STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Project Title: Farrington Highway Widening Kapolei Golf Course Road to Fort Weaver Road

Project No.: 7101A-01-20

DOH NGPC File No. HIR10G438
Prepared by: Department of Transportation Highways Division (HDOT-HWY)
Date: June 28, 2021
Revision Date: April 12, 2022

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[ADD CONTRACTOR NAME]

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: [Contractor Certifying Representative]

Person Position Title: [Contractor Title]

Person Company: [Contractor Company Name]

Department: N/A

Division: [Contractor Division]

Phone Number: (808) XXX-XXXX ext XXXX *Fax No.: (808) XXX-XXXX*

Person Email: [Contractor e-mail]

Storm Water Pollution Prevention Plan (SWPPP)

Notice of General Permit Coverage (NGPC) File No. HIR10G438
Preparation Date 6/28/21
Revision Date: April 12, 2022

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7.0 Preface

The following documents are referenced throughout the SWPPP:

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.*

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 during construction.*

Contractor Staging/Storage Areas

- *HDOT has permitted all outfalls and disturbed potential Contractor Staging/Storage Areas within the project limits as identified in the project's Notice of Intent or NPDES Permit Application. The Contractor's staging areas are recommended to stay within the project site limit and are permitted and sufficient for staging during construction.*

- *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 NPDES submittal. See permitting requirements in Section 209 of the Specifications and applicable Special Provisions.*

This project does not contain outfalls that discharge to nutrient or sediment impaired waters.

Outfalls 1 thru 19 discharge to waters not impaired for nutrients or sediments. The following applies to construction areas discharging to these outfalls:

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

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

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, any later modifications to it, and for compliance with the requirements in the Notice of General Permit Coverage (NGPC) or Individual NPDES permit. The SWPPP 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, and other relevant documents or information that must be kept with the SWPPP.

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

1) Name: [Consultant Design Project Manager]

Company: [Consultant]

Position: Design Project Manager

Contact Number: (808) xxx-xxxx

Responsibilities: Developed the Notice of Intent (NOI) and SWPPP during the design process.

2) Name: Brent Maeda

Company: Hawaii Department of Transportation

Position: HDOT Resident Engineer

Contact Number: (808) 630-7513

Responsibilities: Authorized Representative's delegated signatory for BMP Inspection, Corrective Action, and Discharge Reports.

3) Name:

Company:

Position: Construction Project Engineer

Contact Number: (808)xxx-xxxx

Responsibilities: Responsible for overall project and field compliance with HAR Chapter 11-55 and permit conditions, including SWPPP and any required modifications to SWPPP.

4) Name:

Company:

Position: Inspector

Contact Number: (808)xxx-xxxx

Responsibilities: Responsible for BMP inspections and verifying implementation of BMPs in the field.

5) Name:

Company: [Contractor]

Position: (FILL IN Contractor Designated Representative)

Contact Number: (808)xxx-xxxx

Responsibilities: Responsible for overall project and field compliance and BMP inspections.

6) Name:

Company: Contractor

Position: (FILL IN Contractor Designated Representative)

Contact Number: (808)xxx-xxxx

Responsibilities: Responsible to develop and maintain updates and modifications to the SWPPP.

7) Name:

Company: [Contractor]

Position: Contractor

Contact Number: (808)xxx-xxxx

Responsibilities:

8) Name:

Company: [Contractor]

Position: Contractor

Contact Number: (808)xxx-xxxx

Responsibilities:

7.2.2 Nature of Construction Activities Form C.6

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

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

What is being constructed? The improvements include the widening of the roadway and installation of a new roadway, low impact development drainage infrastructure, curbs, gutters, sidewalks, bridges, culverts, utility relocations, bike lanes, retention basins, and a landscaped median strip.

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.) The scope of work and major construction activities we are requesting to be covering by this NOI include the following:

1. *Installation of Temporary BMP's;*
2. *Clearing and Grubbing;*
3. *Demolition;*
4. *Grading;*
5. *Construct water system, sewer system, drainage system, stormwater treatment system, and utility relocations;*
6. *Widen and construct new roadways with landscaped medians and culverts;*
7. *Construction of a Right-of-Way including sidewalks, curbs and gutters;*
8. *Construct Kaloi Gulch Bridge and Honouliuli Gulch Bridge;*
9. *Site Stabilization and Removal of Temporary BMPs; and*
10. *Submittal of Notice of Cessation.*

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.

7.2.3 Emergency Related Projects

☒ *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 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

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.

☒ *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.*

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 NOI, Form C, Section C.8 and SWPPP, Attachment A.*
b. *Locations where earth-disturbing activities will occur, noting any sequencing of construction activities.* *See NOI, Form C, Section C.8 and SWPPP, 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 NOI, Form C, Section C.8 and SWPPP, 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 NOI, Form C, Section C.8 and SWPPP, 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 NOI, Form C, Section C.8 and SWPPP, Attachment A.*

f. *Locations where sediment, soil, or other construction materials will be stockpiled 7.2.6.1c. See SWPPP, Attachment A. Stockpile locations may be changed by the Contractor depending on his construction means and methods. The Contractor shall submit to the Engineer for his review and acceptance the locations of stockpiles once the project is awarded and will be included in the SWPPP. The Contractor shall submit to the Engineer for his review and acceptance any updates/changes to stockpile areas during construction for inclusion in the SWPPP.*

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.*

h. *Locations of any crossings of state waters 7.2.6.1e. Palehua Stream, Hunehune Gulch, Kaloi Gulch, and Honouliuli Gulch are shown in NOI Form C, Attachment A.*

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

j. *Location(s) of impervious structures (including buildings, roads, parking lots, etc.) after construction is completed 7.2.6.1g. See NOI, Form C, Section C.8 and SWPPP, Attachment A.*

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

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 NOI, Form C, Section C.8 and SWPPP, Attachment A.*

b. *The boundary lines of any natural buffers provided consistent with section 5.1.2.1.1, 7.2.6.3. See NOI, Form C, Section C.8 and SWPPP, Attachment A.*

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 NOI, Form C, Section C.8 and SWPPP, 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 NOI, Form C, Section C.8 and SWPPP, Attachment A.*
and b) Locations where storm water will be discharged to state waters (including wetlands)7.2.6.5. See NOI, Form C, Section C.8 and SWPPP, Attachment A.

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

f. *Locations of storm water control measures 7.2.6.7. See SWPPP, Attachment A. The Contractor may change the locations of storm water control measures by construction activity and construction sequence depending on his construction means and methods. The Contractor shall submit changes to the Engineer for his review and acceptance once the project is awarded. The Contractor shall submit a separate map for each phase of construction which changes the drainage pattern. The Contractor shall submit to the Engineer for his review and acceptance any updates/changes to storm water control measures during construction for inclusion in the SWPPP.*

g. *Locations where chemicals will be used and stored 7.2.6.8. For locations where chemicals will be used, see SWPPP, 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 locations where chemicals may be used and stored may be changed by the Contractor depending on his construction means and methods. The Contractor shall submit to the Engineer for his review and acceptance any updates/changes to locations where chemicals will be used and stored during construction for inclusion in the SWPPP.*

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.*	*Roadway Demolition and Construction, Landscaping*
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.*	*Roadway Demolition and Construction, Landscaping*
Glue, Adhesives	• *Roadway construction*	*Roadway Demolition and Construction*
Concrete Curing Compounds/ Form Release Oils	• *Roadway construction involving concrete*	*Roadway 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*	*Roadway Demolition and Construction, Landscaping*
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*	*Roadway Demolition and Construction, Landscaping*
Soil erosion from the disturbed areas	• *See Section 7.2.10 for Site Specific BMPs*	*Roadway Demolition and Construction, Landscaping*

Sediment from soil stockpiles	• *See Section 7.2.10 for Site Specific BMPs*	*Roadway Demolition and Construction, Landscaping*
Emulsified asphalt or prime/tack coat	• *See Section 7.2.10 for Site Specific BMPs*	*Roadway Demolition and Construction, Landscaping*
Materials associated with painting, such as paint and paint wash solvent	• *See Section 7.2.10 for Site Specific BMPs*	*Roadway Demolition and Construction, Landscaping*
Industrial chemicals, fertilizers, and/or pesticides	• *See Section 7.2.10 for Site Specific BMPs*	*Roadway Demolition and Construction, Landscaping*
Hazardous waste (Batteries, Solvents, Treated Lumber, etc.)	• *See Section 7.2.10 for Site Specific BMPs*	*Roadway Demolition and Construction, Landscaping*
Metals and Building Materials	• *See Section 7.2.10 for Site Specific BMPs*	*Roadway Demolition and Construction, Landscaping*
Existing Pollution Sources	• *See Section 7.2.10 for Site Specific BMPs*	*Roadway Demolition and Construction, Landscaping*
Other (Contaminated Soil)	• *See Section 7.2.10 for Site Specific BMPs*	*Roadway Demolition and Construction, Landscaping*

7.2.8 –Sources of Non-Storm Water

The SWPPP 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*	*Roadway Demolition and Construction, Landscaping*
Concrete Truck Wash Water	• *See Section 7.2.10 for Site Specific BMPs*	*Roadway Demolition and Construction, Landscaping*
Sediment Track Out	• *See Section 7.2.10 for Site Specific BMPs*	*Roadway Demolition and Construction, Landscaping*
Irrigation Water	• *See Section 7.2.10 for Site Specific BMPs*	*Roadway Demolition and Construction, Landscaping*
Hydrotesting Effluent	• *See Section 7.2.10 for Site Specific BMPs*	*Roadway Demolition and Construction, Landscaping*

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

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 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.

Farrington Highway between Kapolei Golf Course Road to Fort Weaver Road is an existing road. Vegetation around the majority of the roadway is disturbed. The roadway crossing at any State waters will have double BMPs.

☐ *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 permittee shall document in the SWPPP 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.

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 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). See below. Perimeter sediment control devices are impracticable.*

☒ *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. 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.

☒ *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): The limits of the site (State Highways Right of Way) often include connections to C&C of Honolulu roadways, other HDOT roadways such as Kualakaʻi Parkway, and private driveways. Installing sediment controls in these areas would not be possible without closing vehicle traffic. Drain Inlets receiving runoff from disturbed areas will be protected in lieu of perimeter sediment control.*

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; cover and transport to a licensed facility.*	*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***
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 all the product has been used.*	*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***
	• ***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 performance is compromised.***	*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* 3. *SC-6 Compost Filter Berm/Sock* 4. *SC-8 Sandbag Barrier* 5. *SC-9 Brush or Rock Filter*

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

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

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

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	• *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 Protection and/or Perimeter Sediment Controls as applicable.*	

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
Industrial chemicals, fertilizers, and/or pesticides	• *Hazardous chemicals shall be well-labeled and stored in original containers.* • ***Keep ample supply of cleanup materials on site.*** • ***Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly.*** • ***Do not clean surfaces or spills by hosing the area down.*** • ***Eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge.*** • *Dispose container only after all of the product has been used.* • *Retain a complete set of safety data sheets (formerly MSDS) on site.* • ***Store industrial chemicals in water-tight containers and provide either cover or secondary containment.*** • ***Provide cover when storing fertilizers or pesticides to prevent these chemicals from coming into contact with rainwater.*** • *Restrict amount of pesticide prepared to quantity necessary for the current application.* • ***Do not apply fertilizers or pesticides during or just before a rain event.*** • ***Do not apply to stormwater conveyance channels with flowing water*** • ***Comply with fertilizer and pesticide manufacturer's recommended usage and disposal instructions. Document departures from manufacturer's specifications in Attachment J.***	*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***
	• ***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 maintenance activities such as used oil or oil filters, greases, cleaning solutions, antifreeze, automotive batteries, and hydraulic and transmission fluids.*	*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***
	• ***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 Equipment Maintenance SM-12 for additional requirements.*	

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP 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*
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.*	*See Dust Control Section SM-19*

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

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
Concrete Truck Wash Water	• *Disposal of concrete truck wash water via percolation is prohibited.* • *Wash concrete-coated vehicles or equipment off-site or in the designated wash area.* • *Locate on-site wash area a minimum of 50 feet away* ***or as far as practicable*** *from storm drain inlets, open drainage facilities, or water bodies.* • *Runoff from the on-site concrete wash area shall be contained in a temporary pit or level bermed area where the concrete can set.* • ***Design the area so that no overflow can occur due to inadequate wash area sizing or precipitation.*** • *The temporary pit shall be lined with plastic to prevent seepage of wash 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*

Pollutant Source	***Appropriate Site-Specific BMP to be Implemented***	***BMP Requirements***
	• *See Waste Management, Concrete Wash and Waste Management Section SM-4 for additional requirements.*	
Sediment Track-Out	• ***Include Stabilized Construction Entrance at all points that exit onto paved roads.*** • *A sediment trapping device is required if a wash rack is used in conjunction with the stabilized construction entrance/exit.* • *The pavement shall not be cleaned by washing down the street.* • *If sweeping is ineffective or it is necessary to wash the streets, wash water must be contained either by construction of a sump, diverting the water to an acceptable disposal area, or vacuuming the wash water.* • *Use BMPs for adjacent drainage structures.* • ***Remove sediment tracked onto the street by the end of the day in which the track-out occurs.*** • ***Restrict vehicle use to properly designated exit points.*** • *Include additional BMPs that remove 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.*
Dewatering Effluent	• *If excavation or backfilling operations require dewatering, and Contractor elects to discharge dewatering effluent into State waters or existing drainage systems,*	*See Dewatering Operations SM-18. Site specific BMPs will be included in the NOI/NPDES Permit Form G submittal.*

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

7.2.10.2 – Stabilization Practices

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 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 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 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 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 in Attachment H.

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

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:
This project does not contain outfalls that discharge to nutrient or sediment impaired waters.

Outfalls 1 thru 19 discharge to waters not impaired for nutrients or sediments. The following applies to construction areas discharging to these outfalls:

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

All areas of soil disturbance will be overlaid with Asphalt Concrete or concrete. Median areas will be stabilized permanently with grass and trees. The streams and beach receiving stormwater runoff are not listed as impaired on the 2018 State of Hawaii Water Quality Monitoring and Assessment Report. HDOT will be complying with the deadlines in 5.2.1.3.2, with completion of initial plantings within 7 calendar days of completion of prepping the soil for planting. Hydromulch and seeding 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 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.

Grass planted in the exposed slopes will stabilize the area and will help prevent erosion. Retention basins will be constructed at the roadway drainage system outfalls where feasible. The basins will store runoff and allow percolation into the ground to reduce pollutants and sediments from leaving the project site.

7.2.11.1 – Spill Prevention and Response Procedures

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

7.2.11.2 – Waste Management Procedures

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

7.2.12 – Procedures for Inspection, Maintenance, and Corrective Action

The SWPPP 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:

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 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 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. 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, modify the SWPPP accordingly. The Contractor will attach product specific maintenance practices in the SWPPP 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 Attachment E will be used.*

☒ *The Corrective Action Report Form provided in SWPPP Attachment I will be used for projects on Kauai, Maui District, and Hawaii Island. The Corrective Action Report Form in Attachment E2 will be used for projects on Oahu.*

7.2.13 – Staff Training

The SWPPP 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 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 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

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

☒ *Attach the Drainage System Owner(s) Approval to Discharge, in Attachment H.*

☒ *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):* _____

☒ *Department of the Army Permit (Section 404) and Section 401 Water Quality Certification:*
If the project requires work in, above, under or adjacent to State waters, please contact the Army Corps of Engineers (COE) Regulatory Branch at (808) 438-9258 regarding their permitting requirements. Provide a copy of the COE permitting jurisdictional determination (JD) or the JD with COE Person's Name, Phone Number, and Date Contacted.
Approved Jurisdictional Determination for Farrington Highway Bridges Expansion, Ewa, Oahu, HI, Department of the Army File No. POH 2020-00071 dated September 18, 2020. See NOI C, Section C.7 and Attachment H.

☒ *List other permits below (No copy necessary in Attachment H)*
Stream Channel Alteration Permit Application Determination letter dated October 1, 2020 (ref: RFD.5478.3). No Permit required. See NOI C, Section C.7.

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

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:* Jul 12, 2021

Person Name: Jade T. Butay

Person Position Title: Director

Person Company or Agency: State of Hawaii

Department: Department of Transportation

Division: Highways Division

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

Email: Jade.Butay@hawaii.gov

7.2.18 Post-Authorization Additions to the SWPPP

After the issuance of the NGPC include the following documents as part of the SWPPP 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)

7.4 Required SWPPP Modifications

Modify the SWPPP, 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. 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 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:

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

7.4.3. SWPPP modification records.
The permittee shall maintain records showing the dates of all SWPPP 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 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 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.

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. HDOT's form in Attachment E4 will be used for projects on Oahu.*

SWPPP Attachments

Attachment A – Contractor/Sub-Contractor Control Maps, Property Boundary Maps, State Waters and BMP Maps, and BMP Details (SWPPP 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 (Outfall Locations) for Areas Outside HDOT provided NOI/NPDES Permit

Property Boundary Maps for Areas Outside HDOT Provided NOI/NPDES Permit

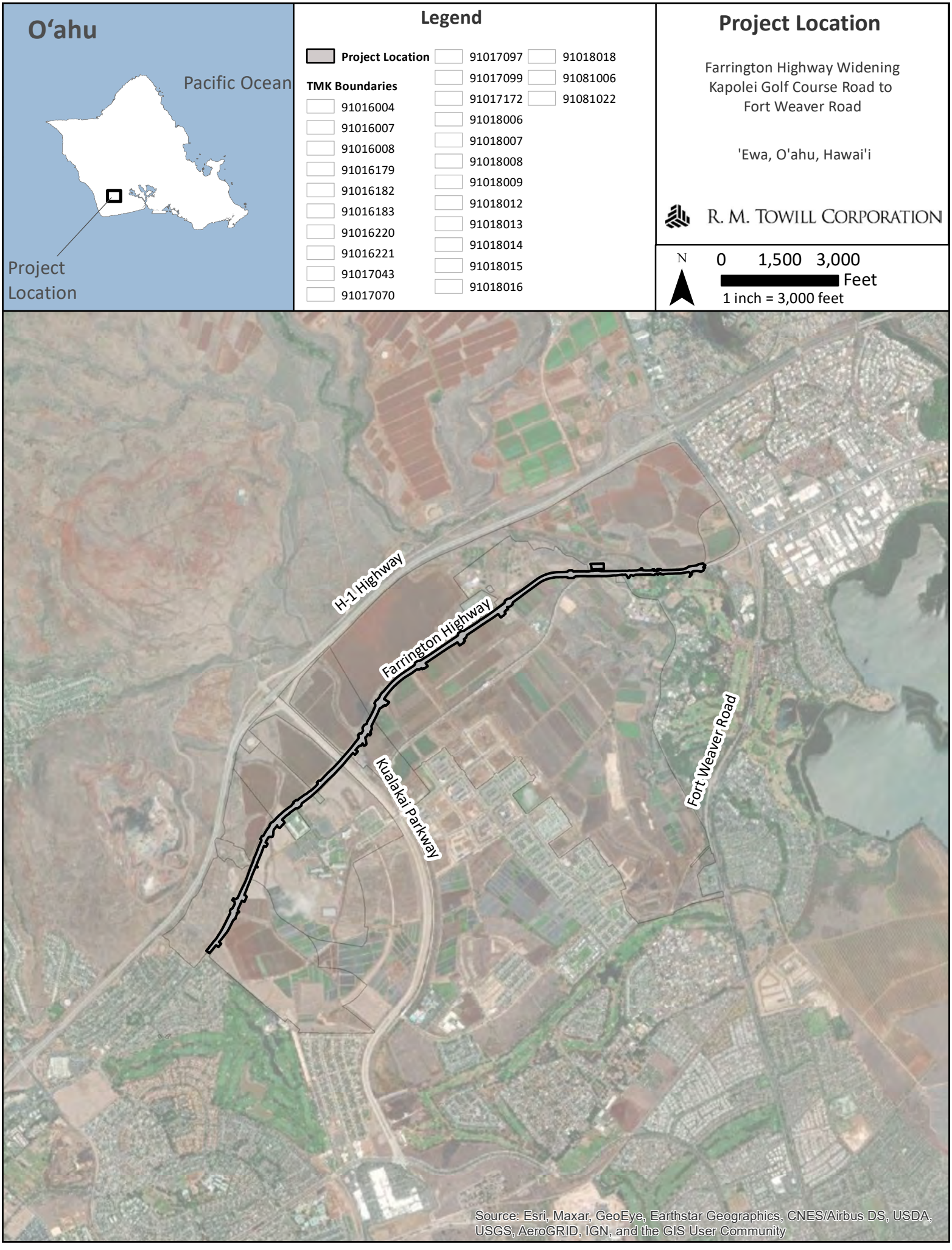
Drainage Maps for Areas Outside of HDOT provided NOI/NPDES Permit

Site-Specific Best Management Plan and Phasing Plans

Staging Area Plans

Contractor/Sub-Contractor Control Map

Catalog Pages and Information on Storm Water Control Materials


O'ahu
Pacific Ocean
Project Location
Legend
Project Location
TMK Boundaries
91016004
91016007
91016008
91016179
91016182
91016183
91016220
91016221
91017043
91017070
91017097
91017099
91017172
91018006
91018007
91018008
91018009
91018012
91018013
91018014
91018015
91018016
91018018
91081006
91081022
Project Location
Farrington Highway Widening
Kapolei Golf Course Road to
Fort Weaver Road
'Ewa, O'ahu, Hawai'i
R. M. Towill Corporation
N
0 1,500 3,000
Feet
1 inch = 3,000 feet
H-1 Highway
Farrington Highway
Kualakai Parkway
Fort Weaver Road
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

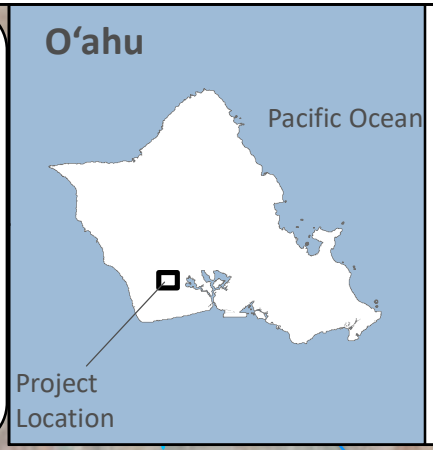
Discharge Points to State Waters:

Palehua Stream:
1. 21.3504 N & 158.0634 W
2. 21.3515 N & 158.0630 W
3. 21.3517 N & 158.0629 W
4. 21.3541 N & 158.0619 W

Hunehune Gulch:
5. 21.3561 N & 158.0609 W
6. 21.3568 N & 158.0604 W
7. 21.3575 N & 158.0600 W

Kaloi Gulch:
8. 21.3624 N & 158.0543 W
9. 21.3640 N & 158.0538 W
10. 21.3638 N & 158.0533 W
11. 21.3658 N & 158.0524 W
12. 21.3657 N & 158.0506 W
13. 21.3689 N & 158.0484 W
14. 21.3703 N & 158.0460 W

Honouliuli Stream:
15. 21.3746 N & 158.0375 W
16. 21.3744 N & 158.0369 W
17. 21.3743 N & 158.0367 W
18. 21.3739 N & 158.0316 W



Legend

Project Location

State Waters
Perennial Streams
Nonperennial Streams

Discharge Flow Arrows
Discharge Points to State Waters

Discharge to State Waters

Farrington Highway Widening
Kapolei Golf Course Road to
Fort Weaver Road

'Ewa, O'ahu, Hawai'i

R. M. TOWILL CORPORATION

N

0 1,200 2,400
Feet
1 inch = 2,400 feet

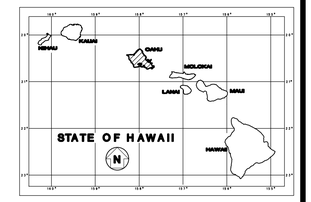
HONOULIULI GULCH
KALOI GULCH
HUNEHUNE GULCH
PALEHUA STREAM

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	1	

INDEX TO DRAWINGS

93



STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

HONOLULU, HAWAII

CONCEPTUAL PLANS FOR

FARRINGTON HIGHWAY WIDENING

KAPOLEI GOLF COURSE ROAD TO FORT WEAVER ROAD

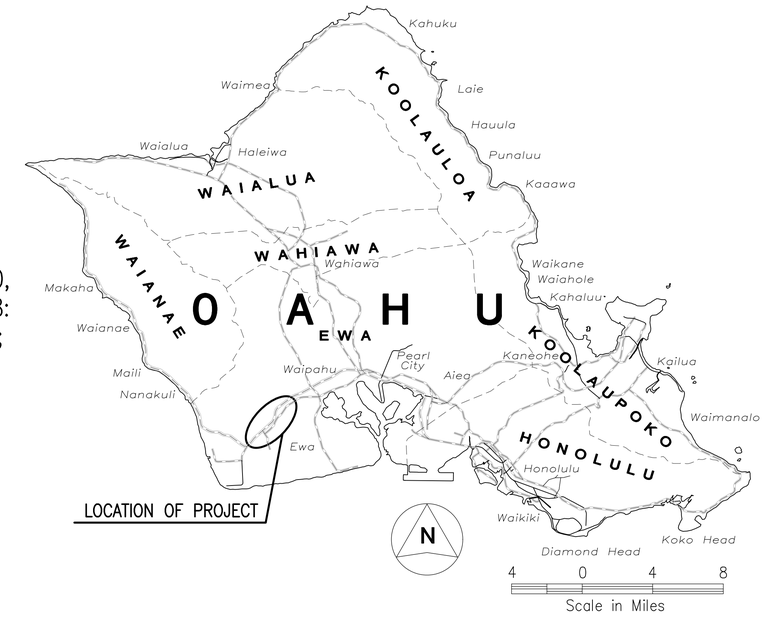
PROJECT NO. 7101A-01-20

DISTRICT OF EWA

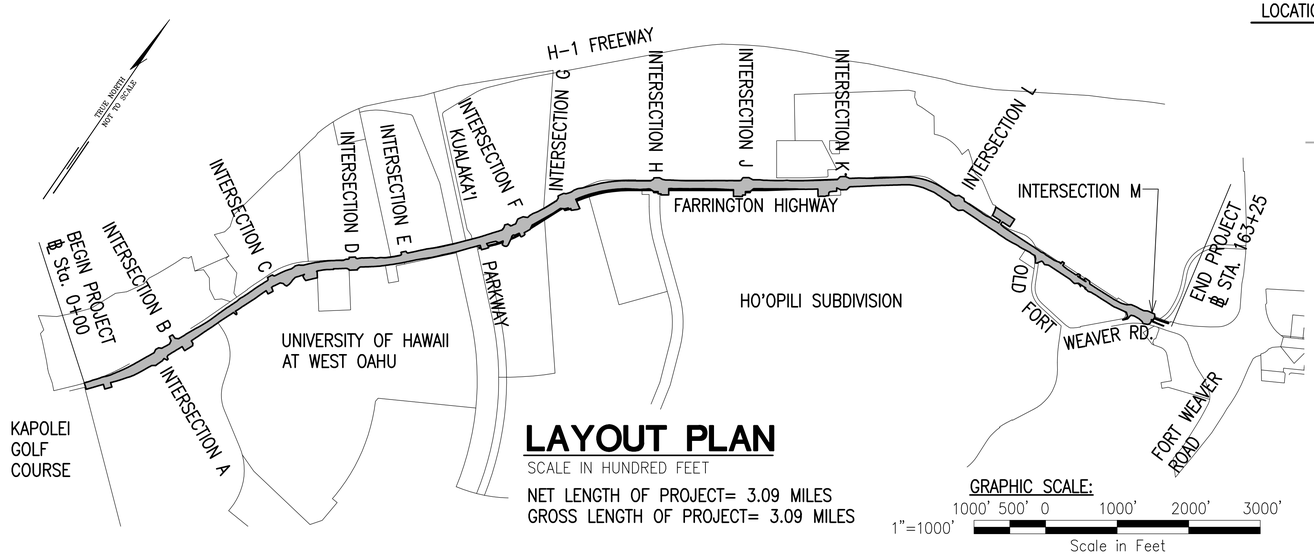
ISLAND OF OAHU

TMK: 9–1–016: 004, 007, 008, 179, 182, 183, 220, 221; 9–1–017: 043, 070, 097, 099, 172; 9–1–018: 006, 007, 008, 009, 012, 013, 014, 015, 016, 018; 9–1–081: 006, 022

JANUARY 18, 2022



FEDERAL AID PROJECTS PREVIOUSLY CONSTRUCTED OR UNDER CONSTRUCTION



LAYOUT PLAN

SCALE IN HUNDRED FEET

NET LENGTH OF PROJECT= 3.09 MILES
GROSS LENGTH OF PROJECT= 3.09 MILES

GRAPHIC SCALE:
1"=1000' 1000' 500' 0 1000' 2000' 3000'
Scale in Feet

DESIGN DESIGNATION

DESIGN ADT (2040)	17,100
DHV	1,710
K	10.0
D (DESIGN)	75/25
T (DESIGN)	5.5%
T 24	5.0%
V	40 MPH (WEST OF KUALAKAI PKWY.) 30 MPH (EAST OF KUALAKAI PKWY.)

DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

APPROVED:

DIR. OF TRANSPORTATION — DATE

R.M. TOWILL CORP. — DESIGNED BY
HWY-DD — MANAGED BY
692-8431 — PHONE
OCTOBER 2021 — DATE

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

RMTC JOB NO. : 1-23146-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	3	XXX

Construction Notes

GENERAL

1. The Project Scope of Work includes the widening of the Farrington Highway; Construction of drainage structures and culverts, asphalt and concrete pavements, concrete curbs, gutters and sidewalks, gas lines, water system and sewer system, street lighting, traffic signals, and landscaping; relocation of water mains; relocation of overhead and underground electrical and telecommunications infrastructure; reconstruction of the Kaloi Stream Bridge and Honouliuli Stream Bridge; demolition and removal of structures, clearing, grading; and pavement marking and sign installation.

2. Construction and restoration of all existing highway facilities within State Highway Right-of-Way shall be done in accordance with all applicable sections of "Hawaii Standard Specifications For Road and Bridge Construction, 2005" and "Specification for Installation of Miscellaneous Improvements Within State Highways" of the State Highways Division, and the Project Plans and Special Provisions.

3. All Contractor operations shall be confined to be within existing Right-of-Ways, easements, and Right-of-Entry areas.

4. In the event that a conflict occurs between State and City and County of Honolulu Standards, Specifications, and/or Notes, the more stringent requirement shall govern.

5. The Contractor shall only take direction from the State Department of Transportation Engineer and shall not perform any work at the direction of the City and County of Honolulu or City Engineer, without the approval of the State Department of Transportation Engineer.

6. The existence and location of underground utilities, manholes, monuments and structures as shown on the plans are from the latest available data but the accuracy is not guaranteed. The encountering of other obstacles during the course of work is possible. The Contractor shall tone for all utility lines before starting any work. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations.

7. Smooth riding connections shall be constructed at the limits of new road construction, including the beginning and end of project, connecting approaches, side streets and driveways as shown on the plans and/or as directed by the Engineer.

8. All saw cutting work shall be considered incidental to Roadway Excavation. The Contractor shall clean up any cuttings and shall not wash down material into the storm drain or sewer systems.

9. All work specified in the contract but not listed separately in the proposal schedule shall be considered incidental to other various contract items and shall not be paid for separately.

10. All work to remove temporary facilities by the Contractor shall be considered incidental to the various contract items in the proposal.

11. For geologic inspection refer to report titled, "Geotechnical Engineering Exploration – Farrington Highway Improvements", dated November 23, 2020 prepared by Geolabs, Inc.

12. The Contractor shall adjust all Utility (water, sewer, power, gas, fuel, communication) structures (manholes, handholes, etc.) to match the finish grade.

13. Topographic and boundary survey information shown herein was provided by ControlPoint Surveying Inc. The topographic survey was done _______.

14. The Contractor shall comply with utility coordination requirements per Standard Specification Section 104.11. As part of coordination requirements, the Contractor shall include carbon copy the Engineer in all correspondences with utilities.

15. All materials shall be new and free of defects, such as rust, damage, or corrosion. The Engineer will determine acceptability. No payment will be made for material that is not accepted by the Engineer.

16. The Contractor shall allow access to all materials that will be used in the project for inspection and/or testing (this includes but is not limited to access to Contractor or subcontractor's base yards, manufacturer yard, production plant, separate storage areas). The Engineer reserves the right to reject any material or work for which access or inspection is not allowed.

17. The Contractor shall inform the Engineer of all scheduled work. See schedule requirements in Specification Section 108.06 and 108.07. If the Engineer is not informed of work and unable to inspect the work, the Engineer reserves the right to reject the work.

18. The Contractor shall be responsible for preserving all survey monuments on State property. All survey monuments disturbed or destroyed by the Contractor shall be reinstalled at no cost to the State. Only licensed State of Hawaii Land Surveyors shall reference, locate, adjust or reinstall monuments. The Contractor shall coordinate with the State Construction Surveyor prior to construction to locate and verify all monuments. Adjusted or reset monuments shall comply with Standard Plan D-07 or D-08 where applicable. Following the completion of the monuments, their locations shall be checked. The monuments must check within a tolerance of the smaller of and error ratio of 0.03 feet. Failure to meet the tolerance will require the Contractor to reset the monuments. All costs associated with coordination, referencing, preserving, adjusting, installation, and verification of survey monuments is included in the various contract pay items.

19. Traffic control plans shown in the Contract Documents are minimum requirements and do not constitute a complete traffic control plan. The Contractor shall provide any traffic control plan (not shown in the plans) that is needed to accomplish the work based on contractor's means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable Manual Uniform Traffic Control Devices (MUTCD) requirements. All lane closures or traffic pattern changes (detours) not shown on the plan shall be submitted to the Engineer for approval in accordance with Specifications Section 645 – Work Zone Traffic Control. For restrictions on lane closures, detours, construction work during peak hours, and other requirements regarding maintaining vehicular and pedestrian traffic, see Section 107.06 – Contractor Duty Regarding Public Convenience, and Section 645 – Work Zone Traffic Control. All traffic control related costs shall be included in the lump sum traffic control pay item and shall not be paid for separately.

20. All material generated by the project and taken off-site shall be considered solid waste. The Contractor shall dispose of material at an approved Department of Health waste management facility as an incidental cost to the work. Provide a copy of all the disposal receipts from the facility permitted by the Department of Health to receive solid waste to the Engineer by the last day of the month. Provide documentation from any intermediary facility where solid waste is handled or processed, haul tags, or any documentation as requested by the Engineer. If the Contractor elects to reclassify material as inert fill, DOH HEER testing guidance shall be followed. No material generated from this project shall be classified as inert fill material for reuse without testing, obtaining required approvals/permits, providing disposal locations/quantities, and obtaining prior written approval from the Engineer. The Contractor shall indemnify the State of all violations of solid waste handling and disposal. Failure to comply with these requirements may result in fines/liquidated damages in accordance with Special Provisions Section 209 and HDOT's Enforcement Response Plan.

21. If the traffic control plan or any traffic control device is not installed per manufacturer's recommendation, plan, specification, or is deemed unsafe, the Engineer reserves the right to shut down the work at no additional cost and time or to withhold payment from Contractor. Lane closures that are unauthorized or not approved will not be allowed and shall be subject to rental fees in accordance with Specification Section 108.09.

22. The Contractor shall provide oversight for quality control of work. The Contractor shall submit copies of all measurements, test results, and reports to the Engineer on a weekly basis. This includes compaction, density, smoothness testing, and pavement core thickness results.

23. All public notices and advertisements shall be incidental to lump sum traffic control item 645.1000 – Traffic Control, and shall not be paid for separately.

24. The exact locations and limits of areas to be excavated or cleared shall be located in the field by the Contractor and accepted by the Engineer. The Contractor shall not begin any work until the Engineer verifies and accepts the location and limits of the area.

25. The Contractor shall verify the presence of existing utilities which may conflict with activities and shall coordinate with the utility company for temporary relocation, as necessary. All costs associated with the temporary relocation shall be borne by the Contractor.

26. 30 days prior to excavation. Provide written notice of scheduled toning and specific locations to the Engineer at least one week ahead of toning. If there is a potential conflict, contractor shall inform DOT within 24 hours of discovery. Contractor shall probe around area and take precautions to not damage utilities. This work shall be incidental to various contract items and shall not be paid for separately.

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 5935-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE

April 30, 2022
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAI'I
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Construction Notes – 1

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

SHEET No. C-2 OF XXX SHEETS

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

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Construction Notes

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	4	XXX

NOTIFICATION

1. All necessary permits for work within the jurisdiction of the City and County of Honolulu shall be obtained by the Contractor at his own cost.

2. The Contractor shall obtain a Permit to Perform Work Upon State Highways from the Oahu District Engineer, State Highways, at 831–6700, prior to commencement of work within the State's Highway Right–of–Way.

3. The Contractor shall notify the Engineer in writing, three (3) weeks prior to starting Construction.

4. The Contractor shall notify the Engineer and City and County of Honolulu, including Utilities, Bus Transportation, Hospitals, Police Department, Fire Department, Emergency Medical Services, and Department of Health in writing at least three (3) weeks before start of construction.

5. The Permit to Perform Work Upon State Highways may be revoked because of default in any of the following, but not limited to, conditions:
   A. Work performed before or after permitted hours.
   B. Failure to maintain roadway surfaces in a smooth and safe condition.
   C. Failure to clean up construction debris generated from project work.
   D. Failure to provide and maintain proper traffic control.
   E. Failure to replace damaged pavement markings and signs.
   F. Failure to provide and maintain erosion control devices in proper condition.
   G. Failure to comply with noise permit and law requirements.

6. The Contractor shall inform the Oahu District Engineer 831–6700 at least three (3) weeks prior to closing any lanes or performing any trench restoration work. This work shall include any backfilling and compacting of trench material; placing and compacting of base course material; and any paving operations. Any trench restoration work performed by the Contractor that is not witnessed by State Representative or not constructed in compliance with the requirements of the contract documents will be required to be removed. It shall be removed with a State Representative present and in compliance with the requirements of the contract documents. All restoration work will be at the Contractor's expense.

7. All workers within the State Right–of–Way who are exposed either to vehicles using the roadway or to construction equipment within the work area, shall wear high–visibility safety apparel that meets the Performance Class 3 requirements of ANSI/ISEA 107–2004 publication entitled "American National Standards for High–Visibility Safety Apparel and Headwear". "Workers" means people on foot whose duties place them within the State Right–of–Way, such as but not limited to, Contractor construction and maintenance forces, equipment operators, survey crews, utility crews and law enforcement personnel when directing traffic, investigating incidents, handling lane closures or obstructed roadways within the State Right–of–Way.

PRECAUTION:

1. The Contractor shall exercise care when performing work in or adjacent to the State Highway Right–of–Way. Damages to the existing facilities shall be immediately reported to the Enginer and respective utility company, or City and County or State agency. The repair work shall be done at the Contractor's expense.

2. Contractor shall take proper precautions when working near overhead lines.

WORK EXECUTION

1. No material and/or equipment shall be stockpiled or otherwise stored within the Highway Right–of–Way except at locations designated in writing and accepted by the Engineer. If use of location is approved by the Engineer, the Contractor shall obtain a Use & Occupancy Permit to use the property within the Highway Right–of–Way from the State Highways District Office (831–6700).

2. Lane closures are allowed only from 8:30 a.m. to 3:00 p.m. Monday through Friday except on Holidays. Exceptions to lane closure hours specified require written acceptance and must be coordinated in advance with the Engineer.

3. All work zone regulatory, guide and construction signs and barricades shall be of high intensity Type IV retroreflective sheeting. Portable concrete barriers shall be reflectorized in accordance to the "Standard Plans", State of Hawaii, Department of Transportation. On the back of each sign install a sticker with 1–inch high letters stating Project Number, Contractor Name and Date Installed. Date installed may be hand written.

4. All construction signs shall be left in place until all construction items have been completed unless otherwise directed by the Engineer. The Contractor shall obtain prior approval from the Engineer to remove construction signs.

3. After the project is completed, all areas disturbed by the Contractor, but not incorporated into the final grades or work plan, shall be restored to a condition equal to or better than the existing condition prior to disturbance. This work will be considered incidental to the various pay items under Section 209.

4. Normal working hours shall be from 7:00 a.m. to 3:30 p.m., Monday through Friday, excluding holidays. Work performed between 3:30 p.m. and 7:00 a.m. of the following day is "night work".

6. Failure of the Contractor to open all lanes of traffic during the times specified above shall result in the assessment of liquidated damages as specified in Section 108.08 of the Special Provisions.

TRENCHING

1. Prior to commencing trench excavation work, the Contractor shall take a pavement profile along the centerline of the proposed utility trench. This information shall be used in the verification of restoring the roadway to its original or better condition. A copy of the pavement profile taken before trenching and after restoration shall be submitted to the Engineer for acceptance.

2. The Contractor shall provide and maintain an adequate, safe and non–skid bridging material, including shoring over trenches in pavement areas.

3. The Contractor will make every effort to minimize the use and the duration of use of steel plates. All steel plates shall have a non–skid surface. The State may require the backfilling of patches of trenches due to the excessive usage of steel plates at no additional cost.

4. Temporary cold mix trench patches will be permitted in any given area for a maximum duration of two (2) weeks, and shall be a minimum of 2–inches thick. All temporary patches shall be placed over properly placed and compacted backfill and base course layers. The Contractor shall be responsible for maintaining all temporary patches and to make repairs to unsatisfactory patches within 24 hours. If a pothole develops that in the opinion of the Engineer will become a hazard to the public, the repairs shall be made immediately, no later than four (4) hours after notification.

5. At the end of each day's work, the Contractor shall remove all work zone signs and barricades not in use, equipment and other obstruction from the roadway to permit free and safe passage of traffic.

ACCESS TO FARM LOTS
(Cost shall be considered incidental to various items of work)

1. The Contractor shall provide continuous access to the farm lots along the mountain and ocean sides of the project.

2. Temporary access provided to farm lots shall be coordinated with farmers.

3. Upon removal of earth berm, the contractor shall provide a physical barrier to farm lots to prevent unauthorized vehicles from accessing the farm lots.

4. The Contractor shall relocate all farmer access gates impacted by construction and provide roadway transition to existing access roadways.

5. The Contractor shall relocate all irrigation lines impacted by construction and ensure farmers continuous irrigation.

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

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Construction Notes – 2

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A–01–20

Scale: As Shown Date: January 2022

SHEET No. C-3 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	5	XXX

Construction Notes (Cont'd)

ACCESS:

1. Where pedestrian walkways exist, they shall be maintained in a safe and passable ADA condition, or other facilities for pedestrians shall be provided. Passages between walkways at intersections shall likewise be provided.
2. A minimum of 36–inches clear width and 80–inches headroom clearance height shall be maintained along existing and potential sidewalk and walkways.
3. The Contractor shall provide for access to and from all existing side streets, driveways and adjacent properties at all times.

DRAINAGE:

1. Existing drainage systems will be functional at all times during construction of proposed drainage structures and bridges. The Contractor shall be responsible for any storm runoff damage caused by their operation. The Contractor shall furnish materials, equipment, labor, tools and incidentals necessary to accomplish maintenance of flow. The cost shall be incidental to the various Contract Items.
2. The Contractor shall verify the locations of all existing culverts and utilities in the field. Any existing culverts and utilities damaged during construction shall be repaired or replaced by the Contractor at his own expense.
3. The Contractor shall remove all silt and debris deposited in drainage facilities, on roadways and in other areas during the duration of the project. This work shall be incidental to various contract items. The costs incurred for any necessary remedial action by the Engineer due to the Contractor's non–compliant work shall be payable by the Contractor.

American With Disabilities Act Note

1. All new sidewalk and walkway running slopes shall be defined as the direction parallel to the prevalent pedestrian flow of travel.
2. All new sidewalk and walkway cross slopes shall be defined as the direction perpendicular to the prevalent pedestrian flow of travel.
3. The running slope of an accessible route shall not exceed 1:20 and the cross slope of an accessible route shall not exceed 1:48.
4. If the running slope of an accessible route exceeds 1:20, it shall be considered a ramp, and shall meet the requirements of ADAAG 405.
5. Curb ramps shall have a running slope not steeper than 1:12 and cross slope not steeper than 1:48.
6. The clear width of a ramp run shall be 36 inches minimum.
7. Landings subject to wet conditions shall be designed to prevent the accumulation of water.
8. Curb ramp flares shall not be steeper than 1:10.
9. Landings shall be provided at the tops of curb ramps. The landing clear length shall be 36 inches minimum. The landing clear width shall be at least as wide as the curb ramp, excluding flared sides, leading to the landing.
10. Curb ramps and the flared sides of curb ramps shall be located so that they do not project into vehicular traffic lanes, parking spaces, or parking access aisles. Curb ramps at marked crossings shall be wholly contained within the markings, excluding any flared sides.
11. Temporary pedestrian access shall comply with the requirements of ADAAG 201.3 and 206.1.

American With Disabilities Act Note (Cont'd)

12. Curb ramp run surfaces shall be stable, firm, and slip resistant. Changes in level other than the running slope and cross slope are not permitted on ramp runs.

General Notes For Traffic Control Plan

1. Traffic control devices shall be installed such that the sign or device farthest from the work area shall be placed first. The others shall then be placed progressively toward the work area.
2. Regulatory and warning signs within the construction zone that are in conflict with the traffic control plans shall be removed or covered. All signs shall be restored upon completion of the work.
3. When required by the issuing office, the permittee shall install a flashing arrow signal as shown on the traffic control plans.
4. All traffic lanes shall be a minimum of ten (10) feet wide.
5. All construction warning signs shall be promptly removed or covered whenever the message is not applicable or not in use.
6. The backs of all signs used for traffic control shall be appropriately covered to preclude the display of inapplicable sign messages (i.e., when signs have messages on both faces).
7. At the end of each day's work or as soon as the work is completed, the permittee shall remove all traffic control devices no longer needed to permit free and safe passage of public traffic. Removal shall be in the reverse order of installation.
8. Sign spacing (D), taper lengths (T) and spacing of cones or delineators shall be as shown in Table 645–1, unless otherwise noted on the Traffic Control Plans.

Table 645–1 For Traffic Control Plan

Posted Speed Limit (M.P.H.)	Sign Spacing (D) (Feet)	Taper Length (T) (Feet)		Longitudinal Buffer Space (B) (Feet)	Spacing of Cones or Delineators (Feet)		
		W = 12' Or Less	W > 12'		Taper	Tangent	Work Area
35	250	200	W X 17	55	25	25	10

W = Width of Lane, Shoulder, or Offset

9. Contractor to provide access and/or directional signs to reroute pedestrian traffic.
10. An advertisement shall be placed in the newspaper by the Contractor for any lane closures. The advertisement shall be made one (1) week before any lane closure and shall contain the following information:
    A. Map of the Traffic Change Limits;
    B. Notice of starting and ending dates, times and duration;
    C. Map to show Lane Closure;
    D. Explanation of the Lane Closure, "NOTICE TO MOTORIST".
    E. Newspaper advertisement shall be a minimum size of 5–inches by 8–inches.

Proof or copy of newspaper ad needs to be submitted to both the City and County of Honolulu, and State engineer for acceptance before being printed. The Contractor shall be required to have any lane closures announced daily over the radio two (2) days before the starting date until the work is completed. Both advertisements in the newspaper and over the radio shall be paid for by the Contractor. The Contractor shall also notify the Hospital, Ambulatory Services, Police Department and Fire Department of lane closures.

General Notes For Traffic Control Plan (Cont'd)

13. All workers who are exposed to either vehicles using the roadway or to construction equipment shall wear high visibility safety apparel that meets the performance class 2 or 3 requirements of "ANSI/ISEA 107–2004". "Workers" is defined as people on foot whose duties place them within the project limits, e.g., State Right–of–Way, City and County Right–of–Way, adjacent properties. Workers as such are but not limited to construction and maintenance forces, equipment operators, survey crew, utility crews, responders to incidents e.g., EMT and firemen, and law enforcement personnel. Use of high visibility safety apparel that complies with ANSI/ISEA–207–2015 and are of comparable ANSI/SEA 107–2004 class will be acceptable.
14. Flaggers and/or police officers shall be insight of each other or in direct communications at all times.
15. The permittee shall make minor adjustments at intersections, driveways, structures, etc., to fit field conditions.
16. Cones or delineators shall be extended to a point where they are visible to approaching traffic.

Public Health, Safety And Convenience Notes (State)

1. The Contractor shall observe and comply with all Federal, State and local laws required for the protection of public health and safety and environmental quality.
2. The Contractor, at his own expense, shall keep the project and its surrounding areas free from dust nuisance. The work shall be in conformance with the Air Pollution Standards of the State Department of Health. The State may require supplementary measures as necessary.

Historical Preservation Notes

1. Should historic remains such as artifacts, burials, concentrations of shell or charcoal be encountered during construction activities, work shall cease immediately in the immediate vicinity of the find and the find protected from further damage. The Contractor shall immediately cordon off the area and notify the Planning Department at (808) 241–4050 and the State Historic Preservation Division at (808) 692–8015, which will access the significance of the find and recommend the appropriate mitigation measures, if necessary.

Hawaii One Call Center

Prior to excavation, contractor is required by HRS 269E to contact the Hawaii One Call Center at phone number (866) 423–7287.

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

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Construction Notes – 3

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A–01–20

Scale: As Shown Date: January 2022

SHEET No. C-4 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	6	XXX

Project Bench Mark

The project bench mark is referenced to the City traverse station "Street Monument A" located in the vicinity of Farrington Highway, near the intersection of Kapolei Golf Course Road. The elevation of "Street Monument A" is 112.95–feet mean sea level (msl). Benchmark provided by ControlPoint Surveying Inc.

Notes for Construction

1. The Contractor shall provide, install, maintain all necessary signs, lights, flares, barricades, markers, cones and other protective facilities and shall take all necessary precautions for the protection and for the convenience and safety of the public traffic. All such protective facilities and precautions to be taken shall conform with rules and regulations governing the use of traffic control devices at work sites on or adjacent to public streets and highways adopted by the Highway Safety Coordinator and U.S. Federal Highway Administration "Manual on Uniform Traffic Control Devices for Streets and Highways", dated 2009 and its amendments.

2. The Contractor shall, whenever necessary, properly sheet and brace all excavations to render it secure and shall remove all such sheeting and bracing before completion of the backfill for storm drains. The minimum cover requirements (from top of pipe to finished grade over pipe) is three (3) feet.

   A. A permit shall be obtained by the Contractor from the Department of Planning and Permitting, at the Contractor's expense.

   B. Driveways shall be kept open at all times.

   C. Damaged shoulders shall be restored to a condition equal to or better than existing condition.

   D. Work on a public street area may be performed only between the hours of 8:00 A.M. to 3:30 P.M. Monday through Friday, except on holidays recognized by the State of Hawaii, unless otherwise permitted by the Department of Planning and Permitting, City and County of Honolulu.

   E. During non–working hours, all trenches shall be covered with a safe non–skid bridging material and all lanes shall be opened to public vehicular and pedestrian traffic.

   F. No material and/or equipment shall be stockpiled or otherwise stored within Right–of–Way except at locations designated in writing and approved by the County Engineer.

   G. The Contractor shall conduct his operations so as to offer the least possible obstructions and inconvenience to the public and he shall have under construction no greater length or amount of work that he can execute properly with due regard to the rights of the public.

   H. All existing drainage flow conditions shall be maintained at all times. Any drainage resulted from blockage of drainages shall be at the responsibility of the contractor.

5. The Contractor shall retain the services of Hawaii licensed professional Engineer(s) for quality control. All sample control and testing shall be done by a person certified in the material test method. Utilize multiple engineers if the area of expertise for an engineer does not cover the type of work being done. Certification of the work done from the Hawaii licensed Engineer(s) shall be submitted to the Department of Public Works at the completion of the construction work Hawaii registered Engineer(s) shall certify that the construction work meets "Standard Specifications". The Hawaii licensed Engineer(s) shall also submit stamped and signed test results as requested by the Department of Public Works.

6. All pavement shall be restored to its original or better condition in accordance with City and County of Honolulu, Hawaii Standard Specifications for Road and Bridge Construction, (2005)", and its amendments with a minimum of 3–inches A.C. and 6–inches base course or match the existing pavement structure whichever is greater.

7. Benchmarks that are disturbed or destroyed shall be restored under a Hawaii Licensed Land Surveyor's direction. Copies of field notes, descriptions and new values of the benchmark shall be sent to the Engineer survey section for review and approval prior to construction.

8. Contractor shall be responsible for all overtime night work payments for City and County's, and State's staff and inspection personnel including consultants when the contract requires overtime or night work to be performed, or directs the Contractor to work additional shifts or overtime for City and County's or State's convenience or Contractor's request to work overtime.

9. When required by the City and County of Honolulu or State, an advertisement shall be placed in the newspaper by the Contractor for any lane closures. The advertisement shall be made one (1) week before any lane closure and shall contain the following information:

   A. Map of the Traffic Change Limits;
   B. Notice of starting and ending dates, times and duration;
   C. Map to show Lane Closure;
   D. Explanation of the Lane Closure, "NOTICE TO MOTORIST".
   E. Newspaper advertisement shall be a minimum size of 5–inches by 8–inches.

   Proof copy of newspaper ad needs to be submitted to both the City and County of Honolulu, and State engineer for acceptance before being printed. The Contractor shall be required to have any lane closures announced daily over the radio two (2) days before the starting date until the work is completed. Both advertisements in the newspaper and over the radio shall be paid for by the Contractor. The Contractor shall also notify the Hospital, Ambulatory Services, Police Department and Fire Department of lane closures.

10. All workers who are exposed to either vehicles using the roadway or to construction equipment shall wear high visibility safety apparel that meets the performance class 3 requirements of ANSI/ISEA 107–2004. "Workers" is defined as people on foot whose duties place them within the project limits, e.g., State Right–of–Way, City and County Right–of–Way, adjacent properties. Workers are such as but not limited to construction and maintenance forces, equipment operators, survey crew, utility crews, responders to incidents e.g., EMT and firemen, and law enforcement personnel. Use of high visibility safety apparel that complies with ANSI/ISEA–207–2015 and are of comparable ANSI/ISEA 107–2004 class will be acceptable.

11. The Contractor shall make every effort to minimize the use and duration of steel plates. All steel plates shall have a non–skid surfacing which shall be maintained during the steel plates use. In locations where more than one steel plate is used, all the plates shall be welded together to minimize the movement of the plate. If this proves insufficient to prevent movement, other methods shall be used, e.g., anchors or pinning. The County or State may require the backfilling and patching of trenching due to the excess use of steel plates or they in the sole opinion of the engineer are a safety hazard. Steel plates shall not be used where the original posted speed limit exceeds 35 mph.

Notes for Construction (Cont'd)

12. The Contractor shall exercise extreme caution to preserve benchmarks (survey monuments) whenever the center of a survey monument is less than three (3) feet from the edge of construction. The Contractor shall retain a Hawaii Licensed Surveyor to reference the location of said survey monument.

13. The Contractor shall provide an adequate non–slip bridging material, including shoring over trenches in pavement areas. The bridging shall be able to support all types of vehicular and pedestrian traffic.

14. Where pedestrian walkways exist, they shall be maintained in a safe and ADA compliant and passable condition or other facilities for pedestrian shall be provided. Passages between walkways at intersections shall likewise be provided.

15. All construction work shall be done in accordance with the Standard Plans and Specifications of the State Department of Transportation as amended, unless otherwise specified by the contract plans and specifications.

16. Confined Space
For entry by HDOT, Department of Water Supply and Contractor personnel, including inspectors, into a permit required confined space as defined in 29 CFR part 1910.146(b), the Contractor shall be responsible for providing:

   A. All safety equipment required by the confined space regulations applicable to all parties other than the construction industry, to include, but not limited to, the following:

      i. Full body harnesses for up to two (2) personnel.
      ii. Lifeline and associated clips.
      iii. Ingress/egress and full protection equipment.
      iv. Two–way radios (walkie–talkies) if out of line–of–sight.
      v. Emergency (escape) respirator (10 minute duration).
      vi. Cellular telephone to call for emergency assistance.
      vii. Continuous gas detector (calibrated) to measure oxygen, hydrogen sulfide, carbon monoxide and flammable (capable of monitoring at a distance at least 20–feet away).
      viii. Personal multi–gas detector to be carried by the HDOT and Contractor Personnel.

   B. Continuous forced air ventilation adequate to provide safe entry conditions.

   C. Qualified attendant/rescue personnel at each entry/exit point.

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

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Construction Notes – 4

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A–01–20

Scale: As Shown Date: January 2022

SHEET No. C-5 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	7	XXX

Notes for Construction Work

D. Training for all personnel including HDOT personnel in use of equipment and working in a confined space.

E. Sanitized equipment so that it shall not spread COVID–19 or other contagious disease.

Environmental Control Notes For Grading

1. In accordance with Chapter 11–60.1, AIR POLLUTION CONTROL, Title 11, Hawaii Administrative Rules, the Property Owner/Developer shall be responsible for ensuring that effective control measures are provided to minimize or prevent any visible dust emission caused by the construction work from impacting the surrounding areas; including the off–site roadways used to enter/exit the project. These measures include but are not limited to the use of water wagons, sprinkler systems, dust fences, etc.

2. In accordance with Chapter 11–55, WATER POLLUTION CONTROL and Chapter 11–54, WATER QUALITY STANDARDS, Title 11, Hawaii Administrative Rules, the Property Owner/Developer shall be responsible for ensuring that the Best Management Practice (BMP) to minimize or prevent the discharge of sediments, debris and other water pollutant into State waters are provided at all times.

3. In accordance with Chapter 11–56, SOLID WASTE MANAGEMENT CONTROL, Title 11, Hawaii Administrative Rules, the Property Owner/Developer shall be responsible for ensuring that grub material, demolition waste and construction waste generated by the project are disposed of in a manner or at a site approved by the State Department of Health. Disposal of any of these wastes by burning or burying is prohibited.

4. The Contractor shall be responsible for compliance with all applicable permits from the Department of Health including but not limited to (NPDES), Notice of Intent and General Permit for storm water, hydrostatic test and dewatering discharges.

5. The Contractor shall remove daily all silt and debris resulting from this work and deposited in drainage facilities, roadways and other areas. The cost incurred for any necessary remedial action by the Engineer shall be payable by the Contractor.

6. Best Management Practices (BMP's) shall be employed at all times to the maximum extent practicable to prevent damage by sedimentation, erosion or dust to streams, watercourses, natural areas and the property of others.

7. In accordance with Chapter 11–46, COMMUNITY NOISE, Hawaii Administrative Rules, the Contractor and the Property Owner/Developer shall be responsible for providing effective control measures to minimize or prevent construction related noise from impacting the residents in the immediate area. If required, noise reduction measures shall be implemented by the Contractor during the construction work.

8. The property may harbor rodents which will be dispersed to the surrounding areas when the site is cleared. In accordance with Chapter 11–26, VECTOR CONTROL, Title 11, HAR, the applicant shall ascertain the presence or absence of rodents on the property. Should the presence of rodents be determined, the applicant shall eradicate the rodents prior to clearing the site.

Environmental Control Notes For Grading (Continued)

9. A copy of the plans, construction schedule and/or written measures that is required to be submitted by the Contractor (Dust Control Measures/Plans) should also be sent to the Department of Health for monitoring purposes.

Notes for Grading

Temporary Dust Control Measures for Grading

1. The graded or project site that is cleared of vegetation shall be kept damp with water continuously for seven (7) days a week. At the end of each day, the site shall be sufficiently dampened with water on a continual basis so that the site will remain moistened during the night.
2. The Contractor shall conduct his operations so that excavation, embankment, and imported material shall be dampened with water on a continual basis to prevent dust problems.
3. In applying for a grading permit, the Contractor shall submit plans, schedules and/or written measures which provides for dust control. The dust control measures shall contain statements which require actions or work that prevent dust problems. No permits will be issued unless the Engineer is assured that dust and erosion problems will be minimized.

Temporary Erosion Control Measures for Grading

1. Temporary vegetative cover shall be planted within a period of 30 calendar days after the site has been graded or bored of vegetation or if the site will be suspended for more than 30 calendar days.
2. Temporary vegetative cover shall consist of 40 lbs. common rye grass seed per acre, 400 lbs. per acre 10–10–10 or equivalent fertilizer worked into the seed bed before planting. Temporary sprinkler system is to be installed concurrently with all plantings. Planting and maintenance of grass shall conform to the "Hawaii Standard Specifications for Road and Bridge Construction, 2005" and its amendments.

Permanent Erosion Control Measures for Grading

1. The Contractor shall grass the entire project site, except paved areas with Bermuda grass sprigs. The grass shall be planted, fertilized, and maintained in accordance with the "Hawaii Standard Specifications for Road and Bridge Construction, 2005" and its amendments.
2. The Contractor shall grass all exposed areas that have been constructed to final grades within a period of 30 calendar days.
3. In lieu of grass sprigs (Note 1), the Contractor may use hydromulch seedings and irrigation sprinkler system.

Notes for Grading

1. All grading work shall be done in accordance with chapter 14, articles 13, 14, 15 and 16, as related to grading, soil erosion and sediment control of the Revised Ordinances of Honolulu, 1990, as amended.

2. The underground pipes, cables or ductlines known to exist by the engineer from his search of records are indicated on the plans. The contractor shall verify the locations and depths of the facilities and exercise proper care in excavating in the area. Wherever connections of new utilities to existing utilities are shown on the plans, the contractor shall expose the existing lines at the proposed connections to verify their locations and depths prior to excavation for the new lines.

Notes for Grading (Continued)

3. The Department of Planning and Permitting shall be informed of the location of the borrow/disposal site for the project when the application for a grading permit is made. The borrow/disposal site must also fulfill the requirements of the grading ordinance.

4. No grading work shall be done on Saturdays, Sundays and holidays at any time without prior notice to the director, D.P.P., provided such grading work is also in conformance with the community noise control standards contained in the Hawaii administrative rules, title 11, chapter 46, "community noise control".

5. The limits of the area to be graded shall be flagged before the commencement of the grading work.

6. Where applicable and feasible the measures to control erosion and other pollutants shall be in place before any earth moving phase of the grading is initiated.

7. Temporary erosion controls shall not be removed before permanent erosion controls are in–place and established.

8. Temporary erosion control procedures shall be submitted for approval prior to application for grading permit.

9. For non–city projects, the contractor shall notify the civil engineering branch, D.P.P. At 768–8084 to arrange for inspectional services and submit two (2) sets of approved construction plans seven (7) days prior to commencement of construction work. For city projects, the contractor shall coordinate inspectional services with the responsible city agency.

10. The contractor shall not start construction until a notice of general permit coverage (NGPC) is received from the department of health, state of Hawaii, and has satisfied any other applicable requirements of the NPDES permit program. The contractor should provide a written copy of the NGPC to the appropriate city department or governmental agency per their requirements.

11. All grading and construction work shall implement measures to ensure that the discharge of pollutants from the construction site will be reduced to the maximum extent practicable and will not cause or contribute to an exceedance of water quality standards.

12. Non–compliance to any of the above requirements shall mean immediate suspension of all work, and remedial work should commence immediately. All costs incurred shall be billed to the violator. Furthermore, violators shall be subjected to administrative, civil and/or criminal penalties.

ORIGINAL PLAN
NOTE BOOK
No.
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DATA BY
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DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Construction Notes – 5

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A–01–20

Scale: As Shown Date: January 2022

SHEET No. C-6 OF XXX SHEETS

7

FILE: K:\civil\23146 Farrington Hwy Widening\Dwg\Construction Dwgs\C-14 Construction Notes – 13.dwg saved March 16, 2022

Water Pollution And Erosion Control Notes

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	8	XXX

A. GENERAL:

1. See Special Provisions Section 209 – Water Pollution and Erosion Control. Section 209 describes but is not limited to: submittal requirements; scheduling of a water pollution and erosion control conference with the Engineer; construction requirements; method of measurement; and basis of payment. In addition, Appendix A lists potential pollutant sources and corresponding BMPs used to mitigate pollutants.

2. Follow the guidelines in the current HDOT Construction Best Management Practices Field Manual in developing, installing, and maintaining the Best Management Practices (BMP) for the project. 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 Note A.2, "applicable bid documents" include the construction plans, standard specifications, Special Provisions, Permits, and the Storm Water Pollution Prevention Plan (SWPPP) when applicable.

3. Follow the guidelines in the Honolulu's City & County "Rules Relating to Soil Erosion Standards and Guidelines" along with applicable Soil Erosion Guidelines for projects on Oahu.

4. The Engineer may assess liquidated damages of up to $27,500 for non-compliance of each BMP requirement and each requirement stated in Section 209, for every day of non-compliance. There is no maximum limit on the amount assessed per day.

5. The Engineer will deduct the cost from the progress payment for all citations received by the Department for non-compliance, or the Contractor shall reimburse the State for the full amount of the outstanding cost incurred by the State.

6. If necessary, install a rain gage prior to any field work including the installation of any site-specific best management practices. The rain gage shall have a tolerance of at least 0.05 inches of rainfall. Install the rain gage on the project site in an area that will not deter rainfall from entering the gage opening. Do not install in a location where rain water may splash into rain gage. The rain gage installation shall be stable and plumbed. Do not begin field work until the rain gage is installed and site-specific best management practices are in-place.

7. Submit Site-Specific BMP Plan to the Engineer along with a completed Site-Specific BMP Review Checklist within 30 calendar days of contract execution. The Site-Specific BMP Review Checklist may be obtained from http://www.stormwaterhawaii.com.

B. WASTE DISPOSAL:

1. Waste Materials
Collect and store all waste materials in a securely lidded metal dumpster or roll off container with cover to keep rain out or loss of waste during windy conditions. The dumpster shall meet all local and State solid waste management regulations. Deposit all trash and construction debris from the site in the dumpster. Empty the dumpster weekly or when the container is two-thirds full, whichever is sooner. Do not bury construction waste materials onsite. The Contractor's supervisory personnel shall be instructed regarding the correct procedure for waste disposal. Post notices stating these practices in the office trailer, on a weatherproof bulletin board, or other accessible location acceptable to the Engineer. The Contractor shall be responsible for seeing that these procedures are followed. Submit the Solid Waste Disclosure Form for Construction Sites to the Engineer within 40 calendar days of contract execution. 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.

2. Hazardous Waste
Dispose all hazardous waste materials in the manner specified by local or State regulations and by the manufacturer. The Contractor's site personnel shall be instructed in these practices and shall be responsible for seeing that these practices are followed.

3. Sanitary Waste
Collect all sanitary waste from the portable units a minimum of once per week, or as required. Position sanitary facilities where they are secure and will not be tipped over or knocked down.

C. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:

1. For projects with an NPDES Permit for Construction Activities, inspect at the following intervals. For construction areas discharging to nutrient or sediment impaired waters, inspect all control measures at least once a week and within 24 hours of any rainfall event of 0.25 inches or greater within a 24 hour period. For construction areas discharged to waters not impaired for nutrient or sediments, inspect all control measures weekly. Inspections are only required during the project's normal working hours. The discharge point water classification may be found in the SWPPP.

2. For projects without an NPDES Permit for Construction Activities, inspect all control measures weekly.

3. Maintain all erosion and sediment control measures in good working order. If repair is necessary, initiate repair immediately and complete 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. When installation of a new erosion or sediment control or a significant repair is needed, install the new or modified control or complete the repair no later than 7 calendar days from the time of discovery. "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 days.

4. Remove built-up sediment from silt fence when it has reached one-third the height of the fence. Remove sediment from other perimeter sediment control devices when it has reached one-half the height of the device.

5. Inspect silt screen or fence for depth of sediment, tears, to verify that the fabric is securely attached to the fence posts or concrete slab and to verify that the fence posts are firmly in the ground. Inspect and verify the bottom of the silt screen is buried a minimum of 6 inches below the existing ground.

6. Inspect temporary and permanent seeding and planting for bare spots, washouts and healthy growth.

7. Complete and submit to the Engineer a maintenance inspection report within 24 hours after each inspection.

8. Provide a stabilized construction entrance at all points of exit onto paved roads to reduce vehicle tracking of sediments. Include stabilized construction entrance in the Water Pollution, Dust, and Erosion Control submittals. Minimum length should be 50 feet. Minimum width should be 30 feet. Minimum depth should be 12 inches or as recommended by the soils engineer and underlain with geo-textile fabric. If minimum dimensions cannot be met, provide other stabilization techniques that remove sediment prior to exit. Clean the paved street adjacent to the site entrance daily or as required to remove any excess mud, cold-planed materials, dirt or rock tracked from the site. Do not hose down the street without containing or vacuuming wash water. Cover dump trucks hauling material from the construction site with a tarpaulin. Remove sediment tracked onto the street, sidewalk, or other paved area by the end of the day in which the track-out occurs.

9. Include designated Concrete Washout Areas(s) in the Water Pollution, Dust, and Erosion Control submittals.

10. Submit the name of a specific individual designated responsible for inspections, maintenance and repair activities and filling out the inspection and maintenance report.

