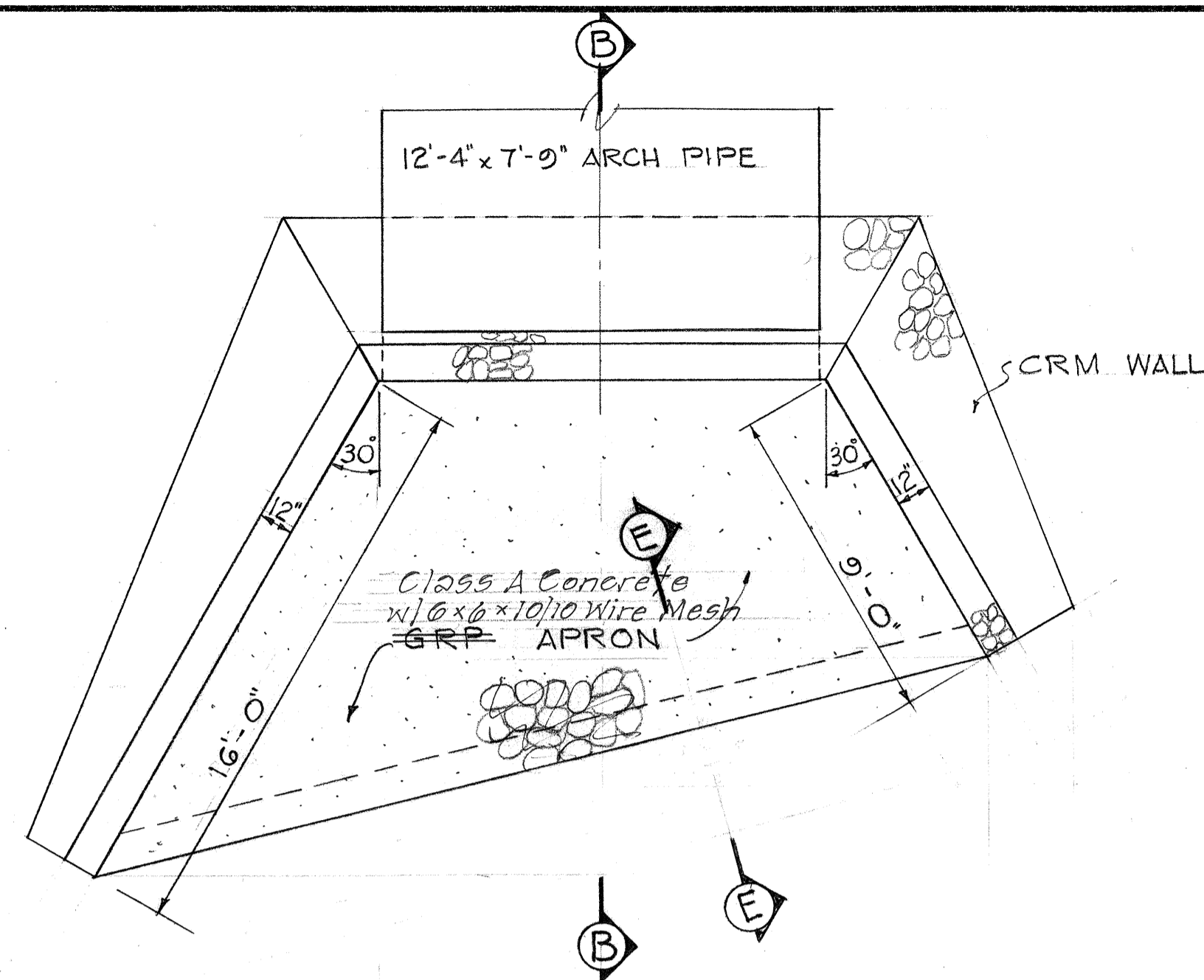
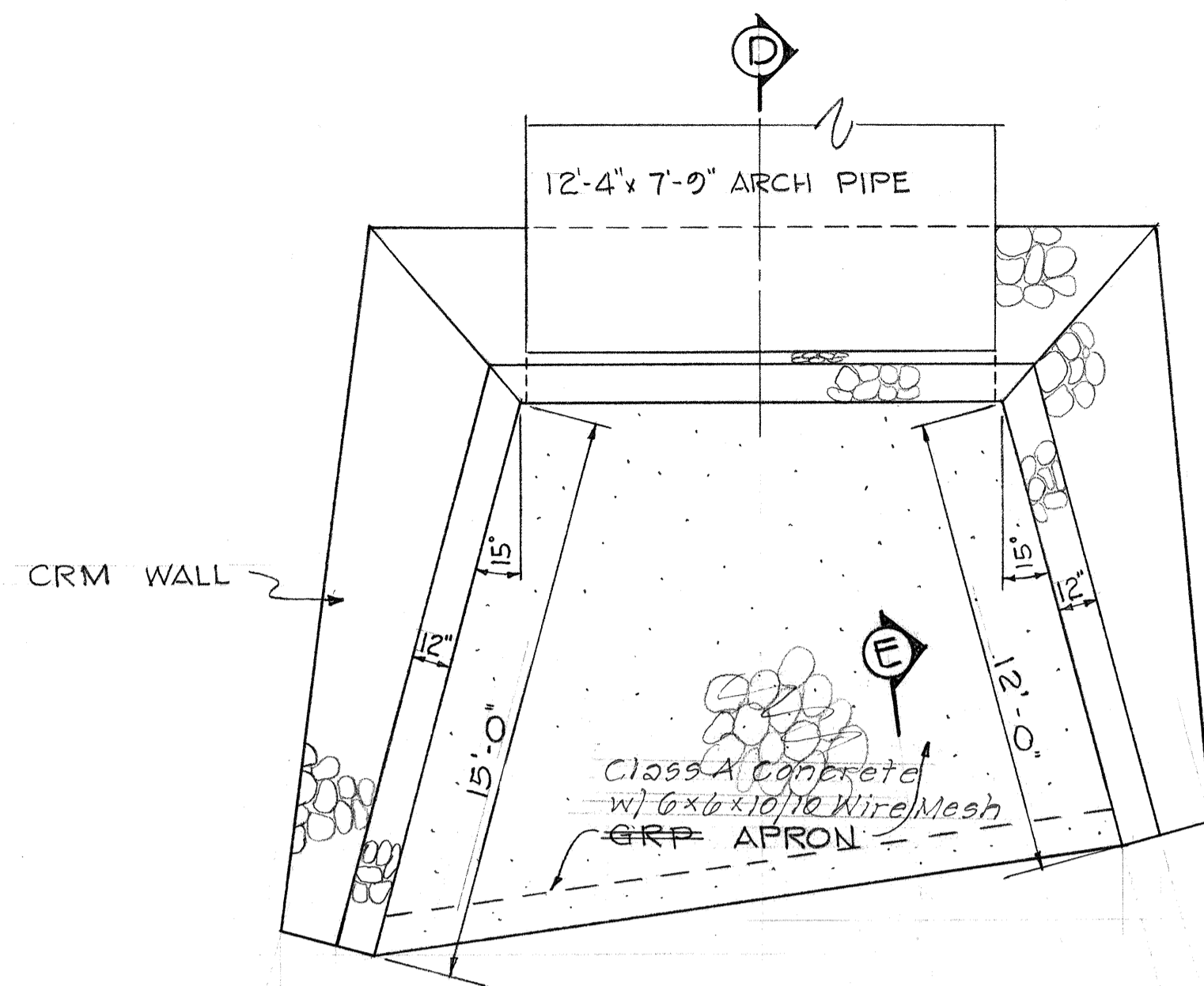


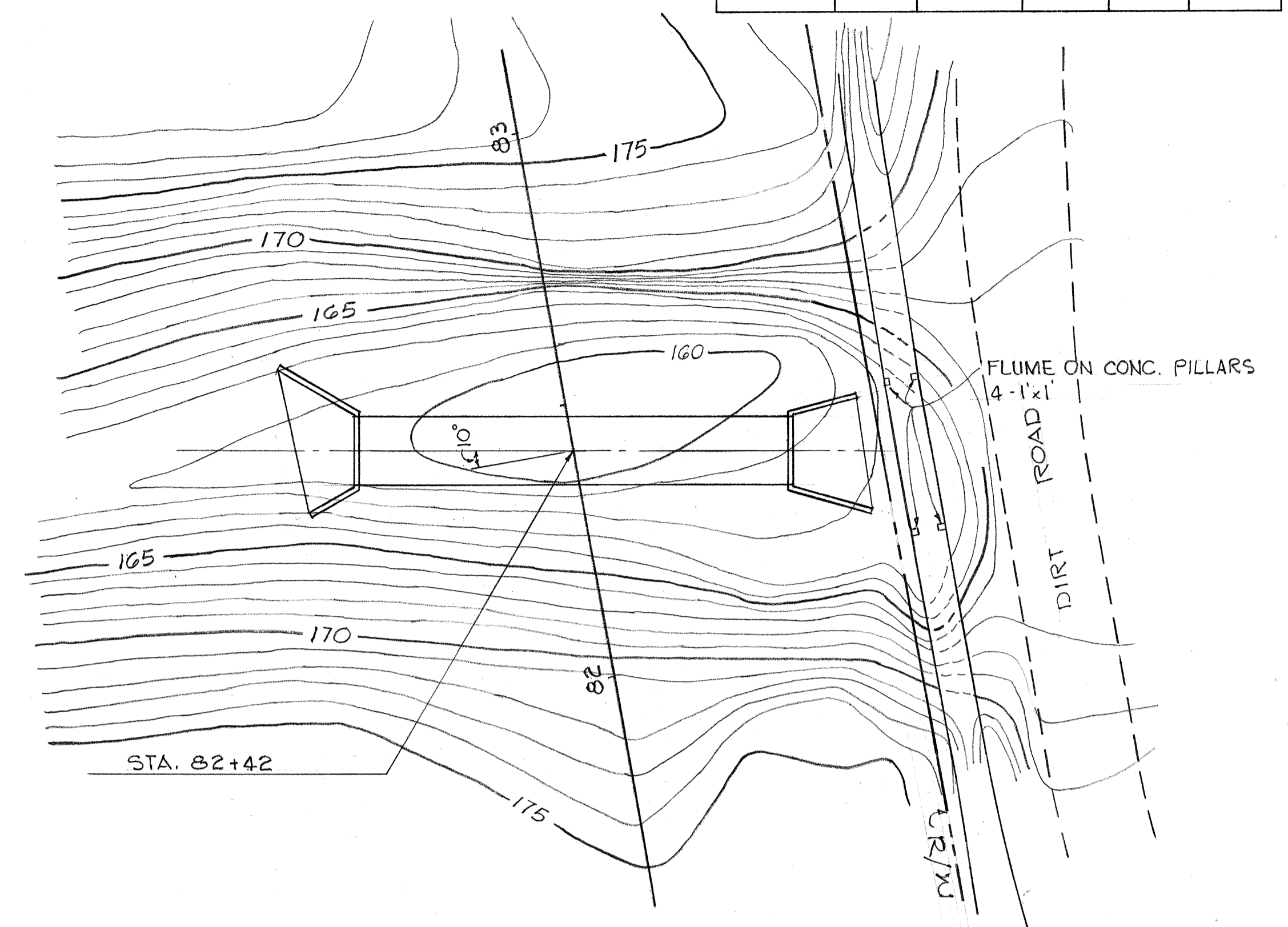
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	5-0380(6)	1969	28	30



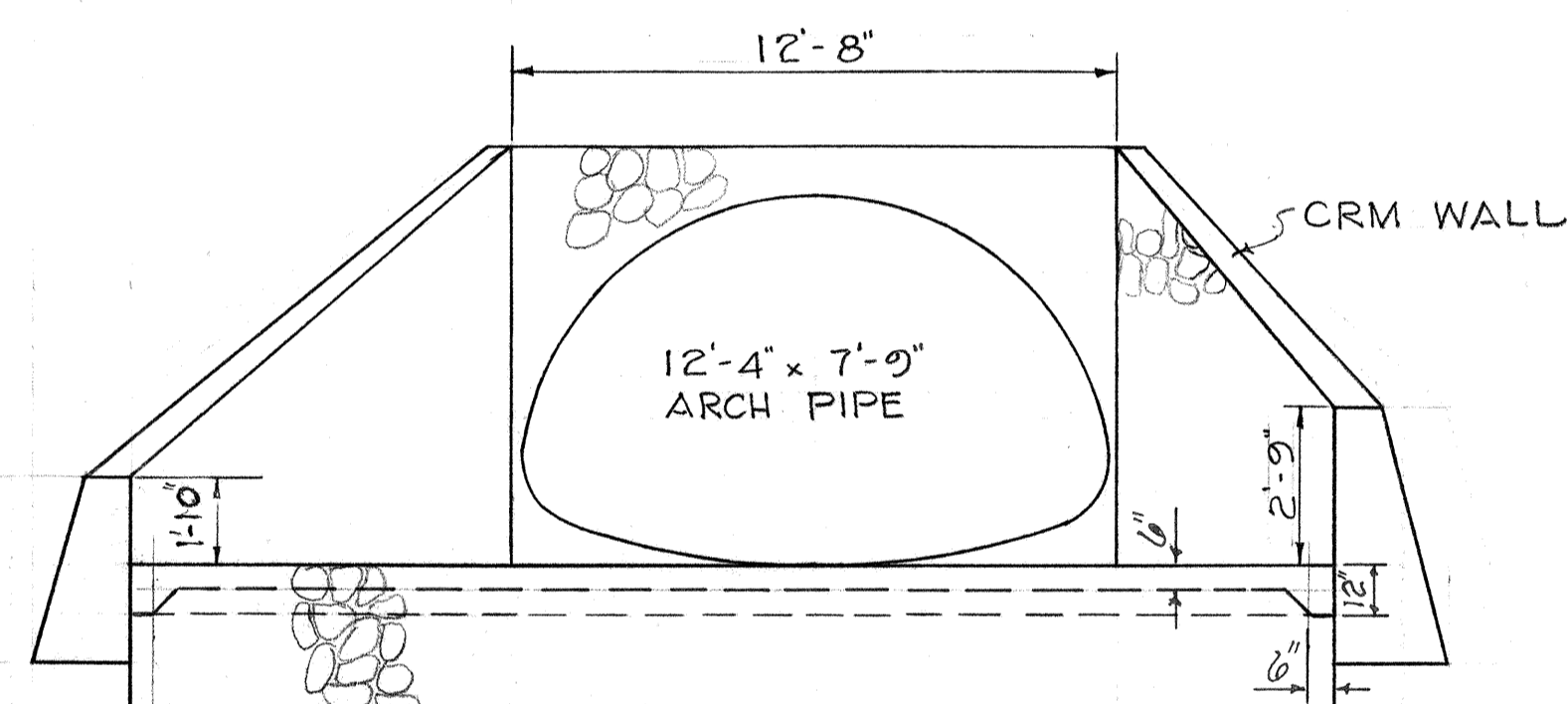
PLAN @ INLET
SCALE: 1/4" = 1'-0"



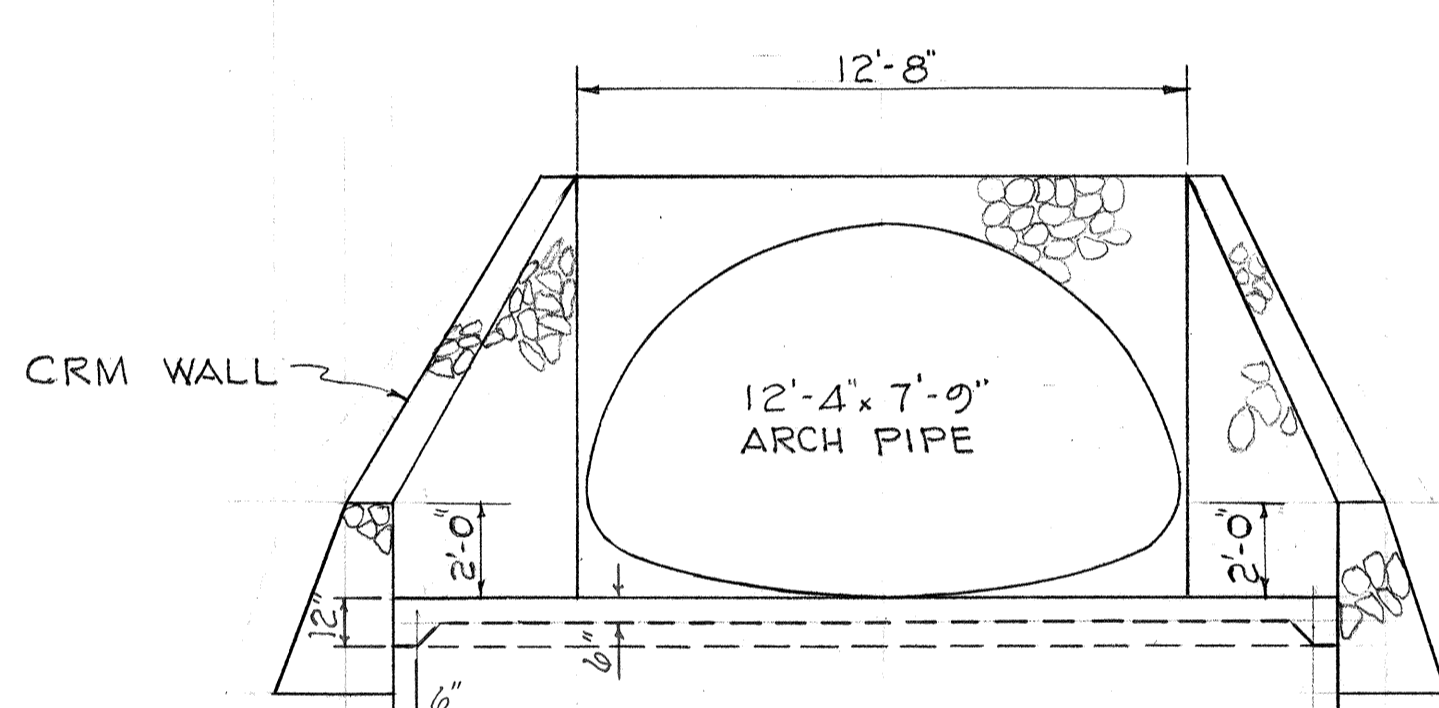
PLAN @ OUTLET
SCALE: 1/4" = 1'-0"



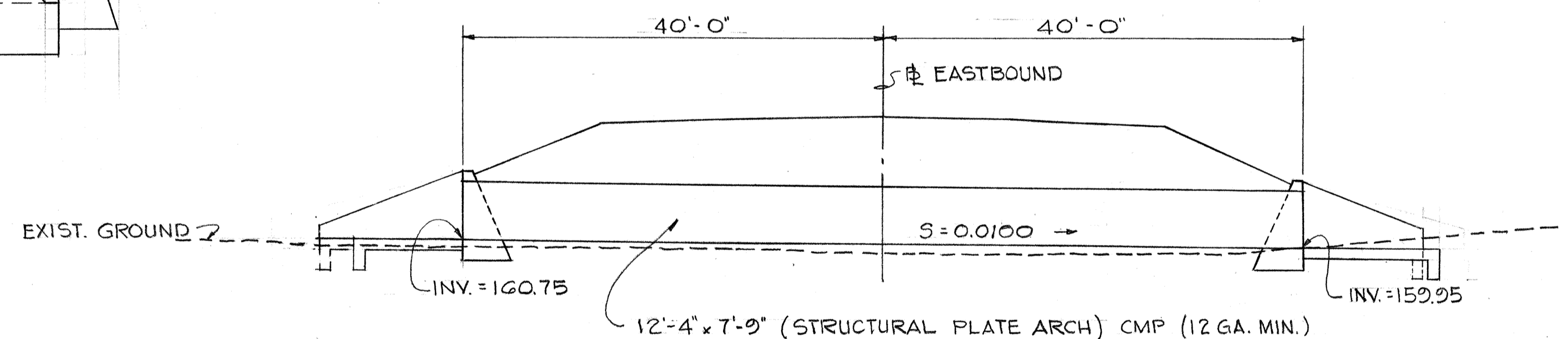
PLAN
12'-4" x 7'-9" ARCH PIPE @ STA. 82+42
SCALE: 1" = 20'



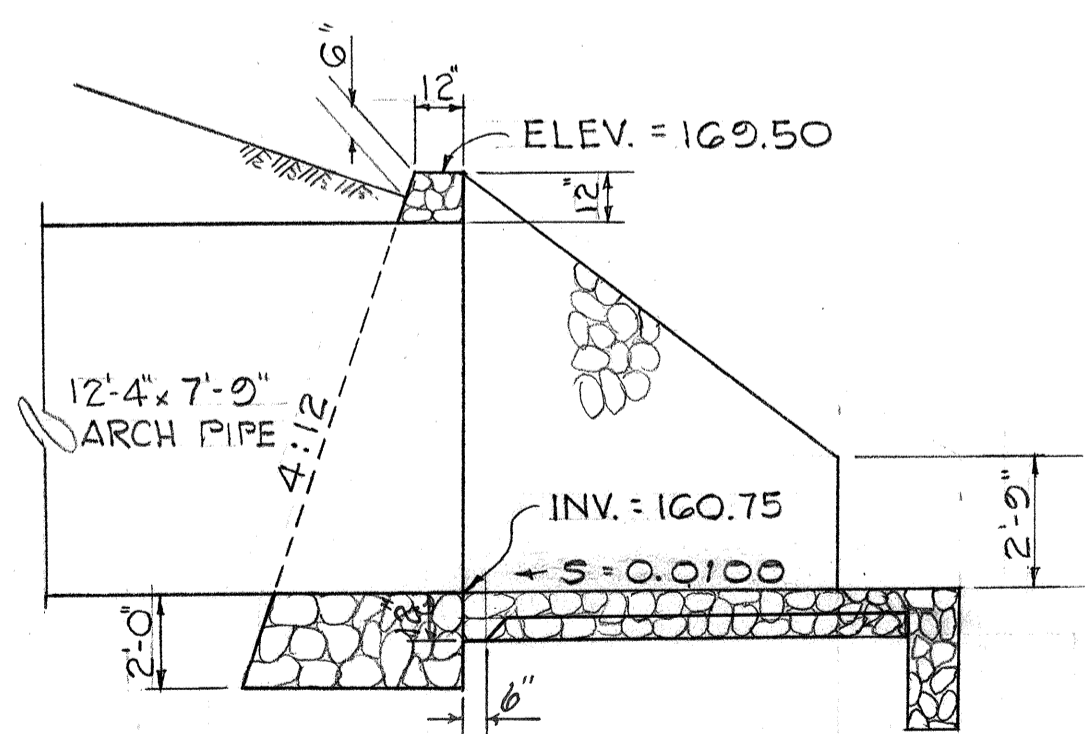
ELEVATION A-A
SCALE: 1/4" = 1'-0"



