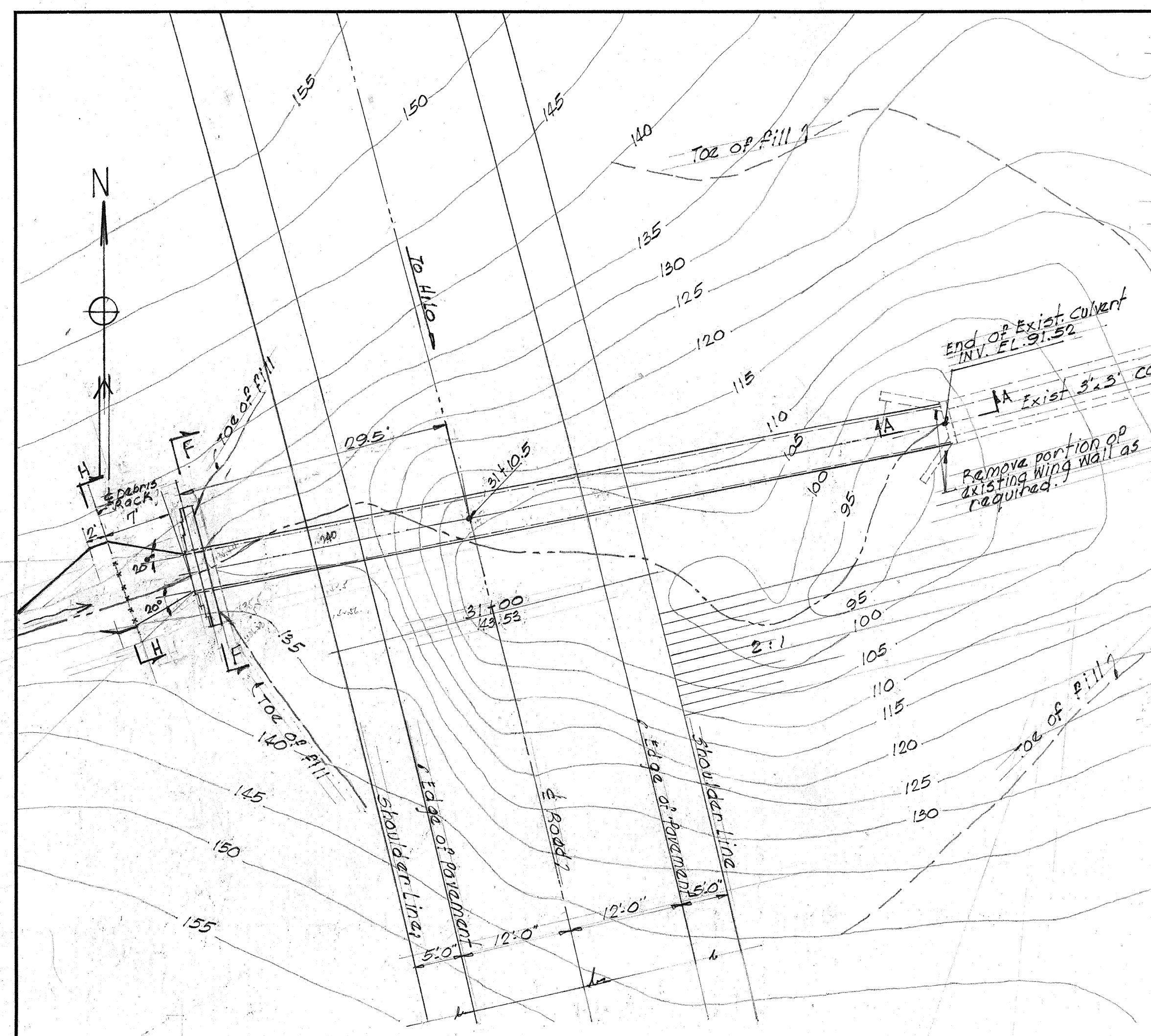
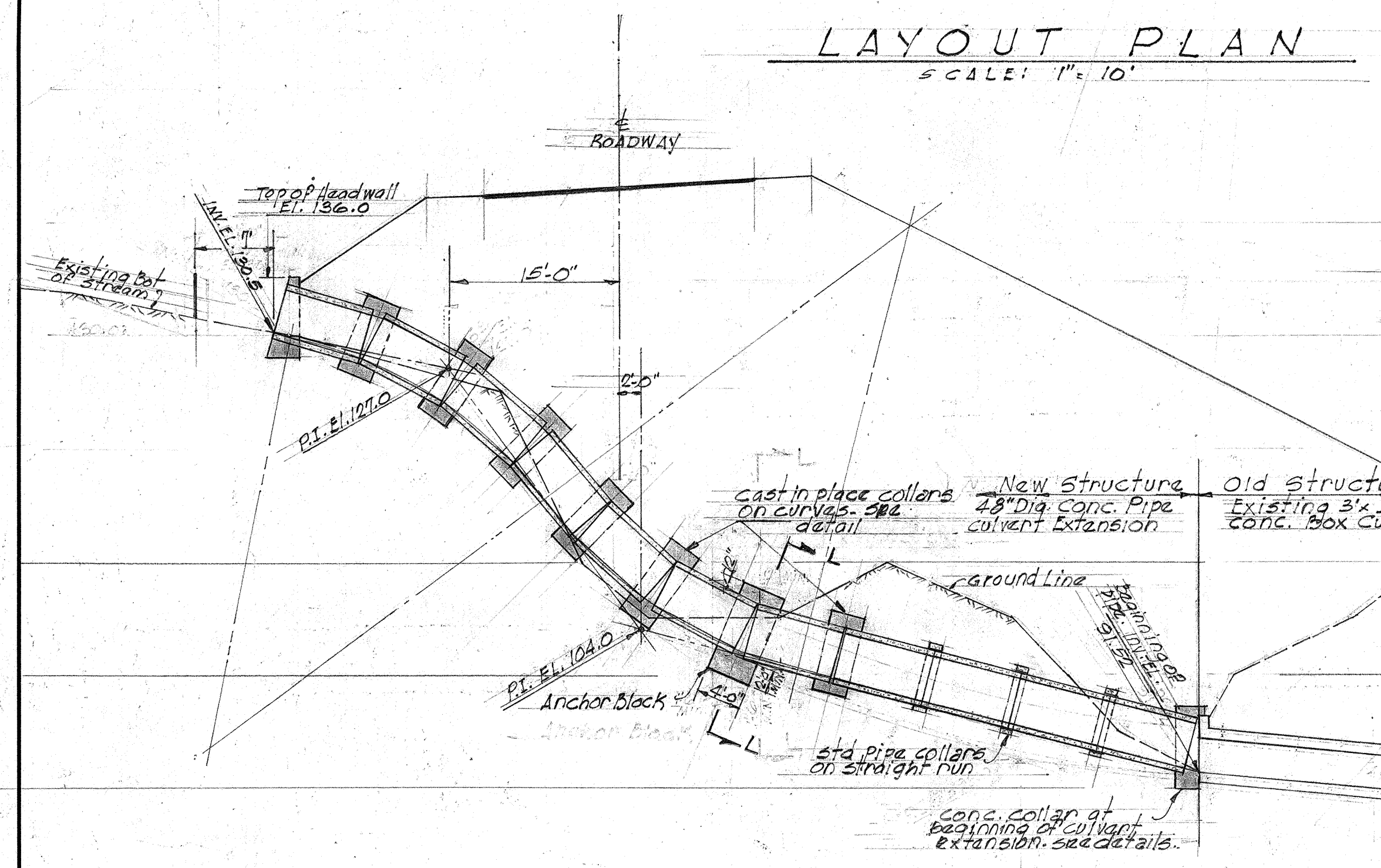


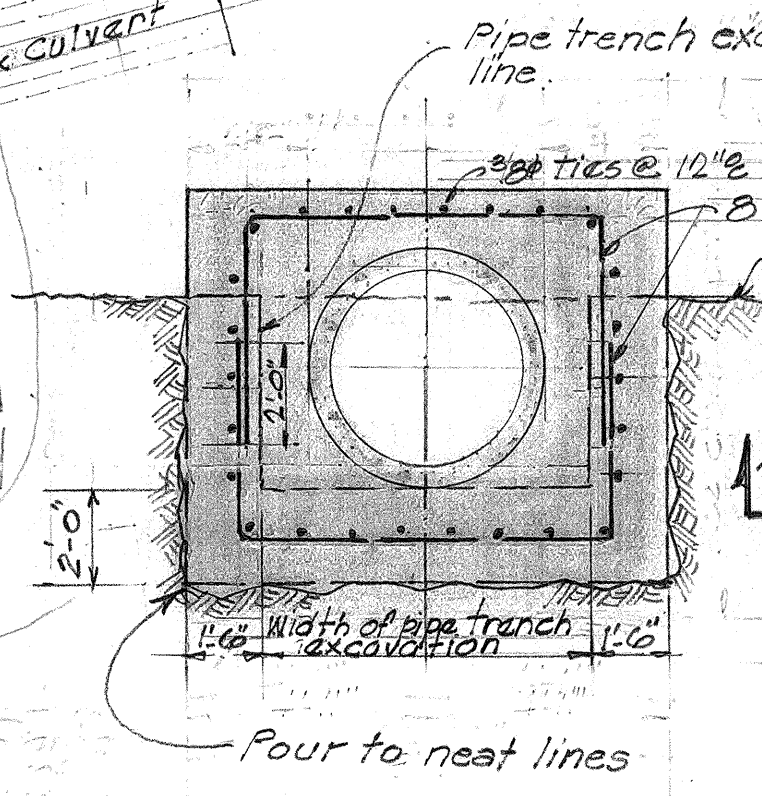
ESTIMATED QUANTITY	
Class A-1 concrete	32.6 cu. y.
Class B-1 concrete	4.7 cu. y.
Reinforcing steel	1,005 #
Used 60# Steel Rails	2,550 #
Structural Excavation	140 c. y.
Channel Excavation	11 c. y.
48" conc. pipe	88 lin. ft.



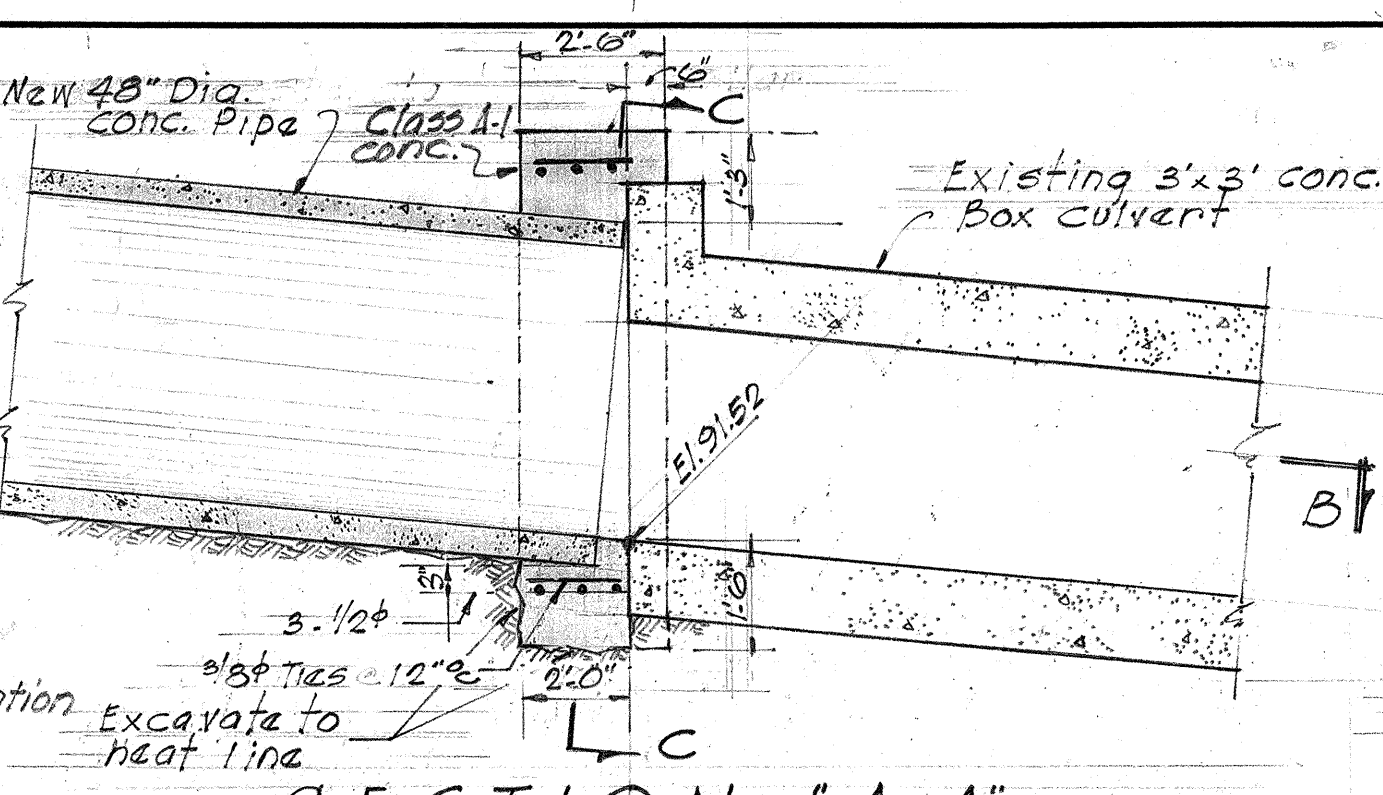
LAYOUT PLAN
SCALE: 1" = 10'



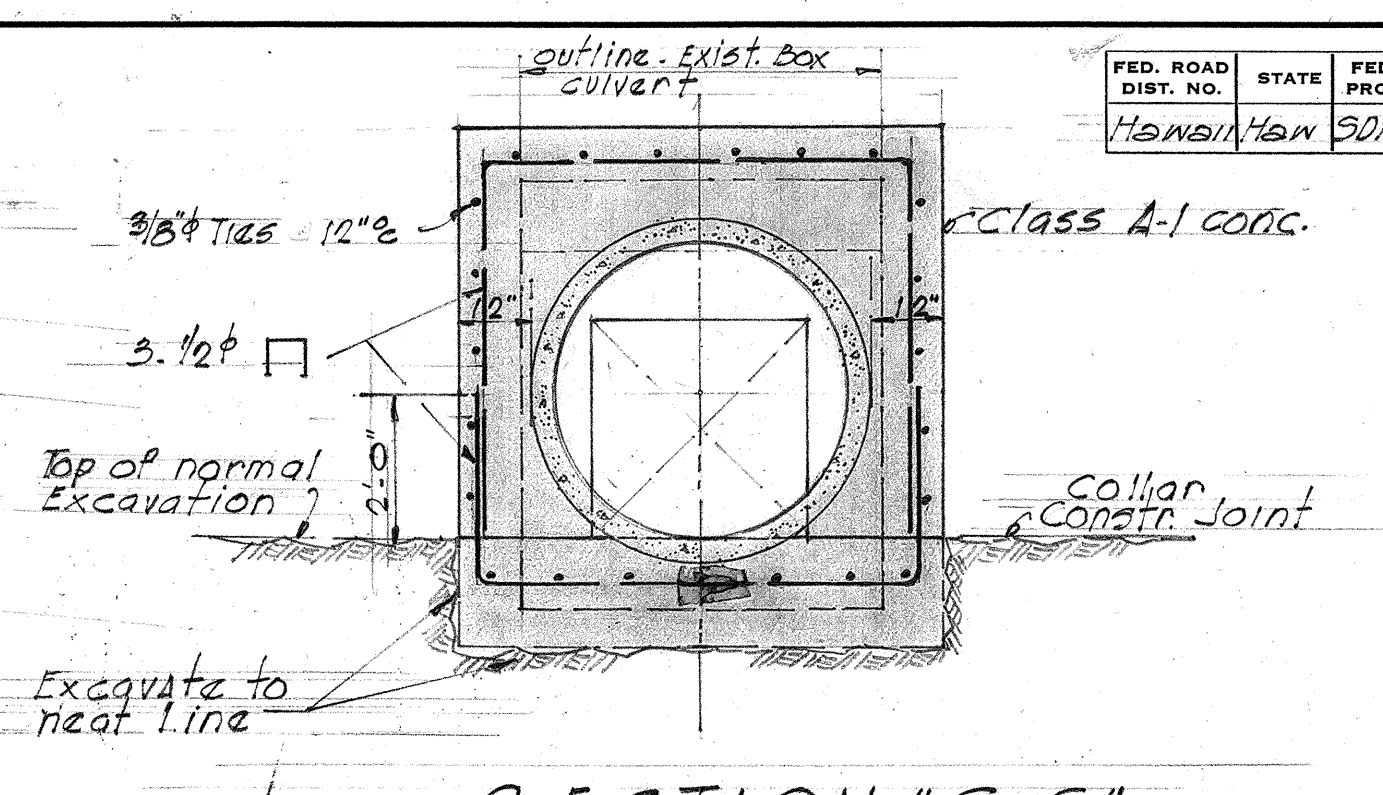
CROSS SECTION ALONG 1/2 OF CULVERT
SCALE: 1" = 10.0'



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

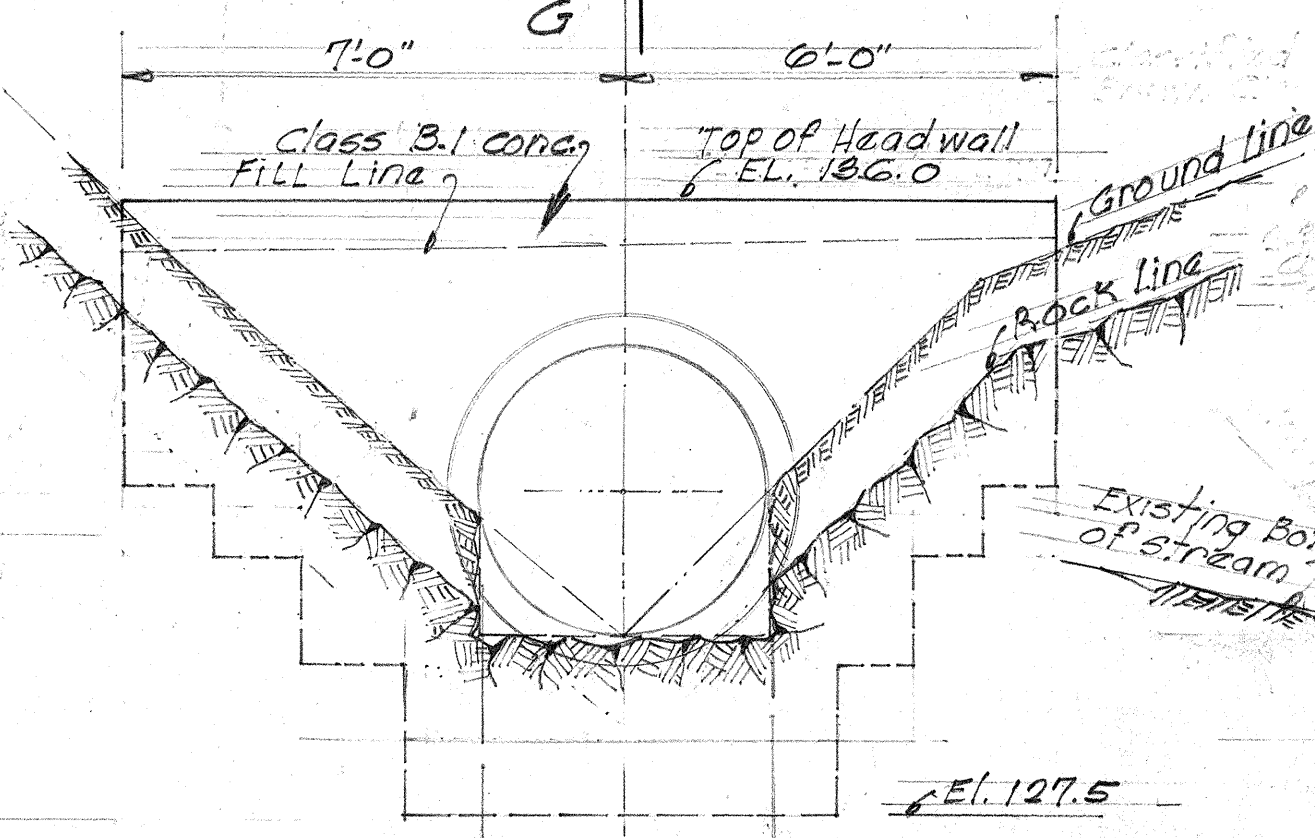


SECTION 'B-B'

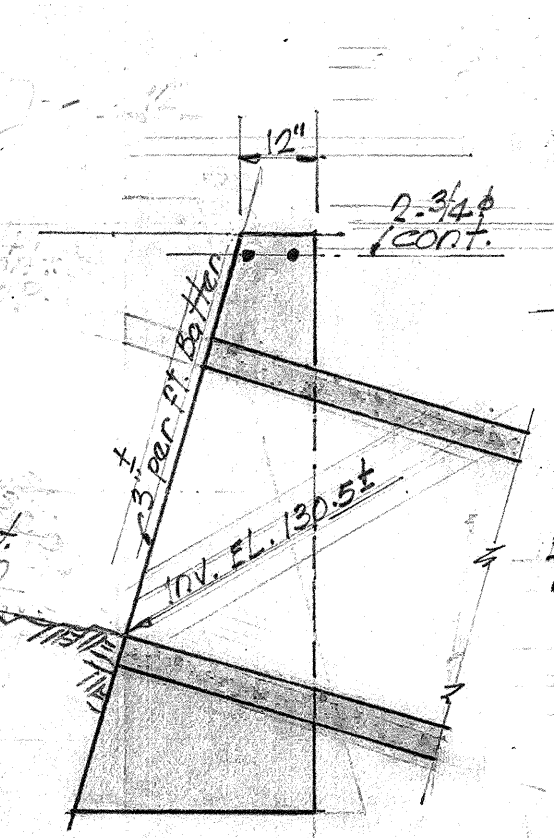


SECTION 'C-C'

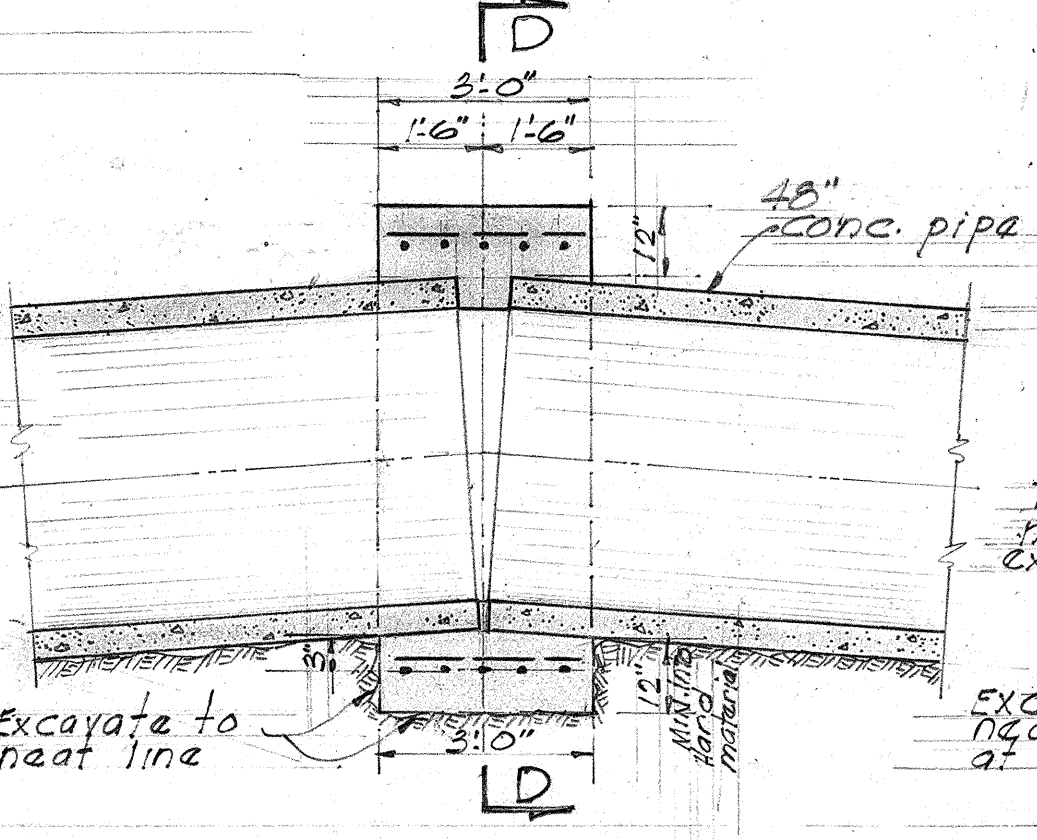
DETAIL OF CAST-IN-PLACE CONC. COLLAR AT BEGINNING OF CULVERT EXTENSION
SCALE: 3/8" = 1'-0"



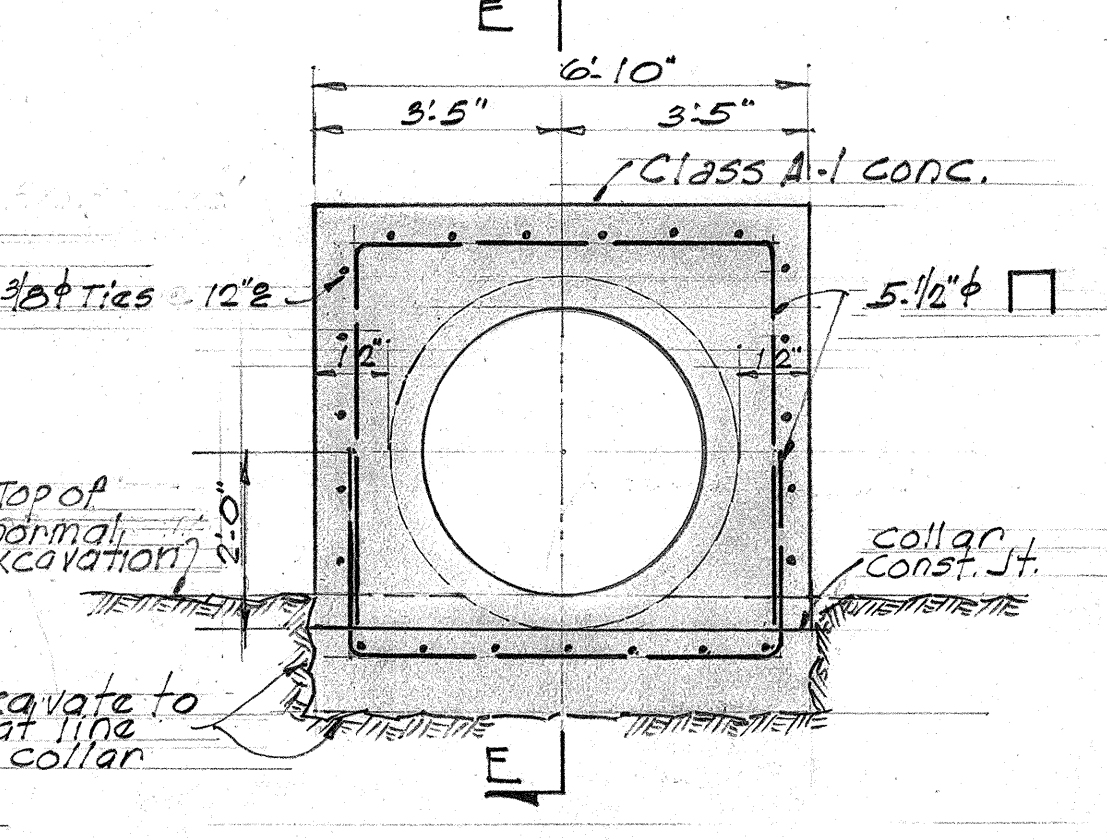
ELEVATION 'F-F'