11. Personnel selected for the inspection and maintenance responsibilities shall receive training from the Contractor. They shall be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.

12. Contain, remove, and dispose slurry generated from saw cutting of pavement in accordance with approved BMP practices. Do not allow discharge into the drainage system or State waters.

13. For projects with an NPDES Permit for Construction Activities, immediately initiate stabilizing exposed soil areas upon completion of earth-disturbing activities for areas where earth-disturbing activities have permanently or temporarily ceased. Earth-disturbing activities have permanently ceased when clearing and excavation within any area of the construction site that will not include permanent structures has been completed. Earth-disturbing activities have temporarily ceased when clearing, grading, and excavation within any area of the site that will not include permanent structures will not resume (i.e., the land will be idle) for a period of 14 or more calendar days, but such activities will resume in the future. For construction areas discharging into waters not impaired for nutrients sediments, complete initial stabilization within 14 calendar days after the temporary or permanent cessation of earth-disturbing activities. For construction areas discharging into nutrient or sediment impaired waters, complete initial stabilization within 7 calendar days after the temporary or permanent cessation of earth-disturbing activities. Classification of water at the discharge point may be found in the SWPPP.

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SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Construction Notes – 6

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

SHEET No. C-7 OF XXX SHEETS

8

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FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	9	XXX

Water Pollution And Erosion Control Notes (Continued)

D. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES:

1. Materials Pollution Prevention Plan
   a. Applicable materials or substances listed below are expected to be present onsite during construction. Other materials and substances not listed below shall be added to the inventory.

Concrete	Detergents
Paints (enamel and latex)	Metal Studs
Tar	Fertilizers
Petroleum Based Products	Cleaning Solvents
Wood	Masonry Block

   b. Use Material Management Practices to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff. Make an effort to store only enough product as is required to do the job.

   c. Store all materials stored onsite in a neat, orderly manner in their appropriate containers and if possible under a roof or other enclosure.

   d. Keep products in their original containers with the original manufacturer's label.

   e. Do not mix substances with one another unless recommended by the manufacturer.

   f. Whenever possible, use a product up completely before disposing of the container.

   g. Follow manufacturer's recommendations for proper use and disposal.

   h. Conduct a daily inspection to ensure proper use and disposal of materials onsite.

2. Hazardous Material Pollution Prevention Plan

   a. Keep products in original containers unless they are not resealable.

   b. b. Retain original labels and Safety Data Sheets (SDS), formerly Material Safety Data Sheets (MSDS).

   c. Dispose of surplus products according to manufacturers' instructions and local and State regulations.

3. Onsite and Offsite Product Specific Plan
   The following product specific practices shall be followed onsite:

   a. Petroleum Based Products:
   Monitor all onsite vehicles for leaks and perform regular preventive maintenance to reduce the chance of leakage. Store petroleum products in tightly sealed containers which are clearly labeled. Apply asphalt substances used onsite according to the manufacturer's recommendation.

   b. Fertilizers:
   Apply fertilizers used only in the minimum amounts recommended by the manufacturer and federal, state, and local requirements. Avoid applying just before a heavy rain event. Apply 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. Once applied, work fertilizer into the soil to limit exposure to storm water. Do not apply to storm conveyance channels with flowing water. Storage shall be in a covered shed or in an area where fertilizer will not come into contact with precipitation o stormwater. Transfer the contents of any partially used bags of fertilizer to a sealable plastic bin to avoid spills.

   c. Paints:
   Seal and store all containers when not required for use. Do not discharge excess paint to the drainage system, sanitary sewer system, or State waters. Dispose properly according to manufacturers' instructions and State and local regulations.

   d. Concrete Trucks:
   Washout or discharge concrete truck drum wash water only at a designated site as far as practicable from storm drain inlets or State waters. Do not discharge water in the drainage system or State waters. Disposal by percolation is prohibited. Clean disposal site as required or as requested by the Engineer.

4. Spill Control Plan
   a. Post a spill prevention plan to include measures to prevent and clean up each spill.

   b. The Contractor shall be the spill prevention and cleanup coordinator. Designate at least three site personnel who shall receive spill prevention and cleanup training. These individuals shall each become responsible for a particular phase of prevention and cleanup. Post the names of responsible spill personnel in the material storage area on a weatherproof bulletin board or other accessible location acceptable to the Engineer and in the office trailer onsite.

   c. Clearly post manufacturers' recommended methods for spill cleanup. Make site personnel aware of the procedures and the location of the information and cleanup supplies.

   d. Keep ample materials and equipment necessary for spill cleanup in the material storage area onsite.

   e. Clean up all spills immediately after discovery.

   f. Keep the spill area well ventilated. Personnel shall wear appropriate protective clothing to prevent injury from contact with a hazardous substance.

   g. Report spills of toxic hazardous material to the appropriate State or local government agency, regardless of the size. 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 Engineer as soon as the Contractor has knowledge of the discharge. The Engineer will 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 and the Clean Water Branch (DOH-CWB) via email at cleanwaterbranch@doh.hawaii.gov during non-business hours immediately. 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.

E. PERMIT REQUIREMENTS:

1. A National Pollutant Discharge Elimination System (NPDES) Permit for Construction Activities of one acre or more of disturbed area is required for this project. If the Contractor requires extra land disturbance, including staging and storage areas, that is not covered by the NPDES Permit obtained by the State, the Contractor shall be responsible for obtaining the required NPDES Construction Activities Permit to cover this additional disturbed area. See Hawaii Administrative Rules Chapter 11-55, Appendix C for definition of land disturbance. The Contractor's attention is directed to the applicable NPDES Permit documents on the bid package compact disc.

2. Comply with all applicable State and Federal Permit conditions. Permits may include, but not limited to the following:
   a. NPDES Permit for Construction Activities

   b. NPDES Permit for Hydrotesting Waters

F. SITE-SPECIFIC BMP REQUIREMENTS:

Each BMP below is referenced to the corresponding section of the current HDOT Construction Best Management Practices Field Manual and appropriate Supplemental Sheets. The Manual may be obtained from the HDOT Statewide Stormwater Management Program Website at http://www.stormwaterhawaii.com/resources/contractors-and-consultants/ under Construction Best Management Practices Field Manual. Supplemental BMP sheets are located at http://stormwaterhawaii.com/contractors-and-consultants/storm-water pollution-prevention-plan-swppp/ under Concrete Curing and Irrigation Water.

The requirements for Water Pollution, Dust, and Erosion Control submittals are included in Section 209 of the Hawaii Standard Specifications for Road and Bridge Construction dated 2005 and applicable Special Provisions. A list of pollutant sources and corresponding BMP used to mitigate the pollutants are included in Section 209 of the Special Provisions under Appendix A.

ORIGINAL PLAN	SURVEY PLOTTED BY DATE
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	QUANTITIES BY "
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No. 6635-C
HAWAII, U.S.A.

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SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Construction Notes - 7

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

SHEET No. C-8 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	10	XXX

Water Pollution And Erosion Control Notes (Cont'd)

F. (Continued)
Follow the requirements below:

1. Protect all Drainage Inlets receiving runoff from disturbed areas (SC–2).

2. Contain on–site runoff using Perimeter Sediment Controls
   a. SC–1 Silt Fence
   b. SC–5 Vegetated Filter Strips and Buffers
   c. SC–8 Compost Filter Berm
   d. SC–13 Sandbag Barrier
   e. SC–14 Brush or Rock Filter

3. Control offsite runoff from entering construction area
   a. EC–8 Run–On Diversion
   b. SC–6 Earth Dike
   c. SC–7 Temporary Drains and Swales

4. Incorporate applicable Site Management BMP
   a. SM–1 Employee Training
   b. SM–2 Material Delivery and Storage
   c. SM–3 Material Use
   d. SM–4 Protection of Stockpiles
   e. SM–6 Solid Waste Management
   f. SM–7 Sanitary/Septic Waste Management
   g. SM–9 Hazardous Waste Management
   h. SM–10 Spill Prevention and Control
   i. SM–11 Vehicle and Equipment Cleaning
   j. SM–12 Vehicle and Equipment Maintenance
   k. SM–13 Vehicle and Equipment Refueling
   l. SM–14 Scheduling
   m. SM–15 Location of Potential Sources of Sediment
   n. SM–16 Preservation of Existing Vegetation
   o. SM–18 Dust Control

5. Contain pollutants within the Construction Staging/Storage Area BMP with applicable Perimeter Sediment Controls and Site Management BMP. Include a Stabilized Construction Entrance/Exit (EC–2) for all areas which exit onto a paved street. Restrict vehicle access to these points.

6. Manage Concrete Waste including installing a Concrete Washout Area (SM–5) and properly disposing of Concrete Curing Water (California Stormwater BMP Handbook NS–12 Concrete Curing).

7. Remove saw cut slurry and hydrodemolition water from the site by vacuuming. Provide storm drain protection and/or perimeter sediment controls during saw cutting and hydrodemolition work.

8. Sediment and Erosion Control BMP measures shown in the Contract Documents are minimum BMPs requirements and do not constitute an acceptable and/or complete Sediment and Erosion Control Plan. The Contractor shall incorporate additional BMPs based upon their means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable permit document requirements. Cost shall be included in Pay Item 209.0100, Installation, Maintenance, Monitoring, and Removal of BMP.

Sewer Notes

1. All sewer construction shall be performed in accordance with the city's "Standard Specifications," Sept. 1986, the Department of Environmental Services "Wastewater System Design Standards," July 2017, and "Wastewater System Standard Details," July 2017, Current City Practices and Revised Ordinances of Honolulu, 1990 as amended.

Sewer Notes (Cont'd)

2. In the event that any change in alignment or grade for the proposed sewers are required due to unforeseen conflicts with other facilities, the engineer in charge or the maker of the plans shall be responsible for the required changes which are to be presented to the Department of Planning and Permitting (DPP) for approval.

3. The contractor shall notify the Civil Engineering Branch, DPP at phone no. 768–8084 to arrange for inspectional services and submit four (4) sets of approved construction plans seven (7) days prior to commencement of construction work. The contractor shall pay for all inspection costs.

4. Crushed rock cradle is permitted where soil is stable. In areas of unstable soil, the maker of the plans and the construction engineer will determine the pipe support required.

5. The underground pipes, cables or ductlines known to exist by the engineer from his research of records are indicated on the plans. the contractor shall verify the location and depth of the facilities, including and affecting sewer lines, in the presence of the DPP inspector and exercise proper care in excavating the area. The contractor shall be responsible and shall pay for all damaged utilities.

6. Sewer laterals shall be clear of and not conflicting with any other utility. Minimum horizontal and vertical clearances shall be strictly observed and followed.

7. Slope for sewer laterals shall be a minimum of 2.00% unless otherwise noted.

8. Building plumbing facilities shall be controlled by sewer lateral inverts.

9. The contractor shall be responsible for maintaining continuous sewer service to all affected areas during construction.

10. The consulting engineer shall submit to the Wastewater Branch, DPP "As–Built" tracings and electronic files of the construction plans as actually constructed, showing all changes from the original plans.

11. The contractor shall be responsible for any sewage spills caused during construction. The contractor shall notify the State Department of Health and utilize appropriate sampling and analyzing procedures. The contractor shall be responsible for all public notifications and press releases.

12. The contractor shall install "Rainstopper" manhole inserts in all sewer manholes with type "SA" frame and cover.

13. The contractor shall obtain approval for advance sewer riser agreement at the DPP and obtain building permit for plumbing work before any advance riser is made.

14. S4C pipe cradle seals shall be installed 10 feet from all sewer manholes to prevent soil migration.

15. Confined Space

For entry by city personnel, including inspectors, into a permit–required confined space as defined in 29 CFR Part 1910.146(b), the contractor shall be responsible for providing:

I. All safety equipment required by the confined space regulations applicable to all parties other than the construction industry, to include, but not limited to, the following:

   a. Full body harnesses for up to two personnel.
   b. Lifeline and associated clips.
   c. Ingress/egress and fall protection equipment.
   d. Two–way radios (walkie–talkies) if out of line–of–sight.
   e. Emergency (escape) respirator (10 minute duration).
   f. Cellular telephone to call for emergency assistance.

Sewer Notes (Cont'd)

   g. Continuous gas detector (calibrated) to measure oxygen, hydrogen sulfide, carbon monoxide and flammables (capable of monitoring at a distance at least 20–feet away).
   h. Personal multi–gas detector to be carried by inspector.

II. Continuous forced air ventilation adequate to provide safe entry conditions.

III. One attendant/rescue personnel topside (two, if conditions warrant it).

16. When connecting to a live sewer line, the contractor shall abide by all conditions that the department of health sets forth to mitigate any wastewater spill that may occur. The contractor shall inform the city inspector five (5) working days prior to the actual connection. The contractor shall be responsible for any fines and penalties due to any spills resulting from the connection.

17. No rungs shall be installed inside new sewer manholes.

18. For sewer manhole adjustments upward less than 3", see Std. Detail S–28. for SMH adjustments upward greater than 3" or for any adjustments downward, reconstruct SMH top from below the cone section.

19. If contractor encounters flow monitoring devices, such as special sewer manhole cover embedded with solar panels, contact Collection System Maintenance (CSM) at 768–7272 to coordinate temporary removal.

20. Contractor shall maintain visibility and maintenance access to live sewer manhole locations at all times, including during non–work hours and paving operations.

21. Contractor shall use manhole debris catching device when performing manhole height adjustment work and remove any construction debris that has fallen into the manhole. Disposal of construction debris in the sewer system is strictly prohibited.

22. For precast sewer manholes, the consulting engineer shall submit four (4) sets of shop drawings to the Wastewater Branch, DPP for approval. After the shop drawings are approved, the manufacturer shall notify the Construction Management Branch, Wastewater Engineering and Construction Division, Env, at 768–8785, 768–8769, or 765–8755 to arrange for inspection services for concrete pours made at its plant seven (7) days prior to pour.

APPROVED:

Chief Wastewater Branch, WWB DATE

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

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SIGNATURE April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Construction Notes – 8

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A–01–20

Scale: As Shown Date: January 2022

SHEET No. C-9 OF XXX SHEETS

ORIGINAL PLAN
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FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	11	XXX

Construction Notes For Gas Facilities

1. Hawaii Gas' pipelines in the project area are plastic coated and cathodically protected. The contractor shall be extremely careful when working near these gas pipelines.

2. Written clearances must be obtained from Hawaii Gas, maps and records department, 515 Kamakee street, at least five (5) working days prior to starting excavation near these gas pipelines.

3. Since gas lines locations on field map are approximate, the contractor, after obtaining written clearance, shall call Hawaii One Call Center a minimum of five (5) working days before starting excavation to arrange for field location of the existing gas pipelines. The telephone number is 811 or 1–866–423–7287.

4. The contractor shall excavate and backfill around gas pipelines in the presence of a representative of Hawaii Gas. All backfill within six inches of any gas pipeline shall be select cushion material approved by Hawaii Gas.

5. For relocation of any gas pipeline, the contractor shall notify Hawaii Gas one month (30) calendar days before starting work. The telephone number is 594–5574. The contractor shall provide the necessary excavation and backfill, obtain traffic permits, and restore pavement, sidewalks, and other facilities. Any relocation of gas facilities shall be done by Hawaii Gas and paid for by the contractor.

6. The contractor shall notify Hawaii Gas immediately after any damage has been caused to existing gas pipelines, coatings, or its cathodic protection devices. The telephone number is 535–5933, 24 hours a day. The contractor shall be liable for any damage to Hawaii Gas' facilities. Repair work on such damage shall be done by Hawaii Gas with payments for this work to be borne by the contractor.

7. Minimum vertical and horizontal clearance between the gas pipelines and other pipelines, conduits, ductlines, or other facilities shall be 12 inches. Adequate support and protection for gas pipeline exposed in the trench shall be provided by the contractor and approved by Hawaii Gas.

8. The contractor shall work in an expeditious manner in order to keep the uncovered gas pipelines exposed for as short a period of time as possible.

HECO Underground Fuel Oil Pipelines Within Energy Corridor

1. Excavation Near HECO Fuel Oil Pipelines

The contractor shall exercise extreme caution whenever construction crosses or is in close proximity to HECO's underground fuel oil pipelines. If any excavation work will be performed within 10–feet of the fuel pipelines, the contractor shall notify HECO's Fuels Department at least two weeks prior to start of the excavation work. If the excavation is adjacent to or beneath the fuel pipeline, HECO may require a stand–by person to monitor the work of the contractor. The cost of the stand–by person shall be borne by the contractor.

Whenever the integrity of the pipeline, its coating, test stations, or cathodic protection system is affected by the excavation work, the pipeline and/or its appurtenances shall be repaired by HECO personnel or a contractor with HECO operator qualification certification, according to US DOT PHMSA regulations. The cost of any repairs shall be borne by the contractor.

The contractor shall notify the Hawaii One Call Center (HOCC) at least five working days prior to the start of excavation work, as required by Hawaii revised statute 269e–7.

The US DOT PHMSA requires that the pipeline be inspected any time that it is exposed. The contractor shall make the area with the exposed pipeline available to HECO, and provide safe access to the excavated area, for inspection.

The contractor may also be required to provide assistance, under the direct supervision of HECO, to further expose the pipeline circumferentially and longitudinally beyond the initial exposed area to facilitate the pipeline examination.

Any exposed pipeline shall be provided adequate protection and support during construction activities and after work hours to prevent damage to the fuel pipeline.

Trenches across the pipeline shall be limited to a maximum width of fifteen (15) feet unless the lines are supported utilizing a method approved by HECO.

All backfill within 12 inches around the pipeline or fiber–optic cable shall be S4C. A pipeline warning tape shall be placed above any exposed pipeline. A fiber–optic cable warning tape shall be placed above any exposed fiber optic cable at the same level as the pipeline warning tape.

Compaction of backfill material above the fuel pipeline shall be performed by vibratory plate, tampers ("jumping jacks"), or walk–behind or remote controlled mini–compactors. Spiked rollers are only allowed once there is a minimum of 30" of backfill material compacted above the S4C layer.

2. Clearance Requirements

Any new installation near HECO's fuel oil pipelines shall adhere to the following clearance requirements:

parallel to HECO fuel pipeline: 24–inches
crossing below HECO fuel pipeline: 24–inches below
crossing above HECO fuel pipeline: crossing above not permitted

3. Notification

Prior to beginning any excavation work, the contractor shall notify the HECO Fuels Department Mr. Derek Sato at 543–4108.

In the event of an emergency, or damage to any pipeline facilities, notify HECO Security Command Center at 543–7685 so HECO personnel can secure the damaged section and report any oil spills to the proper authorities. All costs associated with the damage, repair, and oil spill cleanup shall be borne by the contractor. This phone is manned 24–hours a day.

Free Service For Locating Underground Utilities:

Prior to excavation, the contractor is required by section 269e, Hawaii Revised Statutes, to contact the Hawaii One Call Center at 866–669–4001.

Guidelines For Work Near At&t Utility Lines

1. The location of the existing AT&T line (t18) shown is based on as–built plans. The contractor shall accurately determine the location and depth of the existing AT&T line prior to installation of the waterline crossing by potholing or other methods. Coordinate any necessary plan revisions with the engineer. Notify at&t at least seven (7) days prior to commencement of construction work at the crossing. (contact: Alex Viray, 455–1010).

Highway Lighting, Hawaiian Telcom, Oceanic Time Warner Cable – Notes

1. The Contractor shall notify Highway Lighting, Hawaiian Telcom and Oceanic Time Warner Cable three (3) weeks prior to the start of construction.

2. See electrical drawings.

ORIGINAL PLAN
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NOTE BOOK DESIGNED BY _____ "
QUANTITIES BY _____ "
No. _____ CHECKED BY _____ "

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Construction Notes – 9

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A–01–20

Scale: As Shown Date: January 2022

SHEET No. C-10 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	12	XXX

Par Hawaii Refining Construction Notes And Guidelines

1. All work shall be in accordance with "Design and construction guidelines for projects near Par Hawaii refining pipelines and fuel storage facilities." These guidelines can be obtained from:

   Louie Tamoria, Senior Project Engineer
   LTamoria@parpacific.com
   PAR Hawaii Refining

2. Par Hawaii refining will be provided access to the pipelines and facilities at all times, twenty four (24) hours a day, 7 days a week. If the easement area is to be fenced or walled in, Par Hawaii refining will be provided with a gate key unless the area is attended on a twenty four hour basis.

3. Storage of material or equipment on the easement should be avoided. This includes parking lots for long term storage of materials and vehicles.

4. A minimum overhead clearance of fifteen (15) feet must be maintained within the easement.

5. Extensive landscaping (trees, shrubs, sprinklers, etc.) should be kept off of the easement.

6. Large structures and obstructions (buildings, walls, equipment pads, etc.) should be kept off of the easement.

7. Top to bottom obstructions (power poles, sewer manholes, sewer cleanouts, bridge abutments, etc.) will not be permitted on the easement.

8. Light landscaping and structures (grass, paving, curb crossings, etc.) are considered reasonable. Grassed areas must be suitable for all weather vehicular traffic.

9. A Par Hawaii refining representative will stake the pipelines at contractor's request. The Par Hawaii inspector shall be notified at least five (5) working days prior to excavations in order that the representative can locate the Par Hawaii pipeline. Note: excavations include grading and grubbing of the project area above the Par Hawaii pipeline or in the vicinity of the Par Hawaii surface structures such as valve vaults, valve cages, and control devices. Determination of the pipeline elevations and locations shall be the contractor's responsibility and at the contractor's expense. All maps and drawings provided by Par Hawaii refining of its pipelines and pipeline facilities are approximations and the contractor shall be responsible to verify precise location all underground facilities prior to start of construction.

10. The pipeline easement access road must be kept open at all times. Authorization to block access roads at any time during contractor's construction period must be obtained from Par Hawaii refining pipeline operations manager.

11. Avoid installing sewers, fences, sprinkler lines, pipelines, cables, curbs, etc. In the easement in a parallel or near parallel orientation to the easement centerline. Crossings are permitted but must be held to a minimum of forty five degrees (45) to easement centerline.

12. Sewer and electrical conduits crossings should be held to a minimum clearance of two feet below Par Hawaii refining pipelines for the full easement width. If this condition cannot be met, the crossings should be encased in six (6) inches of concrete.

13. Except for item 12 above, all crossings should be at least twenty four inches clear below pipelines for the full easement width. Crossings above the pipelines are generally not accepted.

Par Hawaii Refining Construction Notes And Guidelines (Cont'd)

14. Removal of fill from the easement shall be limited to not less than 3 feet minimum cover over the lines. If residential or business buildings are within fifty (50) feet of the pipeline, four (4) feet of cover is required.

15. Trenches across the pipelines shall be limited to a maximum width of ten (10) feet unless the lines are supported in a manner acceptable to par hawaii refining.

16. If the pipeline is to be exposed during construction, adequate protection and support shall be provided during construction activities and after hours to prevent damage to or destruction of the fuel pipeline.

17. All excavation and backfilling operations within 15 feet of the pipeline in par hawaii refining easement must be witnessed by a par hawaii representative. All backfill within twelve (12) inches of pipelines shall be finely sifted man made sand (grade c–33). All excavation within 3 feet of pipelines must be accomplished by hand digging. Work shall be handled in an expeditious manner in order to keep pipelines uncovered as briefly as possible.

18. Grading of abutting property should not adversely affect drainage of the easement area or pose a hazard to the easement such as slides or erosion.

19. The slope of the final grade must be kept reasonably level across the easement. Maximum should be 5:1 to provide for backhoe operation and repair vehicles.

20. All crossing metallic facilities with potentials that could interfere with par hawaii refining cathodic protection current shall place a neoprene dielectric blanket between the crossing facility and the par hawaii refining facility for the full length of the easement. In addition, a cathodic protection survey report shall be submitted and approved by par hawaii refining stating the proposed crossing facility will not, in any way, adversely affect par hawaii refining facilities.

21. All costs pertaining to damage of the pipelines, their cathodic protection devices, or damage of property and injury to persons caused directly or indirectly by this work, shall be charged to the contractor. Any repair work on the pipelines resulting from the contractor's project shall be performed by the contractor with authorization or par hawaii refining or par hawaii refining personnel and billed to the contractor.

22. The contractor shall be responsible for traffic conditions over any par hawaii refining pipeline or pipeline facility relating to construction activities. The contractor shall provide steel plates or non–compacted soil berms in areas of equipment traffic and limit traffic to these access ways.

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	QUANTITIES BY	
	CHECKED BY	

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

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SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Construction Notes – 10

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A–01–20

Scale: As Shown Date: January 2022

SHEET No. C-11 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	13	XXX

Water Notes (Board of Water Supply)

1. Unless otherwise specified, all materials and construction of water system facilities and appurtenances shall be in accordance with the STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, dated 2005, as amended, of the Hawaii Highways Division, Department of Transportation, and the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", DATED 2002, THE "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, DATED 2021, and all subsequent amendment and additions.

2. No deviation to the Board of Water Supply 2002 Water System Standards shall be allowed without the manager and Chief Engineer's approval.

3. All plans approved by the Board of Water Supply are based solely on the adequacy of the water supply.

4. Test pressure shall be 200 psi. During the 30-minute pressure test, the pressure shall not drop more than 10 psi.

5. The Contractor shall notify Board of Water Supply Capital Projects Division, Construction Section in writing or call (808) 748-5730, and submit six (6) sets of 24" x 36" approved construction drawings, one week prior to commencing construction activities.

6. The contractor shall chlorinate the entire inside surface of each pipe and fitting with disinfection solution of 5 ounces of sodium hypochlorite mixed with 10 gallons of water. (for connection only).

7. The contractor shall be responsible for the protection of all water lines during construction. The contractor shall be especially careful when excavating behind water lines, tees, and bends wherever there is a possibility of water line movement due to the removal of the supporting earth beyond the existing reaction blocks. The contractor shall take whatever measures necessary to protect the water lines, such as constructing special reaction blocks (with BWS approval) and/or modifying his construction method.

8. The existence and location of underground utilities and structures as shown on the plans are from the latest available data but is not guaranteed as to the accuracy or the encountering of other obstacles during the course of the work. The contractor shall be responsible and shall pay for all damages to existing utilities. The contractor shall not assume that where no utilities are shown, that none exist.

9. Prior to installation, the contractor shall submit for approval by Board of Water Supply, the manufacturer's certification that all cast iron (gray or ductile) fittings for the project conform in all respects to the Water System Standards, dated 2002.

10. Polygon shape for mechanical joint glands as described in AWWA Standard C111 shall be "straight-sided" or an approved equal on a job to job basis.

11. Re-approval shall be required if this project is not under construction within a period of two (2) years.

12. Contractor shall cut and plug all existing unused laterals at the main whether or not shown on the plans. The damaged area shall be repaired to an equal or better condition than the immediate area. All work shall be done at the expense of the contractor.

13. The contractor/developer shall obtain a NPDES permit prior to chlorination and/or dewatering. A copy of the permit shall be submitted to the Board of Water Supply, Capital Projects Division, Construction Section.

Water Notes (Board of Water Supply) (Continued)

14. Soil resistivity for the site has a corrosion rating of Moderately to Severely Corrosive as reported by Geolabs, Inc. in their report entitled "Geotechnical Engineering Exploration, Farrington Highway Improvements, Kapolei Golf Course Road to Fort Weaver Road, Ewa, Oahu, Hawaii, Dated August 4, 2021. All required electrical isolation procedures and corrosion control requirements shall apply.

15. Pipe cushion shall be of high resistivity material. The contractor shall submit a soil certification that high resistant cushion material has a resistivity greater than 5,000 ohm-cm. Remainder of the backfill material shall be as specified in volume 1 of the Water System Standards. Pipe cushion and backfill material shall contain no hazardous substances above regulatory action levels including but not limited to lead, asbestos, mercury, chromium, cadmium, zinc, strontium, and polychlorinated biphenyls (PCB).

16. Upon completion of the project, the developer shall provide the BWS with a certificate from a registered soils engineer certifying that the road prism has been constructed in accordance to City and County road standards.

17. Two-way blue reflective hydrant markers type DB shall be installed at all new fire hydrant installations. Contractor shall verify the exact locations of hydrant markers with the nearest Honolulu Fire Department battalion chief.

18. Cleaning shall be by the use of "pigs" introduced into the pipeline and run completely through all installed pipelines and all branch lines for fire hydrants. "Pigging" of service laterals is not required. Bare foam "pigs" shall be used to swab piping clean as each length of the pipeline is installed. The type, density, size, diameter and length of the pig shall be submitted for review and approval by the Manager prior to pigging work. "Pig" shall be used per manufacturer's specifications. Prior to use, the "pig" shall be submerged in a chlorine solution of 1 oz. of 5% chlorine bleach in 5 gallons of water. "Pigging" of the pipeline shall be considered incidental to the installation of the new pipeline. Manual sweeping, hand cleaning or swabbing may be allowed in lieu of "pigging" as approved by the Board of Water Supply Manager.

19. All ductile iron pipe and fittings, including sections requiring reinforced concrete jacketing shall be ductile iron pipe class 53, with a bonded dielectric coating per the Board of Water Supply 2002 System Standards as amended.

20. The contractor shall install electronic markers to all mains and test the electronic markers prior to installations to verify proper operation. BWS personnel shall verify the number and locations of placed electronic markers before final paving of the project.

21. The Board of Water Supply will not send a completion notice to the Department of Planning and Permitting until easement documents are submitted to the Board of Water Supply and recorded.

22. Prior to any excavating, the Contractor shall verify in the field, the location of existing waterlines and appurtenances.

23. Any adjustments to the existing water system required during construction, to meet the requirements of the BWS Standards, whether shown on the plans or not, shall be done by the Contractor at no cost to the Board of Water Supply.

24. After installation of tapping sleeve and tapping valve and prior to tapping the existing water main, the assembly shall be pressure tested at 200 psi on both sides of the valve and in accordance with the Water System Standards, dated 2002.

Water Notes (Board of Water Supply) (Continued)

25. Maintain 3'-0" minimum cover for all existing waterlines from new finish grade. The contractor shall probe the waterline and service laterals and submit the probing data to BWS Capital Projects Division, Construction Section.

26. The contractor shall furnish and install an insulating corporation stop and petrolatum wax tape at all taps (for DI pipe and copper lateral combination only).

27. All ductile iron pipe, fittings and valves shall be coated with a banded dielectric coating and wrapped with petrolatum wax tape.

28. At the electrical/cable/signal ductline and water crossings, adjust all electrical/cable/signal ductline elevations to maintain the required vertical clear separation from all water mains. Conformance to the Board of Water Supply 2002 Water System Standards as amended shall be at no cost and adhered to.

29. Maintain the required minimum horizontal clear separation between electrical/cable/signal appurtenances, (including any modular units) and the nearest water mains or water appurtenance. Contractor shall field verify for any conflicts at each electrical/cable/signal appurtenance location. Where conflicts occur, the contractor shall coordinate with the project engineer to revise the electrical/cable/signal appurtenance to provide the required clearances. Conformance to the Board of Water Supply, Water System Standards, dated 2002, as amended, shall be at no cost and adhered to.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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APPROVED:

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

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 6935-C HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Construction Notes – 11

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown — Date: January 2022

SHEET No. C-12 OF XXX SHEETS

Water Notes (Board of Water Supply) (Continued)

30. Install 4 mil thick, non-metallic, blue colored, 6 inches wide warning tape over centerline of the pipe and below the base course along the entire length of trench. Tape should be marked with "caution water line buried below".

31. Board of Water Supply approval of these plans does not constitute a water commitment. Availability of water will be determined when building permit is presented to the department. Water commitment will depend upon the status of the water system at that time. Should water service be made available, the water commitment will be effective when the project receives an approved building permit from the building department. All water commitments will be canceled in the event the building permit is canceled.

32. When a utility (gas, sewer, electrical duct line, fiber optic, drainage, etc.) crosses below a Board of Water Supply water main, the designer of record and their construction engineer shall be responsible for determining the adequate water main structural support and submit the construction method and shop drawing, stamped by a licensed engineer and reviewed and accepted by the designer of record, to the Board of Water Supply for review and approval. All work shall be at no cost to the Board of Water Supply.

Chlorination and Hydrotesting Effluent Note

1. The contractor shall only use dechlorinated hydrotesting effluent for dust control, irrigation and/or other purposes that do not involve discharges to waters of the State of Hawaii.

Trenchless Installation Work

1. For trenchless utility work (micro-tunneling, directional drilling, pipe ramming/jacking of new utilities such as electrical duct lines, sewer lines or drain lines) crossing or paralleling existing waterlines, provide the required minimum horizontal and vertical clearance to existing waterlines. No deviation shall be allowed without the Manager and Chief Engineer's approval. The utility owner or contractor shall make adjustments to meet the minimum clearances should the utility line be installed closer to the existing waterlines, at no cost to the Board of Water Supply. The contractor shall submit as-built plans of the new utility lines after inspection of the project.

Waterline Chlorination and Testing Procedures

1. The contractor shall follow the following revised chlorination and water sampling procedures:

   The following chlorination and water sample collection procedure shall apply to all water pipeline projects (all work to be coordinated through BWS inspector):

   Chlorination of Water Systems

   A. The contractor shall provide a 4-week advance notice, in writing, to the Officer-In-Charge for proposed flushing filling and bacterial testing of the new pipeline.

   B. The Contractor shall hire a State of Hawaii – Department of Health certified laboratory to provide water sampling services and to deliver water samples to the Micro Lab for analysis. Water samples for bacterial testing shall be delivered no later than 2:30 p.m. on the day the samples are taken to the Board of Water Supply Microlab located at 630 S. Beretania St., Honolulu, HI 96843. The Micro Lab shall perofrm analysis and provide their results ot the Officer-In-Charge by 4:30 p.m. on the following day (in some cases, final results notification may take up to 48 hours).

Waterline Chlorination and Testing Procedures (Continued)

C. Water mains shall be disinfected in accordance with the Board of Water Supply Water System Standards (2002), as amended, Section 302.29.

Step 1 – Preliminary Flushing (Prior to Chlorination):
The mains shall be flushed with maximum available pressure and velocity. Adequacy of turnover shall be determined by the absence of particles. Turbidity shall be less than 1.0 NTU before chlorination. During all flushing operations, the Manager or the Manager's authorized representative shall determine the rate of water use.

Step 2 – Chlorination:
The Contractor shall submit to the Manager, for approval, a sketch showing locations of sampling points and a plan or schedule delineating the method or steps the Contractor proposes to use to accomplish the work. The following methods for chlorination shall be used:

1. The following chlorination and water sample collection procedure shall apply to all water pipeline projects:

   a. Step 1: Chlorinate main by filling with water and introducing chlorine in sufficient quantity to obtain a minimum chlorine concentration of 50 parts per million. Leave chlorinated water in main overnight.

   b. Step 2: Flush main with fresh water until all chlorine has been flushed out as evidenced by the N, N-diethyl-p-phenylenediamine (DPD) test, then collect a water sample while continuing to flush the main.

   c. Step 3: Repeat Steps 1 and 2. After collecting the second water sample, stop flushing and allow the water to stand in the main overnight.

   d. Step 4: Thoroughly flush the main with fresh water until all water that had been standing in the main overnight has been flushed out. Stop flushing and let the water stand in the main for one hour. Collect a water sample.

2. The main is deemed acceptable and certified when (I) the three consecutive water samples, collected 24 hours apart under Steps 1 and 2, show no TC (Total Coliform bacteria), no E. Coli, less than 200 CFU/ml (Colony Forming Units per ml) of HPC (Heterotrophic Plate Count bacteria) or less than 202 HPC using the MPN (Most Probable Number) method and Turbidity <1.0 NTU and (II) the sample of water held in the main for one hour, collected under Step 4, also shows no TC, no E. coli, less than 200 CFU/ml of HPC or less than 202 HPC using the MPN method and Turbidity <1.0 NTU.

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Waterline Chlorination and Testing Procedures (Continued)

3. Chlorination, flushing, sampling and testing will be extended should unsatisfactory results be encountered. Any sample that shows positive TC, E. coli, HPC>200 CFU/ml, HPC>202 MPN or Turbidity > 1.0 NTU is unsatisfactory.

4. Steps 1 and 2 may be repeated before collecting the one hour hold sample specified in Step 4. Repeating Steps 1 and 2 is recommended in the event samples show the presence of TC and/or E. coli and/or increasing total bacterial results from one sample to the next.

5. Water samples that show the presence of atypical results, debris, high turbidity or results inconsistent with existing water are subject to reconfirmation. The Manager reserves the right to request and test additional water samples in the interest of safeguarding public health and safety at no additional cost to the Department.

6. Liquid chlorine, chlorine based liquid disinfectants or calcium hypochlorite that has been tested and certified as meeting the specifications of the ANSI/NSF Standard 60, Drinking Water Treatment Chemicals – Health Effects, shall be used for the chlorination of the water mains.

APPROVED:

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

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CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 6935-C HAWAII, U.S.A.

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SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Construction Notes – 12

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown — Date: January 2022

SHEET No. C-13 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	15	XXX

Waterline Chlorination and Testing Procedures (Continued)

D. Prior to chlorination, the water mains shall be thoroughly flushed.

E. The interior surfaces of the water mains shall be exposed to the chlorinating solution by completely filling the main remove air pockets, for a minimum of 24–hours and the free chlorine residual shall not be less than 10 ppm after such time.

F. Should the calcium hypochlorite be used, no solid and/or undissolved portion of the compound shall be introduced into any section of the water mains to be chlorinated.

G. At the end of the 24–hour disinfection period, representative samples shall be taken and analyzed to assure a free chlorine residual of at least 10 ppm.

H. Should the free chlorine residual results indicate adequate chlorination, the water mains shall be thoroughly flushed and filled with water from the existing system and again tested for free chlorine residual. The flushing shall be considered adequate if the free chlorine residual test result indicate that the water in the water mains has a comparable chlorine residual as the water in the existing system.

I. The Contractor shall be responsible for the proper disposal of chlorinated water to safeguard public health and the environment in accordance with applicable State of Hawaii Department of Health requirements. A neutralizing chemical shall be applied to the water to be disposed to thoroughly neutralize the chlorine residual remaining in the water in accordance with Board of Water Supply Water System Standards (2002), as amended.

J. The Contractor shall be responsible for obtaining a National Pollutant Discharge Elimination System (NPDES) Permit from the Department of Health, Clean Water Branch prior to the start of construction, for the disposal of water used for hydro testing and chlorination, as required by the contract documents.

K. Following the acceptable flushing of the water mains, three (3) consecutive days of acceptable samples, taken at least 24–hours apart, from representative points shall be taken and subjected to microbiological tests. For water lines, at least one set of samples shall be collected from every 1,200 feet of the new water main, plus one from the end of the line and at least one set from each branch. Positive or invalid test results will not be acceptable, and the process will be repeated.

L. All measurements for chlorine residual shall be analyzed using E.P.A. approved methods for drinking water.

M. All microbiological tests shall be performed by a laboratory approved by the Department of Health, State of Hawaii and the Water Quality Division of the Board of Water Supply.

N. The Contractor shall be responsible for all costs associated with all of the foregoing.

O. Cleaning and Swabbing procedures shall be in accordance with Board of Water Supply Water System Standards (2002), as amended.

P. All materials in direct contact with the potable water shall have National Sanitation Foundations (NSF) approvals. The Contractor shall submit these approvals to the Board of Water Supply for information only prior to its application.

Water Meter Installations (For Meters 3–In. and Larger)

1. Unless otherwise specified, all materials and construction of water system facilities and appurtenances shall be in accordance with the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", Dated 2002, the "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", Volume 3, Dated 2021, and all subsequent amendments and additions.

2. No deviation to the Board of Water Supply's 2002 Water System Standards shall be allowed without the Manager and Chief Engineer's approval.

3. All plans approved by the Board of Water Supply are based solely on the adequacy of the water supply.

4. The existence and location of underground utilities and structures as shown on the plans are from the latest available data, but are not guaranteed as to their accuracy or the encountering of other obstacles during the course of the work. The Contractor shall be responsible and pay for all damages to the existing utilities. The Contractor shall not assume that where no utilities are shown, that none exist.

5. The Contractor shall be responsible for the protection of all waterlines during construction. The Contractor shall be especially careful when excavating behind waterlines, tees, and bends wherever there is a possibility of waterline movement due to the removal of the supporting earth beyond the existing reaction blocks. The Contractor shall take whatever measures necessary to protect the waterlines, such as constructing special reaction blocks (with Board of Water Supply approval) and/or modifying his construction method.

6. The Contract shall notify BWS Capital Projects Division, Construction Section, in writing or call (808) 748–5730 and submit six (6) sets of 24" x 36" approved construction drawings, one week prior to commencing construction activities.

7. Re–approval shall be required if this project is not under construction within a period of two (2) years.

8. Prior to any excavation, the Contractor shall verify in the field, the location of existing waterlines and appurtenances.

9. Any adjustments to the existing water system required during construction, to meet the requirements of the Board of Water Supply Water System Standards, whether shown on the plans or not, shall be done by the Contractor at no cost to the Board of Water Supply.

10. When a utility (gas, sewer, electrical duct line, fiber optic, drainage, etc.) crosses below a Board of Water Supply water main, the designer of record and their construction engineer shall be responsible for determining the adequate water main structural support and submit the construction method and shop drawing, stamped by a licensed engineer and reviewed and accepted by the design of record, to the Board of Water Supply for review and approval. All work shall be at no cost to the Board of Water Supply.

11. Nuts and bolts for flange connections within meter boxes shall be bronze or stainless steel except coupling adapters where "COR–TEN" (U.S. Steel) or "MAYARI" (Bethlehem Steel) may be used. Flange connections outside of meter box may use "COR–TEN" or "MAYARI" type nuts and bolts.

12. All water mains and appurtenances shall be subject to hydrostatic test pressure of 200 psi by the Contractor in accordance with Division 300 – Construction, Section 302.28, "PIPE PRESSURE TEST" of the "WATER SYSTEM STANDARDS", dated 2002. During the 30–minute pressure test, the pressure shall not drop more than 10 psi.

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APPROVED:

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

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 6935-C HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Construction Notes – 13

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A–01–20

Scale: As Shown — Date: January 2022

SHEET No. C-14 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	15A	XXX

Water Meter Installations (For Meters 3–In. and Larger) (Continued)

13. The Contractor shall chlorinate the entire inside surface of each pipe and fitting with disinfection solution of 5 ounces of sodium hypochlorite mixed with 10 gallons of water. (For connection only).

14. All ductile iron pipe, fittings, and valves shall be coated with a bonded dielectric coating and wrapped with petrolatum wax tape.

15. All ductile iron pipe and fittings, including sections requiring reinforced concrete jacketing, shall be ductile iron Class 53, and bonded dielectric coated as per the Board of Water Supply 2002 Water System Standards, as amended.

16. The project shall pay the applicable water system facilities and/or one–time service charge and for the meter which will be furnished by Board of Water Supply and installed by the Contractor when the lateral is installed.

17. Contractor shall cut and plug and remove all existing unused laterals at the main whether or not shown on the plans. Meter and valve boxes to be or already abandoned shall be demolished or removed and properly disposed of. The damaged area shall be repaired to an equal or better condition than the immediate area. All work shall be done at the expense of the Contractor.

18. After installation of tapping sleeve and tapping valve and prior to tapping the existing water main, the assemble shall be pressure tested at 200 psi on both sides of the valve and in accordance with the WATER SYSTEM STANDARDS, dated 2002.

19. For meters 3 inches and larger (Compound, F.M., and Detector Check), Contractor shall notify Customer Care Division – Service Engineering Section in writing after the plan is approved, no later than 120 days, prior to withdrawing meter from Board of Water Supply storeyard. Such notice shall indicate number, size, and type of meter (Compound, F.M., or Detector Check) and approximate month and year meter is anticipated to be drawn out. If the approved plan is allowed to lapse, the 120–day notice will be voided.

20. Board of Water Supply approval of these plans does not constitute a water commitment. Availability of water will be determined when building permit is presented to the Department. Water commitment will depend upon the status of the water system at that time. Should water service be made available, the water commitment will be effective when the project reeives an approved building permit from the Building Department. All water commitments will be canceled in the event the building permit is canceled.

21. The project shall be subject to the Board of Water Supply's Cross–Connection Control requirements prior to issuance of the Building Permit.

22. Easement documents must be submitted to Board of Water Supply and recorded before meter is issued.

23. The installation, chlorination, and testing of the water main and facilities after the property line shall not be the responsibility of the Board of Water Supply.

24. Prior to installation, the Contractor shall submit for approval by the Board of Water Supply, the manufacturer's certification that all cast iron (gray or ductile) fittings for the project conform in all respects to the Board of Water Supply Water System Standards, dated 2002 and addendums.

25. Polygon shape for mechanical joint glands as described in AWWA Standard C111 shall be "straight–sided" or an approved equal on a job–to–job basis.

26. The backflow preventer device must be installed before meter is issued.

27. Pipe cushion shall be of high resistivity material. The Contractor shall submit a soil certification that high resistant cushion material has a resistivity greater than 5,000 OHM–CM. Remainder of the backfill material shall be as specified in the Water System Standards. Pipe cushion and backfill material shall contain no hazardous substances above regulatory action levels including but not limited to lead, asbestos, mercury, chromium, cadmium, zinc, strontium, and polychlorinated biphenlys (PCB).

Water Meter Installations (For Meters 3–In. and Larger) (Continued)

28. The Contractor shall install electronic markers to all mains and test the electronic markers prior to installations to verify proper operation. Board of Water Supply personnel shall verify the number and locations of placed electronic markers before final paving of the project.

29. The Contractor shall furnish and install an insulting corporation stop and petrolatum wax tape at all taps (for D.I. pipe and copper lateral combination only).

30. Install 4 mil thick, non–metallic, blue colored, 6 inches wide warning tape over centerline of the pipe and below the base course along the entire length of trench. Tape should be marked with "CAUTION WATER LINE BURIED BELOW".

ORIGINAL PLAN
NOTE BOOK
No.

SURVEY PLOTTED BY ____ DATE
DRAWN BY .
TRACED BY .
DESIGNED BY .
QUANTITIES BY .
CHECKED BY .

APPROVED:

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

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 6935-C HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Construction Notes – 13A

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A–01–20

Scale: As Shown Date: January 2022

SHEET No. C-14A OF XXX SHEETS

15A

FILE: K:\civil\23146 Farrington Hwy Widening\Dwg\Construction Dwgs\C-14 Construction Notes – 13.dwg saved March 16, 2022

Hawaiian Electric Company Notes

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	16	XXX

1. *Location of HECO Facilities*

   The location of Hawaiian Electric's overhead and underground facilities shown on the plans are from existing records with varying degrees of accuracy and are not guaranteed as shown. The Contractor shall verify in the field the locations of the facilities and shall exercise proper care in excavating and working in the area. Wherever connections of new utilities to existing utilities and utility crossings are shown, the Contractor shall expose the existing lines at the proposed connections and crossings to verify the depths prior to excavation for the new lines. The Contractor shall be responsible for any damages to Hawaiian Electric's facilities whether shown or not shown on the plans.

2. *Compliance with Hawaii Occupational Safety and Health Laws*

   The Contractor shall comply with the State of Hawaii's Occupational Safety and Health Laws and Regulations, including without limitation, those related to working on or near exposed or energized electrical lines and equipment.

3. *Excavation Clearance*

   The Contractor shall obtain an Excavation Clearance from Hawaiian Electric's Planning and Design section of the customer installations department 1–808–543–5654 located at 820 Ward Avenue, 4th floor, a minimum of ten (10) working days prior to starting construction.

4. *Caution!!! Electrical Hazard!!!*

   Existing Hawaiian Electric overhead and underground lines are energized and will remain energized during construction unless prior special arrangements have been made with Hawaiian Electric. Only Hawaiian Electric personnel are to handle these energized lines and erect temporary guards to protect these lines from damage. The Contractor shall work cautiously at all times to avoid accidents and damage to existing Hawaiian Electric facilities, which can result in electrocution.

5. *Overhead Lines*

   State law (OSHA) requires that a worker and the longest object he or she may contact cannot come closer than a specified minimum radial clearance when working close to or under any overhead lines. It is the Contractor's responsibility to be informed of and comply with the law.

   At any time should the Contractor anticipate that his work will result in the need to encroach within the minimum required clearance as stated in the law, the Contractor shall notify Hawaiian Electric at least three (3) months prior to the planned encroachment so that, if feasible, the necessary protections (e.g. relocate or de–energize Hawaiian Electric lines) can be investigated. Hawaiian Electric may also be able to blanket its distribution (12kv and below) lines to provide a visual aid in preventing accidental contact. Hawaiian Electric's cost of safeguarding or identifying its lines will be charged to the Contractor.

   Contact Hawaiian Electric's Customer Installations Division at 1–808–543–7070 for assistance in identifying and safeguarding overhead power lines.

6. *Pole Bracing*

   Contractor shall not excavate within 10 feet from Hawaiian Electric's utility poles or any anchor system supporting the utility pole. If Contractor must excavate closer than 10 feet from a utility pole or its anchor system, Contractor will be responsible for protecting, supporting, securing and taking all precautions to prevent damage to or leaning of existing poles. Before commencing such excavation, Contractor must submit its bracing calculations and drawings, prepared and stamped by a licensed structural engineer, to Hawaiian Electric's Customer Installations Division (1–808–543–7070) for review. Hawaiian Electric requires a minimum of ten (10) working days to conduct the review of Contractor's submittal. Contractor shall be responsible for the design, installation, and removal of the temporary pole bracing system, as well as all costs incurred by Hawaiian Electric to review Contractor's drawings and to repair or straighten poles impacted by Contractor's activities, including response and restoration costs incurred by Hawaiian Electric arising out of or related to outages caused by Contractor's failure to meet the foregoing requirements. Hawaiian Electric's review and approval of any Contractor submittals including its work procedure shall not relieve Contractor from any liability resulting from Contractor's excavation near or around Hawaiian Electric's utility poles.

7. *Underground Lines*

   The Contractor shall exercise extreme caution whenever construction crosses or is in close proximity of underground lines. Hawaiian Electric's existing electrical cables are energized and will remain energized during construction. Only Hawaiian Electric personnel are to break into existing Hawaiian Electric facilities, handle these cables, and erect temporary guards to protect these cables from damage. The cost of Hawaiian Electric's assistance in providing proper support and protection of its underground lines will be charged to the Contractor. For assistance/coordination in providing proper support and protection of these lines, the Contractor shall call Hawaiian Electric's Customer Installations Division at 1–808–543–7070 a minimum of ten (10) working days in advance.

   Special precautions are required when excavating near Hawaiian Electric's 138kv or 46kv underground lines (see Hawaiian Electric Instructions to Consultants/Contractors on "Excavation near Hawaiian Electric's underground 138kv and/or 46kv lines" for detailed requirements).

   For verification of underground lines, the Contractor shall call the Hawaii One Call Center at 1–866–423–7287 a minimum of five (5) working days in advance.

8. *Underground Fuel Pipelines*

   The Contractor shall exercise extreme caution whenever construction crosses or is in close proximity of Hawaiian Electric's underground fuel oil pipelines. Special precautions are required when excavating near Hawaiian Electric's underground fuel oil pipelines (see Hawaiian Electric's specific fuel pipeline "guidelines" to Consultants/Contractors on excavation near Hawaiian Electric's underground fuel pipelines for detailed requirements).

9. *Excavations*

   When trench excavation is adjacent to or beneath Hawaiian Electric's existing structures or facilities, the Contractor is responsible for:

   a) *Arranging for Hawaiian Electric standby personnel to observe work at Contractor's cost.*
   b) *Sheeting, bracing, or otherwise supporting the excavation and stabilizing the existing ground to render it safe and secure and to prevent possible slides, cave–ins, and settlements.*
   c) *Properly supporting existing structures or facilities with beams, struts, under–pinnings, or other necessary methods to fully protect it from damage.*
   d) *Backfilling with proper backfill material including special thermal backfill where existing (refer to Engineering Division for thermal backfill specifications).*

10. *Relocation of HECO Facilities*

    Any work required to relocate or modify Hawaiian Electric facilities shall be done by Hawaiian Electric, or by the Contractor under Hawaiian Electric's supervision. The Contractor shall be responsible for all coordination, and shall provide necessary support for Hawaiian Electric's work, which may include, but not be limited to, staking of pole/anchor locations, identifying right of way and property lines, excavation and backfill, permits and traffic control, barricading, and restoration of pavement, sidewalks, and other facilities.

    All costs associated with any relocation or modification (either temporary or permanent) for the convenience of the Contractor, or to enable the Contractor to perform his work in a safe and expeditious manner in fulfilling his contract obligations shall be borne by the Contractor.

11. *Conflicts*

    Any redesign or relocation of Hawaiian Electric's facilities not shown on the plans may be cause for lengthy delays. The Contractor acknowledges that Hawaiian Electric is not responsible for any delay or damage that may arise as a result of any conflicts discovered or identified with respect to the location or construction of Hawaiian Electric's electrical facilities in the field, regardless of whether the Contractor has met the requested minimum advance notices. In order to minimize any delay or impact arising from such conflicts, Hawaiian Electric should be notified immediately upon discovery or identification of such conflict.

12. *Damage to HECO Facilities*

    The Contractor shall be responsible for the protection of all Hawaiian Electric surface and subsurface utilities and shall be responsible for any damages to Hawaiian Electric's facilities as a result of his operations. The Contractor shall immediately report such damages or any hazardous conditions related to Hawaiian Electric's lines to Hawaiian Electric's Trouble Dispatcher at 1–808–548–7961. Repair work shall be done by Hawaiian Electric or by the Contractor under Hawaiian Electric's supervision. Costs for damages to Hawaiian Electric's facilities shall be borne by the Contractor.

    In case of damage or suspected damage to Hawaiian Electric's fuel pipeline, the Contractor shall immediately notify Hawaiian Electric's Security Command Center at 1–808–543–7685 (a 24–hour number) so Hawaiian Electric personnel can secure the damaged section and report any oil spills to the proper authorities. All costs associated with the damage, repair, and oil spill cleanup shall be borne by the Contractor.

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

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

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SIGNATURE — April 30, 2022 — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Construction Notes – 14

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A–01–20

Scale: As Shown — Date: January 2022

SHEET No. C-15 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	17	XXX

Hawaiian Electric Company Notes (Cont'd)

13. HECo Stand–By Personnel

The contractor may request Hawaiian Electric to provide an inspector to stand–by during construction near Hawaiian Electric's facilities. The cost of such inspection will be charged to the Contractor.

The Contractor shall call Hawaiian Electric's Customer Installations Division at 1–808–543–7070 a minimum of three (3) months in advance to arrange for Hawaiian electric stand–by personnel.

14. Clearances

The following clearances shall be maintained between Hawaiian Electric's ductline and all adjacent structures (charted and uncharted) in the trench:

Guidelines For Minimum Horizontal (Parallel) Clearances Between Hawaiian Electric (HECo) and Other Underground Utilities				
Underground Utility	HECO Direct Buried Cable	HECO Direct Buried in Conduit (no concrete encasement)	HECO 3" (Minimum) Concrete Encasement	Applicable notes:
HECO DB Conduits	12"	3"	0"	
HECO 3" encasement	0"	0"	0"	
Telephone/CATV DB	12"	12"	6"	
Telephone/CATV DB ducts	12"	12"	6"	
Telephone/CATV 3" Encasement	0"	0"	0"	5
Traffic signal	12"	12"	12"	
Water DB (BWS Owned)	36"	36"	36"	1, 4
Customer Owned Water Service Laterals	12"	12"	12"	
Water (Concrete Jacketed) BWS Owned)	36"	36"	36"	1, 4
Gas DB	12"	12"	12"	1
Gas (Concrete Jacketed)	12"	12"	12"	1
Sewer DB	36"	36"	36"	1, 2
Sewer (Concrete Jacketed)	36"	36"	36"	1, 2
Drain	12"	12"	12"	1
Fuel pipelines				3

1. *Where space is available, parallel clearance to other utilities, or foreign structures other than communication or traffic signal shall be 36".*

2. *If 36" clearance cannot be met:*
   - *If clearance is less than 12", jacket sewer line with reinforced concrete (per HECO's standard 30–1030) for a distance of 5'–0" plus pipe diameter.*
   - *If clearance is between 12" and 36", jacket sewer line with plain concrete.*

3. *All Fuel Pipeline crossings shall be reviewed and approved by the company that owns and maintains it.*

4. *5 feet clear to water mains 16" and larger.*

5. *For situations with 0" minimum separation, a 6" separation is recommended.*

6. *Clearances measured from outer edges or diameters of utilities. Whenever concrete jackets are involved, clearances shall be total clear distance between the concrete jacket and utility concerned.*

Department of Transportation Services (DTS) Transportation Mobility Division (TMD)

1. *Construction of this project shall not affect transit operations. Bus routes and bus stops shall remail open and accessible at all times. Any work affecting bus operations, routes, or stops must be submitted to DTS–TMD for review no less than 30 days prior to the start date.*

Point of Contact Information (Notification is required to all phone numbers and emails):

DTS–TMD
(808) 768–8371
thebusstop@honolulu.gov
handivan@honolulu.gov

Oahu Transit Services – Bus Operations
(808) 768–9520
(808) 768–9534
John.donovan@thebus.org
Sean–bennett.paio@thebus.org
Field–ops–mgr@thebus.org

Oahu Transit Services – Paratransit Operations
(808)456–5021
Tracie.coelho@thebus.org

Construction Coordination Notes

1. *Relocation of removal of Hawaiian Electric signs and posts shall be done by Hawaiian Electric. The Contractor shall notify Hawaiian Electric by phone to schedule the relocation or removal of Hawaiian Electric signs and posts. The Contractor shall be responsible for all coordination and scheduling efforts.*

2. *The Contractor shall contact the adjacent landowners, by phone, a minimum of 30 days prior to the start of construction to inform them of the commencement of the construction work. The Contractor shall provide construction updates, by phone, to the adjacent landowners on a monthly basis, unless requested otherwise by the adjacent landowners.*

3. *The Contractor shall be responsible for contacting the adjacent landowners if the construction work will require the removal of trees that are located within the adjacent landowners' properties. If requested by the adjacent landowners, the Contractor shall be responsible for relocating any affected trees to a location designated by the adjacent landowners, within their property. Trees that are not requested to be relocated by the adjacent landowners shall become the property of the Contractor. The Contractor shall be responsible for all coordination, removal, relocation, and disposal work.*

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

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Construction Notes – 15

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A–01–20

Scale: As Shown Date: January 2022

SHEET No. C-16 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	18	XXX

Construction Notes for Gas Transmission Line

1. *Hawaii Gas' High Pressure Gas Transmission Line is Plastic Coated and Cathodically Protected. The Contractor Shall be Extremely Careful When Working Near the Gas Pipeline.*

2. *Prior Written Clearance Must be Obtained from Hawaii Gas, Maps and Records Department, 515 Kamakee Street, At Least Five (5) Working Days Before Starting Excavation Near any of Hawaii Gas' Pipelines.*

3. *Prior Written Clearance Must be Obtained from State of Hawaii DOT Harbors Division, Engineering Branch Before Starting Excavation Within the Energy Corridor. For More Information, Contact State of Hawaii DOT Harbors Division, Engineering Branch.*

4. *Since Pipeline Locations on Field Maps are Approximate, the Contractor, After Obtaining Written Clearance, Shall Call Hawaii One Call Center, a Minimum of Five (5) Working Days Before Starting Excavation to Arrange for Field Location of Existing Gas Lines. The Telephone number is 811 or 1–866–423–7287.*

5. *The Contractor Shall Notify Hawaii Gas, Transmission & Distribution Department 24 Hours Prior to Excavating and Backfilling Any Pipeline. The Telephone Number is 594–5548.*

6. *The Contractor Shall Have the Sole Responsibility to Perform Field Verification, Including Hand Digging Methods.*

7. *The Contractor Shall Excavate and Backfill Around the Pipeline in the Presence of a Representative of Hawaii Gas. All Backfill Within 12 Inches of the Pipeline Shall Be Sand, Mansand or Select CushionMaterial Approved by Hawaii Gas.*

8. *Exploratory Potholing to Verify the Exact Location of the Gas Transmission Line is Required if the Contractor Plans on Boring and/or Drilling Within 5' of the Transmission Line. Exploratory Potholing Shall be Performed in the Presence of a Representative of Hawaii Gas.*

9. *Minimum Vertical and Horizontal Clearance Between Gas Pipeline and Other Pipelines, Conduits, or Other Structures Shall be 24 Inches. Adequate Support and Protection for Gas Pipelines Exposed in the Trench Shall be Provided by the Contractor and Approved by Hawaii Gas.*

10. *The Contractor Shall Work in an Expeditious Manner in Order to Keep Uncovered Gas Line Exposure to a Minimum.*

11. *The Contractor Shall Notify Hawaii Gas Immediately After Any Damage Has Been Caused to the Existing Gas Pipelines, Their Coatings or Their Cathodic Protection Devices. The Telephone Number is 535–5933, 24 Hours a Day. The Contractor Shall be Liable for Any Damage to Hawaii Gas' Facilities. Repair Work on Such Damage Shall be Performed by Hawaii Gas with Payment for This Work to be Borne by the Contractor.*

ORIGINAL PLAN
NOTE BOOK
No.

SURVEY PLOTTED BY ... DATE
DRAWN BY ...
TRACED BY ...
DESIGNED BY ...
QUANTITIES BY ...
CHECKED BY ...

CRAIG W. L. LUKE
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HAWAII, U.S.A.

