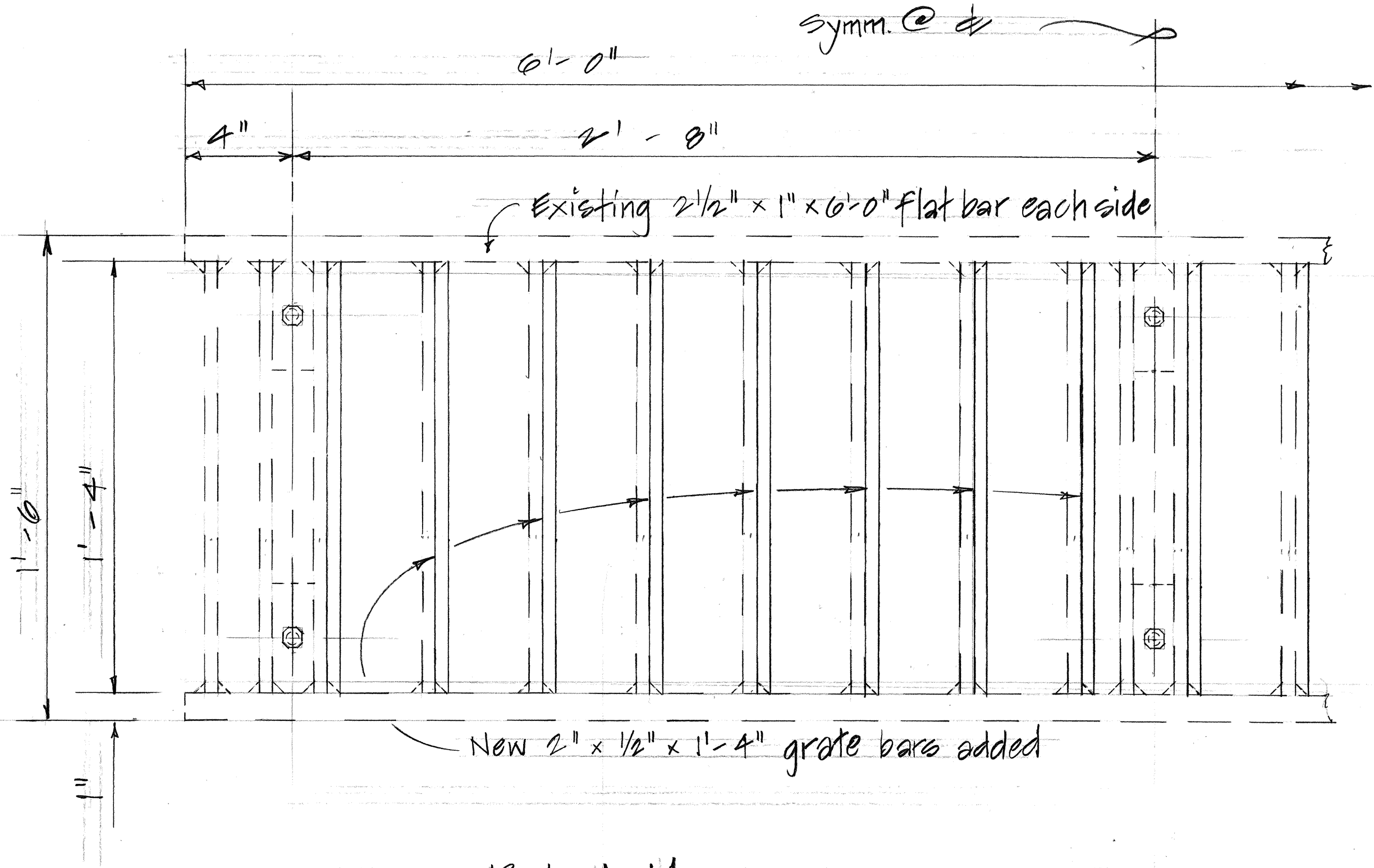
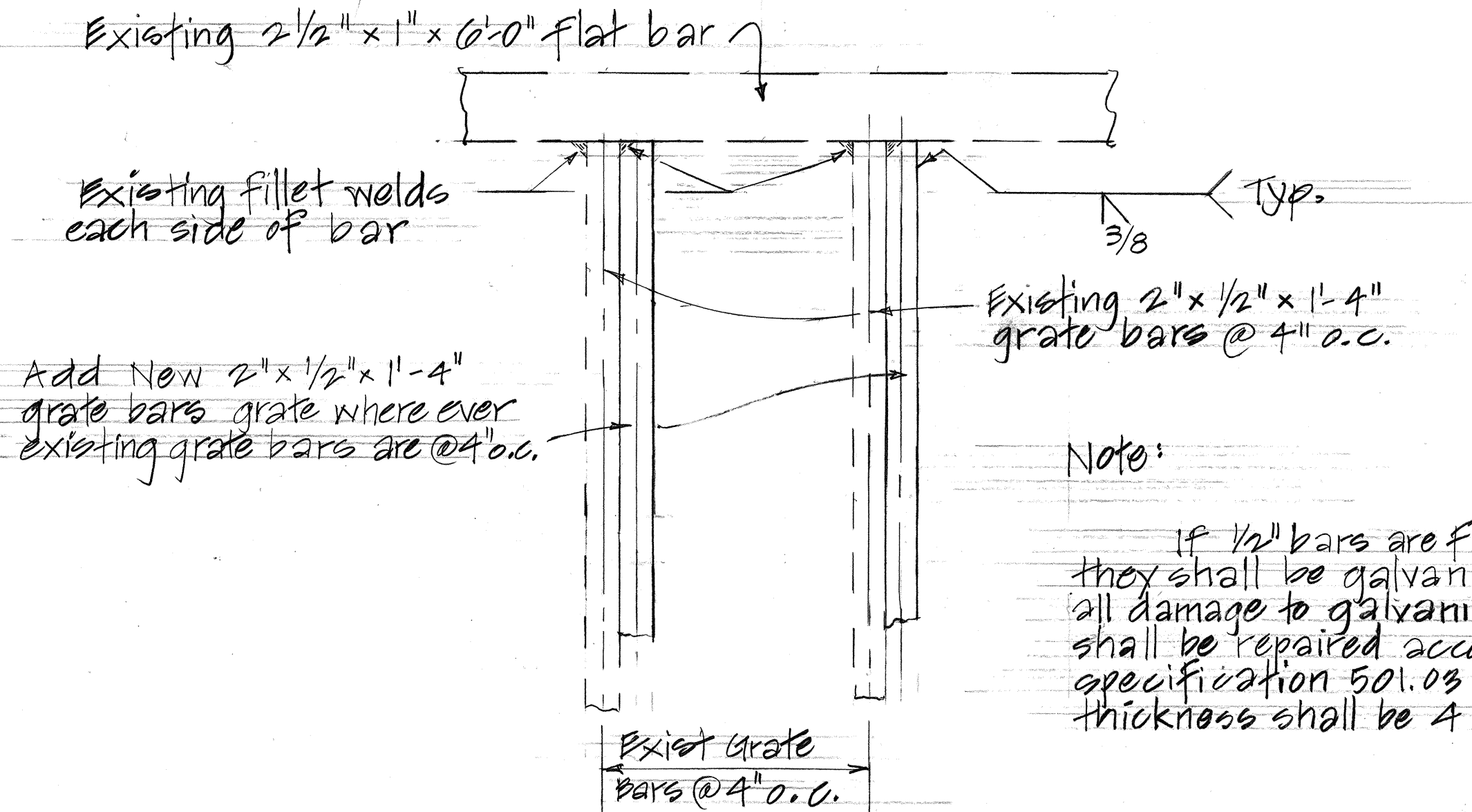


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IK-H1-1 (103)	1986	30	62



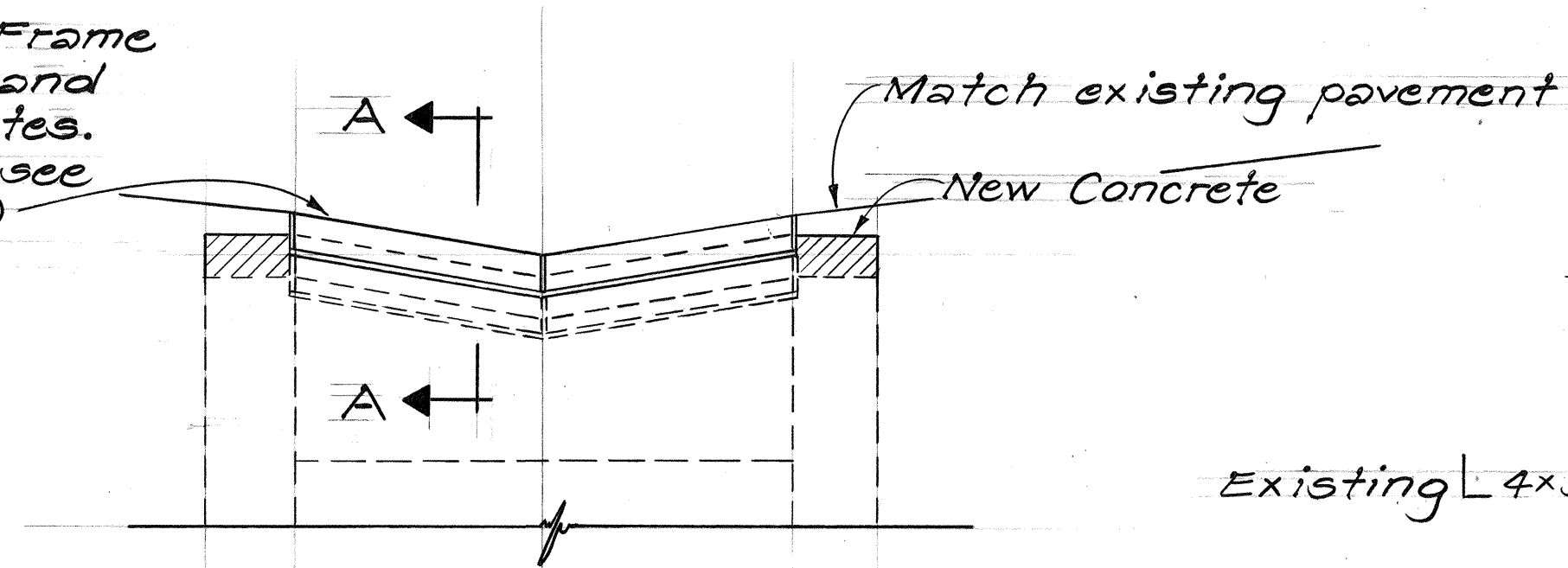
PLAN
Scale: 3" = 1'-0"



DETAIL OF ADDED GRATE BARS
SCALE: HALF SIZE

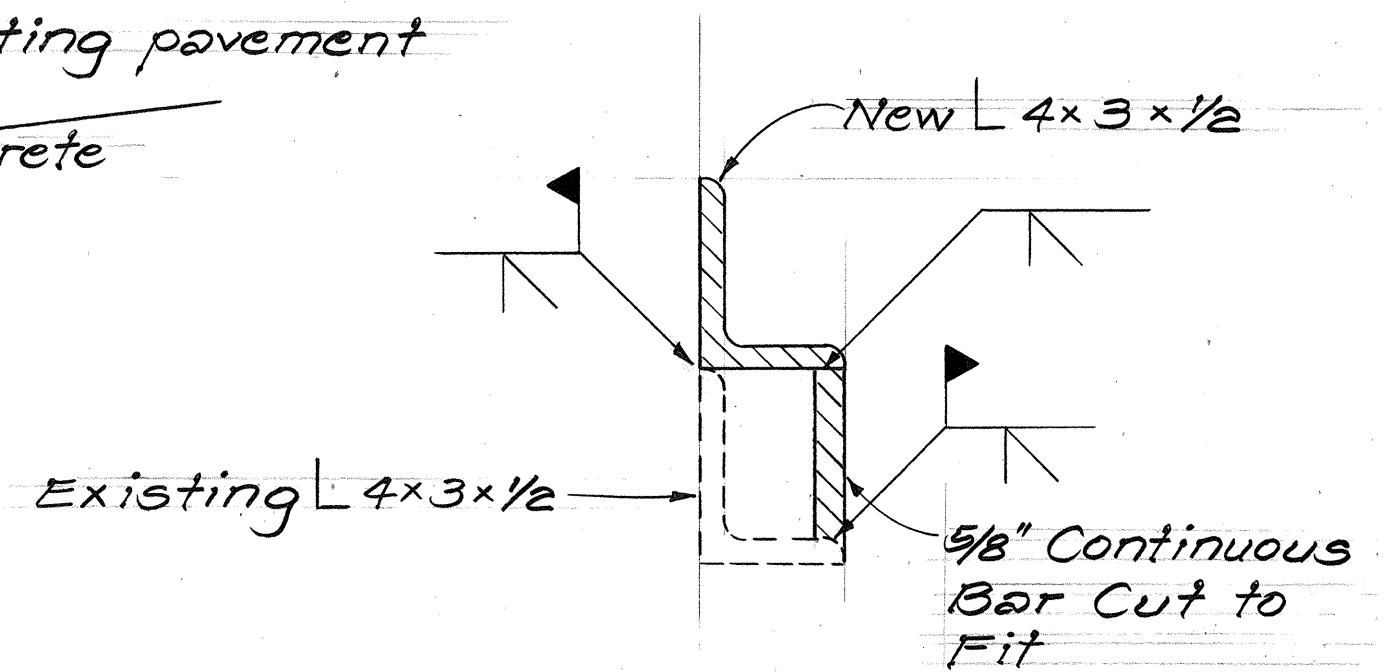
MODIFICATION TO EXISTING DECK
STORM DRAIN GRATE

Install new G1614 Frame to existing frame and reuse existing grates. (For frame details see standard details.) See Sht. No. H-2



TYPICAL SECTION
Scale: 3/4" = 1'-0"

ADJUSTMENT TO EXISTING G1614
INLET AT STA. 105+00 RT.



