

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HIE-01-IIMR	2013	40	49

EROSION CONTROL NOTES:

1. State of Hawaii, Department of Transportation, Highways Division, Construction Best Management Practices (BMP) Field Manual, dated January 2008, provides guidance on BMP installation and maintenance for the project site. The Construction BMP Field Manual is a reference guideline. Actual BMP placement and installation shall be according to the Erosion Control Plan on Sheet EC-2. Contractor is responsible for ensuring proper function, proper performance and maintenance of all temporary BMP's installed as a part of this project.

2. Prior to installation of temporary BMP's for the project, Contractor shall clean the entire length of the existing H-1 double cell box culvert of accumulated debris and trash, including its inlet and outlet structures within the Highways right-of-way. Debris and trash materials shall be hauled off site in water tight trailer beds and disposed of to an approved disposal site accepted by Engineer.

3. Contractor shall check weather forecast each calendar day. Contractor shall immediately notify the Engineer of a forecast of a severe storm event that may require immediate removal of equipment and material in stream. Contractor shall prepare a contingency action plan as part of its site specific BMP plan submittal to address the possibility or occurrence of a severe storm event.

4. Provide access to the Water Quality Monitoring personnel as specified in Subsection 209.03 (AX2) - Water Quality Monitoring and Assessment.

5. Cut existing 42" cmp and install temporary BMP's to contain any pollutants from cutting of the existing 42" cmp pipe as shown on the plans. After the 42" cmp pipe is cut, Contractor shall install a temporary 12" HDPE Bypass Pipe connection to the existing 42" cmp. Contractor shall secure the 12" HDPE Bypass Pipe within the existing 42" cmp as shown on the plans and provide fittings as necessary. Submit plan to Engineer for acceptance prior to construction. Payment for this work will be considered incidental to various contract items.

6. Install sandbag barrier across entire width of outlet of existing H-1 double cell box culvert as indicated on Sht. No. EC-2. Install two temporary 36-inch HPDE pipes to divert Aiea Stream flow during construction. Start installation from the upstream to downstream along streambed. Remove trash and debris, move boulders and other materials as necessary to install sandbags and temporary HDPE pipes.

7. Provide and maintain sufficient HDPE pipe tie-down devices to secure pipes against buoyant forces. Submit plan to Engineer for acceptance prior to construction.

8. The 12 mil HDPE composite liner for the temporary BMP's shall be installed such that the upstream portion covers over the downstream portion with at least an 18-inch overlap.

9. Excess materials as a result of grading, excavation, clearing, grubbing and other related construction work shall be hauled off site in water tight trailer beds and disposed of to a disposal site accepted by the Engineer. Contractor shall comply with all statutes, ordinance, rules and regulations with regard to dewatering liquid wastes prior to disposal at solid waste landfills.

10. Contractor shall send the green waste material to be recycled at a green waste facility.

11. Temporary HDPE pipes shall be smooth interior pipe including fittings as accepted by Engineer.

12. Install a one-foot high sandbag barrier with impervious sheeting across the entire left-hand side (looking upstream) of the inlet structure of the existing H-1 double cell box culvert to divert low stream flow to the right cell of the box culvert. Location and installation of sandbags as shown on plans. Payment for the installation of sandbag barrier will be considered incidental to various contract items.

13. The Contractor has available for its use designated Staging Areas #1 (Approx. 2,500 SF) and #2 (Approx. 7,600 SF) to access the project work site and for storage of materials and equipment (See Sht. TCP-2). Contractor shall restore and stabilize stream bank slope affected by a construction access road as shown on the plans. Trim existing trees on the Diamond Head side of Aiea Stream as necessary to attain adequate vertical and horizontal clearances for construction vehicle and equipment via Temporary Stream Crossing. No overcutting will be allowed. Payment for the trimming of trees as accepted by Engineer will be considered incidental to various contract items.

14. Place coarse aggregate, sandbag barrier, geotextile, silt fences and other BMPs as shown on plans to fully isolate and contain Contractor work area from discharging pollutants to diverted portion of Aiea Stream. Coarse aggregate shall be clean water washed offsite prior to placement for stabilized construction entrance/exit, temporary stream crossing, and construction access.

