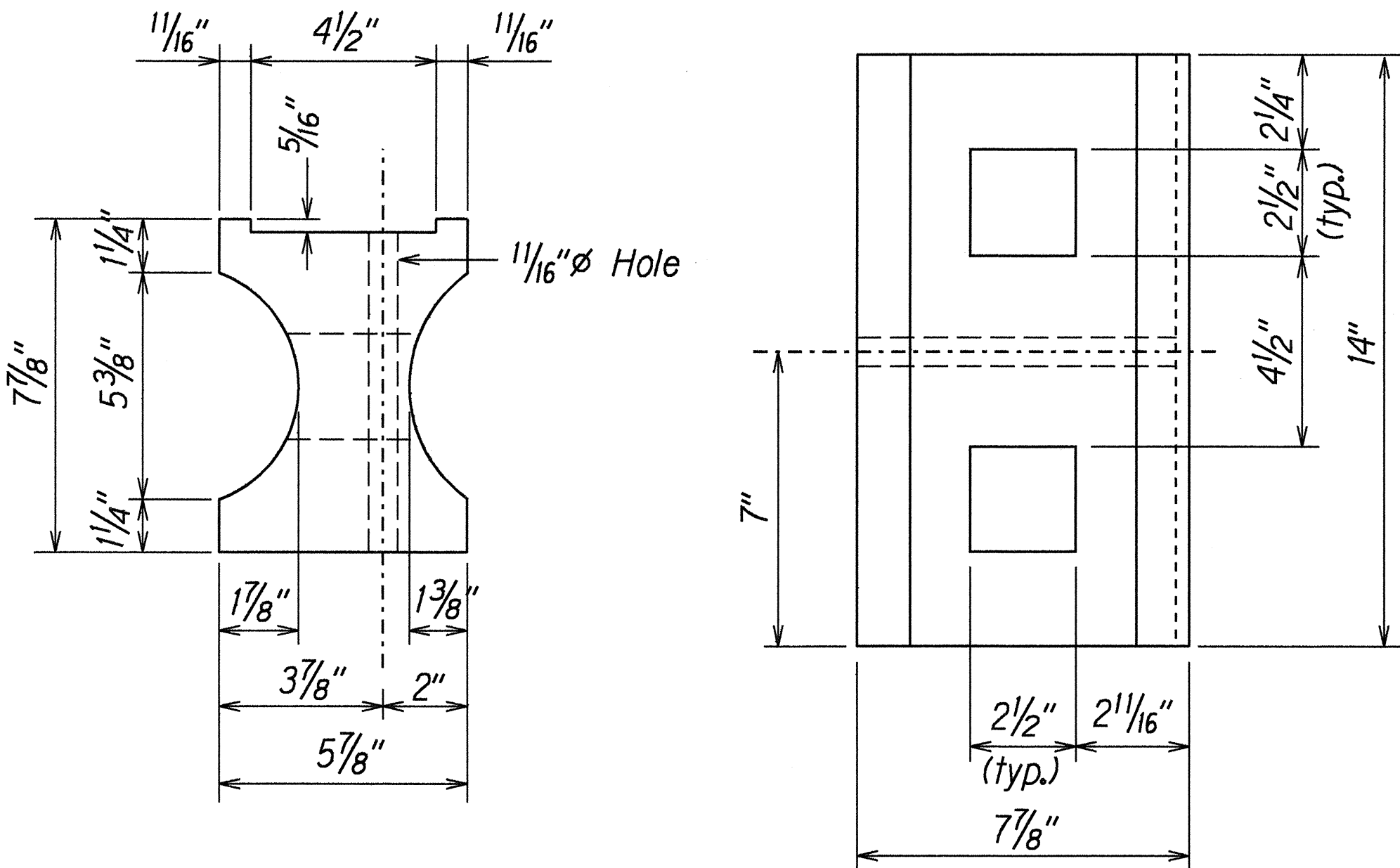
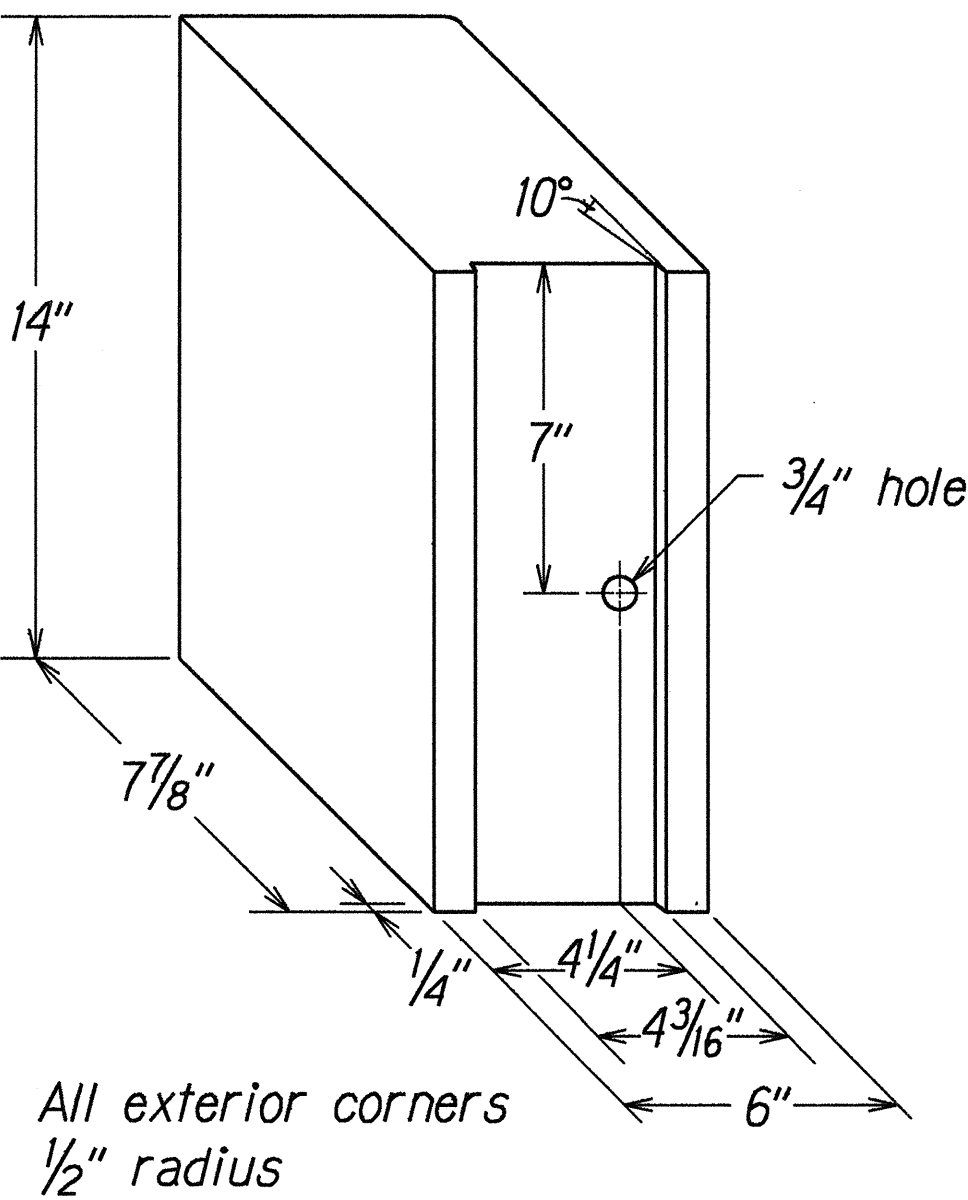


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-NH-030-1(K24)	2000	46	139

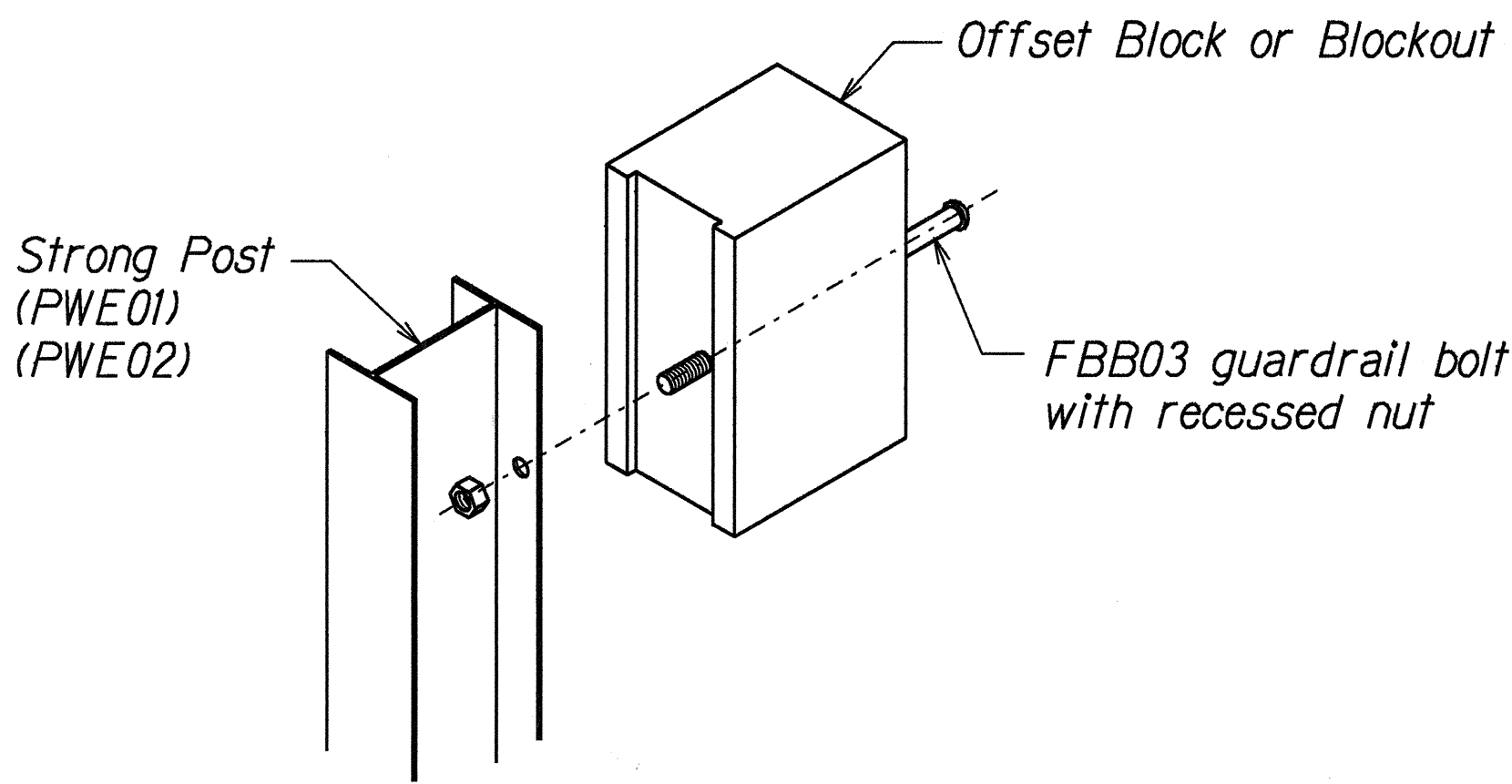


TOP
 SIDE
 RECYCLED PLASTIC BLOCKOUT (TYPE I)

