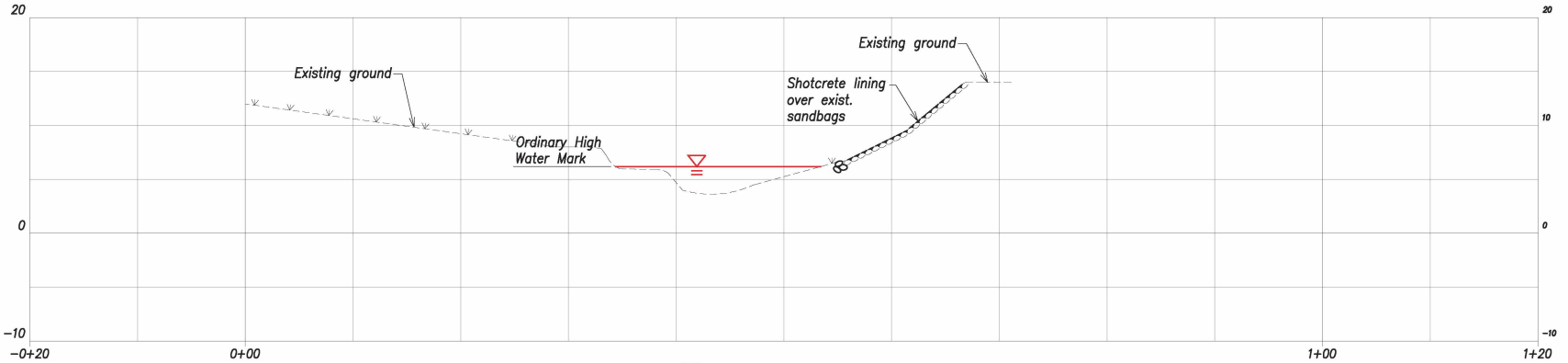
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	REF
No.	TRACED BY	
	DESIGNED BY	WC
	QUANTITIES BY	
	CHECKED BY	

RMTC JOB NO. : 1-19548-OE

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2015	3	xx



C 1 3 **SECTION**
Scale: 1"=5'



D 1 3 **SECTION**
Scale: 1"=5'

Graphic Scale:
1" = 5' 5' 0 5' 10'
Scale in Feet

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTITUTES "IS THIS PROJECT CONSTRUCTION" AS DEFINED IN CHAPTER 16-115 HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

4/30/14
SIGNATURE LIC. EXPIRATION
R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EXHIBIT 3
SECTIONS – 2
Kamehameha Highway
Kaipapau Stream Bridge Replacement
Project No. BR-083-1(48)

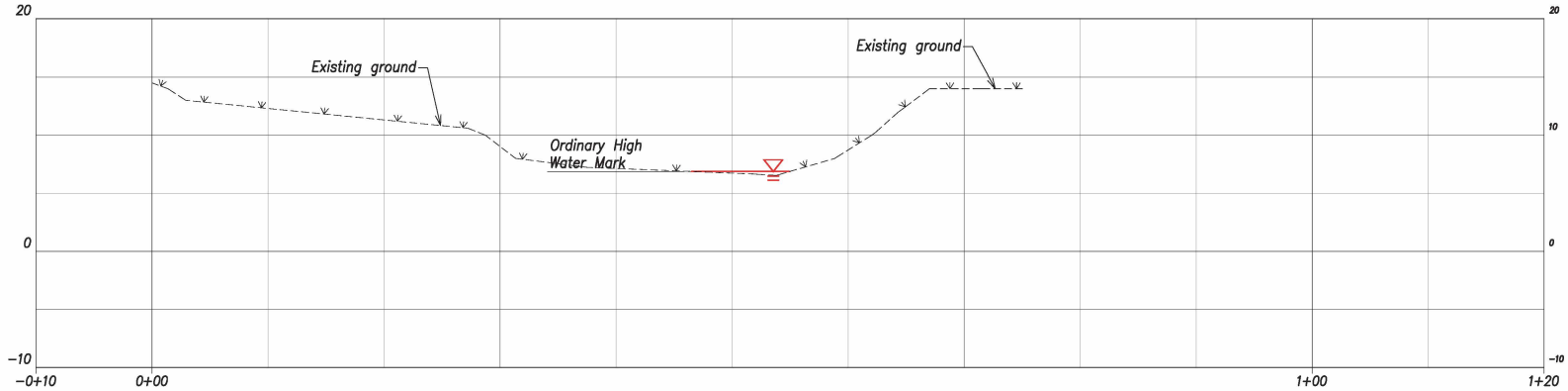
Scale: AS NOTED Date: DECEMBER 2013

SHEET No. 3 OF 4 SHEETS

ORIGINAL PLAN
NOTE BOOK
No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY WC
QUANTITIES BY
CHECKED BY

RMTC JOB NO. : 1-19548-OE

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2015	4	xx



E 1 4 **SECTION**
Scale: 1"=5'

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
No.	TRACED BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

Graphic Scale:
1" = 5' 5' 0 5' 10'
Scale in Feet

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTITUTES ALL THE PLANS OF WORK FOR THIS PROJECT AS DEFINED IN CHAPTER 16-115, "RULES OF PRACTICE AND PROCEDURE", DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, STATE OF HAWAII, ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEER, ARCHITECT, SURVEYOR AND LANDSCAPE ARCHITECT."

4/30/14
SIGNATURE DATE
R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

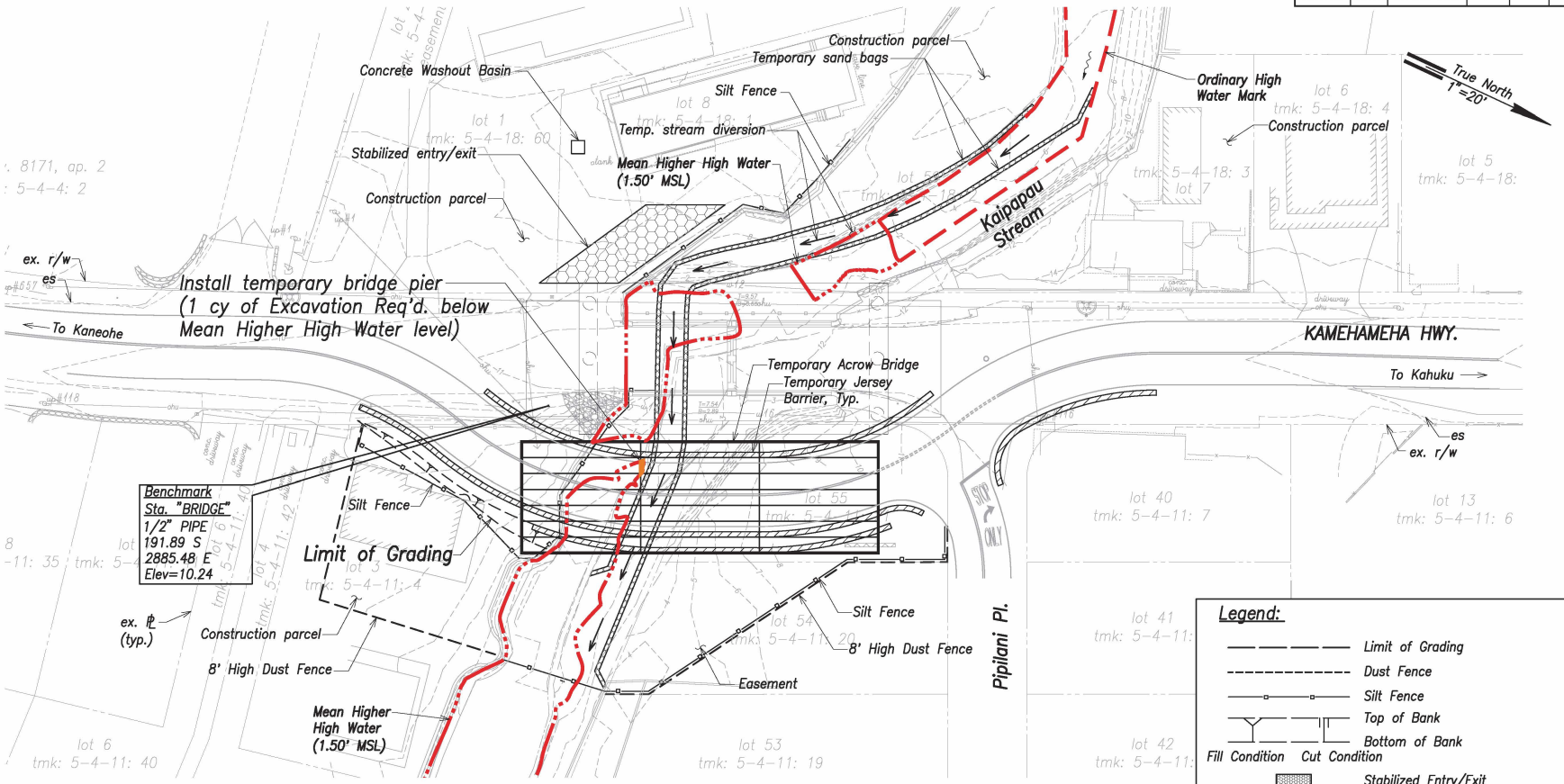
EXHIBIT 4
SECTIONS – 3
Kamehameha Highway
Kaipapau Stream Bridge Replacement
Project No. BR-083-1(48)

Scale: AS NOTED Date: DECEMBER 2013

SHEET No. 4 OF 4 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2015		xx



TEMPORARY DETOUR ROADWAY PLAN
Scale: 1"=20'

Legend:

- Limit of Grading
- Dust Fence
- Silt Fence
- Top of Bank
- Bottom of Bank

Fill Condition Cut Condition

- Stabilized Entry/Exit
- Ordinary High Water Mark
- Mean Higher High Water

Graphic Scale:
1" = 20' 20' 10' 0 20' 40'
Scale in Feet

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
	TRACED BY	
NOTE BOOK	DESIGNED BY	WC
No.	QUANTITIES BY	
	CHECKED BY	

