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

DRAFT

Project Title: Nanue Stream Bridge Rehabilitation

Project No.: BR-019-2(077)

DOH WQC1092.FNL.22
DA File No. POH-XXX-XXXX
DOH NGPC File No. N/A

Prepared by: Department of Transportation, Highways, Design Branch
Date: October 30, 2024

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

DOH WQC1092.FLN.22

DA File No. POH-XXX-XXXXX

Notice of General Permit Coverage (NGPC) File No. ***N/A***
Preparation Date 10/30/24

Table of Contents

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.

Contractor Staging/Storage Areas

- *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 Specifications and applicable Special Provisions.*

The following applies to construction areas discharging to all outfalls:

1) *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 and daily during periods of prolonged rainfall. For more details see Section 7.2.12 of this SWPPP/IWPPP.*

2) *Immediately initiate and complete stabilization within 7 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 Nanue 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 of stream diversion method chosen by the contractor using 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: Annette Matsuda

Company: Hawaii Department of Transportation

Position: Acting HDOT Acting Hawaii District Engineer

Contact Number: (808) 446-4586 Contact Alternate (Cell) Phone number: (808) xxx-xxxx

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 HAR 11-55.

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: Amy Sunahara

Company: Hawaii Department of Transportation

Position: HDOT Design Project Manager

Contact Number: (808) 692-7575

Responsibilities: Develop SWPPP/IWPPP during the design process

2) Name: Larissa Sato

Company: WSP USA

Position: Sr. Supervising Engineer

Contact Number: (808)566-2246

Responsibilities: Develop SWPPP/IWPPP during the design process

3) Name:

Company: Hawaii Department of Transportation

Position: HDOT Resident 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: Hawaii Department of Transportation

Position: HDOT Construction Project Engineer

Contact Number: (808)xxx-xxxx

Responsibilities:

6) Name:

Company: Contractor

Position: Contractor Designated Representative

Contact Number: (808)xxx-xxxx

Responsibilities:

7) Name:

Company: Contractor

Position: Contractor

Contact Number: (808)xxx-xxxx

Responsibilities:

8) 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 NOI 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): Bridge Repair*

For construction site estimates, see NOI Form C, Section C.3.

What is being constructed? The project consists of rehabilitating the Nanue Stream Bridge by repairing various deteriorating items as follows: 1) Superstructure Repairs including replacing steel truss members, bearings, gusset plates; (2) repair spalls and delamination in the concrete deck, abutments, bridge railings and column pedestals; (3) cleaning and painting steel members (4) addressing scour deficiencies for the bridge foundations by cleaning out silt and loose debris prior to filling voids under the bridge foundation with concrete.

Describe the scope of work and major construction activities covered in this NOI, including baseyards and staging areas. Include only project areas where the locations of impervious structures are known; project areas where the final grades are known; and work areas that will be performed by one (1) general contractor. A separate NOI will be required for all other project areas. (Note: Per Section 209 of the specifications and applicable special provisions, the maximum surface area of earth material which may be exposed at any time is 300,000 square feet.)

This project does not require a Notice of Intent as it does not meet the 1 acre disturbed area threshold. 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 once the project is awarded for review and acceptance.

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.

Latitude: **19.927399° N** *Longitude:* **-155.156366° E**

Receiving Water Name: **Nanue 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:

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.

1) Discharge Point Label: **DP #1A**

Latitude: **19.927059° N** *Longitude:* **-155.156522° E**

Receiving Water Name: **Nanue Stream**

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:

2) Discharge Point Label: **DP #1B**

Latitude: **19.927523° N** **Longitude**: **-155.156125° E**

Receiving Water Name: **Nanue Stream**

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:

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

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 project consists of rehabilitating the Nanue Stream Bridge by repairing various deteriorating items as follows: 1) Superstructure Repairs including replacing steel truss members, bearings, gusset plates; (2) repair spalls and delamination in the concrete deck, abutments, bridge railings and column pedestals; (3) cleaning and painting steel members (4) addressing scour deficiencies for the bridge foundations by cleaning out silt and loose debris prior to filling voids under the bridge foundation with concrete.

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.***

(General Contractor Company Name) *The general contractor information will be submitted at least 30 calendar days before the start of construction activities.*	
(General Contractor Contact Person Name)	
(General Contractor Mailing Address)	
(General Contractor Mailing City)	*(General Contractor Mailing State and Zip*
(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 once the project is awarded for inclusion in the SWPPP.

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 SWPPP/IWPPP Attachment A*

b. *Locations where earth-disturbing activities will occur, noting any sequencing of construction activities. See SWPPP/IWPPP Attachment A*

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 SWPPP/IWPPP Attachment A*

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 SWPPP/IWPPP Attachment A*

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 SWPPP/IWPPP Attachment A*

f. *Locations where sediment, soil, or other construction materials will be stockpiled 7.2.6.1c.*

   See SWPPP/IWPPP Attachment A. 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 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. See SWPPP/IWPPP Attachment A-4.*

i. *Designated points on the site where vehicles will exit onto paved roads 7.2.6.1f. See SWPPP/IWPPP Attachment A. 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 SWPPP/IWPPP Attachment A

k. Locations of construction support activity areas covered by this permit 7.2.6.1h. See SWPPP/IWPPP Attachment A. 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 and will be included in the SWPPP/IWPPP. 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.