SECTION 'G-G'



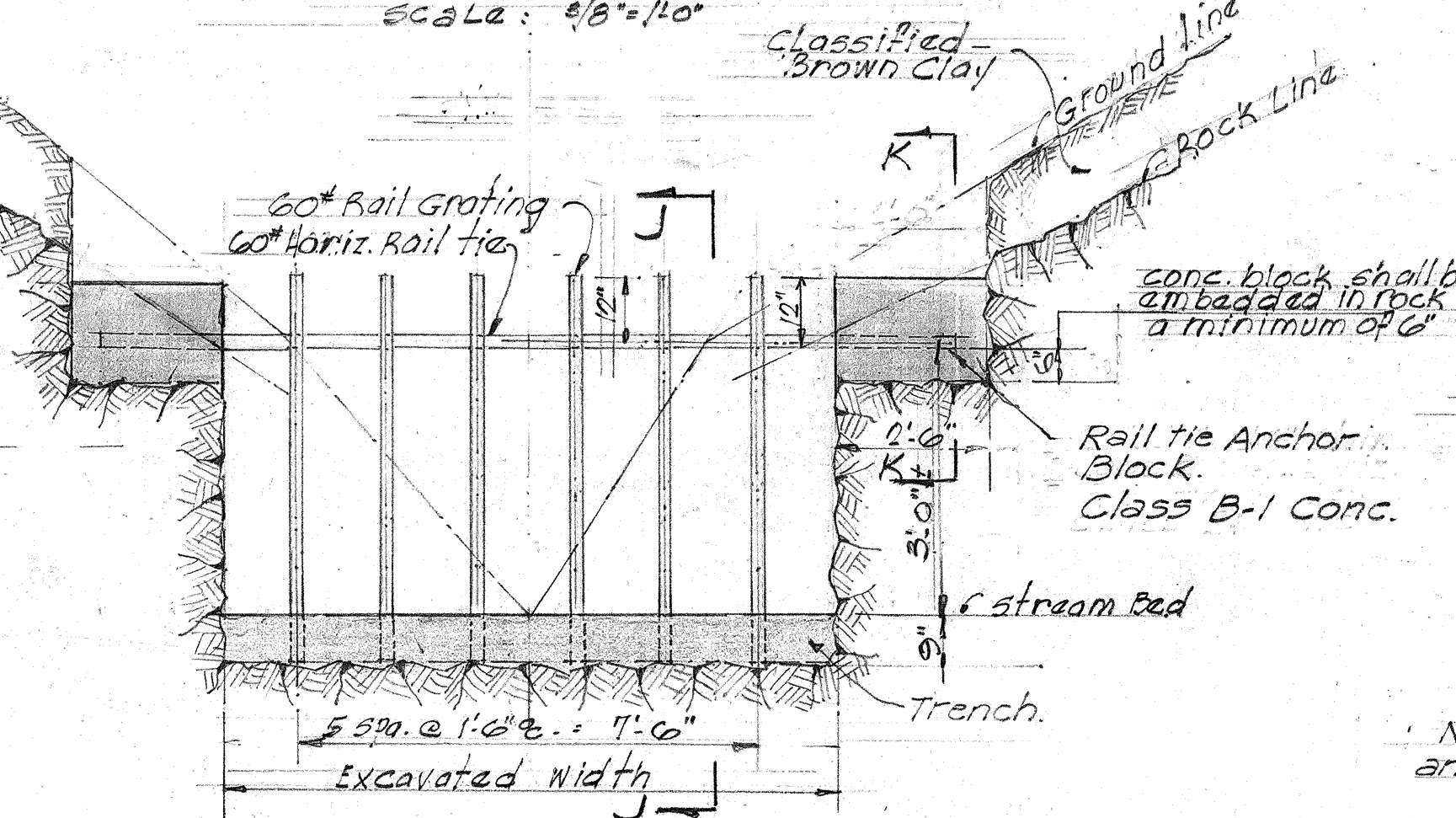
SECTION 'E-E'



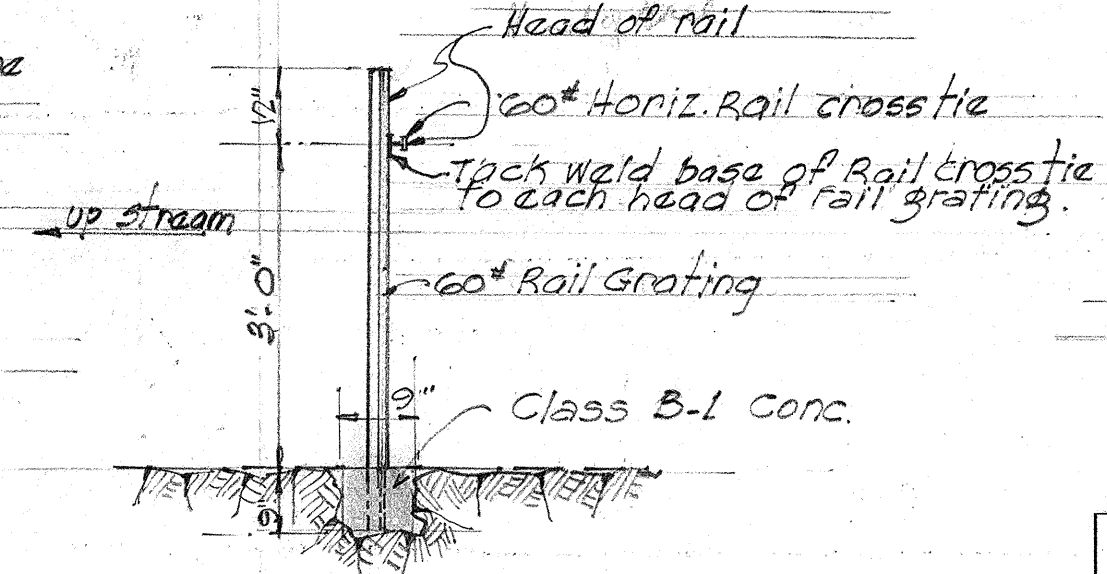
SECTION 'D-D'

TYP. DETAIL OF CAST-IN-PLACE CONC. PIPE COLLAR ON CURVES
SCALE: 3/8" = 1'-0"

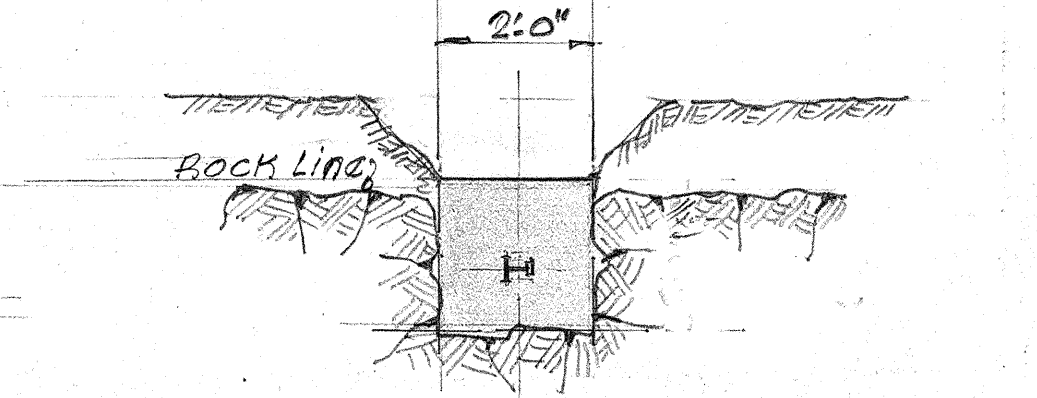
DETAILS OF HEAD WALL
SCALE: 3/8" = 1'-0"



SECTION 'H-H'



SECTION 'J-J'



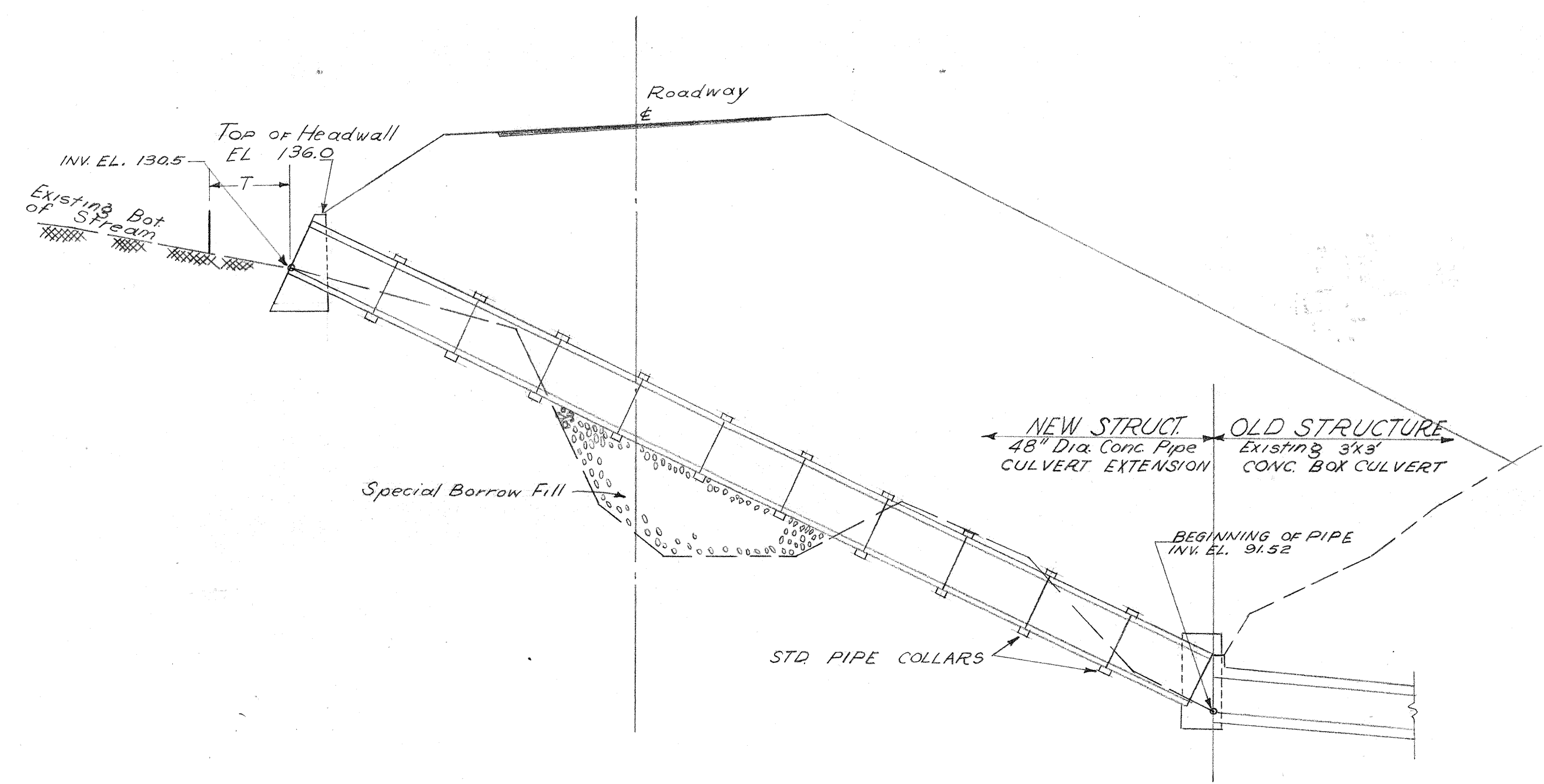
SECTION 'K-K'

DETAILS OF DEBRIS RACK
SCALE: 3/8" = 1'-0"

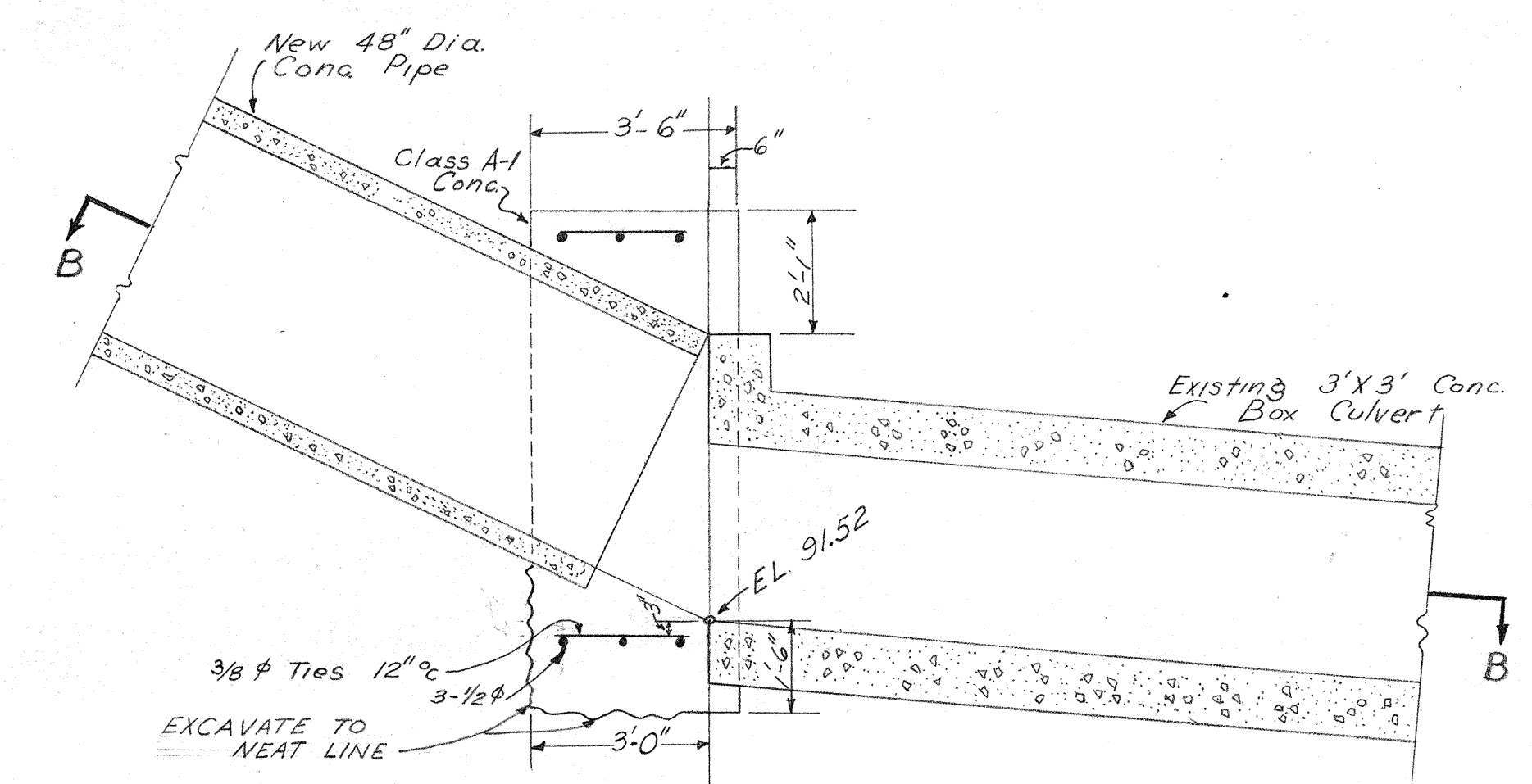
Note: Used rails must be in good condition and must be approved by the Engineer.

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
48" CONC. PIPE CULVERT
STA. 31 + 10.5
HAWAII BELT ROAD SDR 3(4)
JANUARY 1949
SHEET No. / OF / SHEETS

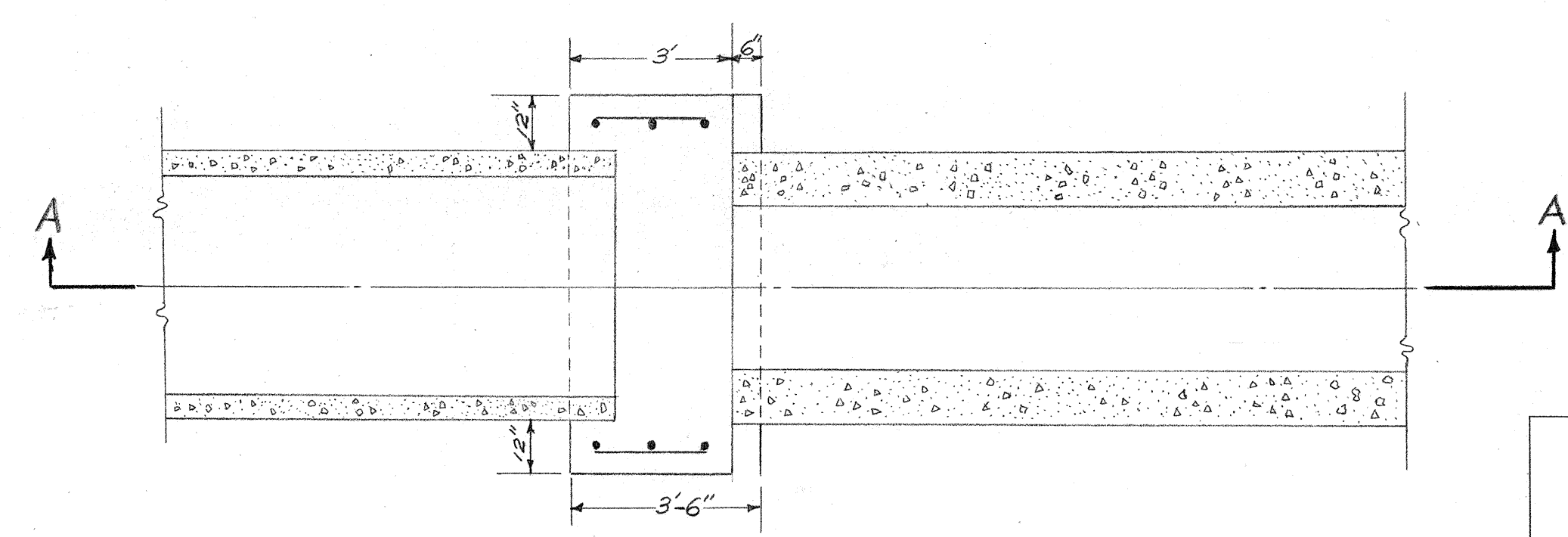
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	SDR 3(4)	1949	13	41



CROSS SECTION ALONG E of CULVERT
SCALE: 1" = 10'-0"



SECTION "A-A"



