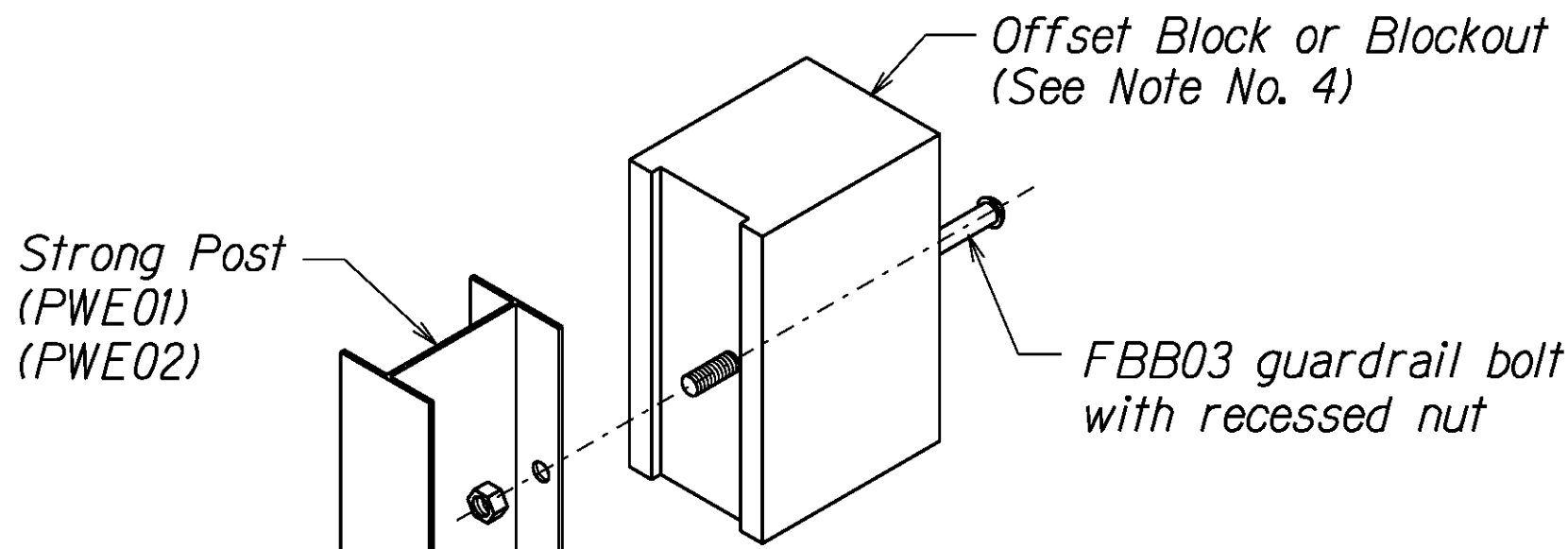


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-STP-0300(164)	2021	ADD.12	119

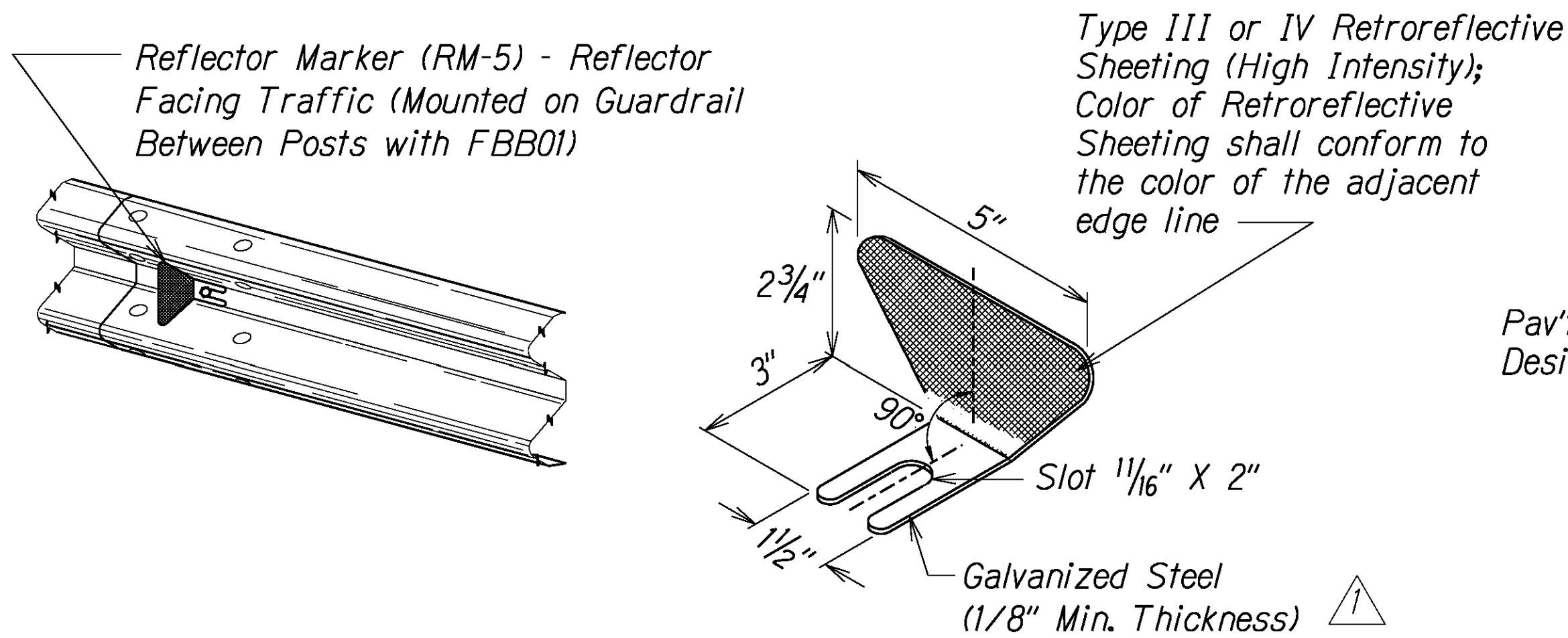
GENERAL NOTES

- All hardware, posts and fasteners shall be hot-dip zinc coated galvanized after fabrication. No punching, drilling or cutting will be permitted after galvanizing.
- Where conditions require, special post lengths in increments of 6 inches may be specified by the Engineer.
- All fasteners, posts, and rail elements (i.e. FBB03, PWE01, RWM04b, etc.) shall conform to the latest edition and amendments of "A Guide to Standardized Highway Barrier Rail Hardware", a report prepared and approved by the AASHTO-AGC-ARTBA Joint Cooperative Committee, Subcommittee On New Highway Materials, Task Force 13 Report. Dimensions of fastners, posts and rail elements have been converted from metric units into their present form.
- The Blockout or Offset Block shall be approved by the State.
- All new guardrail systems (system consists of total length of guardrail including both end treatments) shall include the Additional Paved Area.
- After the guardrail posts are installed in the paved area, the Contractor shall fill/seal around each guardrail post and all cracks in the paved area caused during the guardrail post installation. If required by the inspector/engineer, the Contractor shall tamper the paved area around the guardrail post prior to filling/sealing. All costs associated with this work shall not be paid for separately, but shall be considered incidental to the various guardrail items.
- When standards for the fill slope area cannot be met, a site specific, engineer approved design may be used.
- Minimum working width (clear distance) between back of MGS post to any fixed object is 4'-1" (49").
- New Hot Mix Asphalt (HMA) pavement at guardrails shall extend 6 feet longitudinally beyond terminal ends.
- Reflector Markers (RM-5) mounted on guardrails shall be spaced every 25 feet. RM-5's shall not be installed on Terminal Sections. Furnishing and installing of each RM-5 shall be considered incidental to the guardrail system.