15. Install and maintain Stabilized Construction Entrance/Exit as shown on plans according to guidelines of Construction BMP Field Manual EC-2. Depth of coarse aggregate shall be 12 inches. Coarse aggregate shall be between 3 to 6 inches in size. Place geotextile fabric beneath coarse aggregate layer.

16. Approximately 83 LF of Dust Screen, 12 feet high, shall be installed and maintained along the entire length of existing CMU Wall to top of stream bank, as accepted by Engineer, to minimize project impact on adjacent properties.

17. Contractor shall monitor build-up of debris behind sandbag dams on a daily basis. Maintain to prevent clogging for the duration of the project.

18. Contractor is advised that any modifications to the temporary BMP Plans contained in these contract documents will require a resubmittal for approval to the Hawaii Department of Health of the Project's Section 401 Water Quality Certification (WQC). Any delay resulting from a resubmittal of the 401 WQC will be considered as a Contractor caused delay.

19. The location of the concrete washout area shall be limited to the vicinity of the cul-de-sac staging area and not within the stream.

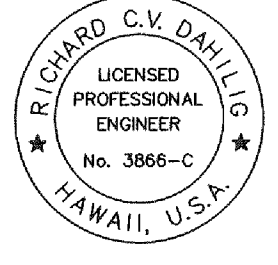
20. Payment for all work prescribed in the following sheets:

EC-1 Erosion Control Notes
EC-2 Erosion Control Plan
EC-3 Erosion Control Detail - 1
EC-4 Erosion Control Detail - 2
SR-1 Site Restoration Plan

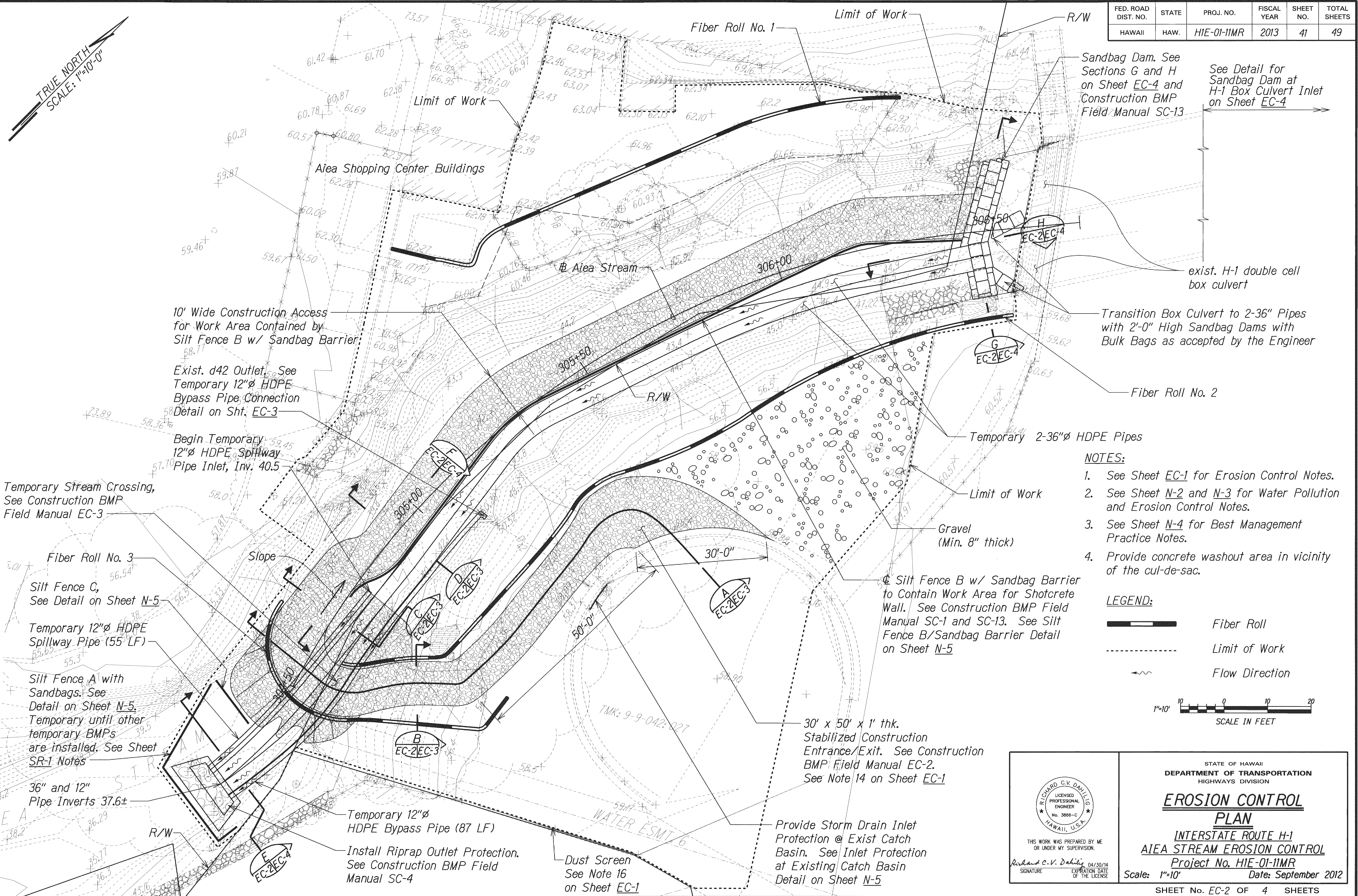
will be paid on a lump sum basis under Pay Item 209.0100, "Installation, Maintenance, Monitoring and Removal of BMP", in the Proposal Schedule.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

