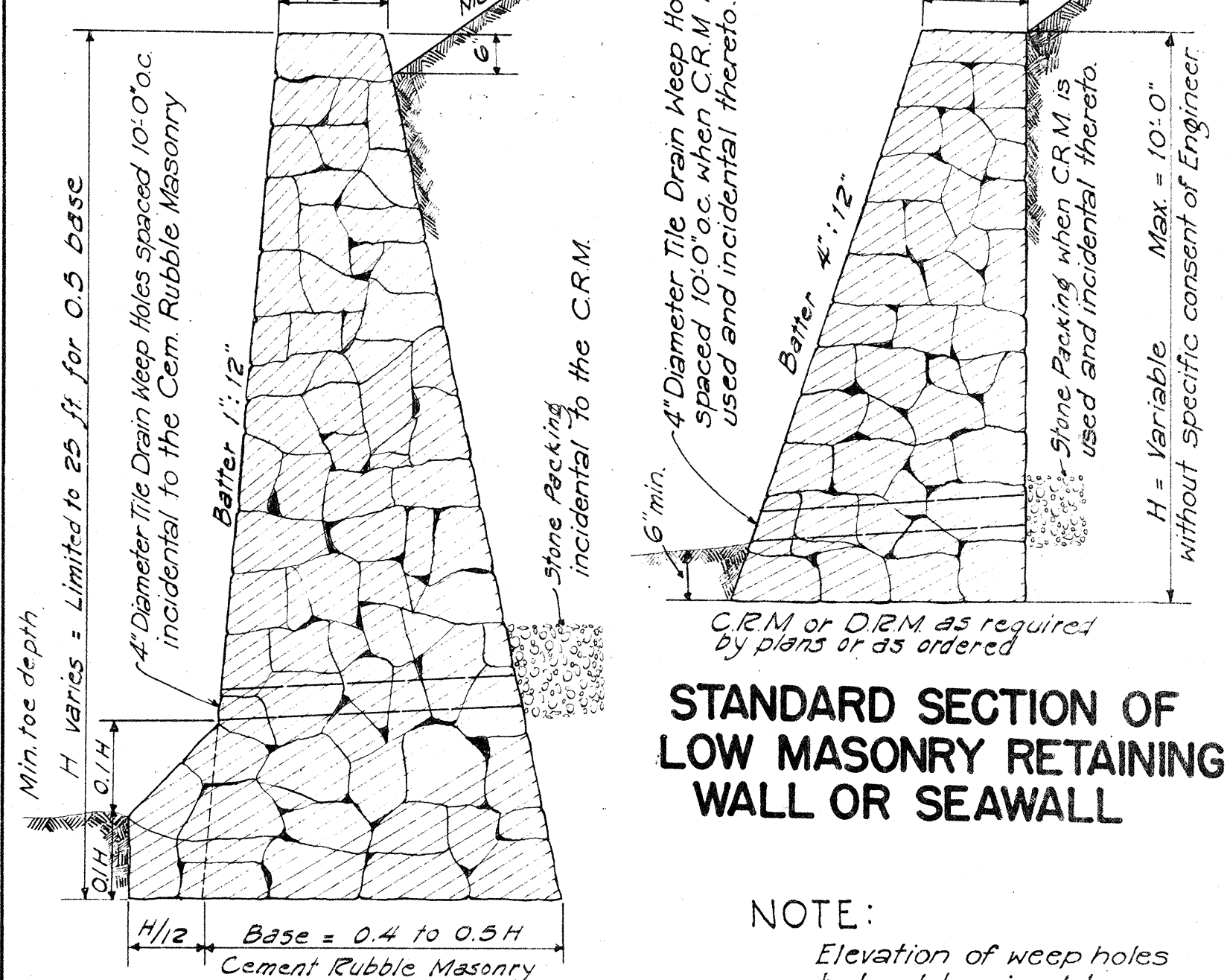


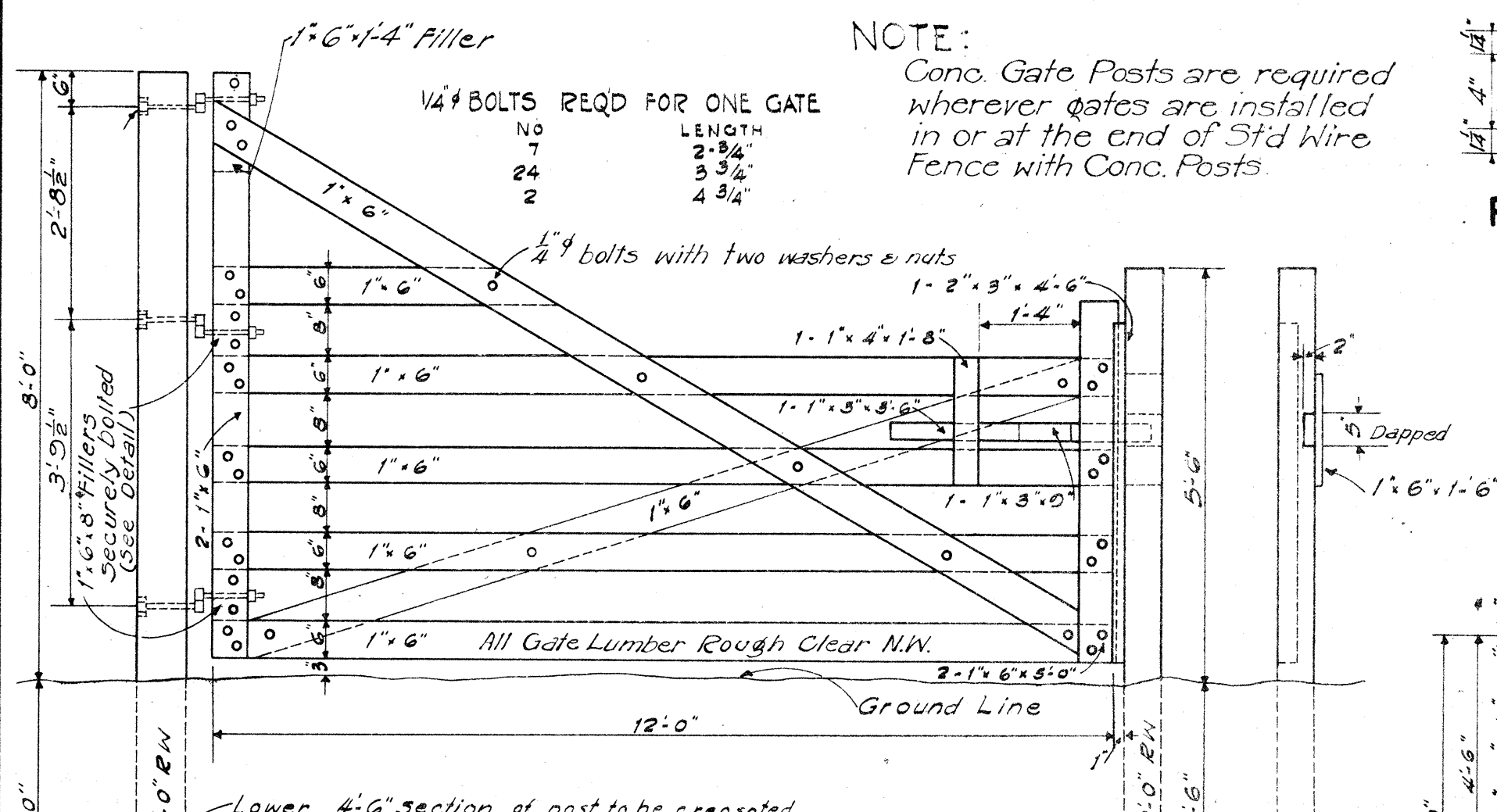
Note: TO RESIDENT ENGINEER
Consider economy of reinforcement for high retaining walls which are not originate on plan layout.