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STATE OF HAWAI'I
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Construction Notes – 16

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A–01–20

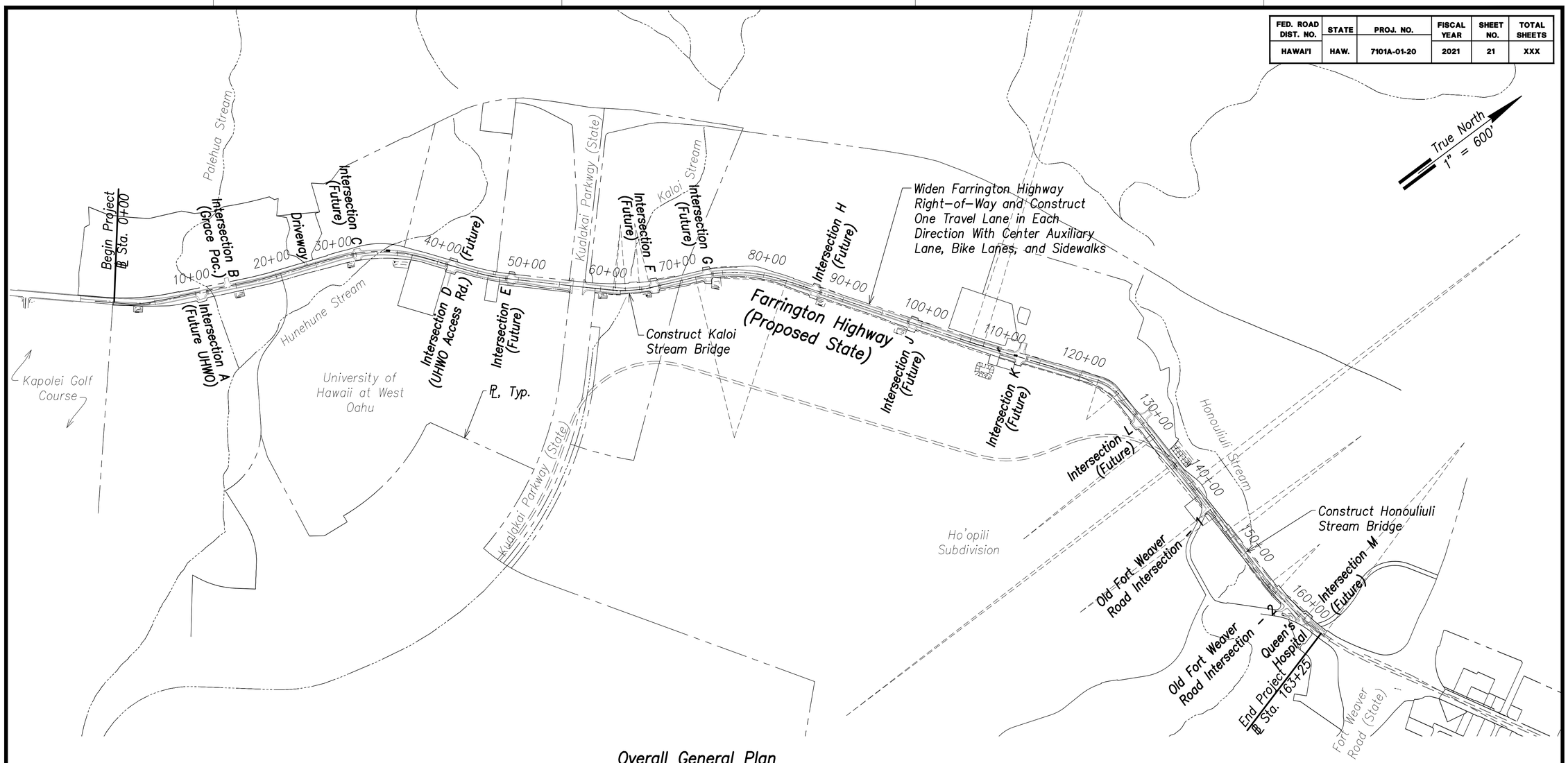
Scale: As Shown Date: January 2022

SHEET No. C-17 OF XXX SHEETS

18

FILE: K:\civil\23146 Farrington Hwy Widening\Dwg\Construction Dwgs\C-14 Construction Notes – 13.dwg saved March 16, 2022

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	21	XXX



Overall General Plan
Scale: 1" = 600'

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

Graphic Scale:
1" = 600' 600' 0 600' 1200'
Scale in Feet

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

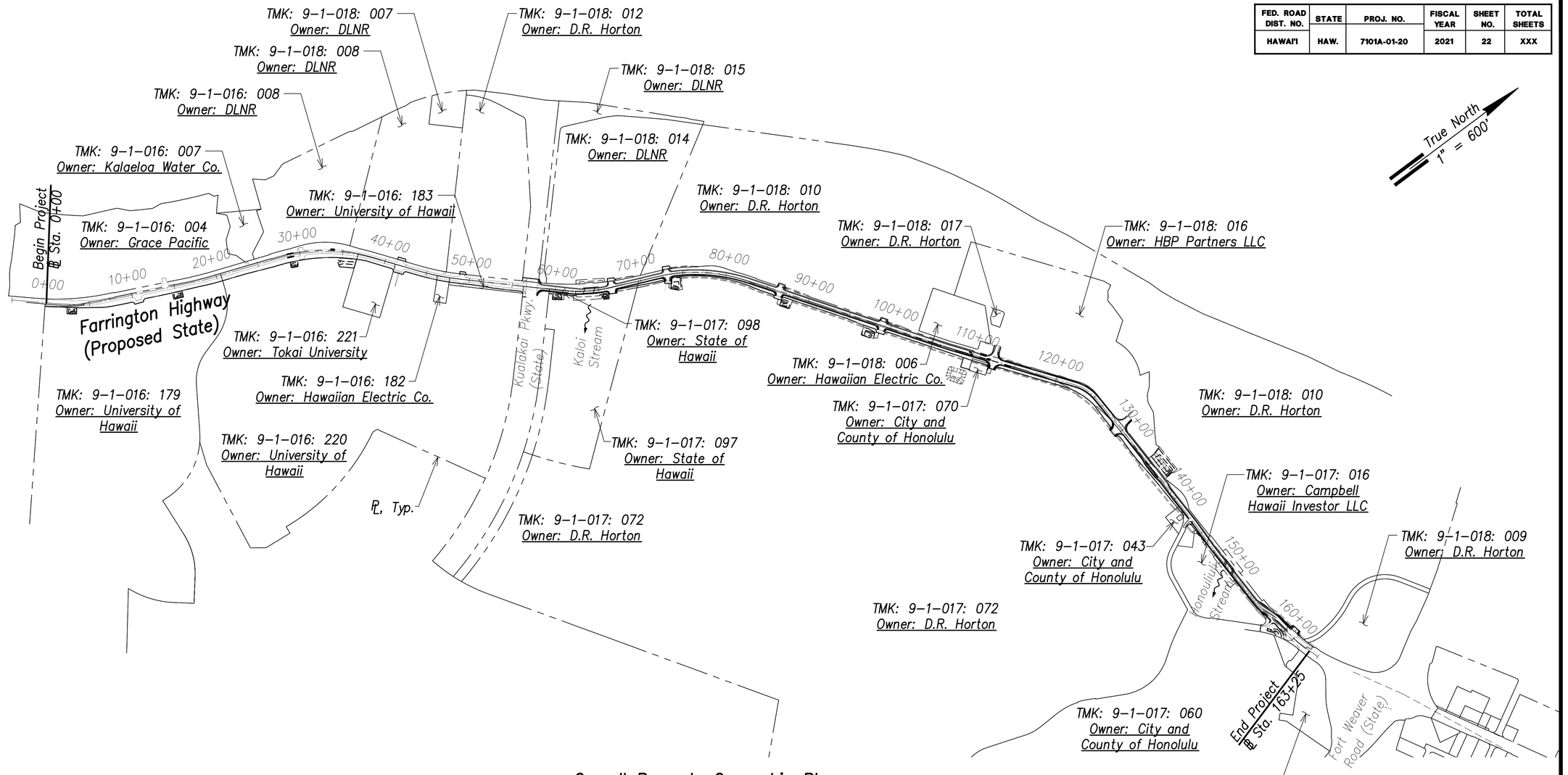
Overall General Plan

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

SHEET No. C-20 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	22	XXX



Overall Property Ownership Plan

Scale: 1" = 600'

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

Graphic Scale:

1" = 600' 600' 0 600' 1200'

Scale in Feet

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HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

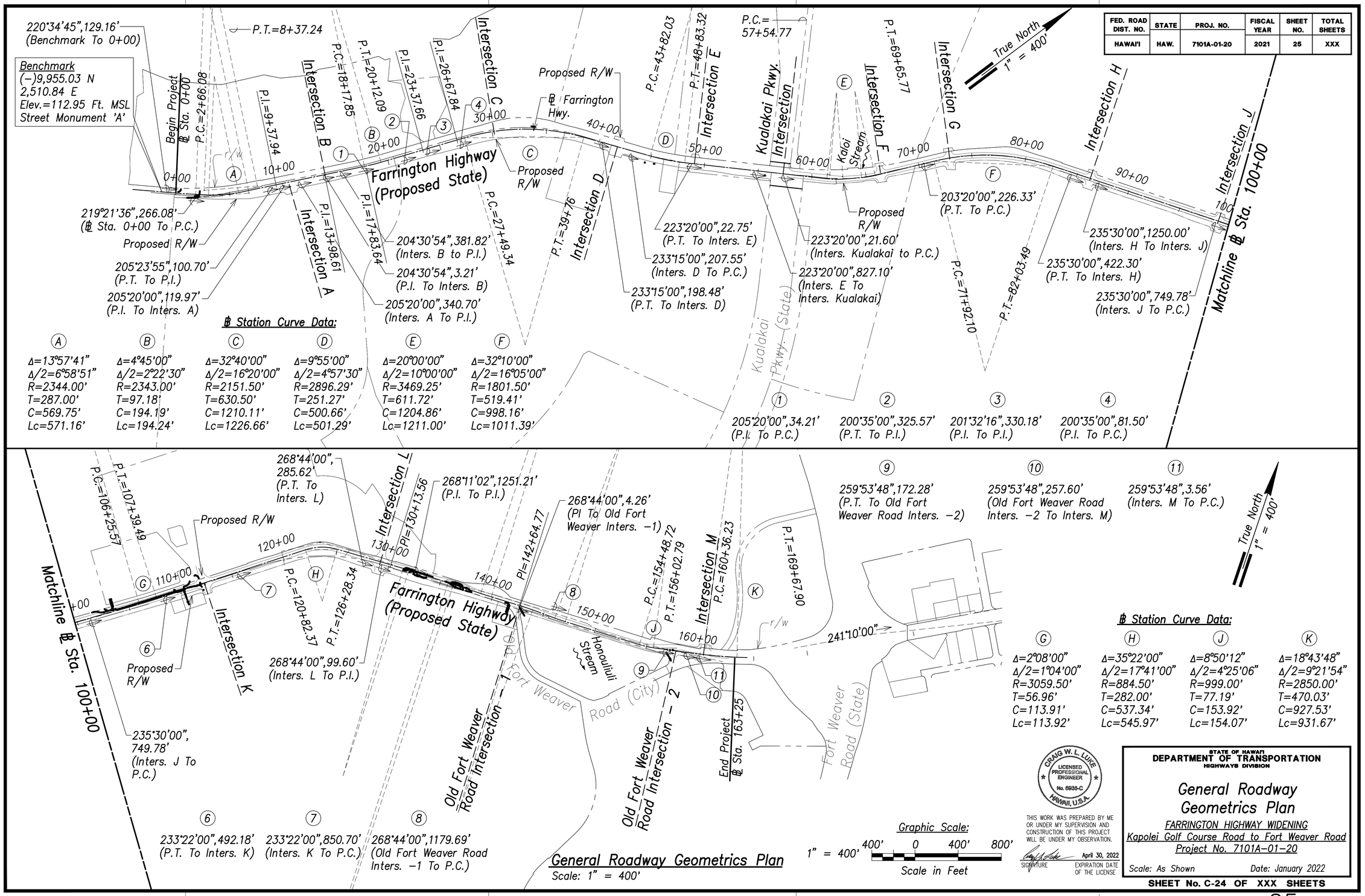
Overall Property Ownership Plan

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

SHEET No. C-21 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	25	XXX



General Roadway Geometrics Plan

Scale: 1" = 400'

Graphic Scale:

1" = 400' 400' 0 400' 800'

Scale in Feet

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

General Roadway Geometrics Plan

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A–01–20

Scale: As Shown Date: January 2022

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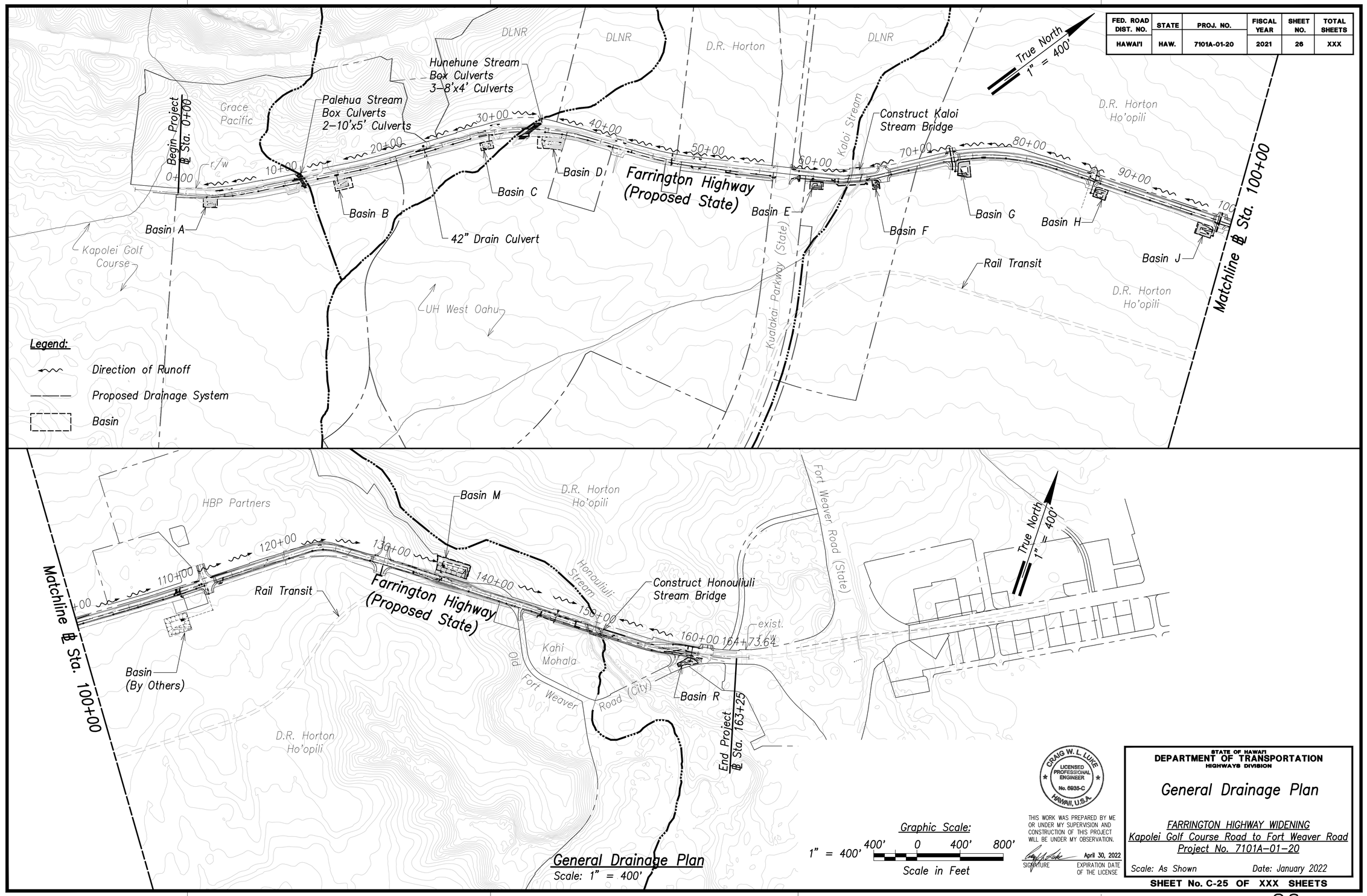
SHEET No. C-24 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	26	XXX



General Drainage Plan
Scale: 1" = 400'

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

Graphic Scale:
1" = 400' 400' 0 400' 800'
Scale in Feet

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HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

General Drainage Plan

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

SHEET No. C-25 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021		XXX

Discharge Point 4
Latitude: 21.3541°
Longitude: −158.0619°

Hunehune Stream Box Culverts
3−8'x4' Culverts

Palehua Stream Box Culverts
2−10'x5' Culverts

Grace Pacific

DLNR

D.R. Horton

DLNR

Kaloi Stream

D.R. Horton

Discharge Point 9
Latitude: 21.3640°
Longitude: −158.0538°

Discharge Point 10
Latitude: 21.3638°
Longitude: −158.0533°

True North
1" = 400'

Begin Project @ Sta. 0+00

r/w

−4+00 0+00 10+00 20+00 30+00 40+00 50+00 60+00 70+00 80+00 90+00 100

Farrington Highway (Proposed State)

42" Drain Culvert

Water Quality Basin

Water Quality Basin

Water Quality Basin

Discharge Point 7
Latitude: 21.3575°
Longitude: −158.0600°

Water Quality Basin

Water Quality Basin

Water Quality Basin

Water Quality Basin

Kapolei Golf Course

Discharge Point 6
Latitude: 21.3568°
Longitude: −158.0604°

Kualakai Pkwy. (State)

Discharge Point 1
Latitude: 21.3504°
Longitude: −158.0634°

Discharge Point 3
Latitude: 21.3517°
Longitude: −158.0629°

Discharge Point 5
Latitude: 21.3561°
Longitude: −158.0609°

Discharge Point 8
Latitude: 21.3624°
Longitude: −158.0543°

Discharge Point 12
Latitude: 21.3657°
Longitude: −158.0506°

Discharge Point 11
Latitude: 21.3658°
Longitude: −158.0524°

Discharge Point 13
Latitude: 21.3689°
Longitude: −158.0484°

Discharge Point 2
Latitude: 21.3515°
Longitude: −158.0630°

UH West Oahu

D.R. Horton

Matchline @ Sta. 100+00

Legend:

Direction of Runoff

Proposed Drainage System

Water Quality Basin

Discharge Point 15
Latitude: 21.3746°
Longitude: −158.0375°

Discharge Point 16
Latitude: 21.3744°
Longitude: −158.0369°

Water Quality Basin

HBP Partners

D.R. Horton

Honouliuli Stream

Fort Weaver Road (State)

Discharge Point 17
Latitude: 21.3743°
Longitude: −158.0367°

True North
1" = 400'

Farrington Highway (Proposed State)

+00 110+00 120+00 130+00 140+00 150+00 160+00

exist. r/w

Matchline @ Sta. 100+00

Water Quality Basin (By Others)

Discharge Point 14
Latitude: 21.3703°
Longitude: −158.0460°

Old Fort Weaver Road (State)

Kahi Mohala

Water Quality Basin

End Project @ Sta. 163+25

Discharge Point 18
Latitude: 21.3739°
Longitude: −158.0316°

Discharge Points
Scale: 1" = 400'

Graphic Scale:
1" = 400' 400' 0 400' 800'
Scale in Feet

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

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Discharge Points

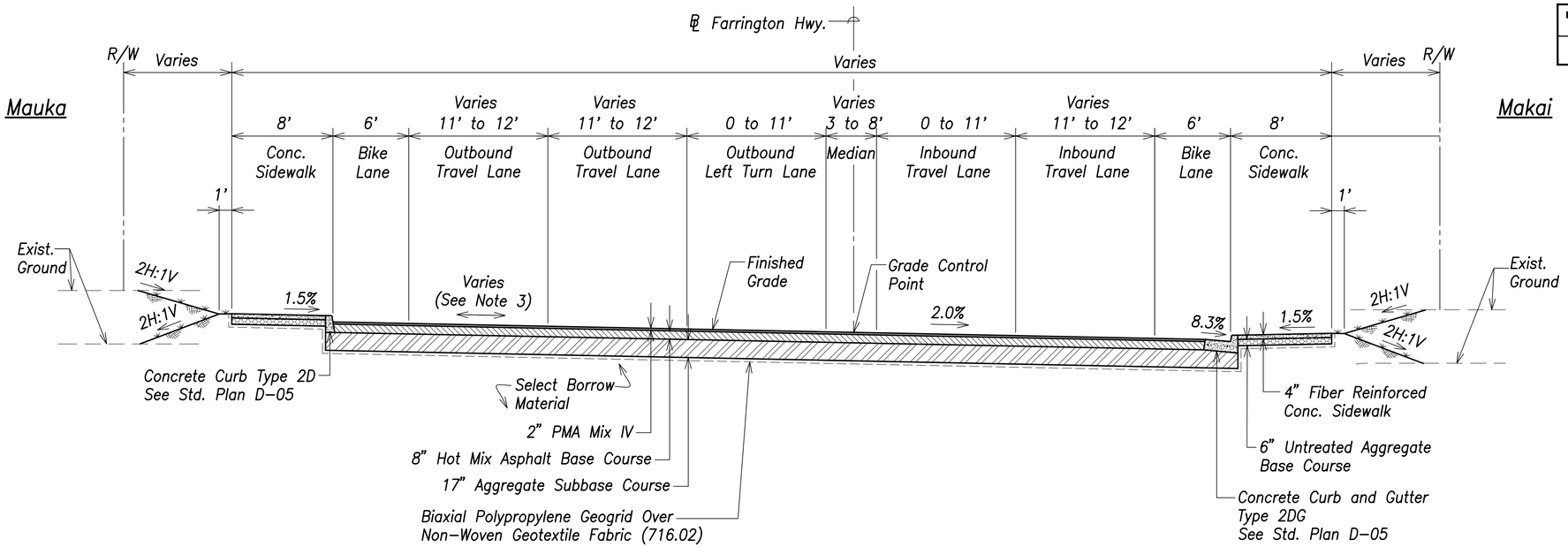
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A−01−20

Scale: As Shown Date: January 2022

SHEET No. OF XXX SHEETS

FILE: K:\civil\23146 Farrington Hwy Widening\Reports and Calculations\Calcs for RMTC Planning\Discharge Points.dwg saved June 4, 2021

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	28	XXX

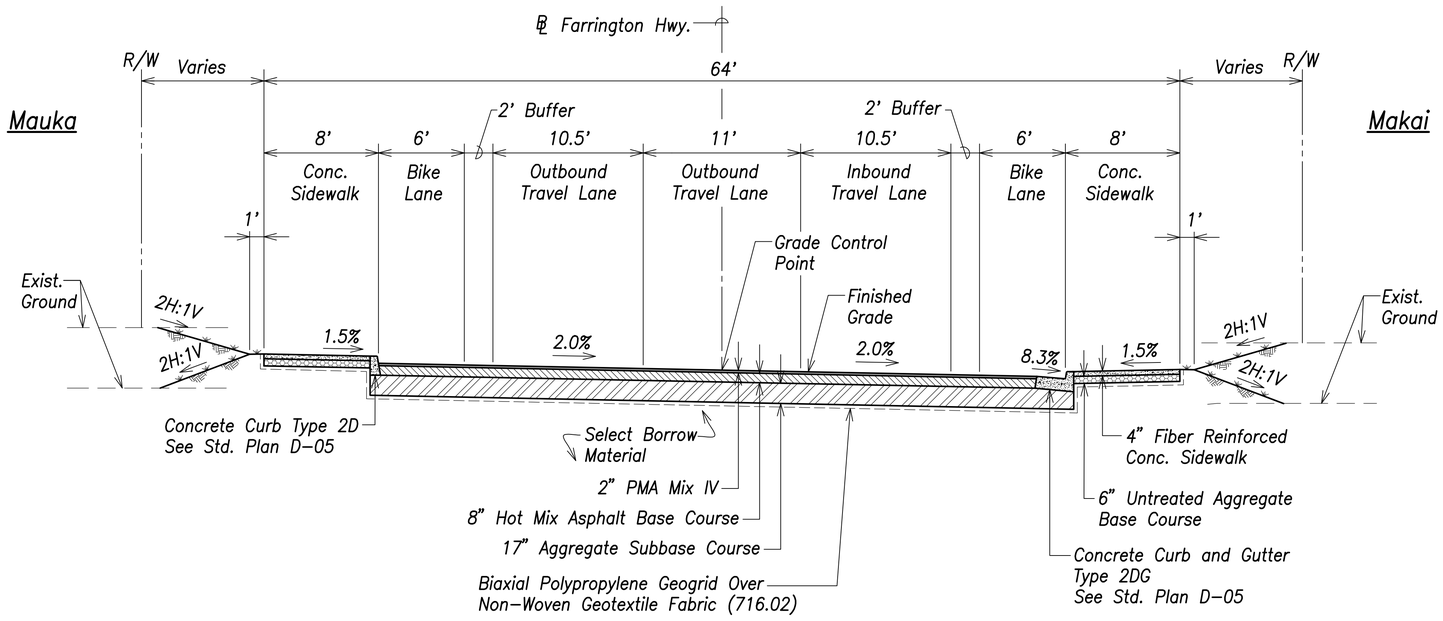


Typical Section – Farrington Highway (℄ Sta. 0+00 to ℄ Sta. 7+67.47)

Scale: 1" = 5'

Notes:

1. Farrington Highway is a low speed facility with a design speed of 30 MPH and Posted speed of 25 MPH.
2. All exposed surfaces shall be seeded with Buffel Grass (Cenchrus Cilaiaris 'Laredo'). Seed at 2 lbs./1,000 SF w/Hydromulch at 30 lbs./1,000 SF.
3. Farrington Highway PMA pavement travel way transitions from 2% normal crown at the connection to the existing road to 2% superelevated at ℄ Sta. 3+00. The axis of rotation is the ℄ Farrington Highway.



Typical Section – Farrington Highway (℄ Sta. 7+67.47 to Intersection A)

Scale: 1" = 5'

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

Graphic Scale:

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

Scale in Feet

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 6935-C HAWAII, U.S.A.

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SIGNATURE April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

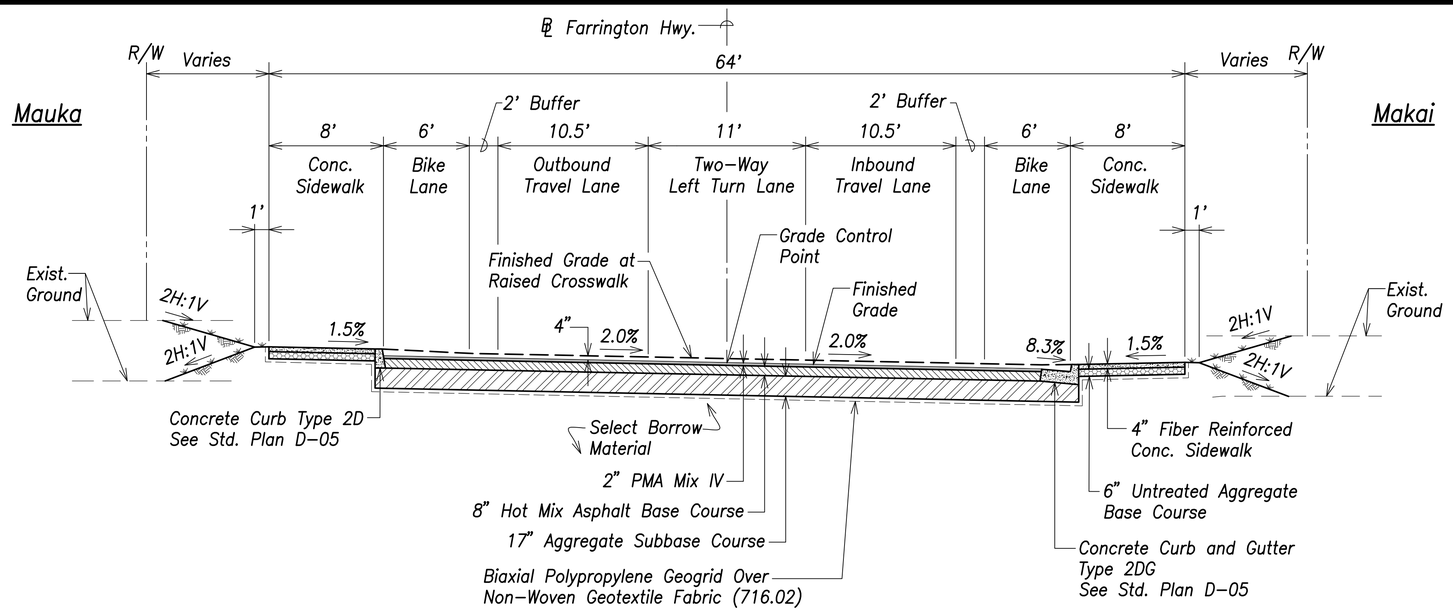
Typical Sections

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

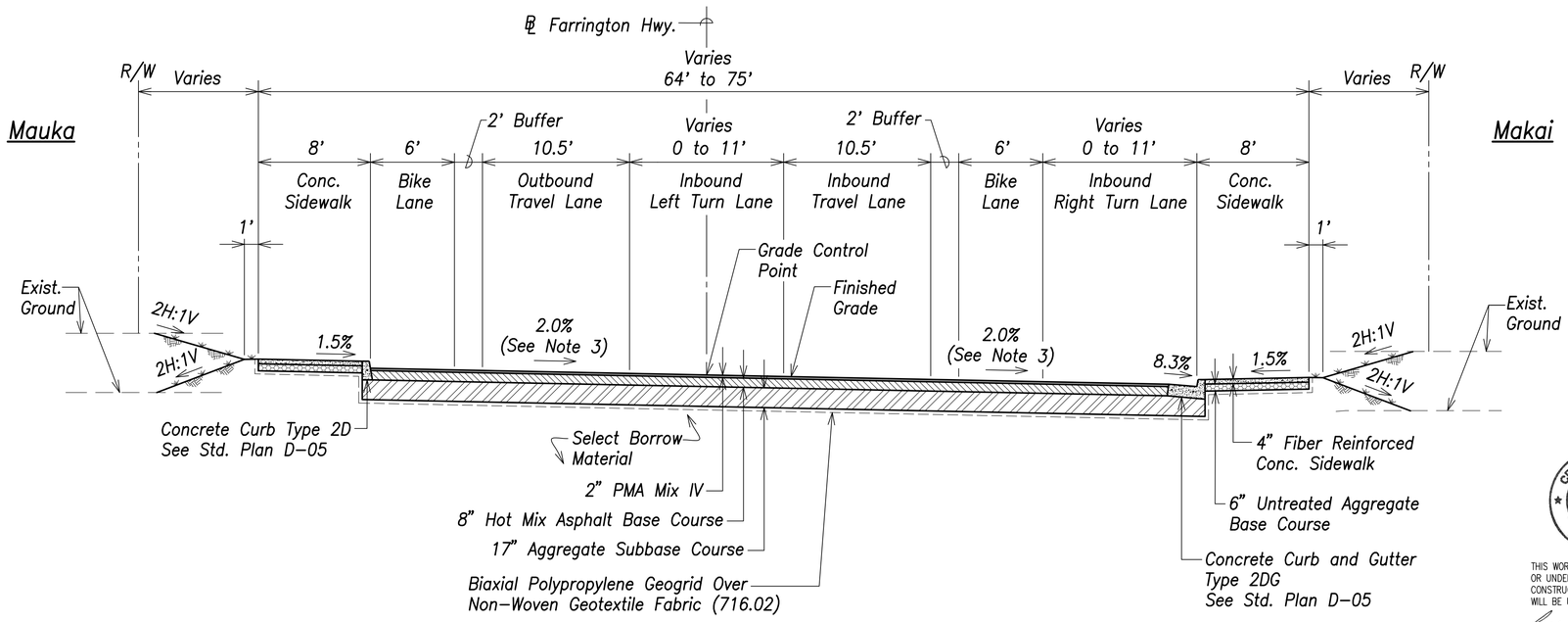
SHEET No. C-27 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	29	XXX



Typical Section – Farrington Highway (℄ Sta. 51+24.16) (℄ Sta. 62+93.64 to ℄ Sta. 133+77.55) (℄ Sta. 138+70.68 to ℄ Sta. 154+50)

Scale: 1" = 5'



Typical Section – Farrington Highway (℄ Sta. 51+24.16 to Kualakai Parkway)

Scale: 1" = 5'

Notes:

1. Farrington Highway is a low speed facility with a design speed of 30 MPH and Posted speed of 25 MPH.
2. All exposed surfaces shall be seeded with Buffel Grass (Cenchrus Cilaiaris 'Laredo'). Seed at 2 lbs./1,000 SF w/Hydromulch at 30 lbs./1,000 SF.
3. Farrington Highway PMA pavement travel way transitions from 2% superelevated to matching the existing pavement at the connection to Kualakai Parkway.

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

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

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STATE OF HAWAI'I
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

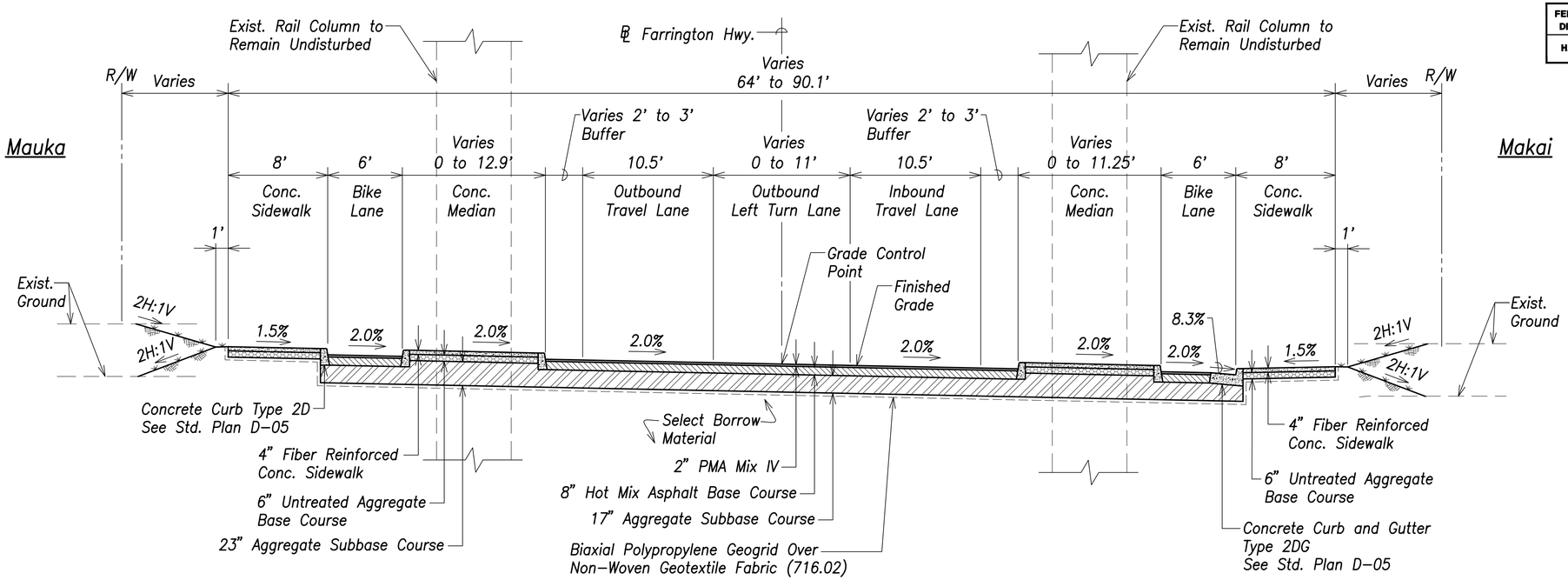
Typical Sections – 2

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A–01–20

Scale: As Shown Date: January 2022

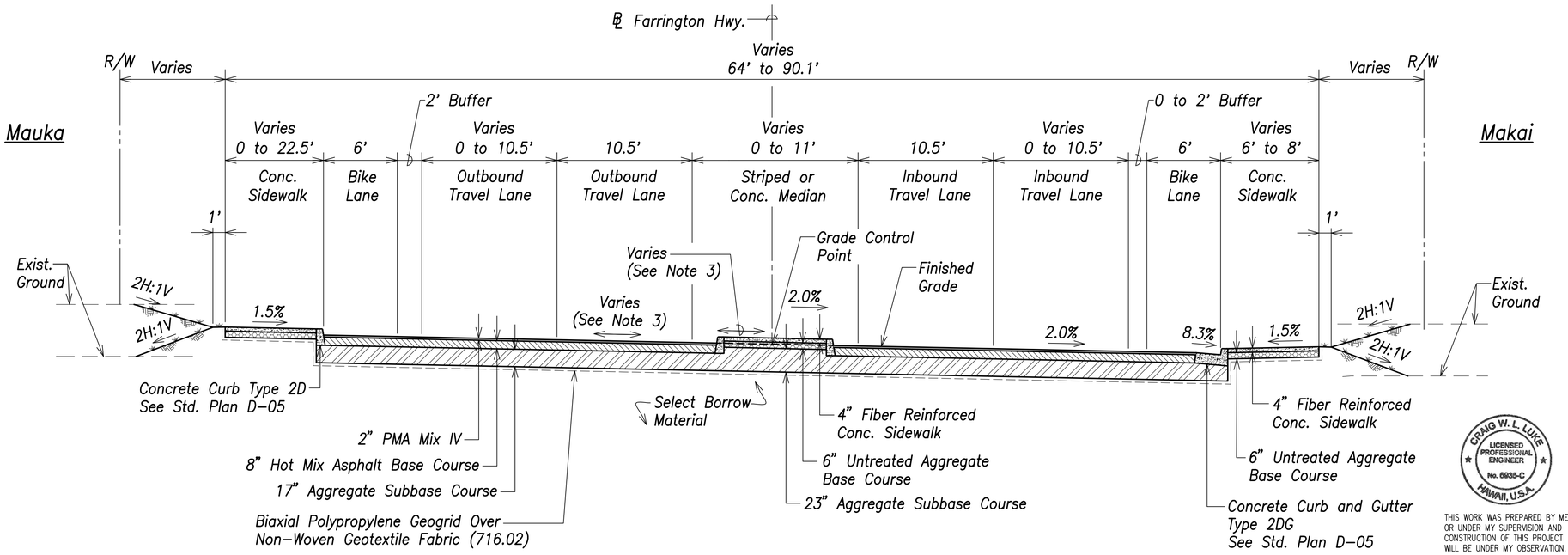
SHEET No. C-28 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	30	XXX



Typical Section – Farrington Highway (℄ Sta. 133+77.55 to ℄ Sta. 138+70.68)

Scale: 1" = 5'



Typical Section – Farrington Highway (℄ Sta. 154+50 to ℄ Sta. 157+82.15)

Scale: 1" = 5'

Notes:

1. Farrington Highway is a low speed facility with a design speed of 30 MPH and Posted speed of 25 MPH.
2. All exposed surfaces shall be seeded with Buffel Grass (Cenchrus Cilaiaris 'Laredo'). Seed at 2 lbs./1,000 SF w/Hydromulch at 30 lbs./1,000 SF.
3. Farrington Highway PMA pavement travel way transitions from 2% superelevated at ℄ Sta. 154+50 to 2% normal crown at Sta. 157+50. The axis of rotation is the ℄ Farrington Highway.

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

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

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

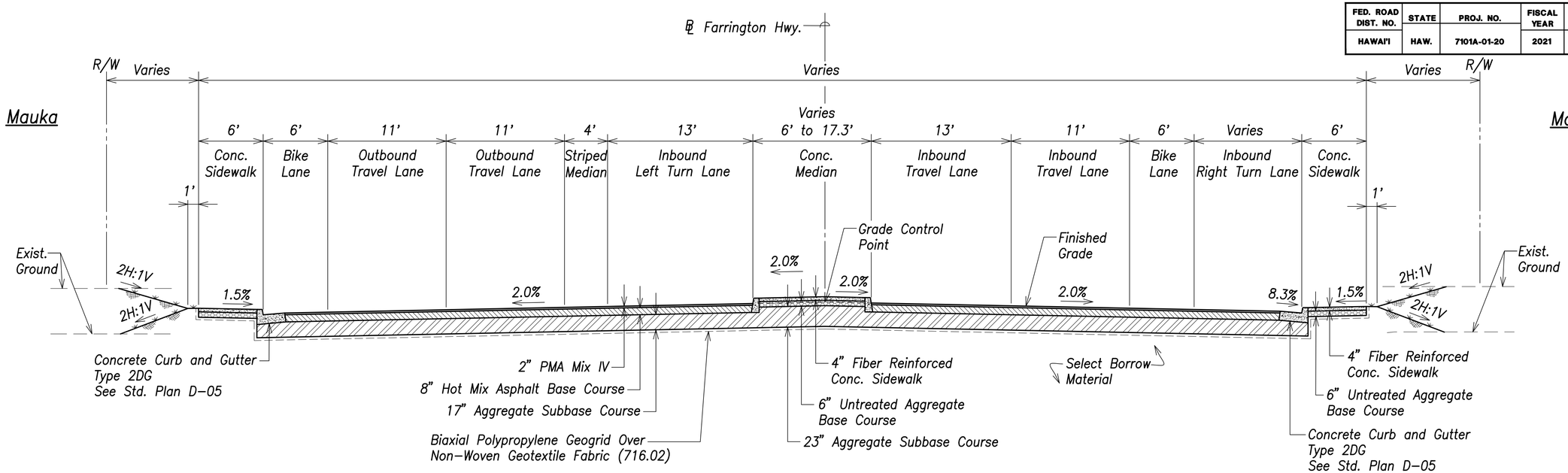
Typical Sections – 3

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

SHEET No. C-29 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021		XXX

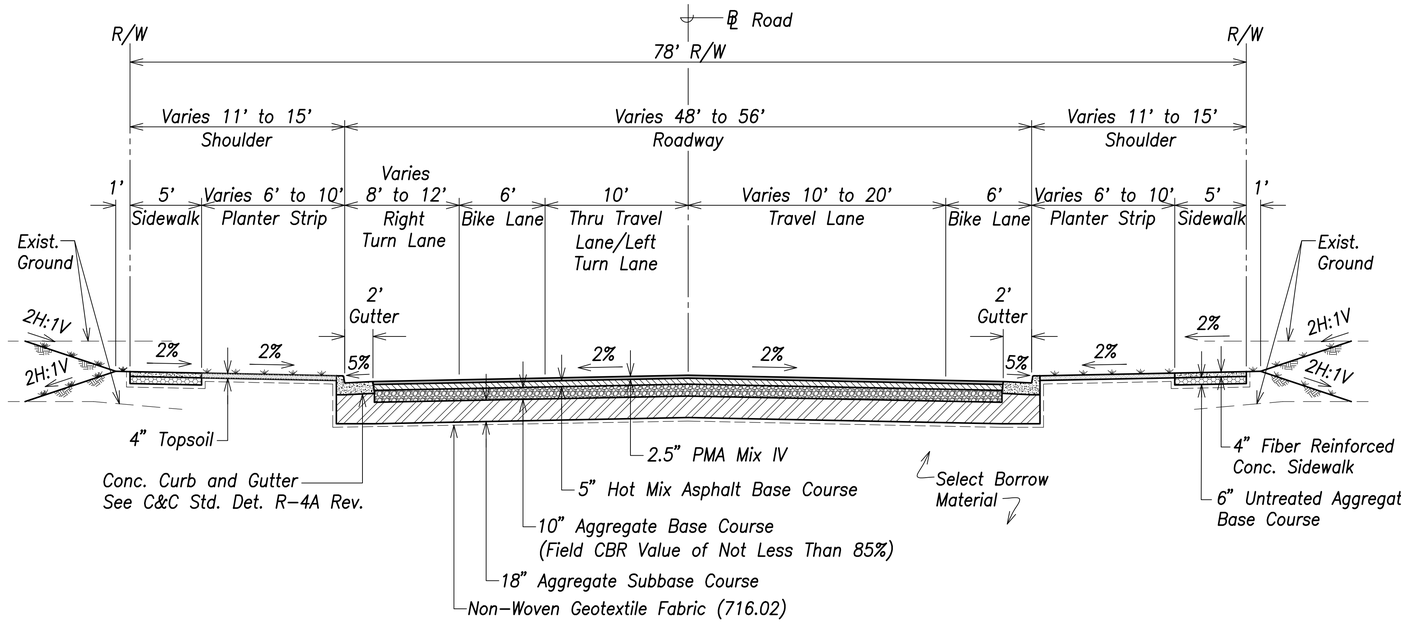


Typical Section – Farrington Highway (℄ Sta. 158+51.86 to ℄ Sta. 159+94.12)

Scale: 1" = 5'

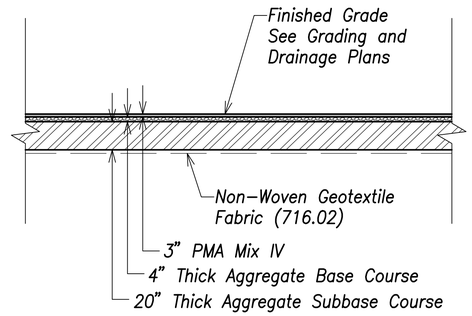
Notes:

1. Farrington Highway is a low speed facility with a design speed of 30 MPH and Posted speed of 25 MPH.
2. All exposed surfaces shall be seeded with Buffel Grass (Cenchrus Cilaiaris 'Laredo'). Seed at 2 lbs./1,000 SF w/Hydromulch at 30 lbs./1,000 SF.



Typical Section – Road 'K' and Road 'L'

Scale: 1" = 5'



Typical Section – PMA Pavement (Private Driveway)

Scale: 1" = 5'

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

CRAIG W. L. LUKE
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HAWAII, U.S.A.

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SIGNATURE April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

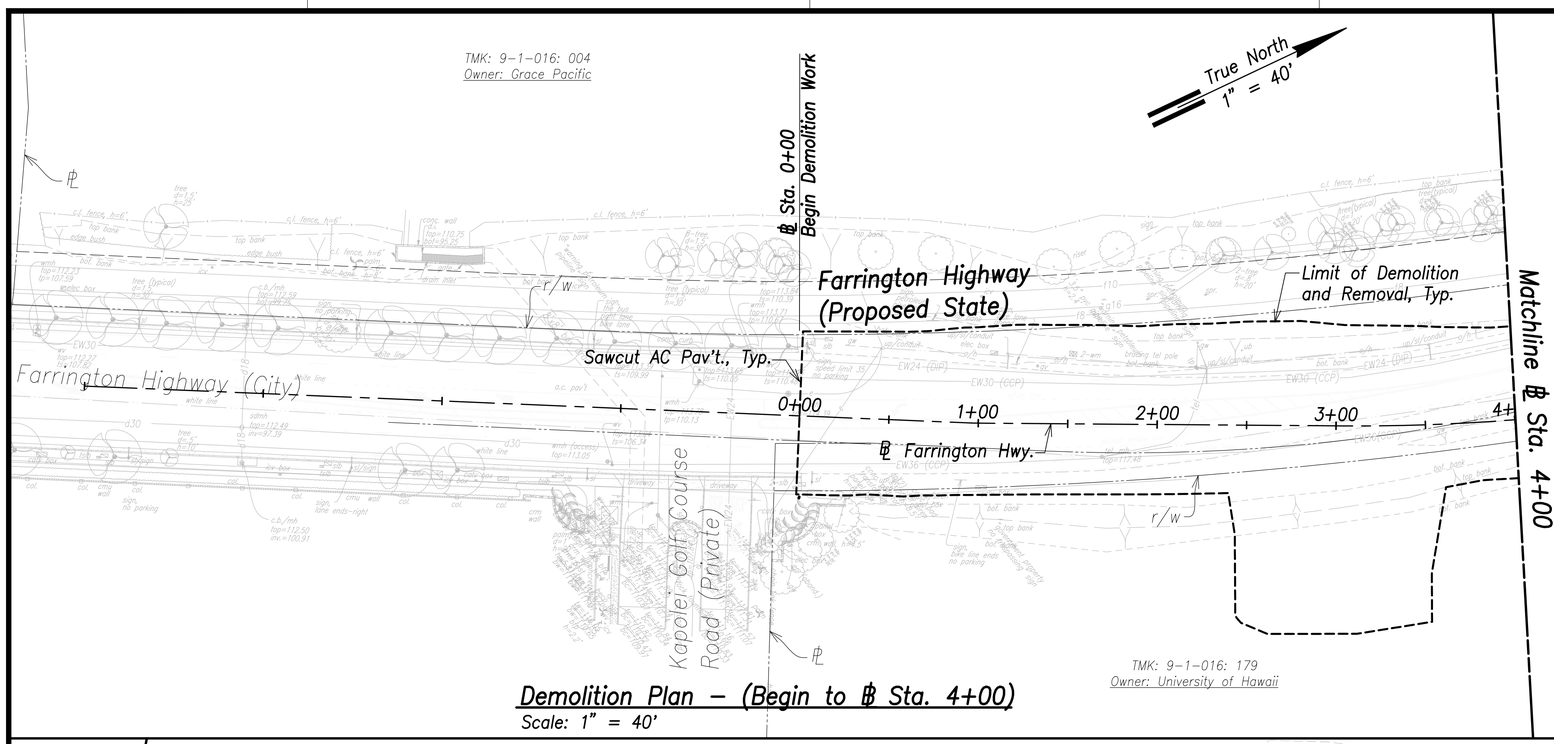
Typical Sections – 4

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

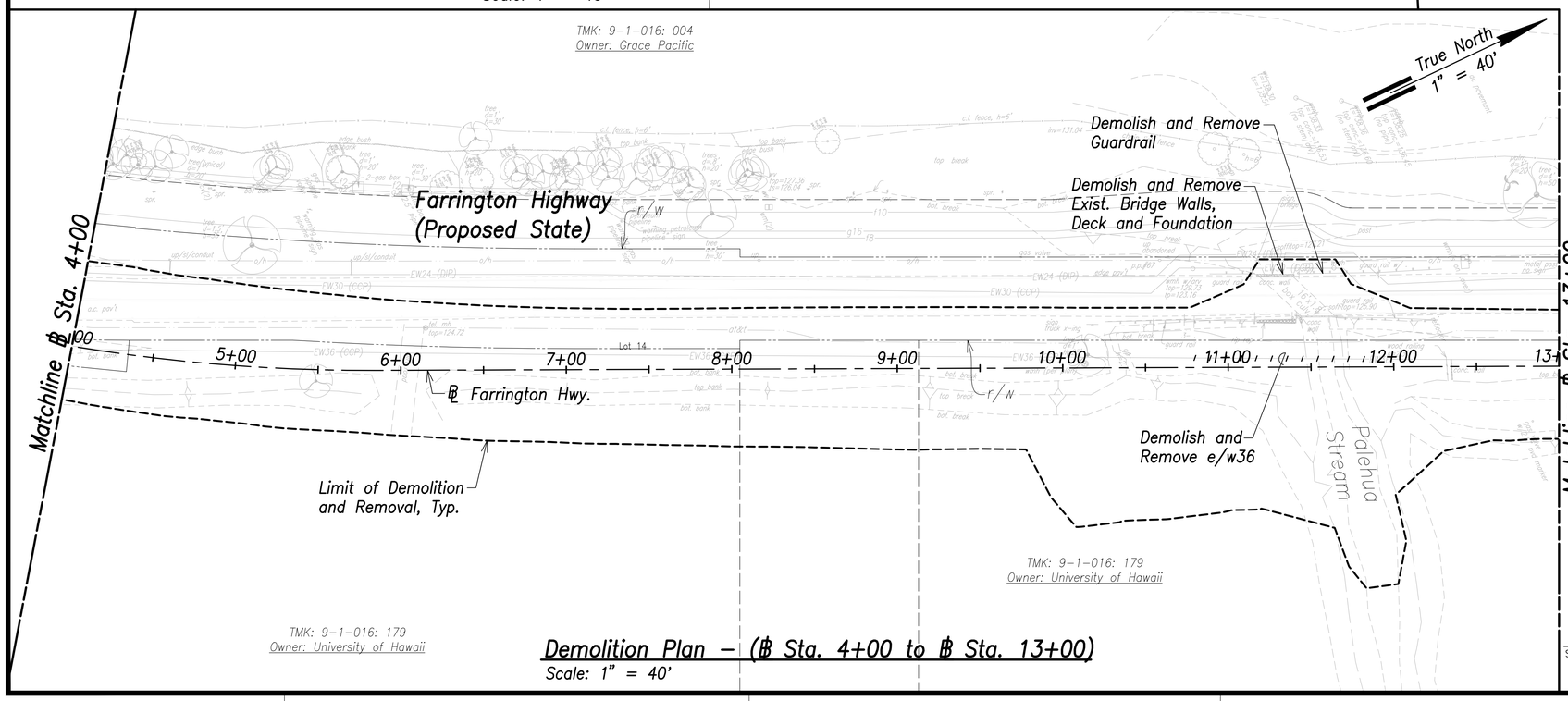
SHEET No. C-30 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	34	XXX



Demolition Plan – (Begin to ℄ Sta. 4+00)

Scale: 1" = 40'



Demolition Plan – (℄ Sta. 4+00 to ℄ Sta. 13+00)

Scale: 1" = 40'

Notes:

1. All drainage structures, curbs, gutters, sidewalks, pavement, guardrails, striping, vegetation, posts, and signing shall be removed within the limit of demolition and removal.
2. See Structural Drawings for Demolition and Removal of Bridge Deck and Structural Members.
3. Remove by grinding pavement striping, to avoid conflicts with existing striping. See Signing and Marking Plans.
4. For Demolition of Electrical and Telecommunication Utilities and Structures, Refer to Electrical Site Demolition Plans. The Contractor is Responsible for Coordinating all Electrical Work with Respective Utility Companies.
5. The Contractor Shall Ensure Demolition and Removal Work of Contaminated Materials is Done in Compliance with the State Department of Health and Federal Environmental Protection Agency Guidelines.
6. The Contractor shall coordinate all work with impacted utility owners.
7. Service shall be maintained at all times to impacted utilities. No interruption in service will be allowed. The contractor shall phase work to allow for continuous utility service.
8. All Water, Sewer, Fuel, and Gas Systems Shall Remain Undisturbed Unless Called Out For Demolition.
9. The Contractor shall reconstruct tops of all existing utility manholes, valve boxes, meter boxes and structures that are remaining in service and contained within the project area flush with the finished grade.
10. The Contractor Shall Comply With Traffic Notes on Sht. C-18.

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

APPROVED:

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

Graphic Scale:

1" = 40' 40' 20' 0 40' 80'

Scale in Feet

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

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SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

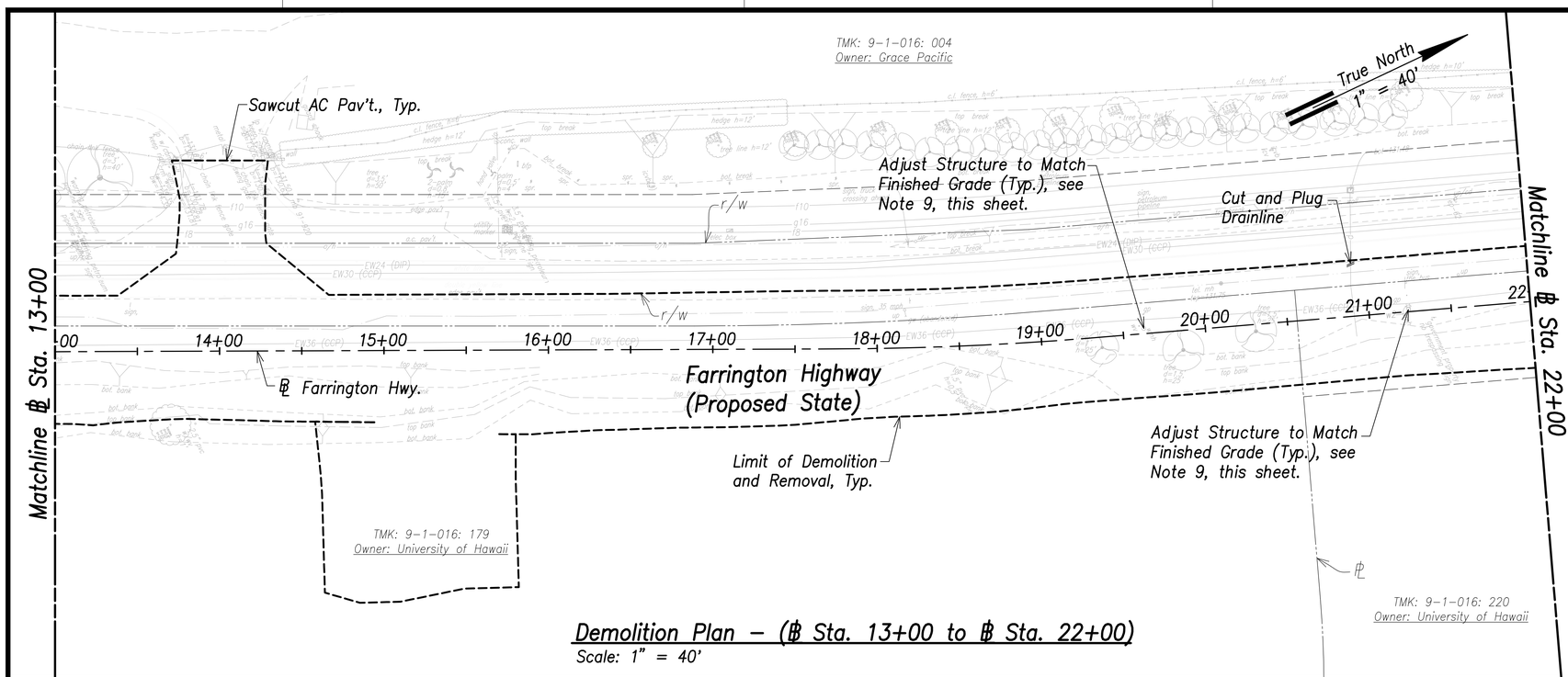
Demolition Plan
℄ Sta. 0+00 to ℄ Sta. 13+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown — Date: January 2022

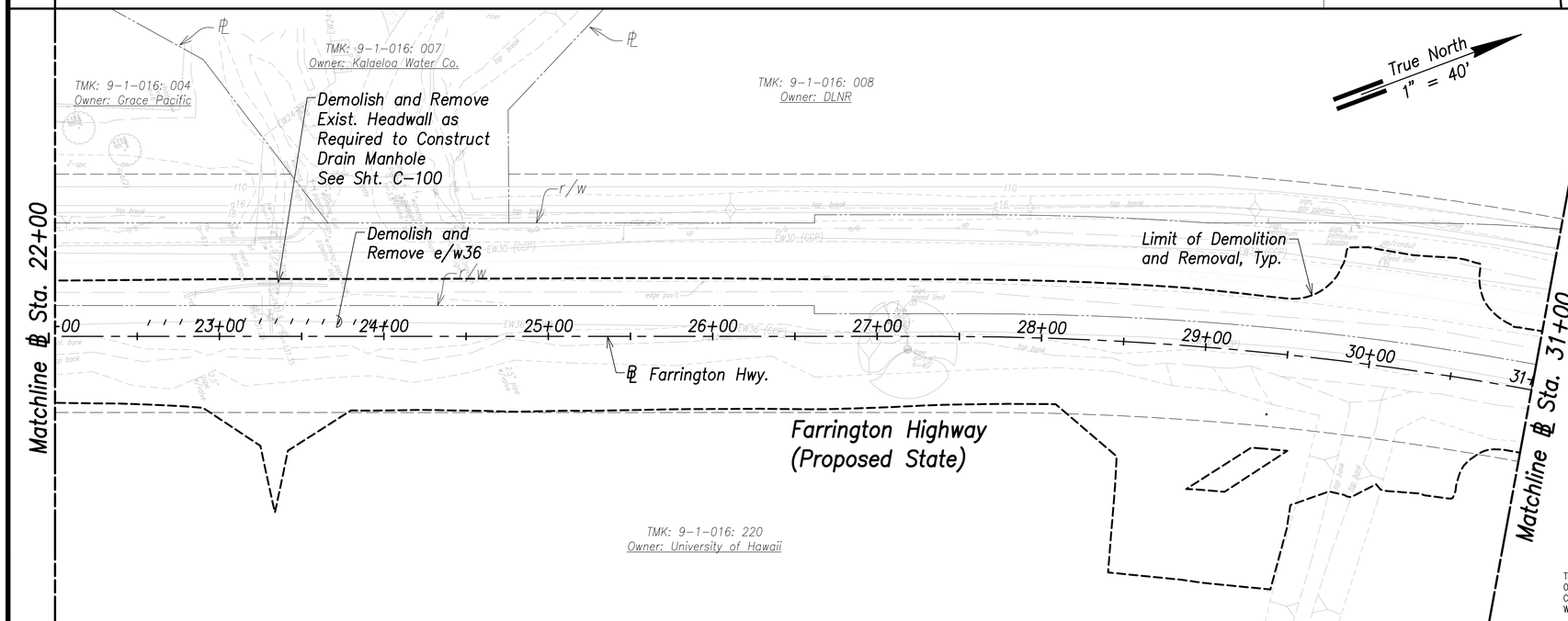
SHEET No. C-33 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	35	XXX



Demolition Plan – (℄ Sta. 13+00 to ℄ Sta. 22+00)

Scale: 1" = 40'



Demolition Plan – (℄ Sta. 22+00 to ℄ Sta. 31+00)

Scale: 1" = 40'

Notes:

1. All drainage structures, curbs, gutters, sidewalks, pavement, guardrails, striping, vegetation, posts, and signing shall be removed within the limit of demolition and removal.
2. See Structural Drawings for Demolition and Removal of Bridge Deck and Structural Members.
3. Remove by grinding pavement striping, to avoid conflicts with existing striping. See Signing and Marking Plans.
4. For Demolition of Electrical and Telecommunication Utilities and Structures, Refer to Electrical Site Demolition Plans. The Contractor is Responsible for Coordinating all Electrical Work with Respective Utility Companies.
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8. All Water, Sewer, Fuel, and Gas Systems Shall Remain Undisturbed Unless Called Out For Demolition.
9. The Contractor shall reconstruct tops of all existing utility manholes, valve boxes, meter boxes and structures that are remaining in service and contained within the project area flush with the finished grade.
10. The Contractor Shall Comply With Traffic Notes on Sht. C-18.

APPROVED:

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

Graphic Scale:

1" = 40' 40' 20' 0 40' 80'

Scale in Feet

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 6635-C HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Demolition Plan
℄ Sta. 13+00 to ℄ Sta. 31+00

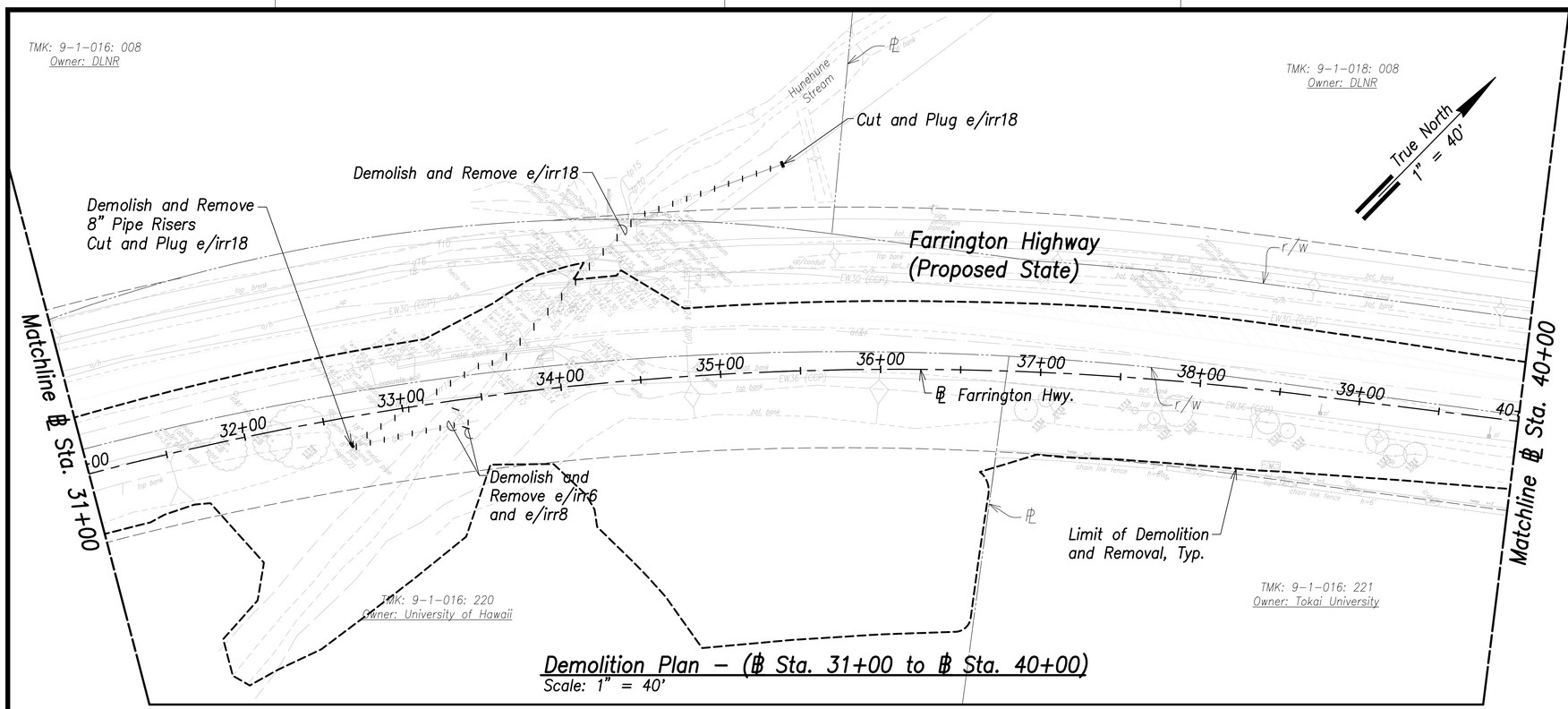
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown — Date: January 2022

SHEET No. C-34 OF XXX SHEETS

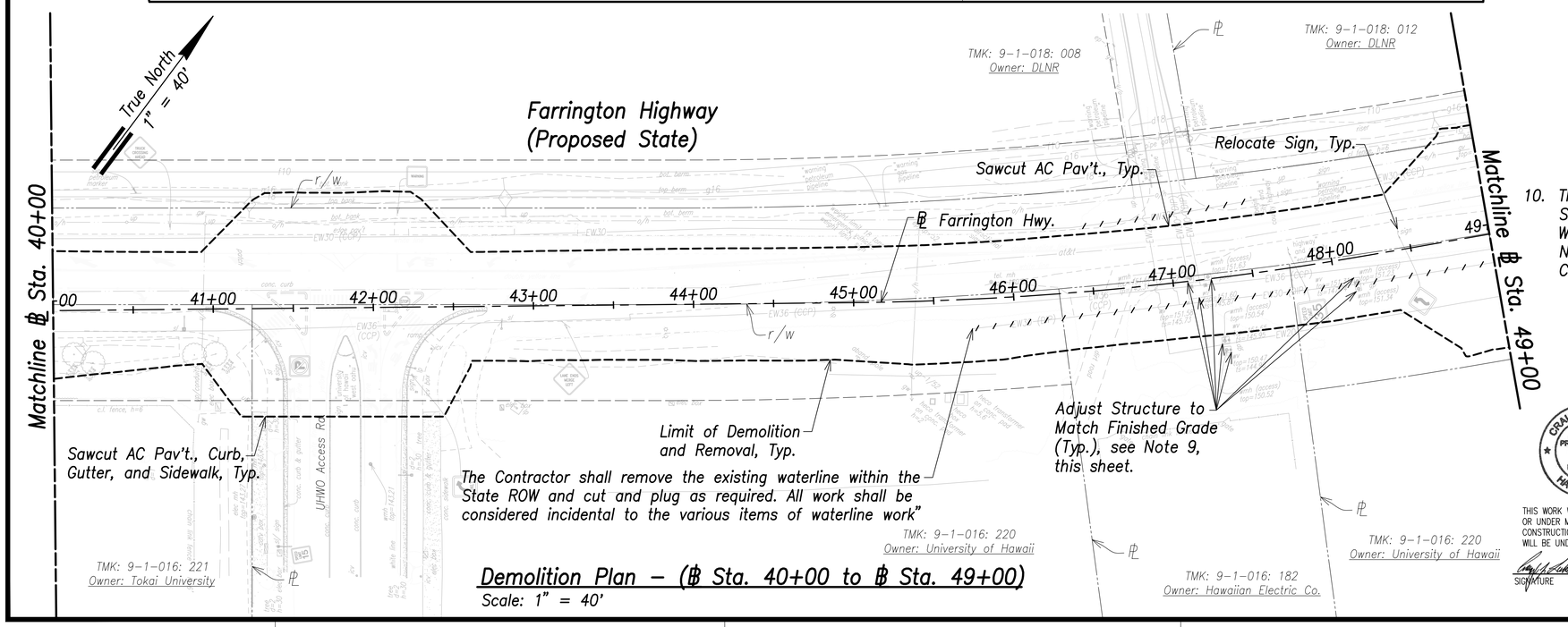
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
NOTE BOOK	TRACED BY	
	DESIGNED BY	
No.	QUANTITIES BY	
	CHECKED BY	

FILE: K:\civil\23146 Farrington Hwy Widening\Dwg\Construction Dwgs\C-34 Demo Plan - Sta. 13+00 to 31+00.dwg saved March 23, 2022



Demolition Plan – (℄ Sta. 31+00 to ℄ Sta. 40+00)

Scale: 1" = 40'



Demolition Plan – (℄ Sta. 40+00 to ℄ Sta. 49+00)

Scale: 1" = 40'

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

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	36	XXX

Notes:

1. All drainage structures, curbs, gutters, sidewalks, pavement, guardrails, striping, vegetation, posts, and signing shall be removed within the limit of demolition and removal.
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APPROVED:

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

Graphic Scale:

1" = 40' 40' 20' 0 40' 80'

Scale in Feet

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

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SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

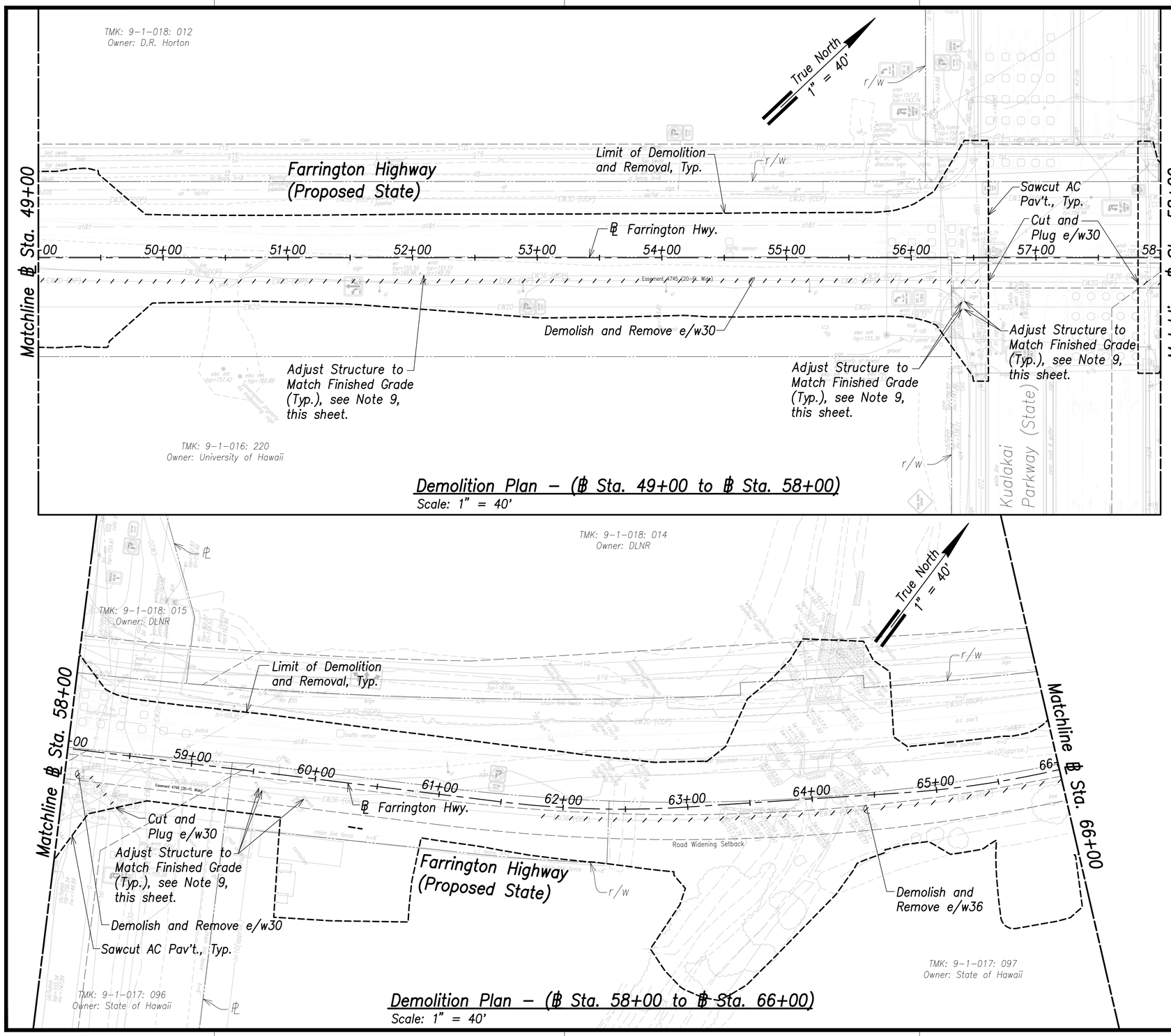
Demolition Plan
℄ Sta. 31+00 to ℄ Sta. 49+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown — Date: January 2022

SHEET No. C-35 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	37	XXX



Notes:

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10. The Contractor Shall Comply With Traffic Notes on Sht. C-18.

