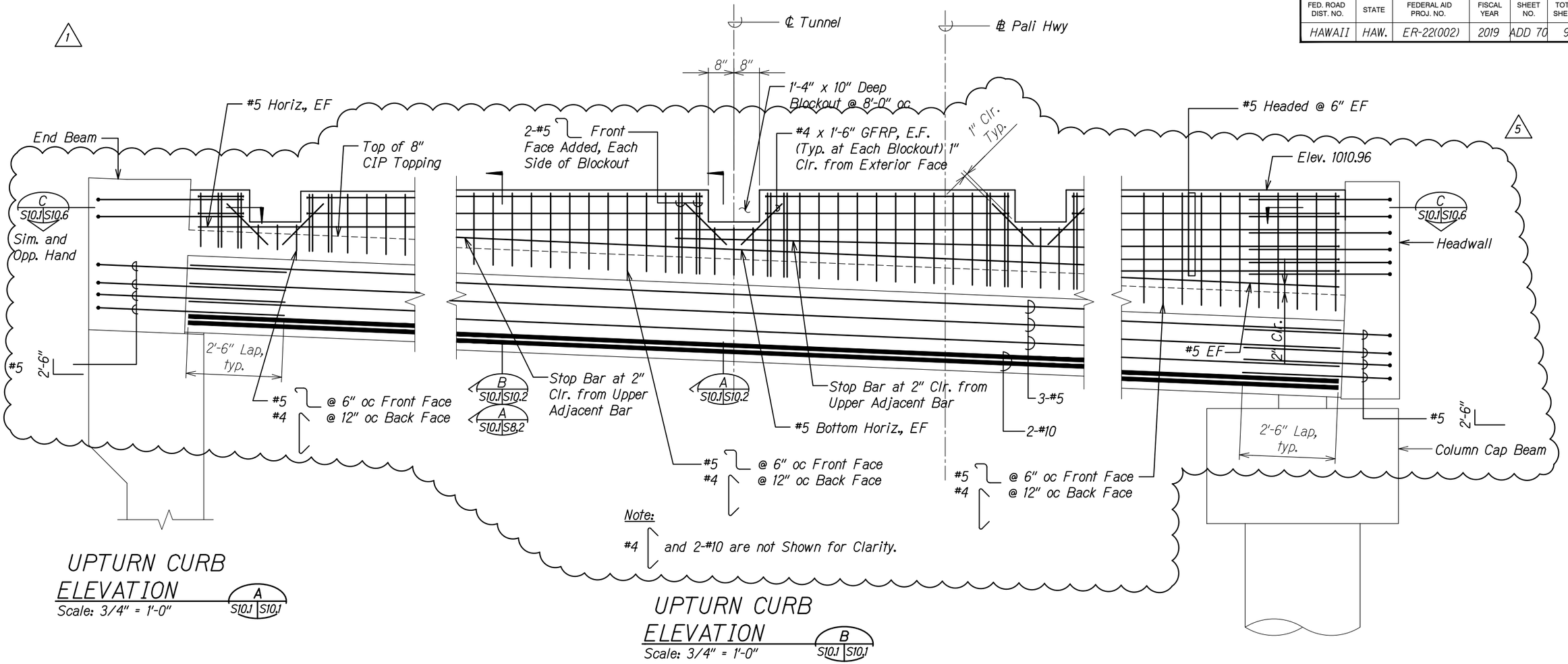
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	ER-22(002)	2019	ADD 70	94



UPTURN CURB ELEVATION (A)
Scale: 3/4" = 1'-0"
A S10.1|S10.1

UPTURN CURB ELEVATION (B)
Scale: 3/4" = 1'-0"
B S10.1|S10.1

UPTURN CURB ELEVATION (C)
Scale: 3/4" = 1'-0"
C S10.1|S10.1

DATE	REVISION
8/06/19	5 Revised Sections
5/24/19	1 Revised Sections

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

UPTURN CURB ELEVATION AT NEW PORTAL

PALI HIGHWAY
LANDSLIDE MITIGATION PROJECT
FAP Proj. No. ER-22(002)

Scale: As Noted Date: May 6, 2019

SHEET No. S10.1 OF 5 SHEETS

ADD 70

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

DRAWING NAME: Z:\00 ONGOING\19-014.1A PALI ROOF SHED POST DESIGN-WSP TM\01 CAD\10-07-19 UPDATE DELTA5-6\PLM-S1001 ADD1 DELTA2 S1003 ADD1 UPTURN.DWG PLOT TIME: 10-07-19, 4:28 PM)

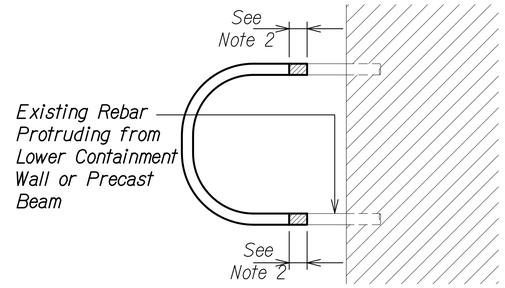
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	ER-22(002)	2019	71 S-1	94

NOTES:

1. Weld detail per AWS D1.4/D1.4M:2011, Fig. 3.2(A).
2. Remove portion of reinforcing steel by saw cutting as necessary to provide 1" clear to precast and 1" clear to lower containment wall. (See Detail on this sheet).
3. Butt weld rebar segment. Butt weld shall be V-Groove. Joints shall not be offset at weld by more than ⅛ inch. Trim back or shape ends of rebars to be butt welded with a V-Groove by carbon arc, oxyacetylene cutting or sawing. (See Details on sheet 2 of 2).
4. Electrodes for manual shielded metal arc welding of ASTM A706 rebars shall conform to ASW 5.5 for E8016G3 or E8018 C3 electrodes.
5. Butt weld the new rebar to the exposed existing rebar with a single pass/layer.
6. Proceed to the next bar welding a single pass while letting the first welded bars cool off.
7. When finished welding the first pass on all new bars, make sure that the first welded bars are cool then proceed with 2nd pass on each bar. Continue this process until weld is complete per structural repair detail. Immediately after completing welding, cover each side of welded joint with insulated wrapping to control rate of cooling. Keep insulated wrapping in place until rebar has cooled to below 200 degrees F or to the touch.
8. Electrodes to be furnished in hermethically sealed containers or dry for two hours at 450 degrees F to 500 degrees F before use. Immediately after removal from hermethically sealed containers or drying ovens, store electrodes in ovens held at temperatures of at least 250 degrees F. Redry electrodes not in use within 4 hours after removal from hermethically sealed containers or from drying ovens.
9. Do not weld in inclement or wet weather unless protection accepted by the engineer is provided.
10. Preheating or post heating of ASTM A706 rebars in weld area is not required.
11. Tack welding for alignment purposes will be allowed when tack weld will be consumed by subsequent weld.
12. All butt welds will be special inspected. Completed welds shall be nondestructive tested per section 602 of the specification in note 17. Welds shall show no sign of cracks, lack of fission, under cutting, excessive piping, porosity or inadequate size.
13. All butt welds shall be made by certified welders qualified for butt welding #4 and #5 rebars.
14. Completed butt weld joints shall develop not less than the specified tensile strength of the rebar.
15. Qualify butt welded rebar joint splice with job control tests on sample joint splice per section 602 of the specification in note 17. Welded butt joint in reinforcing steel shall be complete joint penetration butt welds conforming to requirements of AWS D1.4 Figure 3.2(A) Single V-Groove weld.

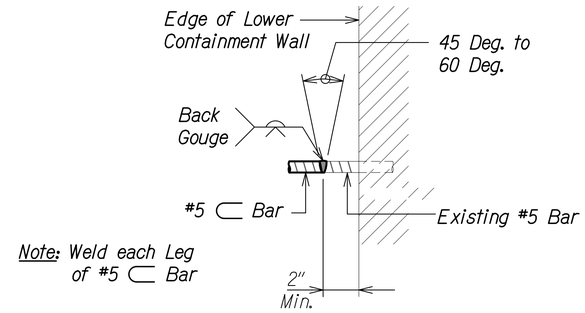
    Job control tests: Sample joint splice shall consist of splice made at the job site to connect two 30 inch long minimum length bars, using same rebar size, material, splice material, position, location and equipment and following same procedures as are being used to make joint splices in the work. Make and test sample joint splice in the presence of the special inspector and perform nondestructive test on completed weld.

    Perform nondestructive test on joint splices by radiographic examination of completed joint penetration butt welded joints. Welds found to be defective shall be repaired in accordance with requirements of AWS D1.4.
16. Maximum stringer bead width shall be 2.5 times electrode diameter. Perform slagging between each weld pass. Weld reinforcement shall not exceed 1/8 inch in convexity.



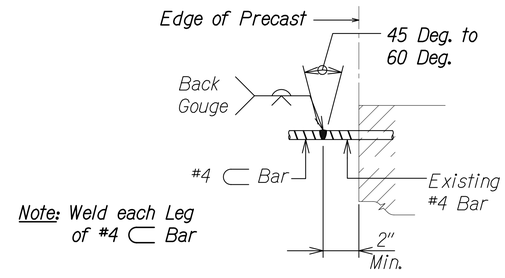
REBAR ALTERATION DETAIL

Scale: 3" = 1'-0"



SIDE VIEW OF LOWER CONTAINMENT WALL

Scale: 3" = 1'-0"



SIDE VIEW OF PRECAST

Scale: 3" = 1'-0"

3/26/21	2 As Built - New Sheet
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PRECAST PORTAL AND LOWER CONTAINMENT WALL REBAR ALTERATION

PALI HIGHWAY
LANDSLIDE MITIGATION PROJECT
FAP Proj. No. ER-22(002)