STANDARD SECTION OF LOW MASONRY RETAINING WALL OR SEAWALL

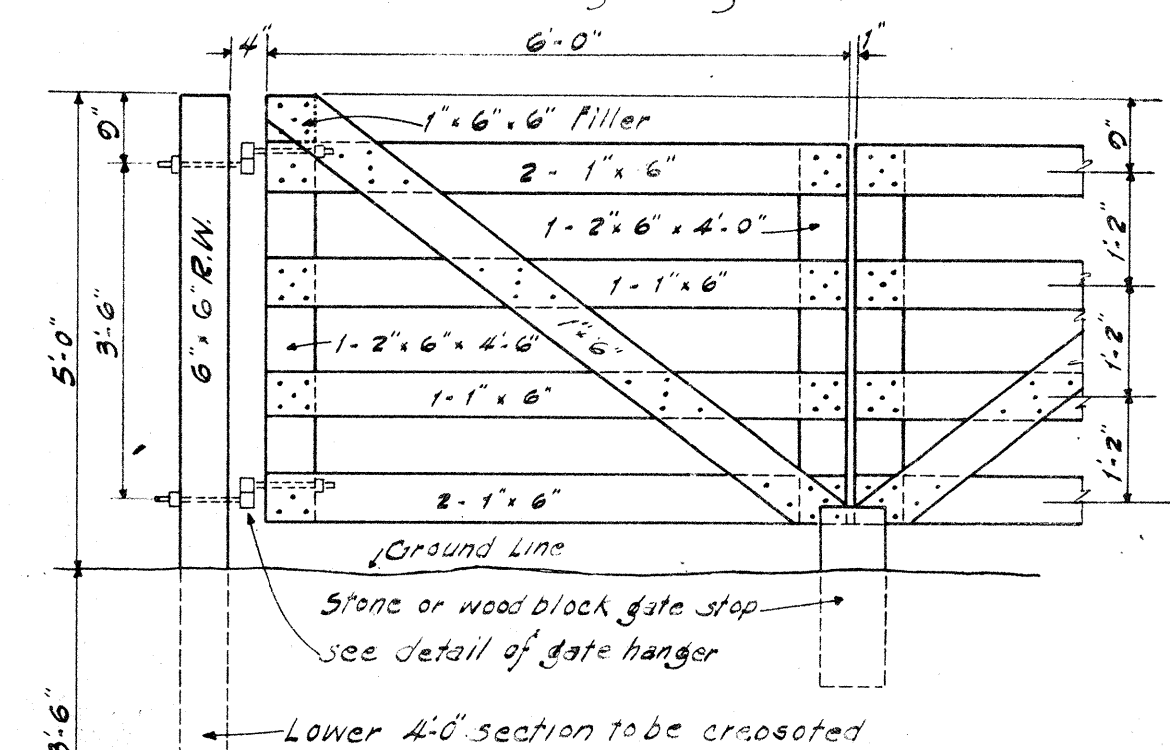
NOTE:
Elevation of weep holes to be determined by Resident Engineer. Holes to be placed as close to the existing ground line as local conditions permit.

STANDARD SECTION OF HIGH CEMENT RUBBLE MASONRY RETAINING WALL OR SEAWALL



DETAIL OF STANDARD CATTLE GATE

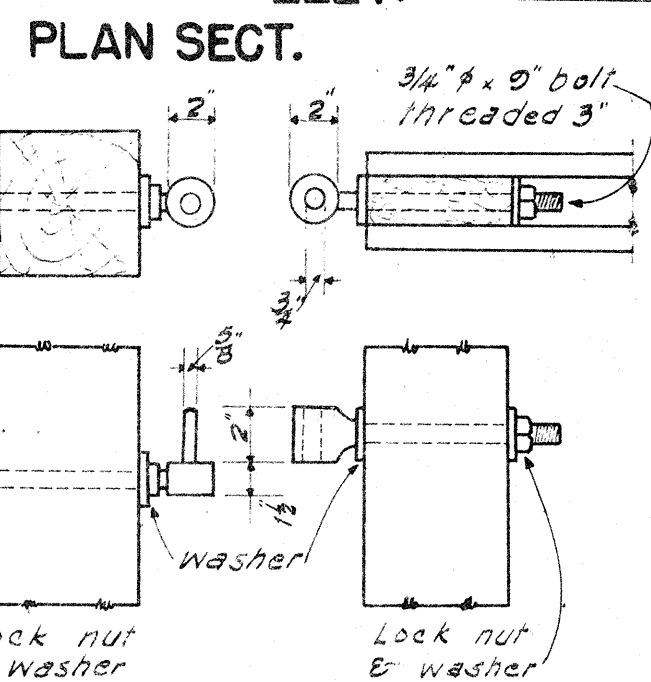
Scale: 1/2" = 1'-0"



DOUBLE HUNG GATE

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

See Note regarding use of Concrete Posts.



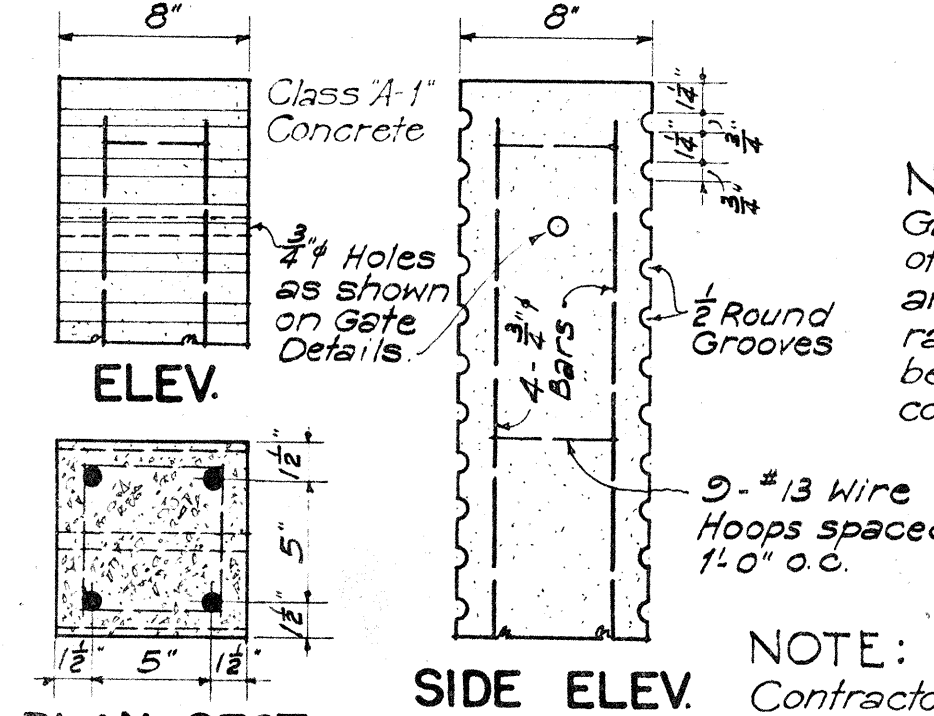
DETAIL OF GATE HANGER

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

Note: Use 3/4 inch x 11 inch bolts for cattle gate

Data Standard Masonry Drop Intake					Where Variable Equals
D'	D	L = D+6"	Cu. Yds		
22 1/2"	18"	2'-0"	2.41		4'-6"
29"	24"	2'-6"	2.89		5'-0"
35 1/2"	30"	3'-0"	3.38		5'-6"
42"	36"	3'-6"	3.92		6'-0"

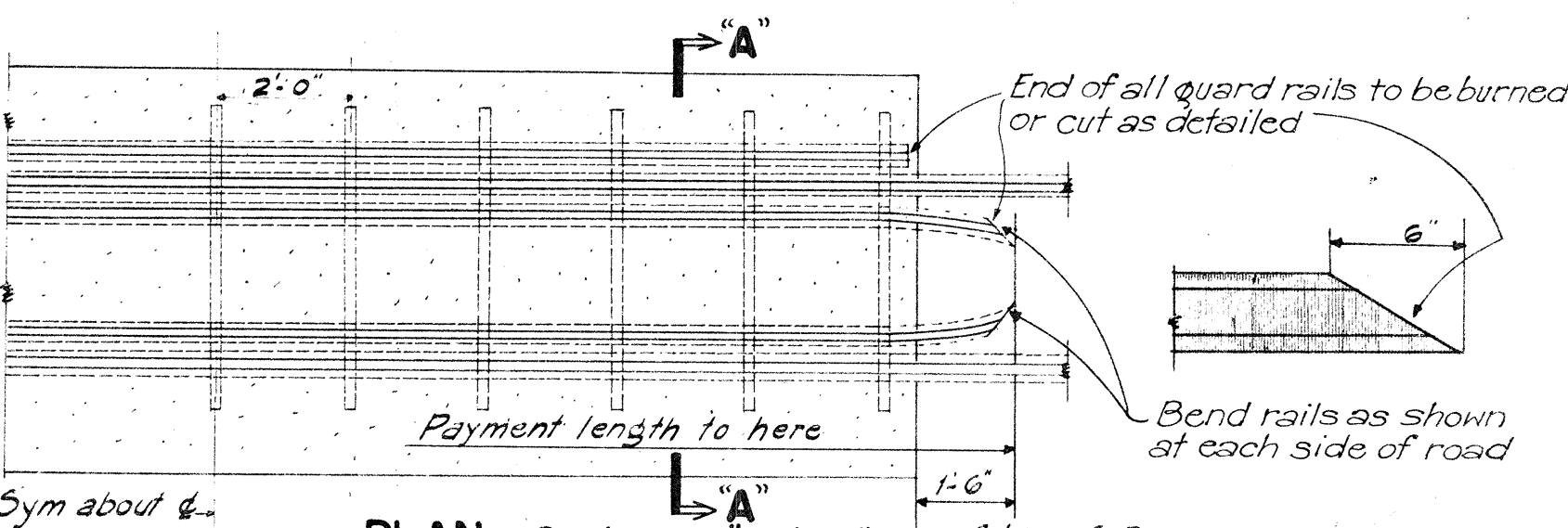
NOTE: Dimension "X" is assumed as 2'-4" in figuring the above quantities.