Map showing the Jurisdiction Line between In-Water and Land Based BMPs See Attachment A-2 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 SWPPP/IWPPP Attachment A.*

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 Nanue 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 SWPPP/IWPPP Attachment A.*

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 SWPPP/IWPPP Attachment A.*

   and b) Locations where storm water will be discharged to state waters (including wetlands) 7.2.6.5. See SWPPP/IWPPP Attachment A-4.

e. *Locations of all potential pollutant-generating activities identified in section 7.2.7, 7.2.6.6.*

   See SWPPP/IWPPP Attachment A.

f. *Locations of storm water control measures 7.2.6.7. See SWPPP/IWPPP Attachment A. The Contractor shall submit to the Engineer for his review and acceptance the locations of storm water control measures by construction activity and construction sequence once the project is awarded and will be included in the SWPPP/IWPPP. 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. (Include maps by Construction Activity and Construction Sequence).*

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 Construction Activity BMP Map. The table below shows possible chemicals which may be used on site and which construction activity they are associated with. The Contractor shall submit to the Engineer for his review and acceptance locations where chemicals may be used and stored 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 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	• *Roadway construction*	*Bridge Demolition and Construction*
Concrete Curing Compounds/ Form Release Oils	• *Roadway 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*
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

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. Note: Buffer compliance requirements must be maintained until construction on the area discharging to the buffer is complete, and the area is restored and stabilized (as applicable).

☐ *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. Provide documentation why it is infeasible to provide buffer of any size in Attachment H.

☐ *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.

☒ *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 removal of silt and debris and installation of underwater concrete to fill the voids in the bridge foundations and associated In-Water work below the Mean High High Water Mark 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). Will be made operational or see below. Perimeter sediment control devices are impracticable on all sections of the project. They will be made operational where possible.*

☒ *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*

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.* • *Collect and dispose of all waste materials in trash dumpsters. Place dumpsters, with secure watertight lids, away from storm water conveyances and drains, in a covered materials storage area.* • *Dispose of construction and non-construction solid waste in accordance with State DOH regs.* • *Load removed non- recyclable vegetation directly onto trucks;*	*See Solid Waste Management Section SM-6. Protect Storm Drain Inlets SC-1, and Perimeter Sediment Controls where applicable.* *See Litter Management Plan.*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	cover and transport to a licensed facility	

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
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 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*	*See Vehicle and Equipment Cleaning, Maintenance, and Refueling, Sections SM-11, SM-12, and SM-13, and Material Storage and Handling Section SM-2, and* ***Spill Prevention and Control SM-10.***

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	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 Storage and Handling SM-2 for additional requirements.*	

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
Soil erosion from the disturbed areas	• ***Provide Soil Stabilization, Slope Protection, Storm Drain Inlet Protection SC-1, Perimeter Controls and Sediment Barriers, Sediment Basins and Detention Ponds, Check Dams SC-3 ,Level Spreader EC-6, Paving Operations SM-20, Construction Roads and Parking Area SC-10, Controlling Storm Water Flowing Onto and Through the Project, Post-Construction BMPs, and Non-Structural BMPs (Construction BMP Training SM-1, Scheduling SM-14, Location of Potential Sources of Sediment SM-15, Preservation of Existing Vegetation SM-17) .*** • ***Delineate, and clearly mark off, with flags, tape, or other similar marking device all natural buffer areas defined in the SWPPP.*** • ***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***	*Soil Stabilization* 1. *SM-22 Topsoil Management* 2. *EC-12 Seeding and Planting* 3. *EC-14 Mulching* 4. *EC-11 Geotextiles and Mats* *Slope Protection* 1. *EC-12 Seeding and Planting* 2. *EC-14 Mulching* 3. *EC-11 Geotextiles and Mats* 4. *EC-4 Slope Roughening, Terracing, and Rounding* 5. *EC-7 Slope Drains and Subsurface Drains* 6. *EC-9 Slope Interceptor or Diversion Ditches/Berms* *SC-1 Storm Drain Inlet Protection* *Perimeter Controls and Sediment Barriers* 1. *SC-7 Silt Fence or Filter Fabric Fence* 2. *SC-2 Vegetated Filter Strips and Buffers*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	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.*** • ***Sediment basins shall be designed and maintained in accordance with HAR Chapter 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.***	3. *SC-6 Compost Filter Berm/Sock* 4. *SC-8 Sandbag Barrier* 5. *SC-9 Brush or Rock Filter* *Sediment Basins and Detention Ponds* 1. *SC-4 Sediment Trap* 2. *SC-5 Sediment Basin* *SC-3 Check Dams* *EC-6 Level Spreader* *SM-20 Paving Operations* *SC-10 Construction Roads and Parking Area Stabilization* *Controlling Storm Water Flowing onto and Through the Project* 1. *EC-3 Run-On Diversion* 2. *EC-5 Earth Dike, Swales and Ditches* *Post Construction*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
		BMPs 1. *EC-2 Flared Culvert End Sections* 2. *EC-10 Rip-Rap and Gabion Inflow Protection* 3. *EC-8 Outlet Protection and Velocity Dissipation Devices* 4. *SM-22 Topsoil Management* *Non-Structural BMPs* 1. *SM-1 Construction BMP Training* 2. *SM-14 Scheduling* 3. *SM-15 Location of Potential Sources of Sediment* 4. *SM-17 Preservation of Existing Vegetation*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
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.*** • *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, 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 Stockpile Management Section SM-3 for additional requirements.*	*See Stockpile Management Section SM-3. Protect Storm Drain Inlet Protection SC-1, and Perimeter Sediment Controls where applicable.*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP 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 Storage and Handling Section SM-2 and Paving Operations Section SM-20 for additional requirements.* • *Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable.*	*See Material Storage and Handling SM-2, and Stockpile Management Section SM-3, Paving Operations Section SM-20, Inlet Protection SC-1, 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 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***	*See Material Storage and Handling Section SM-2, Stockpile Management Section SM-3, and Hazardous Materials and Waste Management Section SM-9, and Spill Prevention and Control SM-10, and Structure Construction and Painting Section SM-21, Inlet Protection SC-1, and Perimeter Sediment Controls*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	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 Storage and Handling SM-2, Waste Management, Hazardous Materials and Waste Management Section SM-9, Waste Management, Spill Prevention and Control Section SM-10, and Structure Construction and Painting Section SM-21 for additional requirements.* • *Provide Storm Drain Inlet*	*where applicable.*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	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***	*See Material Storage and Handling Section SM-2, Stockpile Management Section SM-3, and Hazardous Materials and Waste Management Section SM-9, and* ***Spill Prevention and Control SM-10***

