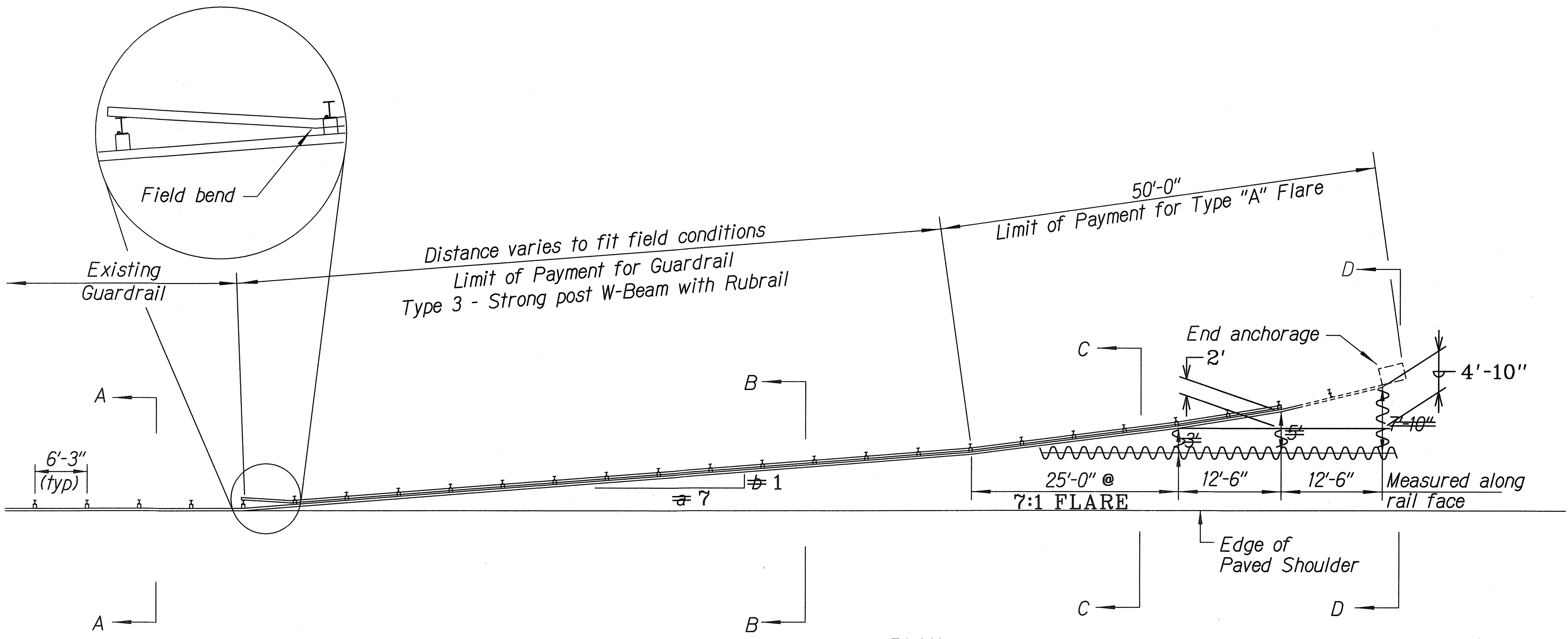


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61C-01-04#	2004	22	91

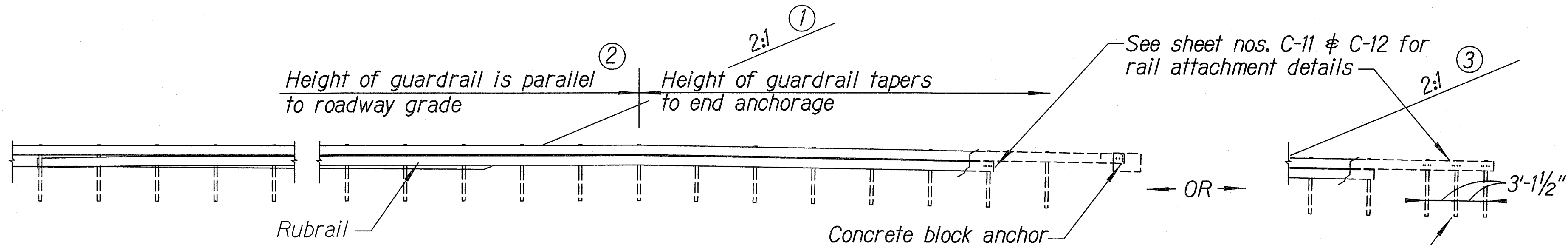
02-04

General Notes

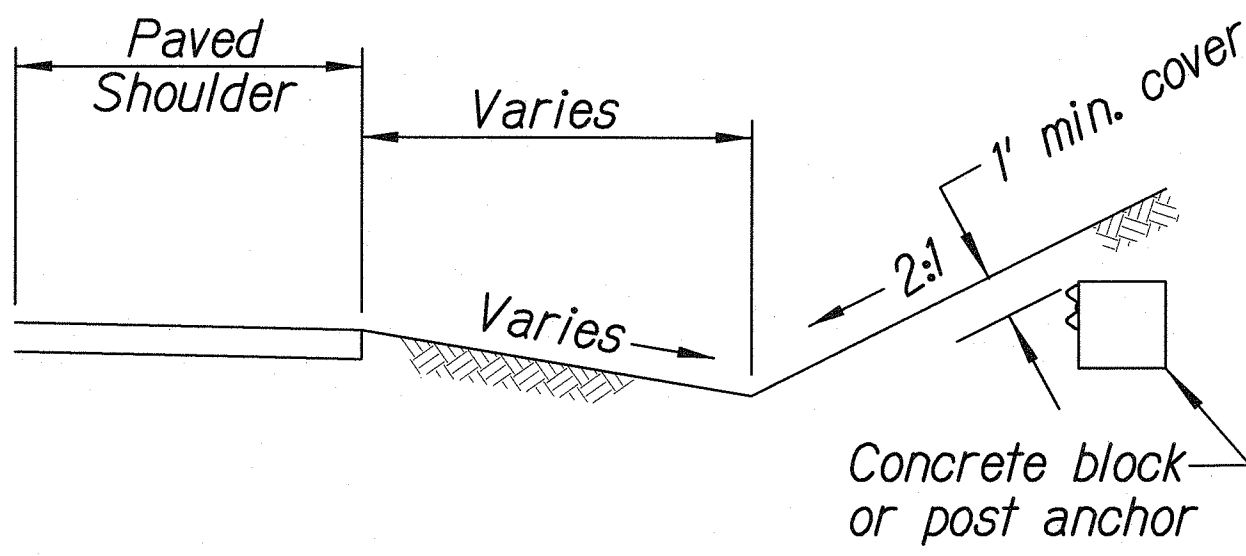
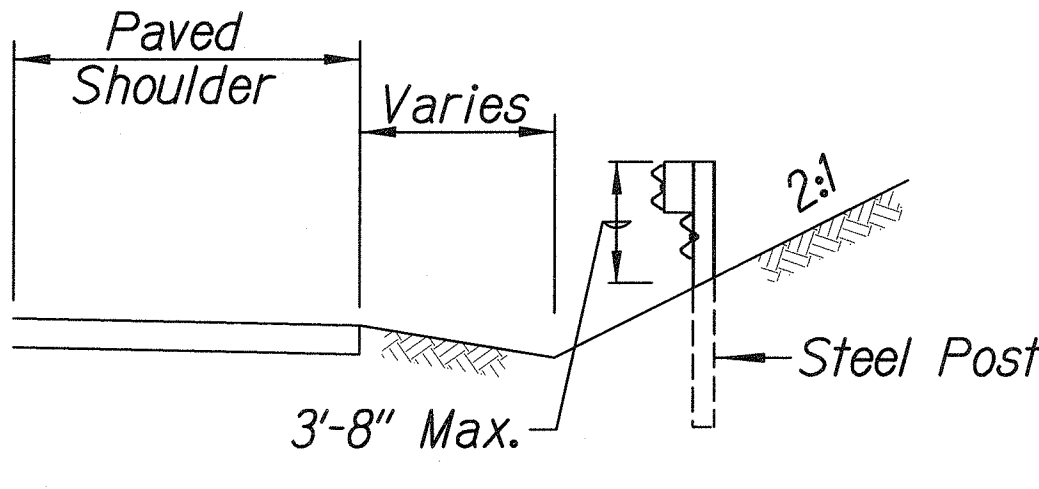
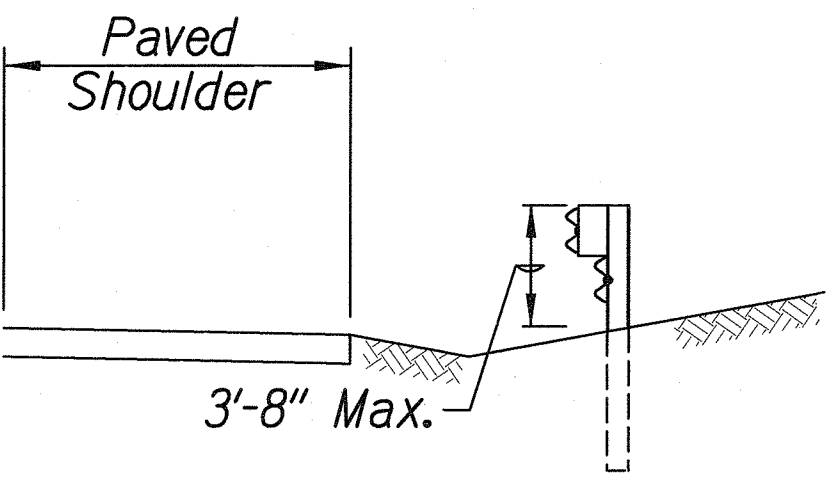
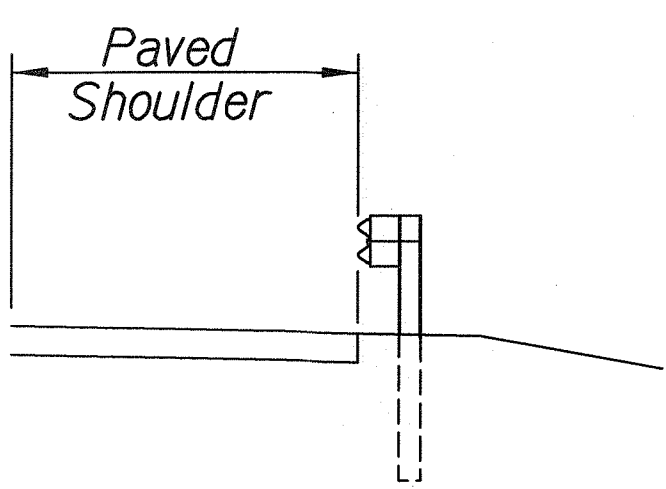
1. A 6:1 or flatter slope is desirable. However, a steeper or flatter existing slope may be used.
2. Height of guardrail may be tapered down in elevation to maintain 3'-8" maximum height.
3. All posts are 8'-0" in length from where the guardrail flares away from the shoulder back to the post anchor. Posts for the post anchor are 6'-0" long.
4. The Guardrail Posts shall be located away from the gutter/swale invert.
5. All fasteners, posts, blocks and rail elements 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-AGCARTBA Joint Cooperative Committee.



Design speed mph	a:b
68	15:1
62	13:1
56	12:1
50	11:1
43	10:1
37	9:1
31	7:1



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



BACKSLOPE ANCHOR TERMINAL (WITH TYPE "A" FLARE)