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

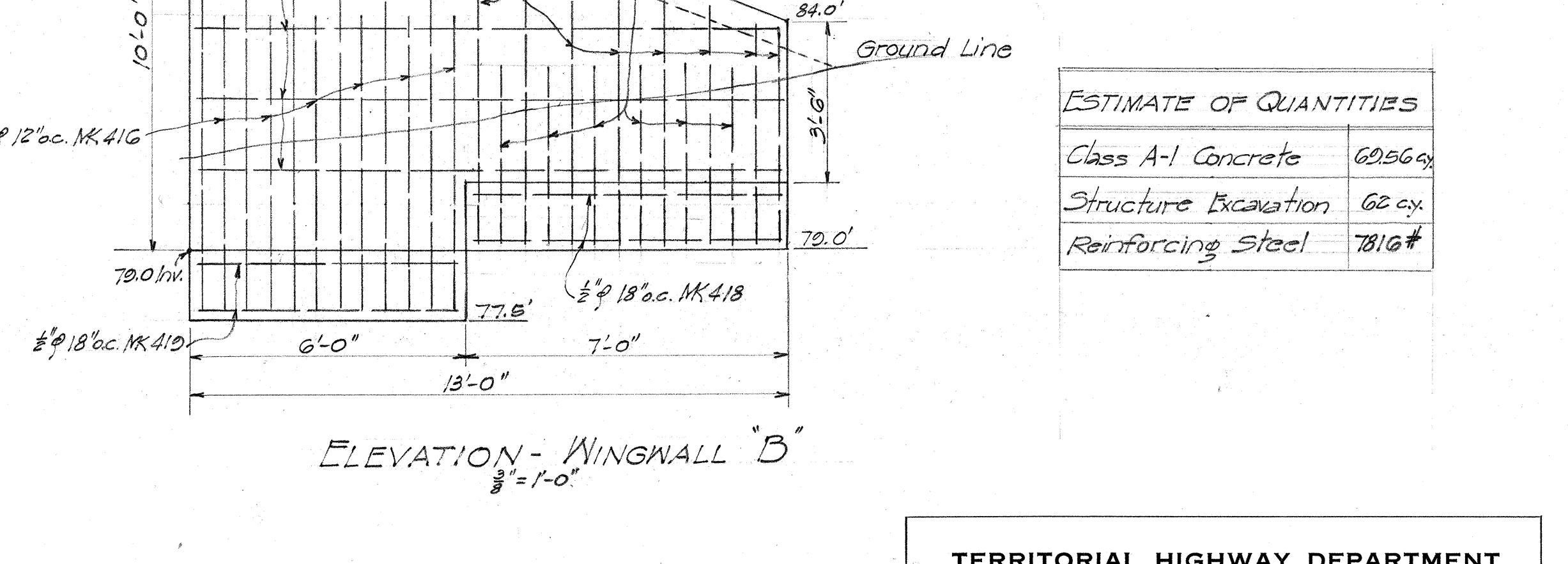
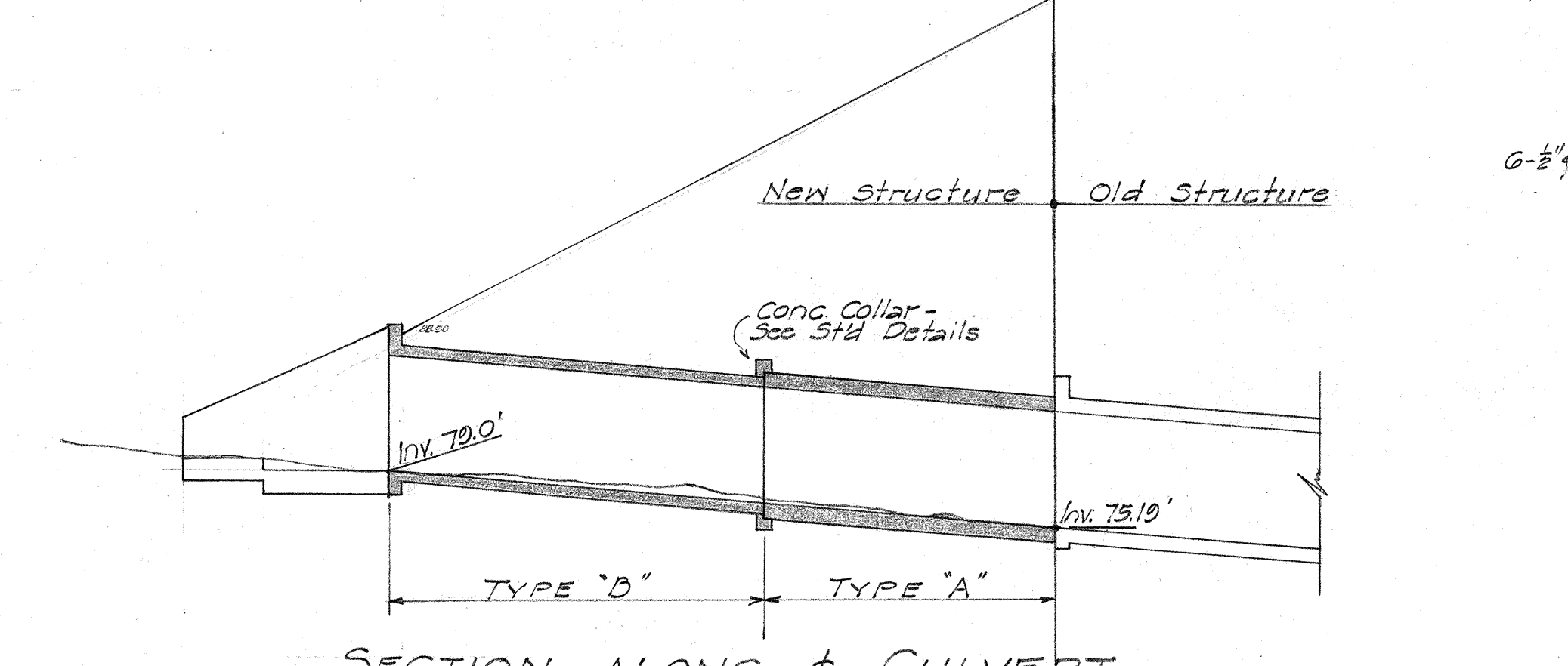
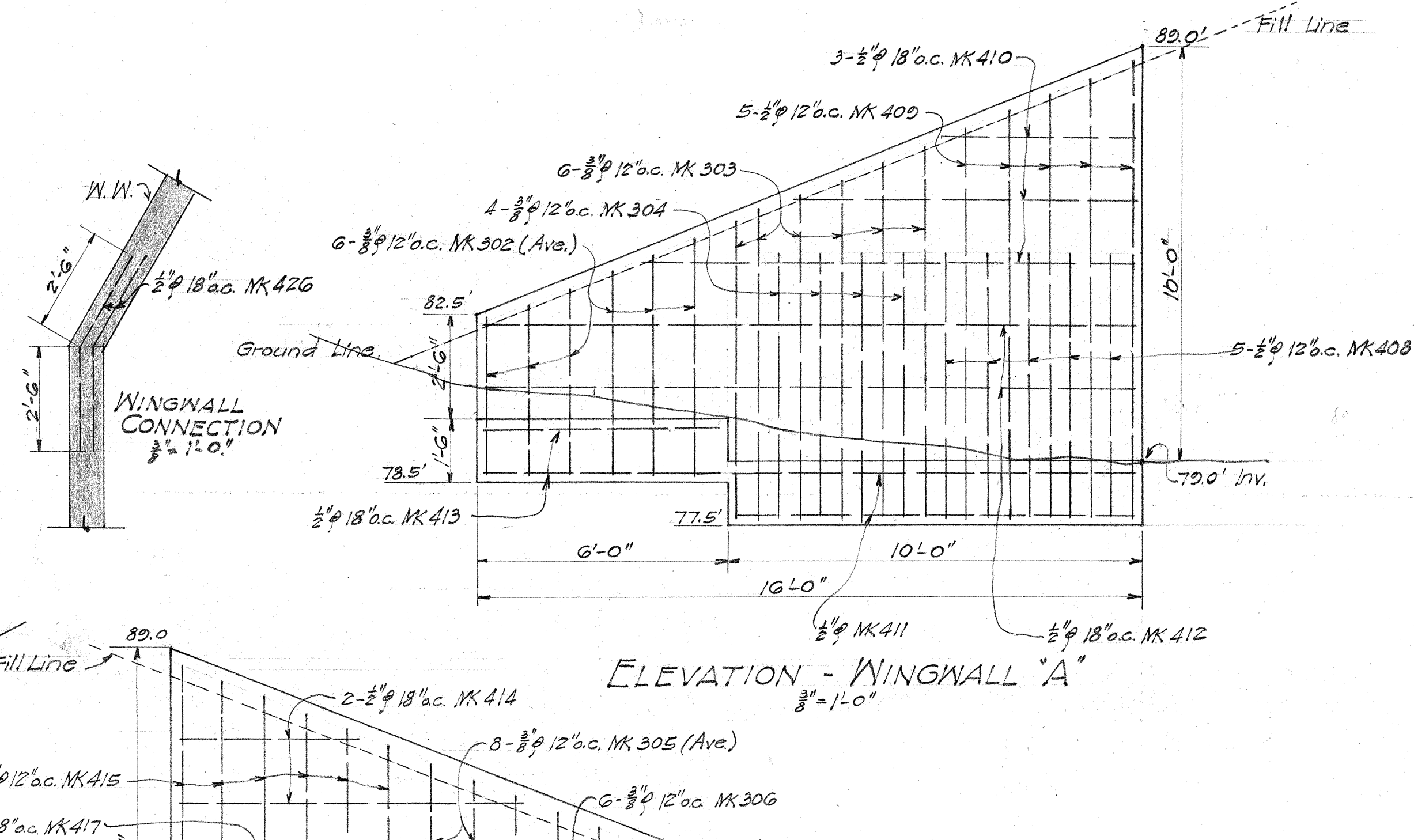
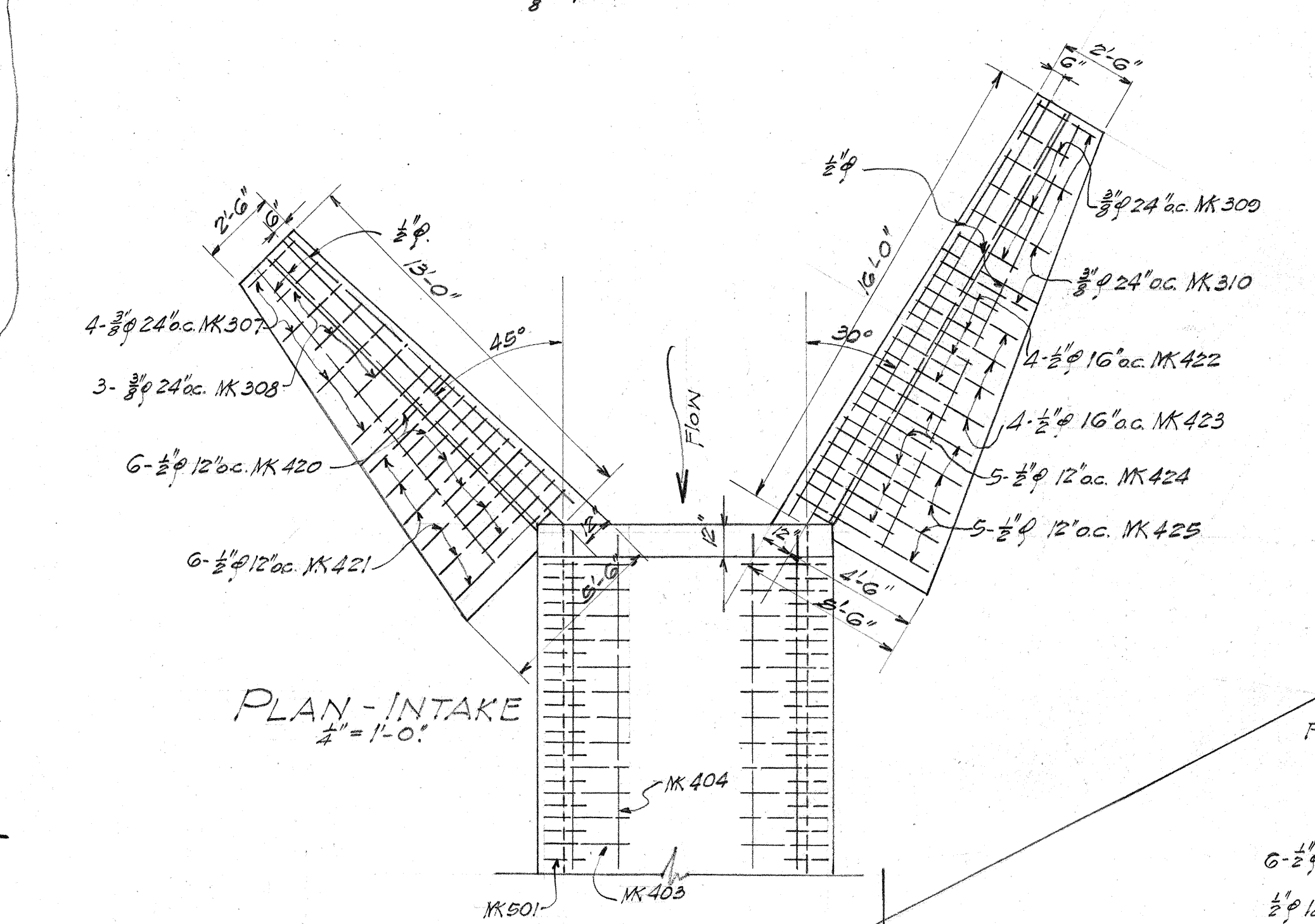
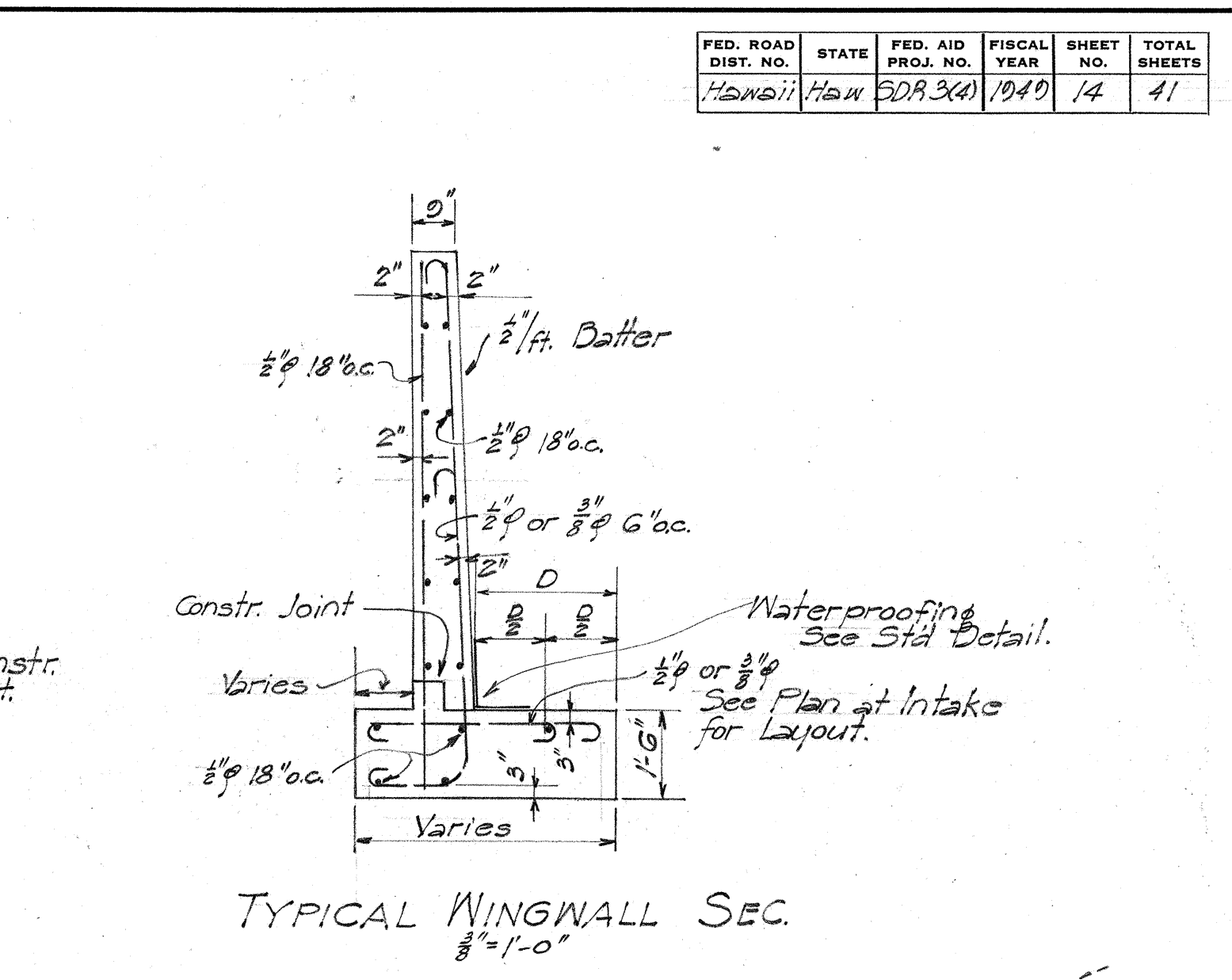
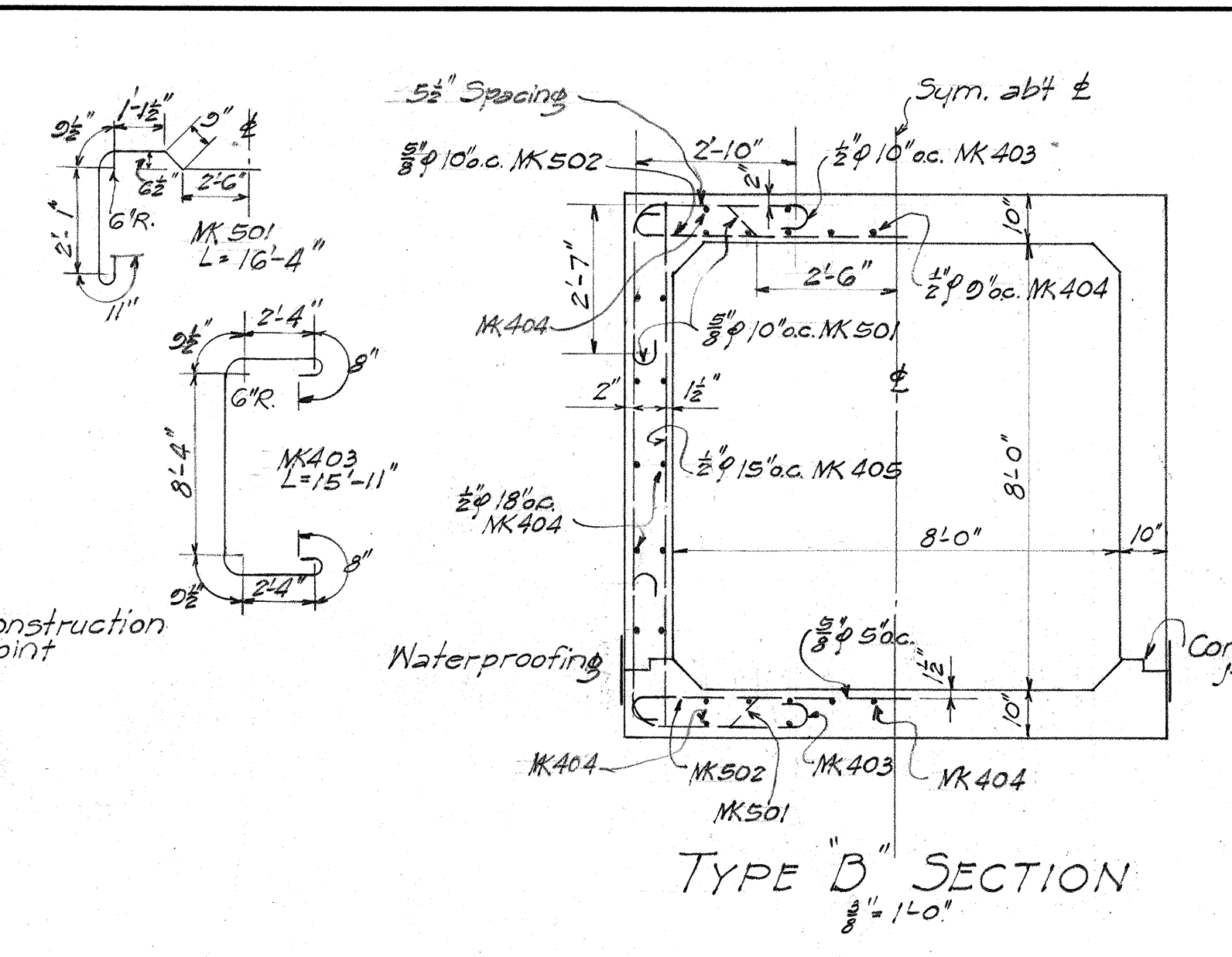
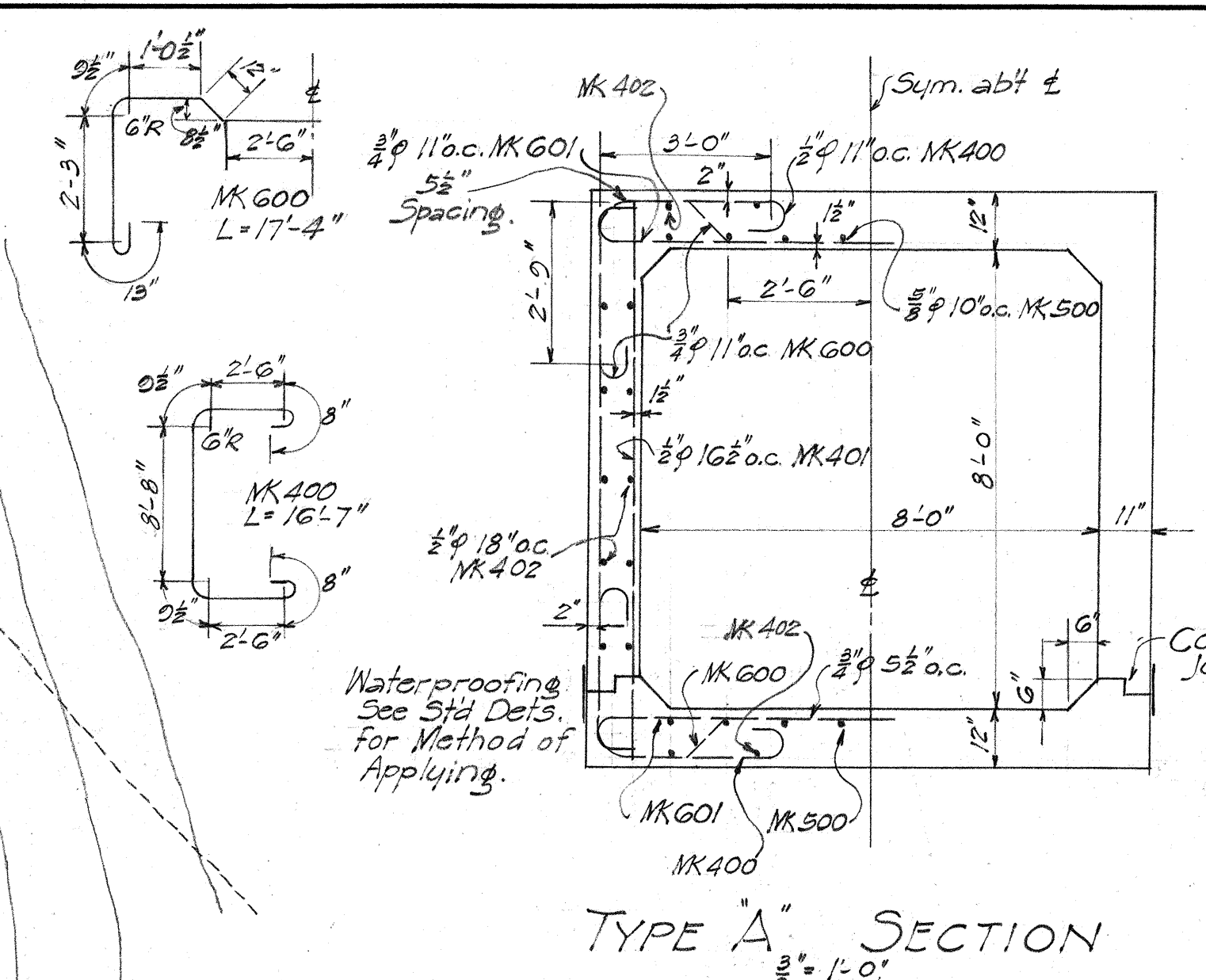
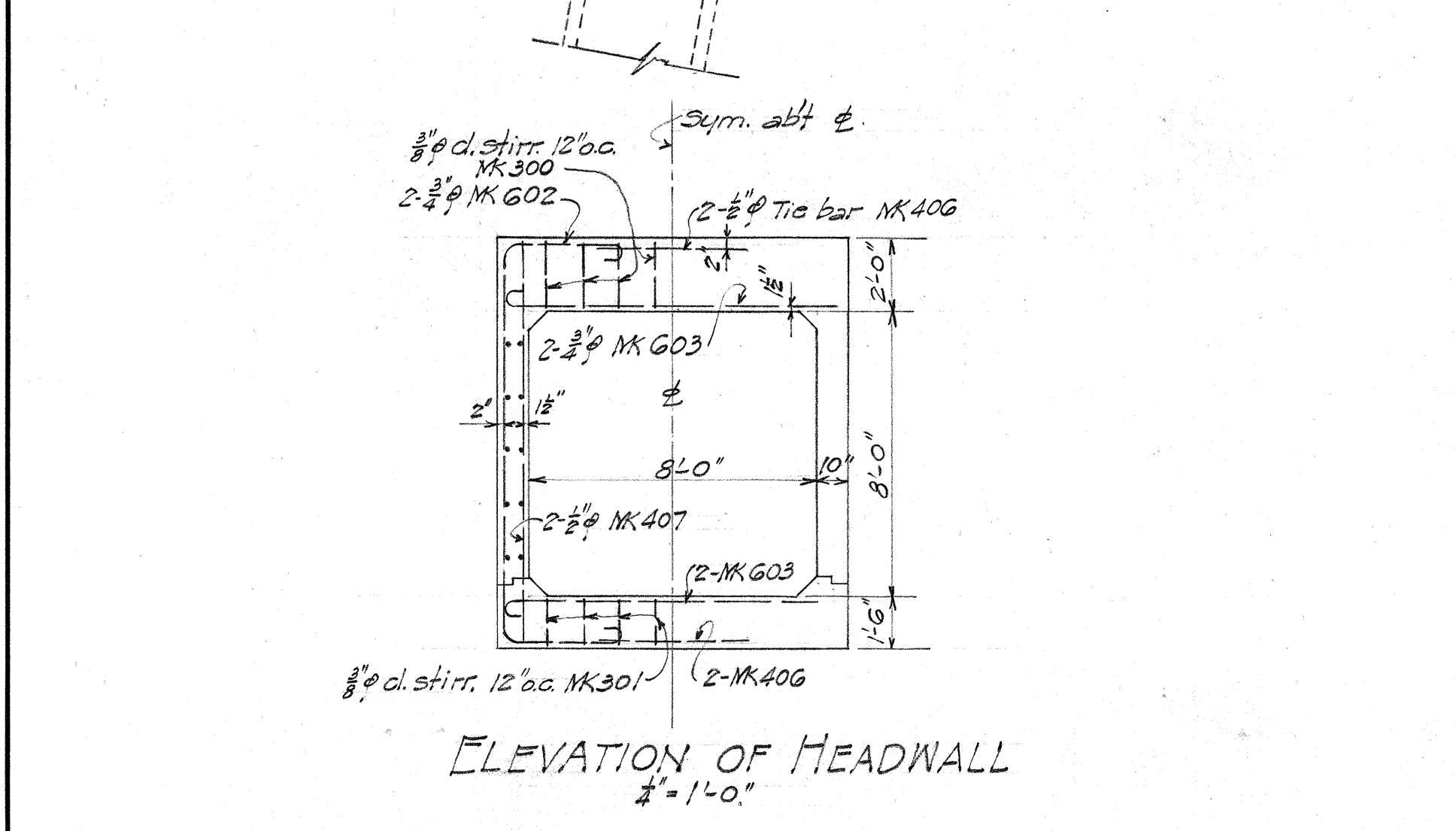
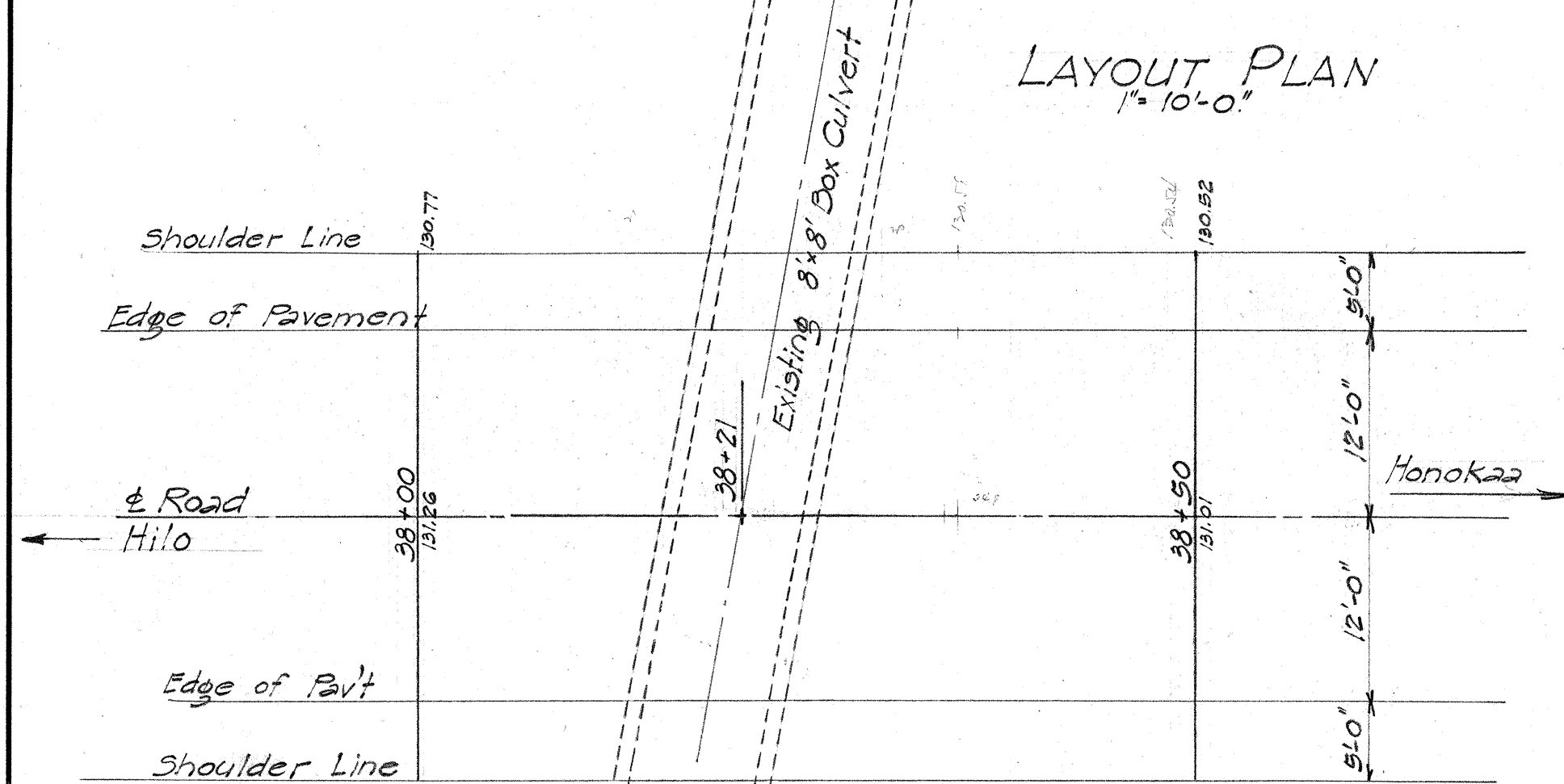
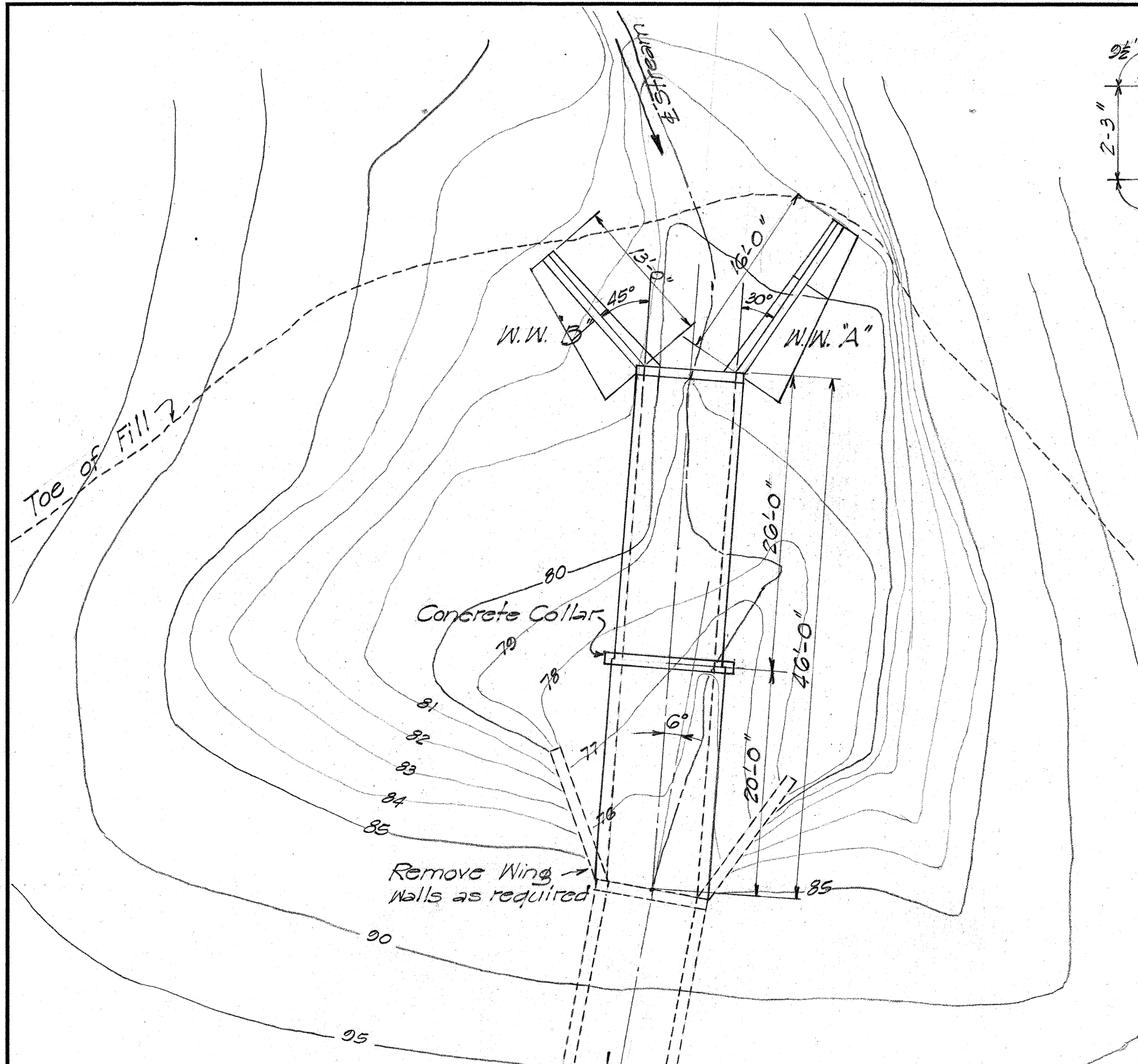
NOTE: This sheet supercedes Sheet No. 5374.13. Change accomplished by WORK ORDER No. 5

