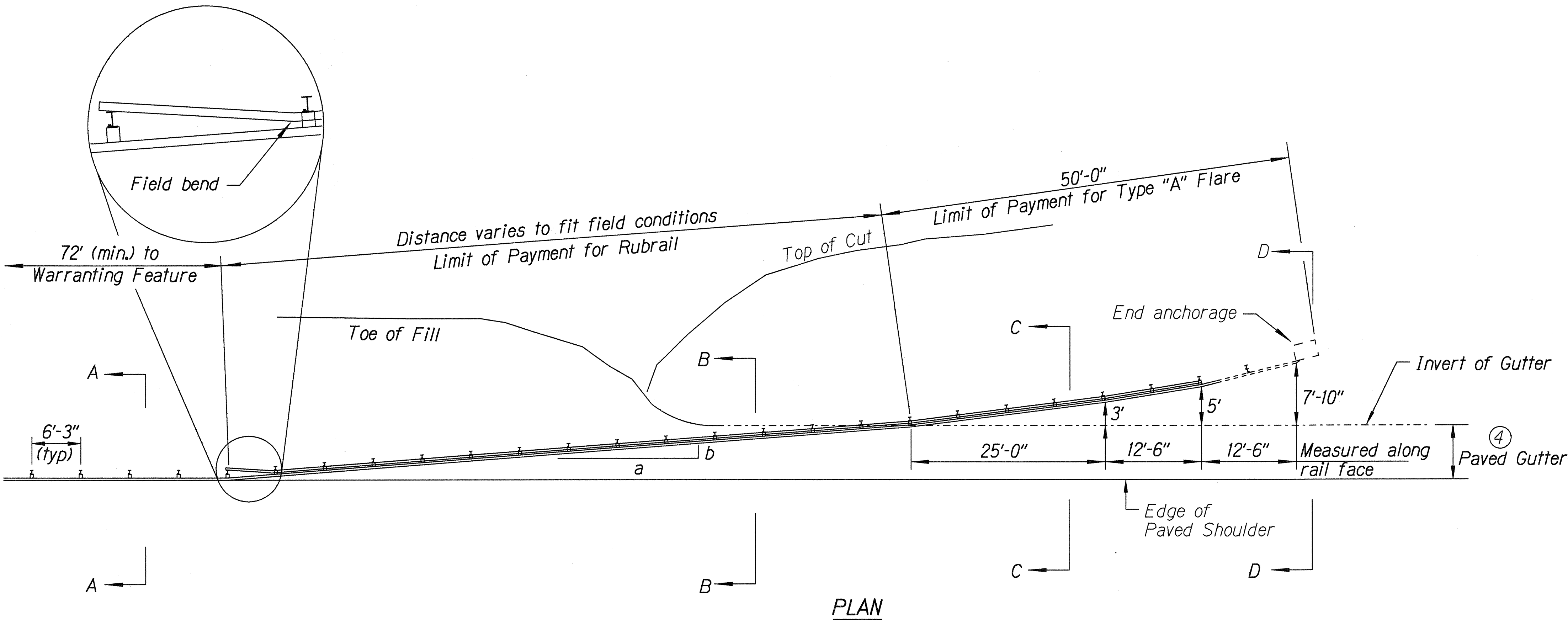


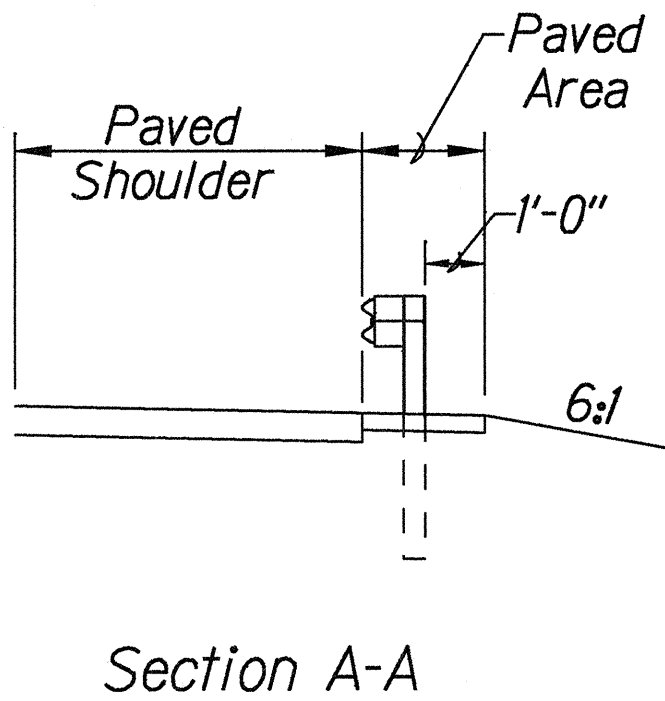
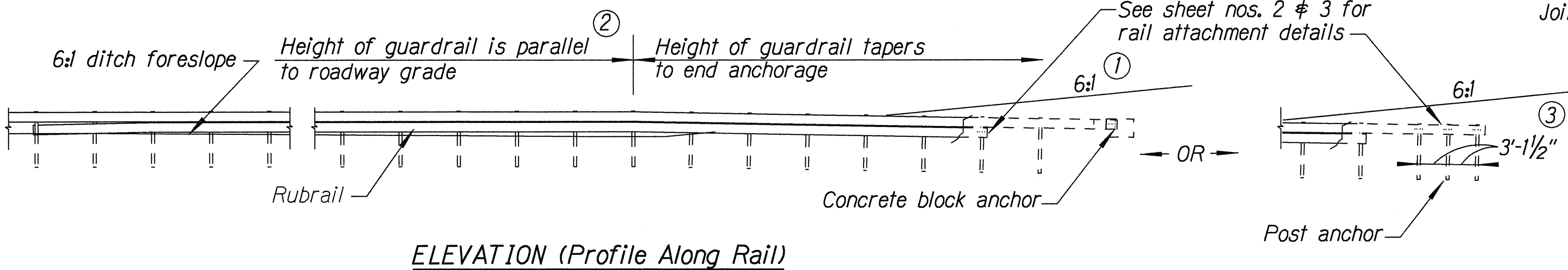
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	51B-01-00M	2000	12	23

