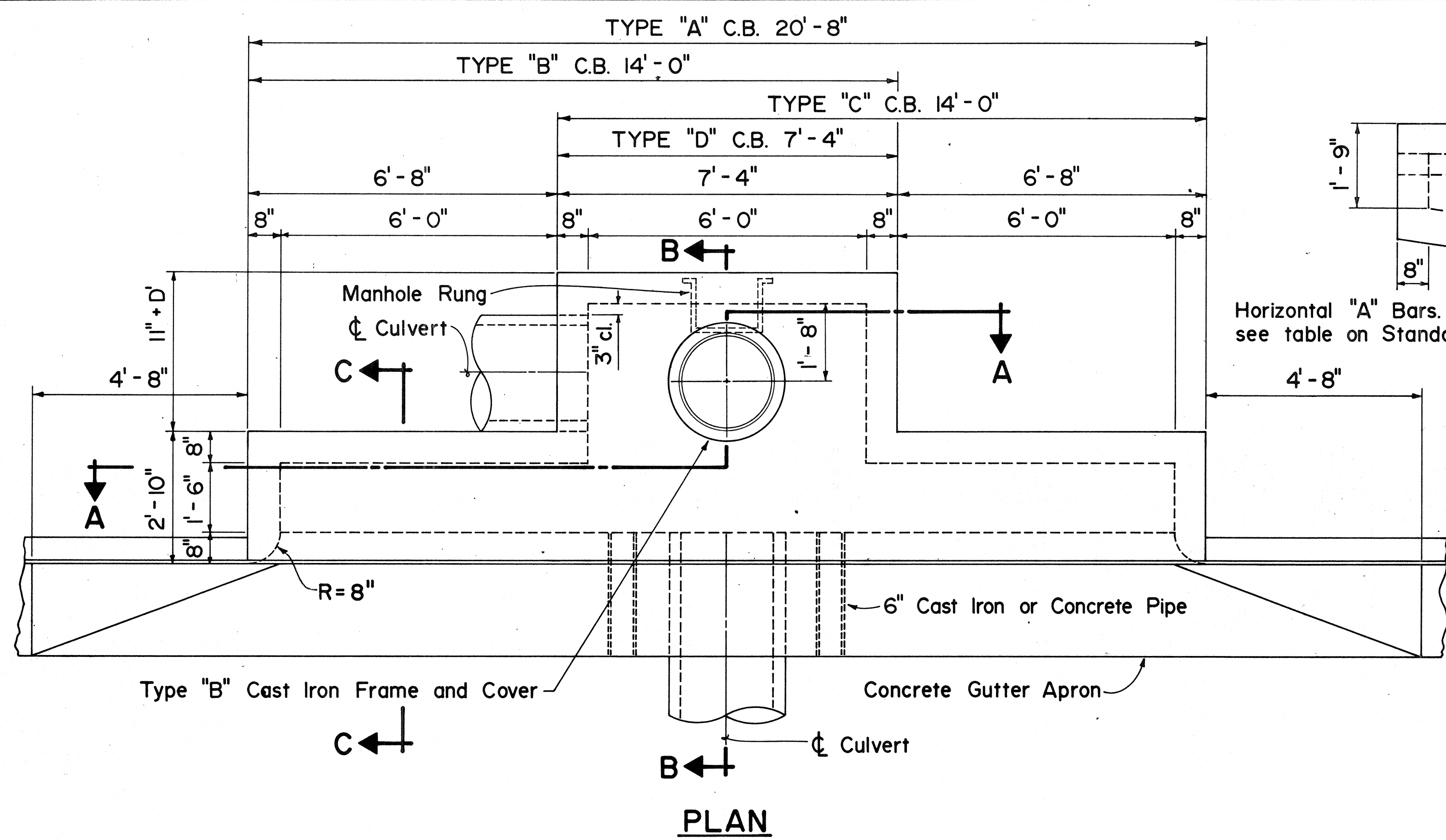
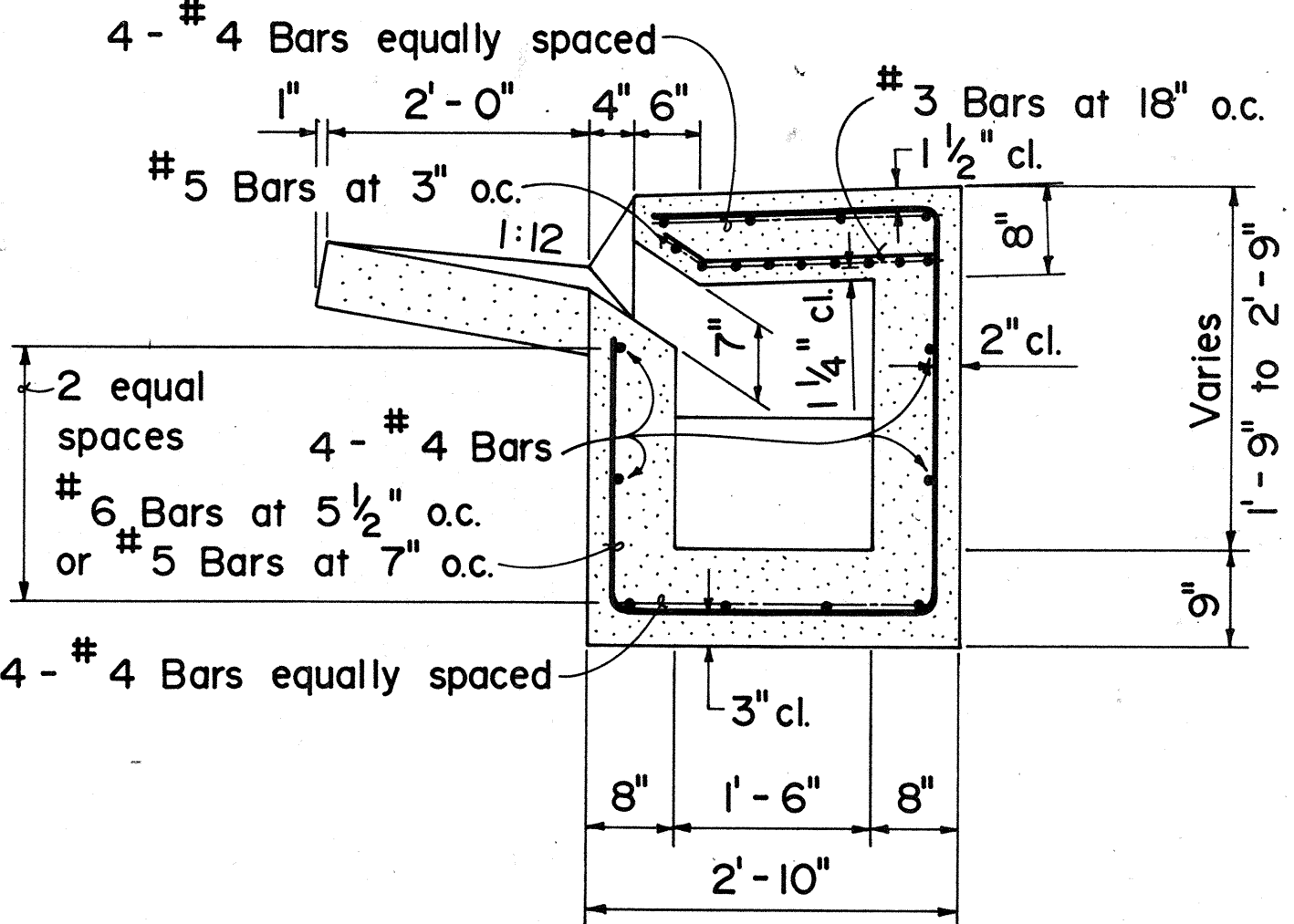
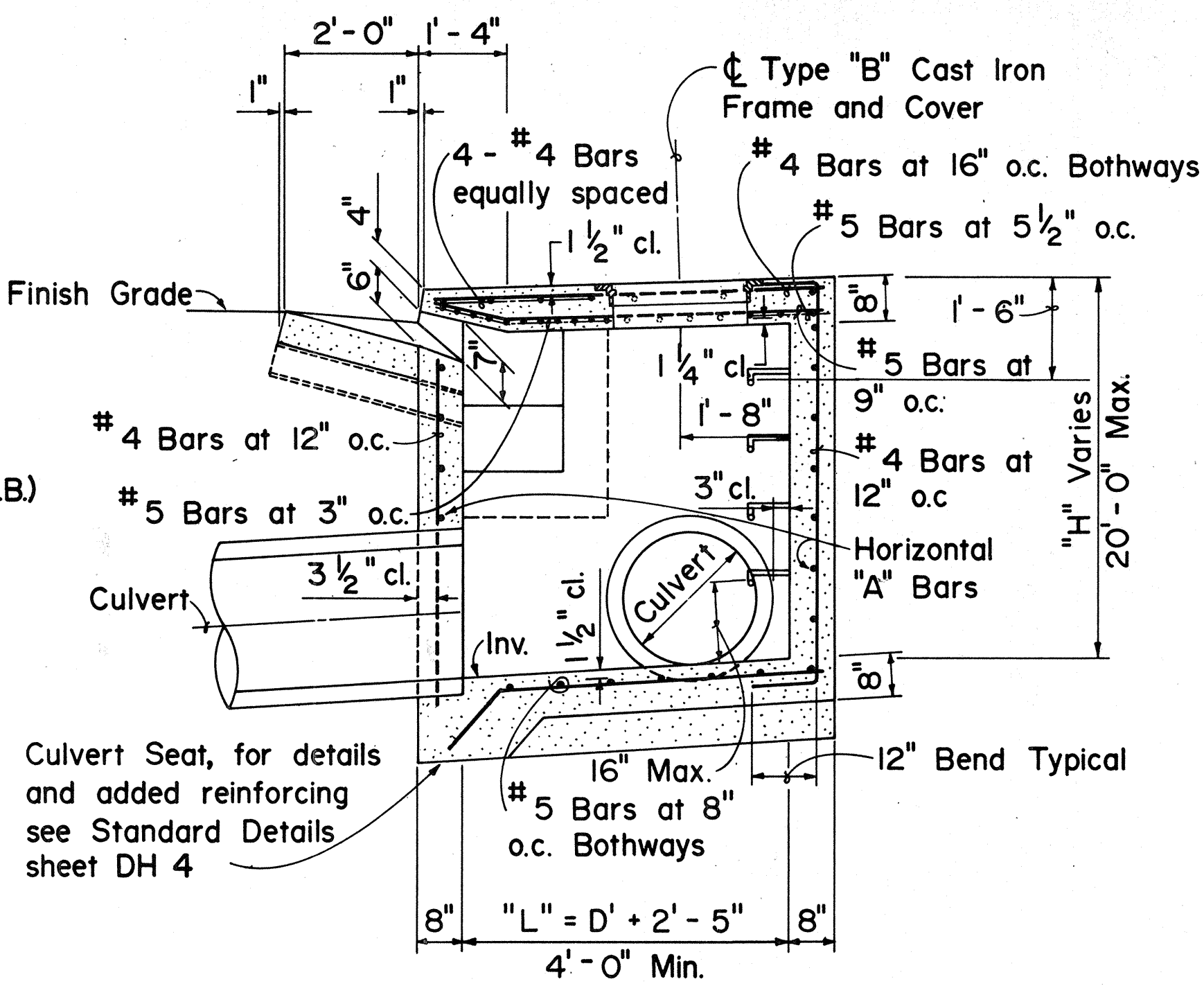
