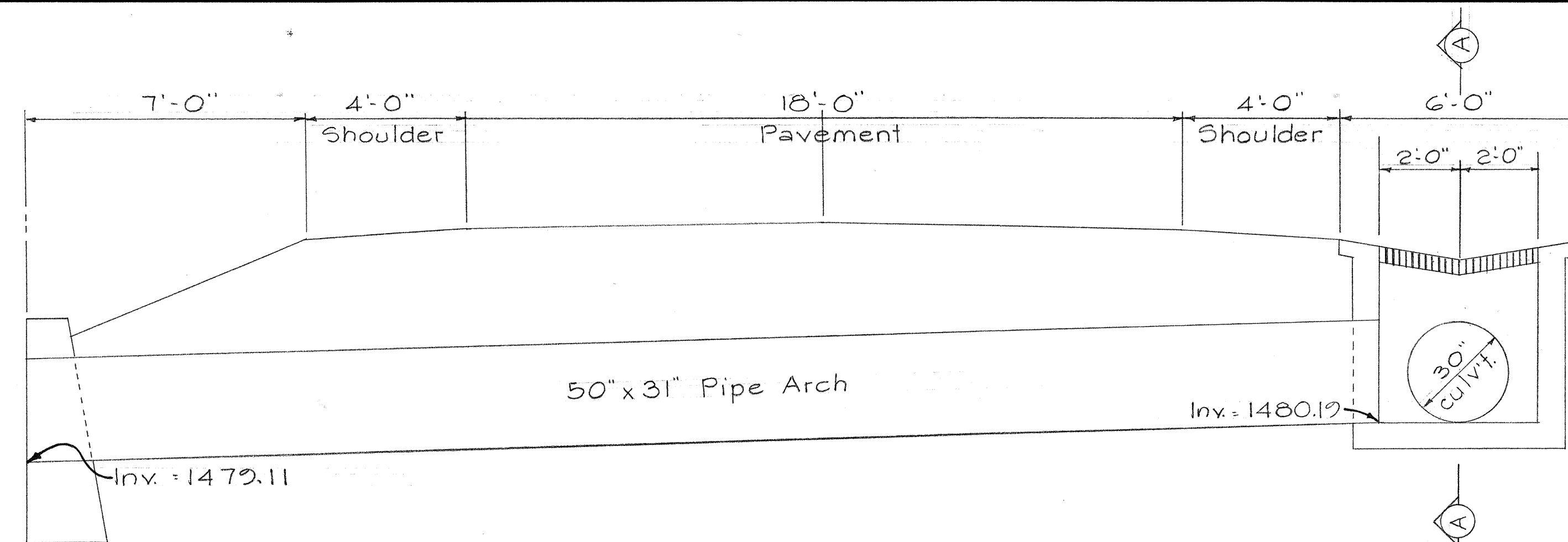


| FED. ROAD<br>DIST. NO. | STATE | FED. AID<br>PROJ. NO.  | FISCAL<br>YEAR | SHEET<br>NO. | TOTAL<br>SHEETS |
|------------------------|-------|------------------------|----------------|--------------|-----------------|
| HAWAII                 | HAW.  | 5-0470(1)<br>5-0470(2) | 1970           | 18           | 80              |

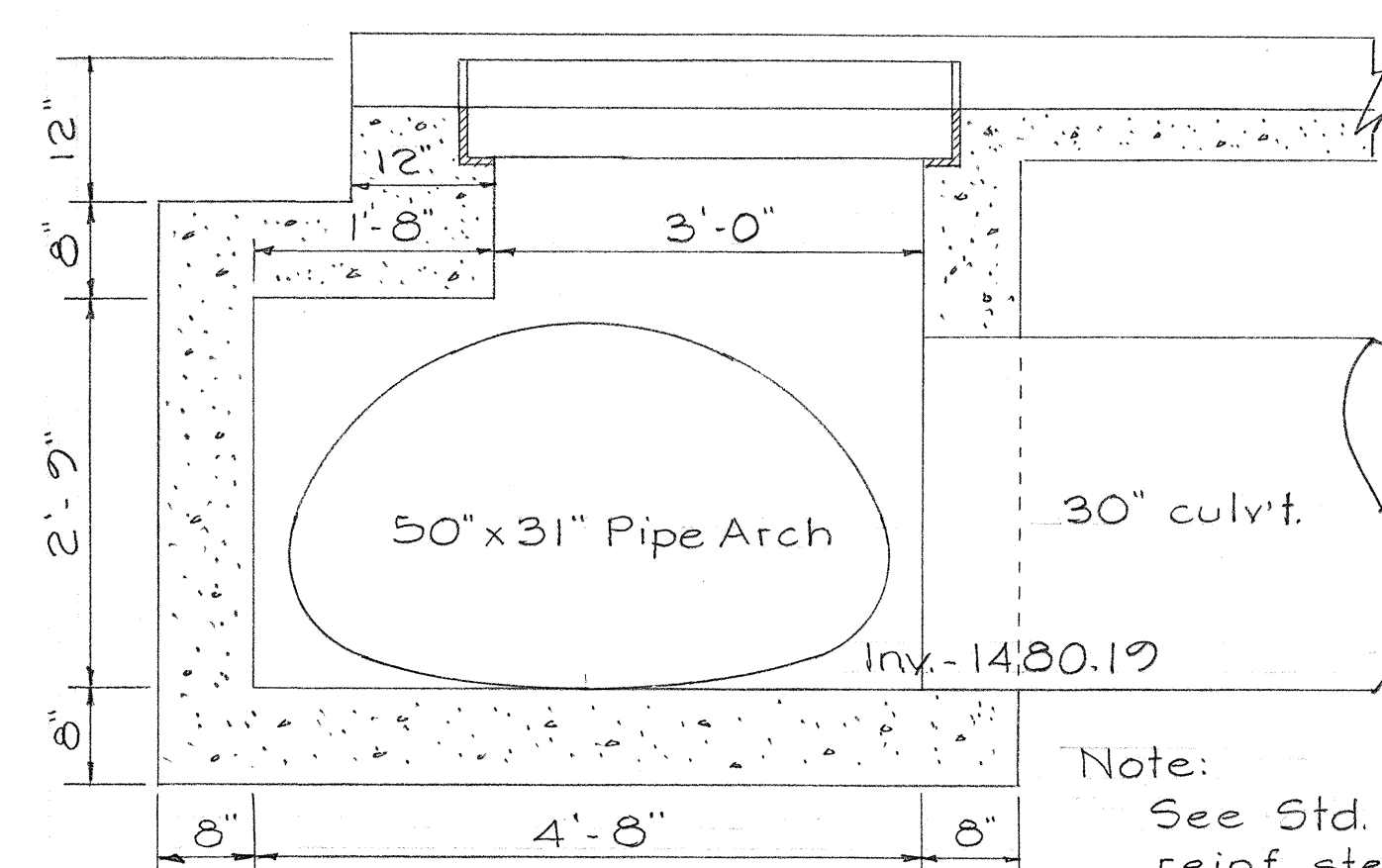
Sheet No. 1  
of 9 Sheets



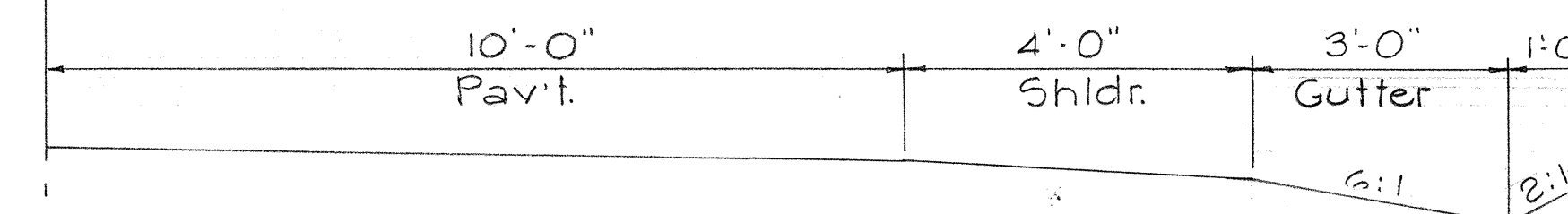
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO.     | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|------------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 5-0470(1)<br>5-0470(2) | 1970        | 19        | 80           |



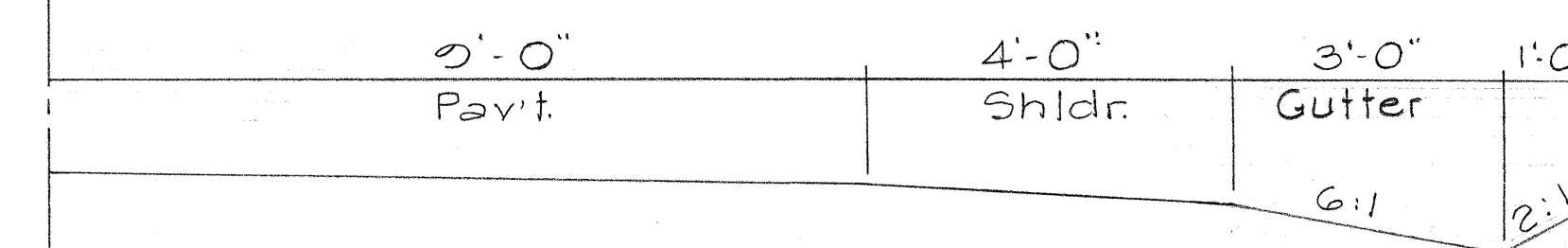
PROFILE AT 50"x31" PIPE ARCH  
SCALE: 3/8"=1'-0"



SECTION A-A  
SCALE: 3/4"=1'-0"



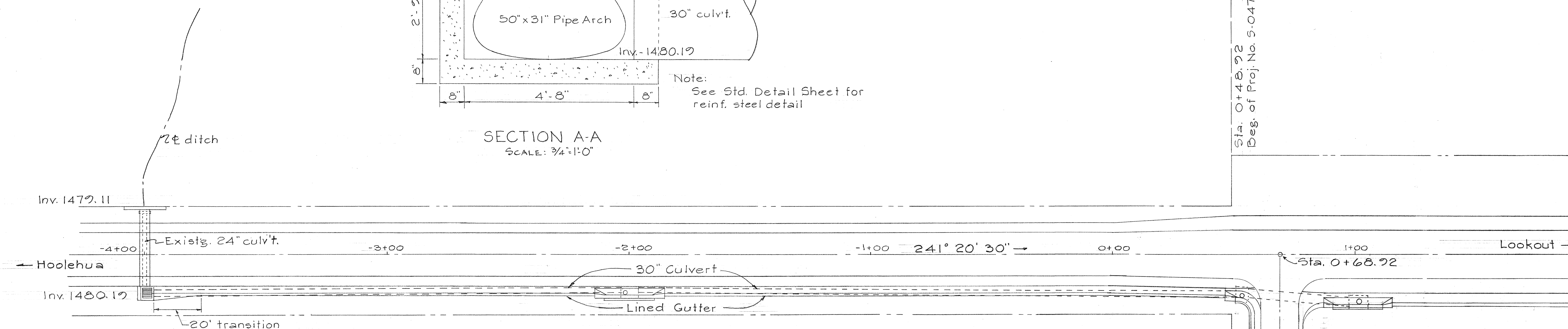
STA. 0+48.92



STA. 0+00

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

Sta. 0+48.92  
Beg. of Proj. No. 5-0470(1)



Sta. -4+00

Const. 1 H.W. - For Detail See Sht. No. DH 10  
" 1 Type 61614 D.I. - See Std. Det. Sht. DH 8  
Install 50"x31" Pipe Arch - 12 Ga.  
Remove exist'g. H.W., D.I., and 24" culvt.,  
incidental to installation of pipe arch.  
Pav't. patching incidental to installation  
of pipe arch.

Sta. -4+00 to 1+01.42 Rt.

Install 30" CMP 12 Ga. or  
30" RCPC Cl. III or  
30" ACP Cl. III

Sta. -4+00 to 0+48.92 Rt.

Const. Type 2(61214) Gutter or  
Type 7(61214) Gutter

Sta. -2+00 rt.

Const. Type A2" C.B.  
See Std. Det. Sht. DH 4  
Elev. Top - 1476.6±  
Inv. - 1470.55  
Const. Inlet Deflectors  
Use similar detail as shown  
on Sheet No. 20.

Sta. 0+49.75 Rt.

Const. Type B2 Modified C.B.  
See Detail Sht. 20  
Elev. Top - 1515.0±  
Inv. - 1502.03

Sta. 1+01.42 Rt.