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
48" CONC. PIPE CULVERT
REVISED DETAILS
STA 91+10.5
HAWAII BELT RD. SDR 3(4)
AUGUST 15, 1949

SHEET No OF SHEETS

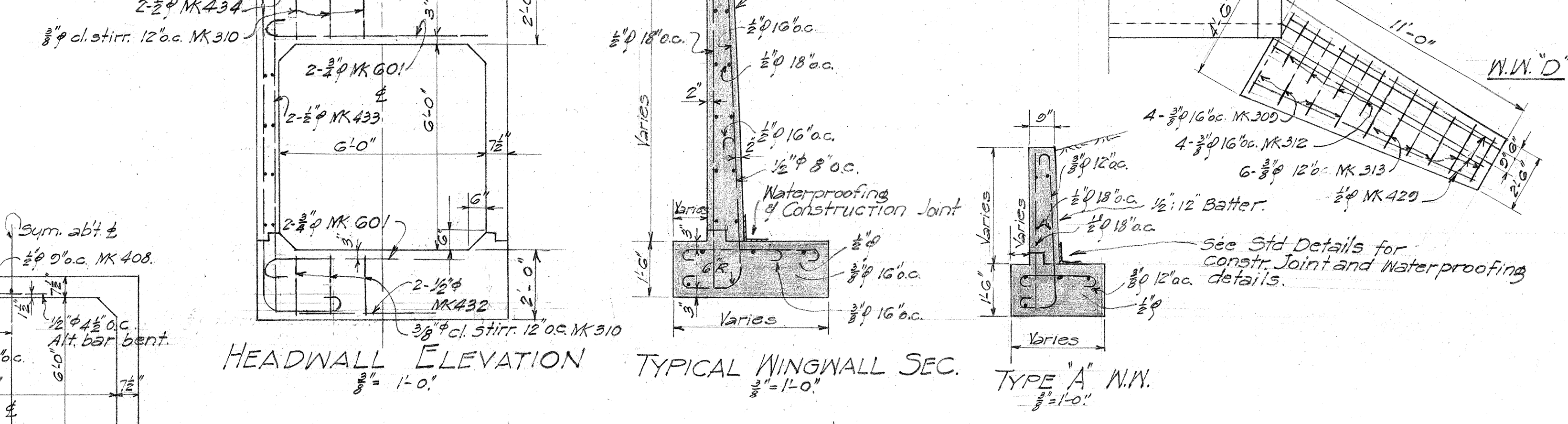
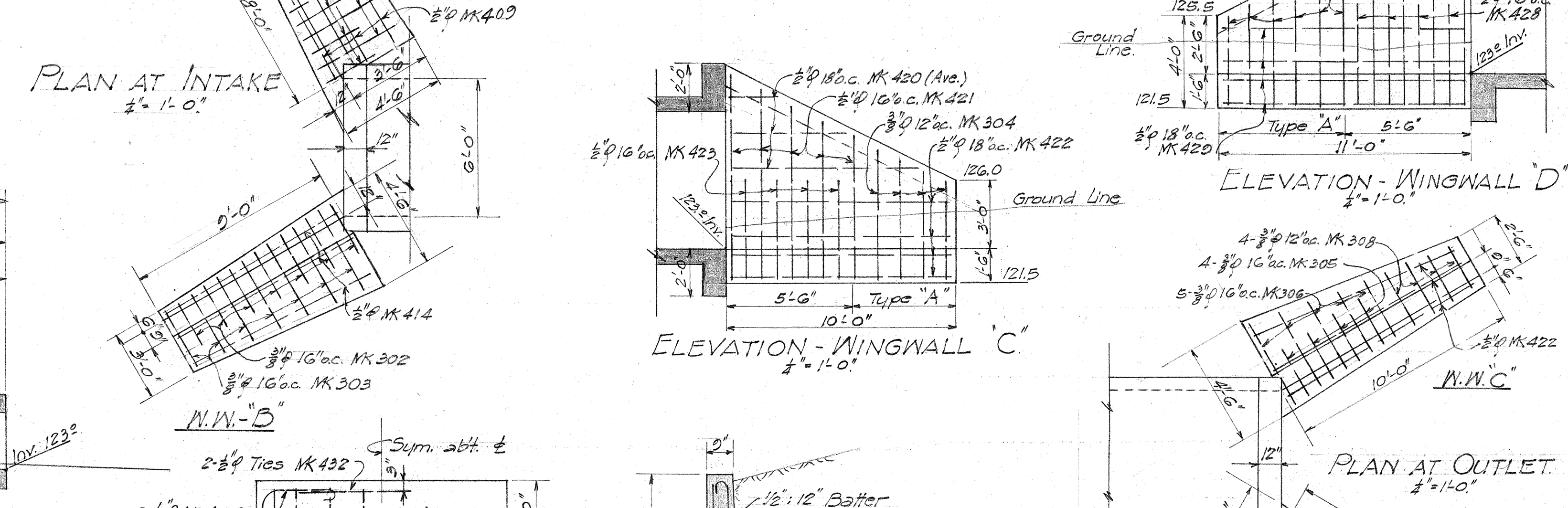
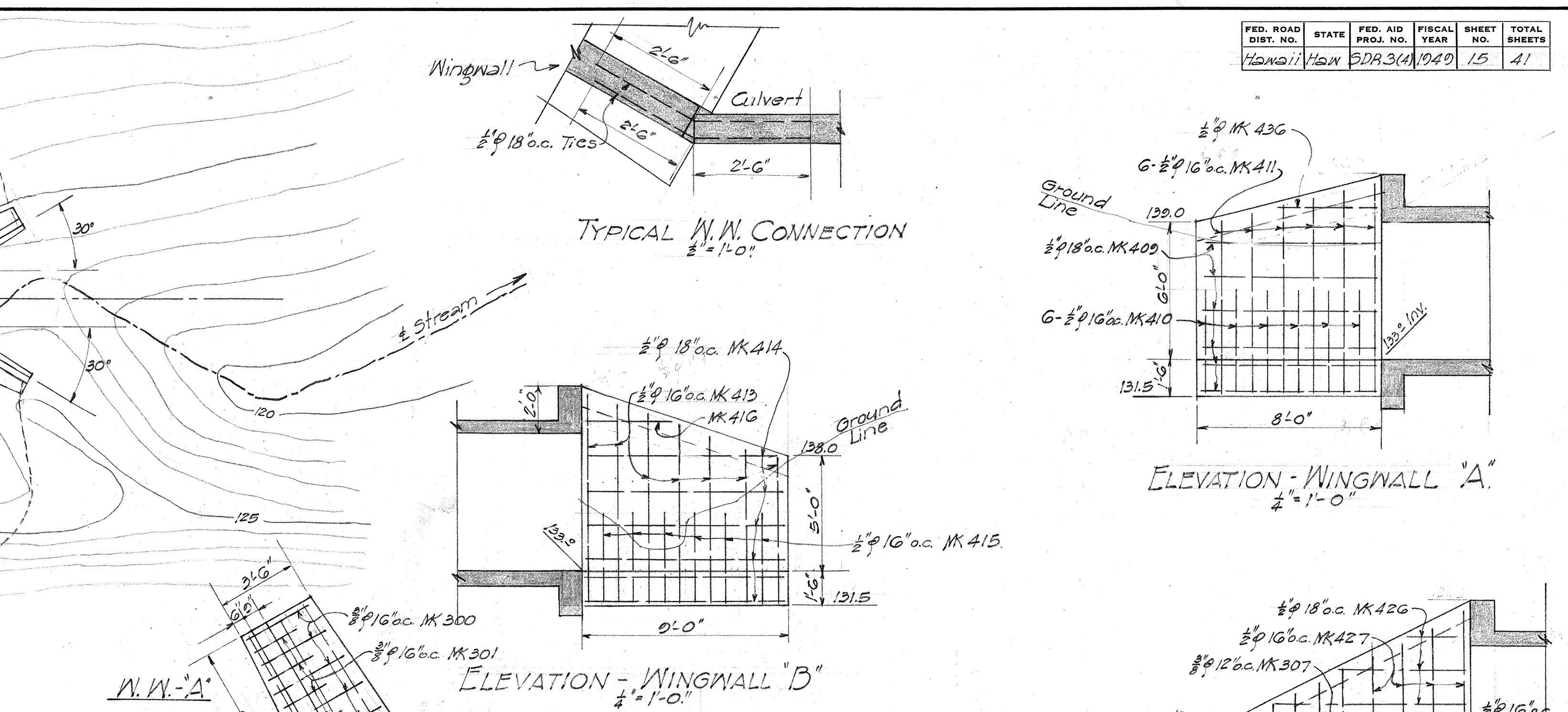
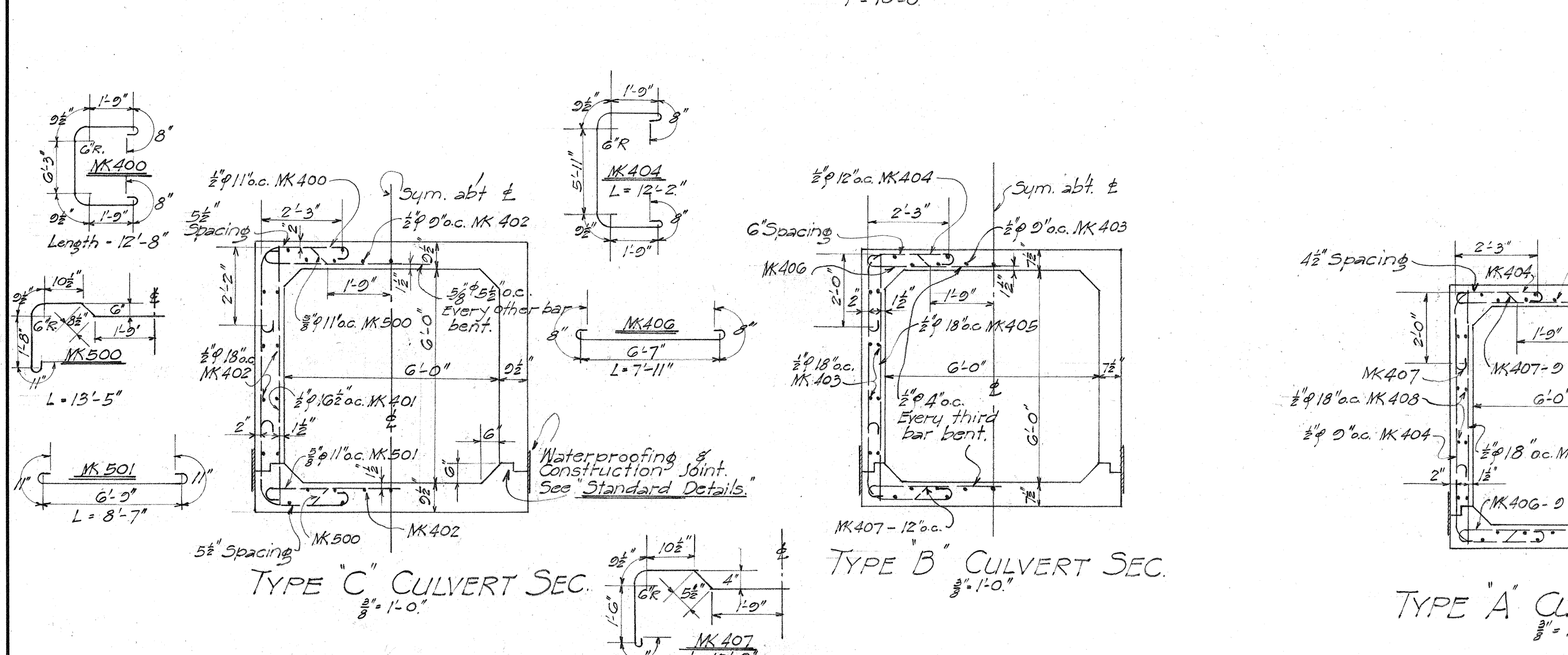
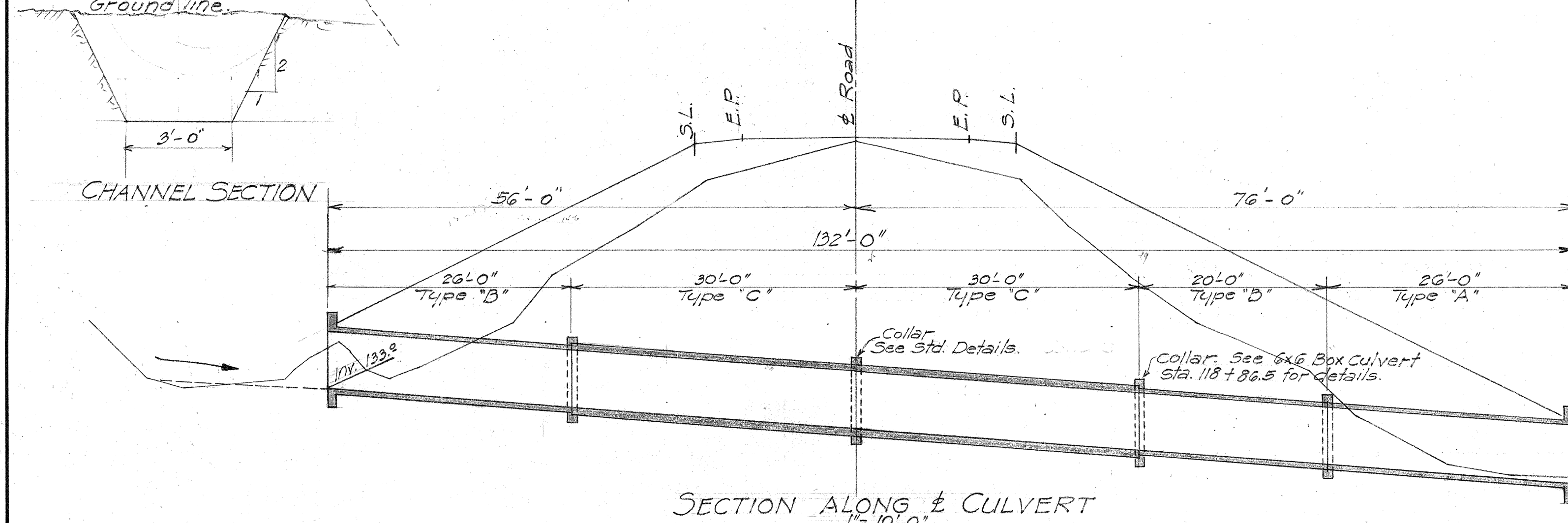
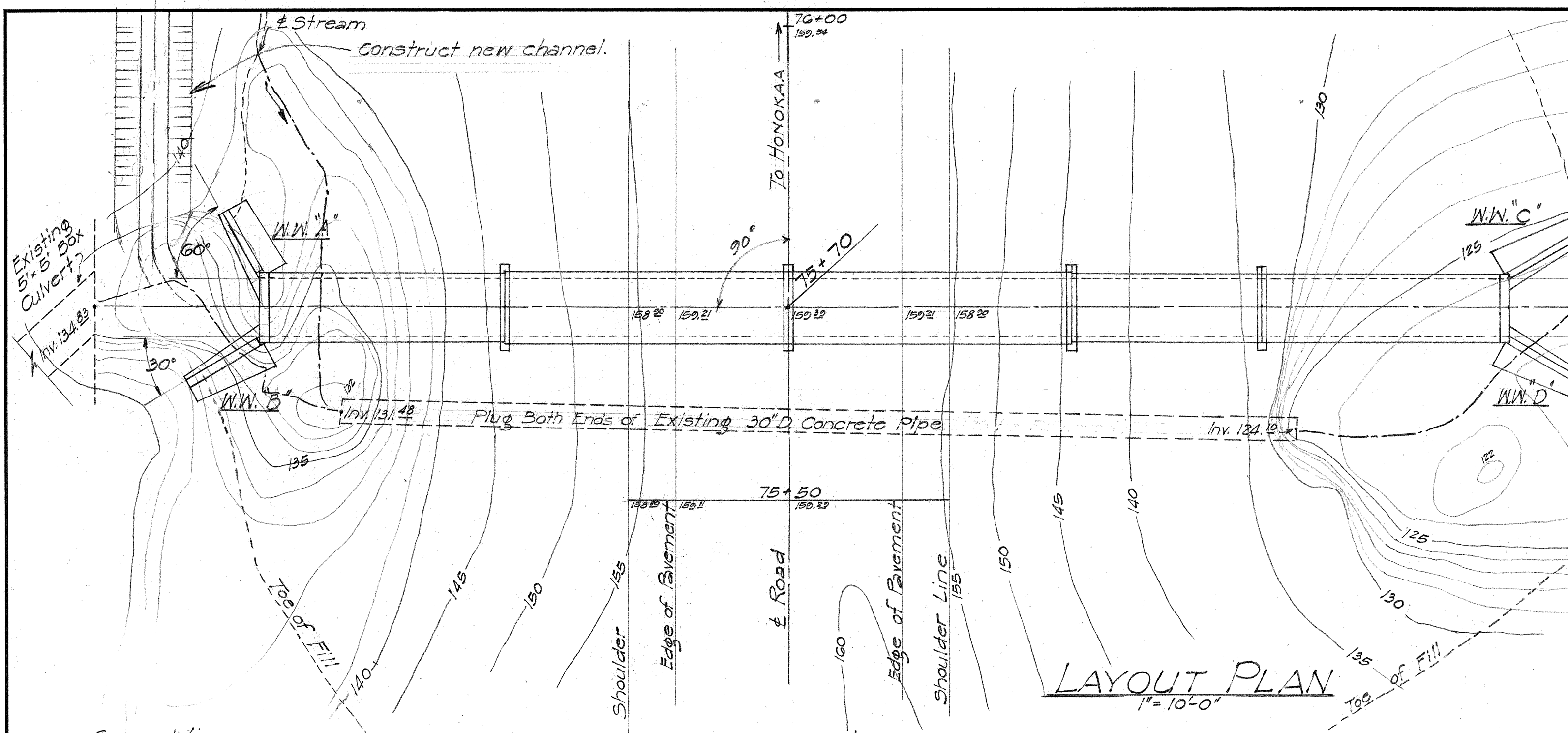
5374.13 A

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
QUANTITIES CHECKED BY	
CHECKED BY	
No.	



ESTIMATE OF QUANTITIES	
Class A-1 Concrete	62,566 cu.
Structure Excavation	62 cu.
Reinforcing Steel	7816 #

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
EXTENSION OF 8'x8' BOX CULVERT
Sta. 38+21
Hawaii Belt Road. SDR 3(4)
December 1948



ESTIMATE OF QUANTITIES	
Class A-1 Concrete	113.90 cu. yd.
Structure Excavation	7.72 cu. yd.
Reinforcing Steel	13,857 lbs.
Channel Excavation	50.00 cu. yd.

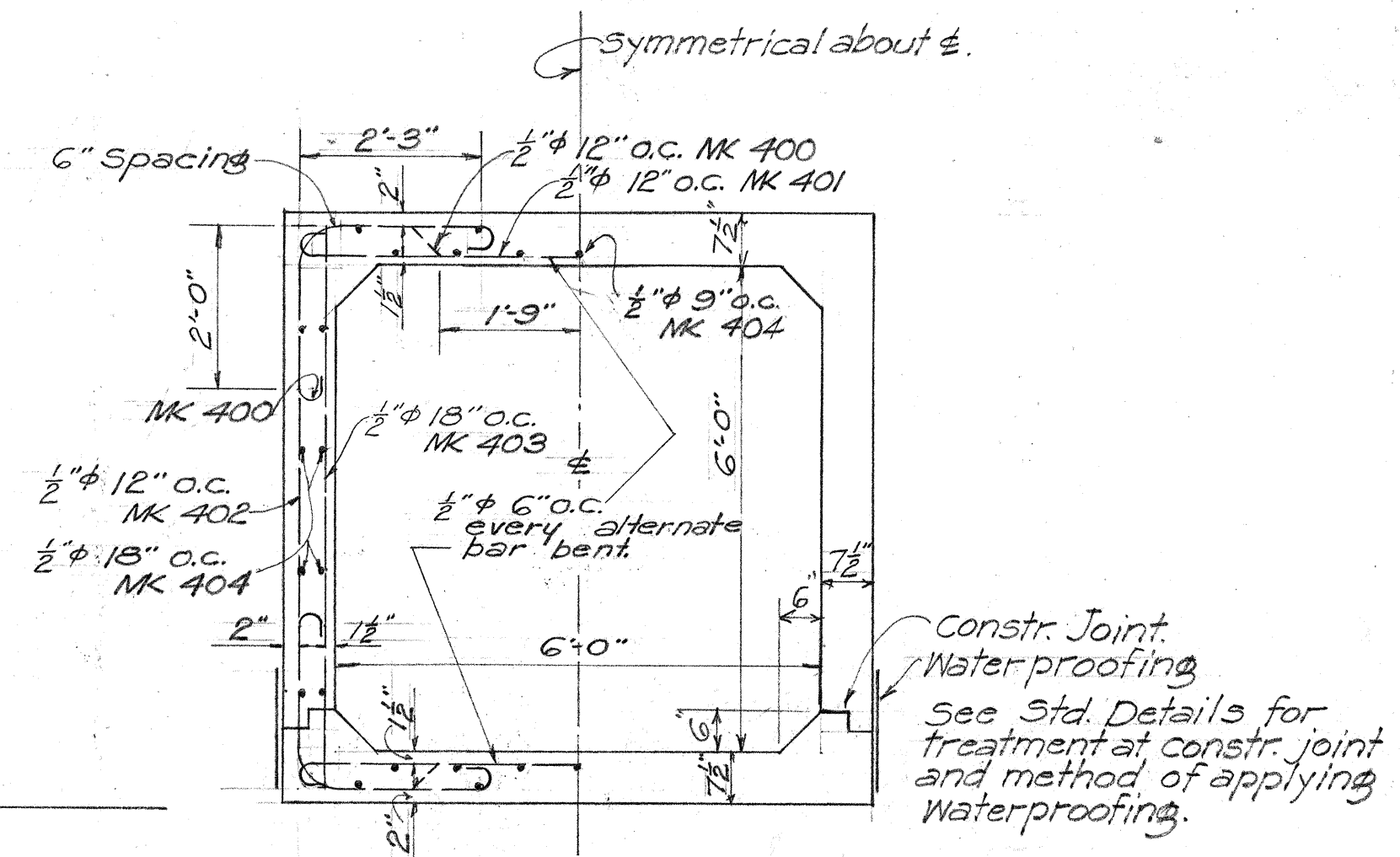
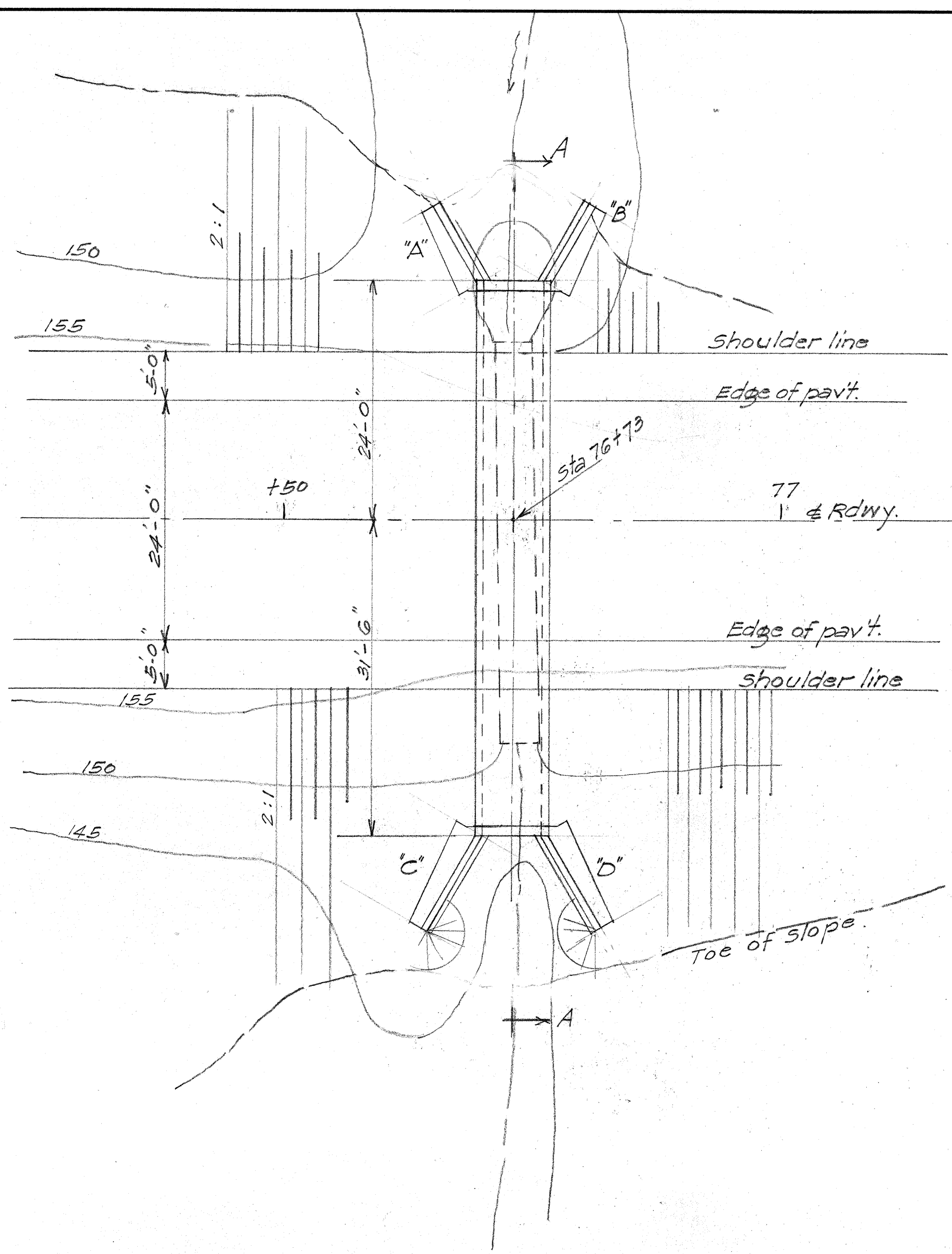
TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

