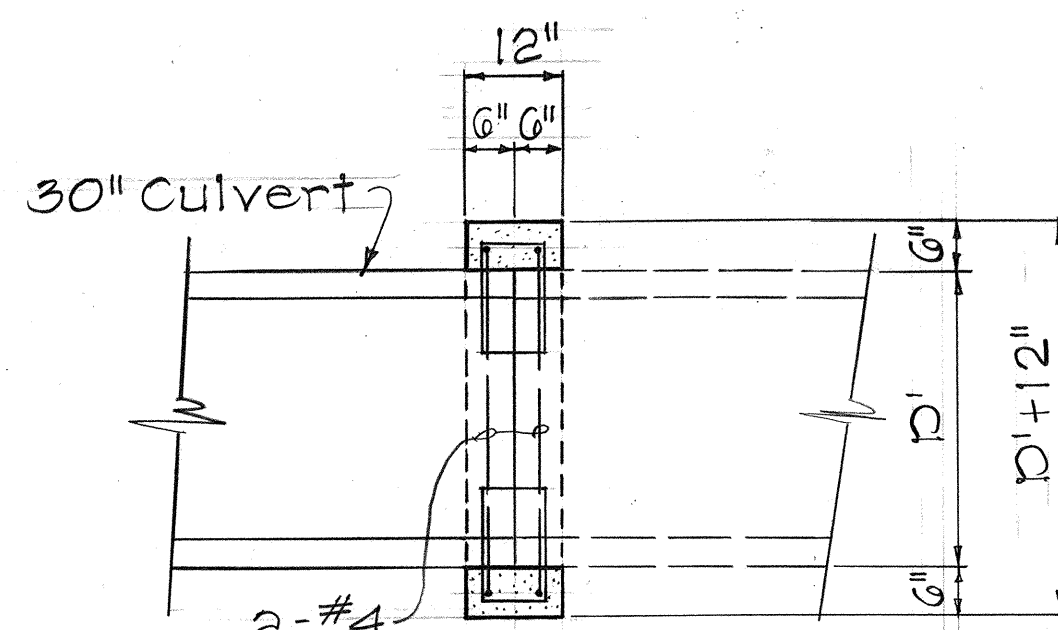
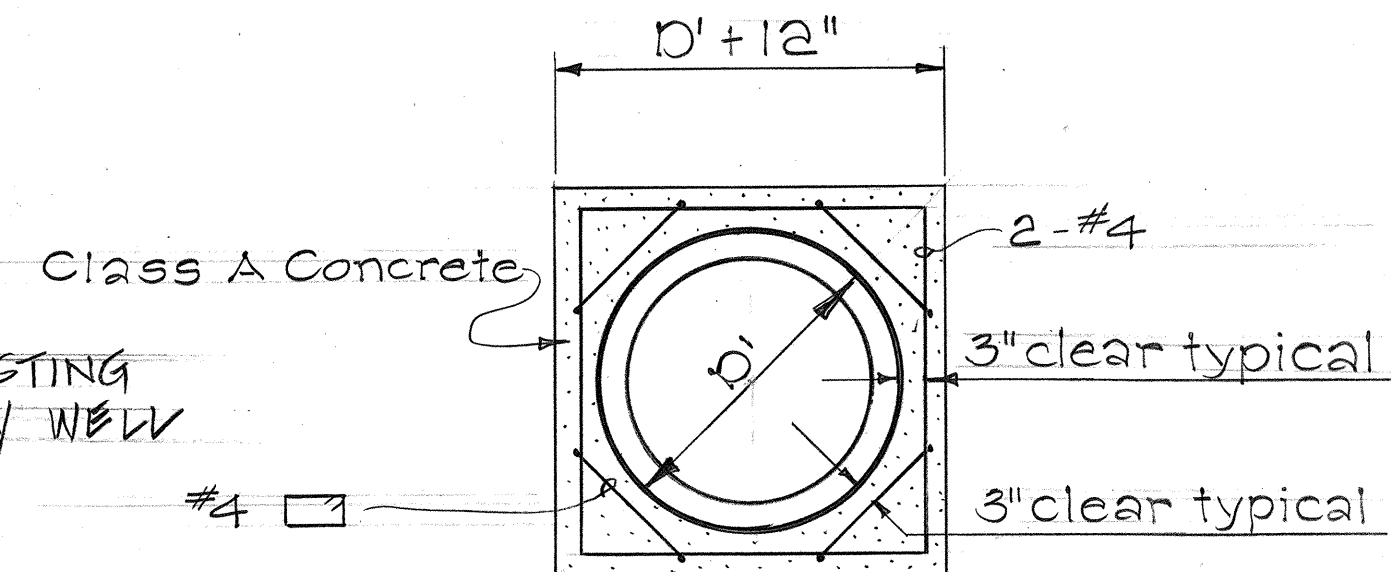
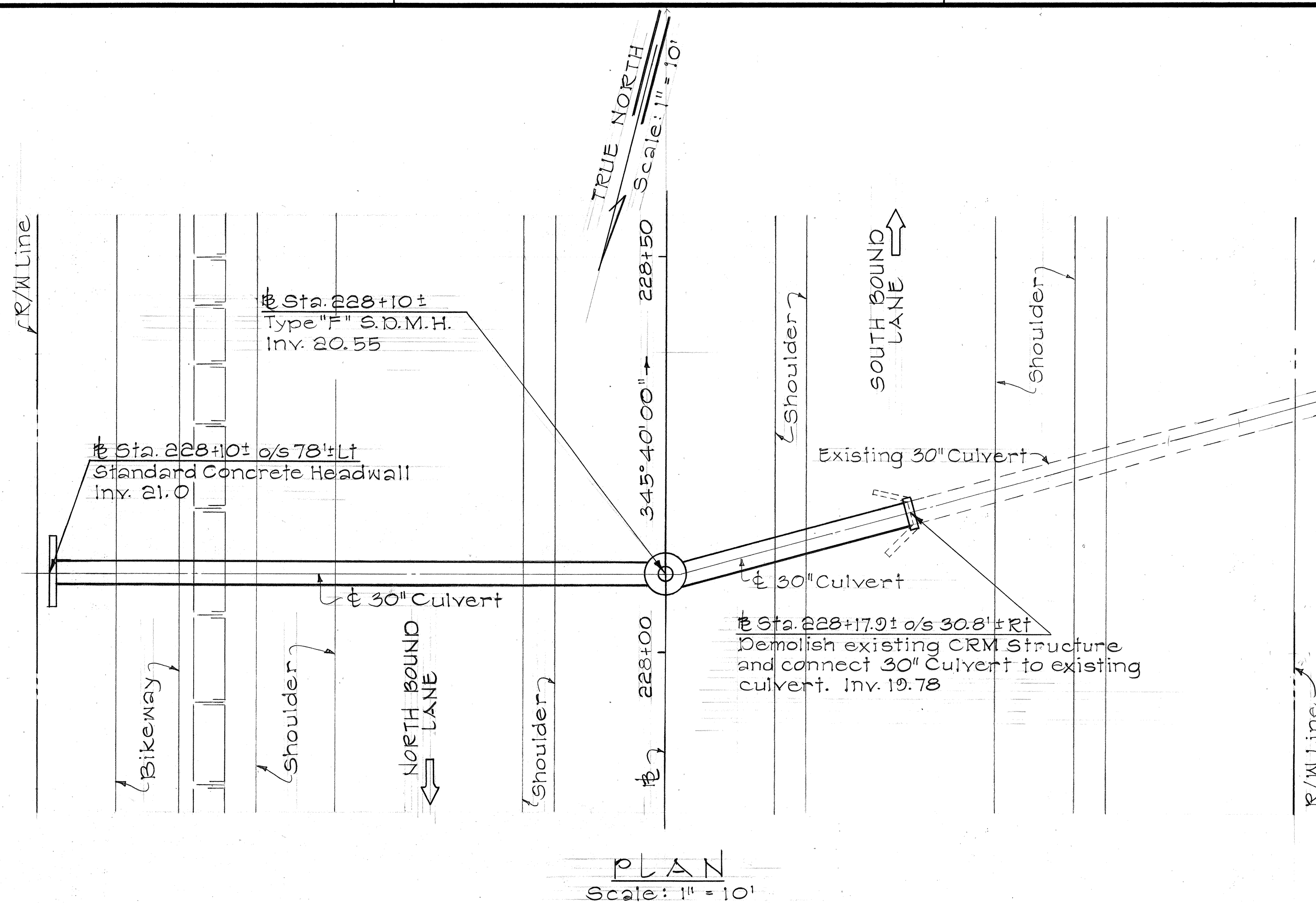