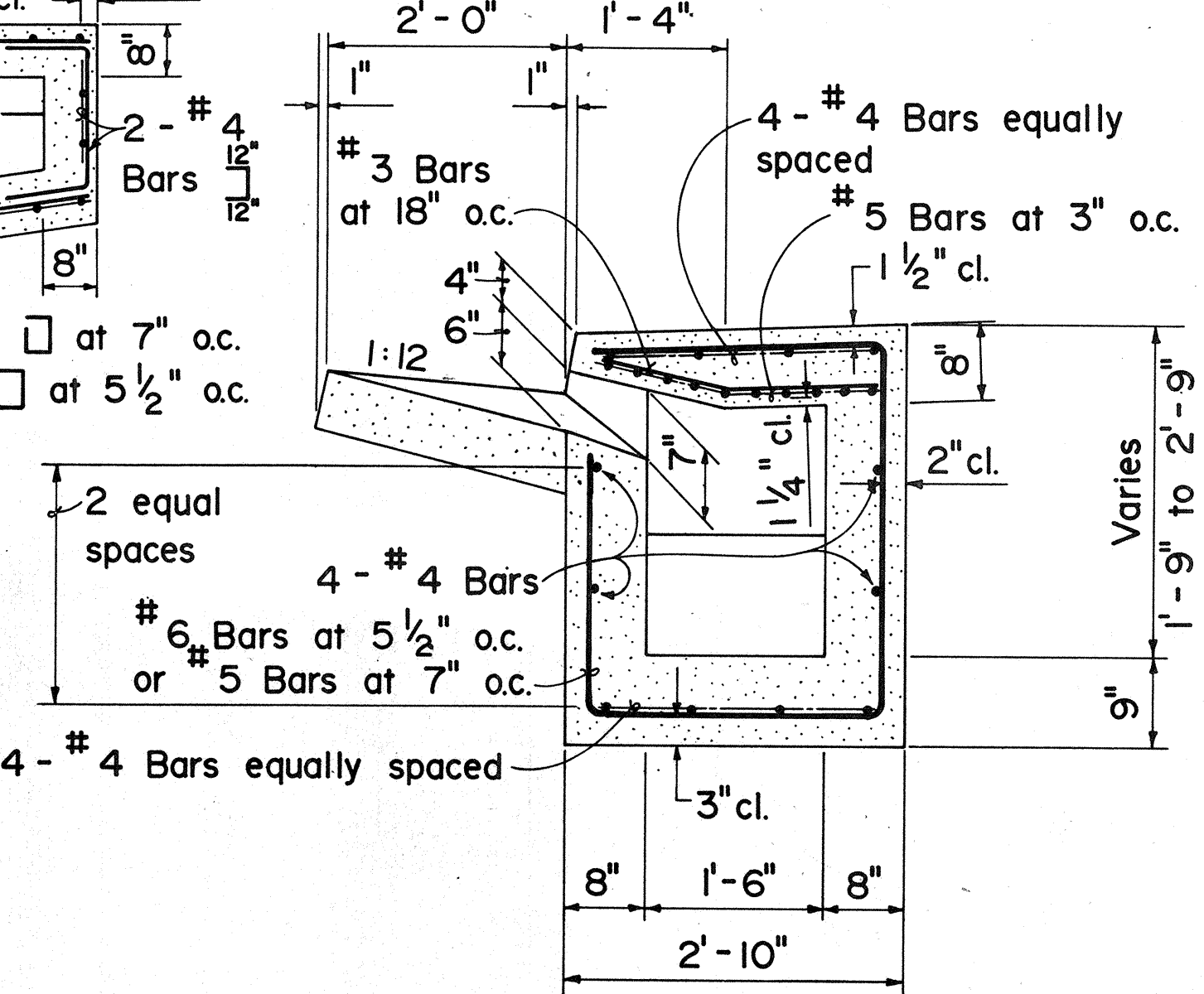
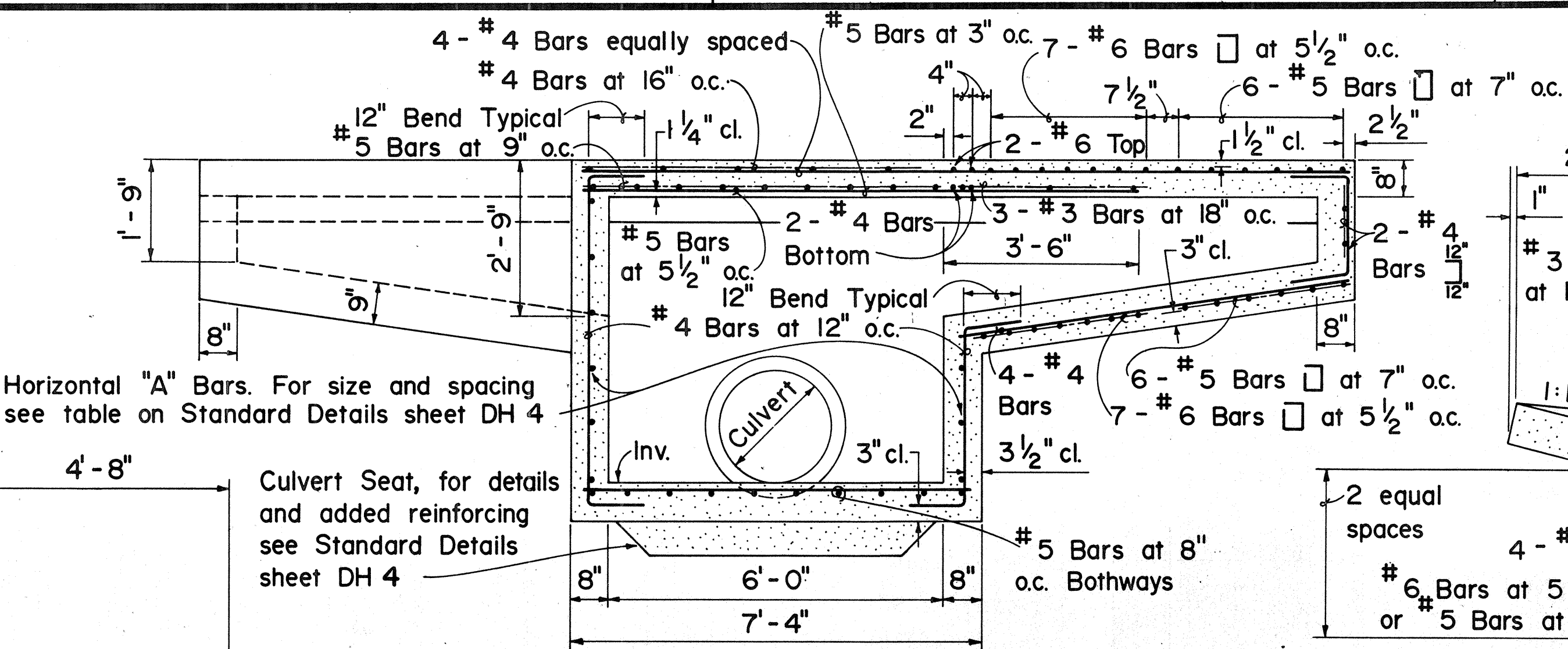
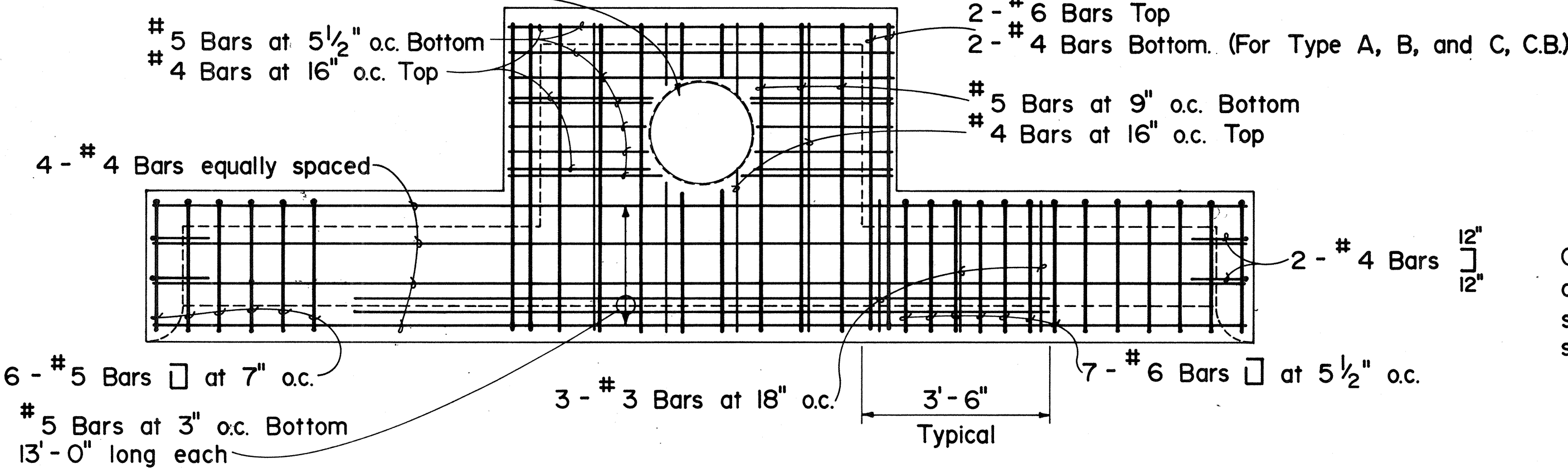