Const. Type A2 C.B.  
See Std. Det. Sht. DH 4  
Elev. Top - 1518.6±  
Inv. - 1512.62  
Const. Inlet Deflectors  
For Detail See Sheet No. 20

PLAN  
Scale: 1"=20'

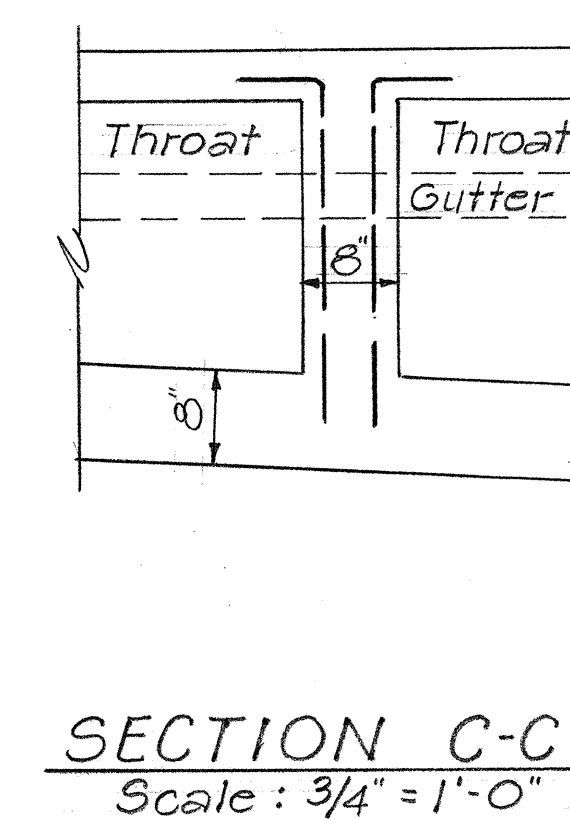
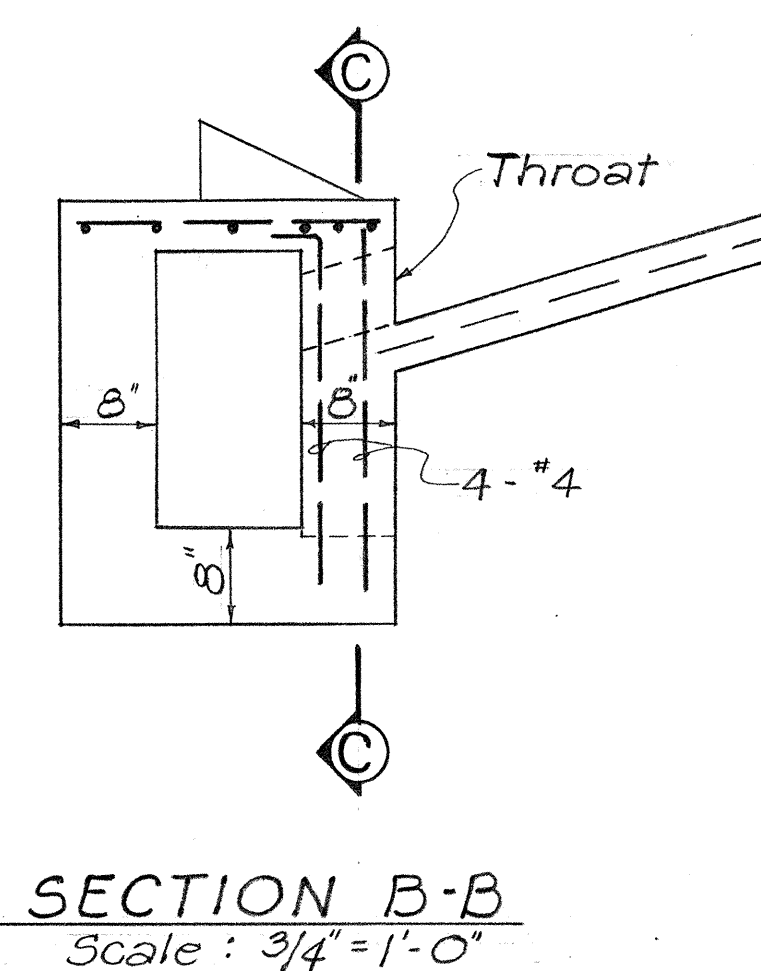
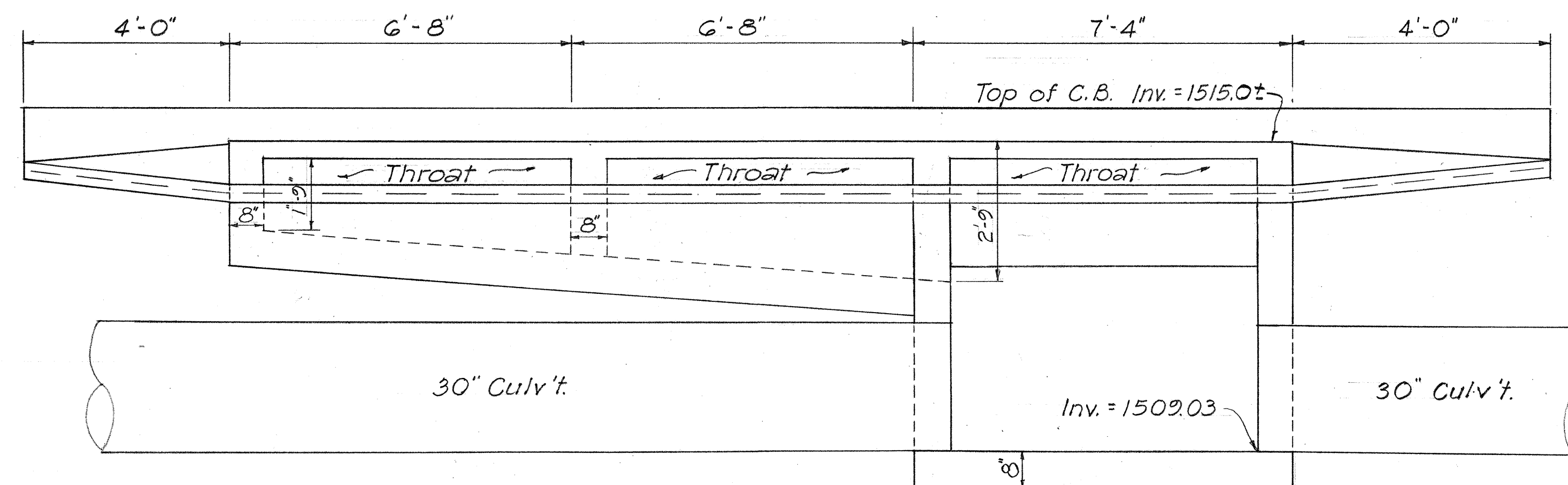
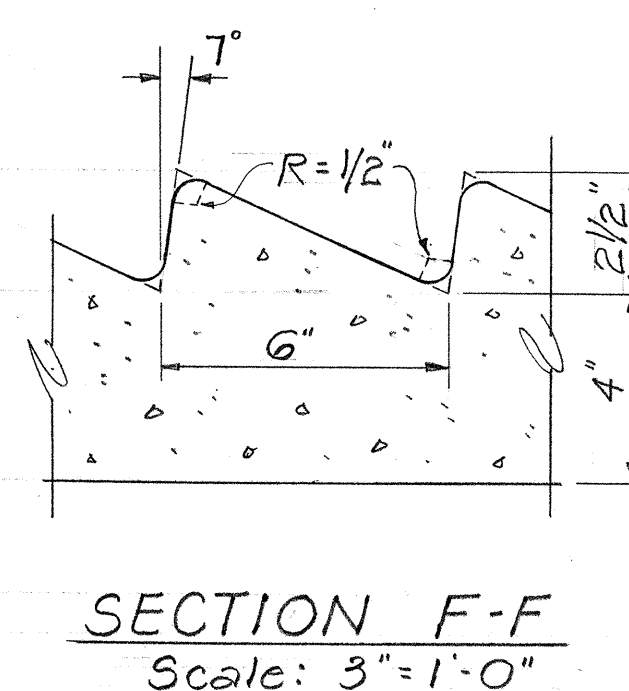
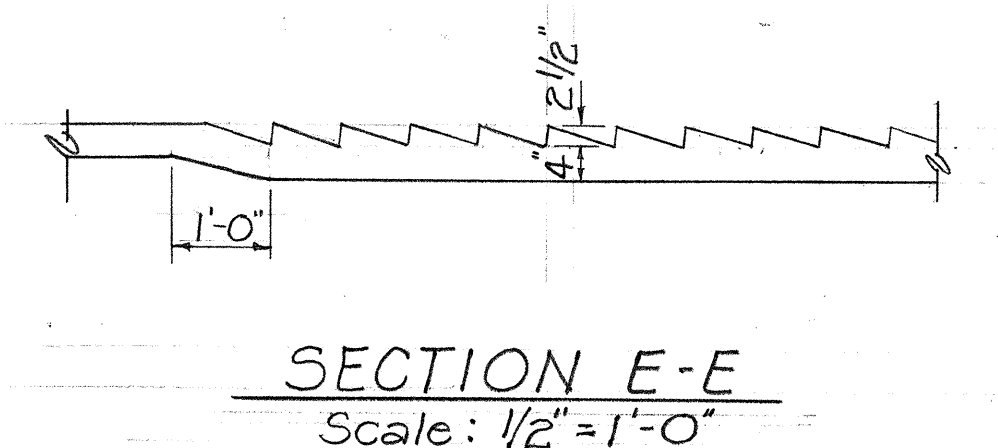
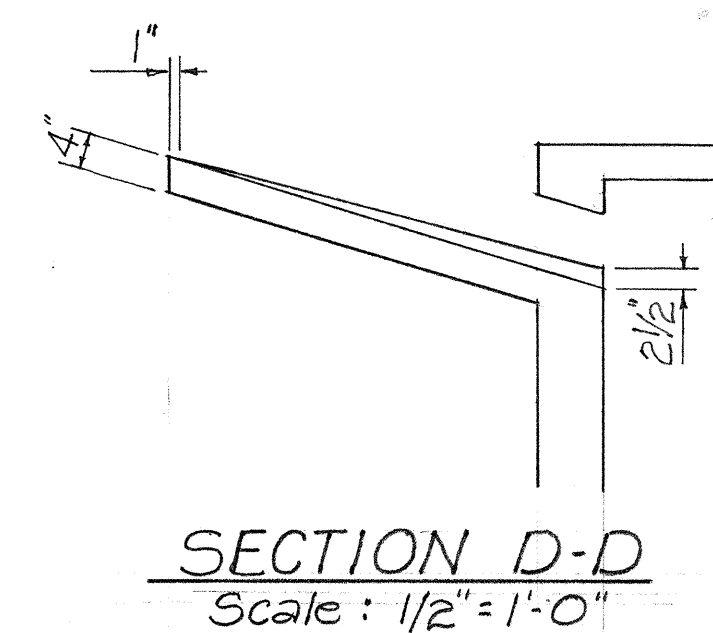
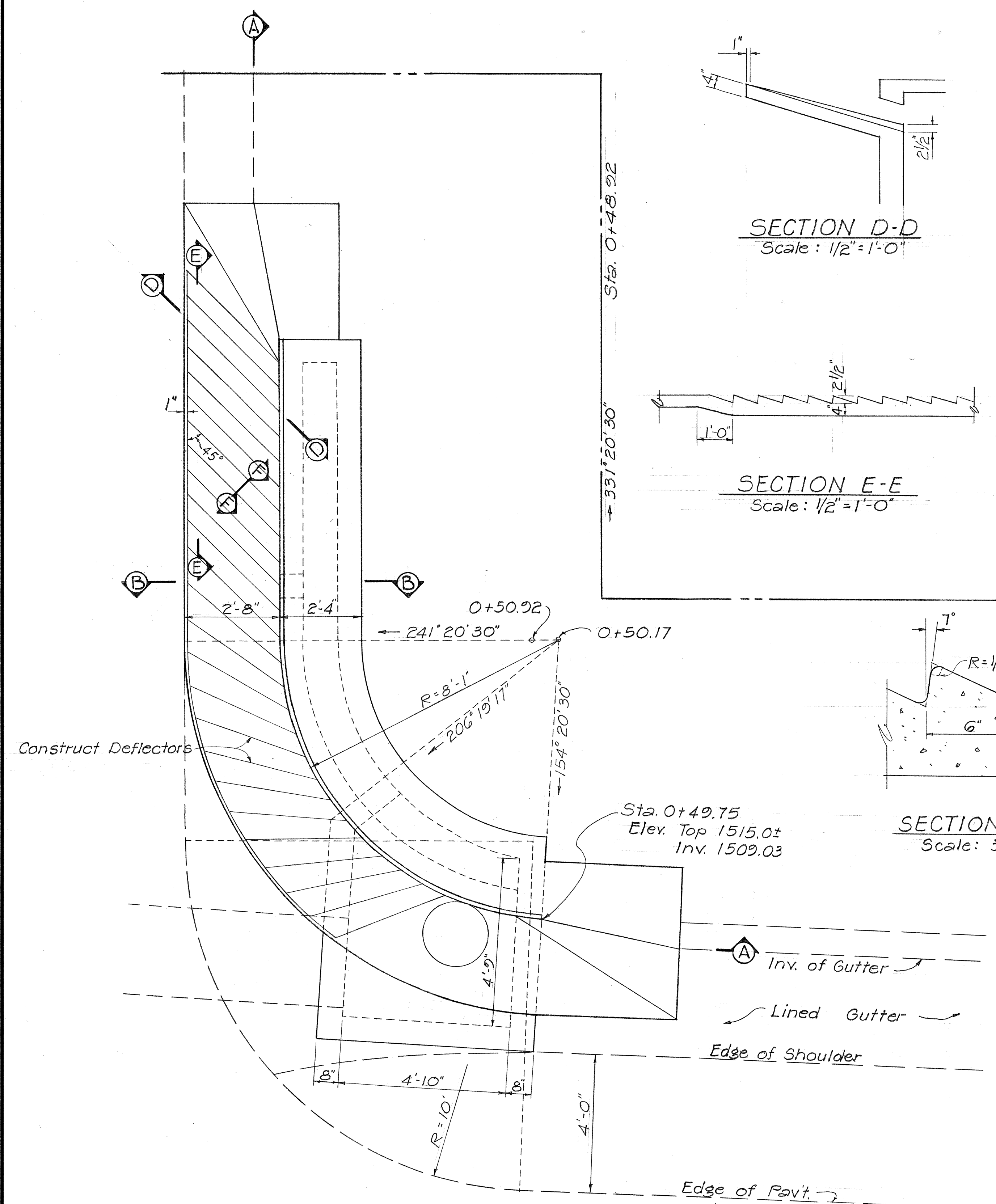
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**DRAINAGE**  
STA. -4+00 to 1+01.42  
KALAUPAPA LOOKOUT RD.  
PROJ. No. 5-0470(2)

SHEET No. 2 OF 2 SHEETS



| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO.     | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|------------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 5-0470(1)<br>5-0470(2) | 1970        | 20        | 80           |



NOTE:  
For other details, see  
Standard Detail  
Sheet No. DH 4

# MODIFIED TYPE B2 CATCH BASIN

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

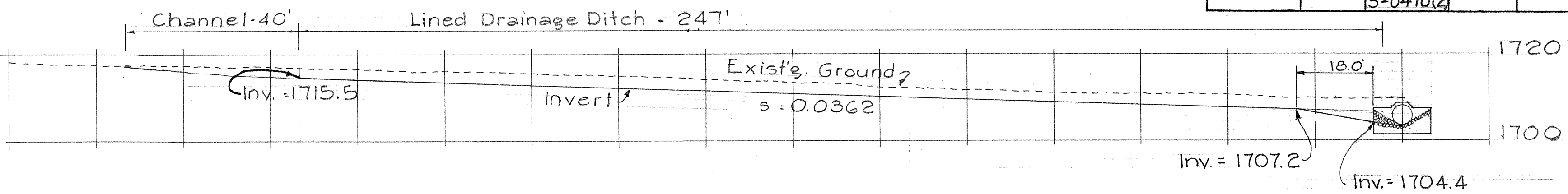
**DRAINAGE DETAIL**

KALAUPAPA LOOKOUT ROAD  
(KALAE TO PALI LOOKOUT)  
PROJ. NO. 5-0470 (2)  
SCALE AS SHOWN

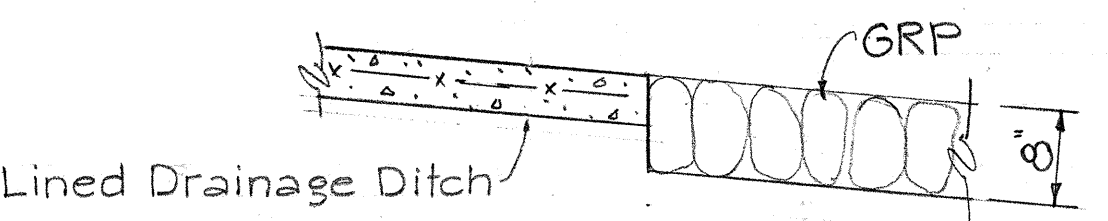
|             |  |
|-------------|--|
| DATE        |  |
| DESIGNED BY |  |
| DRAWN BY    |  |
| CHECKED BY  |  |
| NOTED BY    |  |
| NO.         |  |