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

R. Urayama

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPE "A" FLARE

KALANIANA'OLE HIGHWAY

EMERGENCY LANDSLIDE REPAIRS AT CASTLE JUNCTION

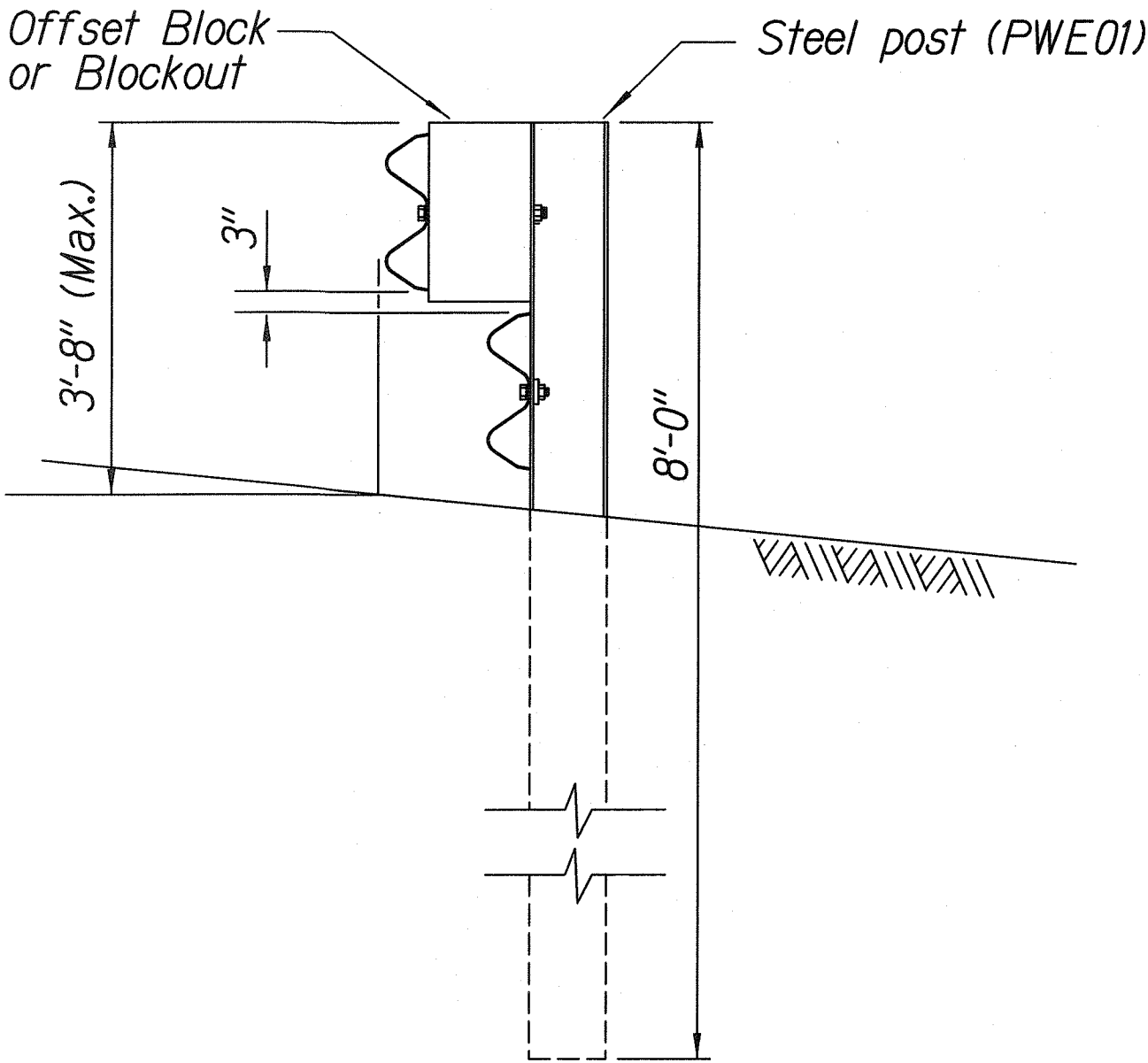
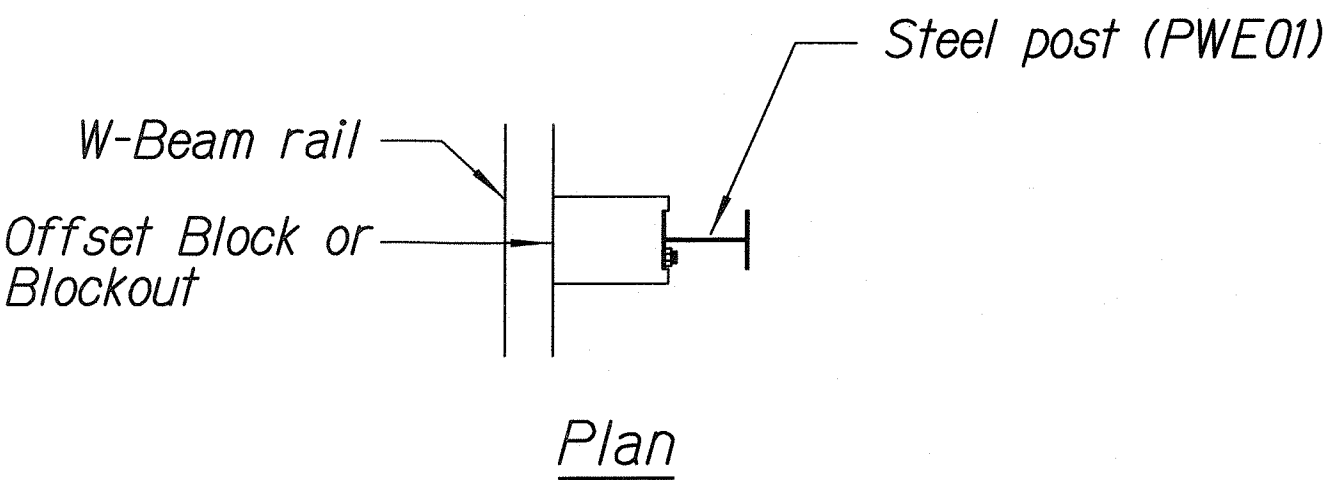
PROJECT NO. 61C-01-04# 02-04