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-01-85	1986	8	25



Opening for Type "B" Cast Iron Frame and Cover. For added reinforcing around hole see Standard Details sheet DH 4



TYPE "A", "B", "C" & "D" CATCH BASIN

APPROVAL RECOMMENDED:

[Signature] 12/3/80

HYDRAULIC DESIGN ENGINEER DATE

APPROVED:

[Signature] 12/1/80

ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1.	Supersedes Sht. DH 1 approved 12/17/69	H.P.	12/4/80
2.	Define "L" - Section "B-B", change bottom slab spacing 9" to 8" in Section "B-B"	<i>[Signature]</i>	3-10-84

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

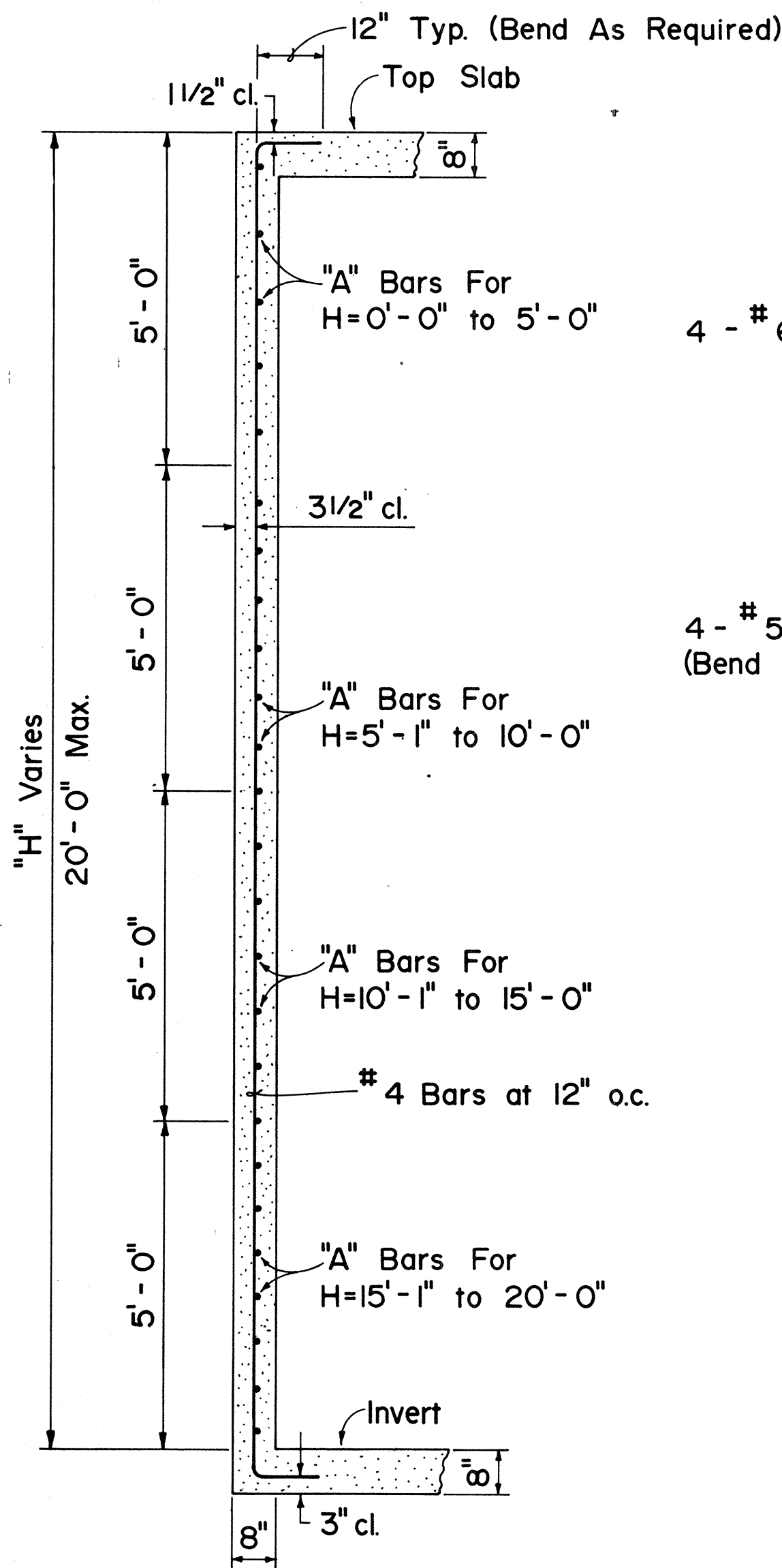
STANDARD DETAILS
TYPE A, B, C, & D
CATCH BASIN