SECTION "A-A"
Scale: 3" = 1'-0"

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS

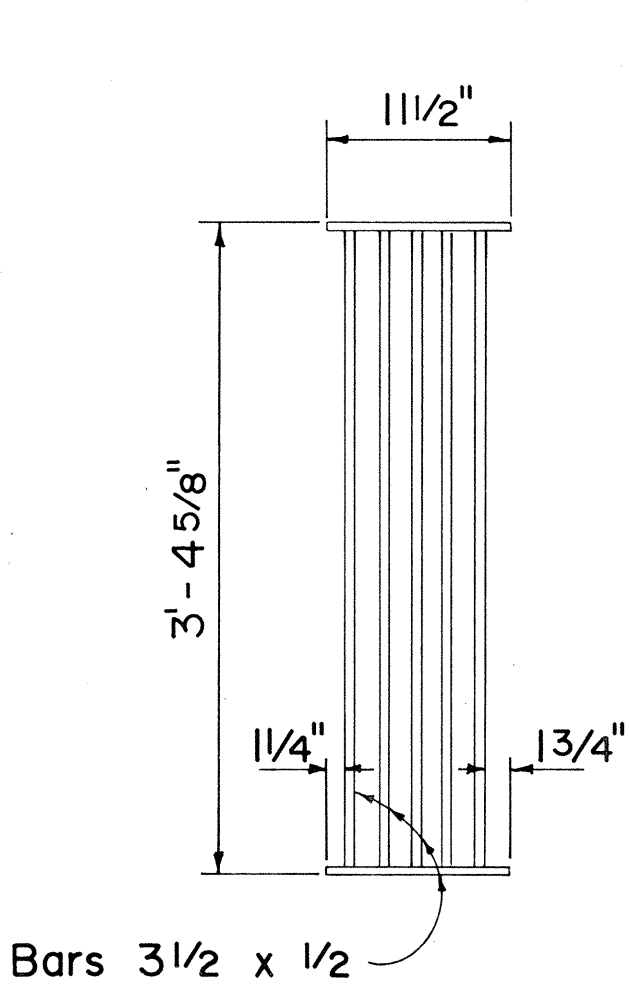
INTERSTATE ROUTE H-1
ADDITIONAL LANES
F.A.I.P. No. IK-H1-1 (103)
SCALE: AS SHOWN DATE: JUNE, 1985

SHEET NO. H1 OF 2 SHEETS

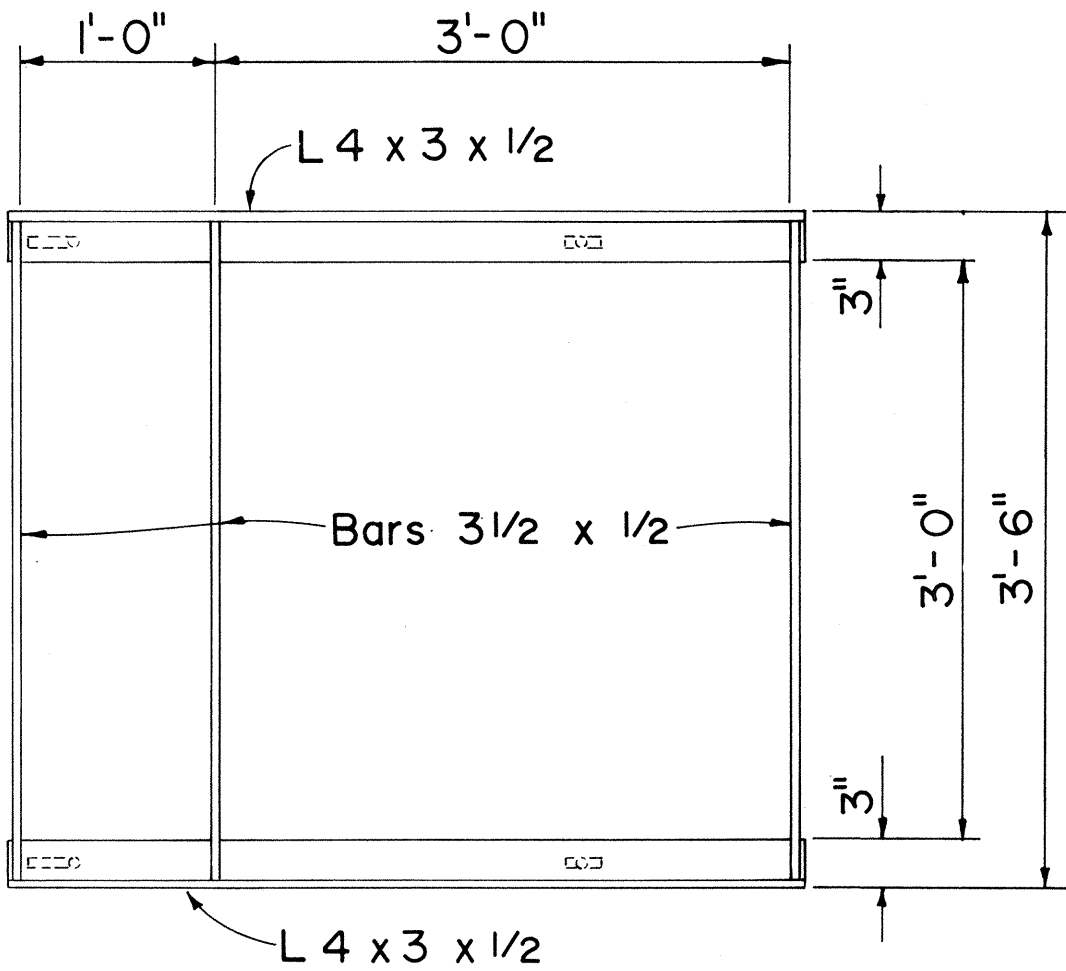
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(1986)	1986	31	62

GENERAL NOTE

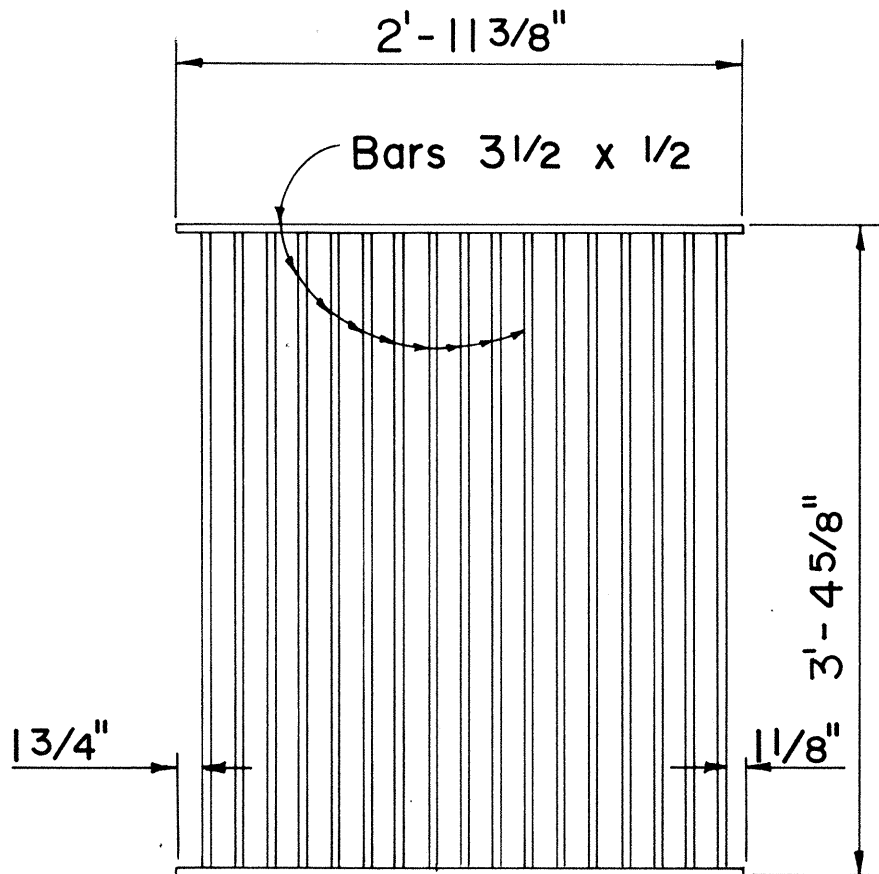
1. All welds 3/8" unless otherwise noted.