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSERVATION. TO THIS PROJECT OF "PROFESSIONAL ENGINEERING" AS DEFINED IN CHAPTER 16-115 HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

4/30/14
SIGNATURE LIC. EXPIRATION
R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TEMPORARY DETOUR ROADWAY PLAN

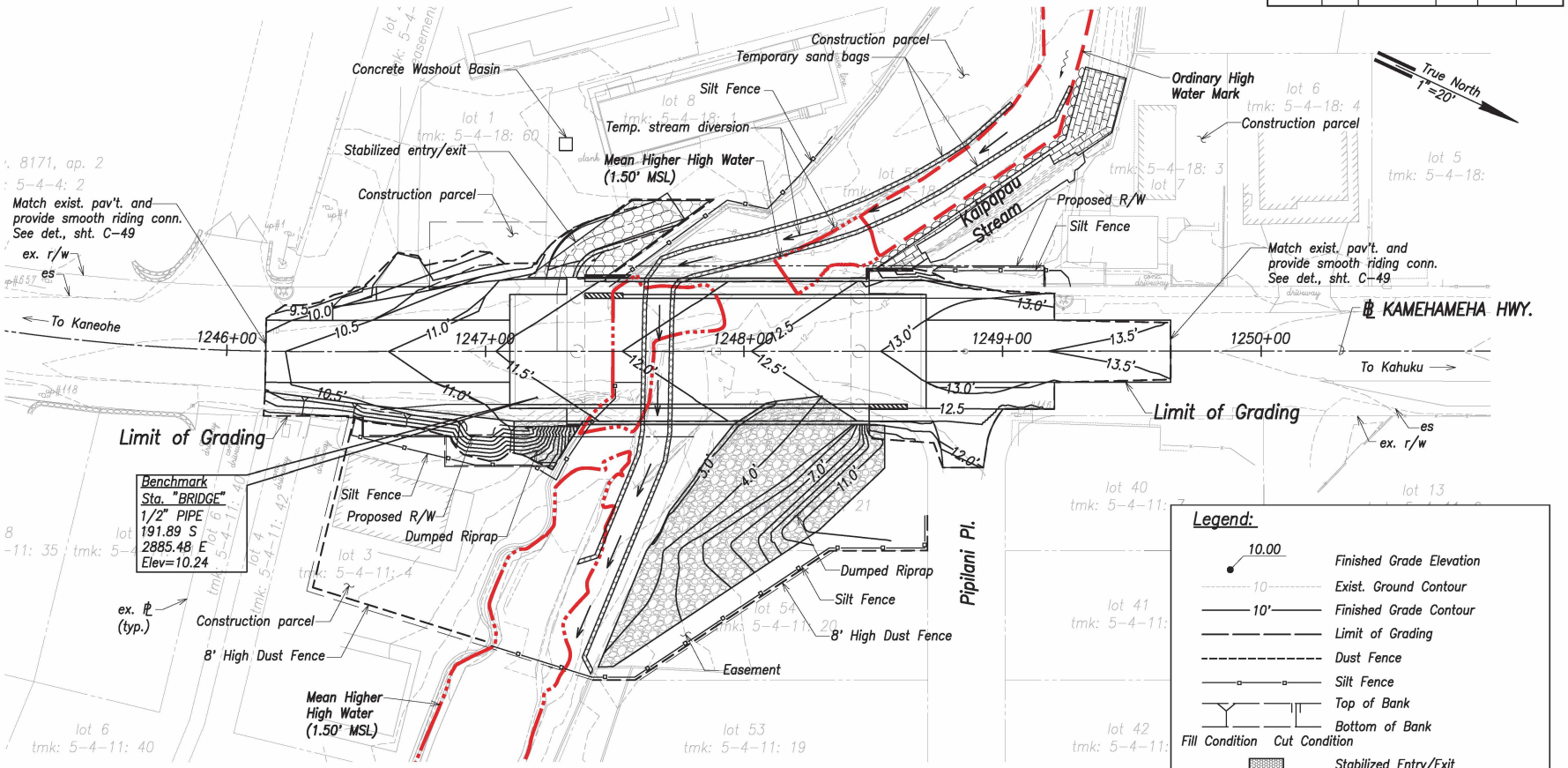
Kamehameha Highway
Kaipapau Stream Bridge Replacement
Project No. BR-083-1(48)

Scale: AS NOTED Date: DECEMBER 2013

SHEET No. OF SHEETS

RMTC JOB NO. : 1-19548-OE

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2015		xx



GRADING, EROSION AND SEDIMENT CONTROL PLAN
Scale: 1"=20'

Legend:

- 10.00 — Finished Grade Elevation
- 10 — Exist. Ground Contour
- 10' — Finished Grade Contour
- Limit of Grading
- Dust Fence
- Silt Fence
- Top of Bank
- Bottom of Bank

Fill Condition Cut Condition

- Stabilized Entry/Exit
- Ordinary High Water Mark
- Mean Higher High Water

Graphic Scale:
1" = 20' 20' 10' 0 20' 40'
Scale in Feet

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION TO THIS PROJECT IS OVERSEEN BY A PERSON APPROPRIATELY EXPERIENCED IN CONSTRUCTION AS DEFINED IN CHAPTER 16-115 HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

4/30/14
SIGNATURE LIC. EXPIRATION
R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GRADING, EROSION AND SEDIMENT CONTROL PLAN

Kamehameha Highway
Kaipapau Stream Bridge Replacement
Project No. BR-083-1(48)

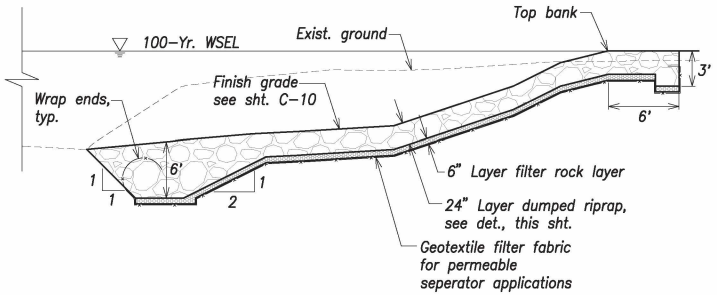
Scale: AS NOTED Date: DECEMBER 2013

SHEET No. OF SHEETS

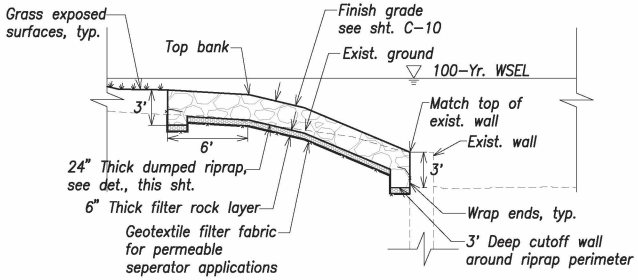
ORIGINAL PLAN
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE
NOTE BOOK
No.

RMTC JOB NO. : 1-19548-OE

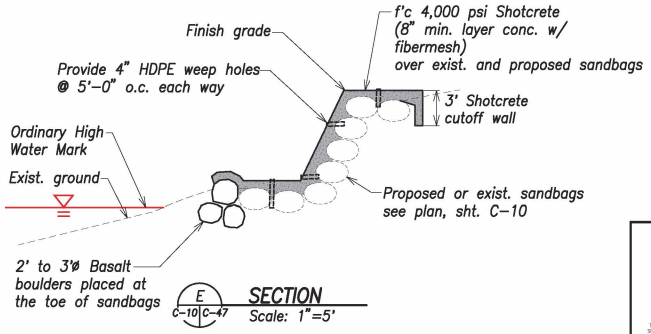
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2015	48	xx



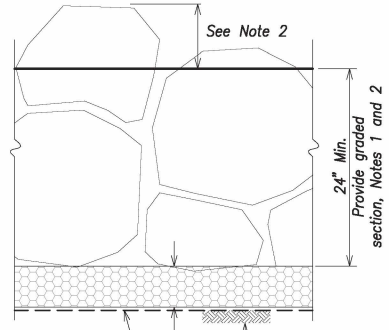
C C–10 | C–47 **SECTION**
Scale: 1"=5'



D C–10 | C–47 **SECTION**
Scale: 1"=5'



E C–10 | C–47 **SECTION**
Scale: 1"=5'



Notes:

1. Riprap shall be basalt rock and consist of 18"ø average stone size, 30"ø maximum stone size.
2. Riprap gradation:
   D_{85} = 2–0"
   D_{50} = 1'–6"
   D_{15} = 6"
3. 12" Max. from highest adjacent rock finish top.

DUMPED RIPRAP
Not to Scale

Graphic Scale:
1" = 5' 5' 2.5' 0 5' 10'
Scale in Feet

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION TO THIS PROJECT WILL BE OBSERVED BY ME OR MY DESIGNATED "OBSERVER OF CONSTRUCTION" AS DEFINED IN CHAPTER 16-115 HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

4/30/14
SIGNATURE LIC. EXPIRATION
R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STREAM BANK STABILIZATION & MISCELLANEOUS SECTIONS

Kamehameha Highway
Kaipapau Stream Bridge Replacement
Project No. BR–083–1(48)

Scale: AS NOTED Date: DECEMBER 2013

SHEET No. C-47 OF SHEETS

ORIGINAL PLAN
NOTE BOOK
No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY WC
QUANTITIES BY
CHECKED BY

RMTC JOB NO. : 1-19548-OE

Attachment B – HDOT SWPPP/IWPPP Training Log (SWPPP/IWPPP Section 7.2.13)

Instructions

Check Appropriate Box and Include Additional Sheet for Each of the Training Classes Listed Below on the Training Log Form:

A) Attendance at Department Of Transportation, Highways Division Annual Construction Site Runoff Control, Pollution Prevention, and Good Housekeeping Training for Contractors.

