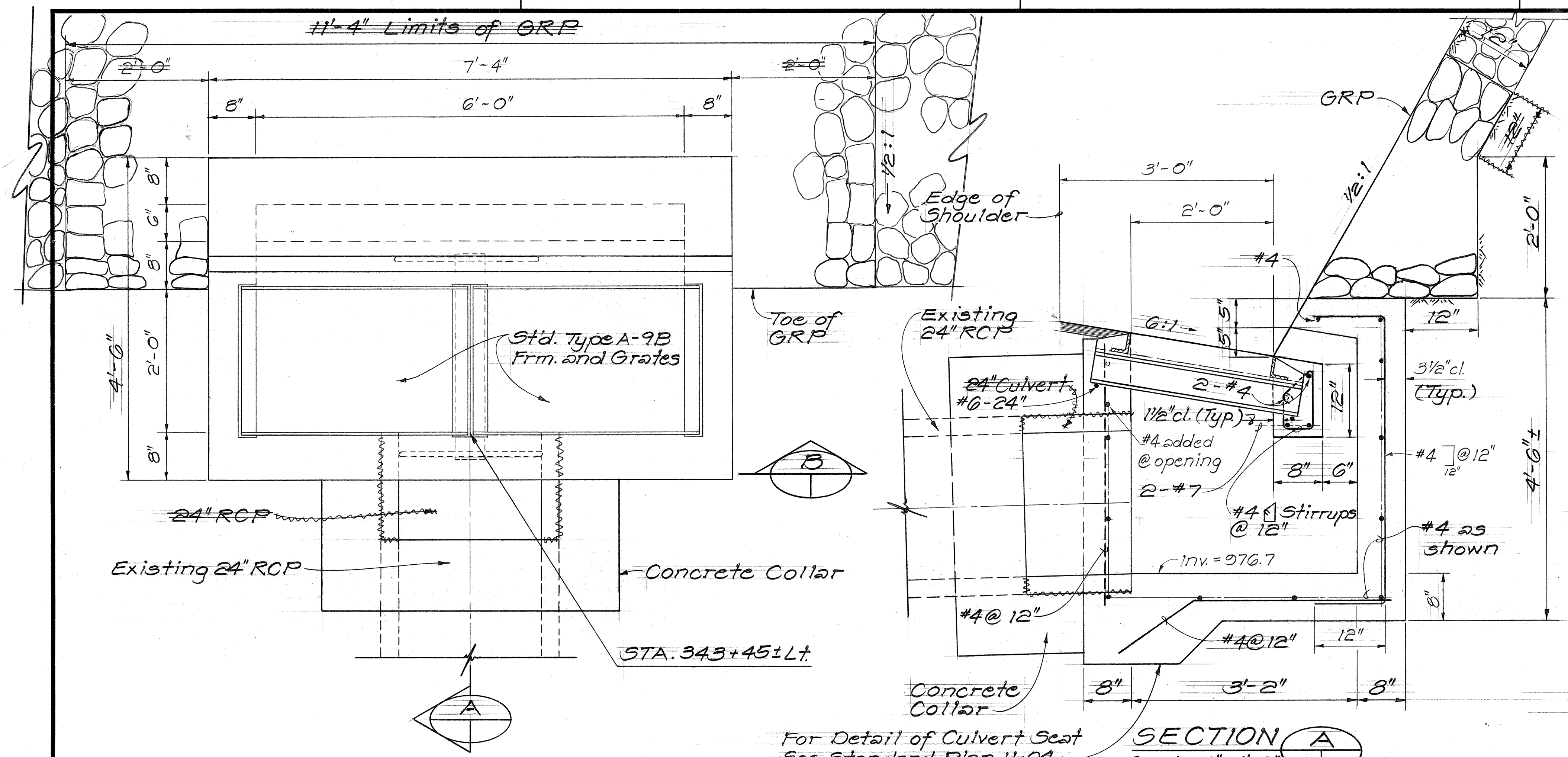
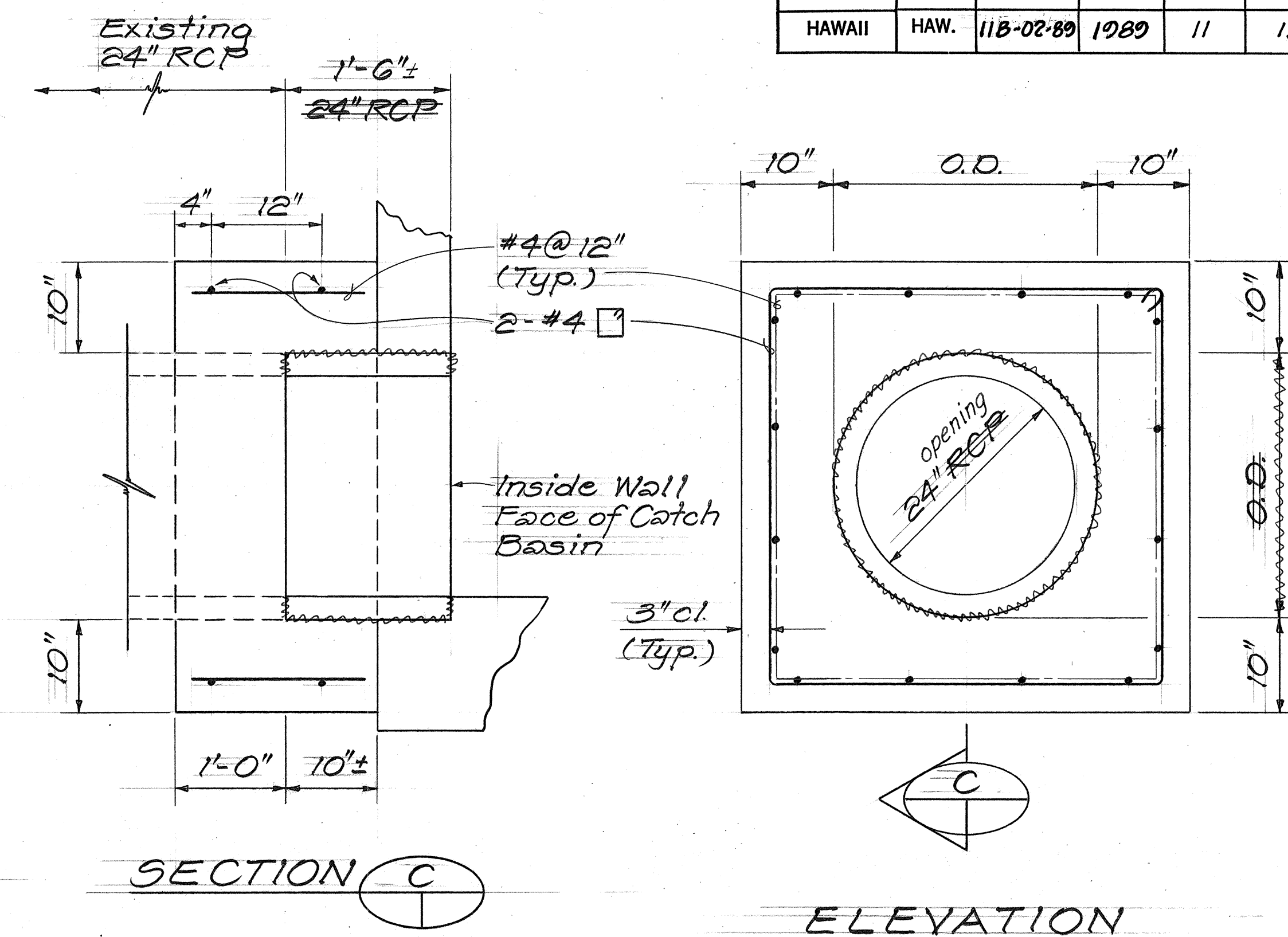