Not To Scale
Date: Dec. 1980

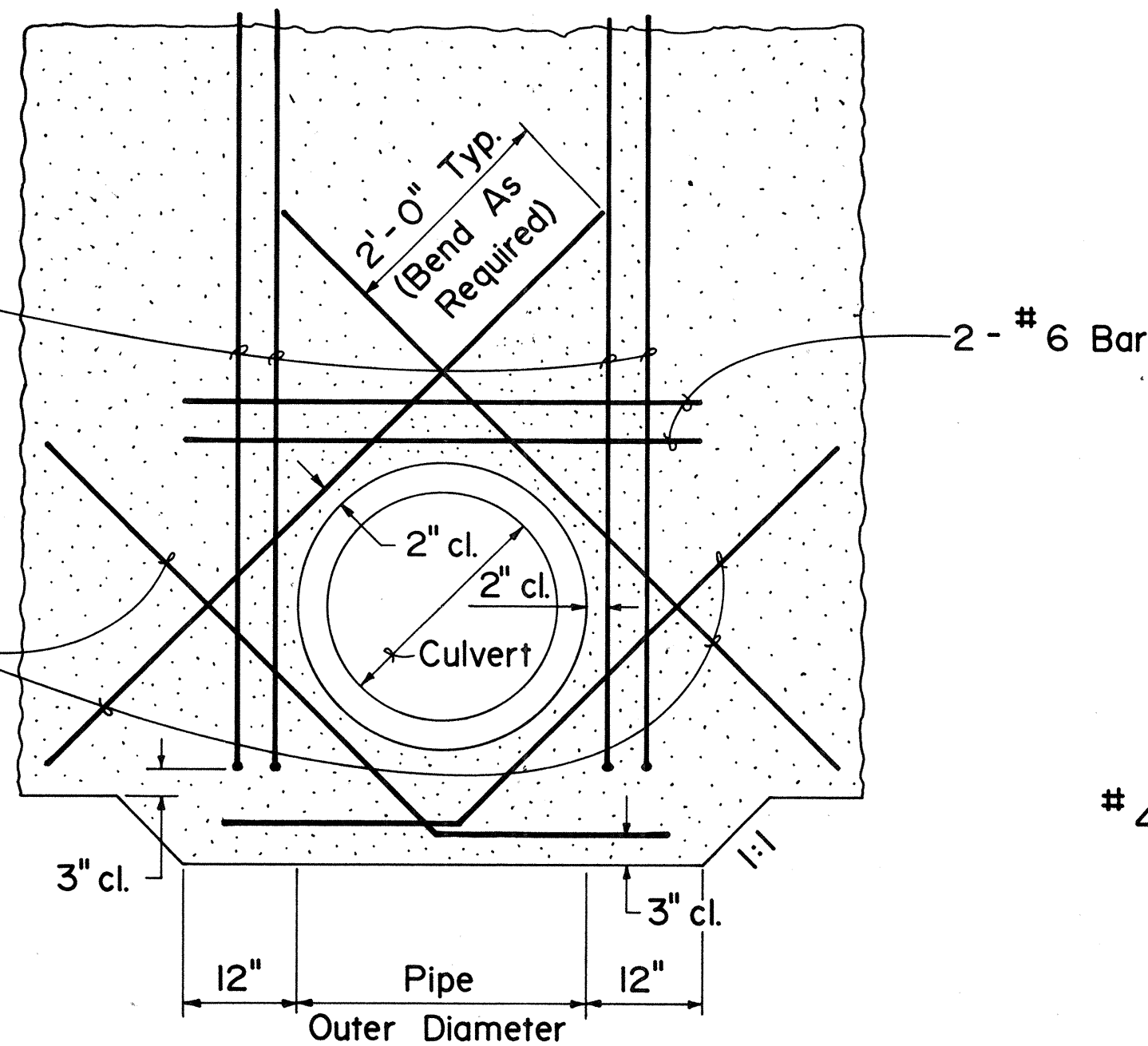
SHEET No. OF SHEETS DH 1

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

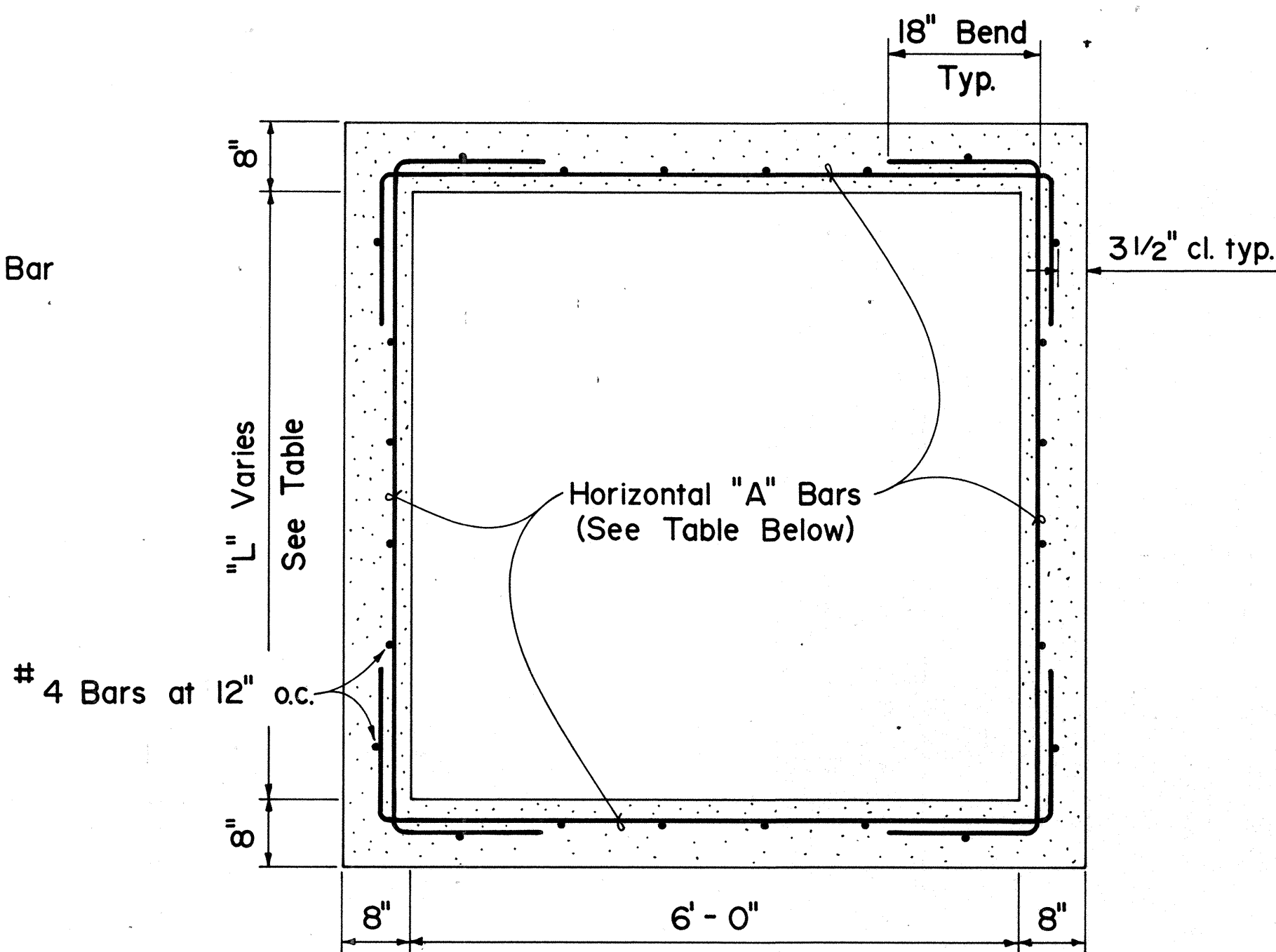
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-01-85	1986	9	25