APPROVED:

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

Graphic Scale:

1" = 40' 40' 20' 0 40' 80'

Scale in Feet

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

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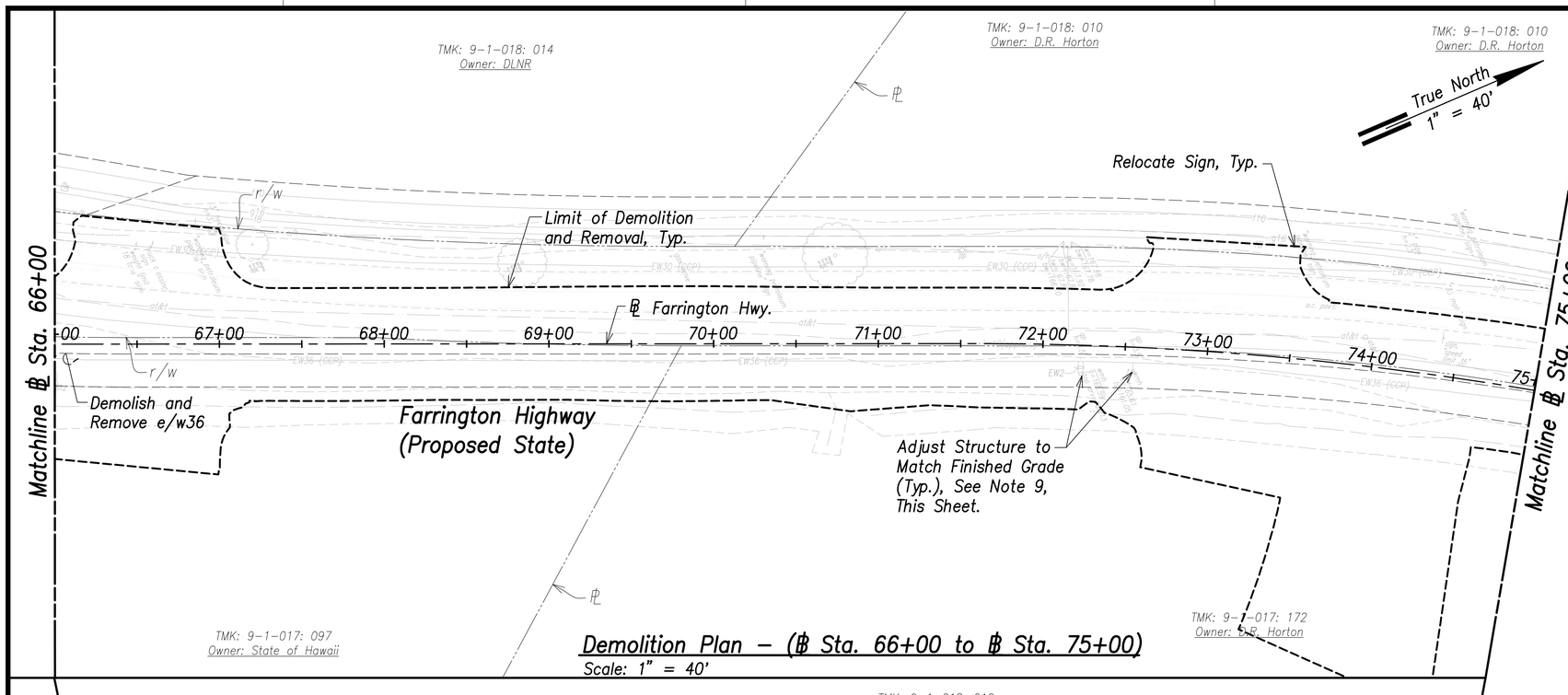
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Demolition Plan
℄ Sta. 49+00 to ℄ Sta. 66+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

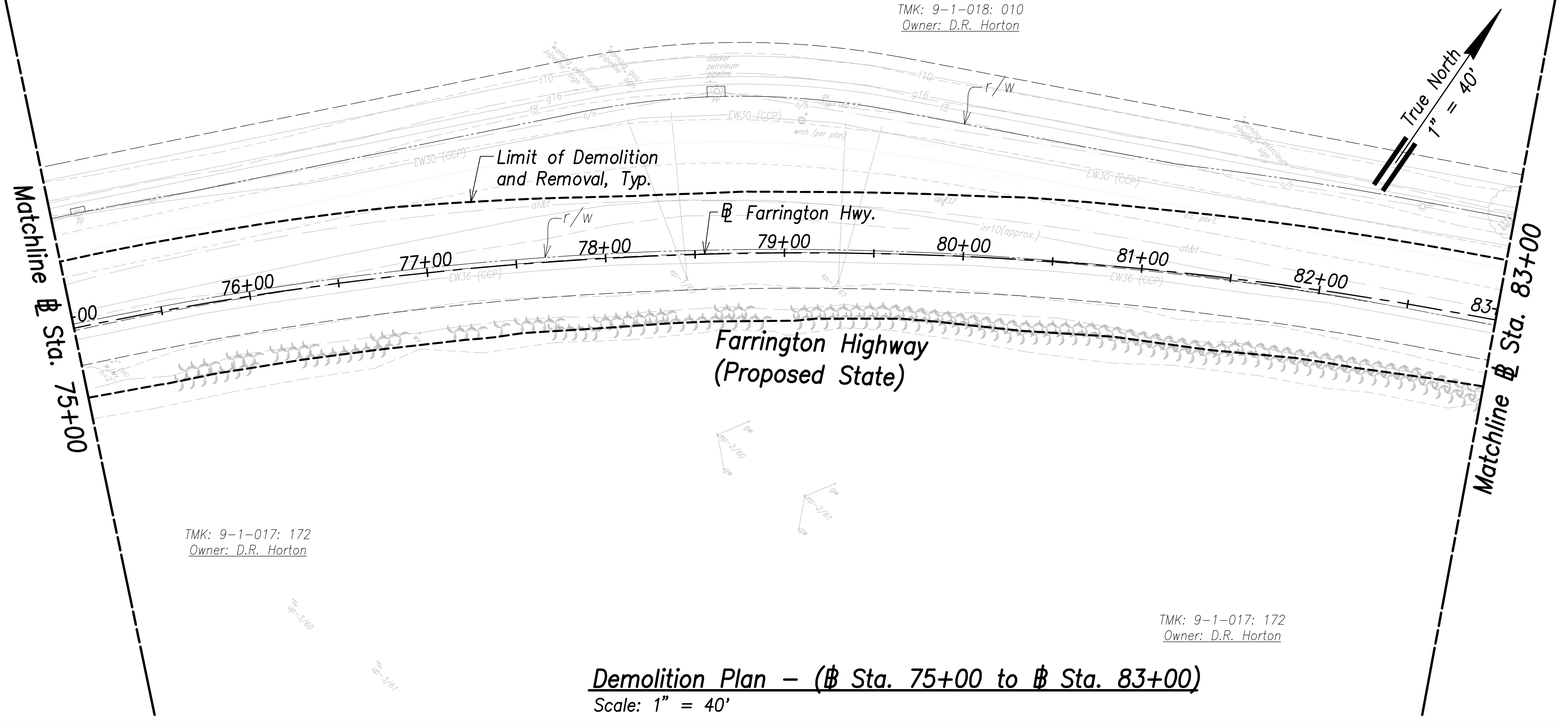
Scale: As Shown Date: January 2022

SHEET No. C-36 OF XXX SHEETS



Demolition Plan – (℄ Sta. 66+00 to ℄ Sta. 75+00)

Scale: 1" = 40'



Demolition Plan – (℄ Sta. 75+00 to ℄ Sta. 83+00)

Scale: 1" = 40'

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	38	XXX

Notes:

1. All drainage structures, curbs, gutters, sidewalks, pavement, guardrails, striping, vegetation, posts, and signing shall be removed within the limit of demolition and removal.
2. See Structural Drawings for Demolition and Removal of Bridge Deck and Structural Members.
3. Remove by grinding pavement striping, to avoid conflicts with existing striping. See Signing and Marking Plans.
4. For Demolition of Electrical and Telecommunication Utilities and Structures, Refer to Electrical Site Demolition Plans. The Contractor is Responsible for Coordinating all Electrical Work with Respective Utility Companies.
5. The Contractor Shall Ensure Demolition and Removal Work of Contaminated Materials is Done in Compliance with the State Department of Health and Federal Environmental Protection Agency Guidelines.
6. The Contractor shall coordinate all work with impacted utility owners.
7. Service shall be maintained at all times to impacted utilities. No interruption in service will be allowed. The contractor shall phase work to allow for continuous utility service.
8. All Water, Sewer, Fuel, and Gas Systems Shall Remain Undisturbed Unless Called Out For Demolition.
9. The Contractor shall reconstruct tops of all existing utility manholes, valve boxes, meter boxes and structures that are remaining in service and contained within the project area flush with the finished grade.
10. The Contractor Shall Comply With Traffic Notes on Sht. C-18.

APPROVED:

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

Graphic Scale:

1" = 40' 40' 20' 0 40' 80'

Scale in Feet

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Demolition Plan
℄ Sta. 66+00 to ℄ Sta. 83+00

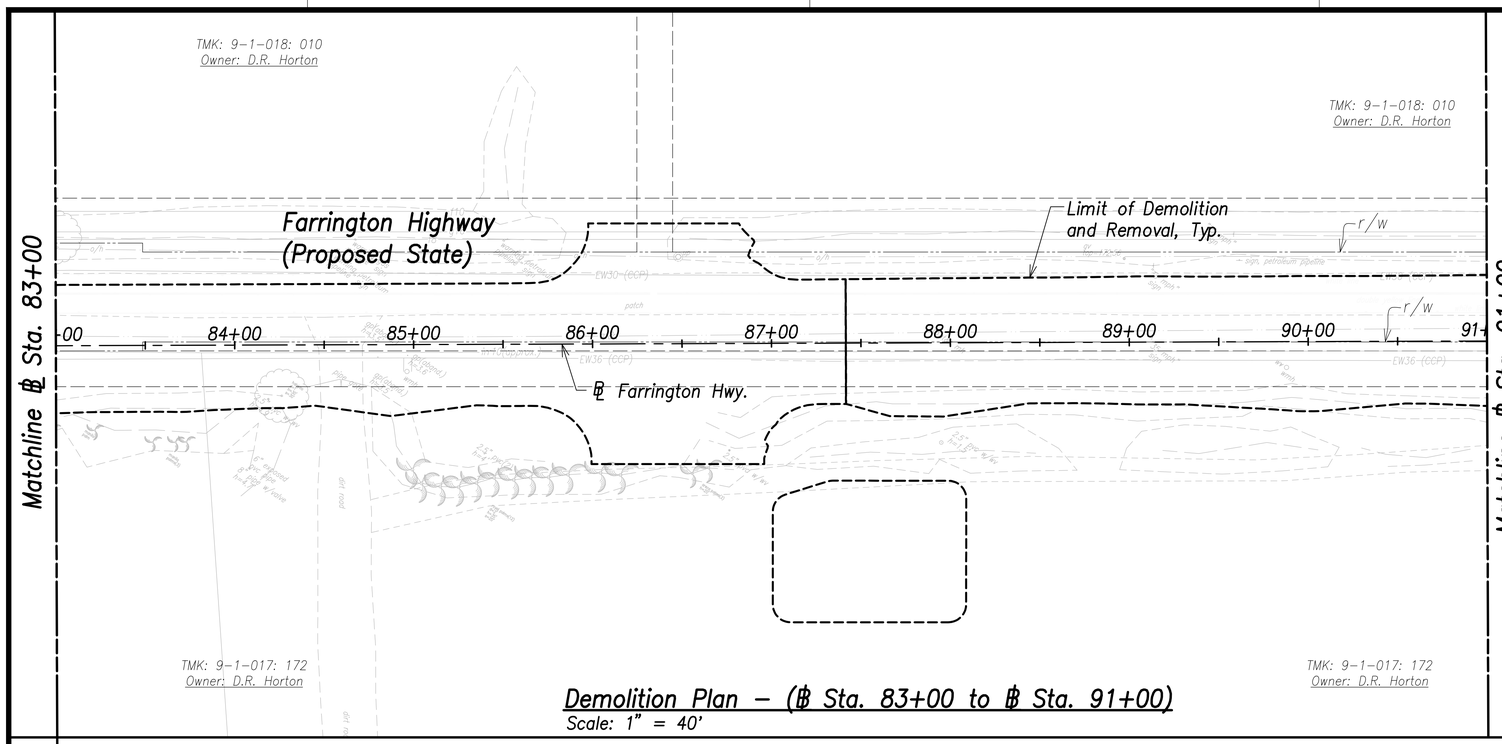
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown — Date: January 2022

SHEET No. C-37 OF XXX SHEETS

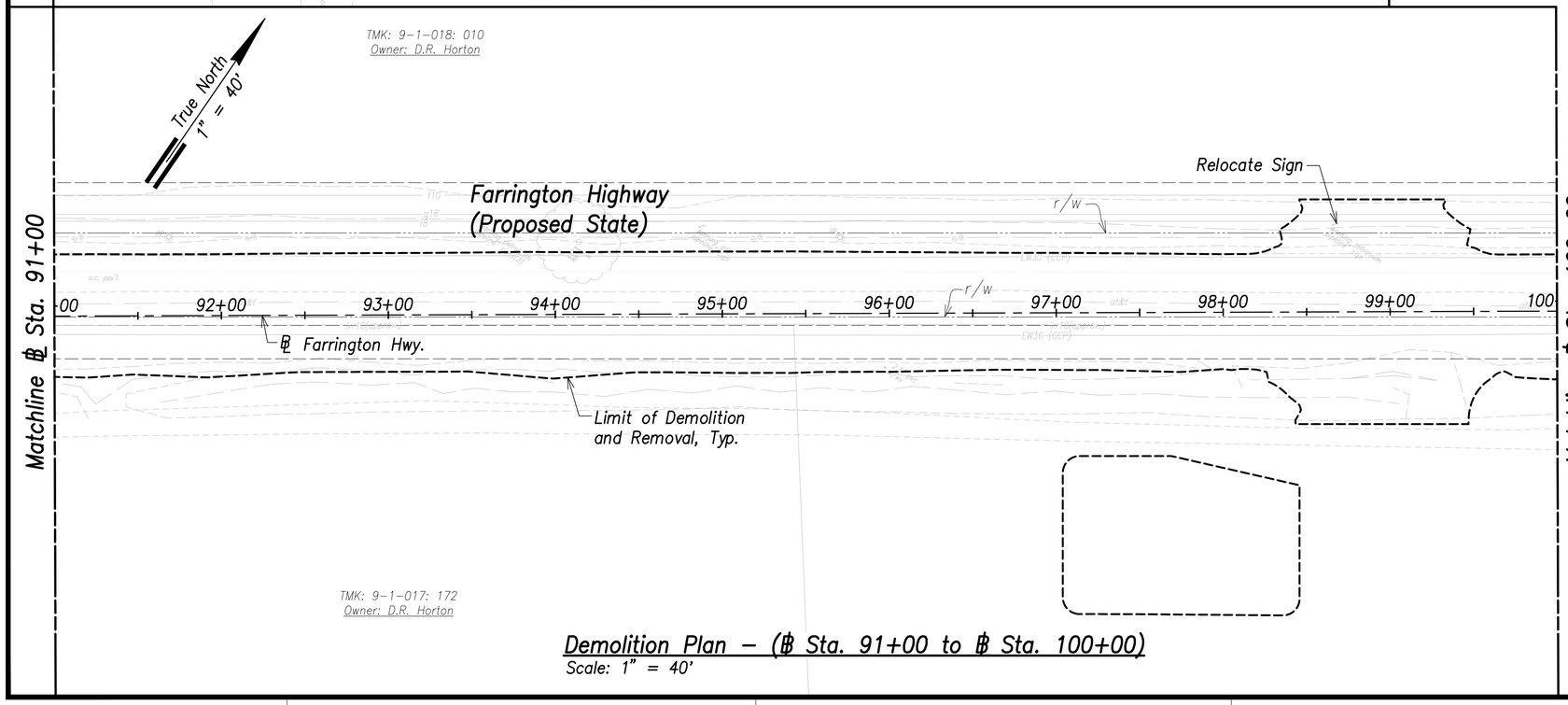
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
NOTE BOOK	TRACED BY	
	DESIGNED BY	
No.	QUANTITIES BY	
	CHECKED BY	

FILE: K:\civil\23146 Farrington Hwy Widening\Dwg\Construction Dwgs\C-37 Demo Plan – Sta. 66+00 to 83+00.dwg saved March 23, 2022



Demolition Plan – (℄ Sta. 83+00 to ℄ Sta. 91+00)

Scale: 1" = 40'



Demolition Plan – (℄ Sta. 91+00 to ℄ Sta. 100+00)

Scale: 1" = 40'

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

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	39	XXX

Notes:

1. All drainage structures, curbs, gutters, sidewalks, pavement, guardrails, striping, vegetation, posts, and signing shall be removed within the limit of demolition and removal.
2. See Structural Drawings for Demolition and Removal of Bridge Deck and Structural Members.
3. Remove by grinding pavement striping, to avoid conflicts with existing striping. See Signing and Marking Plans.
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10. The Contractor Shall Comply With Traffic Notes on Sht. C-18.

APPROVED:

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

Graphic Scale:

1" = 40' 40' 20' 0 40' 80'

Scale in Feet

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 6935-C HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Demolition Plan

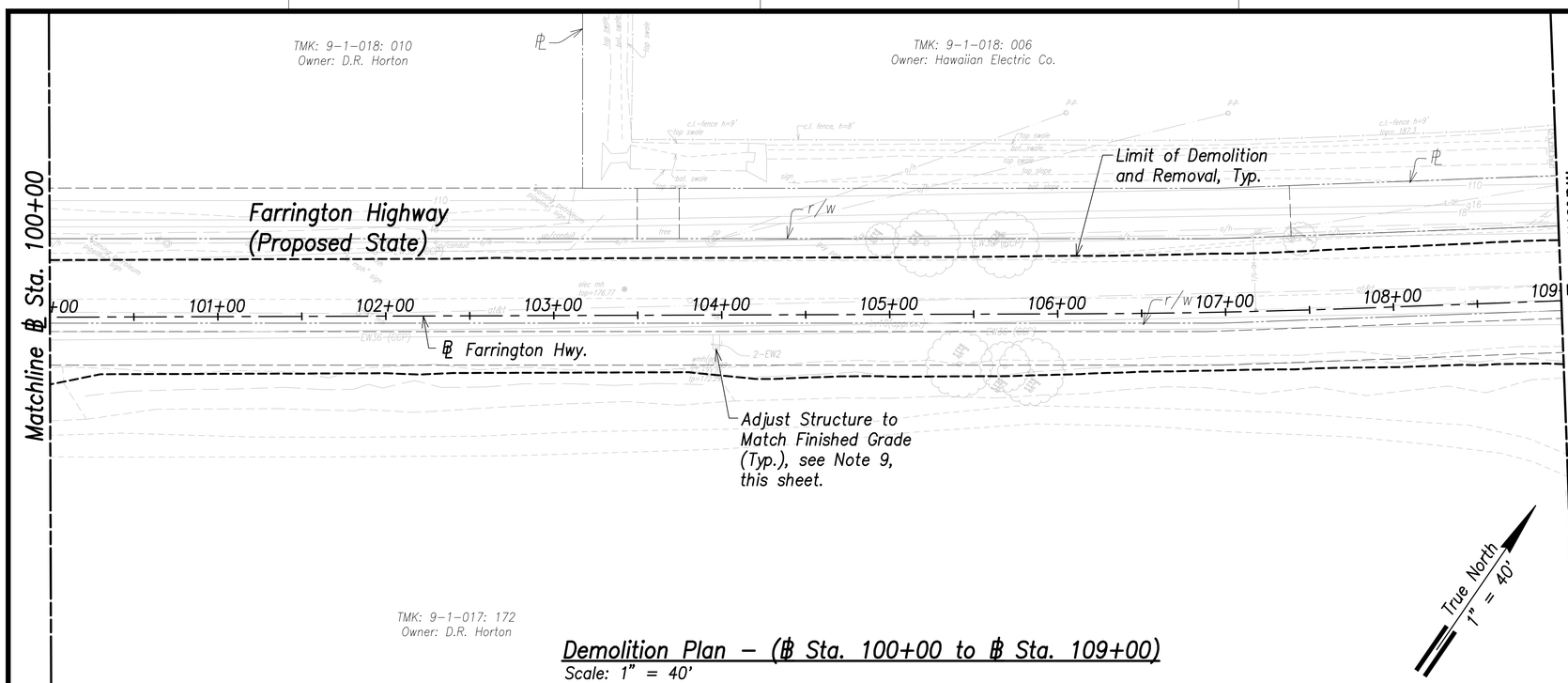
℄ Sta. 83+00 to ℄ Sta. 100+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown — Date: January 2022

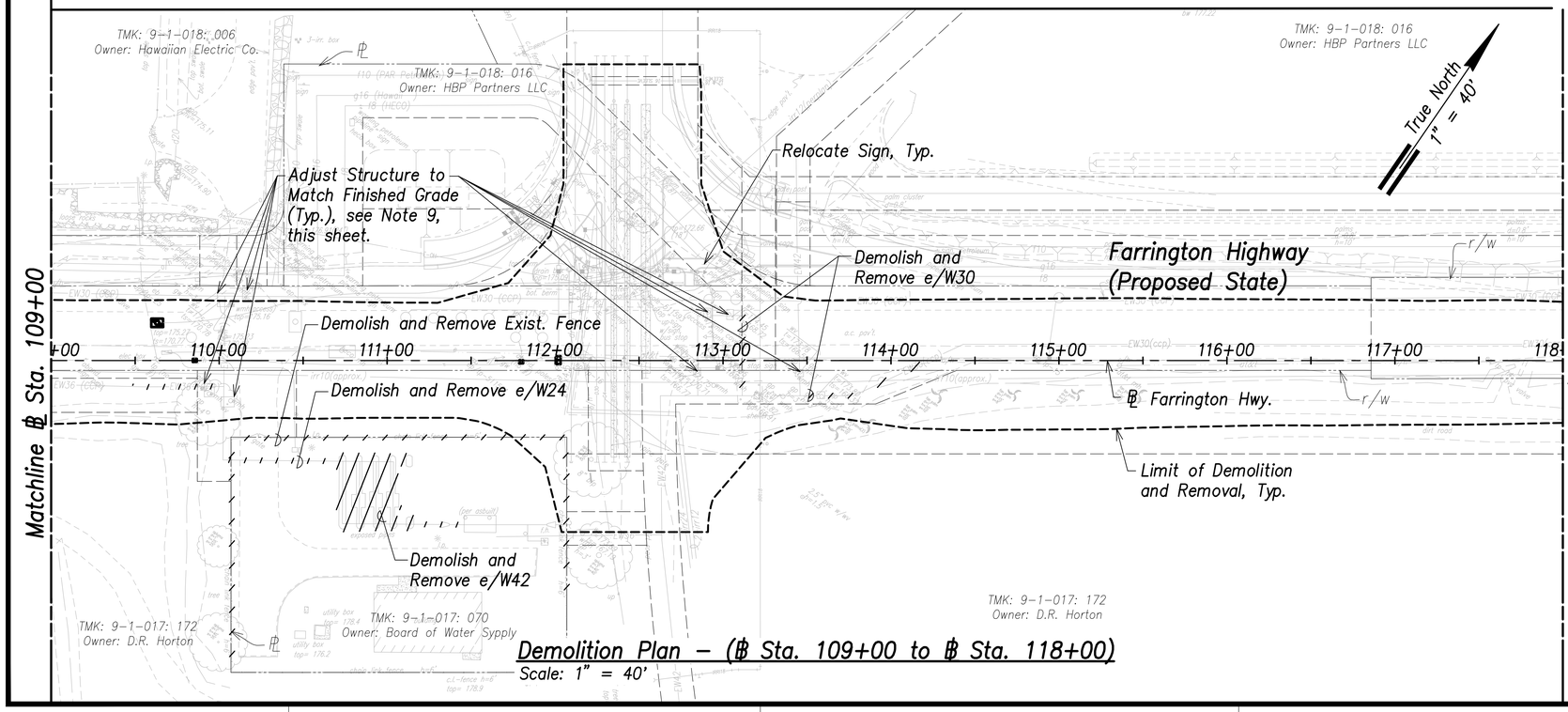
SHEET No. C-38 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	40	XXX



Demolition Plan – (℄ Sta. 100+00 to ℄ Sta. 109+00)

Scale: 1" = 40'



Demolition Plan – (℄ Sta. 109+00 to ℄ Sta. 118+00)

Scale: 1" = 40'

Notes:

1. All drainage structures, curbs, gutters, sidewalks, pavement, guardrails, striping, vegetation, posts, and signing shall be removed within the limit of demolition and removal.
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10. The Contractor Shall Comply With Traffic Notes on Sht. C-18.

APPROVED:

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

Graphic Scale:

1" = 40' 40' 20' 0 40' 80'

Scale in Feet

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

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

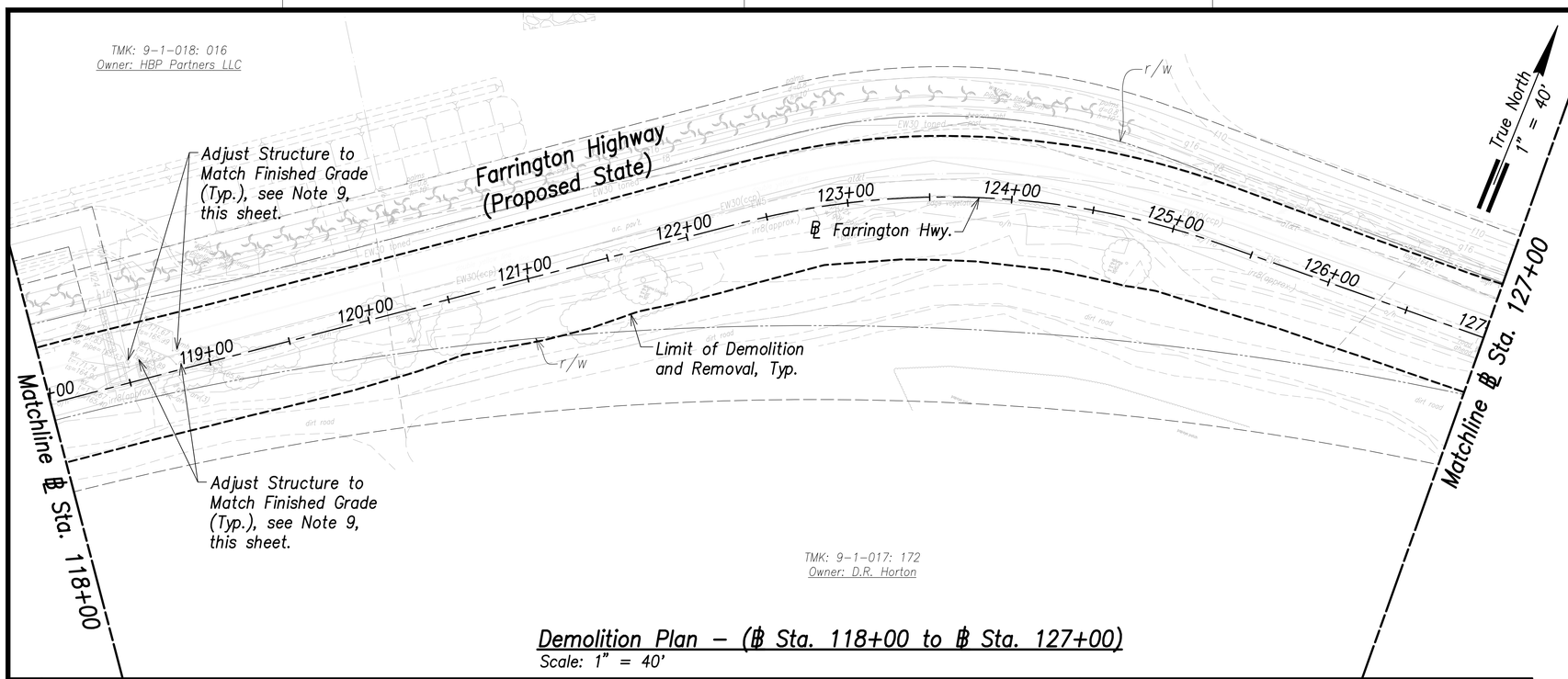
Demolition Plan
℄ Sta. 100+00 to ℄ Sta. 118+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

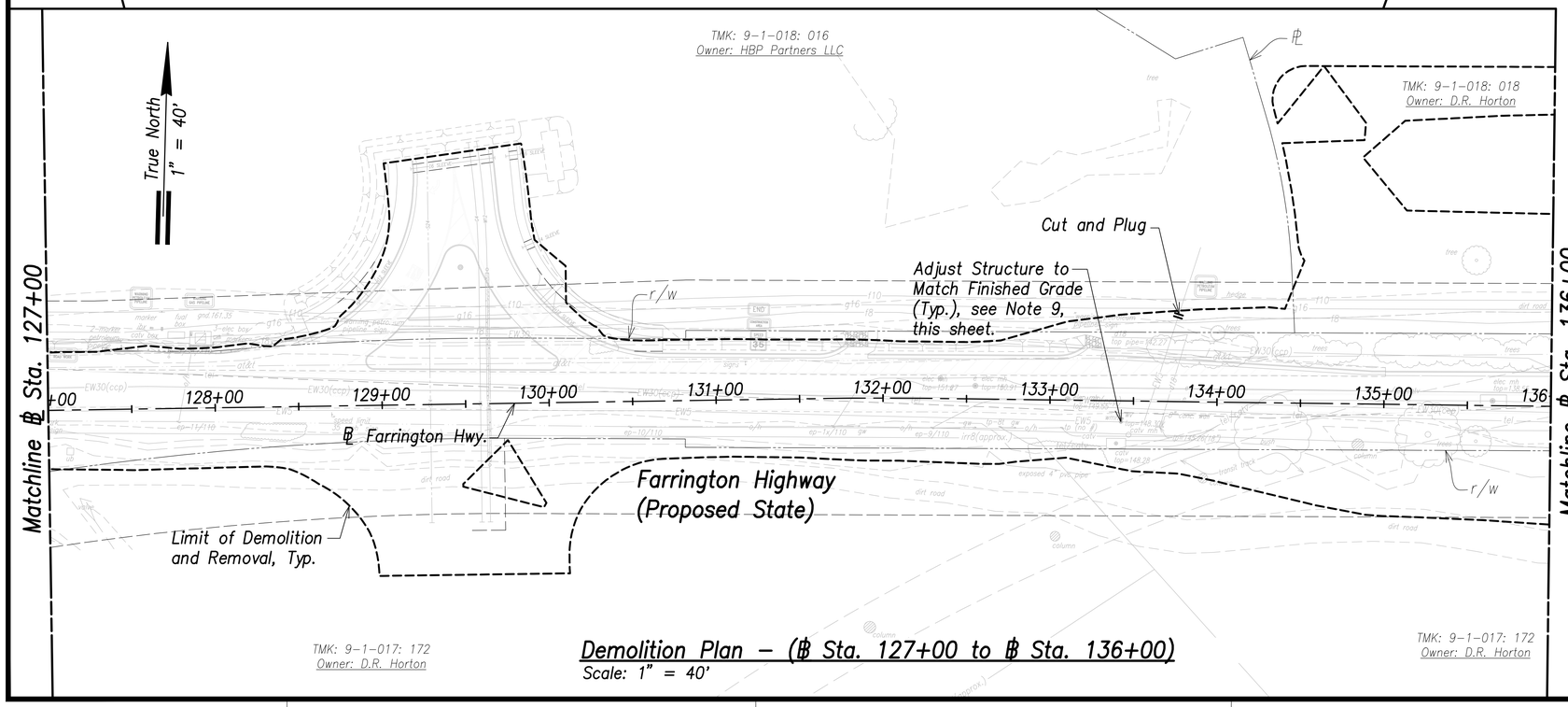
SHEET No. C-39 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	41	XXX



Demolition Plan – (℄ Sta. 118+00 to ℄ Sta. 127+00)

Scale: 1" = 40'



Demolition Plan – (℄ Sta. 127+00 to ℄ Sta. 136+00)

Scale: 1" = 40'

Notes:

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10. The Contractor Shall Comply With Traffic Notes on Sht. C-18.

APPROVED:

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

Graphic Scale:

1" = 40' 40' 20' 0 40' 80'

Scale in Feet

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 6635-C HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Demolition Plan
℄ Sta. 118+00 to ℄ Sta. 136+00

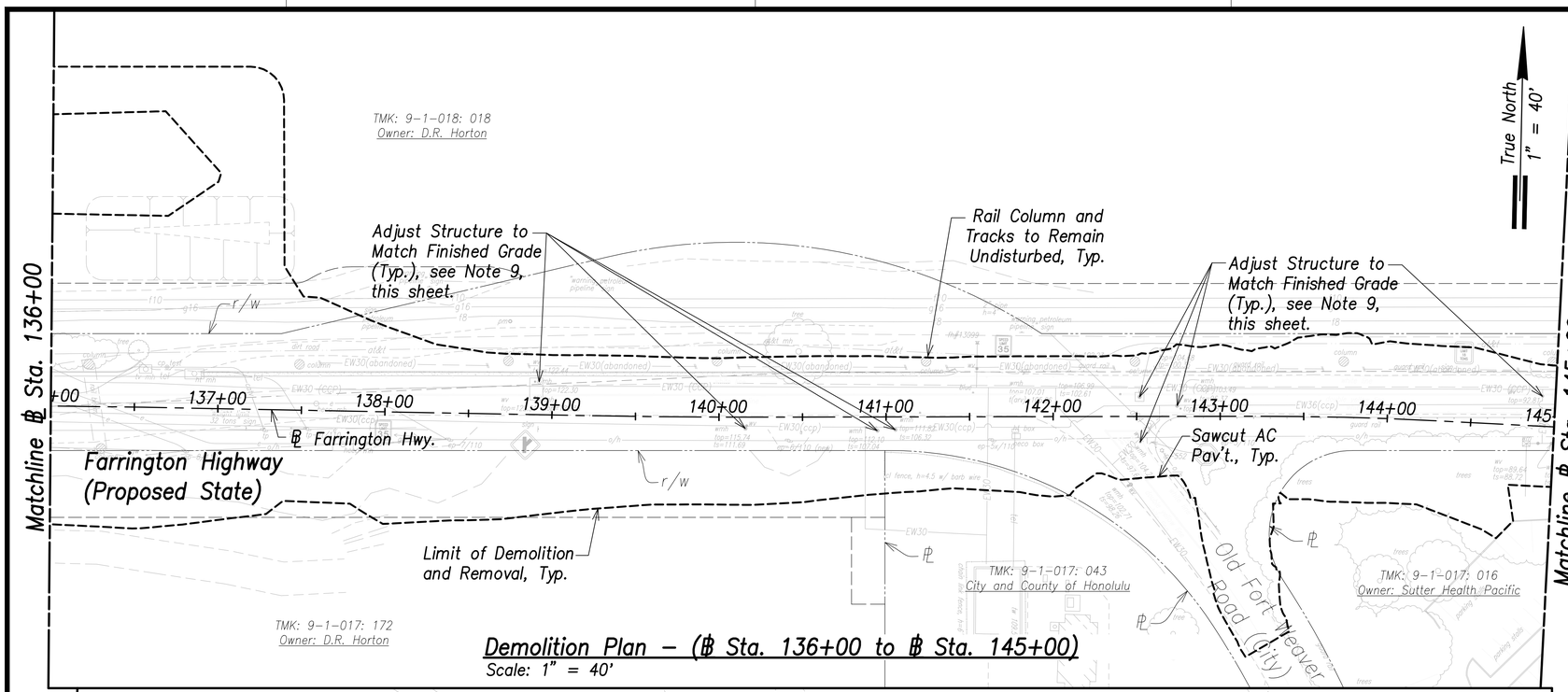
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown — Date: January 2022

SHEET No. C-40 OF XXX SHEETS

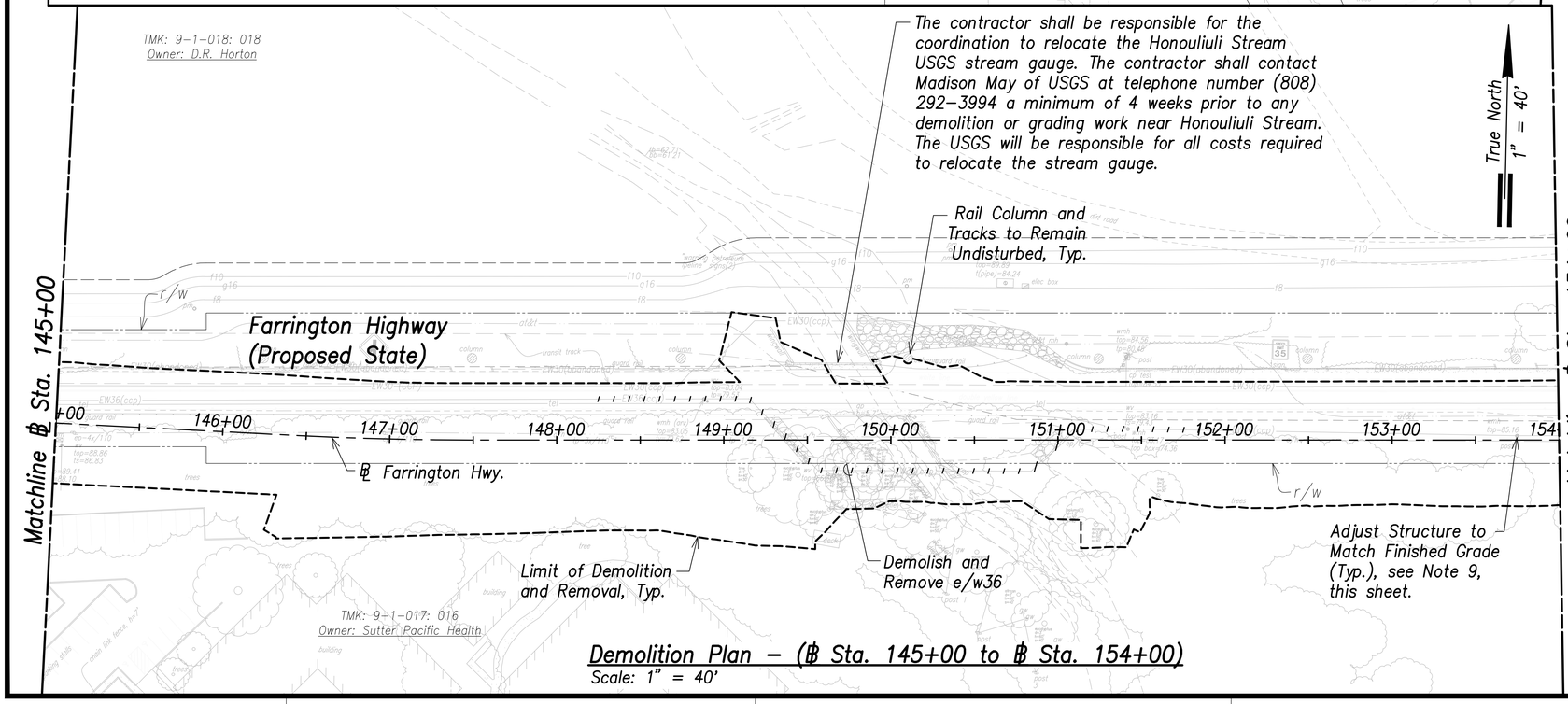
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
NOTE BOOK	TRACED BY	
	DESIGNED BY	
No.	QUANTITIES BY	
	CHECKED BY	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	42	XXX



Demolition Plan – (℄ Sta. 136+00 to ℄ Sta. 145+00)

Scale: 1" = 40'



Demolition Plan – (℄ Sta. 145+00 to ℄ Sta. 154+00)

Scale: 1" = 40'

Notes:

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10. The Contractor Shall Comply With Traffic Notes on Sht. C-18.
11. The Contractor Shall Ensure No Debris Shall Be Allowed To Fall Within Stream Banks High Water Marks During Demolition and Construction of the Honouliuli Stream Bridge.

APPROVED:

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

Graphic Scale:

1" = 40' 40' 20' 0 40' 80'

Scale in Feet

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

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

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SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

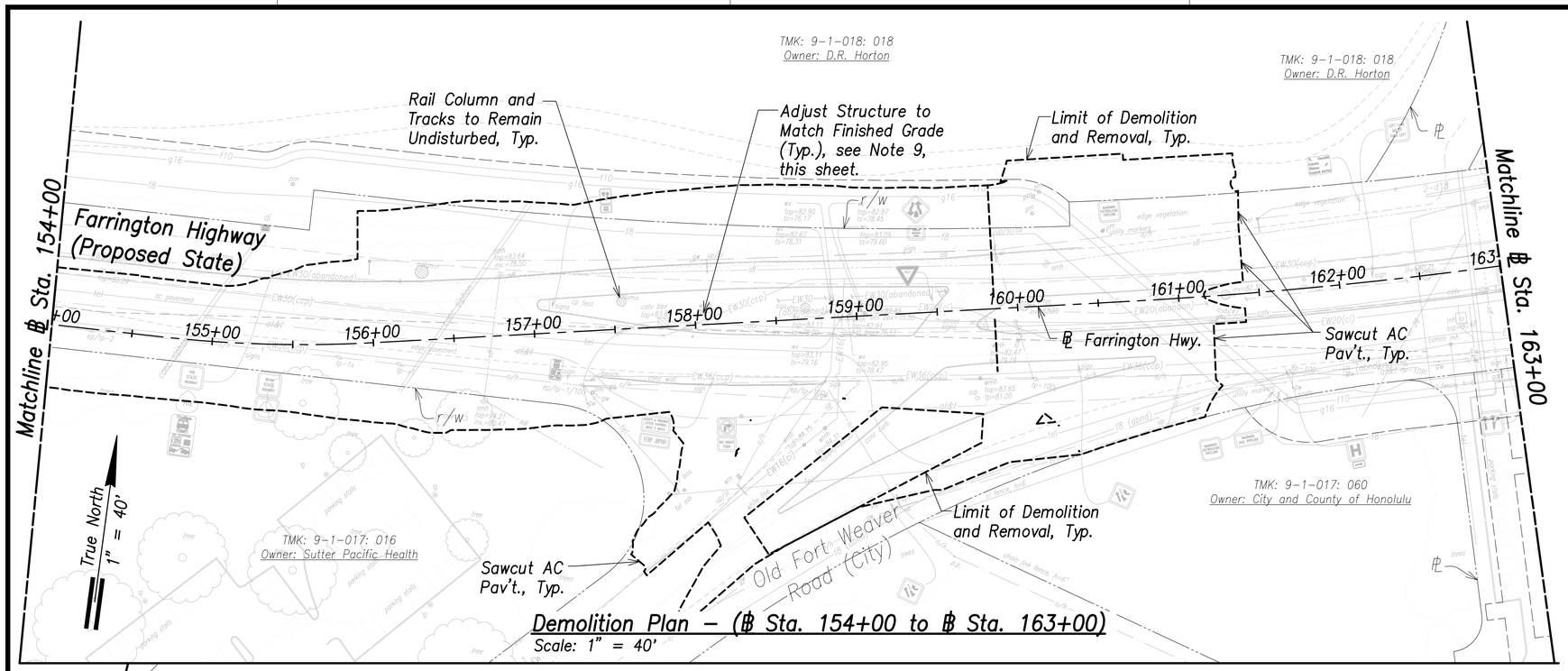
Demolition Plan
℄ Sta. 136+00 to ℄ Sta. 154+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown — Date: January 2022

SHEET No. C-41 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	43	XXX



Notes:

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10. The Contractor Shall Comply With Traffic Notes on Sht. C-18.

APPROVED:

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

Graphic Scale:

1" = 40' 40' 20' 0 40' 80'

Scale in Feet

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

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 6935-C HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

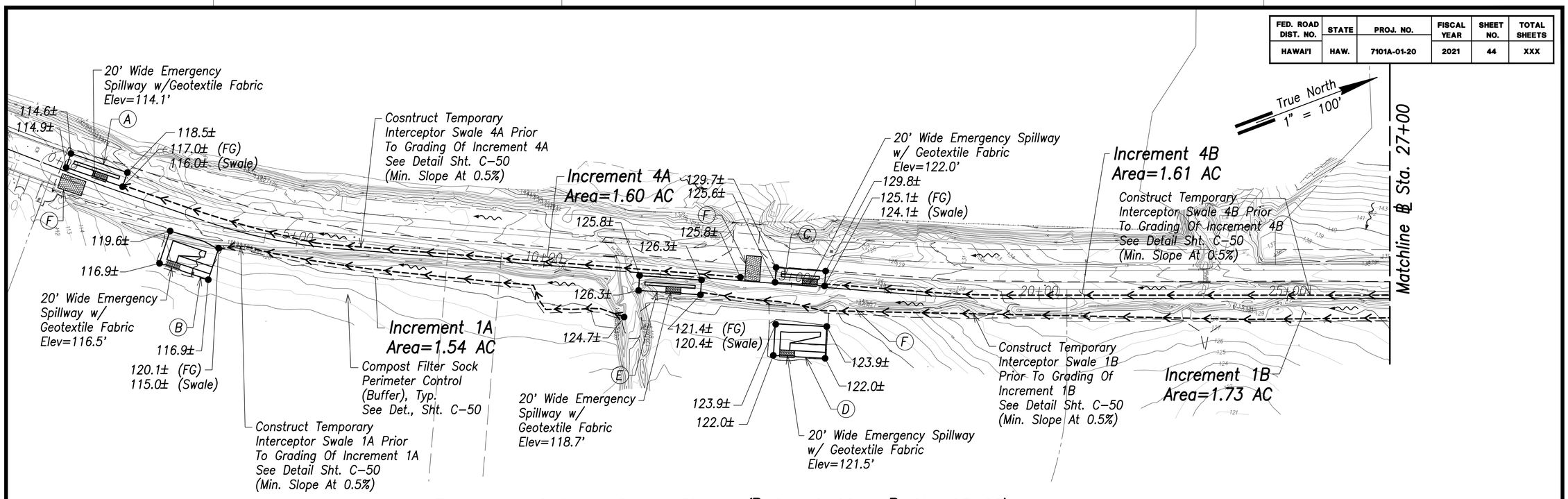
Demolition Plan ℄ Sta. 154+00 to End

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown — Date: January 2022

SHEET No. C-42 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	44	XXX



Erosion and Sediment Control Plan – (℄ Sta. 0+00 to ℄ Sta. 27+00)

Scale: 1" = 100'

Note:
The Contractor shall install two catch basin inlet protection devices on existing catch basins located at approximate road station (–)3+11.

Pre–Construction BMP
- Stabilized Compost Filter Sock
- Temporary Sediment Basins
- Temporary Swales

During Construction BMP
- Temporary Stabilization
- Inlet Protection for New CB

Post Construction BMP
- Permanent Stabilization BMP

Legend:
- LOG and Disturbance
- Filter Sock
- Grading Increment Boundary
- Existing Ground Contour
- Direction of Flow
- Top Bank
- Bottom Bank
- Fill Slope
- Cut Slope
- Swale
- Spot Elevation 126.4±

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

Ⓐ
Temporary Sediment Basin 4A To Be Constructed Prior To Grading Of Increment 4A And Backfilled Upon Completion of Increment 4A
(3600 Cu. Ft. Per Acre)
See Det., Sht. C–50
(120' x 30' Storage Area)
Bot. Basin = 110.6 Ft.
Min. Depth = 4 Ft.
Contributing Area = 1.60 AC. (Inc. 4A)
Required Volume = 213 CY. (Inc. 4A)
Available Volume = 320 CY.

Ⓑ
Sediment Basin A To Be Constructed Prior To Grading Of Increment 1A
(3600 Cu. Ft. Per Acre)
See Det., Sht. C–116
Bot. Basin = 108.4 Ft.
Contributing Area = 1.54 AC. (Inc. 1A)
Required Volume = 205 CY. (Inc. 1A)
Available Volume = 880 CY.

Ⓒ
Temporary Sediment Basin 4B To Be Constructed Prior To Grading Of Increment 4B And Backfilled Upon Completion of Increment 4B
(3600 Cu. Ft. Per Acre)
See Det., Sht. C–50
(100' x 30' Storage Area)
Bot. Basin = 119.5 Ft.
Min. Depth = 4 Ft.
Contributing Area = 1.11 AC. (Inc. 4B)
Required Volume = 148 CY. (Inc. 4B)
Available Volume 413 CY.

Ⓓ
Sediment Basin B (Self Mitigating)
(3600 Cu. Ft. Per Acre)
See Det., Sht. C–117
Bot. Basin = 116.6 Ft.
Contributing Area = xx AC.
Required Volume = xx CY.
Available Volume = 600 CY.

Ⓔ
Temporary Sediment Basin 1B To Be Constructed Prior To Grading Of Increment 1B And Backfilled Upon Completion of Increment 1B
(3600 Cu. Ft. Per Acre)
See Det., Sht. C–50
(125' x 30' Storage Area)
Bot. Basin = 115.2 Ft.
Min. Depth = 4 Ft.
Contributing Area = 1.73 AC. (Inc. 1B)
Required Volume = 231 CY. (Inc. 4B)
Available Volume 333 CY.

Ⓕ
Stabilized Construction Entrance (50'x30'x12" Min.)
See Det., Sht. C–50

Graphic Scale:
1" = 100' 100' 50' 0 100' 200'
Scale in Feet

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 6935-C HAWAII, U.S.A.

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SIGNATURE April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

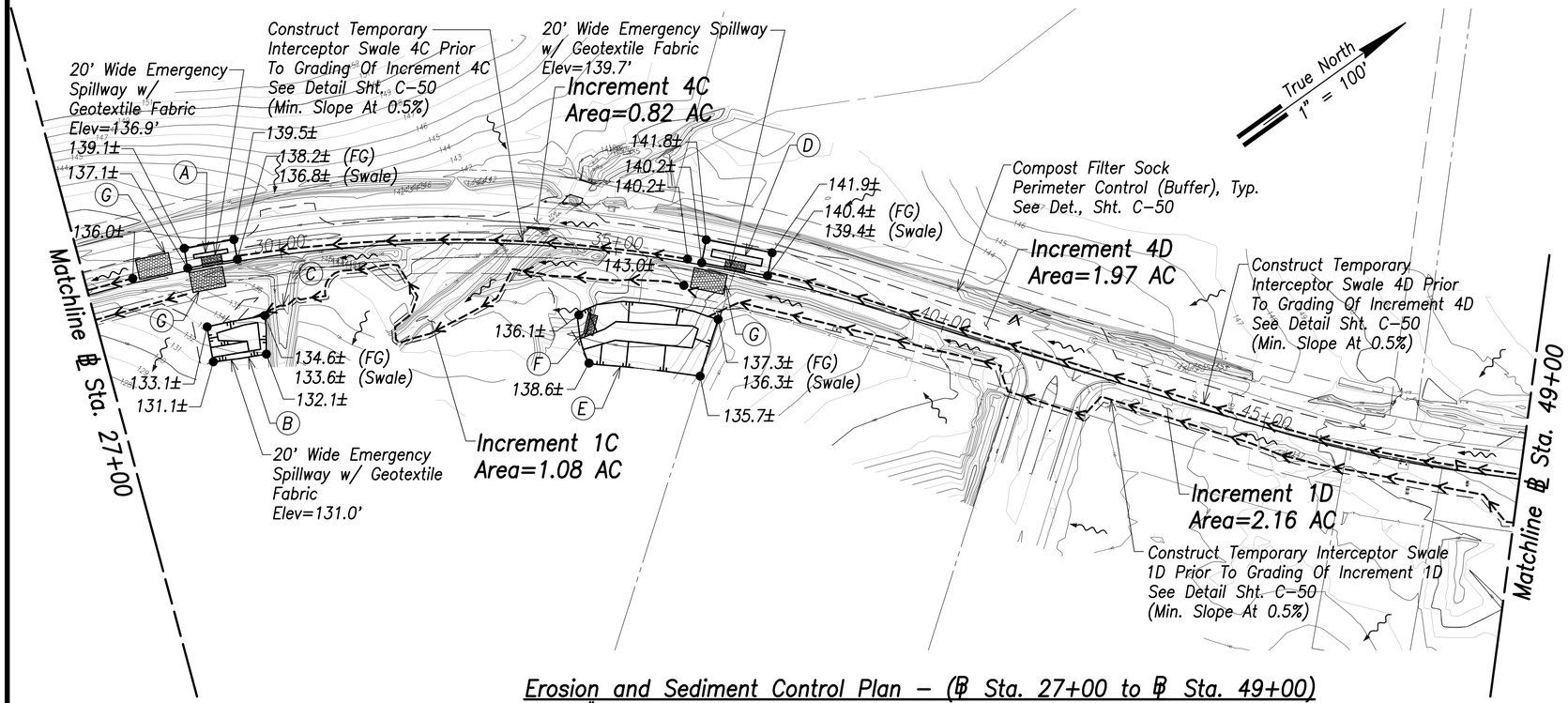
Erosion and Sediment Control Plan – 1

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A–01–20

Scale: As Shown Date: January 2022

SHEET No. C-43 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	45	XXX



Erosion and Sediment Control Plan – (℄ Sta. 27+00 to ℄ Sta. 49+00)

Scale: 1" = 100'

Ⓐ

Temporary Sediment Basin 4C
To Be Constructed Prior To Grading Of Increment 4C And Backfilled Upon Completion of Increment 4C
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-50
(200' X 30' Storage Area)
Bot. Basin = 132.8 Ft.
Min. Depth = 4 Ft.
Contributing Area = 1.22 AC. (Inc. 4C)
Required Volume = 163 CY. (Inv. 4C)
Available Volume = 385 CY.

Ⓑ

Sediment Basin C
To Be Constructed Prior To Grading Of Increment 1C
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-118
Bot. Basin = 128 Ft.
Contributing Area = 1.08 AC. (Inc. 1C)
Required Volume = 144 CY. (Inc. 1C)
Available Volume = 180 CY.

Ⓒ

Construct Temporary Interceptor Swale 1C Prior To Grading Of Increment 1C
See Detail Sht. C-50
(Min. Slope At 0.5%)

Ⓓ

Temporary Sediment Basin 4D
To Be Constructed Prior To Grading Of Increment 4D And Backfilled Upon Completion of Increment 4D
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-50
(100' x 35' Storage Area)
Bot. Basin = 135.1 Ft.
Min. Depth = 4 Ft.
Contributing Area = 1.97 AC. (Inc. 4D)
Required Volume = 263 CY. (Inc. 4D)
Available Volume = 341 CY.

Ⓔ

Sediment Basin D
To Be Constructed Prior To Grading Of Increment 1D
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-119
Bot. Basin = 125 Ft.
Contributing Area = 2.16 AC. (Inc. 1D)
Required Volume = 288 CY. (Inc. 1D)
Available Volume = 850 CY.

Ⓕ

20' Wide Emergency Spillway w/ Geotextile Fabric
Elev=135.5'

Ⓖ

Stabilized Construction Entrance (50'x30'x12" Min.)
See Det., Sht. C-50

Pre-Construction BMP
- Stabilized Compost Filter Sock
- Temporary Sediment Basins
- Temporary Swales

During Construction BMP
- Temporary Stabilization
- Inlet Protection for New CB

Post Construction BMP
- Permanent Stabilization BMP

Legend:
LOG and Disturbance
Filter Sock
Grading Increment Boundary
Existing Ground Contour
Direction of Flow
Top Bank
Bottom Bank
Fill Slope
Cut Slope
Swale
Spot Elevation 126.4±

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

Graphic Scale:
1" = 100' 100' 50' 0 100' 200'
Scale in Feet

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

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SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

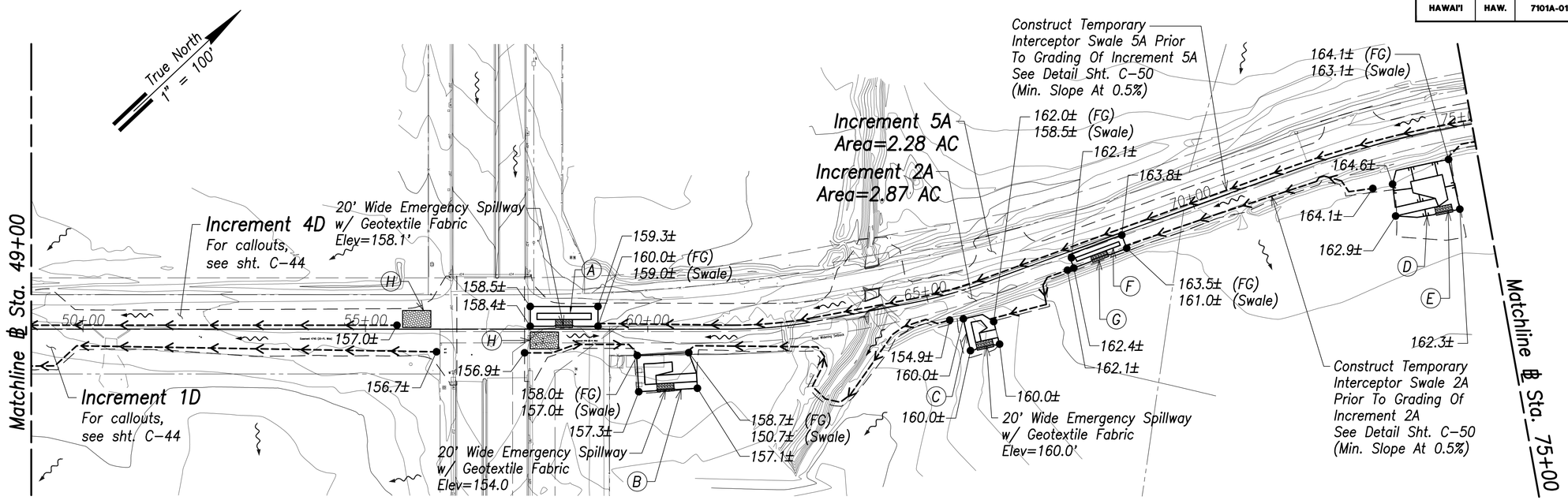
Erosion and Sediment Control Plan – 2

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

SHEET No. C-44 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	46	XXX



Erosion and Sediment Control Plan – (℄ Sta. 49+00 to ℄ Sta. 75+00)

Scale: 1" = 100'

Pre-Construction BMP
- Stabilized Compost Filter Sock
- Temporary Sediment Basins
- Temporary Swales

During Construction BMP
- Temporary Stabilization
- Inlet Protection for New CB

Post Construction BMP
- Permanent Stabilization BMP

Legend:
LOG and Disturbance
Filter Sock
Grading Increment Boundary
Existing Ground Contour
Direction of Flow
Top Bank
Bottom Bank
Fill Slope
Cut Slope
Swale
Spot Elevation 126.4±

(A)

Temporary Sediment Basin 5A To Be Constructed Prior To Grading Of Increment 5A And Backfilled Upon Completion of Increment 5A
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-50
(120' x 35' Storage Area)
Bot. Basin = 154.6 Ft.
Min. Depth = 4 Ft.
Contributing Area = 2.28 AC. (Inc. 5A)
Required Volume = 304 CY. (Inc. 5A)
Available Volume = 409 CY.

(B)

Sediment Basin E To Be Constructed Prior To Grading Of Increment 2A
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-120
Bot. Basin = 147.4 Ft.
Contributing Area = 2.87 AC. (Inc. 2A)
Required Volume = 383 CY. (Inc. 2A)
Available Volume = 345 CY.
Total Available Volume = 2,033 (Inc. 2A)

(C)

Sediment Basin F To Be Constructed Prior To Grading Of Increment 2A
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-121
Bot. Basin = 155.5 Ft.
Contributing Area = 2.87 AC. (Inc. 2A)
Required Volume = 383 CY. (Inc. 2A)
Available Volume = 195 CY.
Total Available Volume = 2,033 (Inc. 2A)

(D)

Sediment Basin G To Be Constructed Prior To Grading Of Increment 2A
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-122
Bot. Basin = 151.0 Ft.
Contributing Area = 2.87 AC. (Inc. 2A)
Required Volume = 383 CY. (Inc. 2A)
Available Volume =1,315 CY.
Total Available Volume = 2,033 (Inc. 2A)

(E)

20' Wide Emergency Spillway w/ Geotextile Fabric Elev=162.0'

(F)

Temporary Sediment Basin 2A To Be Constructed Prior To Grading Of Increment 5A And Backfilled Upon Completion of Increment 2A
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-50
(100' x 25' Storage Area)
Bot. Basin = 157.5 Ft.
Min. Depth = 3 Ft.
Contributing Area = 2.87 AC. (Inc. 2A)
Required Volume = 383 CY. (Inc. 2A)
Available Volume = 178 CY.
Total Available Volume = 2,033 (Inc. 2A)

(G)

20' Wide Emergency Spillway w/ Geotextile Fabric Elev=162.2

(H)

Stabilized Construction Entrance (50'x30'x12" Min.) See Det., Sht. C-50

Graphic Scale:
1" = 100' 100' 50' 0 100' 200'
Scale in Feet

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

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 6635-C HAWAII, U.S.A.

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SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAI'I
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

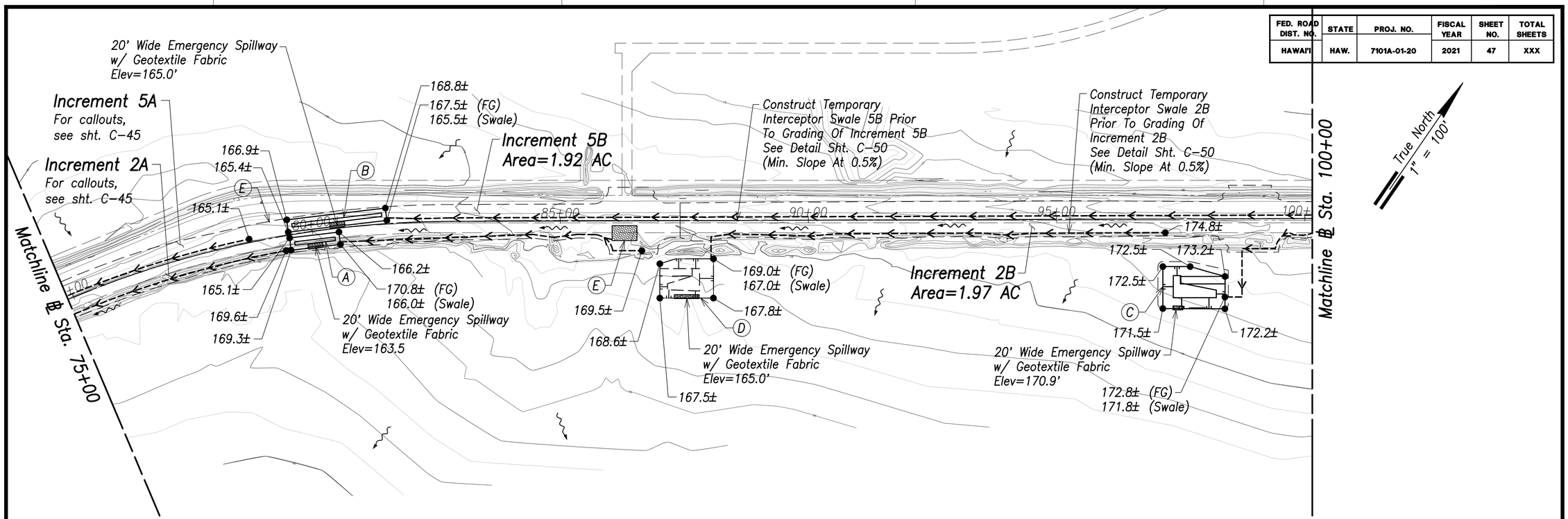
Erosion and Sediment Control Plan – 3

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

SHEET No. C-45 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	47	XXX



Erosion and Sediment Control Plan – (℄ Sta. 75+00 to ℄ Sta. 100+00)

Scale: 1" = 100'

Pre-Construction BMP

- Stabilized Compost Filter Sock
- Temporary Sediment Basins
- Temporary Swales

During Construction BMP

- Temporary Stabilization
- Inlet Protection for New CB

Post Construction BMP

- Permanent Stabilization BMP

Legend:

- LOG and Disturbance
- Filter Sock
- Grading Increment Boundary
- Existing Ground Contour
- Direction of Flow
- Top Bank
- Bottom Bank
- Fill Slope
- Cut Slope
- Swale
- Spot Elevation 126.4±

(A)

Temporary Sediment Basin 2B
To Be Constructed Prior To Grading Of Increment 2B And Backfilled Upon Completion of Increment 2B
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-50
(100' x 25' Storage Area)
Bot. Basin = 162.0 Ft.
Min. Depth = 3 Ft.
Contributing Area = 1.97 AC. (Inc. 2B)
Required Volume = 263 CY. (Inc. 2B)
Available Volume = 178 CY.
Total Available Volume = 2,563 CY. (Inc. 2B)

(B)

Temporary Sediment Basin 5B
To Be Constructed Prior To Grading Of Increment 5B And Backfilled Upon Completion of Increment 5B
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-50
(204' x 35' Storage Area)
Bot. Basin = 160.5 Ft.
Min. Depth = 4 Ft.
Contributing Area = 1.92 AC. (Inc. 5B)
Required Volume = 256 CY. (Inc. 5B)
Available Volume = 560 CY.

(C)

Sediment Basin J
To Be Constructed Prior To Grading Of Increment 2B
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-124
Bot. Basin = 160.5 Ft.
Contributing Area = 1.97 AC. (Inc. 2B)
Required Volume = 263 CY. (Inc. 2B)
Available Volume = 1,835 CY.
Total Available Volume = 2,563 CY. (Inc. 2B)

(D)

Sediment Basin H
To Be Constructed Prior To Grading Of Increment 2B
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-123
Bot. Basin = 159.3 Ft.
Contributing Area = 1.97 AC. (Inc. 2B)
Required Volume = 263 CY. (Inc. 2B)
Available Volume = 550 CY.
Total Available Volume = 2,563 CY. (Inc. 2B)

(E)

Stabilized Construction
Entrance (50'x30'x12" Min.)
See Det., Sht. C-50

Graphic Scale:
1" = 100' 100' 50' 0 100' 200'
Scale in Feet

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

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
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HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

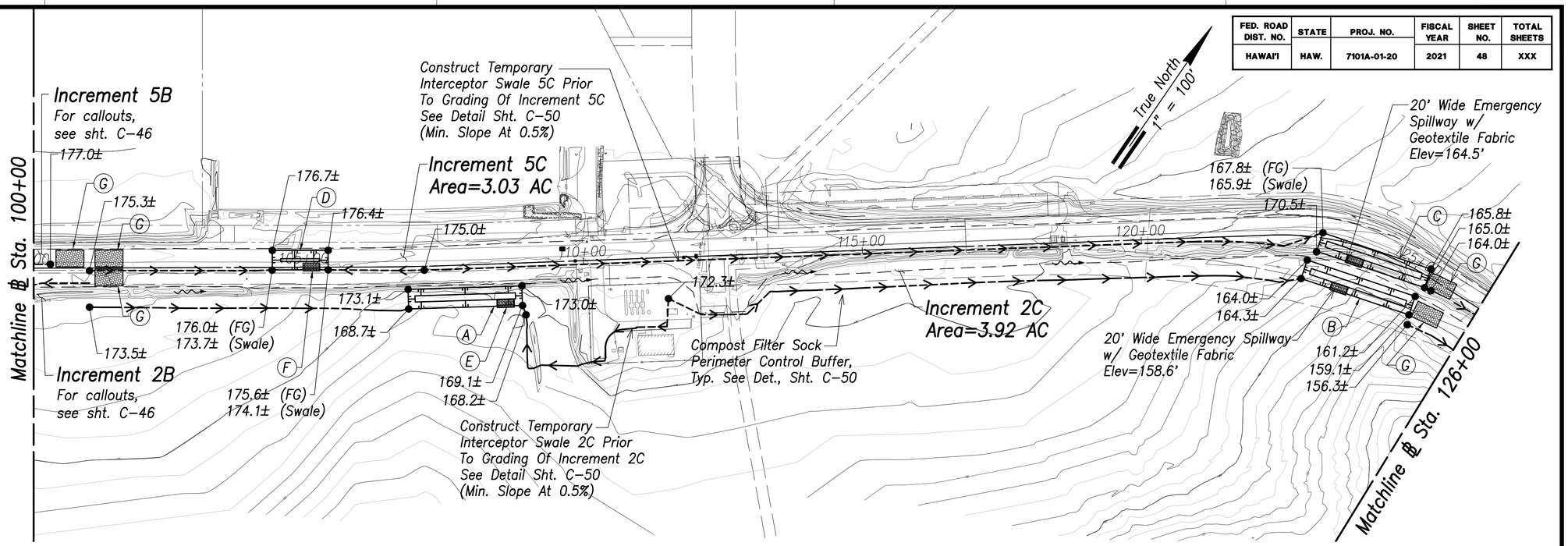
Erosion and Sediment Control Plan – 4

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

SHEET No. C-46 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	48	XXX



Erosion and Sediment Control Plan – (℄ Sta. 100+00 to ℄ Sta. 126+00)

Scale: 1" = 100'

Pre-Construction BMP
- Stabilized Compost Filter Sock
- Temporary Sediment Basins
- Temporary Swales

During Construction BMP
- Temporary Stabilization
- Inlet Protection for New CB

Post Construction BMP
- Permanent Stabilization BMP

Legend:
- LOG and Disturbance
- Filter Sock
- Grading Increment Boundary
- Existing Ground Contour
- Direction of Flow
- Top Bank
- Bottom Bank
- Fill Slope
- Cut Slope
- Swale
- Spot Elevation 126.4±

(A)

Temporary Sediment Basin 2C-1
To Be Constructed Prior To Grading Of Increment 2C And Backfilled Upon Completion of Increment 2C
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-50
(100' x 35' Storage Area)
Bot. Basin = 164.7 Ft.
Min. Depth = 4 Ft.
Contributing Area = 3.92 AC. (Inc. 2C)
Required Volume = 523 CY. (Inc. 2C)
Available Volume = 560 CY.
Total Available Volume = 1,120 CY (Inc. 2C)

(B)

Temporary Sediment Basin 2C-2
To Be Constructed Prior To Grading Of Increment 2C And Backfilled Upon Completion of Increment 2C
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-50
(204' x 35' Storage Area)
Bot. Basin = 155.1 Ft.
Min. Depth = 4 Ft.
Contributing Area = 3.92 AC. (Inc. 2C)
Required Volume = 523 CY. (Inc. 2C)
Available Volume = 560 CY.
Total Available Volume = 1,120 CY (Inc. 2C)

(C)

Temporary Sediment Basin 5C-1
To Be Constructed Prior To Grading Of Increment 5C And Backfilled Upon Completion of Increment 5C
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-50
(204' x 35' Storage Area)
Bot. Basin = 161.0 Ft.
Min. Depth = 4 Ft.
Contributing Area = 3.03 AC. (Inc. 5C)
Required Volume = 404 CY. (Inc. 5C)
Available Volume = 560 CY.
Total Available Volume = 710 CY (Inc. 5C)

(D)

Temporary Sediment Basin 5C-2
To Be Constructed Prior To Grading Of Increment 5C And Backfilled Upon Completion of Increment 5C
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-50
(100' x 35' Storage Area)
Bot. Basin = 170.6 Ft.
Min. Depth = 5 Ft.
Contributing Area = 2.28 AC. (Inc. 5C)
Required Volume = 304 CY. (Inc. 5C)
Available Volume = xxx CY.
Total Available Volume = xxx CY (Inc. 5C)

(E)

20' Wide Emergency Spillway
w/ Geotextile Fabric
Elev=168.3'

(F)

20' Wide Emergency Spillway
w/ Geotextile Fabric
Elev=175.1'

(G)

Stabilized Construction Entrance (50'x30'x12" Min.)
See Det., Sht. C-50

Graphic Scale:
1" = 100' 100' 50' 0 100' 200'
Scale in Feet

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

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 6935-C HAWAII, U.S.A.