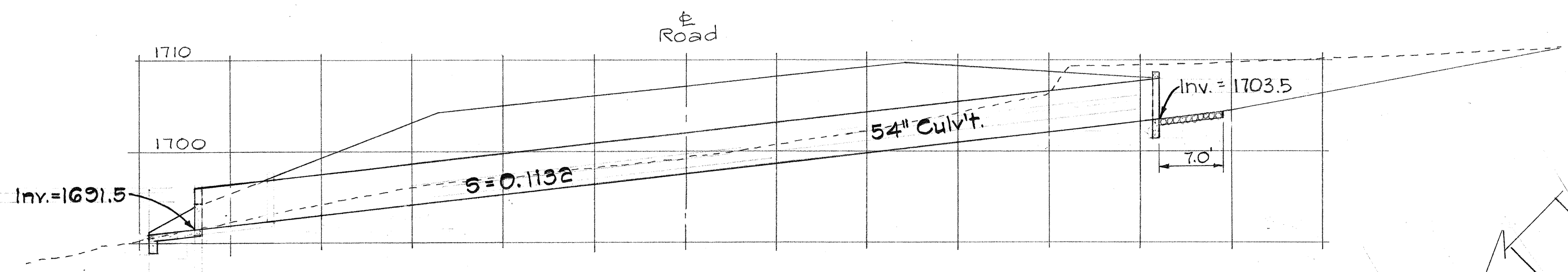
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO.     | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|------------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | S-0470(1)<br>S-0470(2) | 1970        | 21        | 80           |



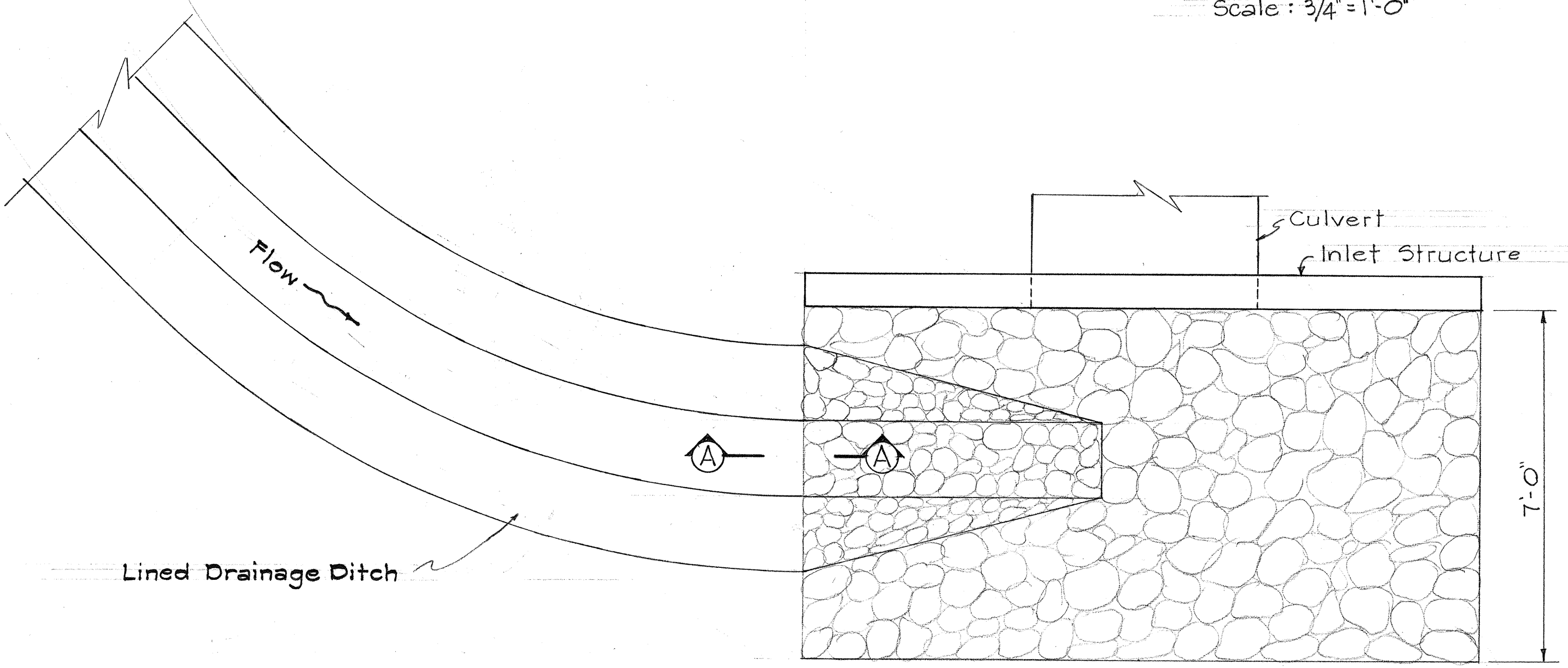
PROFILE OF LINED DRAINAGE DITCH  
Scale: Hor. 1" = 20'  
Vert. 1" = 20'



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

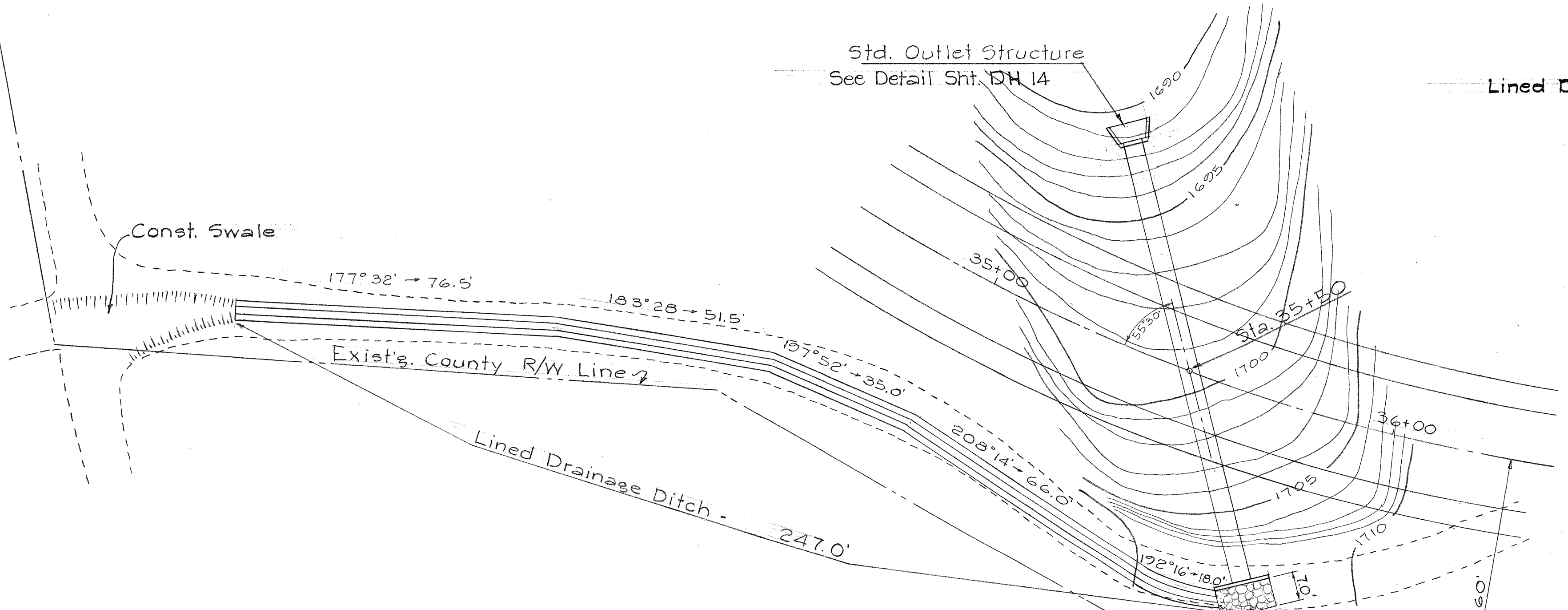


PROFILE OF CULVERT  
Scale: 1" = 10'



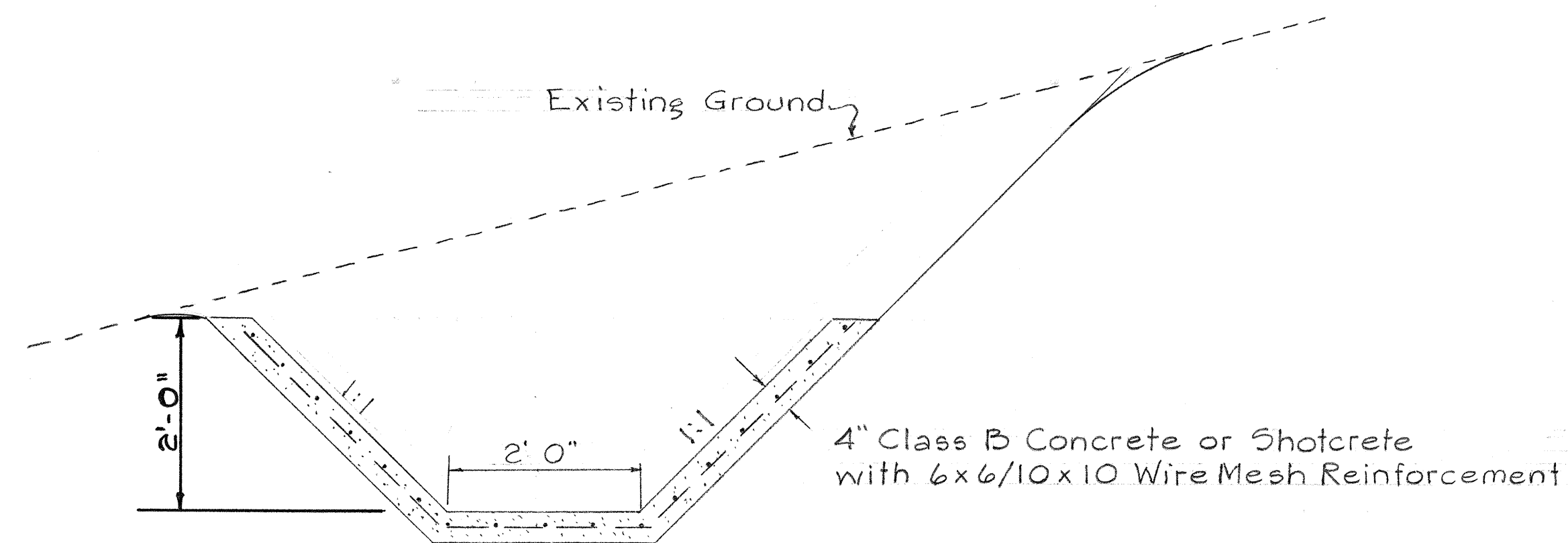
PLAN

DETAIL OF GRP DITCH PROTECTION  
Scale: 1/2" = 1'-0"

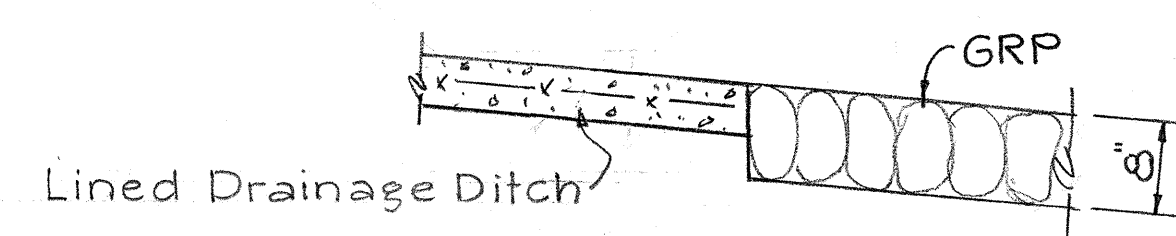




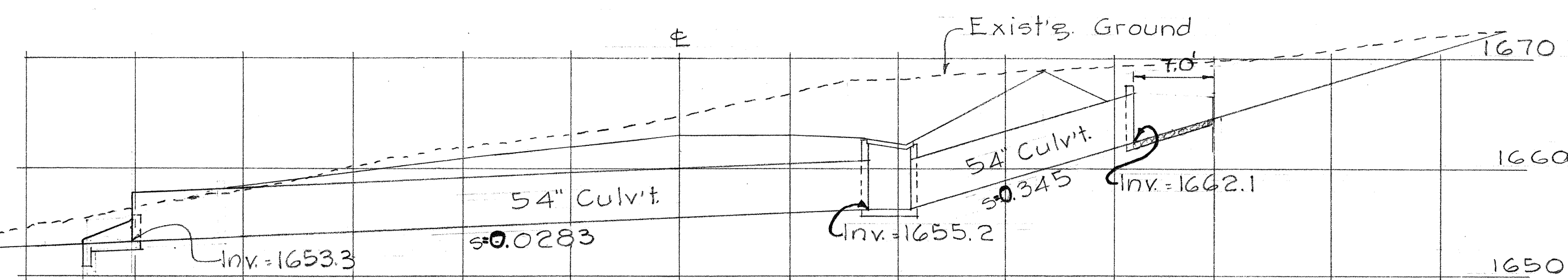
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO.     | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|------------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 5-0470(1)<br>5-0470(2) | 1970        | 22        | 80           |