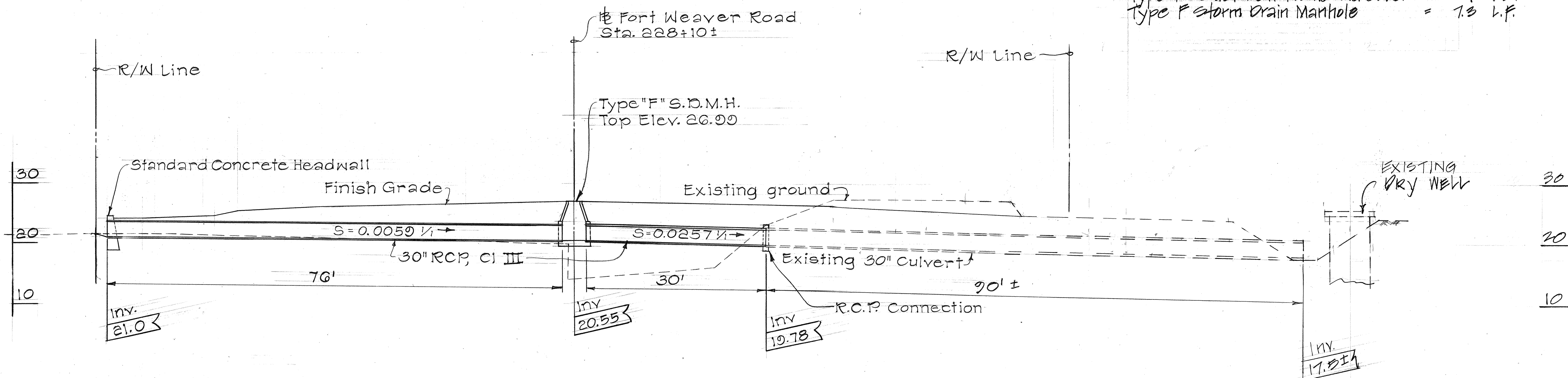
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(1)	1986	94	121



R.C.P. CONNECTION
Scale: 1/2" = 1'-0"

ESTIMATED QUANTITIES

Struc. Exc.	= 105 c.y.
Class A Concrete	= 2.8 c.y.
Reinf. Steel	= 116 lbs.
30" RCP, Class III	= 106 l.f.
Type "F" Cast Iron Frame and Cover	= 1 Ea.
Type P Storm Drain Manhole	= 7.3 l.f.



PROFILE ALONG C OF CULVERTS
Scale: 1" = 10'

DETAILS OF DRAINAGE SYSTEM AT STA. 228+10±

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
DRAINAGE DETAILS

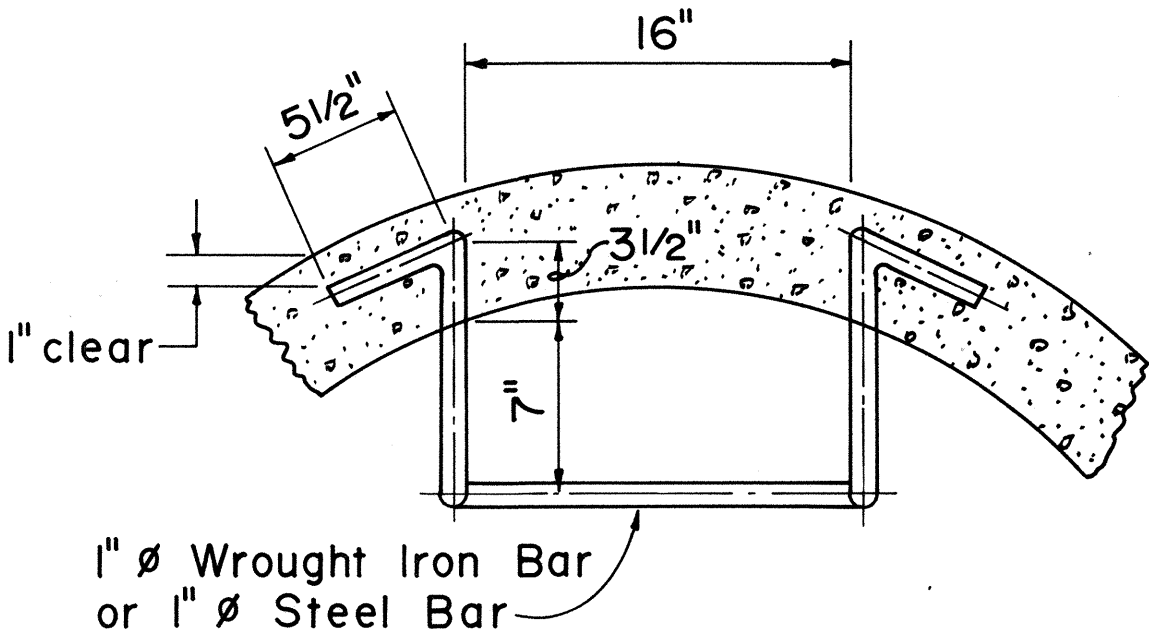
FORT WEAVER ROAD
Renton Road to Hanakahi Street
F.A.P. Proj. No. F-076-1(1)

Scale: As Shown Date: May 1985
SHEET No. 1 OF 4 SHEETS

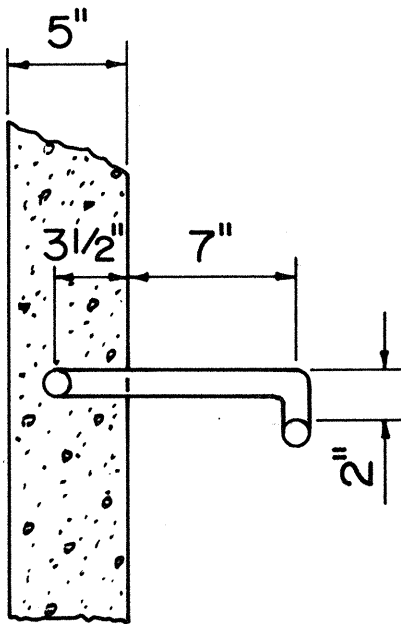
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(1)	1986	95	121

GENERAL NOTES

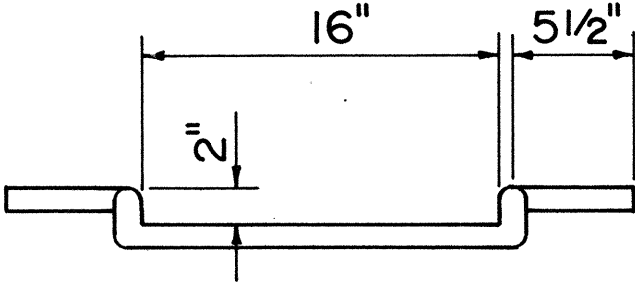
1. Select appropriate combination of risers and grade rings for required height.
2. All joints to be grouted as set.
3. Manufacturers may submit to the Engineer for approval, prior to manufacturing, designs other than those shown on this sheet.