Scale: As Noted Date: May 6, 2019

SHEET No. S10.2A OF 5 SHEETS

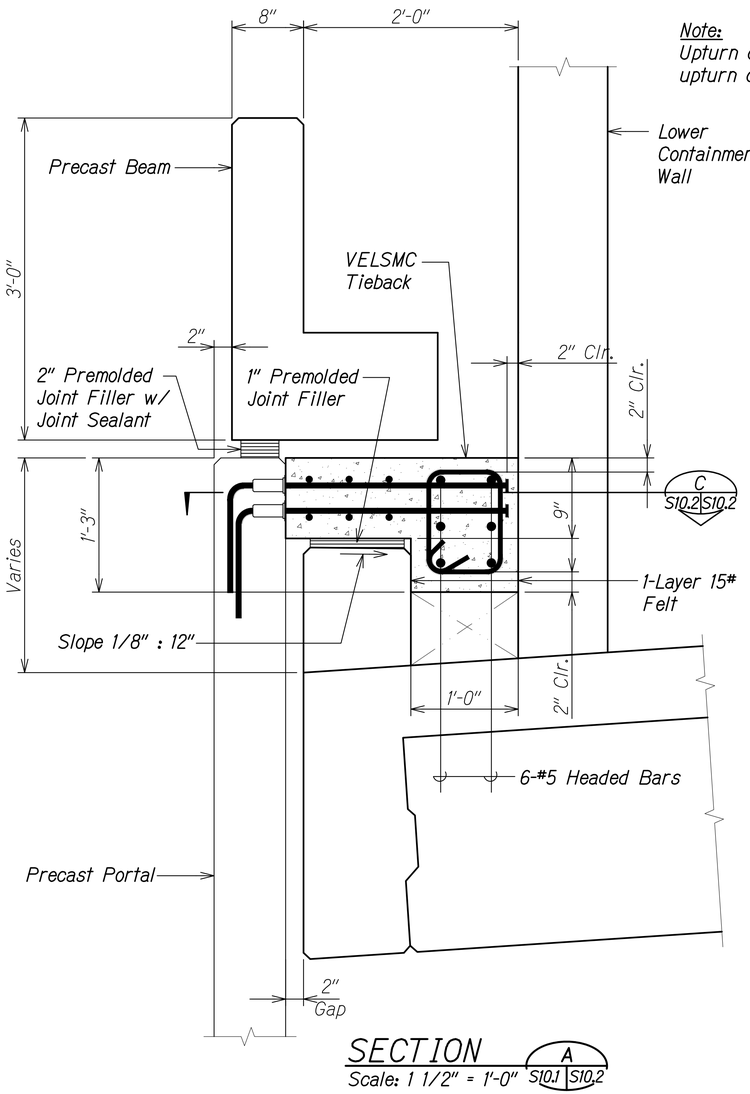
ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

DRAWING NAME: Z:\OD ENGINEA\19-014.1A PALI ROOF SHED POST DESIGN-RSP IN\01 CAD\04-01-21 AS-BUILT RVSD S1002A PLU-S1602 S1004 ADD1 DELTA 5 UPTURN ASB.DWG PLOT TIME: 05-04-21, 1:43 PM

"AS-BUILT"