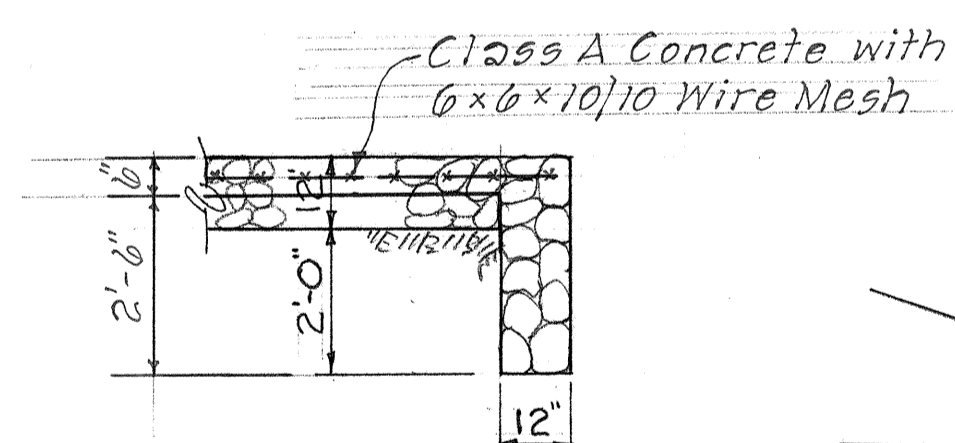
ELEVATION C-C
SCALE: 1/4" = 1'-0"



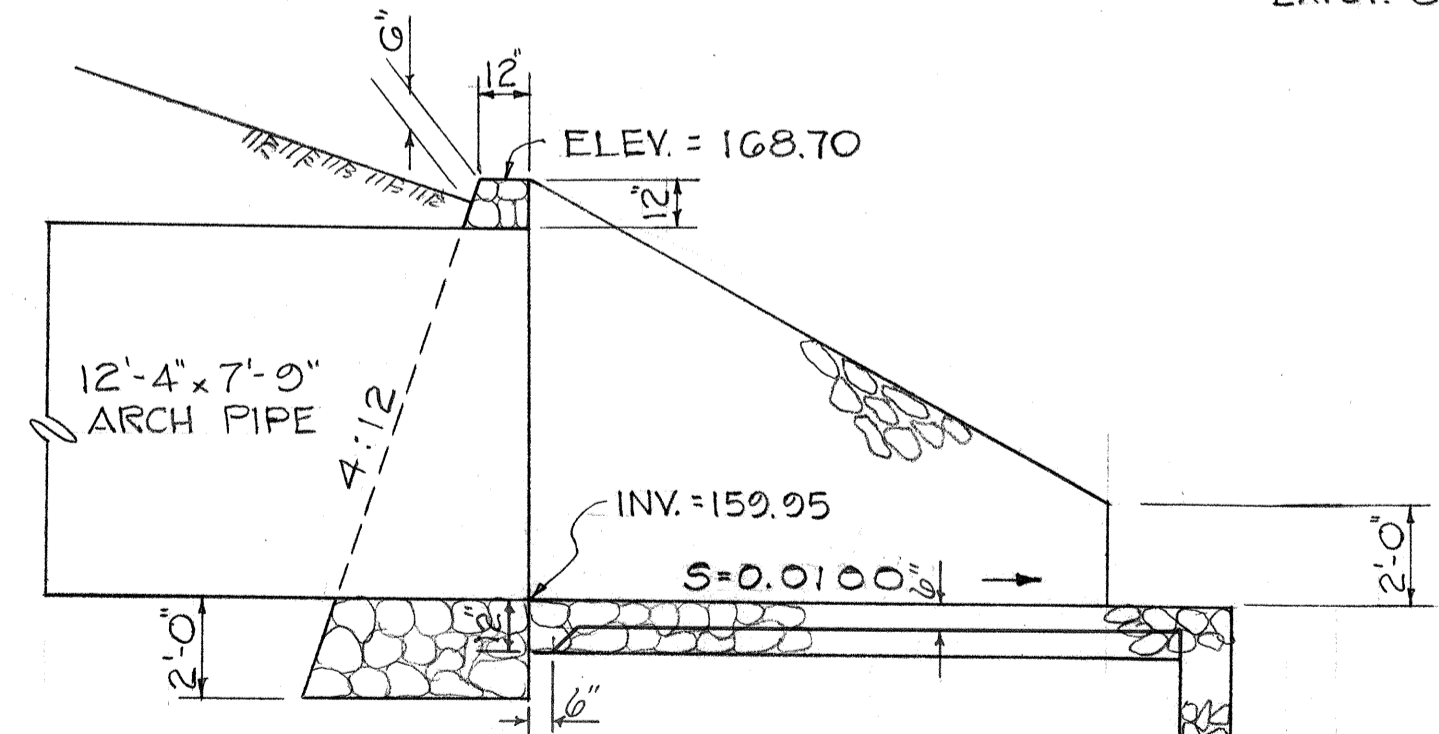
PROFILE
SCALE: HOR. 1" = 10'
VER. 1" = 10'



SECTION B-B
SCALE: 1/4" = 1'-0"



SECTION E-E
SCALE: 3/8" = 1'-0"

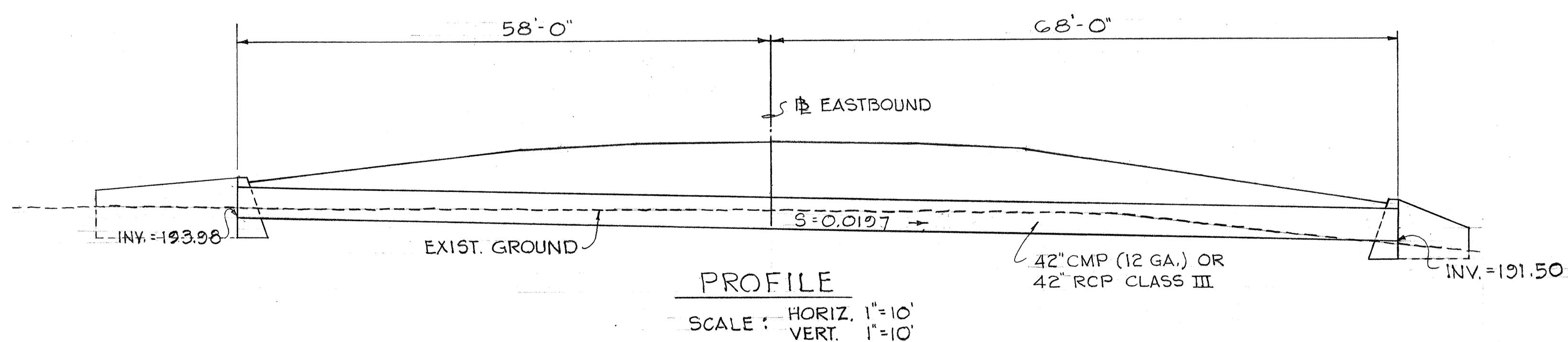
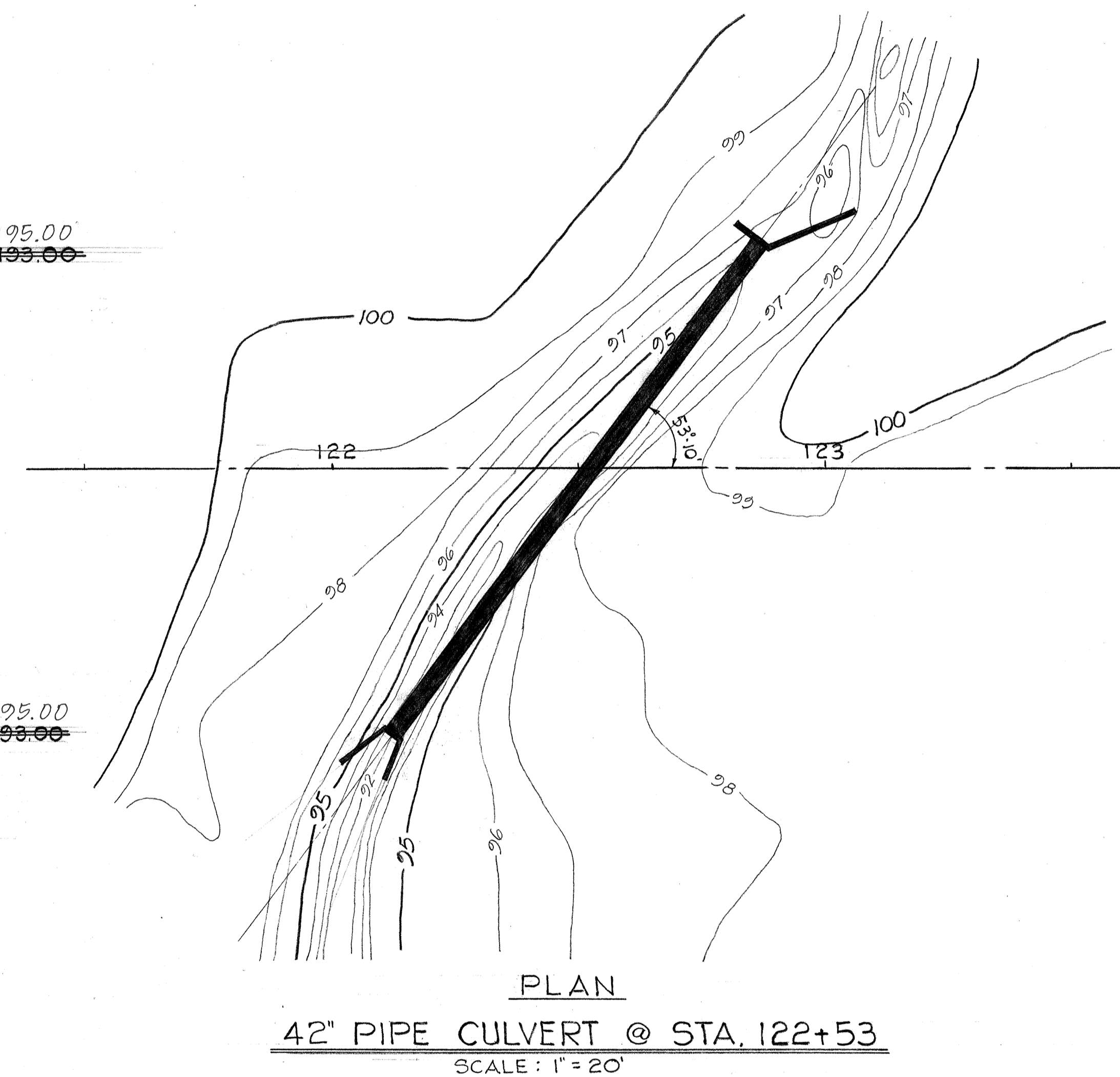
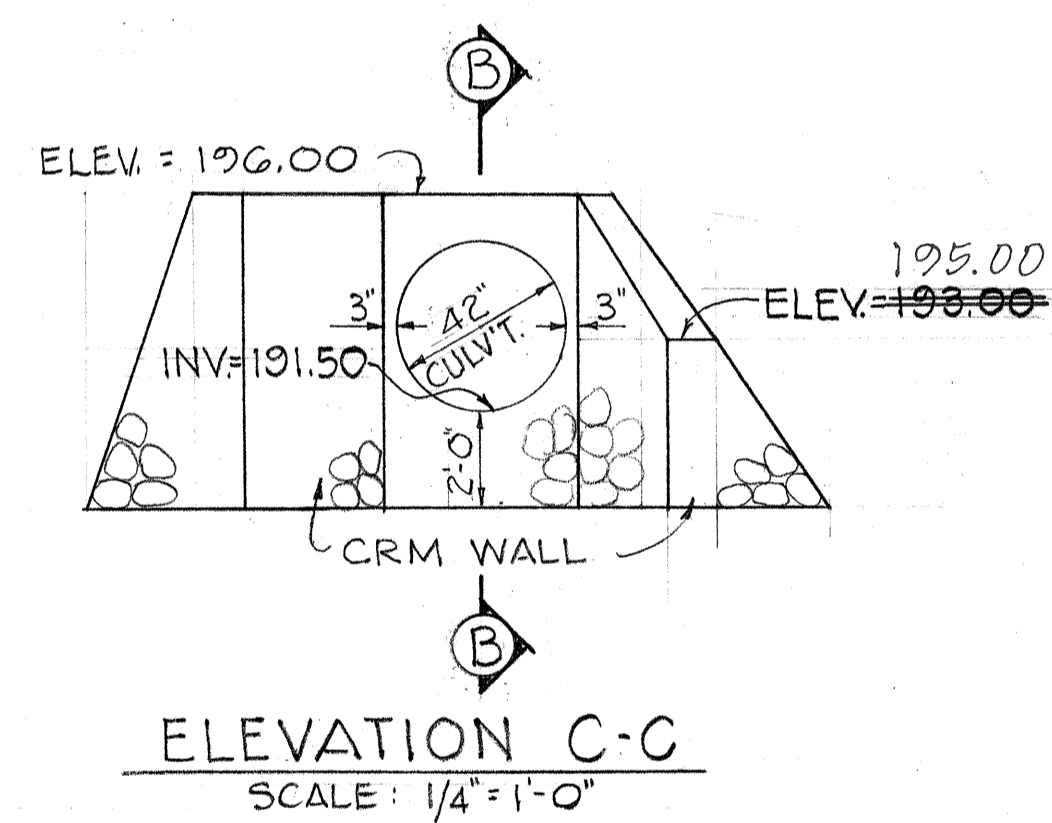
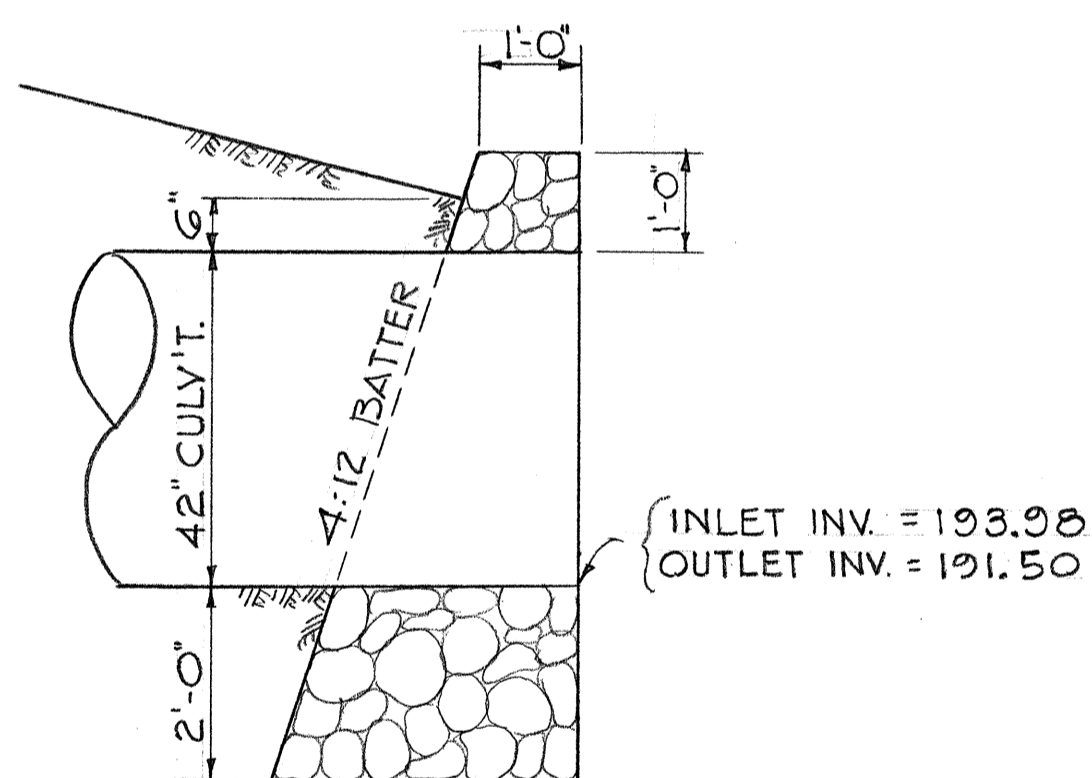
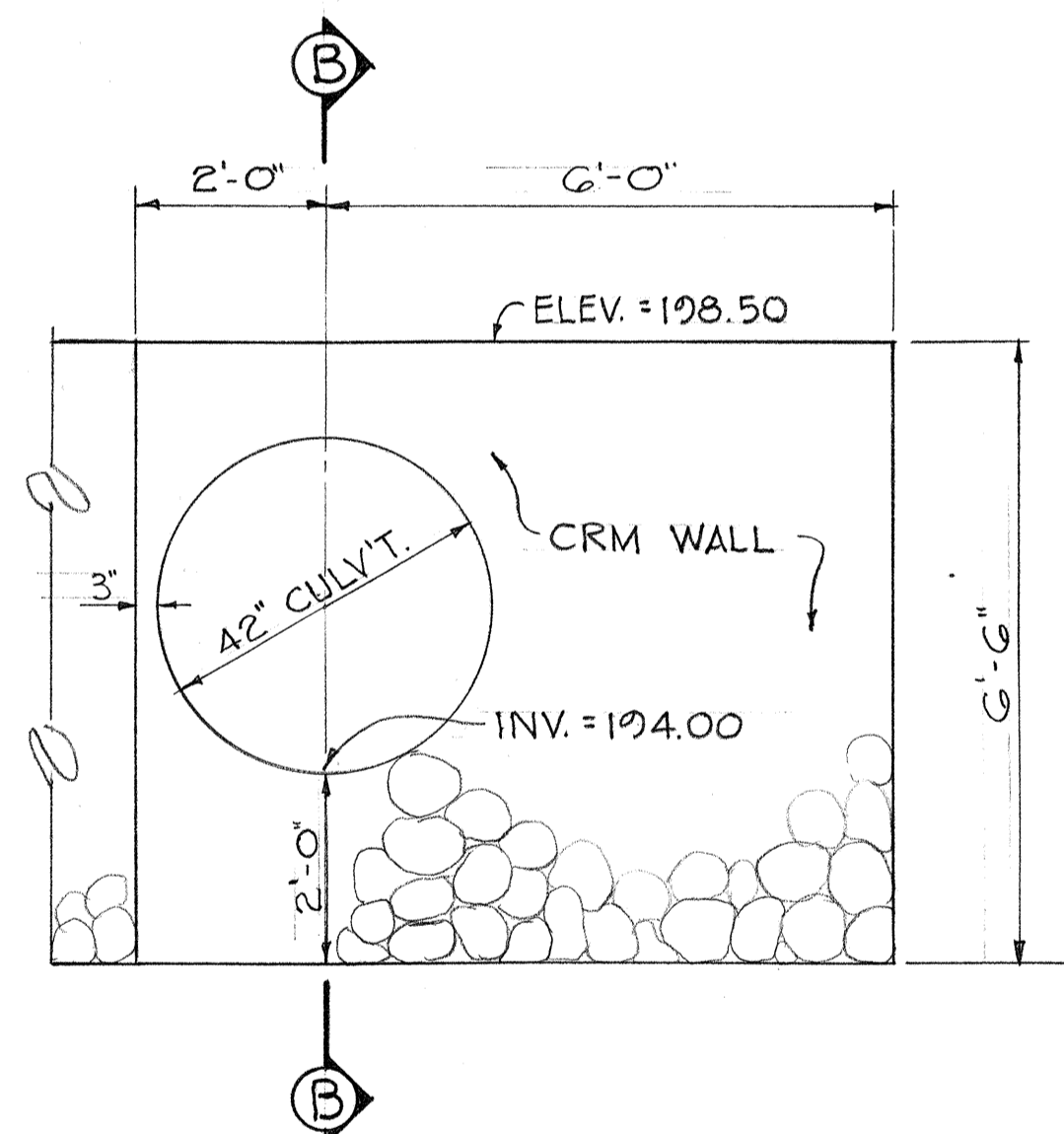
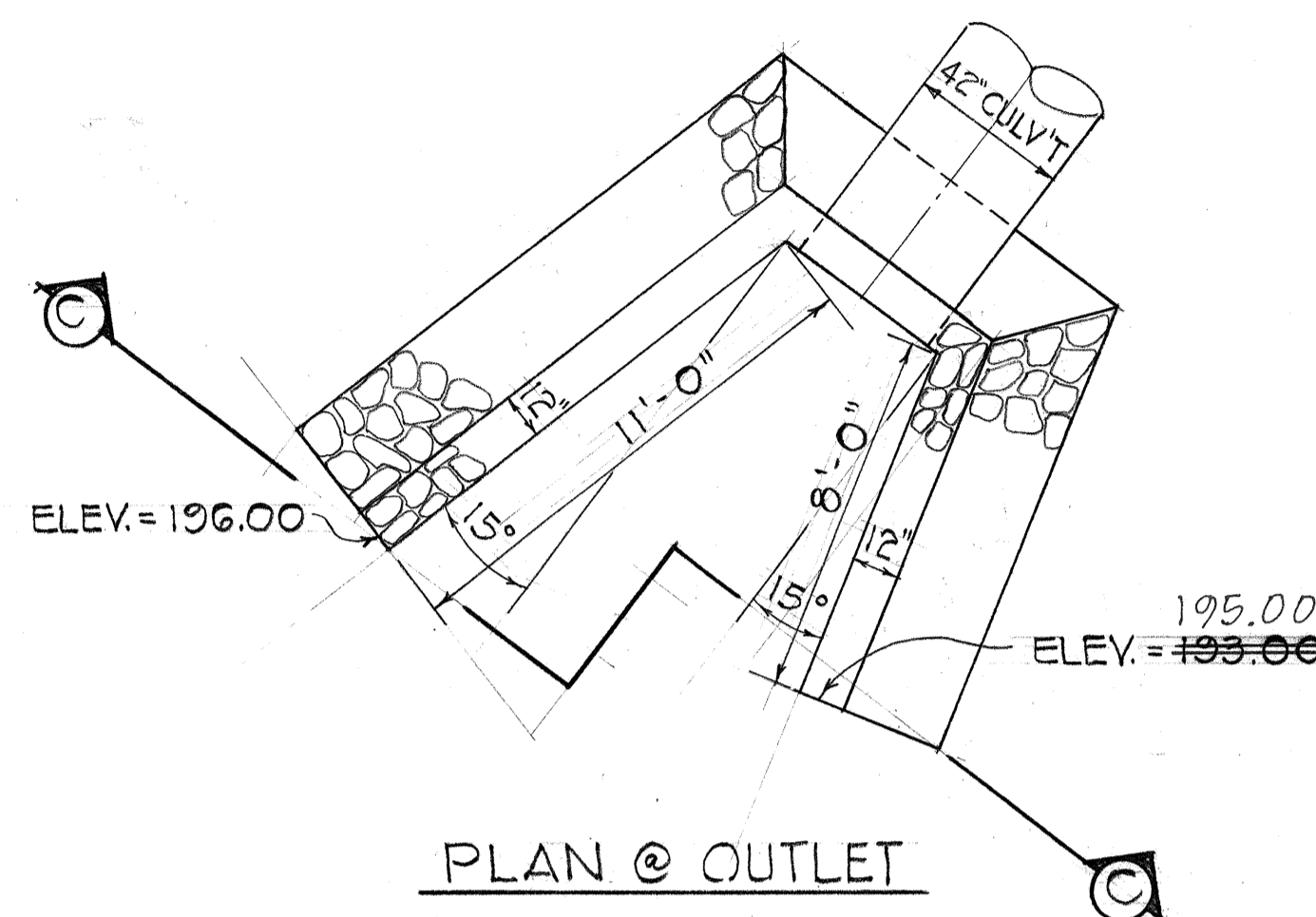
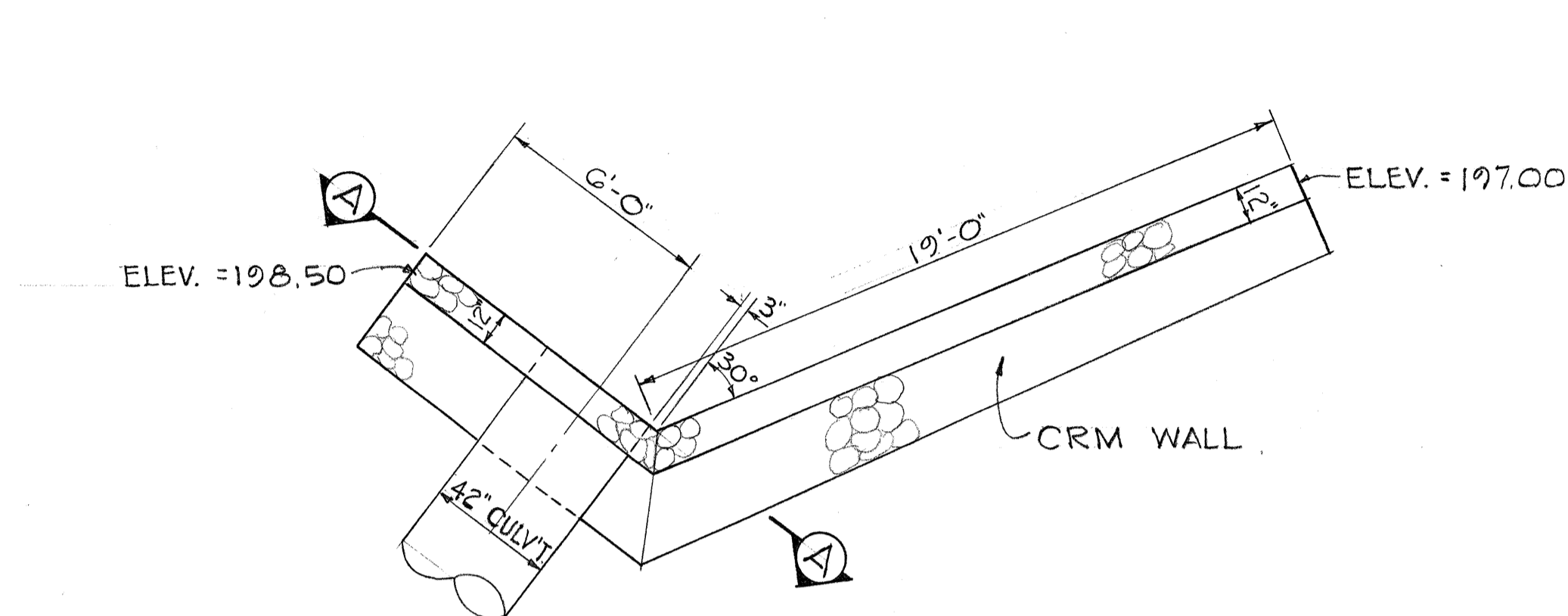