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SIGNATURE April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

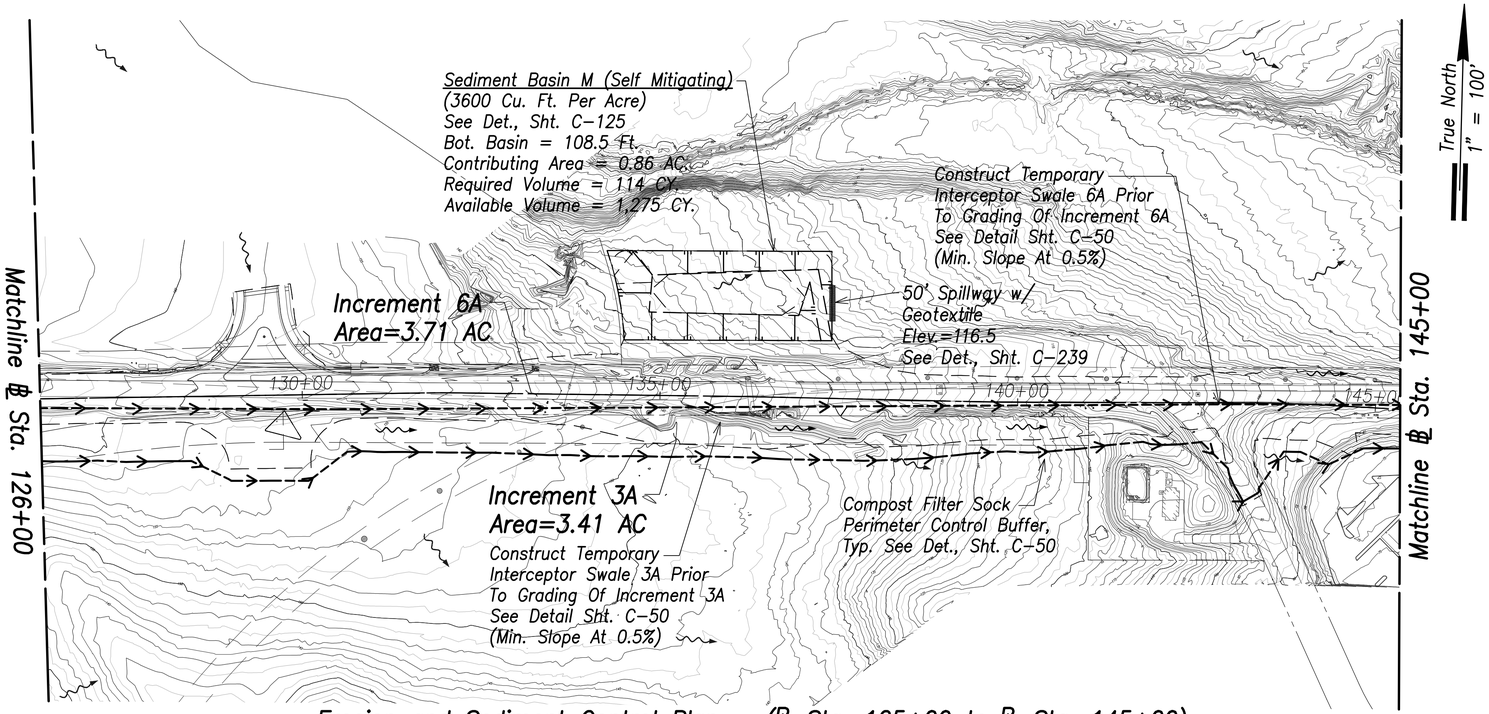
Erosion and Sediment Control Plan – 5

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

SHEET No. C-47 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	49	XXX



Erosion and Sediment Control Plan – (℄ Sta. 125+00 to ℄ Sta. 145+00)
Scale: 1" = 100'

Pre-Construction BMP
- Stabilized Compost Filter Sock
- Temporary Sediment Basins
- Temporary Swales

During Construction BMP
- Temporary Stabilization
- Inlet Protection for New CB

Post Construction BMP
- Permanent Stabilization BMP

Legend:
- LOG and Disturbance
- Filter Sock
- Grading Increment Boundary
- Existing Ground Contour
- Direction of Flow
- Top Bank
- Bottom Bank
- Fill Slope
- Cut Slope
- Swale
- Spot Elevation 126.4±

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

Graphic Scale:
1" = 100' 100' 50' 0 100' 200'
Scale in Feet

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 6935-C HAWAII, U.S.A.

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SIGNATURE April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

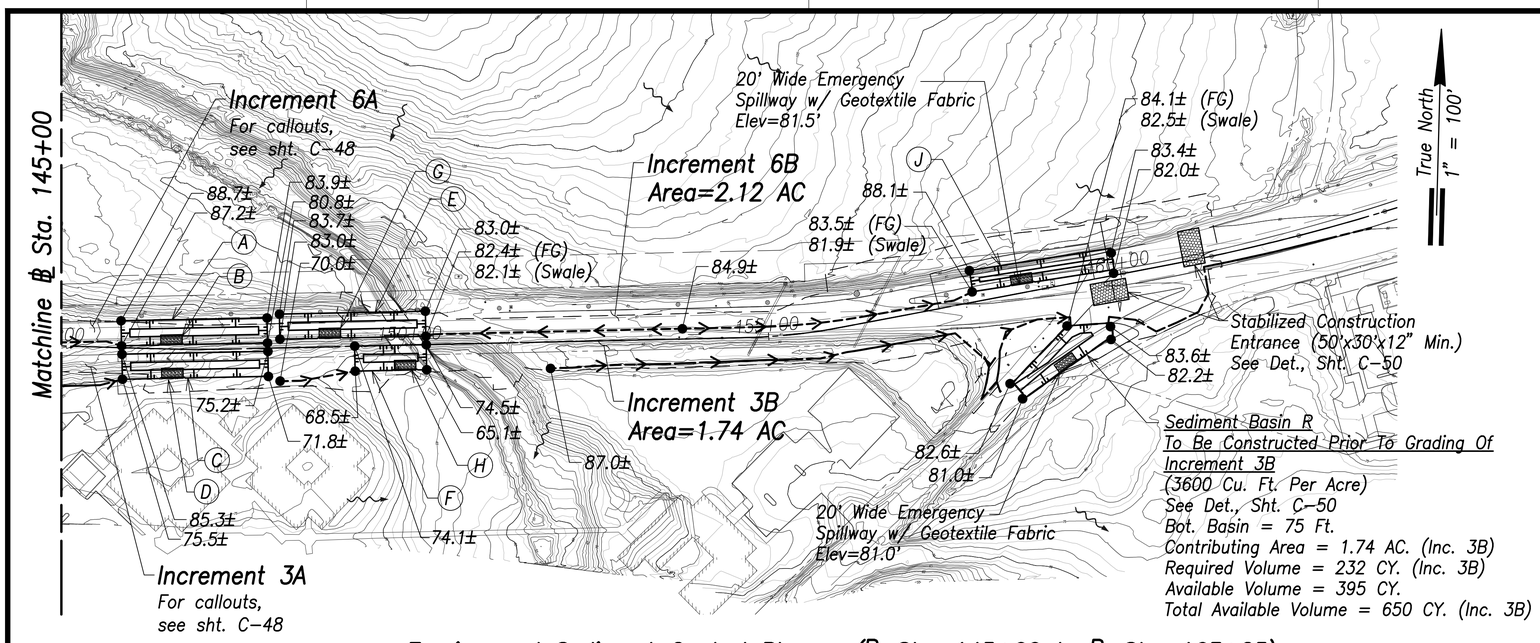
Erosion and Sediment Control Plan – 6

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

SHEET No. C-48 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	50	XXX



Erosion and Sediment Control Plan – (℄ Sta. 145+00 to ℄ Sta. 163+25)

Scale: 1" = 100'

Pre-Construction BMP
- Stabilized Compost Filter Sock
- Temporary Sediment Basins
- Temporary Swales

During Construction BMP
- Temporary Stabilization
- Inlet Protection for New CB

Post Construction BMP
- Permanent Stabilization BMP

Legend:
- LOG and Disturbance
- Filter Sock
- Grading Increment Boundary
- Existing Ground Contour
- Direction of Flow
- Top Bank
- Bottom Bank
- Fill Slope
- Cut Slope
- Swale
- Spot Elevation 126.4±

(A)

Temporary Sediment Basin 6A
To Be Constructed Prior To Grading Of Increment 6A And Backfilled Upon Completion of Increment 6A
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-50
(204' x 35' Storage Area)
Bot. Basin = 76.8 Ft.
Min. Depth = 4 Ft.
Contributing Area = 3.71 AC. (Inc. 6A)
Required Volume = 495 CY. (Inc. 6A)
Available Volume = 560 CY.

(B)

20' Wide Emergency Spillway w/ Geotextile Fabric Elev=80.3'

(C)

Temporary Sediment Basin 3A
To Be Constructed Prior To Grading Of Increment 3A And Backfilled Upon Completion of Increment 3A
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-50
(204' x 35' Storage Area)
Bot. Basin = 67.8 Ft.
Min. Depth = 4 Ft.
Contributing Area = 3.41 AC. (Inc. 3A)
Required Volume = 455 CY. (Inc. 3A)
Available Volume = 560 CY.

(D)

20' Wide Emergency Spillway w/ Geotextile Fabric Elev=71.3'

(E)

Temporary Sediment Basin 6B-1
To Be Constructed Prior To Grading Of Increment 6B And Backfilled Upon Completion of Increment 6B
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-50
(204' x 35' Storage Area)
Bot. Basin = 78.4 Ft.
Min. Depth = 4 Ft.
Contributing Area = 2.12 AC. (Inc. 6B)
Required Volume = 283 CY. (Inc. 6B)
Available Volume = 560 CY.
Total Available Volume = 1,120 CY (Inc. 6B)

(F)

Temporary Sediment Basin 3B
To Be Constructed Prior To Grading Of Increment 6B And Backfilled Upon Completion of Increment 6B
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-50
(100' x 35' Storage Area)
Bot. Basin = 61.1 Ft.
Min. Depth = 4 Ft.
Contributing Area = 1.74 AC. (Inc. 3B)
Required Volume = 232 CY. (Inc. 3B)
Available Volume = 255 CY.
Total Available Volume = 650 CY. (Inc. 3B)

(G)

20' Wide Emergency Spillway w/ Geotextile Fabric Elev=71.9'

(H)

20' Wide Emergency Spillway w/ Geotextile Fabric Elev=64.6'

(J)

Temporary Sediment Basin 6B-2
To Be Constructed Prior To Grading Of Increment 6B And Backfilled Upon Completion of Increment 6B
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-50
(204' x 35' Storage Area)
Bot. Basin = 79.6 Ft.
Min. Depth = 4 Ft.
Contributing Area = 2.12 AC. (Inc. 6B)
Required Volume = 283 CY. (Inc. 6B)
Available Volume = 560 CY.
Total Available Volume =1,120 CY. (Inc. 6B)

Graphic Scale:
1" = 100' 100' 50' 0 100' 200'
Scale in Feet

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No. 6635-C
HAWAII, U.S.A.

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SIGNATURE April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Erosion and Sediment Control Plan – 7

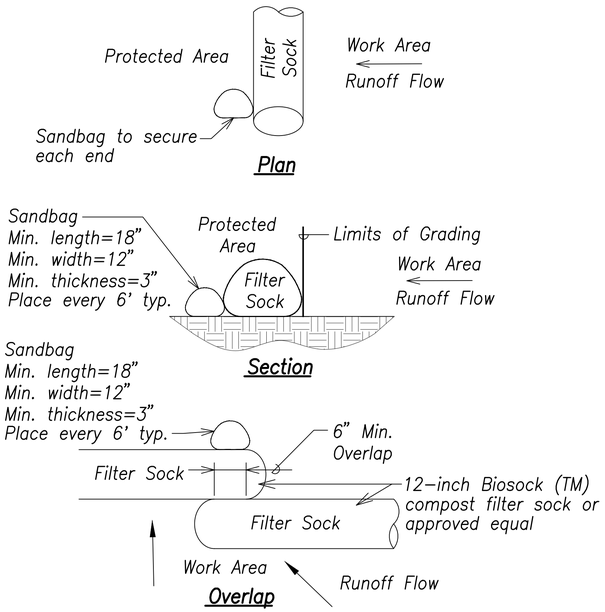
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

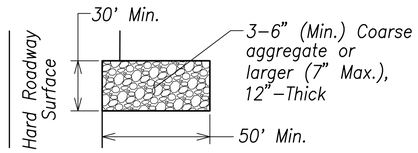
SHEET No. C-49 OF XXX SHEETS

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

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	51	XXX



12" Compost Filter Sock Detail
Not to Scale



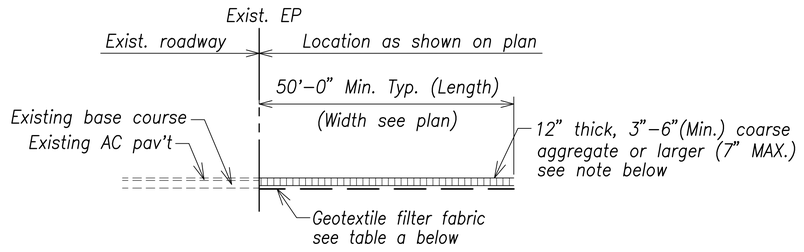
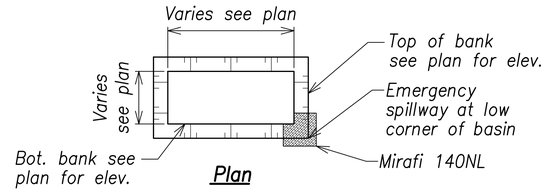


Table A – Geotextile Requirements	
Physical Property	Requirements
Grab Strength	315 MARV (ASTM D4632)
Sewn Seam Strength	285 MARV (ASTM D4884)
Trapezoid Tear Strength	115 MARV (ASTM D4533)
Puncture Resistance	115 MARV (ASTM D4833)
Permittivity	0.05' (ASTM D4491)
Apparent Opening Size (U.S. Standard Sieve)	40 MARV (ASTM D4751)
Ultraviolet Degradation, 500 hours	50 MARV (ASTM D4355)

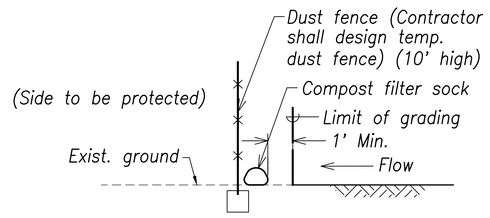
Note:
12" Coarse aggregate layer shall be removed immediately prior to installation of roadway base course.



Notes:

1. In lieu of providing outlet structures, contractor shall maintain the sediment basin in effective operating condition and provide pumping if any water has been standing for 72 hours. the contractor shall pump out standing water in the sediment basins and dispose of it at the temporary discharge area.
2. Double compost filter sock (perimeter control) shall be placed at the downstream side of the temporary discharge area. if the temporary discharge area does not have adequate vegetation, the contractor shall grass the temporary discharge area prior to disposing the water. Double compost filter sock (perimeter control) and grassing shall be maintained during grading operations and use of the discharge area.
3. Sediment that accumulates within the temporary sediment basins shall be periodically removed. Sediment shall be be removed when sediment accumulation reaches one-half of the designated storage volume.

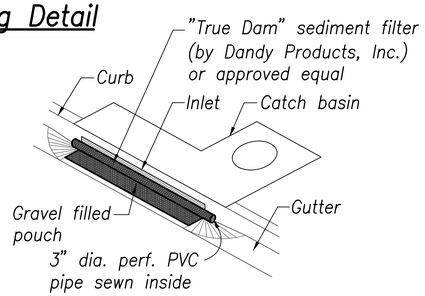
Temporary Sediment Basin
Not to Scale



Limit of Grading Detail
Not to Scale

Notes:

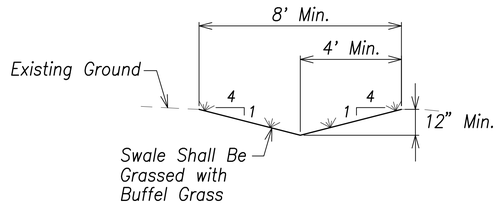
1. Construct catch basin inlet protection on all new catch basin inlets.
2. The Contractor shall clean catch basins and sediment filters weekly.
3. The Contractor shall remove the sediment filters during above normal rainfall events, then replace after the event.



Catch Basin Protection

Inlet Protection (Sediment Control Filter)
Not to Scale

Stabilized Construction Entrance
Not to Scale



Notes:

1. temporary interceptor swale shall be removed and graded last upon completion of grading increments.
2. Temporary interceptor swale shall be stabilized immediately with hydroseed.

Temporary Interceptor Swale
Not to Scale

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

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

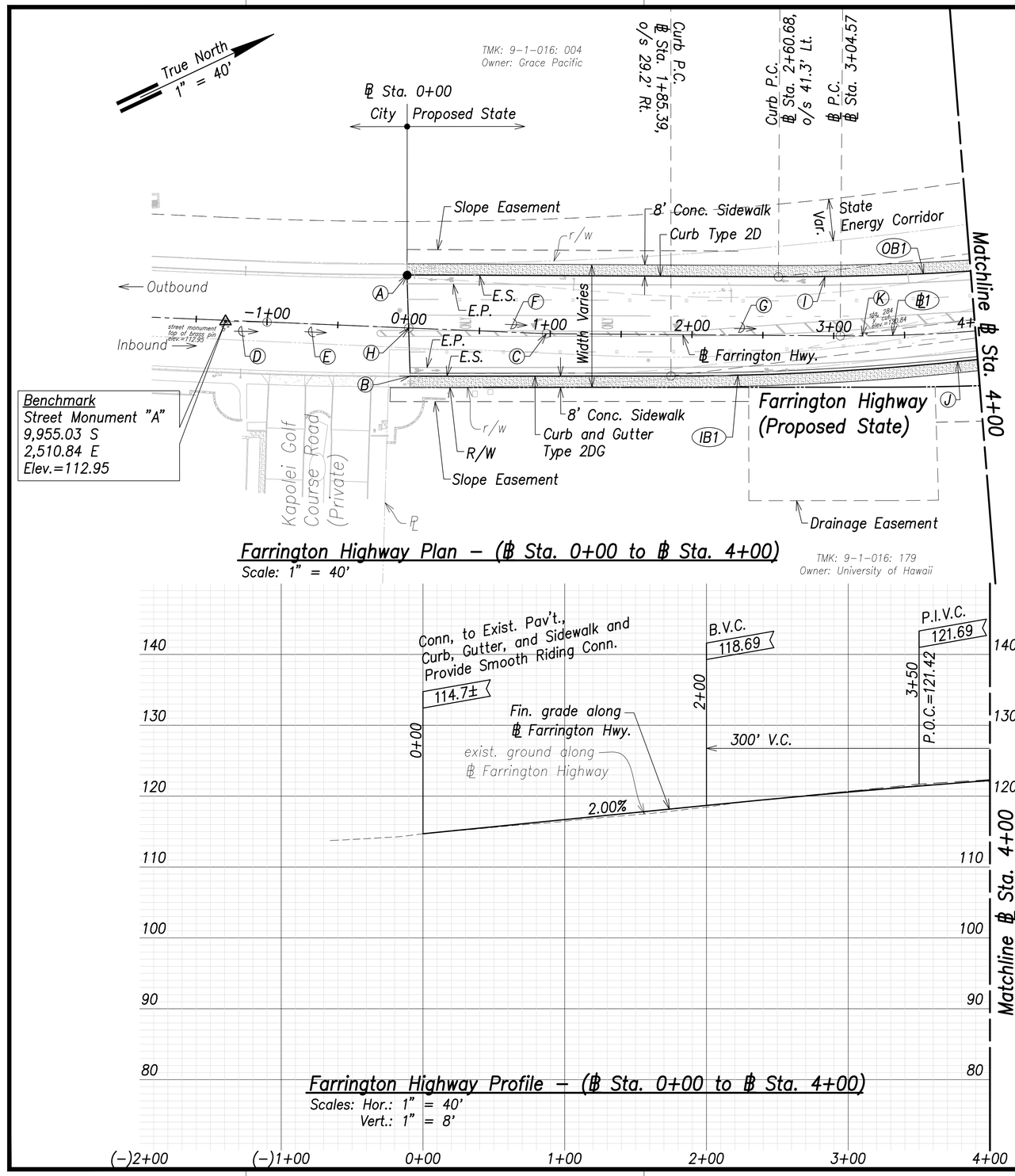
Erosion and Sediment Control Details

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

SHEET No. C-50 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	52	XXX



Farrington Highway Plan – (℄ Sta. 0+00 to ℄ Sta. 4+00)

Scale: 1" = 40'

Farrington Highway Profile – (℄ Sta. 0+00 to ℄ Sta. 4+00)

Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

Ⓐ
℄ Sta. (–)0+02.6, o/s 37.2' Lt.
Conn. to Exist. Curb, Gutter, and Sidewalk

Ⓑ
℄ Sta. 0+02.4, o/s 33.9' Rt.
Conn. to Exist. Curb, Gutter, and Sidewalk

Ⓒ
℄ Sta. 0+97.24
℄ P.I.

Ⓓ
220°04'09", 29.26'
(Benchmark to ℄ Sta. (–)1+00)

Ⓔ
221°38'02", 100.00'
(℄ Sta. (–)1+00 to ℄ Sta. 0+00)

Ⓕ
221°38'02", 97.24'
(℄ Sta. 0+00 to ℄ P.I.)

Ⓖ
219°40'42", 207.33'
(℄ P.I. to ℄ P.C.)

Ⓗ
℄ Sta. 0+00
Conn. to Exist. Pavement

Ⓘ
212°20'22", 495.95'
(Curb P.C. to Curb P.T.)

Ⓙ
212°10'43", 496.73'
(Curb P.C. to Curb P.T.)

Ⓚ
212°24'15", 278.55'
(℄ P.C. to ℄ P.T.)

℄ Curve Data:

Ⓘ ℄1
Δ=14°32'53"
Δ/2=7°16'27"
R=1100.00'
T=140.41'
C=278.55'
Lc=279.30'

Face of Median Curve Data:

IB1
Δ=14°05'49"
Δ/2=7°02'54"
R=2024.00'
T=250.25'
C=496.73'
Lc=497.98'

OB1
Δ=14°25'06"
Δ/2=7°12'33"
R=976.00'
T=249.95'
C=495.95'
Lc=497.26'

Note:
The Contractor Shall Phase Construction to Ensure 1 Lane in Each Direction Remains Operational

Graphic Scales:

1" = 40' 40' 20' 0 40' 80'

1" = 8' 8' 4' 0 8' 16'

Scale in Feet

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

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

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SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

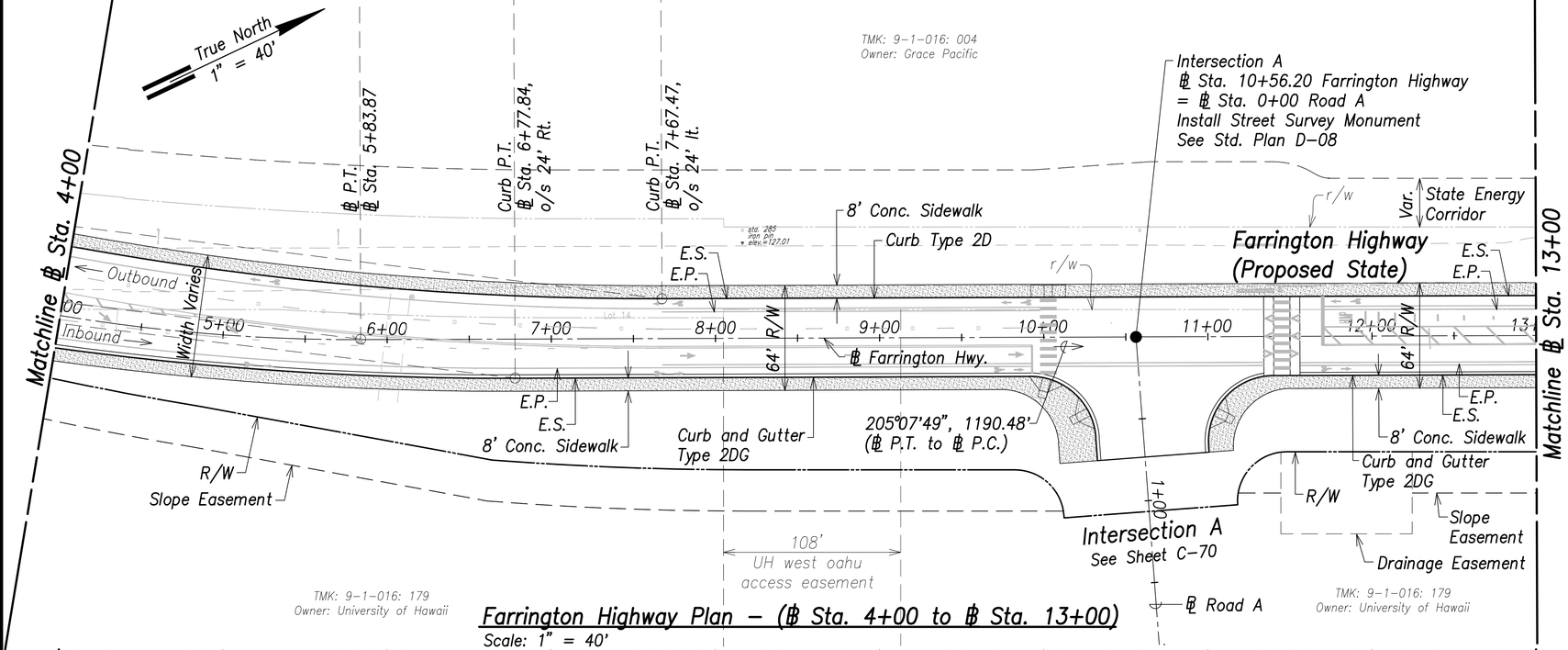
Roadway Plan and Profile ℄ Sta. 0+00 to ℄ Sta. 4+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

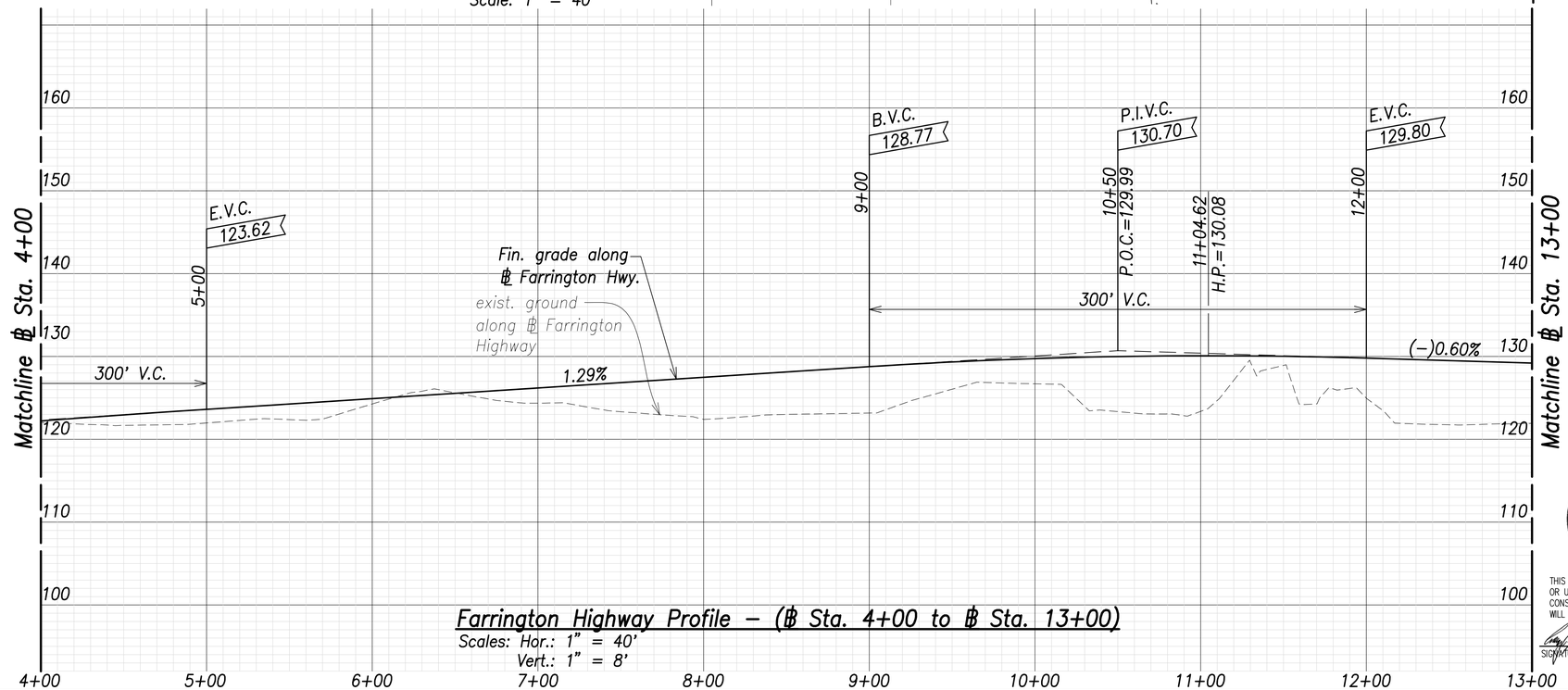
SHEET No. C-51 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	53	XXX



Farrington Highway Plan – (℄ Sta. 4+00 to ℄ Sta. 13+00)

Scale: 1" = 40'



Farrington Highway Profile – (℄ Sta. 4+00 to ℄ Sta. 13+00)

Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

Note:
The Contractor Shall Phase Construction to Ensure 1 Lane in Each Direction Remains Operational

Graphic Scales:

1" = 40' 40' 20' 0 40' 80'

1" = 8' 8' 4' 0 8' 16'

Scale in Feet

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

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6635-C
HAWAII, U.S.A.

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SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

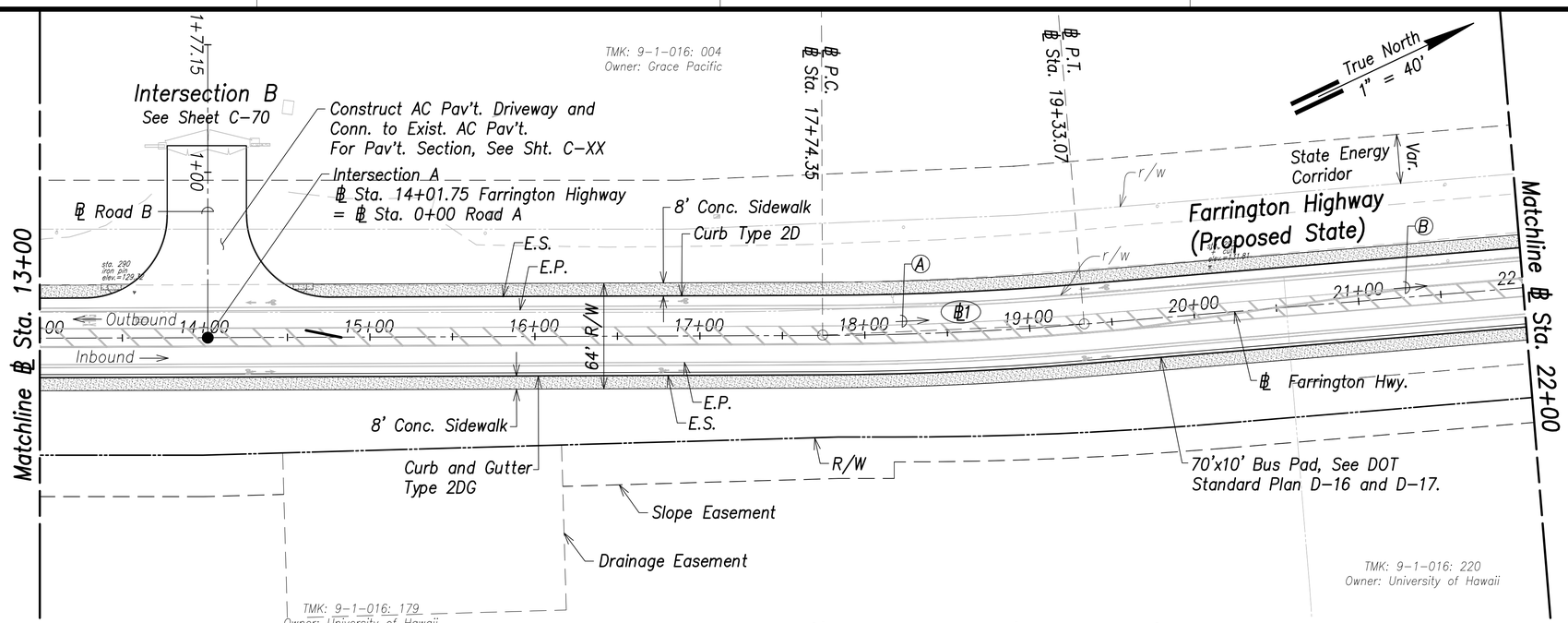
Roadway Plan and Profile ℄ Sta. 4+00 to ℄ Sta. 13+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

SHEET No. C-52 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	54	XXX



Farrington Highway Plan – (℄ Sta. 13+00 to ℄ Sta. 22+00)

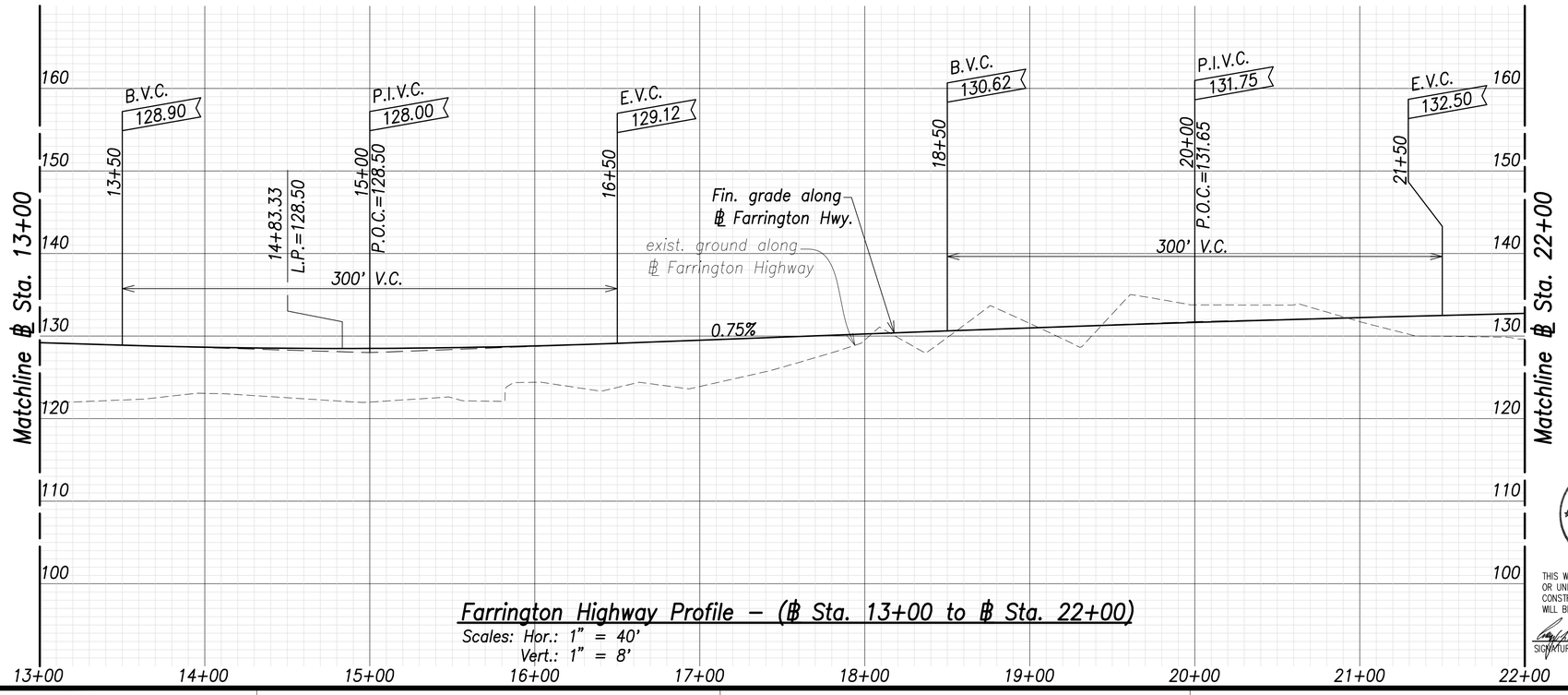
Scale: 1" = 40'

℄ Curve Data:

Ⓐ
202°51'24", 158.67'
(℄ P.C. to ℄ P.T.)

Ⓑ
200°35'00", 805.46'
(℄ P.T. to ℄ P.C.)

℄1
Δ=4°32'49"
Δ/2=2°16'25"
R=2000.00'
T=79.40'
C=158.67'
Lc=158.72'



Farrington Highway Profile – (℄ Sta. 13+00 to ℄ Sta. 22+00)

Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

Note:
The Contractor Shall Phase Construction to Ensure 1 Lane in Each Direction Remains Operational

Graphic Scales:

1" = 40' 40' 20' 0 40' 80'

1" = 8' 8' 4' 0 8' 16'

Scale in Feet

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

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 6935-C HAWAII, U.S.A.

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SIGNATURE April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

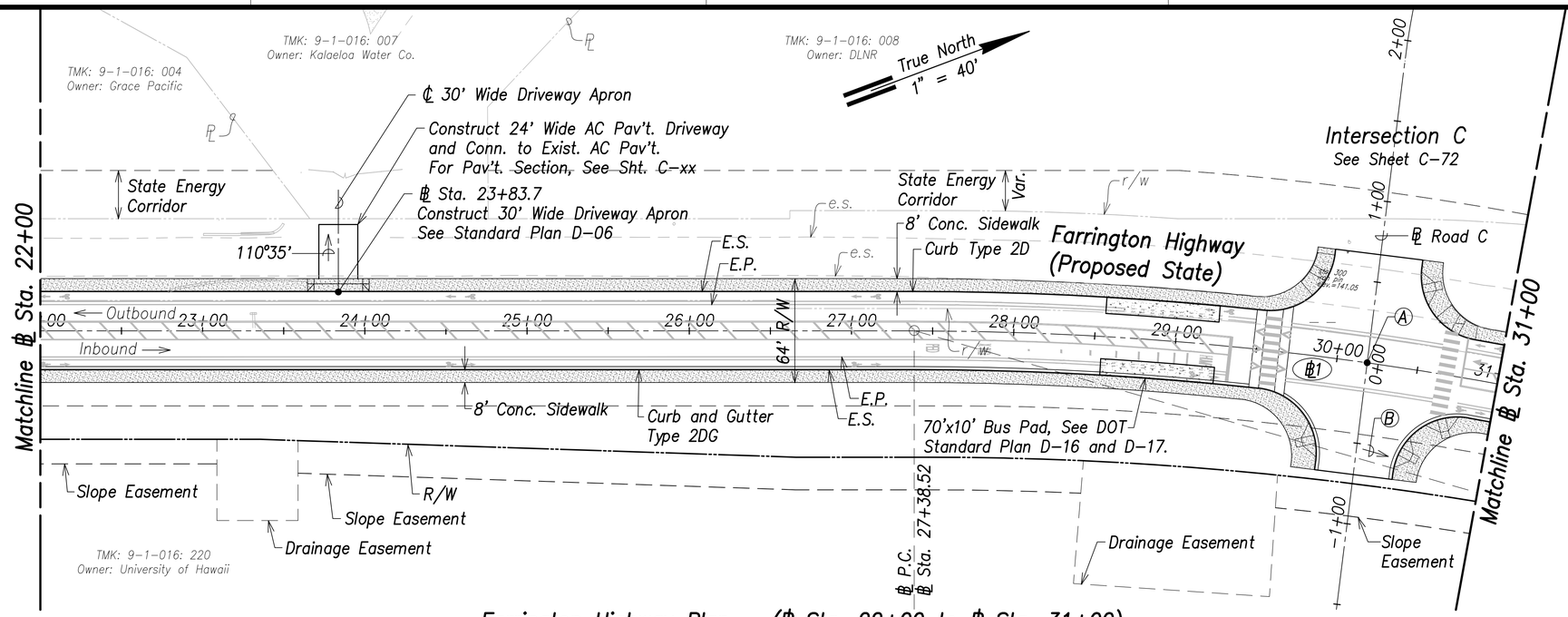
Roadway Plan and Profile
℄ Sta. 13+00 to ℄ Sta. 22+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

SHEET No. C-53 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	55	XXX



Farrington Highway Plan – (℄ Sta. 22+00 to ℄ Sta. 31+00)

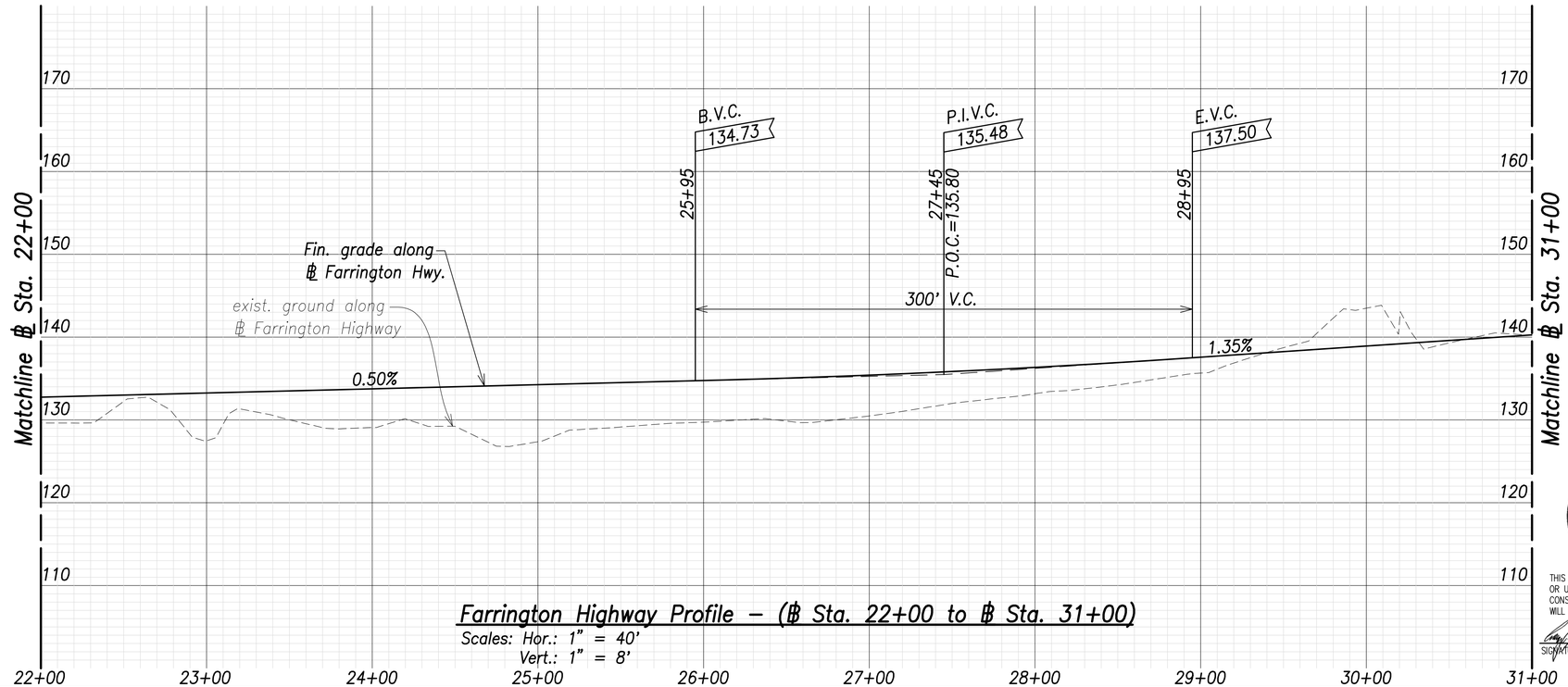
Scale: 1" = 40'

Ⓐ
Intersection C
℄ Sta. 30+18.81 Farrington Highway
= ℄ Sta. 0+00 Road C
Install Street Survey Monument
See Std. Plan D-08

Ⓑ
216°37'51", 1105.73'
(℄ P.C. to ℄ P.T.)

℄ Curve Data:

℄1
Δ=32°05'42"
Δ/2=16°02'51"
R=2000.00'
T=575.28'
C=1105.73'
Lc=1120.32'



Farrington Highway Profile – (℄ Sta. 22+00 to ℄ Sta. 31+00)

Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

Note:
The Contractor Shall Phase Construction to Ensure 1 Lane in Each Direction Remains Operational

Graphic Scales:

1" = 40' 40' 20' 0 40' 80'

1" = 8' 8' 4' 0 8' 16'

Scale in Feet

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

CRAIG W. L. LUKE
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SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

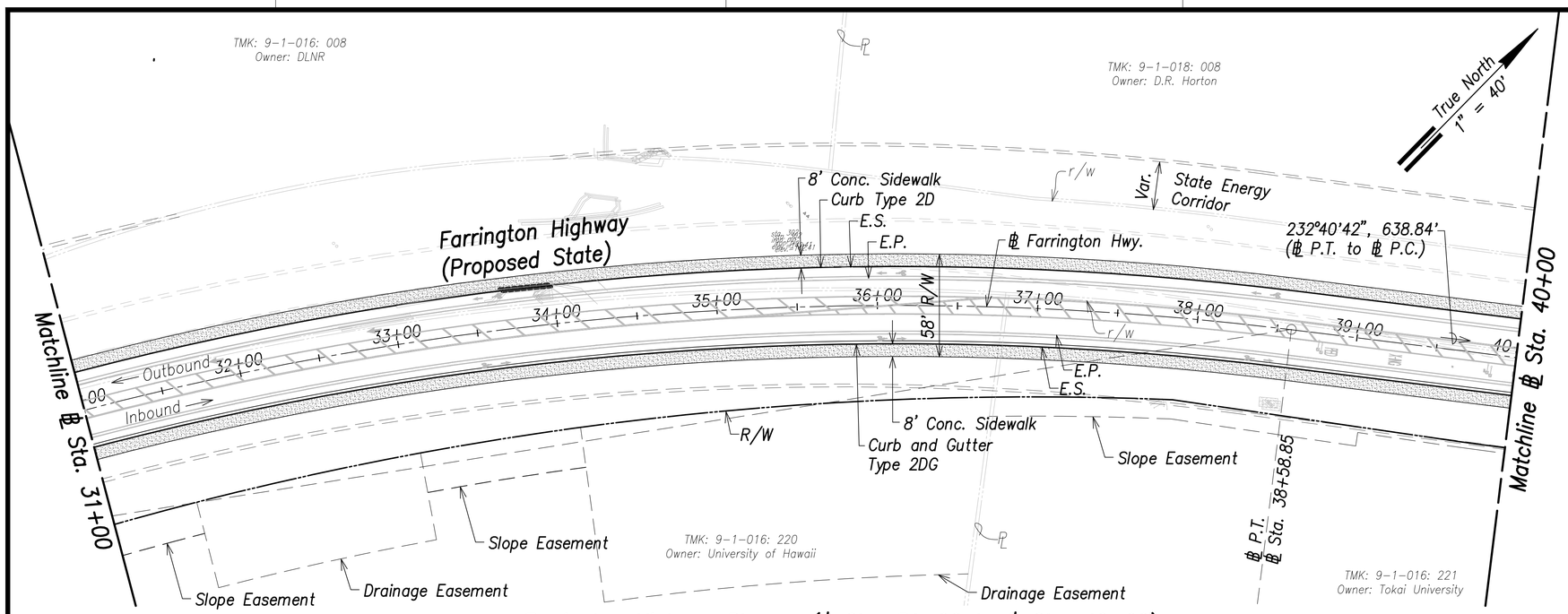
Roadway Plan and Profile
℄ Sta. 22+00 to ℄ Sta. 31+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown — Date: January 2022

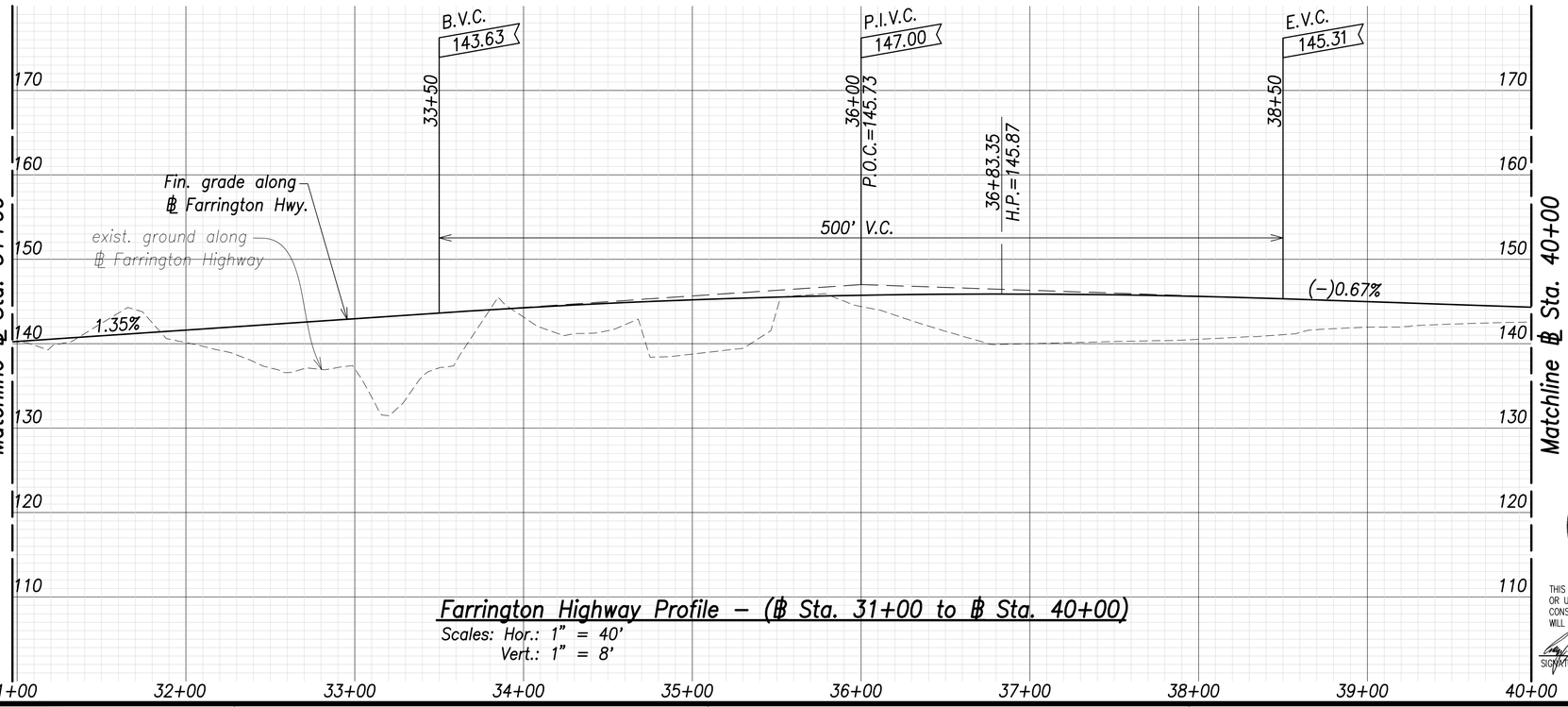
SHEET No. C-54 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	56	XXX



Farrington Highway Plan – (℄ Sta. 31+00 to ℄ Sta. 40+00)

Scale: 1" = 40'



Farrington Highway Profile – (℄ Sta. 31+00 to ℄ Sta. 40+00)

Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

Note:
The Contractor Shall Phase Construction to Ensure 1 Lane in Each Direction Remains Operational

Graphic Scales:

1" = 40' 40' 20' 0 40' 80'

1" = 8' 8' 4' 0 8' 16'

Scale in Feet

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

CRAIG W. L. LUKE
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No. 6935-C
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SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

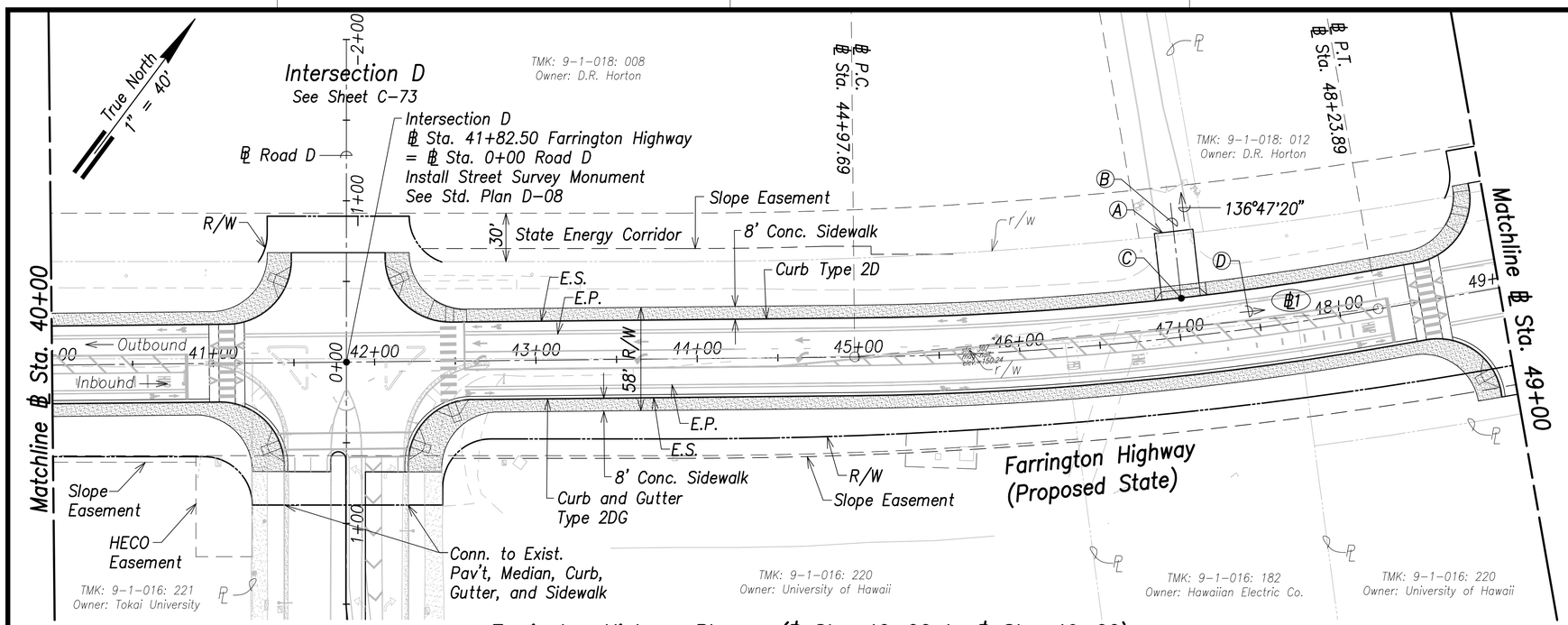
Roadway Plan and Profile ℄ Sta. 31+00 to ℄ Sta. 40+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

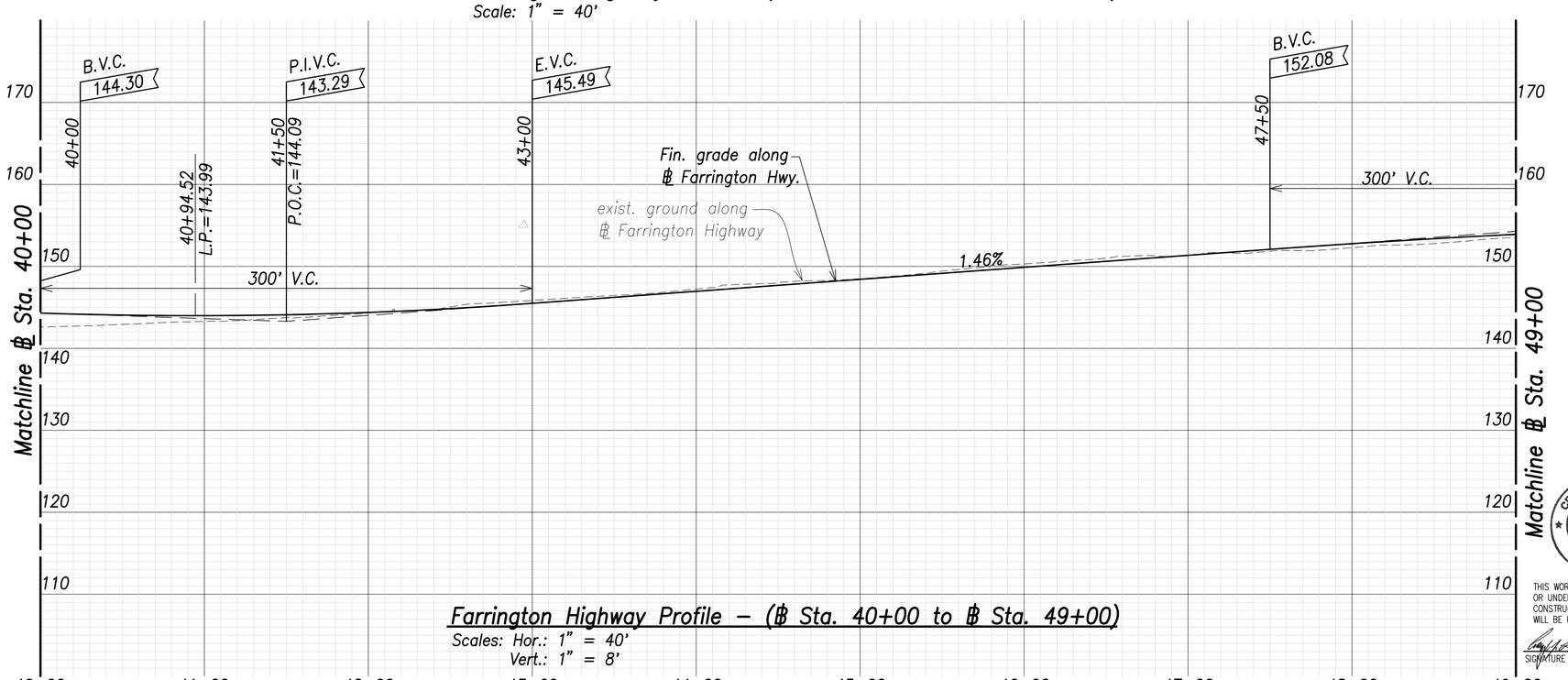
SHEET No. C-55 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	57	XXX



Farrington Highway Plan – (℄ Sta. 40+00 to ℄ Sta. 49+00)

Scale: 1" = 40'



Farrington Highway Profile – (℄ Sta. 40+00 to ℄ Sta. 49+00)

Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

Ⓐ
Construct 24' Wide AC Pav't. Driveway and Conn. to Exist. AC Pav't.
For Pav't. Section,
See Sht. C-XX

Ⓑ
℄ 30' Wide Driveway Apron

Ⓒ
℄ Sta. 47+03.3
Construct 24' Wide Driveway Apron
See Standard Plan D-06

Ⓓ
228°00'21", 325.84'
(℄ P.C. to ℄ P.T.)

℄ Curve Data:

℄1
Δ=9°20'42"
Δ/2=4°40'21"
R=2000.00'
T=163.46'
C=325.84'
Lc=326.20'

Note:
The Contractor Shall Phase Construction to Ensure 1 Lane in Each Direction Remains Operational

Graphic Scales:

1" = 40' 40' 20' 0 40' 80'

1" = 8' 8' 4' 0 8' 16'

Scale in Feet

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

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6635-C
HAWAII, U.S.A.

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SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

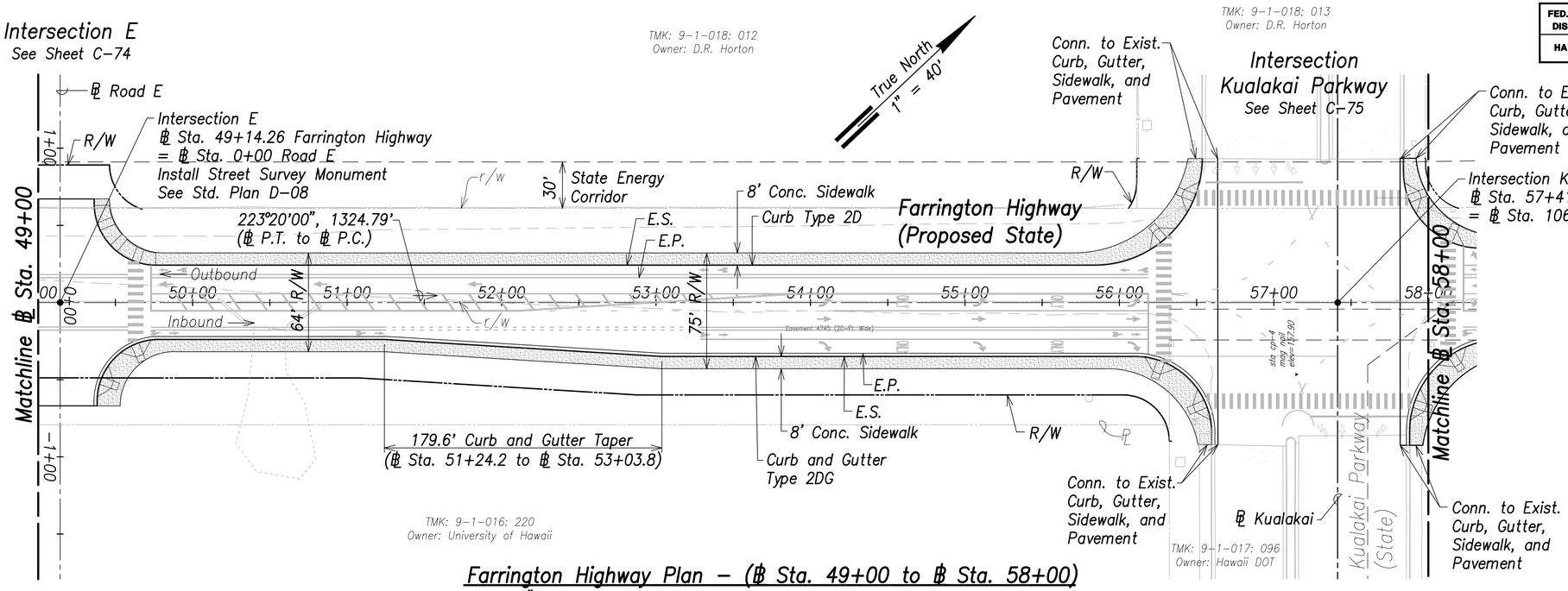
Roadway Plan and Profile
℄ Sta. 40+00 to ℄ Sta. 49+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

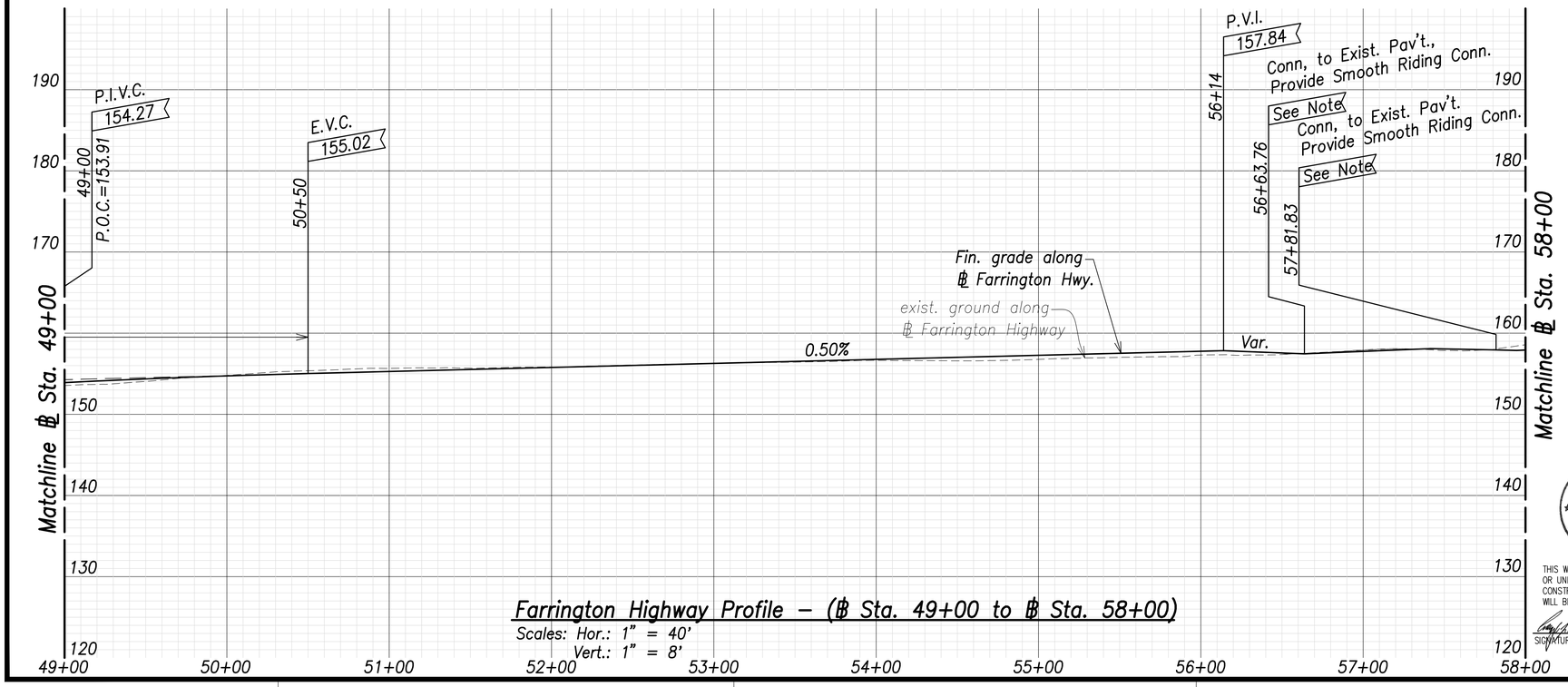
SHEET No. C-56 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	58	XXX



Farrington Highway Plan – (℄ Sta. 49+00 to ℄ Sta. 58+00)

Scale: 1" = 40'



Farrington Highway Profile – (℄ Sta. 49+00 to ℄ Sta. 58+00)

Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

Note:
The Contractor Shall Phase Construction to Ensure 1 Lane in Each Direction Remains Operational

Graphic Scales:

1" = 40' 40' 20' 0 40' 80'

1" = 8' 8' 4' 0 8' 16'

Scale in Feet

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

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

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SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

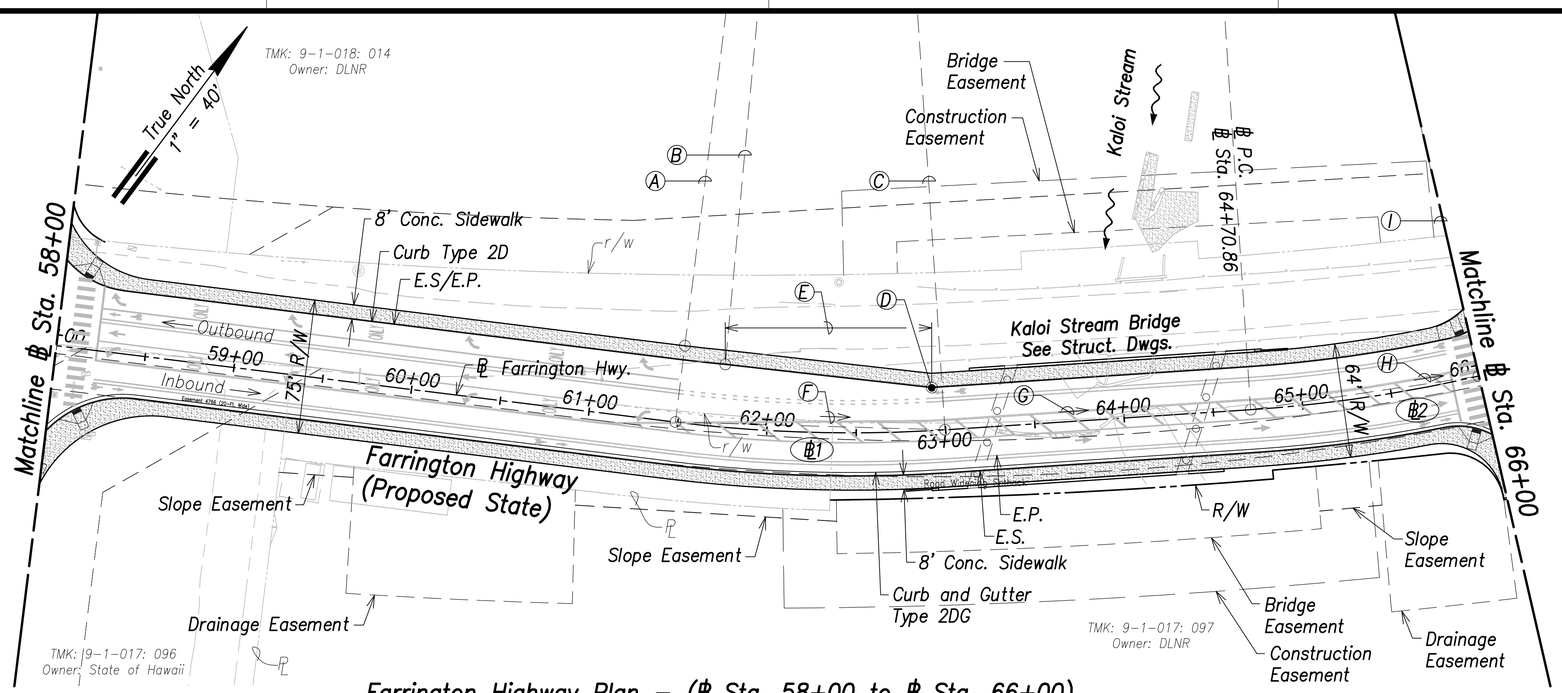
Roadway Plan and Profile
℄ Sta. 49+00 to ℄ Sta. 58+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

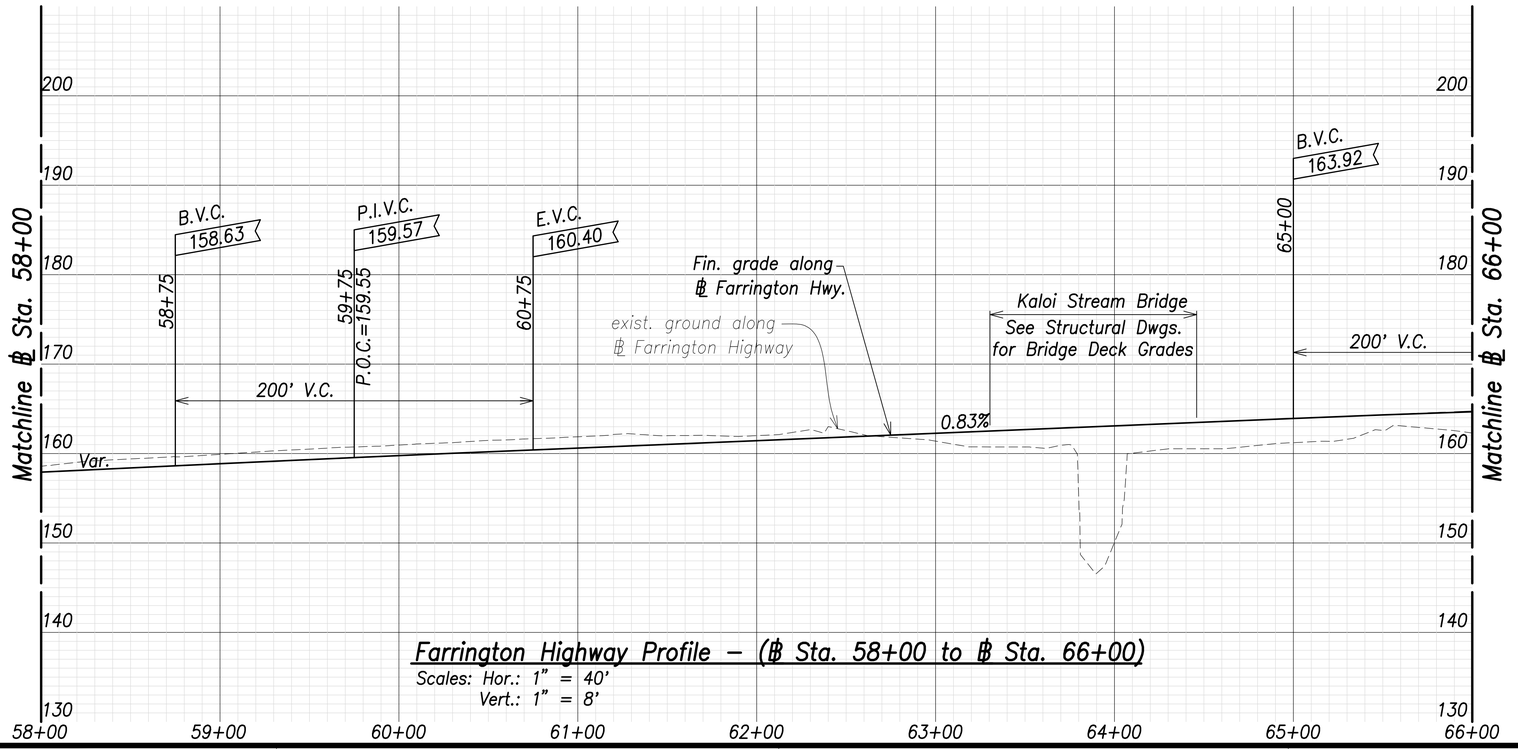
SHEET No. C-57 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	59	XXX



Farrington Highway Plan – (℄ Sta. 58+00 to ℄ Sta. 66+00)

Scale: 1" = 40'



Farrington Highway Profile – (℄ Sta. 58+00 to ℄ Sta. 66+00)

Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

Ⓐ
℄ P.C.
℄ Sta. 61+48.68

Ⓑ
Curb P.T.
℄ Sta. 61+73.50,
o/s 35' Lt.