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 <p>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. Richard C.V. Dahlke 04/30/14 SIGNATURE EXPIRATION DATE OF THE LICENSE</p>	<p>STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION</p> <p>EROSION CONTROL NOTES</p> <p>INTERSTATE ROUTE H-1 AIEA STREAM EROSION CONTROL Project No. HIE-01-IIMR</p> <p>Scale: None Date: September 2012</p>
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HAWAII	HAW.	HIE-01-11MR	2013	41	49



- NOTES:**
1. See Sheet EC-1 for Erosion Control Notes.
 2. See Sheet N-2 and N-3 for Water Pollution and Erosion Control Notes.
 3. See Sheet N-4 for Best Management Practice Notes.
 4. Provide concrete washout area in vicinity of the cul-de-sac.

LEGEND:

- Fiber Roll
- - - Limit of Work
- ~ Flow Direction

1"=10'
SCALE IN FEET

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
SIGNATURE: Richard C.V. Dahl, 04/30/14
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EROSION CONTROL PLAN
INTERSTATE ROUTE H-1
AIEA STREAM EROSION CONTROL
Project No. HIE-01-11MR

Scale: 1"=10' Date: September 2012

SHEET No. EC-2 OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	H1E-01-11MR	2013	C.O. 41S-2	49



LEGEND FOR AS-BUILT POSTINGS	
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	Double line for as-built deletion
	Text for as-built posting

Sandbag Dam. See Sections G and H on Sheet EC-4 and Construction BMP Field Manual SC-13

2-36" Pipes with 5'-0" High Sandbag Dams with Bulk Bags Wrapped with Geotextile as accepted by the Engineer

10' Wide Construction Access for Work Area Contained by Silt Fence B w/ Sandbag Barrier

Exist. d42 Outlet. See Temporary 36" HDPE Bypass Pipe Connection Detail on Sht. EC-3

Temporary 12" HDPE Spillway Pipe Inlet
Inv. 40.5

Temporary Stream Crossing, See Construction BMP Field Manual EC-3

Fiber Roll No. 3

Silt Fence C, See Detail on Sheet N-5

Temporary 12" HDPE Spillway Pipe (55' LF)