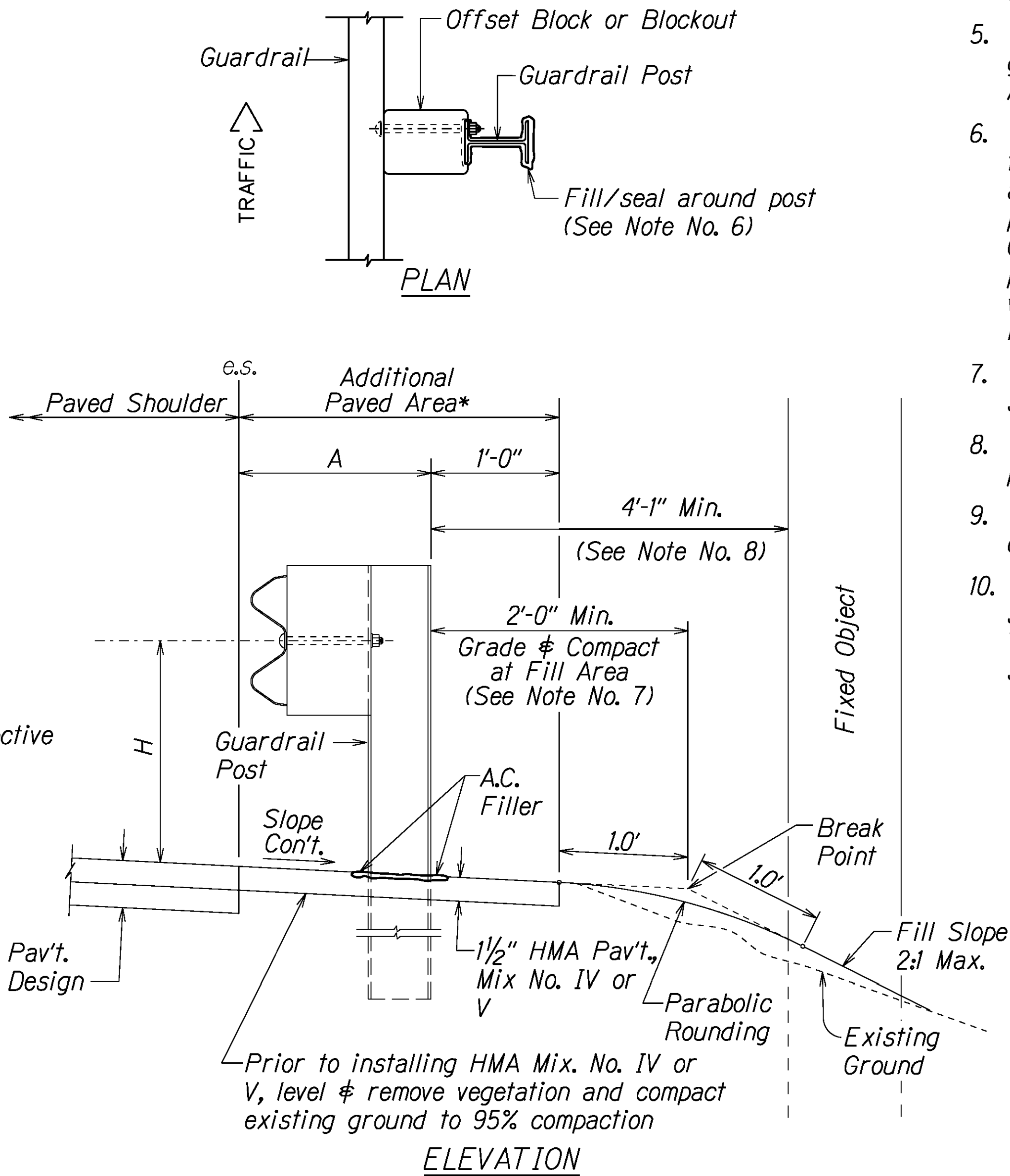
GUARDRAIL TYPE	DIMENSION	
	H	A
MGS w/ Standard 8" Offset Block	2'-1"	1'-6"
MGS w/ No Blockout	2'-7/8"	9 1/4"



Exploded View
(Rail and washer not shown)
STEEL POST AND BLOCK DETAIL



REFLECTOR MARKER (RM-5) DETAIL AND TYPICAL INSTALLATION



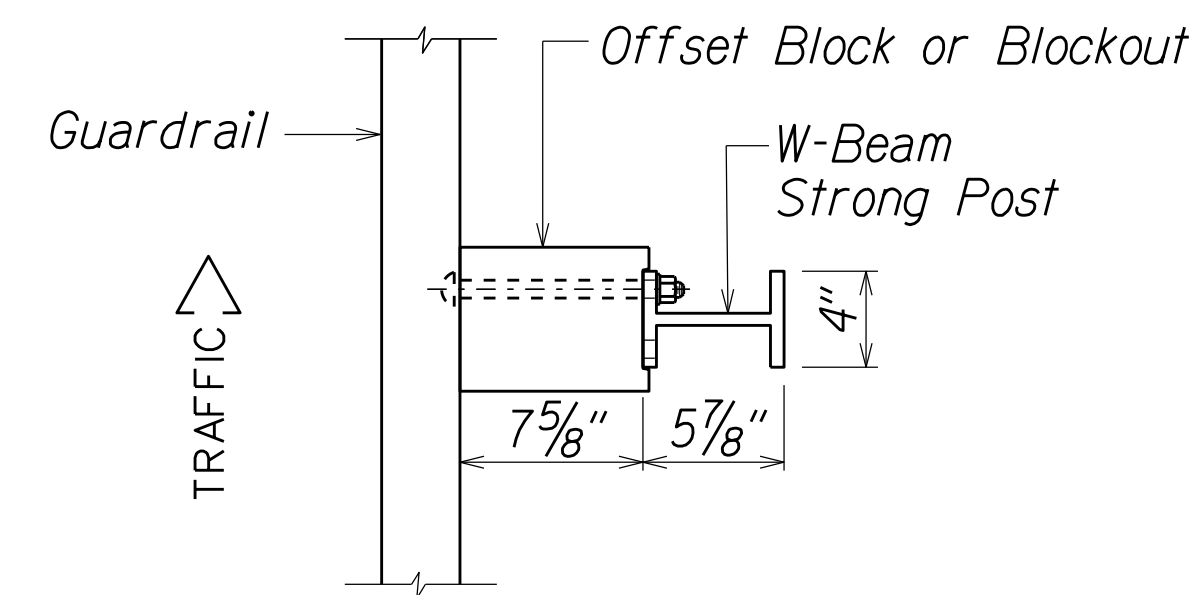
TYPICAL GUARDRAIL INSTALLATION

04/16/21 Revised Material Description

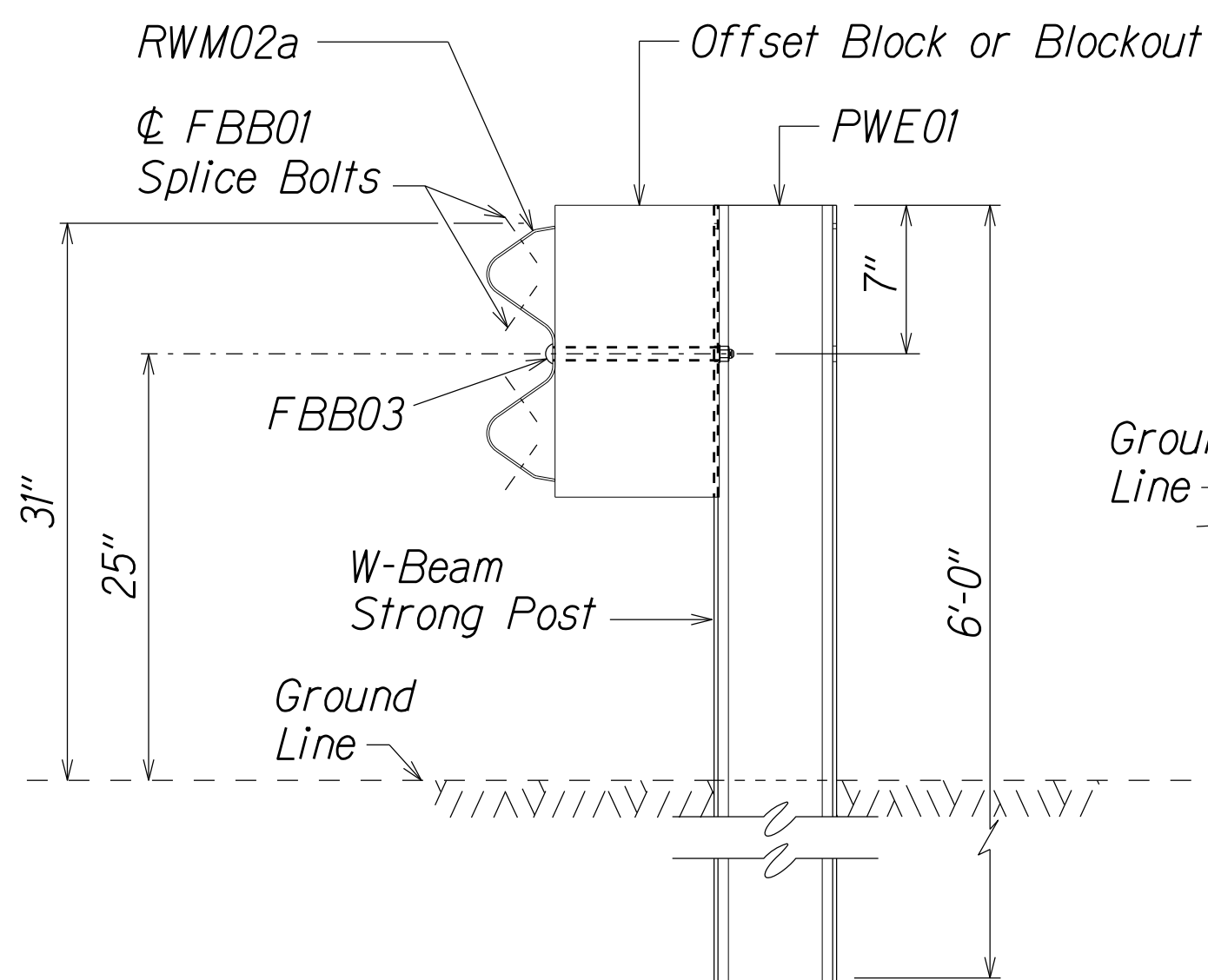
DATE REVISION

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
GUARDRAIL DETAILS	
INTERSTATE ROUTE H-2 and MOANALUA FREEWAY, PHASE 2	
Guardrail and Shoulder Improvements	
Federal-Aid Project No. NH-STP-0300(164)	
Scale: Not To Scale	Date: August, 2020
SHEET No. 1 OF 5 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-STP-0300-(164)	2021	13	119