PLAN

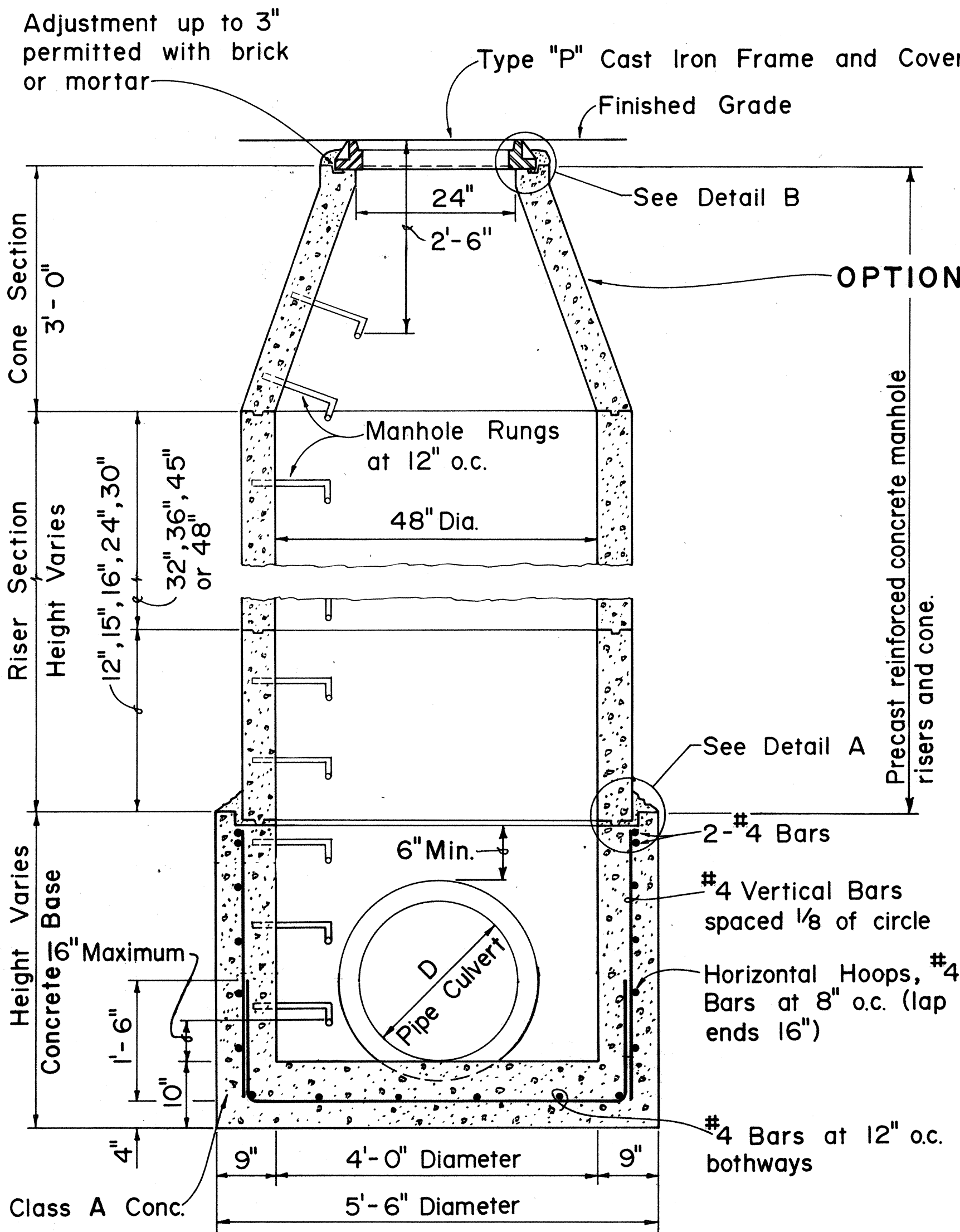


SIDE VIEW

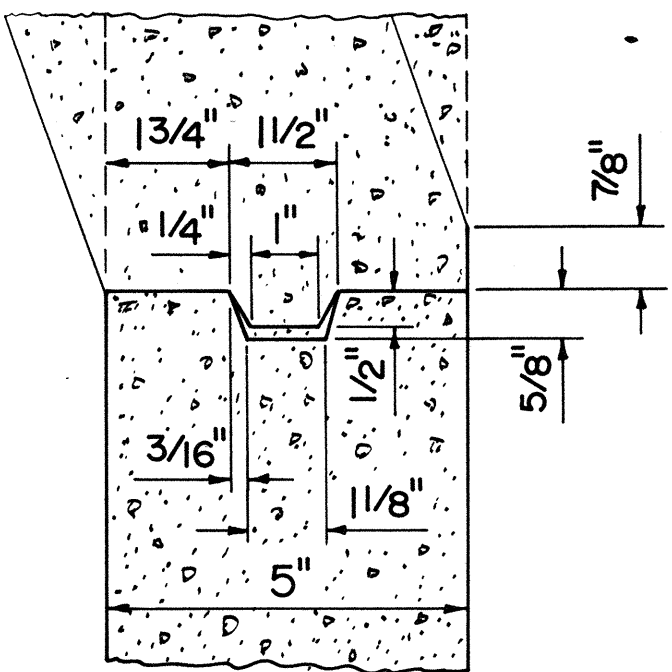


FRONT VIEW

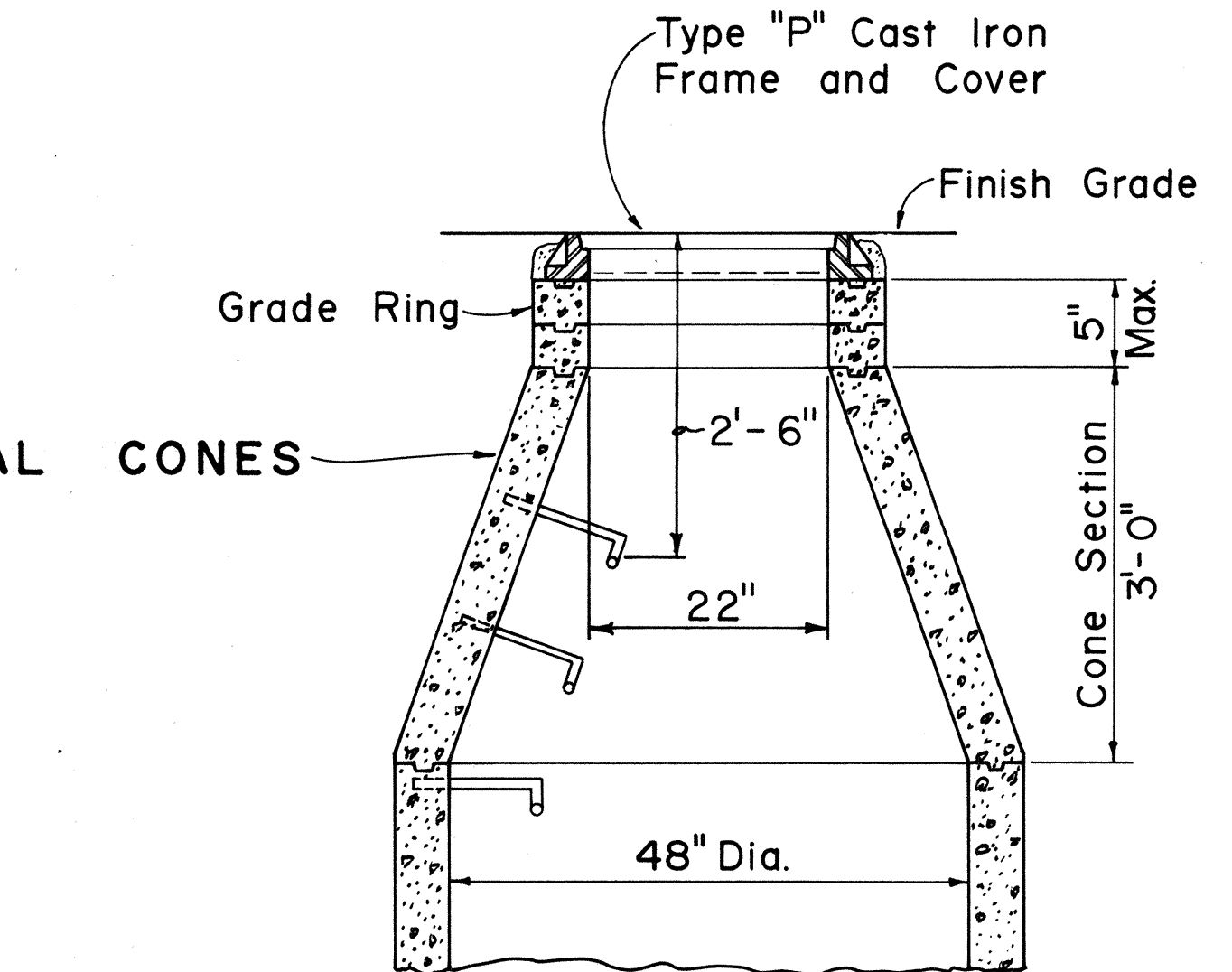
MANHOLE RUNGS



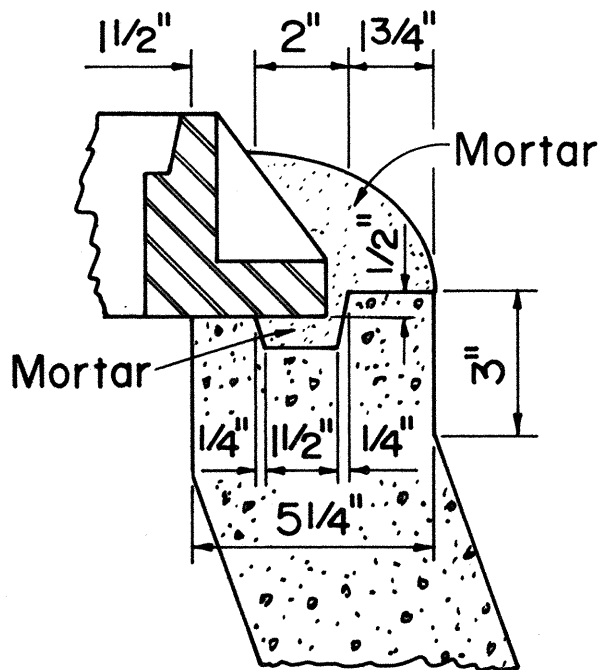
SECTION



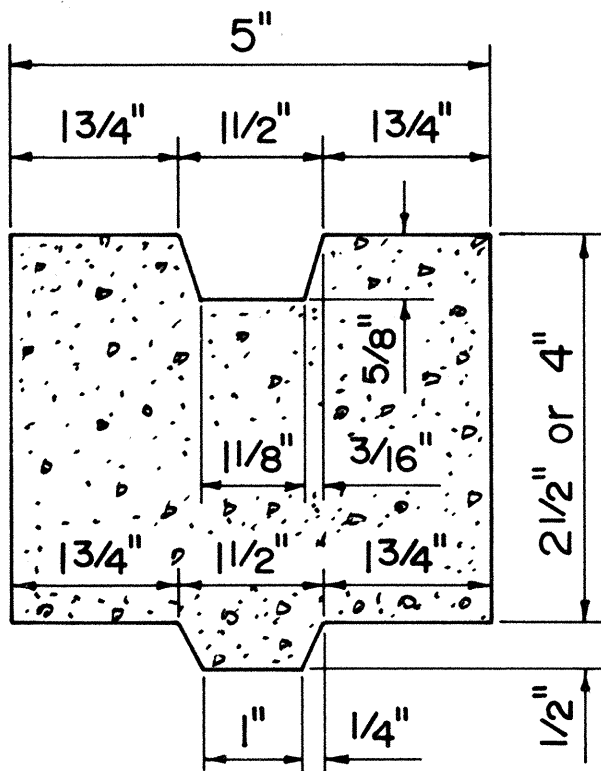
DETAIL FOR RISER JOINTS



DETAIL A



DETAIL B



GRADE RING DETAIL

TYPE "F" STORM DRAIN MANHOLE

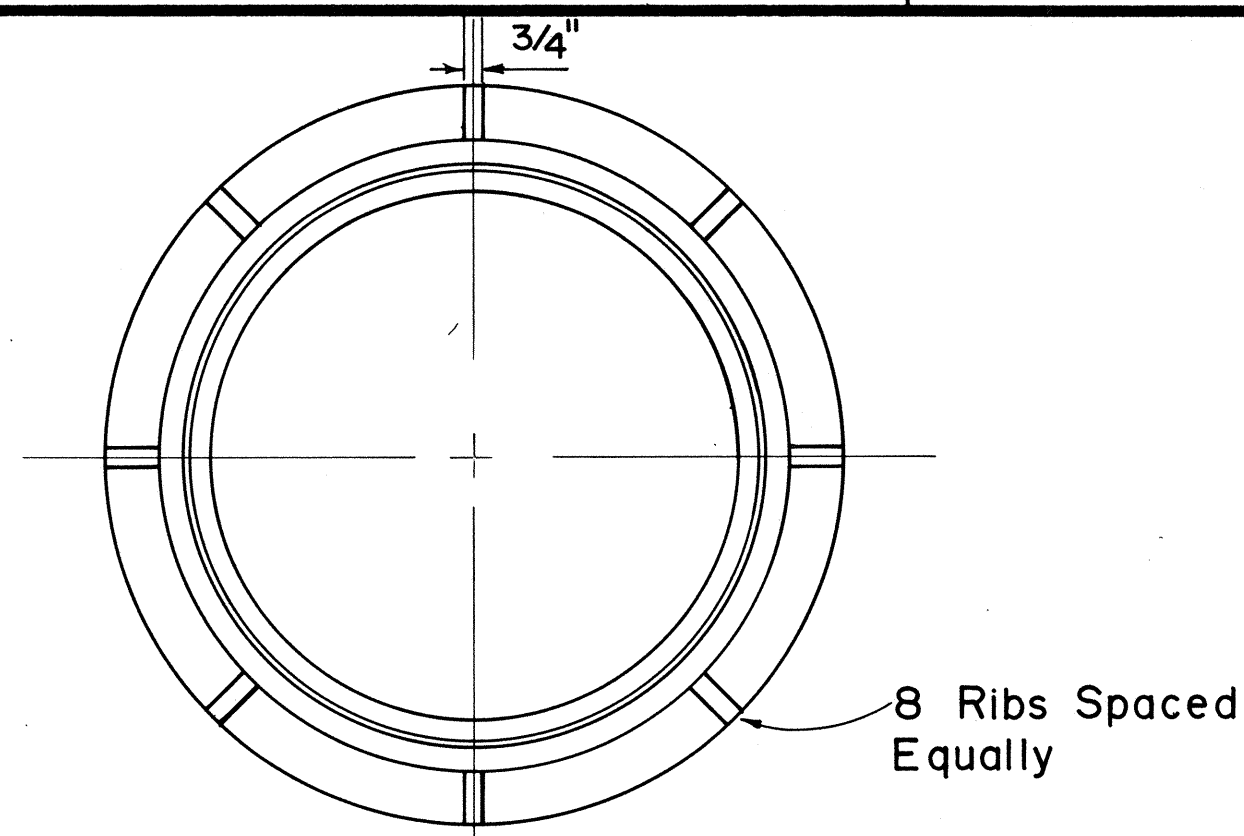