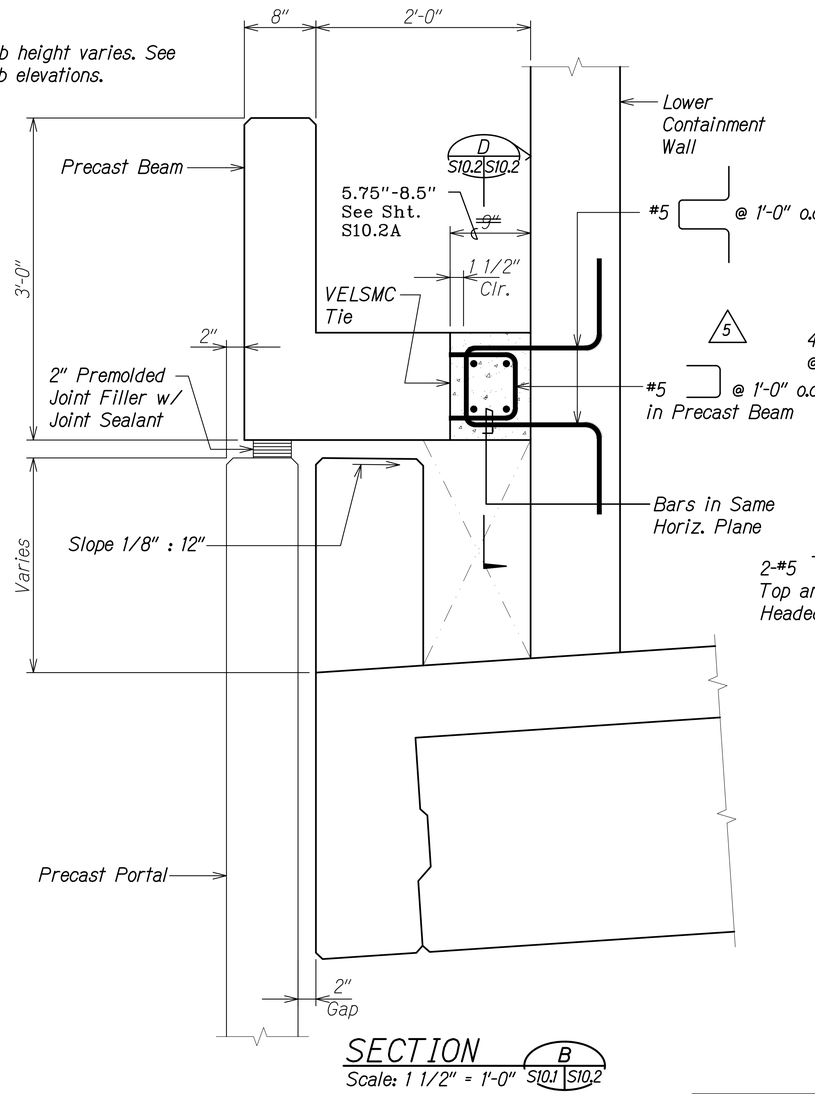
71 S-1

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	ER-22(002)	2019	ADD 71	94

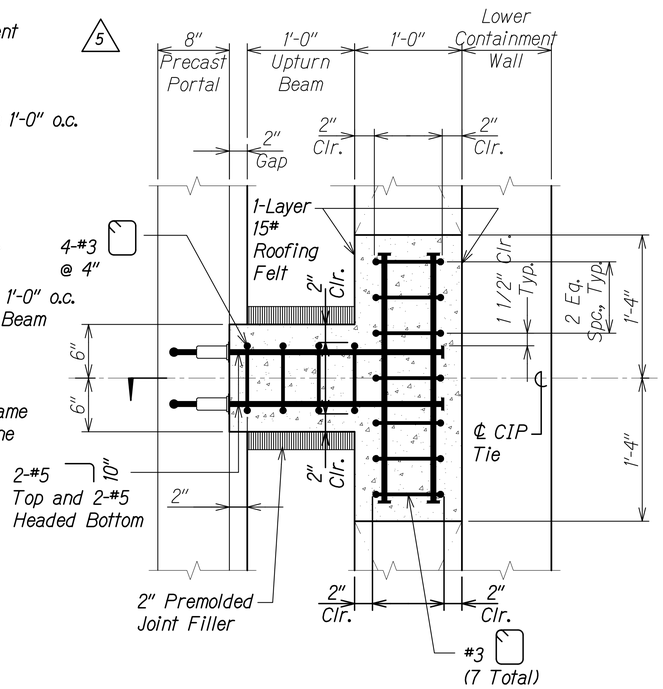


SECTION A
Scale: 1 1/2" = 1'-0" S10.1|S10.2

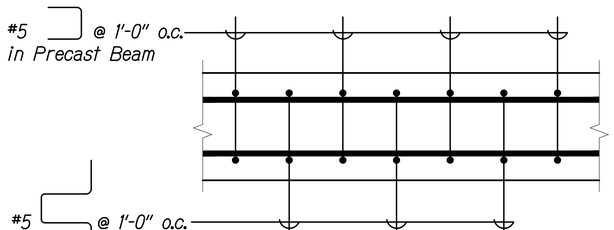
Note:
Upturn curb height varies. See upturn curb elevations.



SECTION B
Scale: 1 1/2" = 1'-0" S10.1|S10.2



SECTION C
Scale: 1 1/2" = 1'-0" S10.2|S10.2



SECTION D
Scale: 1 1/2" = 1'-0" S10.2|S10.2 5

LEGEND FOR AS-BUILT POSTINGS

~~	Squiggly line for as-built deletion