Scale: NTS Date: Sept. 26, 2003

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61C- 01-04 02-04	2004	23	91

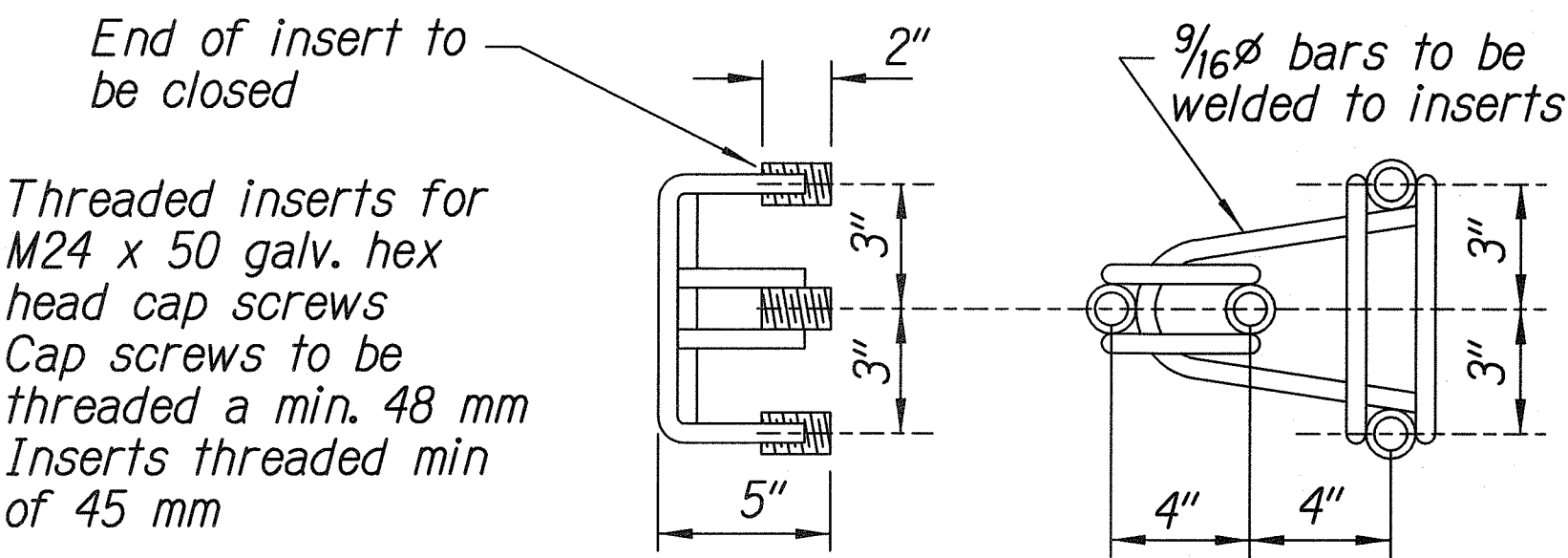
02-04

Note:
All fasteners, posts, blocks and rail elements 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-AGCARTBA Joint Cooperative Committee.