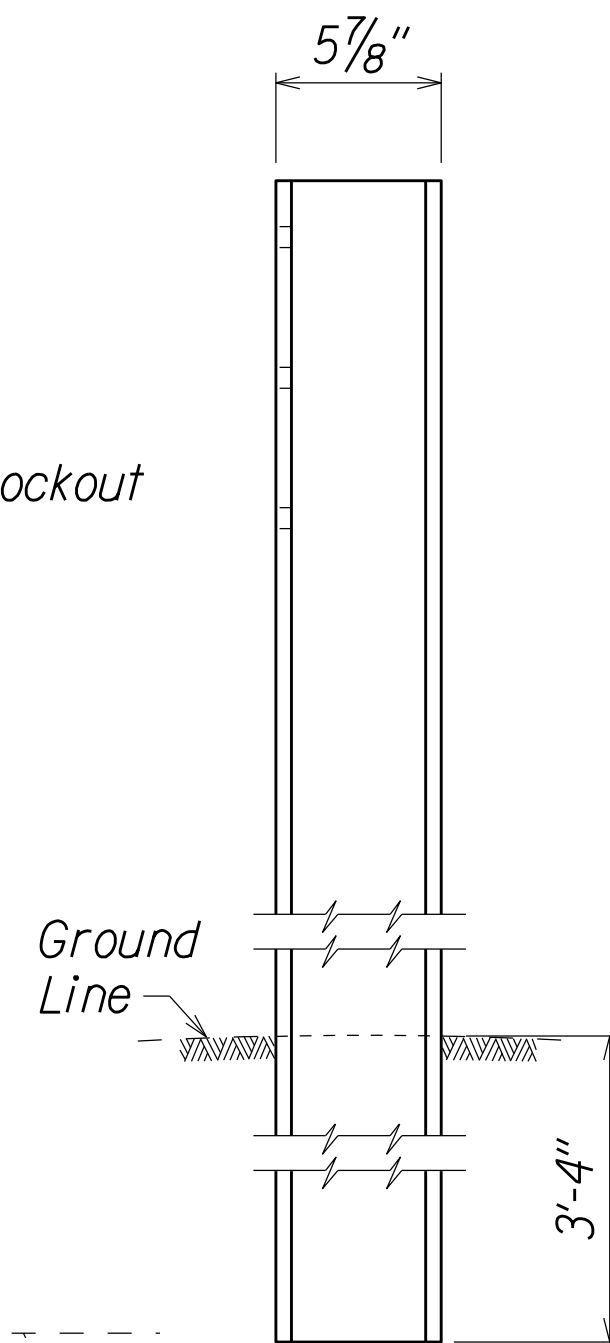
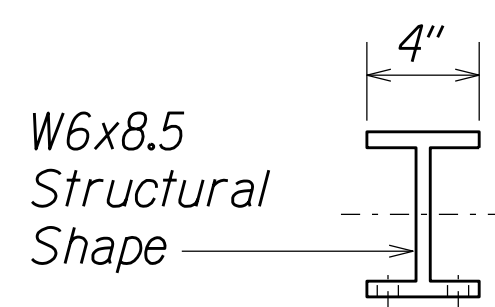


PLAN

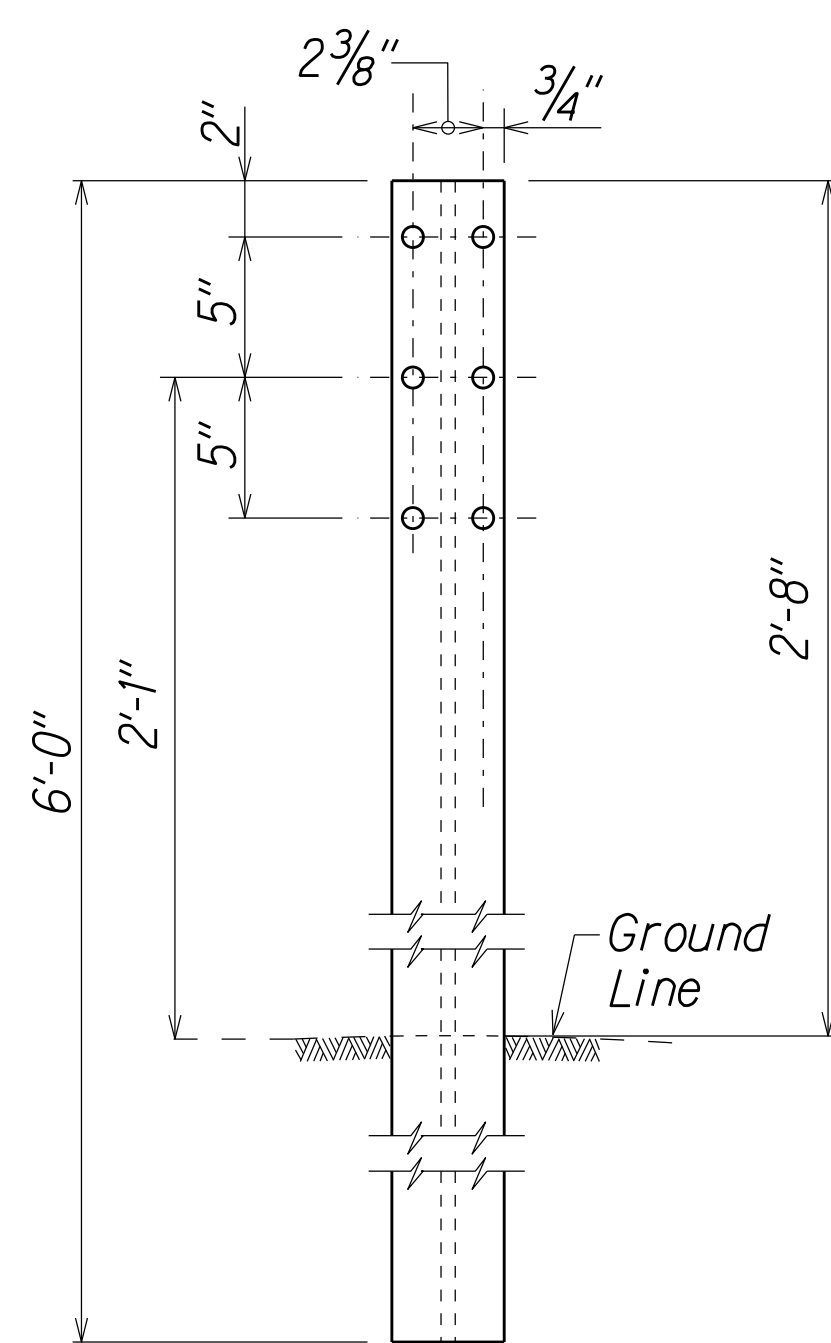


SECTION A-A

NOTE:
All Holes are
3/4" Dia.