~~100.00~~	Double line for as-built deletion
Roadway	Text for as-built posting

1

DATE	REVISION
8/06/19	5 Revised & Added Sections
5/24/19	1 Revised & Added Sections

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

UPTURN CURB SECTIONS AT NEW PORTAL

PALI HIGHWAY
LANDSLIDE MITIGATION PROJECT
FAP Proj. No. ER-22(002)

Scale: As Noted Date: May 6, 2019

SHEET No. S10.2 OF 5 SHEETS

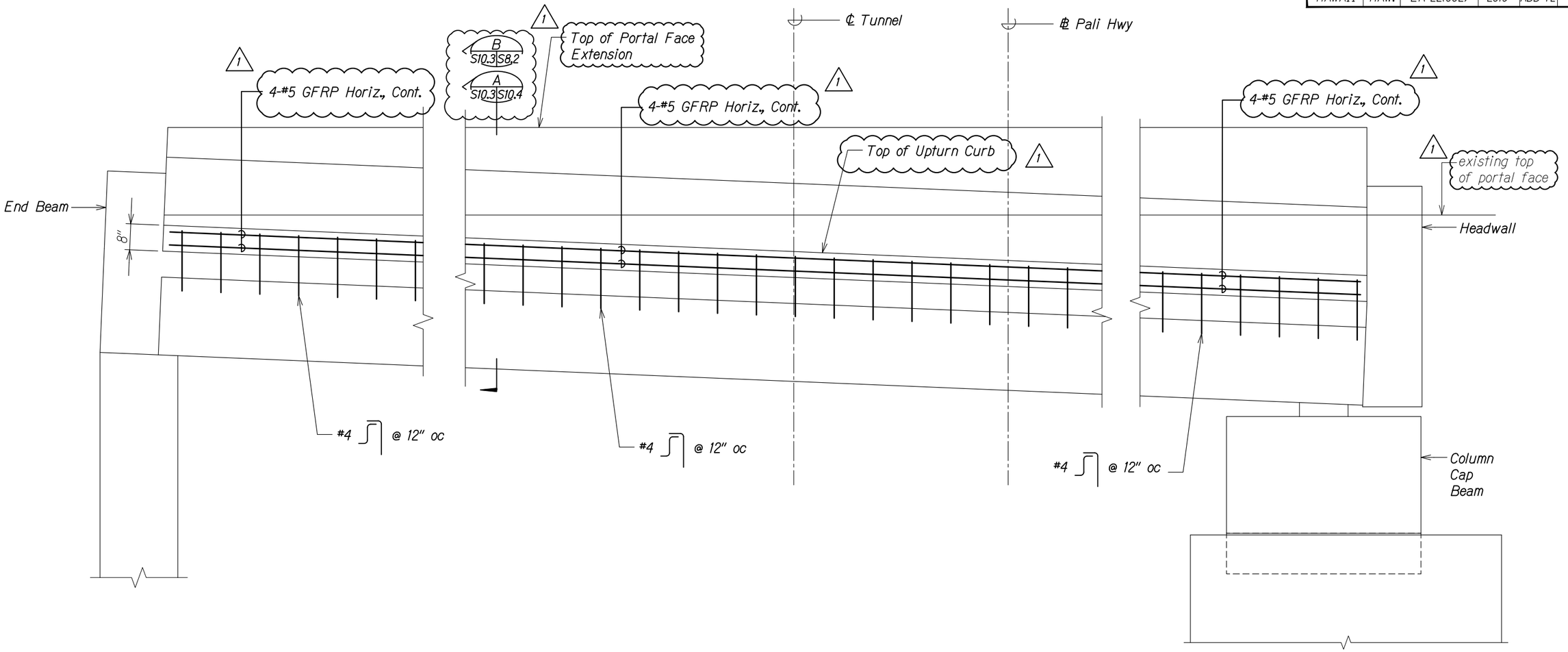
ORIGINAL PLAN | NOTE BOOK | No.
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

