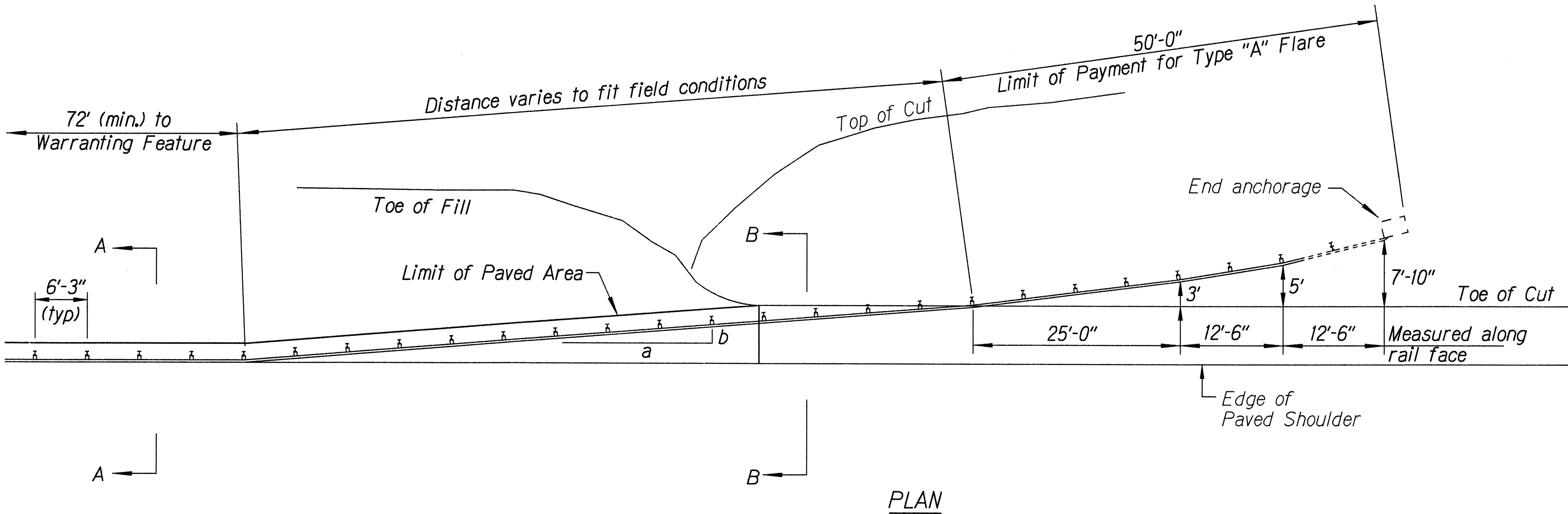


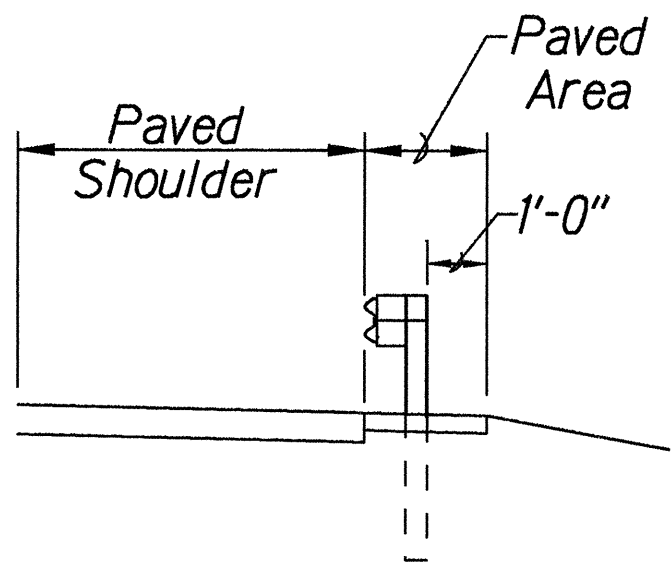
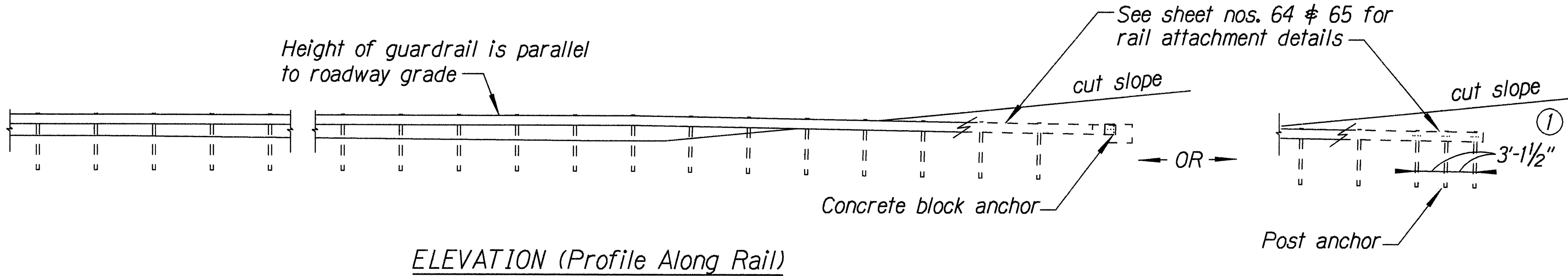
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0190(13)	1999	63	75