B) Attendance at Non-HDOT sponsored Stormwater BMP Training Courses.

C) Participation in viewing Annual HDOT Construction Site Runoff Control, Pollution Prevention, and Good Housekeeping Training for Contractors on DVD provided by HDOT.

TRAINING LOG

- ❑ *Department of Transportation, Highways Division Annual Construction Site Runoff Control, Pollution Prevention, and Good Housekeeping Training for Contractors*
- ❑ *Non-HDOT Sponsored Stormwater BMP Training Courses*
  *Name of Course/Sponsor*_____
- ❑ *Annual HDOT Construction Site Runoff Control, Pollution Prevention, and Good Housekeeping Training for Contractors on DVD Provided by HDOT*

Project Name:
Project Location:
Instructor's Name(s):
Instructor's Title(s):

Course Location: _____ *Date:* _____

Course Length (hours): _____

Stormwater Training Topic: (check as appropriate)

- ❑ *Erosion Control BMPs*
- ❑ *Sediment Control BMPs*
- ❑ *Non-Stormwater BMPs*
- ❑ *Emergency Procedures*
- ❑ *Good Housekeeping BMPs*

*Specific Training Objective:*_____

_____

Attendee Roster:

No.	***Name of Attendee***	***Company***
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Add rows as needed

Attachment C - Construction Schedule (SWPPP/IWPPP Section 7.2.5)

CONSTRUCTION SCHEDULE

To be determined by the General Contractor at a later date – General Contractor will provide date to DOH-CWB 30 days prior to the start of construction.

Schedule for Land-Based Construction Activities

The date when the SWPPP/IWPPP, including erosion control measures will be implemented: ___

All Inlet Protection BMPs will be installed prior to construction. These BMPs meet Section 5.1.1.3.1 as the inlets protected and the perimeter control BMPs are downstream of the paving work. These BMPs will be installed per the manufacturer's recommendations.

The date when the general contractor will begin the earth-disturbing activities: _____

Cessation, temporarily or permanently, of construction activities on the site: _____

Final or temporary stabilization of areas of exposed soil: _____

The date when the general contractor will end site disturbance: _____

The date when erosion control measures will be removed: _____

The date when the Notice of Cessation form will be submitted: _____

Schedule for In-Water Construction Activities

The date when BMP Measures to isolate and contain the work areas will be implemented: _____

Installation of Site-Specific BMPs to divert work around the area will take approximately 30 days.

The date when the general contractor will begin in-water construction activities: _____

Cessation, temporarily or permanently, of construction activities on the site: _____

Removal of temporary storm water conveyances/channels and other storm water control measures, removal of construction equipment and vehicles, and cessation of any pollutant-generating activities: _____

The date when the Notice of Cessation form will be submitted: _____

Attachment D – Subcontractor Certifications/Agreements (SWPPP/IWPPP Section 7.2.4)

SUBCONTRACTOR CERTIFICATION

*NGPC File No: HIR10*_____

Project Title: _____

Operator(s): _____

As a subcontractor, you are required to comply with the Storm Water Pollution Prevention Plan (SWPPP)/In-Water Pollution Prevention Plan (IWPPP) for any work that you perform on-site. Any person or group who violates any condition of the SWPPP/IWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP/IWPPP. A copy of the SWPPP/IWPPP is available for your review at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact storm water must be identified and sign the following certification statement:

I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP/IWPPP for the above designated project and agree to follow the BMPs and practices described in the SWPPP/IWPPP.

This certification is hereby signed in reference to the above named project:

*Company:*_____

*Address:*_____

*Telephone Number:*_____

*Type of construction service to be provided:*_____

_____

Signature: _____

Title: _____

Date: _____

Attach copies, retain originals on-site.

Attachment E1 – SWPPP Inspection Report Form for Oahu Land-Based BMPS(SWPPP Section 7.2.12) Rev. 12/20/13

(See Next Page)

CHECK ALL THAT ARE APPLICABLE:

☐ **There is evidence of a discharge.**

☐ **There is evidence that a polluted discharge is leaving or has left the project site.**

☐ **The polluted discharge was contained prior to reaching the storm drain system/receiving waters.**

NOTE: If any of the boxes above were checked, fill out HDOT Construction Discharge Report.

Included Attachments: ☐ **A. Photographs (Required for BMP Deficiencies)** ☐ **B. Other attachments**

Describe: _____

Comments/Remarks: _____

I certify that I am the person who performed the inspection documented above and that all information recorded on this form is a true and accurate representation of what was observed at the construction site recorded above.

Inspector Name and Title	**Signature**	**Date**

Attachment E2 – Discharge Report for Oahu Land-Based BMPs (Revised 1/29/14)

HDOT CONSTRUCTION DISCHARGE REPORT

☐ **CHECK IF DISCHARGE OBSERVED IS DURING AN INSPECTION**

DATE: _____ **INSPECTOR/ENGINEER:** _____
PROJECT NO.: _____ **DOH FILE NO.:** _____
PROJECT: _____
WEATHER CONDITIONS: _____ **INCHES OF RAIN IN THE PAST 24 HOURS:** _____

LOCATION OF WORK ACTIVITIES: _____
DESCRIPTION OF WORK ACTIVITIES: _____

This report is required when a non-stormwater or polluted stormwater discharge may have or may have potentially entered a storm drain or Receiving State Waters, if a discharge (e.g., spill) has occurred, if a polluted discharge is observed leaving the project limits, or if there is evidence of an unreported polluted discharge leaving project limits prior to inspection (such as: silty trail, eroded areas beyond site limits).

1) General Information

Date of Incident: _____
Incident Identified or reported by: _____
Time of Incident (note if time is approximate): _____
Duration of Incident (note if duration is approximate): _____
Source/Cause of Incident:

_____
Describe the Incident:

_____

Is the suspected reason for the discharge that a storm water control is clearly not operating as intended or is in need of maintenance?
☐ BMP needs maintenance ☐ BMP not operating as intended ☐ BMP is not a factor

2) Specific Discharge Information

Rev 01/28/15

A. Nature of the Discharge:	B. Characteristic of Immediate Area Where Discharge Occurred:
a. ☐ Sediment – Amount: _____ b. ☐ Concrete – Amount: _____ c. ☐ Oil/Grease – Amount: _____ d. ☐ Hazardous Material (describe): _____ – Amount: _____ e. ☐ Other (describe): _____ – Amount: _____	a. ☐ Receiving Water(s) – Name(s): _____ b. ☐ Storm Drain - MS4 Owner: _____ c. ☐ Soil - Type: _____ d. ☐ Asphalt/Concrete Surface e. ☐ Other - Describe: _____
C. Location Where Discharge Originated (include location map and photos on attached template): _____ ☐ Map or Photos attached	D. Description of Path of Discharge (include map and/or photos on attached template): _____ Where did the polluted discharge ultimately go? ☐ Entered a drainage system. ☐ Directly entered State waters (discharged directly to stream or other water body). ☐ Other (describe): _____ ☐ Map or Photos attached If the polluted discharge entered a drainage system or receiving water (e.g., stream, ocean), complete section 3.

Rev 01/28/15

3) Inlets, Outfalls, and Receiving Water Information

List all inlets and corresponding receiving water outfall locations from each drainage system. If discharge went directly to receiving waters, list the point where discharge entered receiving waters. At each point check the characteristics of the water upstream (if applicable), at discharge or outfall location, and downstream of discharge or outfall location (if applicable) and describe (turbidity, color, odor, floating, settled, or suspended solids, foam, oil sheen, and other obvious indicators of storm water pollutants).

If the discharge did not enter a drainage system or receiving water (e.g., stream, ocean), skip this section.

Inlet Location / Drainage System Owner (if applicable)	**Outfall / Discharge Location**	**Characteristics of water (turbidity, color, odor, floating, settled, or suspended solids, foam, oil sheen, and other obvious indicators of storm water pollutants)**		**Notes** (Include information about other inlets entering drainage system prior to outfall, etc.)
		Upstream of Location (if applicable)	**At Outfall/Discharge Location**	

4) Action Taken

a. Describe Immediate Measures Taken (include photos on attached template):

_____

☐ Photos attached

b. Describe Additional Follow-Up Measures Taken (include photos on attached template):

_____

☐ Photos attached

Rev 01/28/15

5) Other Notes/Comments

_____

I certify that I am the person who performed the inspection documented above and that all information recorded on this form is a true and accurate representation of what was observed at the construction site recorded above.

Inspector Name and Title	**Signature**	**Date**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Pratt M. Kinimaka	**Date**

Duly Authorized Person's Name: Pratt M. Kinimaka

Duly Authorized Person's Position Title: Oahu District Engineer

Duly Authorized Person's Company or Agency Information:

Company or Agency:	State of Hawaii Department of Transportation, Highways Division	**Phone:**	831-6700 ext 126
Address:	727 Kakoi Street	**Fax:**	831-6725
	Honolulu, Hawaii 96819	**Email:**	Pratt.Kinimaka@hawaii.gov

Rev 01/28/15

LOCATION MAP

PROJECT NO.: _____ DOH FILE NO.: _____

PROJECT NAME: _____

PROJECT LOCATION: _____

DESCRIPTION: _____

Rev 01/28/15

PHOTOS

PHOTOS TAKEN BY: _____

PROJECT NO.: _____ DOH FILE NO.: _____

PROJECT: _____

Rev 01/28/15

Page 6 of 6

Attachment E3 – HDOT SWPPP Inspection Report for Kauai, Maui, and Big Island Land-Based BMPs

HDOT INSPECTION REPORT FORM

*Date:*_____ *Project/Site:*_____ *Permit No.: HI*_____

*Inspector's Name:*_____

*Inspector's Title:*_____

*Weather:*_____

*Rain Gauge Site and Amount in Inches (If applicable)*_____ _____ *inches*

The Following Areas Have been Inspected	***Yes***	***No***	***N/A***	***Notes***
9.1.5a All areas that have been cleared, graded, or excavated and that have not yet completed stabilization consistent with section 5.2				
9.1.5b All storm water controls (including pollution prevention measures) installed at the site to comply with this permit				
9.1.5c Material, waste, borrow, or equipment storage and maintenance areas that are covered by this permit				
9.1.5d All areas where storm water typically flows within the site, including drainageways designed to divert, convey, and/or treat storm water				
9.1.5e All points of discharge from the site				
9.1.5f All locations where stabilization measures have been implemented				

9.1.5 Were any portions of the site not inspected due to unsafe conditions? YES ❑ NO ❑

If answering yes above, provide reasons why inspection of the site (or portions thereof) were unsafe and locations not inspected

_____

_____

_____

Site Specific Best Management Practices (BMPs) Plan	***Yes***	***No***	***N/A***	***Date Corrected***	***Notes***
Is a copy of the Site Specific BMPs plan available at the site?					
Is the Site Specific BMPs plan certified, signed, and dated?					
Is the Site Specific BMPs plan current and up-to-date?					
Are accompanying erosion and sediment control (ESC) drawings available at the site?					
Are the Erosion and Sediment Control (ESC) drawings up-to-date?					
Are all NPDES permits available at the site?					
Are inspection records available at the site?					