DRAWING NAME: Z:\OD ONGOING\19-014 A PALI ROOF SHED POST DESIGN-WSP TM\01 CAD\04-01-21 AS-BUILT\PLM-S1002 S1004 ADD1 DELTA 5 UPTURN ASB.DWG PLOT TIME: 04-01-21, 3:40 PM)

"AS-BUILT"

ADD 71

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	ER-22(002)	2019	ADD 72	94



UPTURN CURB ELEVATION
Scale: 3/4" = 1'-0"
A S10.3 | S10.3

UPTURN CURB ELEVATION
Scale: 3/4" = 1'-0"
B S10.3 | S10.3

UPTURN CURB ELEVATION
Scale: 3/4" = 1'-0"
C S10.3 | S10.3

DATE	REVISION
5/24/19	1 Revised Elevations

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

UPTURN CURB ELEVATION AT EXISTING PORTAL

PALI HIGHWAY
LANDSLIDE MITIGATION PROJECT
FAP Proj. No. ER-22(002)

Scale: As Noted Date: May 6, 2019

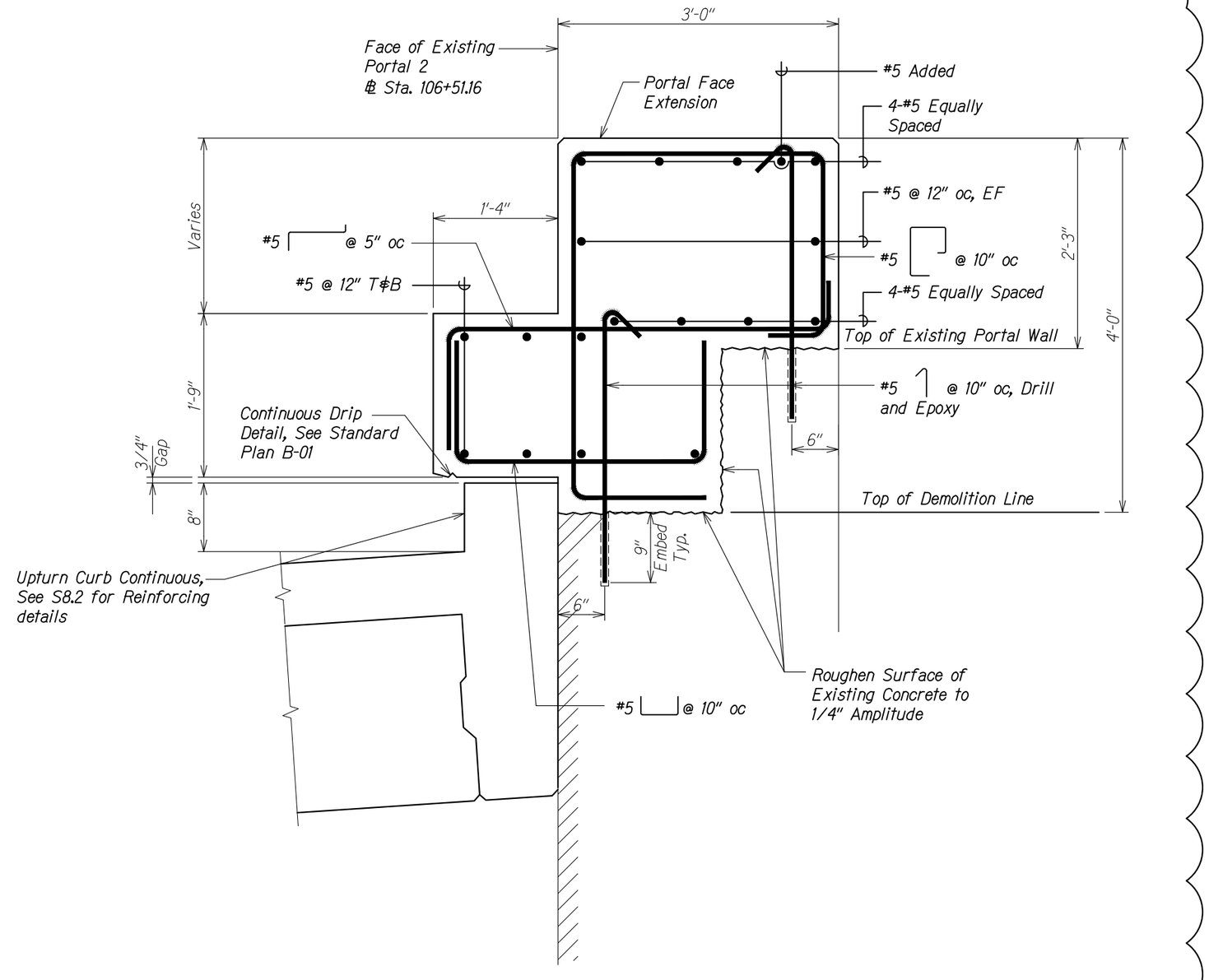
SHEET No. S10.3 OF 5 SHEETS

ADD 72

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

DRAWING NAME: Z:\00 ONGOING\19-014.1 PALI ROOF SHED-WSP TM\01 CAD\05-24-19 PH 2\PLM-S1001 ADD1 S1003 UPTURN.DWG PLOT TIME: 06-03-19, 10:49 AM)