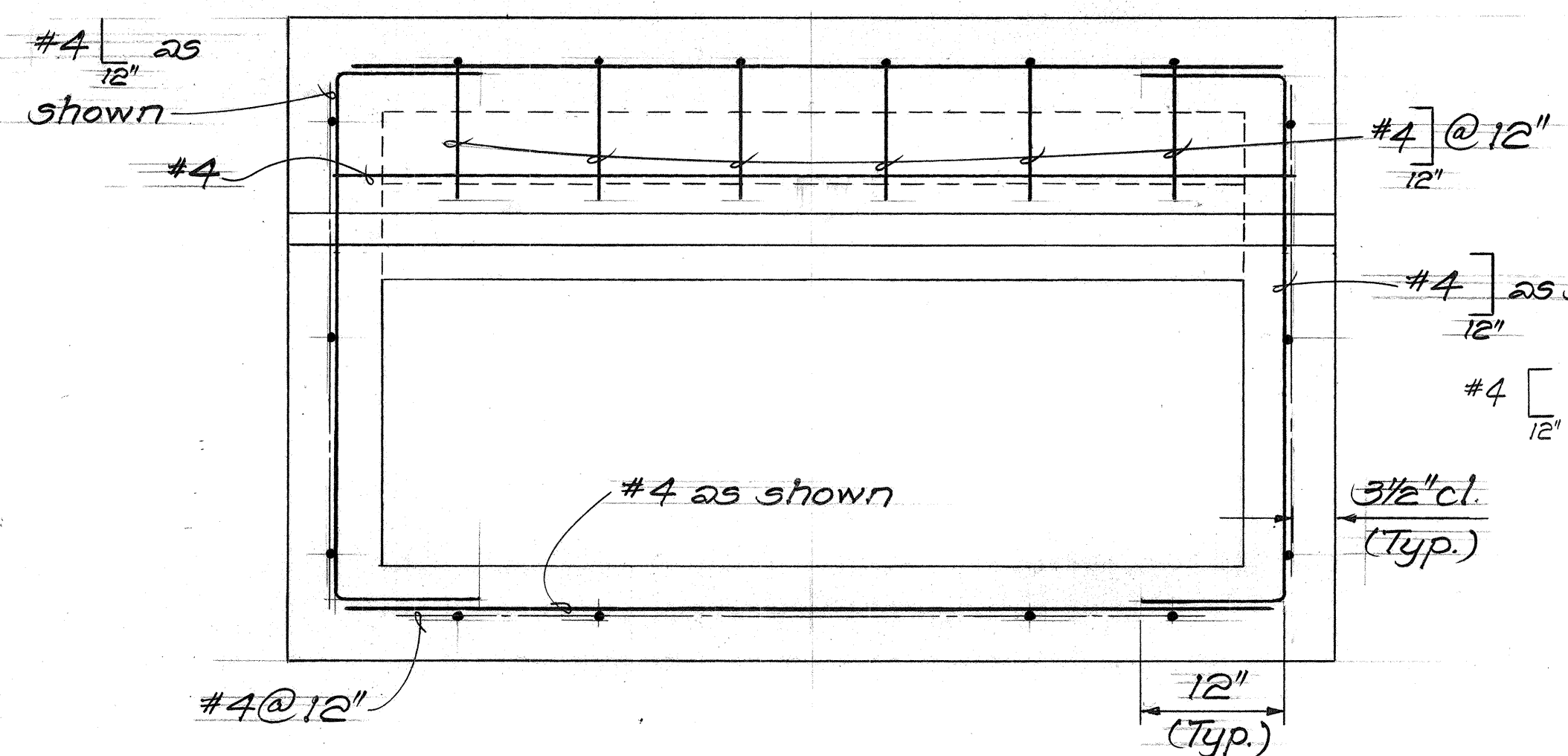
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	11B-02-89	1989	11	15