SECTION D-D
SCALE: 1/4" = 1'-0"

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DRAINAGE DETAILS
12'-4" x 7'-9" STRUCTURAL PLATE
CMP ARCH @ STA. 82+42
KAHALUI AIRPORT - MAALAEA HWY.
PROJ. No. 5-0380 (6)
Scale: As Shown Dec. 1969
SHEET No. D-1 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	5-0380(G)	1969	29	89



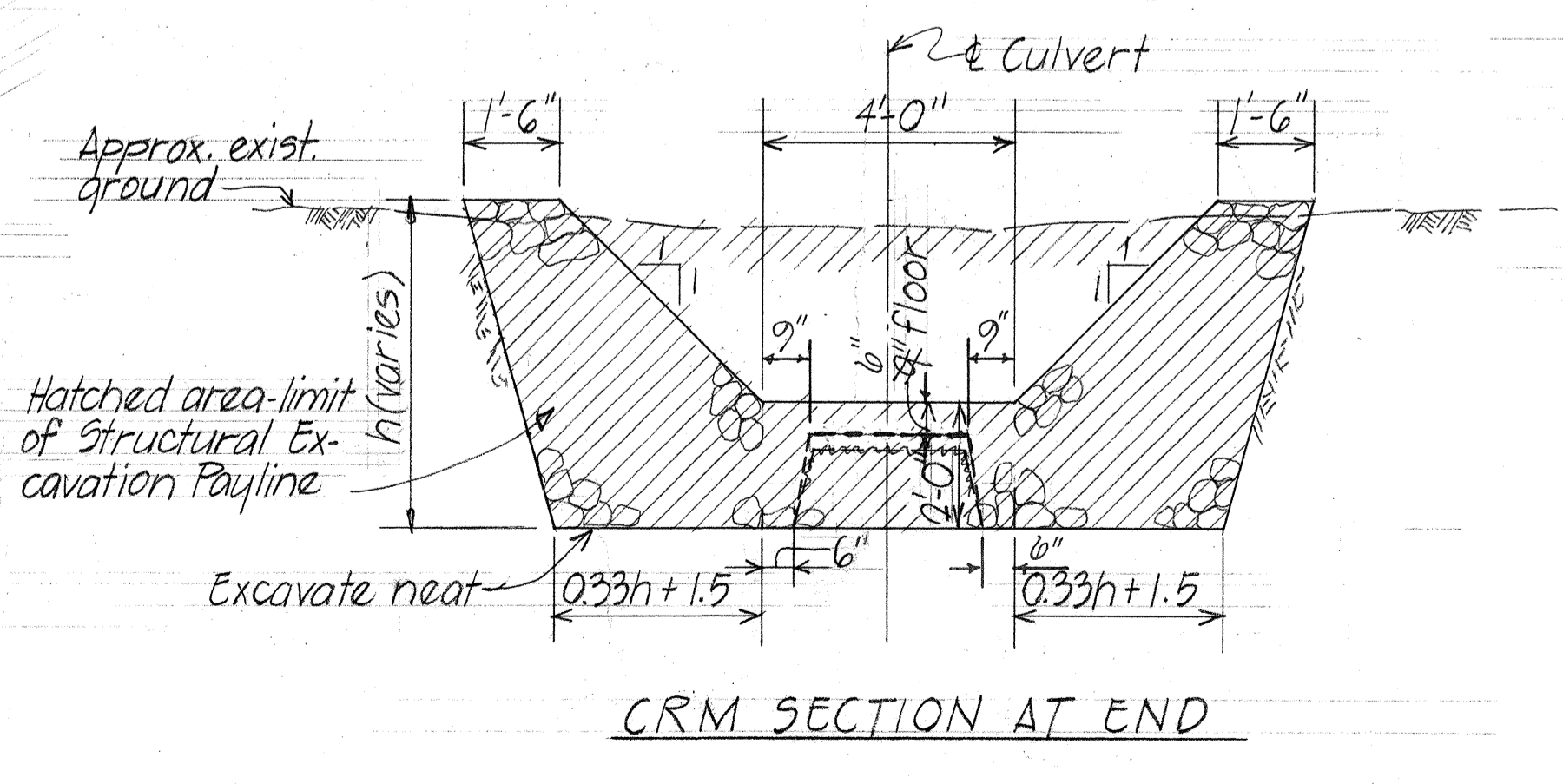
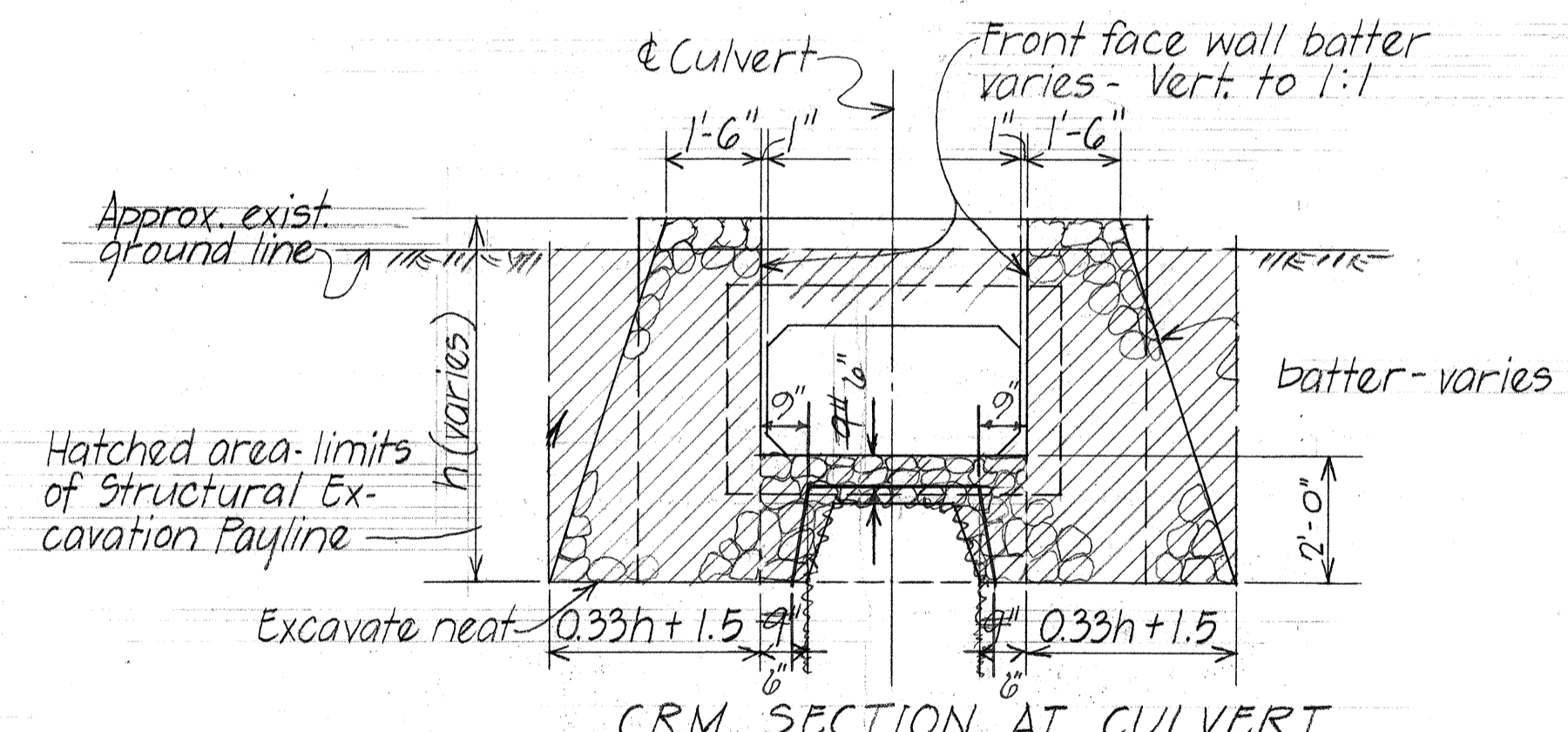
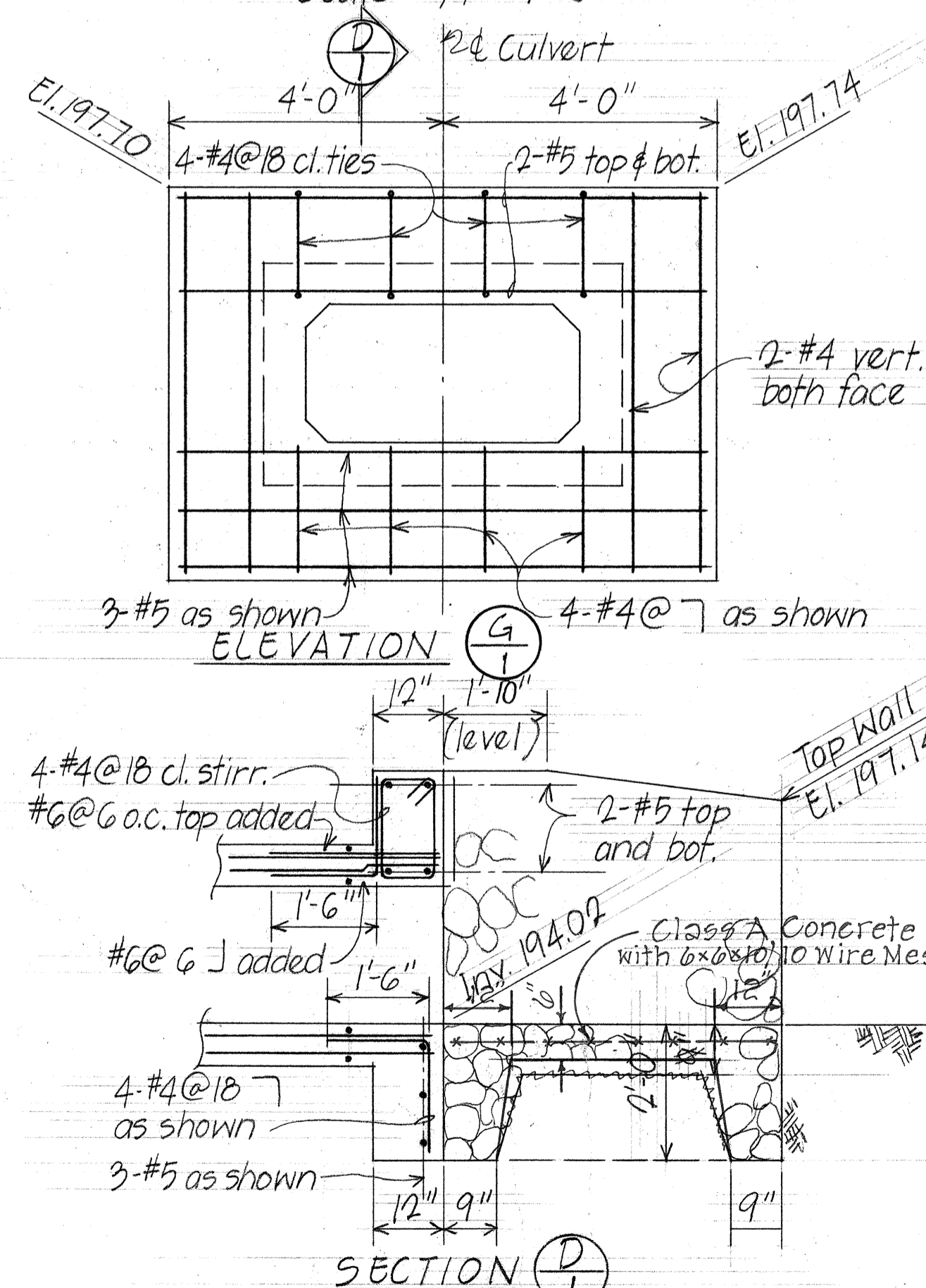