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	instructions. Document departures from manufacturer's specifications in Attachment J. • ***Apply fertilizers at the appropriate time of year for the location, and preferably timed to coincide as closely as possible to the period of 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, Storage, and Material Use SM-2, 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*	*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***
	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, 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 Materials and Waste Management Section SM-9 and Vehicle and Equipment Management, Vehicle and*	

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	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, Contaminated Soil Management Section SM-8 and/or Hazardous Materials and 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.***	*See Waste Management, Contaminated Soil Management Section SM-8 and/or Hazardous Materials and Waste Management Section SM-9*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
Fugitive Dust Control and 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.* • *Minimize exposed areas through the schedule of construction activities.* • *Utilize vegetation, mulching, sprinkling, and stone/gravel layering to quickly stabilize exposed soil.* • *Direct construction vehicle traffic to stabilized roadways.* • *Cover dump trucks hauling material from the site with a tarpaulin.* • *See Dust Control Section SM-19 for additional requirements.*	*See Dust Control Section SM-19*
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.*	*See Waste Management, Concrete Wash and Waste Management Section SM-4*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	• *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 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 Wash and Waste Management Section SM-4 for additional requirements.*	

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP 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 sediment prior to exit when minimum dimensions can not be met.* • *See Stabilized Construction Entrance/Exit Section SC-11 for additional requirements.*	*See Stabilized Construction Entrance/Exit Section SC-11*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP 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-12 and California Stormwater BMP Handbook SD-12 Efficient Irrigation included in SWPPP Attachment A for additional requirements.*	*See Seeding and Planting Section EC-12 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.*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
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-18 for additional requirements.*	*See Dewatering Operations SM-18. Site specific BMPs will be included in the 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-20 for additional requirements.* • *Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable.*	*See Paving Operations Section SM-20, Storm Drain Inlet Protection SC-1, Perimeter sediment controls where applicable*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
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 Attachment A for additional requirements.*	*See California Stormwater BMP Handbook NS-12 Concrete Curing*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
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.*** • ***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 Storage and Handling, SM-2, Stockpile Management SM-3 and Hazardous Materials and Waste Management Section SM-9 for additional requirements.*	*See Material Storage and Handling Section SM-2, Stockpile Management Section SM-3, and Hazardous Materials and Waste Management Section SM-9*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP 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.*** • *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.*	*See Sanitary/Septic Waste Section SM-7.*

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 equipment, such as oil, fuel, and hydraulic fluid leakage	• *Heavy equipment driven in wet portions of a water body to accomplish work should be completely clean of petroleum residue, and water levels 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*	*See Section 5.1 – Working on or Over Water; Including Material and Equipment Use on Water and Sections 5.5.5 and 5.5.6 - Clear Water Diversions (Standards and Specifications and General Considerations)*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	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.*	

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
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* *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*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
		Sediment Control *Section 5.15 – Washing Fines (Streambed Restoration Technique)*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
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*
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:*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
		Pumped, Pipe/Flume, and Excavated

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
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 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. Site specific BMPs will be included in the NOI/NPDES Permit Form G submittal.*
Other Pollutants (Including Chemicals and Pesticides)	• *If the Contractor elects to apply pesticides directly over water, Contractor shall prepare and*	*Site specific BMPs will be included in the NOI/NPDES Permit*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	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.	*Form M submittal.*

7.2.10.2 – Stabilization Practices

Note: See Army Corps 2021 Nationwide Permit Honolulu District, Regional and General Conditions, 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 vegetatively 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:

> *Immediately initiate and complete stabilization within 7 calendar days on areas of the site in which earth-disturbing activities have temporarily or permanently ceased.*

HDOT will be complying with the deadlines in HAR Section 5.2.1.3.2, with completion of initial plantings within 7 calendar days of completion of prepping the soil for planting. Mulch will be applied to the exposed areas. 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)

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.