General Notes

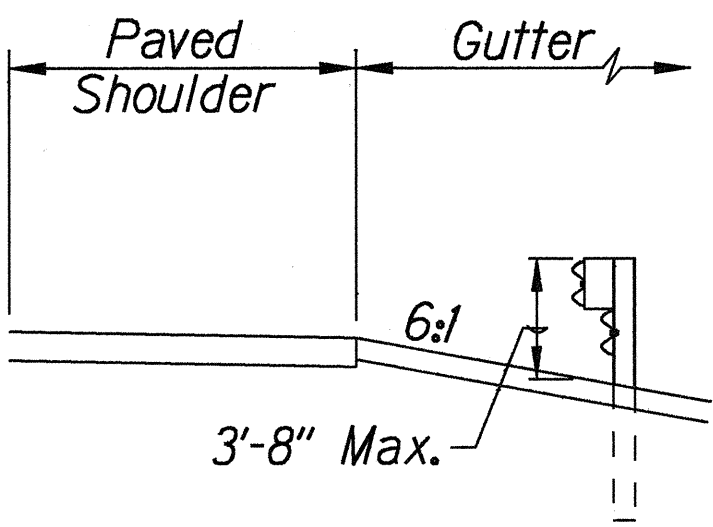
1. A 6:1 or flatter slope is desirable. However, a steeper or flatter existing slope may be used.
2. Height of guardrail may be tapered down in elevation to maintain 3'-8" maximum height.
3. All posts are 8'-0" in length from where the guardrail flares away from the shoulder back to the post anchor. Posts for the post anchor are 6'-0" long.
4. Variable Paved Gutter offsets may be used to fit field conditions.
5. The Guardrail Posts shall be located away from the gutter/swale invert.
6. 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.



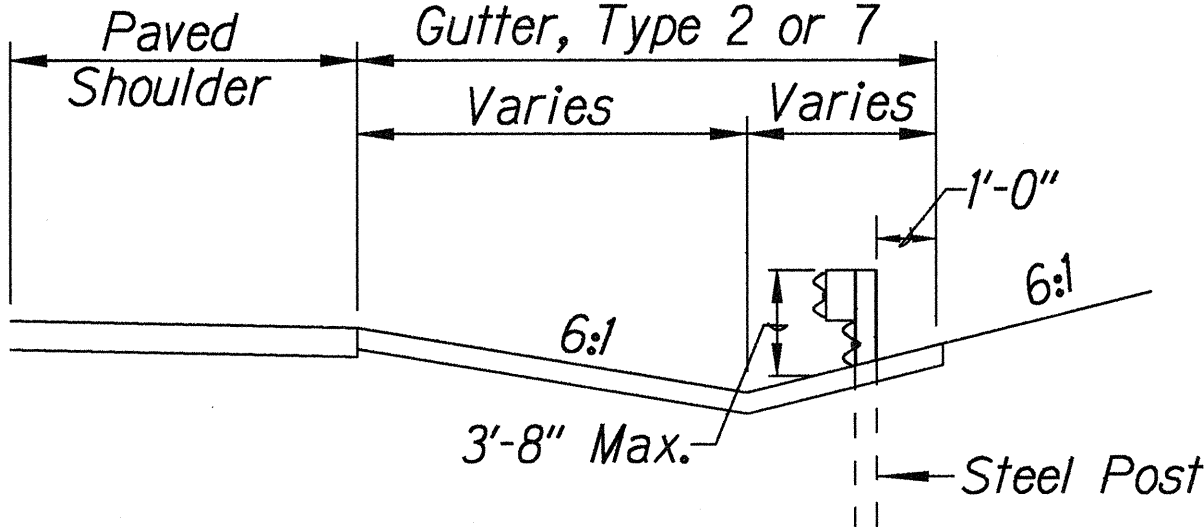
Design speed mph	a:b
68	15:1
62	13:1
56	12:1
50	11:1
43	10:1
37	9:1
31	7:1



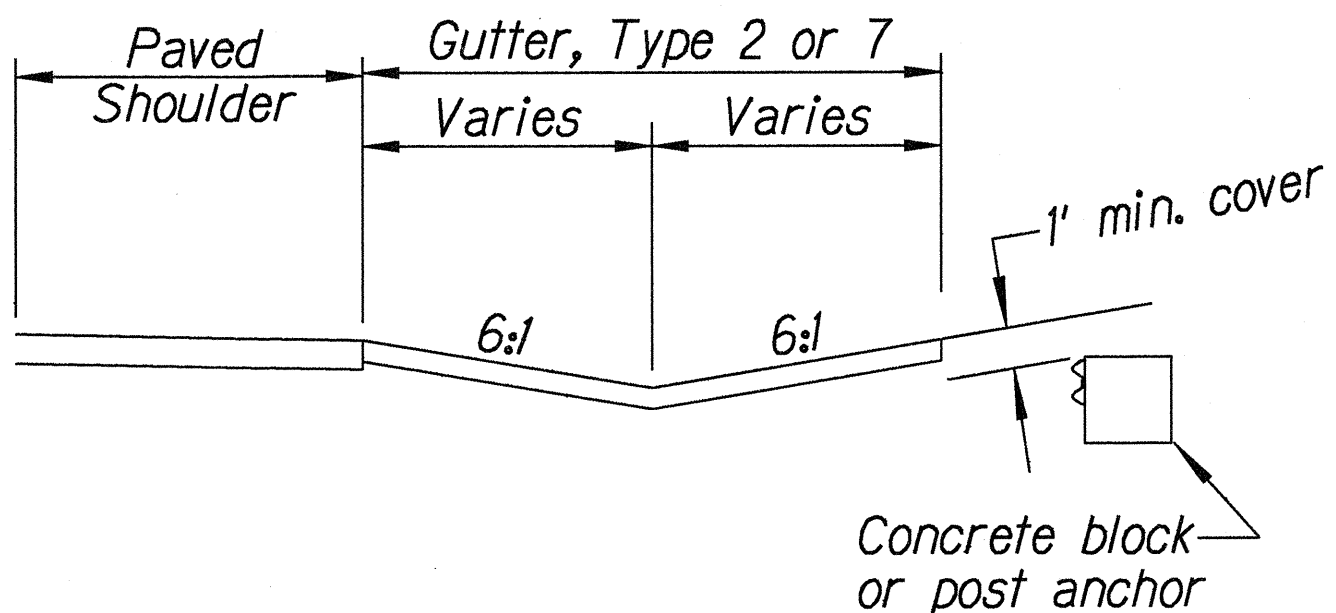
Section A-A



Section B-B
(With Rubrail)