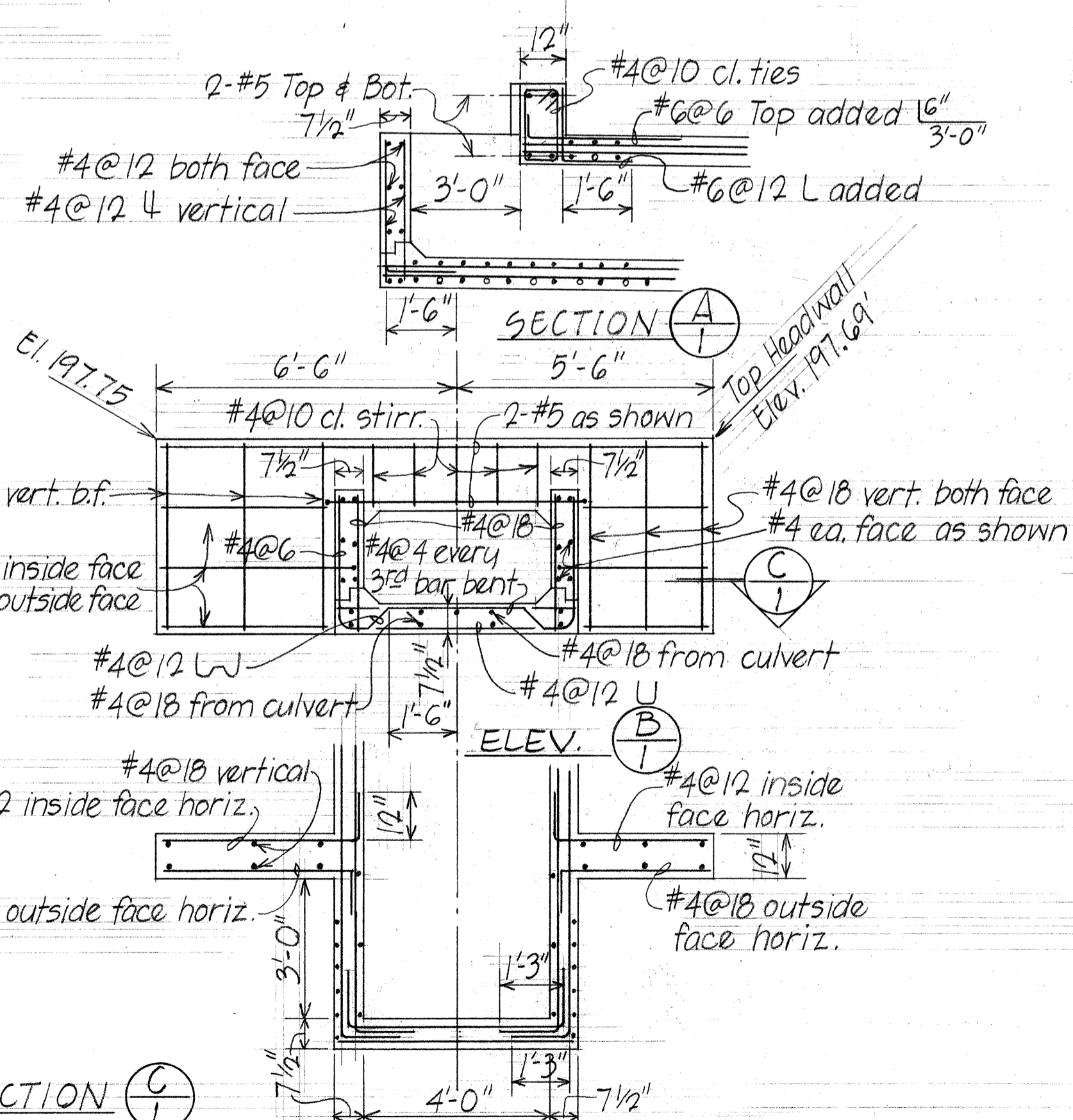
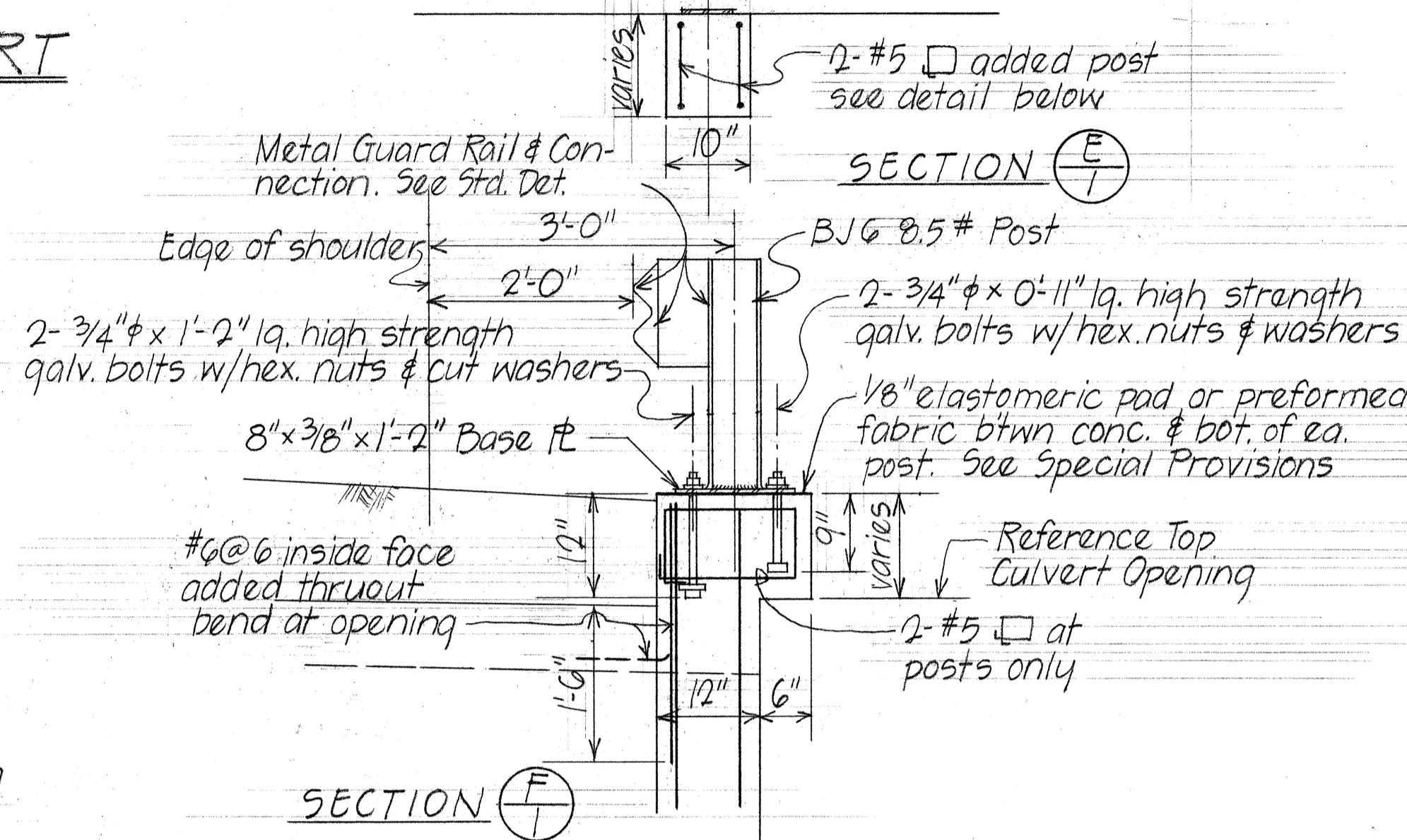
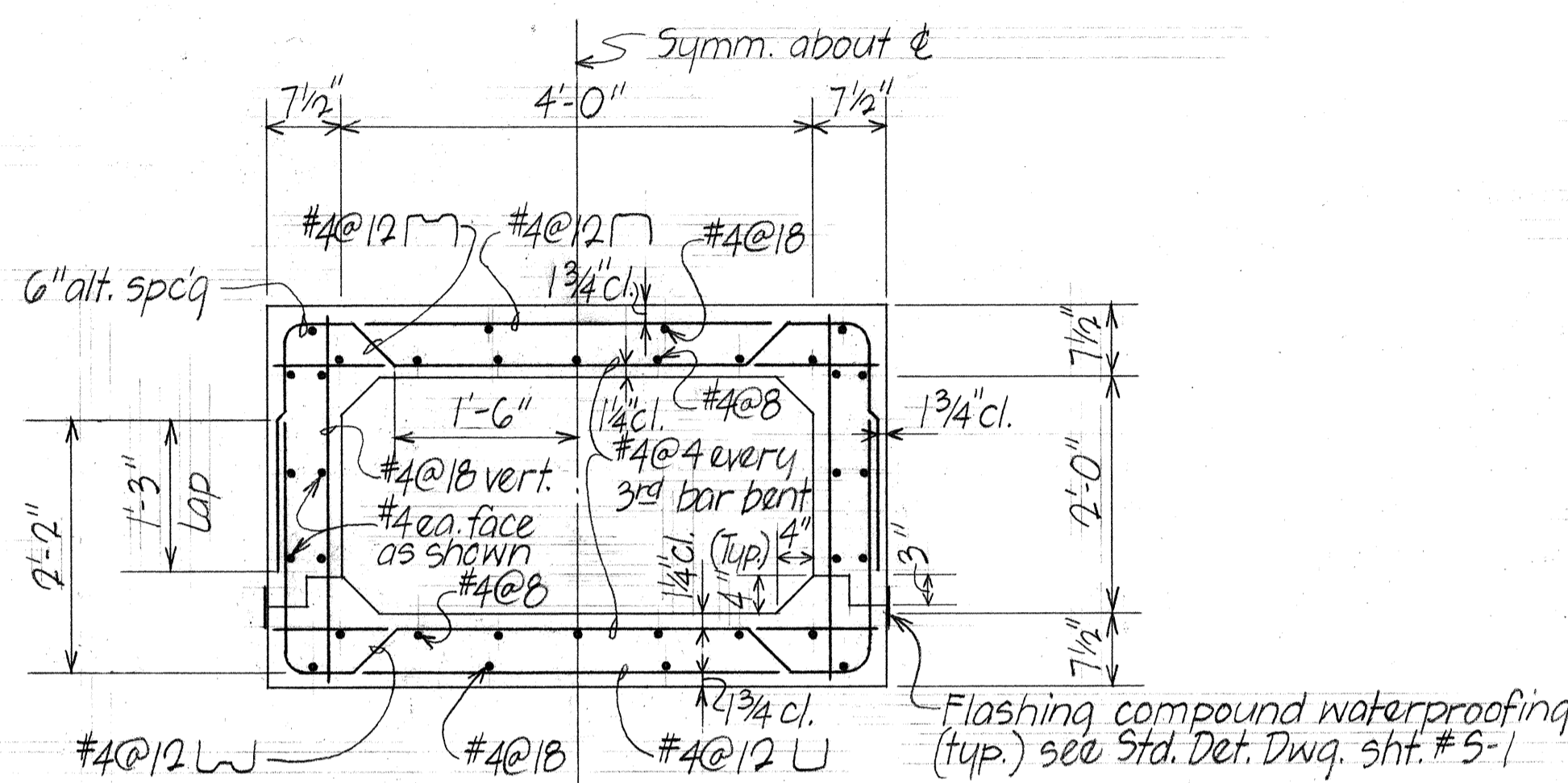
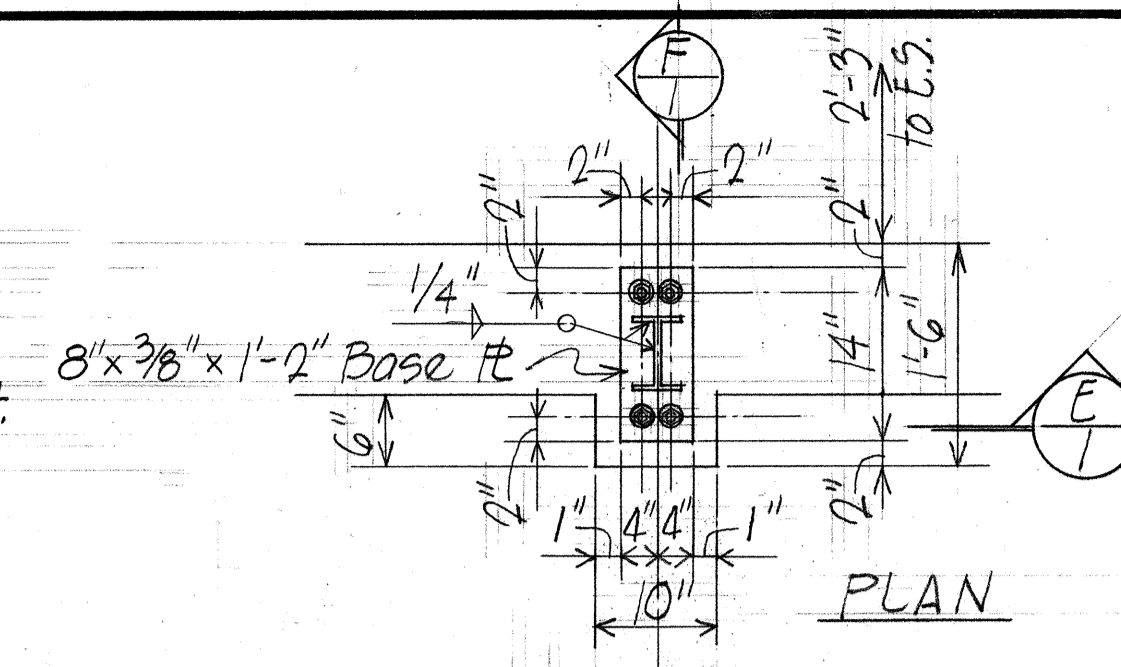
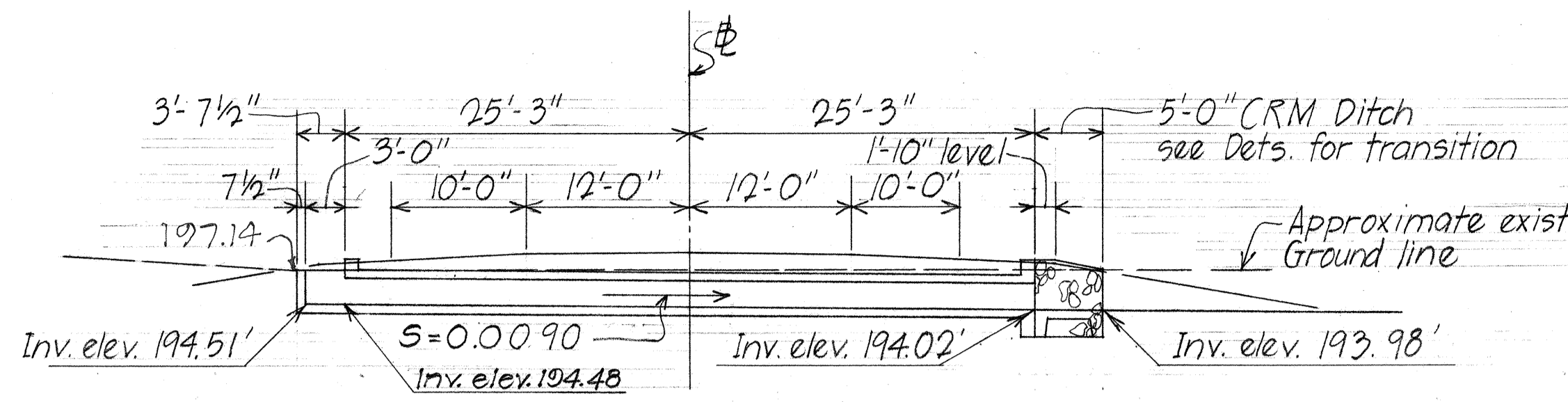
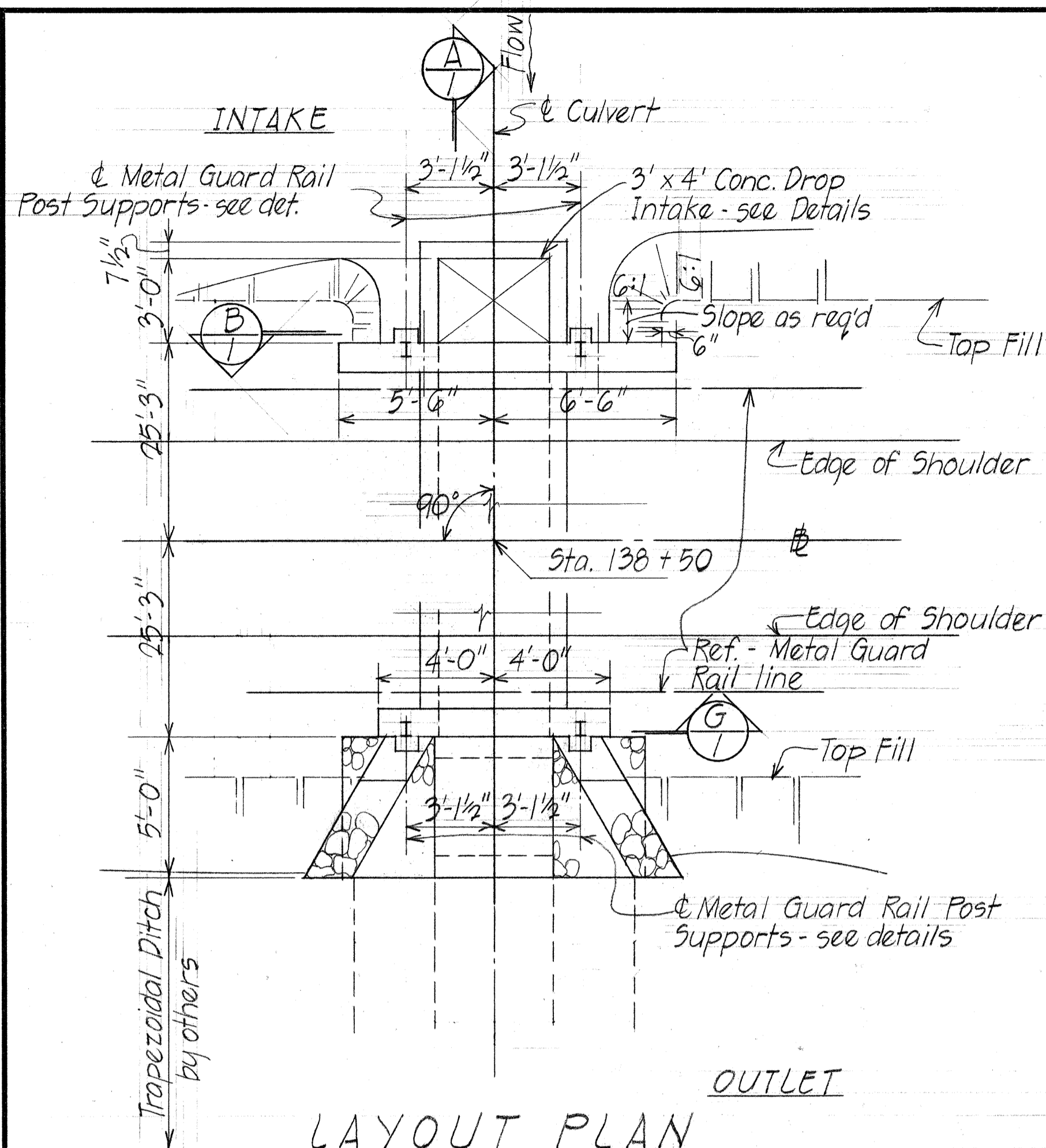
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DRAINAGE DETAILS
42" PIPE CULVERT @ STA. 122+53
KAHULUI AIRPORT - MAALAEA HWY.
PROJ. No. S-0380 (G)
Scale: As Shown Dec. 1969
SHEET No. D-2 OF 9 SHEETS