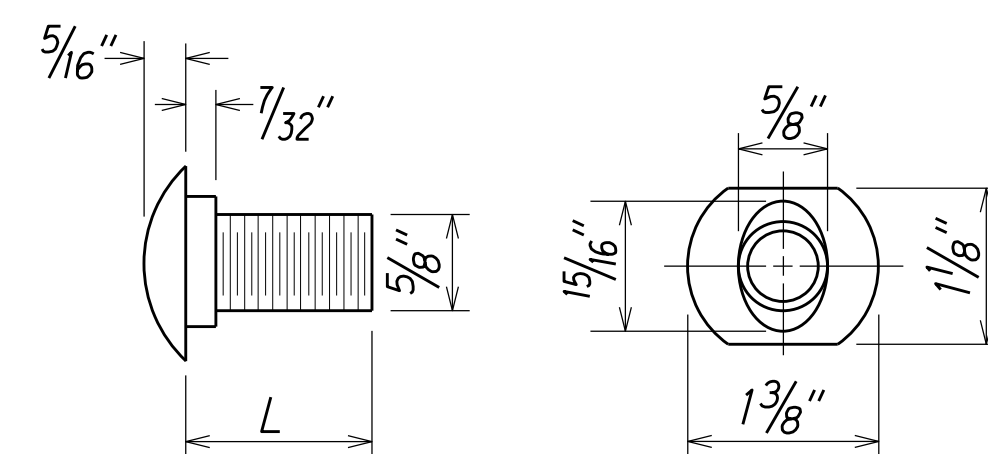


SIDE

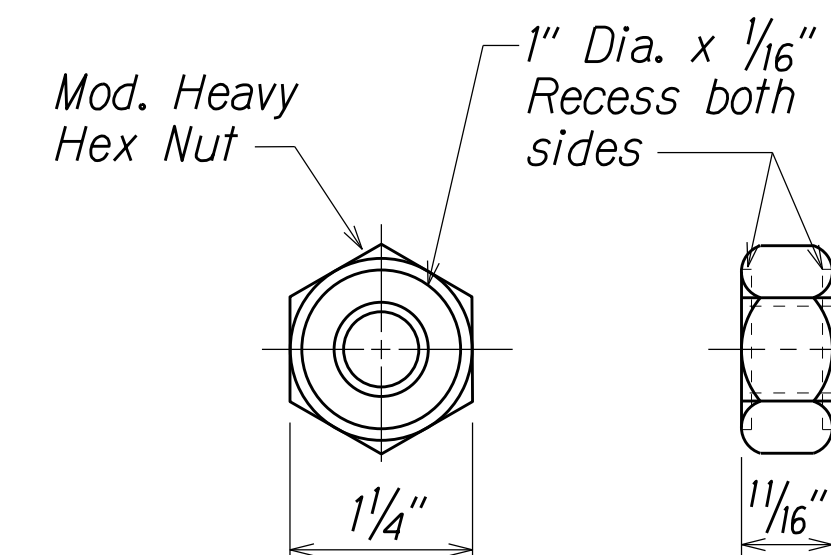


FRONT

W-BEAM STRONG POST
(PWE01)

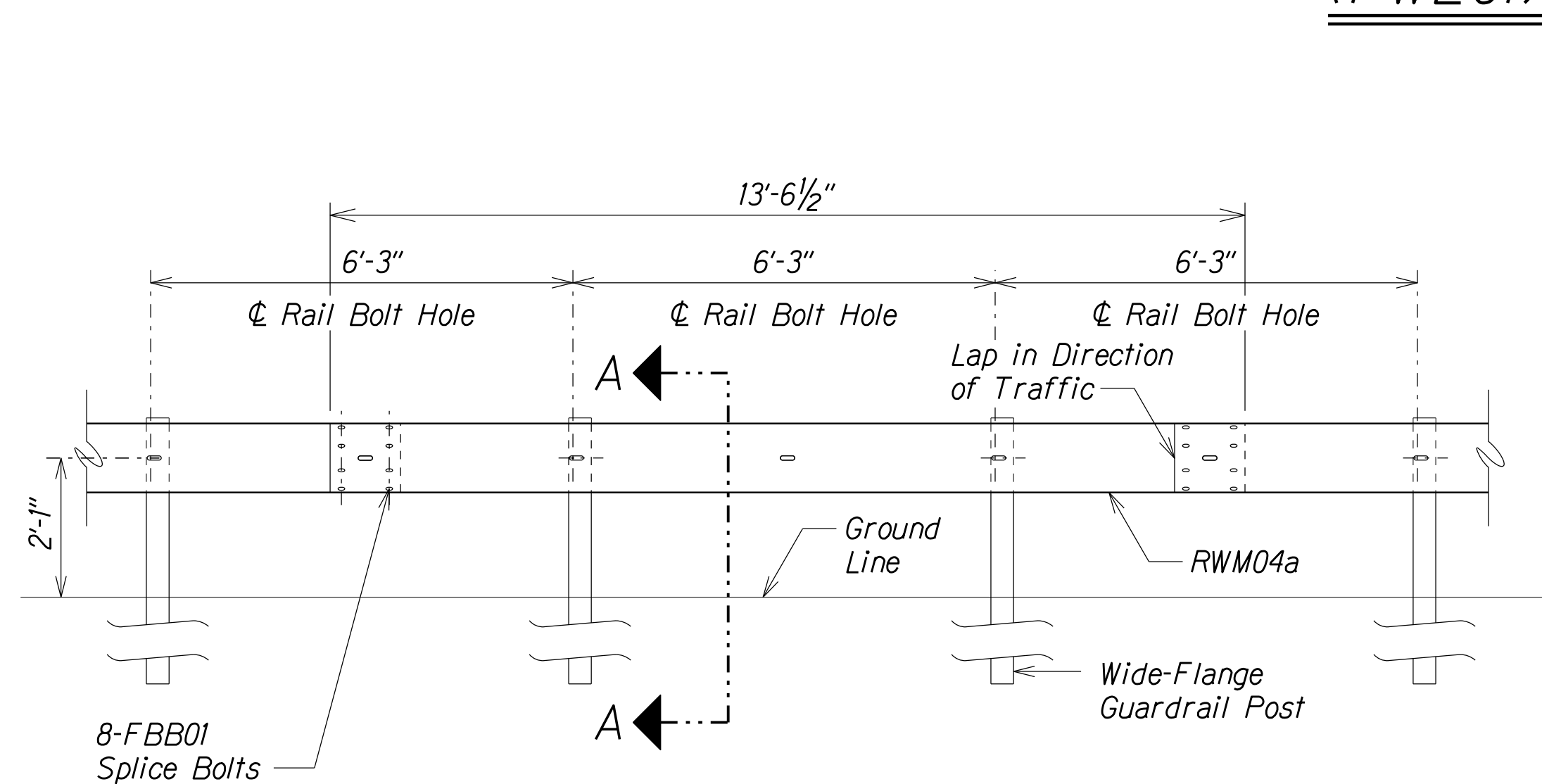
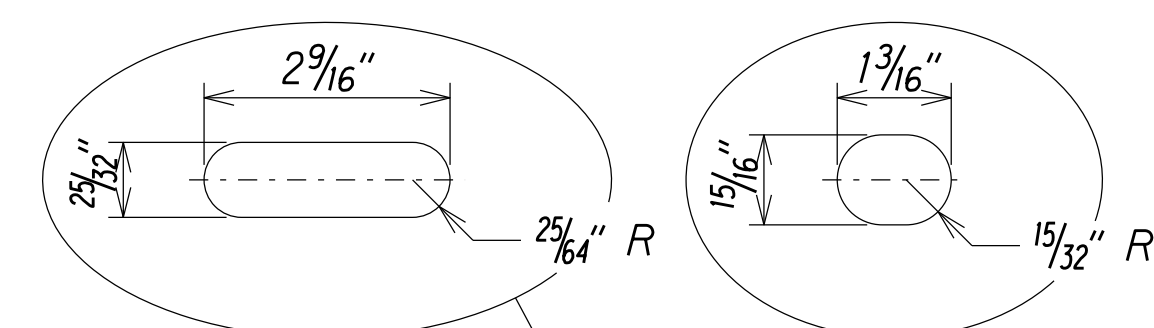


DESIGNATOR	L
FBB01	13 3/8"
FBB02	2"
FBB03	10"