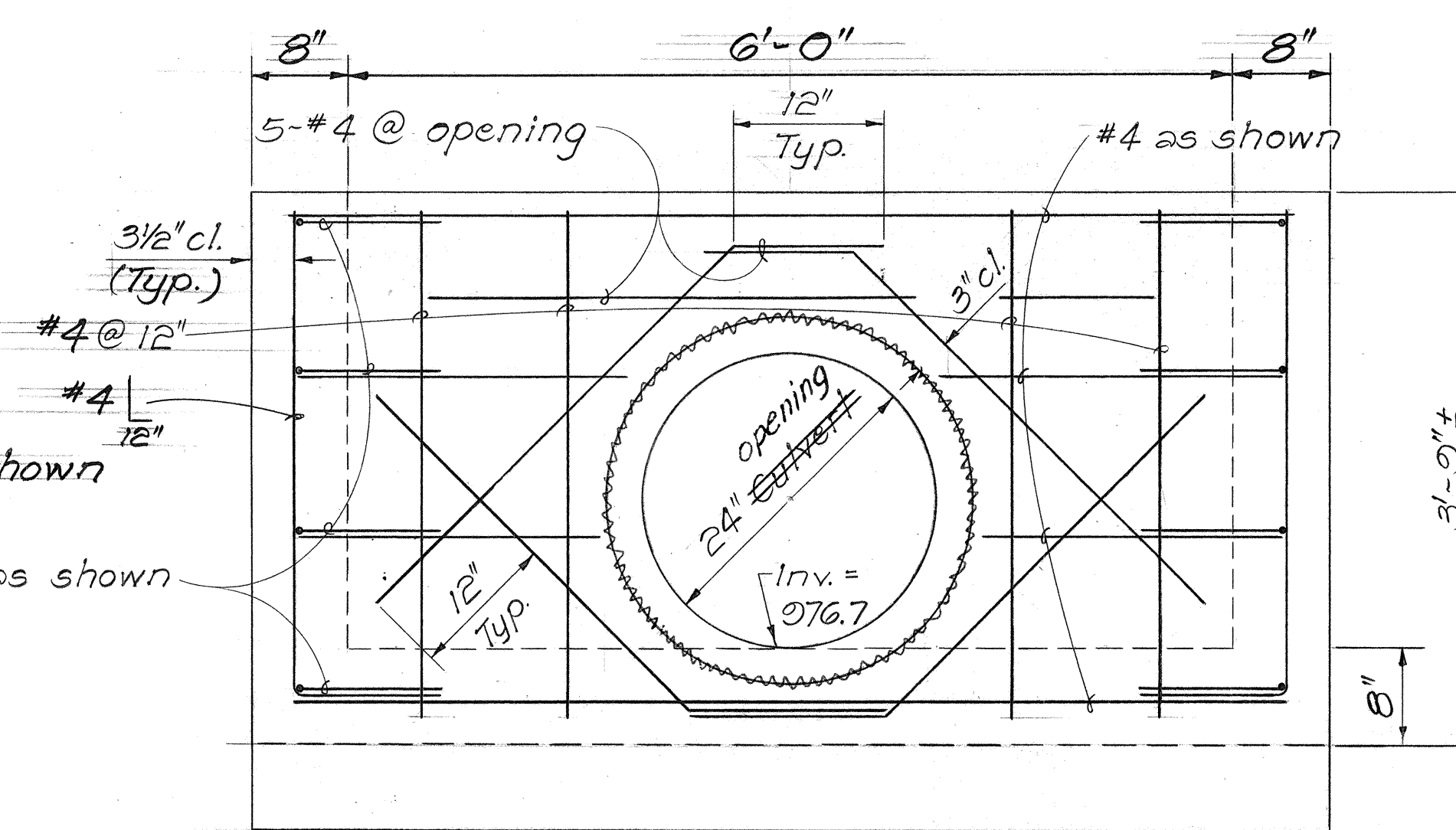
PLAN
Scale: 1"=1'-0"



CONCRETE COLLAR DETAIL
Scale: 1"=1'-0"



PLAN VIEW OF REINFORCING STEEL
Scale: 1"=1'-0"