Section C-C
(With Rubrail)



BACKSLOPE ANCHOR TERMINAL (WITH 6:1 PAVED GUTTER AND TYPE "A" FLARE)

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

TYPE "A" FLARE

KAPULE HIGHWAY,

MISCELLANEOUS IMPROVEMENTS

Vicinity of Ahukini Road to Kuhio Highway

Project No. 51B-01-00M

Scale: NTS

Date: December, 1999

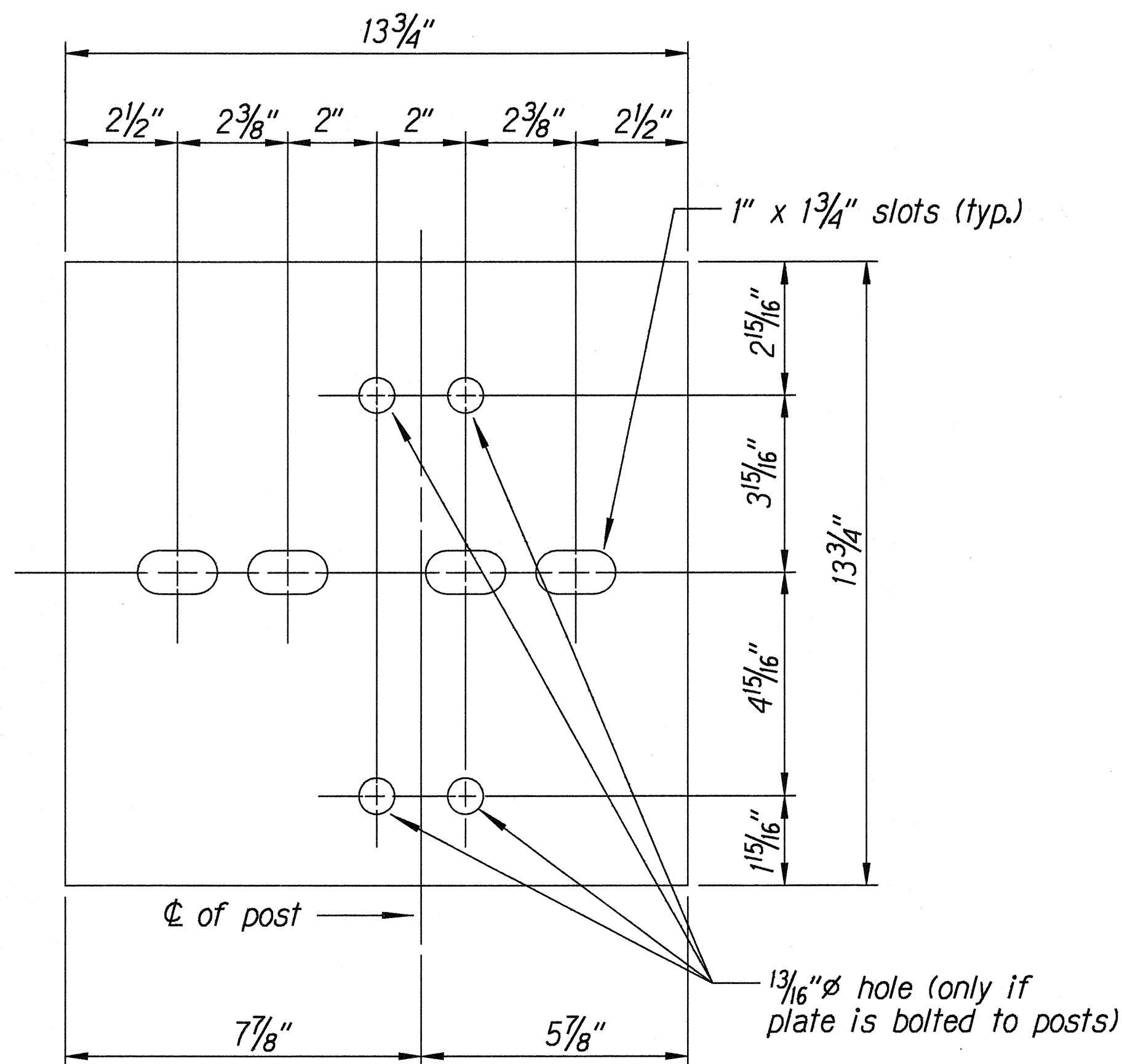
SHEET No. 1

OF 3

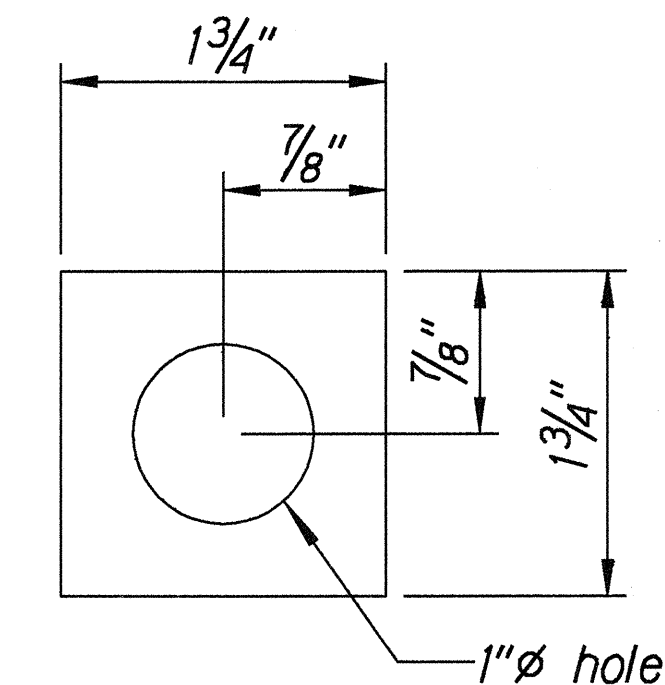
SHEETS

ORIGINAL PLAN	DATE: 12-15-99
SURVEY PLATTED BY: R. A. A. A.	
DRAWN BY: R. A. A. A.	
DESIGNED BY: R. A. A. A.	
CHECKED BY: R. A. A. A.	
NOTED BY: R. A. A. A.	
APPROVED BY: R. A. A. A.	

