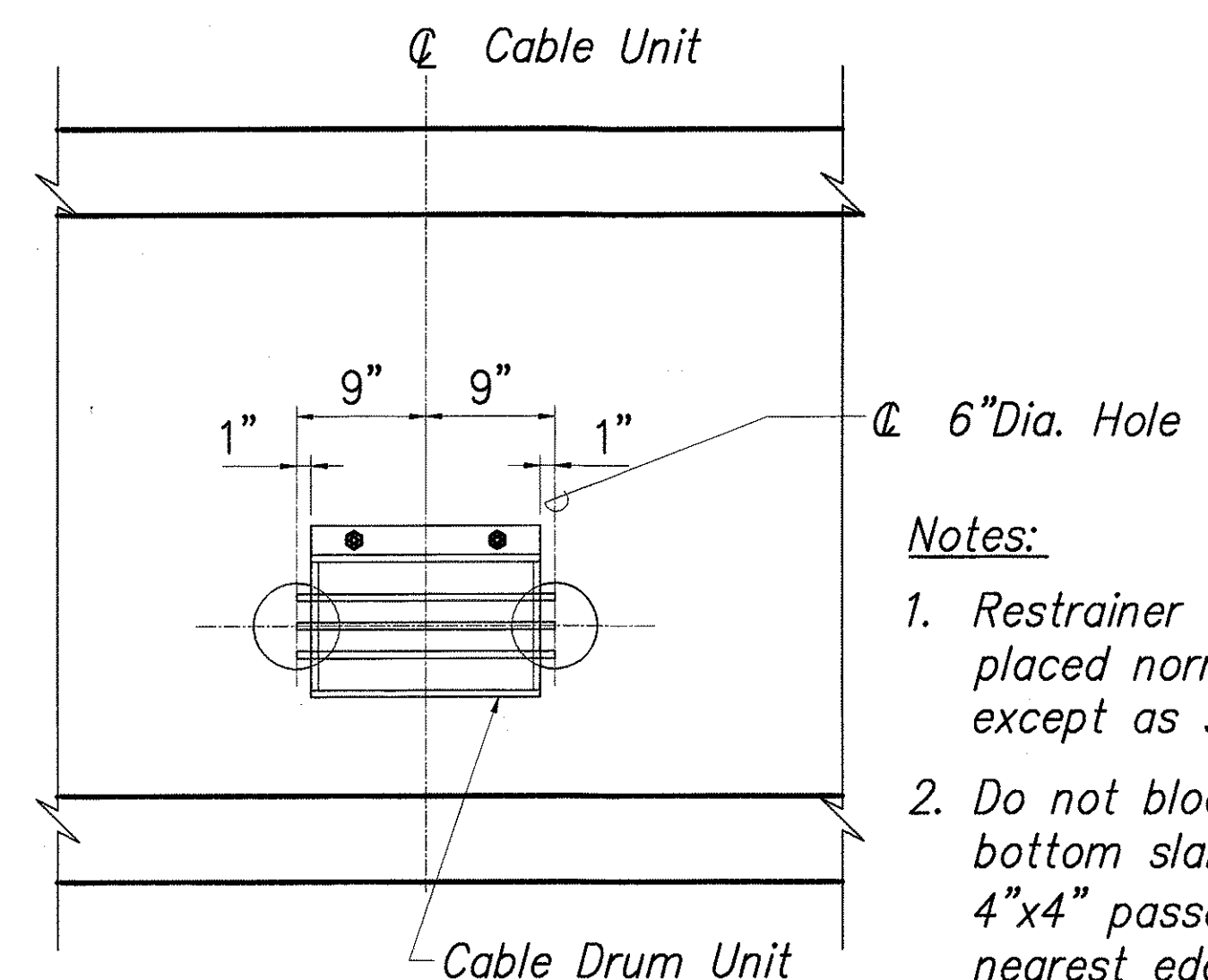
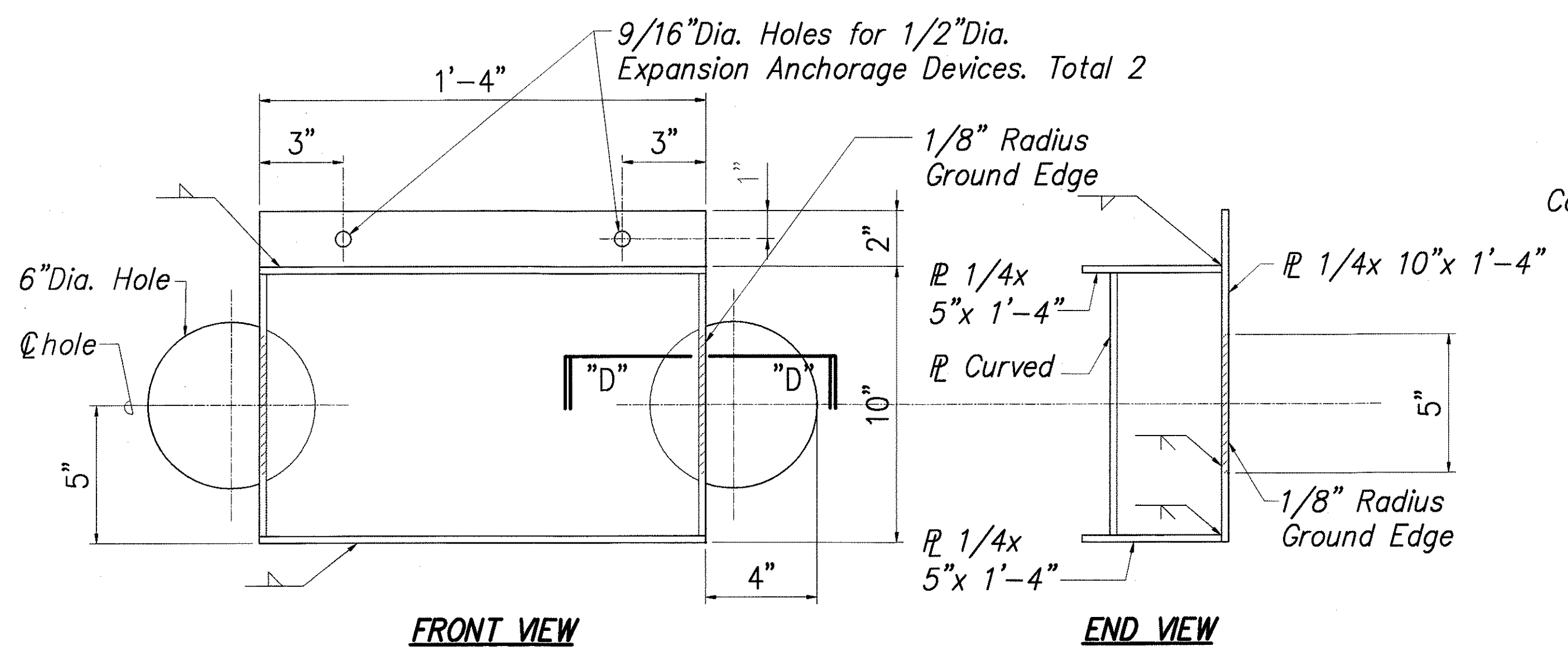