6'x6' BOX CULVERT
Sta. 75+70

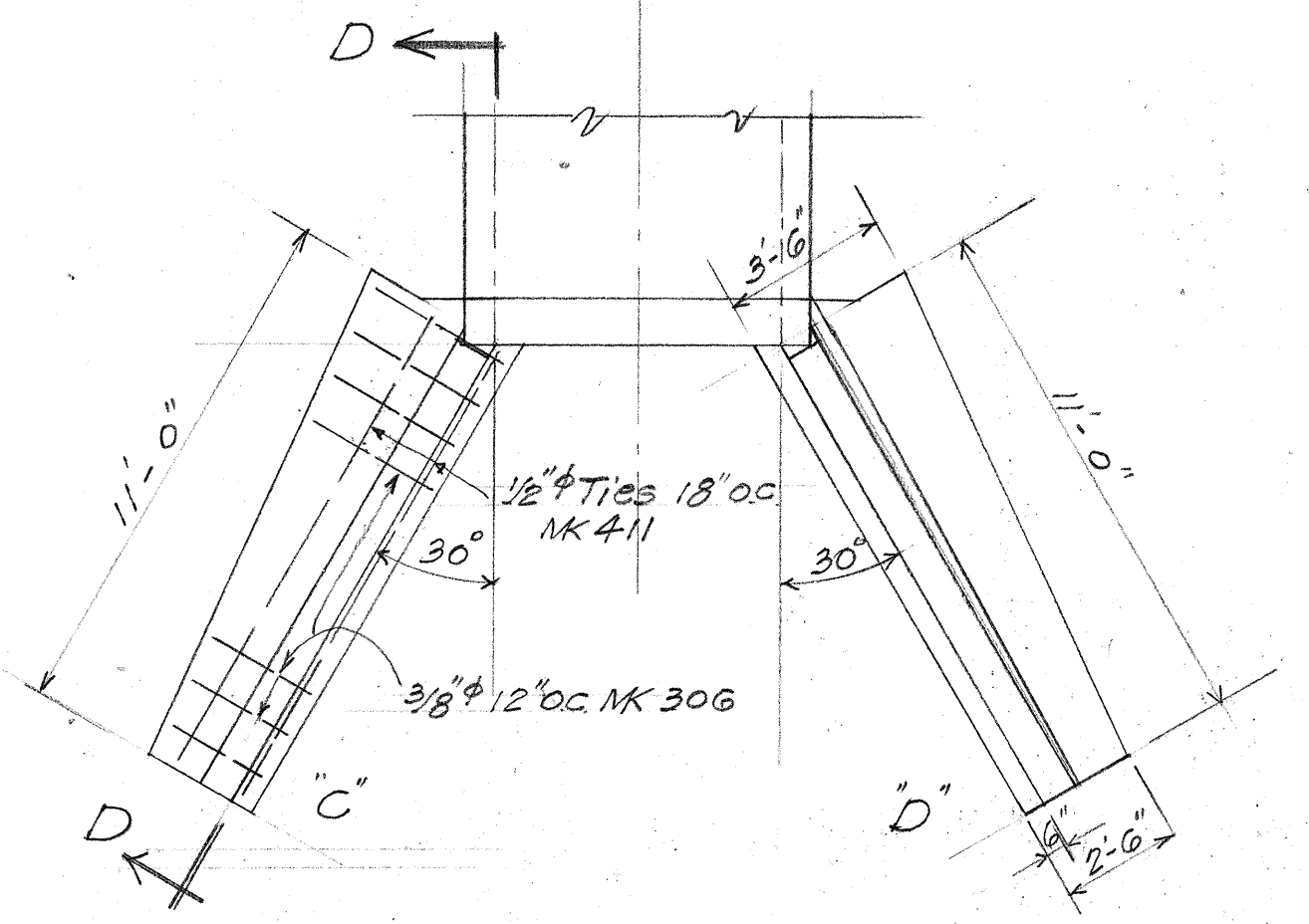
Hawaii Belt Road
Jan. 1940

SDR 3(4)

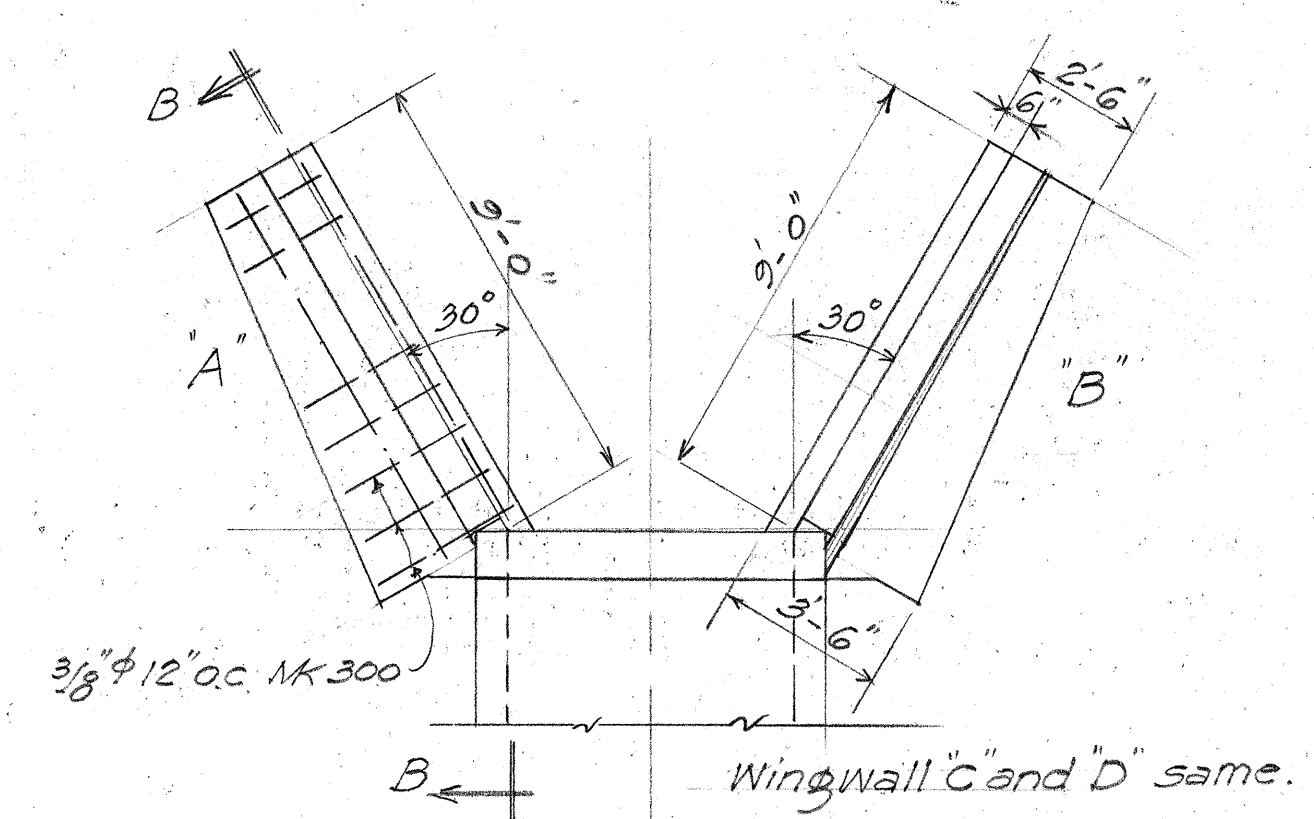
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw	SDR 3(4)	1949	15A	41



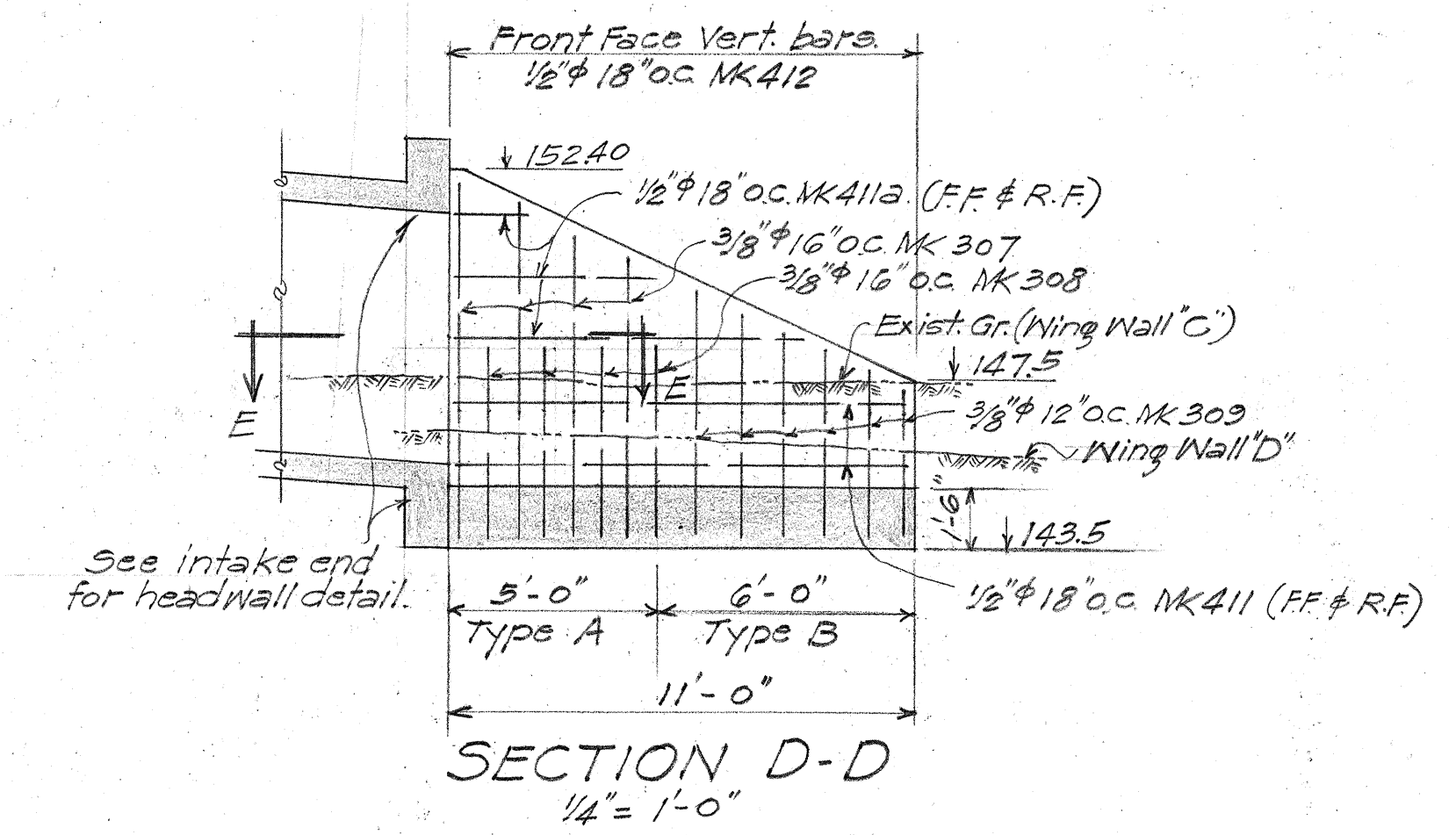
NORMAL SECTION
1/2" = 1'-0"



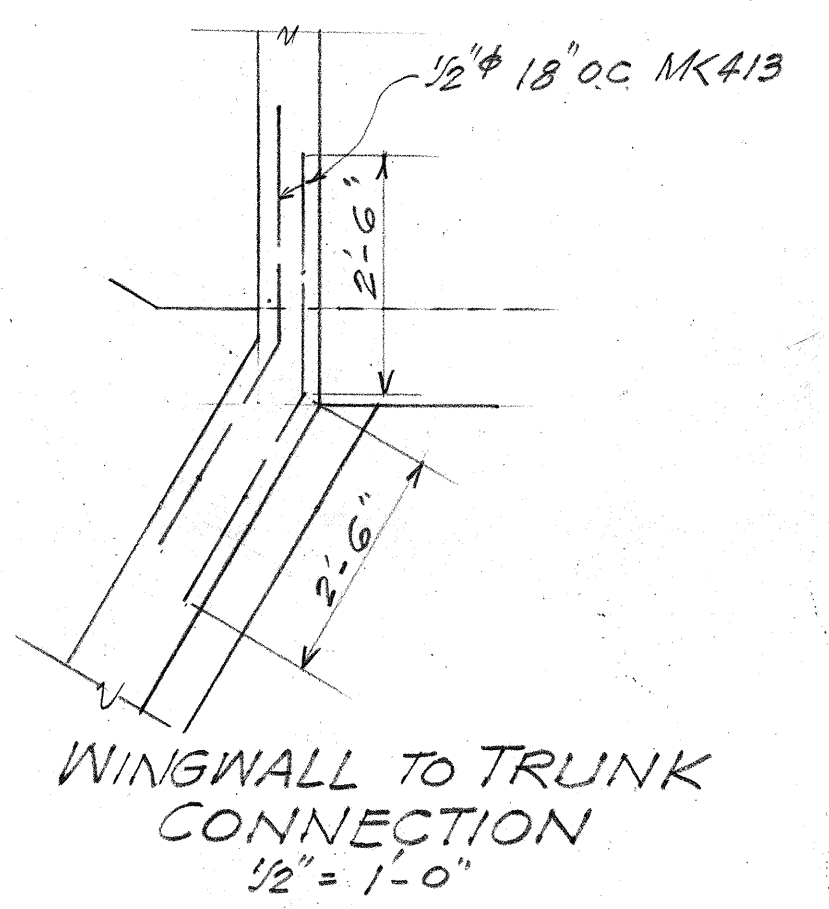
PLAN AT OUTLET
1/4" = 1'-0" Note: Wingwall C and D same.



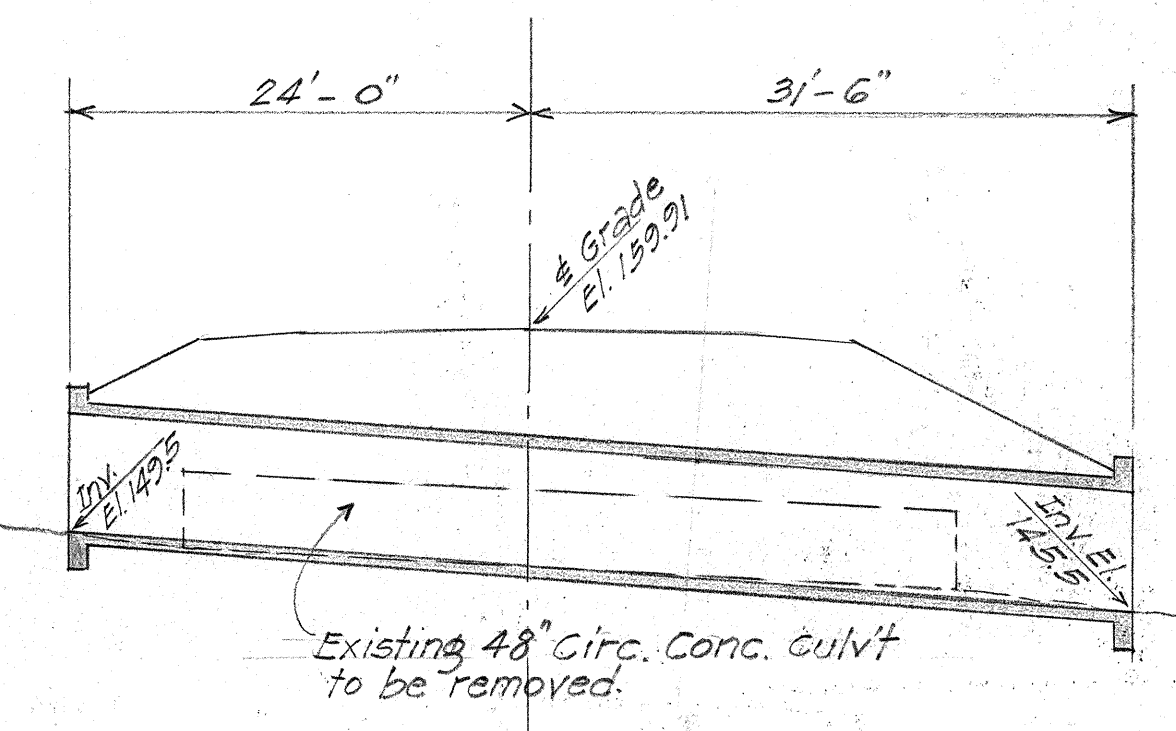
PLAN AT INTAKE
1/4" = 1'-0" Wingwall C and D same.



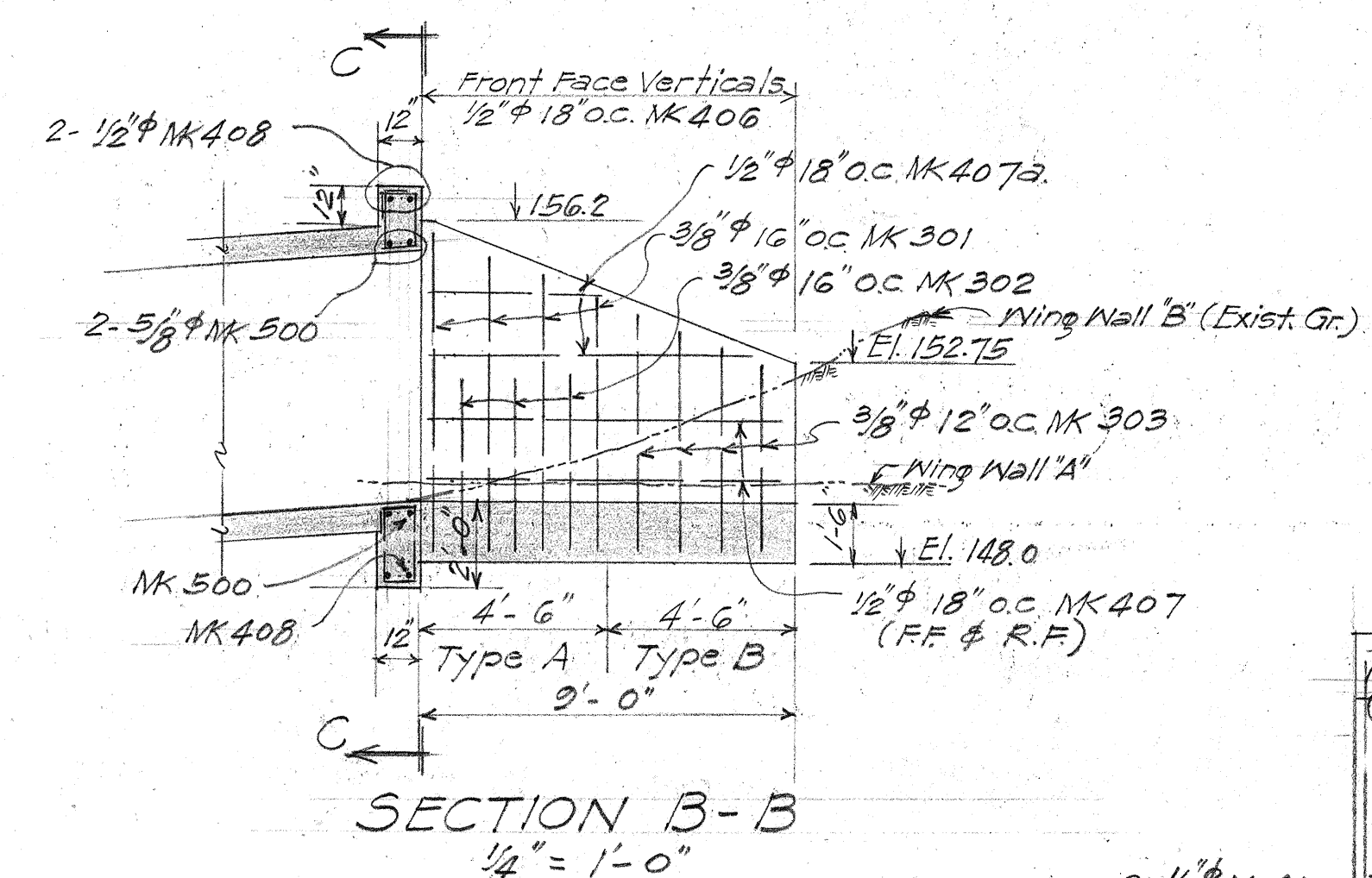
SECTION D-D
1/4" = 1'-0"



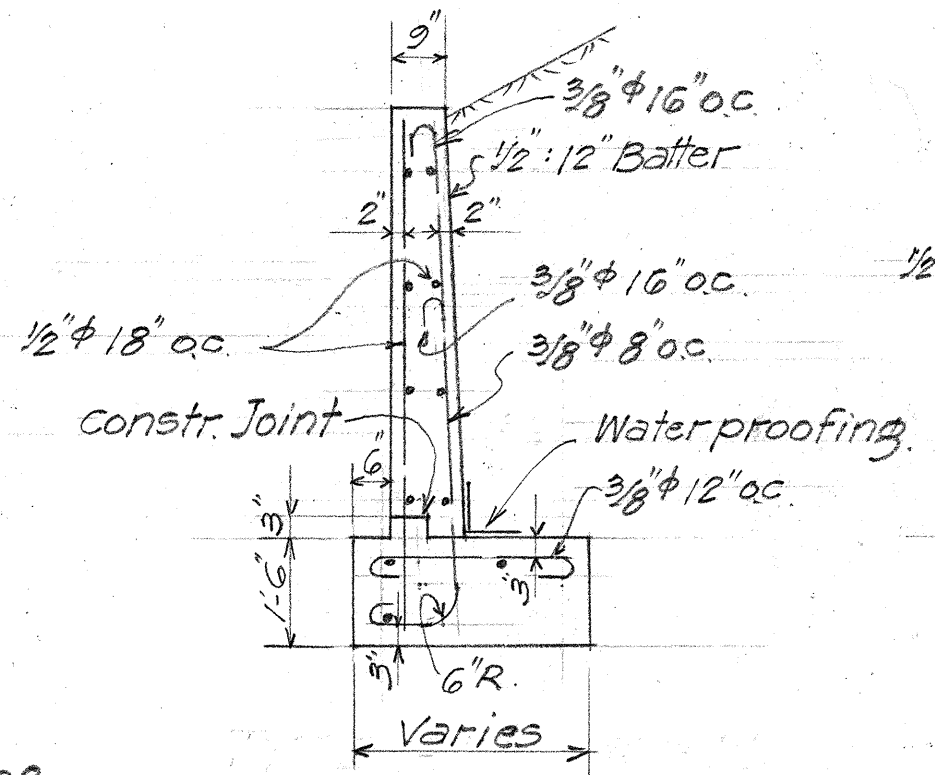
WINGWALL TO TRUNK CONNECTION
1/2" = 1'-0"



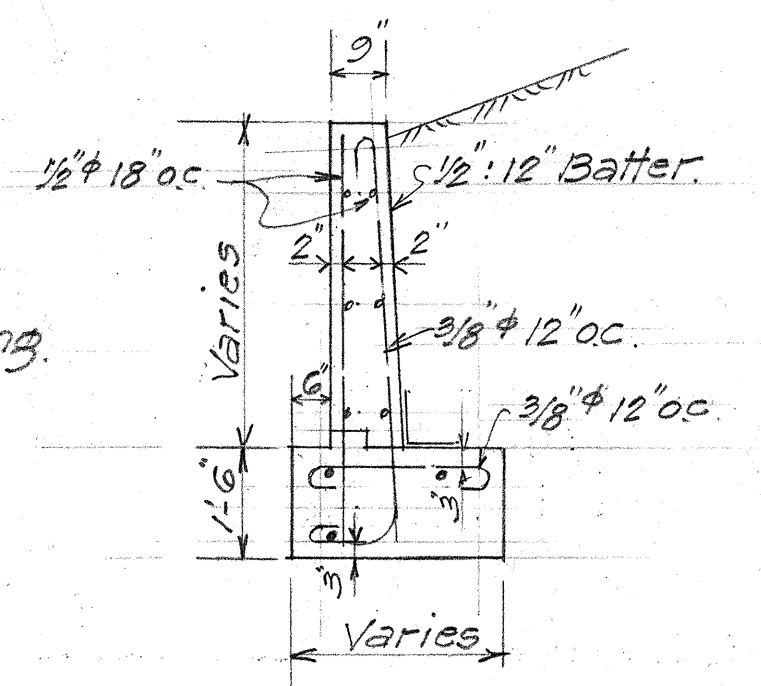
LONGITUDINAL SECTION A-A
1" = 10'-0"



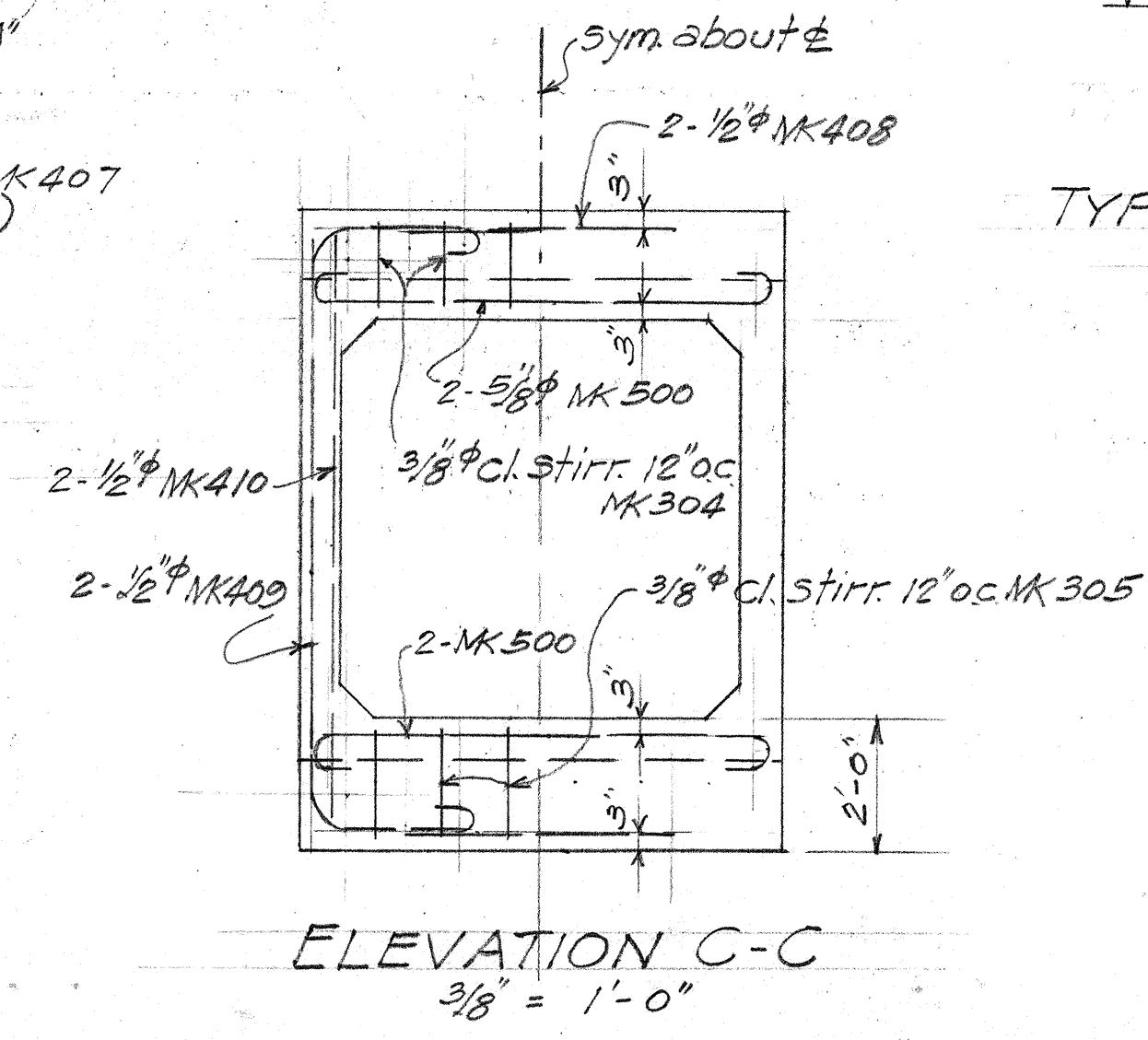
SECTION B-B
1/4" = 1'-0"



TYPE A WINGWALL
3/8" = 1'-0"



TYPE B WINGWALL
3/8" = 1'-0"



ELEVATION C-C
3/8" = 1'-0"

ESTIMATED QUANTS
Class "A-1" Conc. 47.86 CY.
Reinf. Steel 5,037 Lbs.
Struct. Exc. 69 CY.