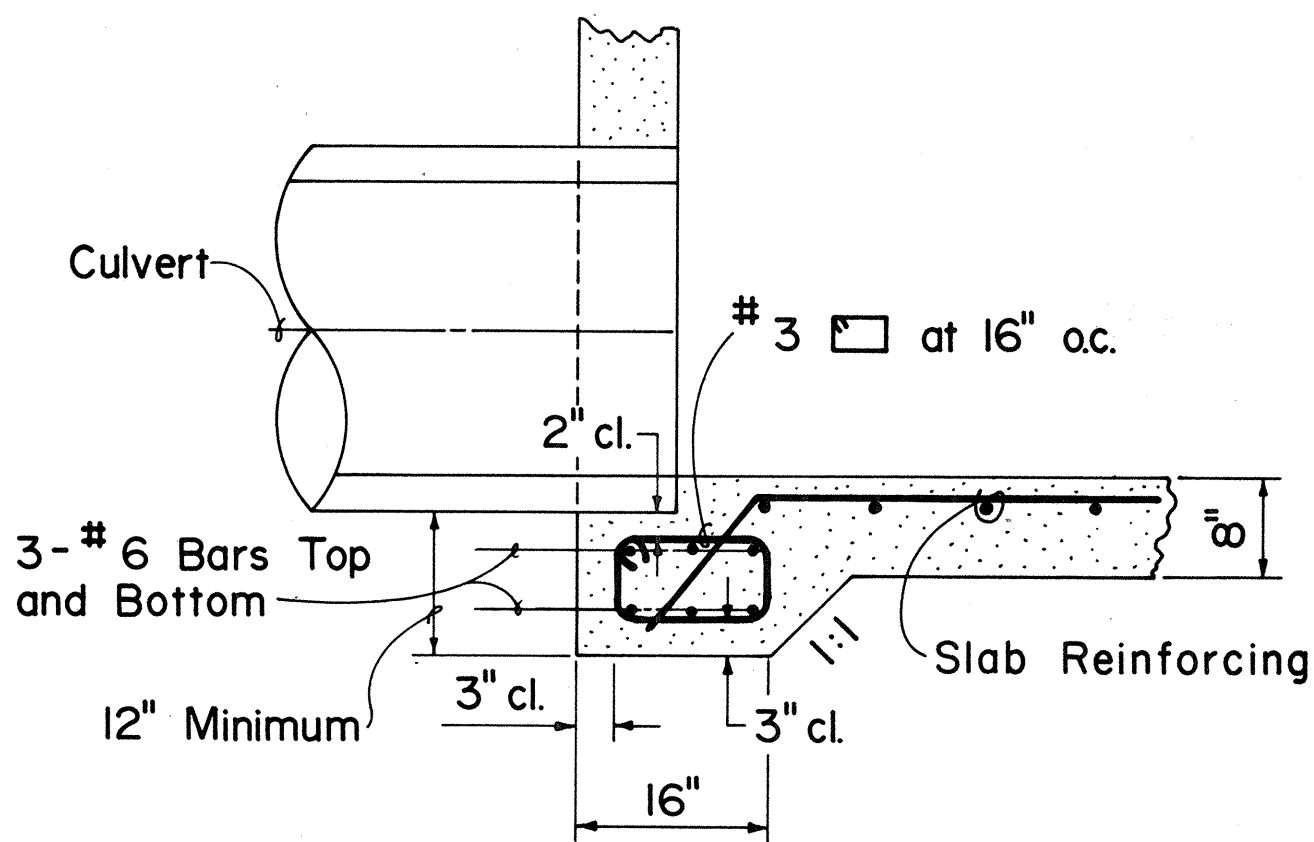
ELEVATION VIEW OF WALL SECTION



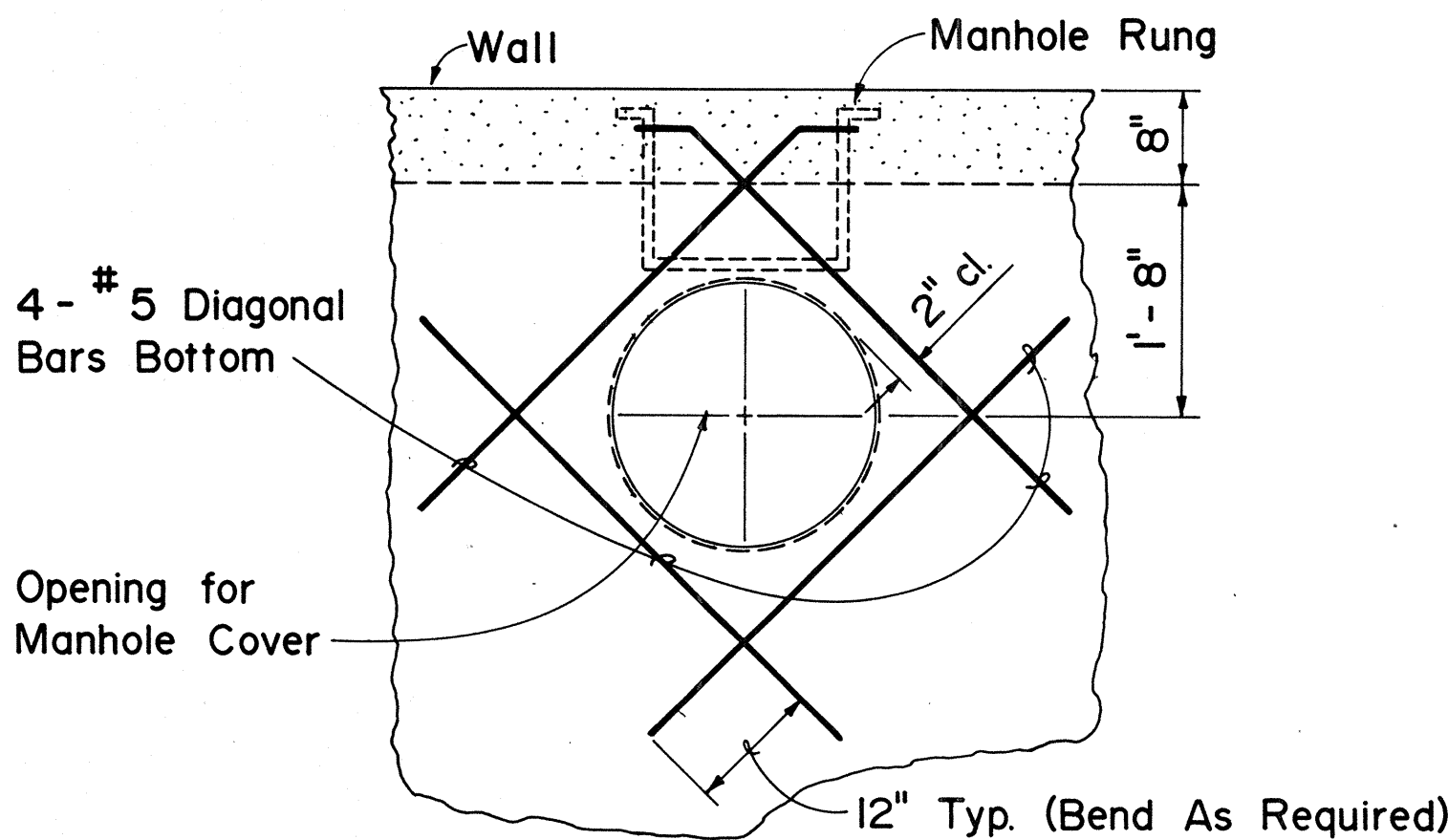
ADDED REINFORCING FOR CULVERT OPENINGS



PLAN VIEW OF WALL SECTION



DETAIL OF CULVERT SEAT



ADDED REINFORCING FOR MANHOLE OPENING

HORIZONTAL "A" BARS					
"H" MAX. (FT.)	"L" MAX. (FT.)				
	4'-0"	6'-0"	7'-4"	8'-4"	9'-4"
0'-0" to 5'-0"	# 4 at 12" o.c.	# 4 at 10" o.c.	# 5 at 10" o.c.	# 5 at 8" o.c.	# 5 at 7" o.c.
5'-1" to 10'-0"	# 4 at 9" o.c.	# 5 at 9" o.c.	# 5 at 6" o.c.	N.A.	N.A.
10'-1" to 15'-0"	# 5 at 10" o.c.	# 5 at 6" o.c.	N.A.	N.A.	N.A.
15'-1" to 20'-0"	# 5 at 8" o.c.	N.A.	N.A.	N.A.	N.A.

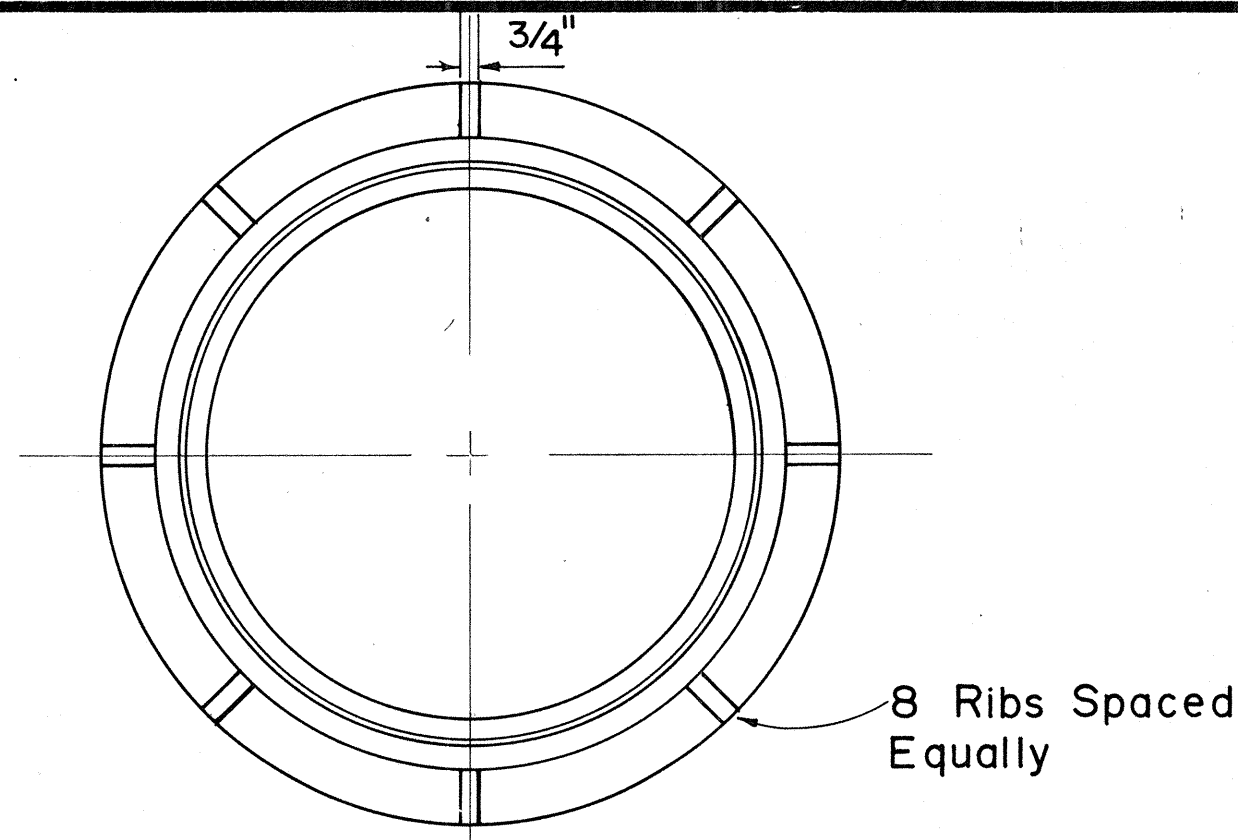
APPROVAL RECOMMENDED: *Ed H. Lee* 12/31/80
HYDRAULIC DESIGN ENGINEER DATE
APPROVED: *Harriet Zafish* 12/4/80
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1.	Replaces Sht. DH 4 approved 12-17-69	H.C.	12/4/80
2.	Delete bar clearance in Culvert Seat Detail, "slab reinforcing" in lieu of bar size and clearance in Culvert Seat Detail	<i>Ed H. Lee</i>	3-10-84