General Notes

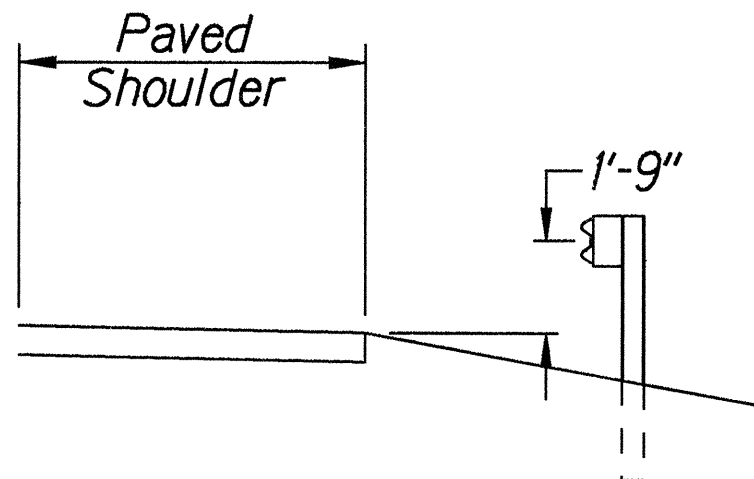
1. All posts from where the guardrail flares away from the shoulder back to the post anchor are 8'-0" in length. Posts for the post anchor are 6'-0" long.
2. All fasteners, posts, blocks and rail elements shall conform to the latest edition and amendments of "A Guide to Standardized Highway Barrier Rail Hardware," a report prepared and approved by the AASHTO-AGCARTBA Joint Cooperative Committee.
3. Concrete block or post anchor shall be buried with a minimum one foot of cover.



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

BACKSLOPE ANCHOR TERMINAL

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	5-4-99/32
	TRACED BY	
	DESIGNED BY	
	CHECKED BY	
	NOTED BY	
	DESIGNED BY	
	CHECKED BY	
	NOTED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