APPROVAL RECOMMENDED:
J. Nakano 6-19-79
 HYDRAULIC DESIGN ENGINEER DATE

APPROVED:
Shelton Nakano 6-22-79
 ASSISTANT CHIEF, ENGINEERING DATE

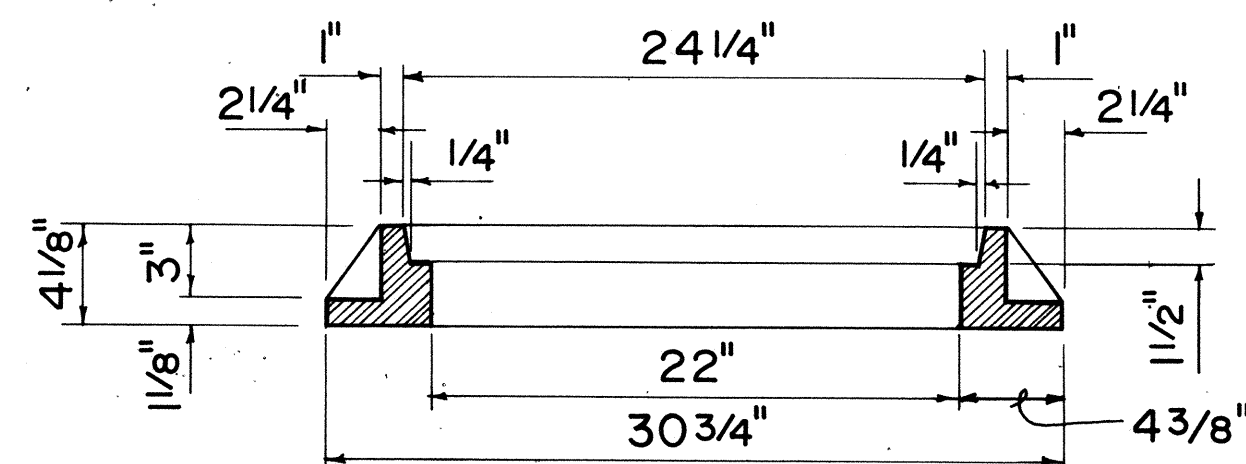
NO.	REVISION	APPROVED BY	DATE
1.	Supersedes Sht. DH 5A approved 2-25-71	H.T.	6/22/79
2.	Change title of manhole and location of top rung	H.T.	8/20/80
3.	Notes added to define concrete base and Precast concrete units.	H.T.	12/4/80