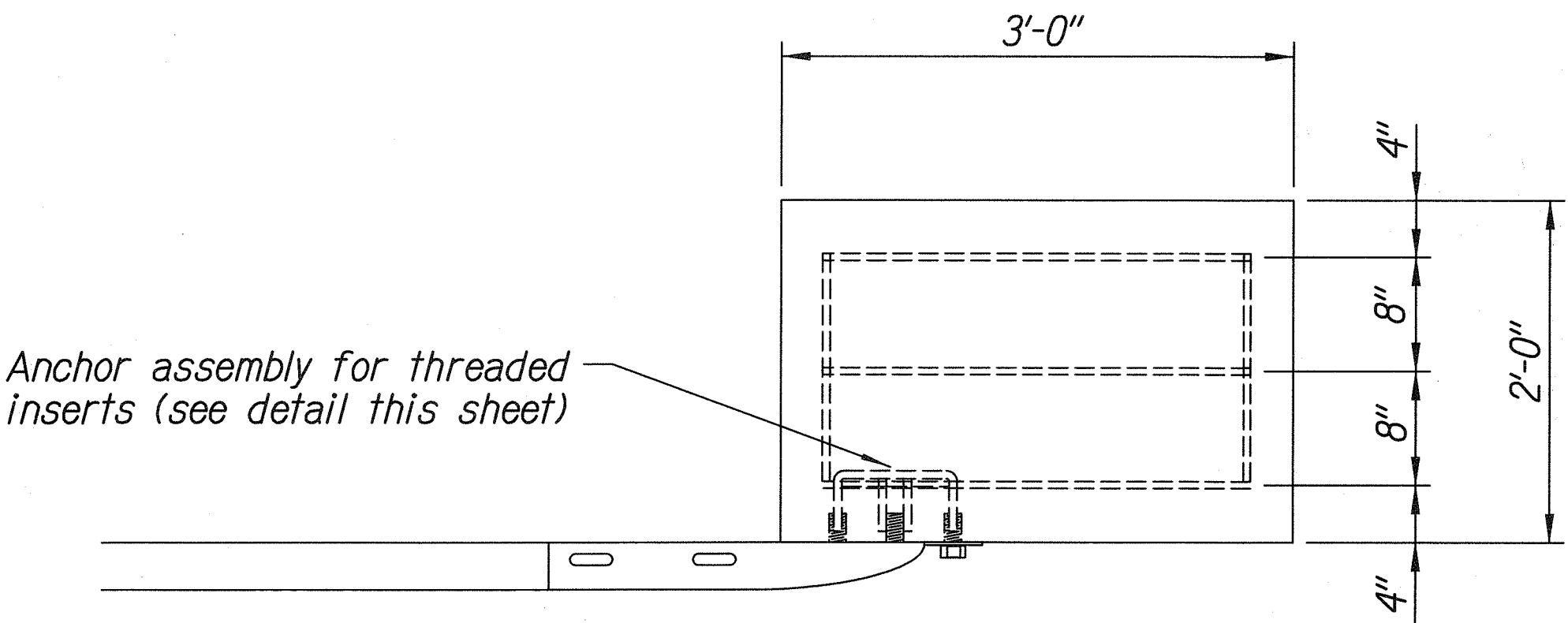


Elevation

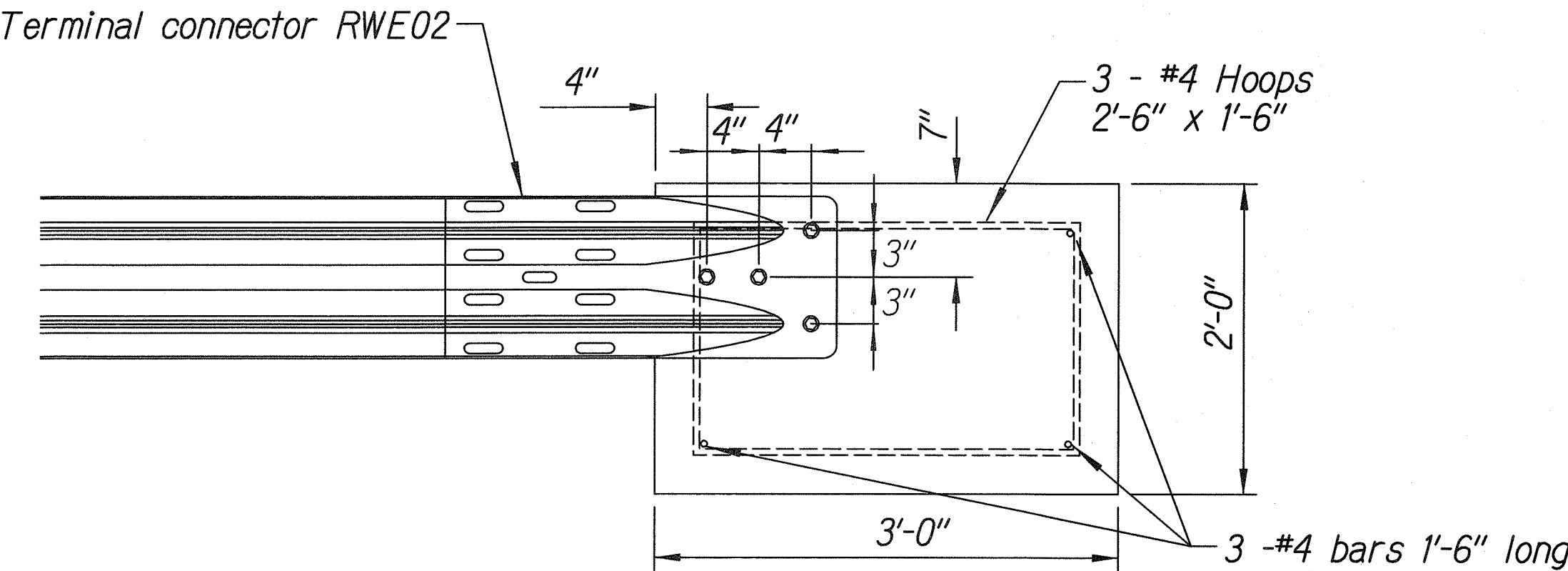
STEEL POST GUARDRAIL
WITH RUBRAIL



ANCHOR ASSEMBLY
CONCRETE BLOCK ANCHOR



Plan



Elevation

CONCRETE BLOCK ANCHOR
(2' X 2' X 3')

BACKSLOPE ANCHOR TERMINAL END ANCHORAGE DETAILS
(TYPE "A" FLARE)

THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPE "A" FLARE

KALANIANA'OLE HIGHWAY

EMERGENCY LANDSLIDE REPAIRS AT CASTLE JUNCTION

PROJECT NO. 61C-~~01-04~~ 02-04

Scale: NTS Date: Sept. 26, 2003

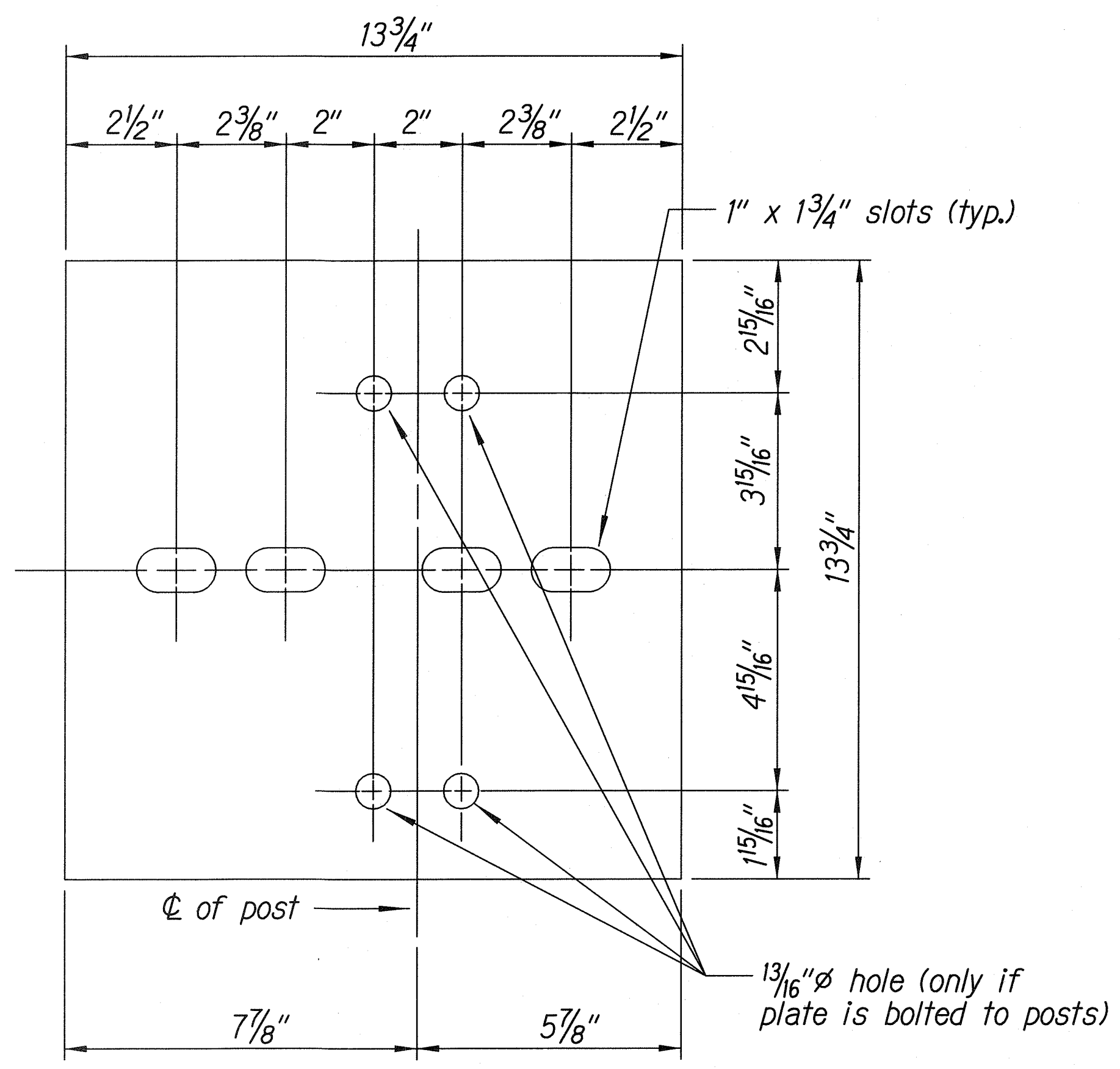
SHEET No. C-11 OF 12 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
NOTE BOOK	
No.	