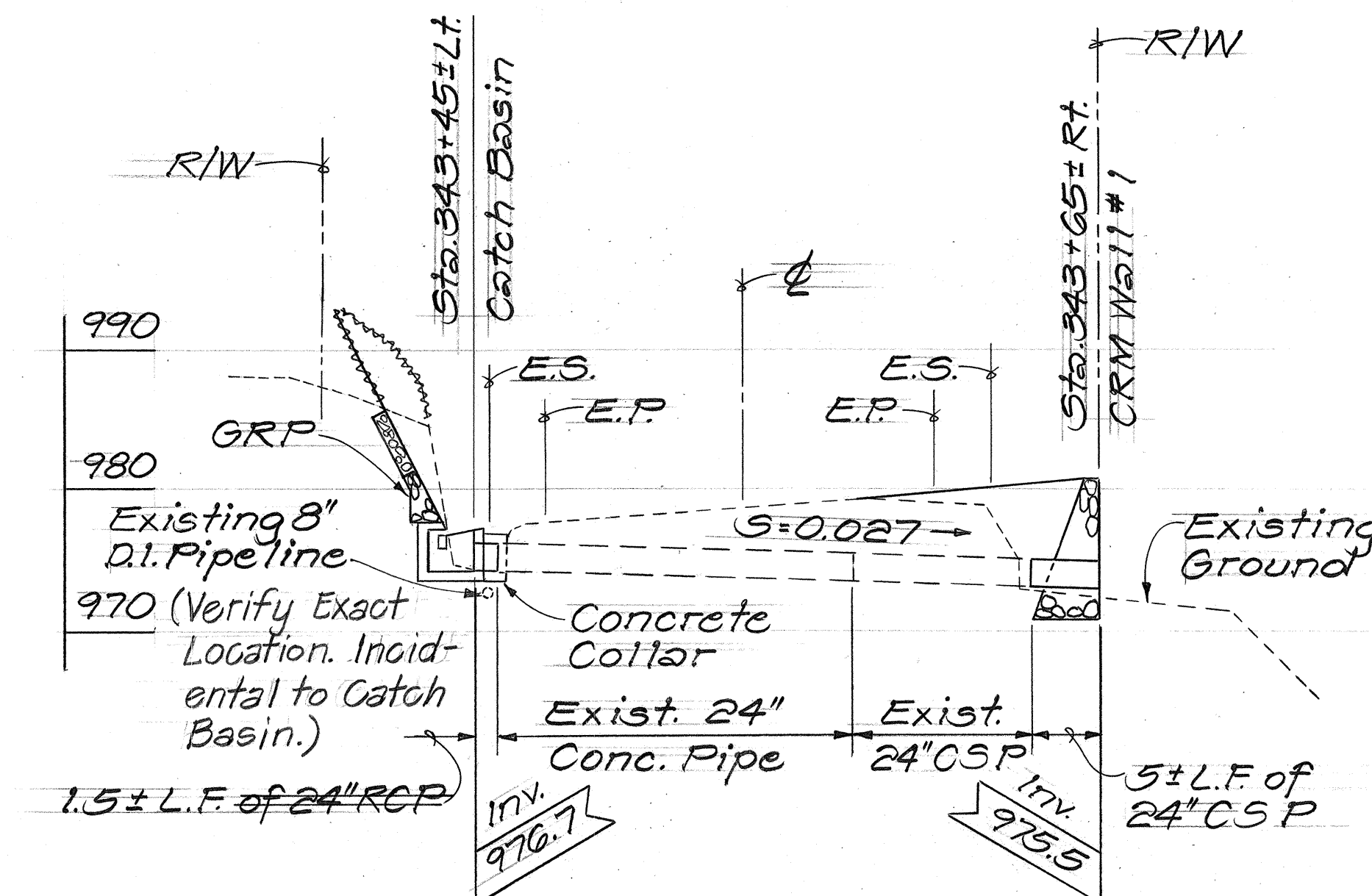


SECTION A
Scale: 1"=1'-0"

ESTIMATED QUANTITIES

Class A Concrete
24" CSP Sh. 1" 0.079"
24" RCP CL. III
GRP
Catch Basin, 3.00 Ft. to 3.99 Ft.
Reinforcing Steel
Bed Course Material for Culverts

1 C.Y.
5 L.F.
2 L.F.
3 G.Y.
1 EA.
35 LB.
1 C.Y.



PROFILE AT CULVERT
Scale: 1"=10'

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DRAINAGE DETAILS
CATCH BASIN @ STA. 343+50± LT.
HAWAII BELT ROAD
SAFETY IMPROVEMENTS
VICINITY OF CITY OF REFUGE ROAD
Project No. 11B-02-89