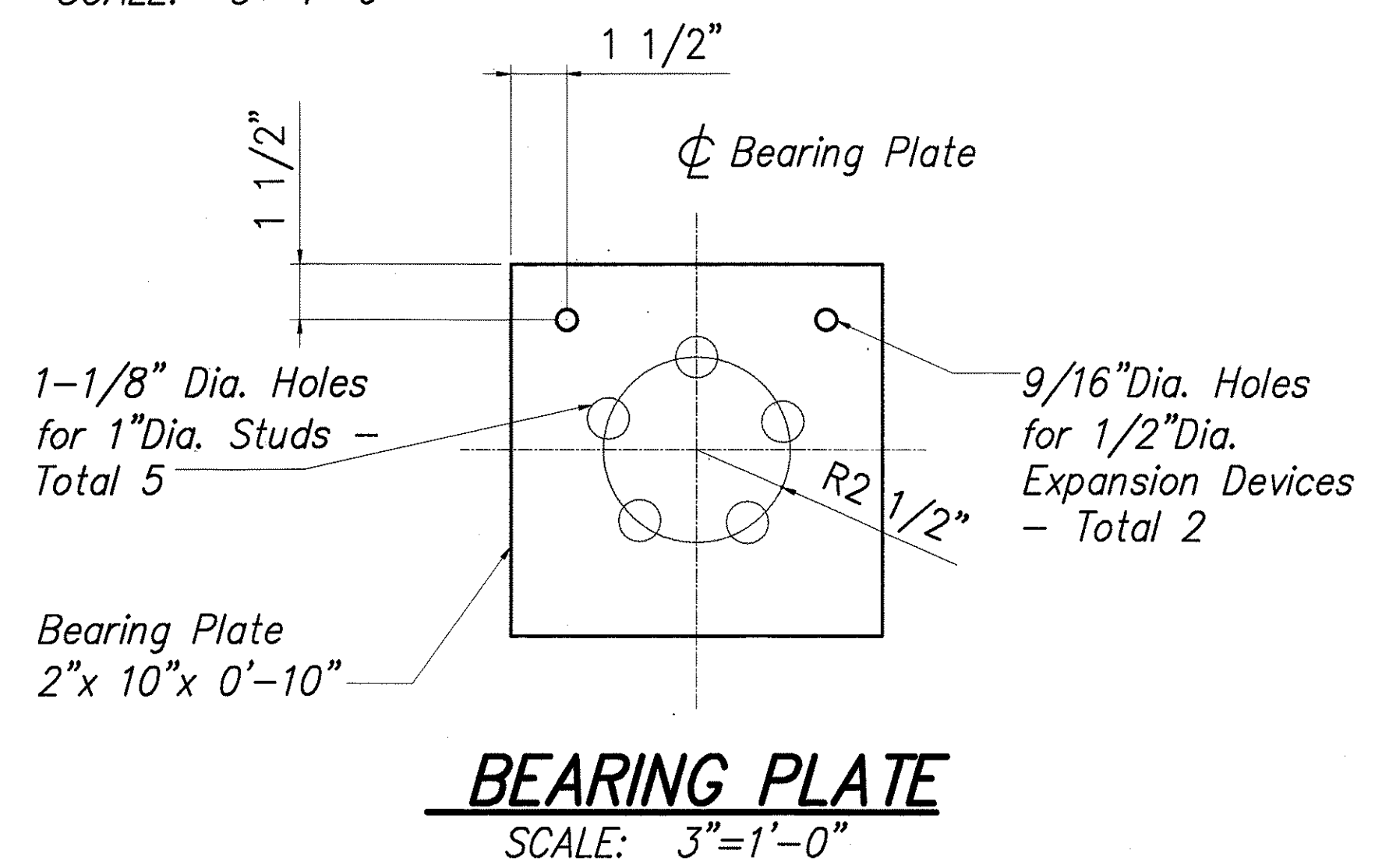
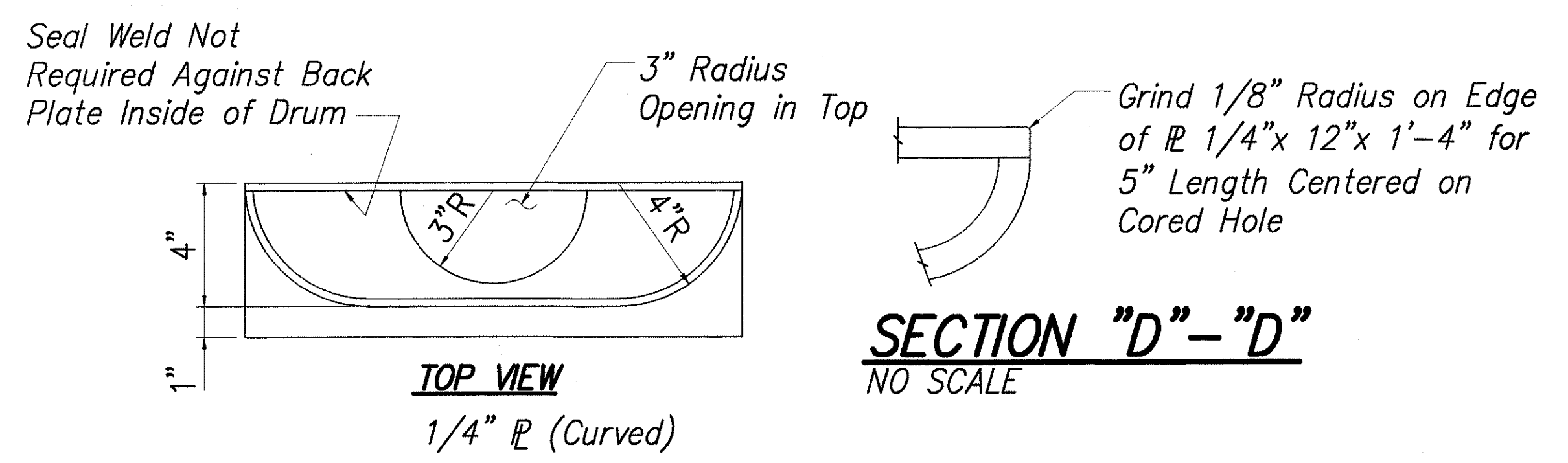