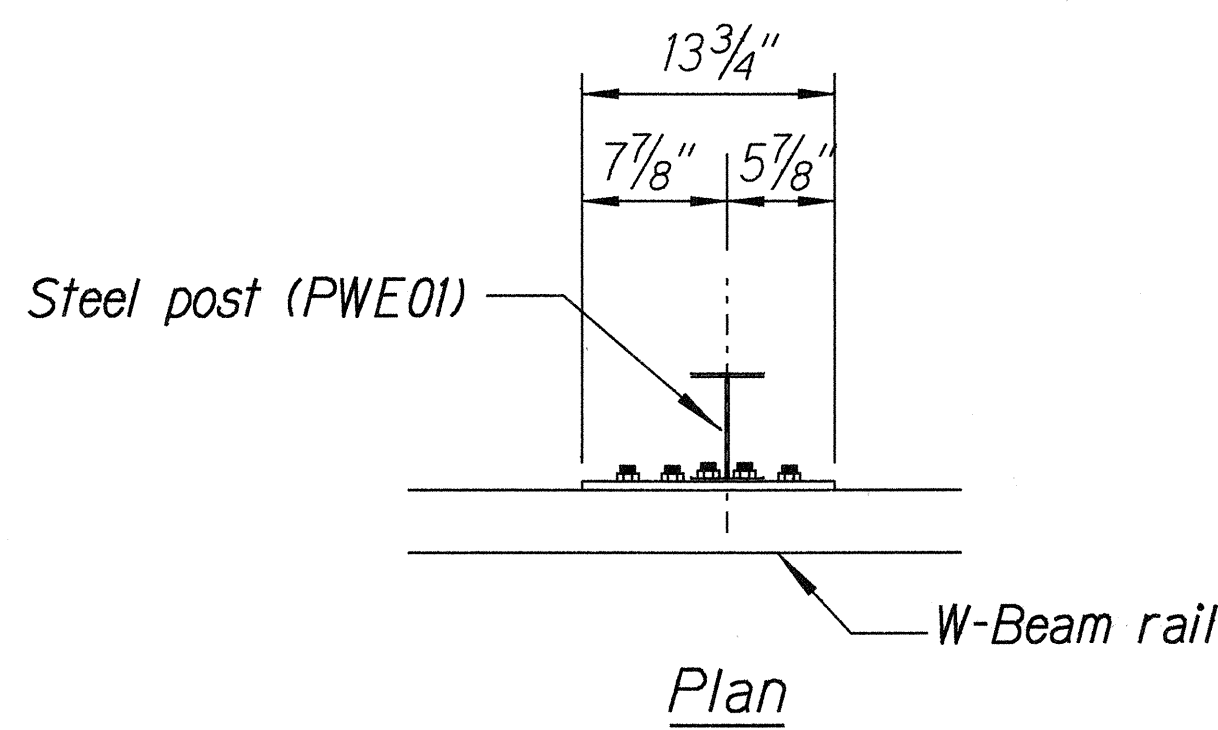
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	51B-01-00M	2000	13	23



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

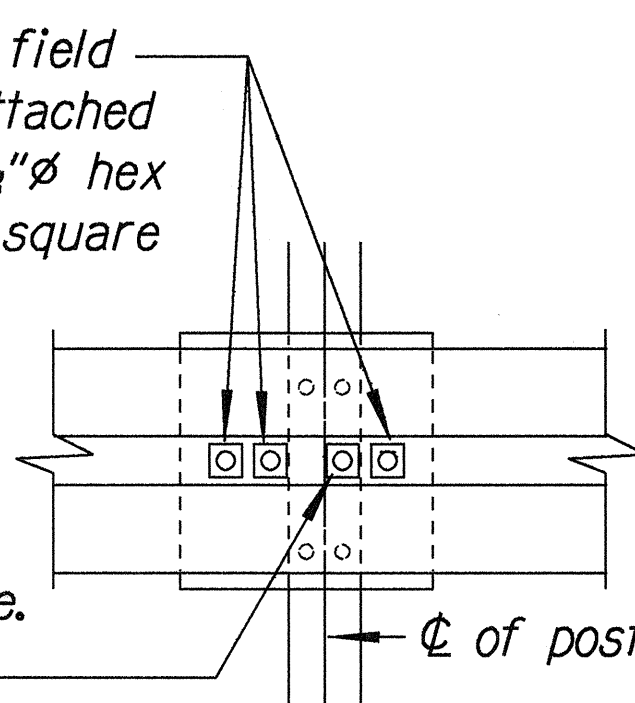


Square Washer
(3/16" Thick - Hot-dip
Zinc Coated Galvanized)