Silt Fence A with Sandbags. See Detail on Sheet N-5. Temporary until other temporary BMPs are installed. See Sheet SR-1 Notes

36" and 12" Pipe Inverts 37.6±

Install Riprap Outlet Protection. See Construction BMP Field Manual SC-4

Dust Screen See Note 16 on Sheet EC-1

NOTE:
No construction entrance/exit was made. Crane was used to lift things in and out of the stream.
~~30' x 50' x 1' thk. Stabilized Construction Entrance/Exit. See Construction BMP Field Manual EC-2. See Note 14 on Sheet EC-1~~

Provide Storm Drain Inlet Protection @ Exist Catch Basin. See Inlet Protection at Existing Catch Basin Detail on Sheet N-5

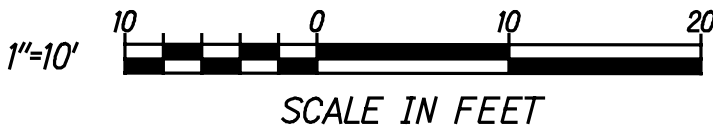
¢ Silt Fence B w/ Sandbag Barrier to Contain Work Area for Shotcrete Wall. See Construction BMP Field Manual SC-1 and SC-13. See Silt Fence B/Sandbag Barrier Detail on Sheet N-5

NOTES:

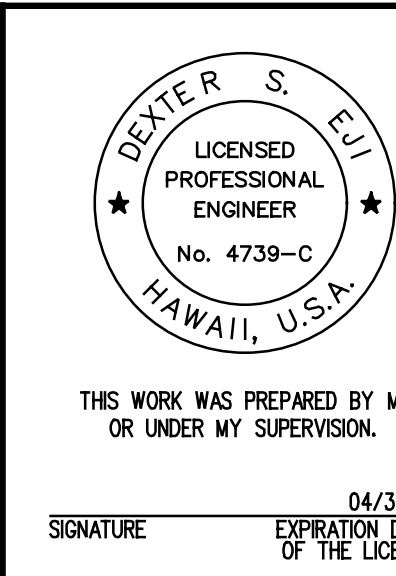
- See Sheet EC-1 for Erosion Control Notes.
- See Sheet N-2 and N-3 for Water Pollution and Erosion Control Notes.
- See Sheet N-4 for Best Management Practice Notes.
- Provide concrete washout area in vicinity of the cul-de-sac.
- See Sht. EC-2A for Erosion Control Plan for Foundation Work on Column 298
- Protect stream bank from erosion with 12mil HDPE composite liner. Secure liner to slope.

LEGEND:

- Fiber Roll
- Limit of Work
- Flow Direction



10/14/15	Added New Sheet
Date	Revision



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EROSION CONTROL PLAN
INTERSTATE ROUTE H-1
AIEA STREAM EROSION CONTROL
Project No. H1E-01-11MR
Scale: 1"=10' Date: September 2012