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	6-0380(G)	1969	30	89

NOTES

Metal guard rail post & connection incidental to Guard Rail and will not be paid for separately.



GENERAL NOTES
Refer to Waihee Ditch Bridge - Sht. # 1 for applicable General Notes.

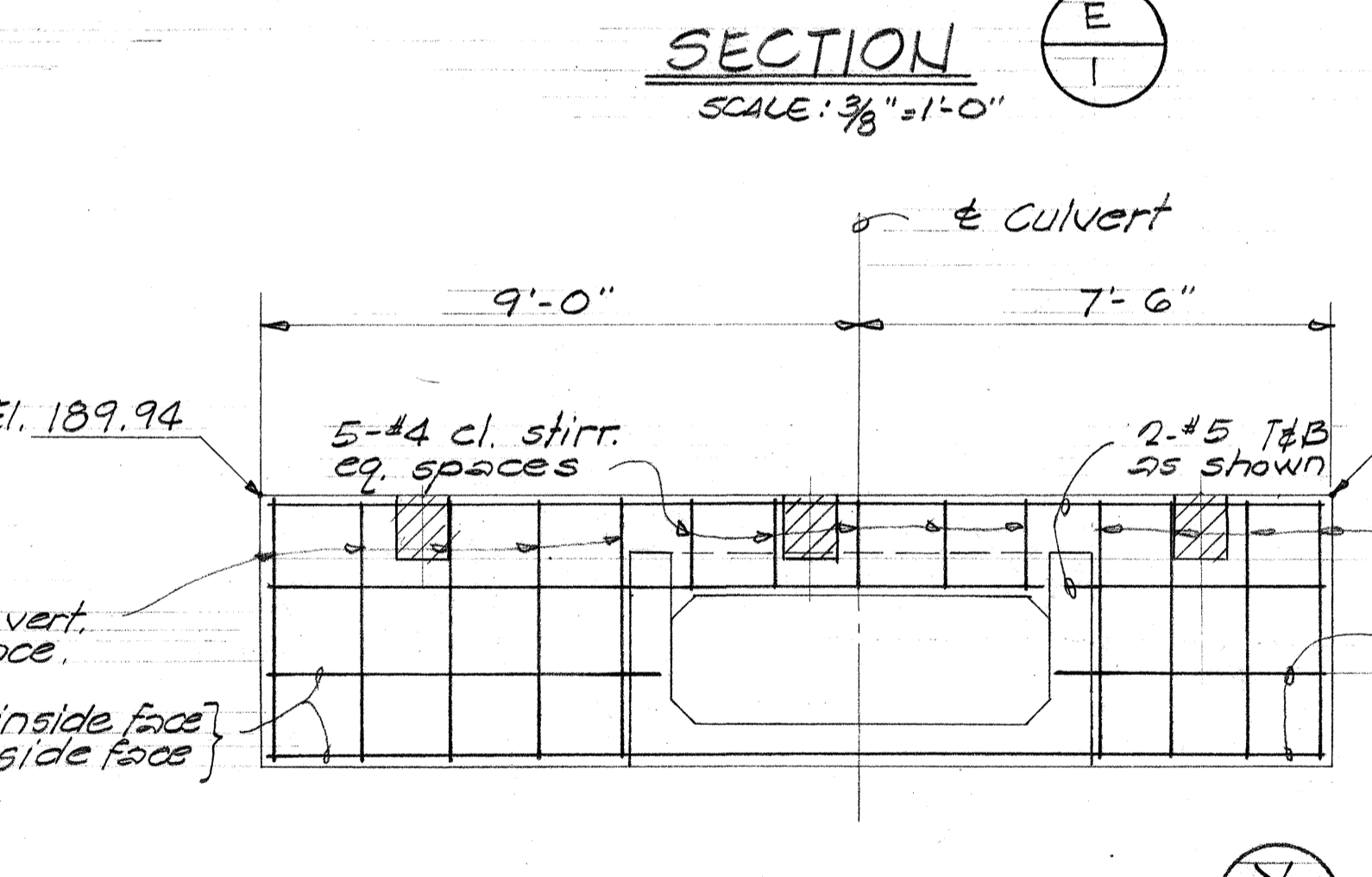
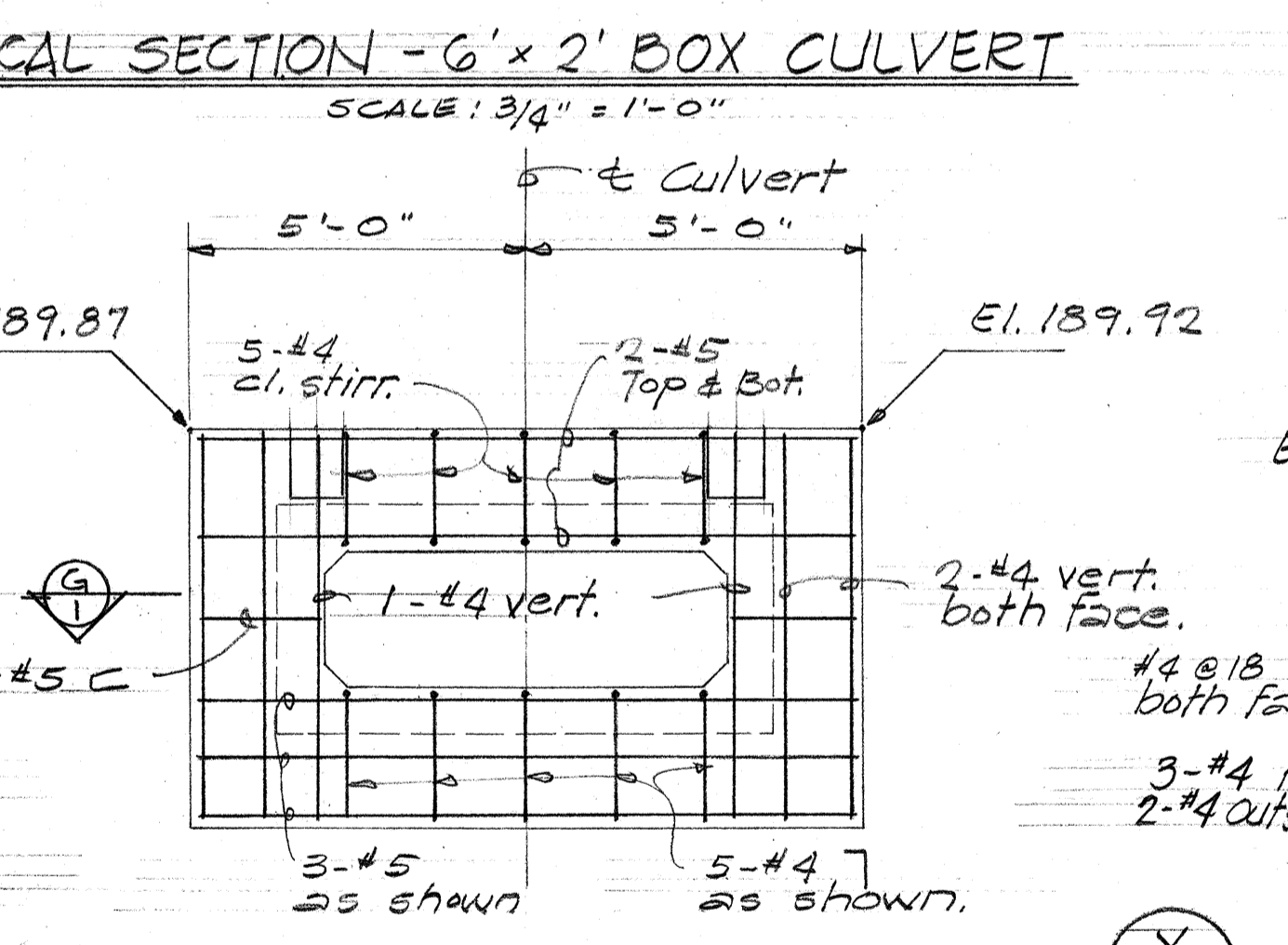
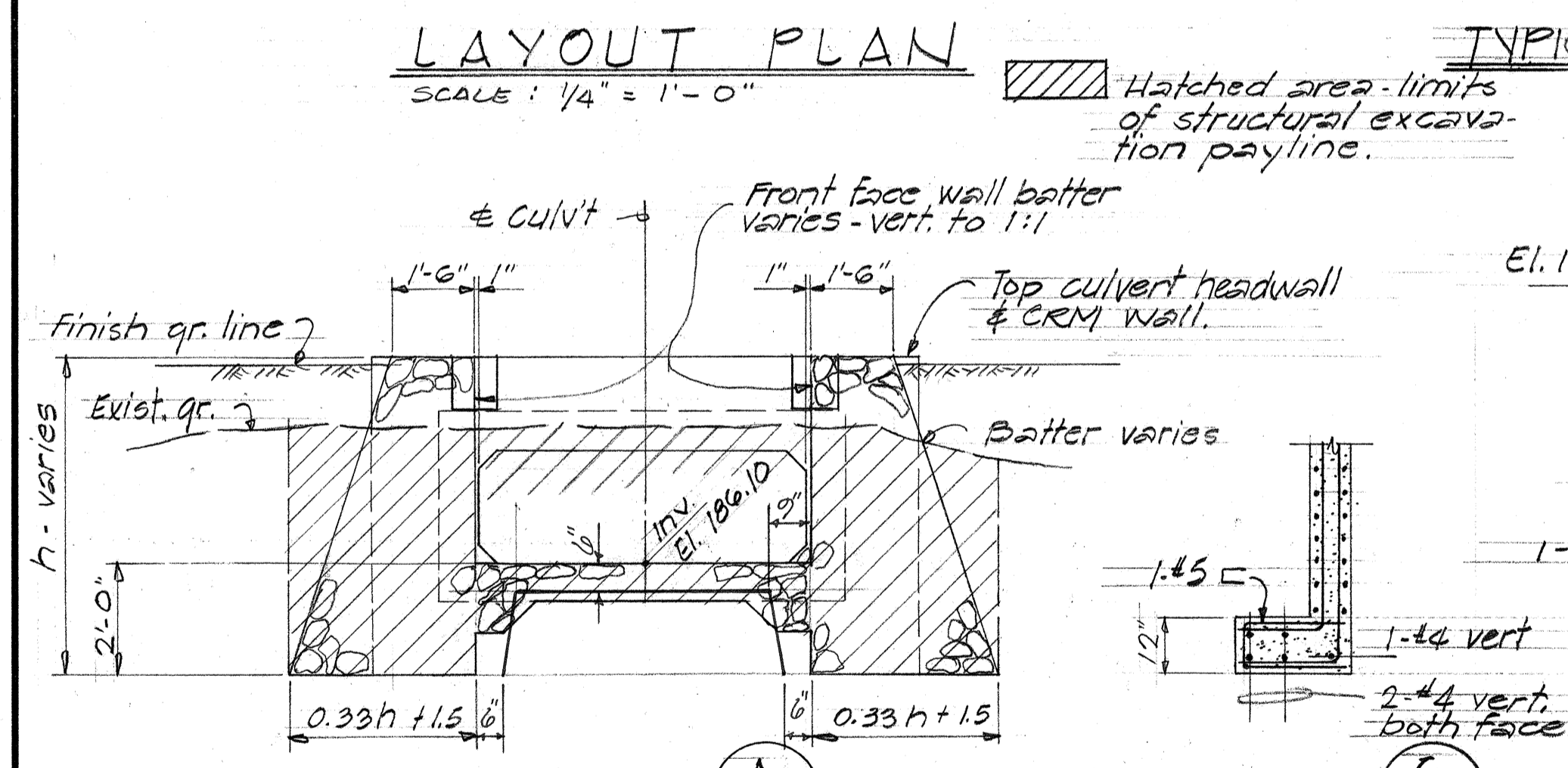
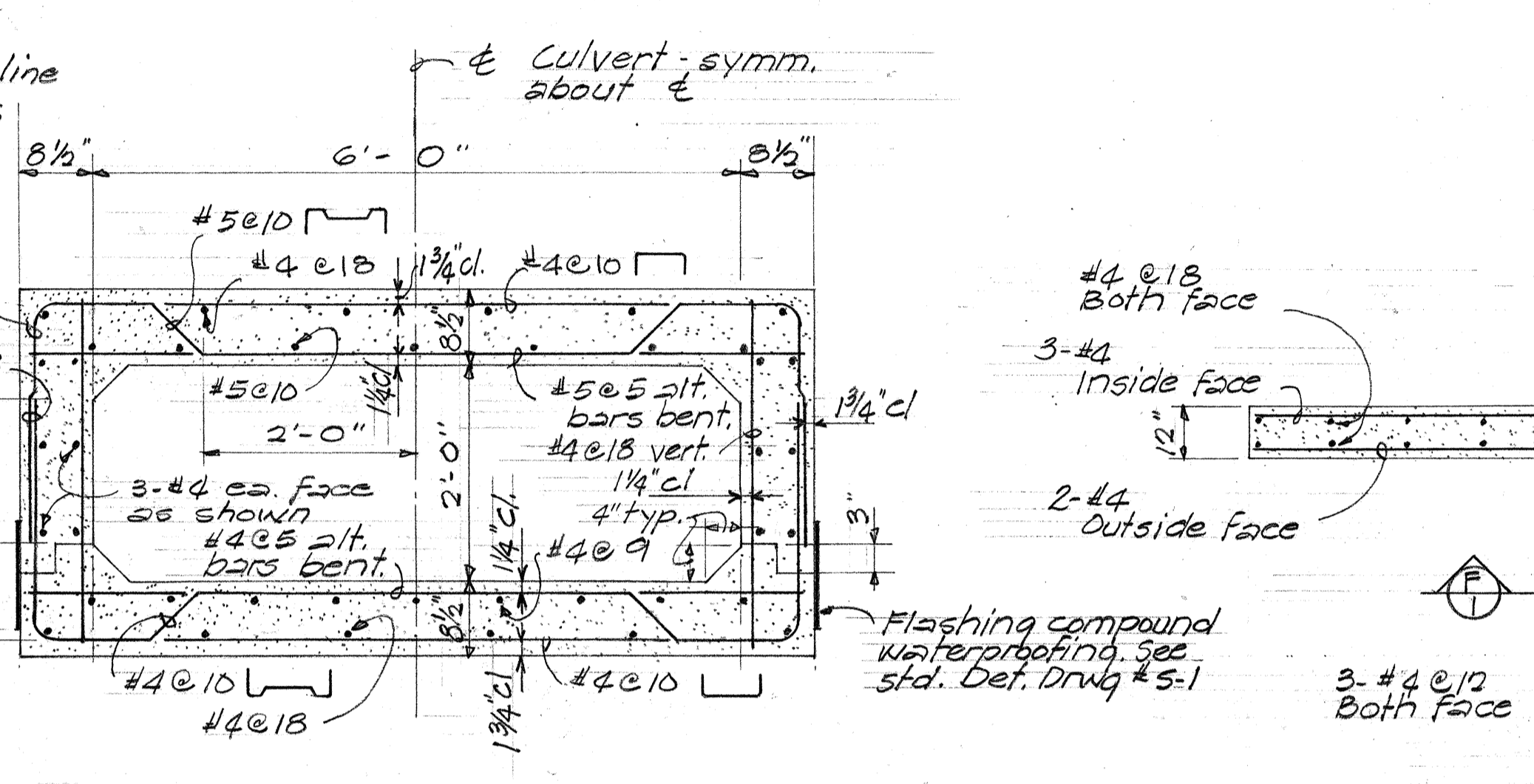
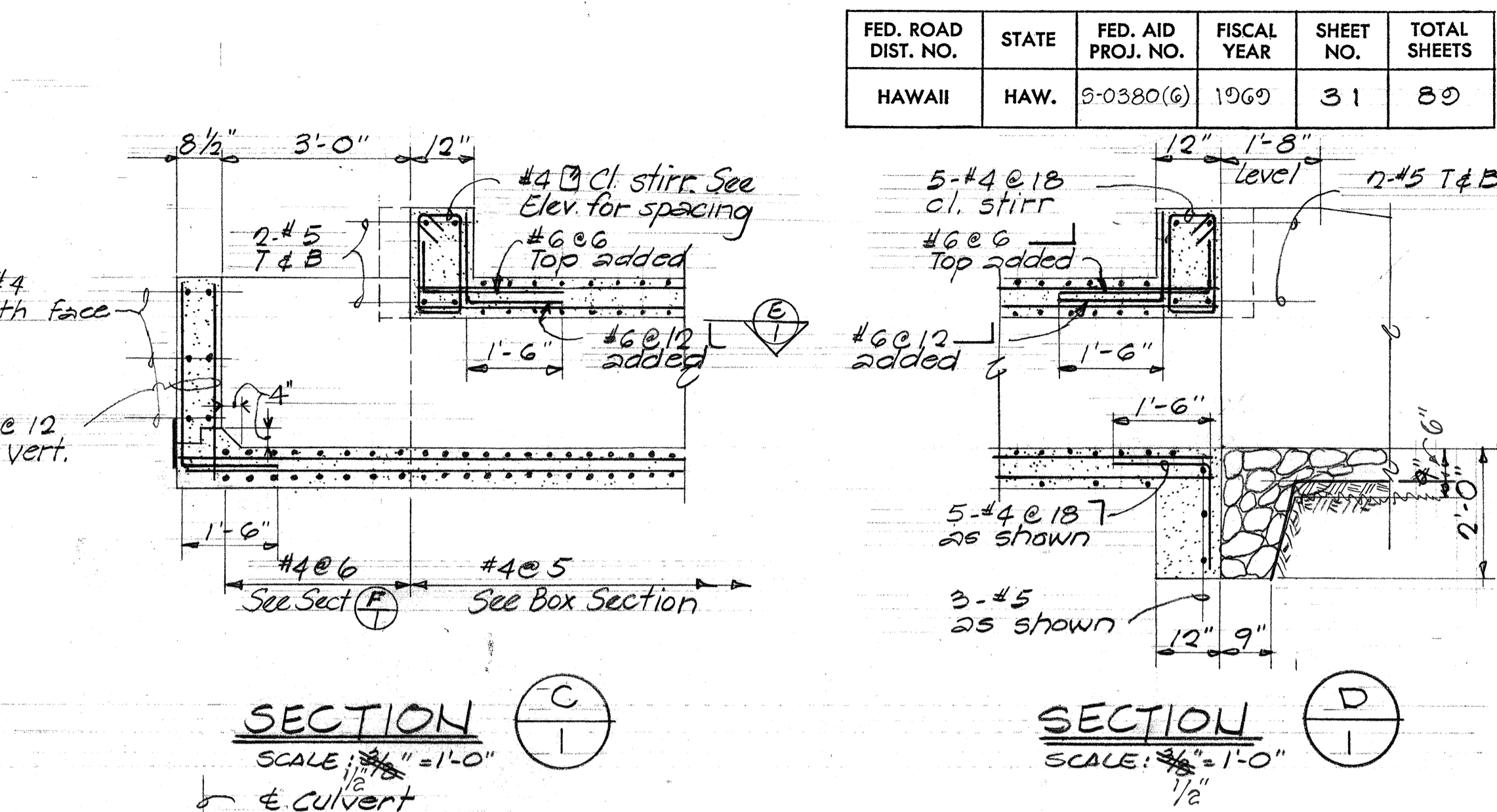
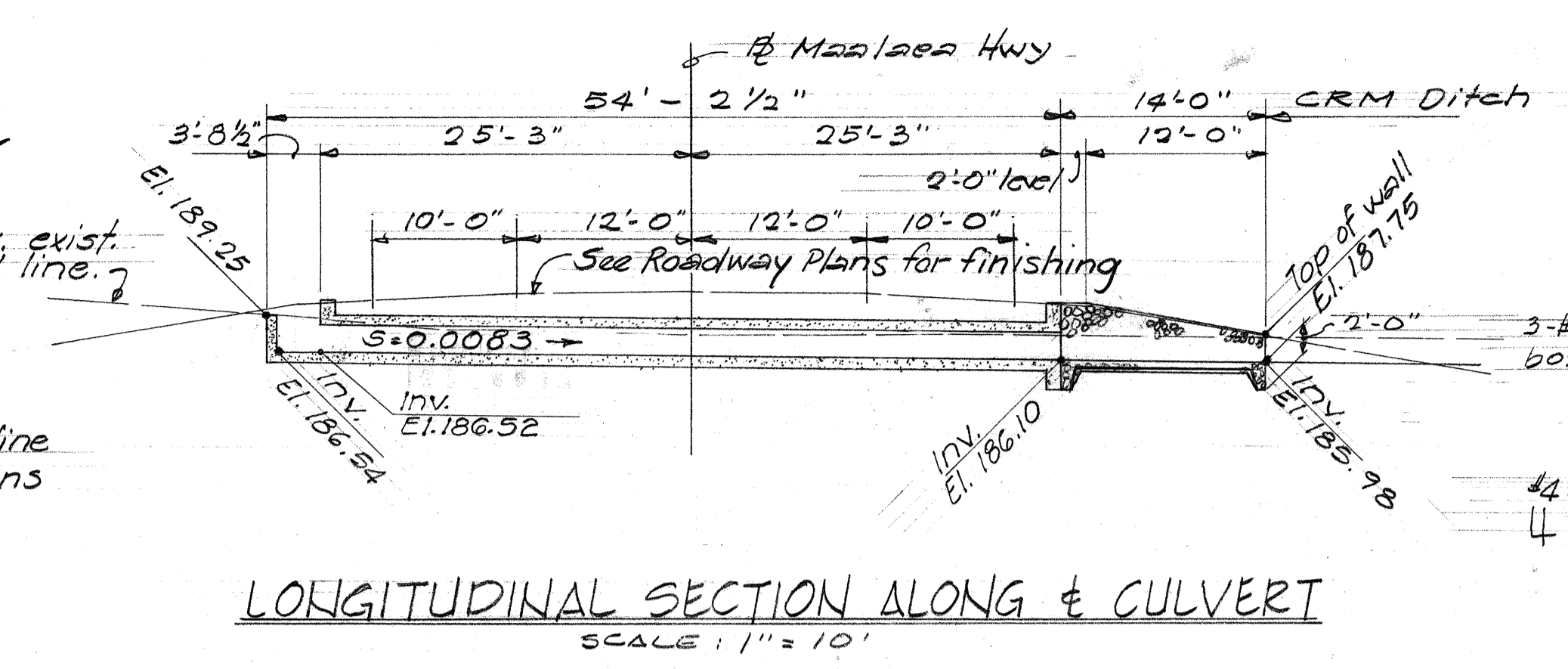
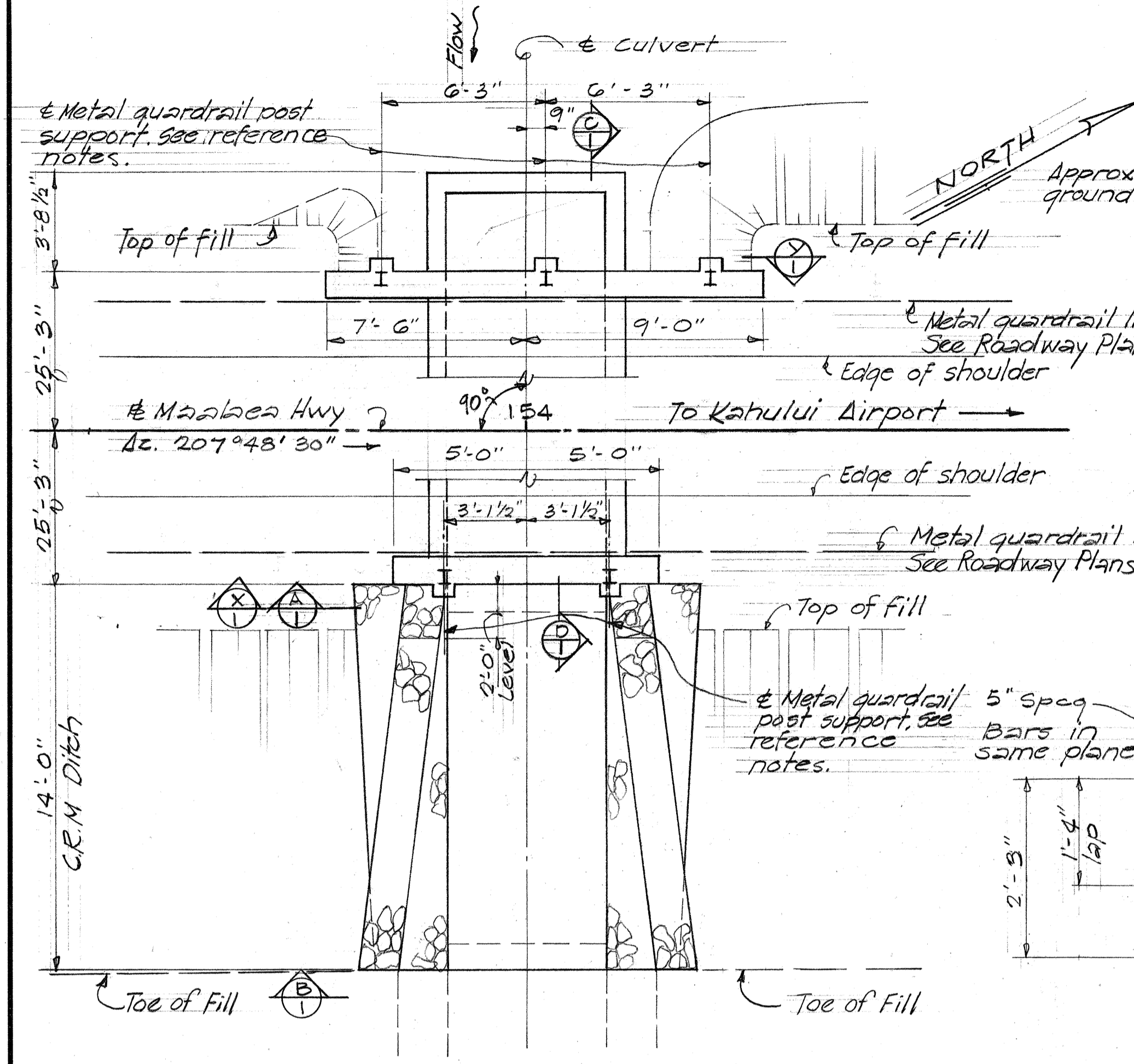
ESTIMATED QUANTITIES

Class "A" Concrete	(Lump Sum)	21.0 cu.yd.
Reinforcing Steel	(Lump Sum)	3,400 lbs.
Structural Excavation		68.0 cu.yd.
CRM		5.0 cu.yd.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DRAINAGE DETAILS
4' x 2' BOX CULVERT @ STA. 138+50
KAHALUI AIRPORT - MAALAE A HWY.
PROJ. NO. 6-0380 (G)
Scale: As Shown Dec. 1969
SHEET No. D-3 OF 9 SHEETS

SURVEY PLOTTED BY: _____
 DESIGNED BY: _____
 CHECKED BY: _____
 ORIGINAL PLAN NO. _____
 NOTE BOOK NO. _____
 CHECKED BY: _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	5-0380(6)	1969	31	89