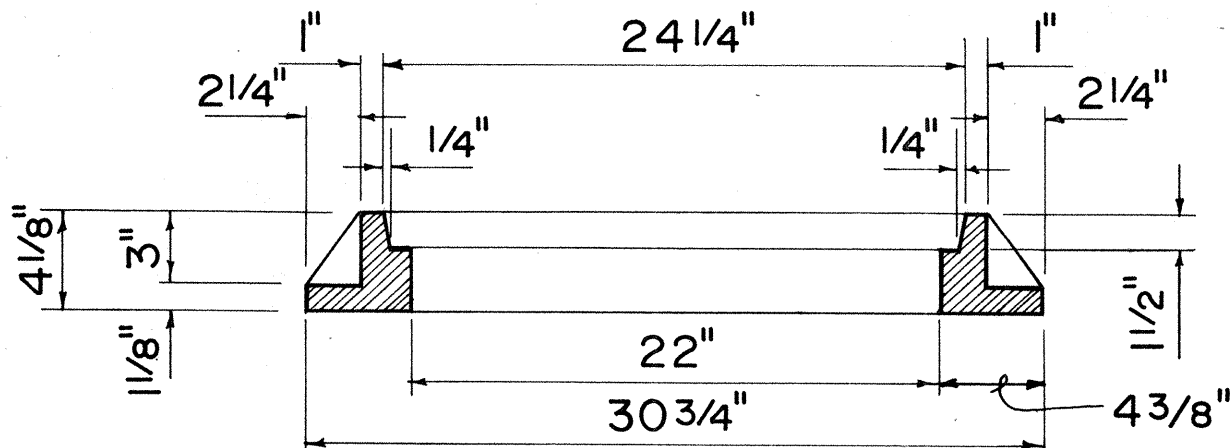
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
STANDARD DETAILS TYPICAL REINFORCING DETAILS FOR CATCH BASINS	
Not To Scale	Date: Dec. 1980
SHEET NO. 9 OF 25 SHEETS DH 4	

ORIGINAL	SURVEY PLOTTED BY	DATE
PLAN	DRAWN BY	
NOTE BOOK	DESIGNED BY	
QUANTITIES BY	CHECKED BY	
No.		

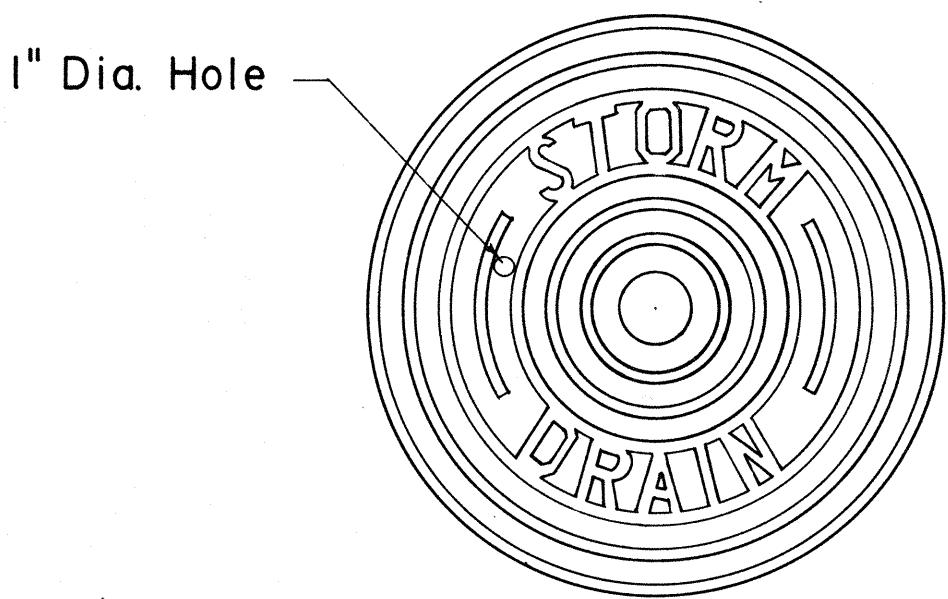
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	564-01-85	1986	10	25