SHEET No. EC-2B OF 4 SHEETS

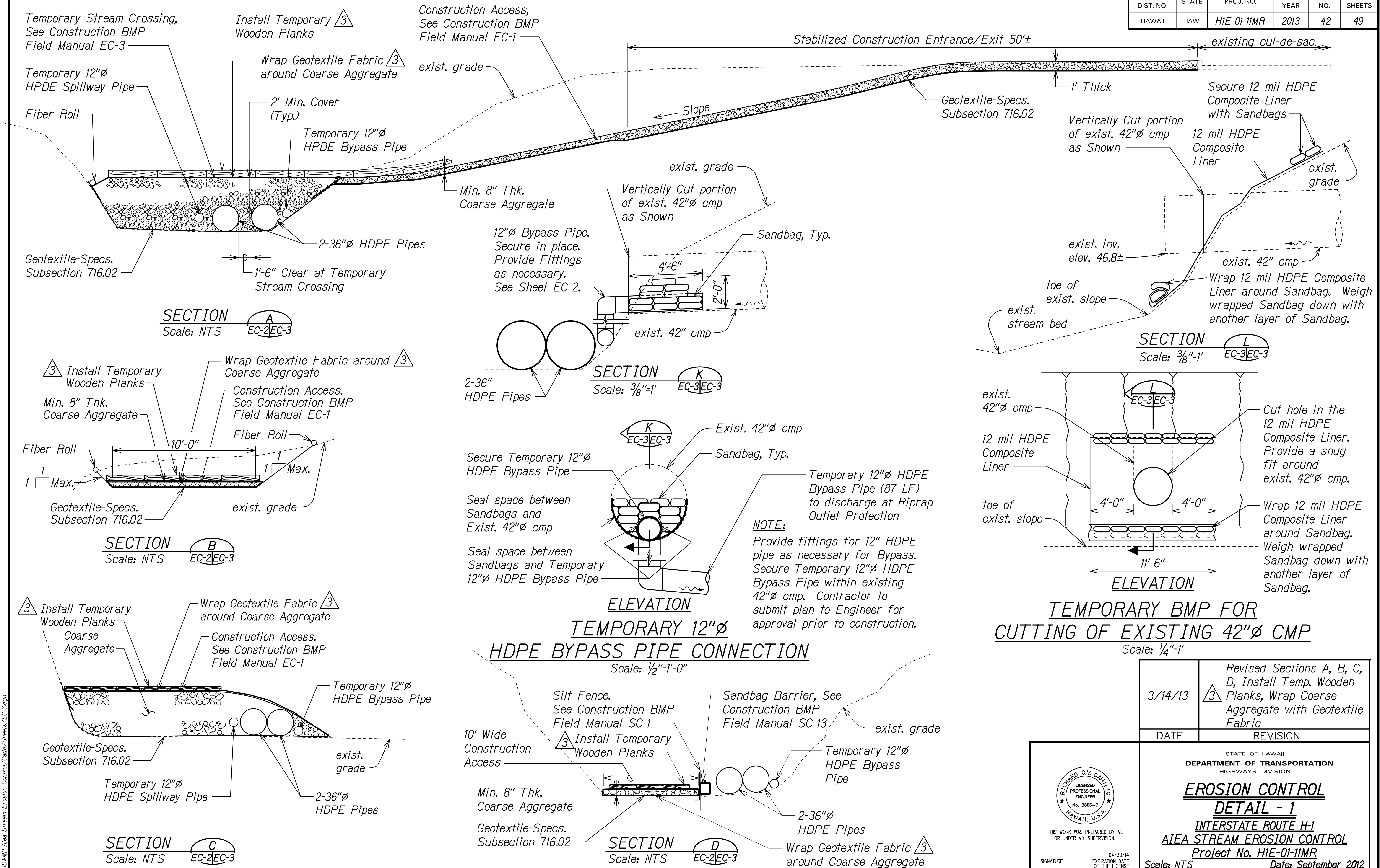