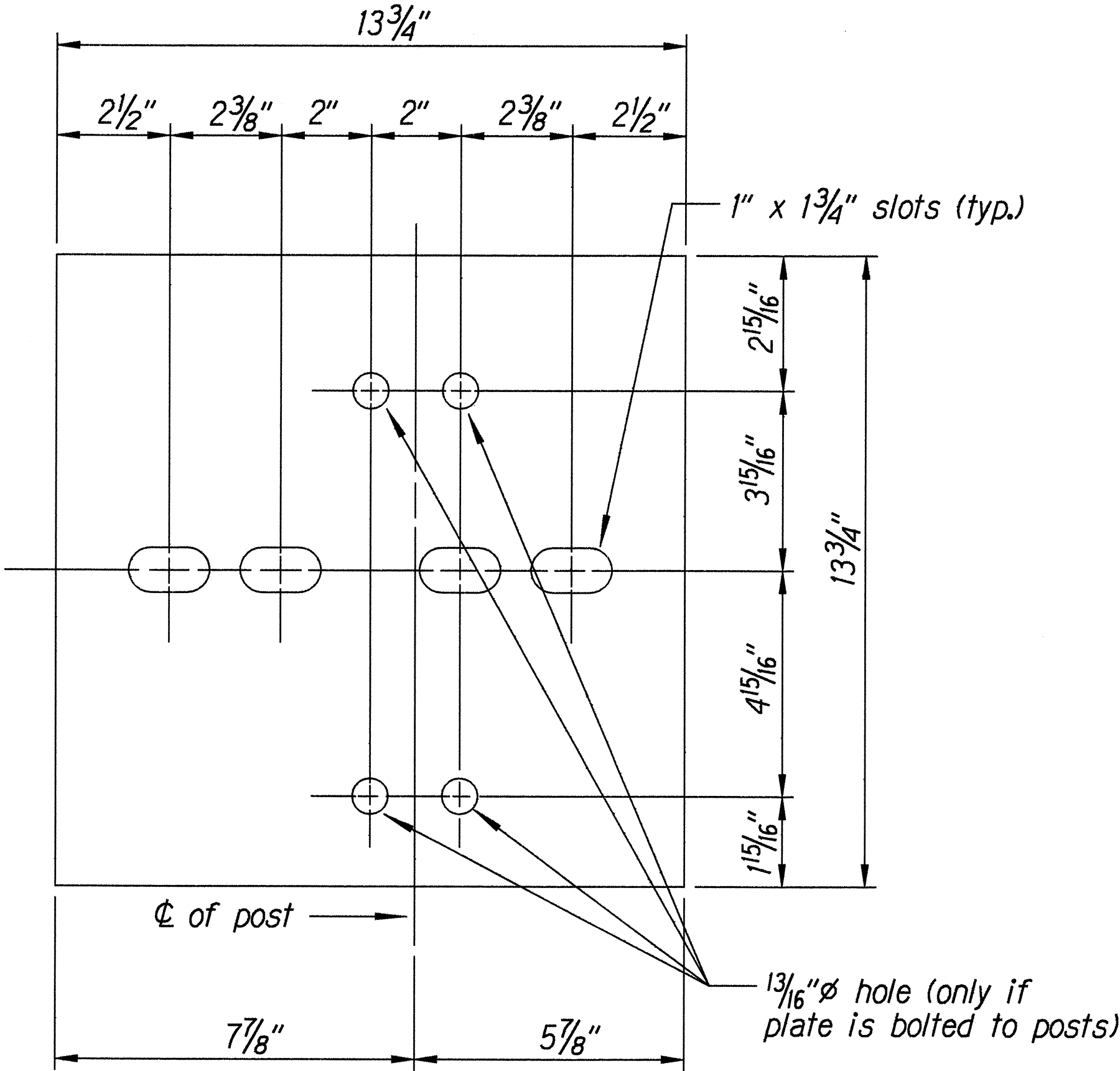
TYPE "A" FLARE

HAWAII BELT ROAD
Replacement of Auwahiakakua
and Popoo Bridges
Federal Aid Proj. No. BR-0190(13)