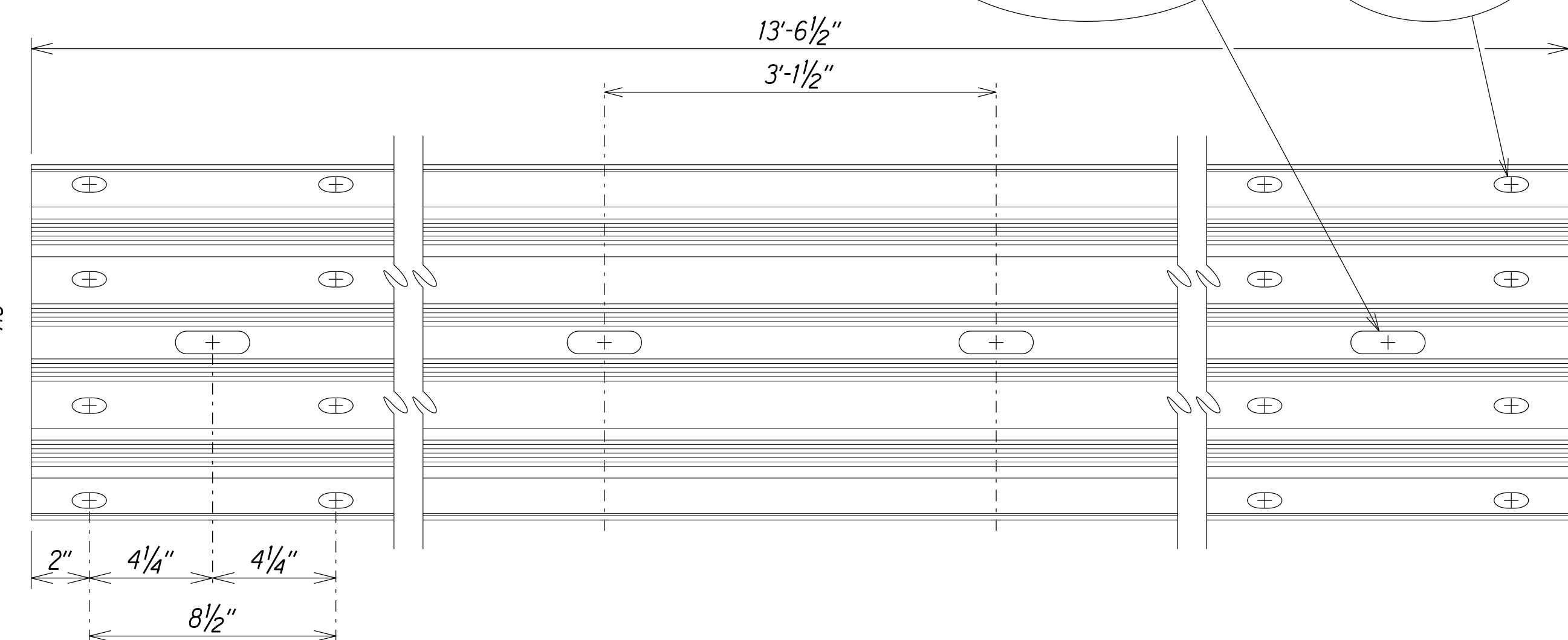
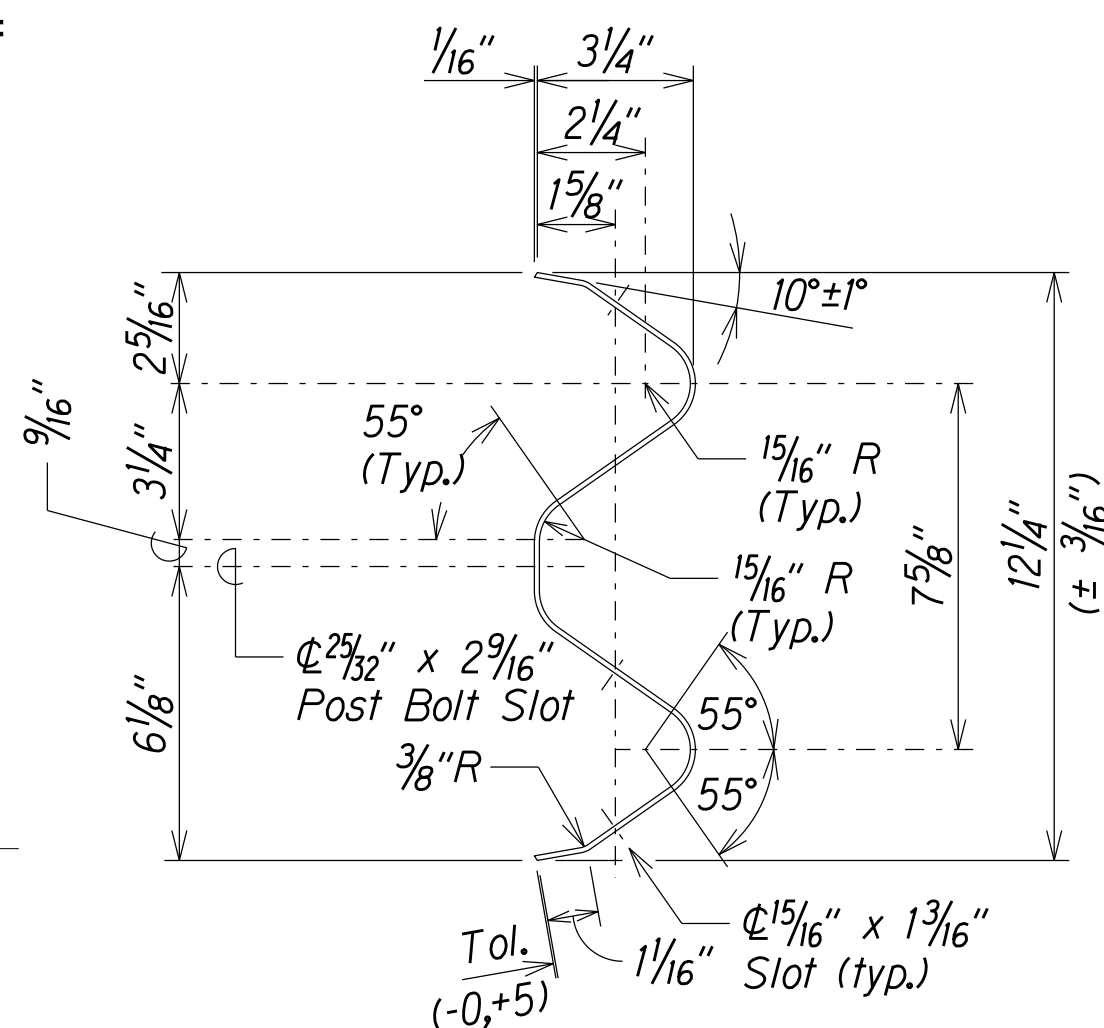


GUARDRAIL BOLTS AND RECESSED NUT

DESIGNATOR	BASE METAL THICKNESS
RWM04a	12 Gauge



ELEVATION



4 SPACE W-BEAM GUARDRAIL (RWM04a)

MIDWEST GUARDRAIL SYSTEM WITH
STANDARD 8" OFFSET BLOCK (SGR47)

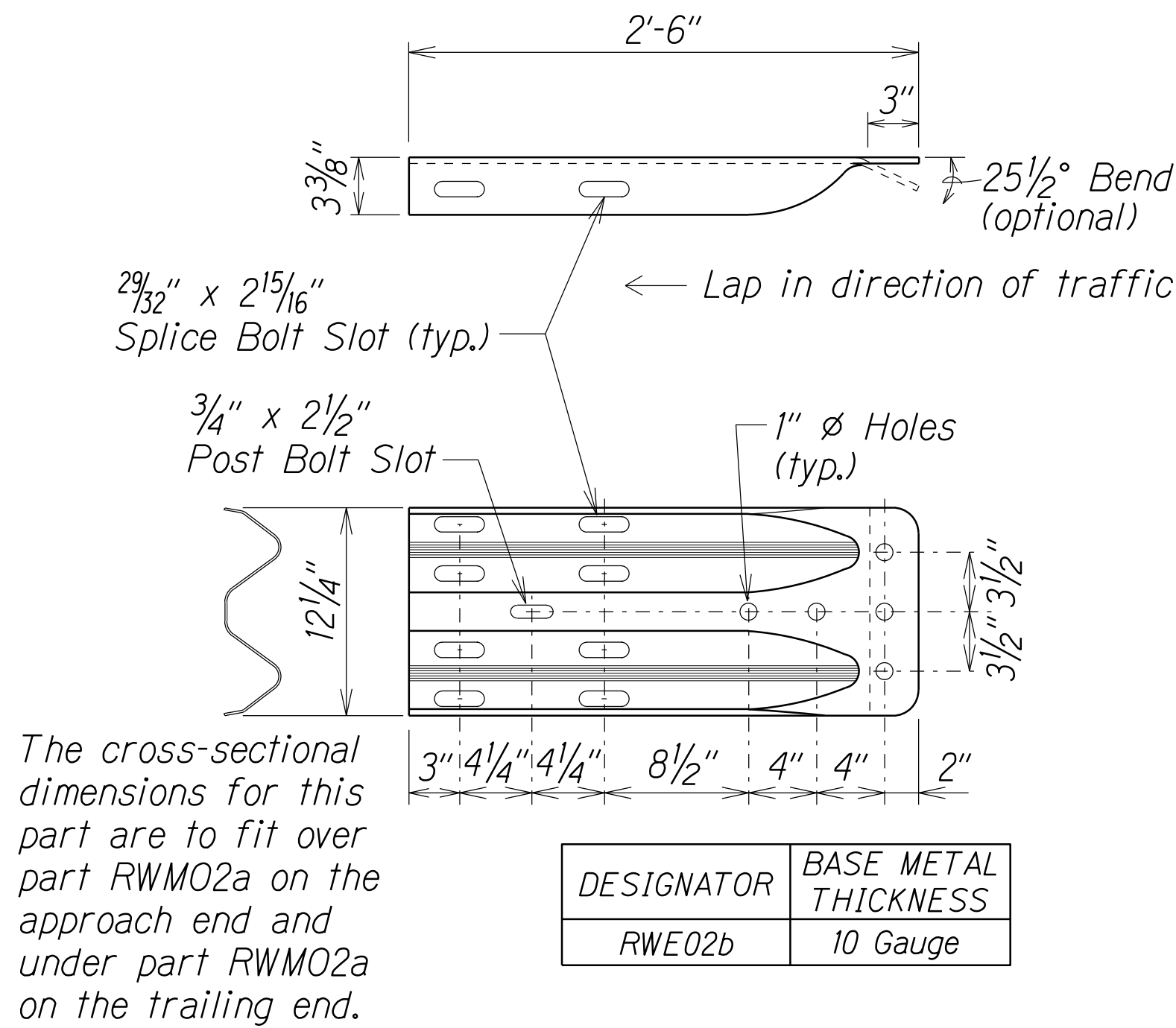
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**INTERSTATE ROUTE H-2 and
MOANALUA FREEWAY, PHASE 2**
Guardrail and Shoulder Improvements
Federal Aid Project No. NH-STP-0300-(164)