STANDARD MASONRY DROP INTAKE

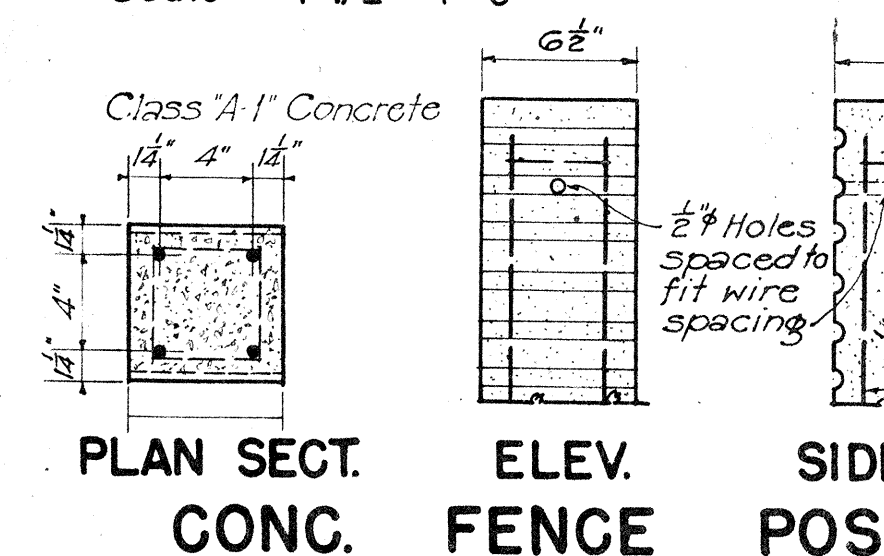
Scale: 3/8" = 1'-0"

NOTE:
Guard rails are to be of the same shape and weight as Main rails. Details may be varied to suit conditions in field.



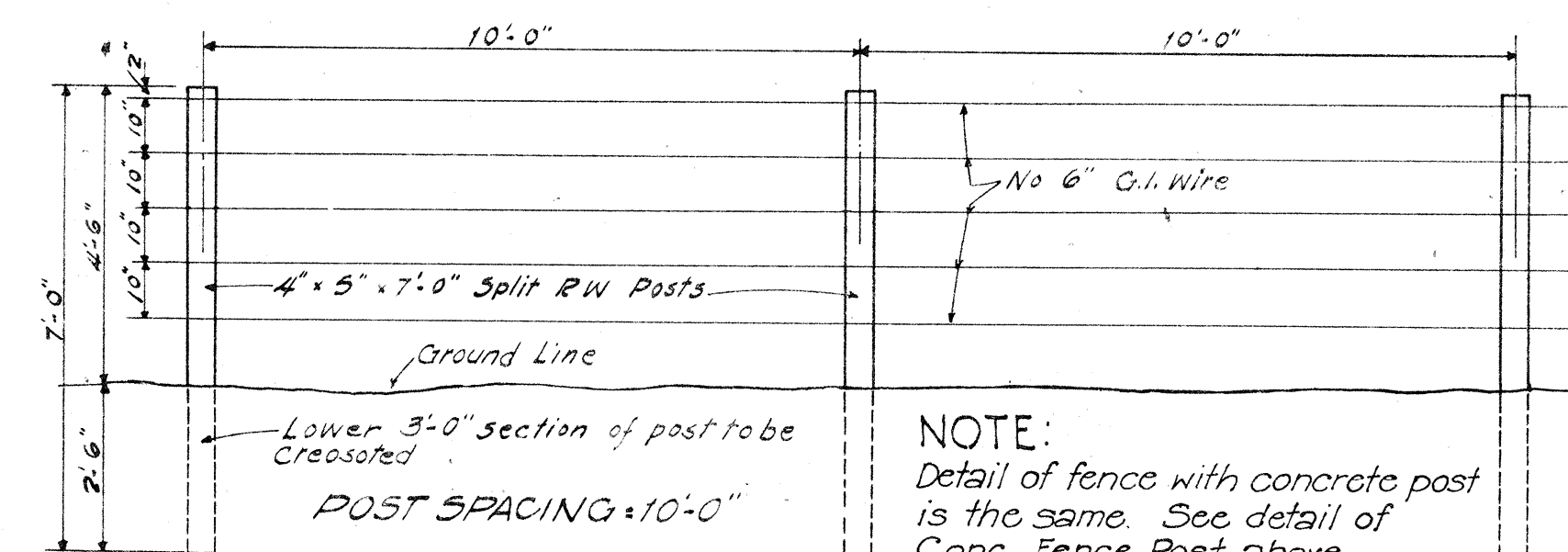
INDUSTRIAL TRACK CROSSING

NOTE: Use TYPE "A" if neither TYPE "A" or "B" is specified.



STANDARD GUIDE POSTS:

8"x8" Reinforced Conc. Posts same as those used for Std. Wood Guard Rail spaced 10'-0" oc unless otherwise specified.

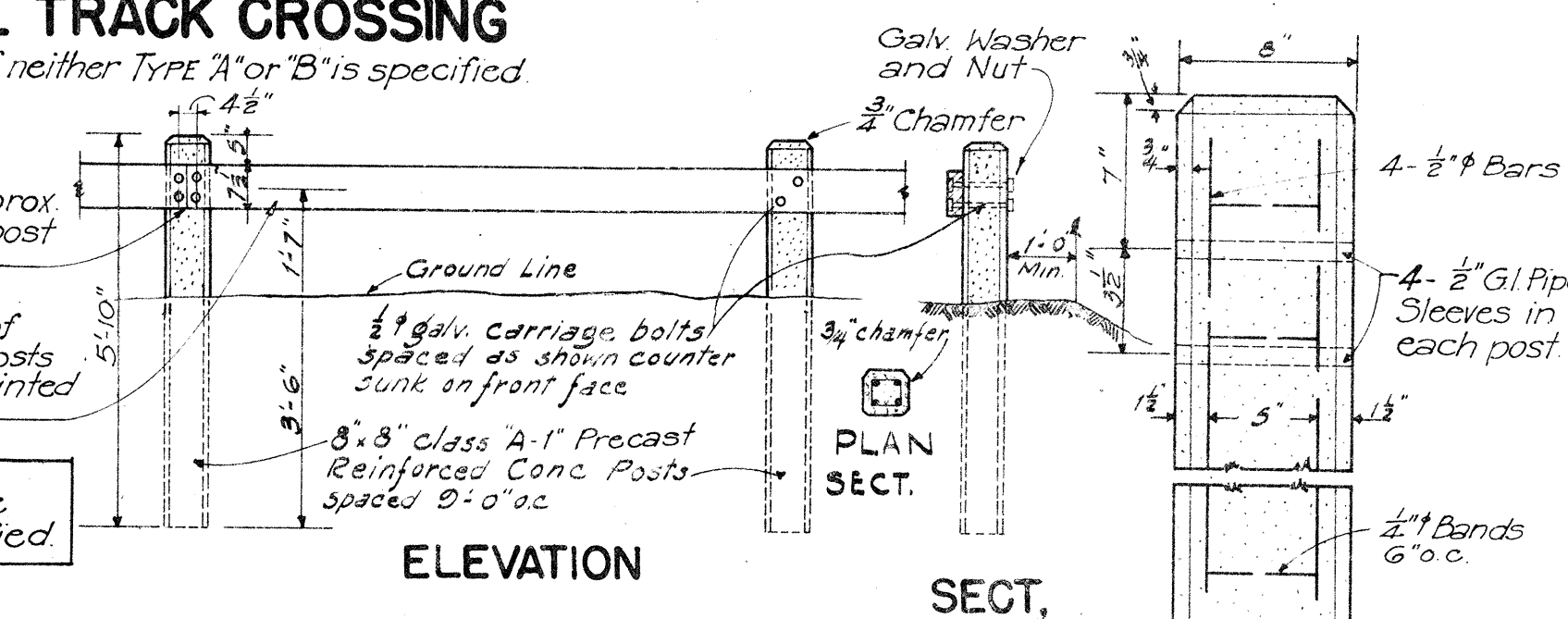


DETAILS OF STANDARD WIRE FENCE WITH WOODEN POSTS

Scale: 3/8" = 1'-0"

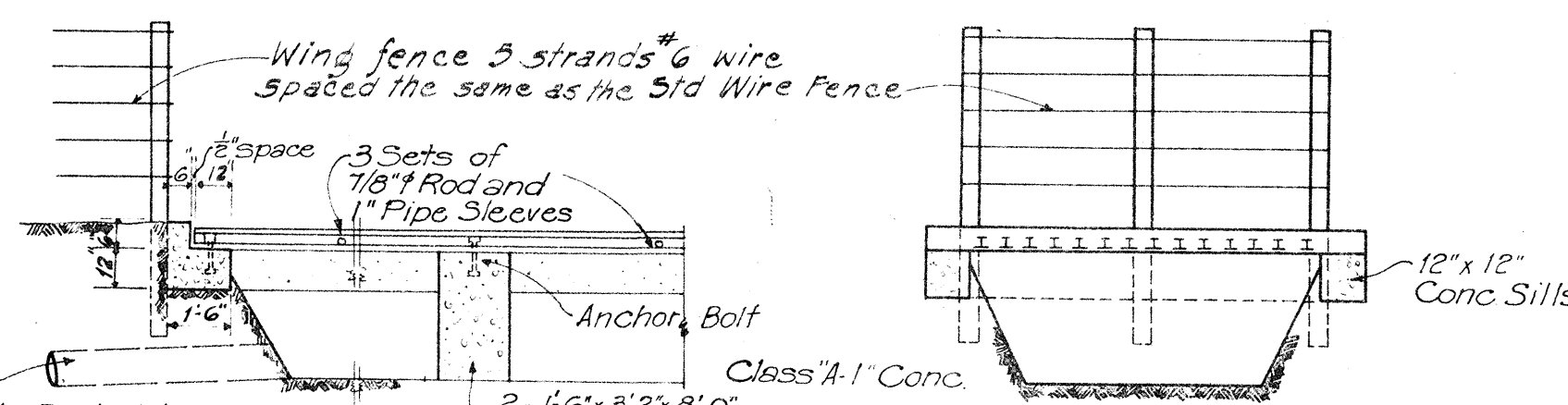
NOTE: This Project requires Std. Wire Fence with 11" post spacing. (If spacing is not indicated above, use 10 ft.)