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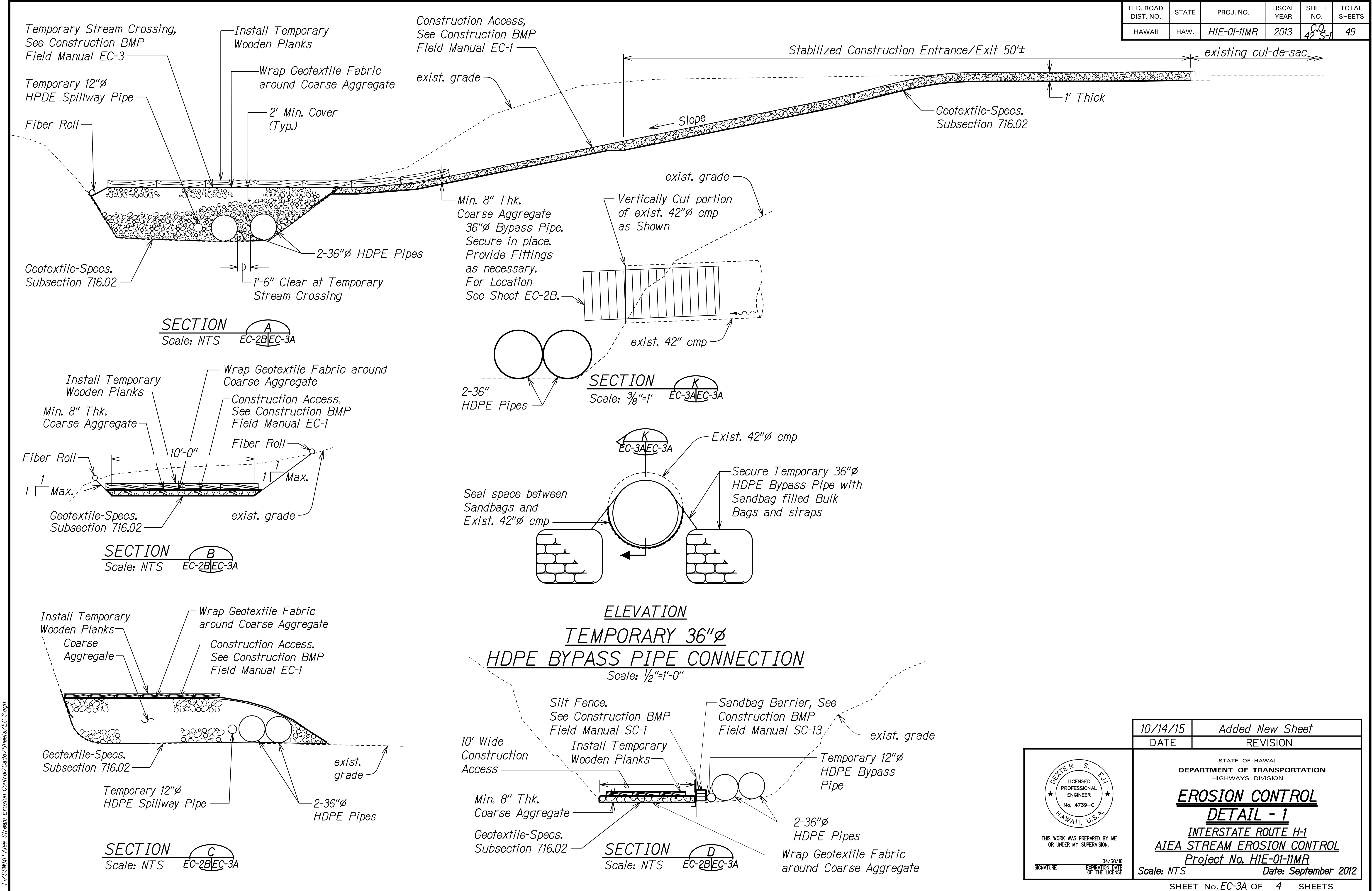
"AS-BUILT"