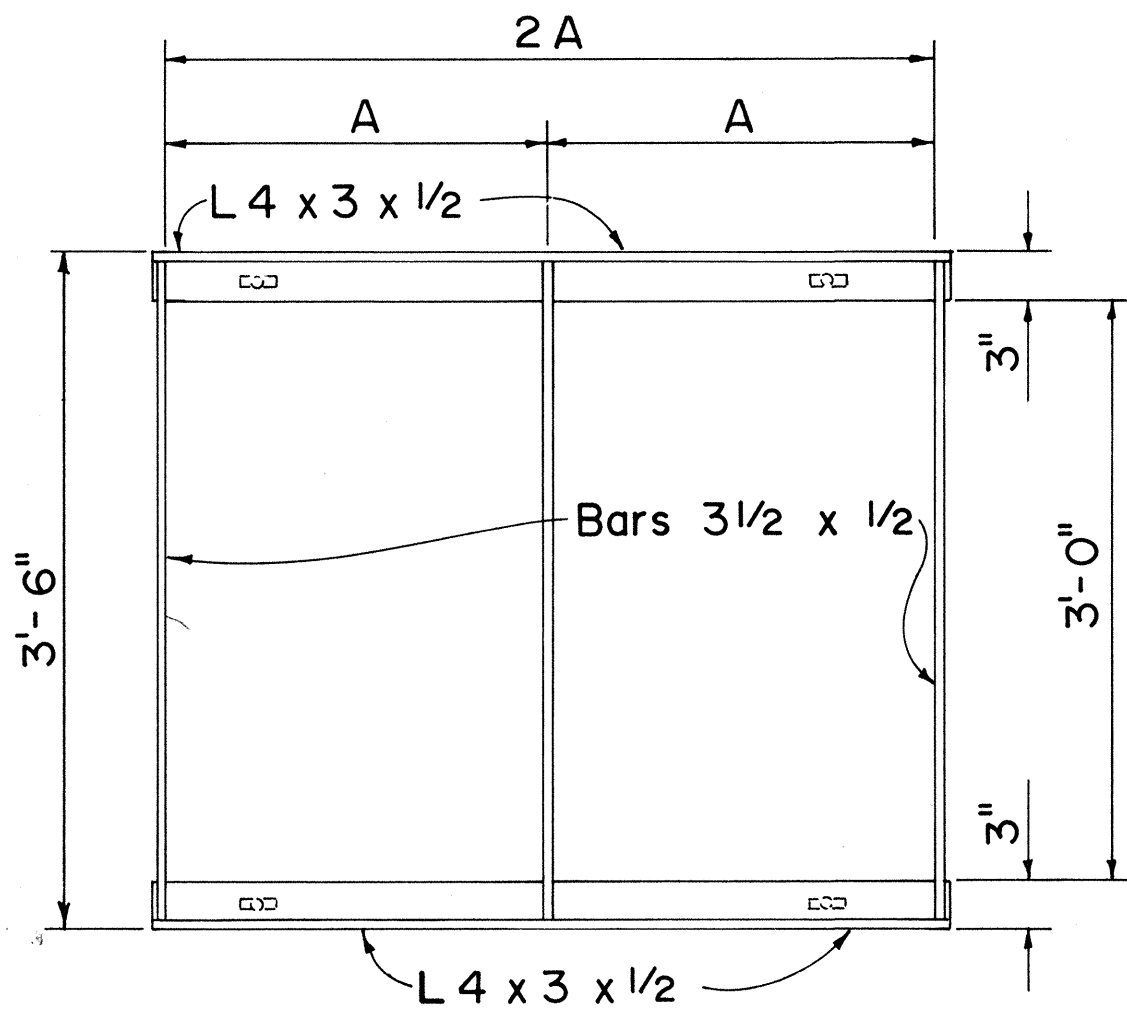
PLAN



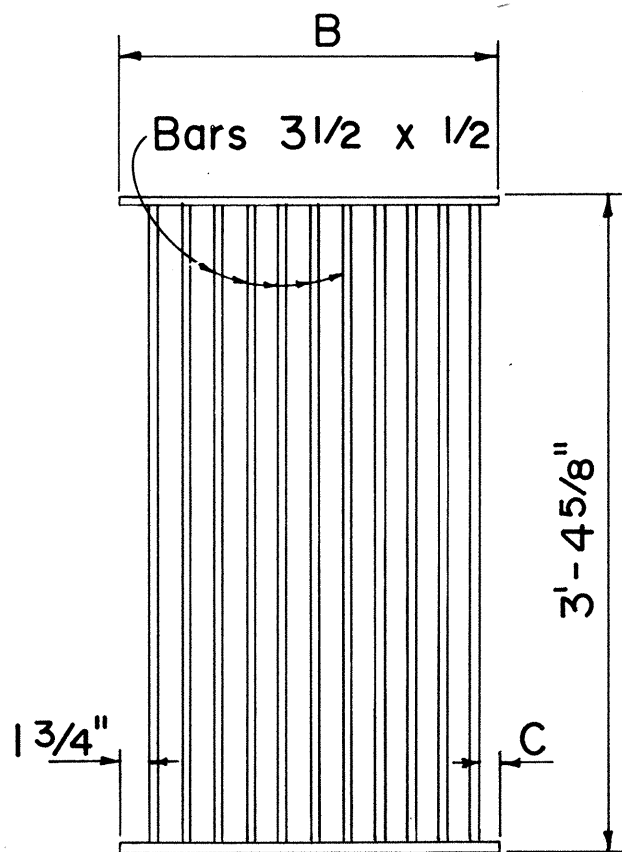
PLAN



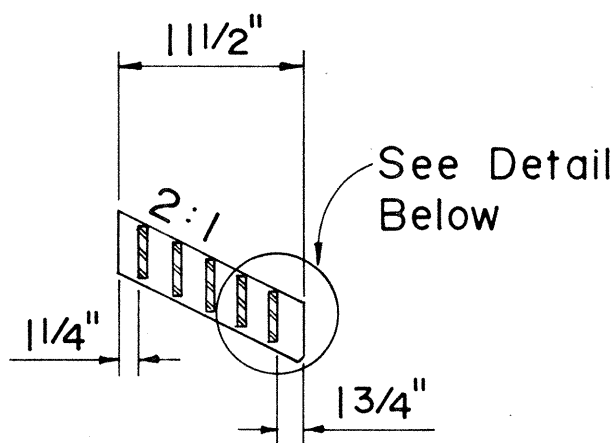
PLAN



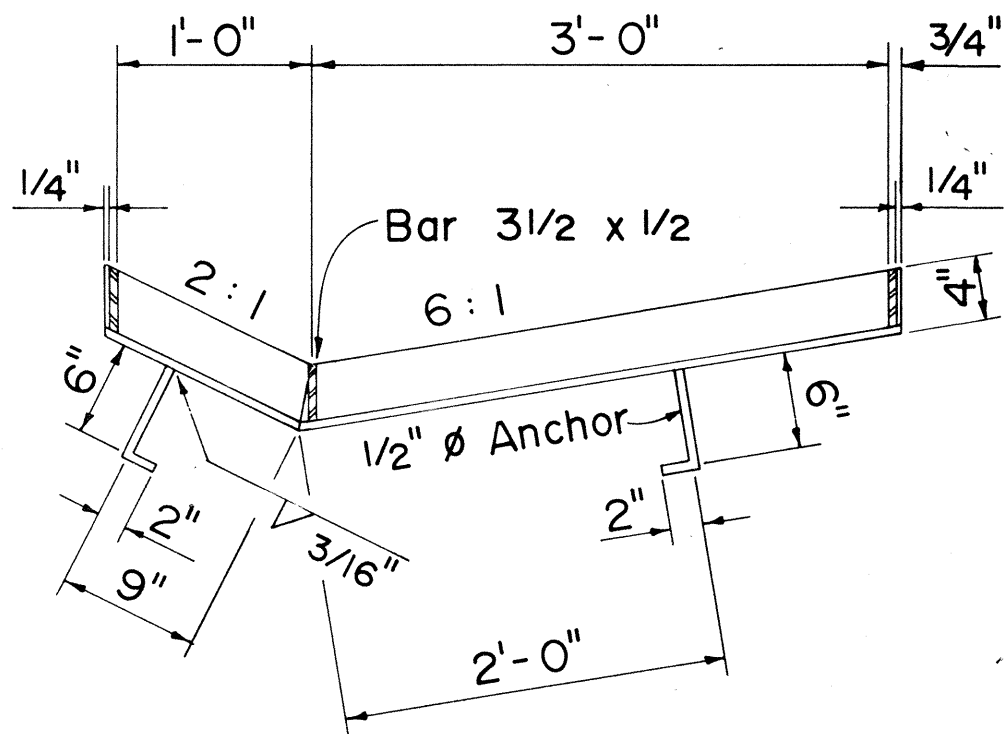
PLAN



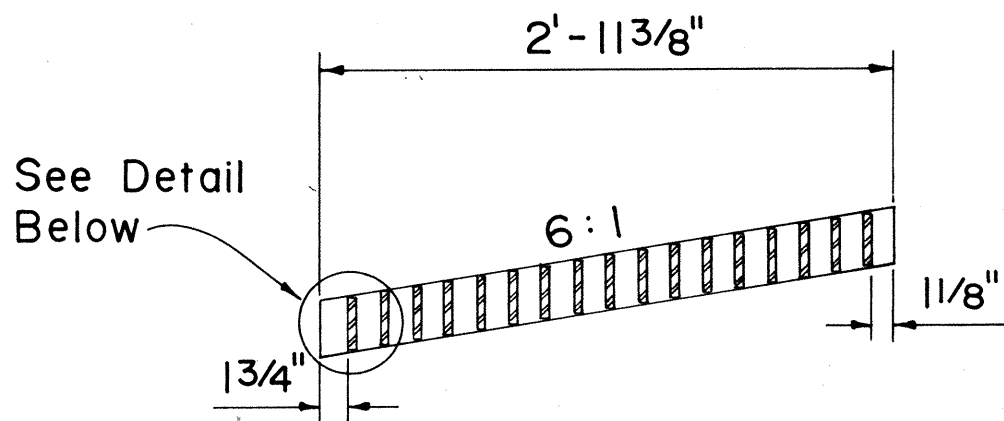
PLAN



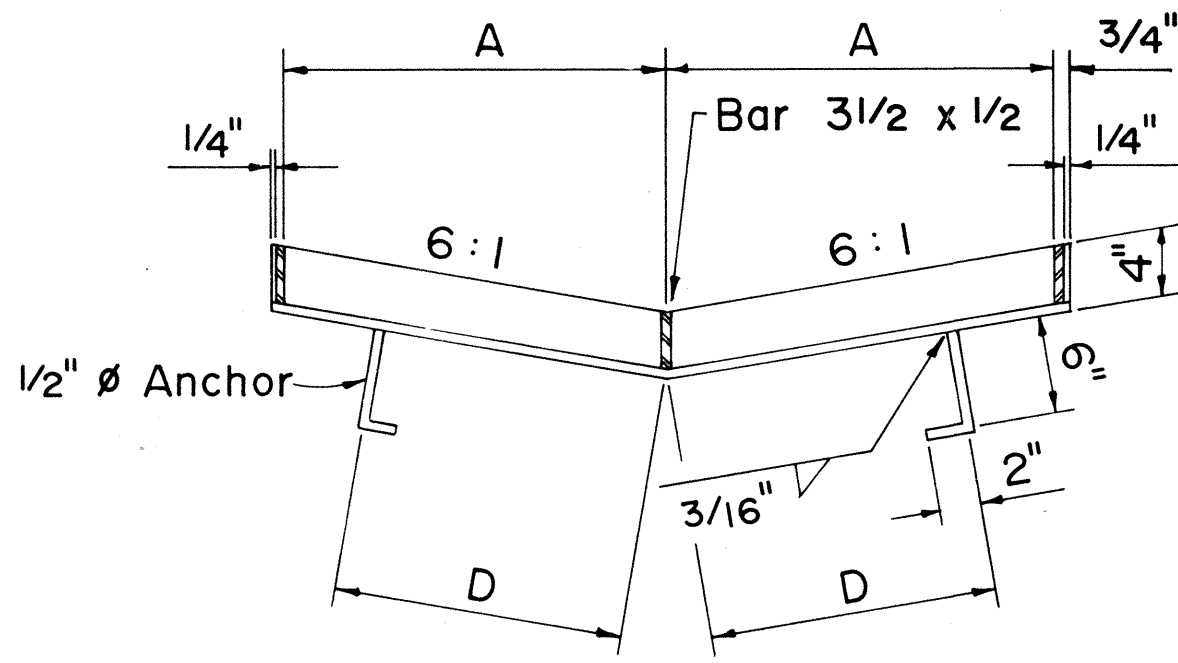
SECTION



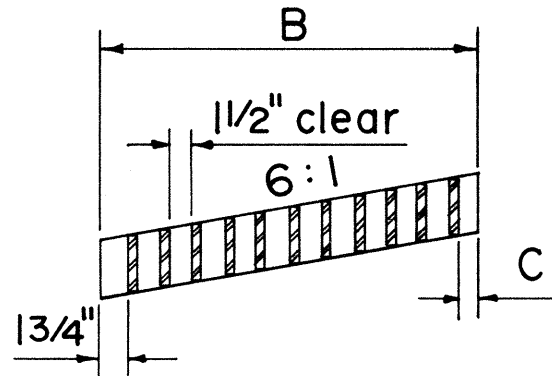
SECTION



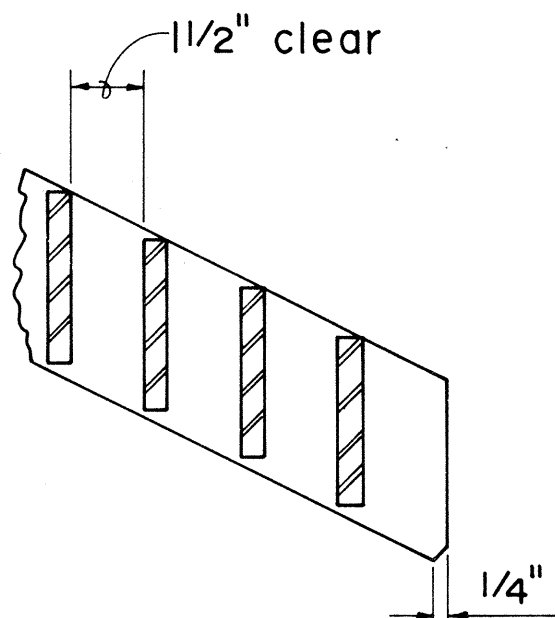
SECTION



SECTION

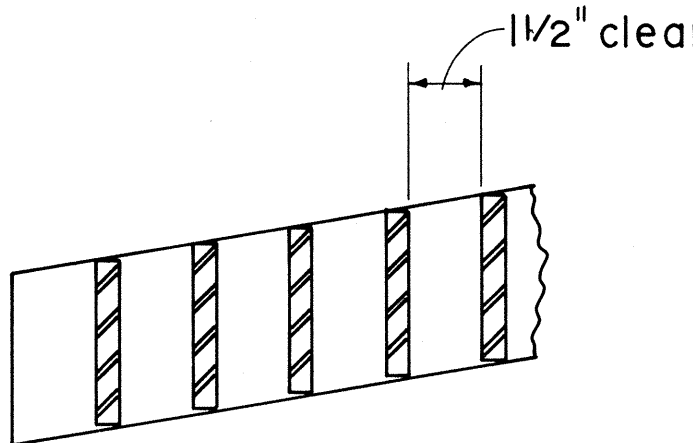


SECTION



SECTION

SECTION



SECTION

61614 OR 61616 STEEL FRAME AND GRATE

DIMENSIONS					
TYPE	NO. BARS	A	B	C	D
61614	11	2'-0"	1'-11 1/2"	1 1/4"	1'-6"
61616	17	3'-0"	2'-11 3/8"	1 1/8"	2'-0"