NOTE TO ENGINEER: Fence must be on road R/W to participate in Fed. Aid. Consult office if uncertain what to do.



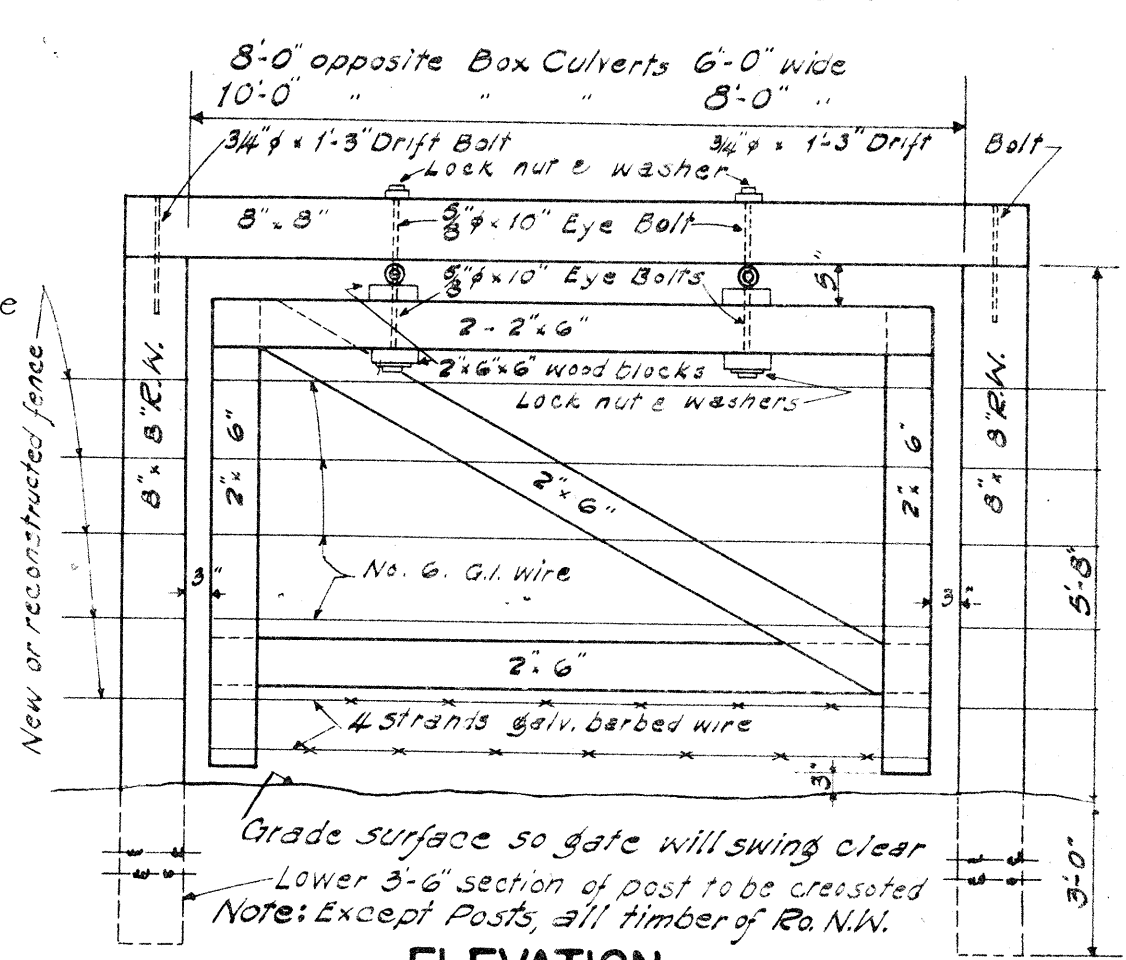
STANDARD WOOD GUARD RAIL

Scale: 3/8" = 1'-0"



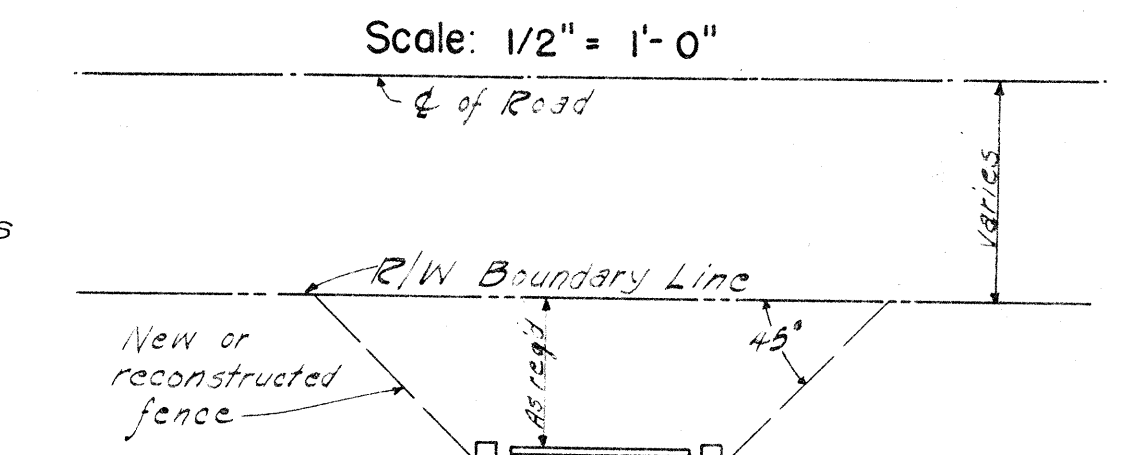
PART LONG SECTION

CROSS SECTION



DETAIL OF STANDARD OUTLET DITCH

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



LAYOUT SHOWING HURDLE PLACED BELOW CULVERT IN A POSITION WHICH WILL BE CATTLE TIGHT

DETAILS OF HURDLE

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

STANDARD DETAILS

SCALES AS NOTED

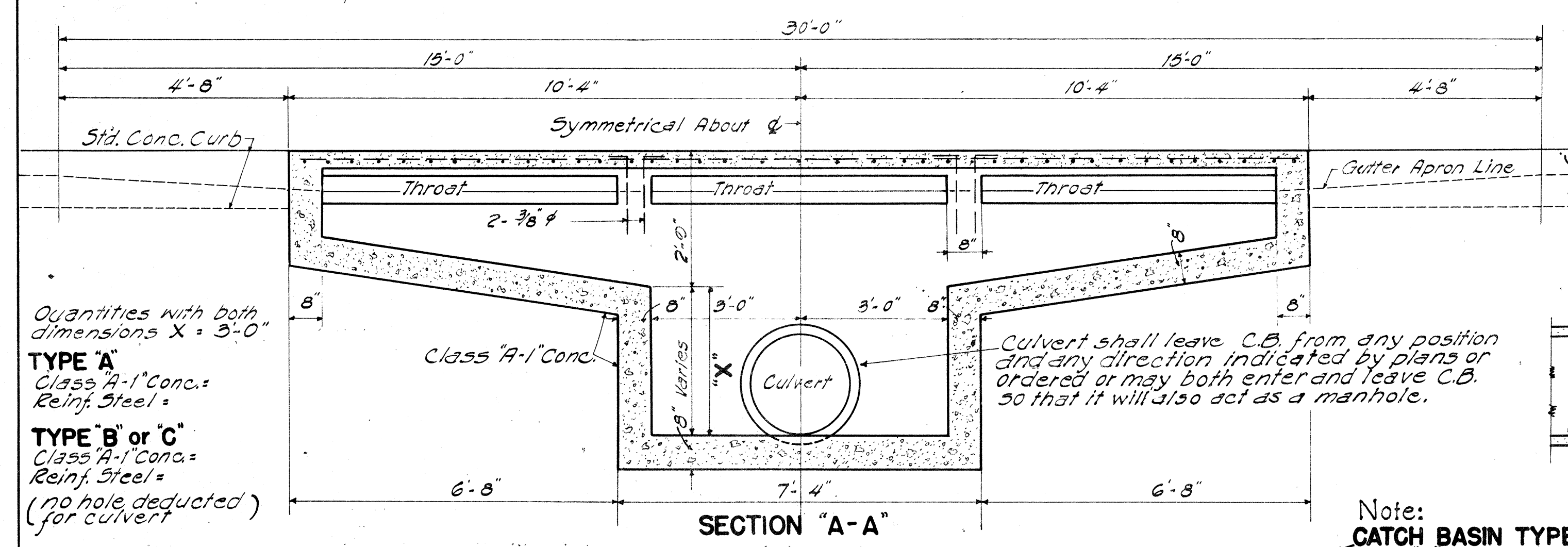
Sept. 5, 1946

APPROVED:

B. F. Purnell

Territorial Highway Engineer
SHEET NO. 1 OF 4 SHEETS

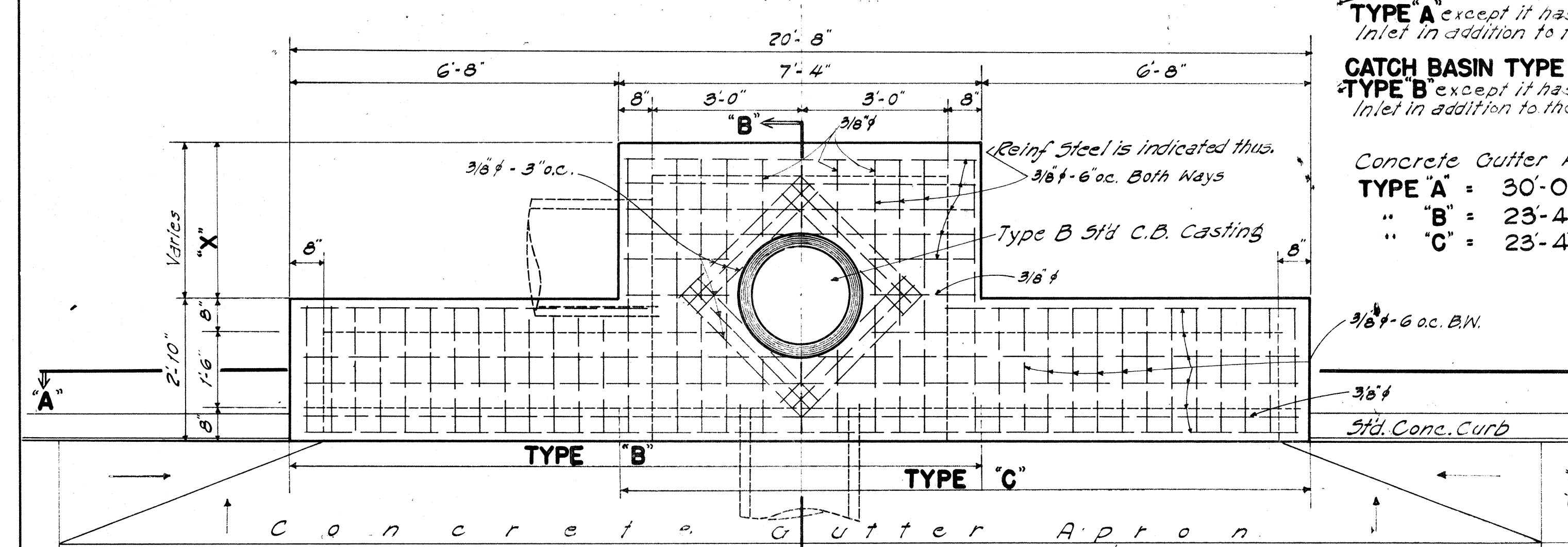
5227.6



Quantities with both dimensions X = 3'-0"

TYPE A
Class A-1 Conc.
Reinf. Steel =

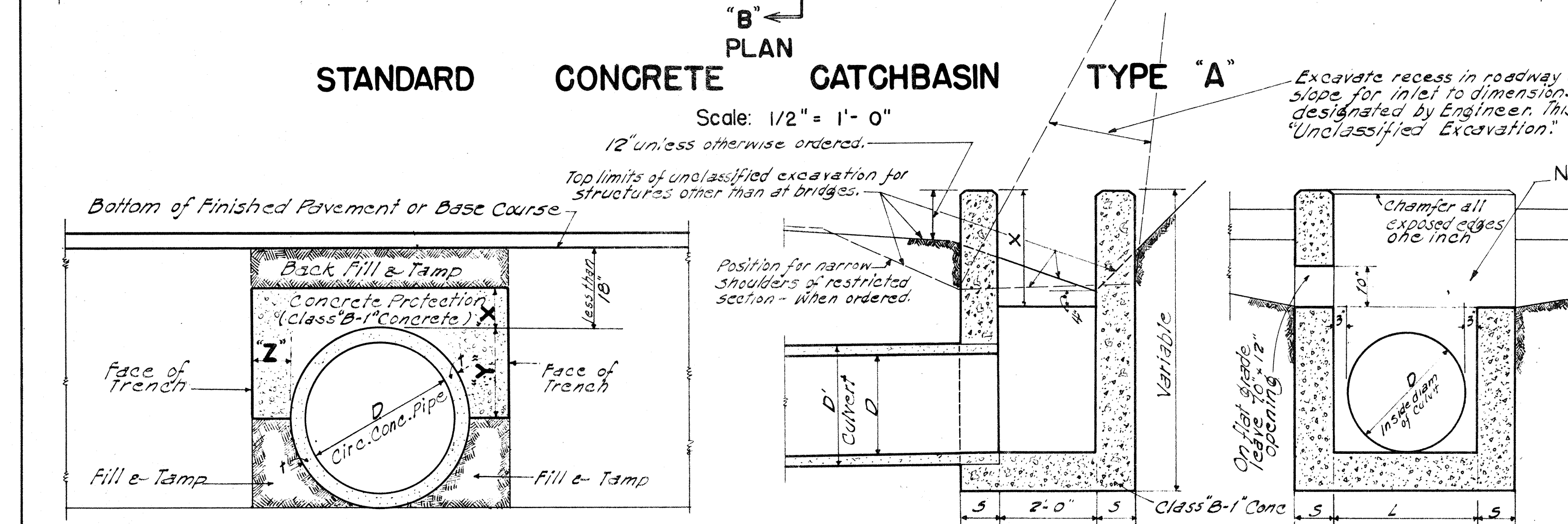
TYPE B or C
Class A-1 Conc.
Reinf. Steel =
(no hole deducted) for culvert



Note:
CATCH BASIN TYPE B: similar to **TYPE A** except it has only Left Side Inlet in addition to the Main Box.

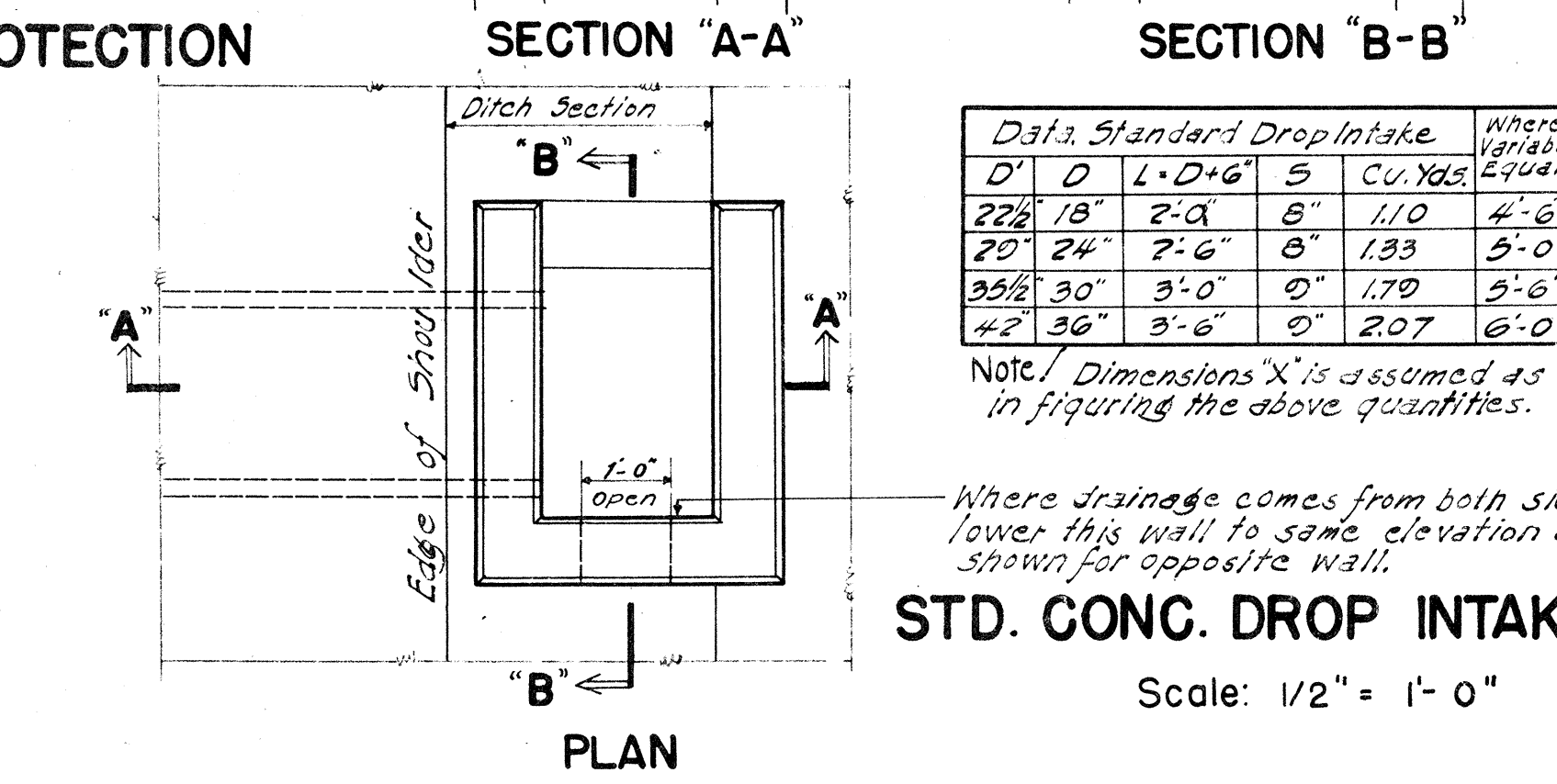
CATCH BASIN TYPE C: similar to **TYPE B** except it has only Right Side Inlet in addition to the Main Box.