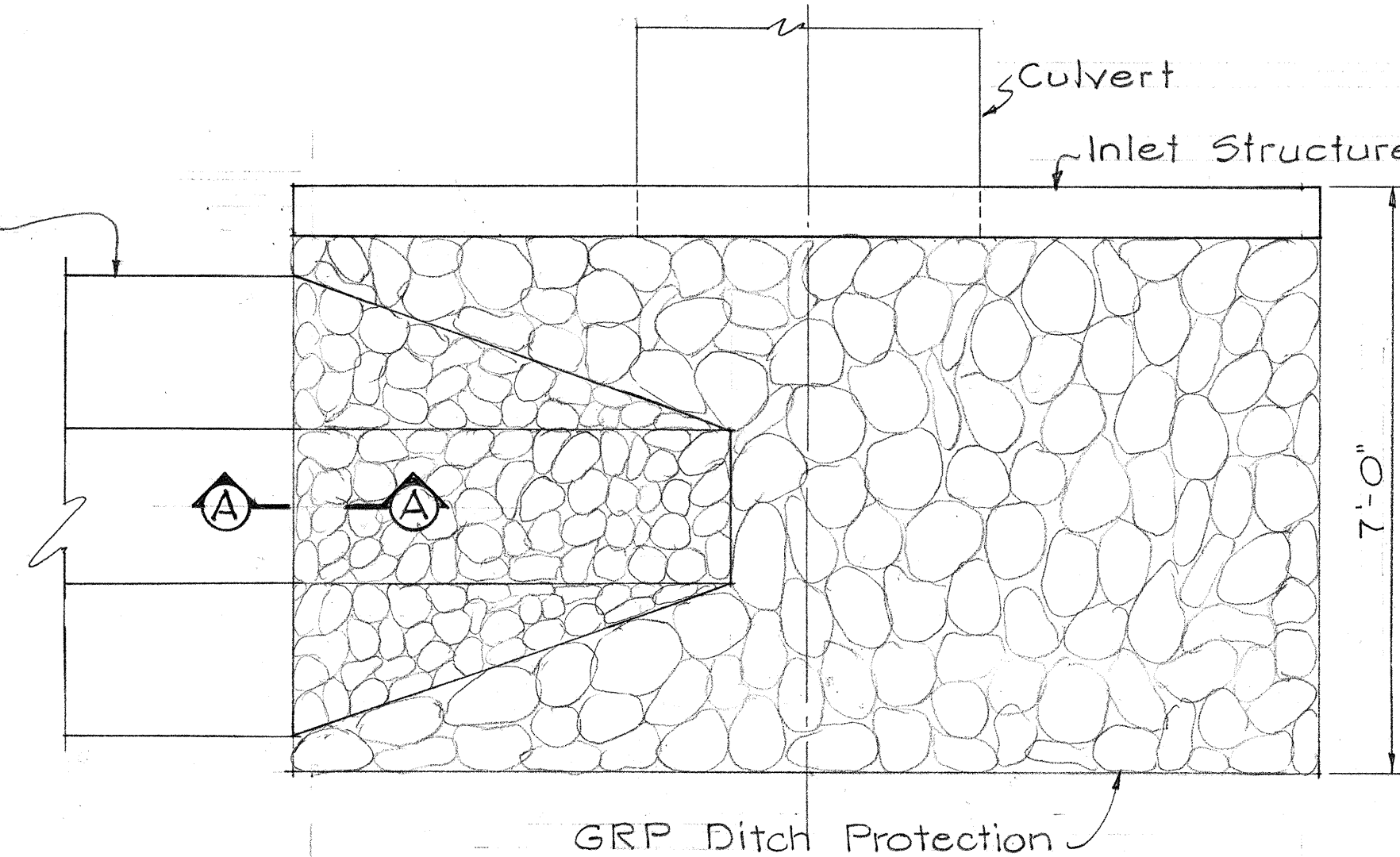
DETAIL OF LINED DRAINAGE DITCH  
TYPE 2'x2' TRAPEZOIDAL  
Scale: 3/4"=1'-0"



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

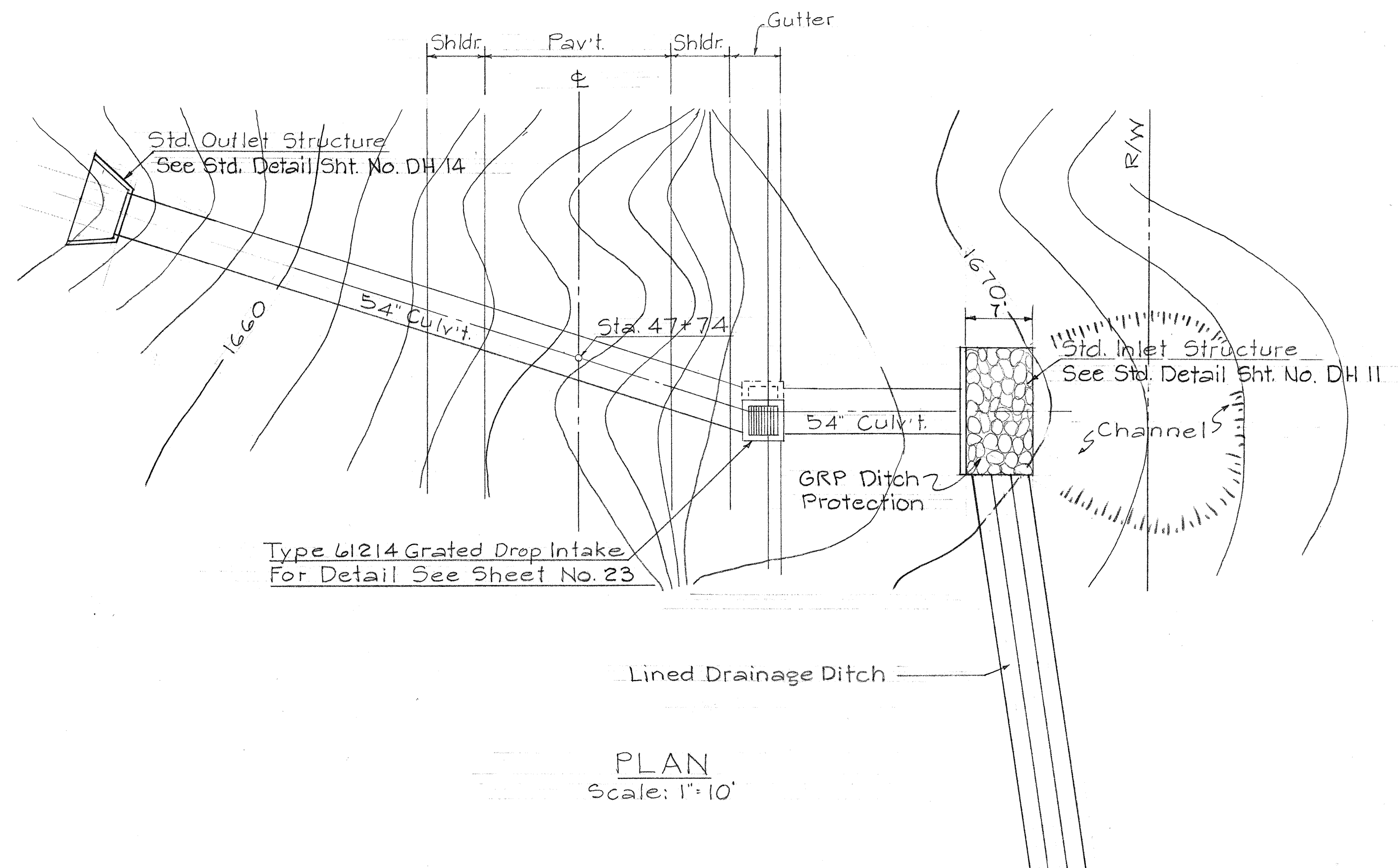


PROFILE  
Scale: 1"=10'



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

DETAIL OF INLET STRUCTURE



PLAN  
Scale: 1"=10'

Type 61214 Grated Drop Intake  
For Detail See Sheet No. 23

|                   |       |
|-------------------|-------|
| DATE              | _____ |
| SURVEY PLOTTED BY | _____ |
| DRAWN BY          | _____ |
| DESIGNED BY       | _____ |
| NOTE BOOK         | _____ |
| QUANTITIES BY     | _____ |
| CHECKED BY        | _____ |
| NO.               | _____ |

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**DRAINAGE**  
**STA. 47+74**  
**54" CULVERT**