All unstabilized areas will be stabilized within 7 calendar days of completion of construction activities. There will be little disturbed areas outside of construction staging and stockpiling (if there are any)

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 Contractor Representatives. Field Office Engineer and/or Inspector, and 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 manufacturers 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-1 will be used.*

☒ *The Corrective Action Report Form provided in SWPPP/IWPPP Attachment I will be used for projects on Kauai, Maui District, and Hawaii Island.*

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-2.

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 will be used.*

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

7.2.12B (WQC) – Procedures for In-Water Work Areas During High Flow and Stop Work Conditions

To be provided by the Contractor

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 (See Below) .*

☒ *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.*

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): A County-approved Erosion and Sediment Control Plan and/or Grading Permit is not required for this project.*

❑ *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) (List below)*

DA File No. POH-XXXX-XXXXX3

Modified Blanket Water Quality Certification (WQC) 1092

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: Lawrence J. Dill

Person Position Title: Highways Administrator

Person Company or Agency: Department of Transportation

Department: Department of Transportation, Highways

Phone Number: (808) 587-2220 *Fax No.:* _____

Person Email: Lawrence.J.Dill@hawaii.gov

7.2.18 Post-Authorization Additions to the SWPPP/IWPPP

The following documents as part of the SWPPP/IWPPP in Attachment K:

a. A copy of the NOI 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 email dated December 14, 2022 provided by Kristi Fluker (USACE) indicating that this project has been issued a non-reporting Nationwide Permit 3(a)

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.

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.

☒ *HDOT's form in Attachment J will be used for projects on Kauai, Maui District, or Hawaii Island.*

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

Project and State Waters Map – A-1

Army Corps Jurisdictional Boundary Map and Temporary Impact Area Map – A-2

Property Boundary Maps – A-3

Drainage Maps – A-4

Contractor/Sub-Contractor Control Map – A-5

Site-Specific Best Management Plan and Phasing Plans – A-6

Staging Area Plans – A-7

Catalog Pages and Information on Storm Water Control Materials – A-8

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 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 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: Nanue Stream Bridge Rehabilitation
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

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:

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: _____

Project Title: **Nanue Stream Bridge Rehabilitation**

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.

Kauai/Maui/Hawaii Attachment E1 – 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 removes 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.)							

Best Management Practices	Location	Installed Per Specifications (Y/N)	Adequate	Needs Maintenance	N/A	Date Corrected	Notes
Other							
Sawcutting							
Dust Control							
Dewatering							

Insert or removes 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?				

Site Conditions	***Yes***	***No***	***N/A***	***Notes and Corrective Actions***
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?				
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 Is there a potential for downstream erosion? YES ❑ NO ❑

*If YES continue to the next question. If NO go to 9.1.6.6b and inspect at the **Discharge Point**.*

9.1 Does the discharge enter an MS4 or separate drainage system prior to the receiving water? YES ❑ NO ❑

*If YES go to 9.1.6.6b and inspect **Where it Enters the Drainage System**. If NO continue to the next question.*

9.1 Does the effluent comingle with offsite water or pollutant sources prior to discharging to the receiving water? YES ❑ NO ❑

*If YES go to 9.1.6.6b and inspect at a **Location Representative of the Discharge Quality Prior to Comingling**.*

*If NO go to 9.1.6.6b and inspect at the **Receiving Water**.*

*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: Annette Matsuda

Duly Authorized Person's Position Title: Acting Hawaii 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) 446-4586 *Fax No.:* (808) 933-8869

Person Email: Annette.dh.Matsuda@hawaii.gov

Attachment E2 – HDOT Inspection Report for In-Water Work (IWPPP Section 7.2.12A)

spection report for daily in-water visual inspections. The questions below apply to the area outside the isolated and confined w

HDOT IN-WATER INSPECTION REPORT FORM

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

*Name:*_____

*Title:*_____

_____

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

wing at the site? YES ❑ NO ❑

urbidity Plume? YES ❑ NO ❑

work immediately and investigate the source of the plume. Follow the procedures in Section 7.2.12A Procedures for Inspectio
ce, and Corrective Actions for In-Water Work Areas.

ny other indicators of a discharge? YES ❑ NO ❑

ibe? _____

_____

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

NO ❑

ibe? _____

_____

en during the BMP inspection documented above are:
ached
erted

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

Printed Name: _____ *Title:* _____

Signature: _____ *Date of Inspection:* _____

Printed Name: _____ *Title:* _____

Signature: _____ *Date of Inspection:* _____

ing person and duly authorized representative shall meet the requirements of Hawaii Administrative Rules 11-55, Appendix A, S

rtify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordan
gned to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the pe
o manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the b
and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, inclu
of fine and imprisonment for knowing violations.