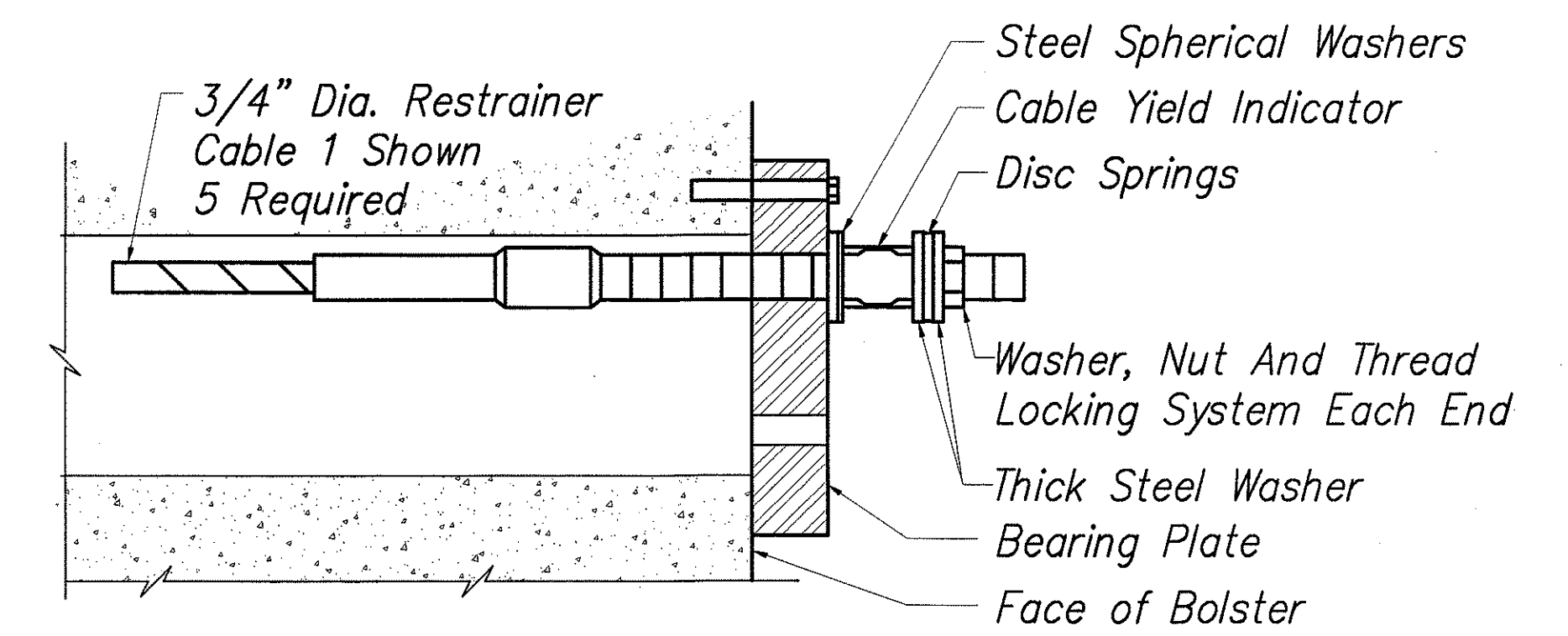
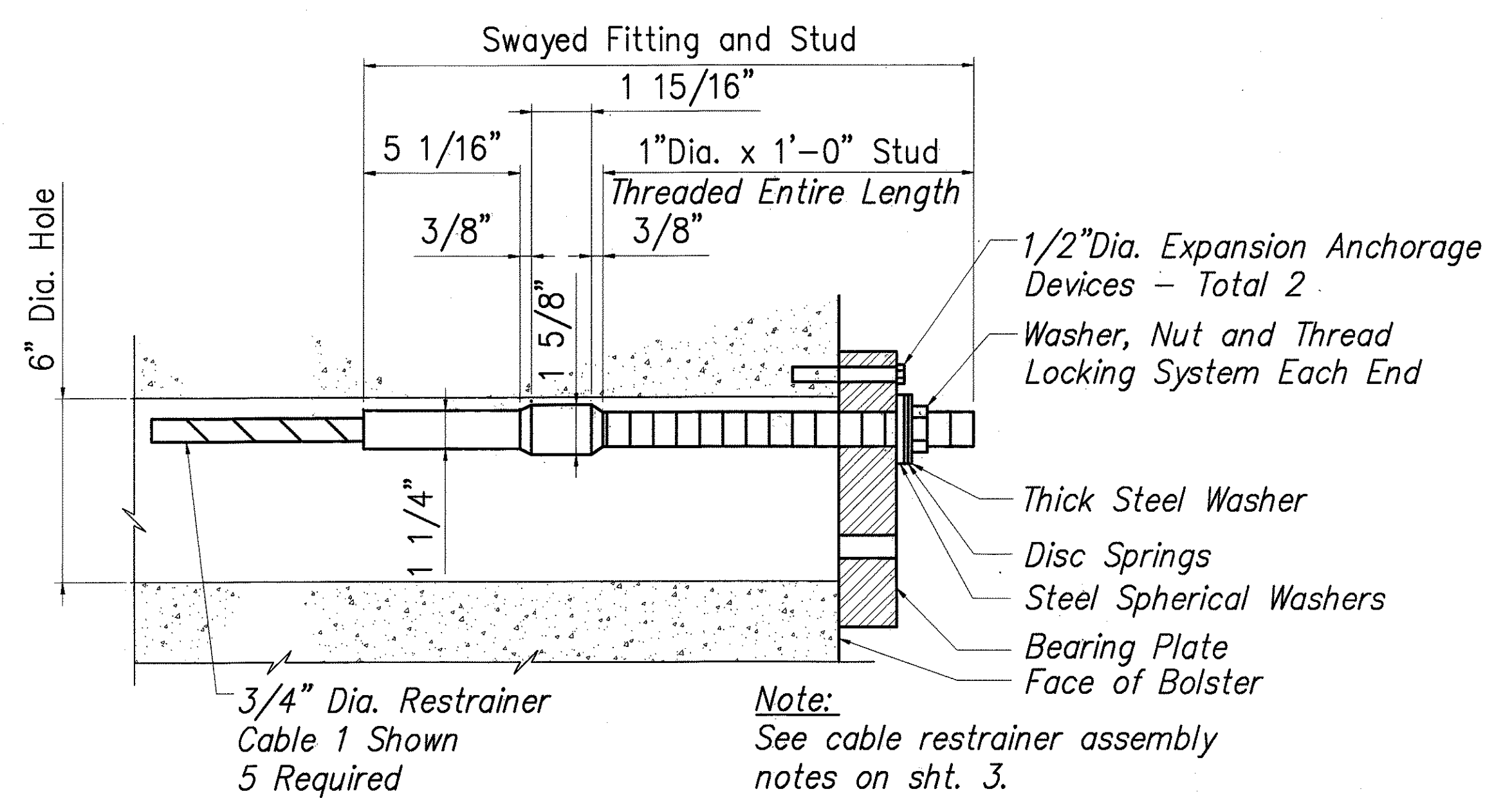