Insert or remove rows, fill in blanks to tailor to your site.

Best Management Practices	***Location***	***Installed Per Specifications (Y/N)***	***Adequate***	***Needs Maintenance***	***N/A***	***Date Corrected***	***Notes***
Controlling Storm Water Flowing onto and through the Project (run-on diversion, silt fence, vegetated filter strips and buffers, etc.							
Soil Stabilization (topsoil management, seeding and planting, mulching, geotextiles and mats, etc.)							
Slope Protection (seeding and planting; mulching; geotextiles and mats; slope roughening, terracing and rounding, etc.)							
Storm Drain Inlet Protection							
Perimeter Controls and Sediment Barriers (silt fence, vegetated filer strips and buffers, etc.)							
Sediment Basins and Detention Ponds (sediment traps, sediment basins, etc.)							
Stabilized Ingress/Egress Structures							
Additional Erosion and Sediment Control BMPs							

Best Management Practices	***Location***	***Installed Per Specifications (Y/N)***	***Adequate***	***Needs Maintenance***	***N/A***	***Date Corrected***	***Notes***
Material Handling and Waste Management (hazardous waste management, concrete waste management, etc.)							
Material Storage							
Spill Prevention/Control							
Baseyards/Staging Areas							
Washout Areas							
Concrete Washout/Waste							
Paint Washout/Waste							
Proper Equipment/Vehicle Fueling and Maintenance Practices							
Equipment/Vehicle Fueling							
Equipment/Vehicle Cleaning							
Equipment/Vehicle Maintenance							
Additional Non-Erosion or Sediment Control BMPs							
Post Construction BMPs (flared culvert end sections, rip-rap and gabion inflow protection, outlet protection and velocity dissipation devices, etc.)							
Other							
Sawcutting							
Dust Control							
Dewatering							

Best Management Practices	Location	Installed Per Specifications (Y/N)	Adequate	Needs Maintenance	N/A	Date Corrected	Notes

Insert or remove rows, fill in blanks to tailor to your site.

Site Conditions	Yes	No	N/A	Notes and Corrective Actions
9.1.6.1 Do all erosion and sediment controls and pollution prevention controls installed, appear to be operational, and working as intended to minimize pollutants discharges?				
9.1.6.1 Any controls need to be replaced, repaired, or maintained in accordance with HAR Ch. 11-55 sections 5.1.1.4 and 5.3.2?				
9.1.6.2 Any conditions present that could lead to spills, leaks, or other accumulations of pollutants on the site?				
9.1.6.3 Any locations where new or modified storm water controls are necessary to meet the requirements of HAR Ch. 11-55 sections 5 and/or 6?				
9.1.6.5 Any incidents of noncompliance observed?				
Are off-site flows entering the construction site?				
9.1.6.4 At points of discharge are there signs of visible erosion and sedimentation that have occurred and are attributable to the discharge?				
9.1.6.4 On the banks of any state waters flowing within the property boundaries are there signs of visible erosion and sedimentation that have occurred and are attributable to the discharge?				

Site Conditions	***Yes***	***No***	***N/A***	***Notes and Corrective Actions***
9.1.6.4 On the banks of any state waters flowing adjacent to the property are there signs of visible erosion and sedimentation that have occurred and are attributable to the discharge?				
Are construction materials/debris/trash/soil stored or disposed of properly at the site?				
Is there vehicle tracking from the site to receiving streets?				
Do locations exist where additional or revised BMPs are needed?				
Do locations exist where BMPs may no longer be necessary and may be removed?				
Does your site evaluation indicate a need to update or revise the current Site Specific BMPs plan and/or accompanying erosion and sediment control drawings?				

9.1.6.6 Discharges Observed During Inspection

Is a discharge occurring during the inspection? YES ❑ *NO* ❑

If answering YES above answer the following:

*9.1.6.6a Identify all points of the property from which there is a discharge*_____

*9.1.6.6b What color is the discharge?*_____

*9.1.6.6b Is there an odor? Describe if possible.*_____

*9.1.6.6b Are there floating, settled, or suspended solids? If so, describe?*_____

*9.1.6.6b Is there foam?*_____

*9.1.6.6b Does the discharge contain an oil sheen?*_____

9.1.6.6b Are there any other obvious indicators of storm water pollutants in the discharge? _____

_____

9.1.6.6c Is the suspected reason for the discharge that a storm water control is clearly not operating as intended or is in need of maintenance?

_____

_____

Photos

Photos taken during the BMP inspection documented above are:

- ❑ *Attached*
- ❑ *Inserted*
- ❑ *Not taken, attached, or inserted.*

(Insert photos in this section if you so choose.)

I certify that I am the person who performed the inspection documented above and that all information recorded on this form is a true and accurate representation of what was observed at the construction site recorded above. Any photographs attached that were taken during the inspection are a true, accurate, and unaltered representation of what was observed during the inspection documented above.

Inspector's Printed Name: _____ *Title:* _____

Inspector's Signature: _____ *Date of Inspection:* _____

Inspector's Printed Name: _____ *Title:* _____

Inspector's Signature: _____ *Date of Inspection:* _____

The certifying person and duly authorized representative shall meet the requirements of Hawaii Administrative Rules 11-55, Appendix A, Section 15.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____ *Date:* _____

Duly Authorized Person's Name: George Abcede

Duly Authorized Person's Position Title: O'ahu District Engineer

Duly Authorized Person's Company or Agency: Department of Transportation

Department: Department of Transportation

Division: Department of Transportation, Highways Division

Phone Number: (808) 831-6700 Ext. 126 *Fax No.:* (808) 831-6725

Person Email: George.Abcede@hawaii.gov

Attachment E4 – HDOT Inspection Report for In-Water Work (IWPPP Section 7.2.12A)

HDOT INSPECTION REPORT FOR IN-WATER WORK (IWPPP SECTION 7.2.12A)

Use this inspection report for daily in-water visual inspections and photographs. The questions below apply to the area outside the isolated and confined work area.

Date:	**April XX, 2021**	**DOH File No**	**N/A**	**DA File No.**	**POH-2005-00342**
Project Name:	**Kamehameha Highway Kaipapau Stream Bridge Replacement**			**HDOT Project No.**	**BR-083-1(48)**
Inspector Name:				**Inspector Title:**	
Weather:	**Mostly Cloudy, XX ºF, Wind: NE at XX mph**	**Rain Gauge Location**	**TBD**	**Rain Amount (Inches)**	**0.00”**

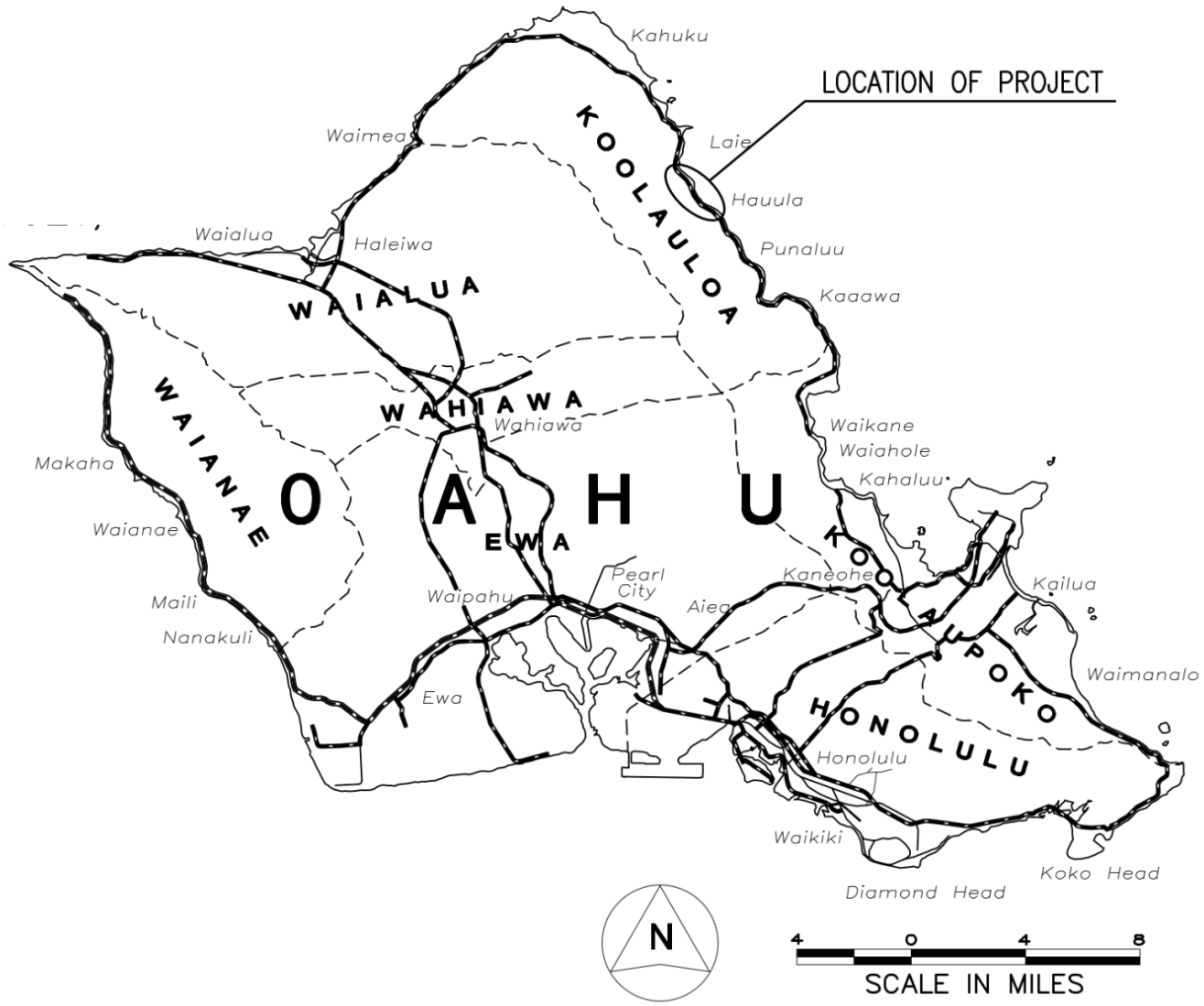
Is water flowing from the site?	**Yes**
Is there Turbidity Plume? *If yes, stop work immediately and investigate the source of the plume. Follow the procedures in Section 7.2.12A Procedures for Inspection, Maintenance, and Corrective Actions for In-Water Work Areas.*	**No.**
Are there any other indicators of discharged? *If yes, describe*	**No**
Is the suspected reason for the discharge that a storm water control is clearly not operating as intended or is in need of maintenance? *If yes, describe*	**No**