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
STANDARD DETAILS
TYPE F
STORM DRAIN MANHOLE
Not To Scale Date: Dec. 1977

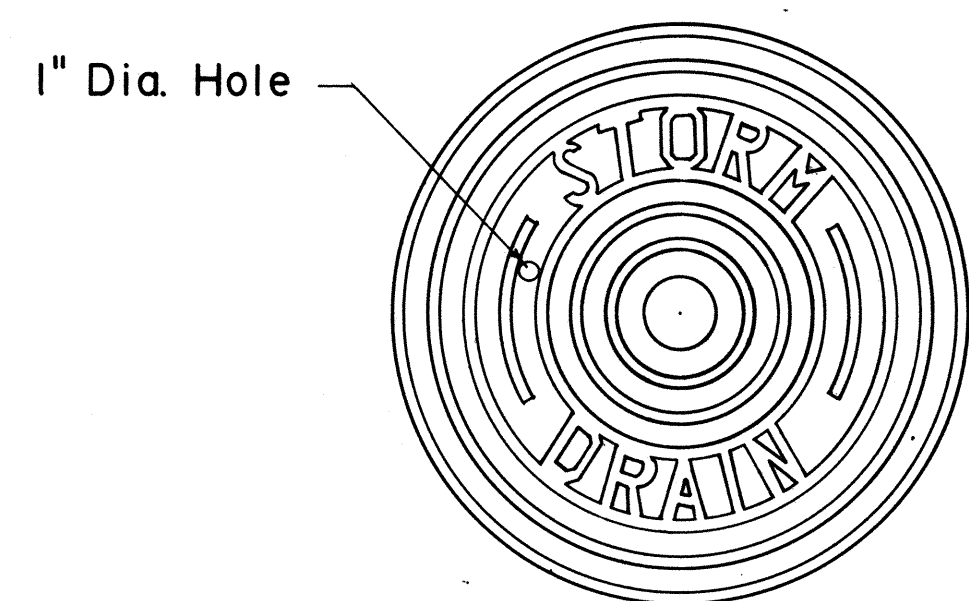
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(1)	1986	96	121