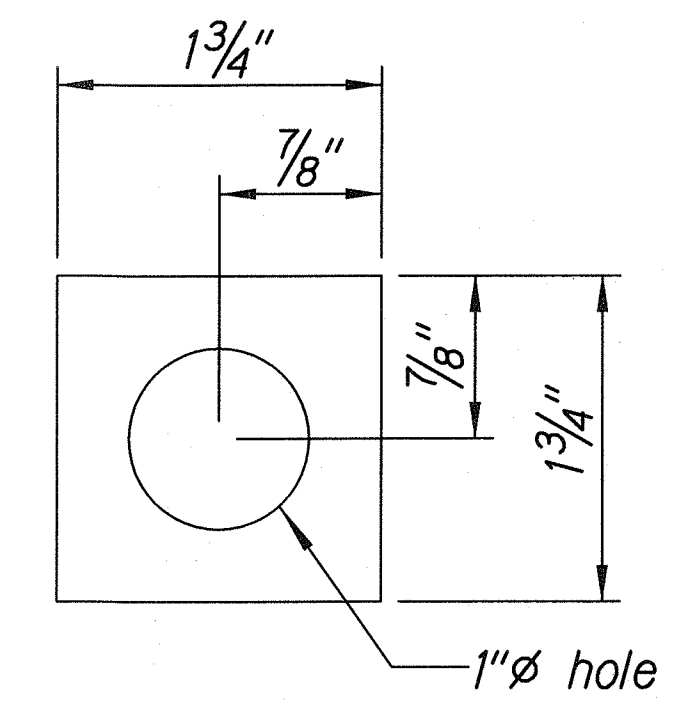
J:\CASTLE JUNCTION\STATE\04DET1.dgn

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61C-01-04#	2004	24	91

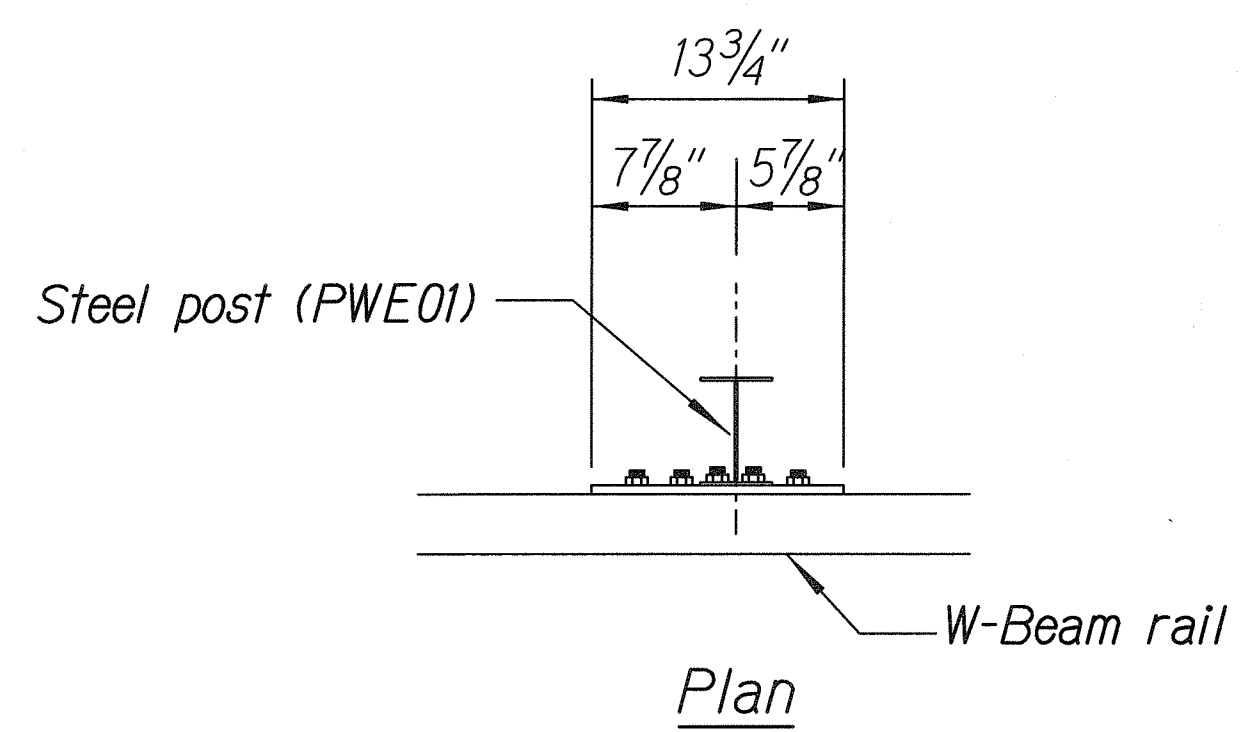
02-04



Steel Plate - 1/2"
(Hot-dip Zinc Coated Galvanized
Welded or Bolted to Post)

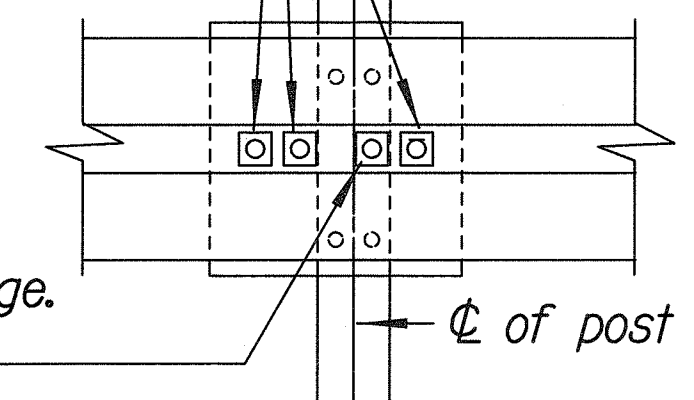


Square Washer
(3/16" Thick - Hot-dip
Zinc Coated Galvanized)