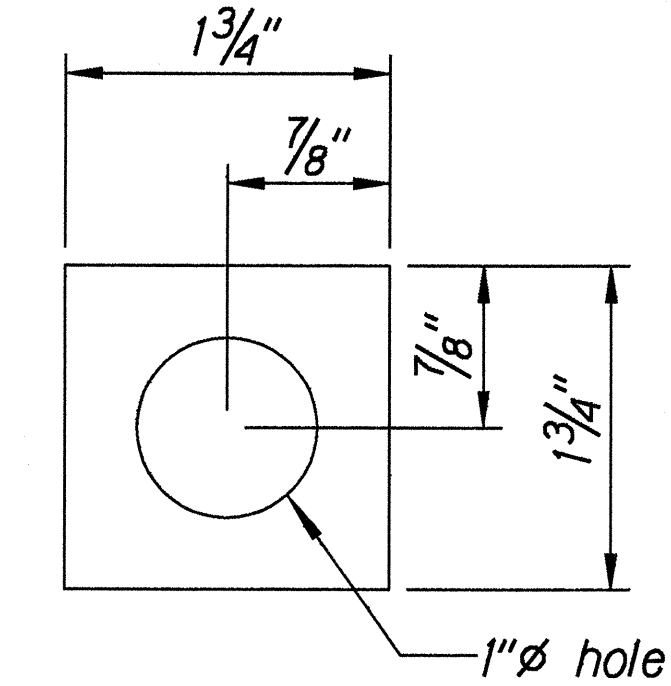
Scale: NTS Date: March 1999

SHEET No. 1 OF 3 SHEETS

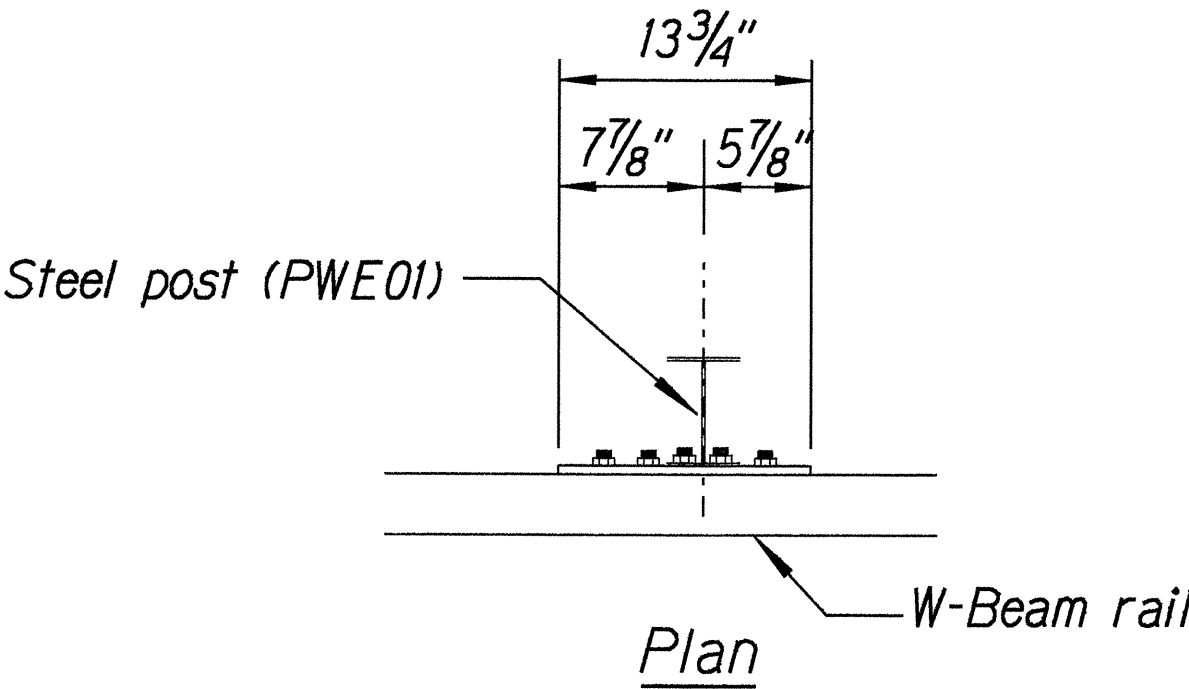
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0190(13)	1999	64	75



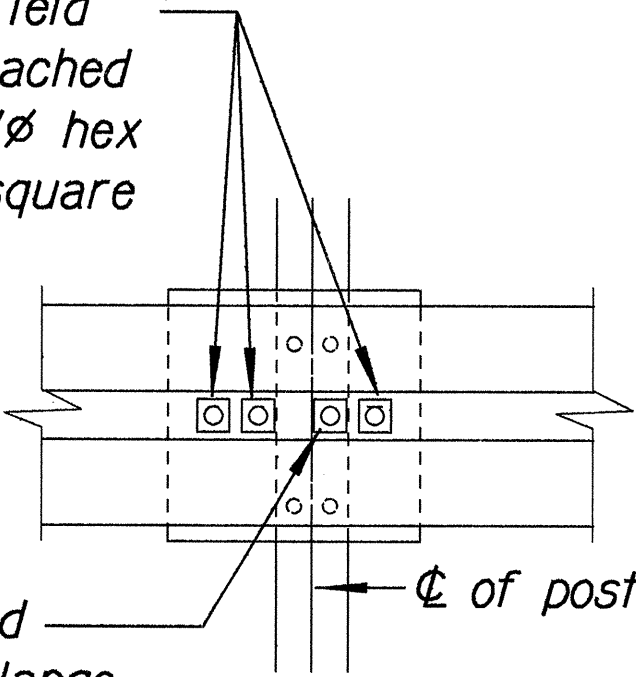
Steel Plate - 1/2"
(Hot-dip Zinc Coated Galvanized
Welded or Bolted to Post)