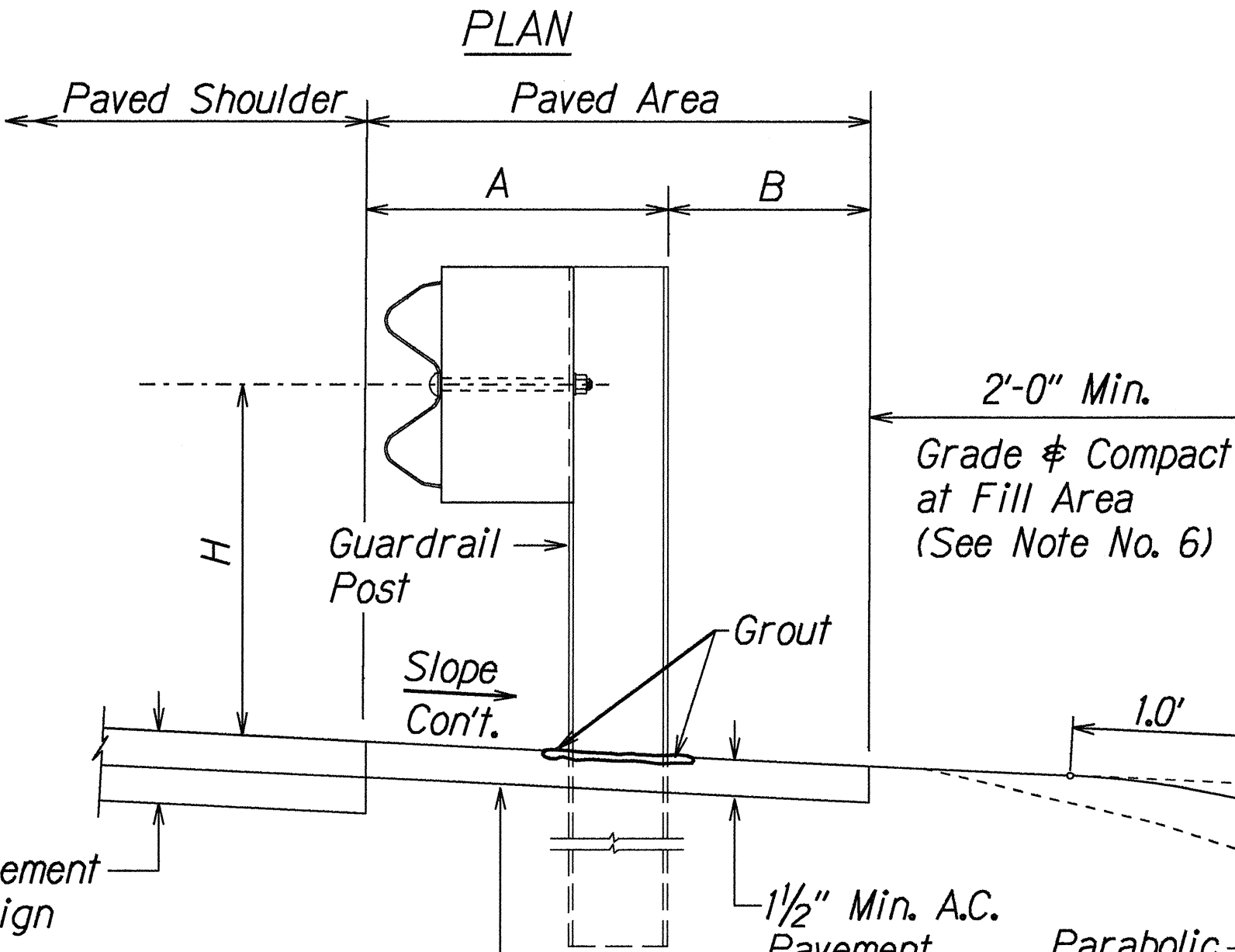
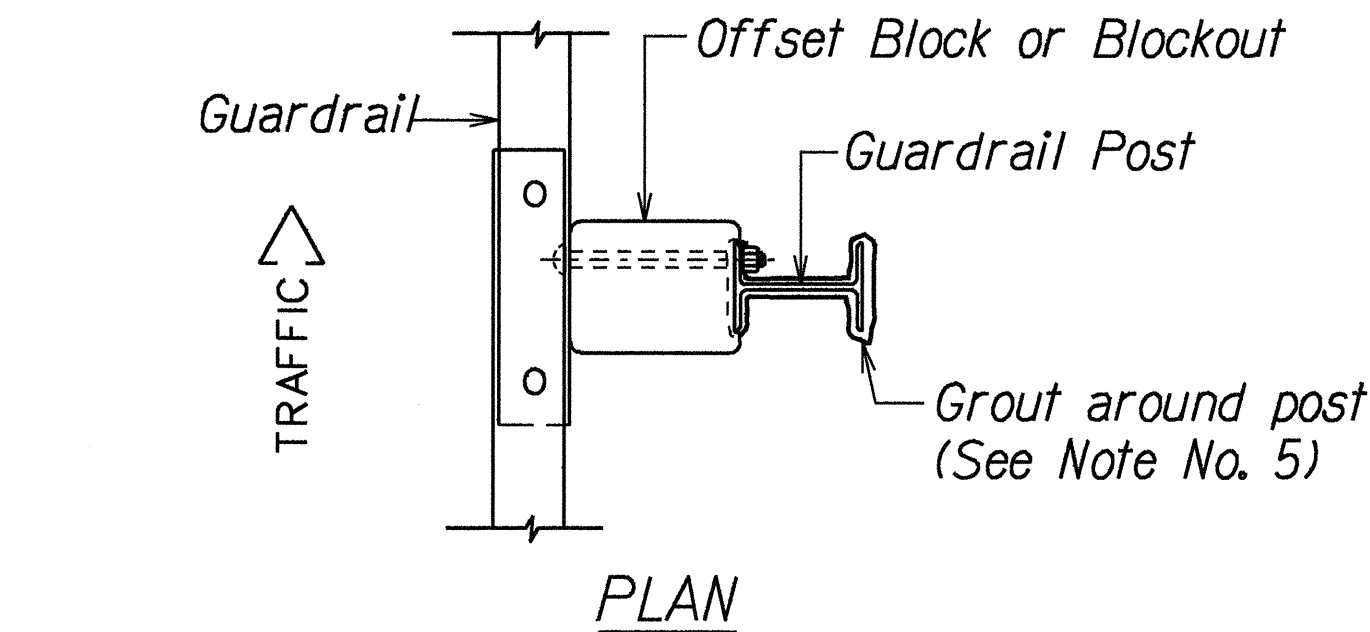


RECYCLED POLYETHYLENE
 OFFSET BLOCK (TYPE II)

- GENERAL NOTES**
1. All hardware, posts and fasteners shall be hot-dip zinc coated galvanized after fabrication. No punching, drilling or cutting will be permitted after galvanizing.
 2. Where conditions require, special post lengths in increments of 6 inches may be specified.
 3. All fasteners, posts, and rail elements (i.e. FBB03, PWE01, RWM02b, 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.
 4. The Recycled Plastic Block or Offset Block shall be approved by the State.
 5. After the guardrail posts are installed in the paved area, the Contractor shall grout around the guardrail post and seal all cracks in the paved area that was 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 grouting. The cost for this work shall not be paid for separately, but shall be considered incidental to the various guardrail items.
 6. When standards for the fill slope area cannot be met, a site specific, engineer approved design may be used.

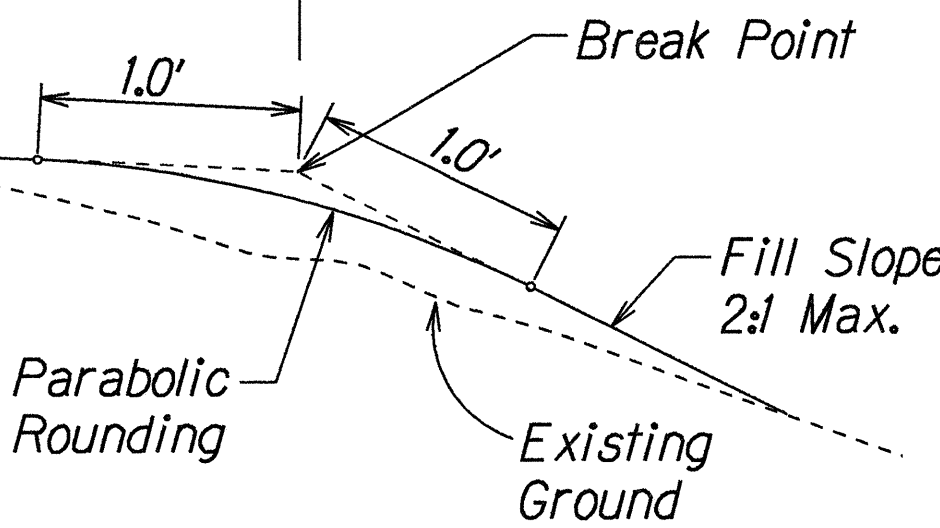


Exploded View
 (Rail and washer not shown)
 STEEL POST AND BLOCK DETAIL



ELEVATION
 TYPICAL GUARDRAIL INSTALLATION

GUARDRAIL TYPE	DIMENSION		
	H	A	B
Strong Post w/W Beam	1'-9 5/8"	1'-6"	1'-0"
Rubrail	2'-0"	1'-6"	2'-0"
Modified Thrie Beam	2'-0"	2'-0"	1'-0"