Date: _____

rized Person's Name: Annette Matsuda

rized Person's Position Title: Acting Hawaii District Engineer

rized Person's Company or Agency: Department of Transportation

t: Department of Transportation, Highways

nber: (808) 446-4586 *Fax No.:* (808) 933-8869

ail: Annette.dh.Matsuda@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. HDOT Tunnels Emergency Contact Number (After Hours)……..808-485-6200

10. Contractor's Spill Cleanup Emergency Response Contractor……..xxx-xxx-xxxx

• *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

Nanue Stream Bridge Rehabilitation

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, Fugitive Dust Control Plan & 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)

Fugitive Dust Fact Sheet

Prepared by the Department of Health, Clean Air Branch
Rev October 2014

Hawaii Administrative-Rules, Section 11-60.1-33, Fugitive Dust-states, in part:

11-60.1-33(a): No person shall cause or permit visible fugitive dust to become airborne without taking reasonable precautions.

11-60.1-33(b): ...no person shall cause or permit the discharge of visible fugitive dust beyond the property lot line on which the fugitive dust originates.

An air permit for a facility may contain additional or more stringent fugitive dust requirements. Failure to comply with the fugitive dust requirements may result in civil and administrative fines of not more than $25,000 per day per violation.

Examples of Reasonable Precautions

The following are examples only, this list is not exclusive nor comprehensive. Reasonable precautions to control fugitive dust are determined on a case-by-case basis. The site topography and surroundings, soil conditions, meteorological conditions, site activities, site equipment, and types of material processed must be considered. The use of any or all of the example measures does not automatically mean compliance with the fugitive dust requirements. The owner, project manager or operator should assess the project activities and conditions daily and make adjustments so that reasonable precautions are taken to prevent fugitive dust from becoming airborne and crossing the property line. Generally, dry and windy conditions will require more control measures than rainy and calm periods.

General Measures

- Design, develop and implement a dust control plan.
- Use water or suitable chemical compounds in the demolition of existing structures, construction operations, and grading or clearing of land.
- Apply water, dust suppressants, or suitable compounds on roads and material stockpiles.
- Pave ingress and egress points to the site.
- Establish and monitor speed limits for on - site vehicles.
- Cover all moving, open-bodied trucks transporting dusty materials.
- Install and use enclosures, screens, hoods, vacuums, and filters to control the handling, sanding or finishing of dusty materials.
- Use trash chutes to direct waste downwards to the ground from upper levels
- Clean up material spills as soon as possible.
- Promptly remove soil or other "carry out"materials from roads adjacent to the site.
- Install dust screens or wind barriers around construction site.
- Where practical, provide a buffer zone between fugitive dust activities and residential areas.

Agricultural Activities

- Keep fallow land to a minimum.
- Use cover crops to minimize exposed soil.
- Limit vehicular speed during plowing activities and while traveling onsite.

Crushing and Screening

- Pre-wet material.
- Monitor crusher's visible dust emissions.
- Apply water to crushed material.
- Apply water at material transfer points.
- Stabilize material immediately after screening.
- Drop material through the screen slowly and minimize drop height.
- Install wind barrier upwind of screen.

Earth-moving activities

- Pre-apply and re-apply water as necessary to maintain soils in a damp condition.
- Limit the amount of exposed areas through planning and timing of project phases.
- Cover temporarily exposed areas with mulch.

Stockpiles

- Stabilize stockpile materials.
- Keep stockpiles wet or damp as needed
- Cover stockpile when not in use. Use mulch or synthetic cover based on usage of stockpile.
- Keep drop or pile height as low as possible.
- Install wind barriers
- Add or remove material from downwind portion of stockpile
- Maintain storage piles to avoid steep sides or faces.

Trucking

- Provide water while loading and unloading to prevent fugitive dust.
- Maintain at least six inches of freeboard on haul vehicles. Level the height of load.
- Limit vehicular speed while traveling onsite.
- Cover your load while travelling.
- Install a gravel pad and grizzly at exit.
- Reduce carry out with a tire wash or spray system.

Attachment I – Corrective Action Report

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: *Annette Matsuda*

Person Position Title: *Acting Hawaii District Engineer*

Person Company or Agency: *State of Hawaii*

Department: *Department of Transportation, Highways*

Phone Number: *(808) 446-4586* *Fax No.:* *(808) 933-8869*

Person Email: *Annette.dh.Matsuda@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: Annette Matsuda

Person Position Title: Acting Hawaii District Engineer

Person Company or Agency: State of Hawaii

Department: Department of Transportation, Highways

Phone Number: (808) 446-4586 *Fax No.:* (808) 933-8869

Person Email: Annette.dh.Matsuda@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