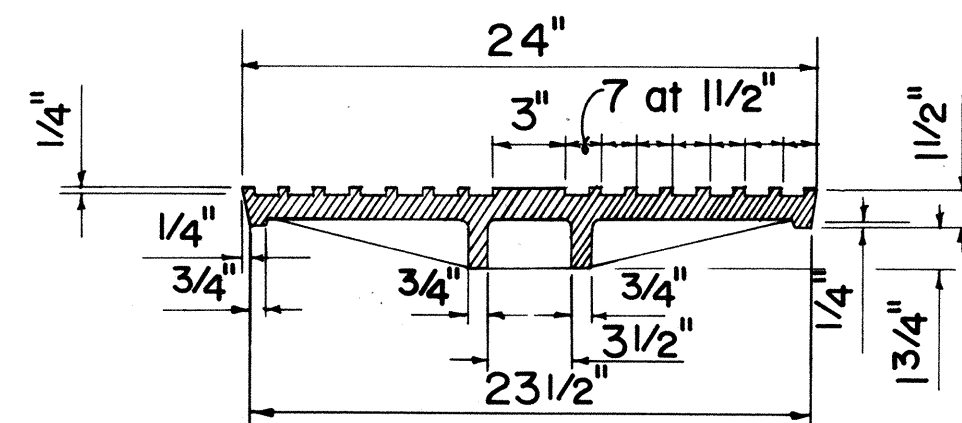
PLAN OF FRAME



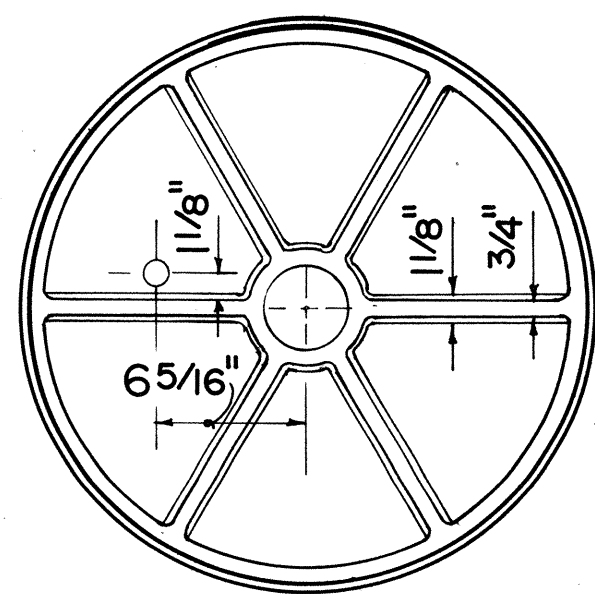
SECTION OF FRAME



TOP VIEW OF COVER

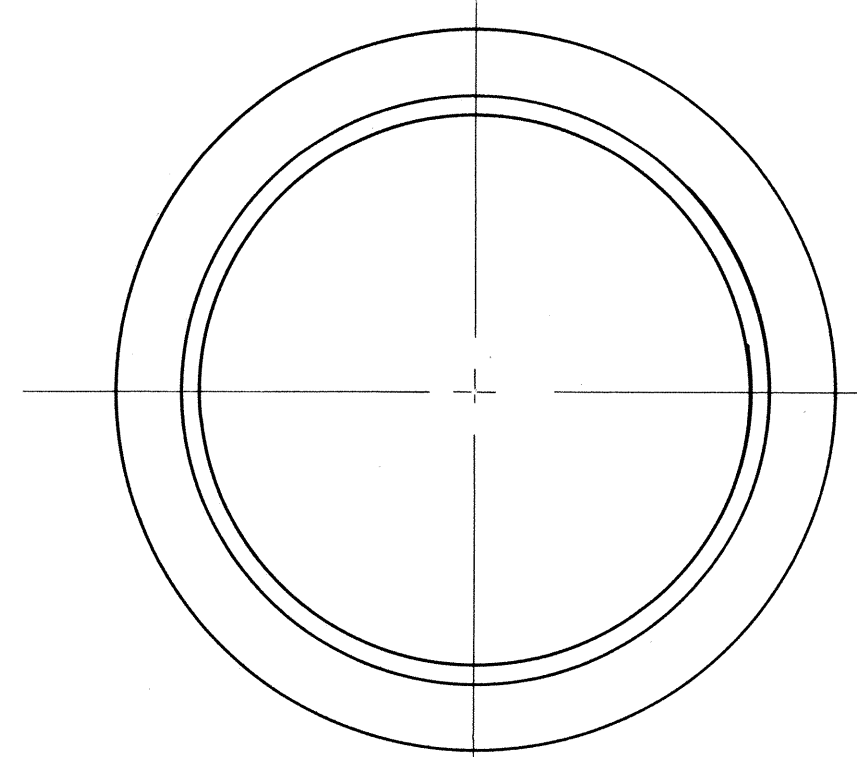


SECTION

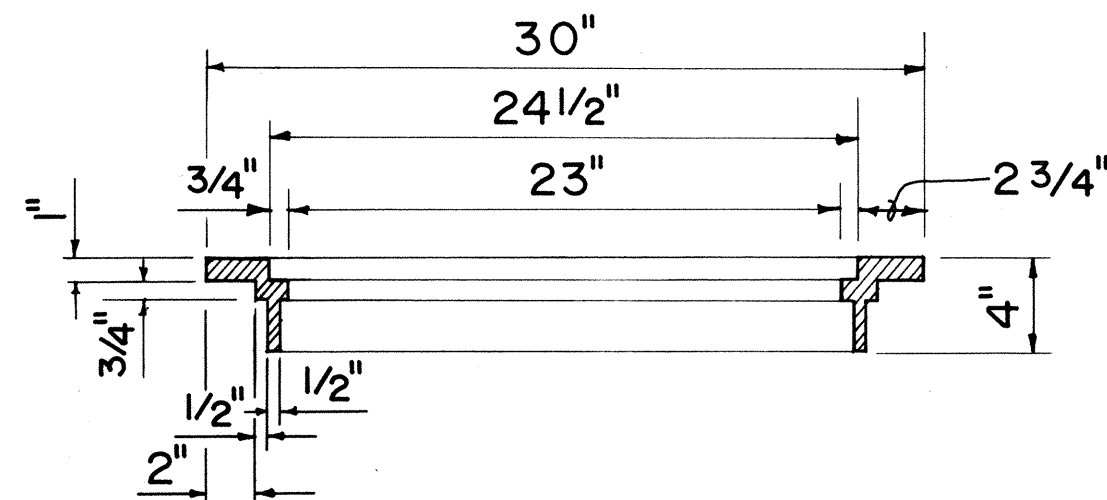


BOTTOM VIEW OF COVER

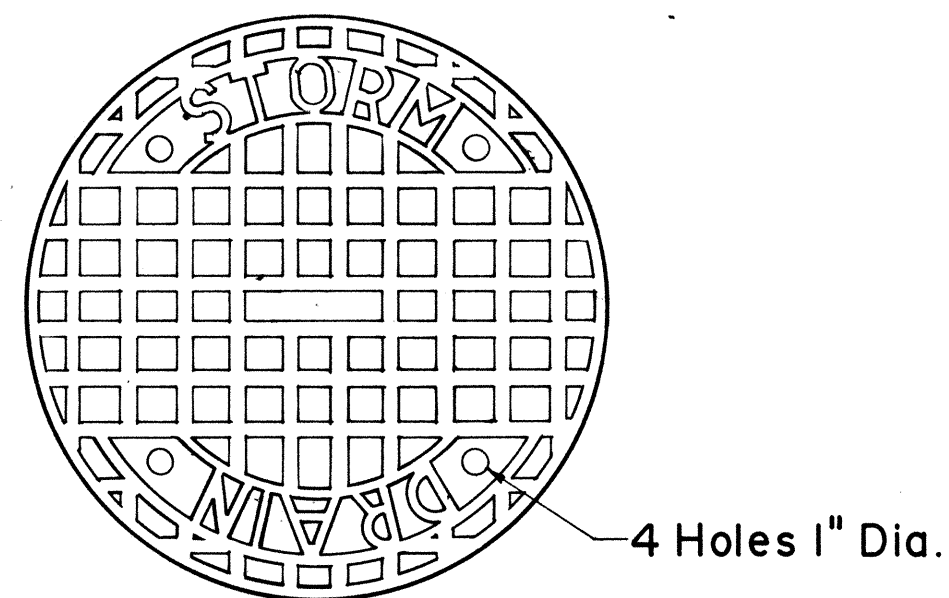
TYPE "P" CAST IRON
FRAME AND COVER



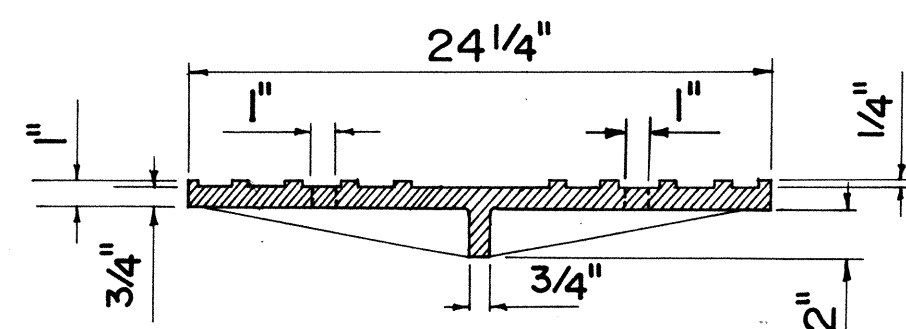
PLAN OF FRAME



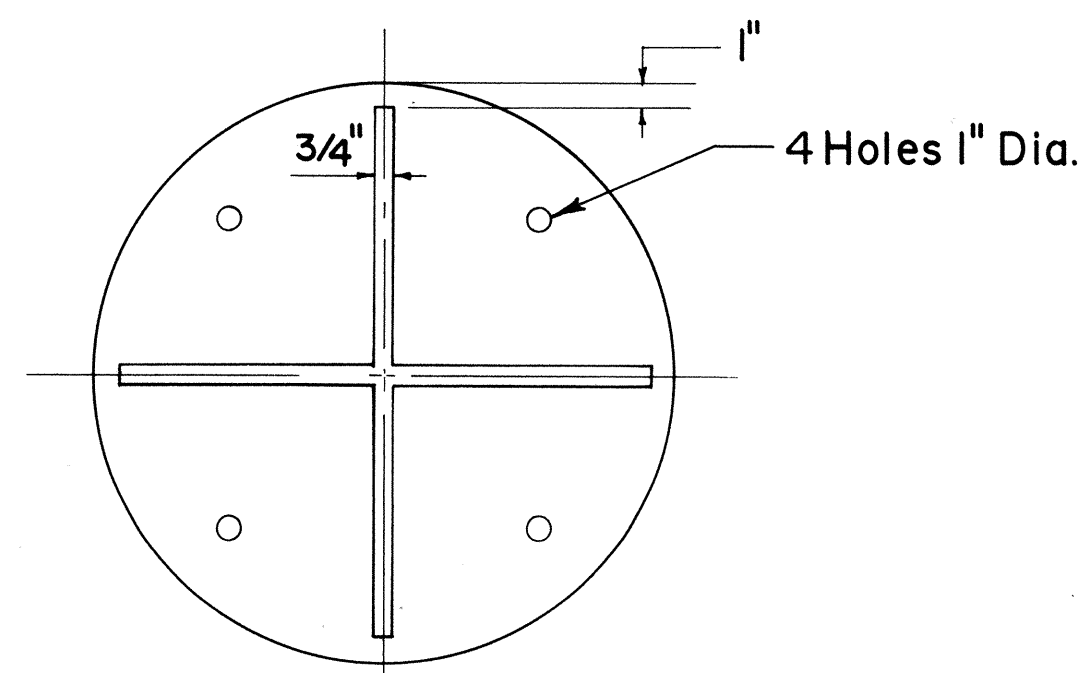
SECTION OF FRAME



TOP VIEW OF COVER

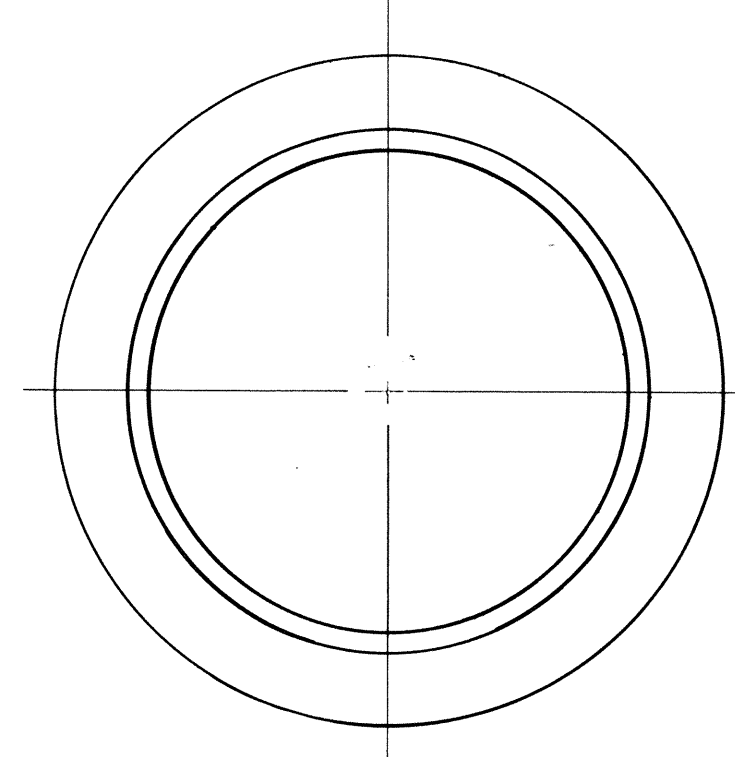


SECTION

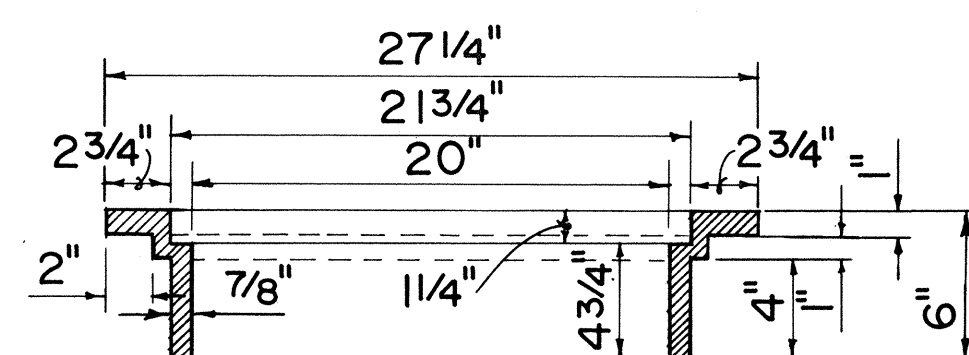


BOTTOM VIEW OF COVER