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	ER-22(002)	2019	ADD 73	94



1 EXISTING PORTAL FACE EXTENSION SECTION

Scale: 1 1/2" = 1'-0"

A S10.3 | S10.4

DATE	REVISION
5/24/19	1 Revised Section

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EXISTING PORTAL FACE EXTENSION SECTION

PALI HIGHWAY
LANDSLIDE MITIGATION PROJECT
FAP Proj. No. ER-22(002)

Scale: As Noted Date: May 6, 2019

SHEET No. S10.4 OF 5 SHEETS

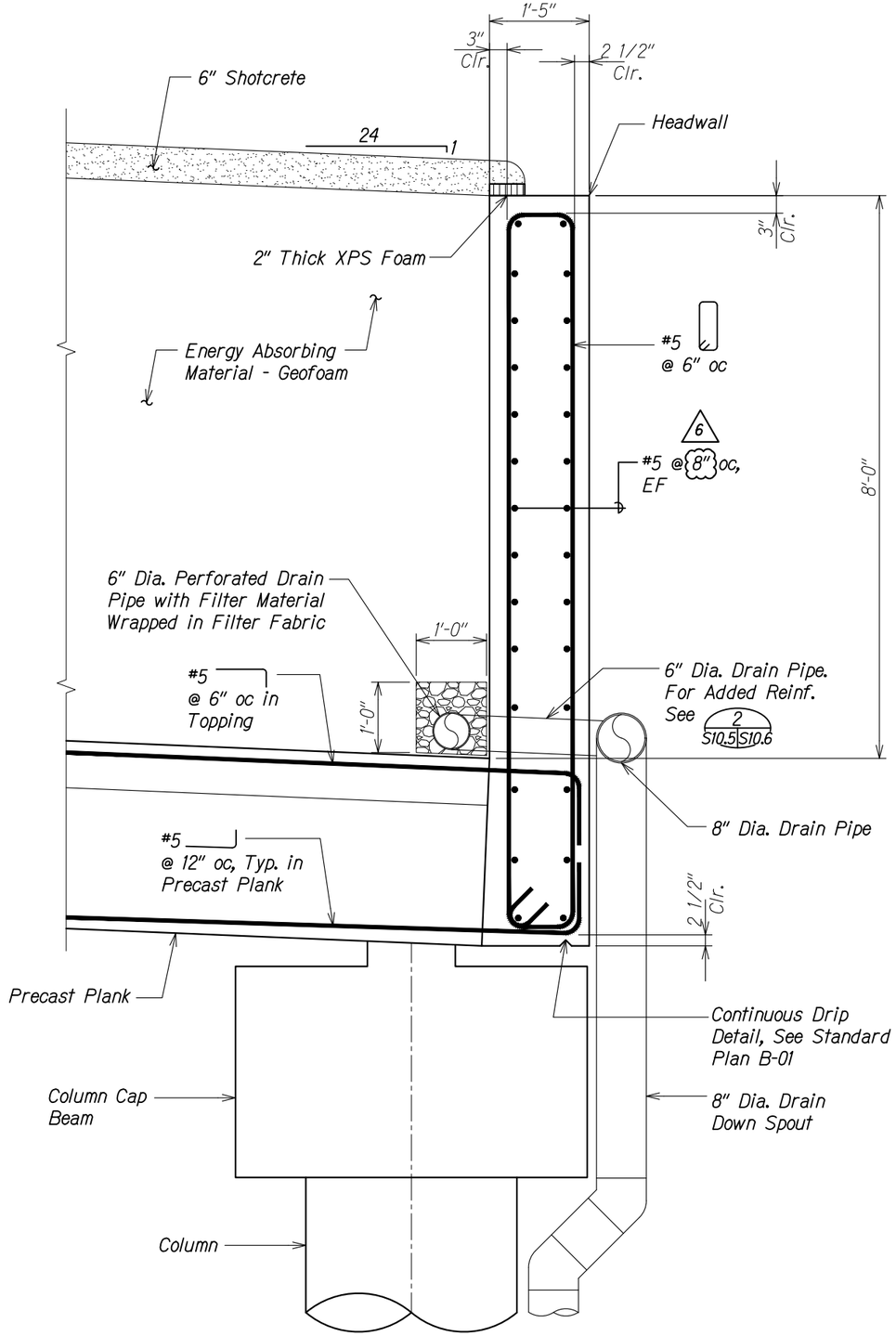
ADD 73

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

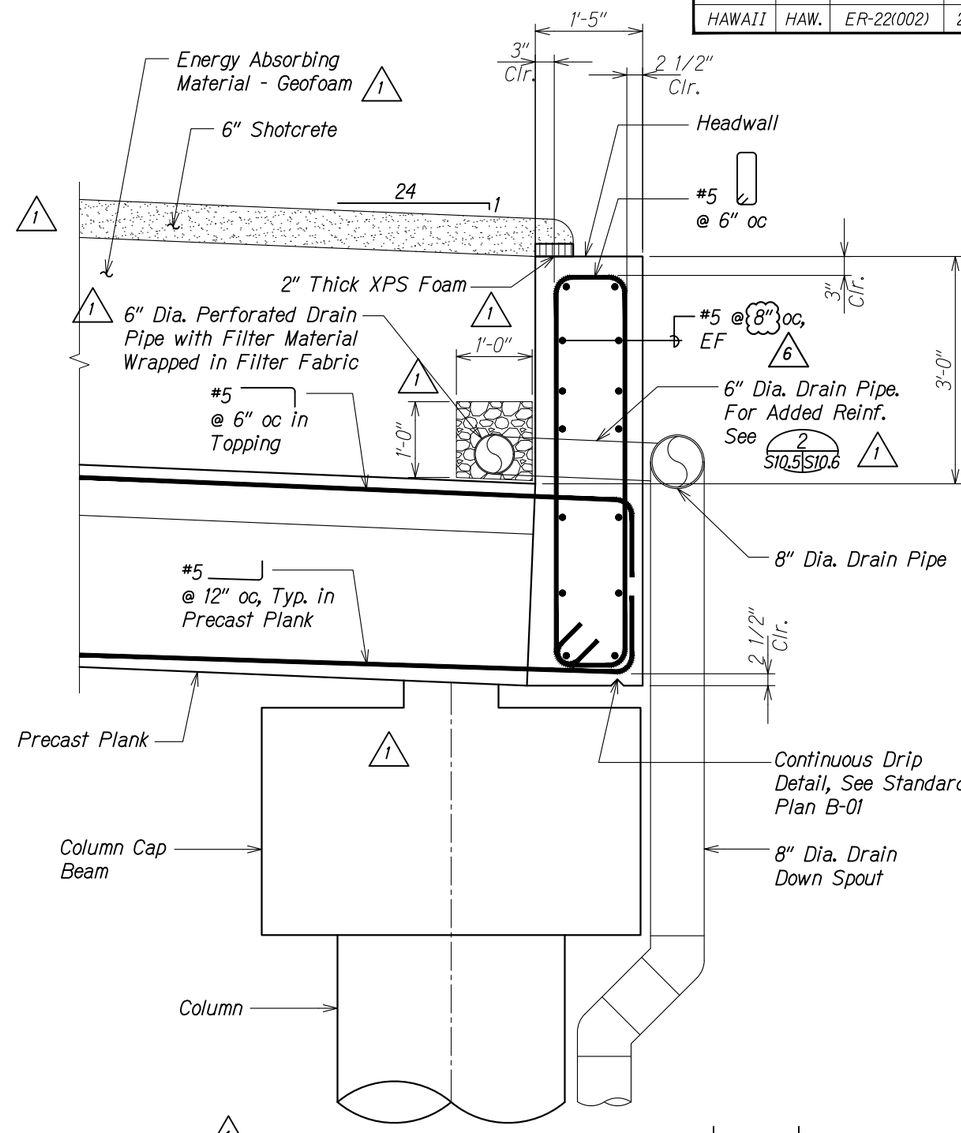
ORIGINAL PLAN
NOTE BOOK
No. ____

DRAWING NAME: Z:\00 ONGOING\19-014.1 PALI ROOF SHED-WSP TM\01 CAD\05-24-19 PH 2\PLM-S1002 S1004 ADD1 UPTURN.DWG PLOT TIME: 06-03-19, 10:55 AM)

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	ER-22(002)	2019	ADD 74	94



1 SECTION AT 8'-0" HIGH HEADWALL (A: S1.5 | S10.5; S1.6, S10.6)
Scale: 1" = 1'-0"



1 SECTION AT 3'-0" HIGH HEADWALL (B: S1.5 | S10.5; S1.6, S10.6)
Scale: 1" = 1'-0"

DATE	REVISION
8/13/19	6 Revised Reinforcing
5/24/19	1 Revised & Added Sections

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HEADWALL SECTIONS

PALI HIGHWAY
LANDSLIDE MITIGATION PROJECT
FAP Proj. No. ER-22(002)