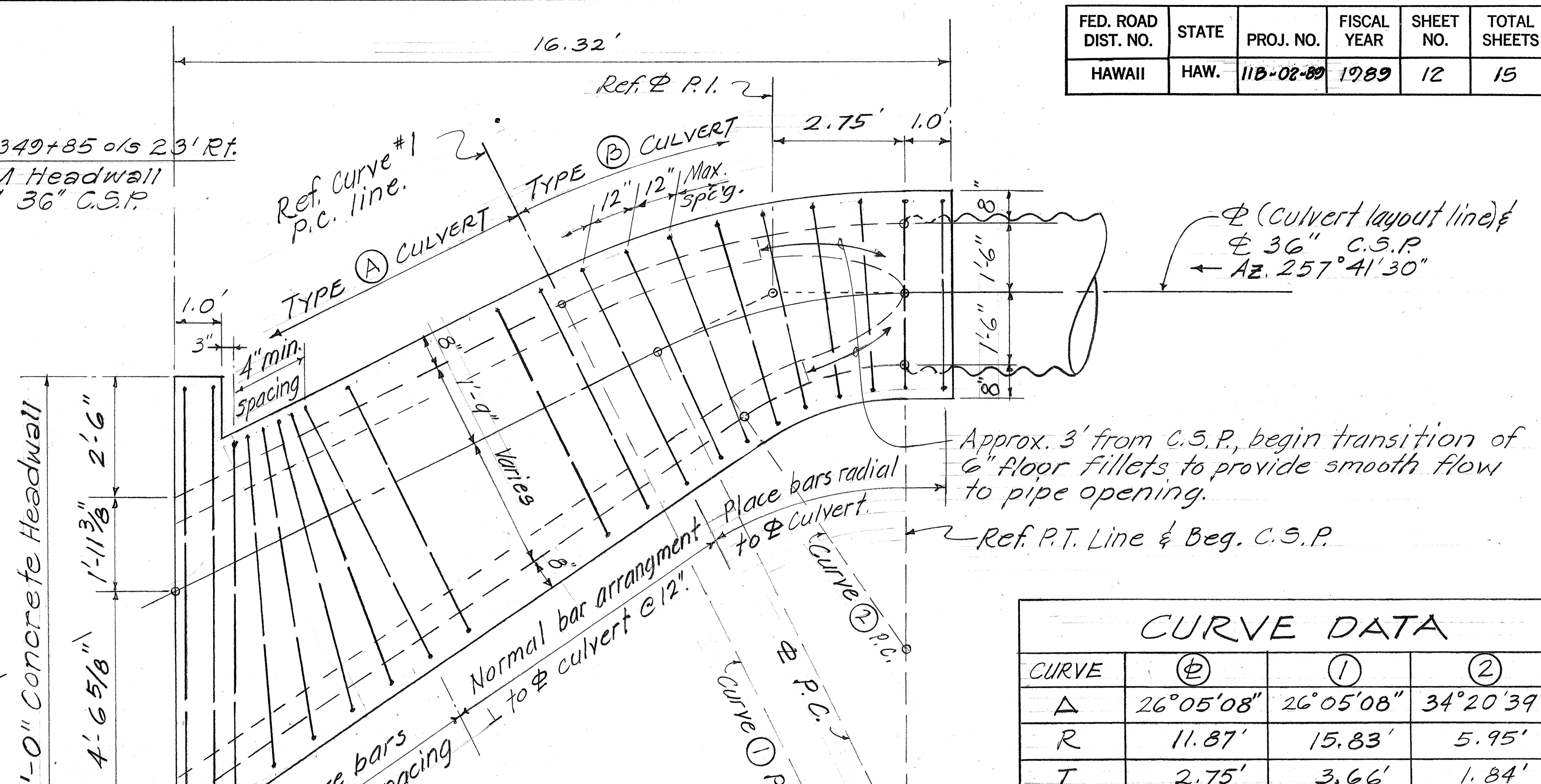
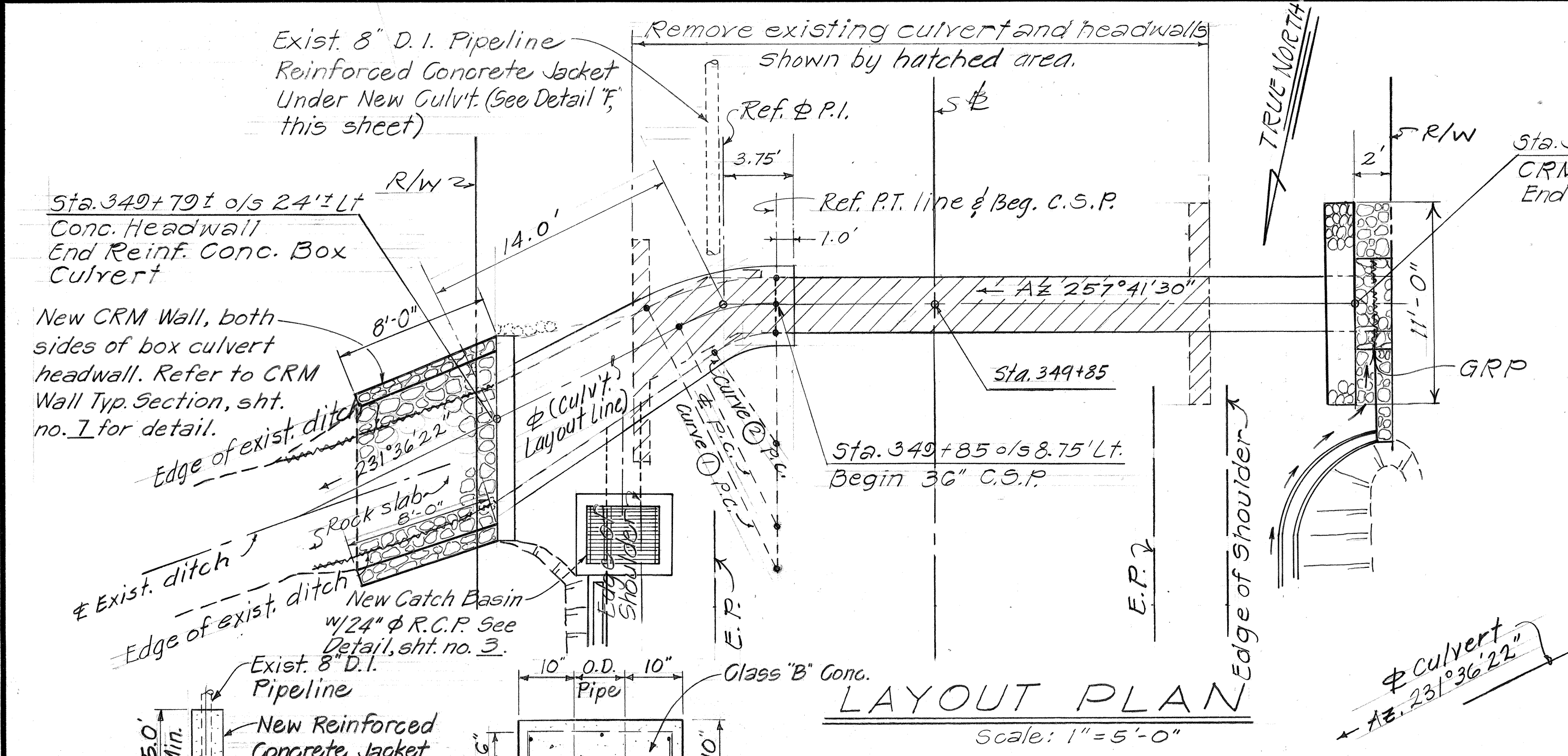
Scale: As Shown Date: Apr. 1989