Concrete Gutter Apron Length:
TYPE A = 30'-0"
TYPE B = 23'-4"
TYPE C = 23'-4"



TYP. SECT. OF CULVERT WITH CONC PROTECTION
(To be used when cover is less than 18")

DATA: CONCRETE PROTECTION OVER CULVERTS		
X	Y	Z
6" for 18" D	$\frac{D}{2} + T$	Z must be from pipe to face of trench
7" " 24" D		Minimum = X
8" " 30" D		
9" " 36" D		
10" " 42" D		
11" " 48" D		
12" " 54" D		

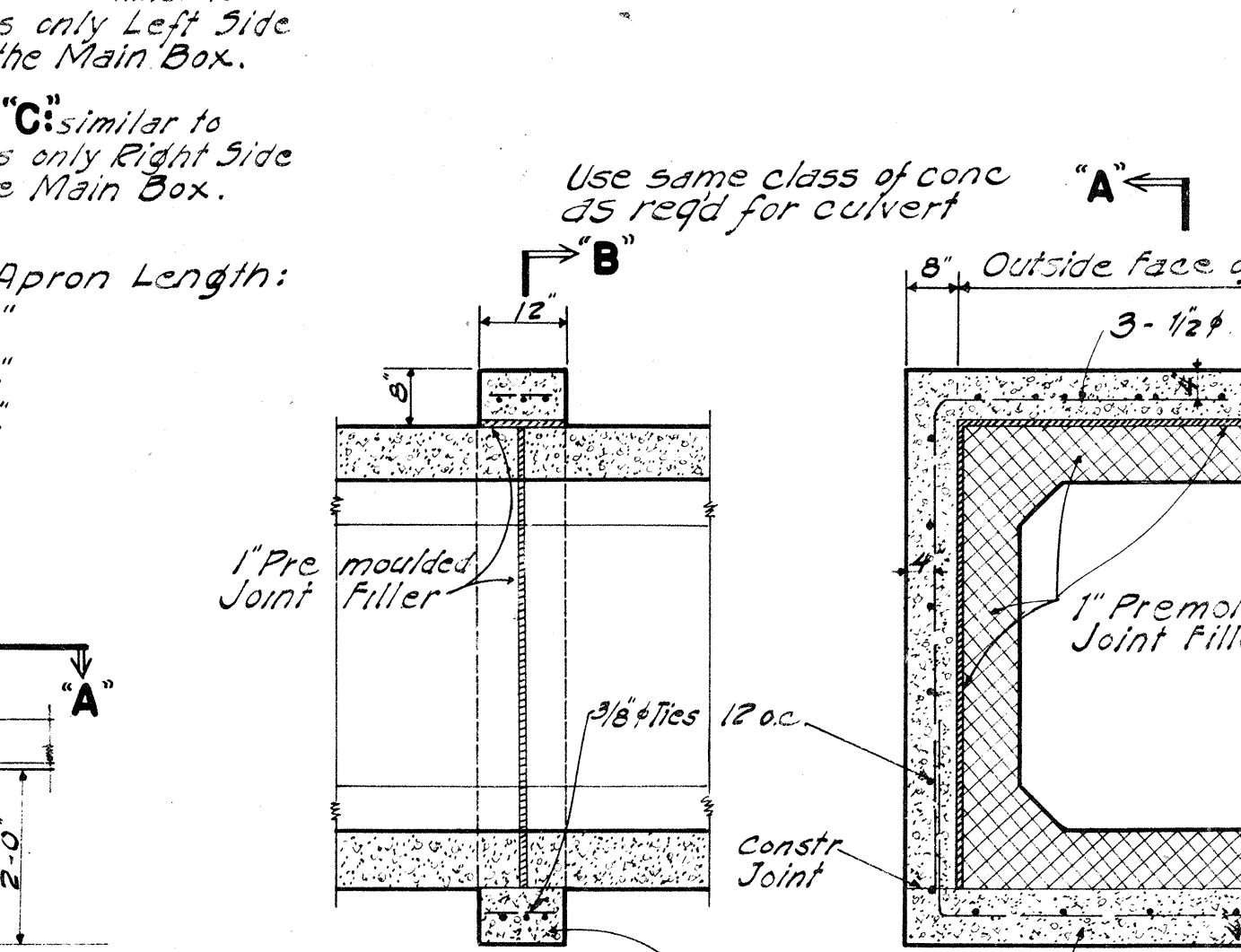
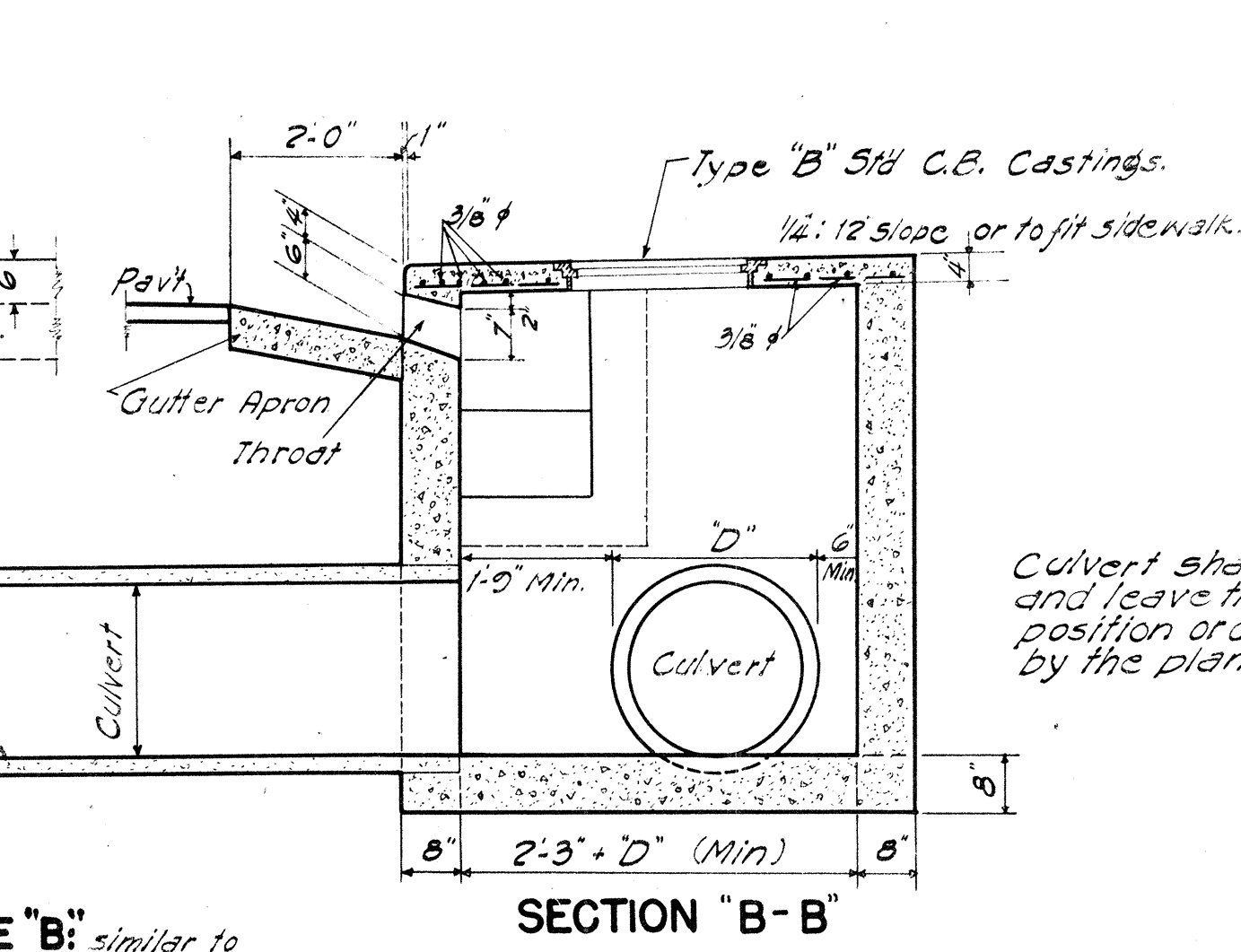


Data: Standard Drop Intake				
D	L	S	Cu. Yds.	Where Variable Equals
22 1/2"	18"	2'-0"	1.10	4'-6"
24"	24"	2'-6"	1.33	5'-0"
26 1/2"	30"	3'-0"	1.79	5'-6"
28"	36"	3'-6"	2.07	6'-0"