Photos taken during the BMP inspection documented above are:	❑ Attached ☒ Inserted

Comments:
Contractor In-Channel Activities today: - Reinforce diversion dam. - Install 8-foot ledger on the diversion dam (downstream) and 5-foot ledger on the diversion dam (upstream). - Place sand bags in a dry area of the channel in preparation for tomorrow’s activities, setting up the bulk bag dam downstream.

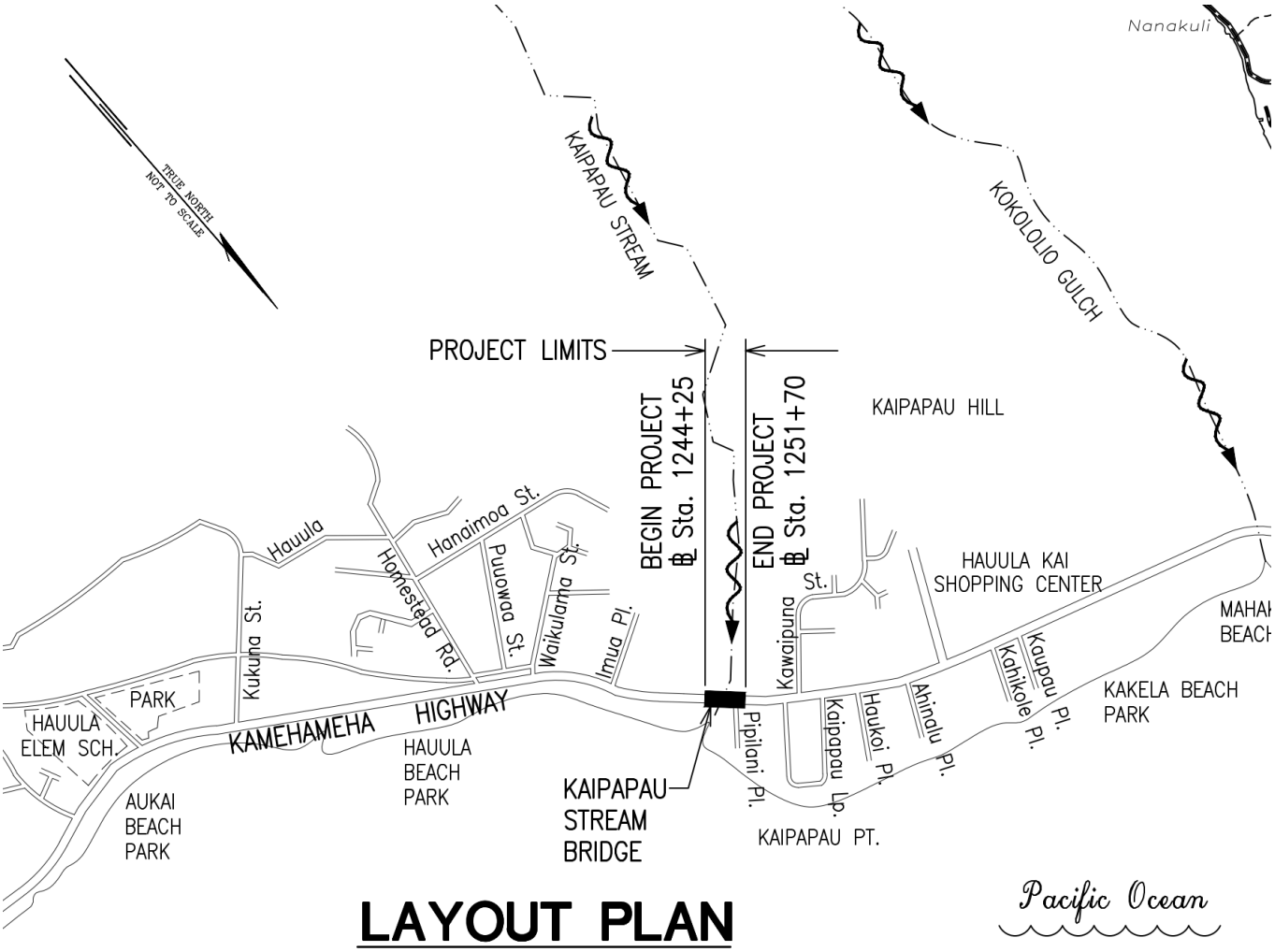
Location Map 1 of 2

HDOT Project No:	**BR-083-1(48)**	**DOH File No**	**N/A**	**DA File No.**	**POH-2005-00342**
Project Name:	**Kamehameha Highway Kaipapau Stream Bridge Replacement**				
Project Location:	**Project located on the Windward side of Oahu near the intersection of Kamehameha Highway and Pipilani Place**				



Location Map 2 of 2

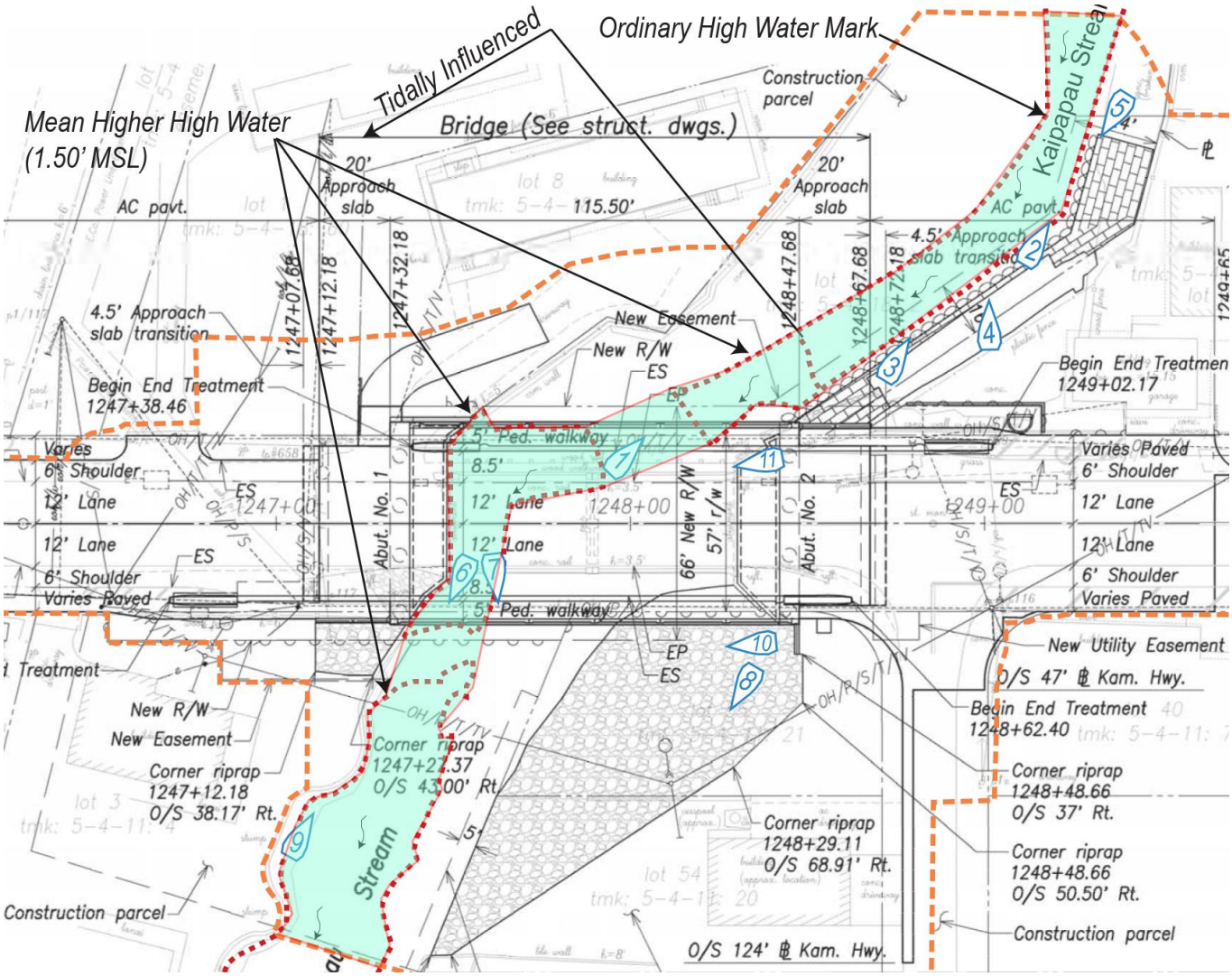
HDOT Project No:	**BR-083-1(48)**	**DOH File No**	**N/A**	**DA File No.**	**POH-2005-00342**
Project Name:	**Kamehameha Highway Kaipapau Stream Bridge Replacement**				
Project Location:	**Project located on the Windward side of Oahu near the intersection of Kamehameha Highway and Pipilani Place**				