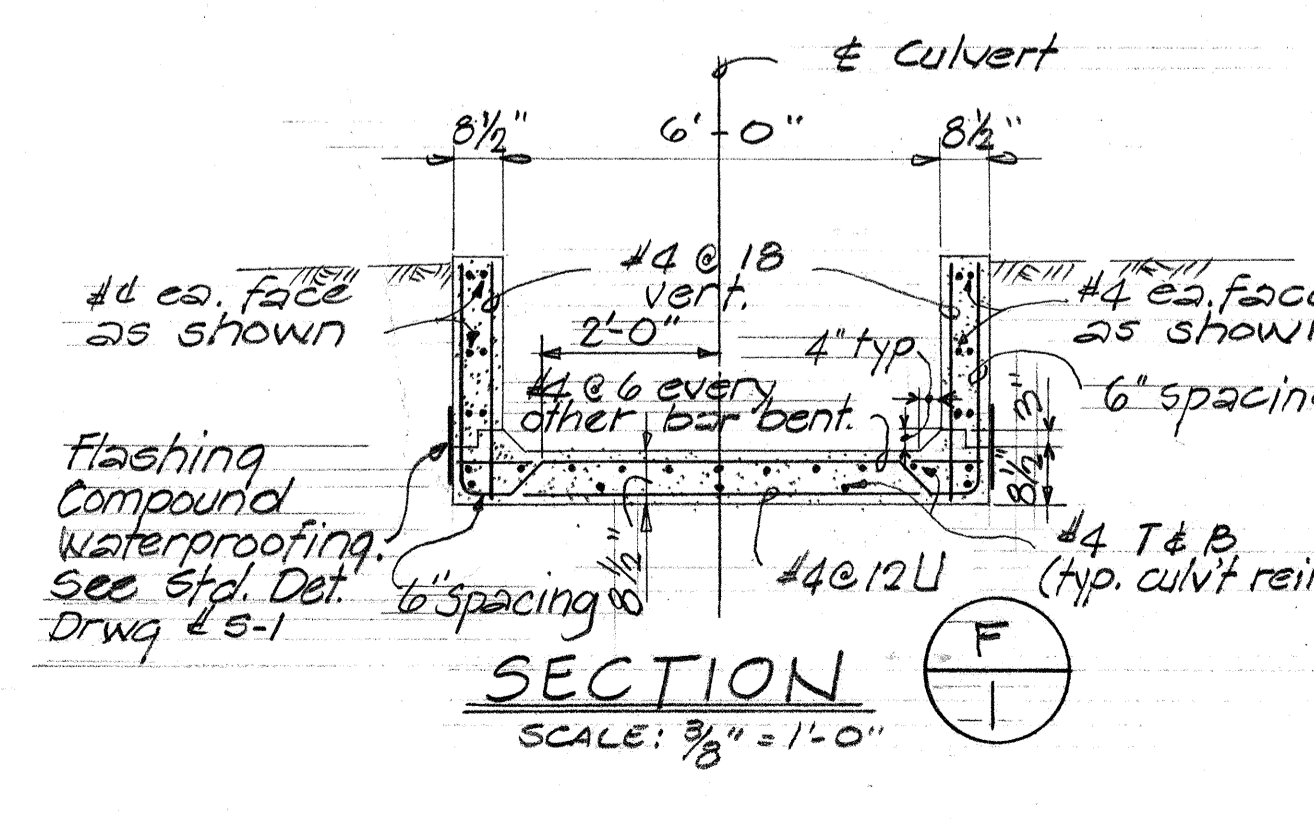
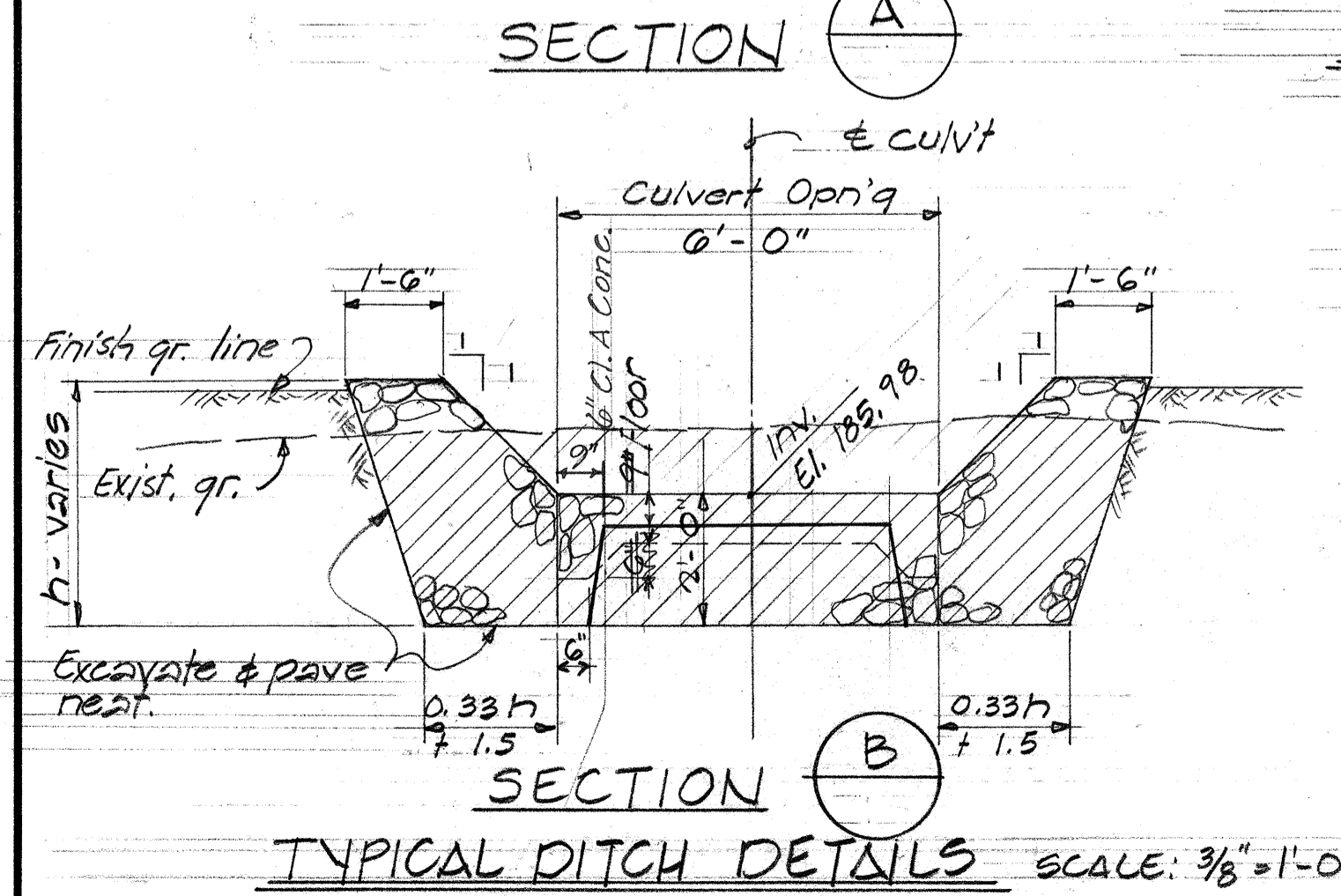
ESTIMATED QUANTITIES

Class A Concrete (Lump Sum)	30 cu. yd.
Reinforcing Steel (Lump Sum)	5,000 lbs
Structural Excavation	64 cu. yd.
C.R.M.	11 cu. yd.

Notes:

Reference:
1. Guardrail support at culvert headwall same as shown for 4' x 2' box culvert sta. 138+50.

General:
2. Refer to Wahee Ditch Bridge drawing #1 for applicable General Notes.



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DRAINAGE DETAILS
6' x 2' BOX CULVERT @ STA. 154+00

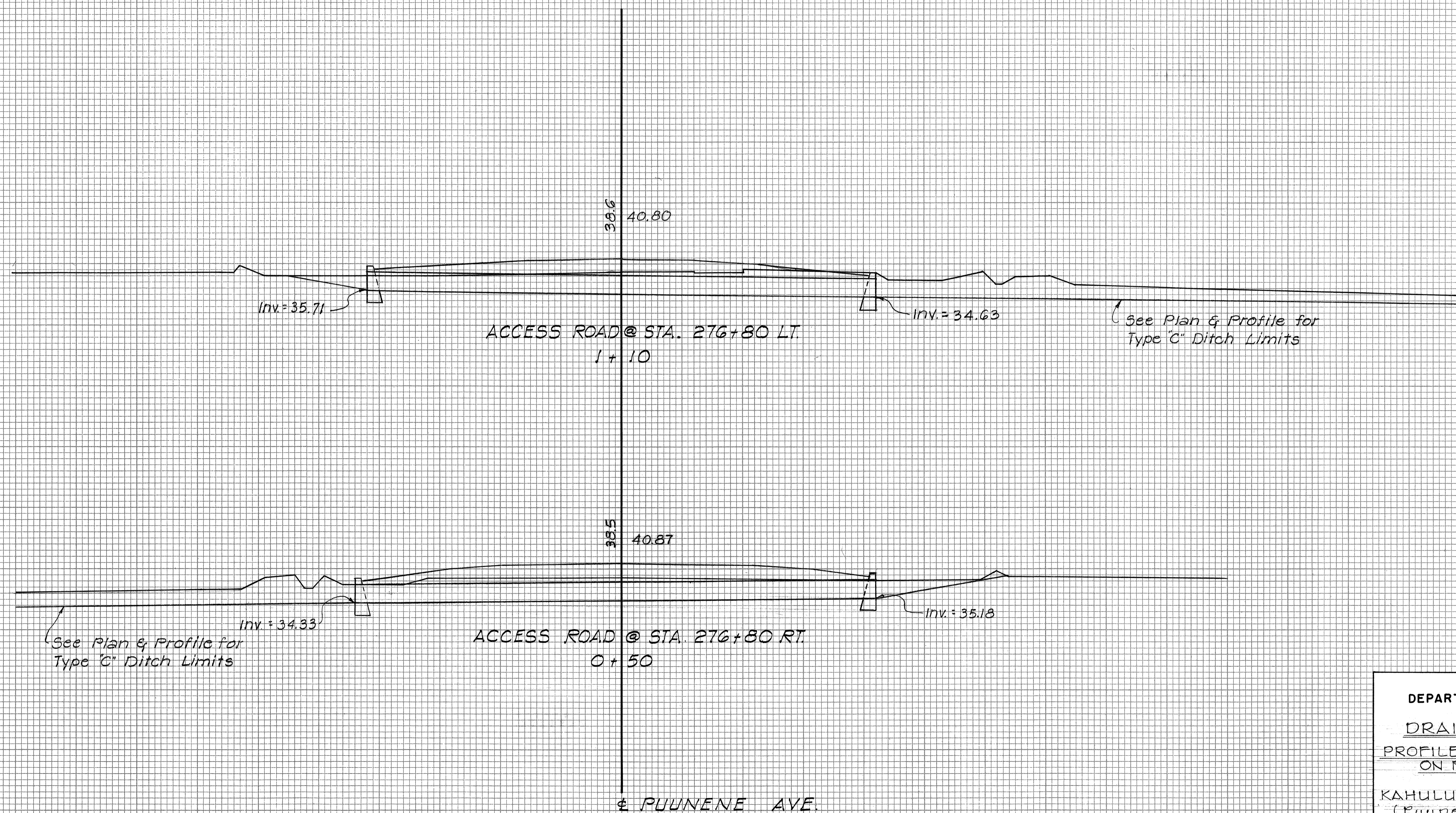
KAHULUI AIRPORT - MAALAEA HWY.
PROJ. No. 5-0380(6)
Scale: As Shown Dec. 1969
SHEET No. D-4 OF 9 SHEETS

DATE	REVISION

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	5-0380(6)	1969	32	89

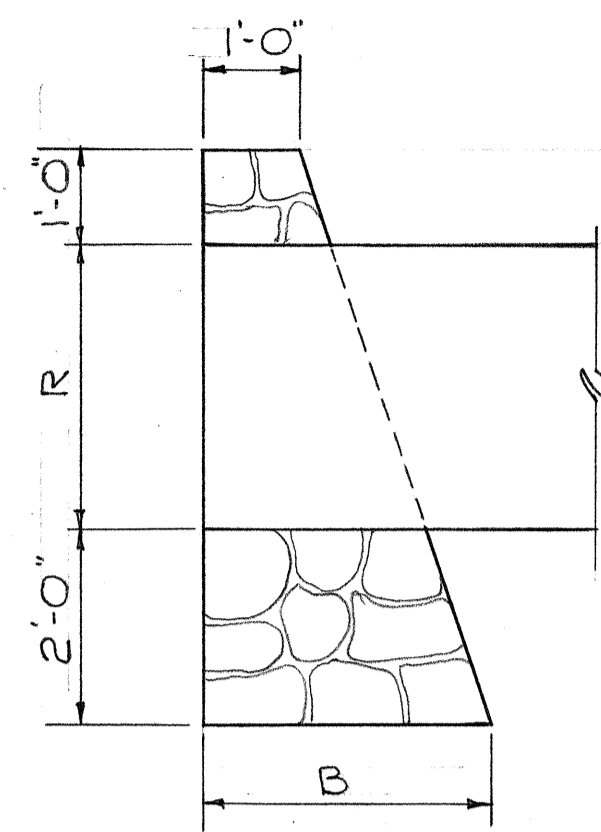
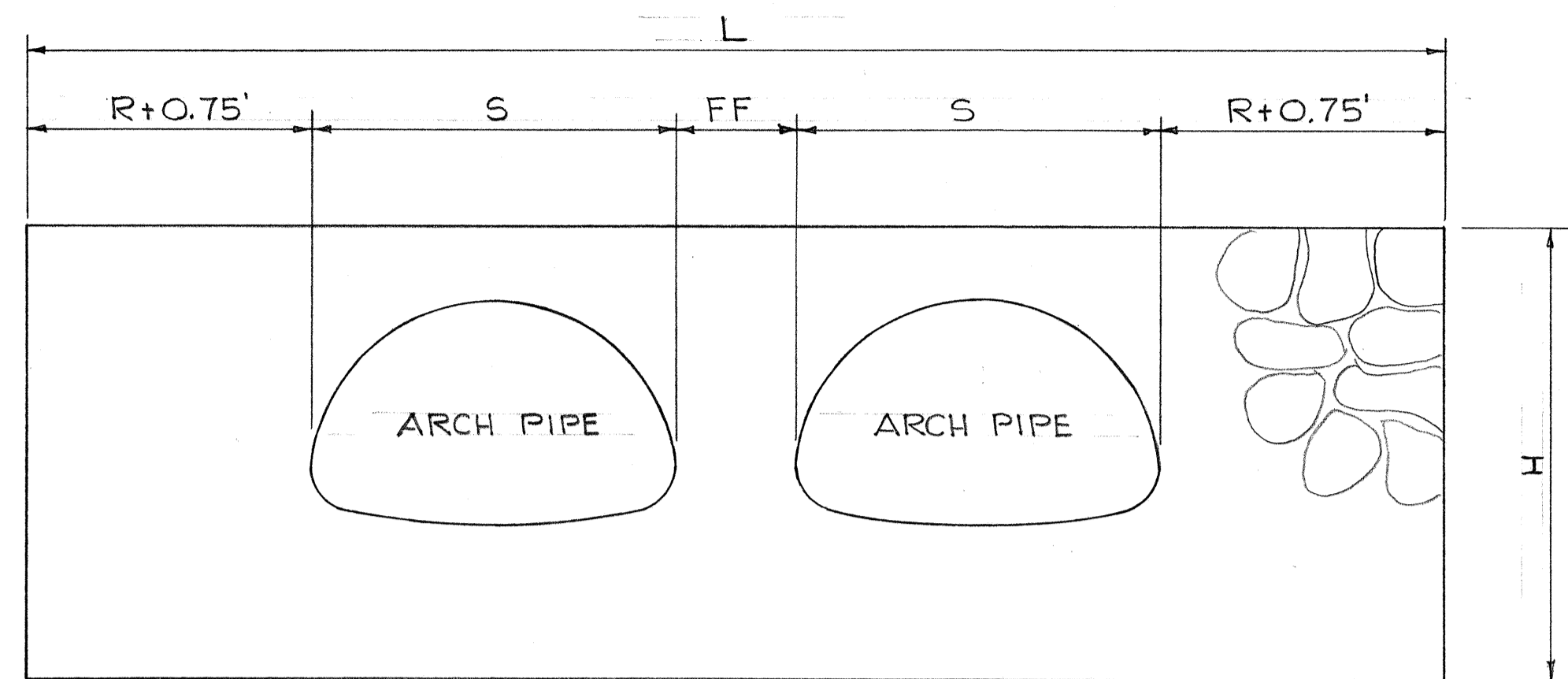
DATE	BY
FINAL SURVEY NOTE BOOK NO.	SURVEY PLOTTED TEMPLATE AREAS CHECKED

DATE	BY
ORIGINAL SURVEY NOTE BOOK NO.	SURVEY PLOTTED TEMPLATE AREAS CHECKED



STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
 DRAINAGE DETAILS
 PROFILE OF 36" PIPE CULVERTS
 ON PUUNENE AVENUE
 KAHULUI AIRPORT-MAALAEA HWY.
 (Puunene Avenue to Maaloa)
 PROJ. No. 5-0380 (6)
 Scale: As Shown Dec. 1969
 SHEET NO. D-50F OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	5-0380(6)	1969	33	80



ELEVATION

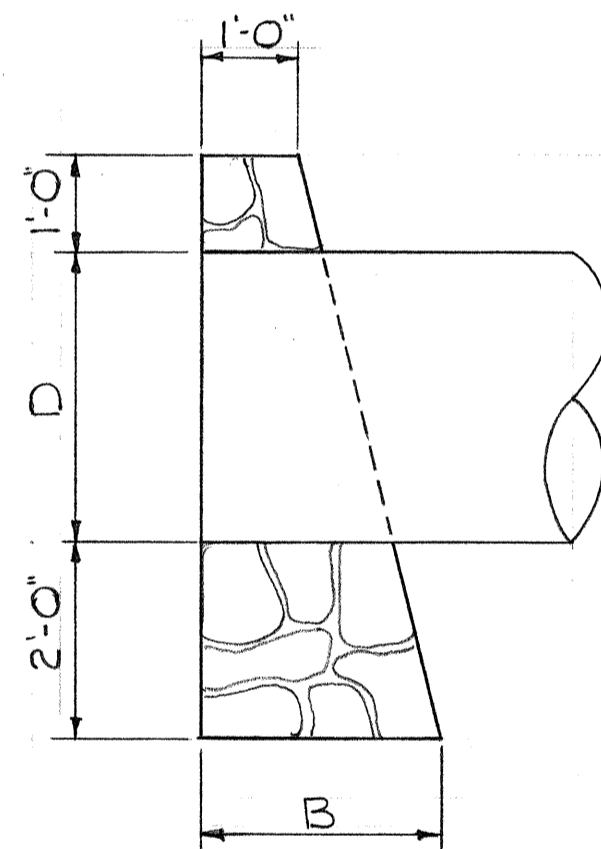
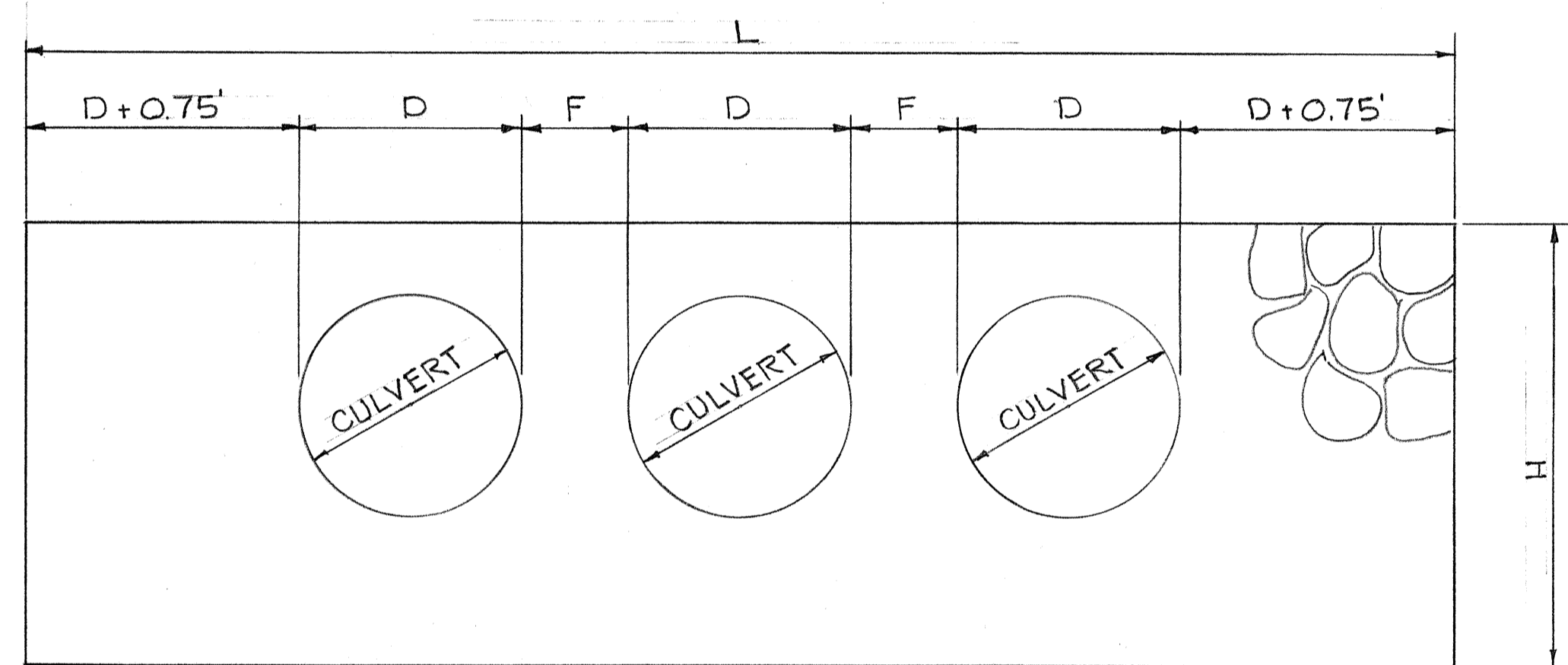
SECTION

DETAIL OF CRM HEADWALL FOR MULTIPLE ARCH PIPE INSTALLATIONS

SCALE: 1/2" = 1'-0"

SINGLE & MULTIPLE ARCH-PIPE CRM HEADWALL DATA

NO. OF ARCH PIPES	SPAN S	RISE R	H	B	L	FF
2	43"	27"	5'-3"	2'-9"	14'-4"	1'-2"
1	50"	31"	5'-7"	2'-10"	10'-10"	
2	50"	31"	5'-7"	2'-10"	16'-5"	1'-5"
2	58"	36"	6'-0"	3'-0"	18'-9"	1'-7"



ELEVATION

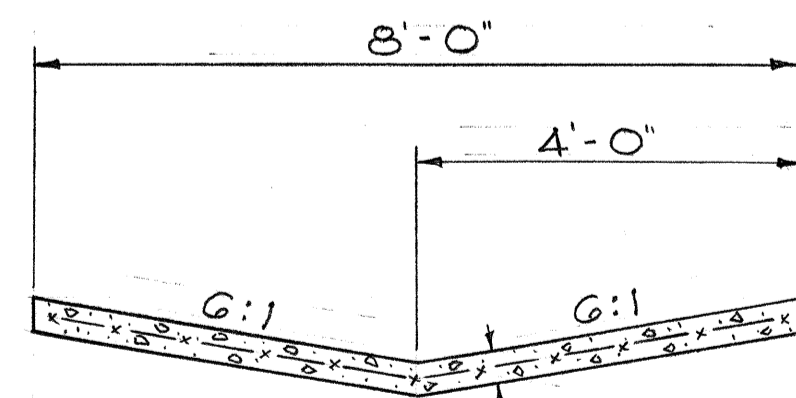
SECTION

DETAIL OF CRM HEADWALL FOR MULTIPLE CIRCULAR PIPE INSTALLATIONS

SCALE: 1/2" = 1'-0"

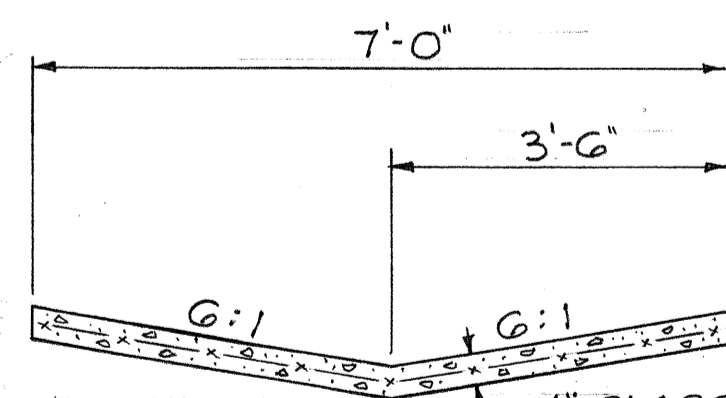
SINGLE & MULTIPLE CIRCULAR PIPE CRM HEADWALL DATA