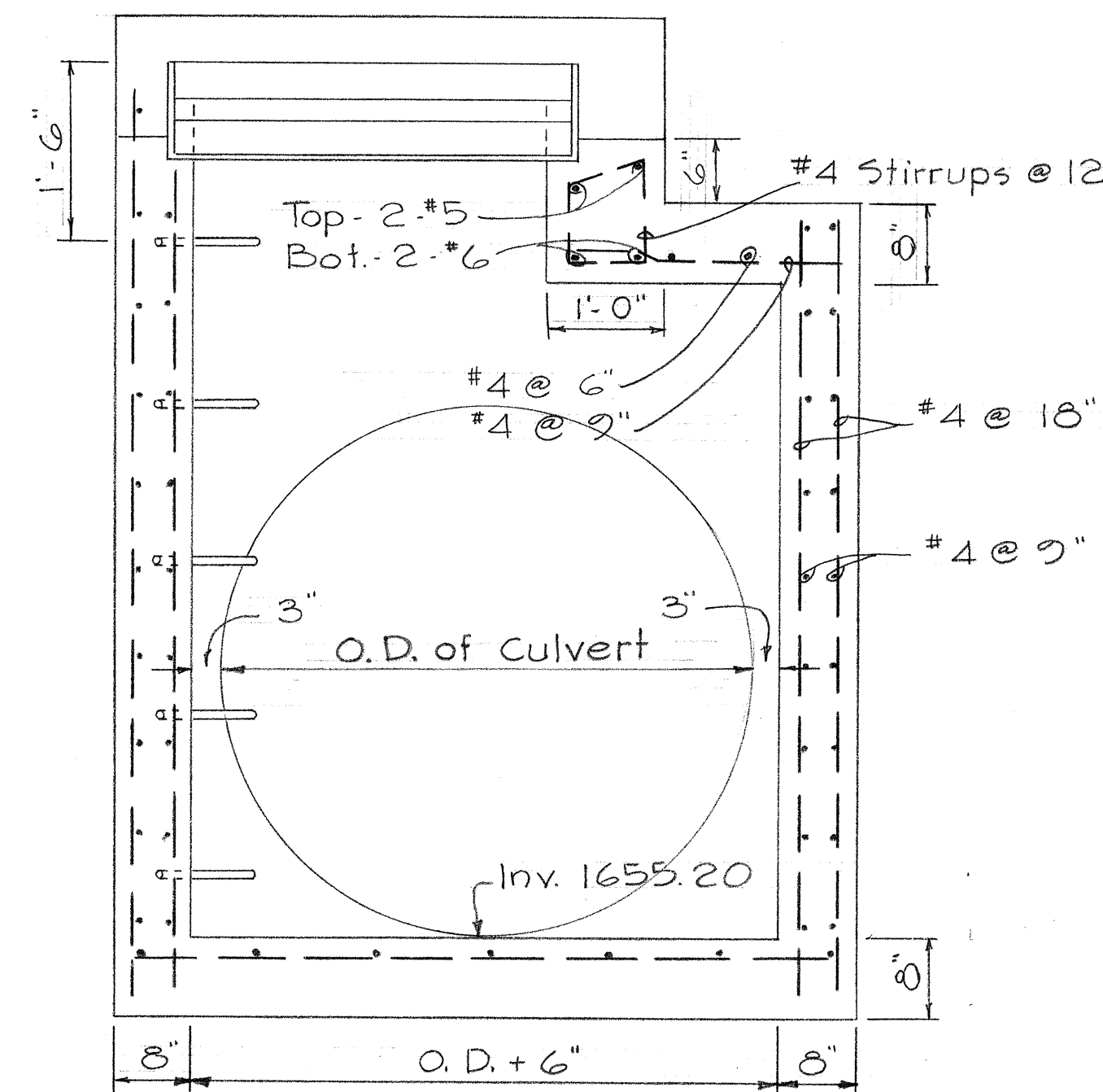
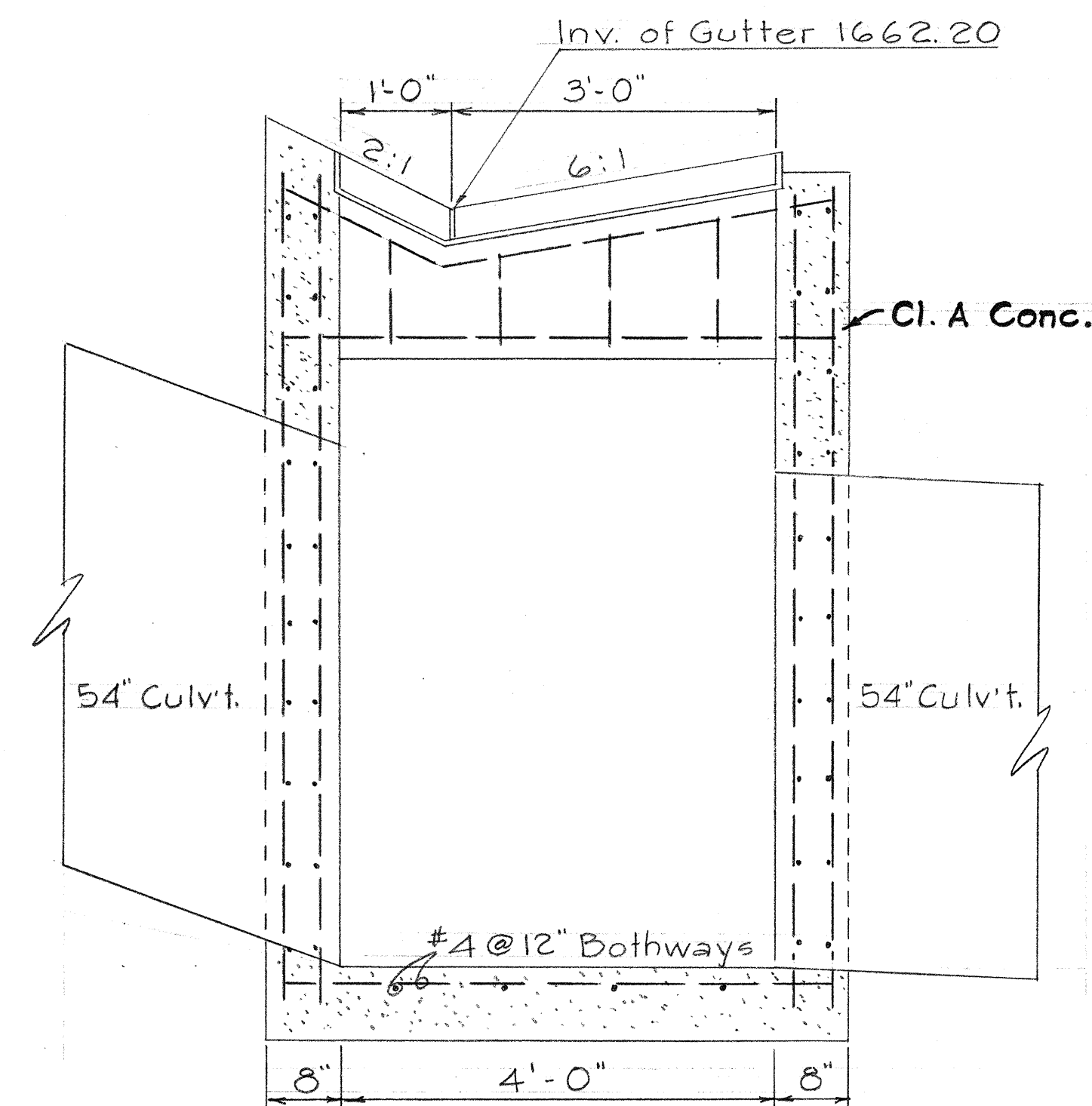
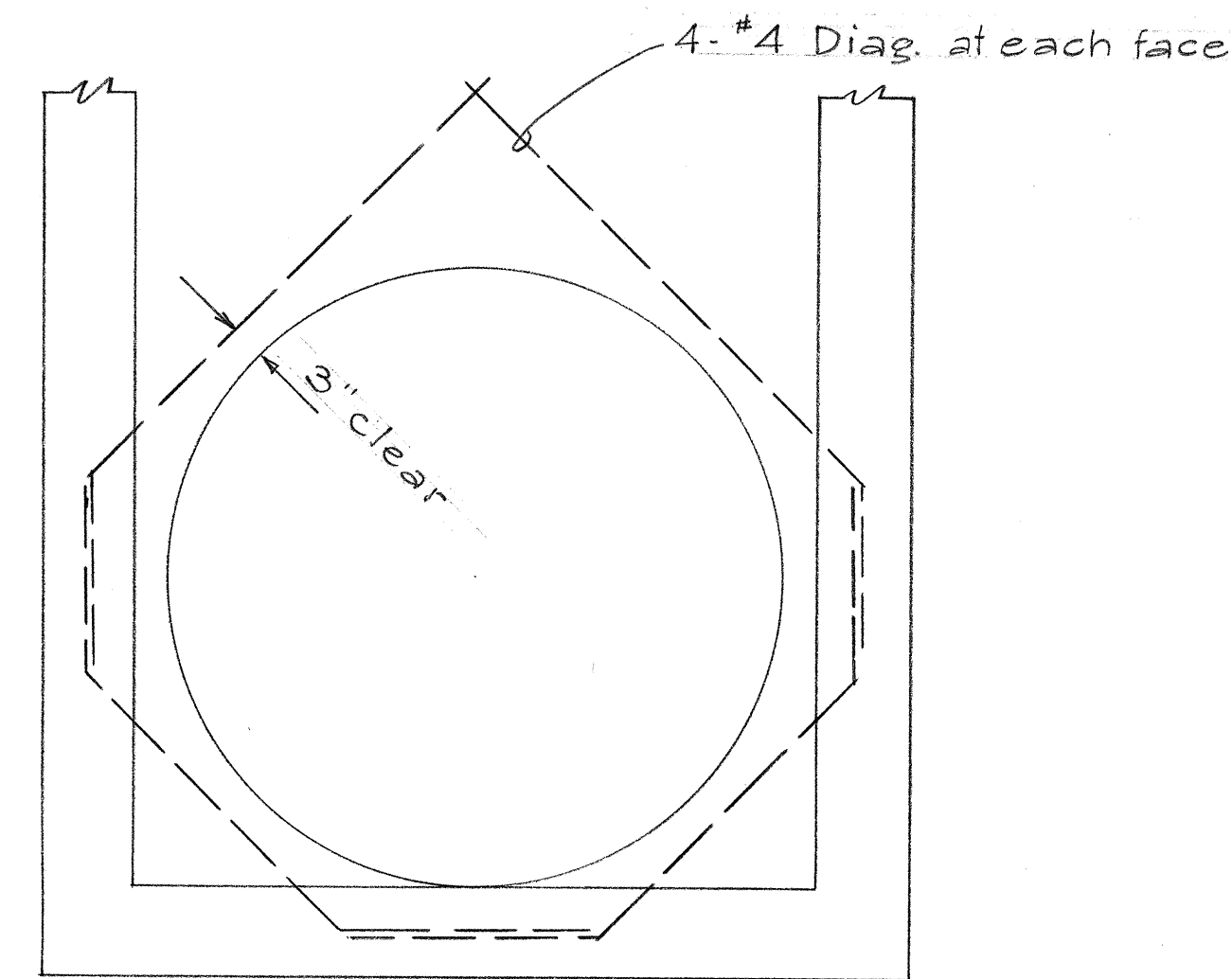
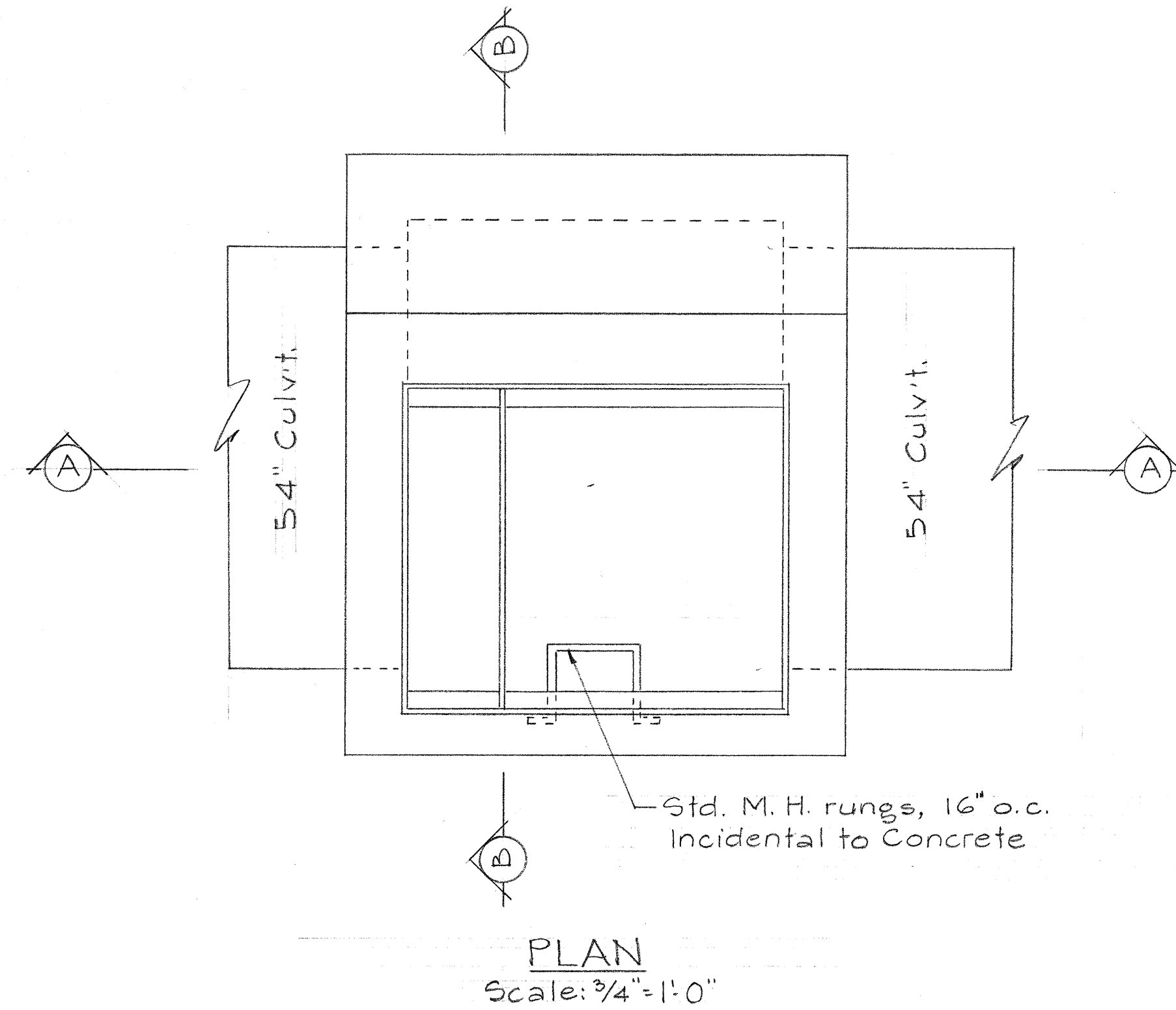
KALAUPAPA LOOKOUT ROAD  
PROJ. NO. 5-0470(2)

SHEET No. 5 OF 7 SHEETS



Note:  
See Sheet No. 64 for detail of  
Type G1214 Steel Frame & Grate

| FED. ROAD<br>DIST. NO. | STATE | FED. AID<br>PROJ. NO.  | FISCAL<br>YEAR | SHEET<br>NO. | TOTAL<br>SHEETS |
|------------------------|-------|------------------------|----------------|--------------|-----------------|
| HAWAII                 | HAW.  | 5-0470(1)<br>5-0470(2) | 1970           | 23           | 80              |



DETAIL OF TYPE G121 GRATED DROP INTAKE AT STA. 47+74

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

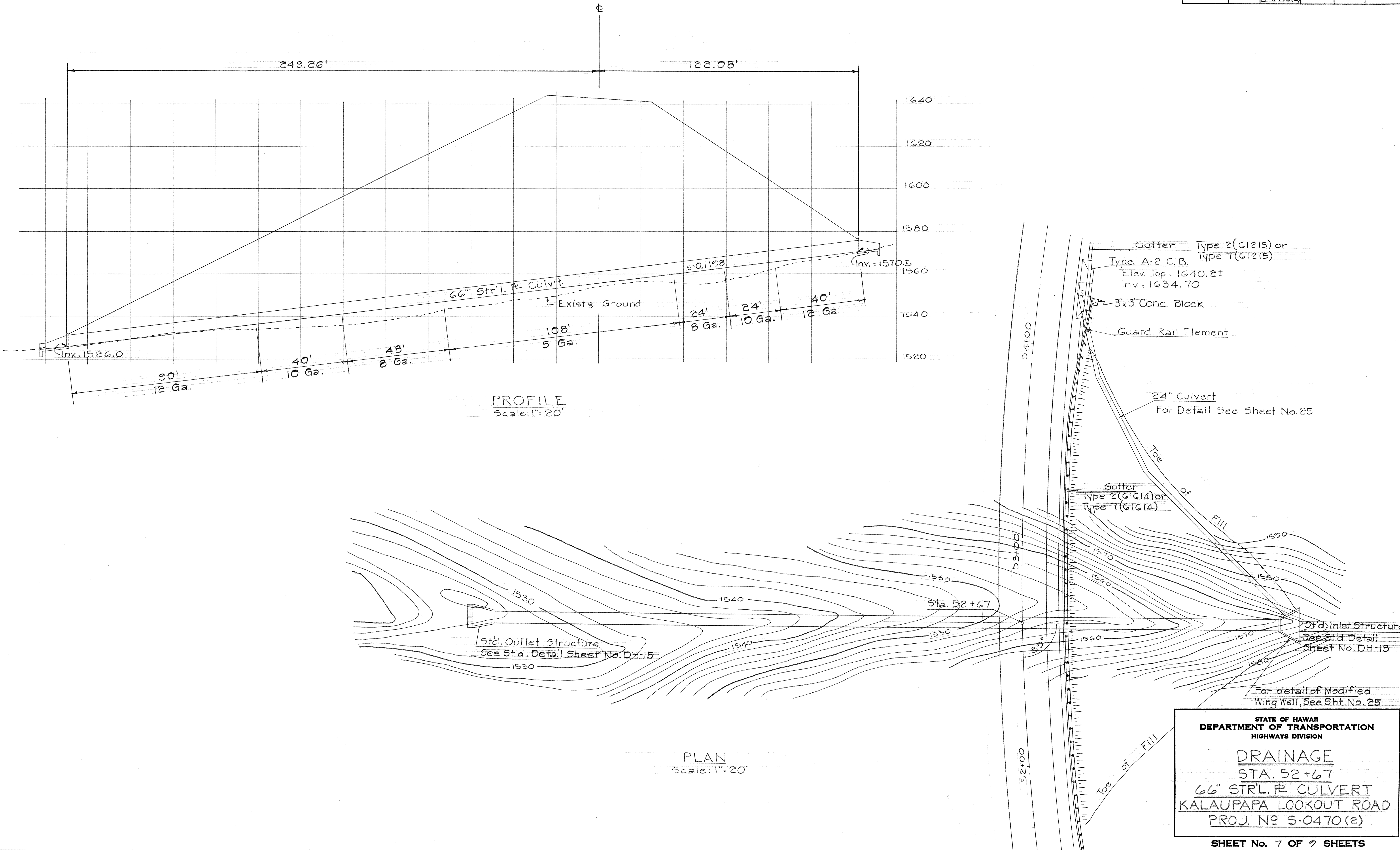
DETAILS  
DRAINAGE

KALAUPAPA LOOKOUT ROAD  
PROJ. No. 5-0470(2)

SHEET No. 6 OF 7 SHEETS



| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO.     | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|------------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 5-0470(1)<br>5-0470(2) | 1970        | 24        | 80           |



|                   |      |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DESIGNED BY       |      |
| NOTED BY          |      |
| CHECKED BY        |      |
| ORIGINAL PLAN     |      |
| NOTE BOOK         |      |
| QUANTITIES BY     |      |
| CHECKED BY        |      |
| No.               |      |