Ⓒ
℄ P.T.
℄ Sta. 62+99.63

Ⓓ
Curb P.I.
℄ Sta. 62+93.64,
o/s 24' Lt.

Ⓔ
115.4' Curb and Gutter Taper
(℄ Sta. 61+73.5 to
℄ Sta. 62+93.6)

Ⓕ
217°55'41", 150.72'
(℄ P.C. to ℄ P.T.)

Ⓖ
212°31'21", 171.23'
(℄ P.T. to ℄ P.C.)

Ⓗ
207°54'38", 128.65'
(℄ P.C. to ℄ P.T.)

Ⓘ
℄ P.T.
℄ Sta. 65+99.65

℄ Curve Data:

℄1
Δ=10°48'39"
Δ/2=5°24'19"
R=800.00'
T=75.70'
C=150.72'
Lc=150.95'

℄2
Δ=9°13'27"
Δ/2=4°36'44"
R=800.00'
T=64.54'
C=128.65'
Lc=128.79'

Note:
The Contractor Shall Phase Construction to Ensure 1 Lane in Each Direction Remains Operational

Graphic Scales:

1" = 40' 40' 20' 0 40' 80'

1" = 8' 8' 4' 0 8' 16'

Scale in Feet

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

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

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SIGNATURE April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Roadway Plan and Profile
℄ Sta. 58+00 to ℄ Sta. 66+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

SHEET No. C-58 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	60	XXX

Intersection F
See Sheet C-76

TMK: 9-1-018: 014
Owner: DLNR

TMK: 9-1-018: 010
Owner: D.R. Horton

TMK: 9-1-018: 010
Owner: D.R. Horton

Intersection F
℄ Sta. 66+50.95 Farrington Highway
= ℄ Sta. 0+00 Road F
Install Street Survey Monument
See Std. Plan D-08

R/W
Slope Easement

Intersection G
See Sheet C-76

True North
1" = 40'

R/W

8' Conc. Sidewalk
Curb Type 2D

r/w

30'
State Energy Corridor

Farrington Highway
(Proposed State)

203°17'55", 561.65'
(℄ P.T. to ℄ P.C.)

E.S.
E.P.

Outbound
Inbound

Matchline ℄ Sta. 66+00

64' R/W

E.P.
E.S.

R/W
Slope Easement

8' Conc. Sidewalk
Curb and Gutter
Type 2DG

Matchline ℄ Sta. 75+00

Slope Easement

℄ Road F

℄ Road G

Drain Easement

℄ P.C. Sta. 71+61.30

TMK: 9-1-017: 097
Owner: State of Hawaii

TMK: 9-1-017: 004
Owner: D.R. Horton

Farrington Highway Plan – (℄ Sta. 66+00 to ℄ Sta. 75+00)

Scale: 1" = 40'

Ⓐ

Intersection G
℄ Sta. 73+08.82 Farrington Highway
= ℄ Sta. 0+00 Road G
Install Street Survey Monument
See Std. Plan D-08

Ⓑ

219°18'16", 1102.94'
(℄ P.C. to ℄ P.T.)

℄ Curve Data:

℄1

Δ=32°00'41"
Δ/2=16°00'21"
R=2000.00'
T=573.71'
C=1102.94'
Lc=1171.41'

P.I.V.C. 164.75
E.V.C. 165.25
P.O.C.=164.67
B.V.C. 166.25
P.I.V.C. 167.00
E.V.C. 166.25
P.O.C.=166.63
B.V.C. 164.99

exist. ground along ℄ Farrington Highway

300' V.C.

Fin. grade along ℄ Farrington Hwy.

0.50%

(–)0.50%

Farrington Highway Profile – (℄ Sta. 66+00 to ℄ Sta. 75+00)

Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

Note:
The Contractor Shall Phase Construction to Ensure 1 Lane in Each Direction Remains Operational

Graphic Scales:

1" = 40' 40' 20' 0 40' 80'

1" = 8' 8' 4' 0 8' 16'

Scale in Feet

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

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

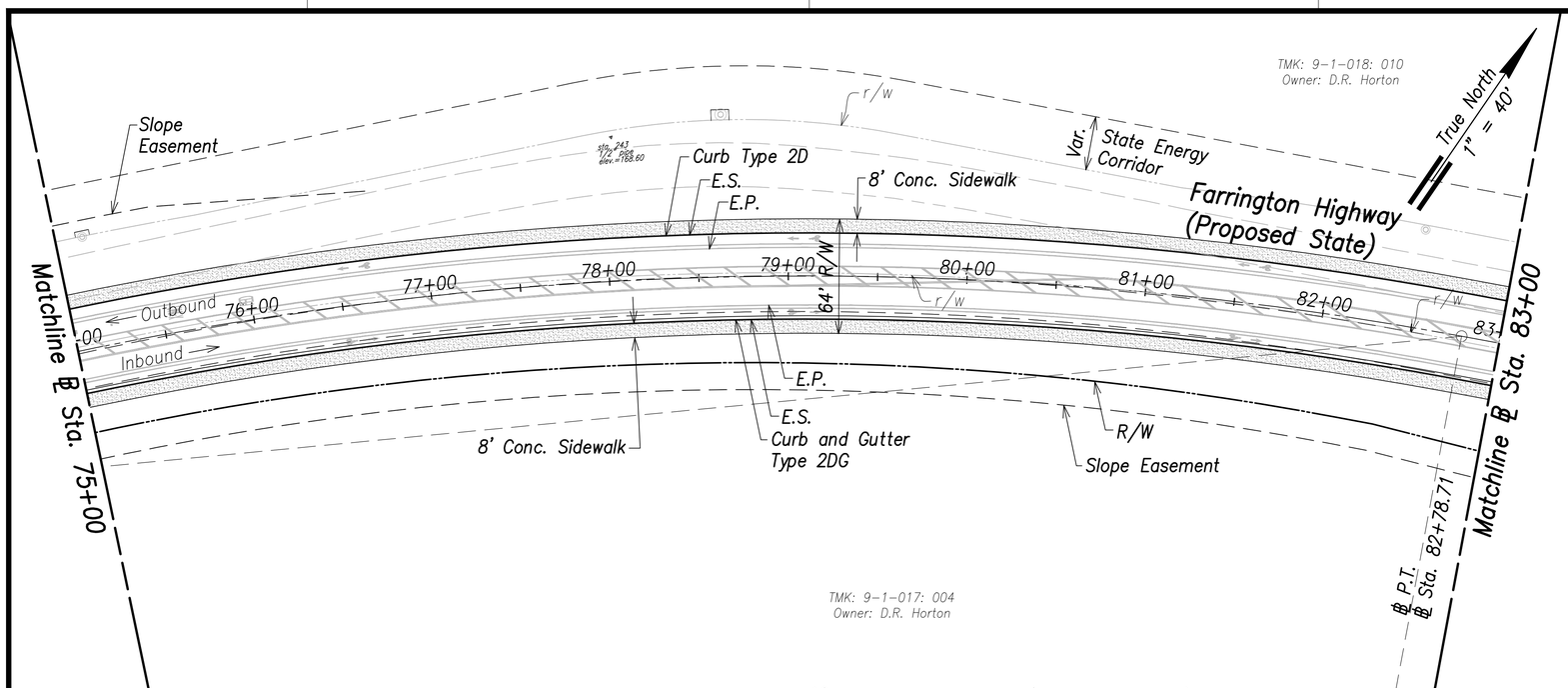
Roadway Plan and Profile
℄ Sta. 66+00 to ℄ Sta. 75+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

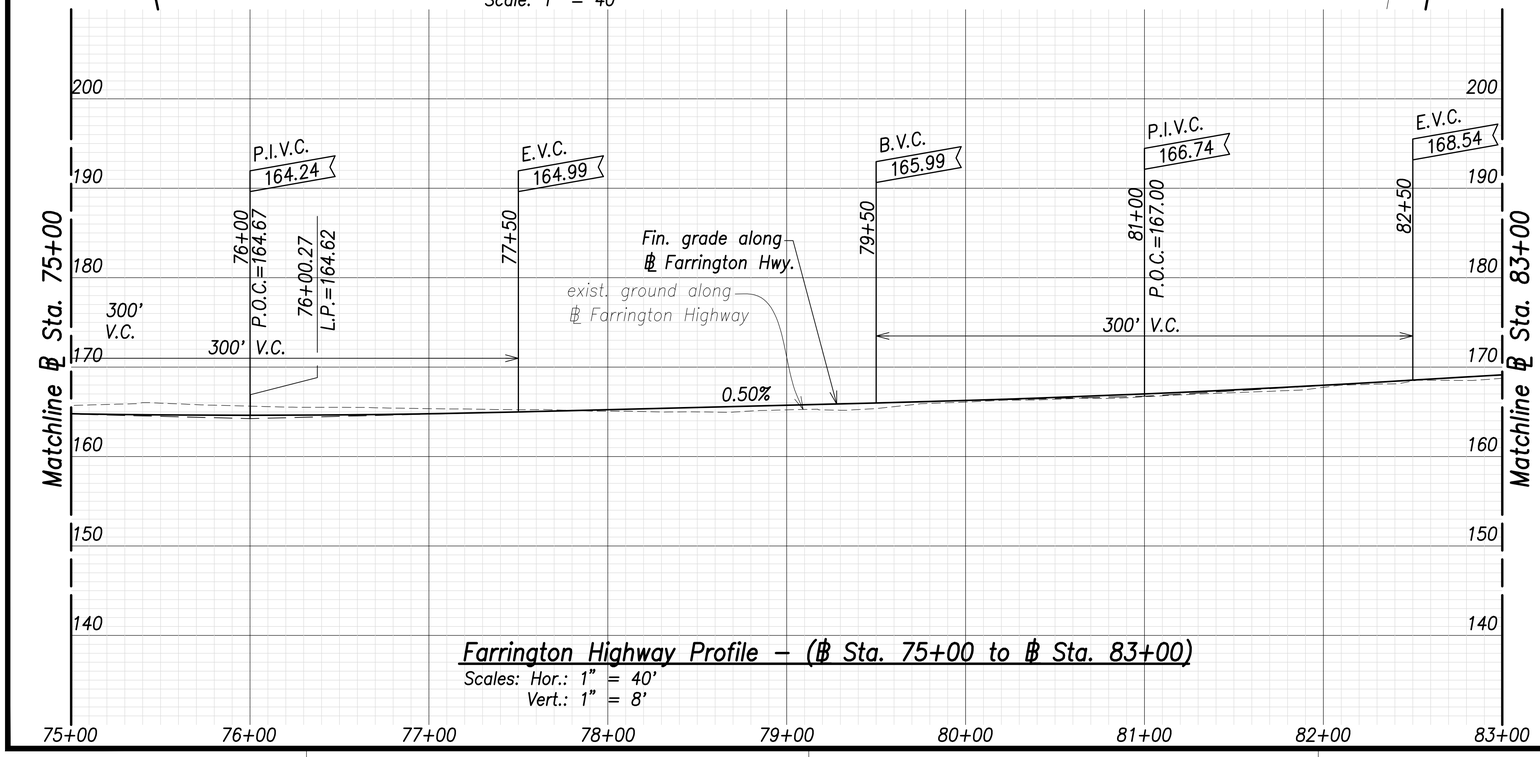
SHEET No. C-59 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	61	XXX



Farrington Highway Plan – (℄ Sta. 75+00 to ℄ Sta. 83+00)

Scale: 1" = 40'



Farrington Highway Profile – (℄ Sta. 75+00 to ℄ Sta. 83+00)

Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

Note:
The Contractor Shall Phase Construction to Ensure 1 Lane in Each Direction Remains Operational

Graphic Scales:

1" = 40' 40' 20' 0 40' 80'

1" = 8' 8' 4' 0 8' 16'

Scale in Feet

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

CRAIG W. L. LUKE
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SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

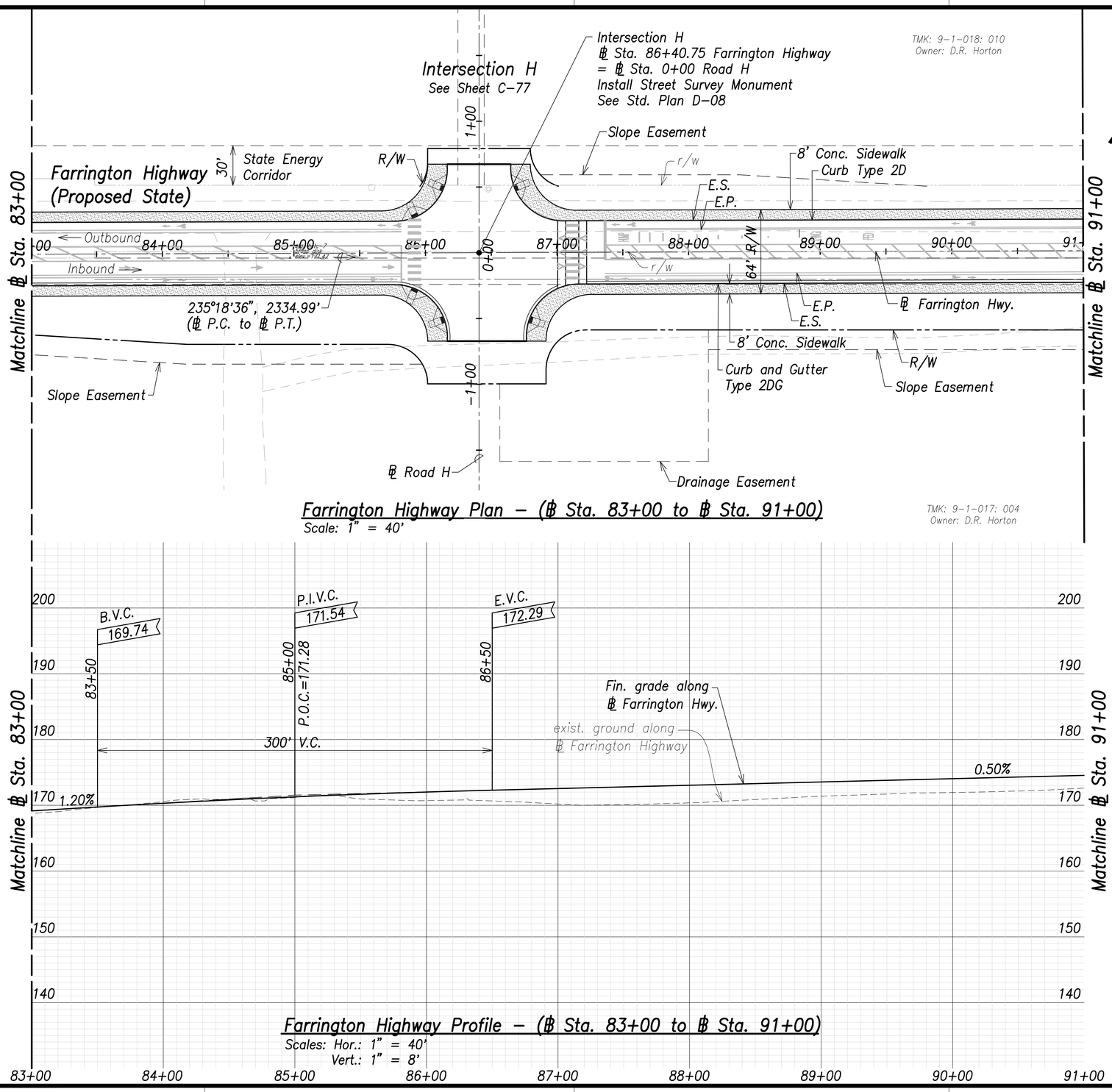
Roadway Plan and Profile ℄ Sta. 75+00 to ℄ Sta. 83+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

SHEET No. C-60 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	62	XXX



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

Note:
The Contractor Shall Phase Construction to Ensure 1 Lane in Each Direction Remains Operational

Graphic Scales:

1" = 40' 40' 20' 0 40' 80'

1" = 8' 8' 4' 0 8' 16'

Scale in Feet

CRAIG W. L. LUKE
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SIGNATURE April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Roadway Plan and Profile
℄ Sta. 83+00 to ℄ Sta. 91+00

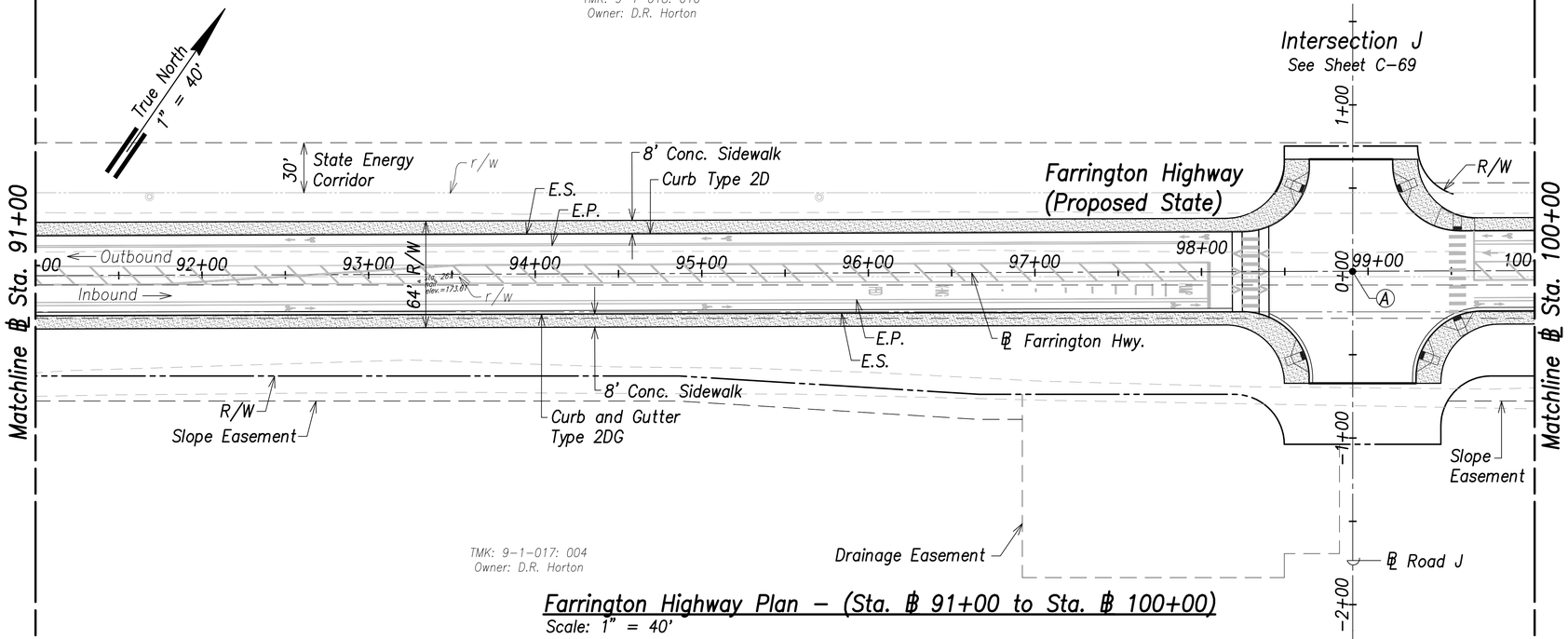
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

SHEET No. C-61 OF XXX SHEETS

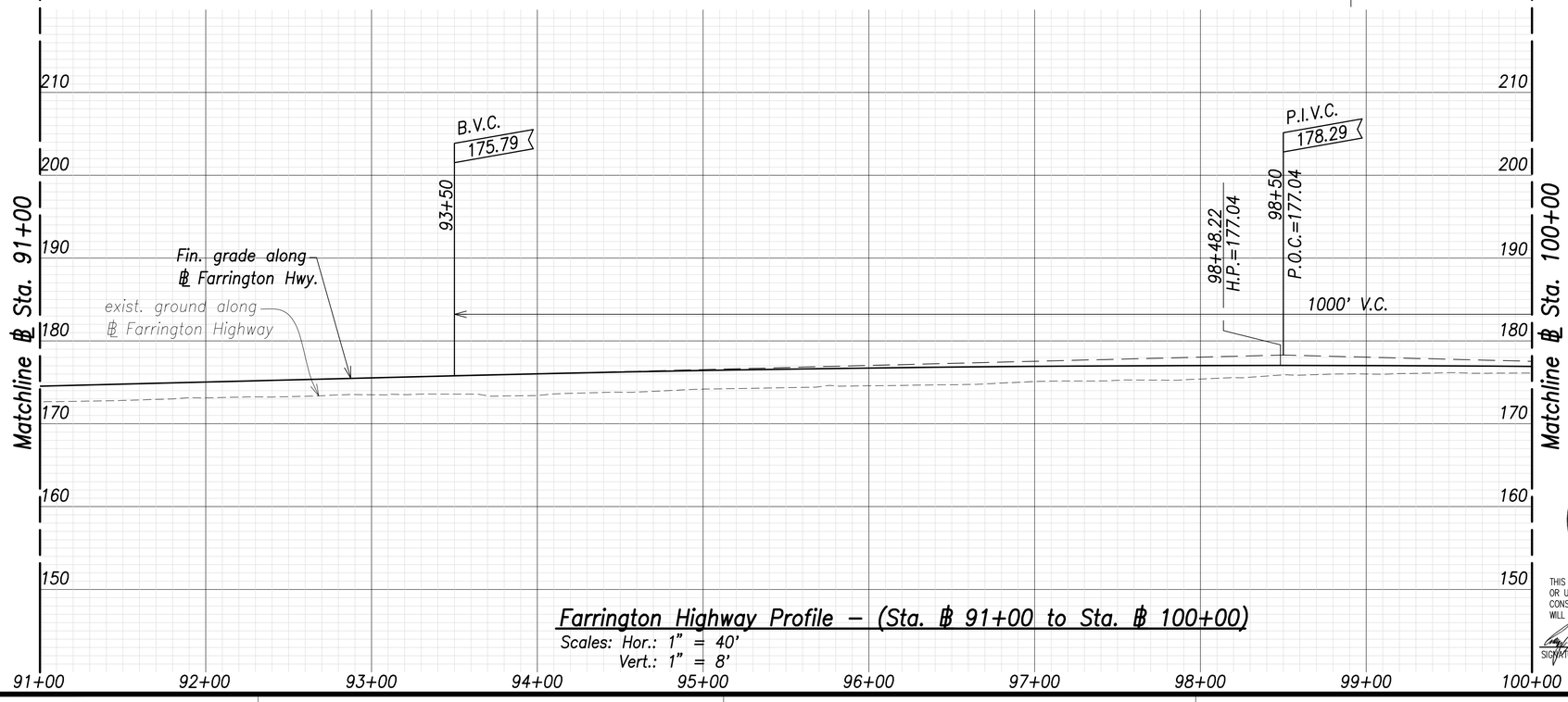
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	63	XXX

TMK: 9-1-018: 010
Owner: D.R. Horton



Farrington Highway Plan – (Sta. ℄ 91+00 to Sta. ℄ 100+00)

Scale: 1" = 40'



Farrington Highway Profile – (Sta. ℄ 91+00 to Sta. ℄ 100+00)

Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

Ⓐ
Intersection J
℄ Sta. 98+90.76 Farrington Highway
= ℄ Sta. 0+00 Road J
Install Street Survey Monument
See Std. Plan D-08

Note:
The Contractor Shall Phase Construction to Ensure 1 Lane in Each Direction Remains Operational

Graphic Scales:

1" = 40' 40' 20' 0 40' 80'

1" = 8' 8' 4' 0 8' 16'

Scale in Feet

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

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

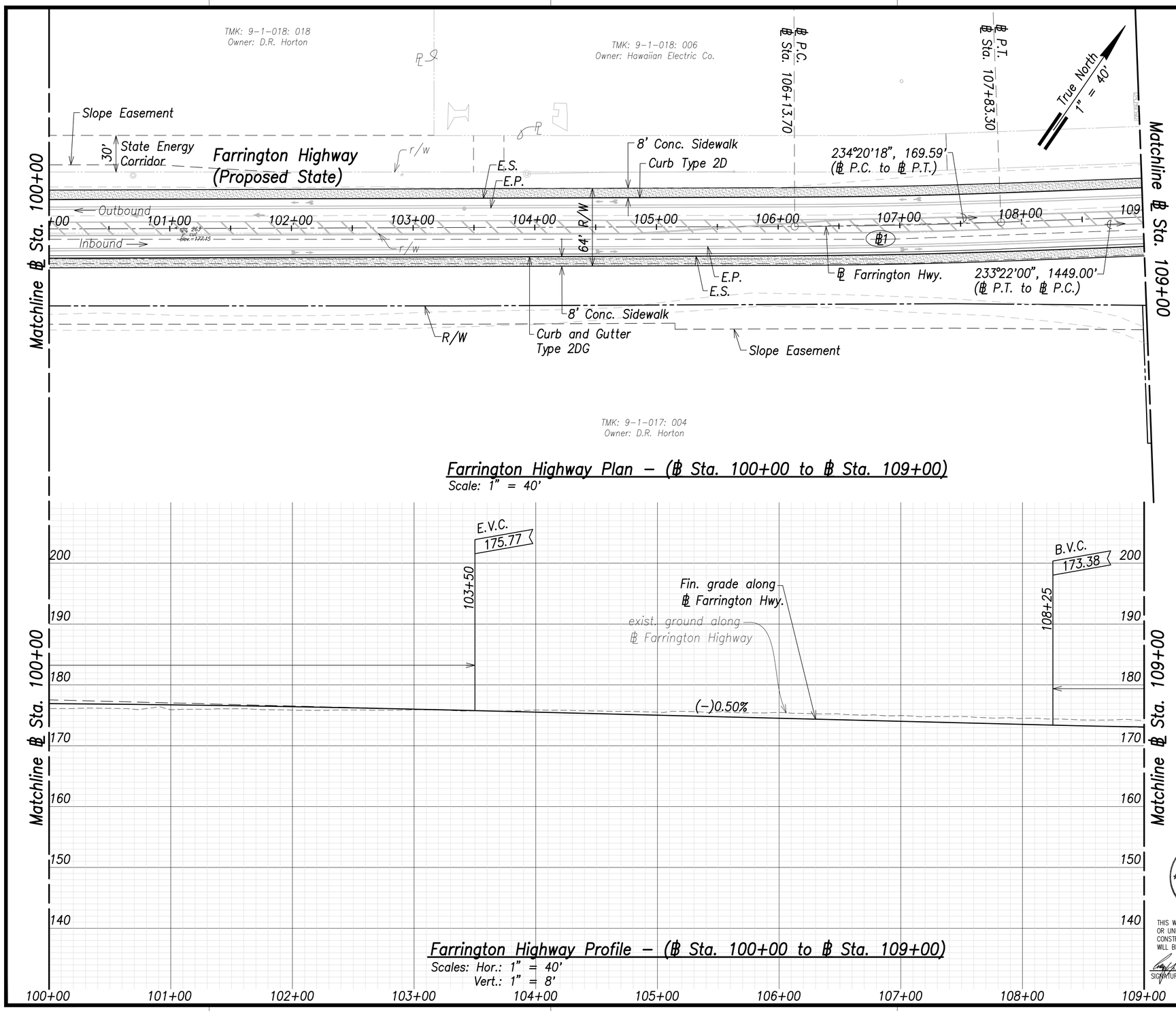
Roadway Plan and Profile
℄ Sta. 91+00 to ℄ Sta. 100+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

SHEET No. C-62 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	xxx	XXX



Farrington Highway Plan – (℄ Sta. 100+00 to ℄ Sta. 109+00)

Scale: 1" = 40'

Farrington Highway Profile – (℄ Sta. 100+00 to ℄ Sta. 109+00)

Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

℄ Curve Data:

℄1

Δ=1°56'36"
Δ/2=0°58'18"
R=5000.00'
T=84.81'
C=169.59'
Lc=169.60'

Note:
The Contractor Shall Phase Construction to Ensure 1 Lane in Each Direction Remains Operational

Graphic Scales:

1" = 40' 40' 20' 0 40' 80'

1" = 8' 8' 4' 0 8' 16'

Scale in Feet

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

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

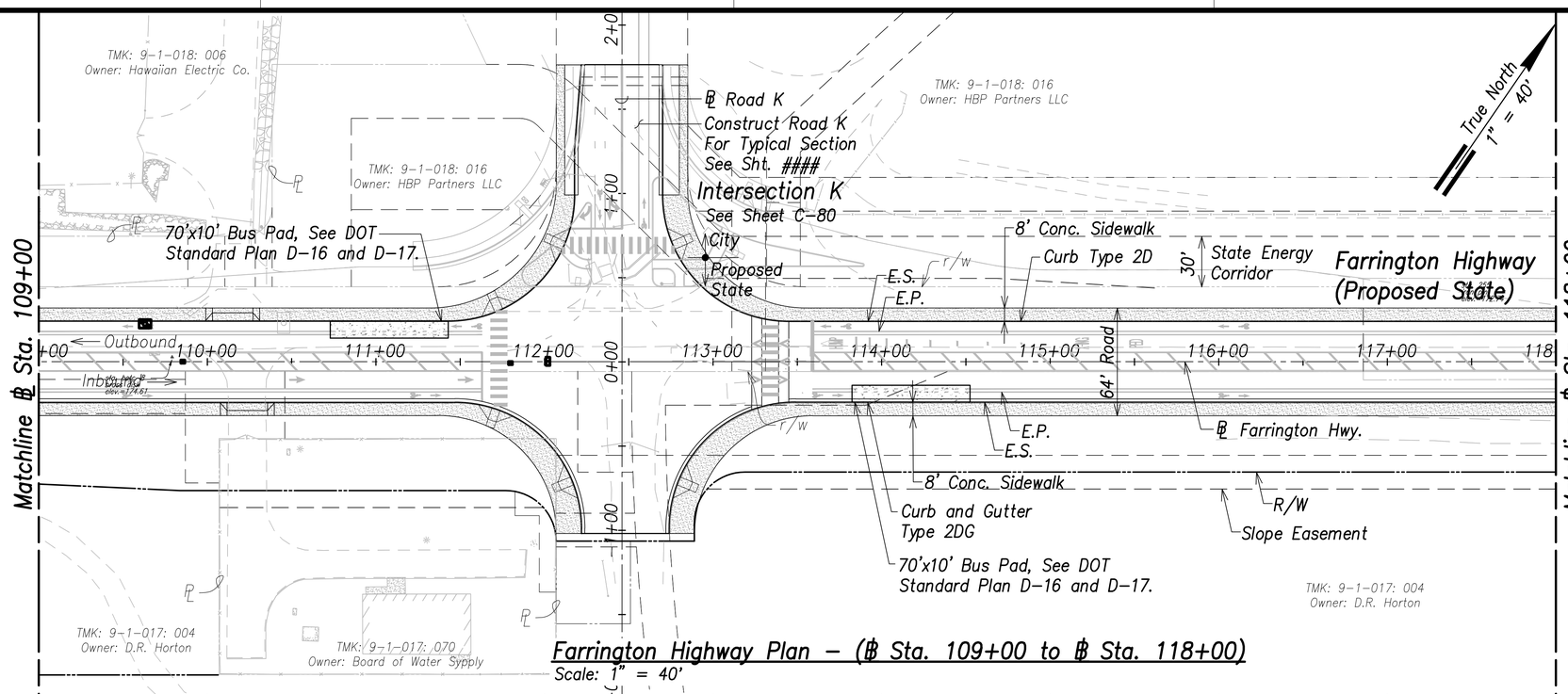
Roadway Plan and Profile
℄ Sta. 100+00 to ℄ Sta. 109+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

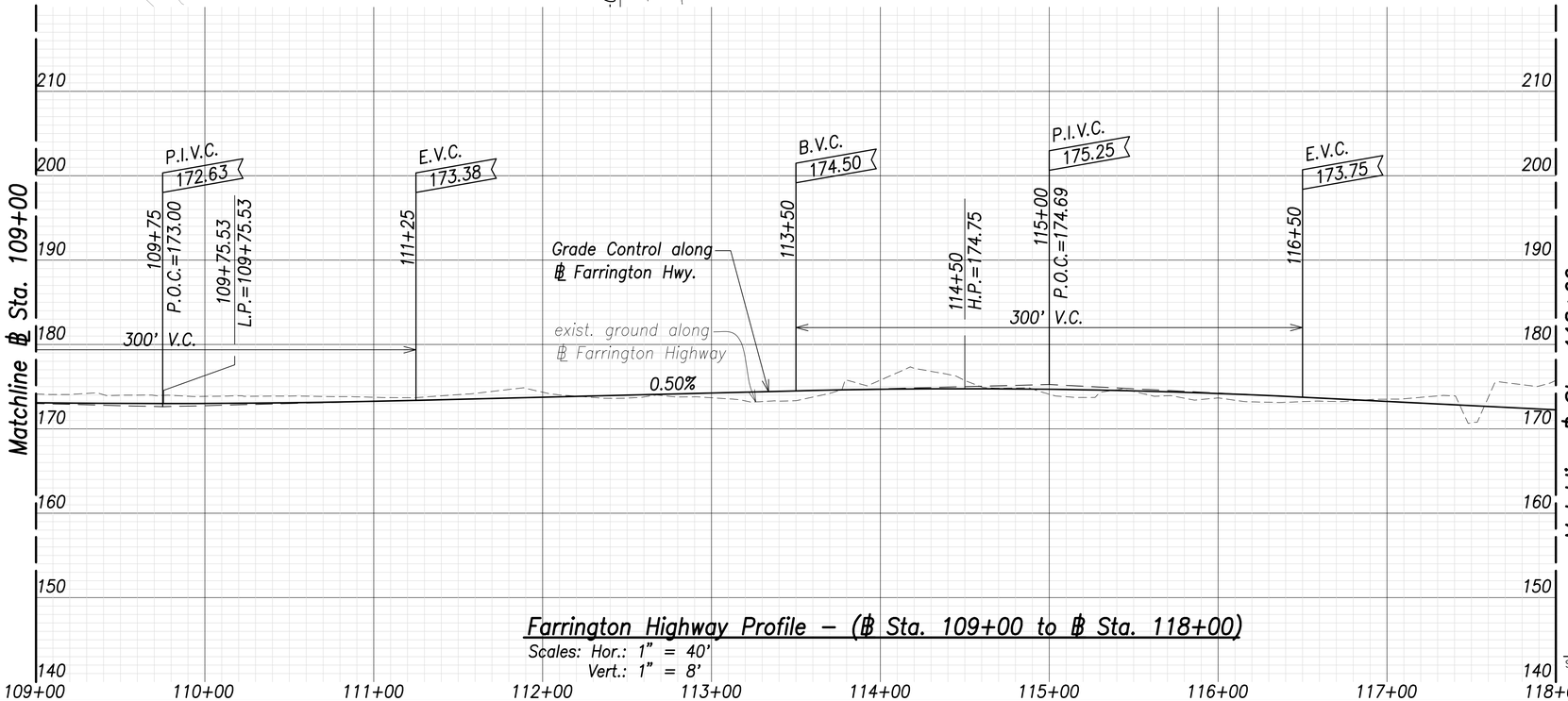
SHEET No. C-63 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	65	XXX



Farrington Highway Plan – (℄ Sta. 109+00 to ℄ Sta. 118+00)

Scale: 1" = 40'



Farrington Highway Profile – (℄ Sta. 109+00 to ℄ Sta. 118+00)

Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

Graphic Scales:

1" = 40' 40' 20' 0 40' 80'

1" = 8' 8' 4' 0 8' 16'

Scale in Feet

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

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STATE OF HAWAI'I
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

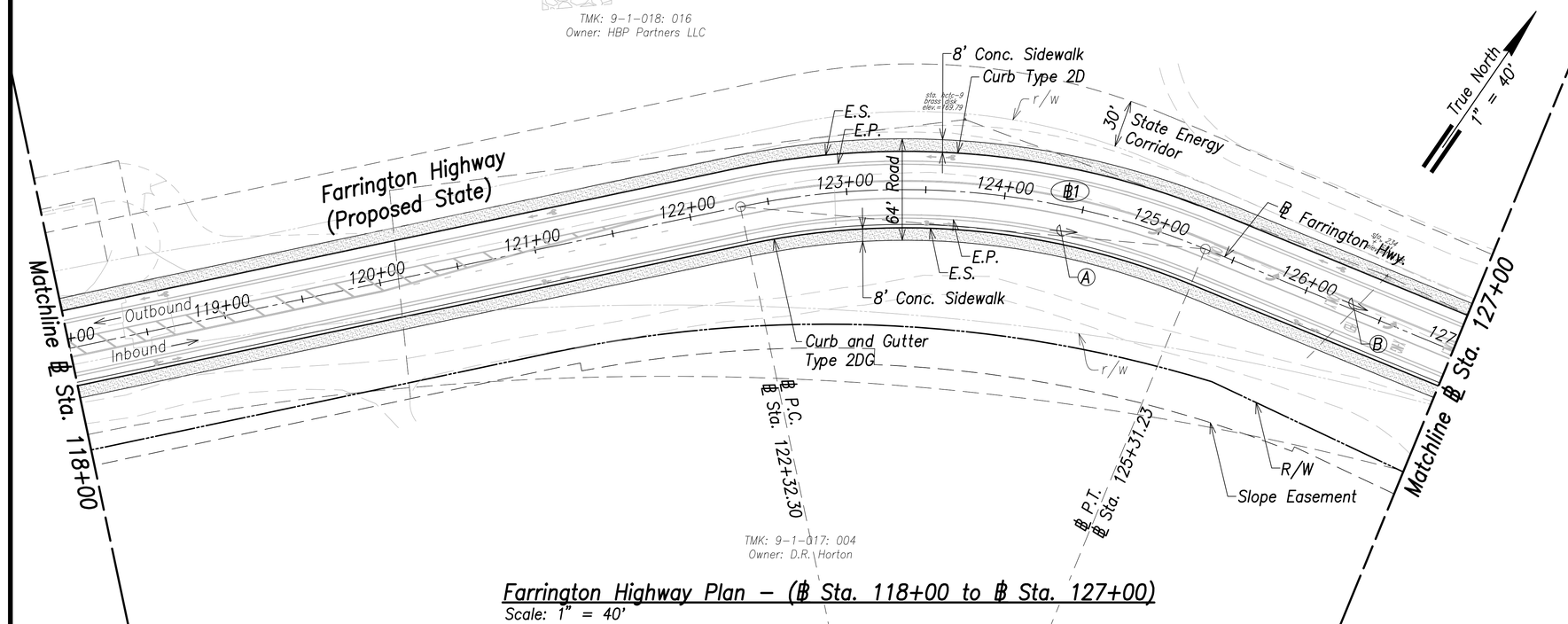
Roadway Plan and Profile
℄ Sta. 109+00 to ℄ Sta. 118+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

SHEET No. C-64 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	66	XXX



Farrington Highway Plan – (℄ Sta. 118+00 to ℄ Sta. 127+00)

Scale: 1" = 40'

℄ Curve Data:

℄1

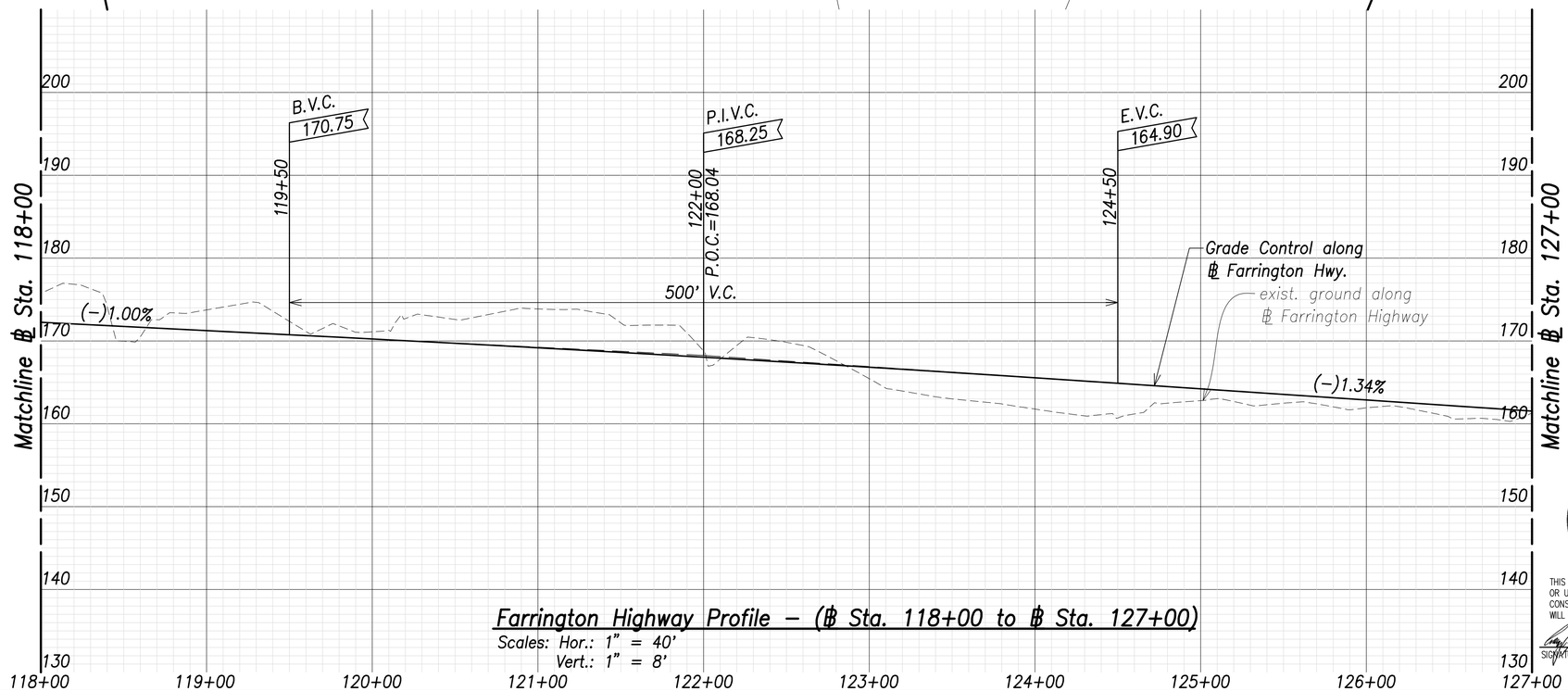
△=34°15'18"
△/2=???
R=500.00'
T=154.08'
C=294.50'
Lc=298.93'

A

250°29'39", 294.50'
(℄ P.C. to ℄ P.T.)

B

267°37'18", 635.53'
(℄ P.T. to ℄ P.C.)



Farrington Highway Profile – (℄ Sta. 118+00 to ℄ Sta. 127+00)

Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

Graphic Scale:

1" = 40' 40' 20' 0 40' 80'

1" = 8' 8' 4' 0 8' 16'

Scale in Feet

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

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 6935-C HAWAII, U.S.A.

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SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAI'I
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

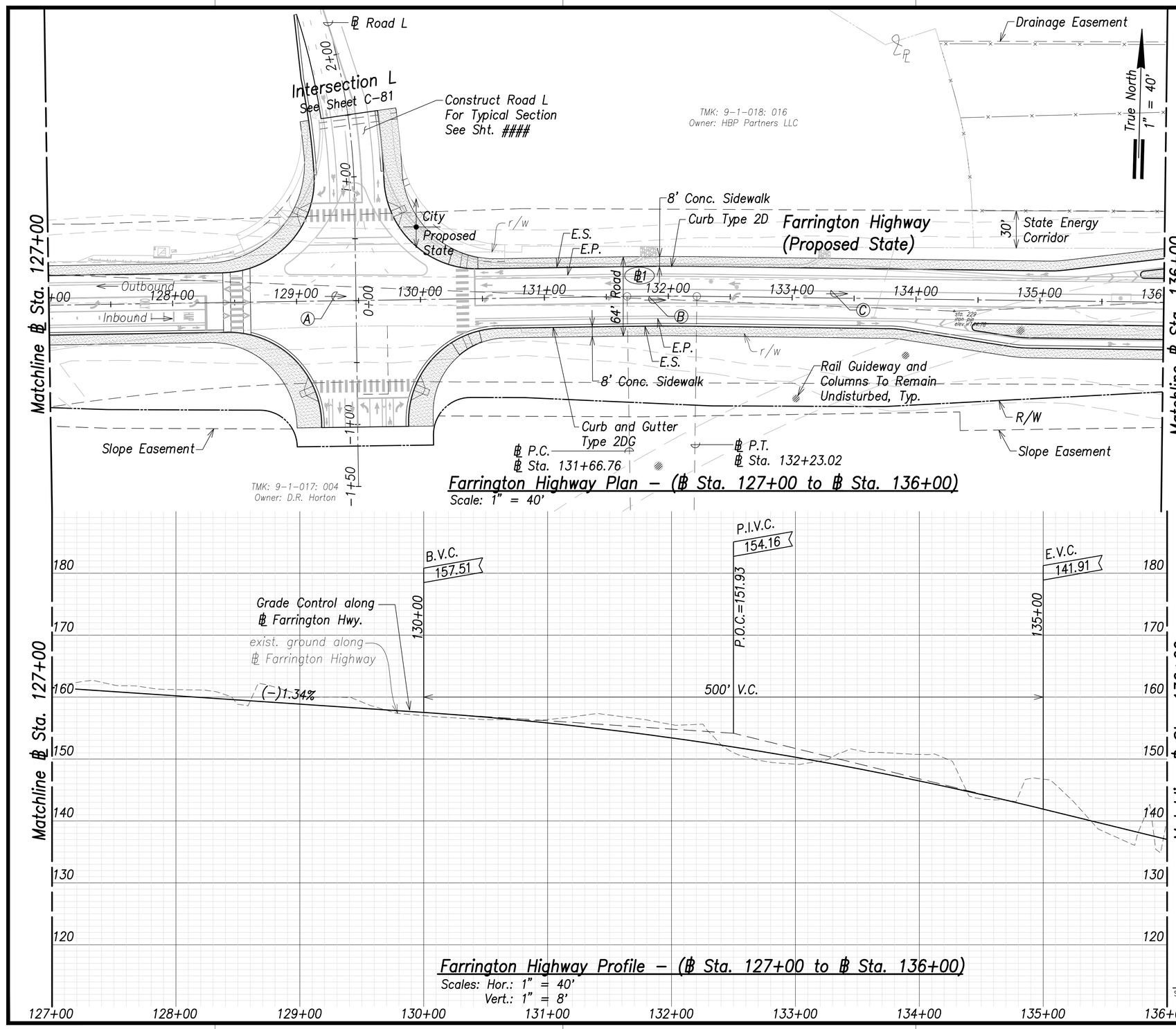
Roadway Plan and Profile
℄ Sta. 118+00 to ℄ Sta. 127+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown — Date: January 2022

SHEET No. C-65 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	67	XXX



℄ Curve Data:

℄1

Δ=1°36'42"
Δ/2=0°48'21"
R=2000.00'
T=28.13'
C=56.26'
Lc=56.26'

Ⓐ

267°37'18", 635.53'
(℄ P.T. to ℄ P.C.)

Ⓑ

267°37'18", 56.26'
(℄ P.C. to ℄ P.T.)

Ⓒ

269°14'00", 381.64'
(℄ P.T. to ℄ P.C.)

Graphic Scales:

1" = 40' 40' 20' 0 40' 80'

1" = 8' 8' 4' 0 8' 16'

Scale in Feet

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Roadway Plan and Profile
℄ Sta. 127+00 to ℄ Sta. 136+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6635-C
HAWAII, U.S.A.

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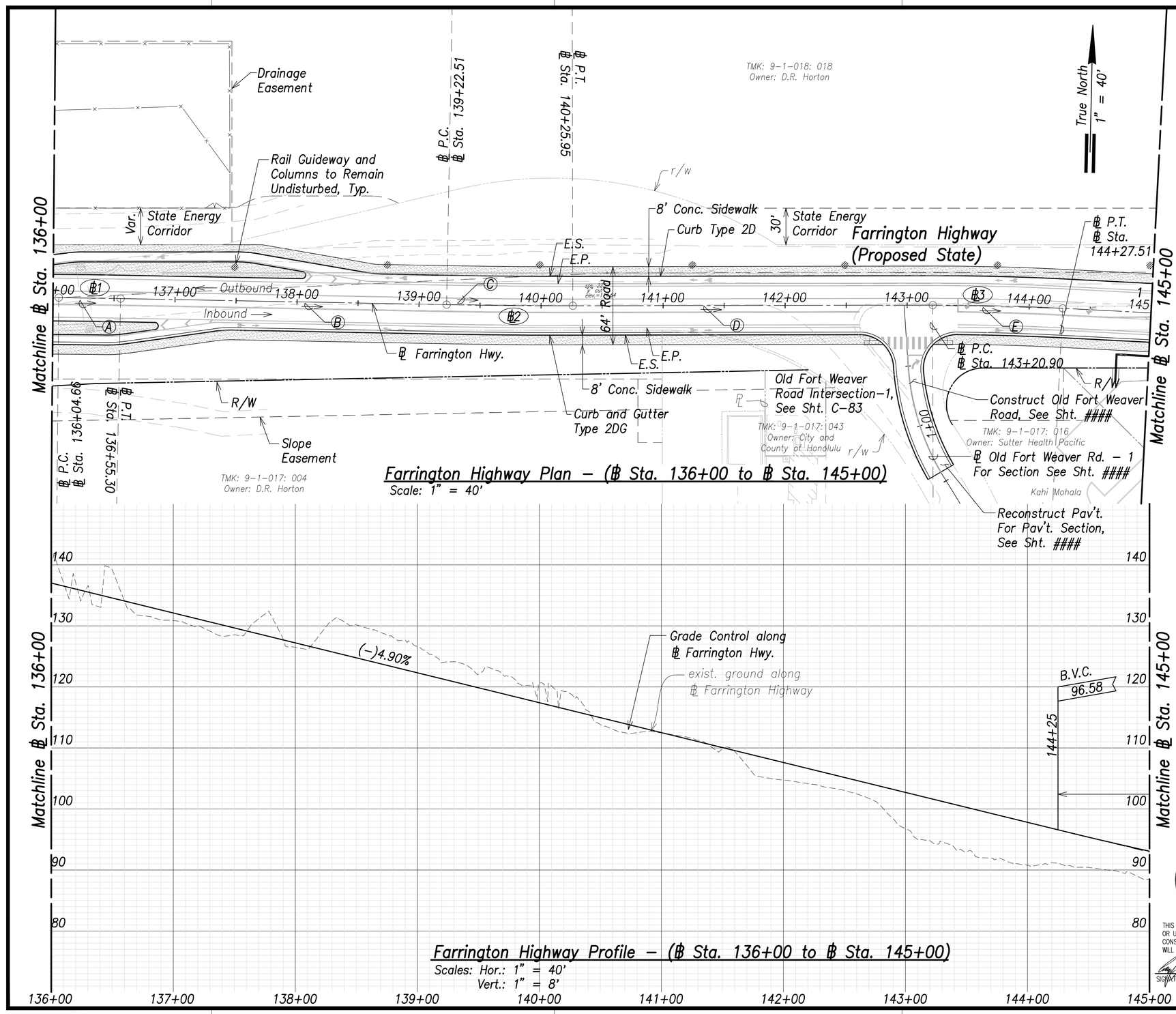
SHEET No. C-66 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	68	XXX



℄ Curve Data:

℄1

△=0°34'49"
△/2=0°17'24.5"
R=5000.00'
T=25.32'
C=50.64'
Lc=50.64'

Ⓐ

269°31'25", 50.64'
(℄ P.C. to ℄ P.T.)

Ⓑ

269°48'49", 267.22'
(℄ P.T. to ℄ P.C.)

℄2

△=1°11'07"
△/2=0°35'33.5"
R=5000.00'
T=51.72'
C=103.44'
Lc=103.44'

Ⓒ

269°13'16", 103.44'
(℄ P.C. to ℄ P.T.)

Ⓓ

268°37'42", 294.95'
(℄ P.T. to ℄ P.C.)

℄3

△=3°03'15"
△/2=1°31'37.5"
R=2000.00'
T=53.32'
C=106.60'
Lc=106.61'

Ⓔ

270°09'20", 106.60'
(℄ P.C. to ℄ P.T.)

Ⓕ

271°40'57", 217.74'
(℄ P.T. to ℄ P.C.)

Graphic Scales:

1" = 40' 40' 20' 0 40' 80'

1" = 8' 8' 4' 0 8' 16'

Scale in Feet

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

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No. 6935-C
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Roadway Plan and Profile
℄ Sta. 136+00 to ℄ Sta. 145+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown — Date: January 2022

SHEET No. C-67 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	69	XXX

TMK: 9-1-018: 018
Owner: D.R. Horton

Honouliuli Stream

℄ P.C. ℄ Sta. 146+45.25

℄ P.T. ℄ Sta. 147+48.20

True North
1" = 40'

Construction Easement

Rail Guideway and Columns To Remain Undisturbed, Typ.

30' State Energy Corridor

8' Conc. Sidewalk

Curb Type 2D

r/w

70'x10' Bus Pad, See DOT Standard Plan D-16 and D-17.

Farrington Highway (Proposed State)

E.S.
E.P.

Matchline ℄ Sta. 145+00

+00 Outbound 146+00 147+00 148+00 149+00 150+00 151+00 152+00 153+00 154

Inbound

Ⓐ

64' Road

℄1

Ⓑ

℄ Farrington Hwy.

Honouliuli Stream Bridge, See Struct. Dwgs.

Sta. 221
elev.=83.69

E.P.
E.S.

r/w

8' Conc. Sidewalk

Curb and Gutter Type 2DG

Construction Easement

R/W

Slope Easement

Matchline ℄ Sta. 154+00

TMK: 9-1-017: 016
Owner: Campbell Estates/Sutter Pacific Health

Kahi Mohala

Farrington Highway Plan – (℄ Sta. 145+00 to ℄ Sta. 154+00)

Scale: 1" = 40'

℄ Curve Data:

Ⓐ

271°40'057", 217.74'
(℄ P.T. to ℄ P.C.)

Ⓑ

270°12'29", 102.94'
(℄ P.C. to ℄ P.T.)

Ⓒ

268°44'00", 718.74'
(℄ P.T. to ℄ P.C.)

℄1

△=2°56'57"
△/2=1°28'28.5"
R=2000.00'
T=51.49'
C=102.94'
Lc=102.95'

P.I.V.C. 91.68
145+25
P.O.C.=91.99
200' V.C.
E.V.C. 88.00
146+25
B.V.C. 85.97
146+80
(-)3.69%
P.I.V.C. 82.28
147+80
P.O.C.=83.33
200' V.C.
148+56.13
L.P.=82.72
148+80
E.V.C. 82.78

Grade Control along ℄ Farrington Hwy.
exist. ground along ℄ Farrington Highway
See Structural Dwgs. for Bridge Deck Grades
0.50%

Matchline ℄ Sta. 143+00

Matchline ℄ Sta. 154+00

120 110 100 90 80 70 60 50

145+00 146+00 147+00 148+00 149+00 150+00 151+00 152+00 153+00 154+00

Farrington Highway Profile – (℄ Sta. 143+00 to ℄ Sta. 154+00)

Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

Graphic Scales:

1" = 40' 40' 20' 0 40' 80'

1" = 8' 8' 4' 0 8' 16'

Scale in Feet

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

CRAIG W. L. LUKE
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SIGNATURE April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

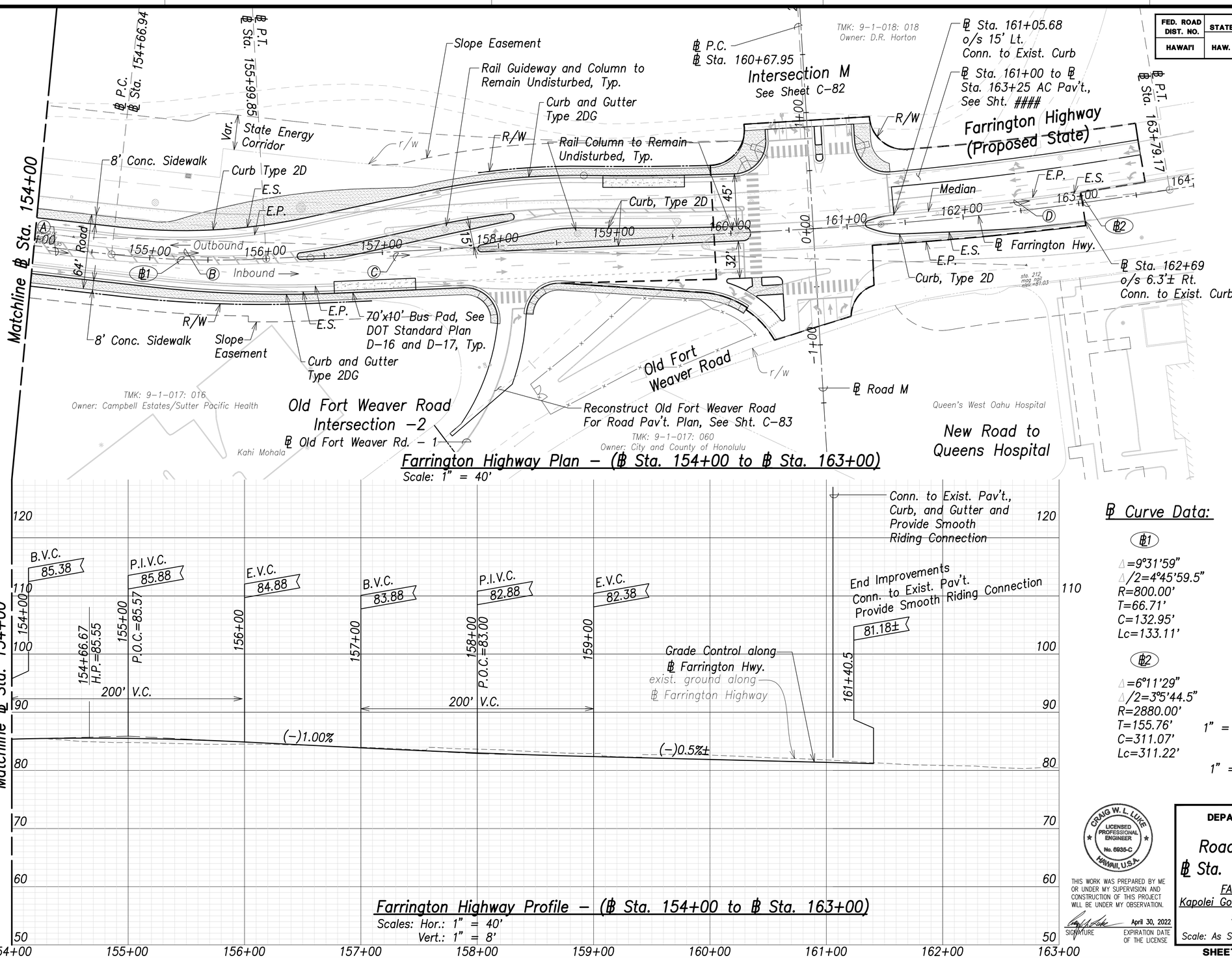
Roadway Plan and Profile ℄ Sta. 145+00 to ℄ Sta. 154+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

SHEET No. C-68 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	70	XXX



Ⓐ
268°44'00", 718.74'
(℄ P.T. to ℄ P.C.)

Ⓑ
263°58'01", 132.95'
(℄ P.C. to ℄ P.T.)

Ⓒ
259°12'01",467.91'
(℄ P.T. to ℄ P.C.)

Ⓓ
266°06'17", 311.07'
(℄ P.C. to ℄ P.T.)