LAYOUT PLAN

Photo Orientation Map

HDOT Project No:	**BR-083-1(48)**	**DOH File No**	**N/A**	**DA File No.**	**POH-2005-00342**
Project Name:	**Kamehameha Highway Kaipapau Stream Bridge Replacement**				
Project Location:	**Project located on the Windward side of Oahu near the intersection of Kamehameha Highway and Pipilani Place**				



Photos

Photo No.	**1**	**DOH File No**	**N/A**	**DA File No.**	**POH-2005-00342**
Project Name:	**Kamehameha Highway Kaipapau Stream Bridge Replacement**			**HDOT Project No:**	**BR-083-1(48)**
Photographer				**Date/Time**	
Description					

Photos

Photo No.	**2**	**DOH File No**	**N/A**	**DA File No.**	**POH-2005-00342**
Project Name:	**Kamehameha Highway Kaipapau Stream Bridge Replacement**			**HDOT Project No:**	**BR-083-1(48)**
Photographer				**Date/Time**	
Description					

Photos

Photo No.	**3**	**DOH File No**	**N/A**	**DA File No.**	**POH-2005-00342**
Project Name:	**Kamehameha Highway Kaipapau Stream Bridge Replacement**			**HDOT Project No:**	**BR-083-1(48)**
Photographer				**Date/Time**	
Description					

Photos

Photo No.	**4**	**DOH File No**	**N/A**	**DA File No.**	**POH-2005-00342**
Project Name:	**Kamehameha Highway Kaipapau Stream Bridge Replacement**			**HDOT Project No:**	**BR-083-1(48)**
Photographer				**Date/Time**	
Description					

Photos

Photo No.	**5**	**DOH File No**	**N/A**	**DA File No.**	**POH-2005-00342**
Project Name:	**Kamehameha Highway Kaipapau Stream Bridge Replacement**			**HDOT Project No:**	**BR-083-1(48)**
Photographer				**Date/Time**	
Description					

Photos

Photo No.	**6**	**DOH File No**	**N/A**	**DA File No.**	**POH-2005-00342**
Project Name:	**Kamehameha Highway Kaipapau Stream Bridge Replacement**			**HDOT Project No:**	**BR-083-1(48)**
Photographer				**Date/Time**	
Description					

Photos

Photo No.	**7**	**DOH File No**	**N/A**	**DA File No.**	**POH-2005-00342**
Project Name:	**Kamehameha Highway Kaipapau Stream Bridge Replacement**			**HDOT Project No:**	**BR-083-1(48)**
Photographer				**Date/Time**	
Description					

Photos

Photo No.	**8**	**DOH File No**	**N/A**	**DA File No.**	**POH-2005-00342**
Project Name:	**Kamehameha Highway Kaipapau Stream Bridge Replacement**			**HDOT Project No:**	**BR-083-1(48)**
Photographer				**Date/Time**	
Description					

Certification

I certify that I am the person who performed the inspection documented above and that all information recorded on this form is a true and accurate representation of what was observed at the construction site recorded above. Any photographs attached that were taken during the inspection are a true, accurate, and unaltered representation of what was observed during the inspection documented above.

Inspector's Printed Name		**Title**	
Inspector's Signature		**Date of Inspection**	

Certifying Person and Authorized Representative

The certifying person and duly authorized representative shall meet the requirements of Hawaii Administrative Rules 11-55, Appendix A, Section 15.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____ Date: _____

Duly Authorized Person's Name	Mike Medeiros		
Duly Authorized Person's Position Title	Oahu District Engineer		
Duly Authorized Person's Company or Agency	Department of Transportation		
Department	Department of Transportation		
Division	Department of Transportation, Highways Division		
Phone Number	(808) 831-6700 Ext. 126	**Fax No.:**	(808) 831-6725
Person Email	Mike.Medeiros@hawaii.gov		

Attachment F – Spill Prevention and Response Procedures (SWPPP/IWPPP Section 7.2.11.1)

Spill Prevention and Control Plan (SM-10)

Description	*Practices and procedures to reduce or prevent leaks or spills of fuels, oil, and other chemicals which may be discharged into the storm drain system or adjacent water bodies.*
Applications	*Construction projects involving the storage of chemicals or hazardous substances.*
Installation and Implementation Requirements	*General Requirements include the following:* *• Store hazardous materials and wastes in covered containers and protect containers from vandalism;* *• Maintain an ample supply of cleanup materials for spills shall be readily accessible;* *• Train employees on proper spill prevention and cleanup; and* *• Review spill response requirements at all applicable work sites.* *Cleanup Requirements include the following:* *• Immediately clean up leaks and spills;* *• Use minimal water to clean up spills on paved surfaces. For small spills, use a rag. For general cleanup, use a damp mop. For larger spills, use absorbent materials. Properly dispose of materials used to clean up hazardous materials;* *• Do not hose down or bury spills; and* *• Eliminate the source of the spill to prevent a discharge or continuation of an ongoing discharge.* *Reporting includes the following:* *• Report significant spills to the U.S. coast Guard, DOH Clean Water Branch, Hawaii State Office of Hazard Evaluation and Emergency Response, and City and County of Honolulu agencies, such as the Fire Department and* *• Per federal regulations, report significant spills of oil onto an adjoining shoreline or into a water body to the National Response Center at 800-424-8802 (24 hour).* *Vehicle and equipment maintenance activities requirements include the following:* *• Use a designated area and/or secondary containment for on-site repair or maintenance activities. These areas shall be located away from drainage courses;* *• Complete regular inspections of on-site vehicles and equipment, including delivery trucks and employees' vehicles, for leaks. Do not allow vehicles or equipment with leaks on-site. Provide Vehicle and Equipment Maintenance BMPs in SM-12 if repair must be made on site.* *• Secondary containment devices such as drop cloths and drain pans shall be used to catch leaks or spills while removing or changing fluids from vehicles or equipment;* *• Place drip pans or absorbent materials under paving equipment not in use;* *• Use absorbent materials on small spills. Do not hose down or bury spills. Remove and properly dispose of cleanup materials;* *• Immediately transfer used fluids to the appropriate waste or*

	recycling containers. Avoid leaving full drip pans and open containers on-site; *• Drain excess oil from oil filters prior to disposal by placing filter in a funnel over a waste oil recycling drum. Recycle oil filters if this service is available or dispose in accordance with Federal, State, and Local requirements;*
Installation and Implementation Requirements (Continued)	*• Store all cracked batteries in a non-leaking secondary container with cover even if the acid appears to have drained out. Handle dropped batteries as cracked batteries until assured it is not leaking.* *• Dispose of or recycle oil in accordance with Federal, State, and Local requirements. Store in water-tight container and provide cover to prevent containers from coming into contact with rainwater or secondary containment.* *Vehicle and equipment fueling activities requirements include the following:* *• Use designated areas for required on-site fueling. Fueling areas shall be located away from drainage courses;* *• Avoid "topping off" of fuel tanks; and* *• Use secondary containment devices such as drain pans to catch spills or leaks while fueling.*
Limitations	*Use of a private spill cleanup company may be necessary.*
Inspections and Maintenance	*• Update spill prevention and control plans and stock necessary cleanup materials as the chemicals used or stored on-site change.* *• Ample supplies of materials for spill control and cleanup shall be located on-site near maintenance and material storage or unloading areas.*

Emergency Spill Response Plan

Procedures for expeditiously stopping, containing, and cleaning up spills, leaks, and other releases (7.2.11.1a).

Spill Coordinator
The Contractor shall appoint a Primary and Secondary Emergency Spill Response Coordinator who will be responsible for the reporting of spills, coordinating contractor personnel for spill cleanup, subsequent site investigations, and associated reports. In the event of a spill, the Emergency Spill Response Coordinator will be responsible for determining the extent of the containment/isolation area and cleanup methods. Include Names, positions, and emergency contact information.
The Contractor shall make contact with a Spill Cleanup Emergency Response Contractor prior to start of construction to provide sufficient information for the spill contractor to be prepared should they receive a call in the event of an emergency.

Immediate Response
All spills regardless of size must be reported to the Emergency Spill Response Coordinator and the (HDOT Construction Resident Engineer/Project Engineer/Construction Inspector). The person observing the incident will take the following actions:
• Assess the safety of the situation (including the risk to the surrounding public).
• Alert nearby personnel and secure the immediate area for safety.

If the person is aware the chemical spilled is not toxic or a known petroleum product do the following:
• Make every effort to remove potential ignition sources and stop the source of the spill.
• Clean the spill using absorbent materials available on-site. Do not hose down or bury spills. Remove and properly dispose of cleanup materials.
• Promptly notify the Emergency Spill Response Coordinator. Report name, the spill location, material spilled, and the extent of the incident.