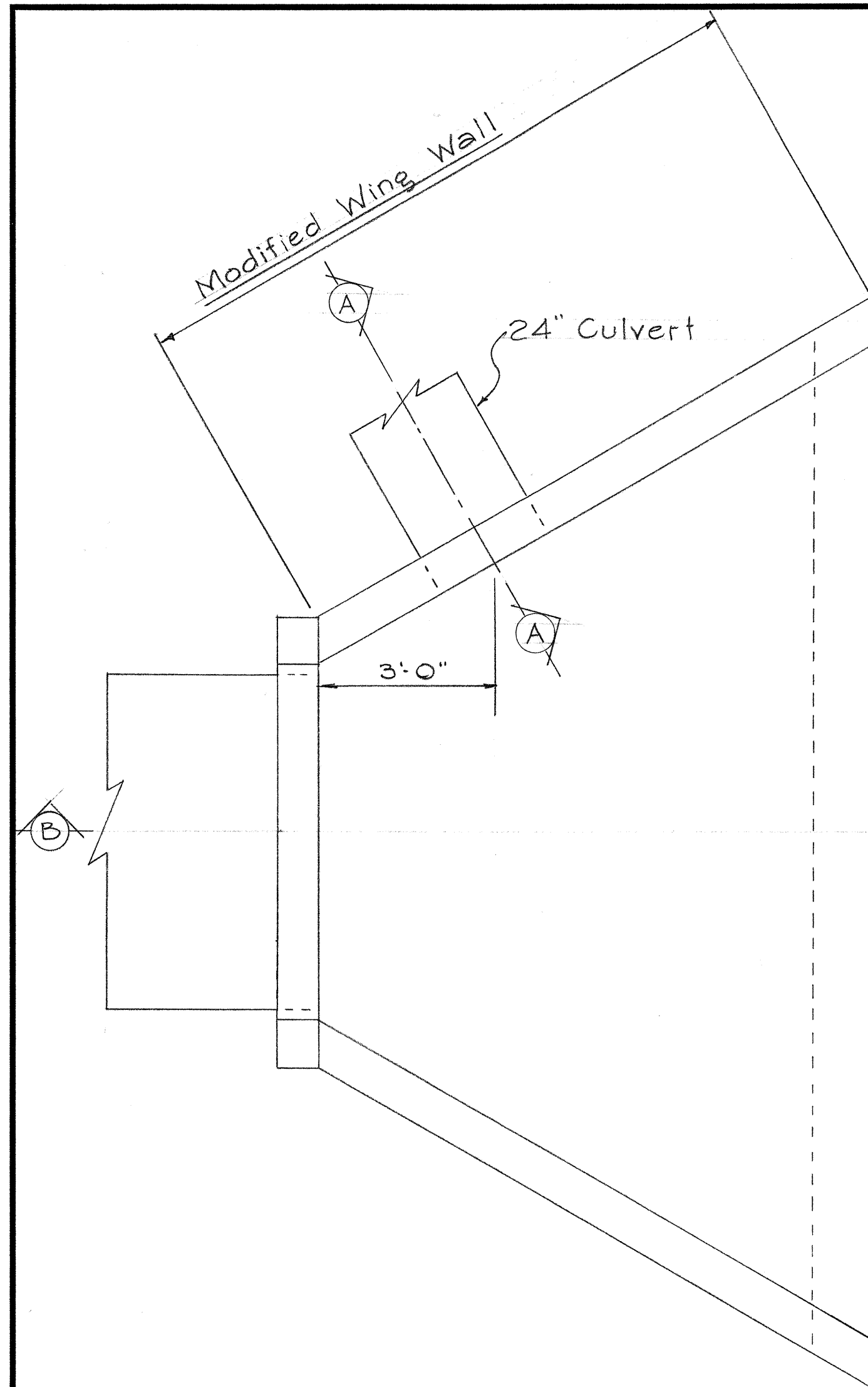
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

DRAINAGE  
STA. 52+67  
66" STR'L. # CULVERT  
KALAUPAPA LOOKOUT ROAD  
PROJ. NO 5-0470(2)

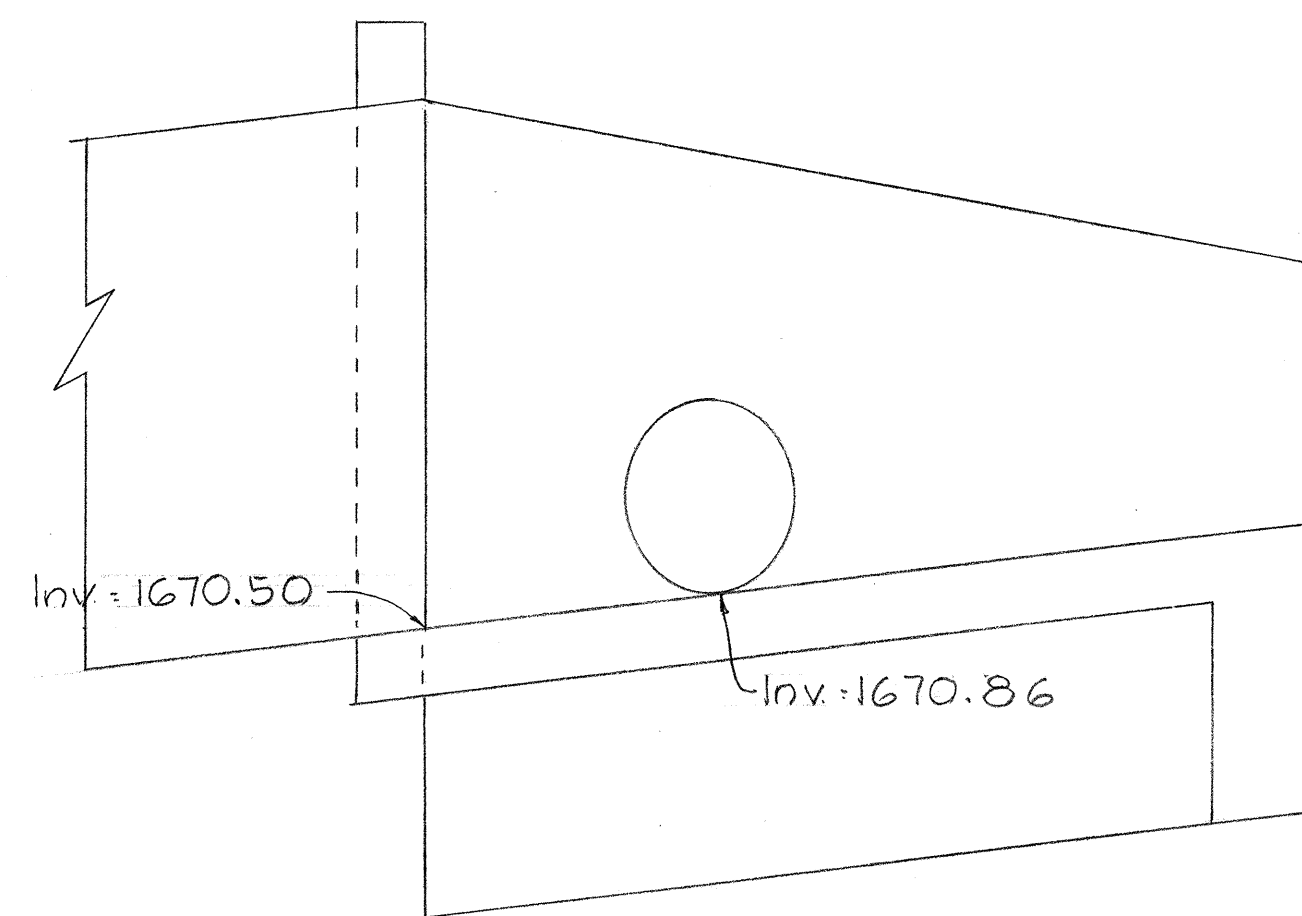
SHEET No. 7 OF 9 SHEETS



| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO.     | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|------------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 5-0470(1)<br>5-0470(2) | 1970        | 25        | 80           |

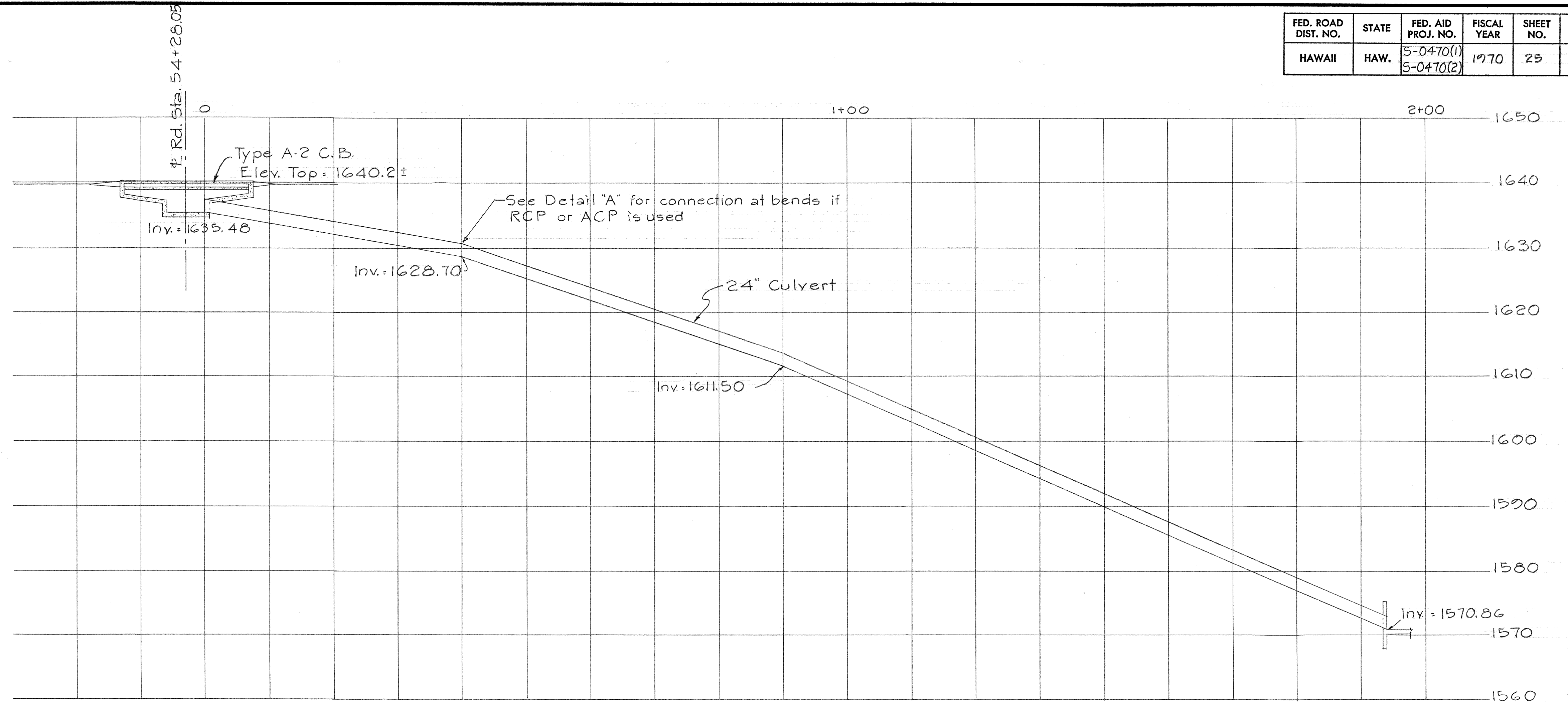


PLAN  
Scale: 1/2" = 1'-0"

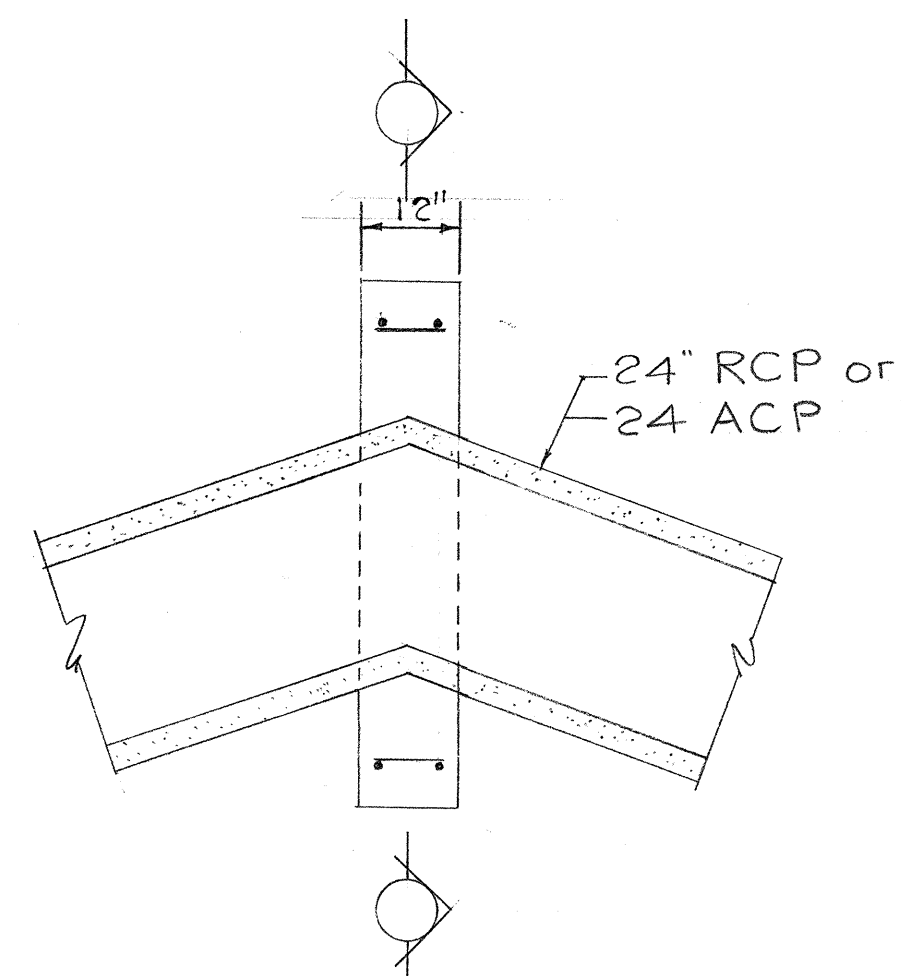


SECTION B-B  
Scale: 1/2" = 1'-0"

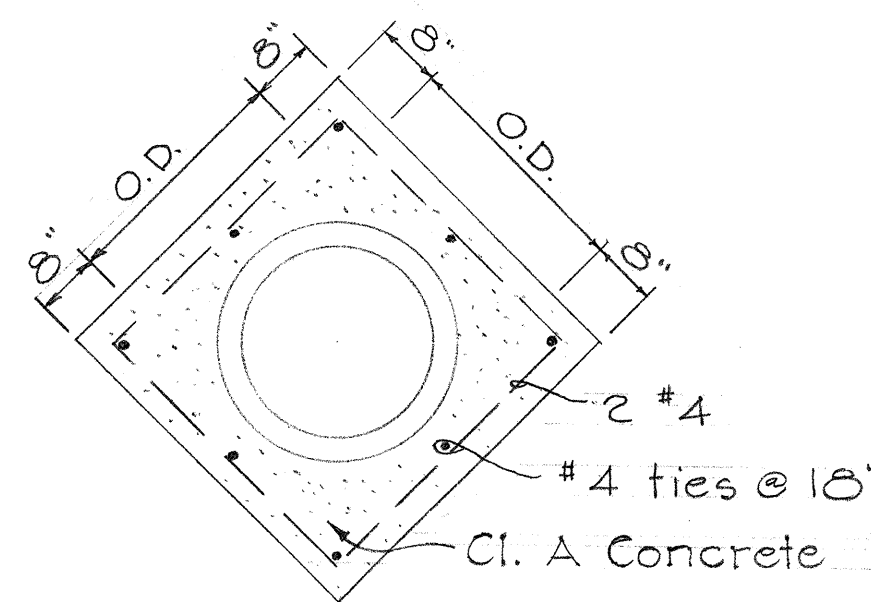
MODIFIED WING WALL  
FOR STD. INLET STRUCTURE AT STA. 52+67 RT.