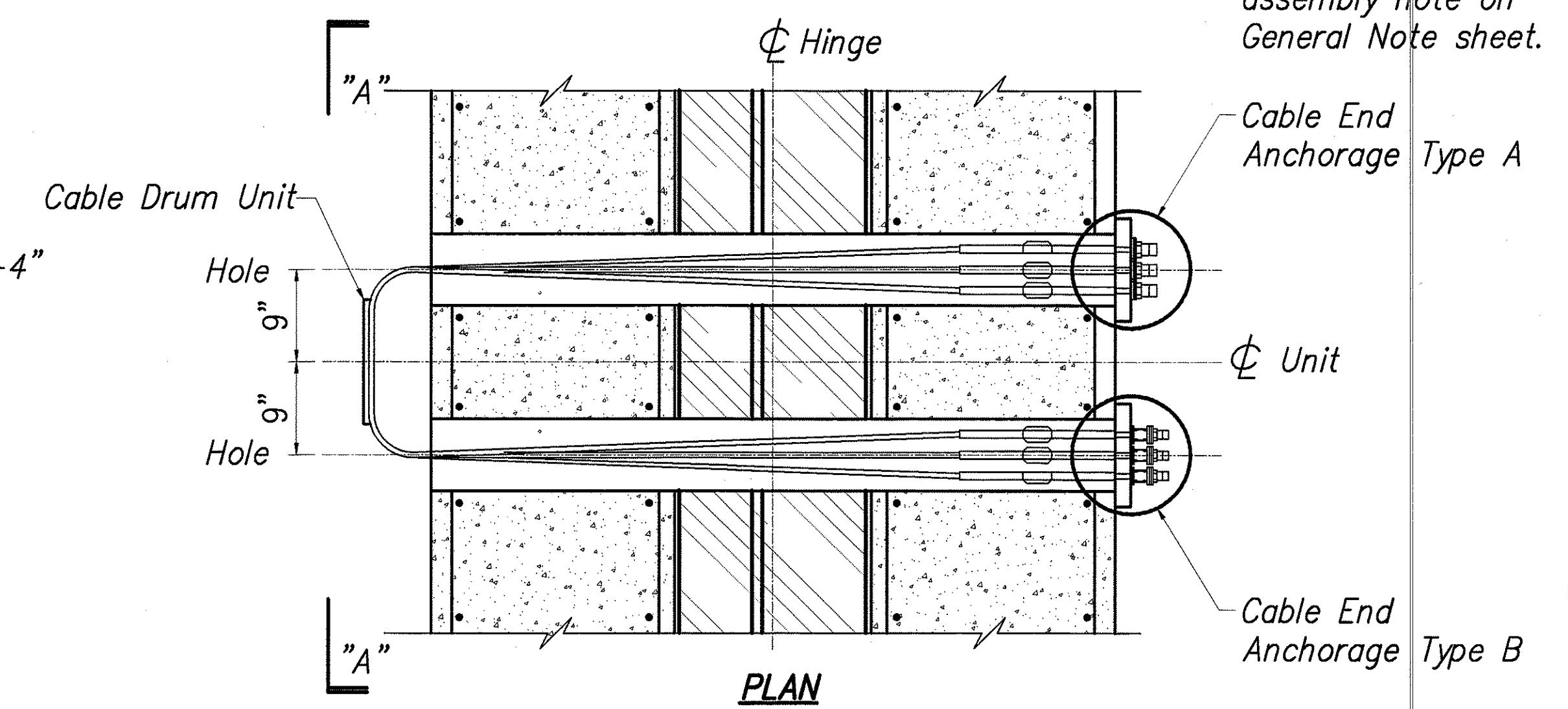
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-H1-1(227)	1998	12	13