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

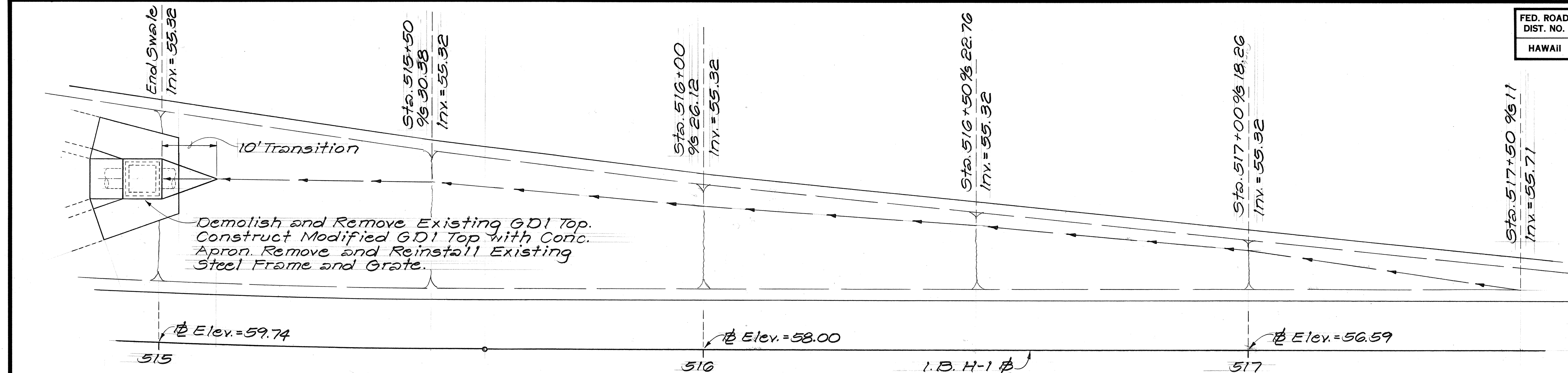
APPROVED:
Herbert Zafraishi
 ASSISTANT CHIEF, ENGINEERING 6-22-79
 DATE

NO.	REVISION	APPROVED BY	DATE
1.	Supersedes Sht. DH8 & DH9 approved 12-17-69	H.I.	6/22/79
2.	Revise standard nomenclature for rolled steel shapes.	H.I.	4/21/82

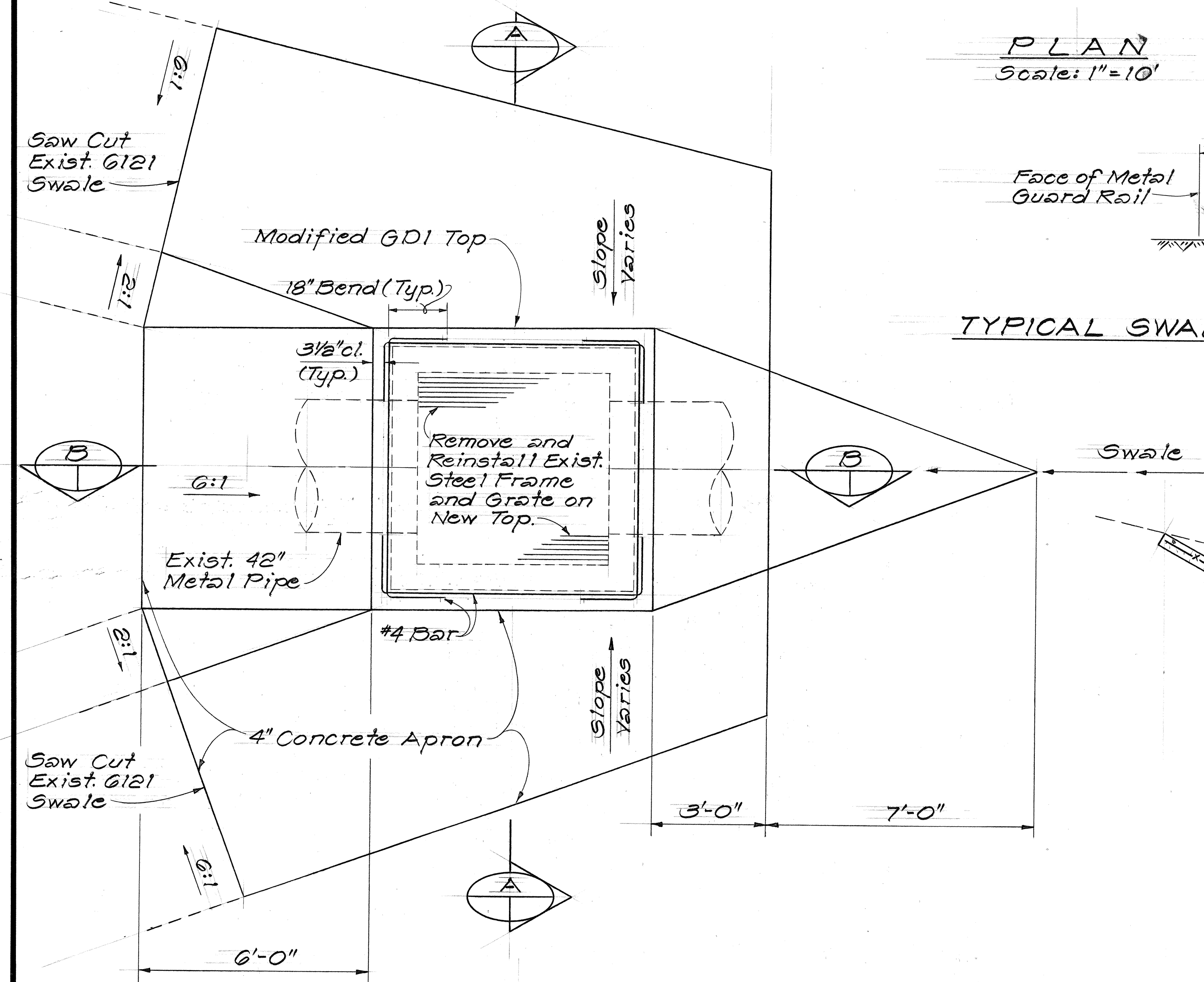
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
STANDARD DETAILS
61214, 61614 & 61616 STEEL FRAMES AND GRATES
Not To Scale Date: Dec. 1977

SHEET NO. H2 OF 2 SHEETS DH 13

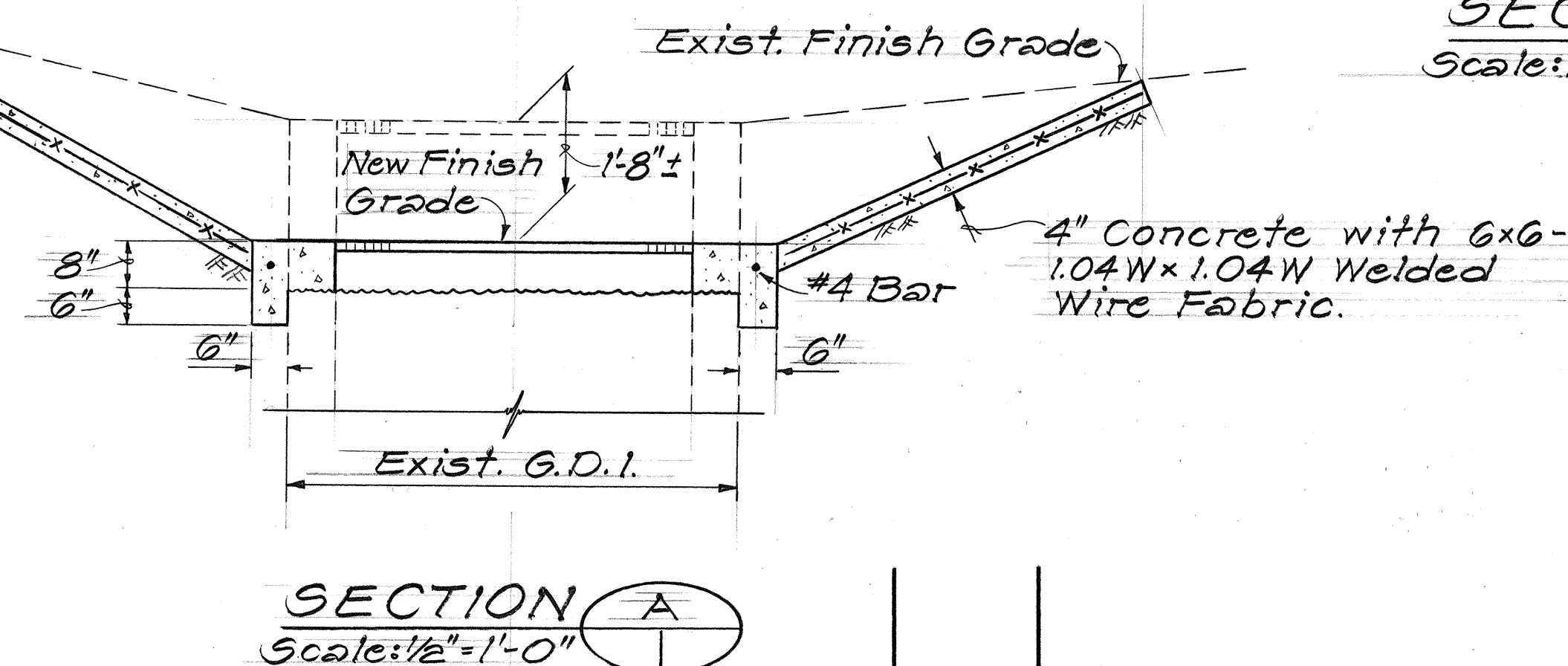
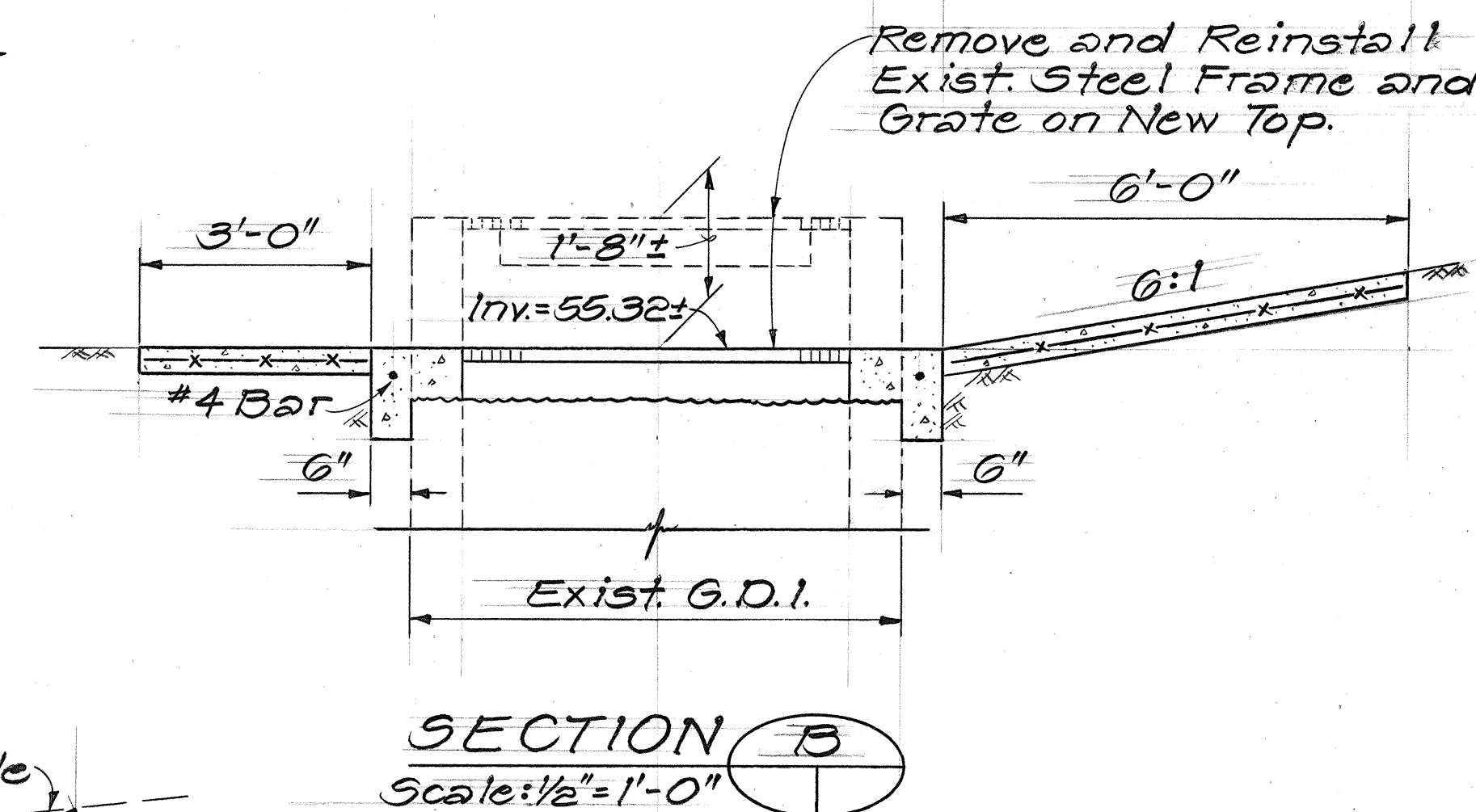
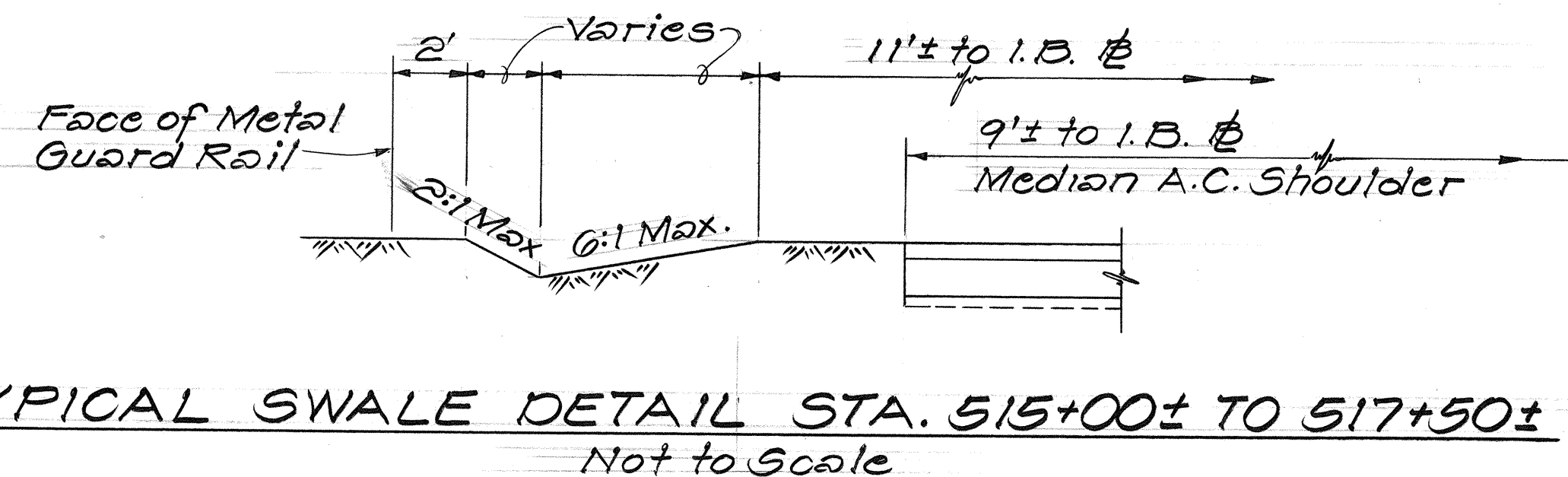
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-H1-1(193)	1987	C.O.31 S-7	62