℄ Curve Data:

℄1
Δ=9°31'59"
Δ/2=4°45'59.5"
R=800.00'
T=66.71'
C=132.95'
Lc=133.11'

℄2
Δ=6°11'29"
Δ/2=3°5'44.5"
R=2880.00'
T=155.76'
C=311.07'
Lc=311.22'

Graphic Scales:
1" = 40' 40' 20' 0 40' 80'
1" = 8' 8' 4' 0 8' 16'
Scale in Feet

Farrington Highway Profile - (℄ Sta. 154+00 to ℄ Sta. 163+00)
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

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

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

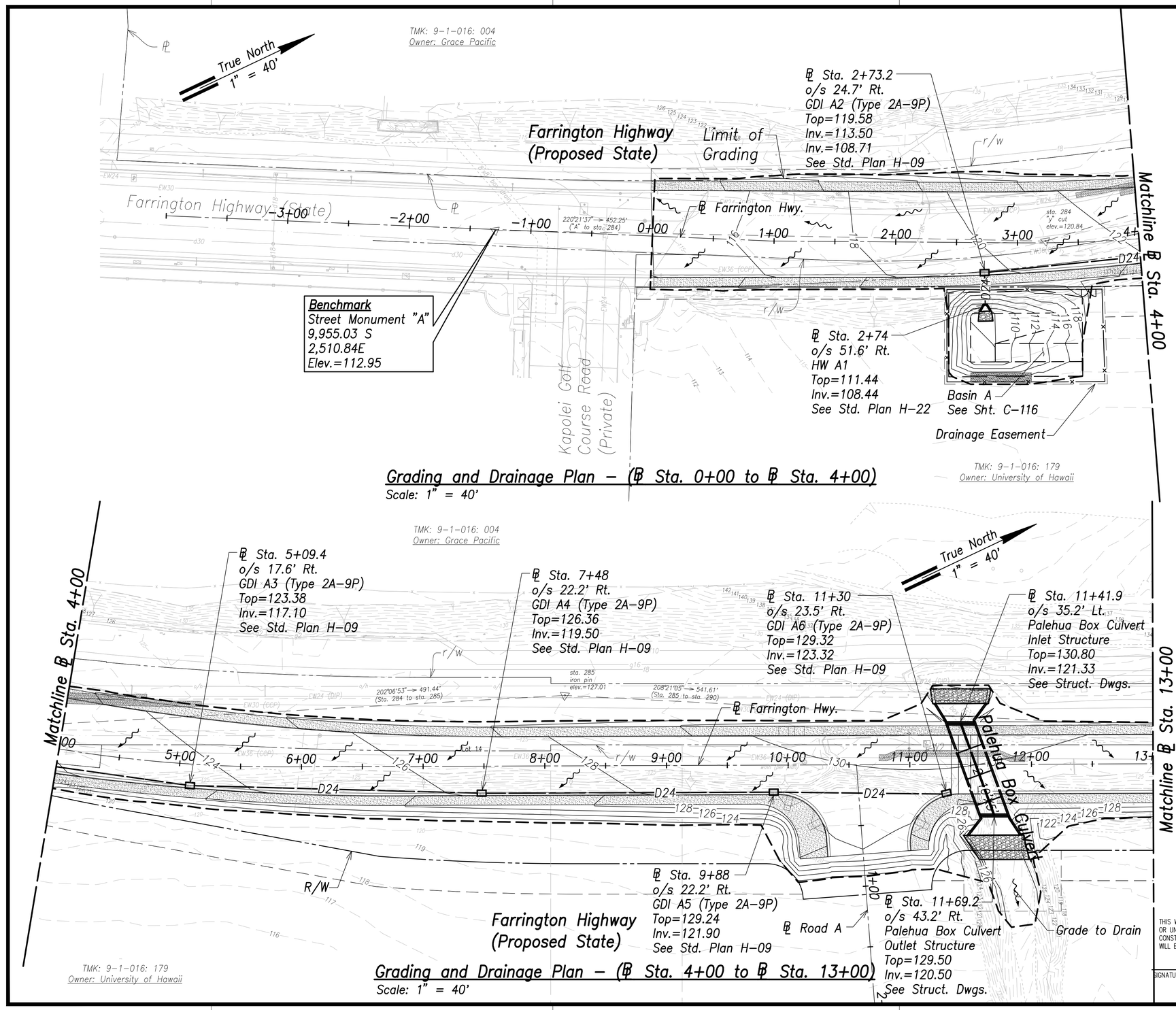
Roadway Plan and Profile ℄ Sta. 154+00 to ℄ Sta. 163+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

SHEET No. C-69 OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	99	XXX



Legend:

- 70 — Existing Grade Contour
- 100 — Finished Grade Contour
- Limit of Grading
- Drainage Flow Direction

Notes:

1. The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
2. See Access to Farm Lots notes on sheet C-3

Graphic Scale:
1" = 40' (40' 20' 0 40' 80')
Scale in Feet

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Grading and Drainage Plan ℄ Sta. 0+00 to ℄ Sta. 13+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

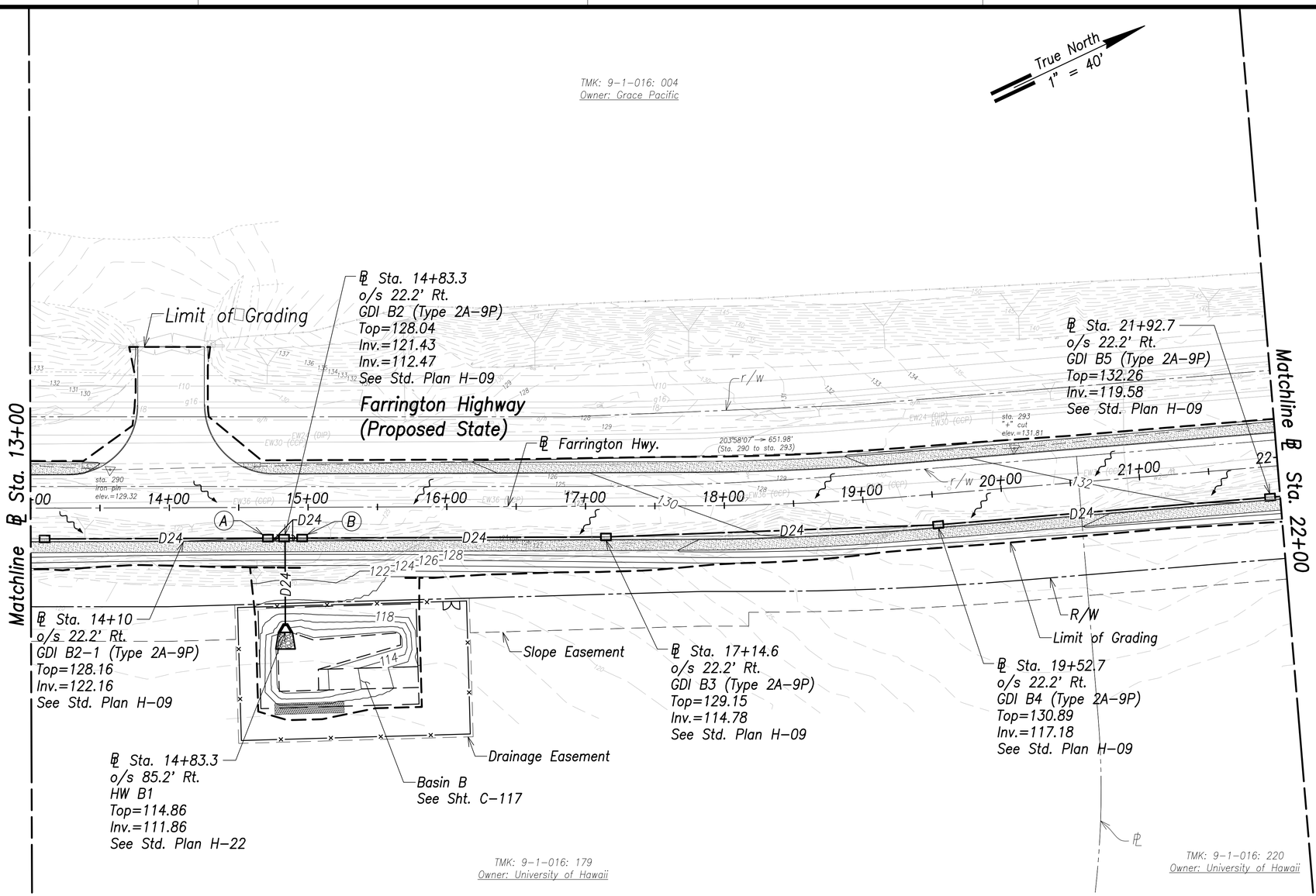
Scale: As Shown Date: January 2022

SHEET No. OF XXX SHEETS

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE April 30, 2022 EXPIRATION DATE OF THE LICENSE

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	100	XXX



Legend:

- Existing Grade Contour (70)
- Finished Grade Contour (100)
- Limit of Grading
- Drainage Flow Direction

Notes:

1. The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
2. See Access to Farm Lots notes on sheet C-3

Graphic Scale:
1" = 40' (40' 20' 0 40' 80')
Scale in Feet

(A)
℄ Sta. 14+71
o/s 22.2' Rt.
GDI B2-A (Type 2A-9P)
Top=128.05
Inv.=121.07
See Std. Plan H-09

(B)
℄ Sta. 14+95.7
o/s 22.2' Rt.
GDI B2-B (Type 2A-9P)
Top=128.05
Inv.=112.59
See Std. Plan H-09

Grading and Drainage Plan – (℄ Sta. 13+00 to ℄ Sta. 22+00)

Scale: 1" = 40'

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

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

April 30, 2022
SIGNATURE — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Grading and Drainage Plan ℄ Sta. 13+00 to ℄ Sta. 22+00

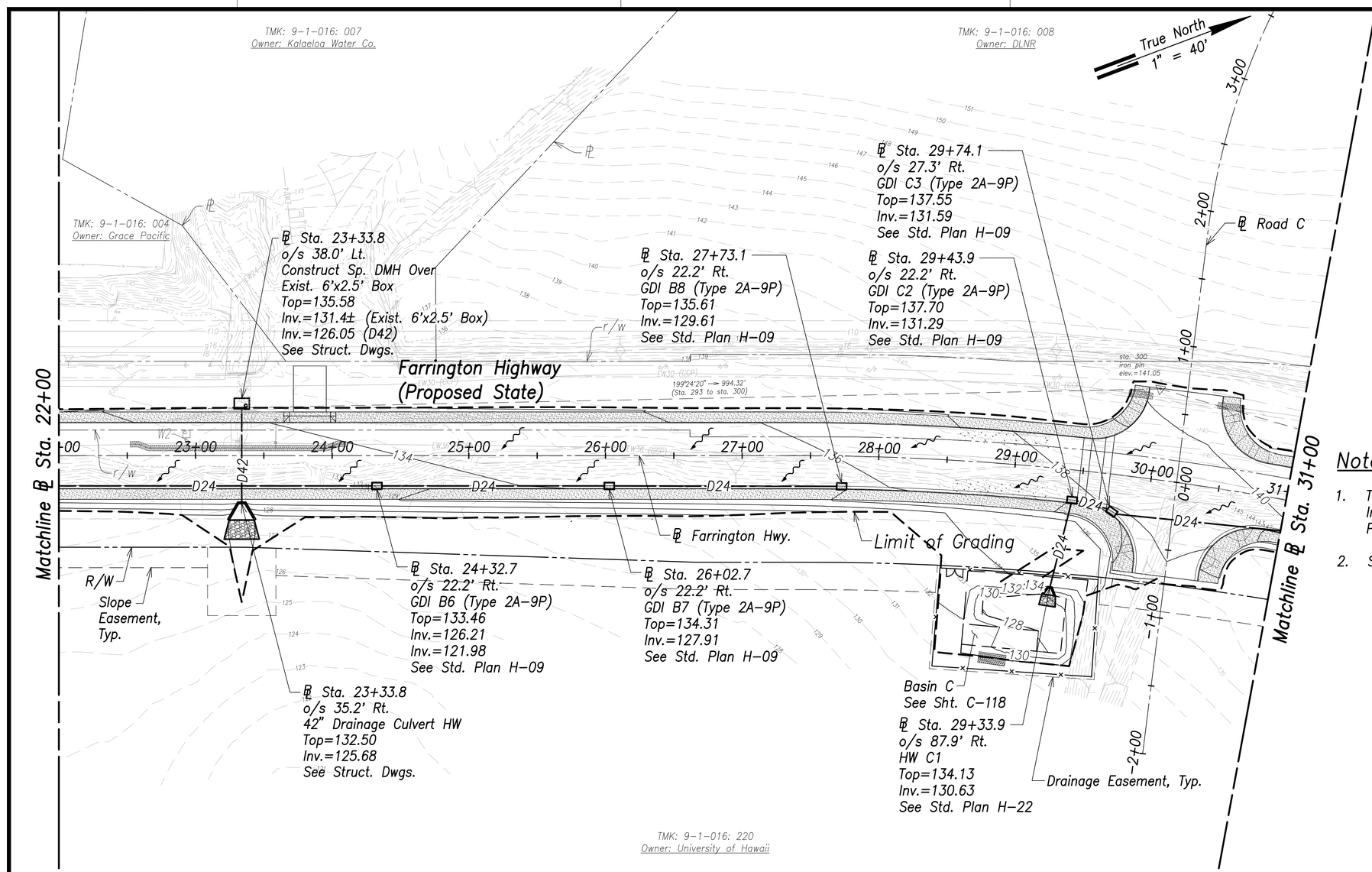
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown — Date: January 2022

SHEET No. OF XXX SHEETS

100

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	101	XXX



Notes:

1. The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
2. See Access to Farm Lots notes on sheet C-3

Legend:

- 70 — Existing Grade Contour
- 100 — Finished Grade Contour
- Limit of Grading
- Drainage Flow Direction

Graphic Scale:

1" = 40' 40' 20' 0 40' 80'

Scale in Feet

Grading and Drainage Plan – (℄ Sta. 22+00 to ℄ Sta. 31+00)

Scale: 1" = 40'

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

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

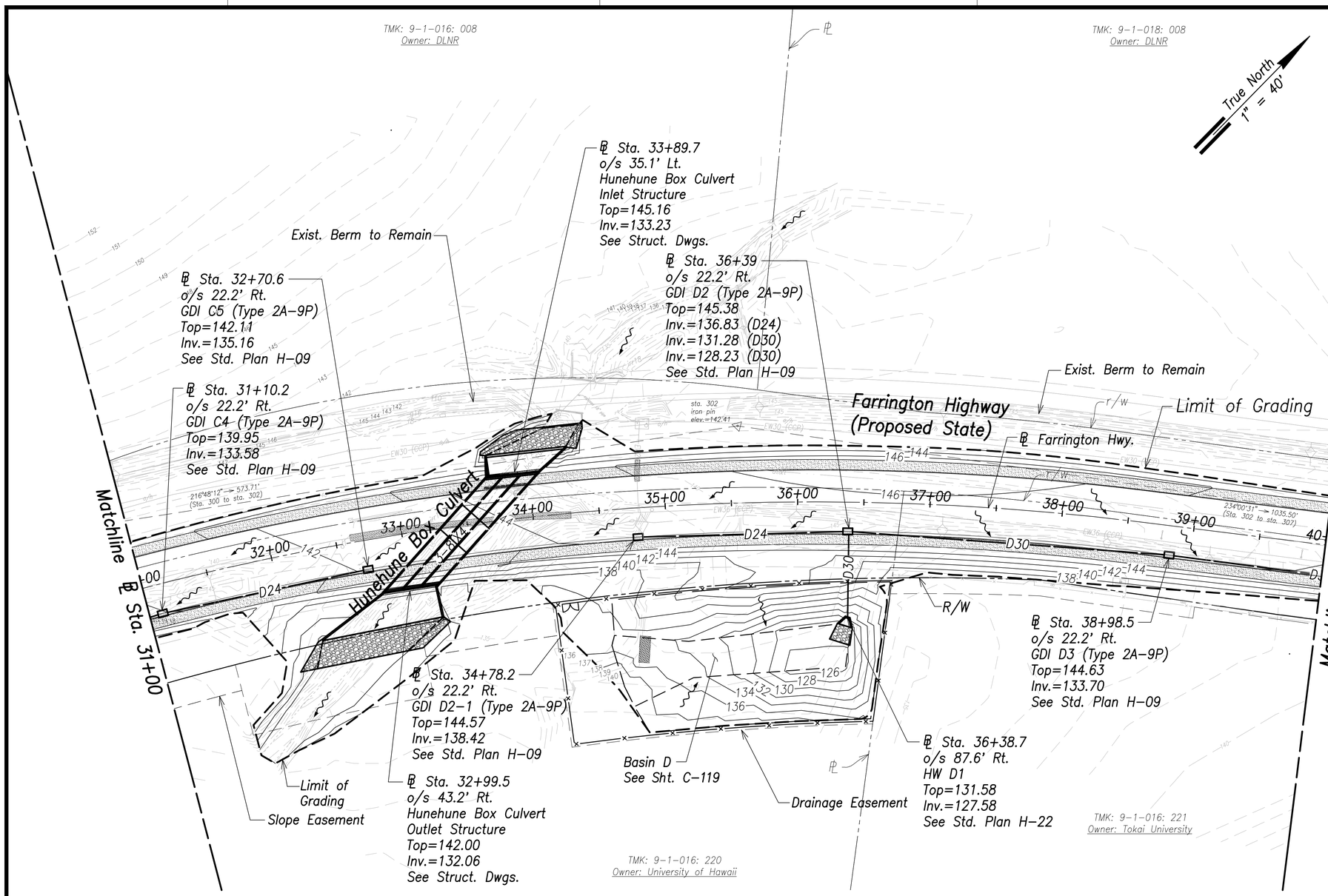
Grading and Drainage Plan ℄ Sta. 22+00 to ℄ Sta. 31+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

SHEET No. OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	102	XXX



Legend:

- 70 — Existing Grade Contour
- 100 — Finished Grade Contour
- Limit of Grading
- Drainage Flow Direction

Notes:

1. The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
2. See Access to Farm Lots notes on sheet C-3

Graphic Scale:

1" = 40' (40' 20' 0 40' 80')

Scale in Feet

Grading and Drainage Plan – (℄ Sta. 31+00 to ℄ Sta. 40+00)

Scale: 1" = 40'

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

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

April 30, 2022

SIGNATURE — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Grading and Drainage Plan ℄ Sta. 31+00 to ℄ Sta. 40+00

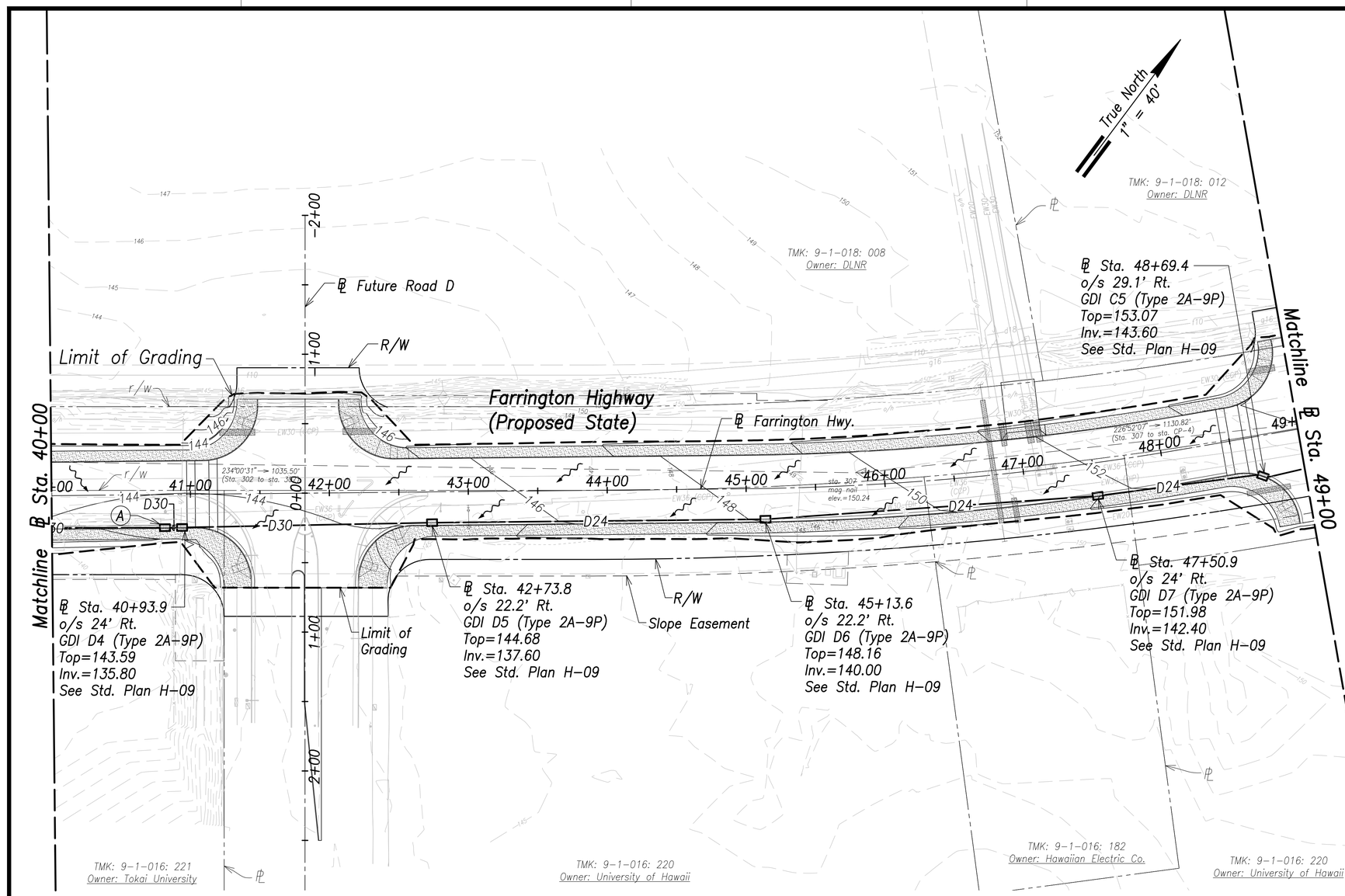
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown — Date: January 2022

SHEET No. OF XXX SHEETS

102

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	103	XXX



Ⓐ

℄ Sta. 40+81.5
o/s 23.8' Rt.
GDI D4-A (Type 2A-9P)
Top=143.40
Inv.=136.68
See Std. Plan H-09

Grading and Drainage Plan – (℄ Sta. 40+00 to ℄ Sta. 49+00)

Scale: 1" = 40'

Notes:

1. The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
2. See Access to Farm Lots notes on sheet C-3

Legend:

- 70 — Existing Grade Contour
- 100 — Finished Grade Contour
- Limit of Grading
- Drainage Flow Direction

Graphic Scale:

1" = 40' (40' 20' 0 40' 80')

Scale in Feet

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

STATE OF HAWAI'I
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Grading and Drainage Plan
℄ Sta. 40+00 to ℄ Sta. 49+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

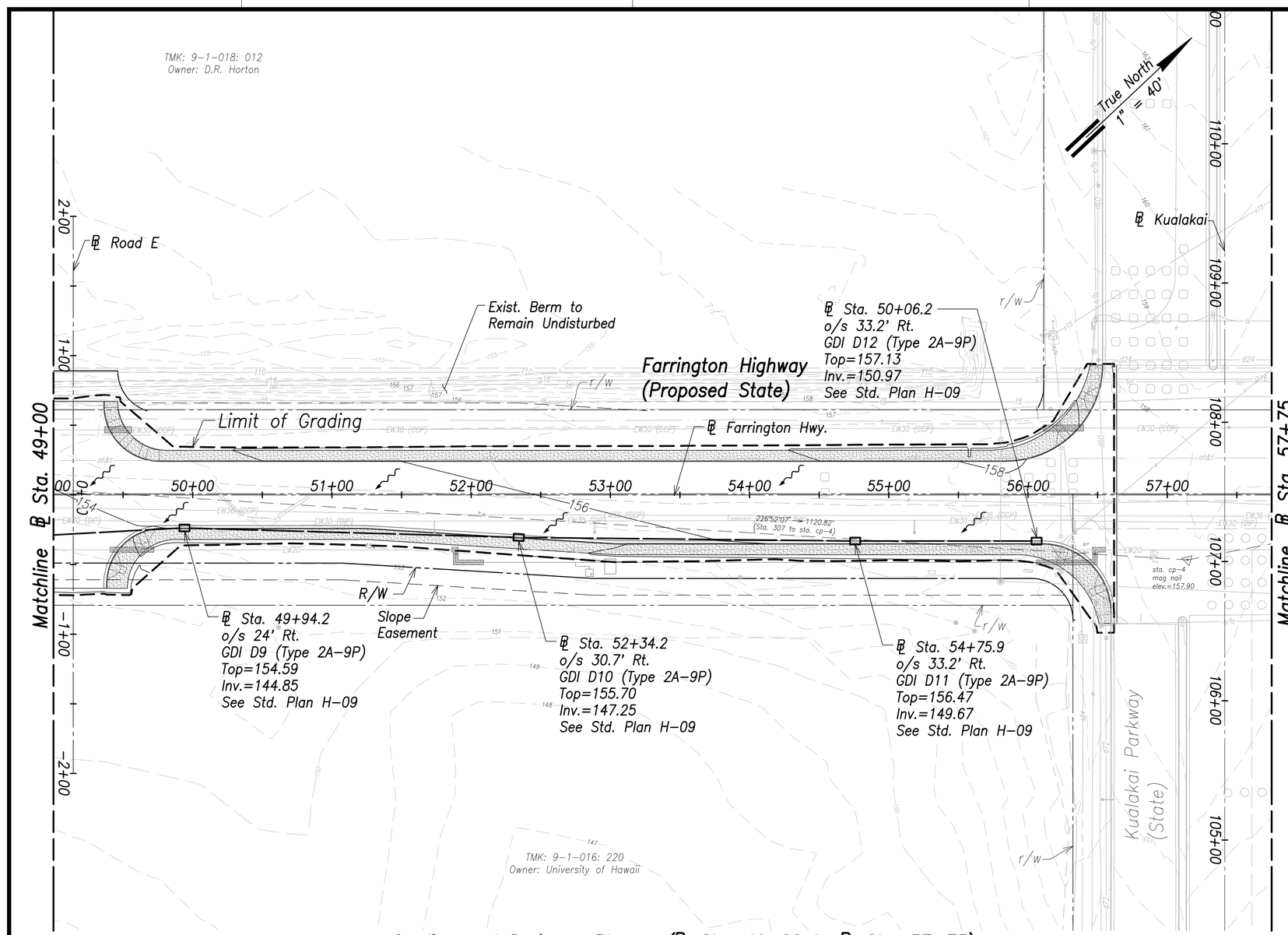
Scale: As Shown Date: January 2022

SHEET No. OF XXX SHEETS

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — April 30, 2022 — EXPIRATION DATE OF THE LICENSE

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	104	XXX



Grading and Drainage Plan – (℄ Sta. 49+00 to ℄ Sta. 57+75)

Scale: 1" = 40'

Legend:

- Existing Grade Contour
- Finished Grade Contour
- Limit of Grading
- Drainage Flow Direction

Notes:

1. The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
2. See Access to Farm Lots notes on sheet C-3

Graphic Scale:
1" = 40' (40' 20' 0 40' 80')
Scale in Feet

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Grading and Drainage Plan ℄ Sta. 49+00 to ℄ Sta. 57+75

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

SHEET No. OF XXX SHEETS

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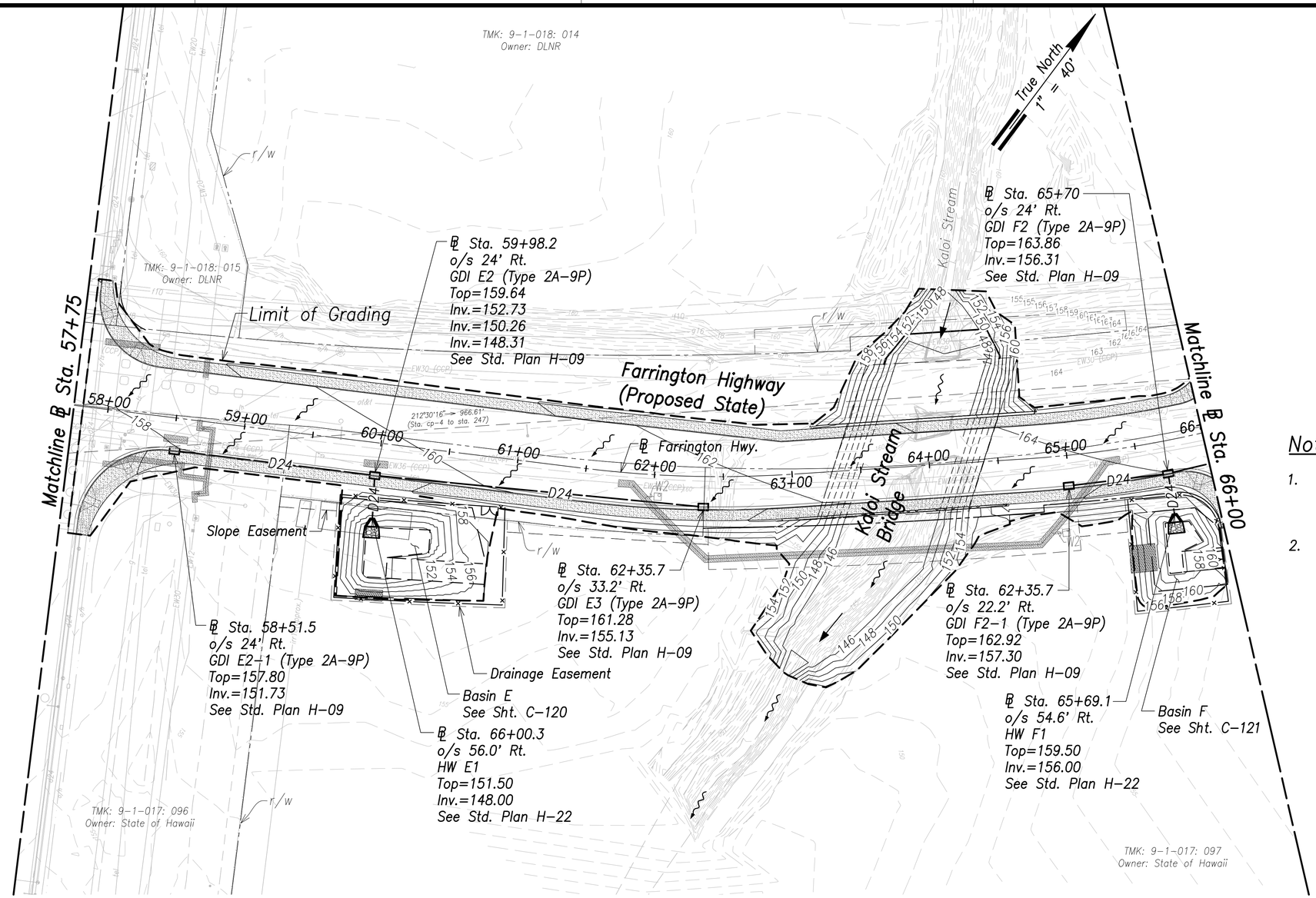
SIGNATURE

April 30, 2022
EXPIRATION DATE OF THE LICENSE

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	105	XXX



Grading and Drainage Plan – (℄ Sta. 57+75 to ℄ Sta. 66+00)

Scale: 1" = 40'

Notes:

1. The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
2. See Access to Farm Lots notes on sheet C-3

Legend:

- 70 — Ground Contour
- 100 — Finished Grade Contour
- 70 — Finished Grade Contour (Under Bridge)
- Limit of Grading
- Existing Flow
- Proposed Flow

Graphic Scale:

1" = 40' (40' 20' 0 40' 80')

Scale in Feet

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Grading and Drainage Plan
℄ Sta. 57+75 to ℄ Sta. 66+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

April 30, 2022

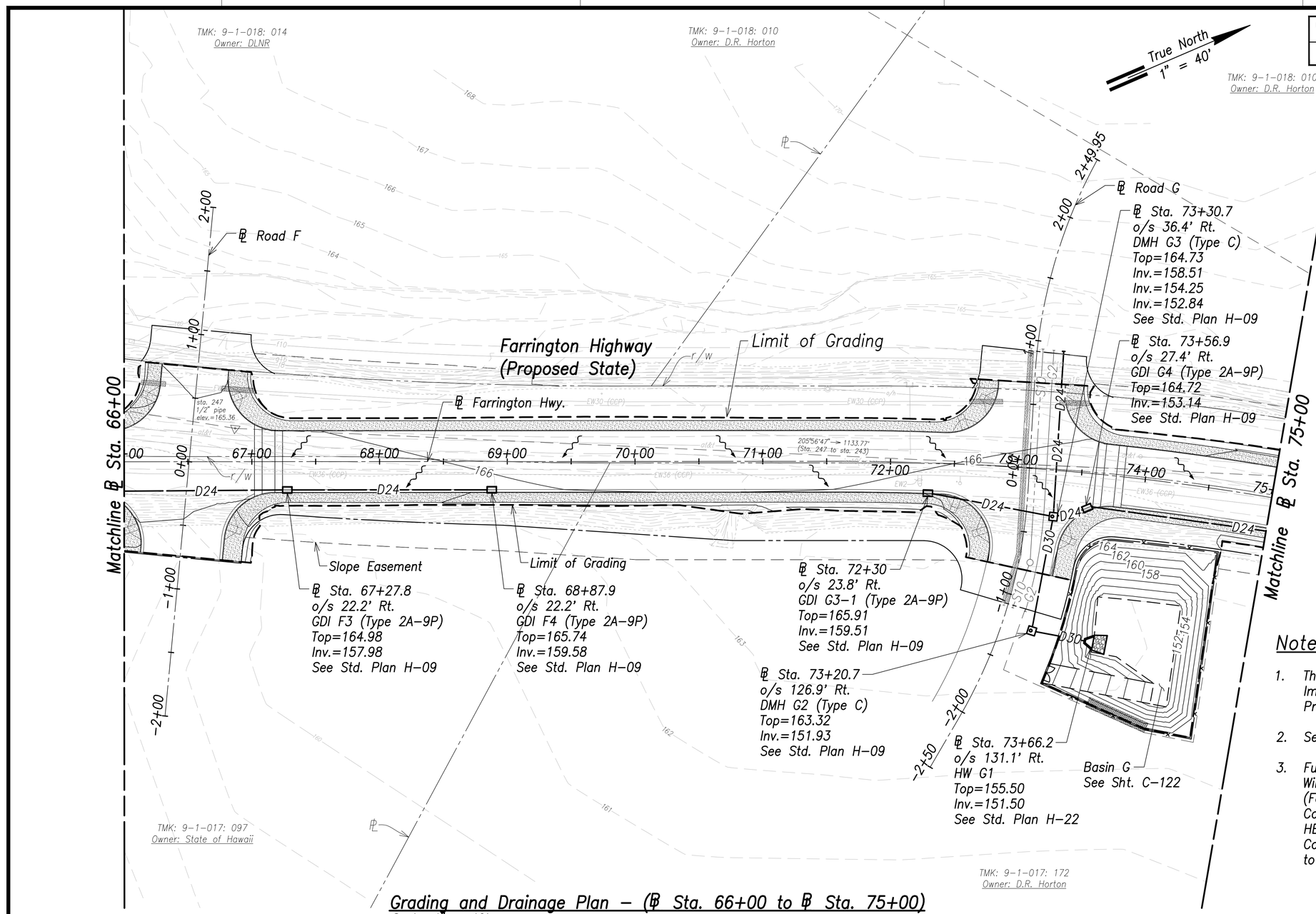
SIGNATURE EXPIRATION DATE OF THE LICENSE

SHEET No. OF XXX SHEETS

105

FILE: K:\civil\23146 Farrington Hwy Widening\Dwg\Construction Dwgs\C-104 Grading and Drainage Plan - Sta. 57+75 to 66+00.dwg saved March 24, 2022

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	106	XXX



Grading and Drainage Plan – (℄ Sta. 66+00 to ℄ Sta. 75+00)

Scale: 1" = 40'

Legend:

- 70 — Existing Grade Contour
- 100 — Finished Grade Contour
- Limit of Grading
- Drainage Flow Direction

Notes:

1. The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
2. See Access to Farm Lots notes on sheet C-3.
3. Future HECO Electrical System, Construction Will Occur at the Same as this Project (Farrington Highway Improvements). The Contractor Shall Fully Coordinate Work with HECO and their Contractor. The Cost to Coordinate Work Will be Considered Incidental to the Various Items of Work.

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

Graphic Scale:
1" = 40' 40' 20' 0 40' 80'
Scale in Feet

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

April 30, 2022
SIGNATURE — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAI'I
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

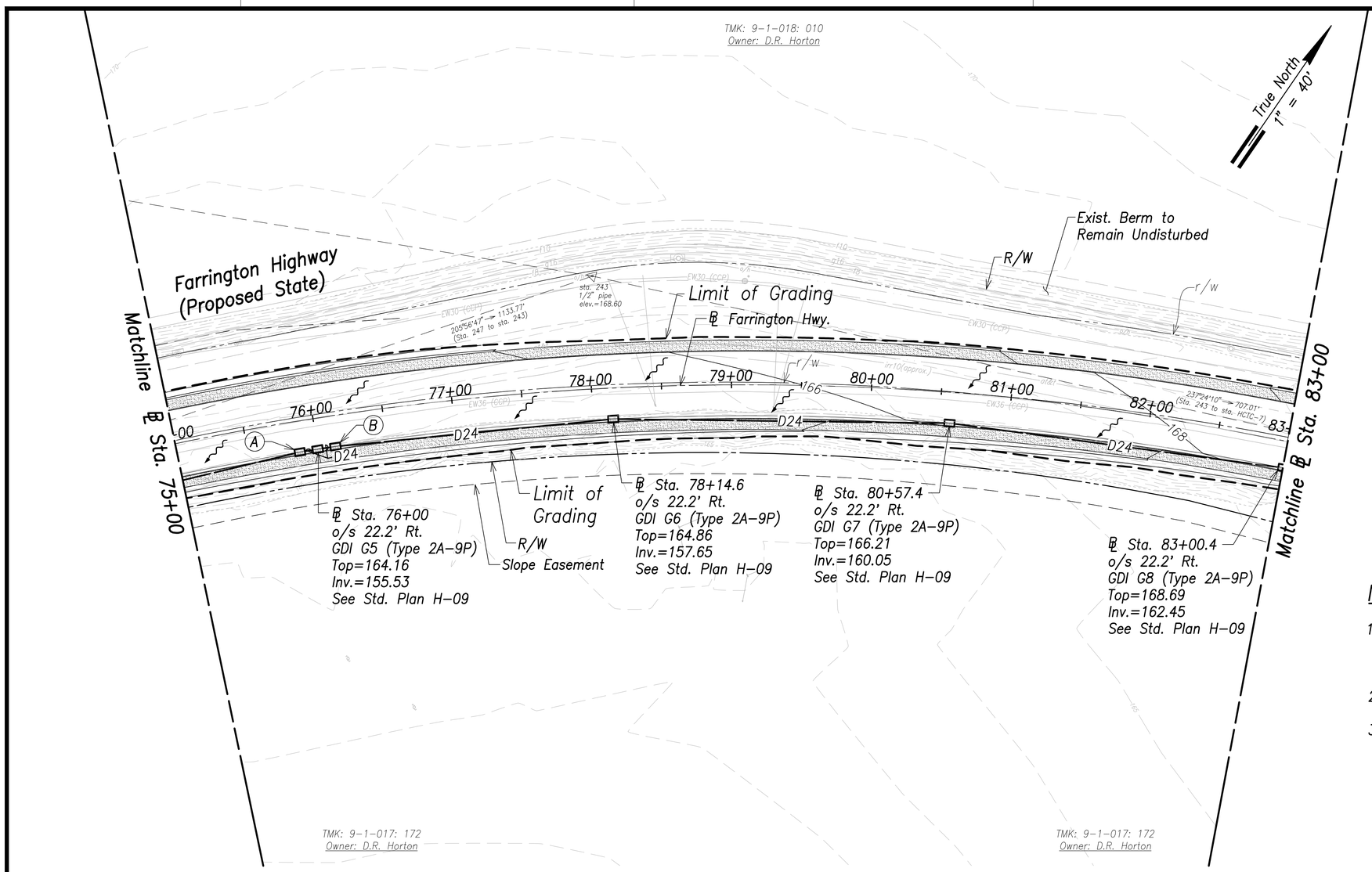
Grading and Drainage Plan ℄ Sta. 66+00 to ℄ Sta. 75+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown — Date: January 2022

SHEET No. OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	107	XXX



Grading and Drainage Plan – (℄ Sta. 75+00 to ℄ Sta. 83+00)

Scale: 1" = 40'

Ⓐ

℄ Sta. 75+87
o/s 22.2' Rt.
GDI G5-A (Type 2A-9P)
Top=164.16
Inv.=155.41
See Std. Plan H-09

Ⓑ

℄ Sta. 76+13
o/s 22.2' Rt.
GDI G5-B (Type 2A-9P)
Top=164.16
Inv.=155.67
See Std. Plan H-09

Legend:

- 70 — Existing Grade Contour
- 100 — Finished Grade Contour
- Limit of Grading
- Drainage Flow Direction

Notes:

1. The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
2. See Access to Farm Lots notes on sheet C-3.
3. Future HECO Electrical System, Construction Will Occur at the Same as this Project (Farrington Highway Improvements). The Contractor Shall Fully Coordinate Work with HECO and their Contractor. The Cost to Coordinate Work Will be Considered Incidental to the Various Items of Work.

Graphic Scale:

1" = 40' 40' 20' 0 40' 80'

Scale in Feet

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

STATE OF HAWAI'I
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Grading and Drainage Plan
℄ Sta. 75+00 to ℄ Sta. 83+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

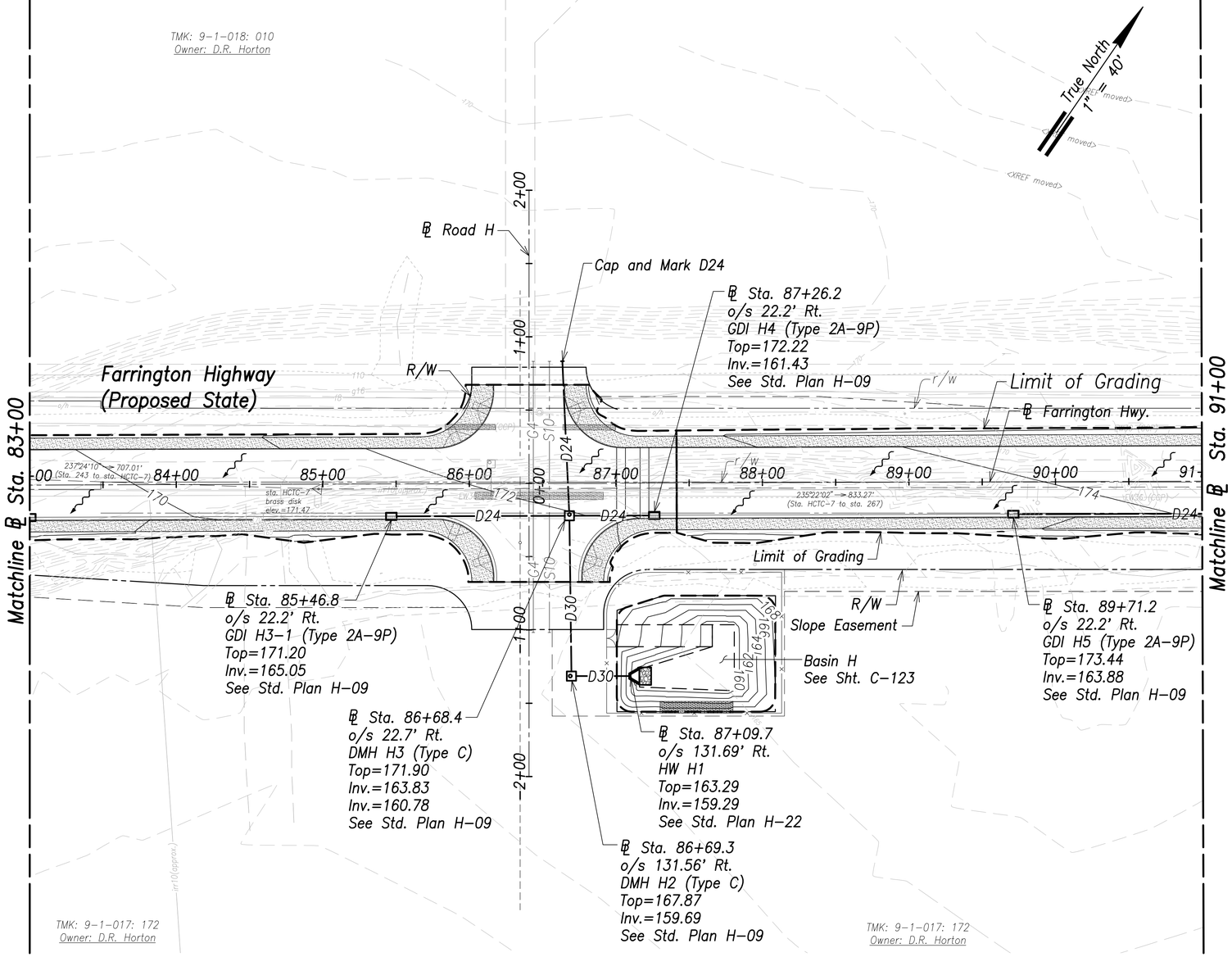
SIGNATURE

April 30, 2022
EXPIRATION DATE OF THE LICENSE

SHEET No. OF XXX SHEETS

107

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	108	XXX



Legend:

- 70 — Existing Grade Contour
- 100 — Finished Grade Contour
- Limit of Grading
- Drainage Flow Direction

Notes:

1. The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
2. See Access to Farm Lots notes on sheet C-3.
3. Future HECO Electrical System, Construction Will Occur at the Same as this Project (Farrington Highway Improvements). The Contractor Shall Fully Coordinate Work with HECO and their Contractor. The Cost to Coordinate Work Will be Considered Incidental to the Various Items of Work.

Graphic Scale:
1" = 40' (40' 20' 0 40' 80')
Scale in Feet

Grading and Drainage Plan – (℄ Sta. 83+00 to ℄ Sta. 91+00)

Scale: 1" = 40'

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

STATE OF HAWAI'I
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Grading and Drainage Plan
℄ Sta. 83+00 to ℄ Sta. 91+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

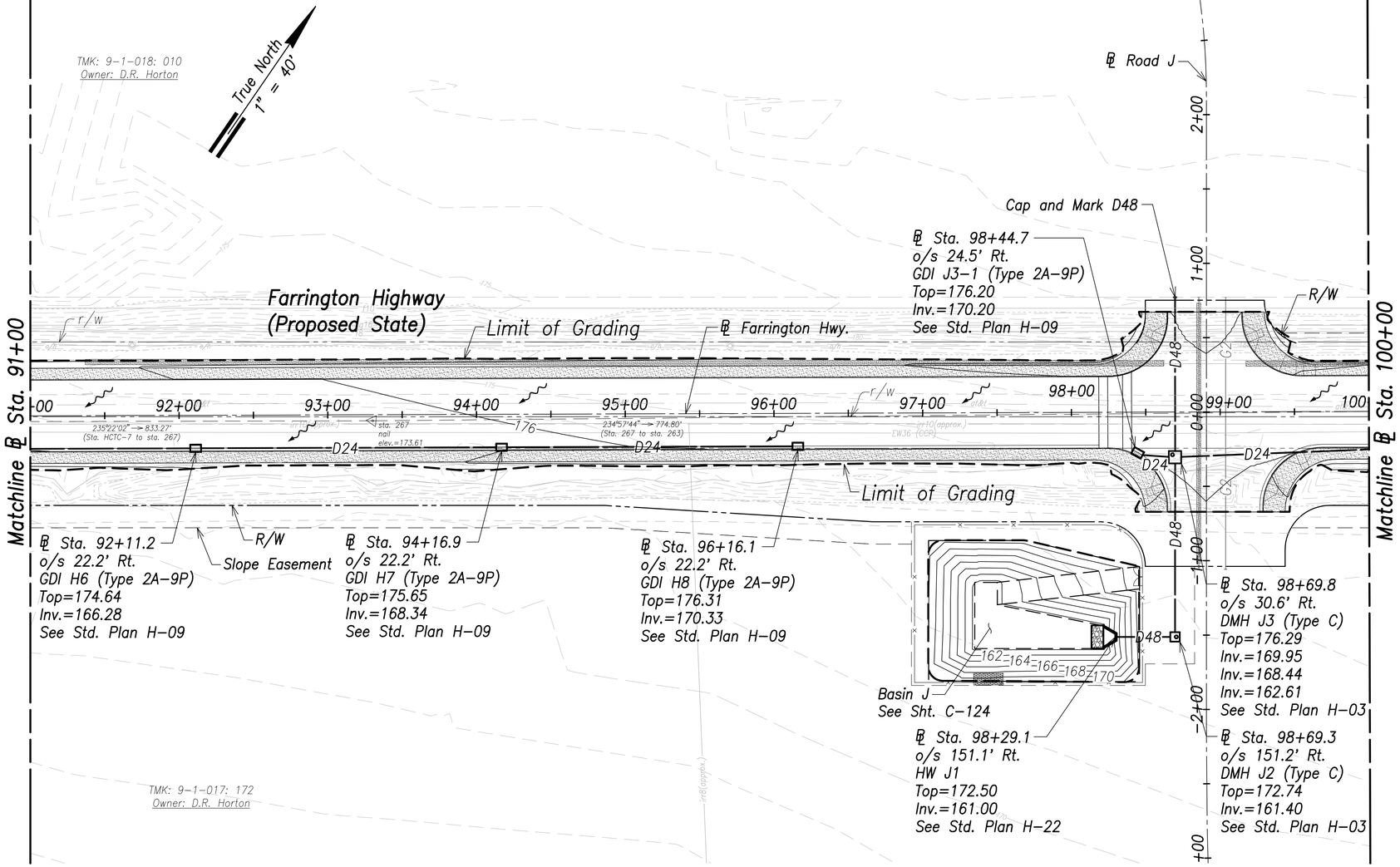
Scale: As Shown Date: January 2022

SHEET No. OF XXX SHEETS

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — EXPIRATION DATE OF THE LICENSE: April 30, 2022

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	109	XXX



Grading and Drainage Plan – (℄ Sta. 91+00 to ℄ Sta. 100+00)

Scale: 1" = 40'

Notes:

1. The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
2. See Access to Farm Lots notes on sheet C-3.
3. Future HECO Electrical System, Construction Will Occur at the Same as this Project (Farrington Highway Improvements). The Contractor Shall Fully Coordinate Work with HECO and their Contractor. The Cost to Coordinate Work Will be Considered Incidental to the Various Items of Work.

Legend:

- 66 — Ground Contour
- 68 — Finished Grade Contour
- Limit of Grading
- Flow Direction

Graphic Scale:
1" = 40' (40' 20' 0 40' 80')
Scale in Feet

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

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

April 30, 2022
SIGNATURE — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAI'I
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

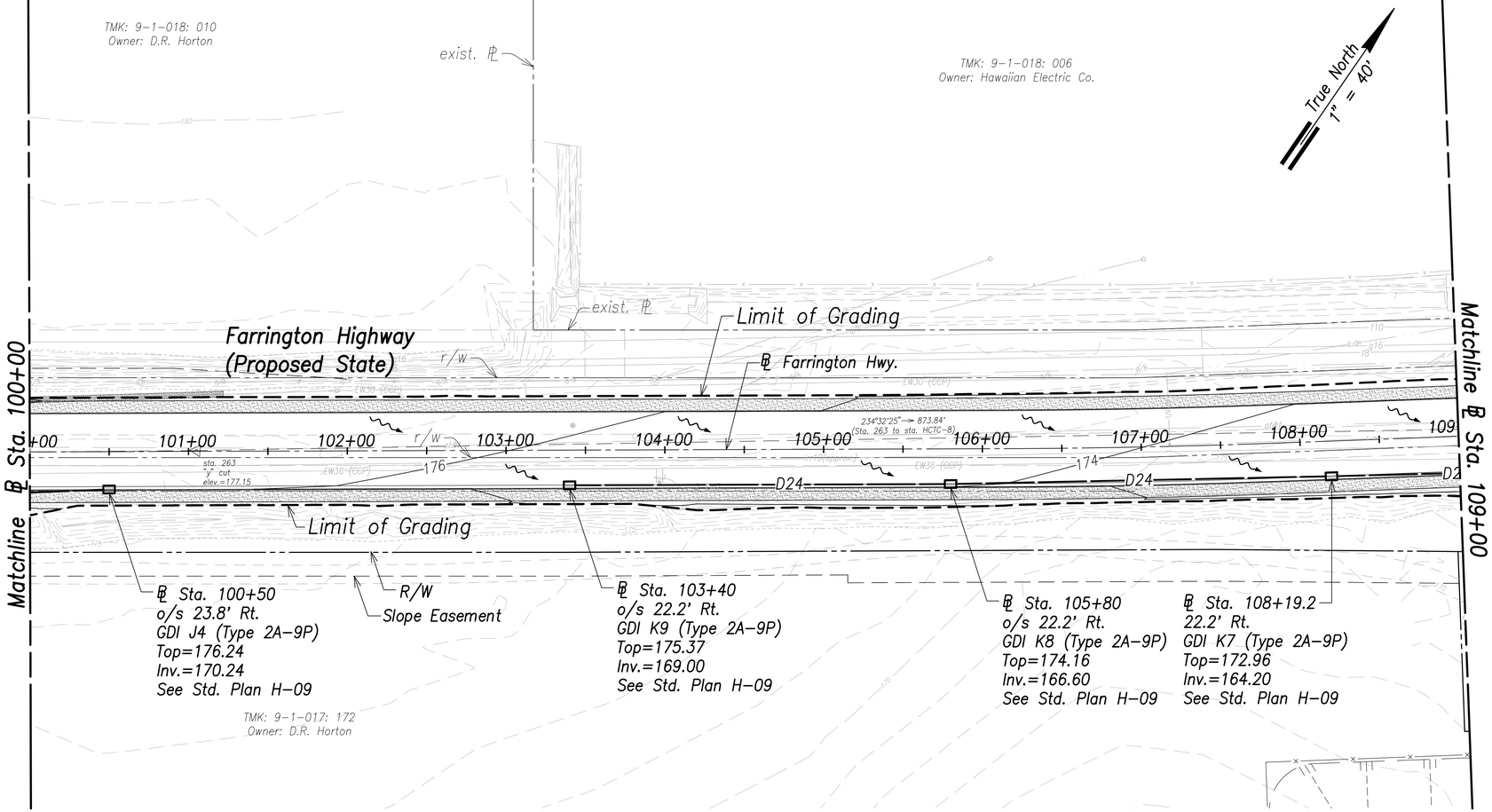
Grading and Drainage Plan ℄ Sta. 91+00 to ℄ Sta. 100+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown — Date: January 2022

SHEET No. OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	110	XXX



Legend:

- 70 — Existing Grade Contour
- 100 — Finished Grade Contour
- Limit of Grading
- Drainage Flow Direction

Grading and Drainage Plan – (℄ Sta. 100+00 to ℄ Sta. 109+00)

Scale: 1" = 40'

Notes:

1. The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
2. See Access to Farm Lots notes on sheet C-3.
3. Future HECO Electrical System, Construction Will Occur at the Same as this Project (Farrington Highway Improvements). The Contractor Shall Fully Coordinate Work with HECO and their Contractor. The Cost to Coordinate Work Will be Considered Incidental to the Various Items of Work.

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

Graphic Scale:
1" = 40' 40' 20' 0 40' 80'
Scale in Feet

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

April 30, 2022
SIGNATURE — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAI'I
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

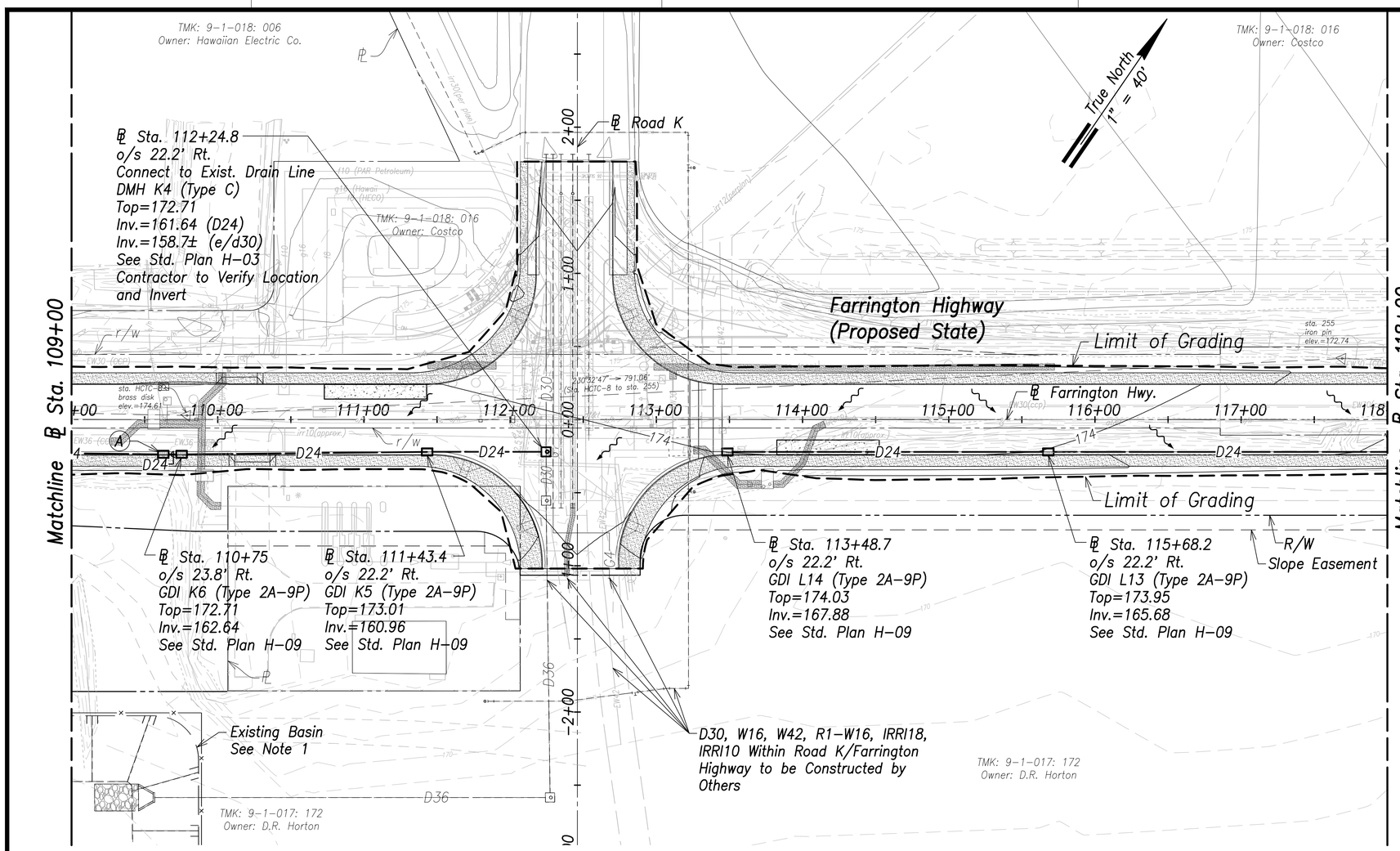
Grading and Drainage Plan ℄ Sta. 100+00 to ℄ Sta. 109+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown — Date: January 2022

SHEET No. OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	111	XXX



Grading and Drainage Plan – (℄ Sta. 109+00 to ℄ Sta. 118+00)

Scale: 1" = 40'

Notes:

1. Future drain line, manhole and basin improvements to be constructed by others under the project plans prepared by the R.M. Towill Corp., titled "Ho'opili Development – Industrial Mixed Use Intersection Improvements", Construction Plan File No. 2017/CP-307 (Subd. File No. 2018/SUB-187, 2018/SUB-201) and "Ho'opili Industrial Mixed Use (IMX) Subdivision Mass Grading and Infrastructure Improvements", Construction Plan File No. 2020/CP-66 (Subd. File No. 2019/SUB-162)
2. The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
3. See Access to Farm Lots notes on sheet C-3

Legend:

- 70 — Existing Grade Contour
- 100 — Finished Grade Contour
- Limit of Grading
- Drainage Flow Direction

Graphic Scale:
1" = 40' (40' 20' 0 40' 80')
Scale in Feet

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Grading and Drainage Plan ℄ Sta. 109+00 to ℄ Sta. 118+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

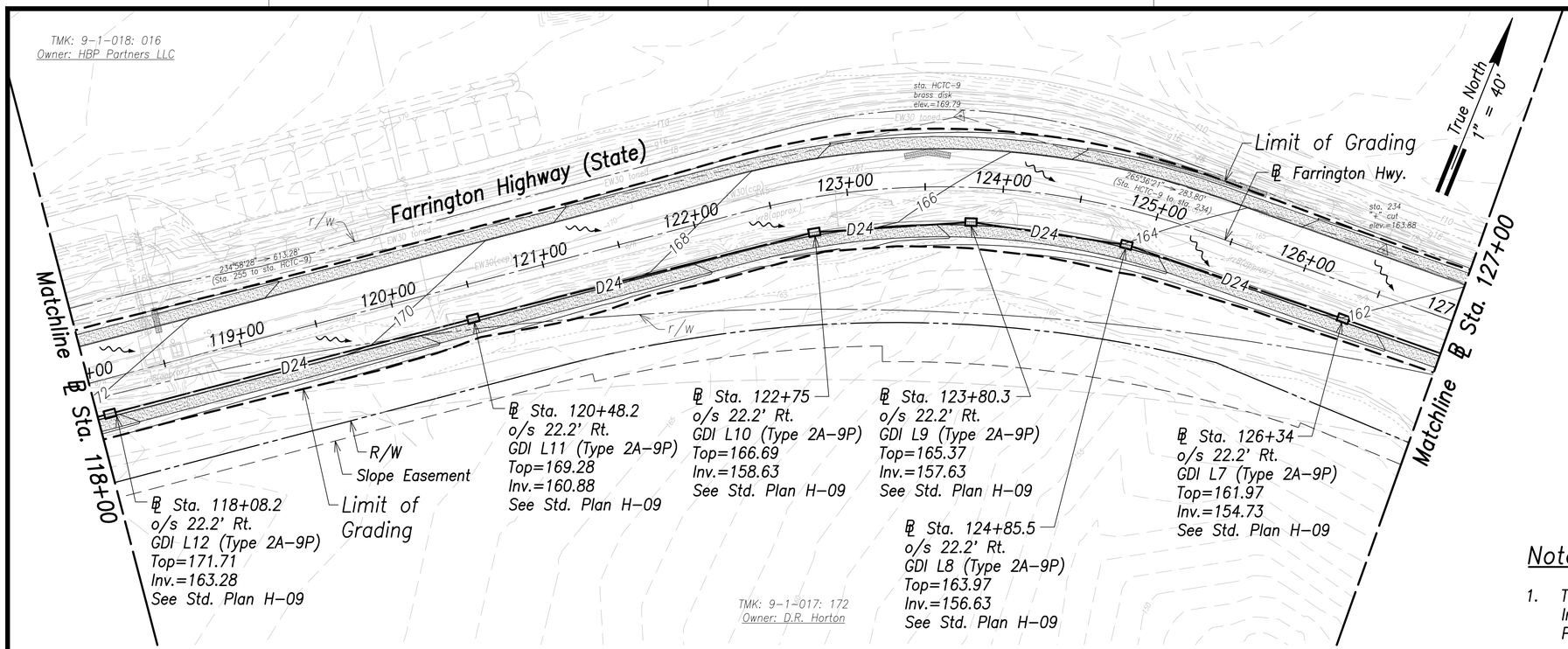
Scale: As Shown Date: January 2022

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

April 30, 2022
SIGNATURE EXPIRATION DATE OF THE LICENSE

SHEET No. OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	112	XXX



Grading and Drainage Plan – (℄ Sta. 118+00 to ℄ Sta. 127+00)

Scale: 1" = 40'

Notes:

1. The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
2. See Access to Farm Lots notes on sheet C-3

Legend:

- Existing Grade Contour (70)
- Finished Grade Contour (100)
- Limit of Grading
- Drainage Flow Direction

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

Graphic Scale:

1" = 40' 40' 20' 0 40' 80'

Scale in Feet

STATE OF HAWAI'I
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Grading and Drainage Plan ℄ Sta. 118+00 to ℄ Sta. 127+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

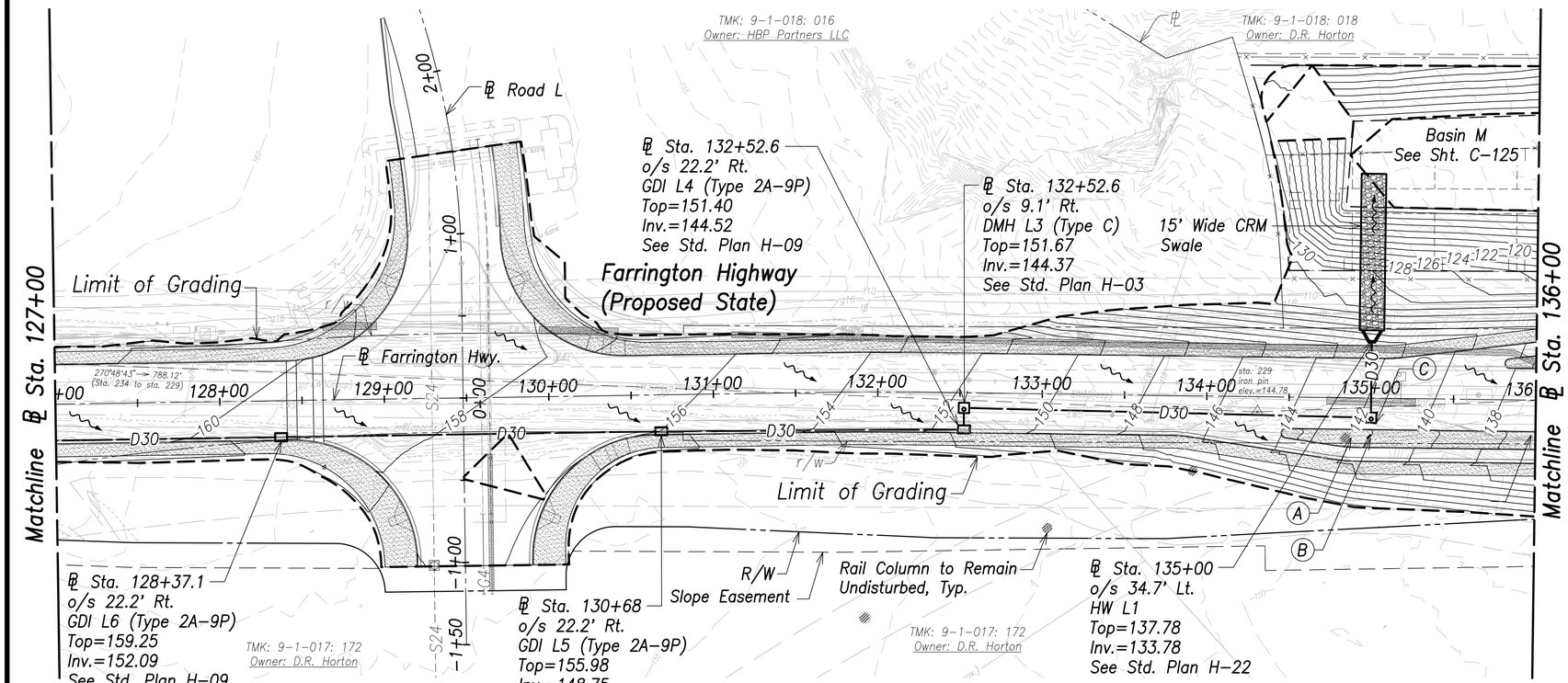
April 30, 2022
SIGNATURE EXPIRATION DATE OF THE LICENSE

SHEET No. OF XXX SHEETS

112

FILE: K:\civil\23146 Farrington Hwy Widening\Dwg\Construction Dwgs\C-111 Grading and Drainage Plan - Sta. 118+00 to 127+00.dwg saved March 25, 2022

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	113	XXX



Grading and Drainage Plan – (℄ Sta. 127+00 to ℄ Sta. 136+00)

Scale: 1" = 40'

Ⓐ

Conn. to Exist. Downspout
See Det., Sht. C-238

Ⓑ

℄ Sta. 134+99.9
o/s 24.4' Lt.
1-8" Wye
1-C.O.T.G.
Inv.=XX.XX
See Det., Sht. C-238

Ⓒ

℄ Sta. 135+00
o/s 11.1' Rt.
DMH L2 (Type C)
Top=141.69
Inv.=134.23
See Std. Plan H-03

Note:

1. The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
2. Contractor Shall Locate Guardrail Posts to Provide 2' Min. Clear From Drain Utilities and Cleanout.

Legend:

- 70 — Existing Grade Contour
- 100 — Finished Grade Contour
- Limit of Grading
- Drainage Flow Direction

Graphic Scale:

1" = 40' 40' 20' 0 40' 80'

Scale in Feet

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Grading and Drainage Plan
℄ Sta. 127+00 to ℄ Sta. 136+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

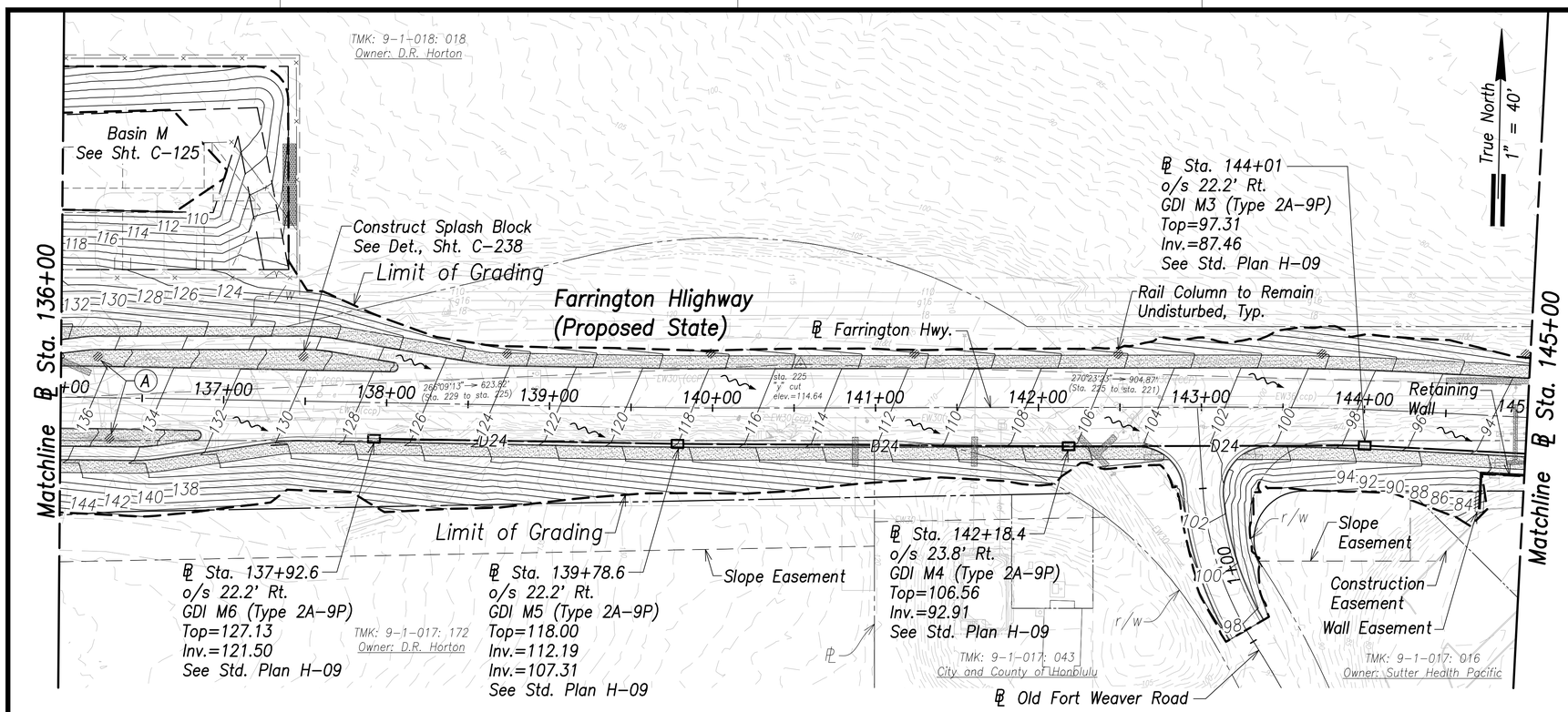
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

April 30, 2022

SIGNATURE EXPIRATION DATE OF THE LICENSE

SHEET No. OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	114	XXX



Grading and Drainage Plan – (℄ Sta. 136+00 to ℄ Sta. 145+00)

Scale: 1" = 40'

Ⓐ Construct Splash Block
See Det., Sht. C-238

Note:

1. The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
2. Contractor Shall Locate Guardrail Posts to Provide 2' Min. Clear From Drain Utilities.