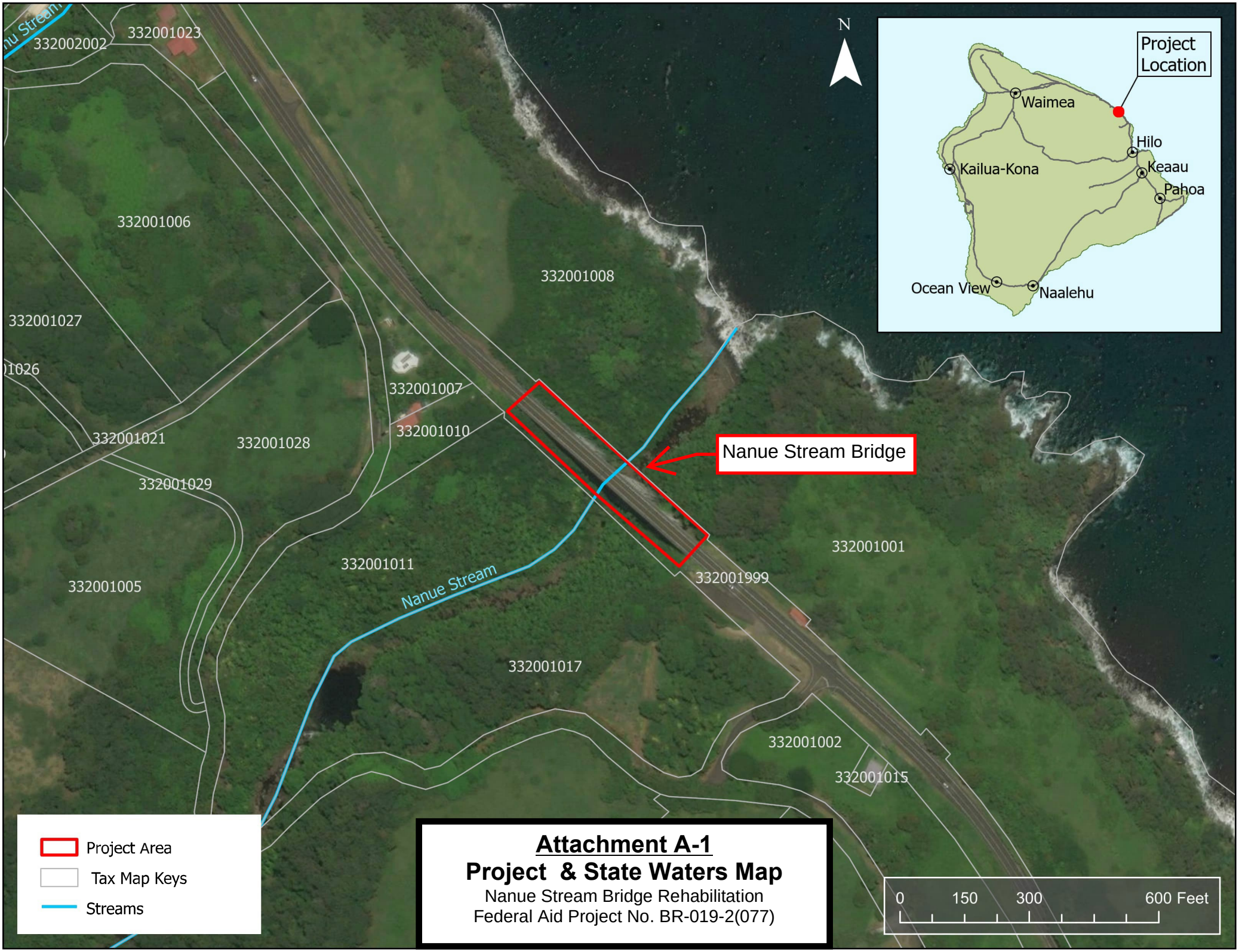
Each Modification must be signed by the authorized representative authorizing the changes in Section 7.2.17 within 7 calendar days following the occurrence of any of the conditions listed in section 7.4.1.

Project Name: **Nanue Stream Bridge Rehabilitation**
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.