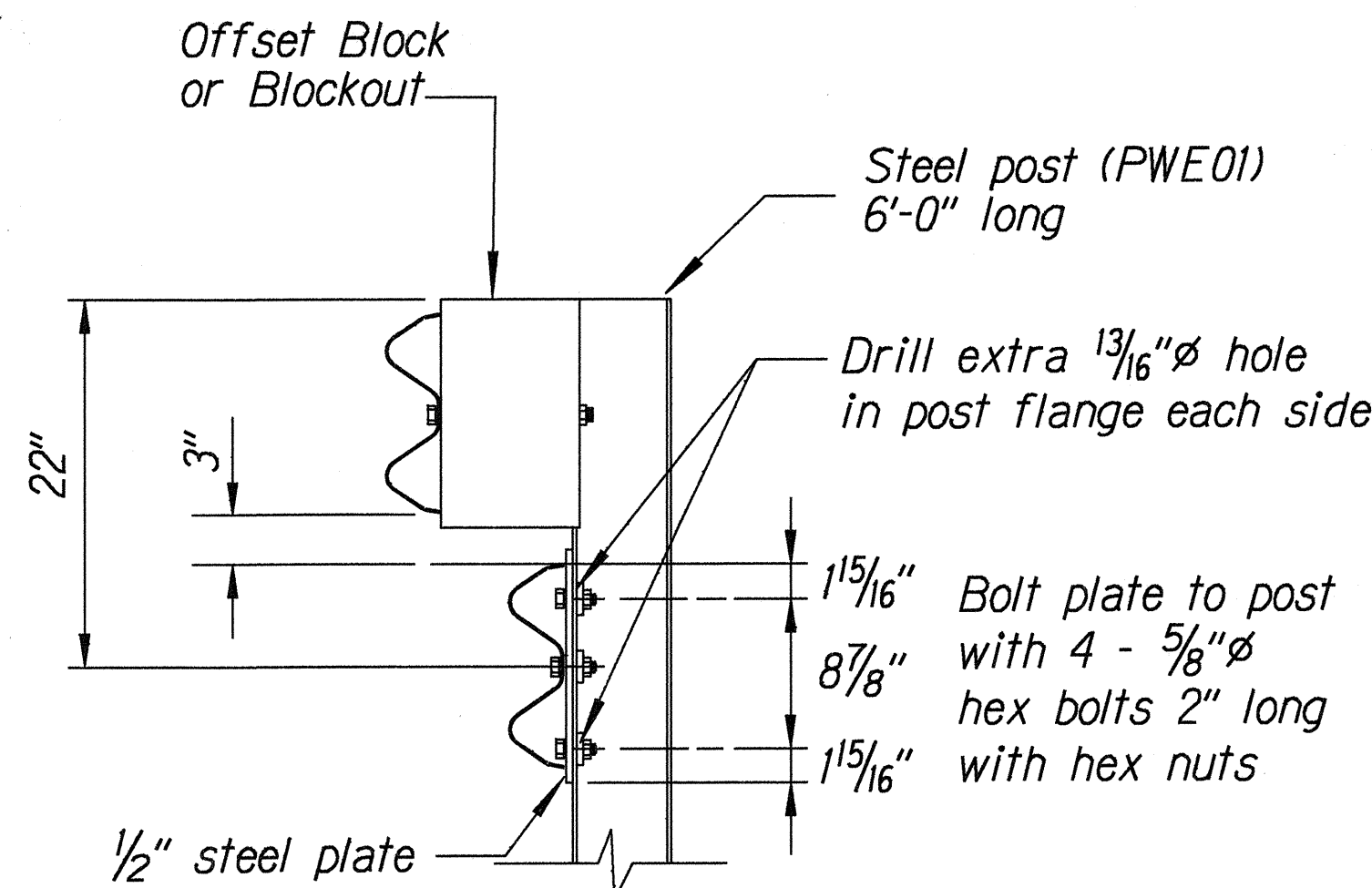


3 - 7/8" ϕ holes to be field drilled in rail and attached to steel plate with 7/8" ϕ hex bolts 1 5/16" long with square washer