Upon learning of the spill, the Emergency Spill Response Coordinator will implement the following measures:
• Assess the safety of the situation (including the risk to the surrounding public).
• If the source of the spill is toxic or unknown, immediately notify the Fire Department and ask for assistance from the HAZMAT team.
• Secure the area by stopping traffic if necessary and install barricades or safety fencing around the area.
•If safe to do so, prevent hazardous material from entering the stormwater or sewer system or any waterbodies by covering/blocking any drains in the spill area, and providing containment BMPs to either prevent stormwater from contacting hazardous material or contain commingled stormwater.
•If safe to do so, absorbent materials will be applied to the spill area. Contaminated soils and vegetation will be excavated and temporarily placed on and covered by plastic sheeting or in an appropriate container or surrounded by impermeable lined berms in a containment area a minimum of 100 feet away from any wetland or waterbody, until proper disposal is arranged.
• Notify appropriate agencies as required by Federal, State, and local regulations.
•For petroleum spills, provide notification if the release meets any of conditions the below:

a) *Greater than 25 gallons*
b) *Not cleaned within 72 hours*
c) *Enters a storm drainage system or state waters*

• Arrange for proper disposal (including contaminated personal protective equipment and/or cleanup supplies) in accordance with Federal, State, and local regulations and Manufacturer's instructions if known.
• If a spill is beyond the scope of on-site equipment and personnel, contact the Spill Cleanup Emergency Response Contractor to further contain and clean up the spill.
• Notify the (HDOT Construction Resident Engineer/Project Engineer/Construction Inspector).

Contents of the Spill kits shall be determined by the Contractor based on the anticipated type and quantity of hazardous material to be stored/used on-site. The kit should contain at minimum:
•55 gallon drum with lid
•absorbent pads (50)
•absorbent socks (12)
•absorbent pillows (5)
•1 pair goggles or faceshield
•1 pair elbow length gloves
•1 disposable apron
•disposable bags with ties (3)
•Include additional materials such as Absorbent Skimmers or Booms for work adjacent or over State Waters as needed.
•Include additional materials as necessary to secure the spill area.

Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity consistent with HAR 11-55 subsection 5.3.4. and established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302, occurs during a 24-hour period (7.2.11.1.b).

• Contact information must be in locations that are readily accessible and available.

• The Contractor shall take all reasonable measures to protect human health and the environment.

• For emergencies or life-threatening situations, call 911 first.

• Notify responsible parties listed below as required and immediately notify DOH Clean Water Branch and the National Response Center of the incident. The notification shall also include the identity of the pollutant sources and the implemented control or mitigation measures. Notify other agencies as required by Federal/State/Local laws. List additional agencies or personnel below as required.

1. Owner Contact/Emergency Contact Number: (HDOT Construction Resident Engineer/Project Engineer/Construction Inspector)

2. Authorized Representative/ Emergency Contact Number: (HDOT District Engineer or designated representative who can contact Authorized Representative)

3. Contractor/ Emergency Contact Number: (Contractor Emergency Contact)

4. Department of Health
Clean Water Branch (During regular working hours): ……..808-586-4309
Hawaii State Hospital Operator (After hours):…….. 808-247-2191

AND E-mail Clean Water Branch via email at cleanwaterbranch@doh.hawaii.gov

5. Hawaii Hazard Evaluation and Emergency Response (HEER) ……..808-586-4249
(After Hours) ……....808-247-2191

AND

Appropriate Local Emergency Planning Committee (LEPC)

For projects on Hawaii Island
Henry Silva, Hawaii County LEPC…….……..808-936-0858

For projects on Oahu

Leland Nakai Department of Emergency Management……808-723-8958
LEPC……..…..808-723-8960
(After Hours)……..911

For projects on Kauai
Clifford Ikeda, Kauai Civil Defense……..……..……..808-241-1800
(After Hours)……..808-241-6711

For projects in Maui County
Scott Kekuewa, Maui Fire Department……..…..808-270-7911
(After Hours)……..911

6. National Response Center (NRC)……...(800)424-8802

7. Coast Guard Operations Center, Honolulu (working hours) …….. 808-522-8246
(After hours)……808-247-2191

8. County Fire Department/Police…… 911

9. Contractor to ADD Spill Cleanup Emergency Response Contractor]

• If required, fill in and follow the requirements of the HDOT Corrective Action Report.

Attachment G – Waste Management Procedures (SWPPP/IWPPP Section 7.2.11.2)

Waste Management Procedures

The Contractor shall submit the DOH "Solid Waste Disclosure Form for Construction Sites" to the Engineer within 30 calendar days of contract execution. The form can be downloaded at: *http://health.hawaii.gov/shwb/files/2013/06/swdiscformnov2008.pdf* ***Attach signed copy, including solid waste generated by sub-contractors, in Attachment G.***

Provide a copy of all the disposal receipts from the facility permitted by the Department of Health to receive solid waste to the Engineer monthly, this should also include documentation from any intermediary facility where solid waste is handled or processed, or as directed by the Engineer.

Solid Waste Management (SM-6)

Description	*Practices and procedures to prevent or reduce the discharge of pollutants from construction site wastes to the drainage system or adjacent water bodies.*
Applications	*Construction projects generating non-hazardous solid wastes from construction and demolition (C&D) activities. These wastes include C&D wastes, inert fill material, and recycle/reuse material.* *C&D wastes include materials originating from the demolition of roads, buildings, or other structures. Materials generated from these activities include concrete, brick, bituminous concrete, wood, masonry, composition roofing, roofing paper, steel, plaster, and minor amounts of metals.* *Inert fill materials are wastes that are not contaminated with hazardous materials such as asbestos or lead-based paint. Inert fill materials do not decompose or produce leachate or other products harmful to the environment. Inert fill materials include earth, soil, rock, cured asphalt, brick, and clean concrete (no exposed steel-reinforcing rod) with no dimension greater than eight inches.* *Recycle/reuse materials include but are not limited to: asphalt pavement, cardboard, concrete aggregate (no LBP, asbestos-free), electronic equipment, excavated rock, soil (uncontaminated), Freon from appliances, glass, green waste, metals, ferrous/non-ferrous, used tires, wood and lumbers, furniture, etc.*
Installation and Implementation Requirements	*• Separate contaminated clean up materials from C&D wastes. Contamination may be from hazardous substances, friable asbestos, waste paint, solvents, sealers, or adhesives. (See Section SM-9 Hazardous Waste Management)* *• Inert fill material shall not contain vegetation, organic material, or other solid waste.* *• Inert fill materials shall not be mixed with other C&D waste.* *• Provide waste containers of sufficient size and number to contain construction and domestic waste. Dumpsters should be securely lidded. Roll off containers should have a cover to keep rain out or loss of waste during windy conditions. Waste containers shall meet all local and State solid waste management regulations* *• Clean up and dispose of waste in designated waste containers.* *• The Contractor's supervisory personnel shall be instructed regarding the correct practices for waste disposal. Post notices stating these practices in the office*

trailer and the Contractor shall be responsible for seeing that these practices are followed.

Limitations *None*

Inspections and Maintenance

- *Inspect construction waste and recycling areas regularly.*
- *Schedule solid waste collection regularly. Empty waste containers weekly or when they are two-thirds full, whichever is sooner.*
- *Schedule recycling activities based on construction/demolition phases.*
- *Do not allow containers to overflow and clean up immediately if they do.*

Sanitary/Septic Waste Management (SM-7)

Description	*Practices and procedures to reduce or prevent the discharge of sanitary wastes from construction sites into the storm drain system or adjacent water bodies.*
Applications	*Construction sites with temporary or portable sanitary/septic waste systems.*
Installation and Implementation Requirements	*• Locate sanitary facilities in a convenient place away from drainage facilities and State Waters.* *• Untreated wastewater shall not be discharged into the drainage system, State waters, to the ground or buried.* *• Position sanitary facilities where they are secure and will not be knocked down.* *• Comply with the State of Hawaii, Department of Health requirements when using an on-site disposal system such as a septic system.* *• Avoid illicit discharges by properly connecting temporary sanitary facilities to the sanitary sewer system.* *• Sanitary/septic systems discharging to the sanitary sewer shall comply with the local wastewater treatment plant requirements.* *• A licensed service provider shall maintain sanitary/septic facilities in good working order.* *• Schedule regular waste collection by a licensed transporter at least once a week or as required.*
Limitations	*None*
Inspections and Maintenance	*• Inspect and maintain facilities regularly.* *• Schedule regular waste collection.* *• Prevent illicit discharges.*

Hazardous Waste Management (SM-9)

Description

Practices and procedures to prevent the discharge of hazardous waste to the land, storm drain system, sewer system, or adjacent water bodies.

Applications

Handling procedures on construction sites involving one of the following hazardous wastes:
• Paints and solvents;
• Petroleum products such as oils, fuels, and grease;
• Herbicides;
• Acids for cleaning masonry;
• Concrete curing and repair compounds; and
• Contaminated waste material.

Hazardous waste management shall also be implemented for wastes from existing structures including:
• Sandblasted material such as grit or chips containing lead, cadmium, or chromium-based paints;
• Asbestos; and
• Polychlorinated Biphenyls (PCBs). Older transformers are a common source of PCBs.

Installation and Implementation Requirements

Recognize potentially hazardous waste by implementing the following:
• Review product label and shipping papers;
• Identify key words such as flammable or ignitable (able to catch fire); carcinogenic (causes cancer); toxic or poisonous (injures or harms people or animals); and hazardous, danger, caustic or corrosive (burns through chemical action). Hawaii Administrative Rules (HAR) Title 11, Chapter 261 includes a list of hazardous waste and criteria;
• Review safety data sheets (SDS), formerly material safety data sheets (MSDS) from the manufacturer and supplier of the product; and
• Contact DOH, Hazardous Waste Program Office at 586-4226 for additional questions and information.

Material use practices and procedures for hazardous waste management include the following:
• Dispose container only after all of the product has been used;
• Keep the original product label on the container since it includes important safety and disposal information;
• Restrict amount of herbicide prepared to quantity necessary for the current application. Comply with the recommended usage instructions. Do not apply herbicides during or just before a rain event; and
• Remove as much paint from brushes on painted surface. Do not clean or rinse water-based paint brushes in soil, streets, gutters, storm drains, or streams. Rinse from water-based paints shall be discharged into the sanitary sewer system. Filter and re-use solvents and thinners. Dispose of oil-based paints and residue as a hazardous waste.
• See SM-2 Material Delivery and Storage and SM-3 Material Use for other requirements.