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

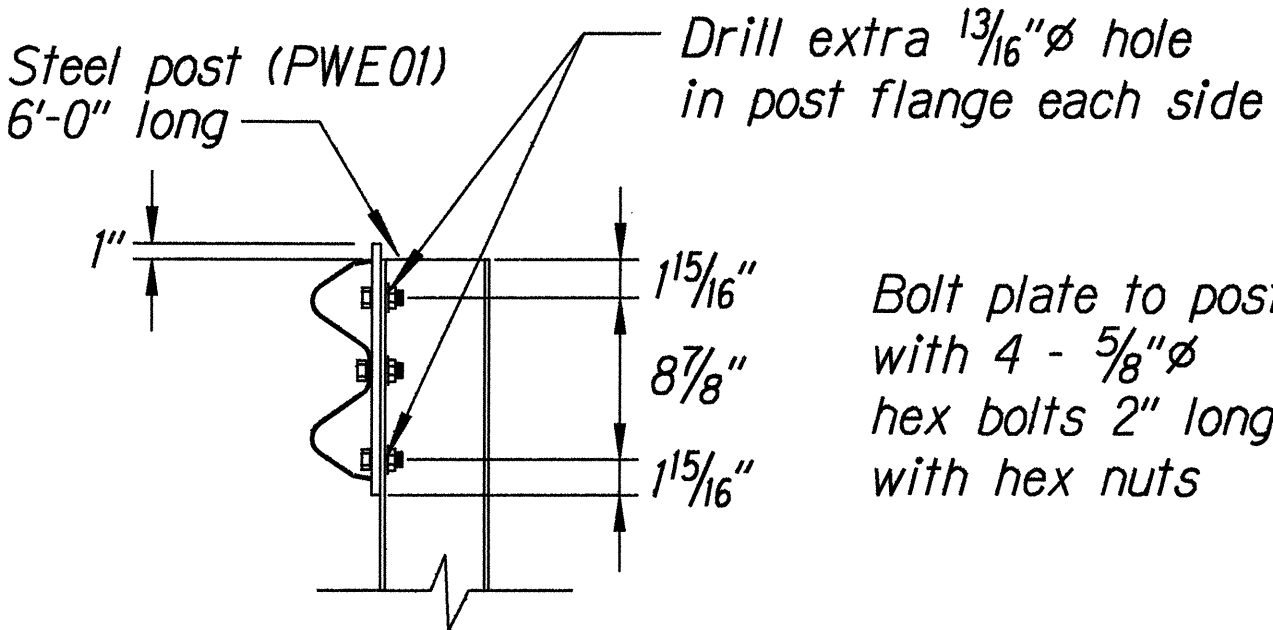


3 - 7/8" ϕ holes to be field drilled in rail and attached to steel plate with 7/8" ϕ hex bolts 1 5/16" long with square washer