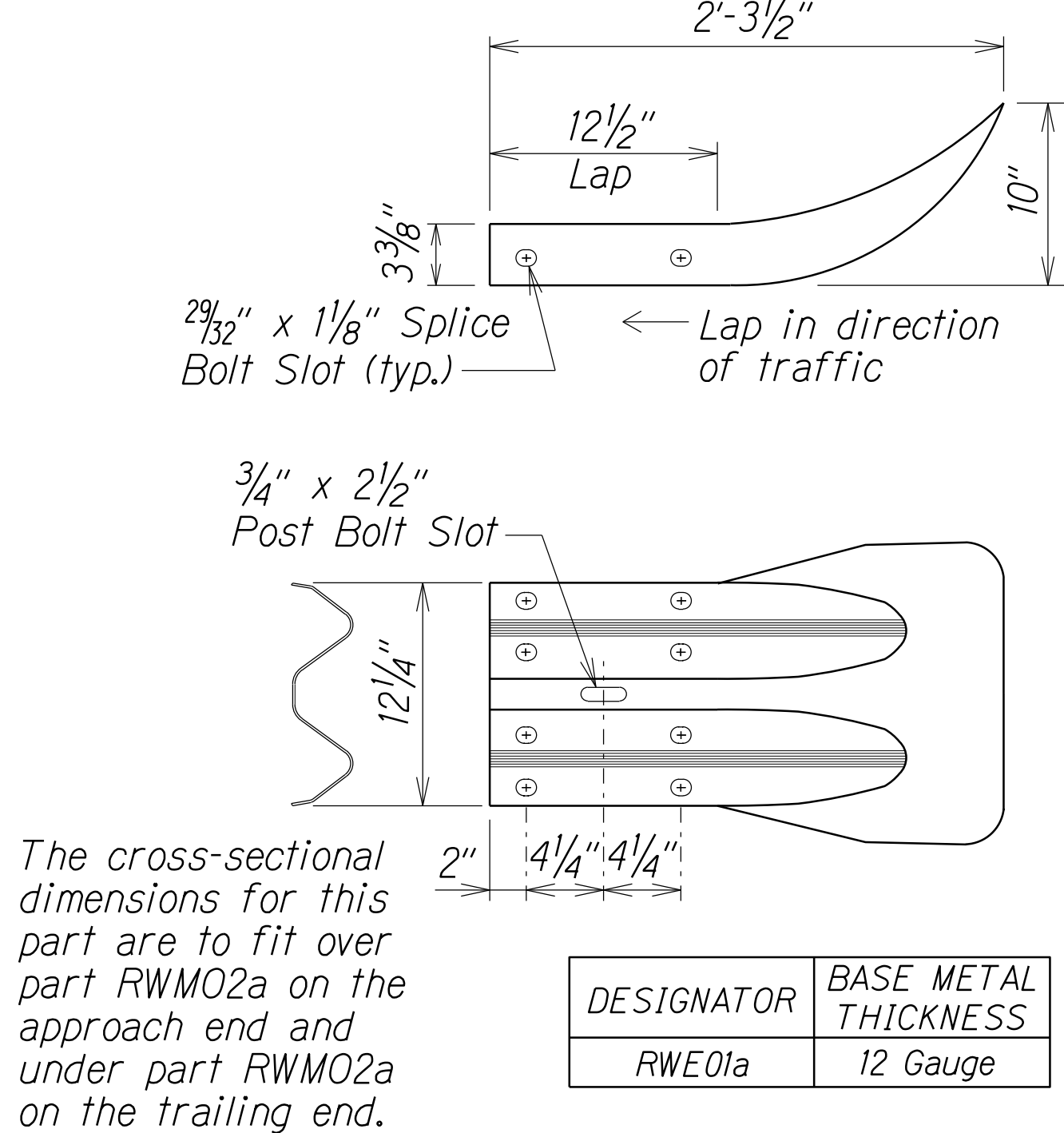
Scale: NTS Date: August, 2020

SHEET No. 2 OF 5 SHEETS

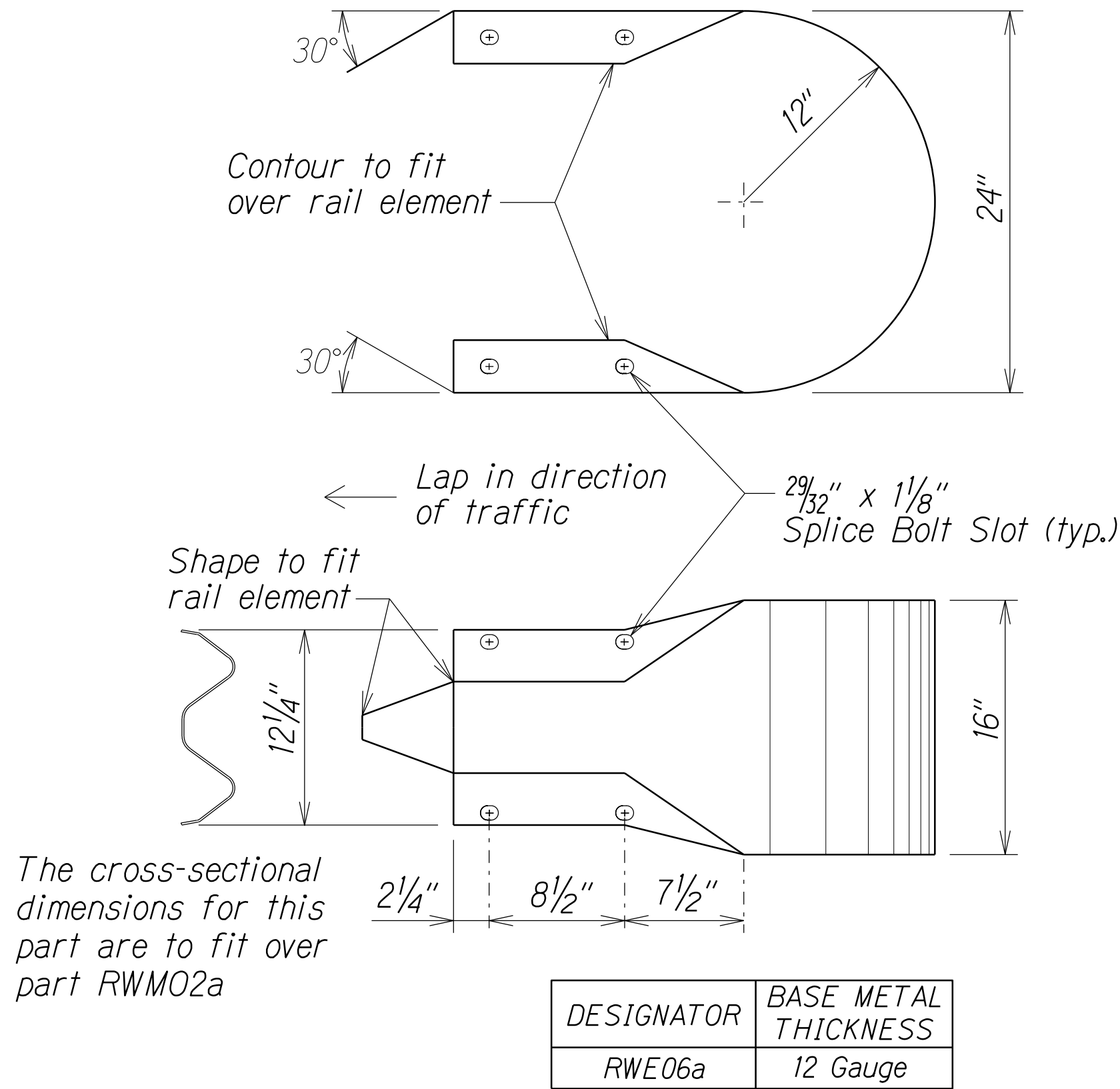
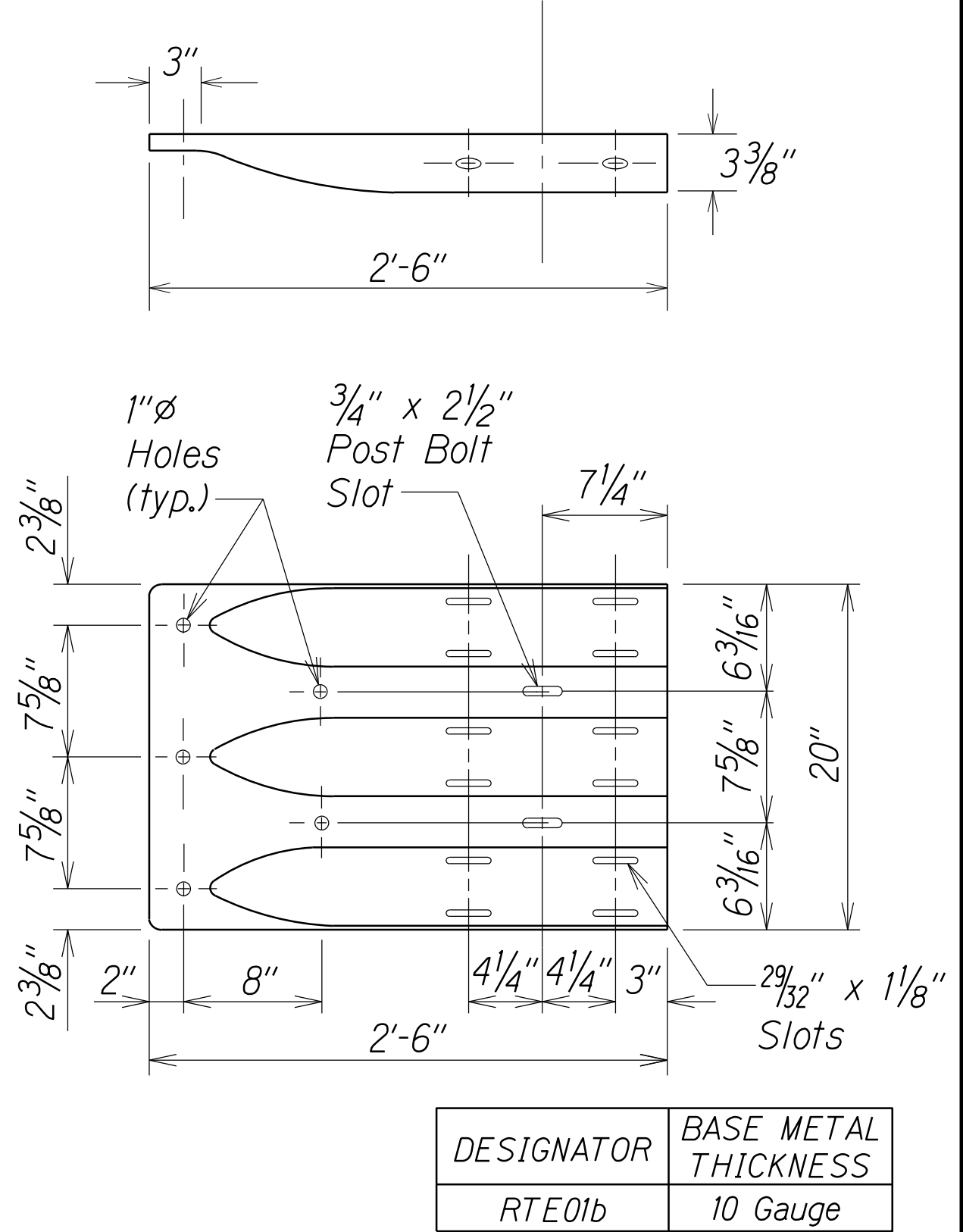