SHEET NO. 1 OF 2 SHEETS

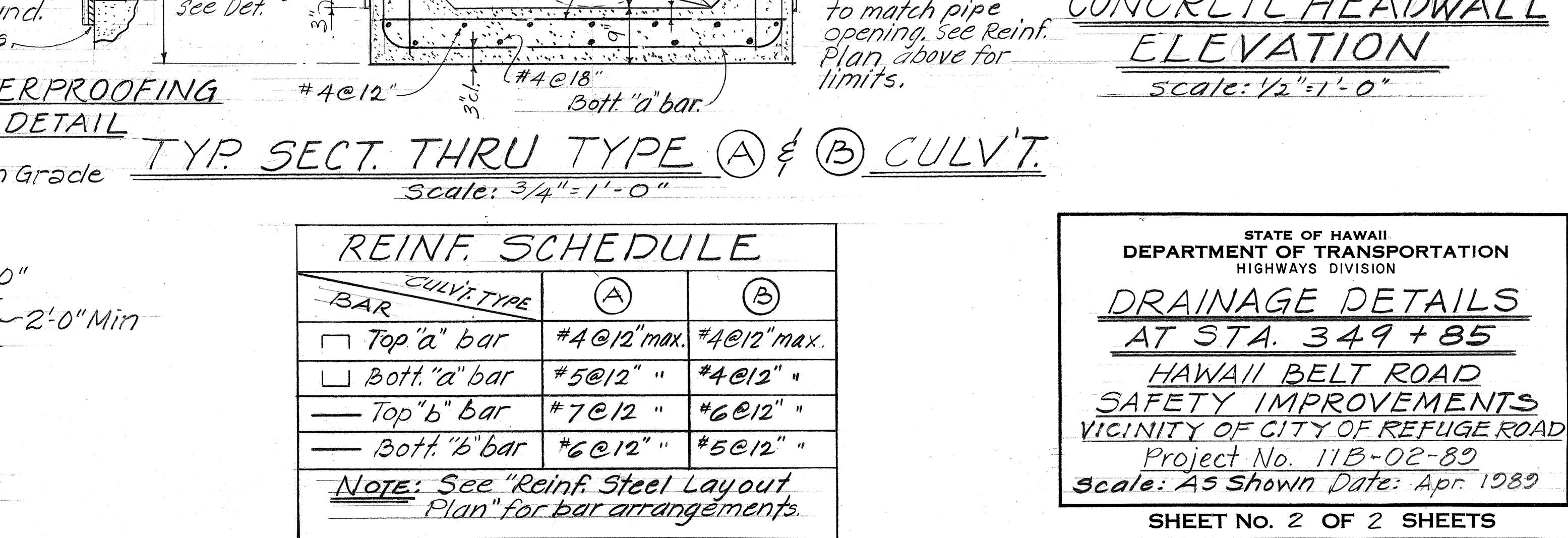
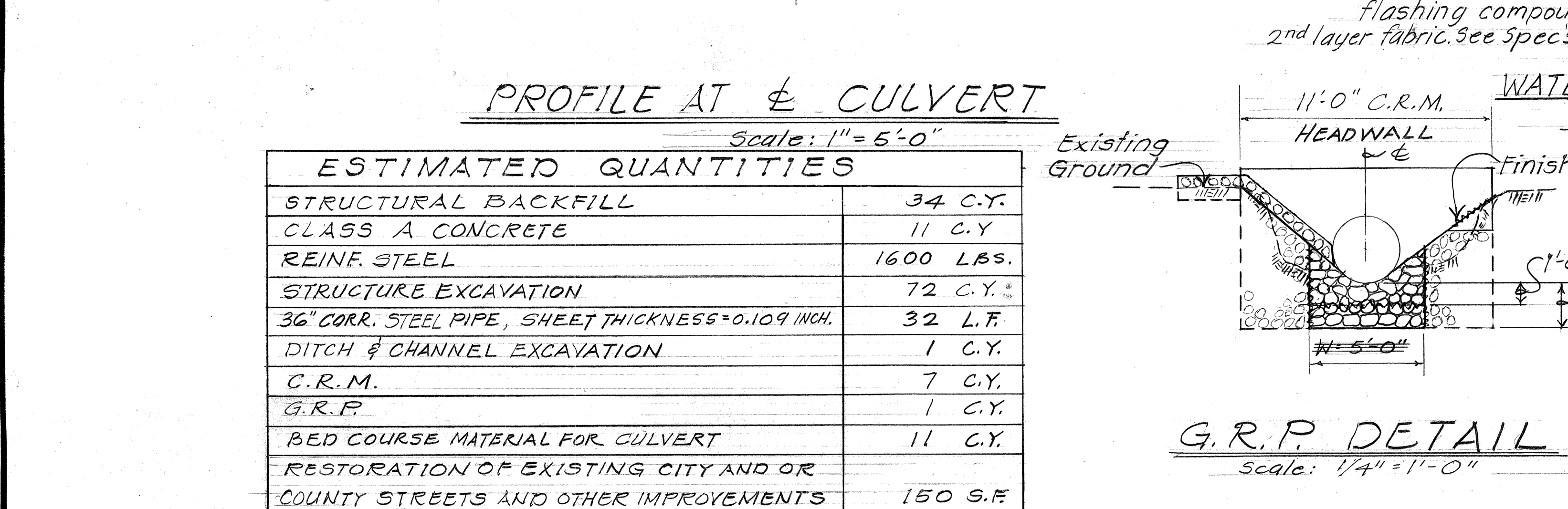