Note: This sheet was added to plans June 13, 1949. Quantities has been included in the project agreement estimate but are not included in the contract to be covered by Work Order.

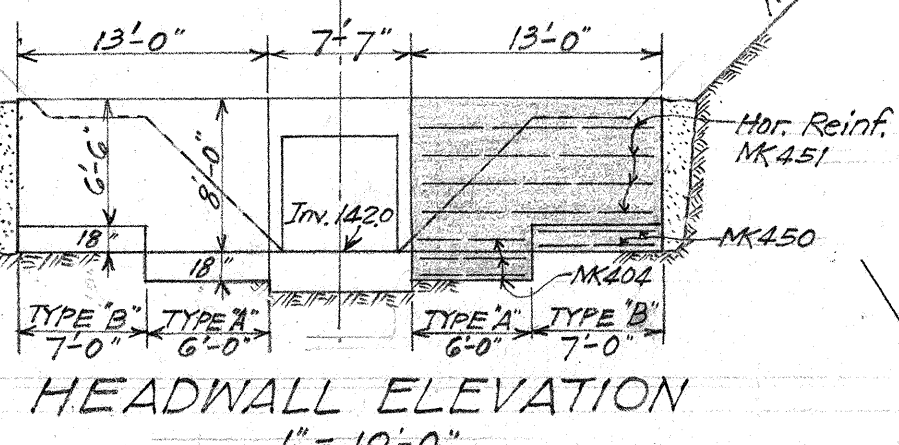
TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

6 x 6 BOX CULVERT
(FOR CANE FLUME)
STA. 76 + 73

HAWAII BELT RD. SDR 3(4)

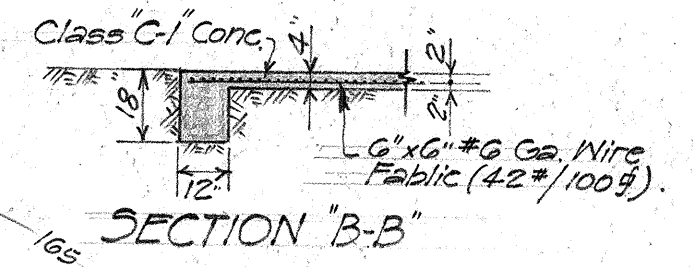
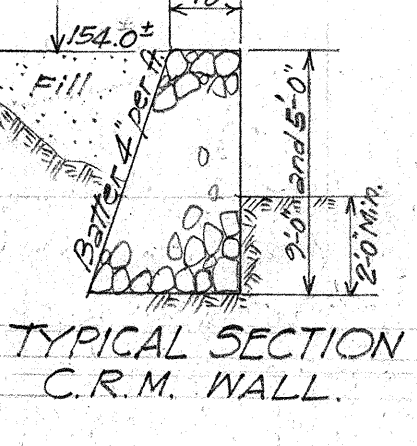
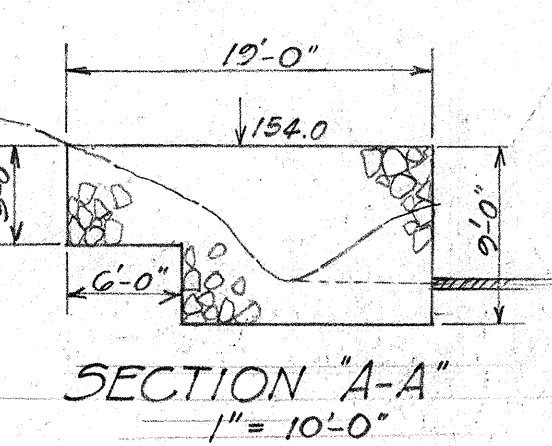
June 1949

SHEET No. 15 OF 41 SHEETS



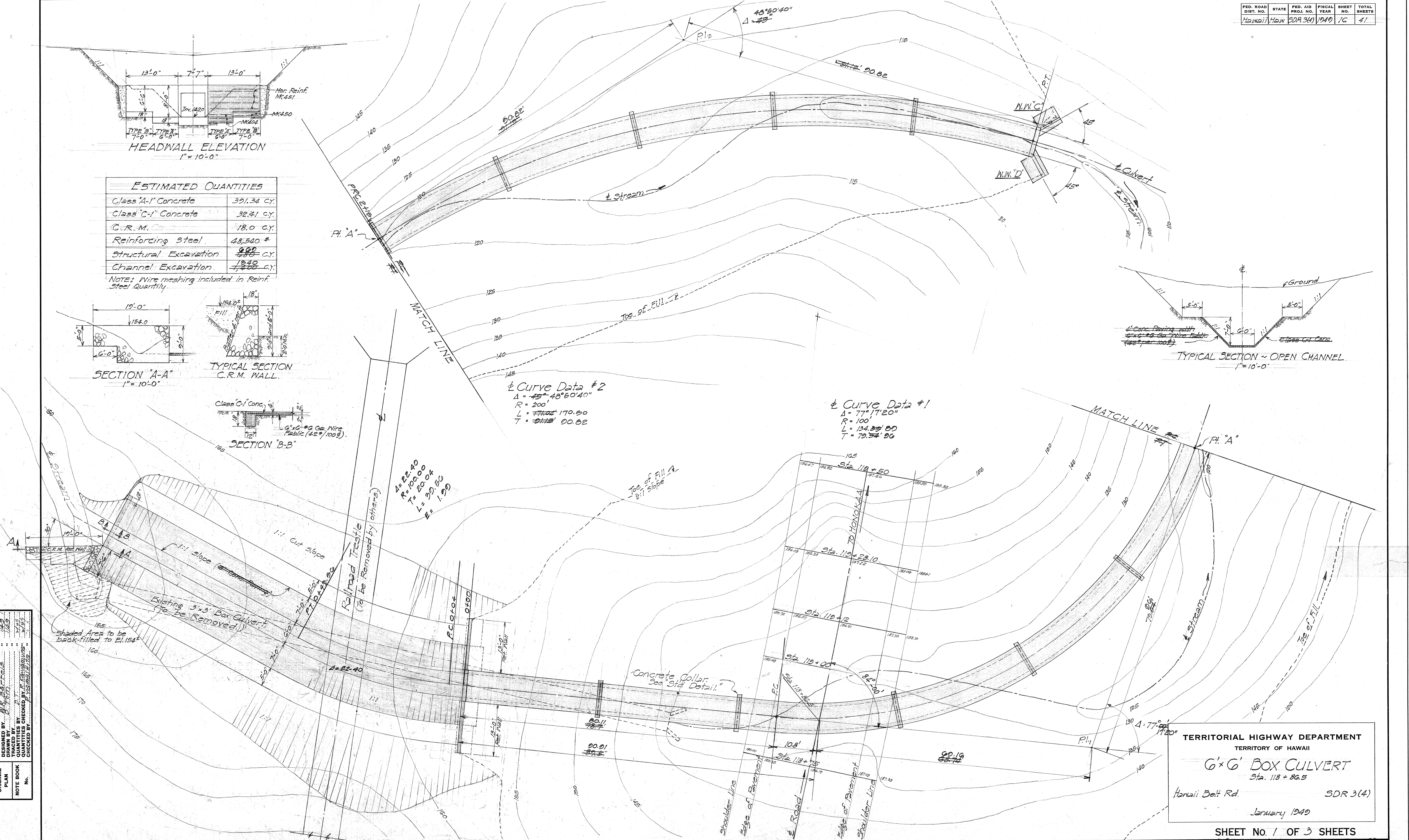
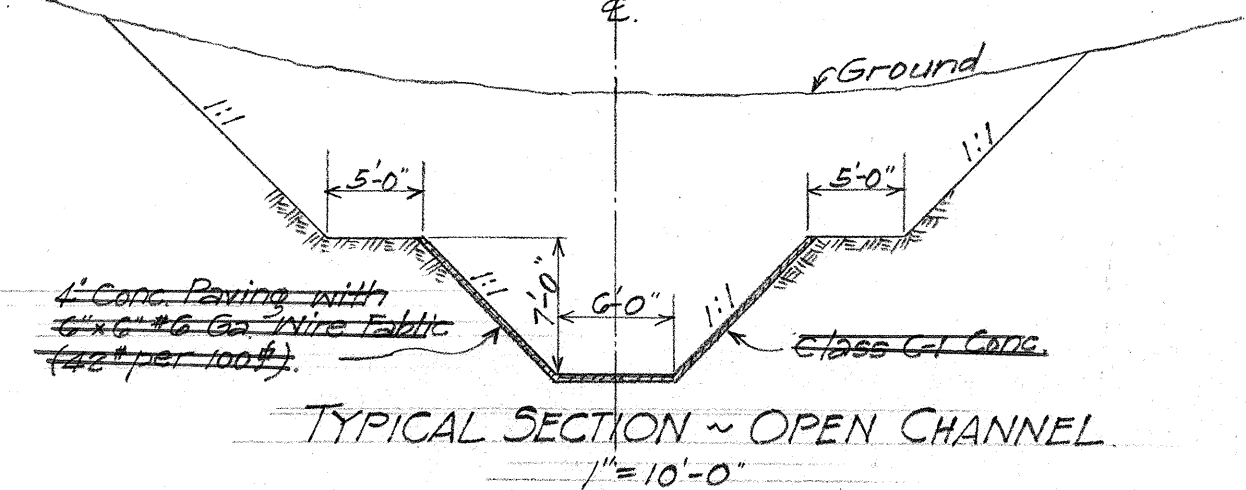
ESTIMATED QUANTITIES	
Class 'A-1' Concrete	391.34 CY.
Class 'C-1' Concrete	32.41 CY.
C.R.M. Concrete	18.0 CY.
Reinforcing Steel	48,540 #
Structural Excavation	980 CY.
Channel Excavation	1340 CY.

NOTE: Wire meshing included in Reinf. Steel Quantity.



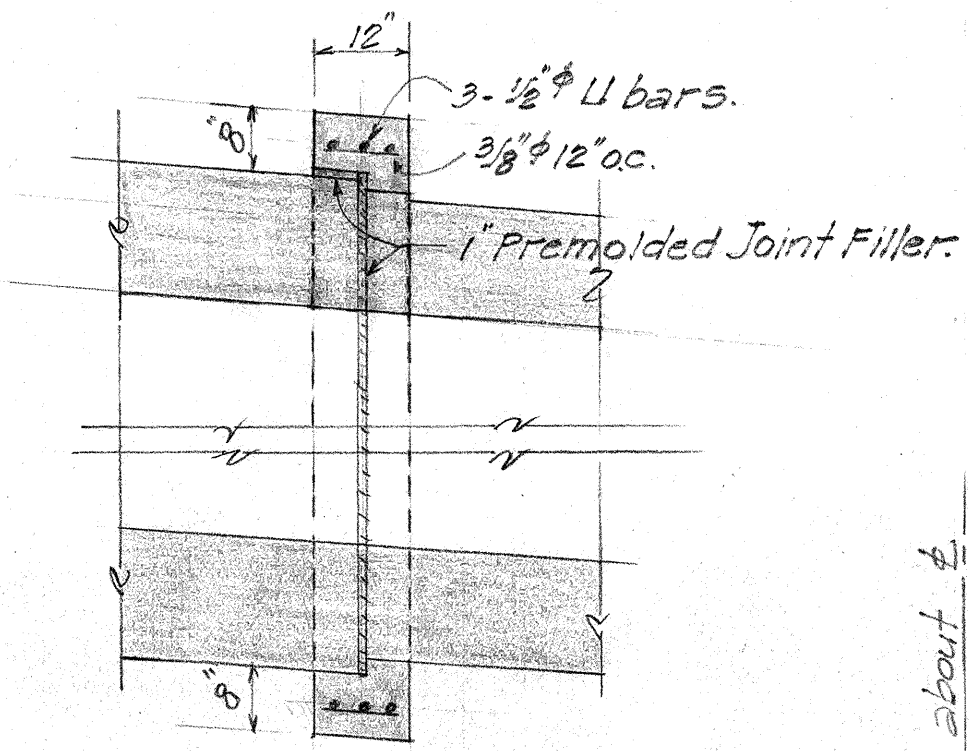
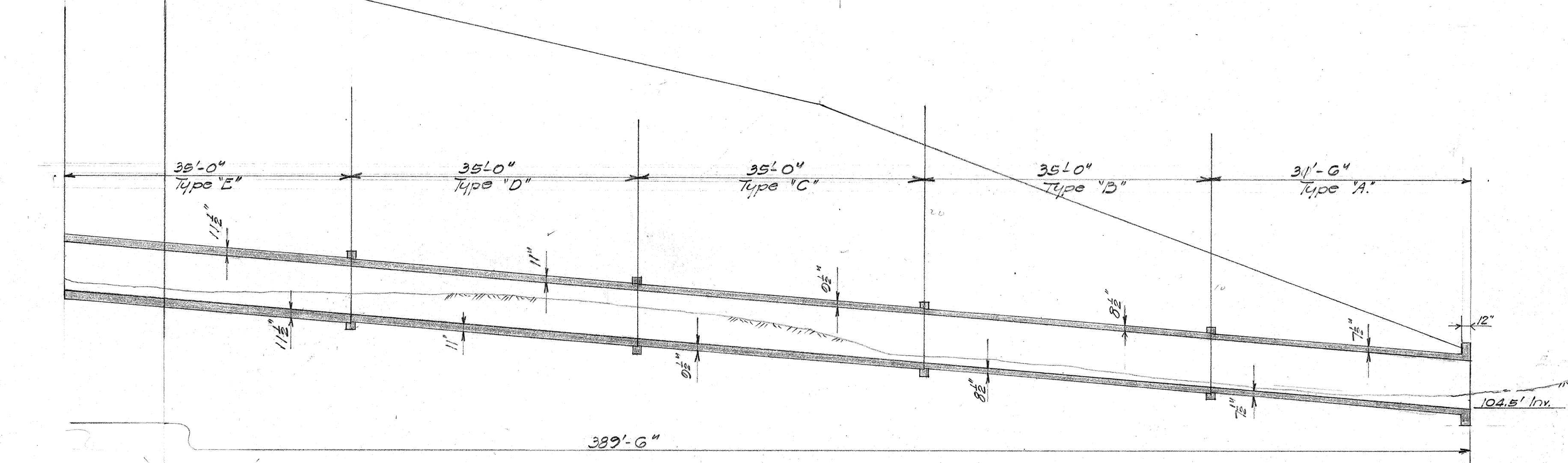
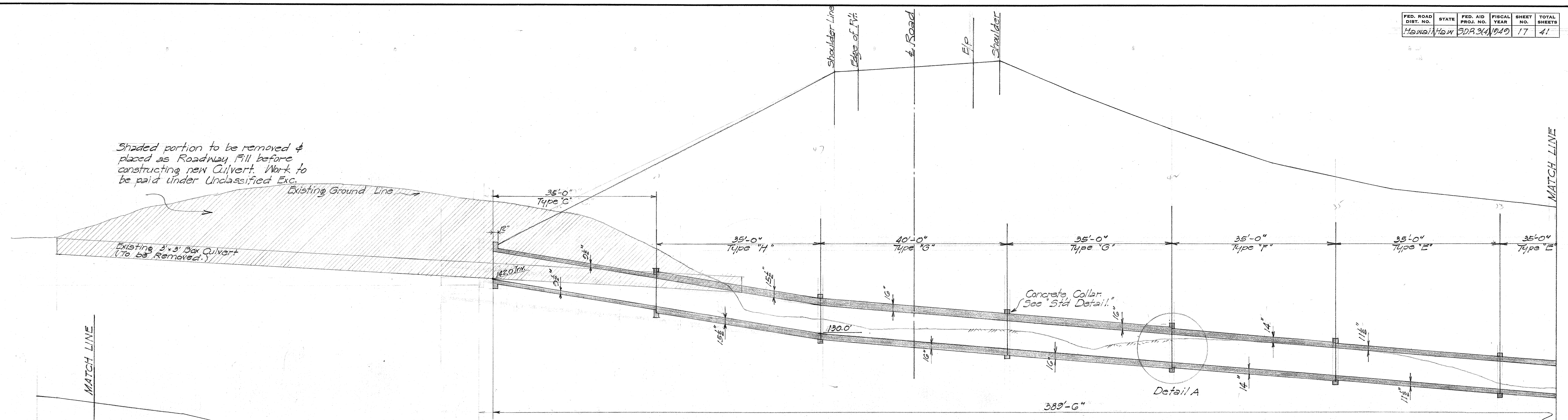
Curve Data #2
 $\Delta = 48^\circ 50' 40''$
 $R = 200'$
 $L = 171.00'$
 $T = 91.15'$
 $E = 1.99'$

Curve Data #1
 $\Delta = 77^\circ 17' 20''$
 $R = 100'$
 $L = 134.33'$
 $T = 79.54'$
 $E = 0.82'$

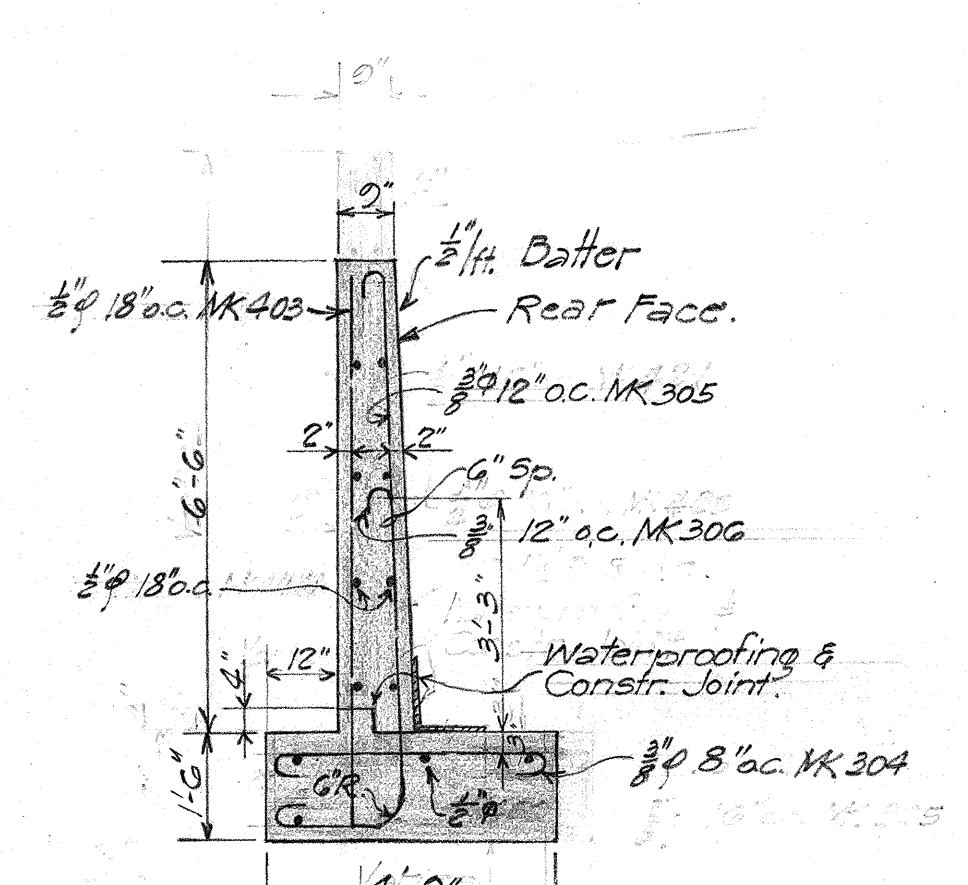


SURVEY PLOTTED BY: DATE: 1/23/50
DESIGNED BY: 1/23/50
TRACED BY: 1/23/50
QUANTITIES BY: 1/23/50
CHECKED BY: 1/23/50
ORIGINAL PLAN No. 1
NOTE BOOK No. 1

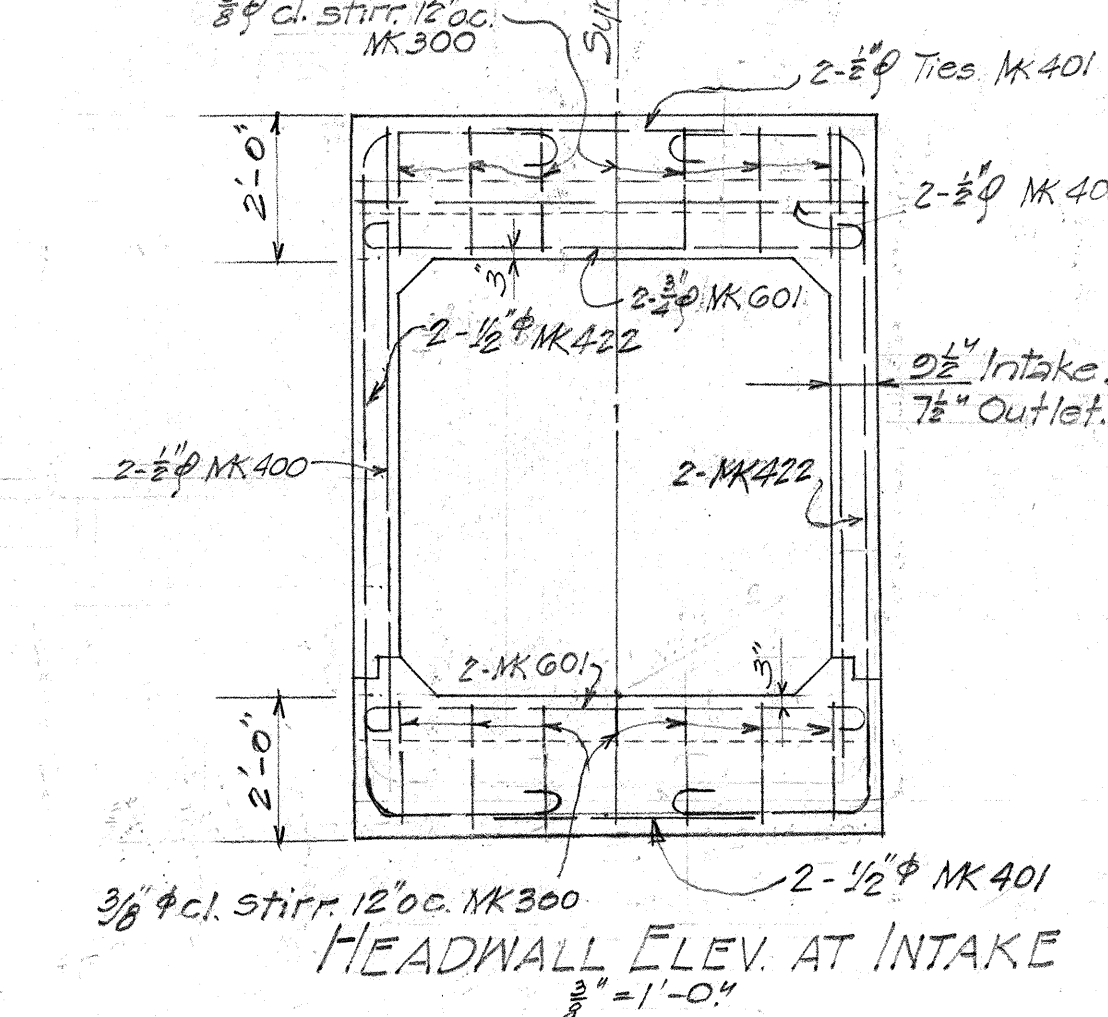
TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
6'x6' BOX CULVERT
Sta. 118 + 86.5
Honali Bell Rd. SDR 3(4)
January 1949



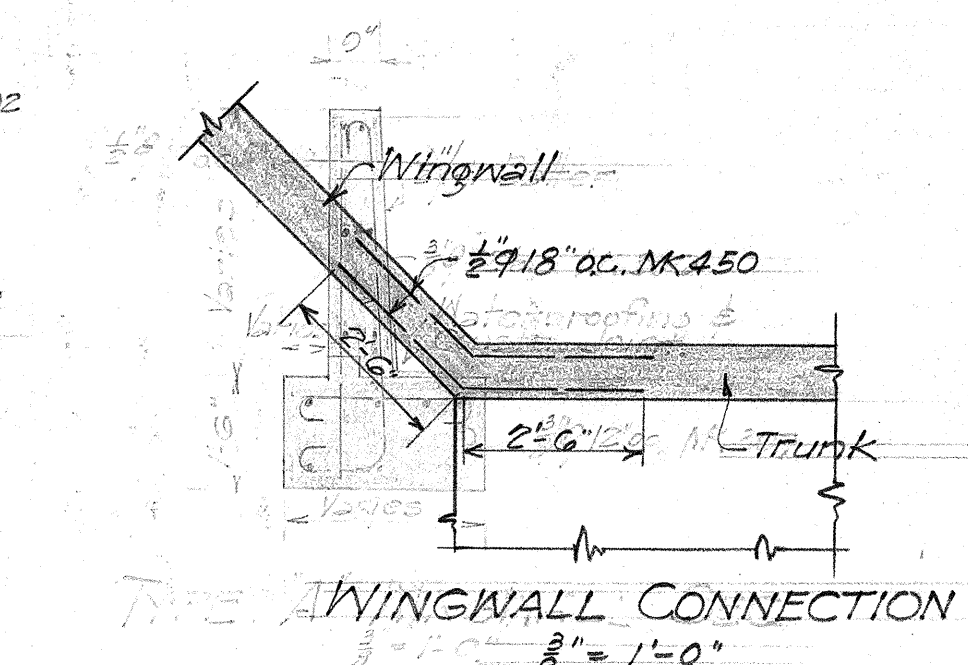
COLLAR DETAIL A
 1/2" = 1'-0"
 Note: For further details see Std. Details.