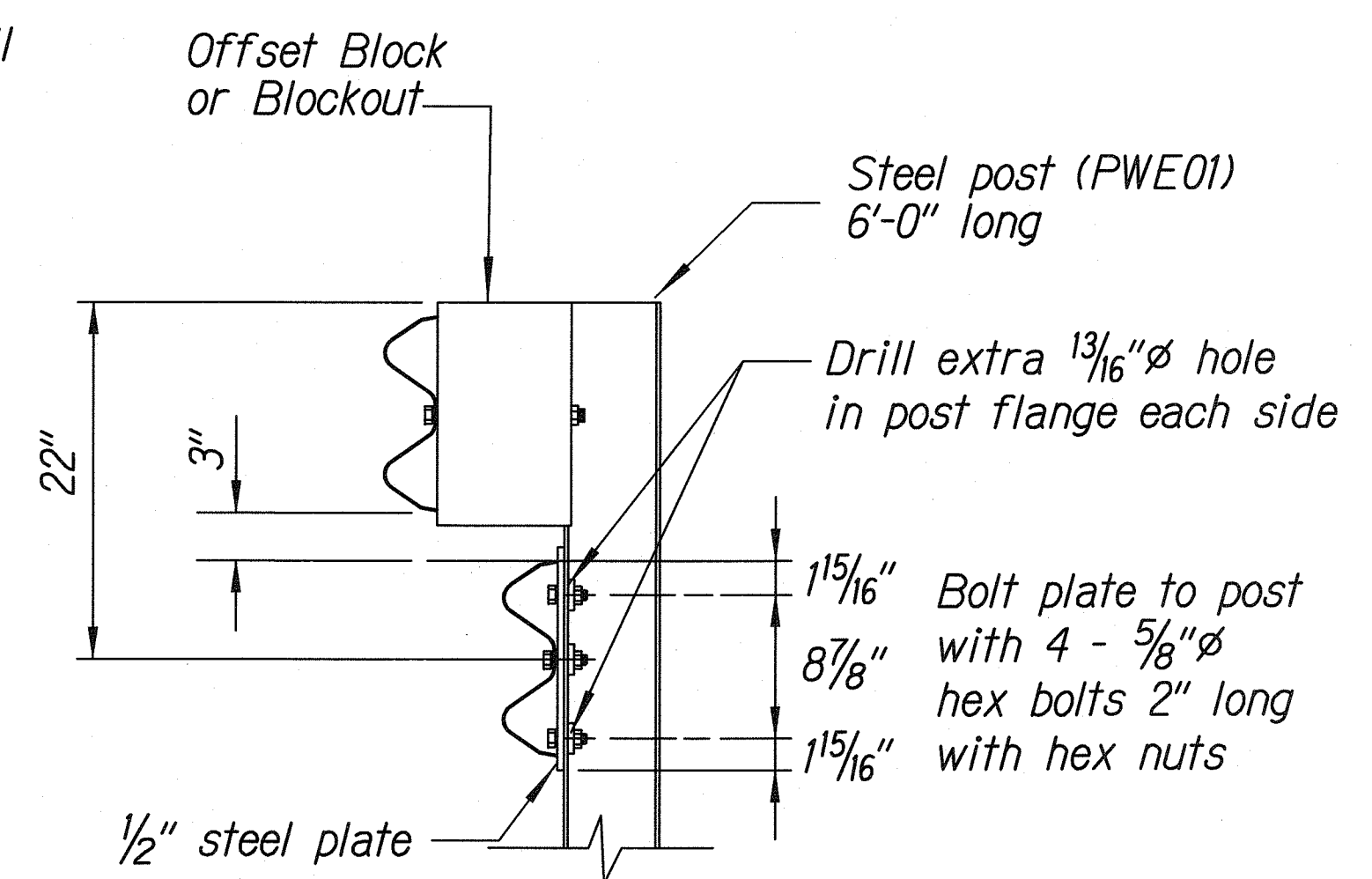


3 - 7/8" holes to be field drilled in rail and attached to steel plate with 7/8" hex bolts 1 15/16" long with square washer

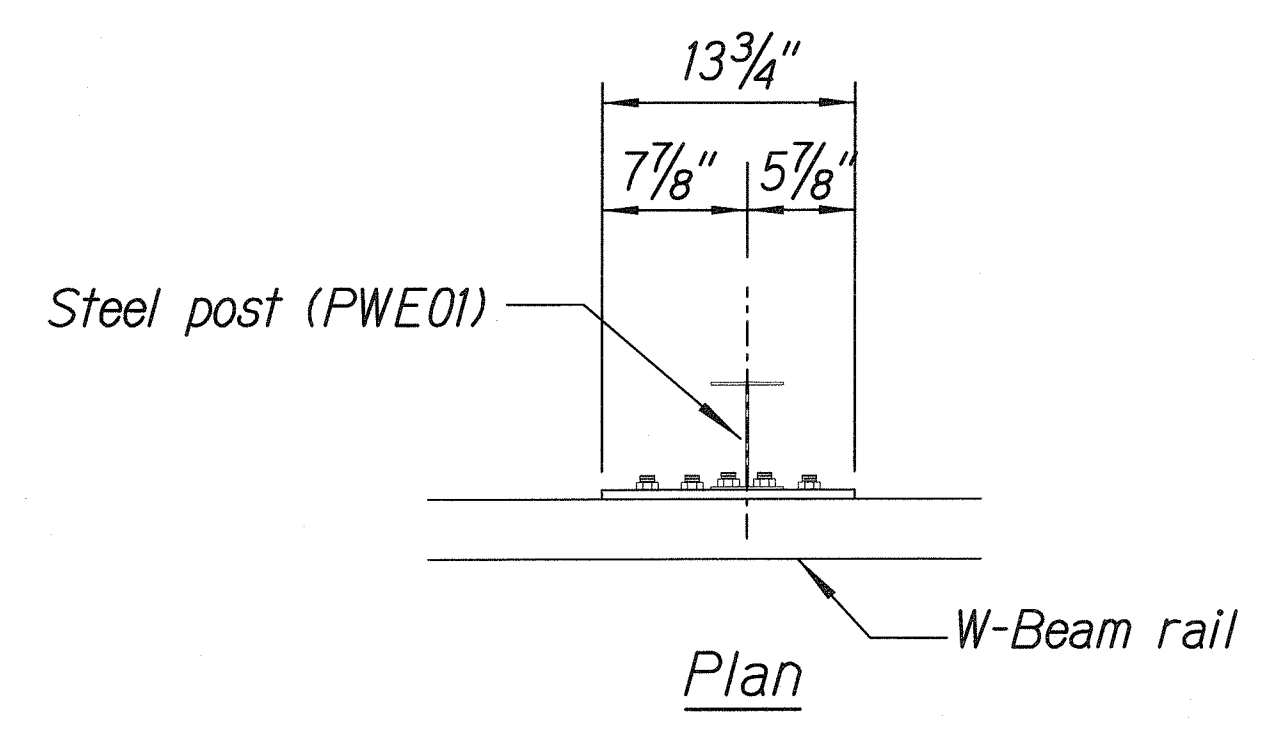
1" holes to be field drilled in rail and through post flange. Attach to steel plate with 7/8" hex bolts 2" long with square washer