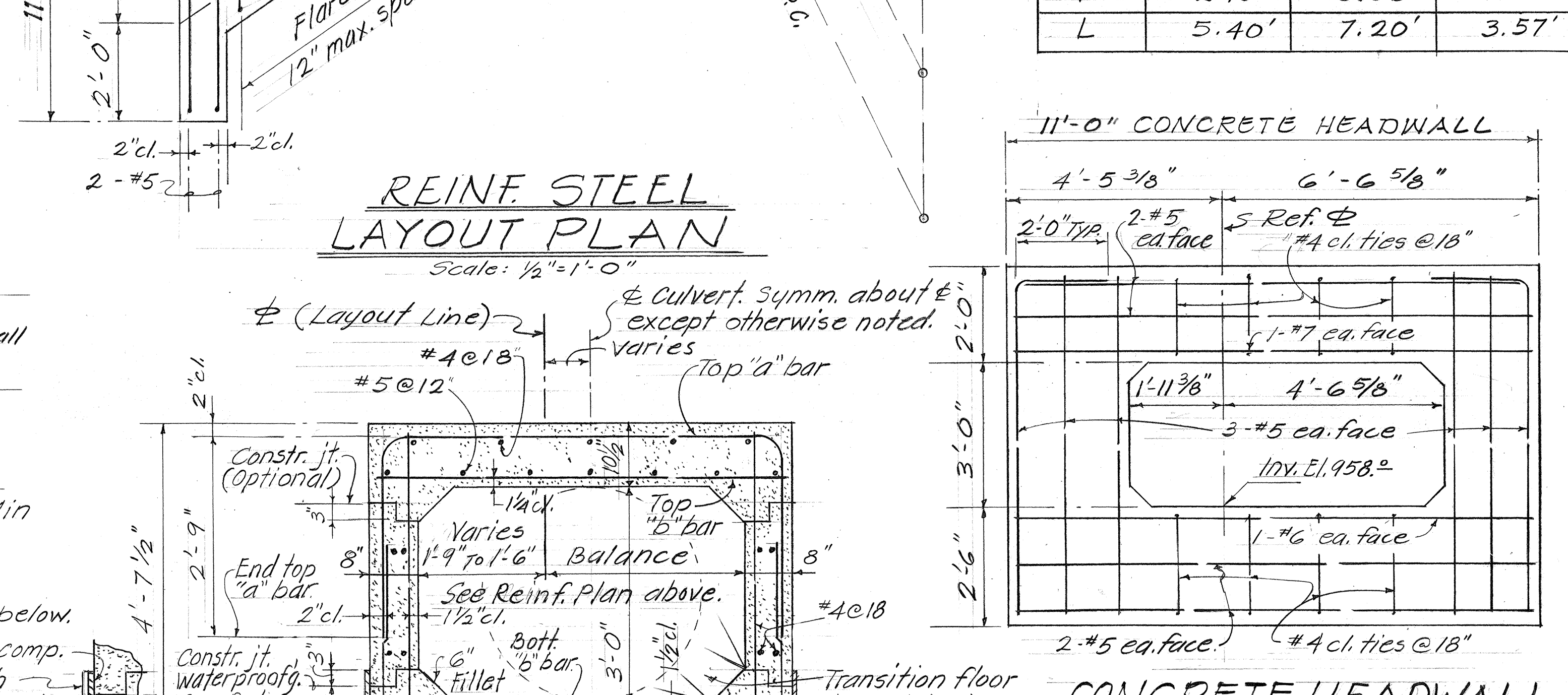
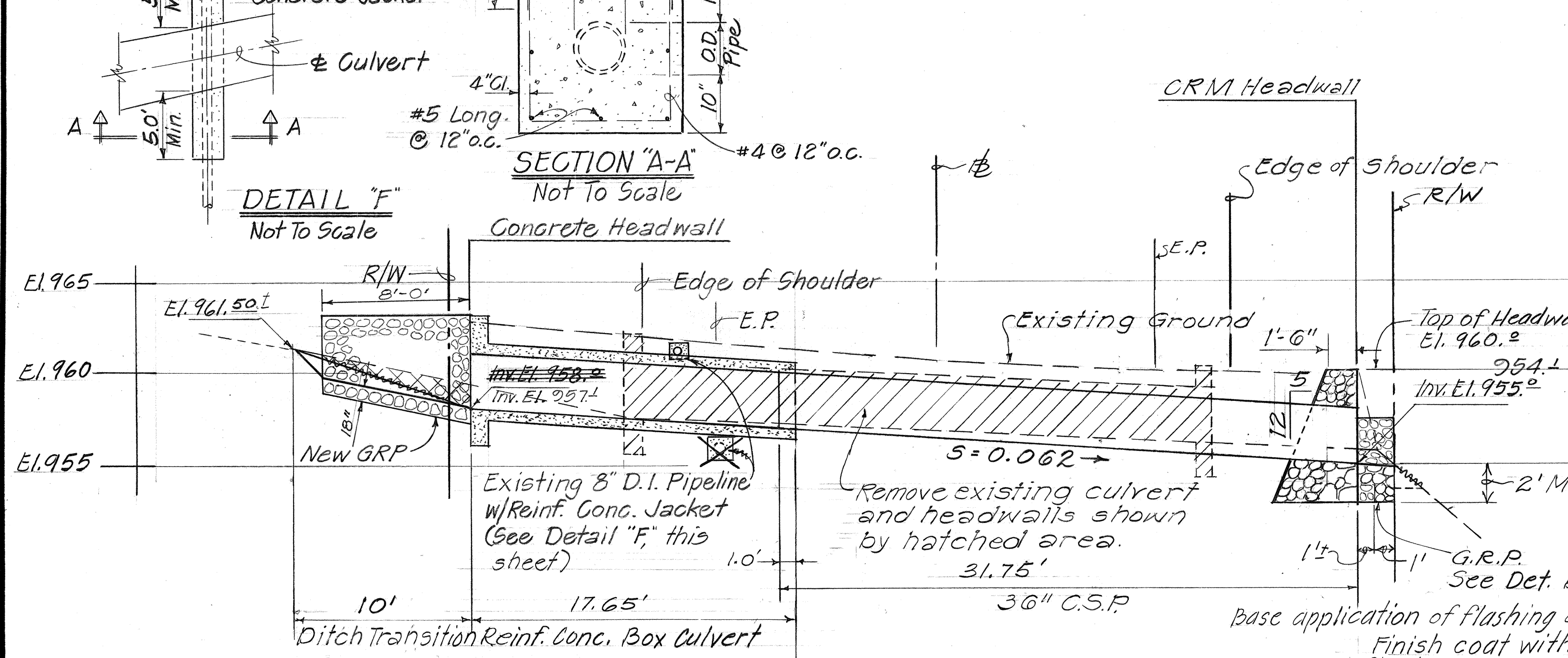
CATCH BASIN AT STA. 343+45± LT.