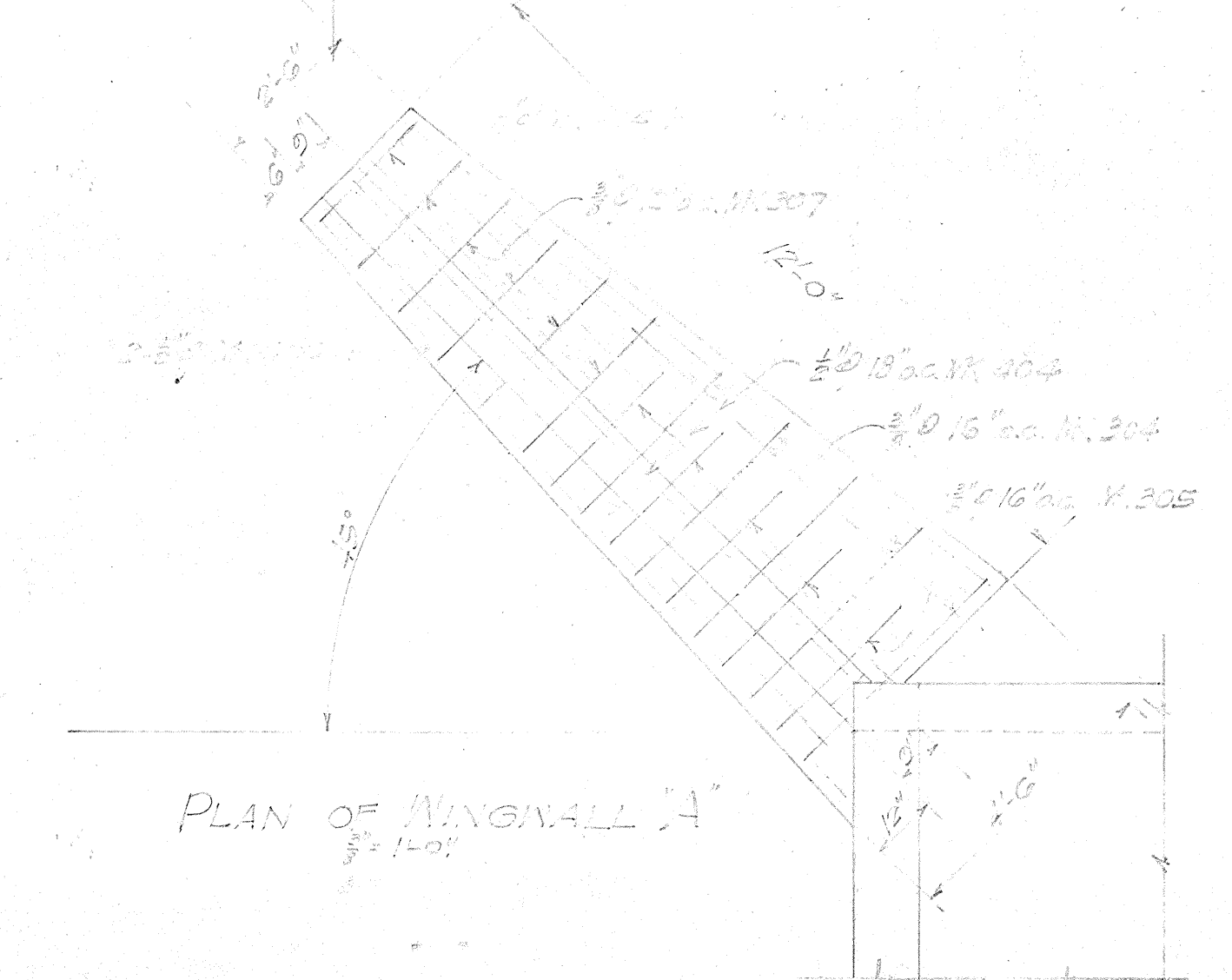
TYPE B RETAINING WALL
 3/8" = 1'-0"



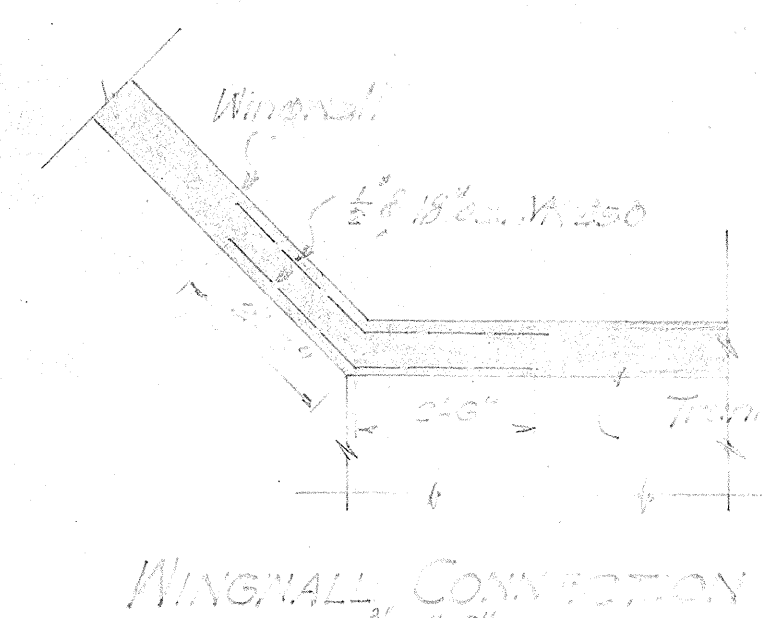
Note: Headwall at Outlet similar.



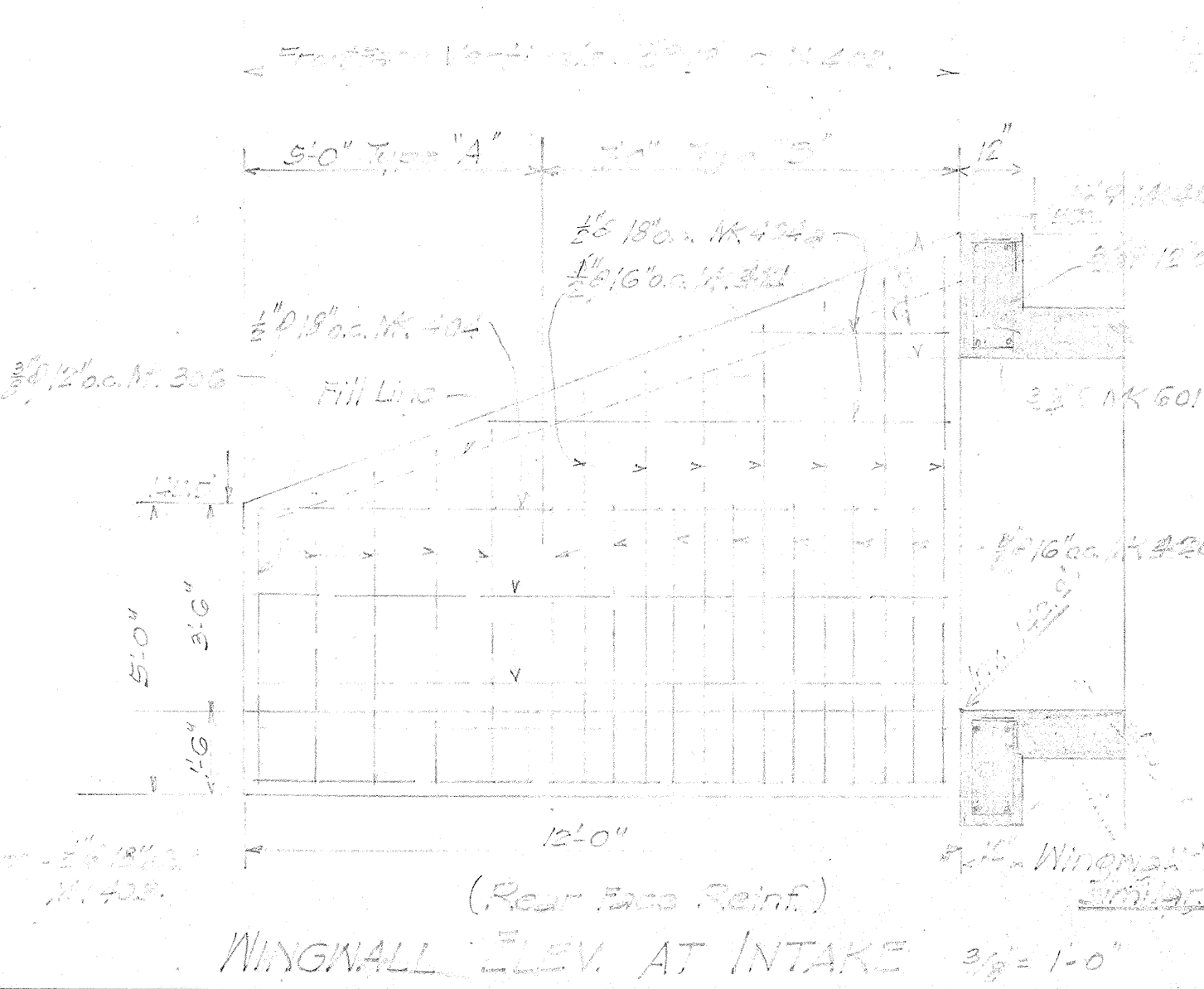
TYPE A WINGWALL CONNECTION
 3/8" = 1'-0"



PLAN OF WINGWALL A
 3/8" = 1'-0"



WINGWALL CONNECTION
 3/8" = 1'-0"