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

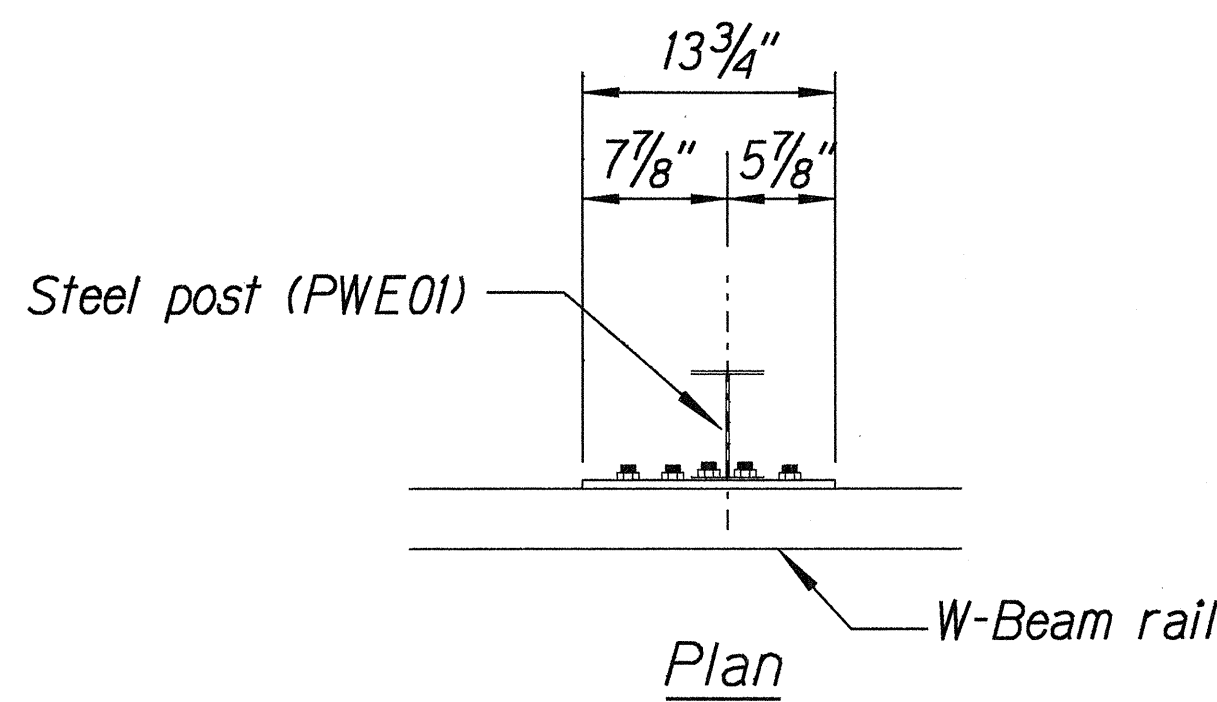


Front View



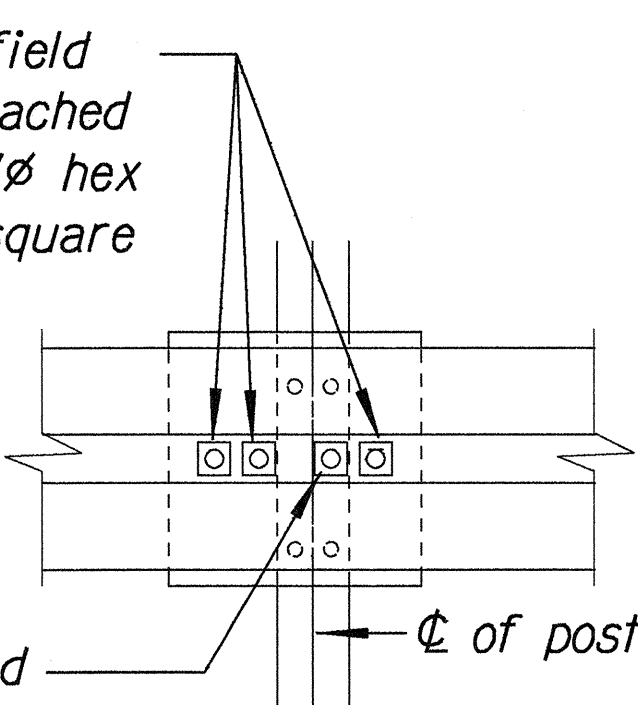
Elevation

RUBRAIL ANCHOR DETAILS

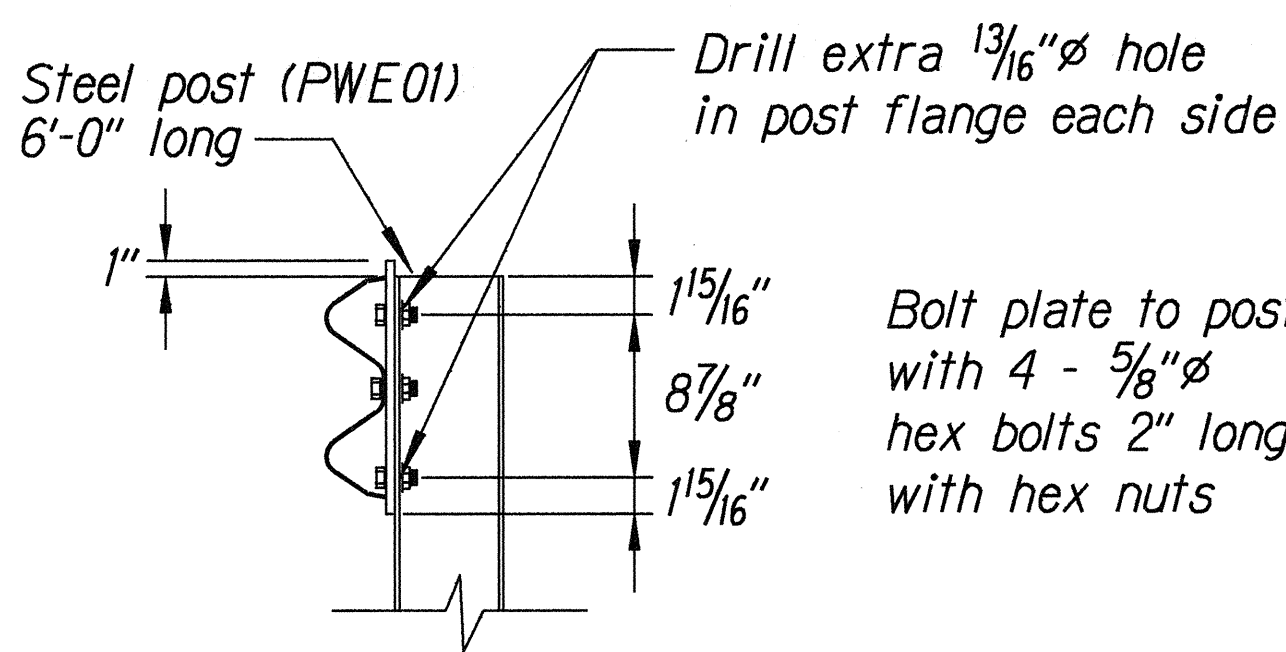


3 - 7/8" ϕ holes to be field drilled in rail and attached to steel plate with 7/8" ϕ hex bolts 1 5/16" long with square washer

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



Front View



Elevation

POST ANCHOR DETAILS

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

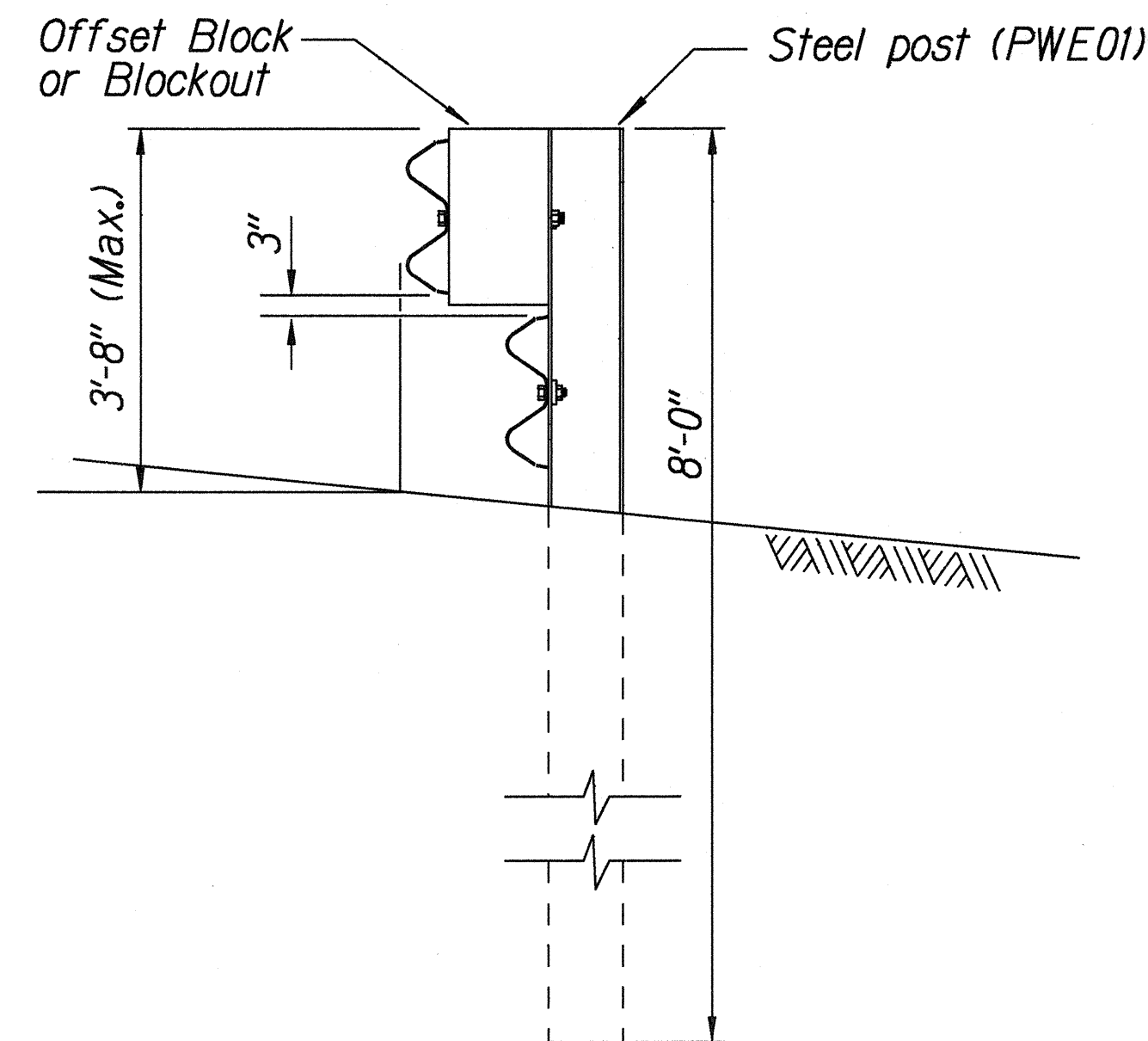
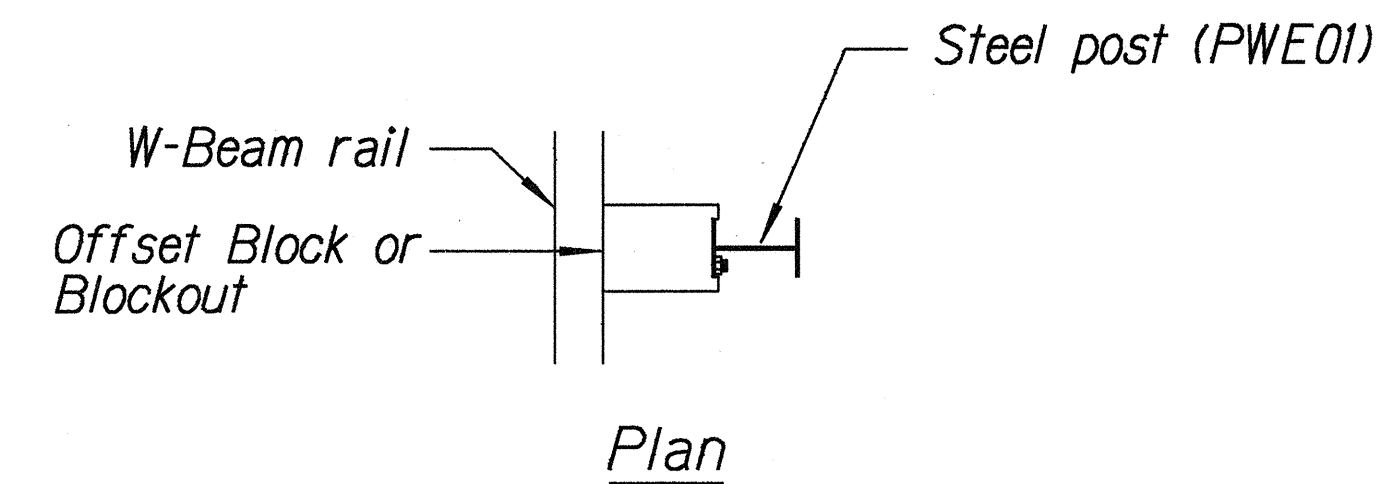
Note:

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.

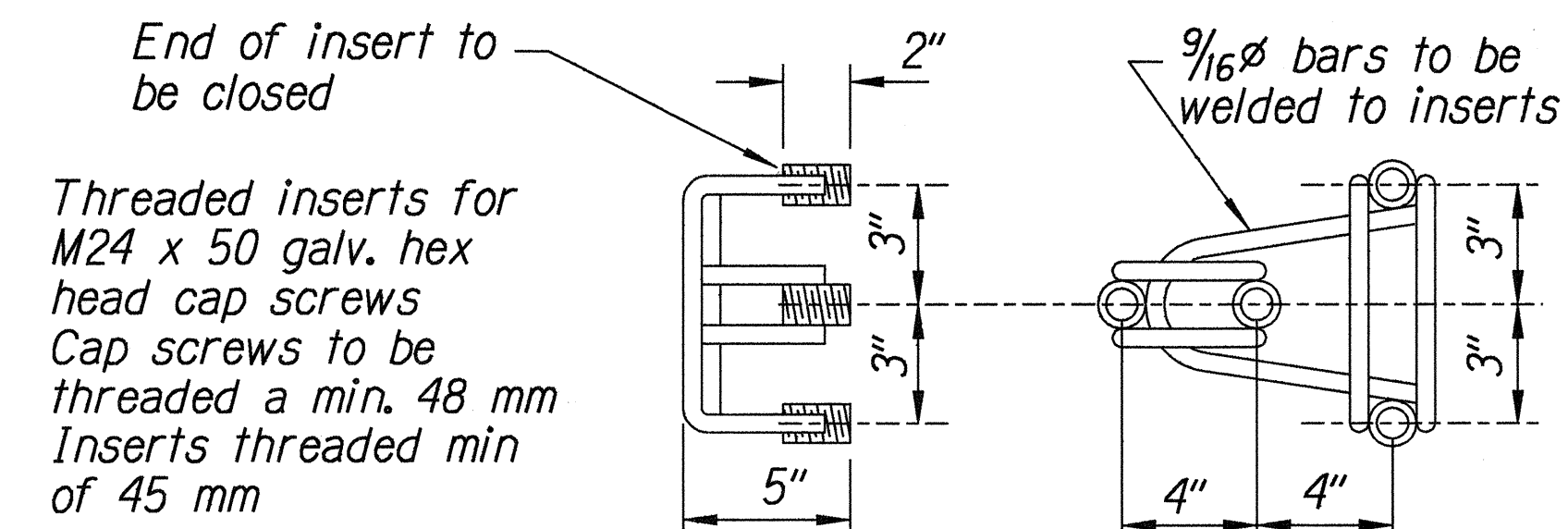
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPE "A" FLARE
KAPULE HIGHWAY,
MISCELLANEOUS IMPROVEMENTS
Vicinity of Ahukini Road to Kuhio Highway
Project No. 51B-01-00M
Scale: NTS Date: December, 1999
SHEET No. 2 OF 3 SHEETS