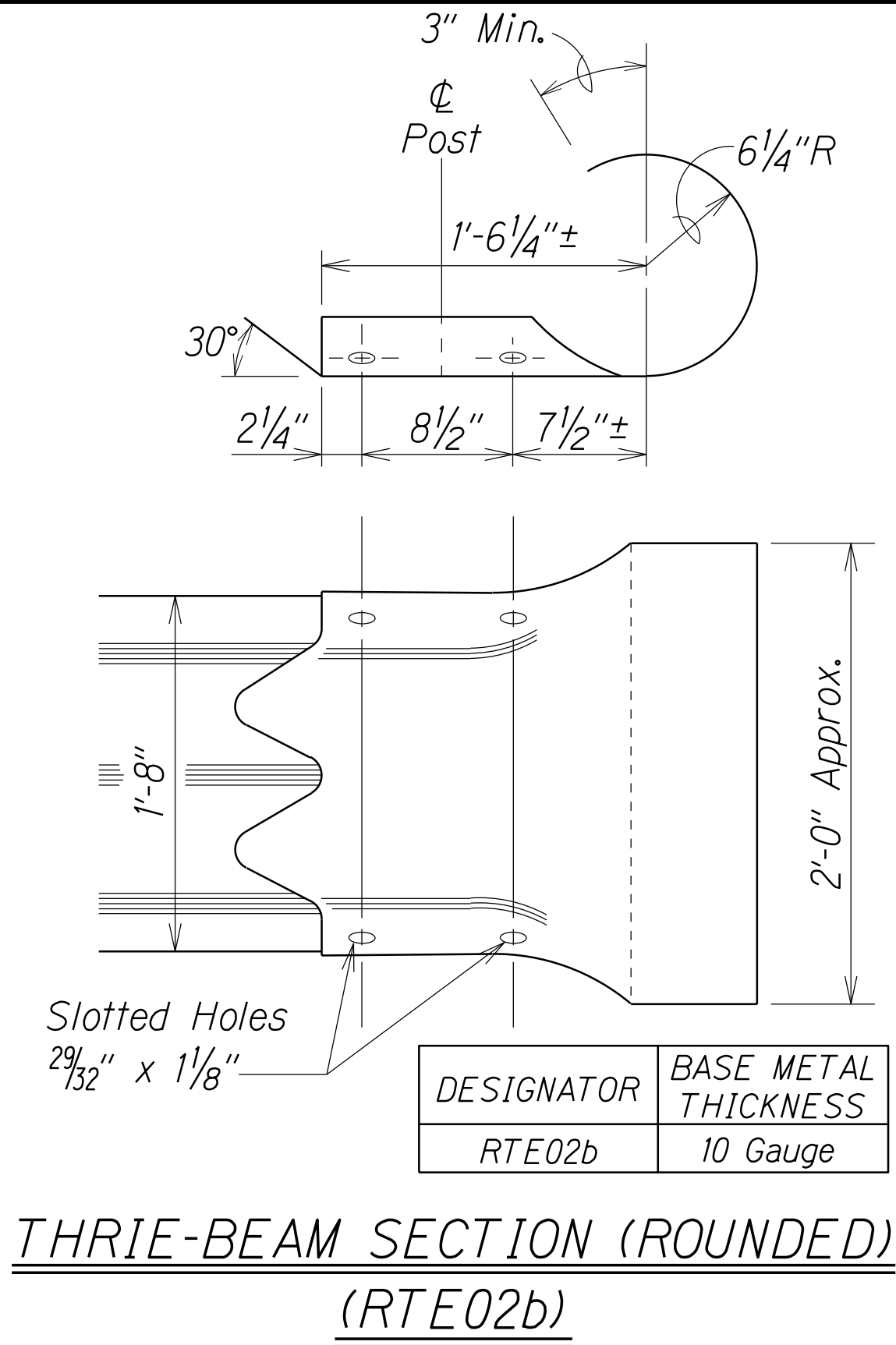
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-STP-0300(164)	2021	15	119



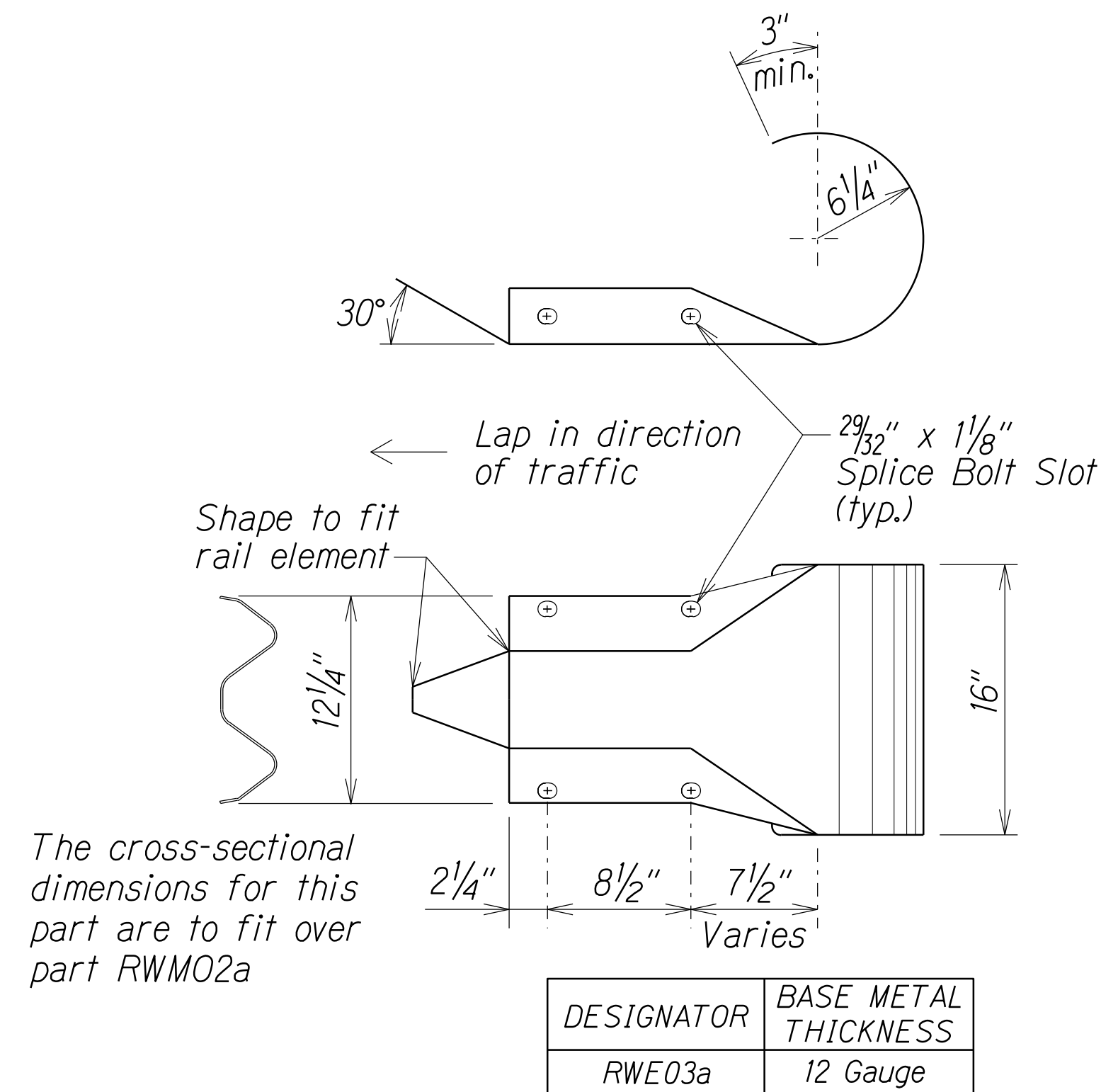
W-BEAM TERMINAL CONNECTOR (RWE02b)