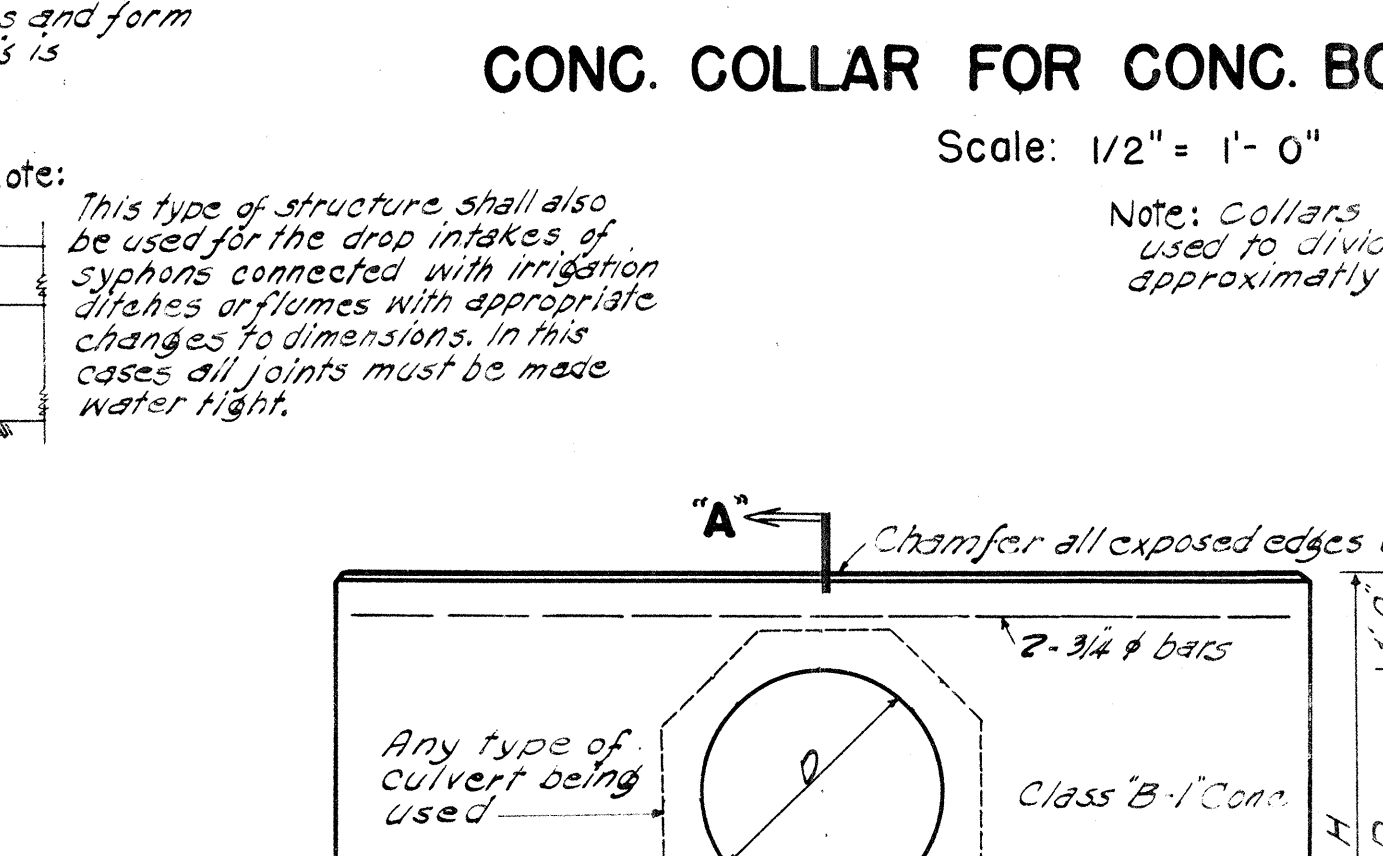
Note: Dimensions X is assumed as 2'-4" in figuring the above quantities.

Where drainage comes from both sides lower this wall to same elevation as shown for opposite wall.

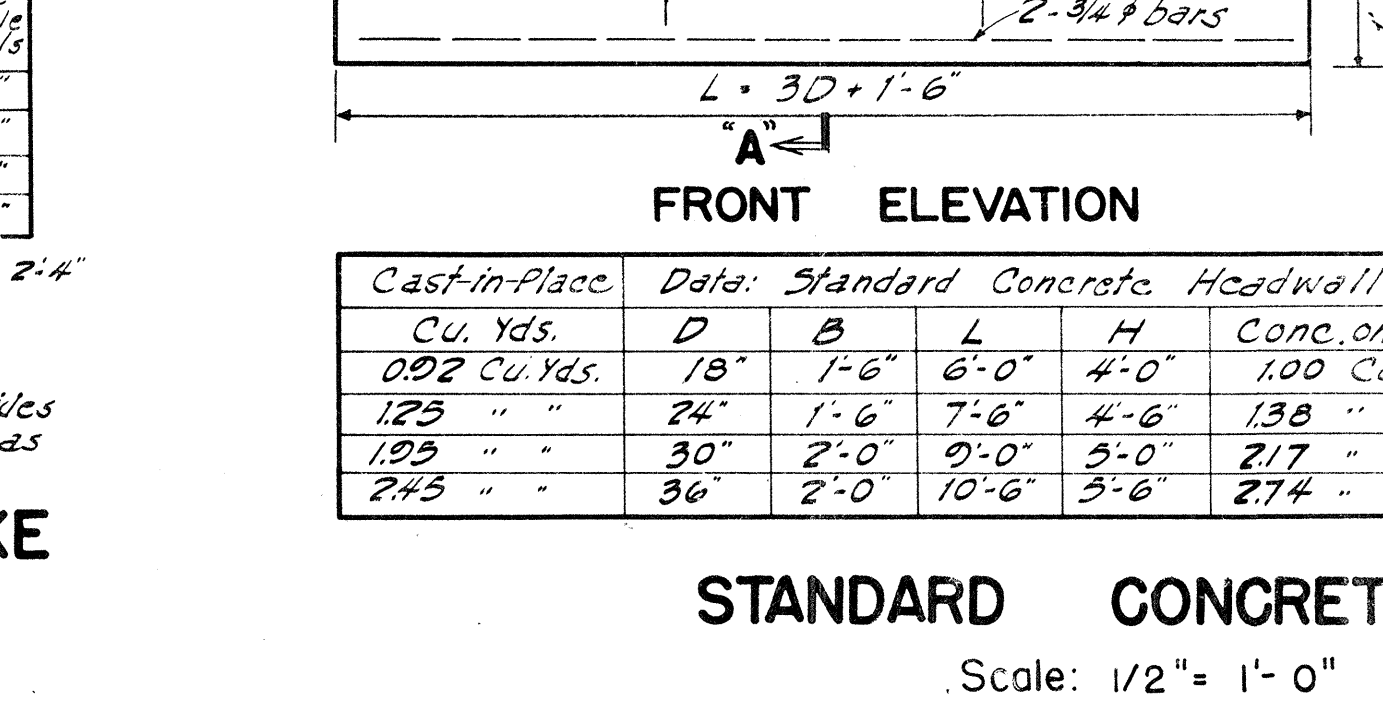
STD. CONC. DROP INTAKE
Scale: 1/2" = 1'-0"