Scale: As Noted Date: May 6, 2019

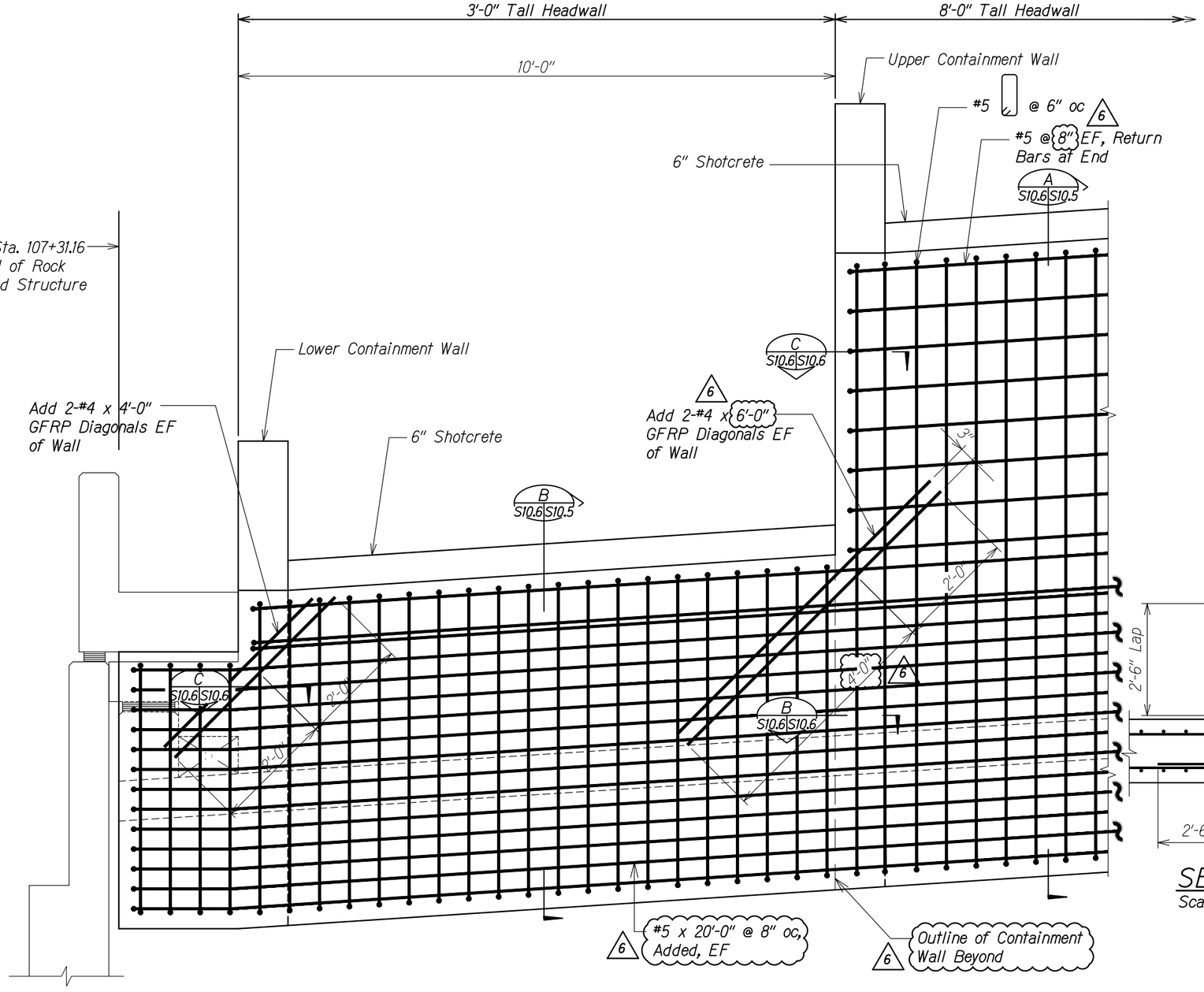
SHEET No. S10.5 OF 5 SHEETS

ADD 74

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

DRAWING NAME: Z:\OO ONGOING\19-014.1 PALI ROOF SHED-WSP TM\01 CAD\09-XX-19 UPDATED PORTAL\PLM-S1005 S1006 ADD1 DEL#6 CAP DRN.DWG PLOT TIME: 09-06-19, 7:58 AM)

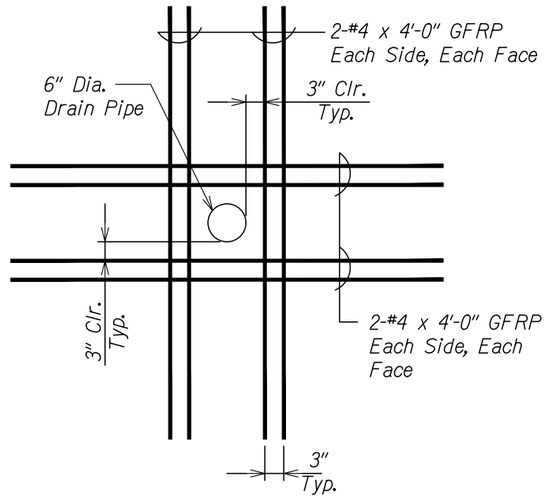
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	ER-22(002)	2019	ADD 74S-1	94



HEADWALL STEP SECTION

Scale: 1" = 1'-0"

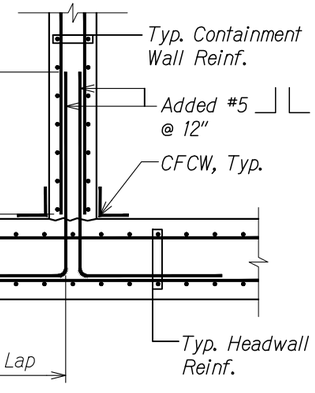
A S10.6 S10.6



ADDED REINFORCING DETAIL AT DRAIN PIPE

Scale: 1" = 1'-0"

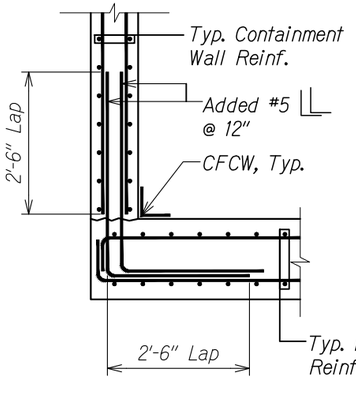
1 S10.5 S10.6



SECTION

Scale: 3/4" = 1'-0"

B S10.6 S10.6



SECTION

Scale: 3/4" = 1'-0"

C S10.6 S10.6

DATE	REVISION
8/13/19	6 Revised Reinforcing
5/24/19	1 New Sheet

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HEADWALL SECTION AND DETAIL

PALI HIGHWAY
LANDSLIDE MITIGATION PROJECT
FAP Proj. No. ER-22(002)

Scale: As Noted Date: May 6, 2019

SHEET No. S10.6 OF 5 SHEETS

ADD 74S-1

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

ORIGINAL PLAN
NOTE BOOK
No.

DRAWING NAME: Z:\00 ONGOING\19-014.1 PALI ROOF SHED-WSP TM\01 CAD\09-XX-19 UPDATED PORTAL\PLM-S1005 S1006 ADD1 DELTA6 CAP DRN.DWG PLOT TIME: 09-06-19, 7:59 AM)