PROFILE OF 24" CULVERT  
Scale: Hor. 1" = 10'  
Vert. 1" = 10'

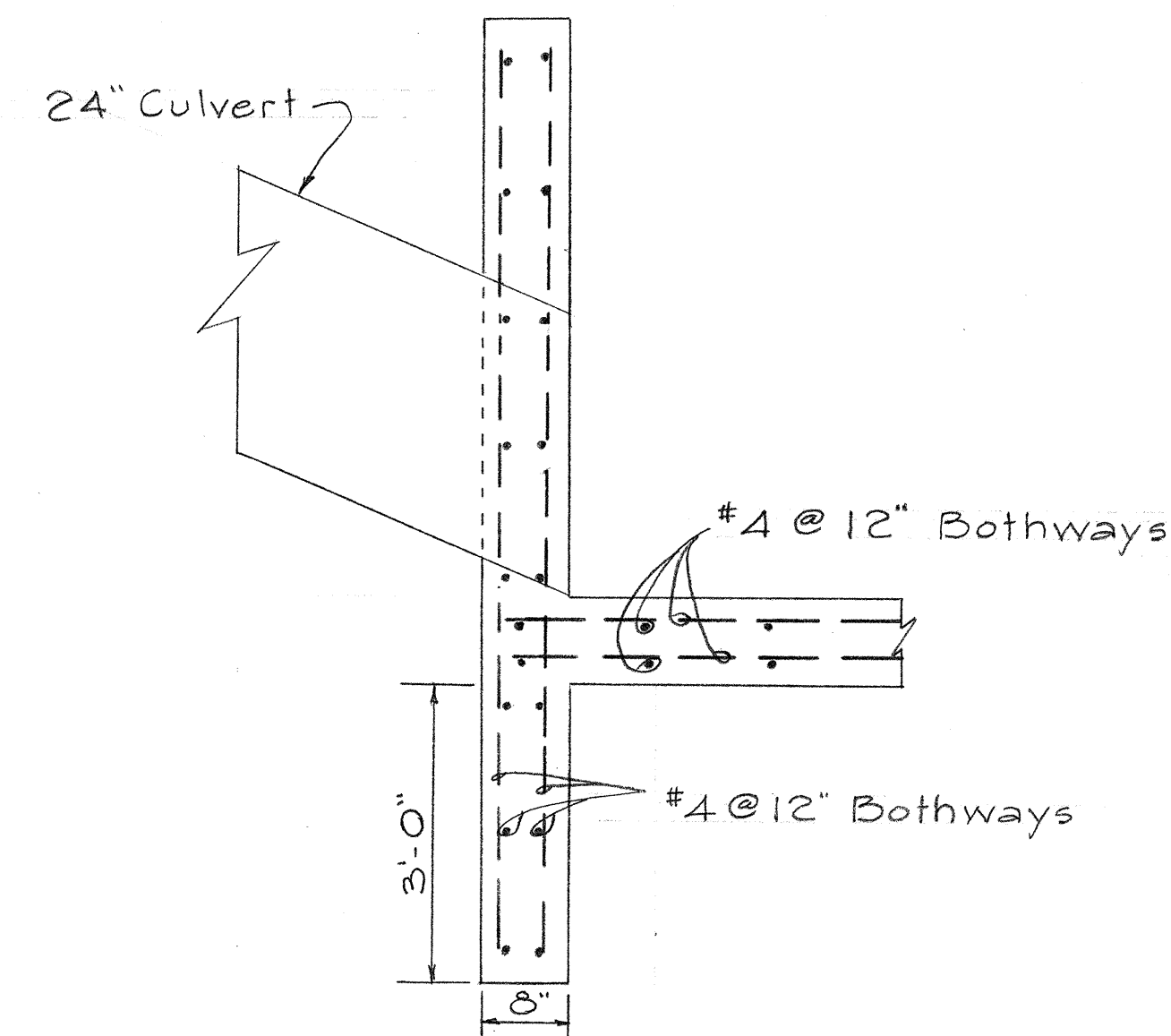


ELEVATION



SECTION

DETAIL "A"  
RCP OR ACP BEND CONNECTION  
Scale: 1/2" = 1'-0"



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

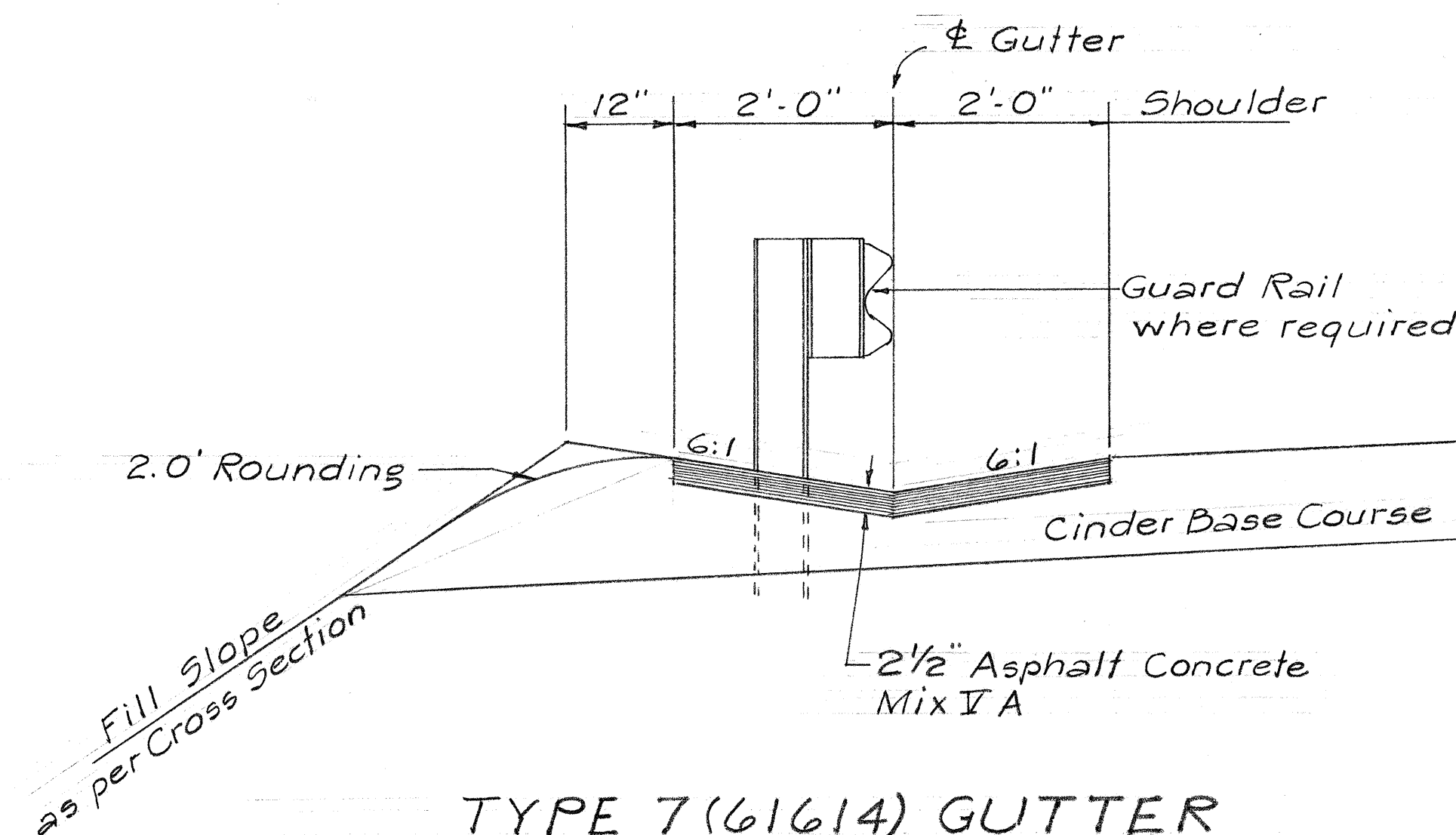
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**DRAINAGE**  
STA. 52+67 TO STA. 54+28.05  
24" CULVERT  
KALAUPAPA LOOKOUT ROAD  
PROJ. NO. S-0470(2)