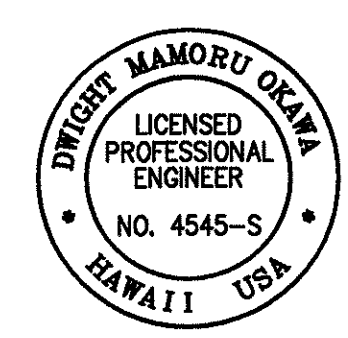
- Notes:
1. Restrainer units to be placed normal to ridge except as shown.
 2. Do not block vents in bottom slab. Provide 4"x4" passage to nearest edge of bolster.



CABLE DRUM UNIT
SCALE: 3"=1'-0"



NOTE:
See cable restrainer assembly note on General Note sheet.



State of Hawaii

Department of Transportation

Highways Division

CABLE RESTRAINER DETAILS

Interstate Route H-1, Seismic Retrofit, Waiawa Interchange

FAIP No. BR-H1-1(227)

Scale: as noted Date: March 1998

SHEET No. 59 OF 10 SHEETS

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

I:\1997\9700500\DWGS\PLAN\5-09.DWG 11/22/99 10:53 DY

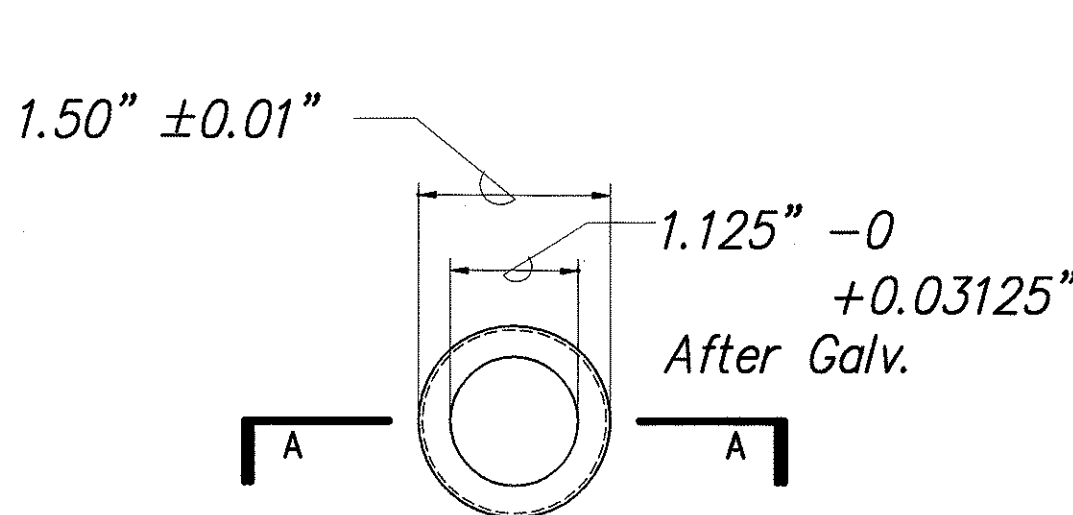
DISC SPRINGS AND WASHERS

All Dimensions in Inches Except as Noted.

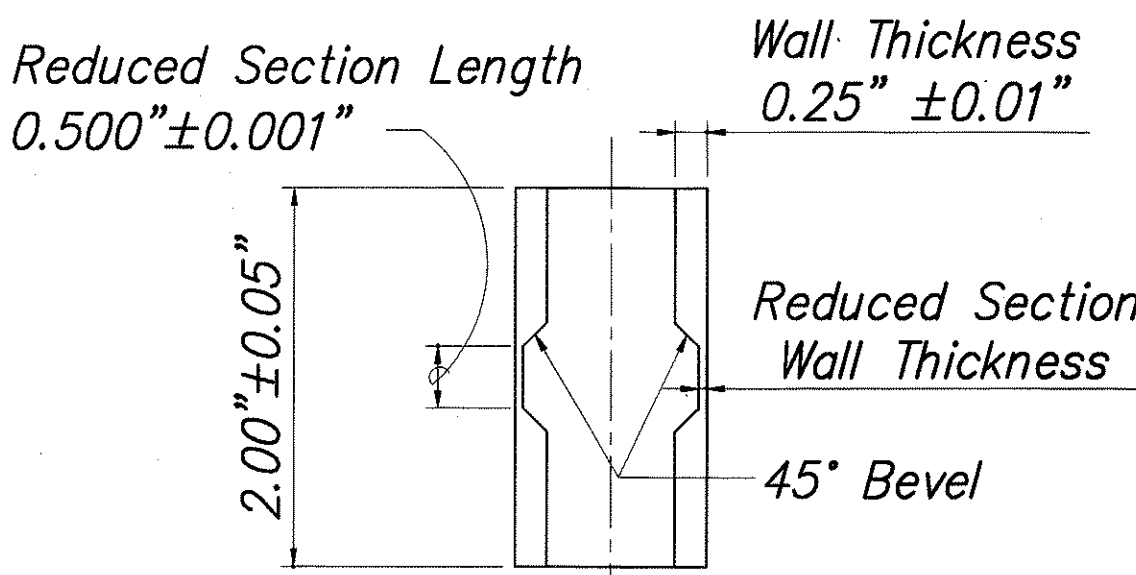
Cable Length (ft.)	DISC SPRING					STEEL SPHERICAL WASHER			THICK WASHER		
	ID	OD	t	H	COLOR CODE	ID	OD	Nom. thick	ID	OD	t*
00.0 - 25.0	1.00	2.00	0.065	0.13	WHITE	1.19	2.25	0.50	1.03	2.00	0.25
32.0 - 37.9	1.00	2.00	0.097	0.145	BLUE	1.19	2.25	0.50	1.03	2.00	0.25