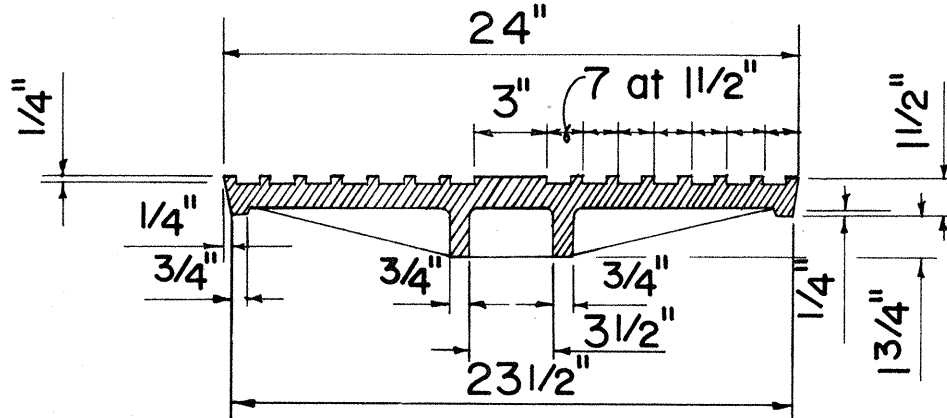
PLAN OF FRAME



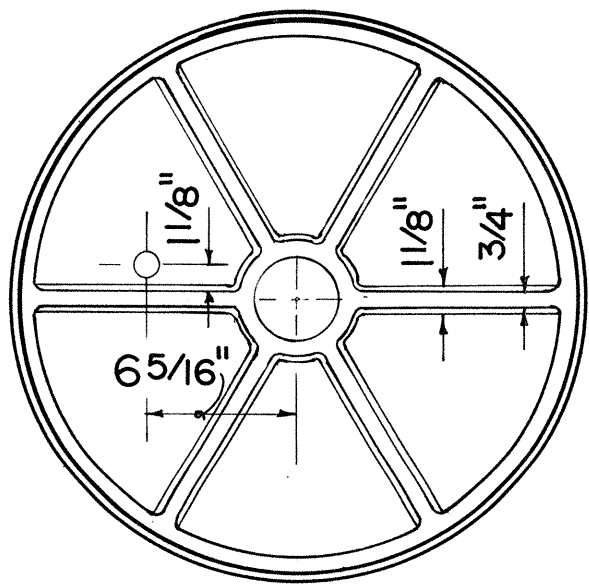
SECTION OF FRAME



TOP VIEW OF COVER

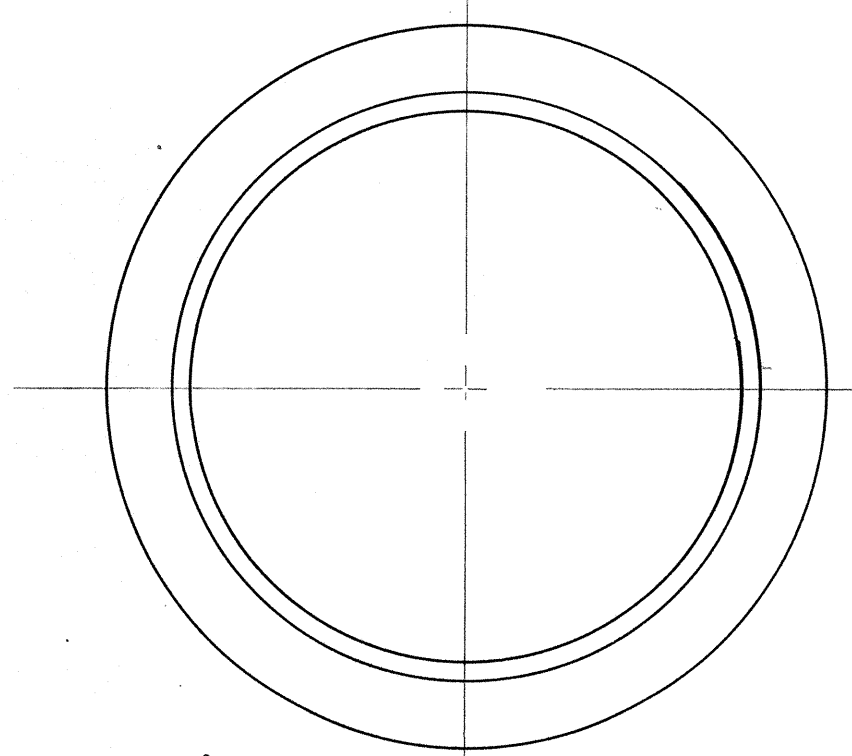


SECTION

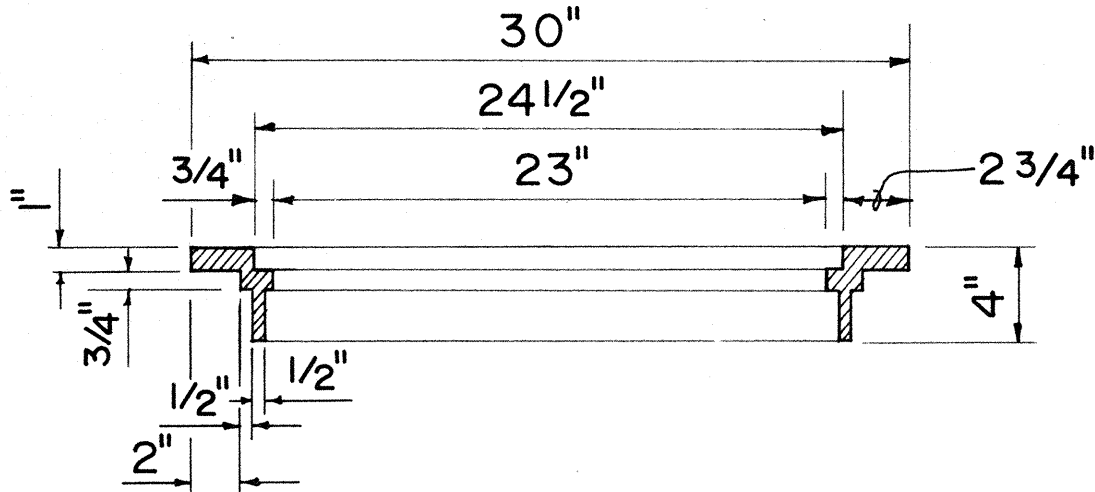


BOTTOM VIEW OF COVER

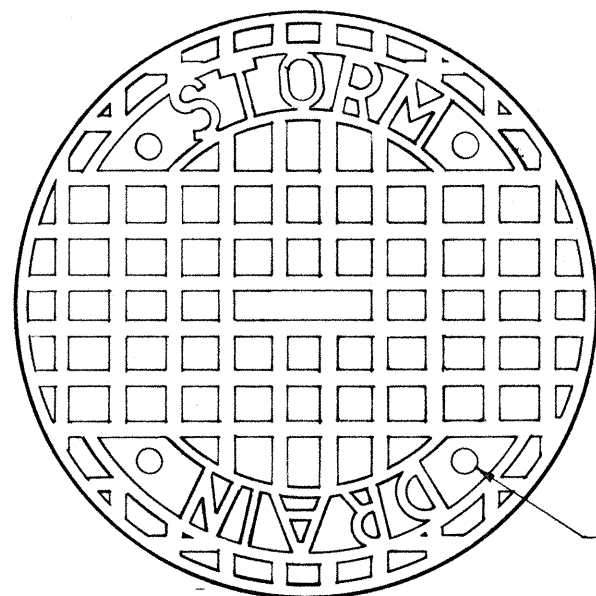
TYPE "P" CAST IRON
FRAME AND COVER



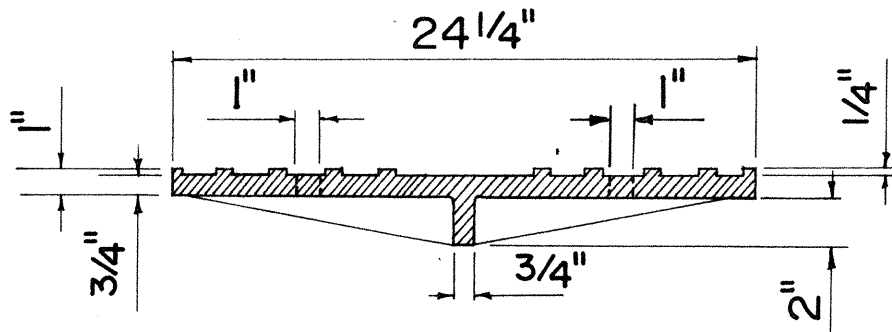
PLAN OF FRAME



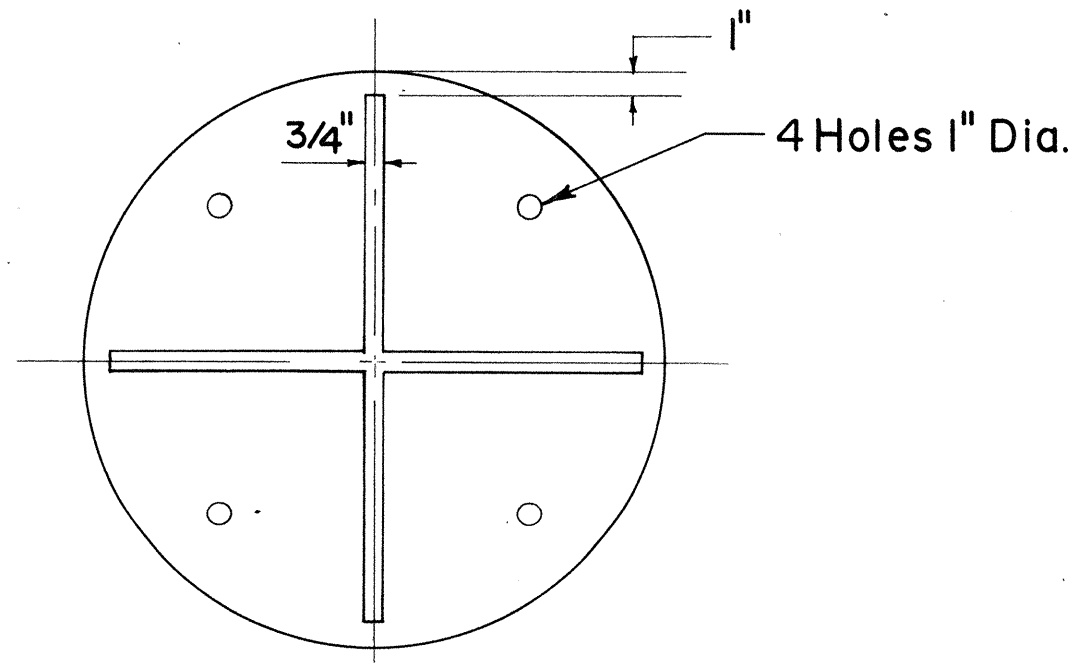
SECTION OF FRAME



TOP VIEW OF COVER

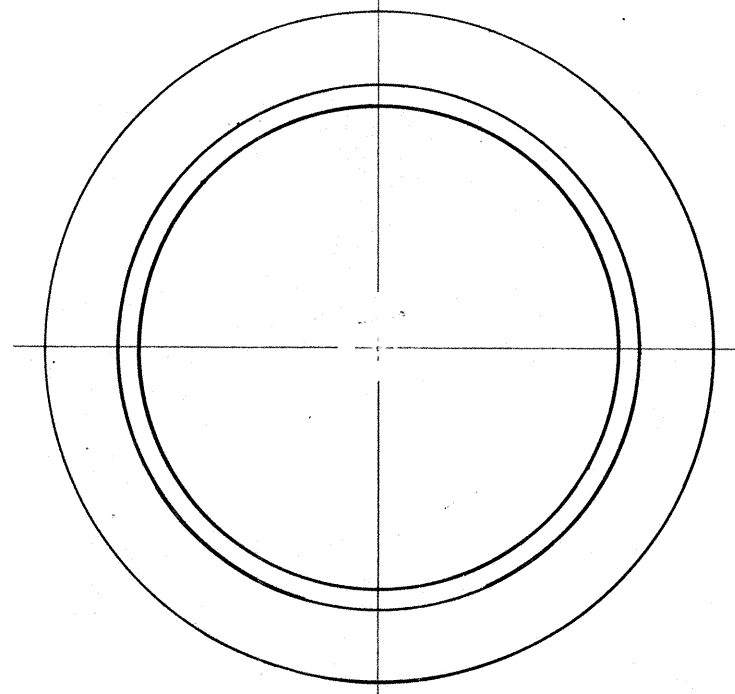


SECTION

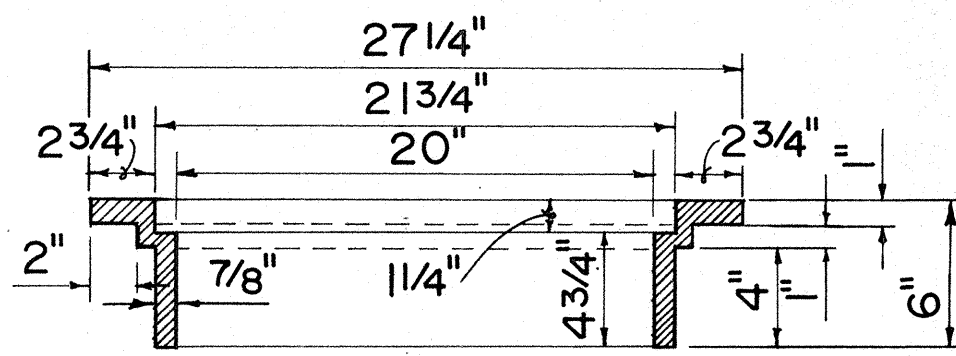


BOTTOM VIEW OF COVER

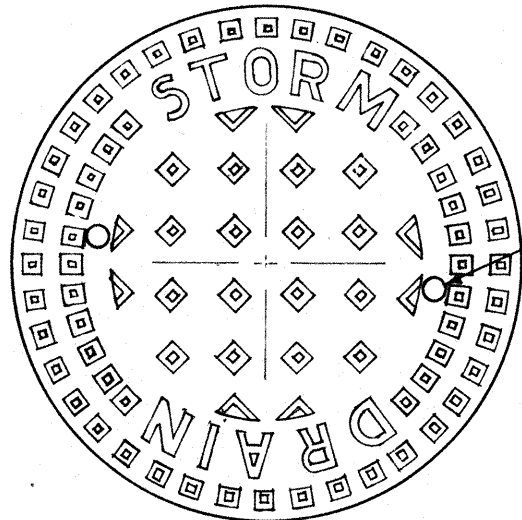
TYPE "B" CAST IRON
FRAME AND COVER



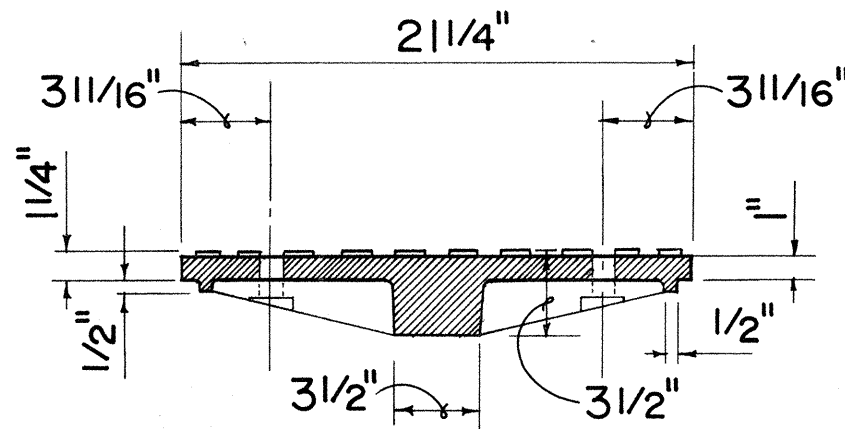
PLAN OF FRAME



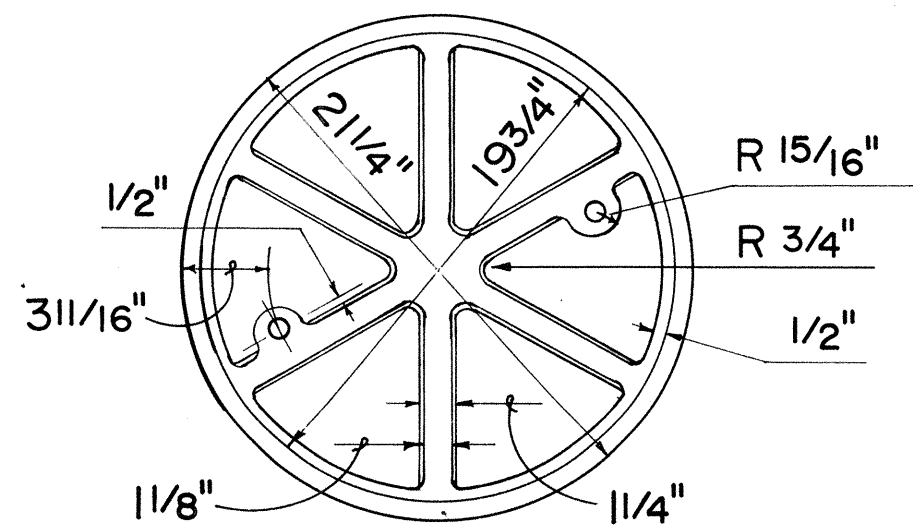