PLAN
Scale: 1" = 10'



PLAN
Scale: 1/2" = 1'-0"



SECTION A
Scale: 1/2" = 1'-0"

SECTION B
Scale: 1/2" = 1'-0"

ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
NOTED BY	
CHECKED BY	
NO.	

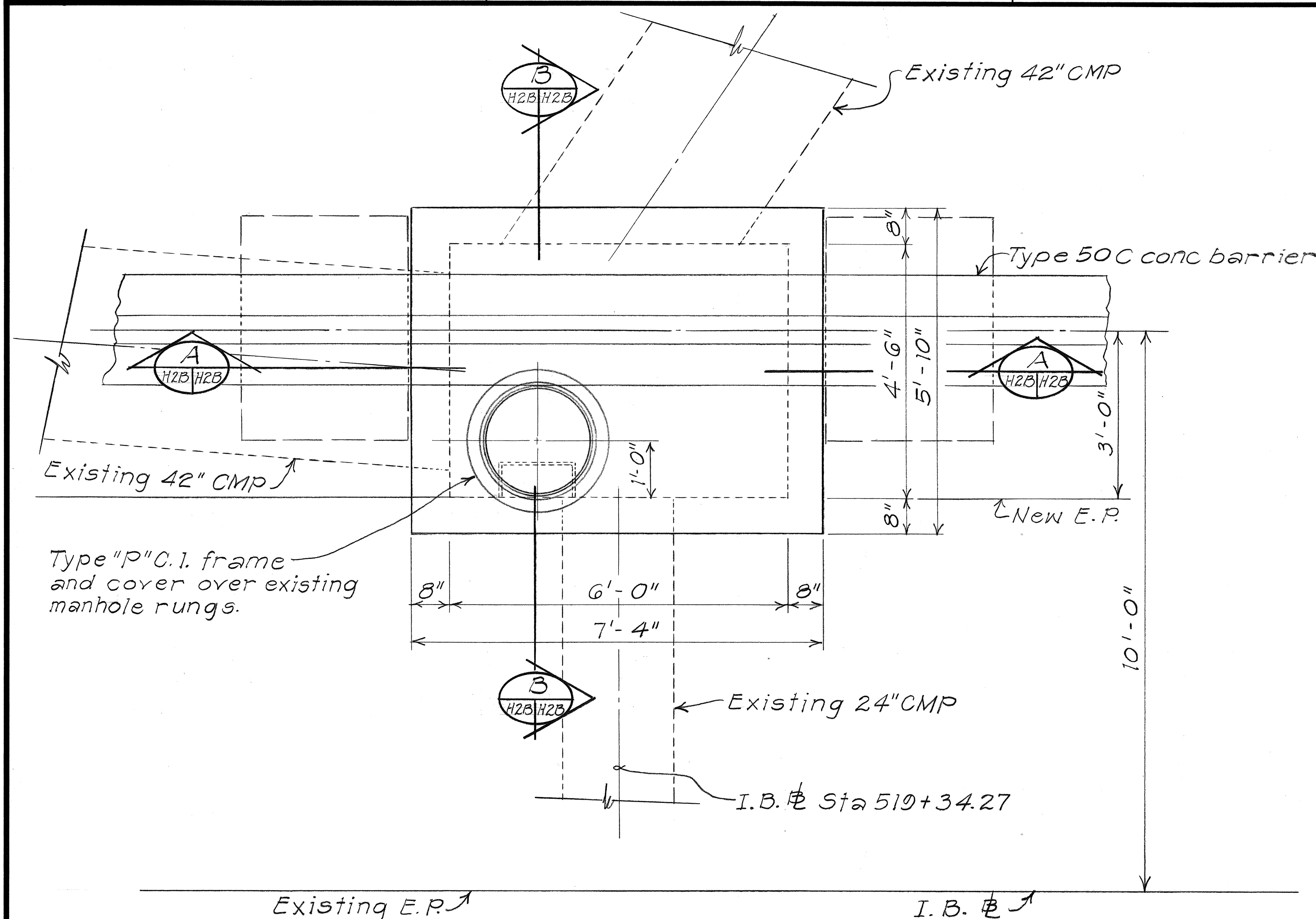
2/20/87 This sheet added for Swale Details & Modified GDI Top Details.

DATE REVISION

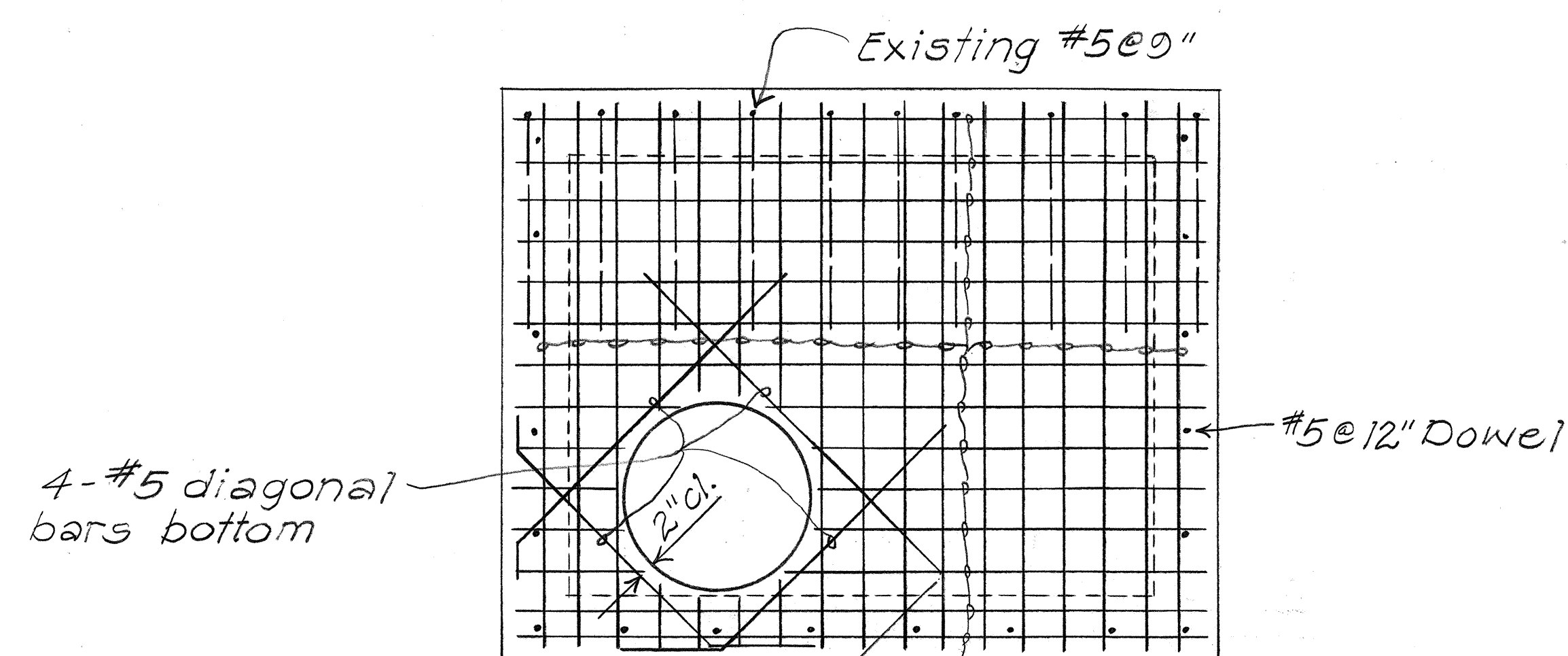
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
DRAINAGE DETAILS
INTERSTATE ROUTE H-1 ADDITIONAL LANES
F.A.I. Proj. No. IR-H1-1(193)
Scale: As Noted Date: Feb. 1987
SHEET NO. 22A OF 2 SHEETS