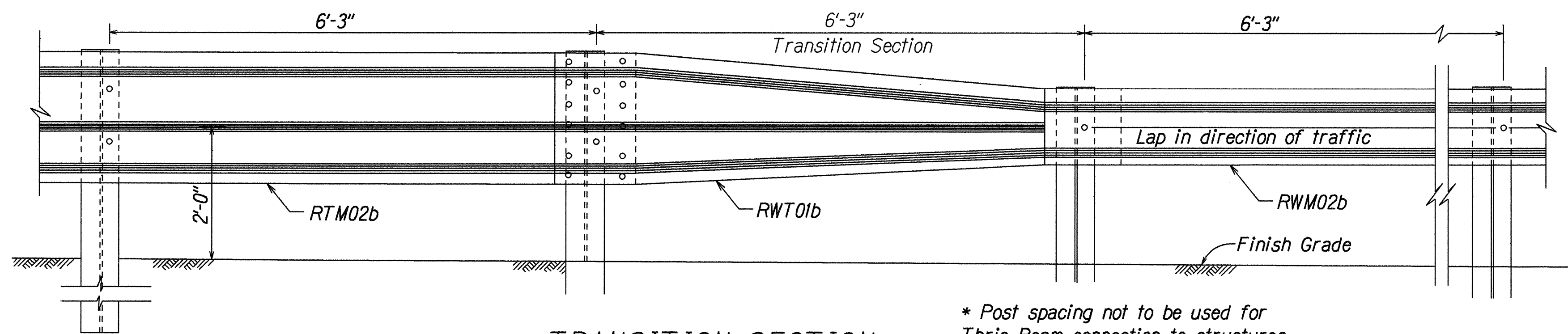
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GUARDRAIL DETAILS & NOTES
HONOAPIILANI HIGHWAY WIDENING
North Kihei Road to Kuihelani Highway
F.A. Project No. BR-NH-030-1(K24)
Scale: NTS
Date: Feb., 2000

SHEET No. 1 OF 1 SHEETS

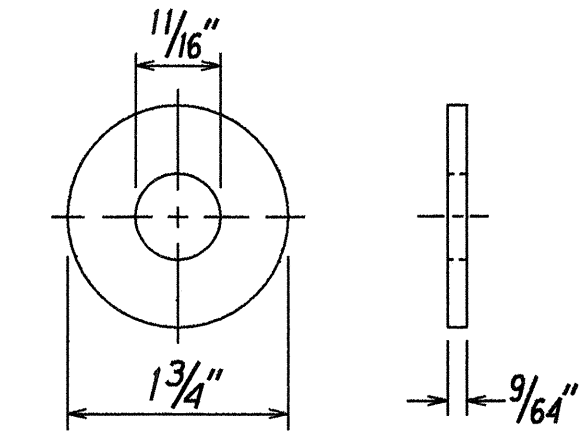
SURVEY PLOTTED BY: DATE: 2/24/00
 DRAWN BY: G. Kawahara
 CHECKED BY: M. Oka
 NOTE BOOK: 00241
 QUANTITIES BY: N. E. S. design
 1/3/01/99 10/10/00/1650/revdgn (standard plan TE-50 r03/06/87)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-NH-030-1(24)	2000	46S-1	139

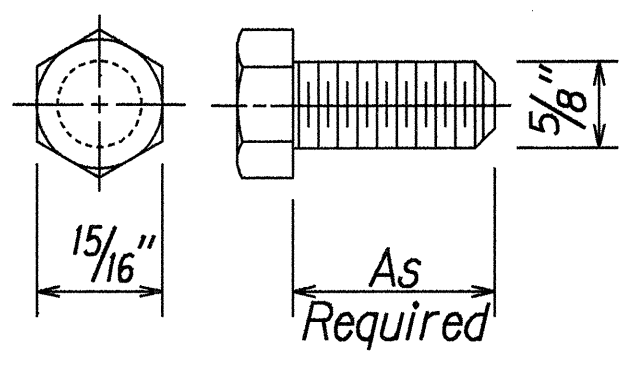


TRANSITION SECTION *

* Post spacing not to be used for Thrie Beam connection to structures.



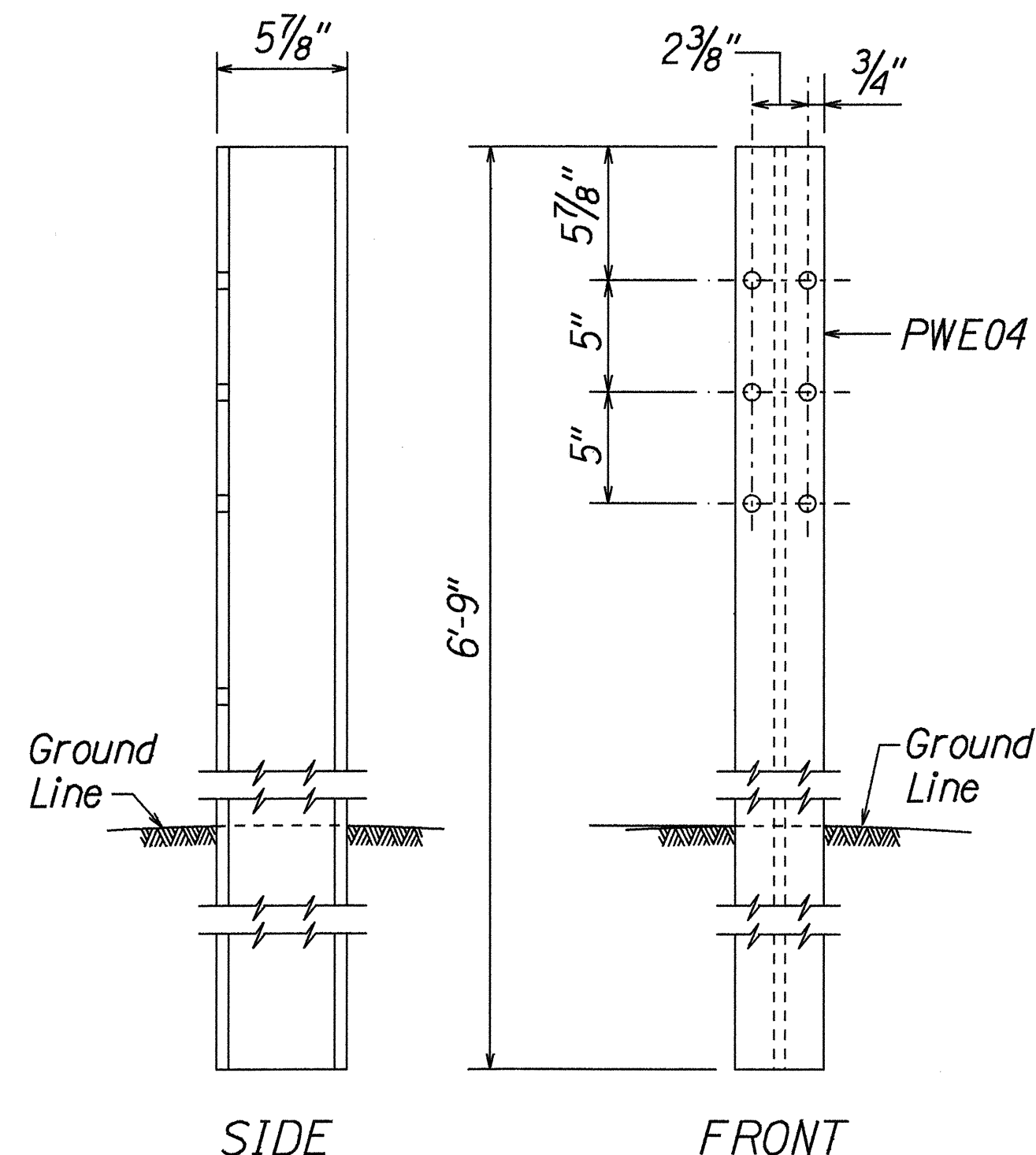
STEEL WASHER FOR 5/8" BOLT



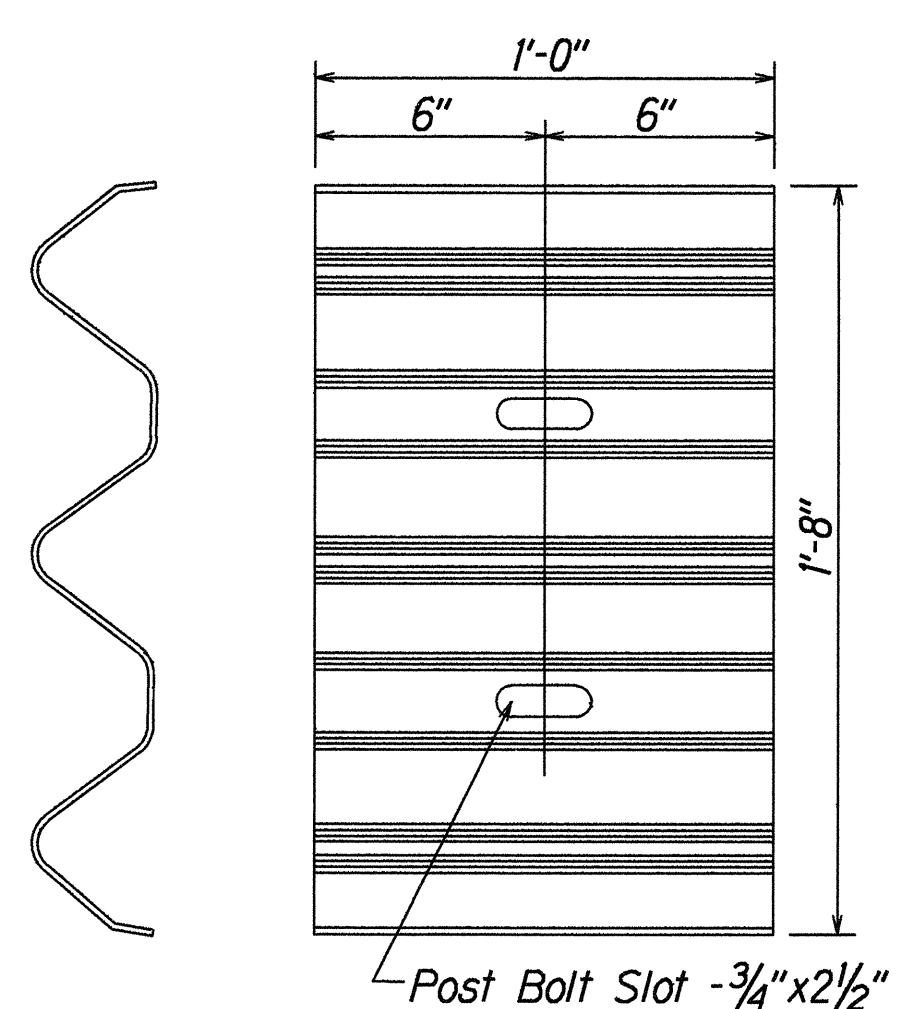
HEX BOLT & NUT (FBX16a)

NOTE: All Holes are 3/4" Dia.