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

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	11B-02-89	1989	12	15



CURVE DATA			
CURVE	①	②	③
Δ	26°05'08"	26°05'08"	34°20'39"
R	11.87'	15.83'	5.95'
T	2.75'	3.66'	1.84'
L	5.40'	7.20'	3.57'



ESTIMATED QUANTITIES	
STRUCTURAL BACKFILL	34 C.Y.
CLASS A CONCRETE	11 C.Y.
REINF. STEEL	1600 LBS.
STRUCTURE EXCAVATION	72 C.Y.
36" CORR. STEEL PIPE, SHEET THICKNESS = 0.109 INCH.	32 L.F.
DITCH & CHANNEL EXCAVATION	1 C.Y.
C.R.M.	7 C.Y.
G.R.P.	1 C.Y.
BED COURSE MATERIAL FOR CULVERT	11 C.Y.
RESTORATION OF EXISTING CITY AND OR COUNTY STREETS AND OTHER IMPROVEMENTS	150 S.F.

REIN. SCHEDULE		
BAR	①	②
Top "a" bar	#4 @ 12" max.	#4 @ 12" max.
Bot. "a" bar	#5 @ 12" "	#4 @ 12" "
Top "b" bar	#7 @ 12" "	#6 @ 12" "
Bot. "b" bar	#6 @ 12" "	#5 @ 12" "

NOTE: See "Reinf. Steel Layout Plan" for bar arrangements.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS
AT STA. 349+85
HAWAII BELT ROAD
SAFETY IMPROVEMENTS
VICINITY OF CITY OF REFUGE ROAD
Project No. 11B-02-89
Scale: As Shown Date: Apr. 1989

SHEET NO. 2 OF 2 SHEETS

SURVEY PLOTTED BY: _____
DATE: _____
DRAWN BY: _____
DESIGNED BY: _____
NOTED BY: _____
CHECKED BY: _____
ORIGINAL PLAN: _____
NOTE BOOK: _____
QUANTITIES BY: _____
NO. _____