C.O.31 S-1

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(103)	1987	C.O. 31 S-2	62

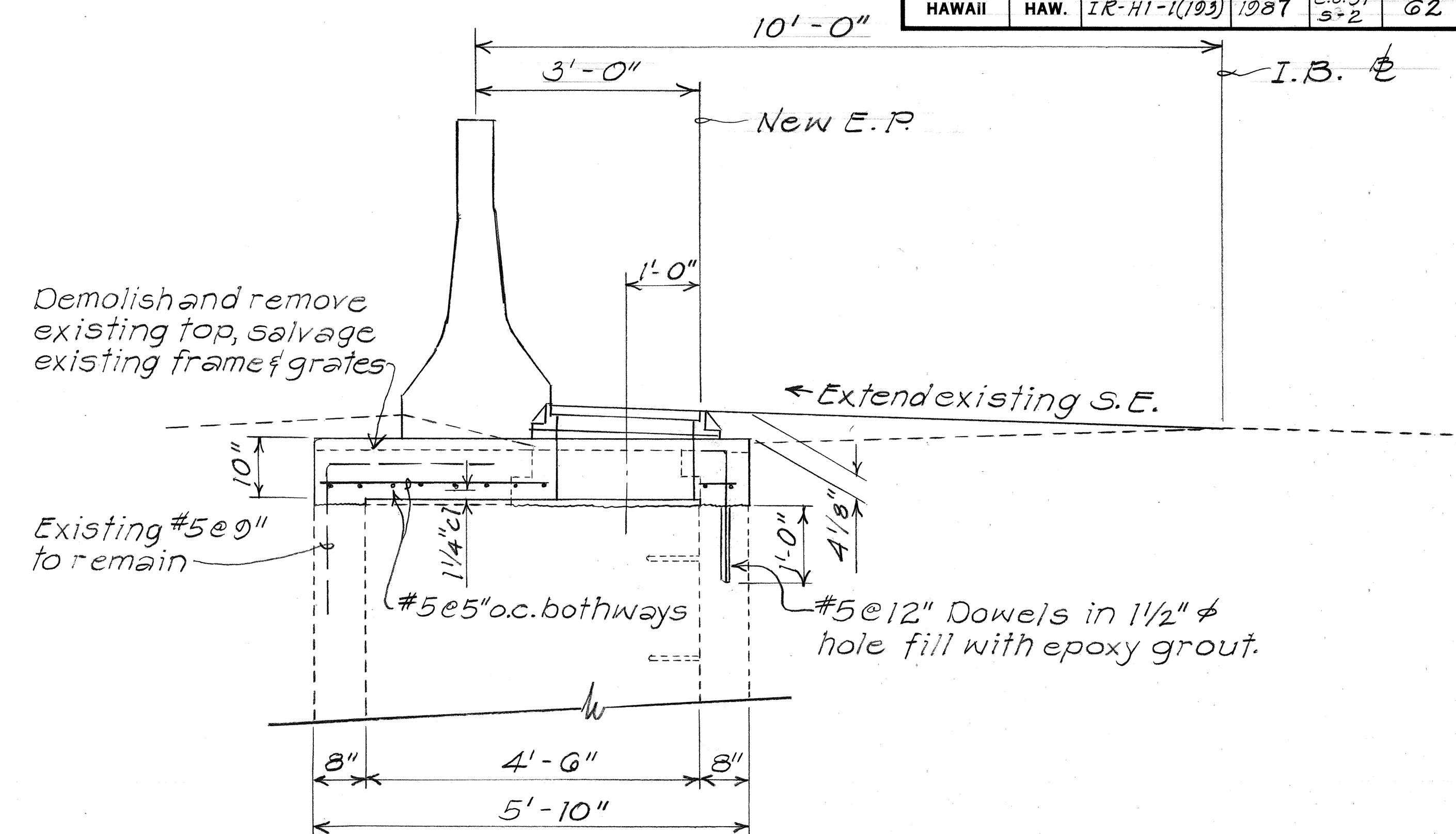


PLAN

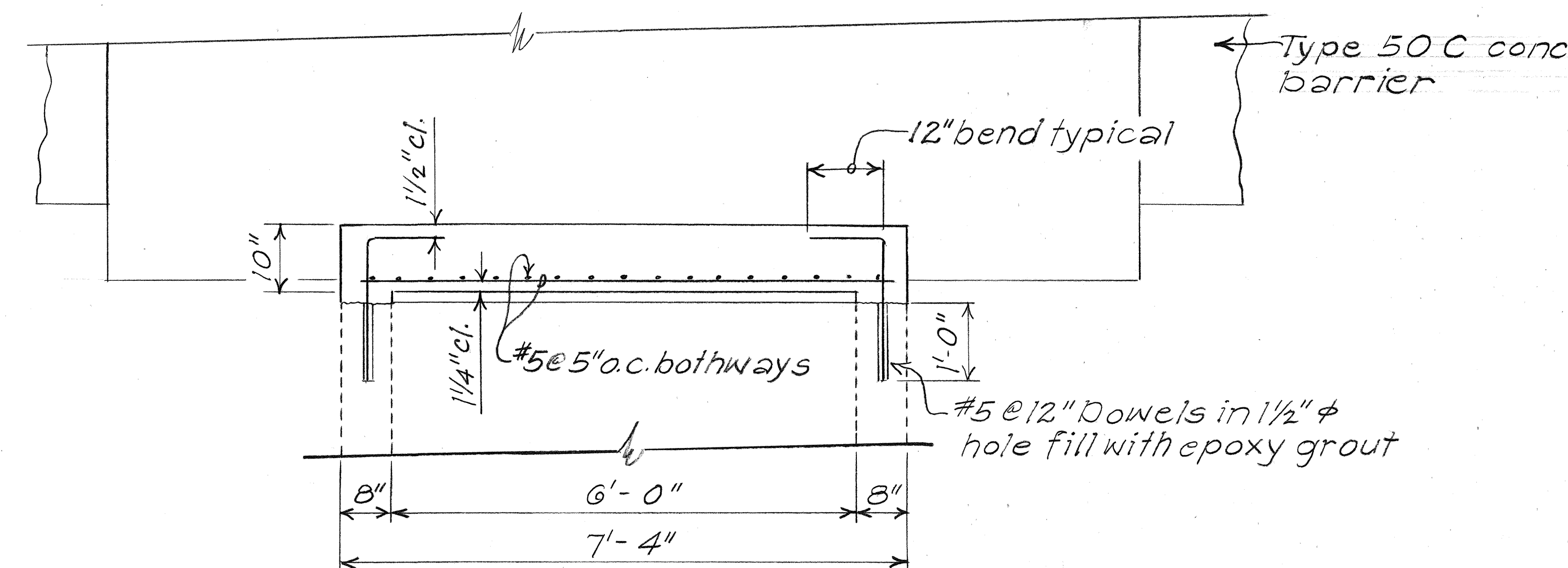


12" Typ. (Bend as required)
PLAN VIEW OF REINFORCING STEEL

DETAIL OF S.D.M.H. AT I.B. Sta 519+34.27



SECTION B
H2B/H2B



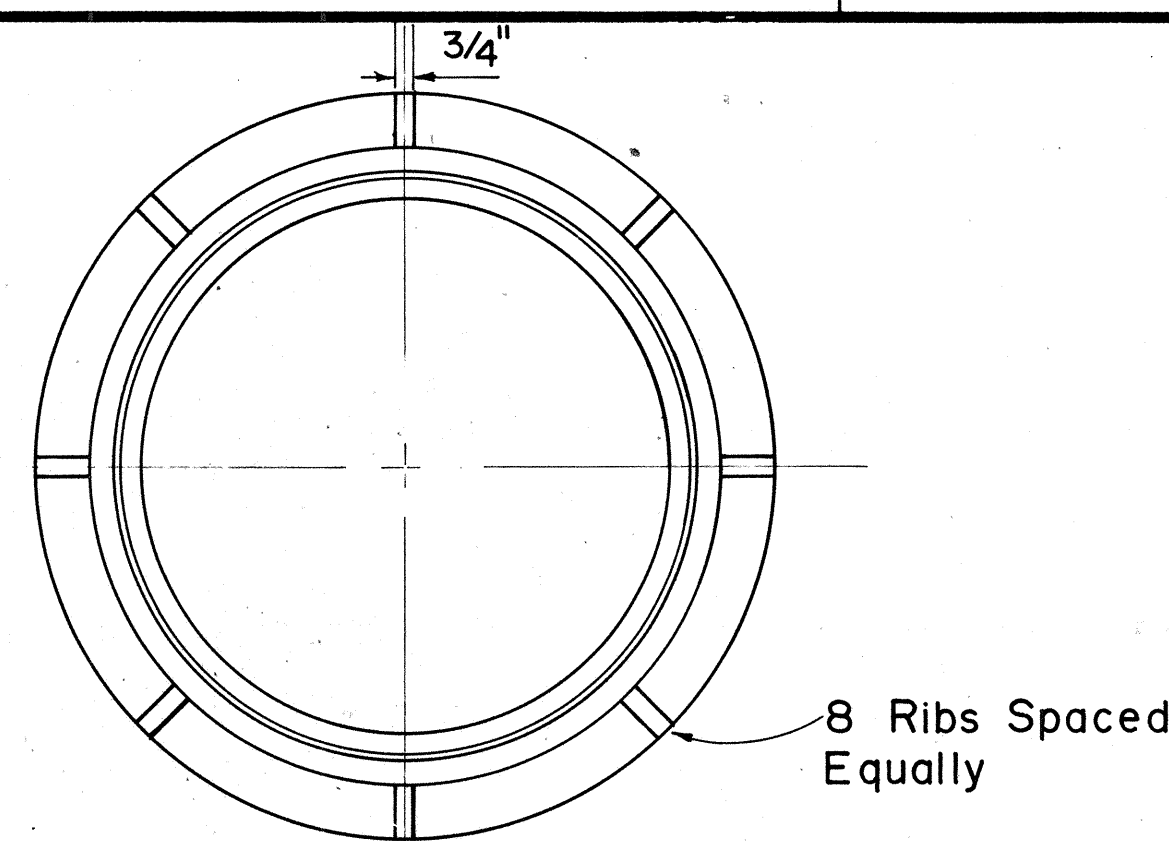
SECTION A
H2B/H2B

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
DRAINAGE DETAILS	
INTERSTATE ROUTE H-1 ADDITIONAL LANES	
F.A.I. Proj. No. IR-HI-1(103)	
Scale: 3/4"=1'-0" Date: Jan, 1987	
SHEET No. H2B OF 2 SHEETS	

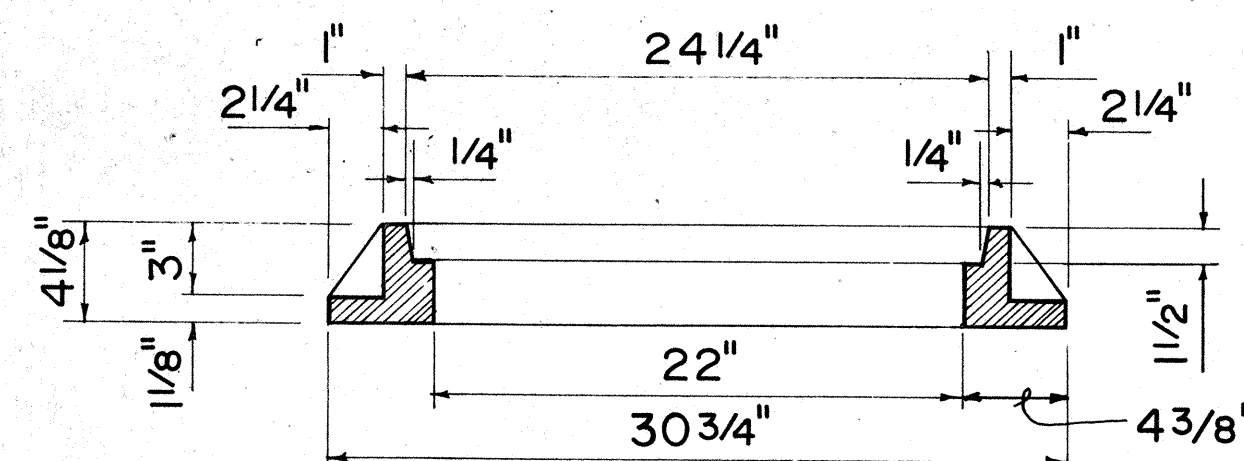
1/21/87 This sheet added for G.D.I.
modification to S.D.M.H.