NO. OF PIPES	DIA.	H	B	L	F
1	36"	6'-0"	2'-6"	10'-6"	
2	36"	6'-0"	2'-6"	15'-0"	1'-6"
3	36"	6'-0"	2'-6"	19'-6"	1'-6"
1	42"	6'-6"	3'-2"	12'-0"	



DETAIL OF TYPE G1G14 CONCRETE GUTTER

SCALE: 1/2" = 1'-0"



DETAIL OF TYPE G1G13.5 CONCRETE GUTTER

SCALE: 1/2" = 1'-0"

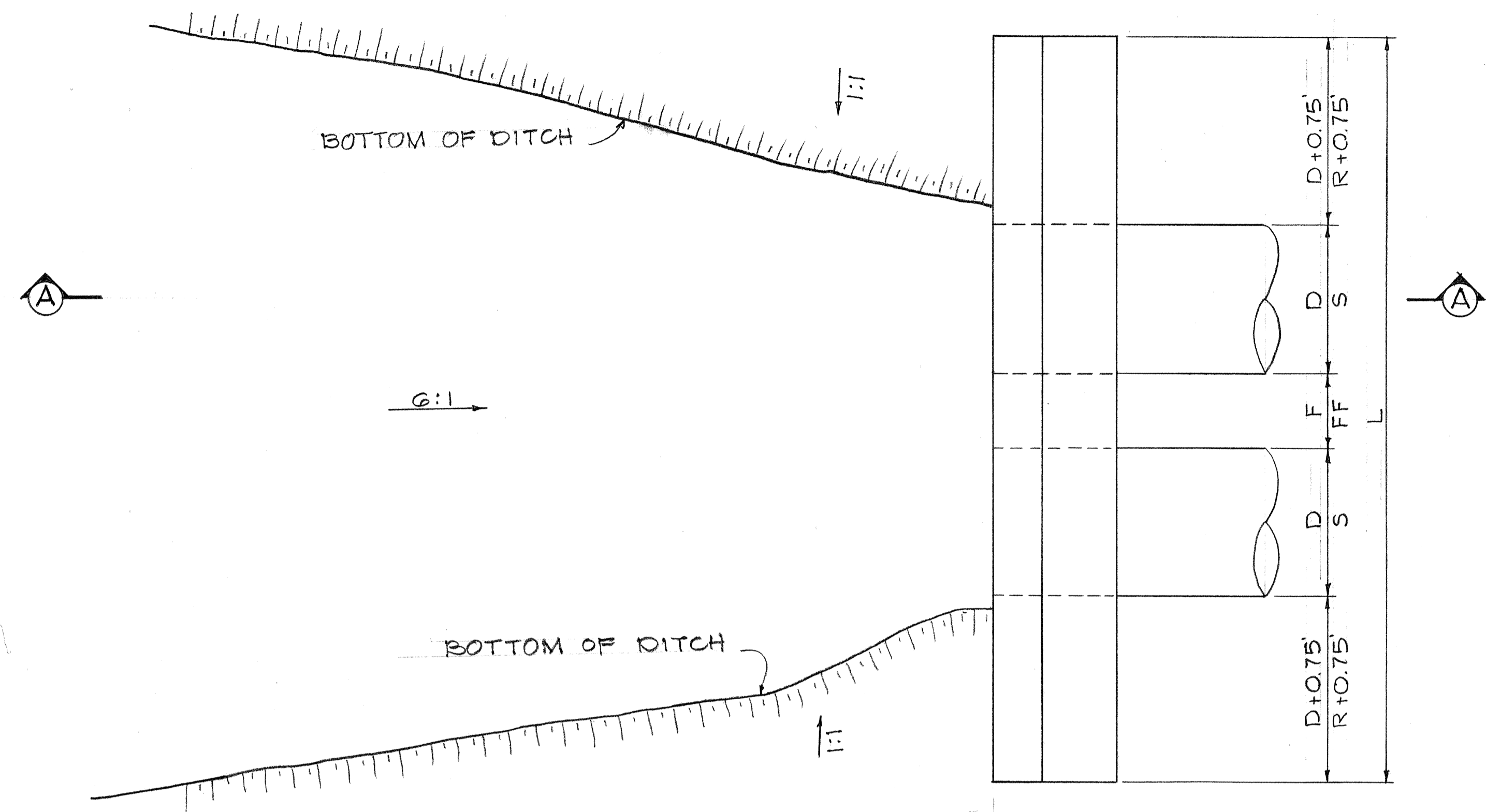
4" CLASS "B" CONCRETE OR SHOTCRETE
W/ 6x6x10/10 WIRE MESH

4" CLASS "B" CONCRETE OR SHOTCRETE
W/ 6x6x10/10 WIRE MESH

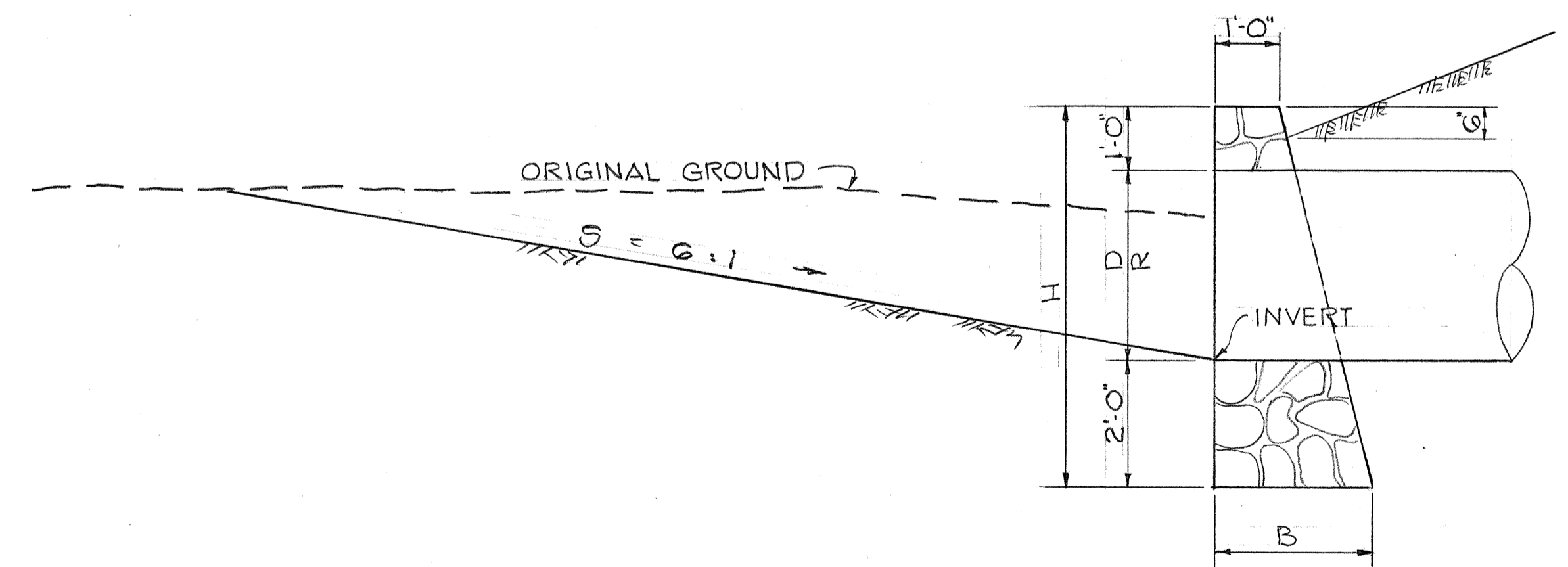
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DRAINAGE DETAILS
DETAILS OF CRM HEADWALL
FOR MULTIPLE CULVERT PIPES,
TYPE G1G13.5 AND G1G14
CONCRETE GUTTERS
KAHULUI AIRPORT-MAALAEA HWY.
PROJ. No. 5-0380 (6)
Scale: As Shown Dec. 1969
SHEET No. D-GOF 9 SHEETS

SURVEY PLOTTED BY: _____ DATE: _____
DRAWN BY: _____
DESIGNED BY: _____
NOTE BOOK QUANTITIES BY: _____
CHECKED BY: _____
No. _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	S-0380(6)	1969	34	89

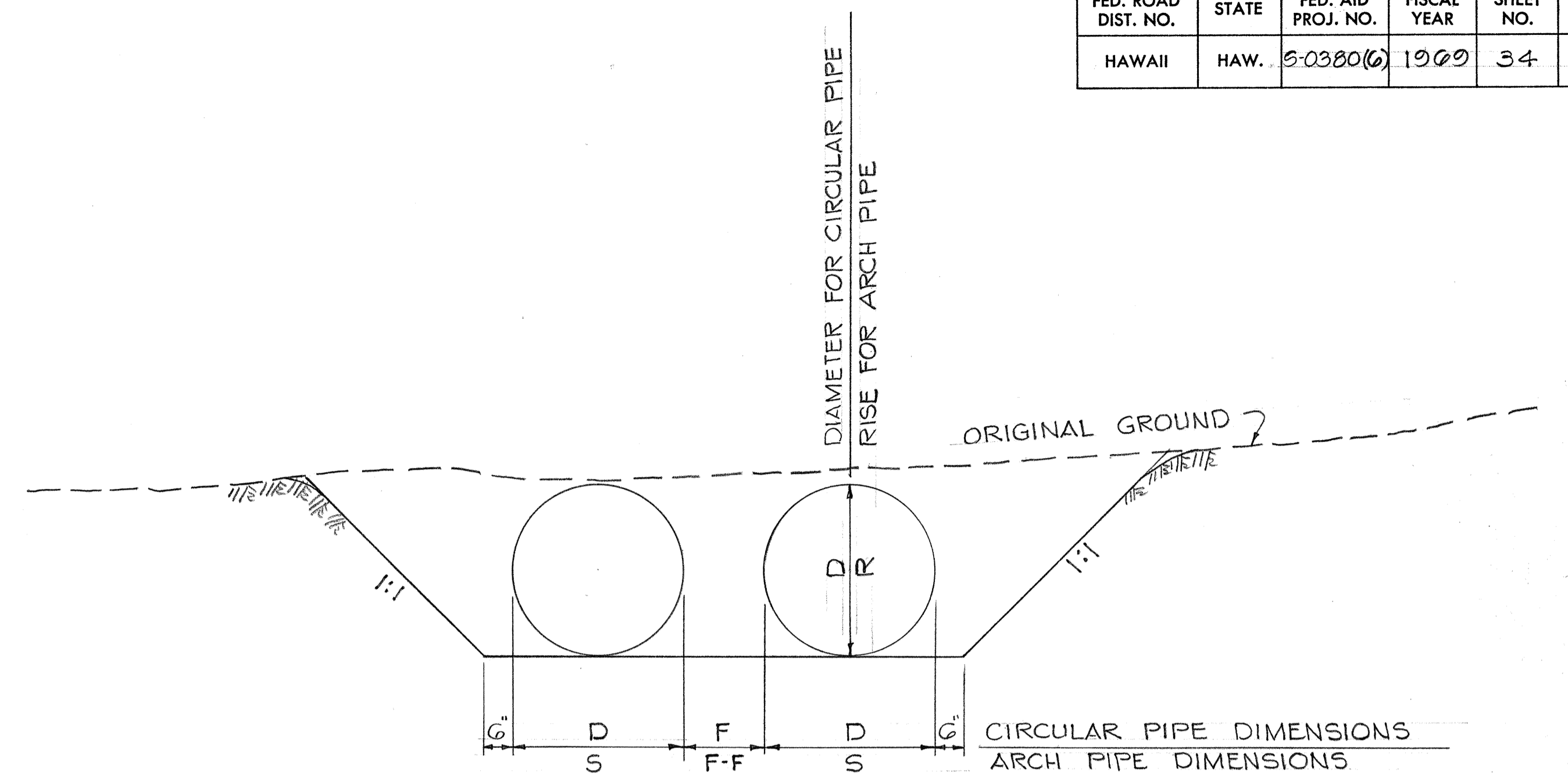


PLAN

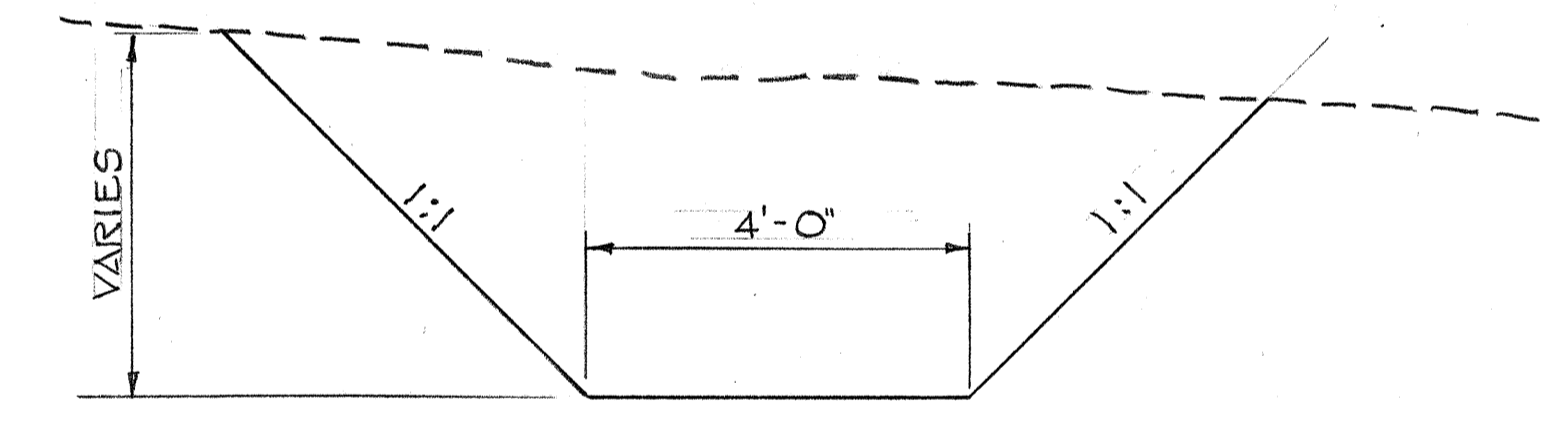


SECTION A-A

TYPICAL DETAIL OF INLET DITCH
SCALE: 1/2" = 1'-0"



TYPICAL DETAIL OF OUTLET DITCH
SCALE: 1/2" = 1'-0"

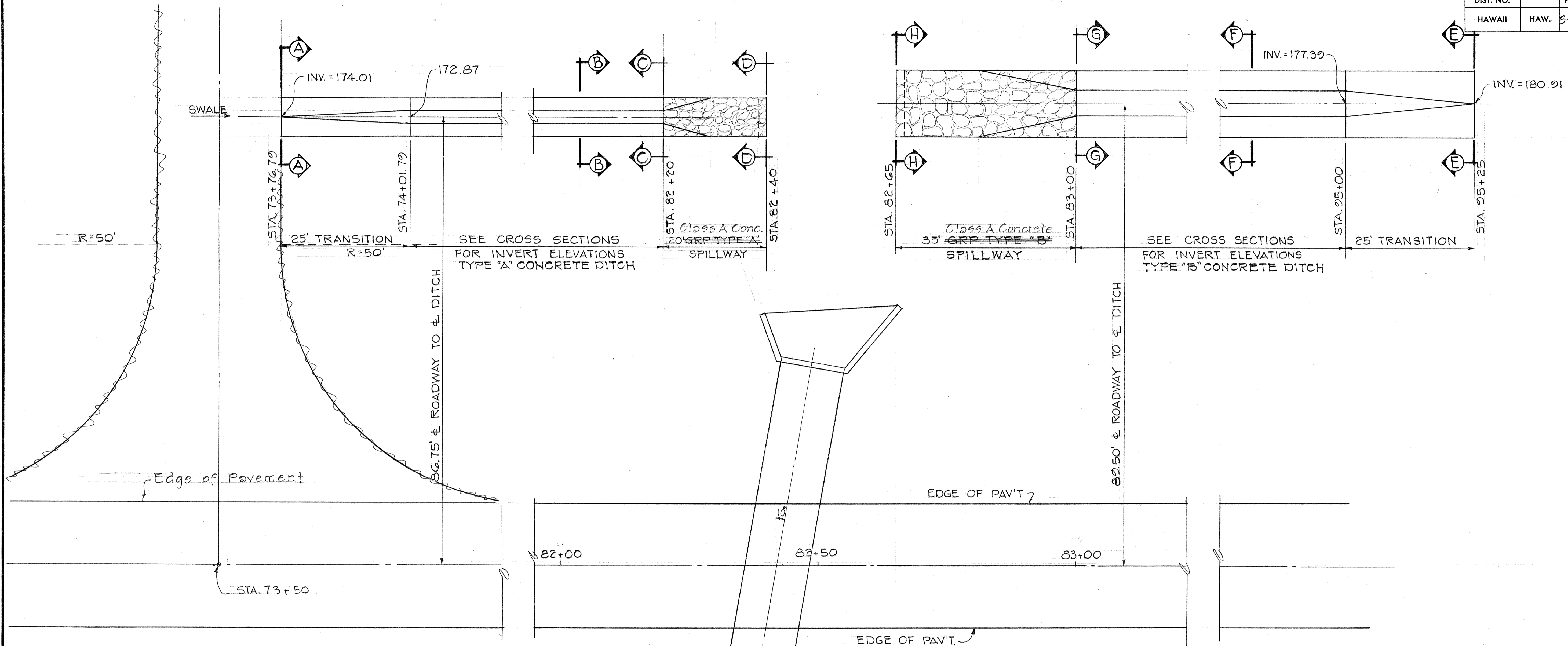


DETAIL OF TYPE "C" UNLINED DITCH
SCALE 1/2" = 1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DRAINAGE DETAILS
INLET & OUTLET DITCH FOR PIPE
CULVERTS, TYPE "C" UNLINED DITCH
KAHULUI AIRPORT-MAALAEA HWY.
PROJ. No. S-0380 (6)
Scale: As Shown Dec. 1969
SHEET No. D-7 OF 9 SHEETS

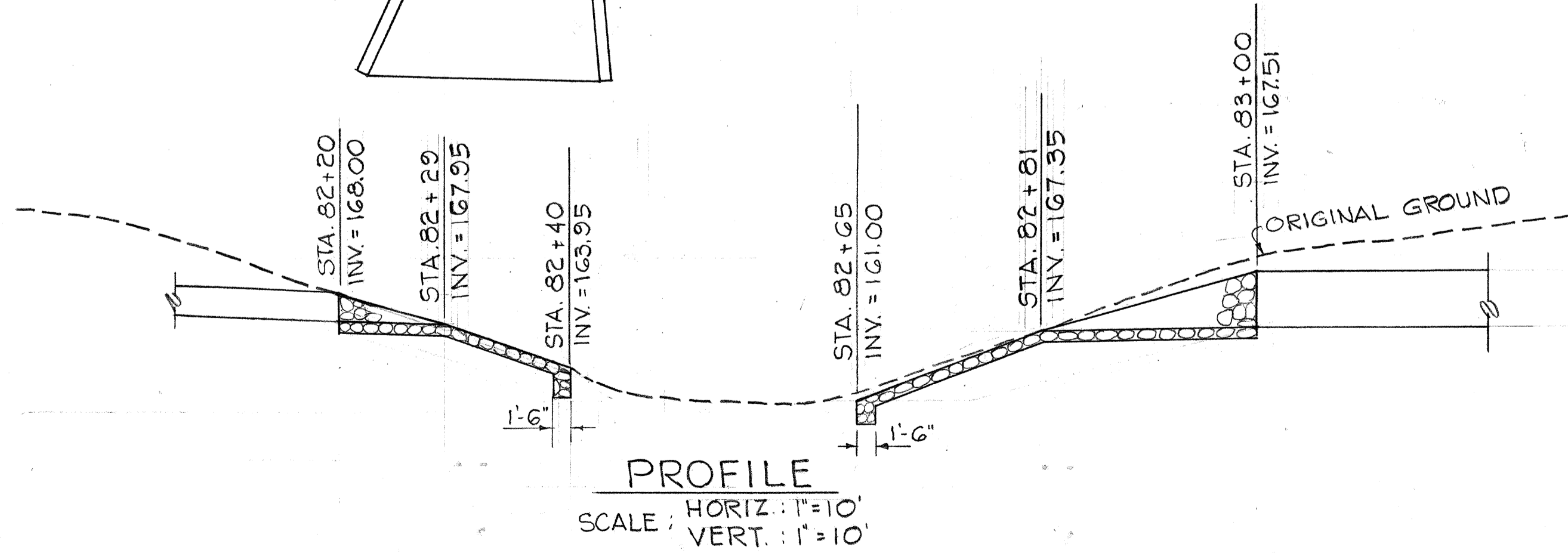
SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	No.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	5-0380(6)	1969	35	89



PLAN FOR GRP SPILLWAY
SCALE: 1"=10'

NOTE:
FOR TYPICAL DITCH AND SPILLWAY SECTIONS SEE SHEET NO. 36

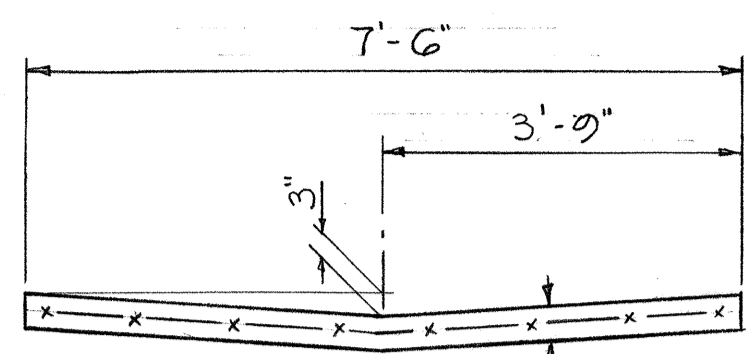


PROFILE
SCALE: HORIZ. 1"=10'
VERT. 1"=10'