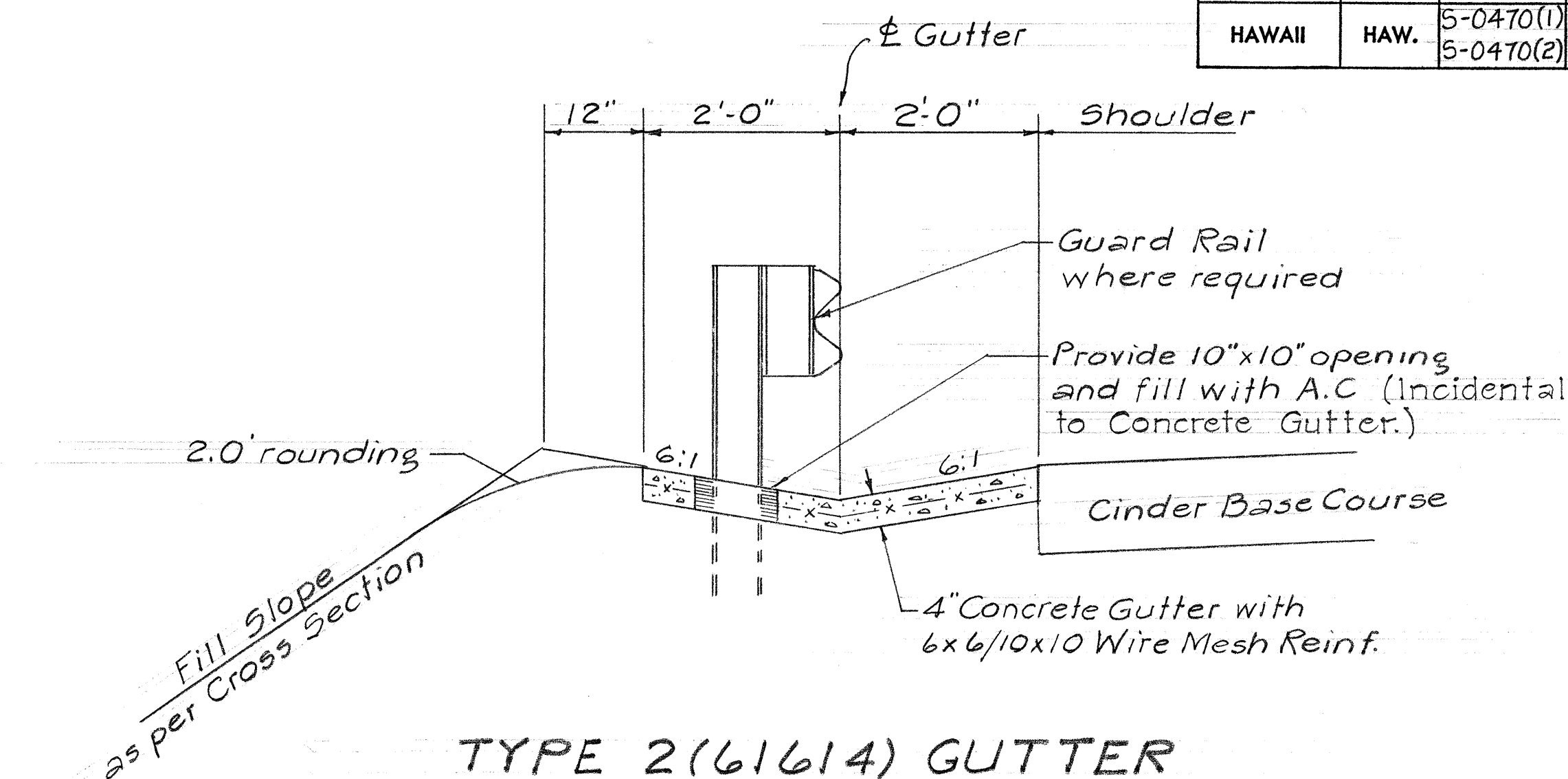
SHEET No. 8 OF 9 SHEETS



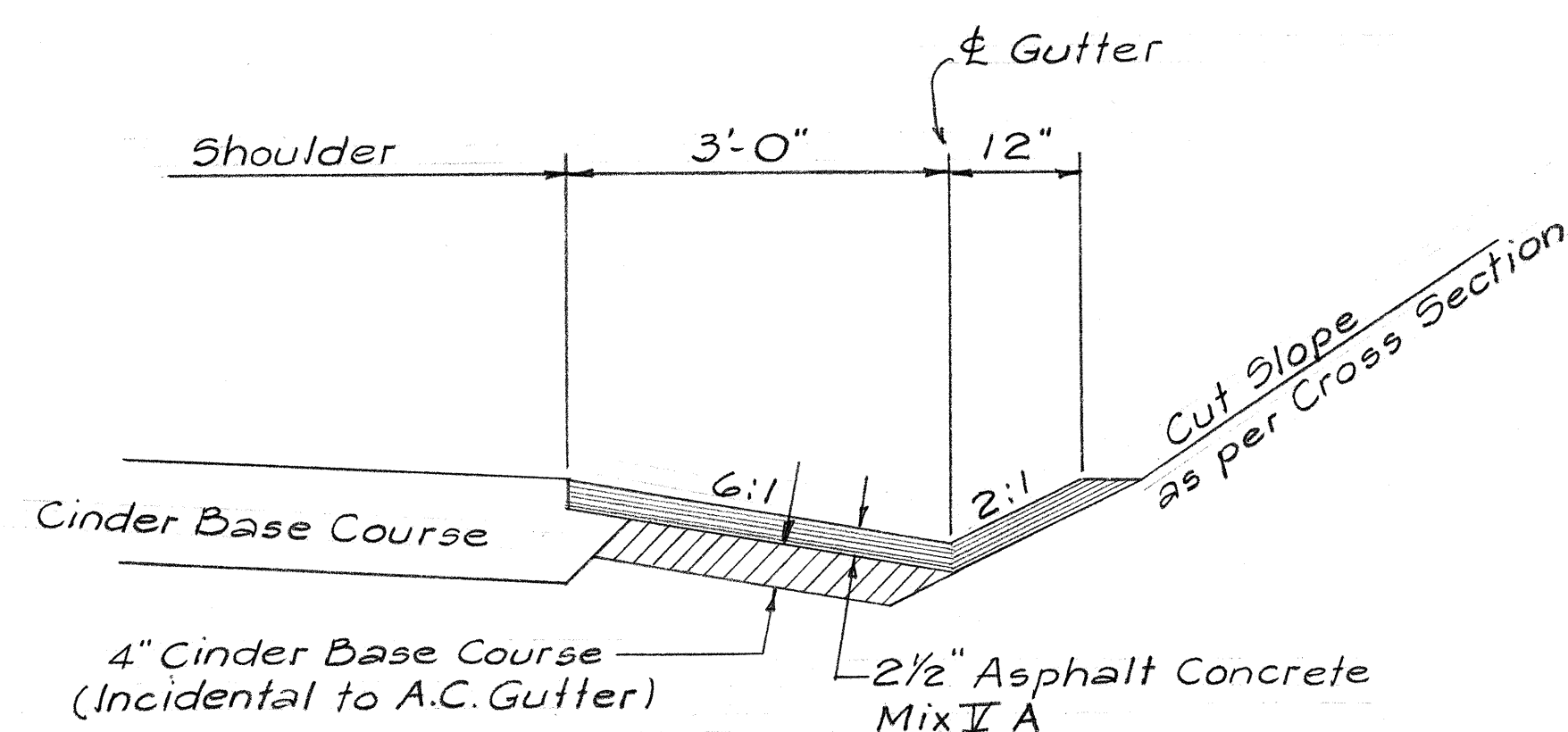
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO.     | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|------------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 5-0470(1)<br>5-0470(2) | 1970        | 26        | 80           |



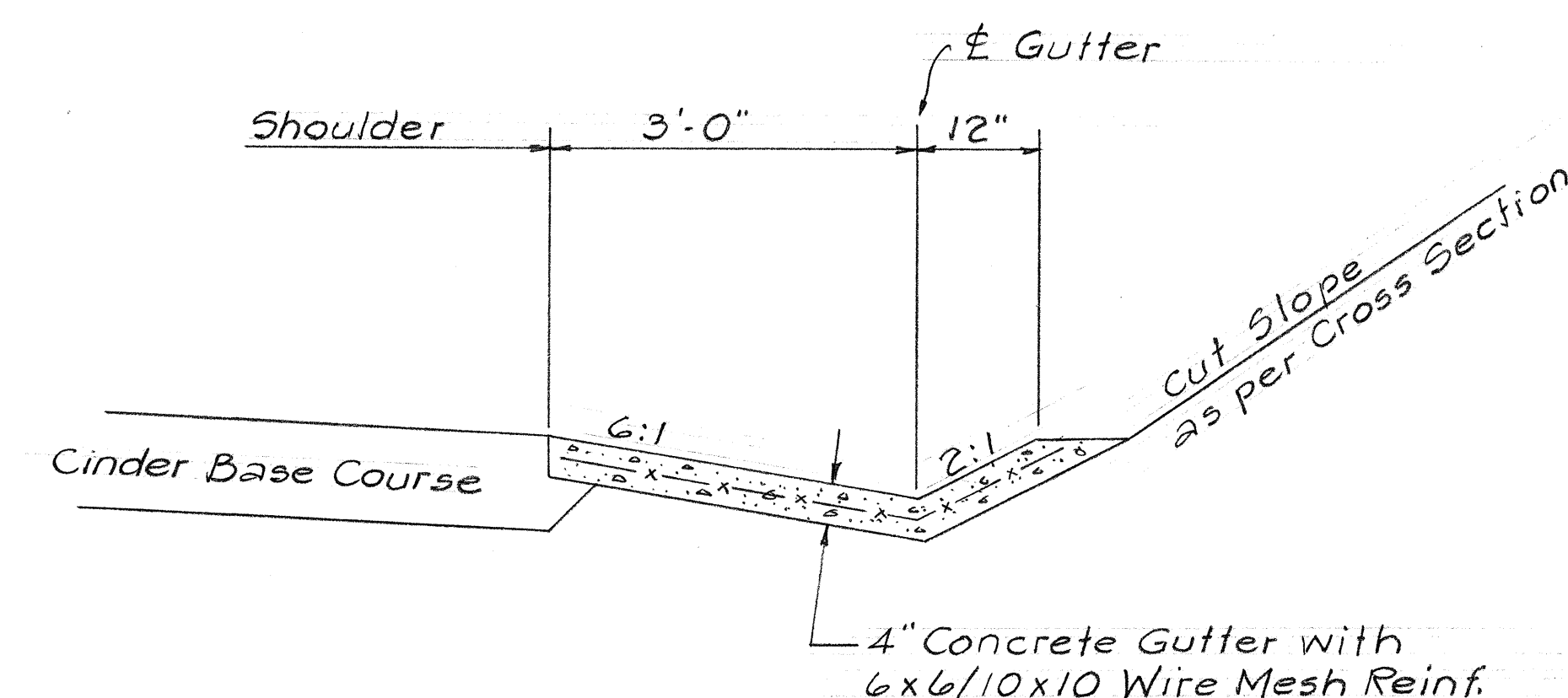
TYPE 7(61614) GUTTER  
Scale: 3/4" = 1'-0"



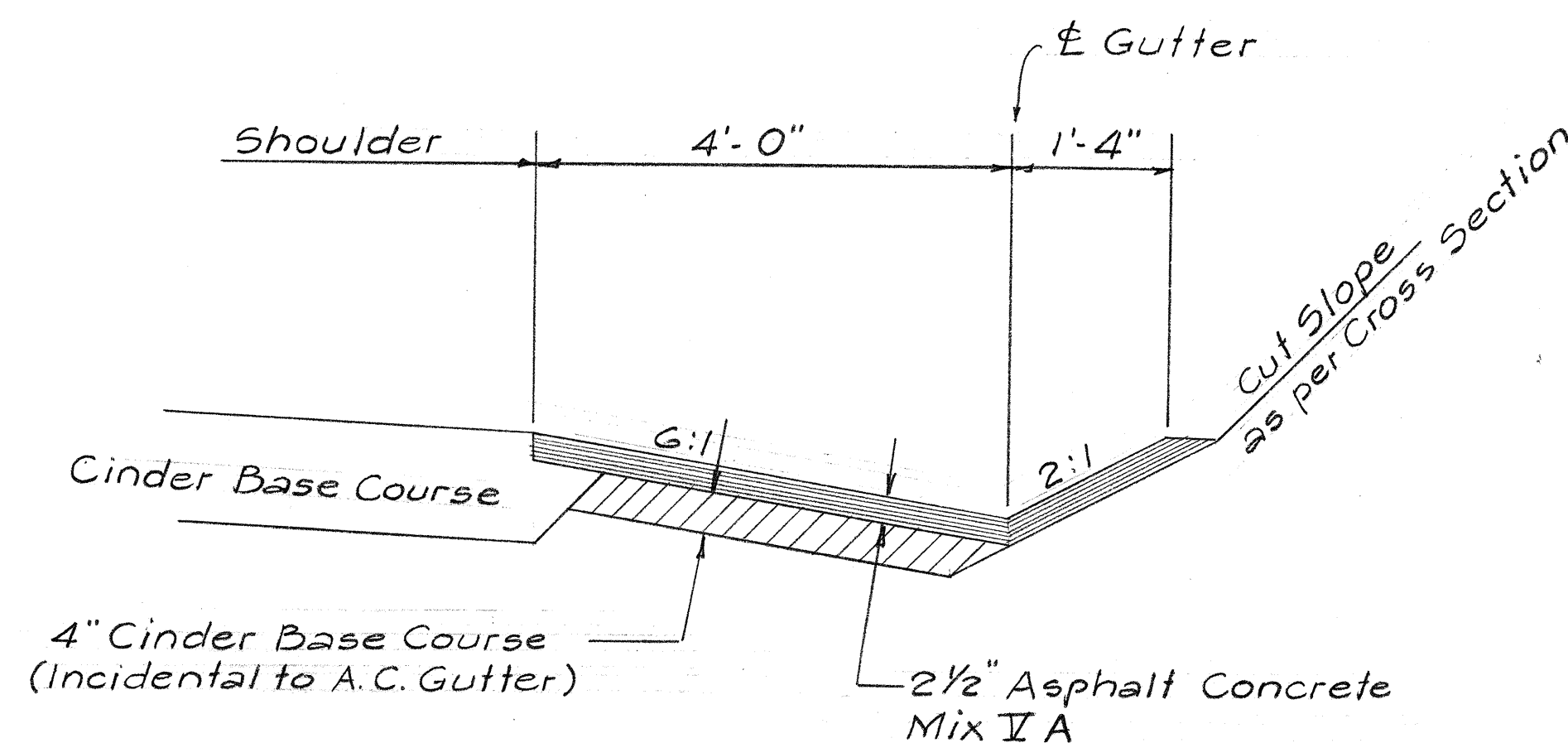
TYPE 2(61614) GUTTER  
Scale: 3/4" = 1'-0"



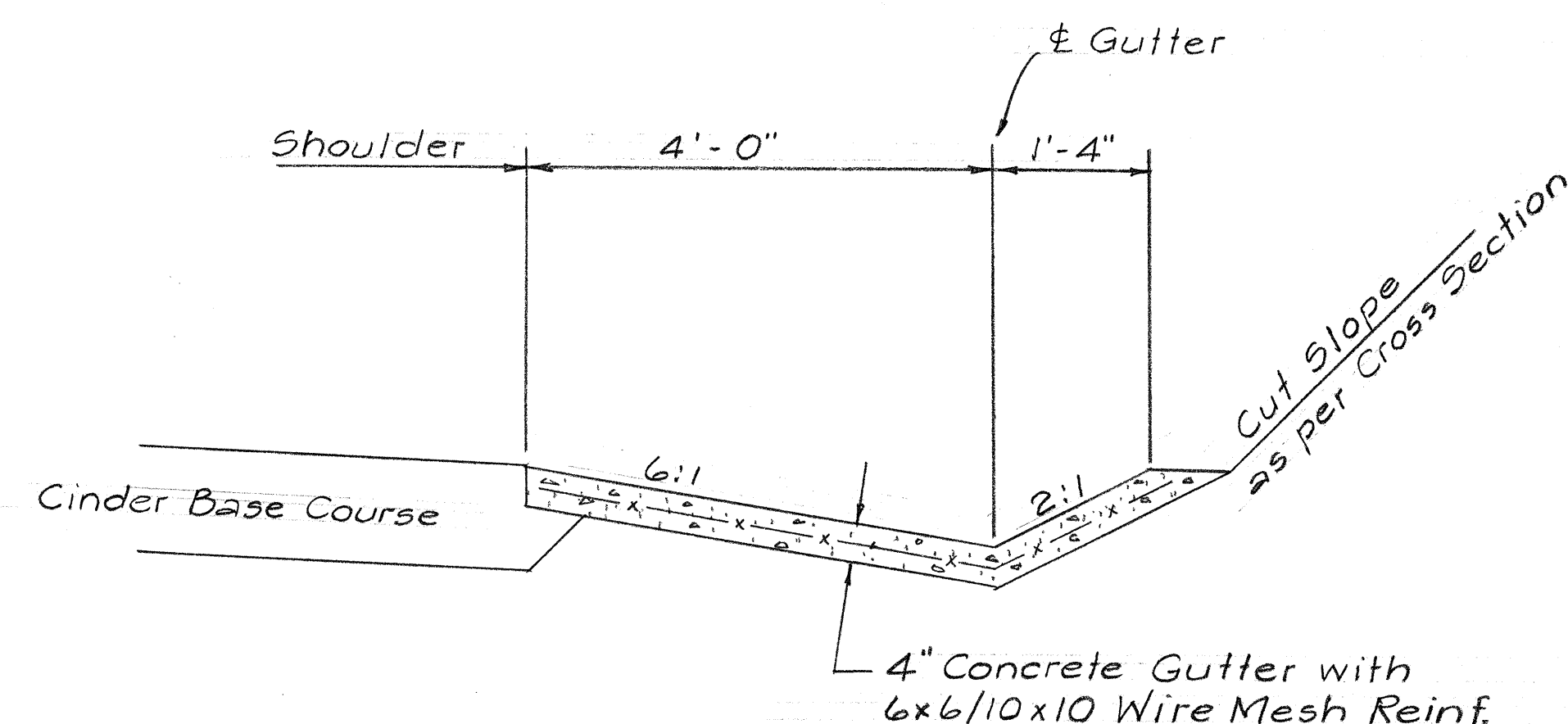
TYPE 7(61214) GUTTER  
Scale: 3/4" = 1'-0"



TYPE 2(61214) GUTTER  
Scale: 3/4" = 1'-0"



TYPE 7(61215) GUTTER  
Scale: 3/4" = 1'-0"



TYPE 2(61215) GUTTER  
Scale: 3/4" = 1'-0"

|                                                                      |
|----------------------------------------------------------------------|
| STATE OF HAWAII<br>DEPARTMENT OF TRANSPORTATION<br>HIGHWAYS DIVISION |
| TYPICAL SECTION<br>GUTTER                                            |
| KALAUPAPA LOOKOUT RD.<br>PROJ. NO. 5-0470(2)                         |
| SHEET NO. 26 OF 80 SHEETS                                            |