Waste recycling and disposal practices and procedures for hazardous waste management include the following:
• Designate areas for collection of hazardous wastes;
• Store hazardous materials and wastes in covered containers and label according to applicable Resource Conservation and Recovery Act (RCRA) requirements and all other applicable federal, state, and local requirements;
• Provide appropriately-sized secondary containment for hazardous waste containers or cover to prevent from contact with rainwater and stormwater runoff;
• Keep wastes separate to prevent chemical reactions which make recycling and disposal difficult;
• Recycle useful materials such as oil or water-based paint;
• Do not dispose of toxic liquid wastes (solvents, used oils, and paints) or chemicals (additives, acids, and curing compounds) in dumpsters allocated for construction debris;
• Schedule periodic waste collection to prevent overflow of containers; and
• Ensure collection, removal, and disposal of hazardous waste complies with manufacturer's recommendations and in compliance with federal, state, and local requirements.
• Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly.
• Do not clean surfaces or spills by hosing the area down.
• Eliminate the source of the spill to prevent a discharge or a continuation of an ongoing discharge.

Hazardous waste management training shall include the following:
• Awareness of potential dangers from hazardous wastes;
• Identifying hazardous wastes;
• Proper hazardous waste storage and disposal procedures;
• Safety procedures for hazardous wastes;
• Placement of warning signs in areas recently treated with chemicals;
• Use of cleanup materials for spills.

Limitations

Hazardous waste that cannot be reused or recycled shall be disposed of by a licensed hazardous waste hauler.

Inspections and Maintenance

• Regularly inspect hazardous waste collection and storage areas and containers.
• Schedule hazardous waste collection regularly.

Litter Management Plan

Kaipapa'u Stream Bridge Replacement

A. Construction site preparations.

Before the start of construction activities, during the mobilization process, proper litter waste receptacles will be located at the construction site. Litter receptacles will be placed within the boundaries of the project right-of-way or within a project related vehicle on-site. Construction debris receptacles that accept mixed reuse may also act as litter control receptacles.

B. Daily Construction Site Litter Prevention Activities.

- *Pre-Construction activities litter prevention and control activities.*

  - *At the start of each work day, the active work areas of the construction site(s) will be inspected for litter debris.*
  - *Litter debris found will be collected and properly sorted into the proper debris receptacle.*
  - *Litter will be collected whether or not it was sourced from the job site and construction related activities.*
  - *After collection, litter will be disposed of in appropriate waste containers and all practices outlined in the Waste Management Plan will be followed.*
  - *Waste containers will be inspected regularly to prevent overfilling.*

- *Post-Construction Site Litter Prevention Activities*

  - *At the end of each work day, the active work areas of the construction site(s) will be inspected for litter debris.*
  - *Litter debris found will be collected a property sorted into the proper debris receptacle.*
  - *Litter will be collected whether or not it was sourced from the job site and construction related activities.*
  - *After collection, litter will be disposed of in appropriate waste containers and all practices outlined in the Waste Management Plan will be followed.*
  - *Waste containers will be inspected regularly to prevent overfilling.*

- *BMPs and Litter Control*

    - *Construction Site BMPs will be inspected for litter debris when conducted weekly BMP inspection or after a significant rain event as litter debris may reduce the performance of BMPs.*

Attachment H – Emergency Related Projects, Departures from Manufacturer's Specifications for Fertilizers Containing Nitrogen or Phosphorus, Buffer Documentation, Documentation of Compliance with UIC Requirements, Other State/Federal/County Permits, & Other Information as Requested by the Director (SWPPP/IWPPP Sections 7.2.3, 7.2.9, 7.2.14, 7.2.15, and 7.2.16)

Attachment I – Corrective Action Reports

Hawaii Department of Transportation Corrective Action Report

Section 10.1 "Corrective Actions" Defined

Corrective actions are actions taken in compliance with this section to:

a. Repair, modify, or replace any storm water control used at the site
b. Clean up and properly dispose of spills, releases, or other deposits
c. Remedy a permit violation

Section 10.2.1. Triggering Events

The following are triggers that require corrective action be taken (this triggering condition is to be documented within 24 hours of discovering the occurrence):

- ❑ *A required storm water control was never installed, was installed incorrectly, or not in accordance with the requirements in HAR Chapter 11-55, sections 5 and/or 6.*
- ❑ *The Contractor/Engineer becomes aware that the storm water controls installed and being maintained are not effective enough for the discharge to meet applicable water quality standards or applicable requirements in HAR Chapter 11-55, section 6.1. The Contractor shall notify the Engineer immediately. The Engineer will notify the Department of Health by the end of the next work day.*

  *Date/time Engineer notified by Contractor*_____

  *Date/time DOH notified by Engineer*_____

- ❑ *One of the prohibited discharges below is occurring or has occurred:*
  - ❒ *Wastewater from washout of concrete*
  - ❒ *Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials*
  - ❒ *Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance*
  - ❒ *Soaps, solvents, or detergents used in vehicle and equipment washing*
  - ❒ *Toxic or hazardous substances from a spill or other release*

Section 10.2. Requirements for Taking Corrective Actions

The Contractor shall complete corrective actions in accordance with the deadlines specified below. In all circumstances, the Contractor shall immediately take all reasonable steps to minimize or prevent the discharge of pollutants until a permanent solution is installed and made operational, including cleaning up any contaminated surfaces so that the material will not discharge in subsequent storm events. Immediately means the same day the condition is discovered, unless it is too late in the day, in which initiation of corrective action must begin on the following work day.

Following any of the above triggering events, the Contractor shall install a new or modified control and make it operational, or complete the repair, by no later than 7 calendar days from the time of discovery. If it is infeasible to complete the installation or repair within 7 calendar days, the Contractor shall document and submit to the Engineer, for his agreement, why it is infeasible to complete the installation or repair within the 7 calendar day timeframe and

document a schedule for installing the storm water control(s) and making it operational as soon as practicable after the 7-day timeframe.

*Date installation/repair completed or date/time prohibited discharge ceased*_____

Reason it is infeasible to complete installation or repair within 7 calendar days and proposed schedule (if applicable) _____

10.4.1. Initial Report (24 Hours)

Within 24 hours of discovering the occurrence of one of the triggering conditions in HAR Chapter 11-55, section 10.2.1. at the site, the Contractor must complete the following:

- *The nature of the condition identified*_____
- *The date and time of the condition identified and how it was identified* _____

10.4.2. Final Report (7 Days)

Within 7 calendar days of discovering the occurrence of one of the triggering conditions in HAR Chapter 11-55, section 10.2.1. at the site, the Contractor must complete a report of the following:

- *Any follow-up actions taken to review the design, installation, and maintenance of storm water controls, including the dates such actions occurred*_____
- *A summary of storm water control modifications taken or to be taken, including a schedule of activities necessary to implement changes, and the date the modifications are completed or expected to be completed*_____
- *Notice of whether SWPPP/IWPPP modifications are required as a result of the condition identified or corrective action*_____

Section 10.2.2. SWPPP/IWPPP Modification Due to Corrective Actions

Where corrective actions result in changes to any of the storm water controls or procedures documented in the SWPPP/IWPPP, modify the SWPPP/IWPPP accordingly within 7 calendar days of completing corrective action work.

❑ *Date SWPPP/IWPPP modified*_____

Section 10.3 Corrective Actions Required by the Department of Health (DOH)

The Contractor shall comply with any corrective actions required by the department as a result of permit violations found during an inspection by DOH or EPA.

Was the Corrective Action triggered by a DOH/EPA inspection?

❑ *Yes* ❑ *No*

❑ *Date of DOH/EPA Inspection*_____

Section 10.4.3. Certification

The certifying person and duly authorized representative shall meet the requirements of Hawaii Administrative Rules 11-55, Appendix A, Section 15.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

*Signature:*_____ *Date:*_____

Person Name: George Abcede

Person Position Title: O'ahu District Engineer

Person Company or Agency: State of Hawaii

Department: Department of Transportation *Division:* Highways Division

Phone Number: (808) 831-6700 Ext. 126 *Fax No.:* (808) 831-6725

Person Email: George.Abcede@hawaii.gov

Attachment J – Monthly Compliance Report

Hawaii Department of Transportation Monthly Compliance Report

*DOH NGPC File No.*_____
*Project Name:*_____
*Project No:*_____
*Reporting Month and Year:*_____
*Date Prepared:*_____

Complete this form within 2 working days of the end of the month. This report must be kept on-site and made available by the end of the next business day when requested by DOH. Check the applicable boxes below and include attachments when necessary.

❑ *Corrective Action Reports for this month are attached.*

❑ *Changes to the information on file with DOH for the past month are attached.*

❑ *No changes, updates, or any incidences of non-compliance to report.*

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

*Signature:*_____ *Date:*_____

Person Name: George Abcede

Person Position Title: O'ahu District Engineer

Person Company or Agency: State of Hawaii

Department: Department of Transportation *Division:* Highways Division

Phone Number: (808) 831-6700 Ext. 126 *Fax No.:* (808) 831-6725

Person Email: George.Abcede@hawaii.gov

Attachment K – Post-Authorization Additions to the SWPPP/IWPPP (Including Army Corps PCN, 401 WQC, and Special Conditions)

Attachment L – SWPPP/IWPPP Modification Log

MODIFICATION LOG

Each Modification must be signed by the authorized representative authorizing the changes in Section 7.2.17 within 7 calendar days following the occurrence of any of the conditions listed in section 7.4.1.

Project Name: _____

SWPPP/IWPPP Contact: _____

Modification No.	***Description of the Modification***	***Date of Modification***	***Modification Prepared by [Name(s) and Title]***

Add rows as needed.

Include any attachments on the following pages.