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



Bolt plate to post with 4 - 5/8" ϕ hex bolts 2" long with hex nuts

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

HAWAII BELT ROAD

Replacement of Auwahiakakua and Popoo Bridges

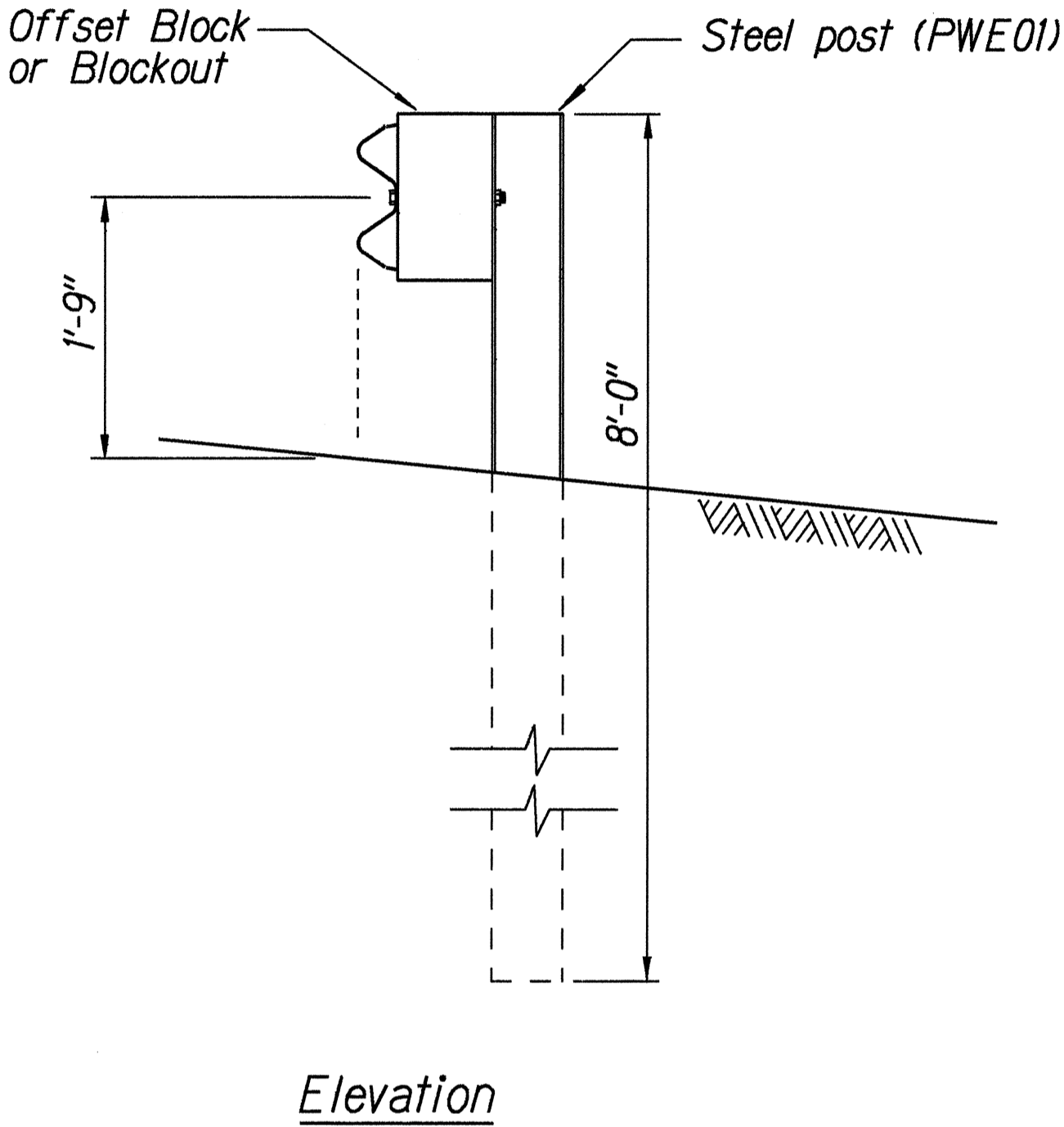