W6x9.0 Structural Shape

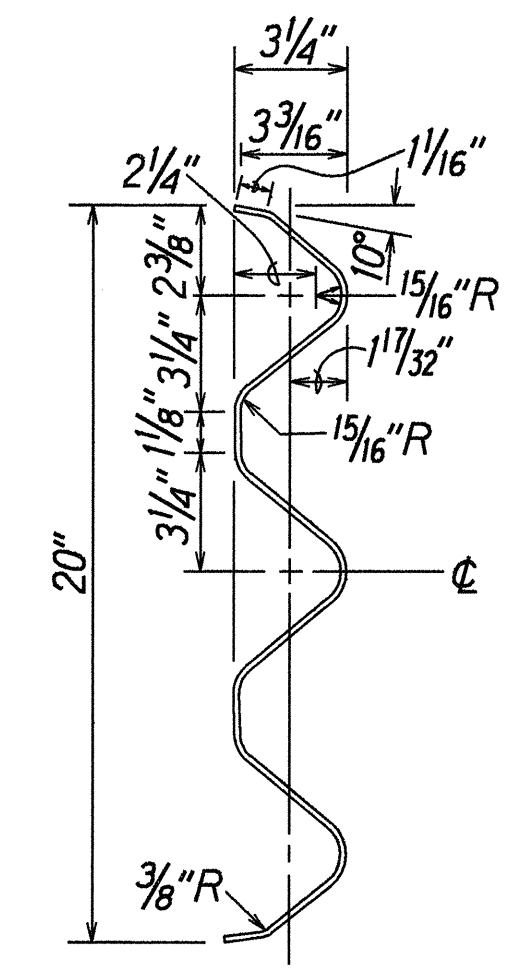


W-BEAM STRONG POST (PWE04)

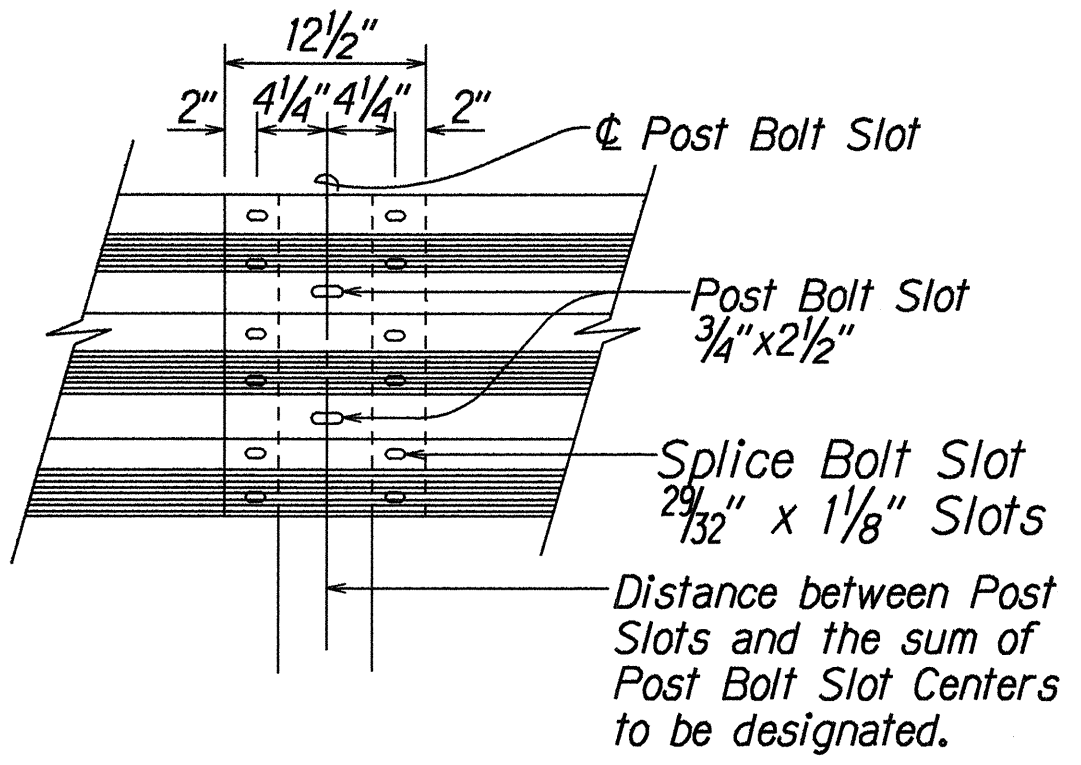


BACKUP PLATE (RTB01b)

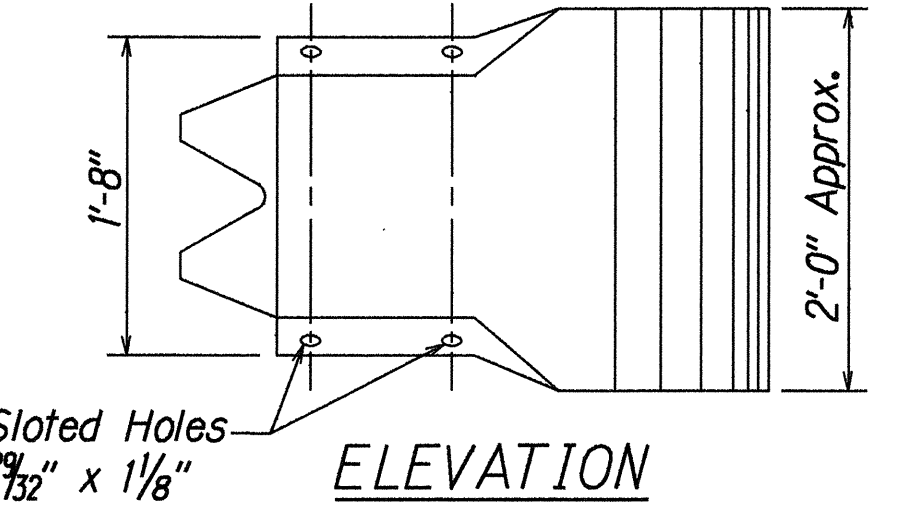
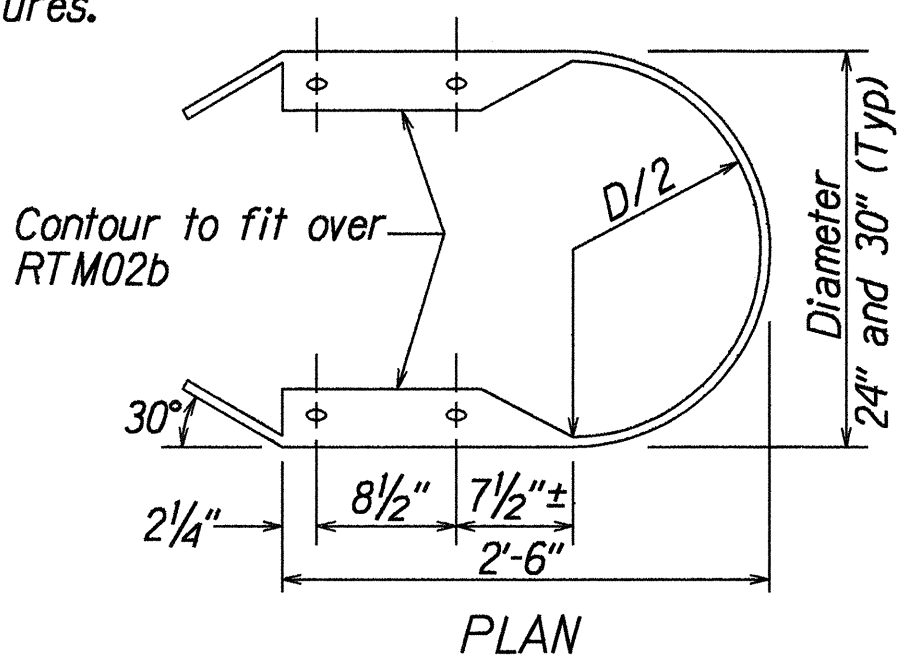
(Use at Posts where Splices do not occur)



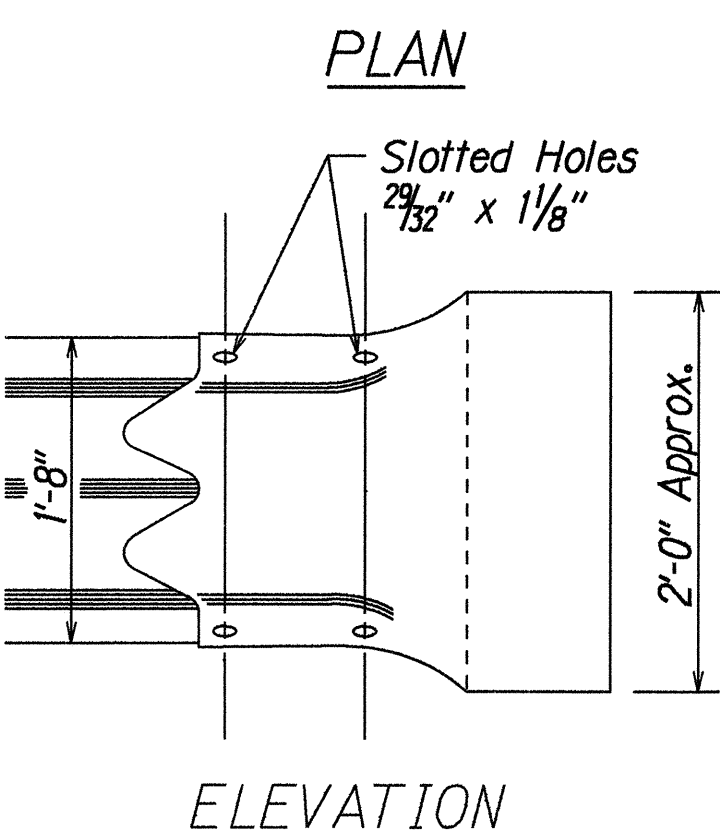
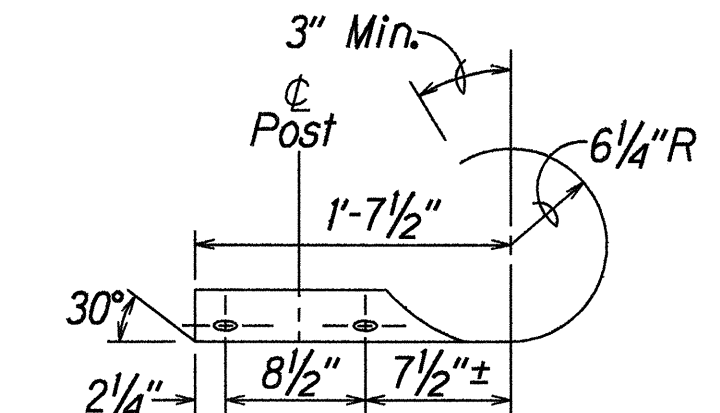
SECTION THRU RAIL ELEMENT (RTM02b)