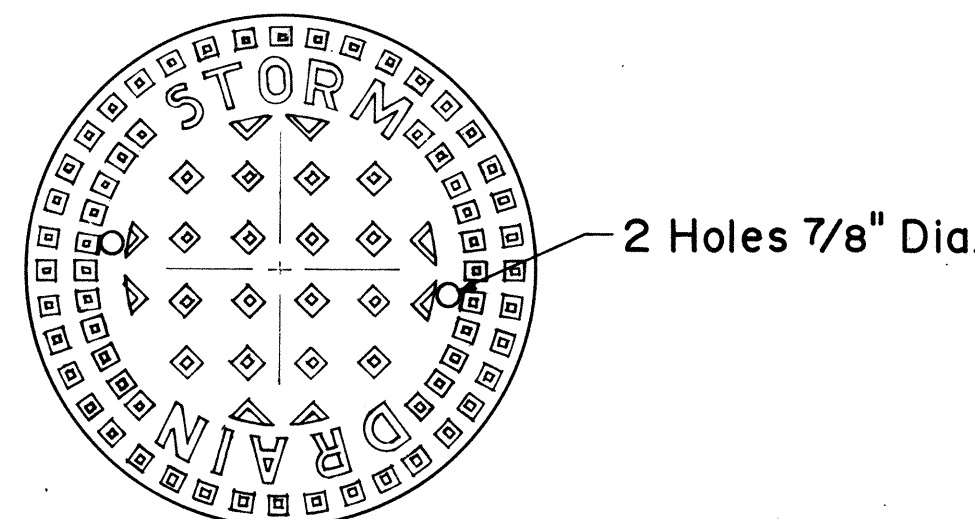
TYPE "B" CAST IRON
FRAME AND COVER



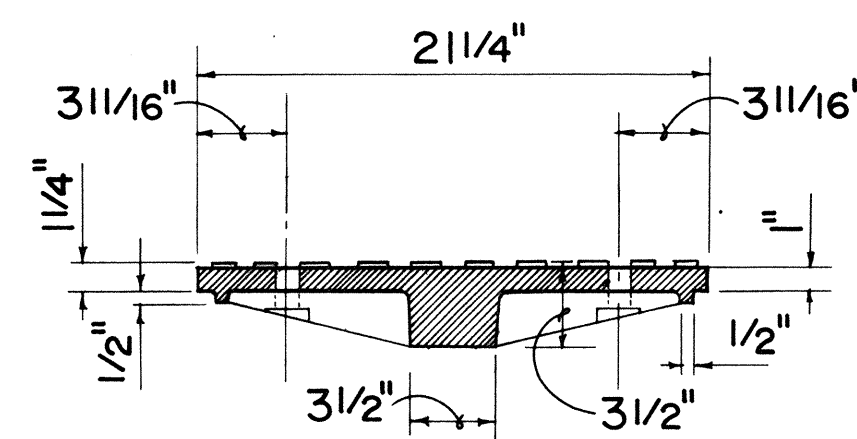
PLAN OF FRAME



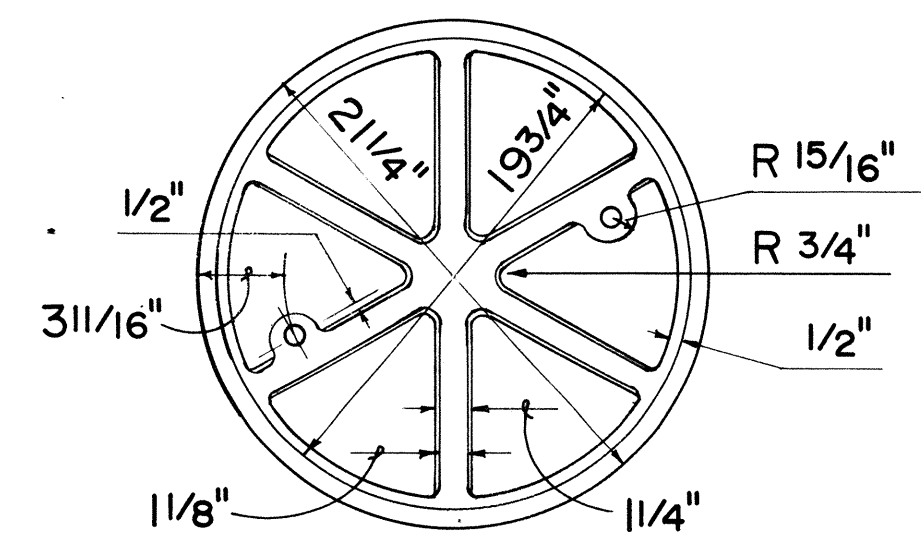
SECTION OF FRAME



TOP VIEW OF COVER

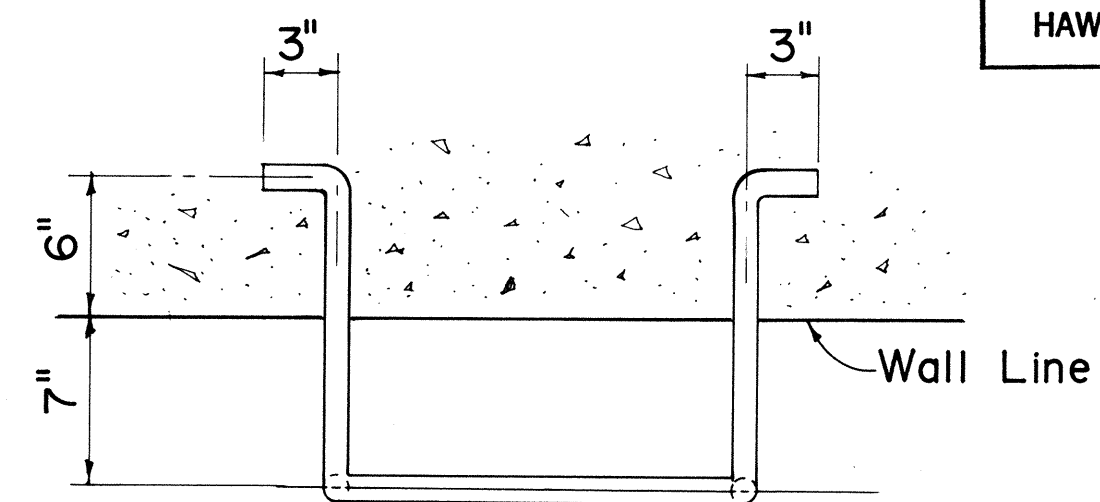


SECTION

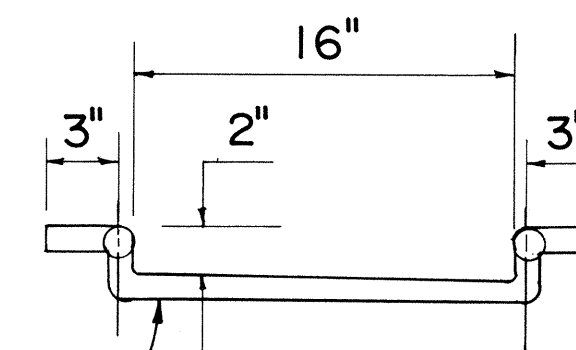


BOTTOM VIEW OF COVER

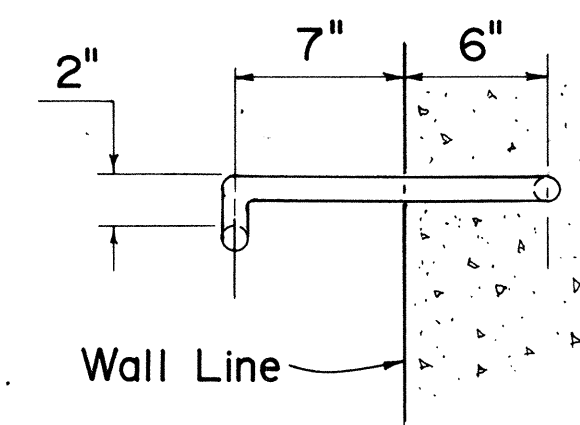
TYPE "A" CAST IRON
FRAME AND COVER



PLAN



FRONT VIEW



SIDE VIEW

MANHOLE RUNG

APPROVAL RECOMMENDED:
Herbert Zakeishi 6-19-79
 HYDRAULIC DESIGN ENGINEER DATE
 APPROVED:
Herbert Zakeishi 6-22-79
 ASSISTANT CHIEF, ENGINEERING DATE