C.O.41S-2

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	H1E-01-11MR	2013	42	49

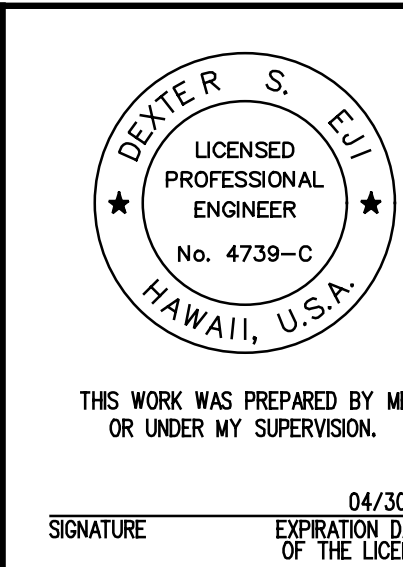


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	H1E-01-11MR	2013	C.O. 42 S-1	49



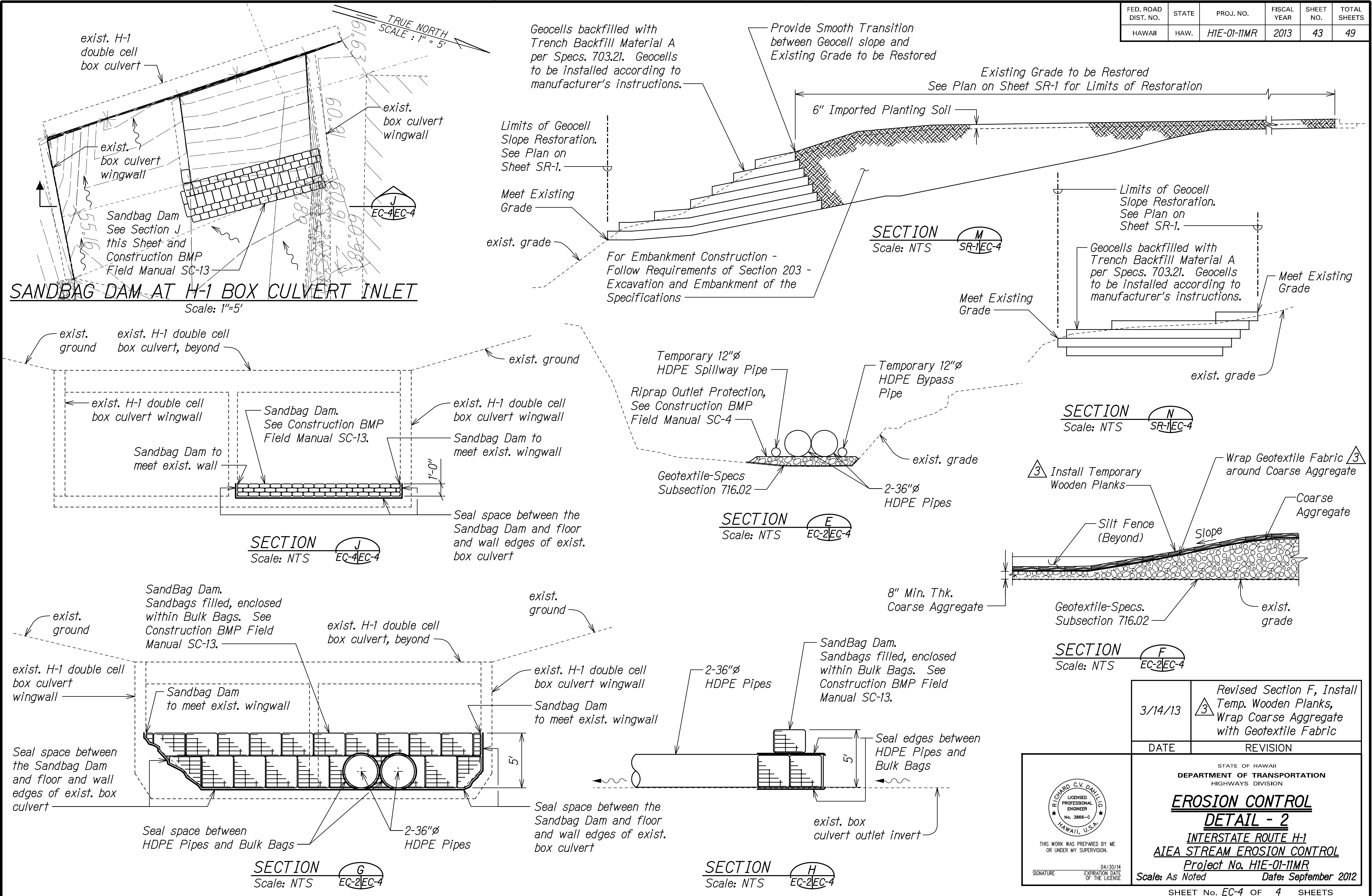
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NOTE BOOK	_____
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10/14/15	Added New Sheet
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION EROSION CONTROL DETAIL - 1 INTERSTATE ROUTE H-1 AIEA STREAM EROSION CONTROL Project No. H1E-01-11MR Scale: NTS Date: September 2012	
SHEET No. EC-3A OF 4 SHEETS	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	H1E-01-11MR	2013	43	49



DATE	_____
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NOTE BOOK	_____
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