DATE REVISION

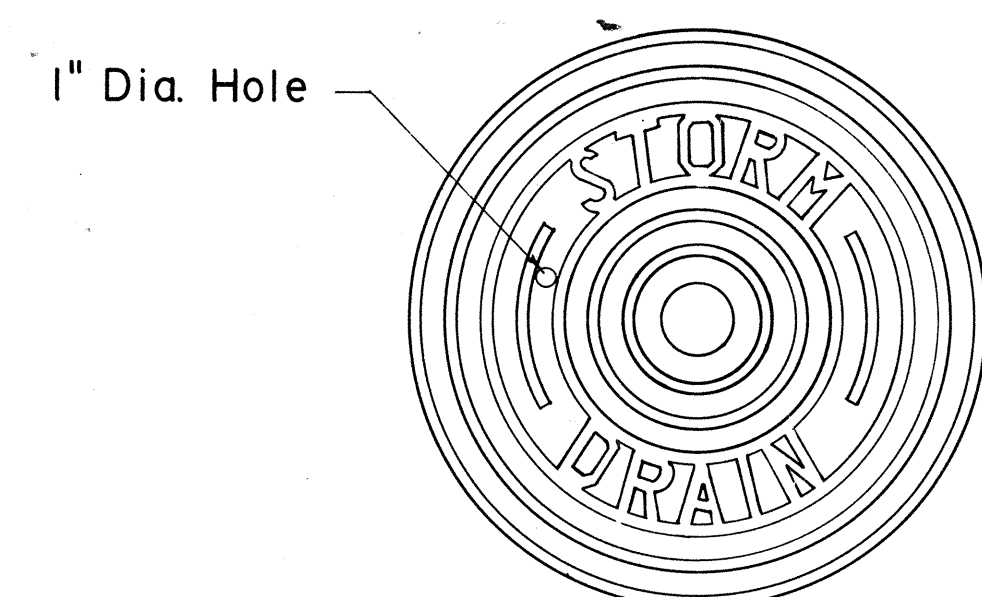
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(12)	1987	C.O. 31 S-3	62