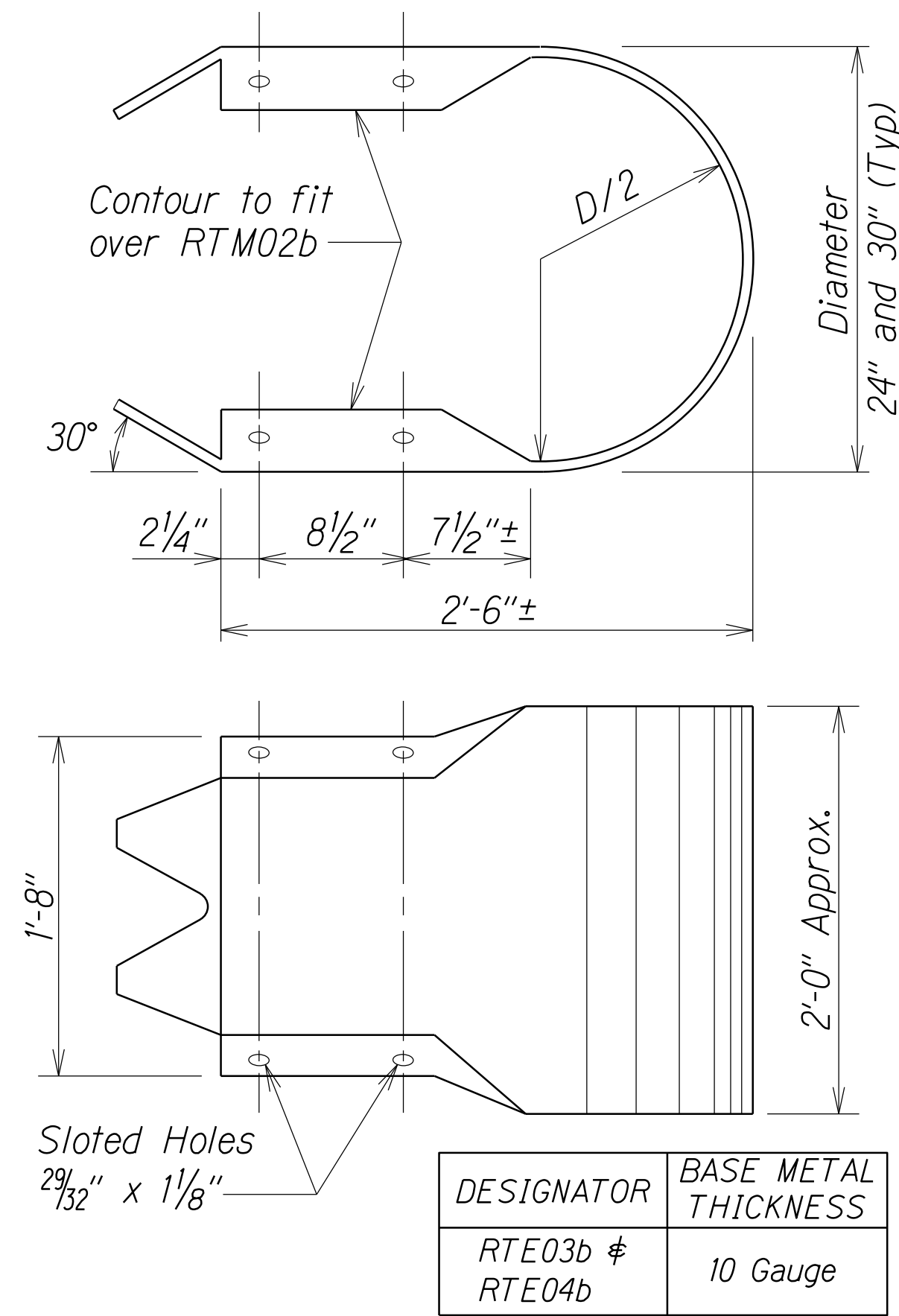
W-BEAM END SECTION (FLARED RWE01a)



W-BEAM END SECTION (BUFFER RWE06a)



W-BEAM END SECTION (ROUNDED RWE03a)



THRIE-BEAM TERMINAL CONNECTOR (RTE01b)

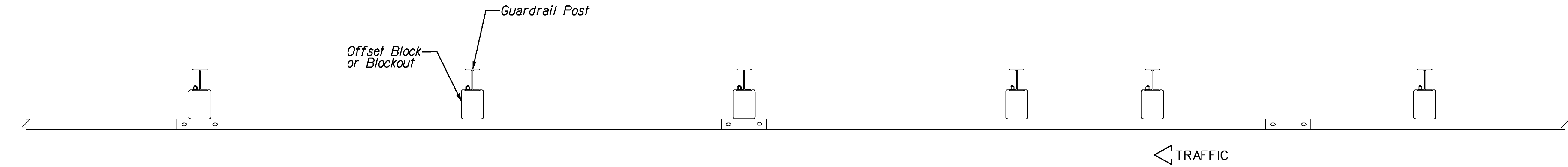
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**GUARDRAIL TERMINAL CONNECTORS
AND END SECTIONS**

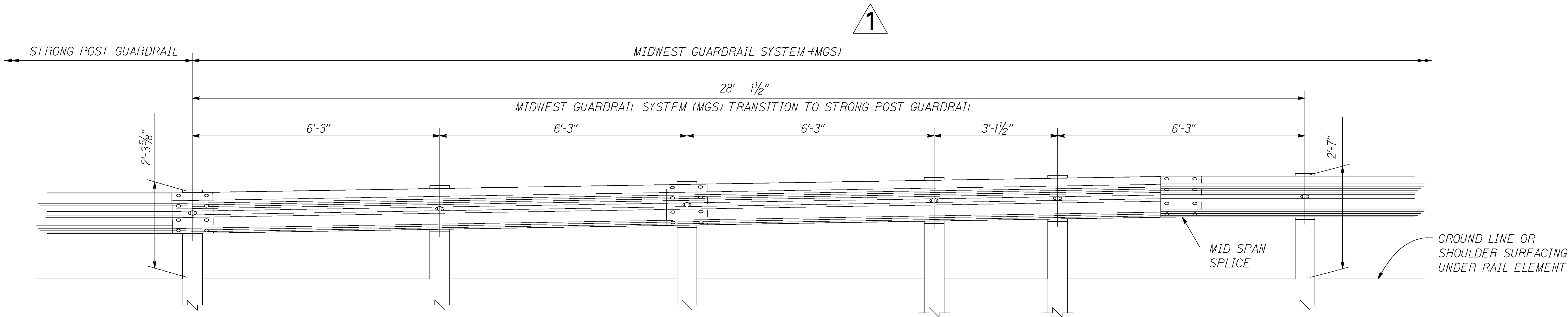
KAMEHAMEHA HIGHWAY REHABILITATION
Vicinity of Kapuhi Street to Dairy Road
Federal Aid Project No. NH-STP-0300(164)
Scale: NTS Date: June, 2020

SHEET No. 4 OF 5 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-STP-0300(164)	2021	ADD.16	119



PLAN



ELEVATION

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTED BOOK	DRAWN BY	X
DATE	DESIGNED BY	
DATE	CHECKED BY	

r09/06/16 D:\r09\standards\Traffic Guardrail Standards\m16_midwest.dgn

1	4/16/21	Updated label on detail
DATE	REVISION	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**MGS TRANSITION TO
STRONG POST GUARDRAIL**

**INTERSTATE ROUTE H-2, 84-INCH
Culvert Restoration at M.P. 2.10**

Federal Aid Project No. NH-STP-0300(164)

Scale: Not to Scale Date: May, 2020