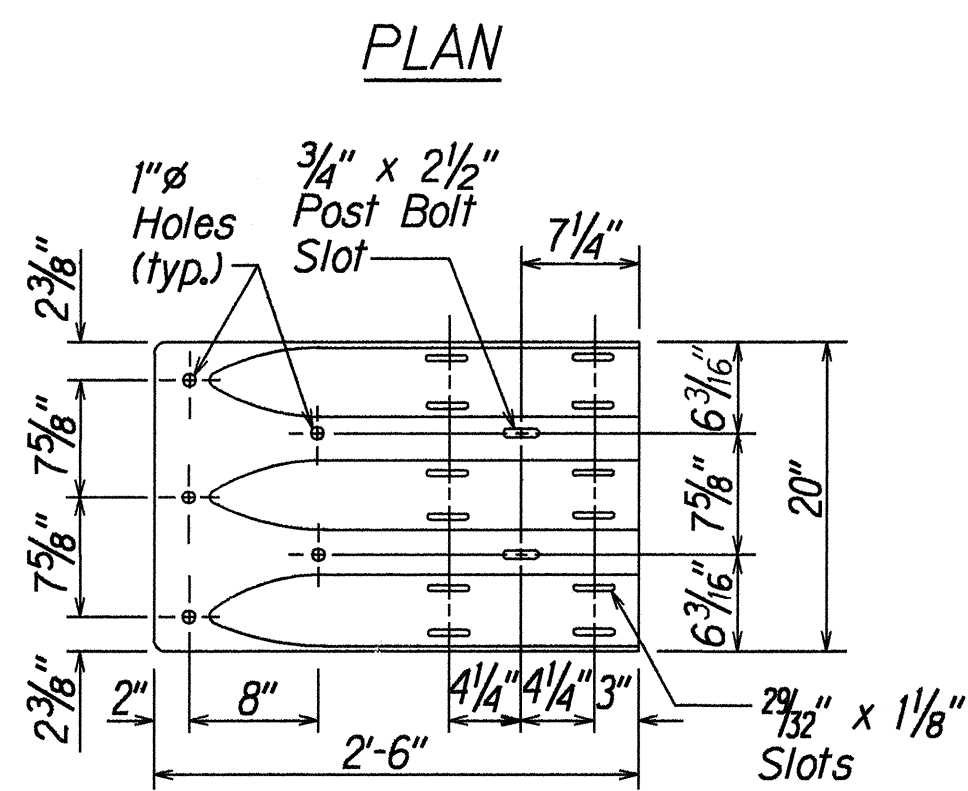
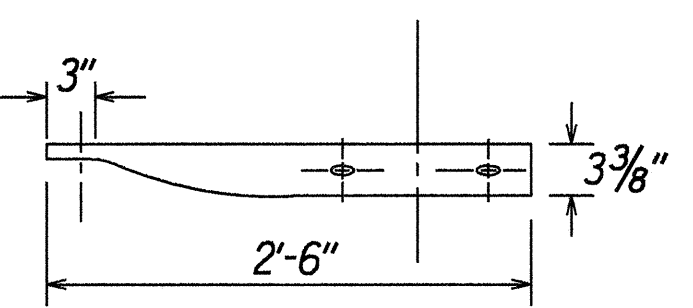
RAIL SPLICE



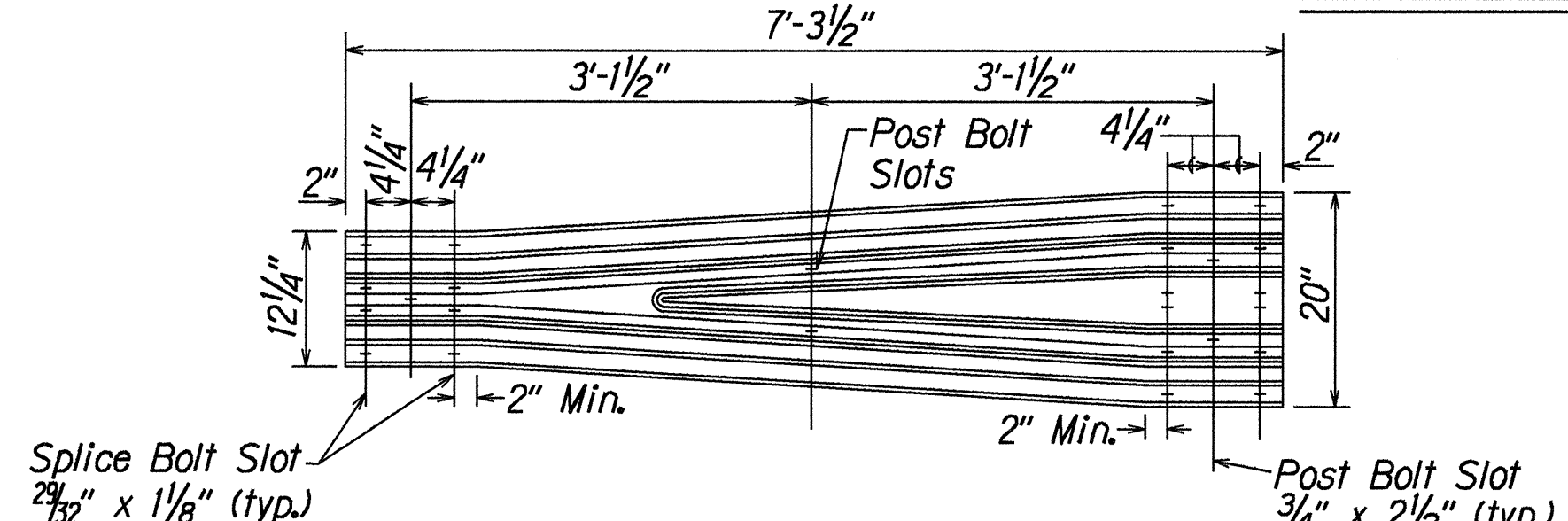
END SECTION (BUFFER RTE03b or RTE04b)



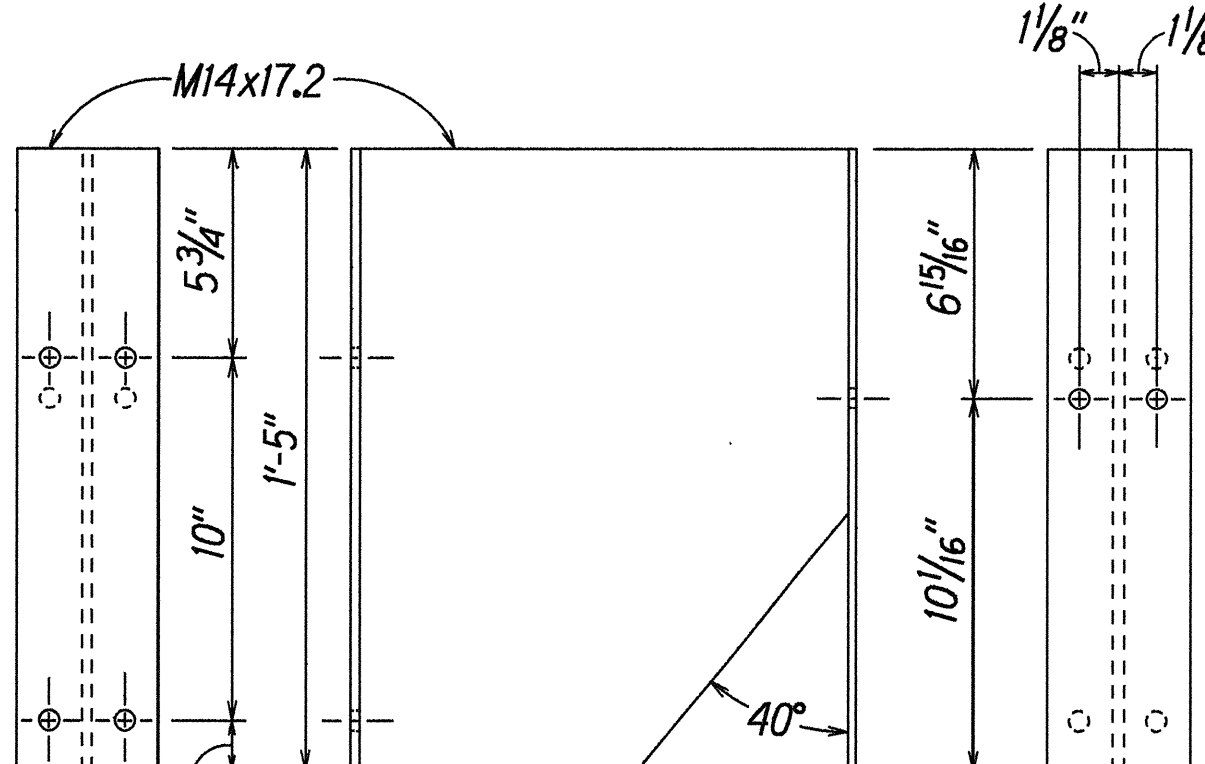
SECTION (ROUNDED) (RTE02b)



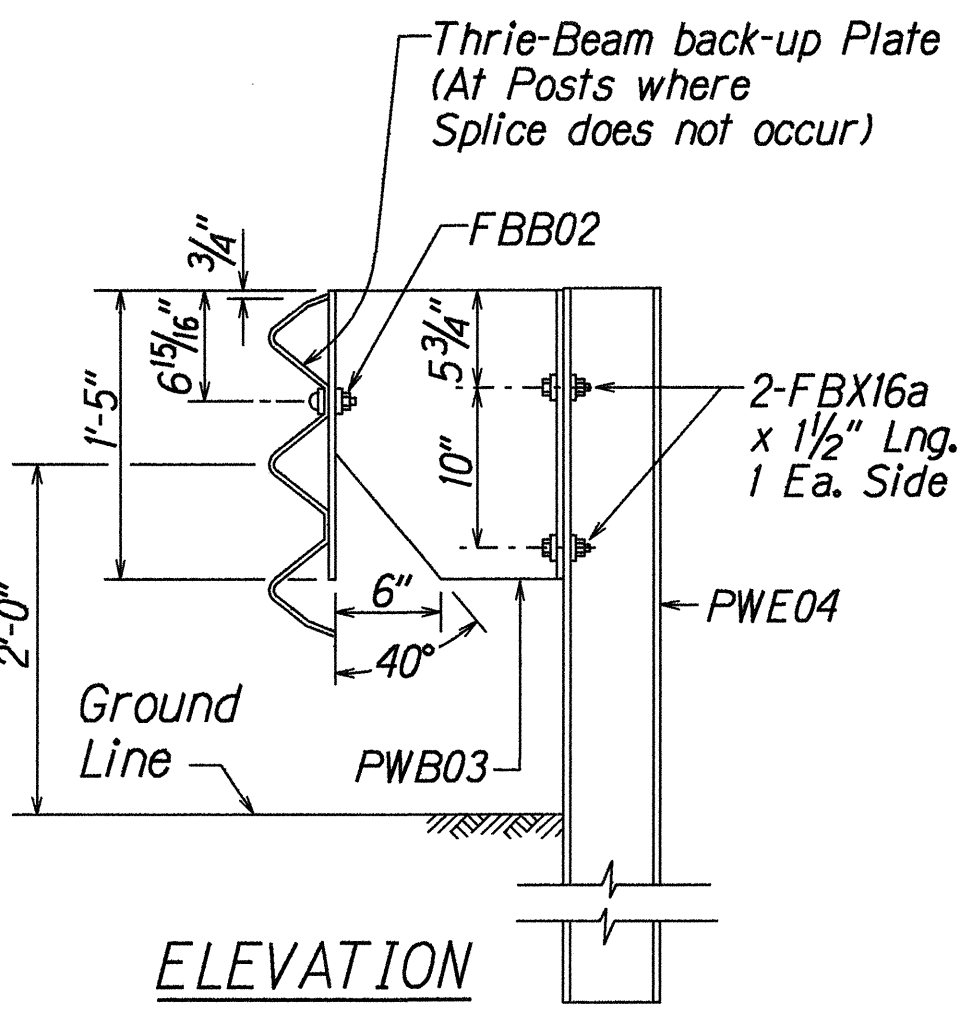
TERMINAL CONNECTOR (RTE01b)