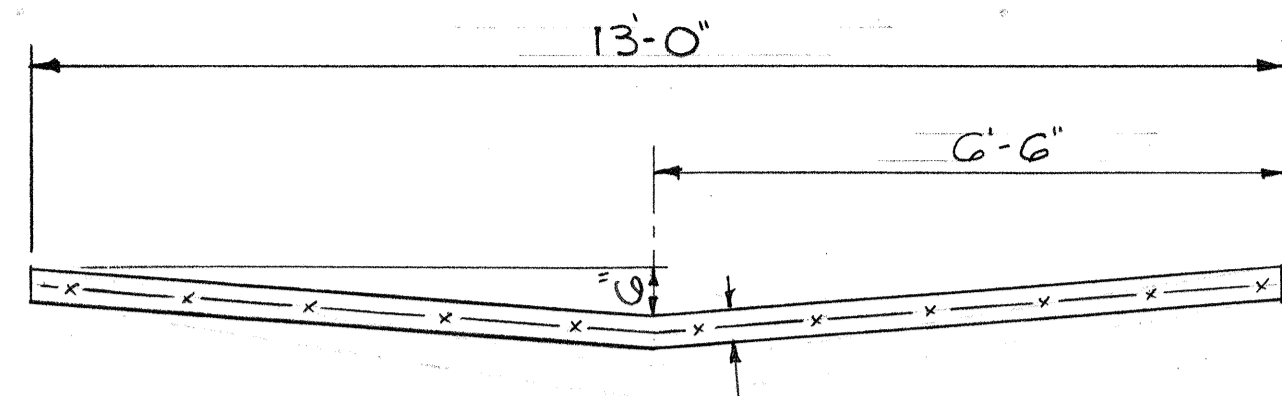
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DRAINAGE DETAILS
CONCRETE LINED DITCH AND
GRP SPILLWAY ~ STA. 73+76.79±LT.
TO STA. 95+25±LT.
KAHULUI AIRPORT-MAALAEA HWY.
PROJ. No. S-0380 (6)
Scale: As Shown Dec. 1969
SHEET No. D-8 OF 9 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	" "
TRACED BY	" "
QUANTITIES BY	" "
CHECKED BY	" "
NO.	" "

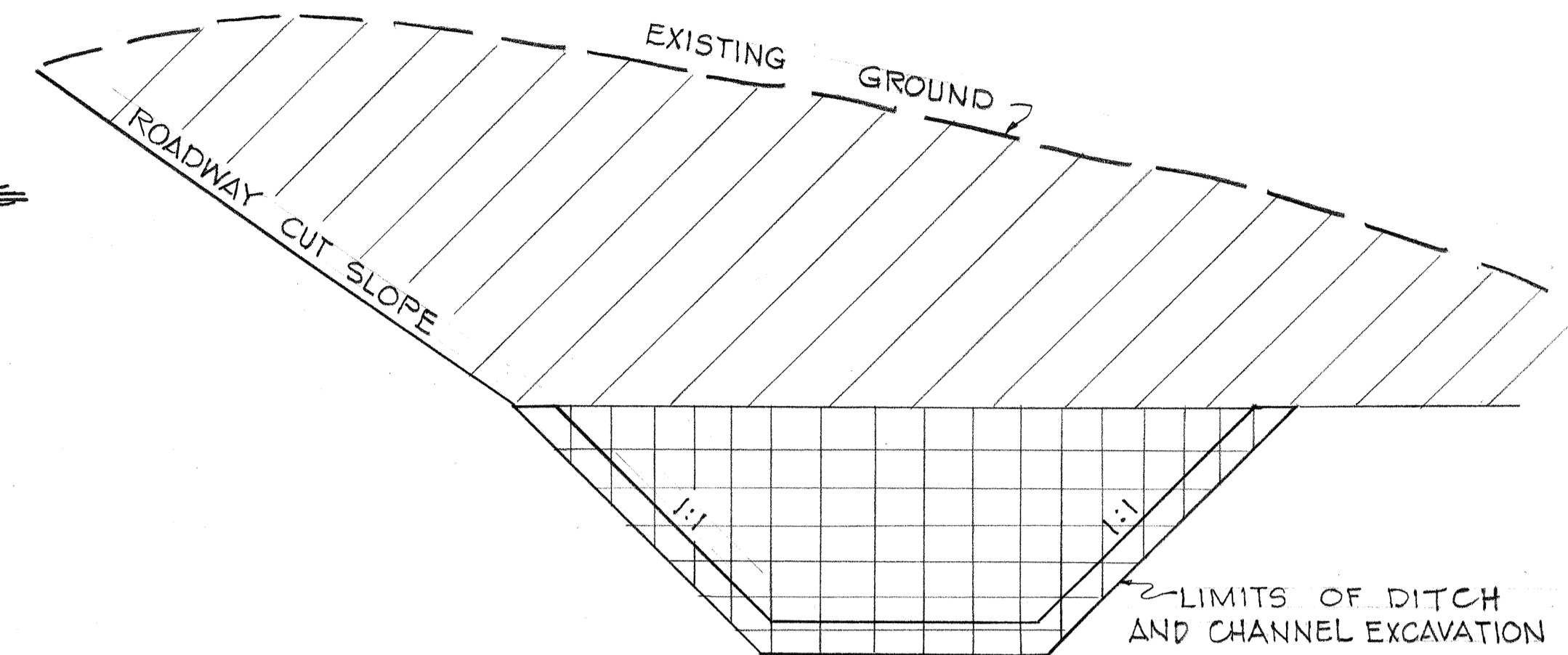
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	5-0380(6)	1969	36	80



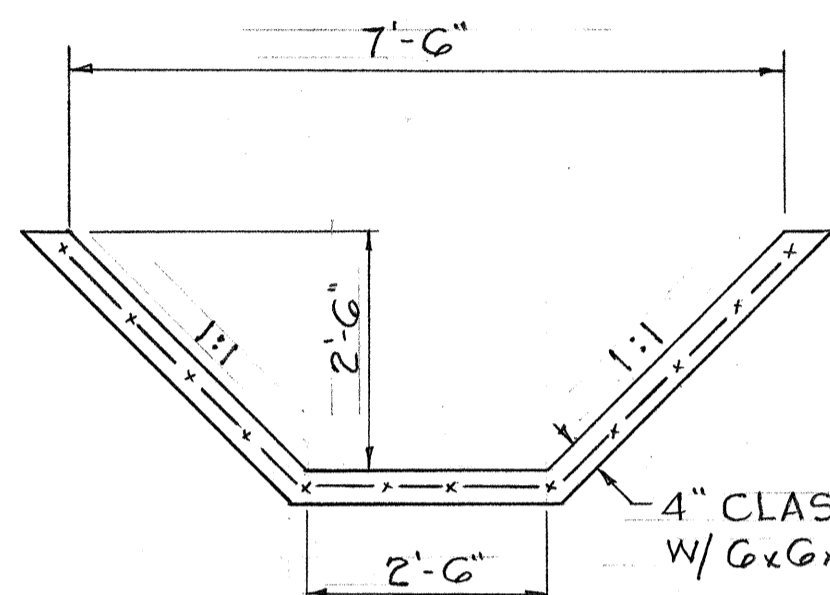
SECTION A-A



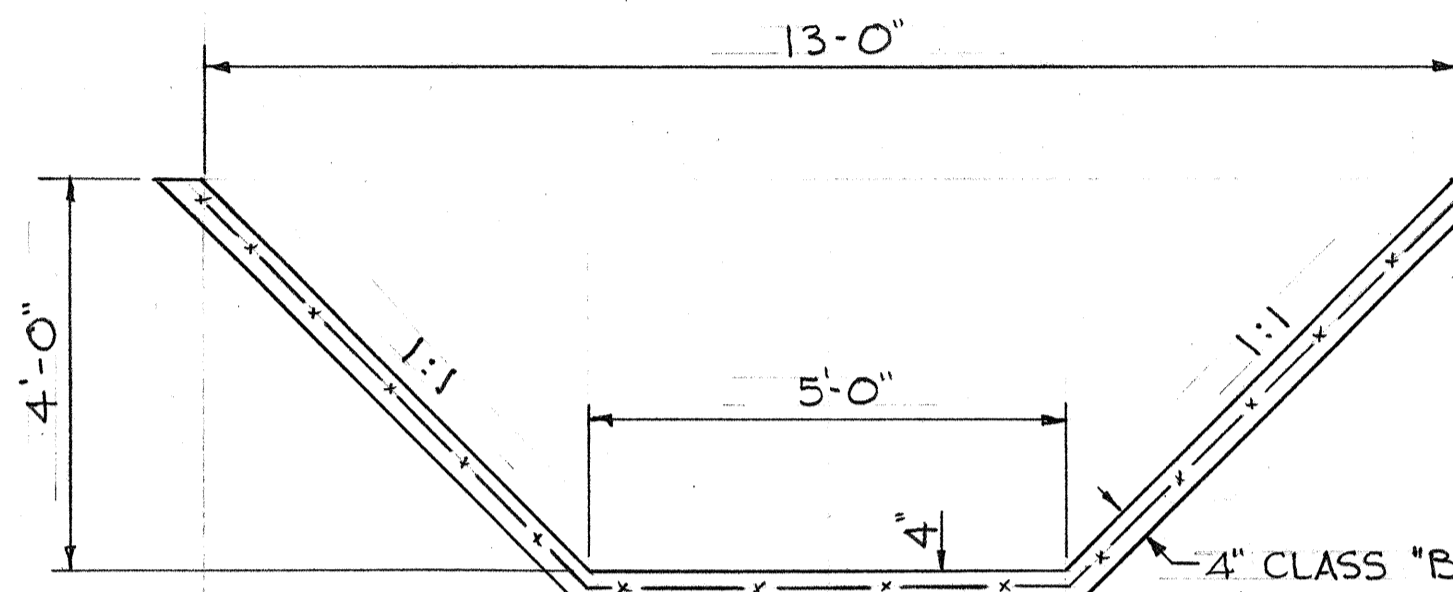
SECTION E-E



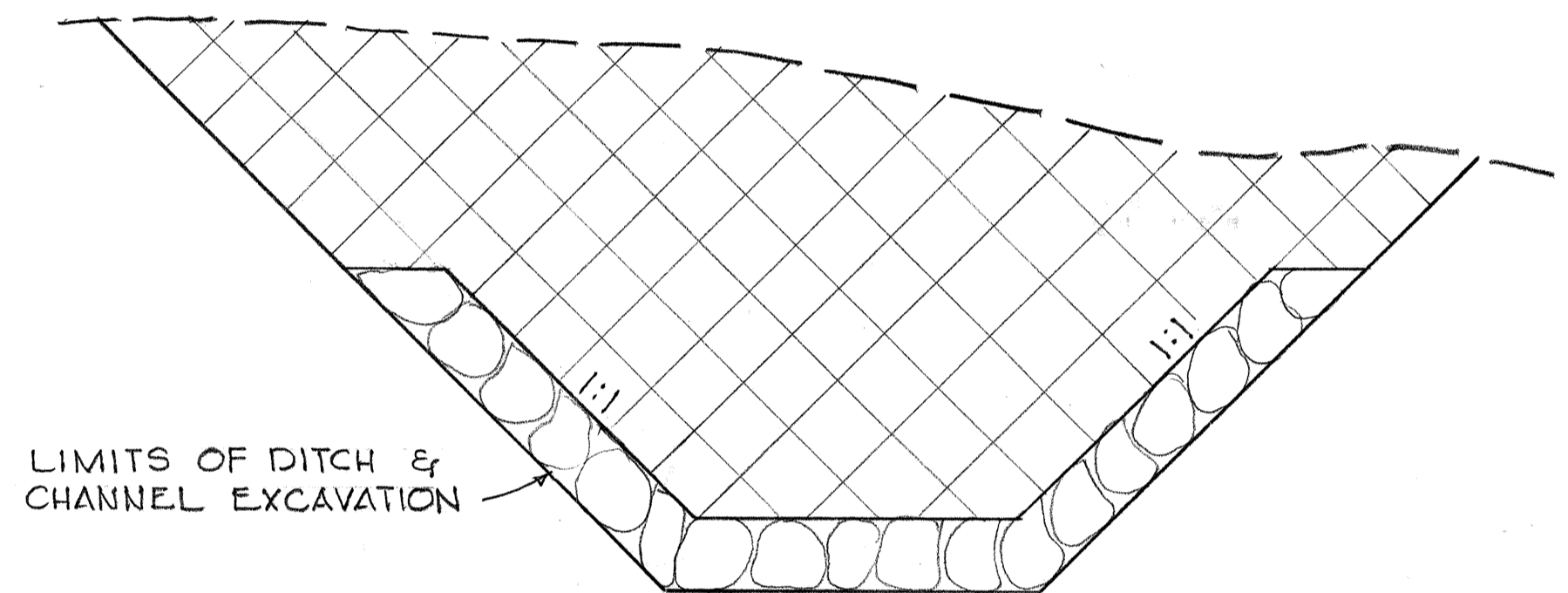
CONCRETE DITCH



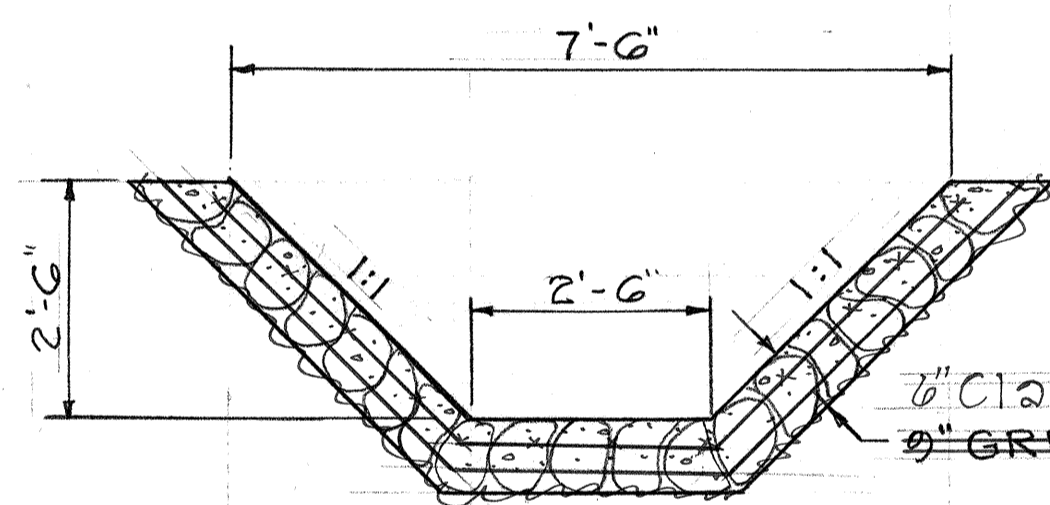
SECTION B-B



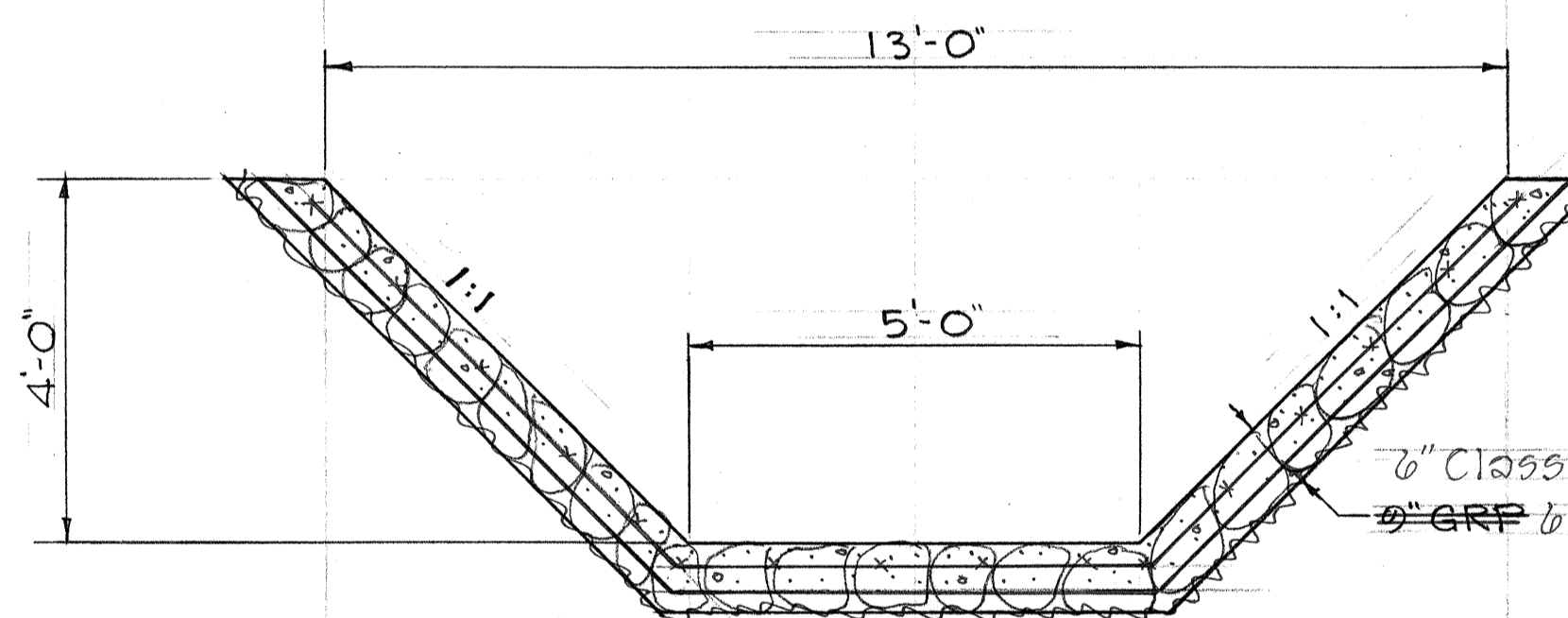
SECTION F-F



CLASS A CONCRETE GRP SPILLWAY



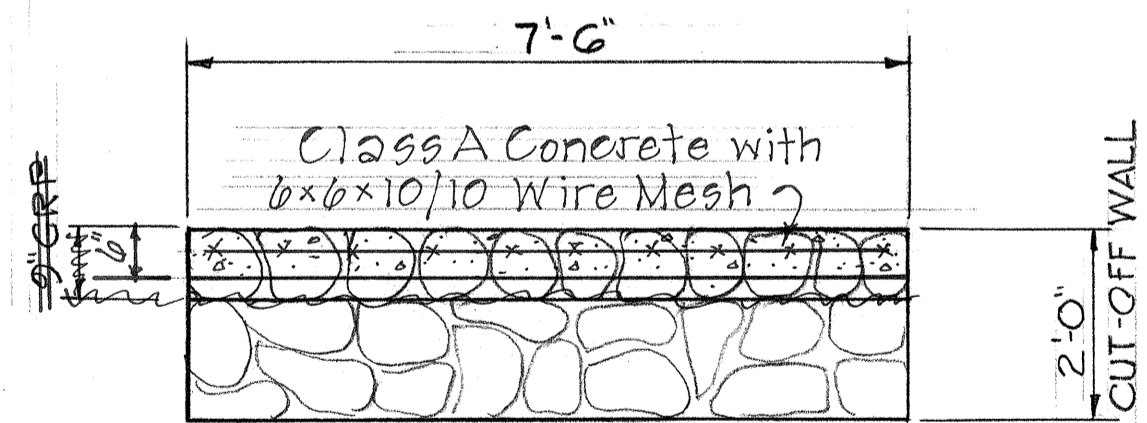
SECTION C-C



SECTION G-G

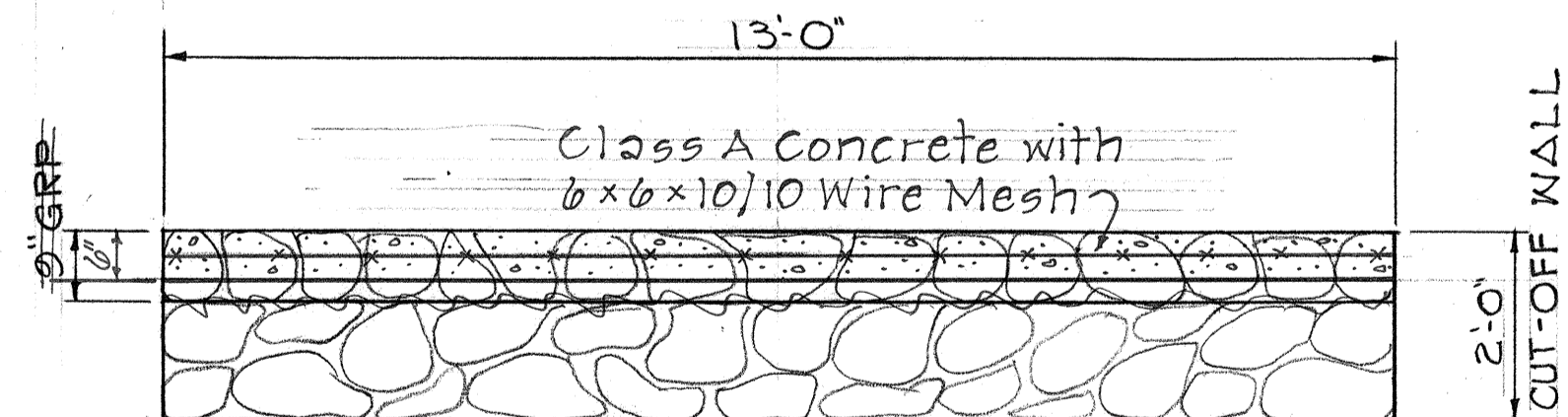
- DITCH & CHANNEL EXC.
- ROADWAY EXCAVATION
- STRUCTURE EXCAVATION

LIMITS OF PAY QUANTITIES
NO SCALE



SECTION D-D

DETAIL OF TYPE 'A' CONCRETE DITCH AND TYPE 'A' GRP SPILLWAY
SCALE: 1/2" = 1'-0"



SECTION H-H

DETAIL OF TYPE 'B' CONCRETE DITCH AND TYPE 'B' GRP SPILLWAY
SCALE: 1/2" = 1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DRAINAGE DETAILS
TYPE 'A' & TYPE 'B' CONCRETE DITCH AND GRP SPILLWAY
KAHULUI AIRPORT-MAALAEA HWY.
PROJ. No. 5-0380 (6)
Scale: As Shown Dec. 1969
SHEET No. D-9 OF 9 SHEETS

DATE: _____
SURVEY PLOTTED BY: _____
DRAWN BY: _____
CHECKED BY: _____
NOTE BOOK: _____
QUANTITIES BY: _____