Legend:

- Existing Grade Contour
- 100 — Finished Grade Contour
- Limit of Grading
- Drainage Flow Direction

Graphic Scale:
1" = 40' 40' 20' 0 40' 80'
Scale in Feet

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Grading and Drainage Plan ℄ Sta. 136+00 to ℄ Sta. 145+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

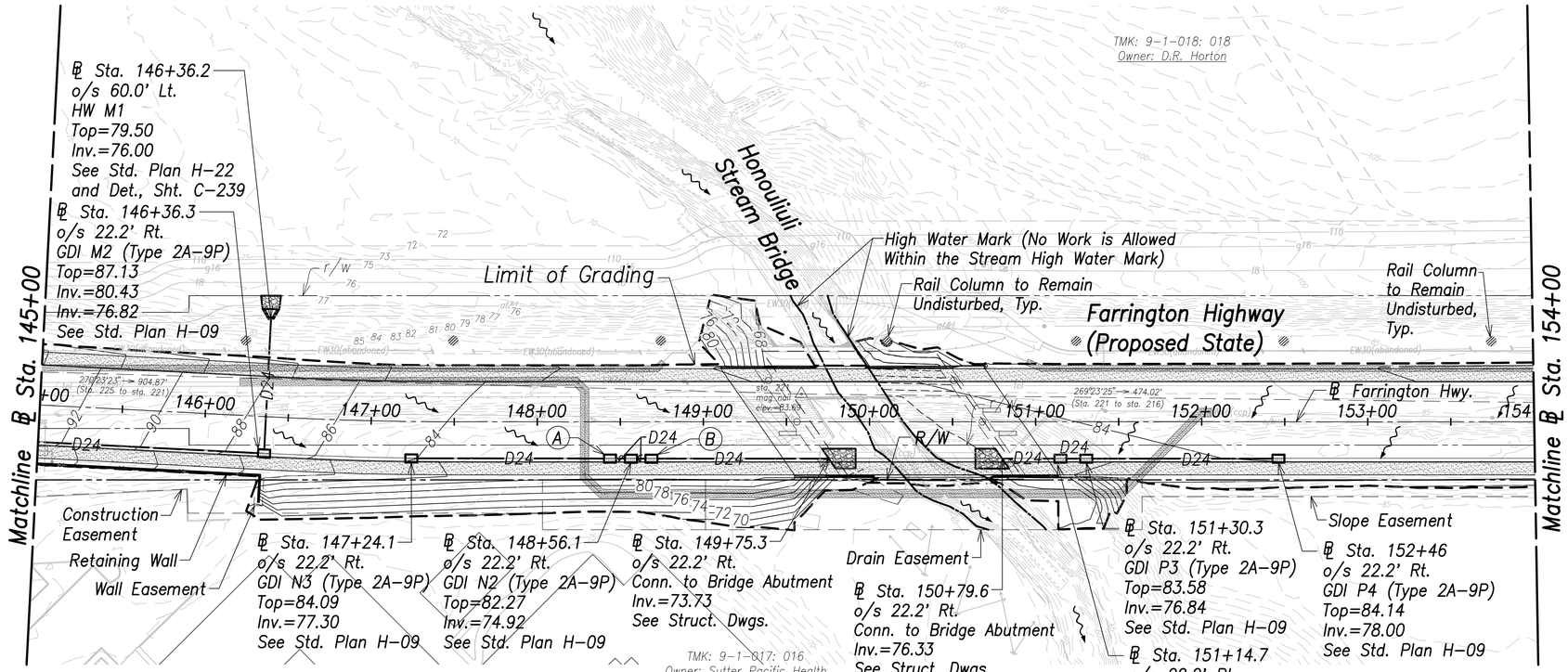
Scale: As Shown Date: January 2022

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

SHEET No. OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021	115	XXX



Grading and Drainage Plan – (℄ Sta. 145+00 to ℄ Sta. 154+00)

Scale: 1" = 40'

Ⓐ

℄ Sta. 148+43.8
o/s 22.2' Rt.
GDI N2-A (Type 2A-9P)
Top=82.28
Inv.=75.14
See Std. Plan H-09

Ⓑ

℄ Sta. 148+68.5
o/s 22.2' Rt.
GDI N2-B (Type 2A-9P)
Top=82.28
Inv.=75.14
See Std. Plan H-09

Notes:

1. The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
2. See Access to Farm Lots notes on sheet C-3

Legend:

- 70 — Ground Contour
- 100 — Finished Grade Contour
- 70 — Finished Grade Contour (Under Bridge)
- Limit of Grading
- Existing Flow

Graphic Scale:

1" = 40' 40' 20' 0 40' 80'

Scale in Feet

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

STATE OF HAWAI'I
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Grading and Drainage Plan ℄ Sta. 145+00 to ℄ Sta. 154+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

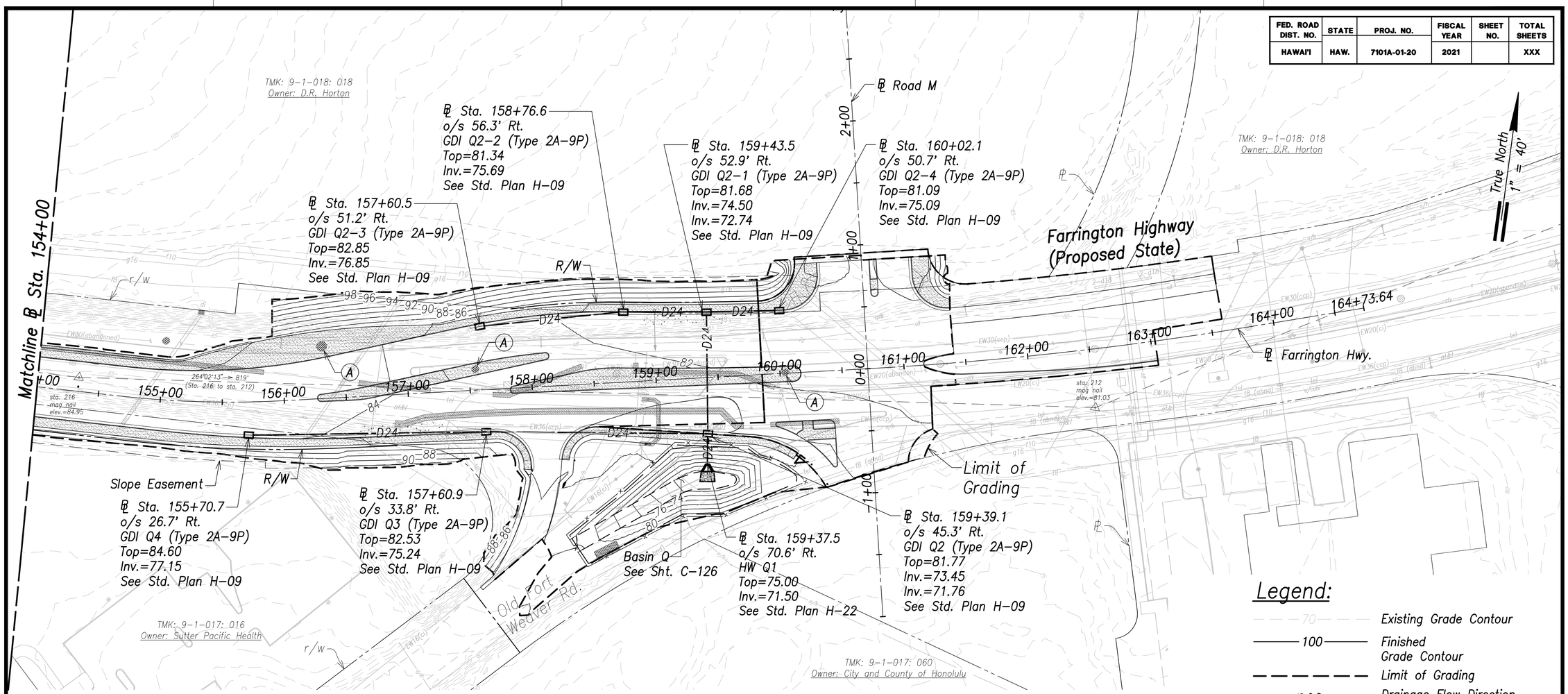
Scale: As Shown Date: January 2022

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

SHEET No. OF XXX SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021		XXX



Legend:

- 70 — Existing Grade Contour
- 100 — Finished Grade Contour
- Limit of Grading
- Drainage Flow Direction

Ⓐ Construct Splash Block
See Det., Sht. C-238

Grading and Drainage Plan – (℄ Sta. 154+00 to ℄ Sta. 165+00)

Scale: 1" = 40'

Notes:

1. The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
2. Contractor Shall Locate Guardrail Posts to Provide 2' Min. Clear From Drain Utilities and Cleanout.
3. See Access to Farm Lots notes on sheet C-3

Graphic Scale:
1" = 40' (40' 20' 0 40' 80')
Scale in Feet

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

STATE OF HAWAI'I
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Grading and Drainage Plan
℄ Sta. 154+00 to ℄ Sta. 165+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: January 2022

SHEET No. OF XXX SHEETS

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — April 30, 2022 — EXPIRATION DATE OF THE LICENSE

Farrington Highway Widening		Date:	4/6/22
Location:	Ewa, Oahu, Hawaii	Prepared By:	CN
Description:	NPDES Drainage calculations	Checked By:	CWL

Prepared for: State of Hawaii Department of Transportation
Consultant: R. M. Towill Corporation

PURPOSE: To calculate the quantity of storm water runoff generated from the project site in the event of a 10-year, one-hour storm.

REFERENCE: 1) Design Criteria for Highway Drainage, State of Hawaii Department of Transportation, Highways Division, June 15, 2019.
2) Point Precipitation Frequency Estimates, NOAA Atlas 14, Volume 4, Version 3.

CALCULATIONS:

1) Rational Method Equation

Use rational method, Q = ciFA, where:

Q=	flow rate, cfs
c=	runoff coefficient
i =	rainfall intensity, in/hr, for a duration equal to the time of concentration
F=	correction factor to convert 1-hr. rainfall to Tc duration
A=	drainage area, acre

2) Runoff Quantity

Runoff coefficient, C	0.85	
Rainfall intensity, i (in/hr, 10 year)	2.14	(Ref. 2)
Correction factor, F	2.20	
Drain Area, A (acres)	37.37	
Q (cfs)	149.56	

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

Instructions

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

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

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

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

TRAINING LOG

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

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

Course Location: _____ *Date:* _____

Course Length (hours): _____

Stormwater Training Topic: (check as appropriate)

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

*Specific Training Objective:*_____

_____

Attendee Roster:

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

Add rows as needed

Attachment C - Construction Schedule (SWPPP Section 7.2.5)

CONSTRUCTION SCHEDULE

The date when the SWPPP, including erosion control measures will be implemented: The General Contractor will provide an updated schedule to DOH-CWB 30 days prior to the start of construction.

The date when the general contractor will begin the earth-disturbing activities: The General Contractor will provide an updated schedule to DOH-CWB 30 days prior to the start of construction.

Cessation, temporarily or permanently, of construction activities on the site: The General Contractor will provide an updated schedule to DOH-CWB 30 days prior to the start of construction.

Final or temporary stabilization of areas of exposed soil: The General Contractor will provide an updated schedule to DOH-CWB 30 days prior to the start of construction.

Cessation, temporarily or permanently, of construction activities on the site: The General Contractor will provide an updated schedule to DOH-CWB 30 days prior to the start of construction.

Final or temporary stabilization of areas of exposed soil: The General Contractor will provide an updated schedule to DOH-CWB 30 days prior to the start of construction.

The date when the general contractor will end site disturbance: The General Contractor will provide an updated schedule to DOH-CWB 30 days prior to the start of construction.

The date when erosion control measures will be removed: The General Contractor will provide an updated schedule to DOH-CWB 30 days prior to the start of construction.

The date when the Notice of Cessation form will be submitted: The General Contractor will provide an updated schedule to DOH-CWB 30 days prior to the start of construction.

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

SUBCONTRACTOR CERTIFICATION

NGPC File No: *HIR10G438*

Project Title: *Farrington Highway Widening, Kapolei Golf Course Road to Fort Weaver Road*

Operator(s): _____

As a subcontractor, you are required to comply with the Storm Water Pollution Prevention Plan (SWPPP) for any work that you perform on-site. Any person or group who violates any condition of the SWPPP 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. A copy of the SWPPP 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 for the above designated project and agree to follow the BMPs and practices described in the SWPPP.

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.

Oahu Attachment E1 – SWPPP Inspection Report Form for Oahu(SWPPP Section 7.2.12) Rev. 1/28/2015

(See Next Page)

SITE-SPECIFIC BEST MANAGEMENT PRACTICE/STORM WATER POLLUTION PREVENTION INSPECTION AND MAINTENANCE REPORT

DATE: _____ PERMIT NO. _____ ☐ INDIVIDUAL NPDES PERMIT PROJECT (RECEIVING STATE WATERS INSPECTIONS REQUIRED)

PROJECT NO.: _____ PROJECT: _____

☐ PRE-CONSTRUCTION VERIFICATION INSPECTION REPORT PHASE: _____ ☐ INDEPENDENT (THIRD-PARTY) INSPECTION

☐ WEEKLY REPORT ☐ EVENT REPORT _____ INCHES OF RAIN FOR THE PAST 24 HOURS (if rain event) ☐ OTHER _____

BMP Measures and Devices Currently Installed on the Project:

LOCATION	ACTIVITY AND TYPE OF BMP MEASURE/DEVICE	ACTION REQUIRED?		NOTES/COMMENTS
		Y	N	

BMP Deficiencies Found and Corrective Actions Taken:

DATE FOUND	LOCATION	ACTIVITY AND TYPE OF BMP MEASURE/DEVICE	DATE CONTRACTOR NOTIFIED	NOTES/COMMENTS	AMENDMENT REQUIRED? (Y/N)	DATE CORRECTED	ACTION TAKEN - NOTES/COMMENTS

Page 1 of 2 Project No. Date

Rev 01/28/15

CHECK ALL THAT ARE APPLICABLE:

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

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

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

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

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

Describe: _____

_____

_____

_____

Comments/Remarks: _____

_____

_____

_____

_____

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

_____ _____ _____

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

Rev 01/28/15

Page 2 of 2 **Project No.** **Date**

Oahu Attachment E2 – Corrective Action Reports (SWPPP Section 7.2.12) Rev. 02/25/14

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 modifications are required as a result of the condition identified or corrective action.*

Section 10.2.2. SWPPP Modification Due to Corrective Actions

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

❑ *Date SWPPP modified should be indicated in the Amendment Log*

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.

Section 10.4.4. Corrective Action Report

NOTE: Corrective Actions shall be documented in the Site-Specific Best Management Practice/Storm Water Pollution Prevention Inspection and Maintenance Report, See Attachment E1.

Oahu Attachment E3 – HDOT Highways Oahu Construction Discharge Response Flow Chart, Rev. 11/17/2015; HDOT Construction Discharge Report Form (SWPPP Section 7.2.12) Rev. 1/28/15

(See Next Pages)

HDOT CONSTRUCTION DISCHARGE REPORT

☐ CHECK IF DISCHARGE OBSERVED IS DURING AN INSPECTION

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

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

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

1) General Information

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

_____
Describe the Incident:

_____

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

2) Specific Discharge Information

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Page 1 of 6

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

Rev 01/28/15

Page 2 of 6

3) Inlets, Outfalls, and Receiving Water Information

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

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

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

4) Action Taken

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

_____

☐ Photos attached

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

_____

☐ Photos attached

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5) Other Notes/Comments

_____

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

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

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

Michael K. Medeiros	**Date**

Duly Authorized Person's Name: Michael K. Medeiros

Duly Authorized Person's Position Title: Oahu District Engineer

Duly Authorized Person's Company or Agency Information:

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

Page 4 of 6

LOCATION MAP

PROJECT NO.: _____ DOH FILE NO.: _____

PROJECT NAME: _____

PROJECT LOCATION: _____

DESCRIPTION: _____

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PHOTOS

PHOTOS TAKEN BY: _____

PROJECT NO.: _____ DOH FILE NO.: _____

PROJECT: _____

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Oahu Attachment E4 – Monthly Compliance Report

Hawaii Department of Transportation Monthly Compliance Report

A Monthly Compliance Report is required to be completed 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. The following is required to be addressed in the Monthly Compliance Reports and include attachments as necessary.

- ❑ *Any instances of non-compliance or corrective actions*
- ❑ *Changes to the information on file with DOH*

If the activity is in compliance and none of the information on file with the department requires updating, or there were no incidences of non-compliance, preparation of the monthly compliance information is still required which states:

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

The certifying person and duly authorized representative shall meet the requirements of Hawaii Administrative Rules 11-55, Appendix A, Section 15. The certifying person or duly authorized representative is required to sign the Monthly Compliance Reports with the following certification statement:

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.

MONTHLY COMPLIANCE REPORT

Reporting Month/Year: _____

Project Name: _____
Location/Address: _____
DOH NGPC File No.: _____ **Project No.:** _____
County/Island: _____ **Acreage Disturbed (acres):** _____
Construction Start Date: _____ **Percent of Work Completed (%):** _____

This form must be completed within 2 working days of the end of the month and must be kept on-site and made available by the end of the next business day when requested by DOH. In addition, this form is required to be submitted to DOH with the Notice of Cessation at the completion of the project.

1. BMP Deficiencies and Associated Corrective Actions

Date Found	Location	Activity and Type of BMP Measure/Device	Date Contractor Notified	Notes/Comments	Date Corrected	Action Taken

2. Discharges This Month

Date Discharge Occurred	Outfall	Receiving Waterbody Discharged To	Date DOH Notified	Notes

3. Other Major Incidents Reported to DOH This Month

Date/Time Incident Occurred (if applicable)	Date/Time Incident Discovered	Date/Time Reported to DOH	Description of Incident	Notes

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.

Michael K. Medeiros — Date

Duly Authorized Person's Name: Michael K. Medeiros
Duly Authorized Person's Position Title: Oahu District Engineer
Duly Authorized Person's Company or Agency Information:
Company or Agency: State of Hawaii Department of Transportation, Highways Division
Address: 727 Kakoi Street
Honolulu, Hawaii 96819
Phone: 831-6700 ext. 126
Fax: 831-6725
Email: Mike.medeiros@hawaii.gov

Kauai/Maui/Hawaii Attachment E1 – HDOT Inspection Report for Kauai, Maui, and Big Island

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.)							
Other							
Sawcutting							

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

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** if safe to do so. If unsafe, document in section 9.15 above.*

*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: Michael K. Medeiros

Duly Authorized Person's Position Title: Oahu District Engineer

Duly Authorized Person's Company or Agency: State of Hawaii

Department: Department of Transportation

Division: Highways Division

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

Person Email: mike.medeiros@hawaii.gov

Attachment F – Spill Prevention and Response Procedures (SWPPP 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 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*

The submission of this form by the contractor is required.

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.

STATE OF HAWAII
DEPARTMENT OF HEALTH
SOLID WASTE SECTION

Solid Waste Disclosure Form for Construction Sites

The following form shall be filled out for construction projects either identified as under 40 CFR 122.26(b)(14)(x) or produces (or will produce) dredged spoils. A response must be provided for each item. If an item is not relevant to the activity, indicate by "Not Applicable" (N/A), with a short comment.

This form helps the Department of Health, Solid Waste Section (SWS) to identify sources of construction/demolition waste and site clearing debris. Property owners, developers, operators and contractors are responsible for ensuring the proper disposal of such solid waste. Violators of Chapter 11-58.1, HAR, "Solid Waste Management Control," are subject to enforcement, corrective actions, and fines.

Mail completed forms to the Department of Health, Solid Waste Section, P.O. Box 3378, Honolulu, Hawaii 96801-3378. Any questions regarding this form should call (808) 586-4226.

I. Site Information

A. Site Address: Farrington Highway, between Kapolei Golf Course to Fort Weaver Road.
B. Name of Owner: State of Hawaii, Department of Transportation, Highways Division
C. Owner address: 869 Punchbowl Street Honolulu, Hawaii 96813-5097
D. Owner phone number: (808) 587-2150
E. Tax Map Key (TMK): (1) 9-1-016:004, 007, 008, 179, 182, 183, 220, 221; (1) 9-1-017:043, 070, 097, 099, 172; (1) 9-1-018:006 through 009, 012 through 016, 018; (1) 9-1-081:006, 022
F. Size of Site (acres): 150 acres

II. County Permit Information

A. Issuing County Agency: _____
B. Grading permit no.: _____
C. Demolition permit no.: _____
D. Grubbing/Stockpiling permit no.: _____

III. Site Activity Information

A. State the kinds of site clearing activities to be completed. State final use of site: The improvements include the widening of the roadway and installation of a new roadway, low impact development drainage infrastructure, curbs, gutters, sidewalks, bridges, culverts, utility relocations, bike lanes, retention basins, and a landscaped median strip.

B. Describe structures on site (if none, indicate N/A): The project site is located on Farrington Highway, which currently serves as a major east-west transportation facility.

If structures exist, are they to be demolished or removed?
[ ] yes [X] no. If yes, submit copy of building assessment.

IV. Contractor Information

A. General Contractor: _____
Contact: _____ Phone: _____

B. Site Clearing/Demolition Contractor: _____
Contact: _____ Phone: _____

C. Hauling Contractor: _____
Contact: _____ Phone: _____

D. Asbestos/Lead Abatement Contractor: _____
Contact: _____ Phone: _____

E. Destination of Waste Materials:

1. Building demolition materials:
To landfill (name): _____

☐ concrete (specify) _____
☐ scrap metal (specify) _____
☐ non-ferrous metals (specify) _____
☐ roofing materials (specify) _____
☐ other (specify) _____

To permitted recycling facility (name): _____
_____

☐ concrete (specify) _____
☐ green waste (specify) _____
☐ non-ferrous metals (specify) _____
☐ scrap metal (specify) _____
☐ other (specify) _____

For re-use. State what wastes are to be reused and where: _____
_____

2. Dredged spoils:
To landfill (name): _____

To permitted recycling facility (name): _____
_____

For re-use (list address and TMK No.): _____
_____

I declare that I have read and examined the foregoing summary and that the facts stated in it are true.

Sign Here: _____ Title: Director of Transportation
Print Name: Jade T. Butay Date: _____
Employer: State of Hawaii, Department of Transportation, Highways Division Phone: (808) 587-2150

NOTE: The person who completed this form must be a representative of either the owner or contractor. Furthermore, if the destination of waste material(s) change or will change, then the owner, contractor or the representative of the owner or contractor shall submit a revised Solid Waste Disclosure Form with updated information to the Department of Health, Solid Waste Section, P.O. Box 3378, Honolulu, Hawaii 96801-3378.

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.

[Edit as applicable] ***Litter Management Plan***

Project Name

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 Sections 7.2.3, 7.2.9, 7.2.14, 7.2.15, and 7.2.16)

STATE/FEDERAL/COUNTY PERMITS

Surface Runoff from Construction Activities entering into City's Storm Sewer System.

Approved Jurisdictional Determination for Farrington Highway Bridges Expansion, Ewa, Oahu, HI, Department of the Army File No. POH 2020-00071 dated September 18, 2020.

Date: July 23, 2021

Director
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, HMB, 7th Floor
Honolulu, Hawaii 96813

Dear Madam/Sir:

Subject: Surface Runoff from Construction Activities entering into City's Storm Sewer System

Pursuant to Section 11-55-04, Chapter 11-55, Water Pollution Control, Hawaii Administrative Rules, as amended, we are required to obtain coverage under National Pollutant Discharge Elimination System (NPDES) Permit Program from State Department of Health (DOH) for storm water discharges associated with construction activities. Since surface runoff of storm water from above activities will enter into city's storm sewer system, we are providing the following information for your use:

1. Owner/Lessee Information (owner of facility or activity):

Legal Name: State of Hawaii, Department of Transportation, Highways Division (HDOT-HWY)

Street Address: 869 Punchbowl Street

City, State and Zip Code: Honolulu, Hawaii 96813-5097

Contact Person & Title: Jade T. Butay, Director of Transportation

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

2. Facility/Project Information:

Facility/Project Name: Farrington Highway Widening, Kapolei Golf Course Road to Fort Weaver Road

Street Address: The project is located on Farrington Highway, between Kapolei Golf Course Road and Fort Weaver Road.

City, State and Zip Code: Ewa, Hawaii 96706

Tax Map Key: (1) 9-1-016:004, 007, 008, 179, 182, 183, 220, 221; (1) 9-1-017:043, 070, 097, 099, 172; (1) 9-1-018:006 through 009, 012 through 016, 018; (1) 9-1-081:006 & 022

Type of Existing/Proposed Facility/Activity: Road Construction and Linear Unity

City drainage facility(ies) discharge will be entering: City and County of Honolulu

Contact Person & Title: Lawrence Laus, P.E., Design Project Manager

Phone No.: (808) 692-7575 Fax No.: N/A

3. Other Information:

Estimated Rate of Discharge (for 10 yrs, 1 hr storm event): 186.08 cfs

Estimated Duration of Discharge: 1 hour

Estimated Size of Disturbed Area 46.50 acres

Has the Dept. of Health NPDES permit been applied: Yes ✓ No_____

Has the Dept. of Health NPDES permit been approved: Yes ✓ No_____
(If yes, attach a copy of the permit/NGPC)

4. The following is attached as required in accordance to the City and County of Honolulu, Rules Relating to Soil Erosion Standards and Guidelines, April 1999:

✓ Erosion Control Plan (for categories 4 and 5)

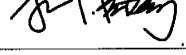
✓ Site Specific BMP's (for categories 1, 2, and 3)

____ Other (_____)

Should you need any clarification or more information, please call Jade T. Butay at (808) 587-2150.

I certify under penalty of law that the information contained herein is true, accurate, and complete to the best of my knowledge and belief.

Very truly yours,



Owner/Lessee (Signature)

Jade. T. Butay
Print Name

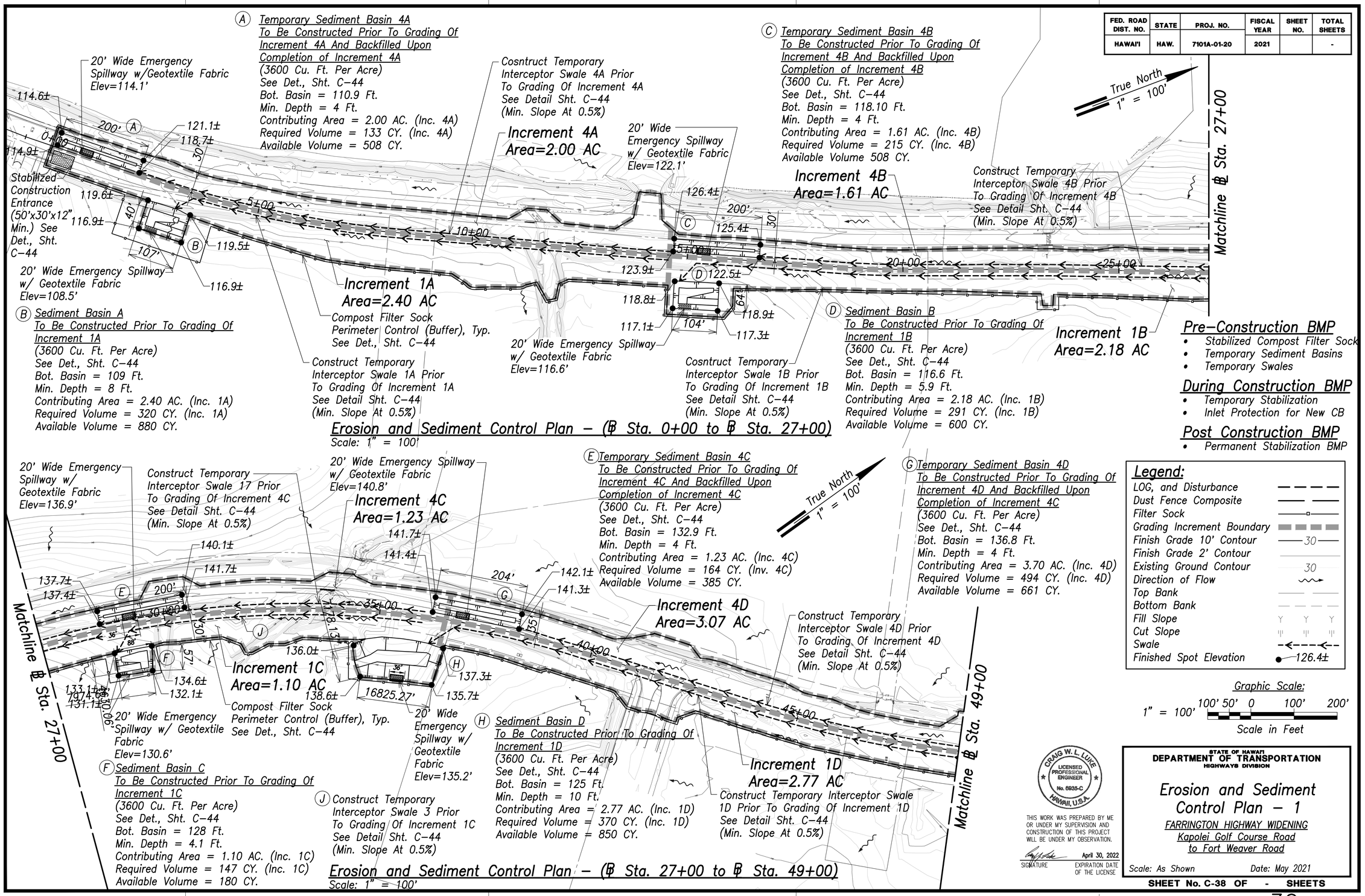
Attachment(s)

For Official Use Only:

DPP Project Reference No. 20____CP-_____
Date Received Surface Runoff Form:_____
Accepted by:_____

☐ ECP or BMP approved on: / /
☐ The review, approval, and inspection of the BMP for the OTR project shall be the responsibility of the above City agency.
☐ The review, approval, and inspection of the BMP for the government project not reviewed by DPP shall be the responsibility of the above City agency.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021		-



Legend:

LOG, and Disturbance	
Dust Fence Composite	
Filter Sock	
Grading Increment Boundary	
Finish Grade 10' Contour	30
Finish Grade 2' Contour	
Existing Ground Contour	30
Direction of Flow	
Top Bank	
Bottom Bank	
Fill Slope	
Cut Slope	
Swale	
Finished Spot Elevation	126.4±

Graphic Scale:

1" = 100' 100' 50' 0 100' 200'

Scale in Feet

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

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 6935-C HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAI'I
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Erosion and Sediment Control Plan – 1

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road

Scale: As Shown Date: May 2021

SHEET No. C-38 OF - SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021		-

(A) *Temporary Sediment Basin 5A*
To Be Constructed Prior To Grading Of Increment 5A And Backfilled Upon Completion of Increment 5A
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-44
Bot. Basin = 153.3 Ft.
Min. Depth = 4 Ft.
Contributing Area = 3.18 AC. (Inc. 5A)
Required Volume = 424 CY. (Inc. 5A)
Available Volume = 661 CY.

(B) *Sediment Basin E*
To Be Constructed Prior To Grading Of Inorement 2A
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-44
Bot. Basin = 147.9 Ft.
Min. Depth = 7.1 Ft.
Contributing Area = 4.04 AC. (Inc. 2A)
Required Volume = 539 CY. (Inc. 2A)
Available Volume = 345 CY. (1,855 Total Inc. 2A)

(C) *Sediment Basin F*
To Be Constructed Prior To Grading Of Increment 2A
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-44
Bot. Basin = 156 Ft.
Min. Depth = 5 Ft.
Contributing Area = 4.04 AC. (Inc. 2A)
Required Volume = 539 CY. (Inc. 2A)
Available Volume =195 CY. (1,855 Total Inc. 2A)

Construct Temporary Interceptor Swale 5A Prior To Grading Of Increment 5A See Detail Sht. C-44 (Min. Slope At 0.5%)

Construct Temporary Interceptor Swale 4C Prior To Grading Of Increment 4C See Detail Sht. C-44 (Min. Slope At 0.5%)

Increment 4C Area=3.80 AC

Increment 5A Area=3.18 AC

Increment 2A Area=4.04 AC

Increment 1C Area=4.06 AC

Matchline ℄ Sta. 00+49

Construct Temporary Interceptor Swale 1C Prior To Grading Of Increment 1C See Detail Sht. C-44 (Min. Slope At 0.5%)

Compost Filter Sock Perimeter Control Buffer, Typ. See Det., Sht. C-44

20' Wide Emergency Spillway w/ Geotextile Fabric Elev=157.3'

20' Wide Emergency Spillway w/ Geotextile Fabric Elev=160.4'

20' Wide Emergency Spillway w/ Geotextile Fabric Elev=159.5'

Construct Temporary Interceptor Swale 2A Prior To Grading Of Increment 2A See Detail Sht. C-44 (Min. Slope At 0.5%)

20' Wide Emergency Spillway w/ Geotextile Fabric Elev=162.0'

(D) *Sediment Basin G*
To Be Constructed Prior To Grading Of Increment 2A
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-44
Bot. Basin = 153.25 Ft.
Min. Depth = 9.75 Ft.
Contributing Area = 4.04 AC. (Inc. 2A)
Required Volume = 539 CY. (Inc. 2A)
Available Volume =1,315 CY. (1,855 Total Inc. 2A)

Matchline ℄ Sta. 75+00

True North 1" = 100'

Erosion and Sediment Control Plan – (℄ Sta. 49+00 to ℄ Sta. 75+00)
Scale: 1" = 100'

Pre-Construction BMP
- *Stabilized Compost Filter Sock*
- *Temporary Sediment Basins*
- *Temporary Swales*

During Construction BMP
- *Temporary Stabilization*
- *Inlet Protection for New CB*

Post Construction BMP
- *Permanent Stabilization BMP*

Temporary Sediment Basin 5B
To Be Constructed Prior To Grading Of Increment 2B And Backfilled Upon Completion of Increment 2B
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-44
Bot. Basin = 163.8 Ft.
Min. Depth = 4 Ft.
Contributing Area = 2.96 AC. (Inc. 2B)
Required Volume = 395 CY. (Inc. 2B)
Available Volume = 661 CY.

20' Wide Emergency Spillway w/ Geotextile Fabric Elev=167.8'

Construct Temporary Interceptor Swale 5B Prior To Grading Of Increment 5B See Detail Sht. C-44 (Min. Slope At 0.5%)

Increment 5B Area=2.96 AC

Increment 2B Area=3.86 AC

Matchline ℄ Sta. 75+00

Matchline ℄ Sta. 97+00

20' Wide Emergency Spillway w/ Geotextile Fabric Elev=167.8

Temporary Sediment Basin 2B-1
To Be Constructed Prior To Grading Of Increment 2B And Backfilled Upon Completion of Increment 2B
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-44
Bot. Basin = 163.8 Ft.
Min. Depth = 4 Ft.
Contributing Area = 3.86 AC. (Inc. 2B)
Required Volume = 515 CY. (Inc. 2B)
Available Volume = 661 CY.

20' Wide Emergency Spillway w/ Geotextile Fabric Elev=167.0'

Sediment Basin H
To Be Constructed Prior To Grading Of Increment 2B
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-44
Bot. Basin = 153.3 Ft.
Min. Depth = 11.7 Ft.
Contributing Area = 3.86 AC. (Inc. 2B)
Required Volume = 515 CY. (Inc. 2B)
Available Volume = 550 CY.

Construct Temporary Interceptor Swale 2B Prior To Grading Of Increment 2B See Detail Sht. C-44 (Min. Slope At 0.5%)

Erosion and Sediment Control Plan – (℄ Sta. 75+00 to ℄ Sta. 97+00)
Scale: 1" = 100'

Legend:
- LOG, and Disturbance
- Dust Fence Composite
- Filter Sock
- Grading Increment Boundary
- Finish Grade 10' Contour
- Finish Grade 2' Contour
- Existing Ground Contour
- Direction of Flow
- Top Bank
- Bottom Bank
- Fill Slope
- Cut Slope
- Swale
- Finished Spot Elevation

Graphic Scale:
1" = 100' 100' 50' 0 100' 200'
Scale in Feet

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

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 6935-C HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Erosion and Sediment Control Plan – 2

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road
to Fort Weaver Road

Scale: As Shown Date: May 2021

SHEET No. C-39 OF - SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021		-

Sediment Basin K
To Be Constructed Prior To Grading Of Increment 2C
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-44
Bot. Basin = 166.3 Ft.
Min. Depth = 9.8 Ft.
Contributing Area = 3.58 AC. (Inc. 2C)
Required Volume = 477 CY. (Inc. 2C)
Available Volume = 255 CY. (916 Total Inc. 2C)

Cosntruct Temporary Interceptor Swale 5C Prior To Grading Of Increment 5C
See Detail Sht. C-44
(Min. Slope At 0.5%)

Increment 5B
Area=5.15 AC

Increment 5C
Area=4.20 AC

Increment 2B
Area=3.86 AC

Increment 2C
Area=3.58 AC

Ⓑ Temporary Sediment Basin 2C-1
To Be Constructed Prior To Grading Of Increment 2C And Backfilled Upon Completion of Increment 2C
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-44
Bot. Basin = 159.4 Ft.
Min. Depth = 4 Ft.
Contributing Area = 4.20 AC. (Inc. 2C)
Required Volume = 560 CY. (Inc. 2C)
Available Volume = 661 CY.

True North
1" = 100'

20' Wide Emergency Spillway w/ Geotextile Fabric
Elev=163.9'

Ⓐ 20' Wide Emergency Spillway w/ Geotextile Fabric
Elev=171.7'

20' Wide Emergency Spillway w/ Geotextile Fabric
Elev=164.0'

20' Wide Emergency Spillway w/ Geotextile Fabric
Elev=167.8'

Compost Filter Sock
Perimeter Control Buffer,
Typ. See Det., Sht. C-44

Construct Temporary Interceptor Swale 2C Prior To Grading Of Increment 2C
See Detail Sht. C-44
(Min. Slope At 0.5%)

Sediment Basin J
To Be Constructed Prior To Grading Of Increment 2B
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-44
Bot. Basin = 161 Ft.
Min. Depth = 9.8 Ft.
Contributing Area = 3.86 AC. (Inc. 2B)
Required Volume = 515 CY. (Inc. 2B)
Available Volume = 1,835 CY.

Temporary Sediment Basin 2C-2
To Be Constructed Prior To Grading Of Increment 2C And Backfilled Upon Completion of Increment 2C
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-44
Bot. Basin = 160 Ft.
Min. Depth = 4 Ft.
Contributing Area = 3.58 AC. (Inc. 2C)
Required Volume = 477 CY. (Inc. 2C)
Available Volume = 661 CY. (916 Total Inc. 2C)

Matchline ℄ Sta. 97+00

Matchline ℄ Sta. 126+00

Erosion and Sediment Control Plan – (℄ Sta. 97+00 to ℄ Sta. 125+00)
Scale: 1" = 100'

Matchline ℄ Sta. 126+00

Construct Temporary Interceptor Swale 6 Prior To Grading Of Increment 6
See Detail Sht. C-44
(Min. Slope At 0.5%)

True North
1" = 100'

Increment 6A
Area=2.79 AC

Increment 3A
Area=3.35 AC

Construct Temporary Interceptor Swale 3A Prior To Grading Of Increment 3A
See Detail Sht. C-44
(Min. Slope At 0.5%)

Compost Filter Sock
Perimeter Control Buffer,
Typ. See Det., Sht. C-44

Matchline ℄ Sta. 145+00

Erosion and Sediment Control Plan – (℄ Sta. 125+00 to ℄ Sta. 145+00)
Scale: 1" = 100'

Pre-Construction BMP
- Stabilized Compost Filter Sock
- Temporary Sediment Basins
- Temporary Swales

During Construction BMP
- Temporary Stabilization
- Inlet Protection for New CB

Post Construction BMP
- Permanent Stabilization BMP

Legend:
- LOG, and Disturbance
- Dust Fence Composite
- Filter Sock
- Grading Increment Boundary
- Finish Grade 10' Contour
- Finish Grade 2' Contour
- Existing Ground Contour
- Direction of Flow
- Top Bank
- Bottom Bank
- Fill Slope
- Cut Slope
- Swale
- Finished Spot Elevation

Graphic Scale:
1" = 100' (100' 50' 0 100' 200')
Scale in Feet

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

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

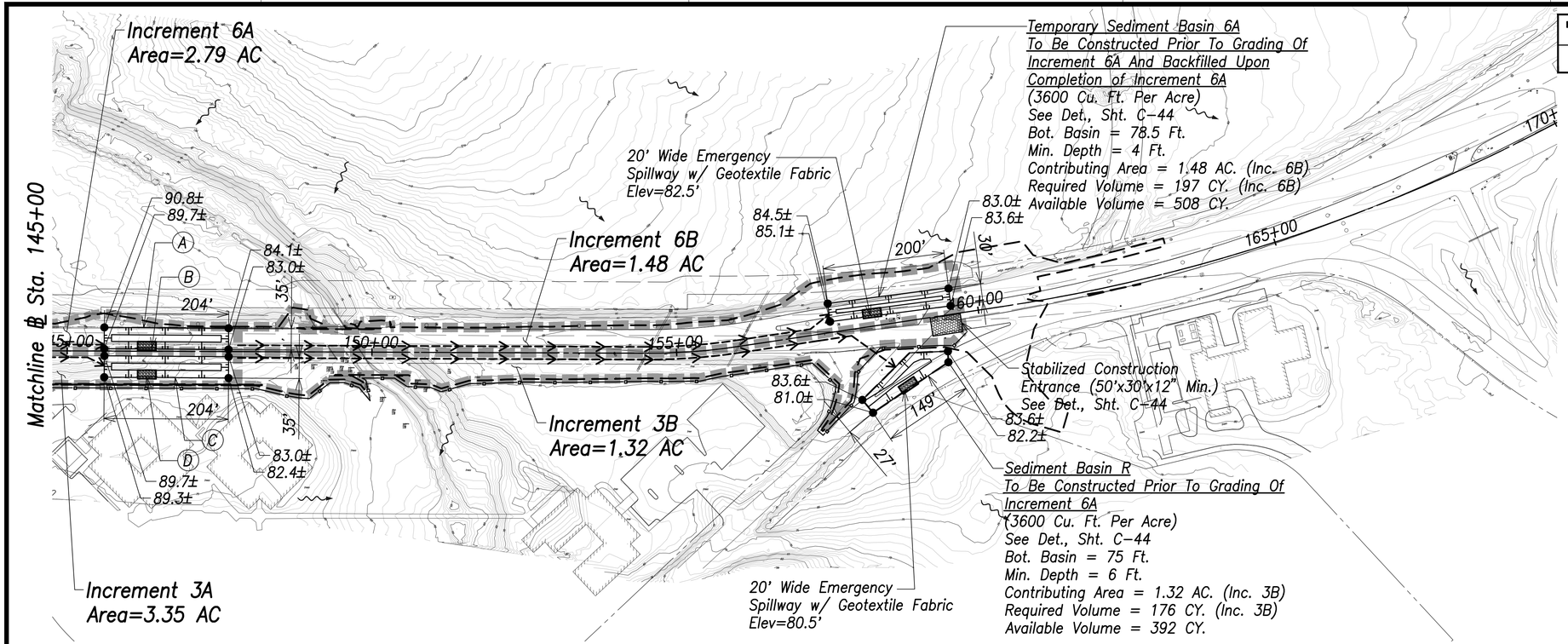
Erosion and Sediment Control Plan – 3

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road
to Fort Weaver Road

Scale: As Shown Date: May 2021

SHEET No. C-40 OF - SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021		-



Erosion and Sediment Control Plan – (℄ Sta. 145+00 to ℄ Sta. 163+25)

Scale: 1" = 100'

Ⓐ *Temporary Sediment Basin 6A*
To Be Constructed Prior To Grading Of
Increment 6A And Backfilled Upon
Completion of Increment 6A
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-44
Bot. Basin = 78.5 Ft.
Min. Depth = 4 Ft.
Contributing Area = 2.79 AC. (Inc. 6A)
Required Volume = 372 CY. (Inc. 6A)
Available Volume = 661 CY.

Ⓑ *20' Wide Emergency*
Spillway w/ Geotextile Fabric
Elev=82.5'

Ⓒ *Temporary Sediment Basin 3A*
To Be Constructed Prior To Grading Of
Increment 3A And Backfilled Upon
Completion of Increment 3A
(3600 Cu. Ft. Per Acre)
See Det., Sht. C-44
Bot. Basin = 77.9 Ft.
Min. Depth = 4 Ft.
Contributing Area = 3.35 AC. (Inc. 3A)
Required Volume = 447 CY. (Inc. 3A)
Available Volume = 661 CY.

Ⓓ *20' Wide Emergency*
Spillway w/ Geotextile Fabric
Elev=81.9'

Pre-Construction BMP
- Stabilized Compost Filter Sock
- Temporary Sediment Basins
- Temporary Swales

During Construction BMP
- Temporary Stabilization
- Inlet Protection for New CB

Post Construction BMP
- Permanent Stabilization BMP

Legend:
- LOG, and Disturbance
- Dust Fence Composite
- Filter Sock
- Grading Increment Boundary
- Finish Grade 10' Contour (30)
- Finish Grade 2' Contour
- Existing Ground Contour (30)
- Direction of Flow
- Top Bank
- Bottom Bank
- Fill Slope
- Cut Slope
- Swale
- Finished Spot Elevation (126.4±)

Graphic Scale:
1" = 100' 100' 50' 0 100' 200'
Scale in Feet

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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	CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

Erosion and Sediment Control Plan – 4

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road
to Fort Weaver Road

Scale: As Shown Date: May 2021

SHEET No. C-41 OF - SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021		-

Good Housekeeping BMPs Notes:

1. *Street Sweeping and Vacuuming.*

   All pollutants discharged from construction site to off–site areas must be swept or vacuumed each day before leaving the job site.

2. *Materials Delivery, Storage and Use Management.*

   Prevent, reduce, or eliminate the discharge of pollutants from material delivery, storage, and use to the storm water system or watercourses by minimizing the storage of hazardous materials onsite, storing materials in a designated area, installing secondary containment. Construction materials, waste, toxic and hazardous substances, stockpiles and other sources of pollution shall not be stored in buffer areas, near areas of concentrated flow, or areas abutting the ms4, receiving waters, or drainage improvements that discharge off–site. Primary and secondary containment controls and covers shall be implemented to the maximum extent practical (MEP).

3. *Spill Prevention and Control.*

   Create and implement spill prevention and response plans to eliminate and minimize the discharge of pollutants to the MS4 and receiving waters from leaks and spills by reducing the chance for spills, absorbing, containing, and cleaning up spills and properly disposing of spill materials. at a minimum, all projects shall cleanup all leaks and spills immediately.

4. *Hazardous Materials.*

   prevent or reduce the discharge of pollutants to storm water from hazardous waste through proper material use and waste disposal. in the event that hazardous materials are discharged to the ms4, the property owner or escp coordinator shall immediately notify the department of facilities maintenance, honolulu fire department, and honolulu police department of the discharge by telephone. a written report describing the pollutants that were discharged, the reasons for the discharge, and the measures that have been taken or will be taken to prevent a reoccurrence of the discharge shall be submitted to the director no less than 3 days after notification by phone.

5. *Nonhazardous Materials.*

   In the event that nonhazardous materials are discharged to the MS4, the property owner or ESCP coordinator shall notify the city department of facilities maintenance by telephone no later than the next business day. A written report describing the pollutants that were discharged, the reasons for the discharge, and the measures that have been taken or will be taken to prevent a reoccurrence of the discharge shall be submitted to the director no less than 3 days after notification by phone.

6. *Vehicle and Equipment Cleaning.*

   Eliminate and minimize the discharge of pollutants to storm water from vehicle and equipment cleaning operations by using off–site facilities when feasible, washing in designated, contained areas only, and eliminating discharges to the storm drain system by evaporating and/or treating wash water, as appropriate or infiltrating wash water for exterior cleaning activities that use water only.

7. *Vehicle and Equipment Fueling.*

   Prevent fuel spills and leaks by using off–site facilities, fueling only in designated areas, enclosing or covering stored fuel, and implementing spill controls such as secondary containment and active measures using spill response kits.

Good Housekeeping BMPs Notes (Cont'd)

8. *Vehicle and Equipment Maintenance.*

   Eliminate and minimize the discharge of pollutants to storm water from vehicle and equipment maintenance operations by using off–site facilities when feasible, performing work in designated areas only, using spill pads under vehicles and equipment, checking for leaks and spills, and containing and cleaning up spills immediately.

9. *Solid Waste Management.*

   Prevent or reduce discharge of pollutants to the land, groundwater, and in storm water from solid waste or construction and demolition waste by providing designated waste collection areas, collect site trash daily, and ensuring that construction waste is collected, removed, and disposed of only at authorized disposal areas.

10. *Sanitary/Septic Waste Management.*

    Temporary and portable sanitary and septic waste systems shall be mounted or staked in, well–maintained and scheduled for regular waste disposal and servicing. Sources of sanitary and/or septic waste shall not be stored near the MS4 or receiving waters.

11. *Stockpile Management.*

    Stockpiles shall not be located in drainage ways, within 50 feet from areas of concentrated flows, and are not allowed in the City right–of–way. Sediment barriers or silt fences shall be used around the base of all stockpiles. Stockpiles shall not exceed 15 feet in height. Stockpiles greater than 15 feet in height shall require 8 foot wide benching in accordance with ROH Chapter 14, Article 15. stockpiles must be covered with plastic sheeting or a comparable material if they will not be actively used within 7 days.

12. *Liquid Waste Management.*

    Liquid waste shall be contained in a controlled area such as a holding pit, sediment basin, roll–off bin, or portable tank of sufficient volume and to contain the liquid wastes generated. Containment areas or devices must be impermeable and leak free and should not be located where accidental release of the contained liquid can discharge to water bodies, channels, or storm drains.

13. *Concrete Waste Management.*

    Prevent or reduce the discharge of pollutants to storm water from concrete waste by conducting washout offsite or performing onsite washout in a designated area constructed and maintained in sufficient quantity and size to contain all liquid and concrete waste generated by washout operations. Plastic lining material should be a minimum of 10 millimeter polyethylene sheeting and should be free of holes, tears, or other defects that compromise the impermeability of the material. Containment areas or devices should not be located where accidental release of the contained liquid can discharge to water bodies, channels, or storm drains. Washout facilities must be cleaned, or new facilities must be constructed and ready for use once the washout is 75 percent full. Once concrete wastes are washed into the designated area and allowed to harden, the concrete should be broken up, removed, and disposed of as solid wastes.

14. *Contaminated Soil Management.*

    At minimum contain contaminated material soil by surrounding with impermeable lined berms or cover exposed contaminated material with plastic sheeting. Contaminated soil should be disposed of properly in accordance with all applicable regulations.

Good Housekeeping BMPs Notes (Cont'd)

1. *Dust Control.*

   The Contractor, at his own expense, shall provide effective measures for the control of dust from the project site and haul roads so it shall not be transported or discharged to off–site areas. The work must be in conformance with air pollution control standards contained in the Hawaii Administrative Rules: Title 11 Chapter 60.1, "Air Pollution Control".

2. *BMP and Site Maintenance.*

   The contractor shall maintain temporary erosion control measures for the life of the project. The Contractor shall clean trash and debris around the surrounding area on a weekly basis.

Erosion and Sediment Control Plan Schedule and Rain Response Plan Notes:

Project Sequence:

1. *Install stabilized construction entrances, perimeter controls, and temporary fencing for protected areas, clearing and grubbing as necessary for the installation of these BMPs.*
2. *Construct temporary sediment basins, stabilize immediately.*
3. *Construct temporary swales to direct runoff into the sediment basins. Stabilize immediately.*
4. *Install permanent drainage system with temporary inlet protection for inlets that do not drain to the sediment basins. Clear and grub as needed for installation.*
5. *Clear, grub and grade the site in 7 phases, sequentially in numerical order beginning with Increment 1. Relocate, Reconstruct and maintain bmps as needed to keep them effective at all times. Stabilization of the current phase is required prior to the start of the subsequent phase. Initiate temporary stabilization immediately once grading is completed in each phase.*
6. *Initiate stabilization of steep slopes (> 15%) with hydroseeding as soon as grading is completed on those areas. Install permanent irrigation system prior to permanent seeding.*
7. *Proceed with construction with least possible disturbance of vegetative areas and temporary structures.*

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Erosion and Sediment Control Notes – 1

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road
to Fort Weaver Road

Scale: As Shown Date: May 2021

SHEET No. C-42 OF - SHEETS

Erosion and Sediment Control Plan Schedule and Rain Response Plan Notes (Cont'd)

Project Sequence:

8. *Plant permanent ground cover according to the landscaping plan as soon as possible.*

9. *Remove or dismantle temporary erosion control structures after full establishment of permanent vegetative cover.*

10. *Practice good housekeeping measures throughout the duration of construction.*

11. *Inspections will be performed weekly.*

Rain Response Plan:

The following will be performed when heavy rains, tropical storm or hurricane is imminent or is forecasted in the next 48 hours:

1. *Temporary suspension of active grading and trenching/construction.*

2. *Inspect all sediment basins, temporary ditches/ swales, perimeter controls, and inlet protection devices, and maintain as needed. Reinstall any perimeter controls that were removed due to active work in the area. If a severe storm is expected, remove inlet protection devices to prevent flooding on surrounding streets.*

3. *Cover or relocate material stockpiles and liquid material containers to avoid contact with rainwater.*

4. *Place spill pans or oil–only spill pads under construction vehicles to prevent runoff from contacting any spilled petroleum products. Properly dispose of any accumulated oily water after the rain event.*

5. *Re–inspect after the approaching heavy rains, tropical storm or hurricane and replace or maintain BMPs as needed.*

Erosion Prevention / Sediment Control Notes

1. *The Contractor shall follow the guidelines in the City and County of Honolulu's "Rules Relating to Water Quality."*

2. *Measures to control erosion and other pollutants shall be in place before any earthwork is initiated.*

3. *Temporary stabilization is required on disturbed areas which are at final grade or when the disturbed area will not be worked for 14 consecutive days or more.*

4. *Permanent Stabilization*

   All disturbed areas shall be permanently stabilized using vegetative covering, pavement, or equivalent, prior to removing erosion and sediment measures. Trapped sediment and areas of disturbed soil which result from the removal of the temporary measures shall be immediately and permanently stabilized.

5. *Preserve Existing Vegetation*

   Clearly mark the areas to be preserved with flags or temporary fencing. Where temporary fencing is used, fencing must be adequately supported by posts and maintained in an upright position.

Erosion Prevention / Sediment Control Notes (Cont'd)

6. *Minimize Soil Compaction*

   Areas where final stabilization or infiltration practices will be installed shall be protected from excessive compaction during construction. Vehicle and equipment use shall be restricted or techniques to condition the soils to support vegetation shall be implemented in the areas that have been compacted and are designated to remain vegetative or post–construction infiltration areas. Clearly mark the areas to be avoided with flags or temporary fencing. Where temporary fencing is used, fencing must be adequately supported by posts and maintained in an upright position.

7. *Perimeter Controls*

   Perimeter controls are required downslope of all disturbed areas. Maintain downstream vegetated buffer area.

8. *Inlet Protection*

   - *All storm drain inlets onsite and those offsite which may receive runoff from the site shall use an inlet protection device unless they are directed to a sediment basin.*
   - *Sediment levels may not exceed one third of the height of a sediment barrier or inlet protection device at any point along the length of the sediment barrier or the inlet protection device.*
   - *Sediment barriers and inlet protection devices must be unclogged and cleaned when performance is compromised.*
   - *Torn, weathered or sagging sediment barriers or inlet protection devices must be repaired or replaced immediately.*

9. *Sediment Basins*

   Sediment basins must be kept in effective operating condition and sediment shall be removed to maintain at least one half of the design capacity at all times.

10. *Tracking Control*

    - *Minimize sediment track–out onto off–site streets, other paved areas, and sidewalks from vehicles exiting the construction site by restricting vehicle traffic to properly designated areas and using additional controls to remove sediment from vehicle tires prior to exiting the site.*
    - *Vehicular parking and movements on project sites must be confined to paved surfaces or predefined parking areas and vehicle paths, which shall be marked with flags or boundary fencing.*
    - *All pollutants and materials that are dropped, washed, tracked, spilled, or otherwise discharged from a project site to off–site streets, other paved areas, sidewalks or the ms4 must be cleaned using dry methods such as sweeping or vacuuming.*
    - *Washing pollutants and materials that are discharged from the project site to the ms4 into drain inlets or catch basins is prohibited unless the material is sediment and the inlets are directed to a sediment basin or sediment trap.*

11. *Best Management Practices (BMPs) shall not be removed until final stabilization is complete for that phase.*

12. *Refer to City and County of Honolulu Best Management Practices Manual–Construction, for more information on BMPs.*

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021		-

Erosion Prevention / Sediment Control Notes (Cont'd)

13. *The following BMPs were determined to be not applicable based on the specific site conditions. As construction progresses, revisions may be necessary and will be provided to DPP inspectors.*

    - *sediment barriers are not applicable as the proposed BMPs (perimeter control and sediment basins) are sufficient to address any potential sediment runoff.*
    - *Dewatering practices are not applicable because ground water is not expected to be present, due to the project elevation.*
    - *Sediment traps are not applicable because this project is larger than 5 acres.*

14. *An ESCP coordinator is required for this project. At the time of obtaining the trenching permit, the owner or authorized agent shall submit the "ESCP coordinator and/or CWPPP Designation Form" from the Appendix A to the "Rules Relating to Water Quality", August 2018, to CEB, to designate the Escp coordinator for this project.*

15. *The contractor shall comply with the project scheduling requirement as specified in the "Administrative Rules, Title 20, Department of Planning and Permitting, Chapter 3, Rules Relating to Water Quality", Section 20–3–28. The scheduled start date shall be submitted to the director in writing 2 weeks prior to commencing any work governed by these rules.*

ORIGINAL PLAN
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SIGNATURE — April 30, 2022 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

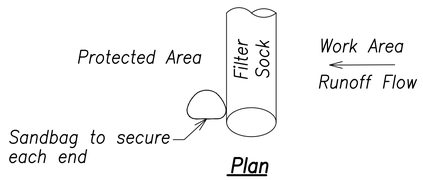
Erosion and Sediment Control Notes – 2

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road
to Fort Weaver Road

Scale: As Shown Date: May 2021

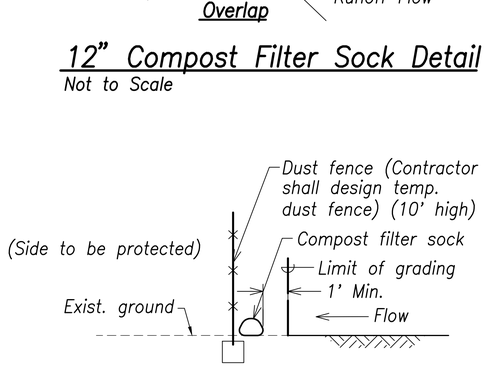
SHEET No. C-43 OF - SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021		-



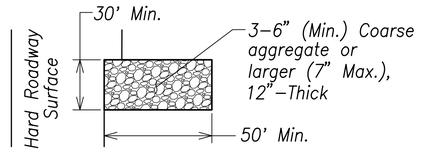
12" Compost Filter Sock Detail

Not to Scale



Limit of Grading Detail

Not to Scale



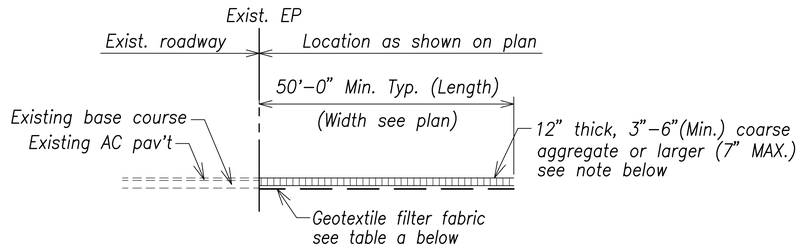
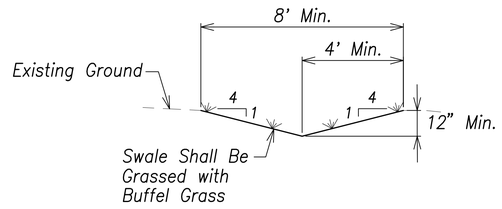


Table A – Geotextile Requirements	
Physical Property	Requirements
Grab Strength	315 MARV (ASTM D4632)
Sewn Seam Strength	285 MARV (ASTM D4884)
Trapezoid Tear Strength	115 MARV (ASTM D4533)
Puncture Resistance	115 MARV (ASTM D4833)
Permittivity	0.05' (ASTM D4491)
Apparent Opening Size (U.S. Standard Sieve)	40 MARV (ASTM D4751)
Ultraviolet Degradation, 500 hours	50 MARV (ASTM D4355)

Note:
12" Coarse aggregate layer shall be removed immediately prior to installation of roadway base course.

Stabilized Construction Entrance

Not to Scale

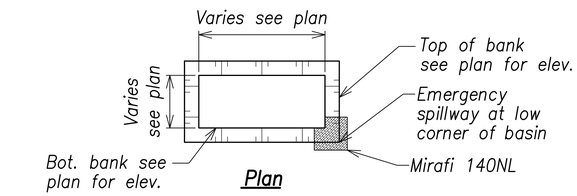


Notes:

1. temporary interceptor swale shall be removed and graded last upon completion of grading increments.
2. Temporary interceptor swale shall be stabilized immediately with hydroseed.

Temporary Interceptor Swale

Not to Scale



Note:

1. In lieu of providing outlet structures, contractor shall maintain the sediment basin in effective operating condition and provide pumping if any water has been standing for 72 hours. the contractor shall pump out standing water in the sediment basins and dispose of it at the temporary discharge area.
2. Double compost filter sock (perimeter control) shall be placed at the downstream side of the temporary discharge area. if the temporary discharge area does not have adequate vegetation, the contractor shall grass the temporary discharge area prior to disposing the water. Double compost filter sock (perimeter control) and grassing shall be maintained during grading operations and use of the discharge area.

Temporary Sediment Basin

Not to Scale

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Erosion and Sediment Control Details

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road

Scale: As Shown — Date: May 2021

SHEET No. C-44 OF - SHEETS

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, HONOLULU DISTRICT
FORT SHAFTER, HAWAII 96858-5440

September 18, 2020

SUBJECT: Approved Jurisdictional Determination for Farrington Highway Bridges Expansion, Ewa, Oahu, HI, Department of the Army File No. POH-2020-00071

Hawaii Department of Transportation, Highways
c/o Mr. Craig Luke
R.M. Towill Corporation
2024 N. King Street
Suite 200
Honolulu, HI 96819

Dear Mr. Luke:

The Honolulu District, U.S. Army Corps of Engineers (Corps), Regulatory Office has received your request for a jurisdictional determination and clarification whether a Department of the Army (DA) permit is required for the expansion of an approximately 3.1-mile portion of Farrington Highway, including widening the bridge over Honouliuli Stream, relocating Honouliuli Stream beneath the bridge, and lengthening four culvert crossings, located 21.374414, - 158.033544, between Fort Weaver Road on the east and Kapolei Golf Course Road on the west, in Ewa, Island of Oahu, Hawaii, Island of Oahu, Hawaii. Your request has been assigned DA file number POH-2020-00071. Please reference this number in all future correspondence with our office relating to this action.

Based on our review of the information you provided and the enclosed approved jurisdictional determination (AJD), dated September 14, 2020, the area identified as the Corps Area of Review (AOR) (Enclosure 1) contains Honouliuli Stream, a water of the U.S. Therefore, a DA permit under Section 404 of the Clean Water Act would be required for the discharge of fill into Honouliuli Stream.

The Corps AOR also contains Kaloi Gulch, Hunehune Gulch, an existing culvert crossing, and Palehua Gulch, four ephemeral features. The Corps has determined that Kaloi Gulch, Hunehune Gulch, an existing culvert crossing, and Palehua Gulch are not tributaries based on the rationale provided in the enclosed AJD Forms. Kaloi Gulch, Hunehune Gulch, an existing culvert crossing, and Palehua Gulch are ephemeral features (b)(3) that do not contribute surface water flow to a water identified as an (a)(1) water in a typical year either directly or through one or more waters identified in (a)(2),(3) or (4) of the NWPR. In accordance with the NWPR, ephemeral, (b)(3), waters are not Waters of the U.S. and therefore not jurisdictional. Therefore, a DA permit under Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors

Act of 1899 is not required for activities occurring in Kaloi Gulch, Hunehune Gulch, an existing culvert crossing, and Palehua Gulch.

This letter contains the basis for our jurisdictional determination on the enclosed AJD Forms (Enclosures 2, 3, 4, 5, and 6) for the aforementioned AOR. If you wish to submit new information regarding this jurisdictional determination, please do so within 60 days. We will consider any new information submitted and respond within 60 days by either revising the prior determination, if appropriate, or reissuing the prior determination. If you object to this determination, you may request an administrative appeal under 33 CFR Part 331. We have enclosed a Notification of Appeal Process and Request for Appeal (NAP/RFA) form (Enclosure 7). If you wish to appeal this determination, you must submit a completed RFA form within 60 days of the date on the NAP to the Corps' Pacific Ocean Division office at the following address:

Kate Bliss
Civil Works and Regulatory Program Manager
U.S. Army Corps of Engineers
Pacific Ocean Division, ATTN: CEPOD-PDC
Building 525
Fort Shafter, Hawaii 96858-5440

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Pacific Ocean Division office within 60 days of the date on the NAP.

While a DA permit is not required for your proposed project, you are responsible for obtaining all other applicable Federal, state, or local authorizations required by law.

Thank you for your cooperation with the Honolulu District Regulatory Program. If you have any questions related to this determination, please contact me at 808-835-4310 or via e-mail at Vera.B.Koskelo@usace.army.mil. You are encouraged to provide comments on your experience with the Honolulu District Regulatory Office by accessing our web-based customer survey form at http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey.

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 Reports

Hawaii Department of Transportation Corrective Action Report

Section 10.1 "Corrective Actions" Defined

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

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

Section 10.2.1. Triggering Events

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

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

  *Date/time Engineer notified by Contractor*_____

  *Date/time DOH notified by Engineer*_____

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

Section 10.2. Requirements for Taking Corrective Actions

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

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

days, the Contractor shall document and submit to the Engineer, for his agreement, why it is infeasible to complete the installation or repair within the 7 calendar day timeframe and document a schedule for installing the storm water control(s) and making it operational as soon as practicable after the 7-day timeframe.

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

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

10.4.1. Initial Report (24 Hours)

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

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

10.4.2. Final Report (7 Days)

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

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

Section 10.2.2. SWPPP Modification Due to Corrective Actions

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

❑ *Date SWPPP 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: *Michael K. Medeiros*

Person Position Title: *Oahu District Engineer*

Person Company or Agency: *State of Hawaii*

Department: *Department of Transportation* *Division:* *Highways Division*

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

Person Email: *Mike.medeiros@hawaii.gov*

Attachment J – Monthly Compliance Report

Hawaii Department of Transportation Monthly Compliance Report

DOH NGPC File No. HIR10G438
Project Name: Farrington Highway Widening, Kapolei Golf Course Road to Fort Weaver Road
Project No: 7101A-01-20
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: Michael K. Medeiros

Person Position Title: Oahu District Engineer

Person Company or Agency: State of Hawaii

Department: Department of Transportation *Division: Highways Division*

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

Person Email: Mike.medeiros@hawaii.gov

Attachment K – Post-Authorization Additions to the SWPPP

Attachment L – SWPPP 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: *Farrington Highway Widening, Kapolei Golf Course Road to Fort Weaver Road*
SWPPP Contact: *Michael K. Medeiros, Oahu District Engineer*

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.