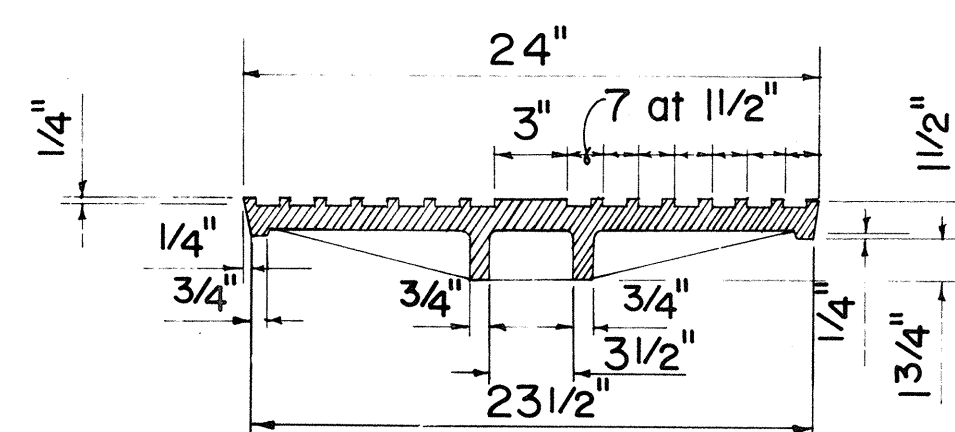
PLAN OF FRAME



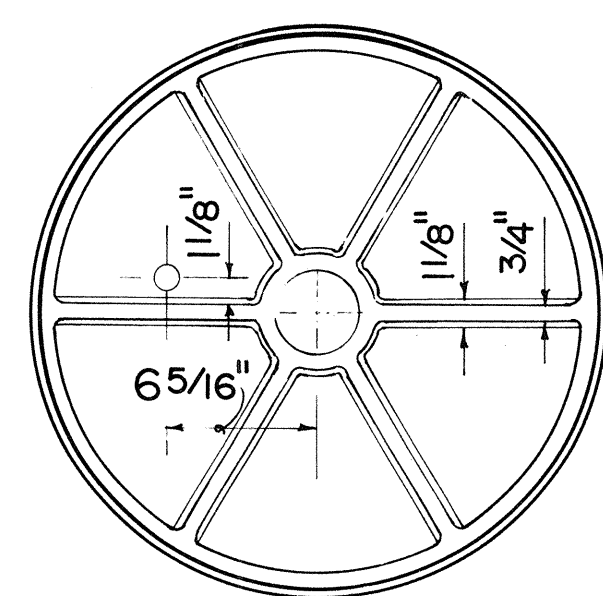
SECTION OF FRAME



TOP VIEW OF COVER

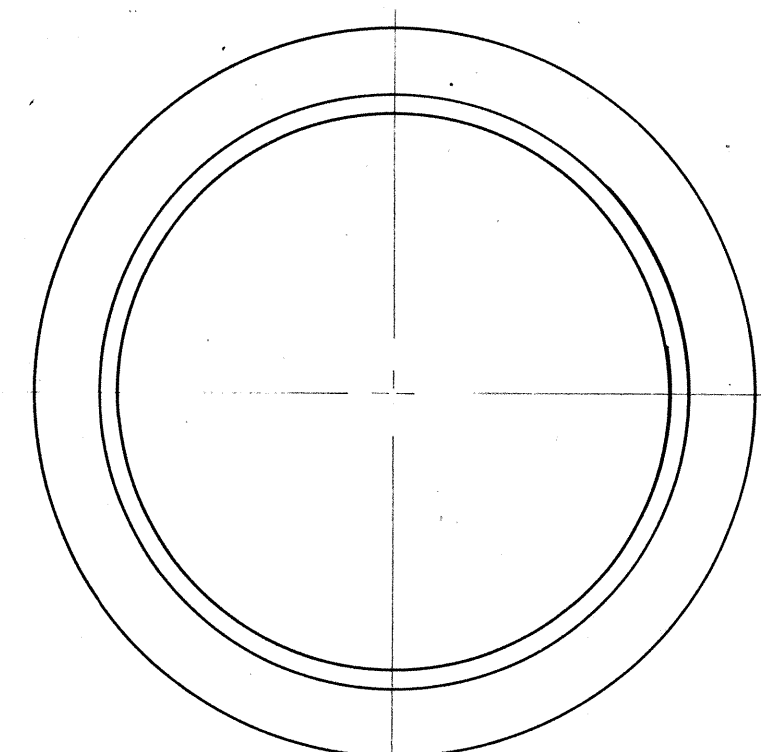


SECTION

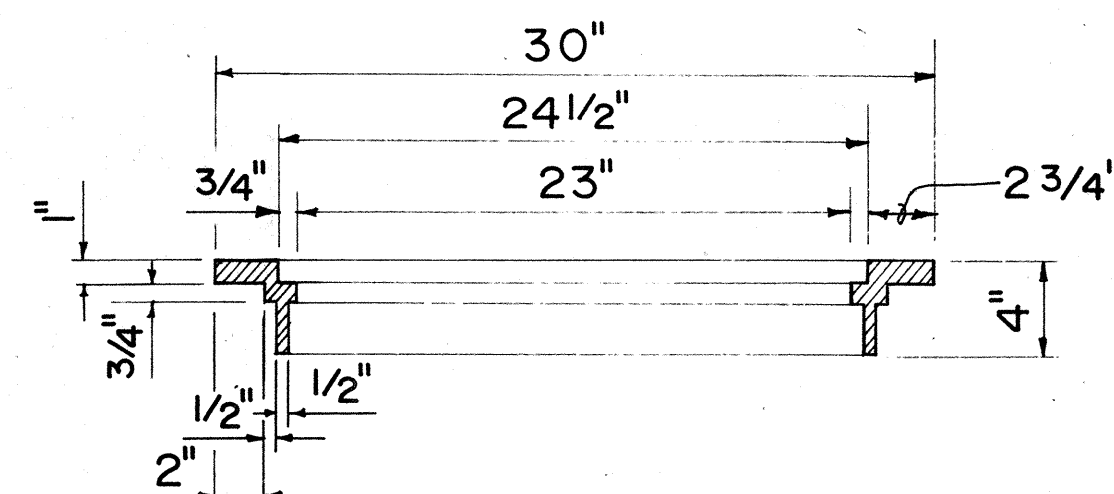


BOTTOM VIEW OF COVER

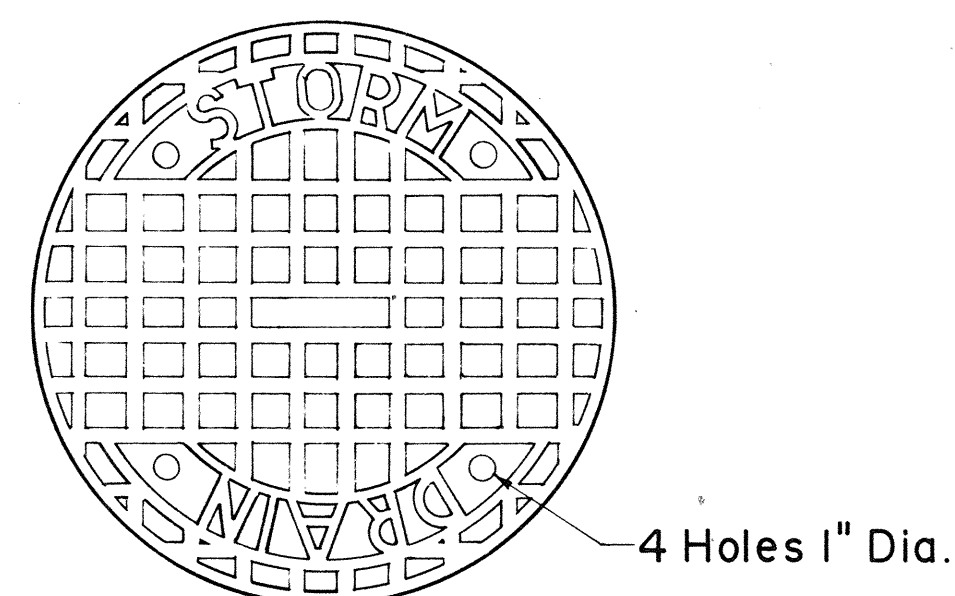
**TYPE "P" CAST IRON
FRAME AND COVER**



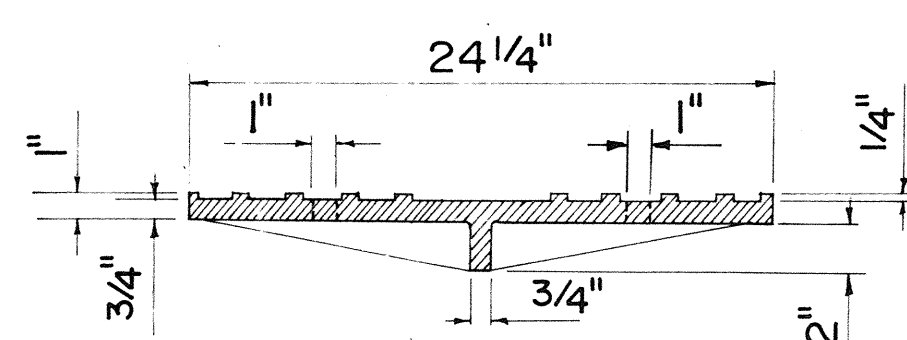
PLAN OF FRAME



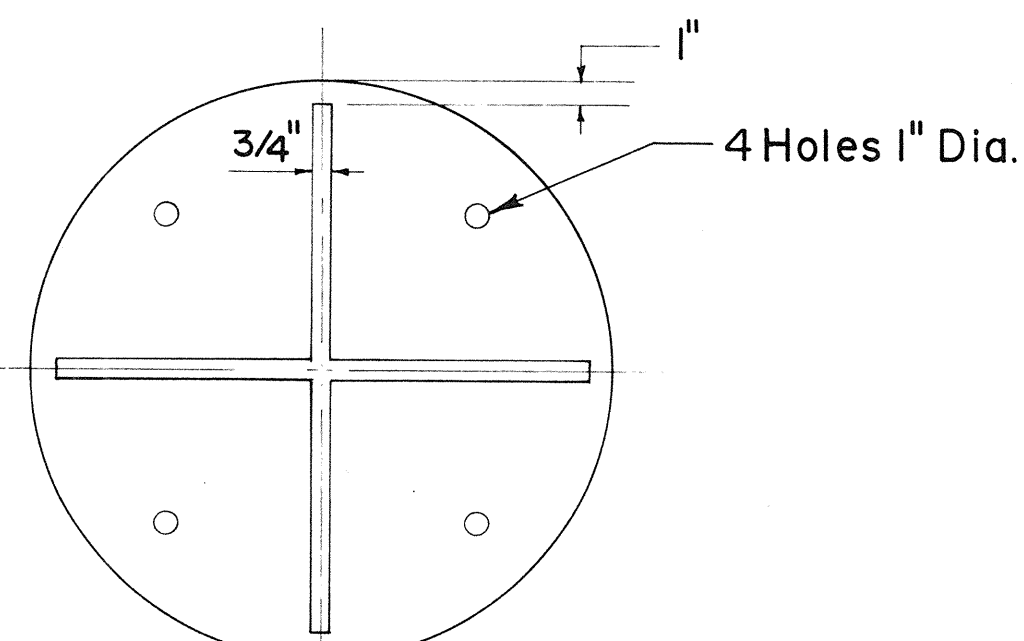
SECTION OF FRAME



TOP VIEW OF COVER

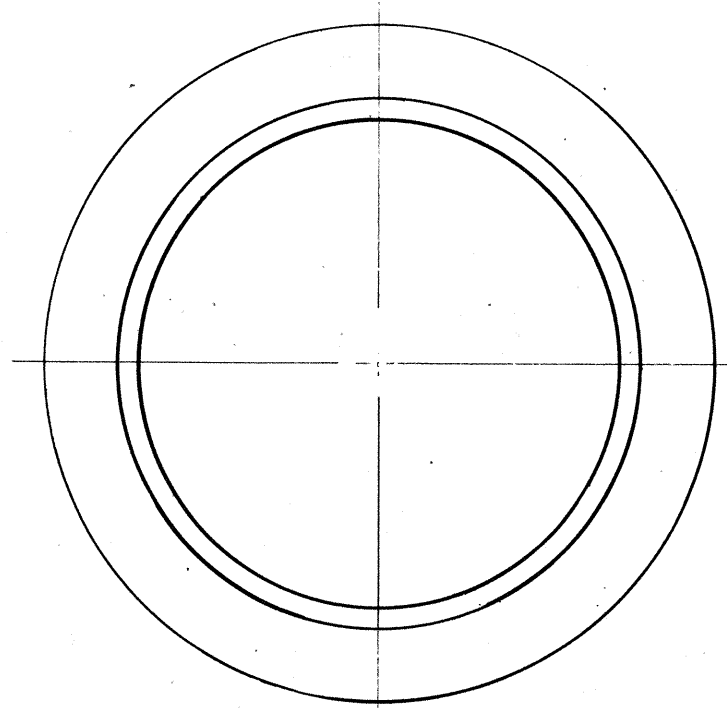


SECTION

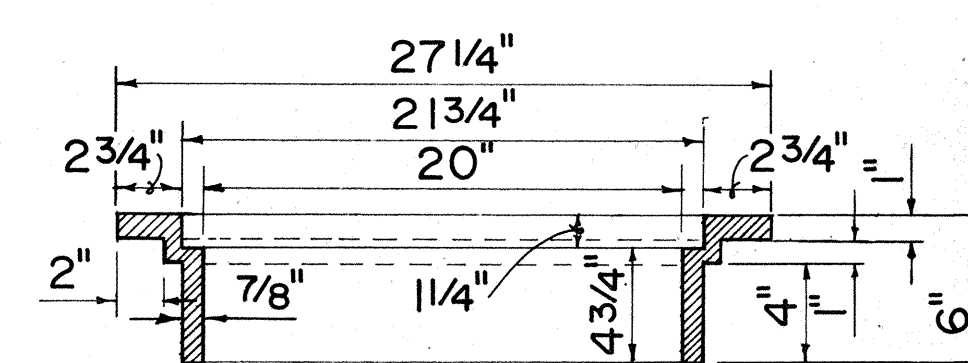


BOTTOM VIEW OF COVER

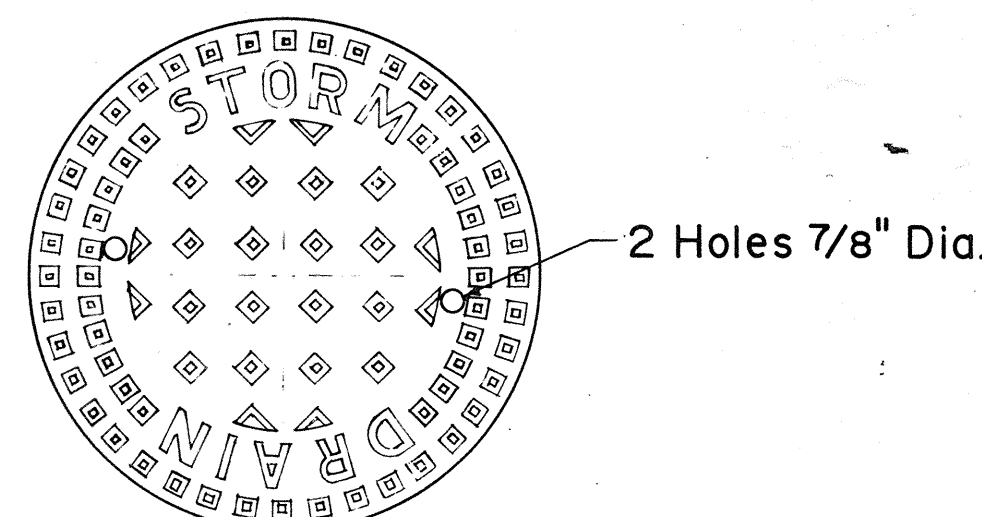
**TYPE "B" CAST IRON
FRAME AND COVER**



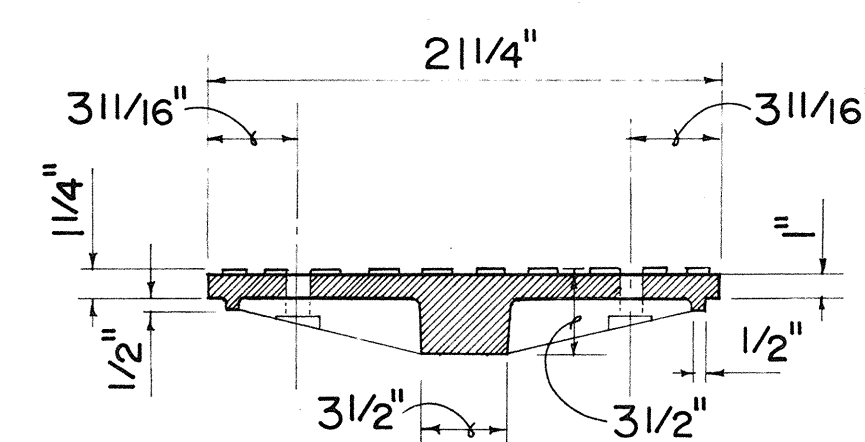
PLAN OF FRAME



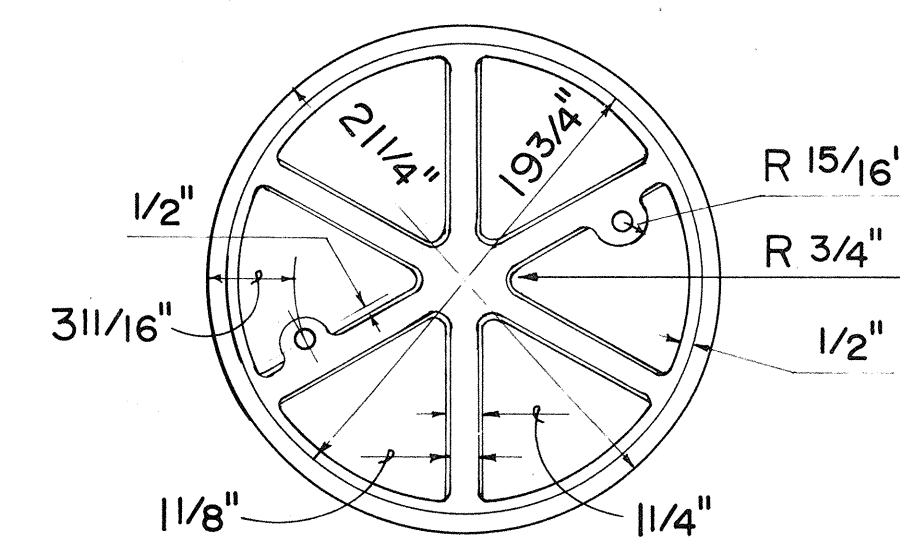
SECTION OF FRAME



TOP VIEW OF COVER

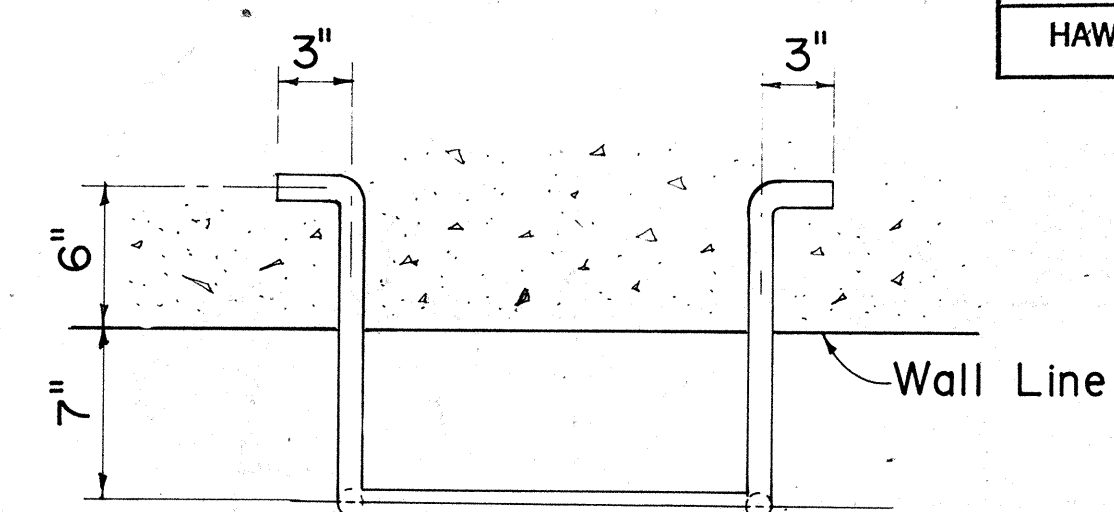


SECTION

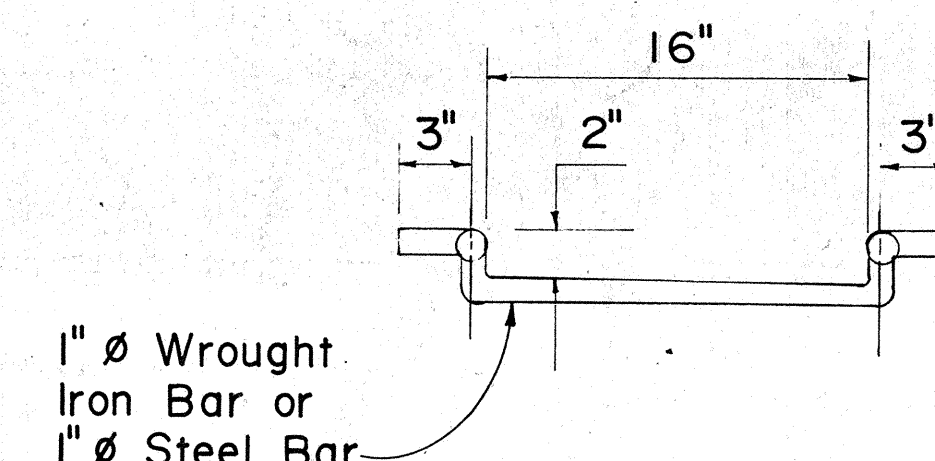


BOTTOM VIEW OF COVER

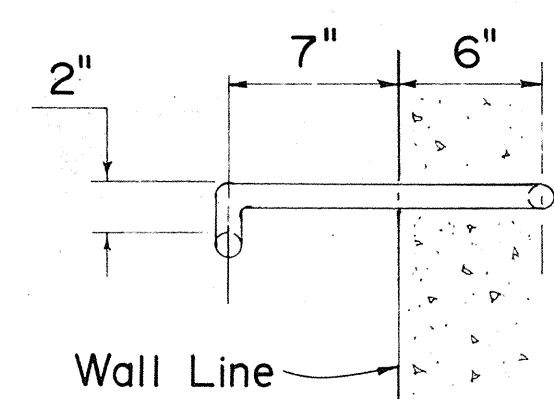
**TYPE "A" CAST IRON
FRAME AND COVER**



PLAN



FRONT VIEW



SIDE VIEW

MANHOLE RUNG

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD PLAN H-08

**CATCH BASIN AND
MANHOLE CASTINGS**

APPROVED *[Signature]* DATE *12-31-85*

SHEET No. 120 OF 2 SHEETS

DATE	REVISION	APP'D.

C.O. 31 S-3

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