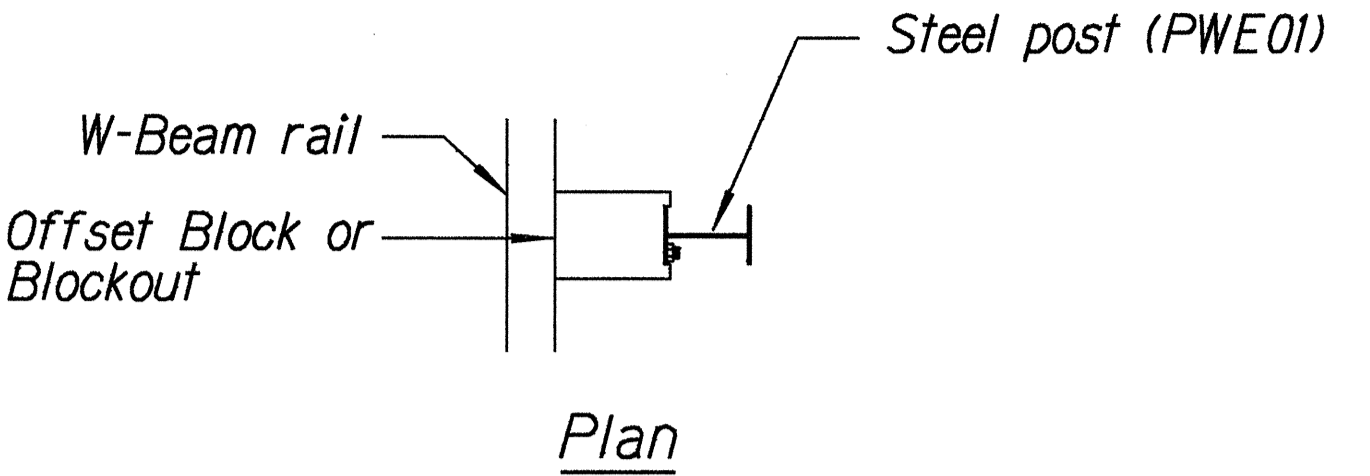
Federal Aid Proj. No. BR-0190(13)

Scale: NTS
Date: March 1999

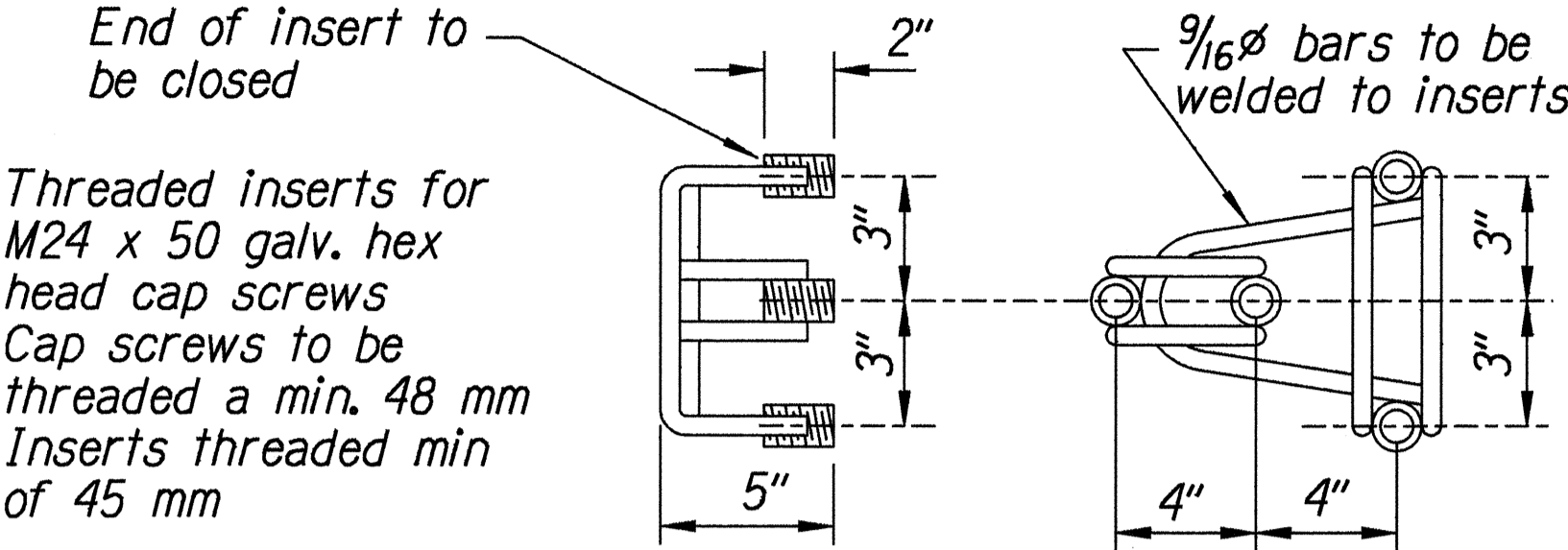
SHEET No. 2 OF 3 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
PLAN	5.4.99	
NOTE BOOK	DRAWN BY	
dd5,carly	CHECKED BY	
N. Gadele		