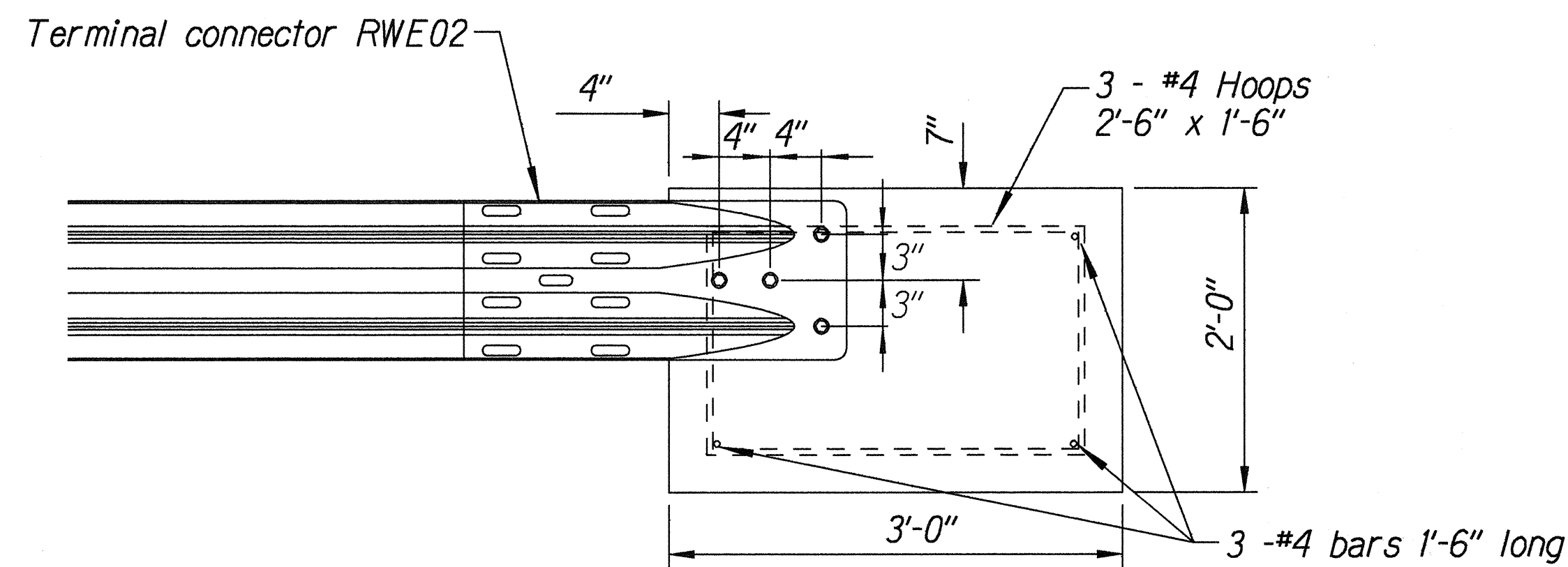
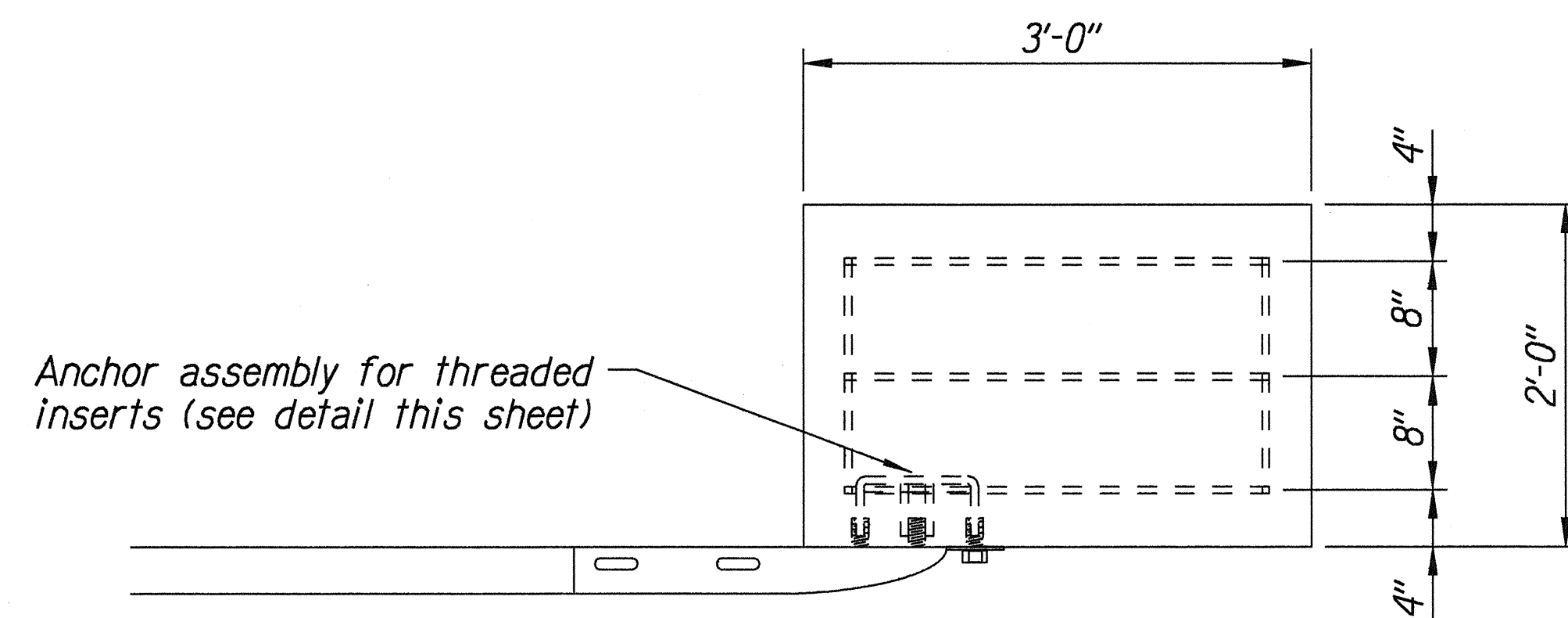
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	51B-01-00M	2000	14	23



STEEL POST GUARDRAIL
WITH RUBRAIL



ANCHOR ASSEMBLY
CONCRETE BLOCK ANCHOR



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

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.

SURVEY PLOTTED BY	DATE
DRAWN BY	12-15-92
TRACED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
INSTRUMENT	
SCALE	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPE "A" FLARE

KAPULE HIGHWAY.
MISCELLANEOUS IMPROVEMENTS
Vicinity of Ahukini Road to Kuhio Highway
Project No. 51B-01-00M

Scale: NTS Date: December, 1999

SHEET No. 3 OF 3 SHEETS