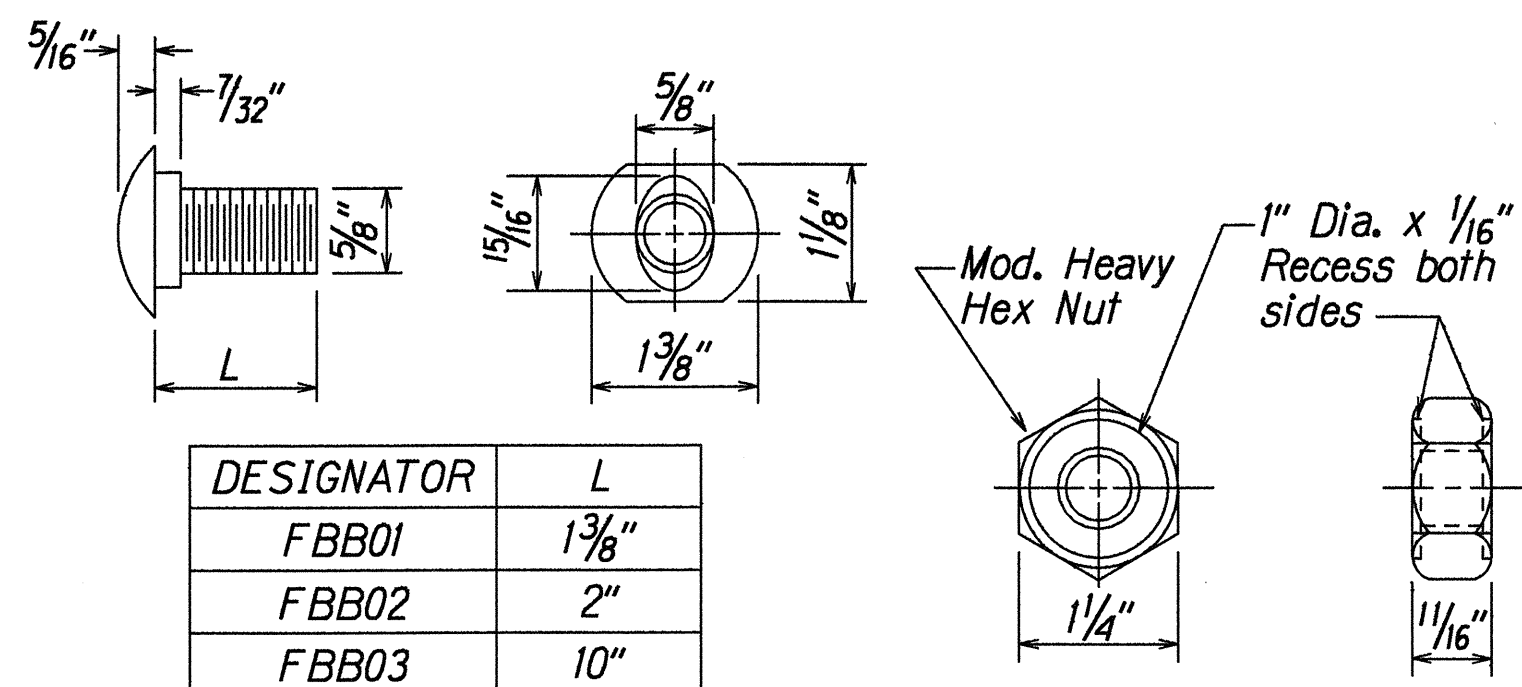
TRANSITION SECTION (RWT01b)



SPACER BLOCK PWB03



STRONG POST MODIFIED THRIE-BEAM GUARDRAIL (SGR09b)



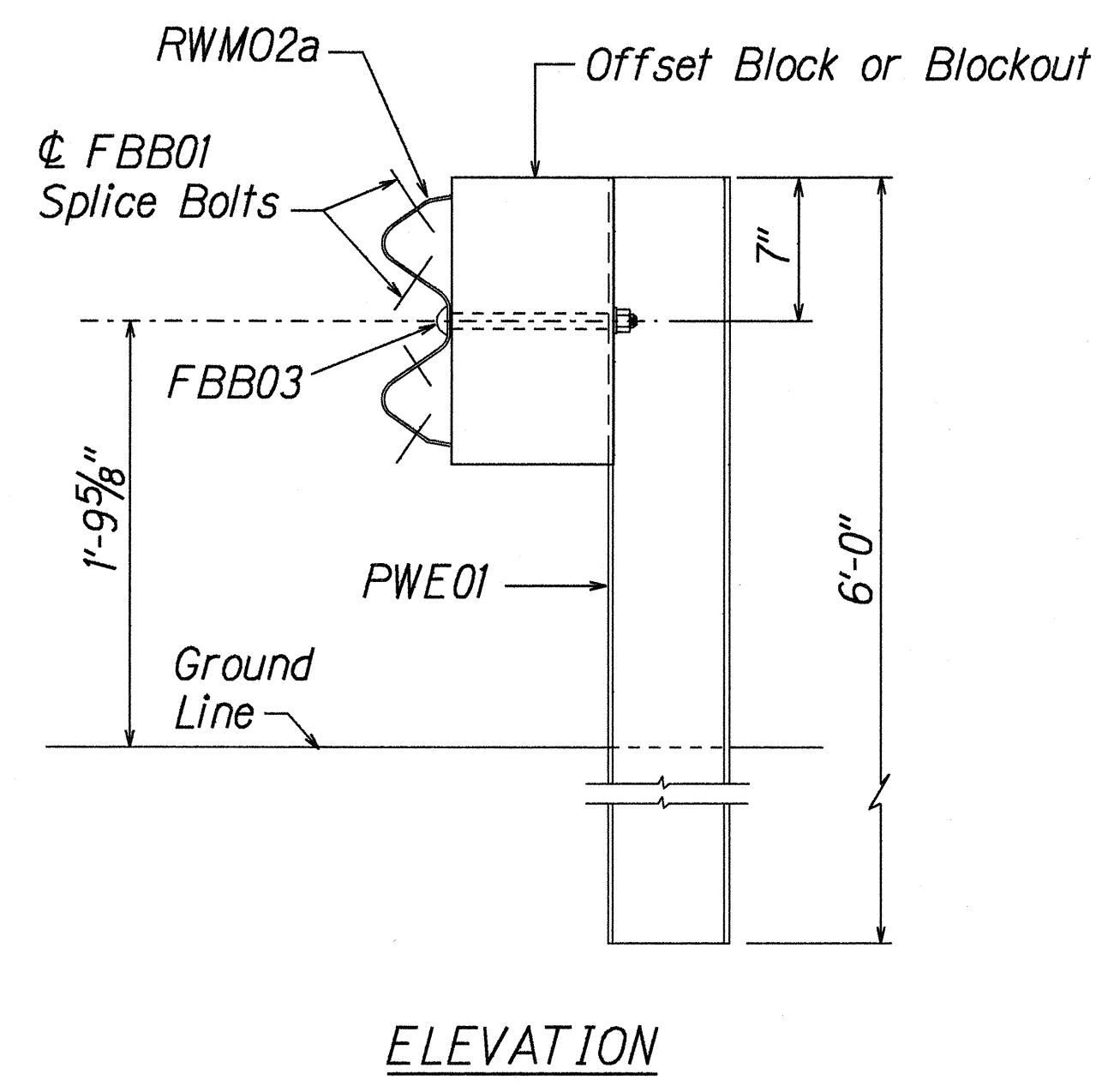
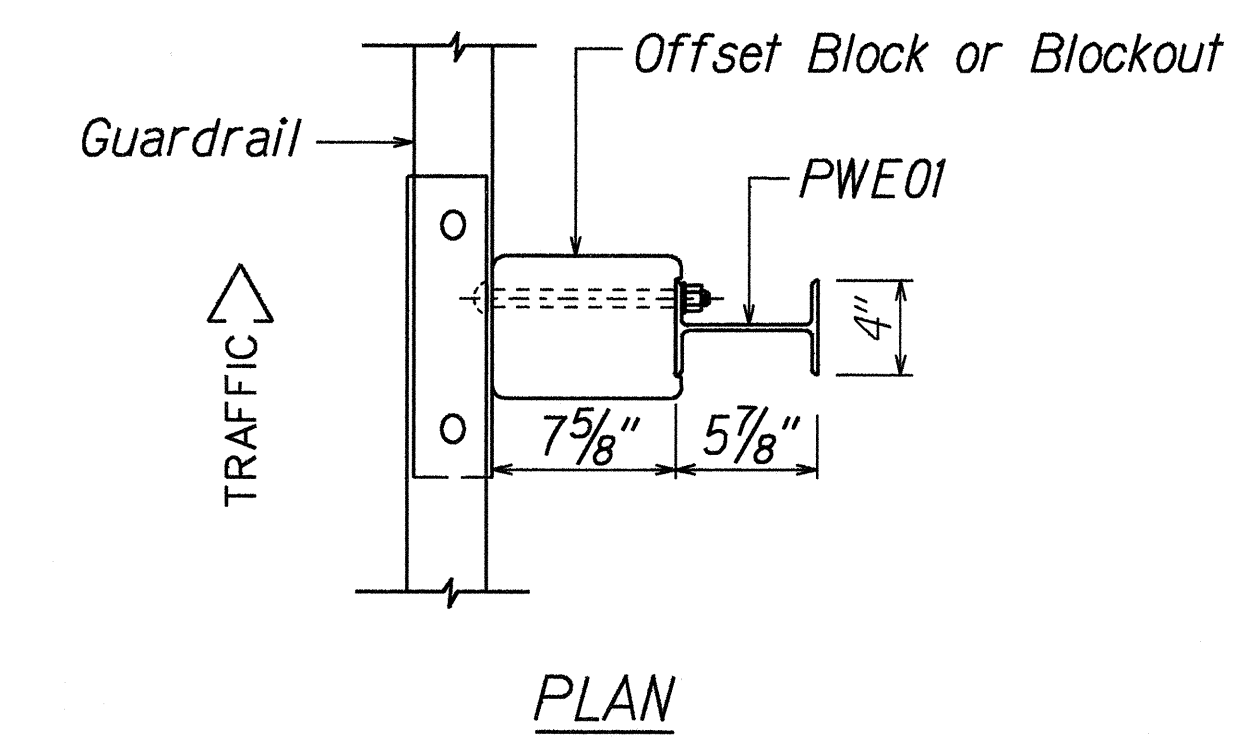
DESIGNATOR	L
FBB01	1 3/8"
FBB02	2"
FBB03	10"