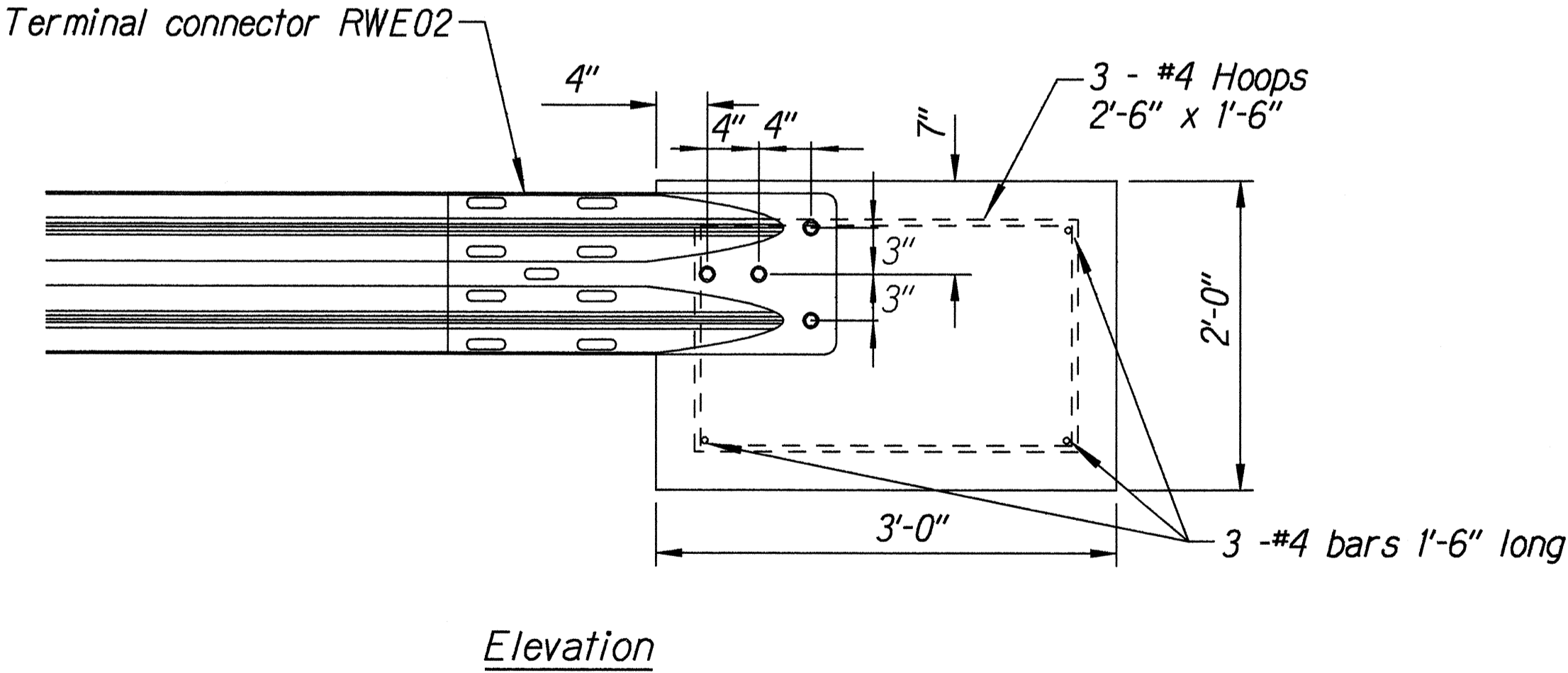
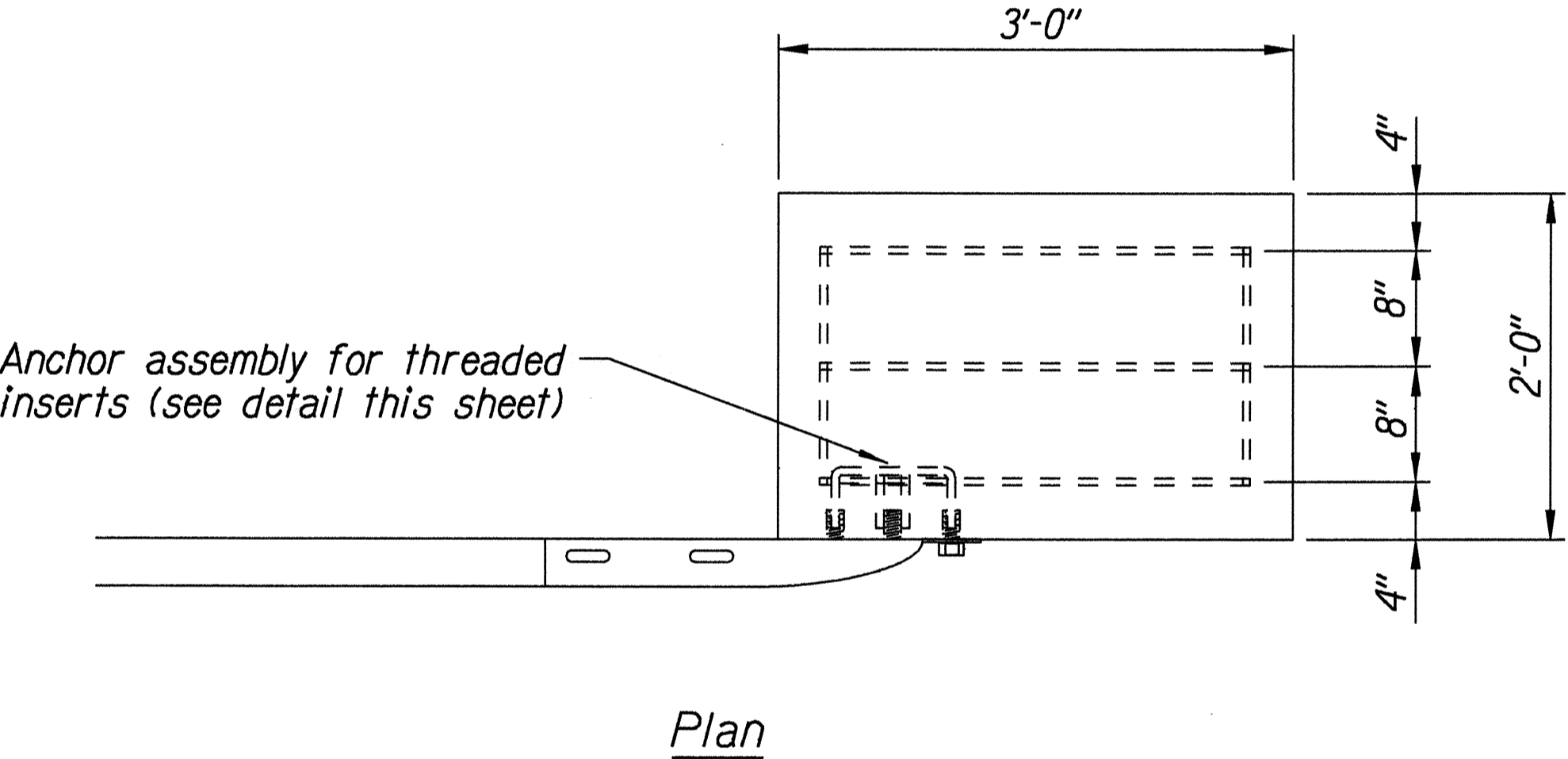
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0190(13)	1999	65	75



STEEL POST GUARDRAIL



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.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTED BY	DRAWN BY	5-2-99
CHECKED BY	DESIGNED BY	
	QUANTITY BY	
	CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPE "A" FLARE

HAWAII BELT ROAD
Replacement of Auwahiakua
and Popoo Bridges
Federal Aid Proj. No. BR-0190(13)

Scale: NTS Date: March 1999

SHEET No. 3 OF 3 SHEETS