Front View

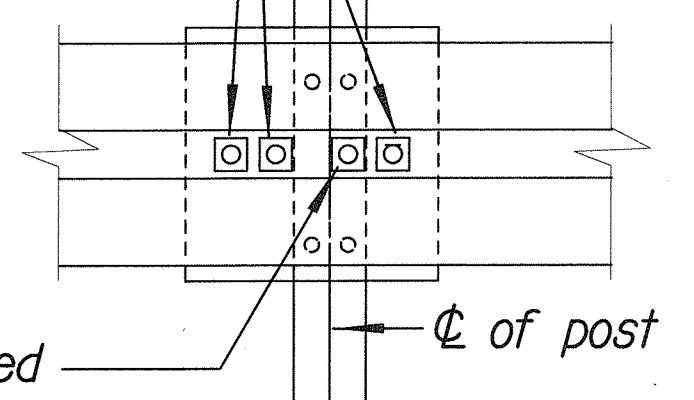


RUBRAIL ANCHOR DETAILS

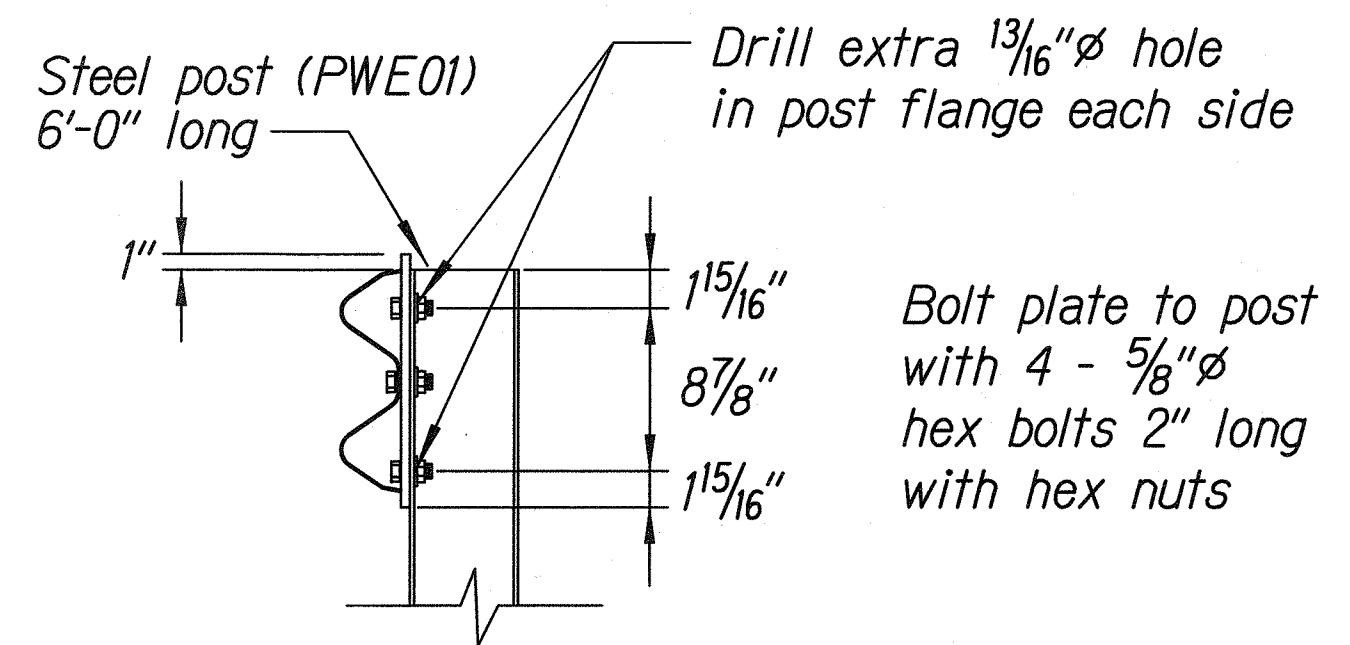


3 - 7/8" holes to be field drilled in rail and attached to steel plate with 7/8" hex bolts 1 15/16" long with square washer

1" holes to be field drilled in rail and through post flange. Attach to steel plate with 7/8" hex bolts 2" long with square washer



Front View



POST ANCHOR DETAILS

BACKSLOPE ANCHOR TERMINAL END ANCHORAGE DETAILS
(TYPE "A" FLARE)

Note:

All fasteners, posts, blocks and rail elements 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-AGCARTBA Joint Cooperative Committee.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

R. Urasaki

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPE "A" FLARE

KALANIANA'OLE HIGHWAY

EMERGENCY LANDSLIDE REPAIRS AT CASTLE JUNCTION

PROJECT NO. 61C-01-04# 02-04

Scale: NTS Date: Sept. 26, 2003

SHEET No. C-12 OF 12 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	CHECKED BY	
	APPROVED BY	

J:\CASTLE JUNCTION\STATE\GADT2.dgn

"AS-BUILT"