GUARDRAIL BOLTS AND RECESSED NUT

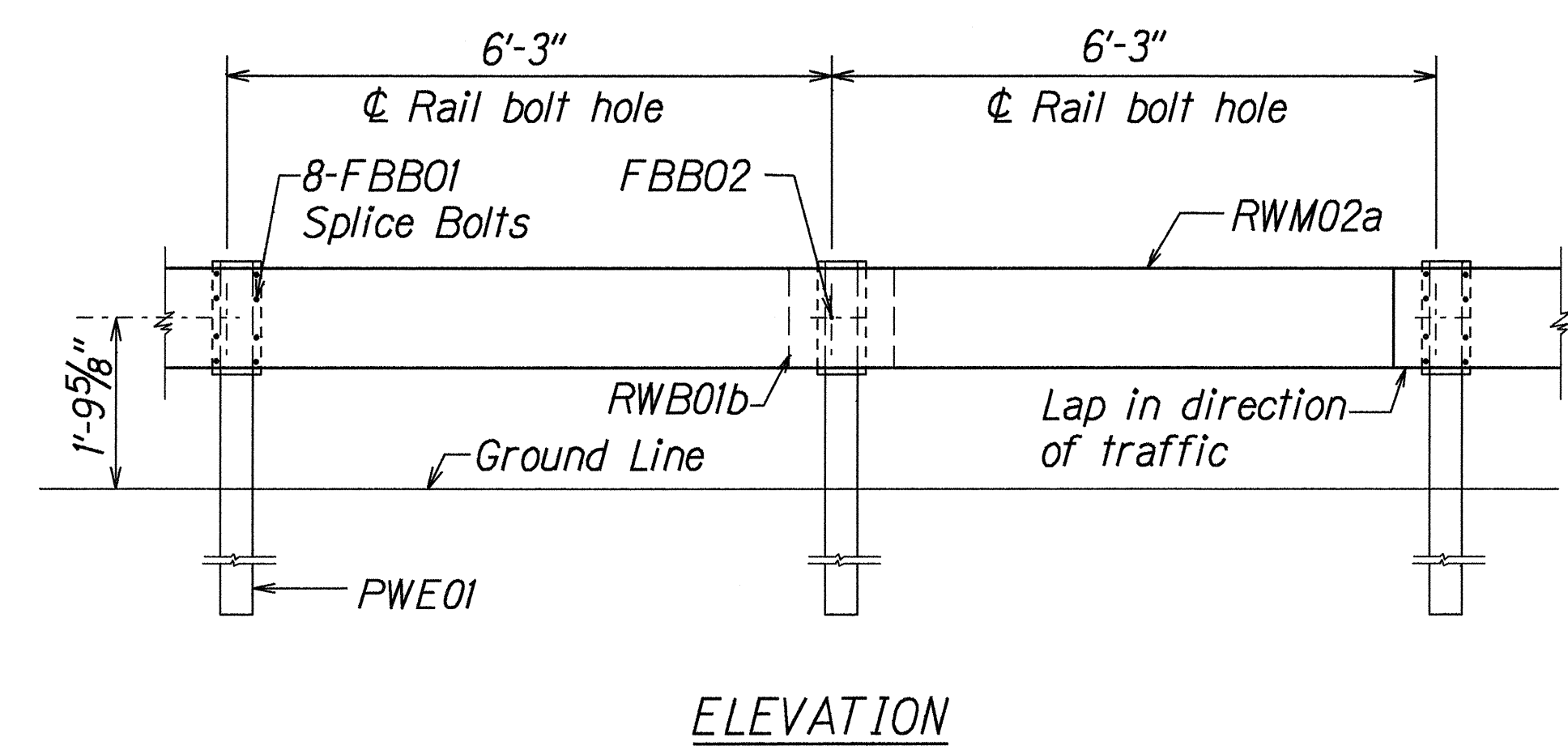
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRONG POST MODIFIED
THRIE-BEAM GUARDRAIL
HONOAPIILANI HIGHWAY WIDENING
North Kihei Road to Kuihelani Highway
F.A. Project No. BR-NH-030-1(24)
Scale: NTS
Date: June, 2000

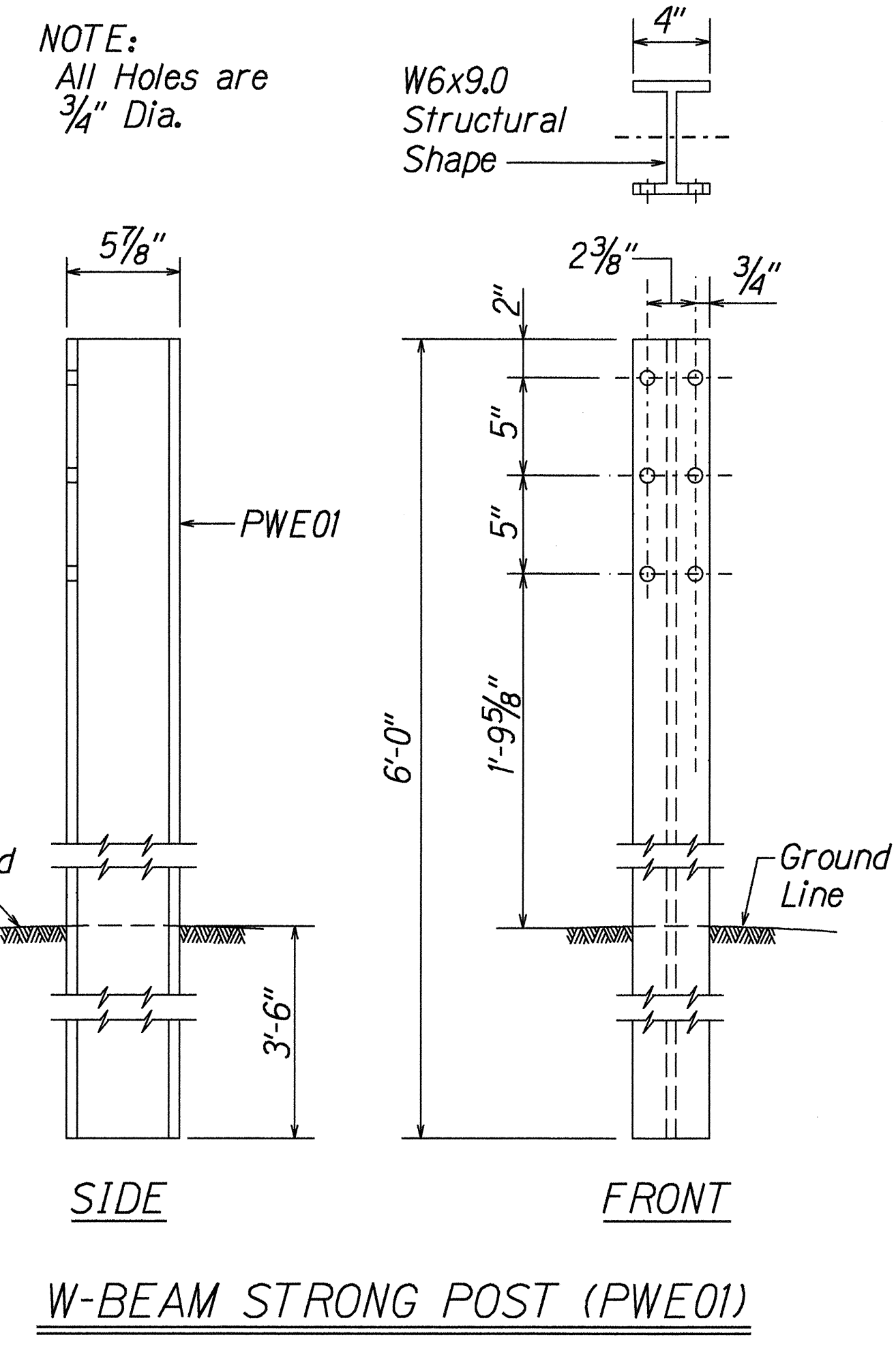
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-NH-030-1(24)	2000	47	139