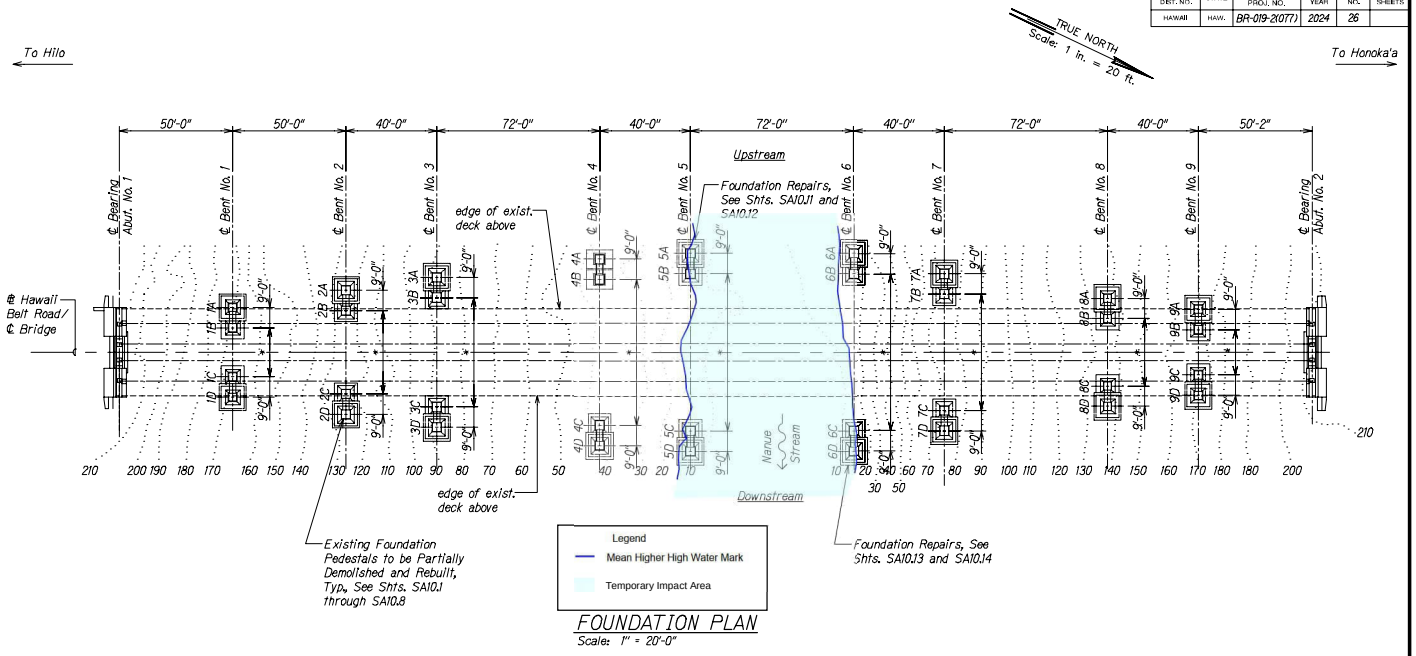


Attachment A-1

Project & State Waters Map

Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	26	



FOUNDATION PLAN
Scale: 1" = 20'-0"

Attachment A-2
Army Corps Jurisdictional Boundary Map and Temporary Impact Area

Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

NOTE:

* Dimensions will be finalized after in-depth survey information has been obtained at foundation pedestal locations.

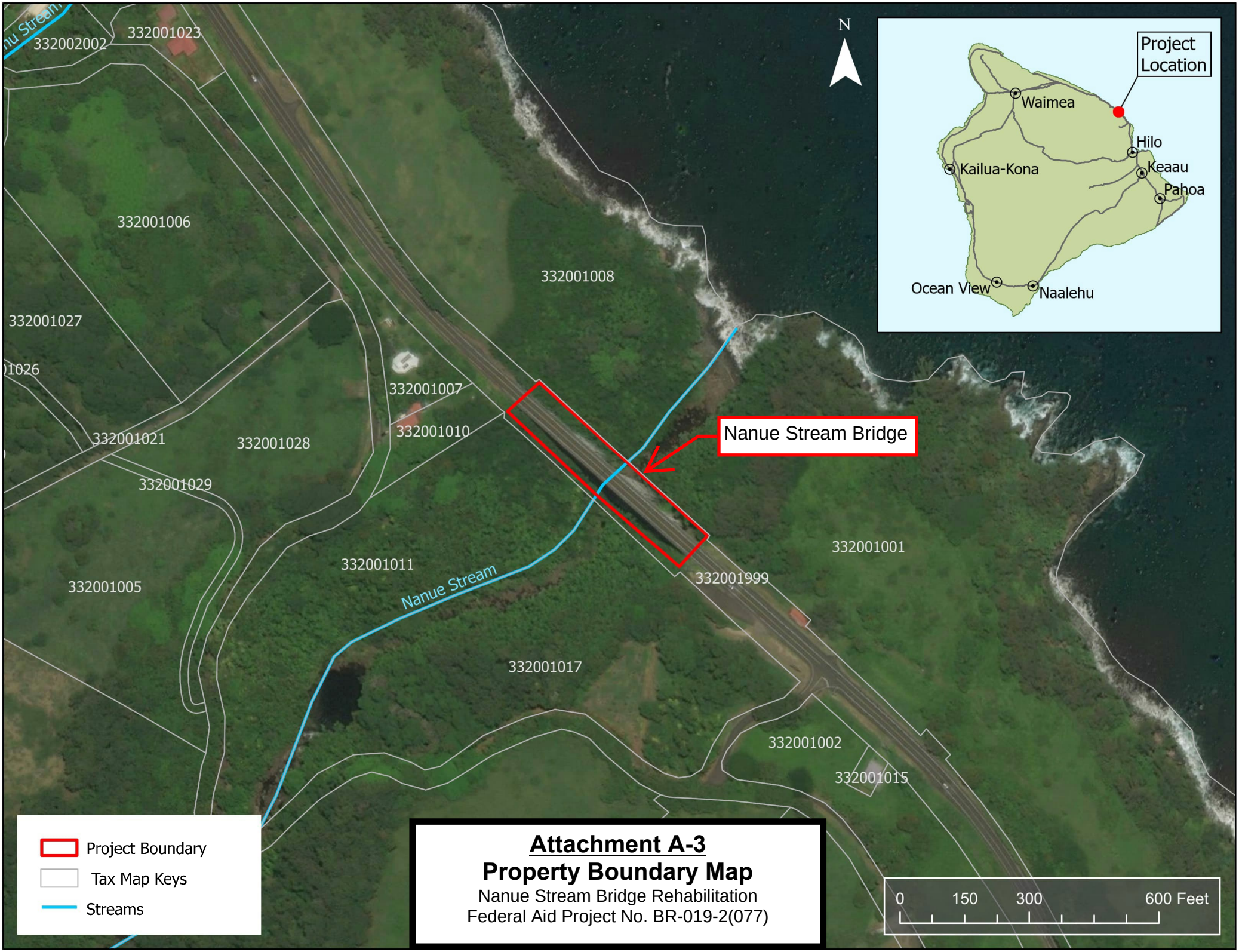
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FOUNDATION PLAN