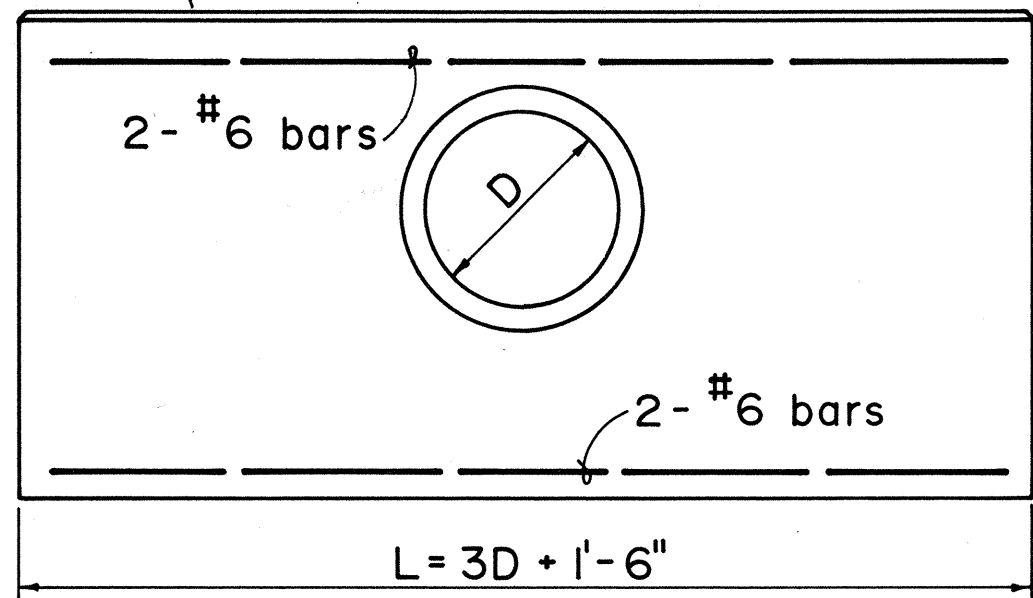
NO.	REVISION	APPROVED BY	DATE
1.	Supersedes Sht. DH 6 approved 12-17-69	H.P.	6/22/79

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
STANDARD DETAILS CATCH BASIN AND MANHOLE CASTINGS
Not To Scale Date: Dec. 1977

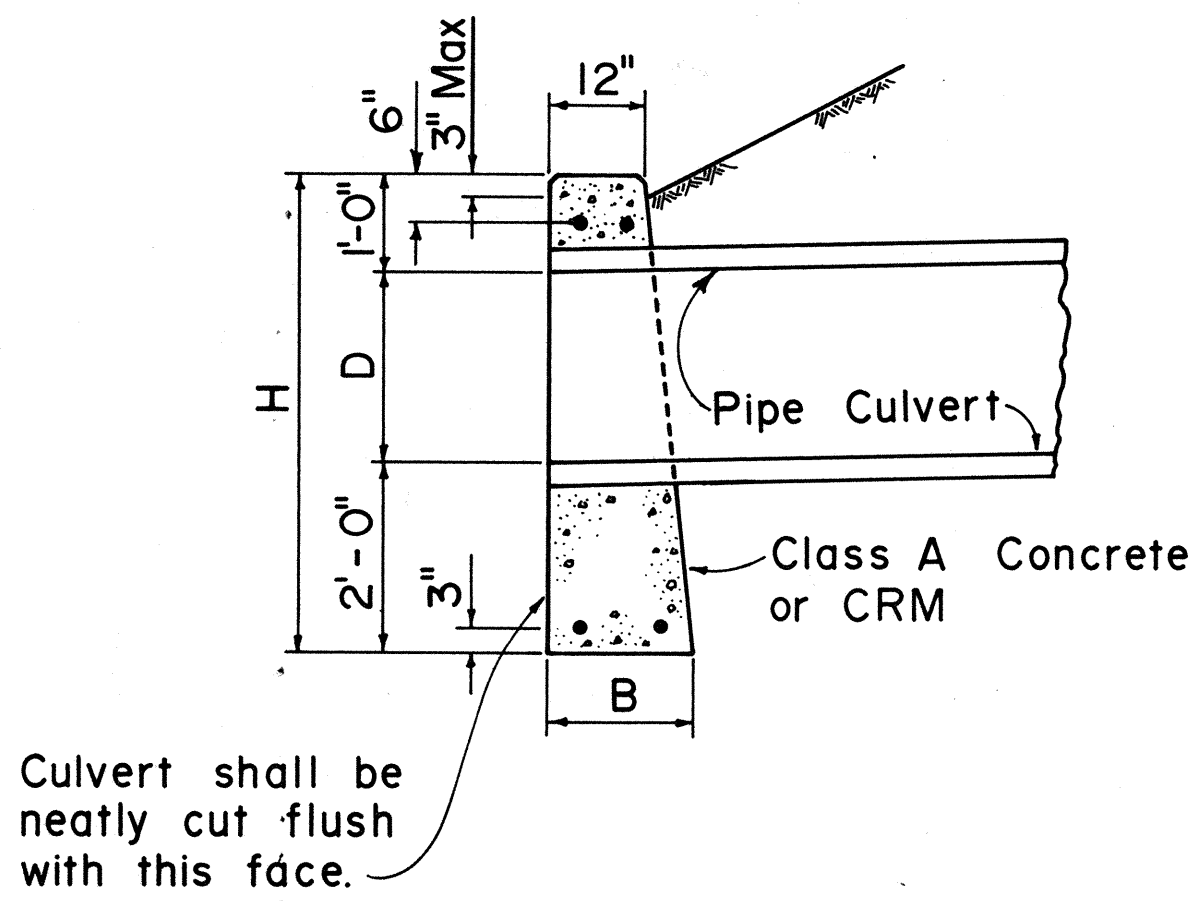
SHEET NO. 3 OF 4 SHEETS DH 6

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(1)	1986	97	121

Chamfer all exposed edges one inch



ELEVATION



SECTION

DATA FOR CONC. HDWL.			
D	B	L	H
18"	1'-6"	6'-0"	4'-6"
24"	1'-6"	7'-6"	5'-0"
30"	2'-0"	9'-0"	5'-6"
36"	2'-0"	10'-6"	6'-0"
42"	2'-6"	12'-0"	6'-6"
48"	2'-6"	13'-6"	7'-0"

DATA FOR CRM HDWL.			
D	B	L	H
18"	1'-9"	6'-0"	4'-6"
24"	2'-0"	7'-6"	5'-0"
30"	2'-3"	9'-0"	5'-6"
36"	2'-6"	10'-6"	6'-0"

CONCRETE OR CRM HEADWALL

APPROVAL RECOMMENDED:
T. Nakano 6-19-79
 HYDRAULIC DESIGN ENGINEER DATE
 APPROVED:
Harold Zaleishi 6-22-79
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1.	Supersedes Sht. DH 10 approved 12-17-69	H.T.	6/22/79
2.	Change Class of concrete	H.T.	12/4/80

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
 STANDARD DETAILS
 CONCRETE OR CEMENT
 RUBBLE MASONRY HEADWALLS
 Not To Scale Date: June 1979

SHEET No. 4 OF 4 SHEETS DH10

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