* = Minimum Value

NOTE: All OD and ID Dimensions for Washers and Disc Springs Shall Meet the Dimensional Tolerances for Harden Steel Washers. ASTM F436



END VIEW

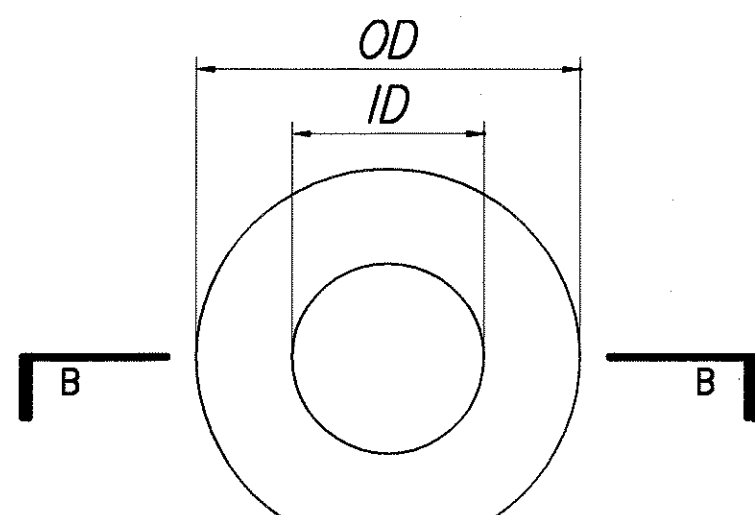


SECTION A-A

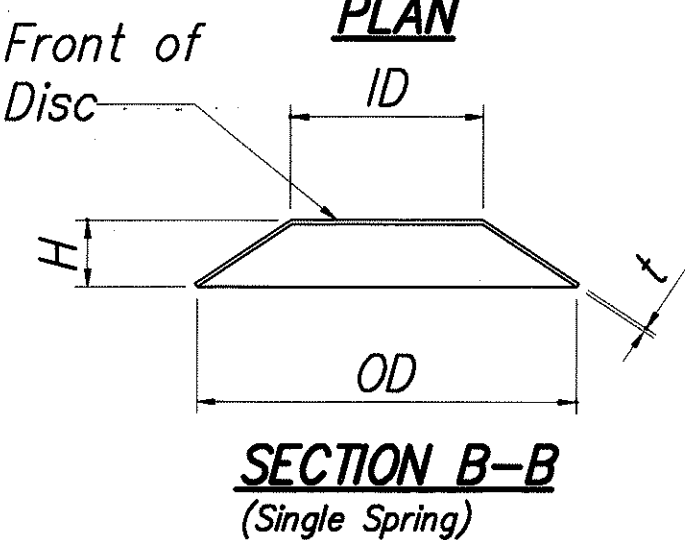
CABLE YIELD INDICATOR

All Dimensions are Before Galvanizing Except as Noted.

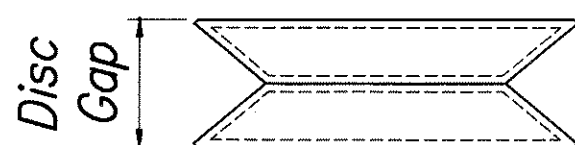
CABLE RESTRAINER DETAILS



PLAN



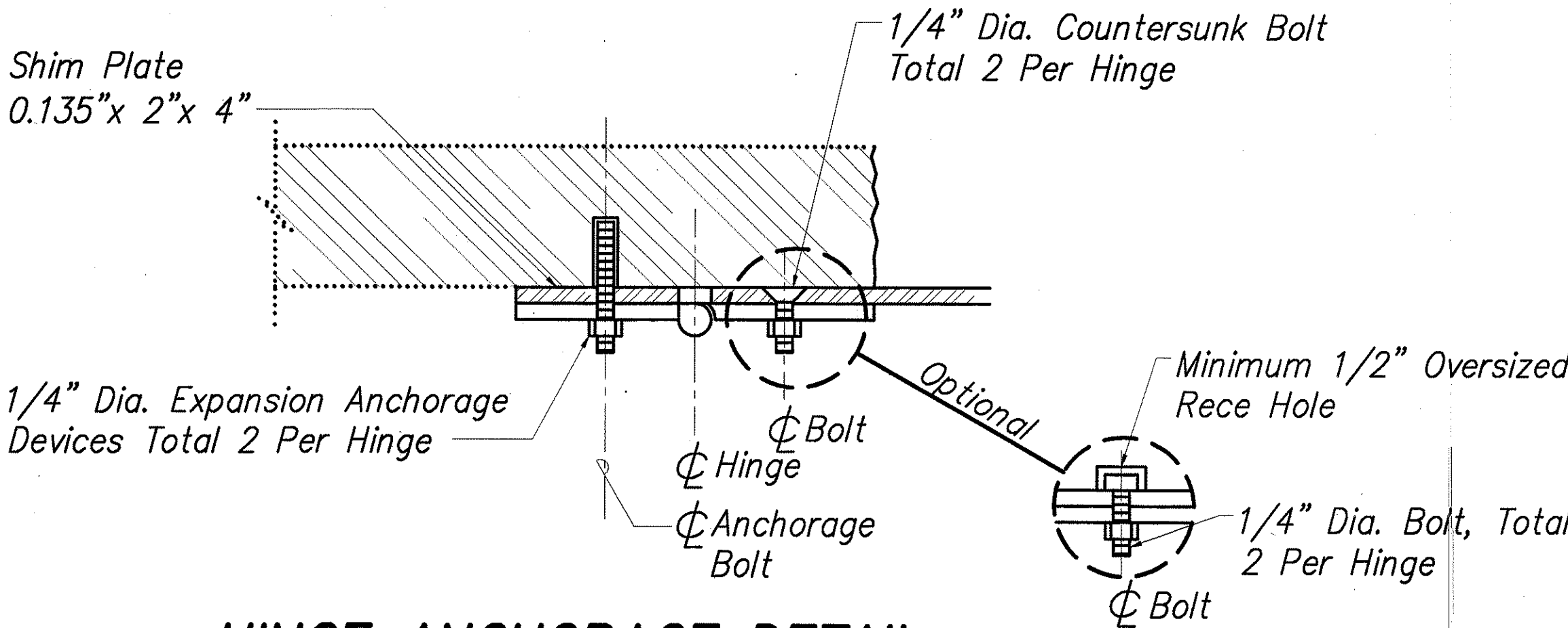
SECTION B-B (Single Spring)