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Mar. 2024

SHEET No. SA1.2 OF 2 SHEETS

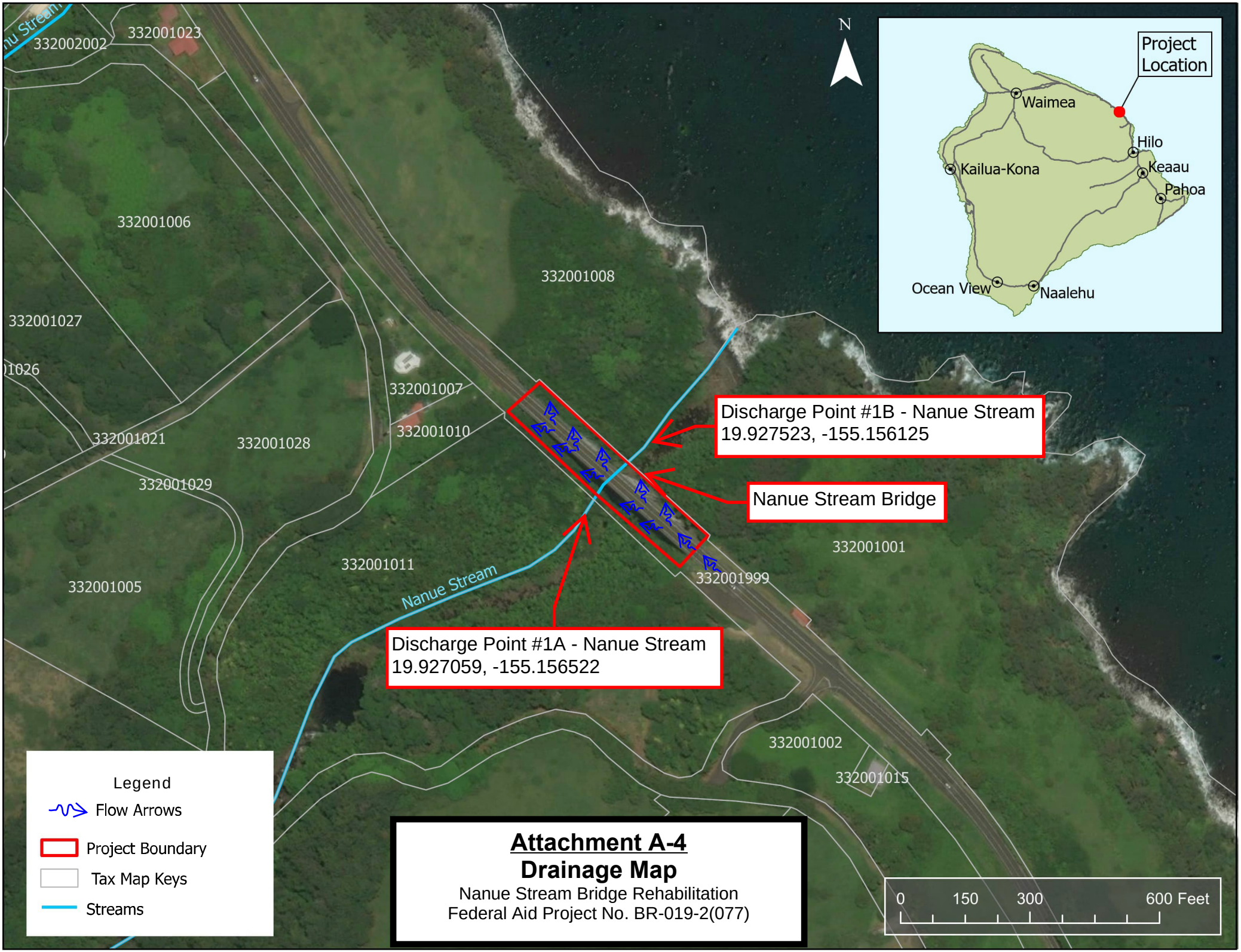


Attachment A-3

Property Boundary Map

Nanue Stream Bridge Rehabilitation

Federal Aid Project No. BR-019-2(077)


N
Project Location
Waimea
Hilo
Kailua-Kona
Keaau
Pahoa
Ocean View
Naalehu
332002002
332001023
332001006
332001008
332001027
332001007
332001010
332001021
332001028
332001029
332001011
332001005
332001001
332001999
332001002
332001015
Nanue Stream
Discharge Point #1B - Nanue Stream
19.927523, -155.156125
Nanue Stream Bridge
Discharge Point #1A - Nanue Stream
19.927059, -155.156522
Legend
Flow Arrows
Project Boundary
Tax Map Keys
Streams
Attachment A-4
Drainage Map
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)
0
150
300
600 Feet