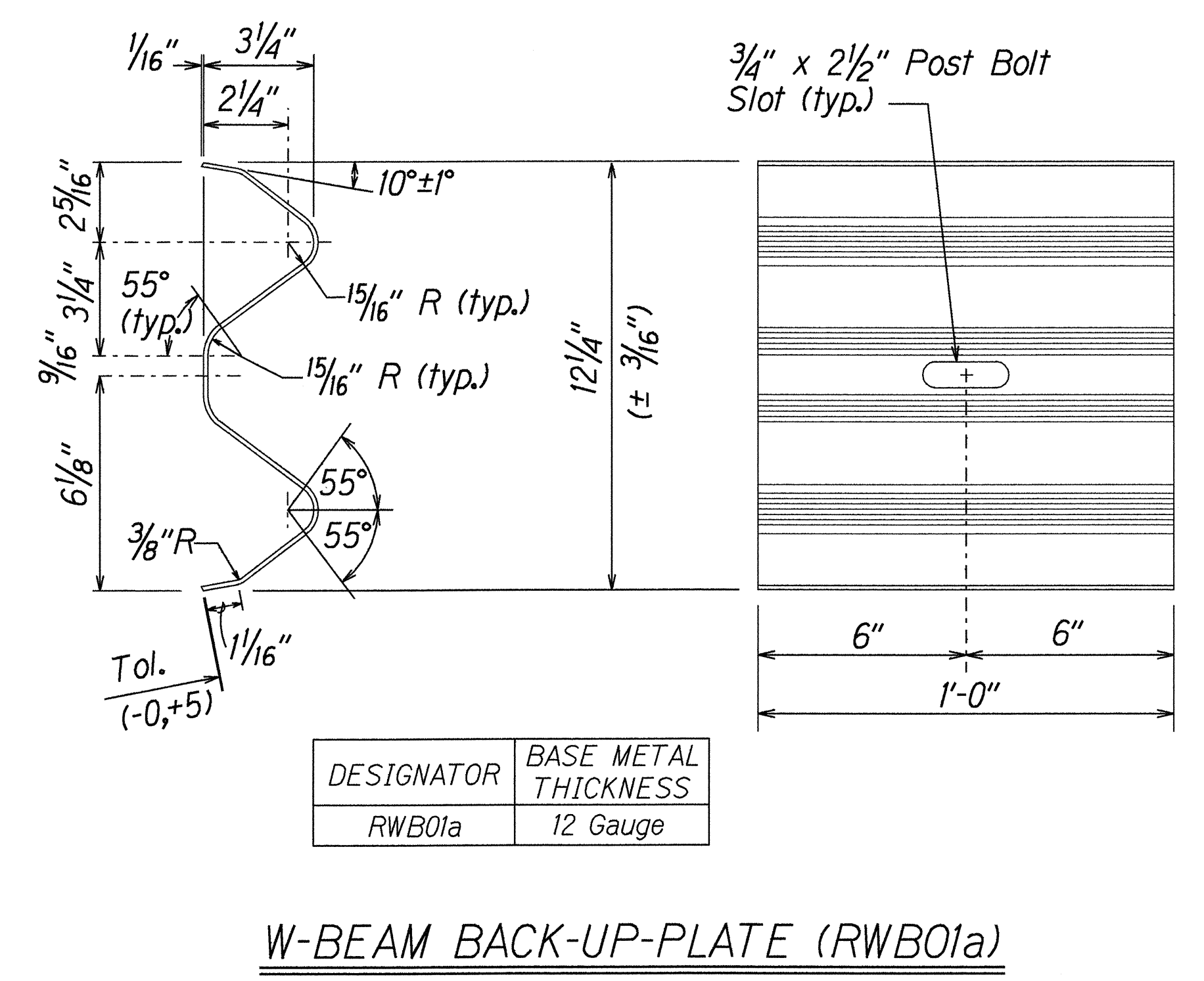
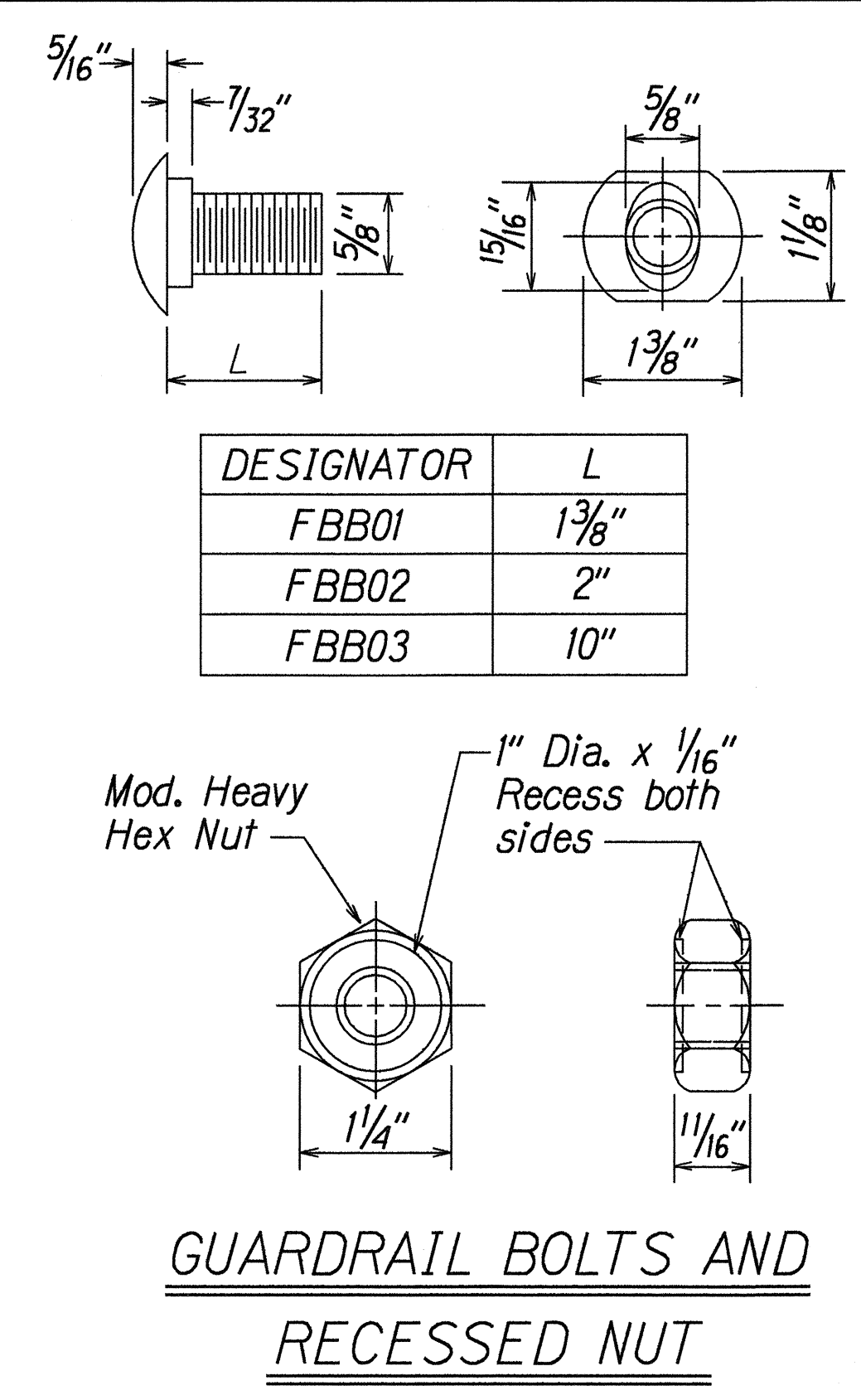
STRONG POST W-BEAM GUARDRAIL (SGR04a)



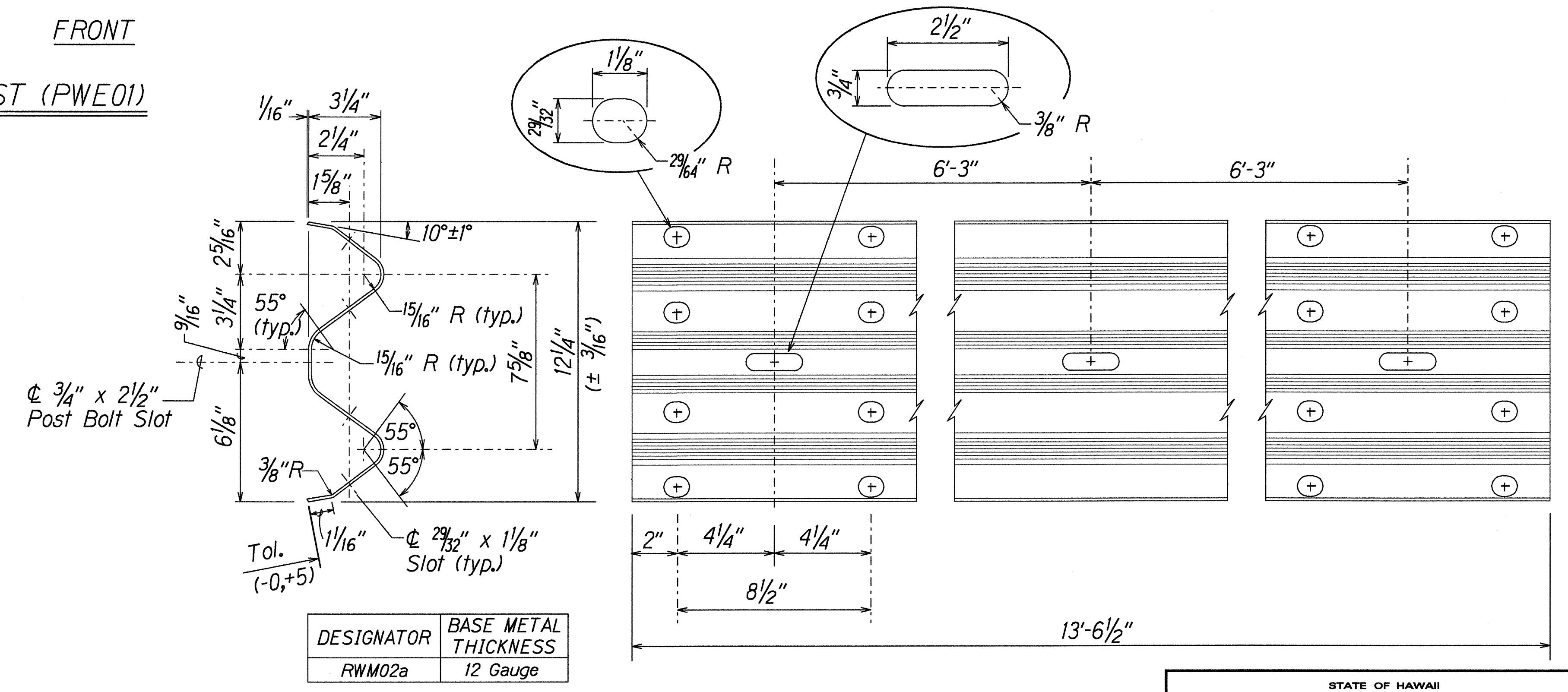
STRONG POST W-BEAM GUARDRAIL WITH RECYCLED OFFSET BLOCK OR PLASTIC BLOCKOUT



W-BEAM STRONG POST (PWE01)



W-BEAM BACK-UP-PLATE (RWB01a)



2 SPACE W-BEAM GUARDRAIL (RWM02a)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRONG POST W-BEAM GUARDRAIL

HONOAPIILANI HIGHWAY WIDENING
North Kihei Road to Kuihelani Highway
F.A. Project No. BR-NH-030-1(24)
Scale: NTS Date: Feb., 2000

SHEET No. 1 OF 1 SHEETS

ORIGINAL PLAN	DATE	2/24/00
DRAWN BY	W. Kawahara	
TRACED BY	W. Kawahara	
QUANTITIES BY	W. Kawahara	
CHECKED BY	W. Kawahara	

13.01.99 1d1rubyl/guardrail/wbeamsdgn (standard plan TE-50 r03/06/87)