AS INSTALLED ON STUD

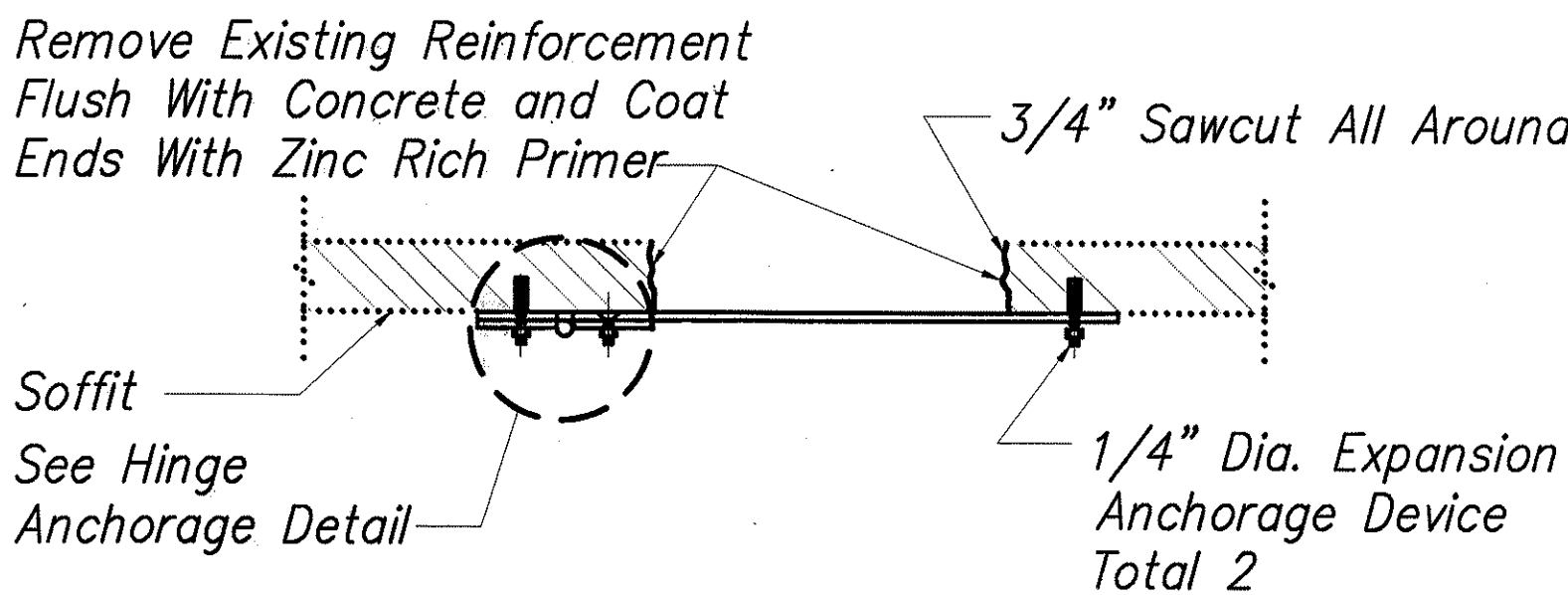
DISC SPRING

Note: For Dimensions Not Shown, See Table



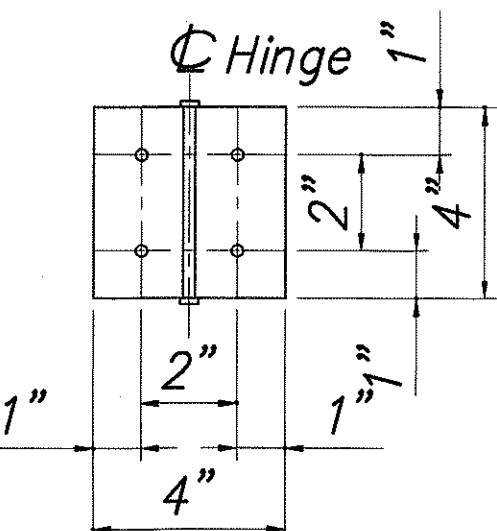
HINGE ANCHORAGE DETAIL

NO SCALE



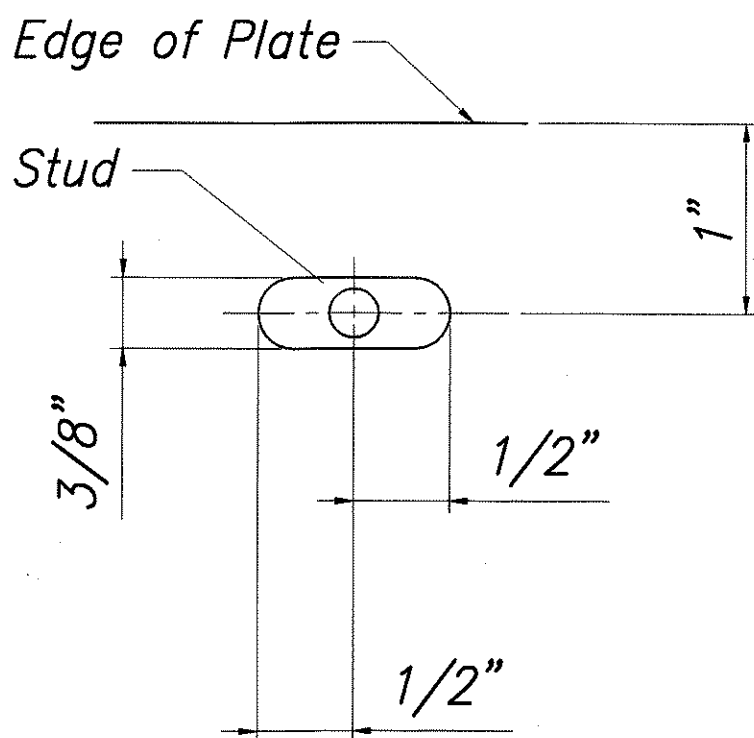
SECTION X-X

NO SCALE



HINGE DETAIL

SCALE: 4" = 1'-0"



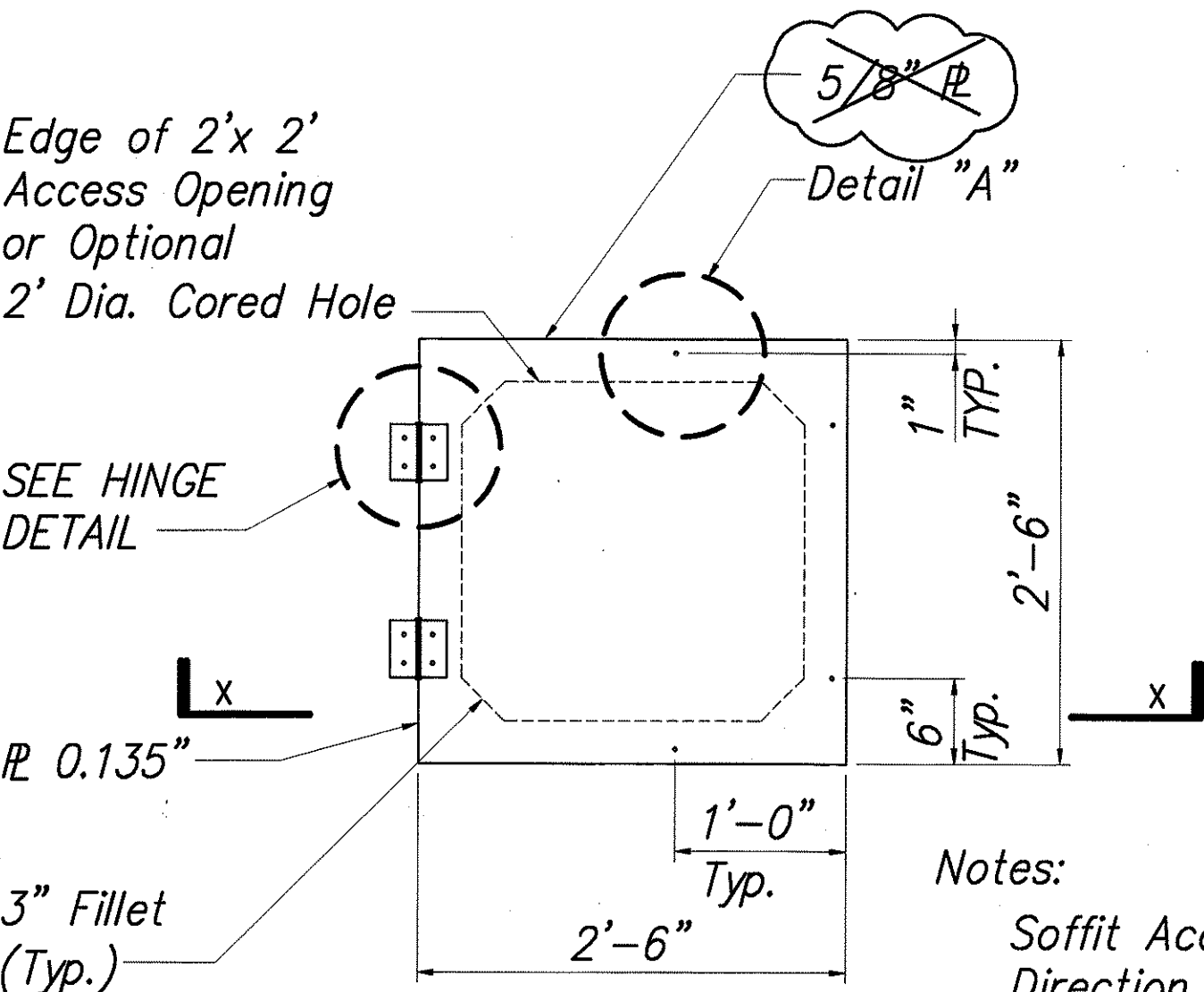
DETAIL "A"

FULL SCALE

As-Built Legend



As-Built Revisions



PLAN

ACCESS DOOR ASSEMBLY

SCALE: 1" = 1'-0"

Notes: Soffit Access Door Opening Direction to be Determined by the Engineer

State Of Hawaii
Department of Transportation
Highways Division

CABLE RESTRAINER AND ACCESS OPENING DETAILS

Interstate Route H-1, Seismic Retrofit, Waiawa Interchange
FAIP No. BR-H1-1(227)

Scale: as noted Date: March 1998

SHEET No. S10 OF 10 SHEETS