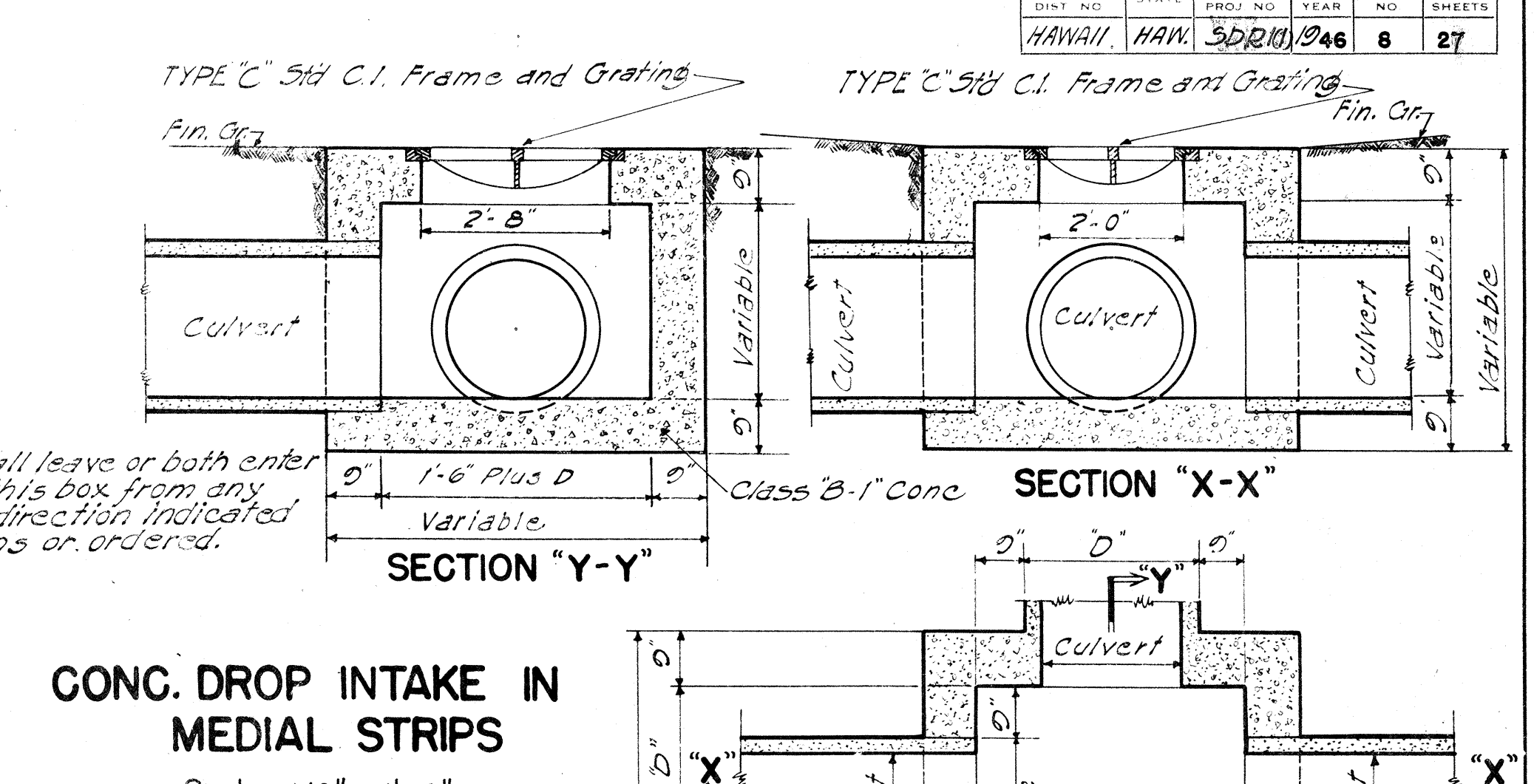
CONC. COLLAR FOR CONC. BOX CULVERT
Scale: 1/2" = 1'-0"



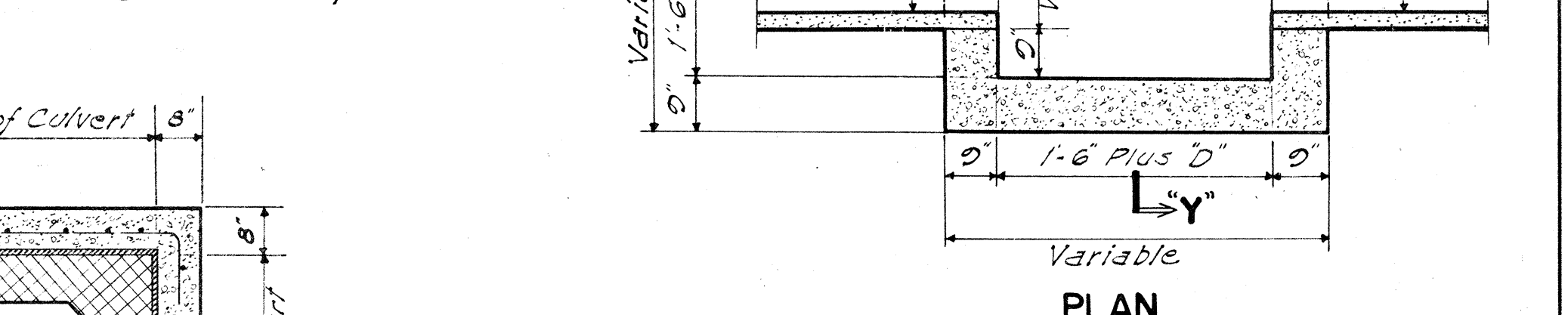
FRONT ELEVATION
Scale: 1/2" = 1'-0"



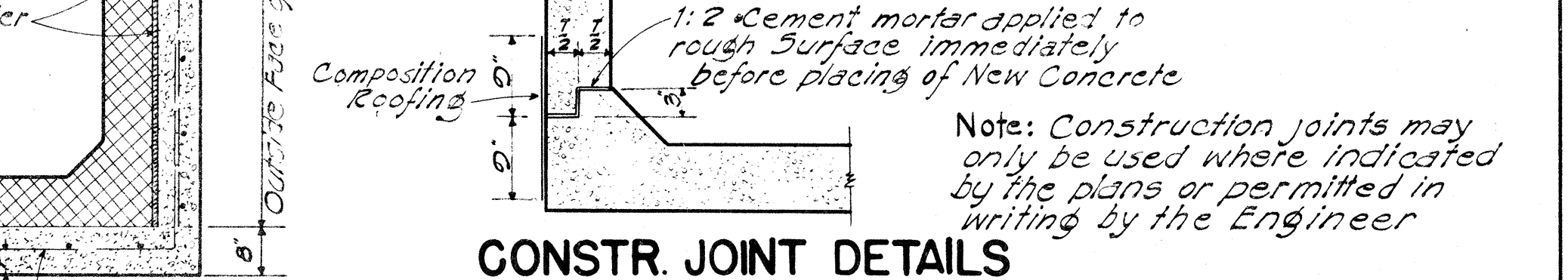
STANDARD CONCRETE HEADWALL
Scale: 1/2" = 1'-0"



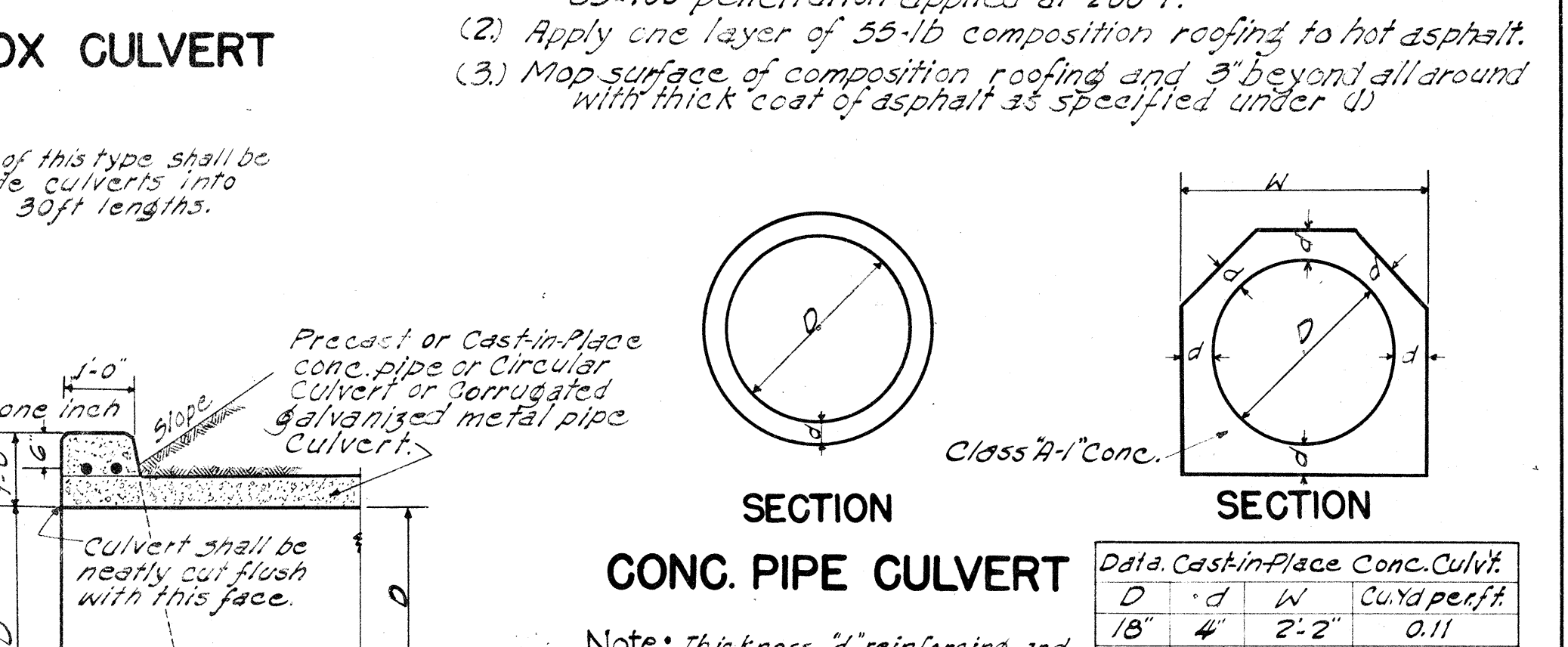
CONC. DROP INTAKE IN MEDIAL STRIPS
Scale: 1/2" = 1'-0"



CONSTR. JOINT DETAILS



CONC. PIPE CULVERT



CAST-IN-PLACE CONC. CULVERT

Data: Cast-in-Place Conc. Culvert									
D	d	W	Cu. Yds. per ft.						
18"	4"	2'-2"	0.11						
24"	4 1/2"	2'-0"	0.14						
30"	5"	3'-4"	0.19						
36"	5 1/2"	3'-11"	0.26						

Note: Thickness 'd', reinforcing, and concrete used are to conform with the approved design as provided by the Specifications.