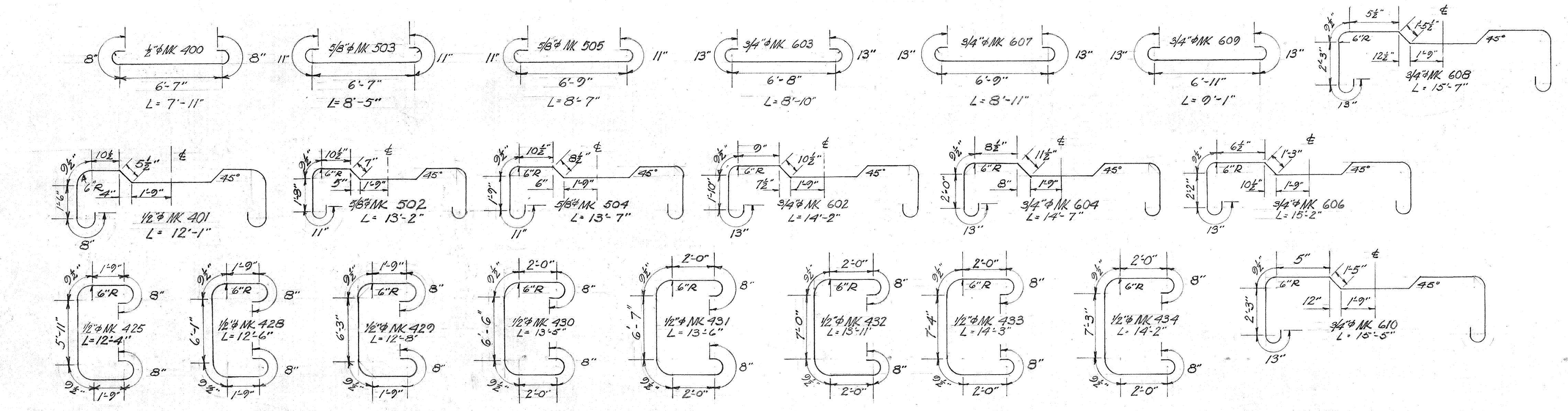
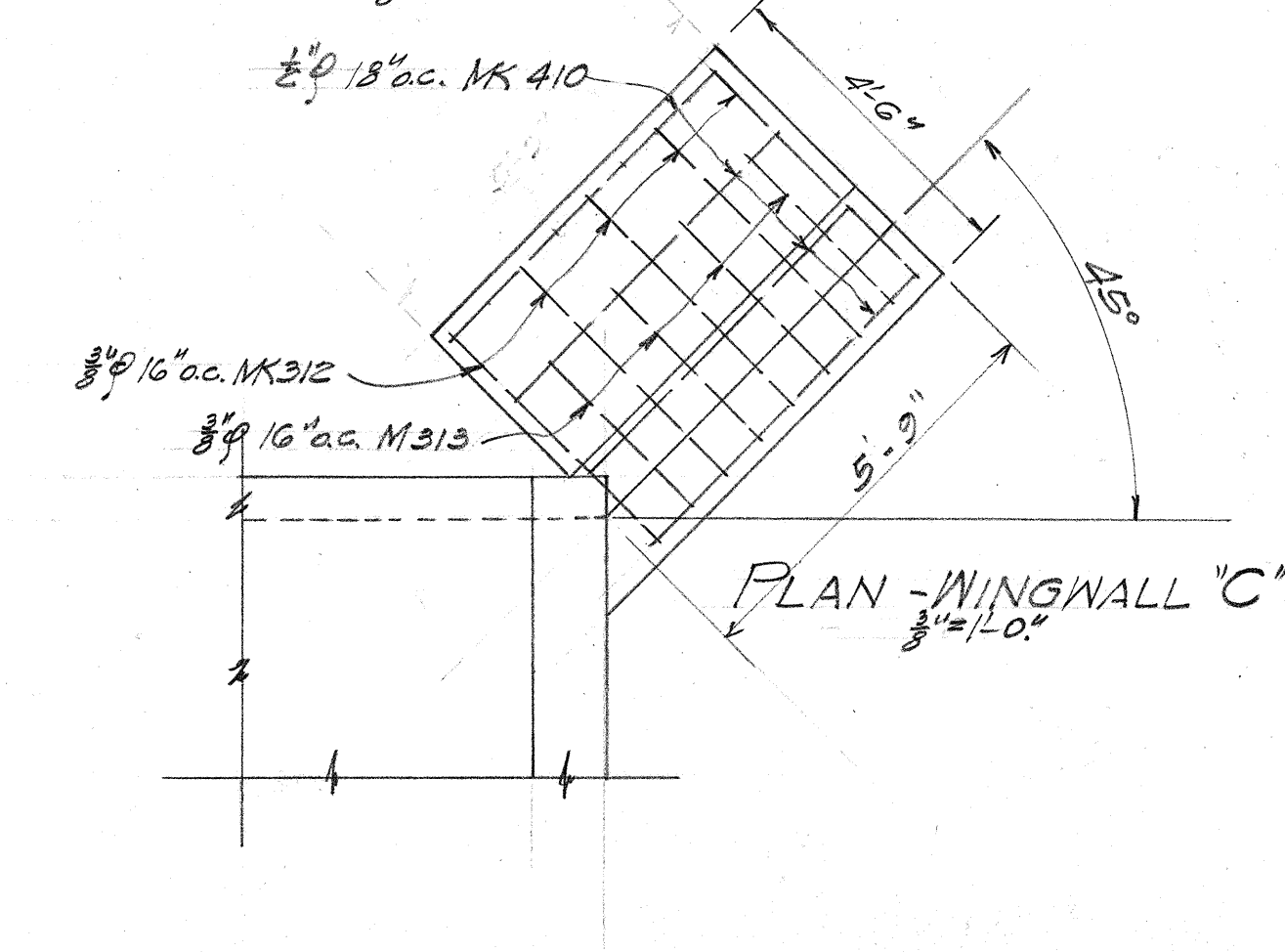
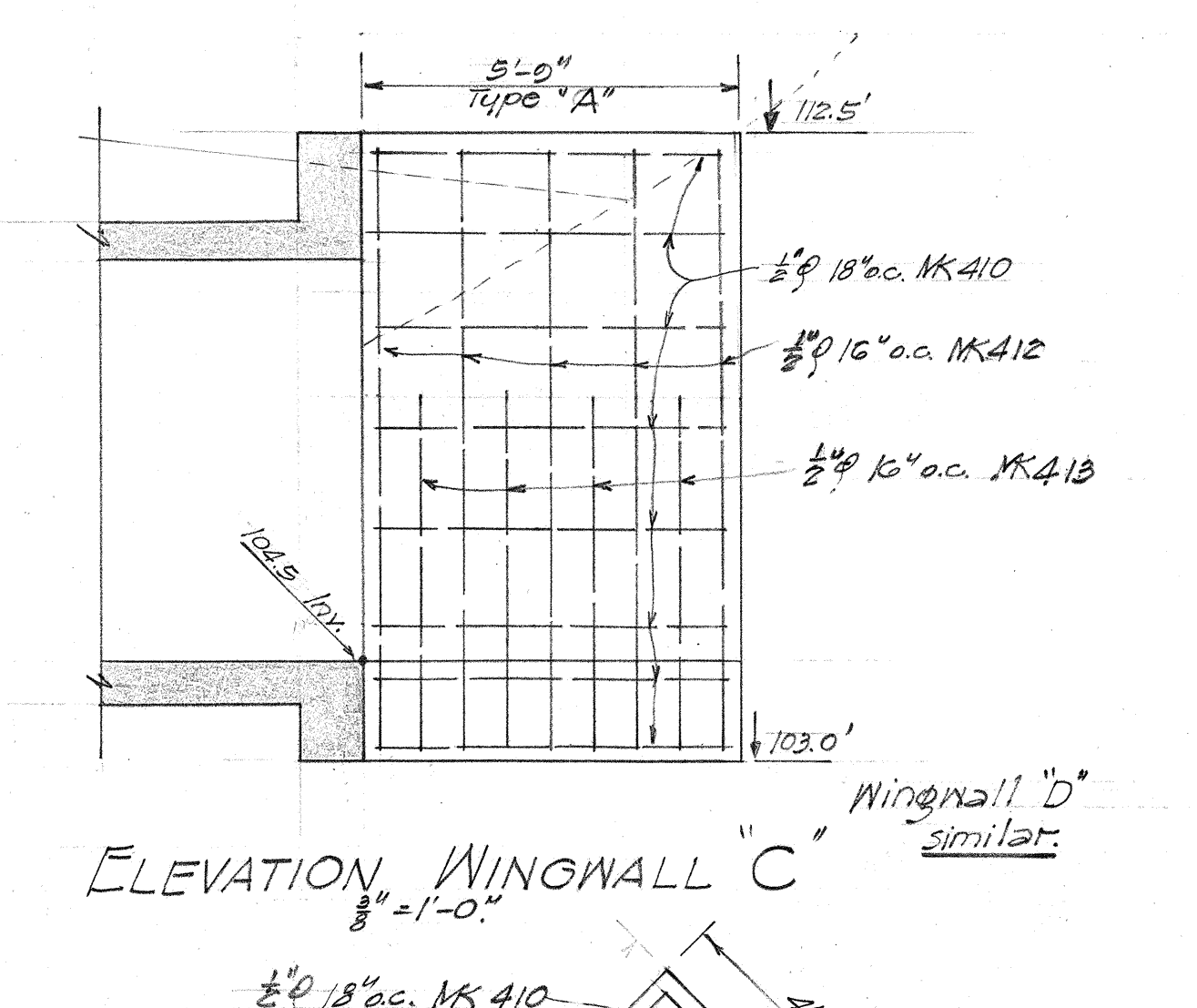
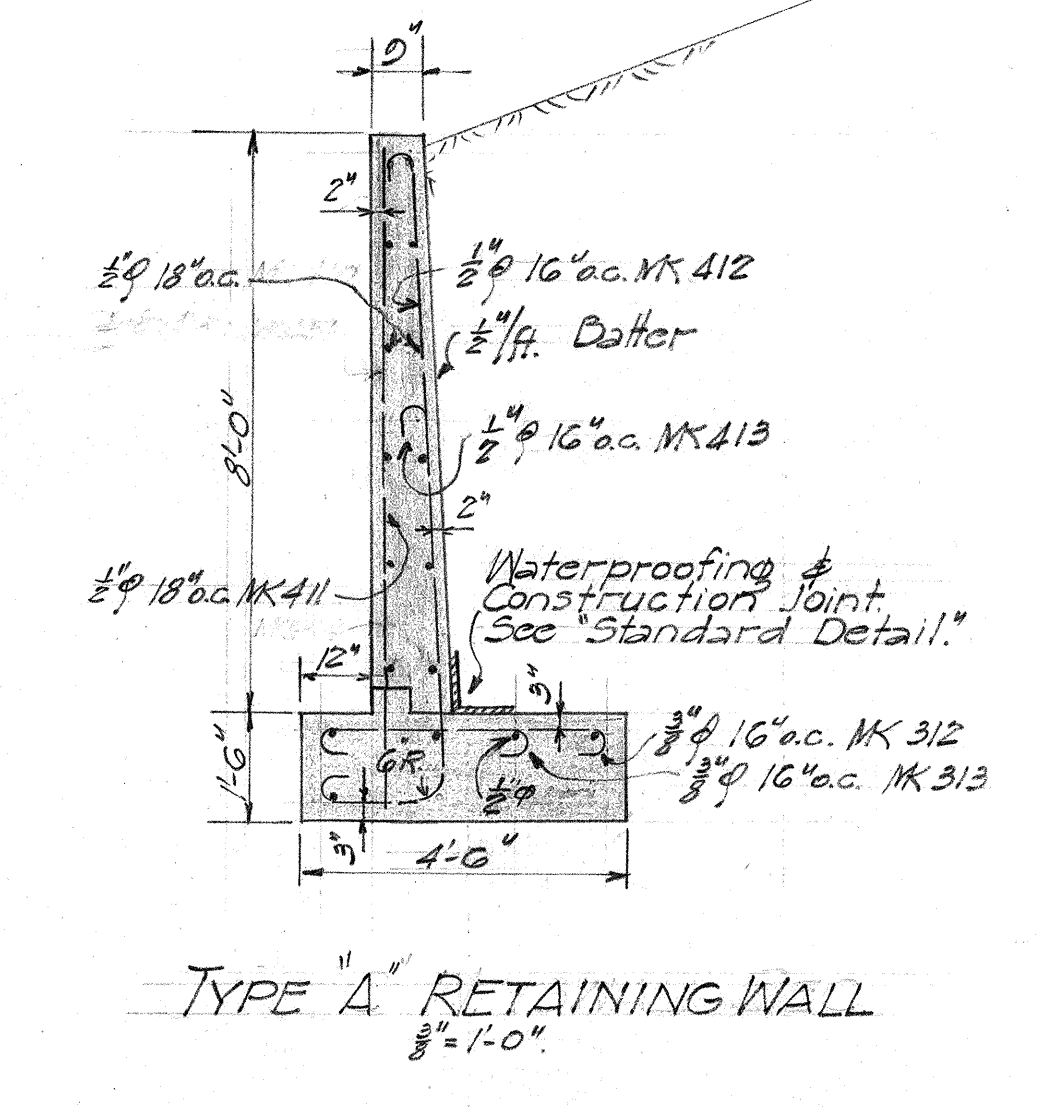
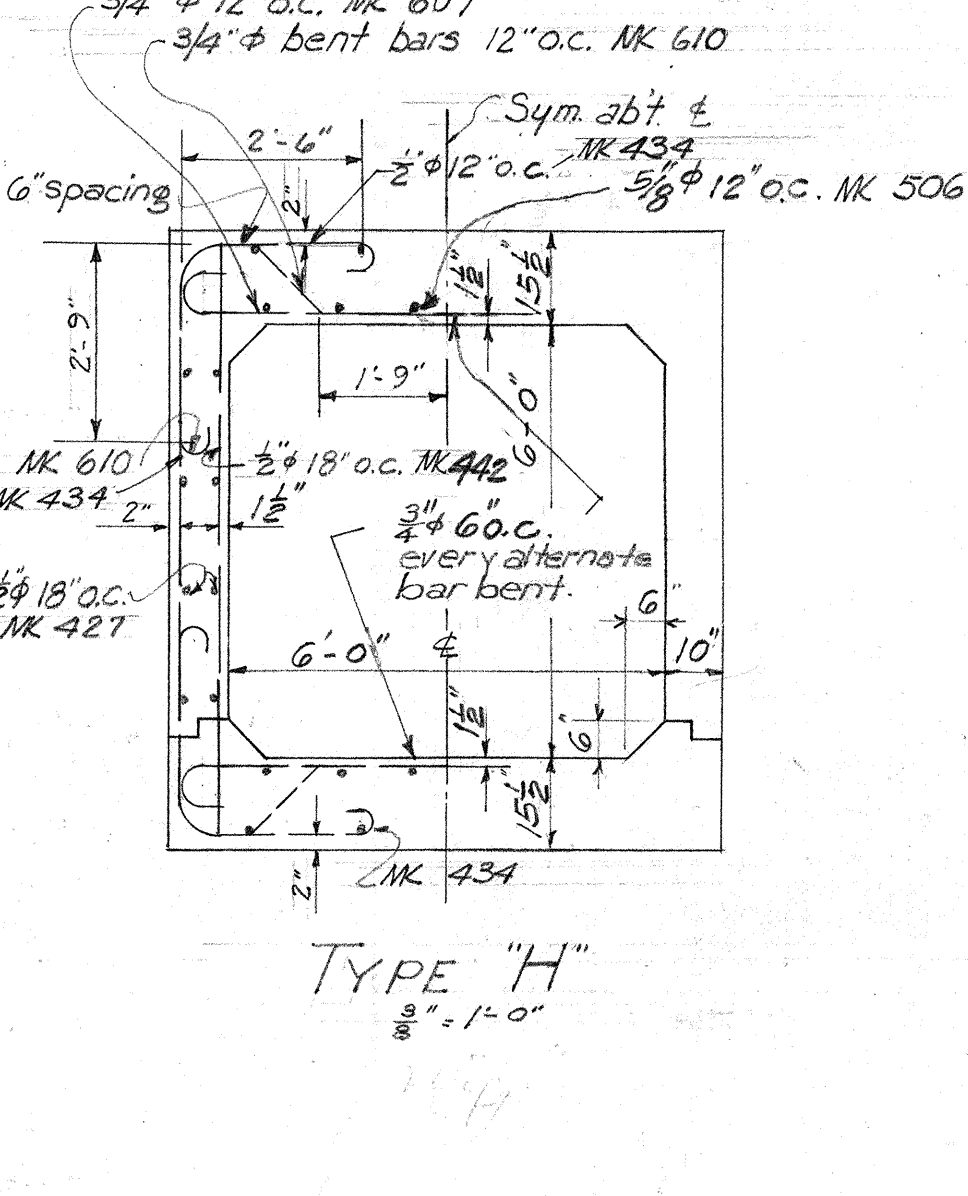
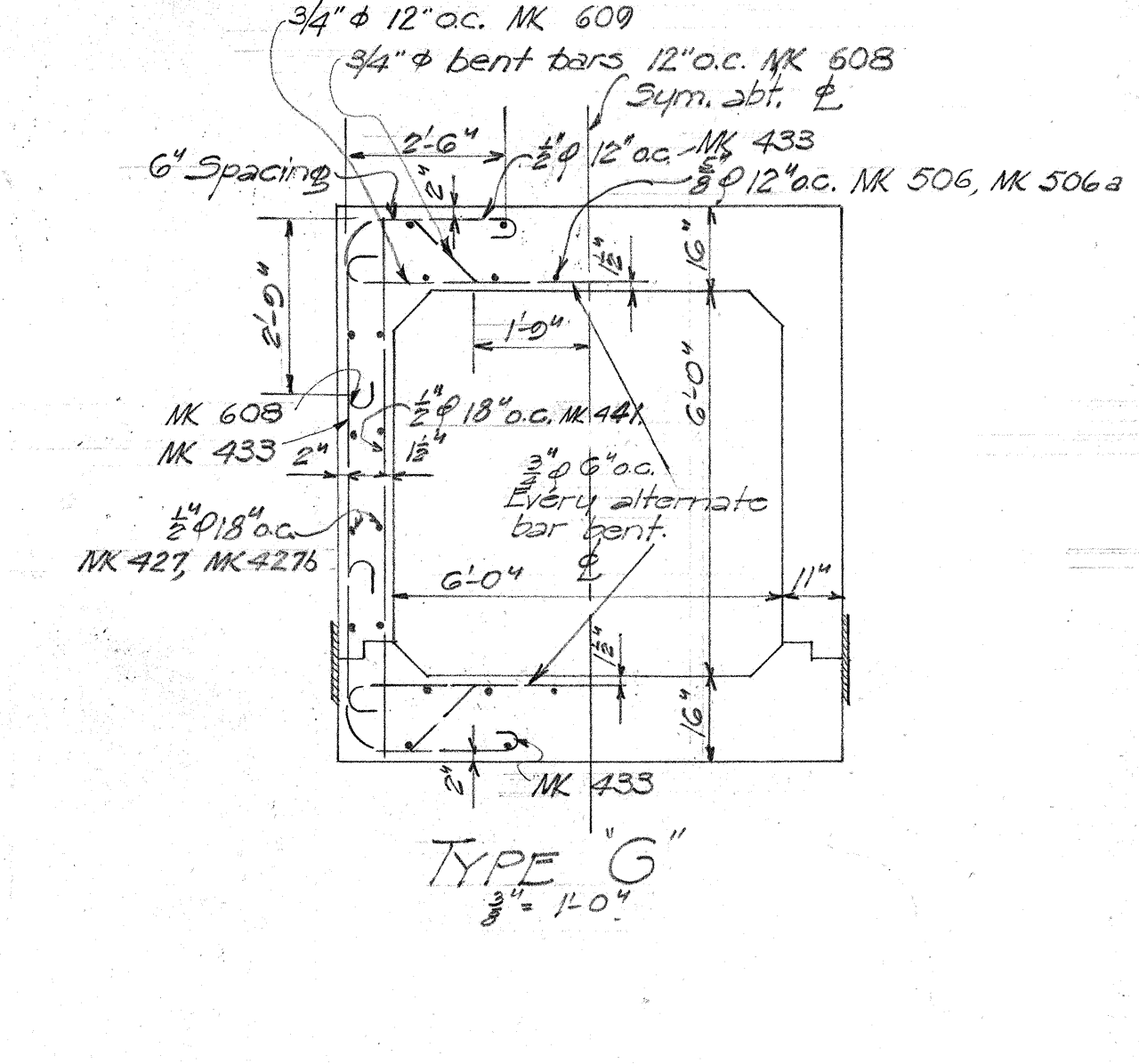
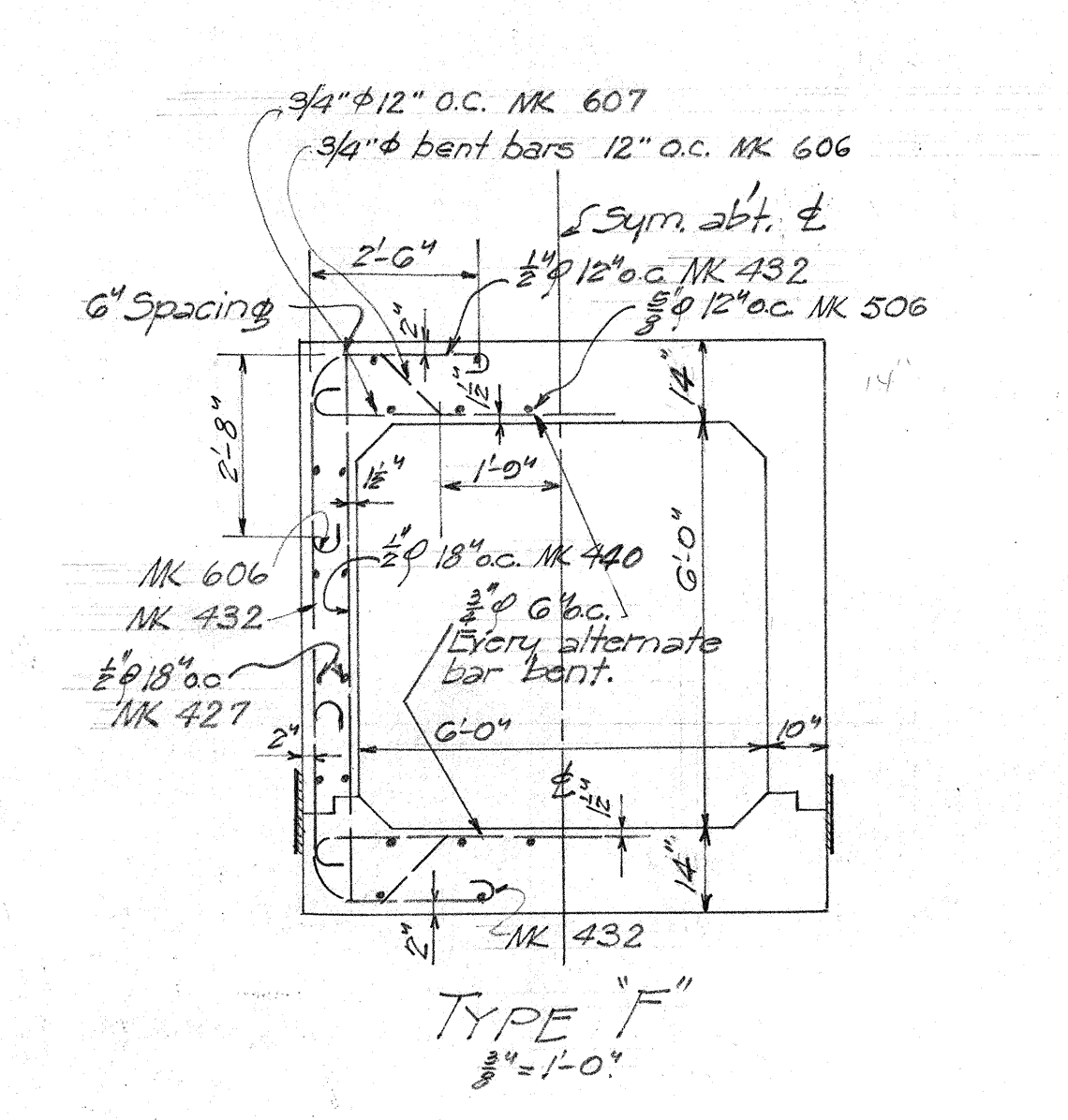
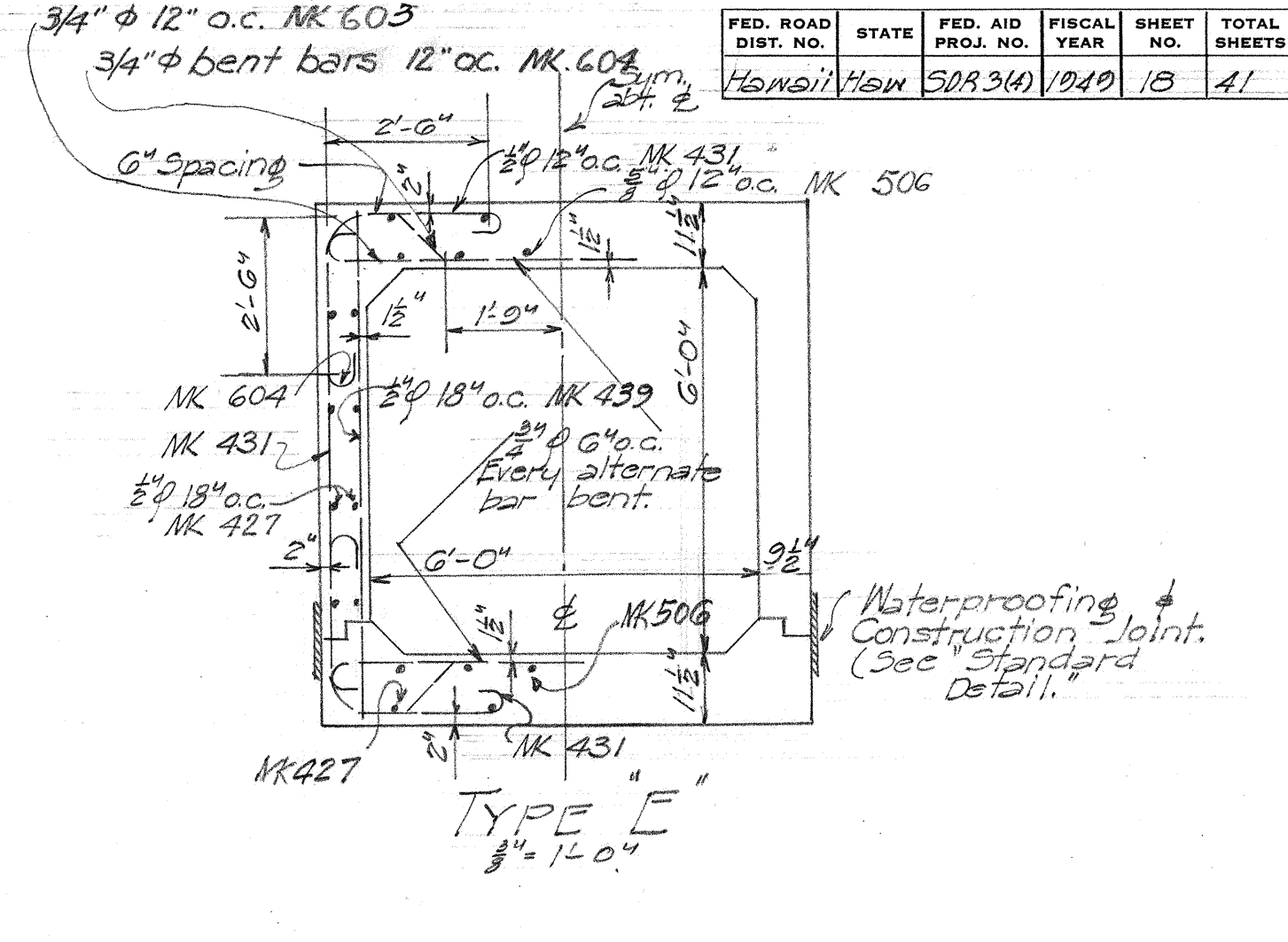
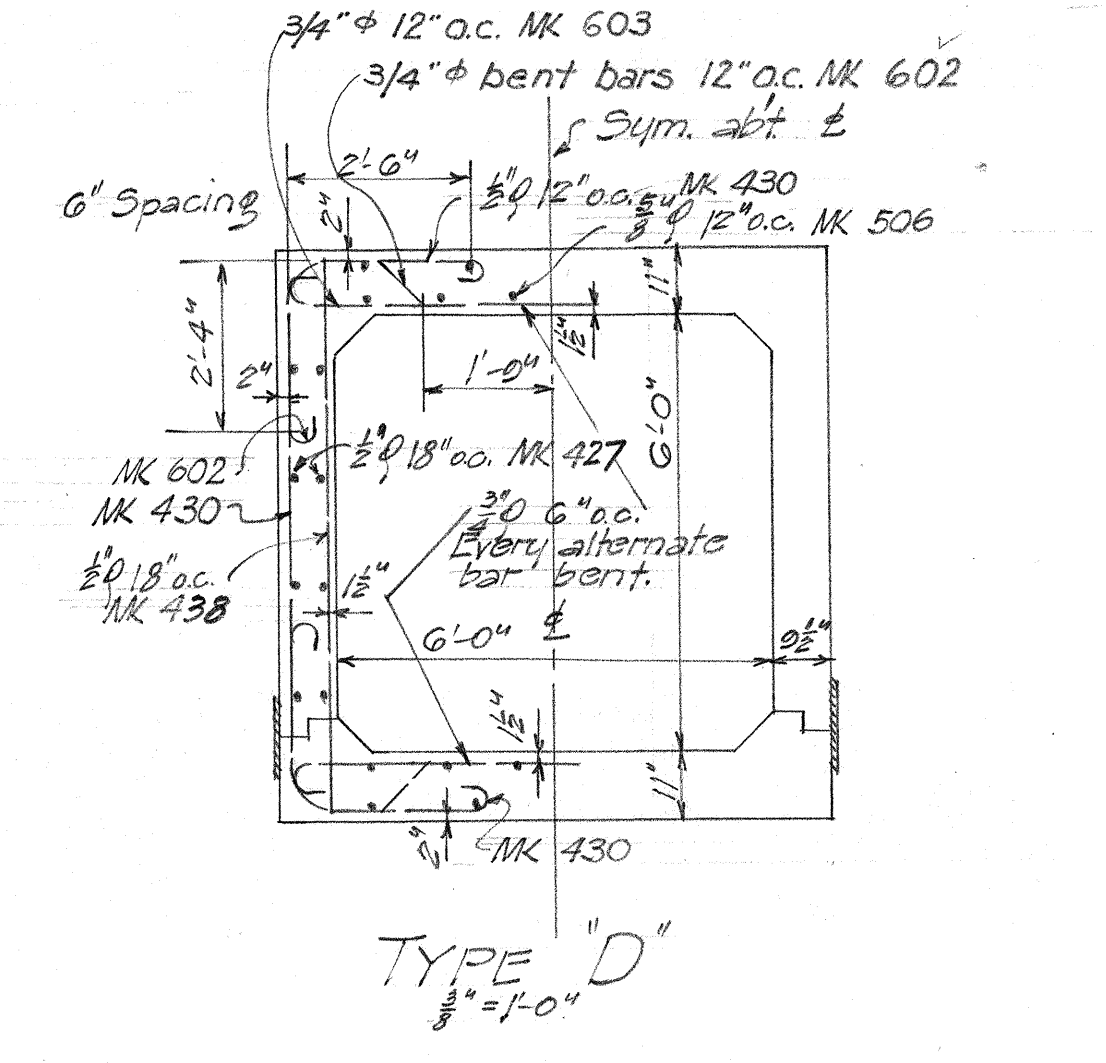
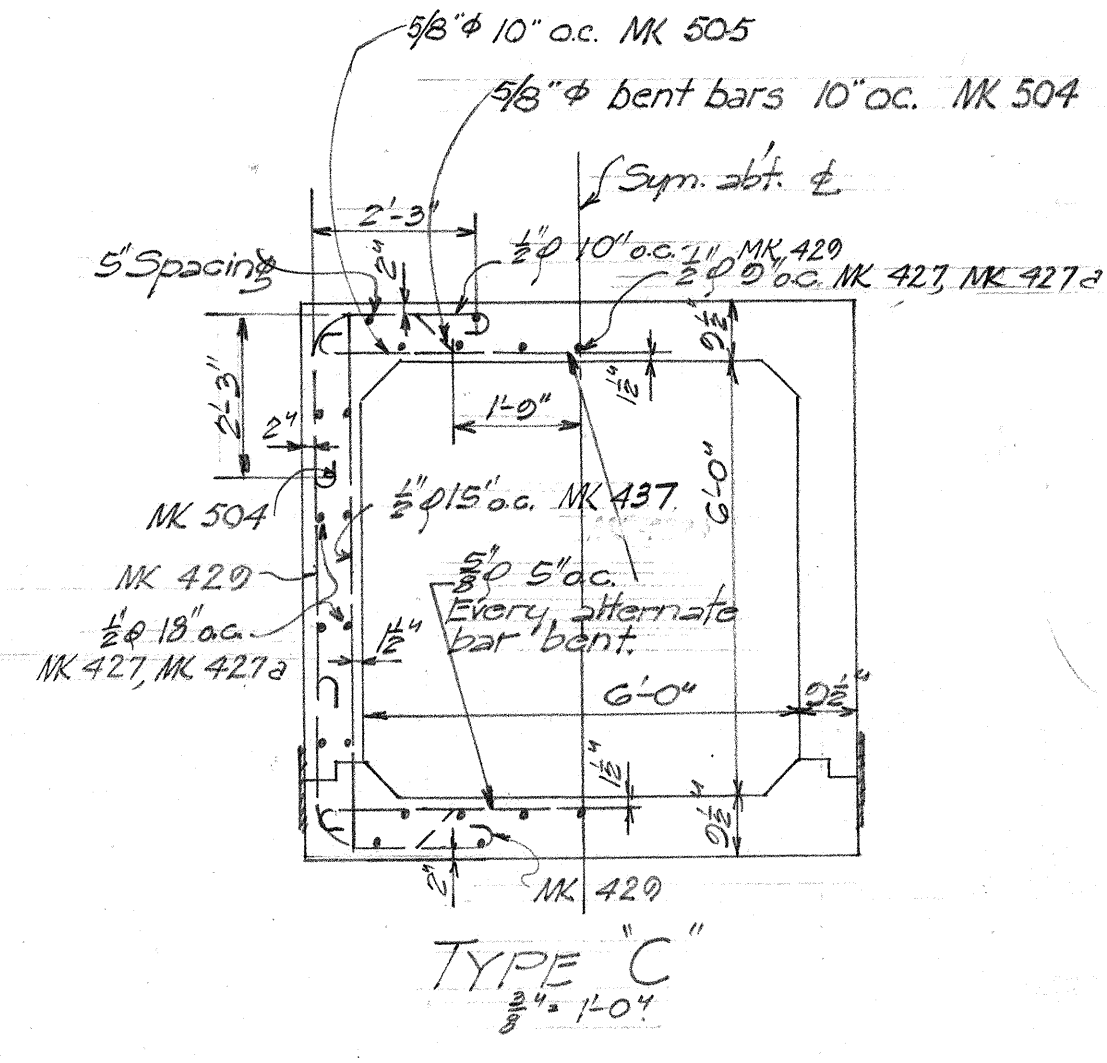
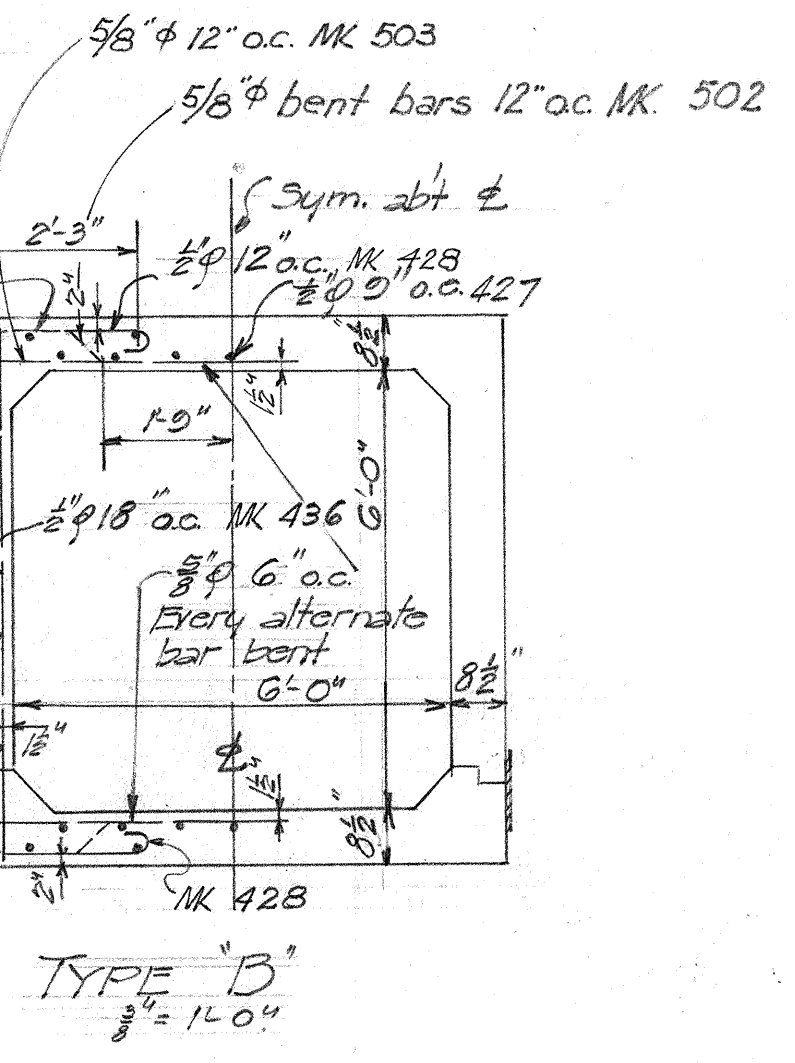
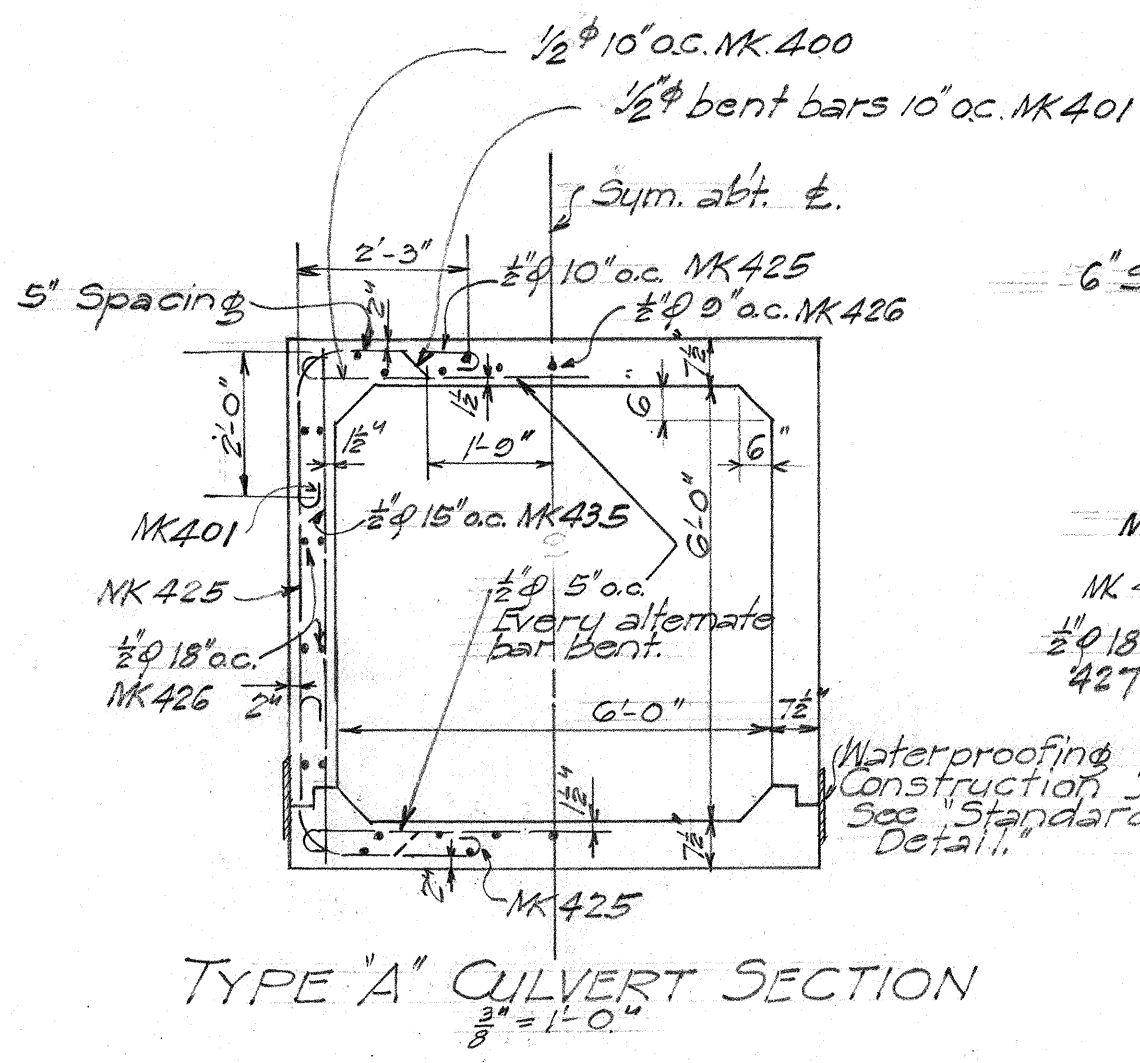
WINGWALL ELEV. AT INTAKE
 3/8" = 1'-0"

TERRITORIAL HIGHWAY DEPARTMENT
 TERRITORY OF HAWAII

6'x6' BOX CULVERT
 Sta. 118 + 86.5

Hawaii Belt Rd. SDR 3(4)
 January 1940

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
140	Hawaii	5083(4)	1949	18	41



TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
G'xG' BOX CULVERT
S.D. 118 + 86.5
Hawaii Belt Rd SDR 3(4)
January 1949

SHEET No. 3 OF 3 SHEETS

5374.18

DATE: 1/10/49
DESIGNED BY: J. L. Smith
CHECKED BY: J. L. Smith
ORIGINAL PLAN NO. 100
NOTE BOOK NO. 100