SECTION OF FRAME



TOP VIEW OF COVER

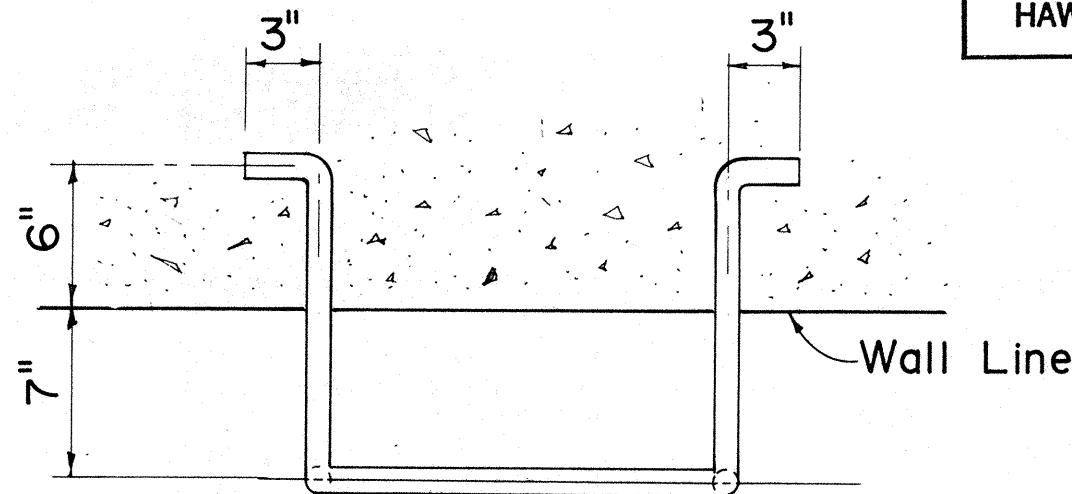


SECTION

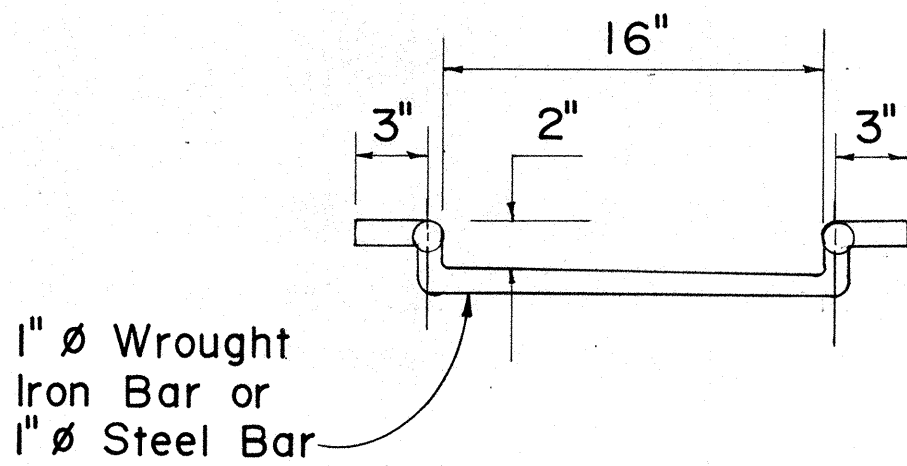


BOTTOM VIEW OF COVER

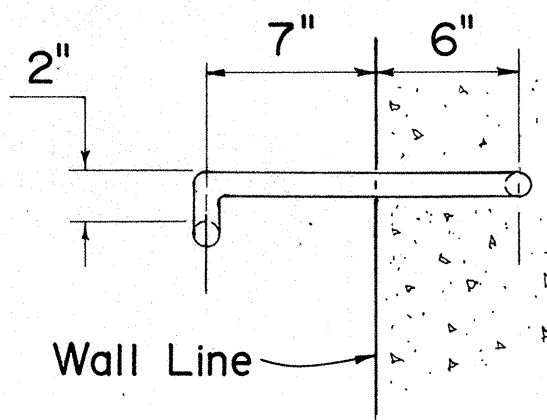
TYPE "A" CAST IRON
FRAME AND COVER



PLAN



FRONT VIEW



SIDE VIEW

MANHOLE RUNG

APPROVAL RECOMMENDED:
P. Nakano 6-19-79
 HYDRAULIC DESIGN ENGINEER DATE

APPROVED:
Herbert Zakeishi 6-22-79
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1.	Supersedes Sht. DH 6 approved 12-17-69	H.P.	6/22/79

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
 CATCH BASIN AND
 MANHOLE CASTINGS

Not To Scale Date: Dec. 1977

SHEET NO. OF SHEETS DH 8

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
DESIGNED BY	DRAWN BY	
CHECKED BY	NOTED BY	
NO.		