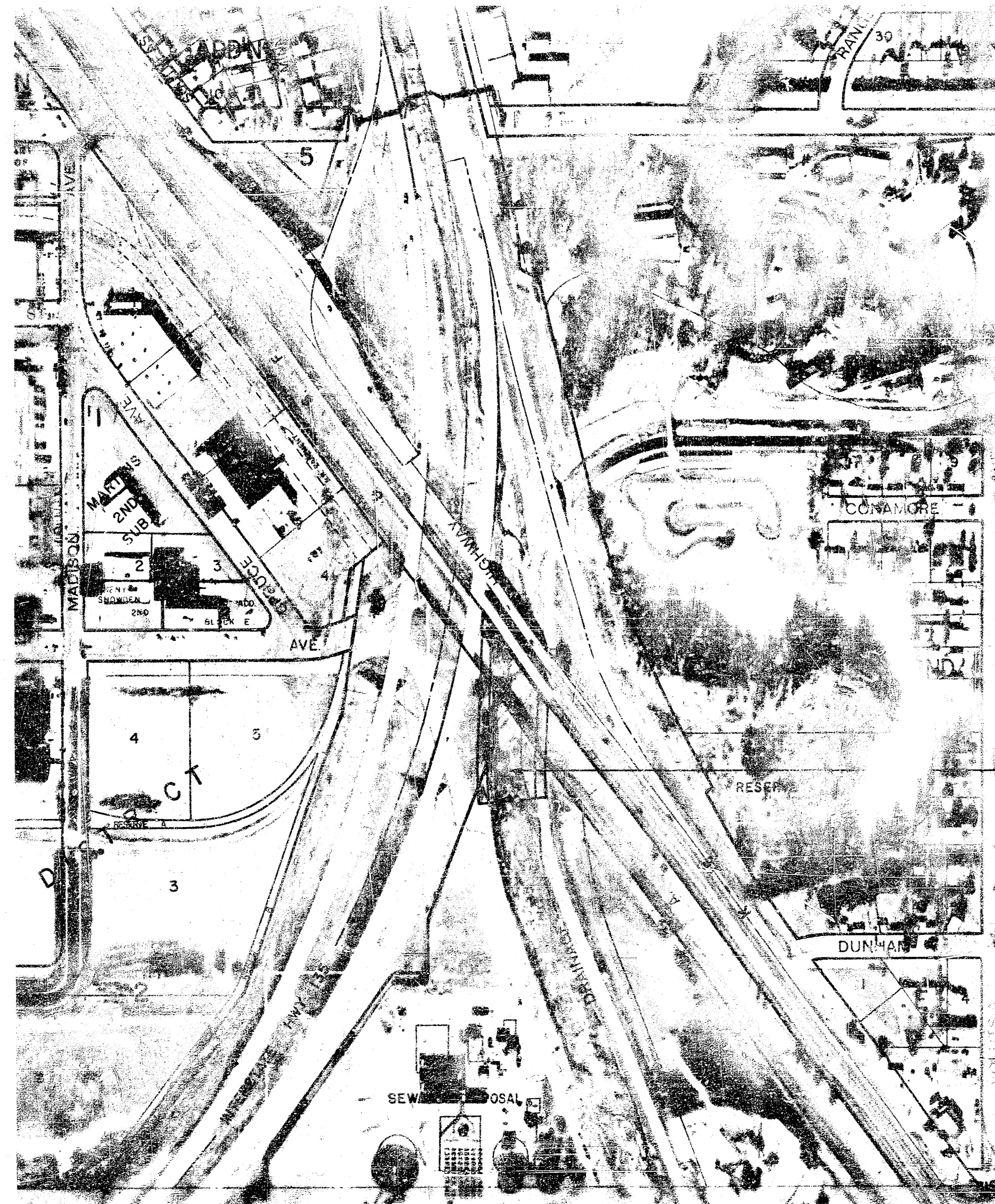


RECONSTRUCT CANAL LINING

ARKANSAS RIVER TO K-15 HIGHWAY

GENERAL NOTES

1. THE FOLLOWING ITEMS SHALL BE INCLUDED IN THE BID PRICE FOR LIN. FT. OF CANAL LINING: ANY NECESSARY PIPE, CONCRETE BOX STRUCTURE, HEADWALLS, FLAP GATES, UNDERDRAIN, DRAIN MATERIAL AND 6" FILTER BLANKET.
2. LUMP SUM CLEARING RIGHT-OF-WAY SHALL INCLUDE ANY AND ALL ITEMS WHOSE REMOVAL IS NECESSARY TO CONSTRUCT PROJECT.
3. POWER POLE TO BE RELOCATED BY "OTHERS".
4. FIELD ENGINEER SHALL TAKE CROSS-SECTIONS BEFORE AND AFTER CONSTRUCTION. THESE CROSS-SECTIONS SHALL BE USED TO DETERMINE FINAL PAY QUANTITIES FOR EARTHWORK.
5. COST OF PROVIDING SITE PROTECTION DURING CONSTRUCTION, (I.E., DEMATERING, COFFERDAM, PUMPING, ETC.), SHALL BE INCIDENTAL TO PROJECT.
6. CONTRACTOR IS TO CONTACT DAVID STONE, DIRECTOR OF OPERATIONS AND MAINTENANCE AT 268-4422 FOR DISPOSAL OF ALL EXCESS MATERIAL AT CHAPIN LANDFILL.



Index

Sheet 1	Cover Sheet
Sheet 2	Plan & Profile
Sheet 3	Canal Lining Detail
Sheet 4	Outfall Structures
Sheet 5	Std. RC Manholes
Sheet 6	Underdrain Details
Sheet 7	Contraction Joint
Sheet 8,9	X-Sections

Construct Concrete Lining to connect existing linings

R.W. BRUGGEMAN, DIRECTOR OF ENGINEERING /
CITY ENGINEER

CITY OF WICHITA, KANSAS

PROJECT NO. 468 76 245 81104 000 000 001

DATE: _____

ST. SO.

1/9

Sta. 161+80, Install Transverse Pipe Underdrain; Junction Manhole at E with 1 Pipe Plug; Outlet Manhole at 61' Lt. & Rt. with 2 Flap Gate & 1 Pipe Plug; Flowline at E. El. 70.75
Remove Wood Stoppers in Existing Underdrain Pipes

Sta. 163+66, Remove Existy R.C. Box Constr. New R.C. Box and Headwall for double 30" RCP See Sheet 4, 5

Install Underdrain Pipes

Sta. 165+29.88 Match Existing Lining. Remove Wooden Plug in existing underdrain pipes.

Sta. 163+10, Constr. 24" RCP Storm drain w/ Headwall & Flap gate, See Sheet 4

Curve Data
 P.C. Sta. 158+92.17
 P.T. Sta. 162+73.90
 $\Delta = 24^{\circ} 48' 44''$
 $D = 6^{\circ} 30'$
 $L = 381.73$
 $R = 881.47$
 $T = 193.90$

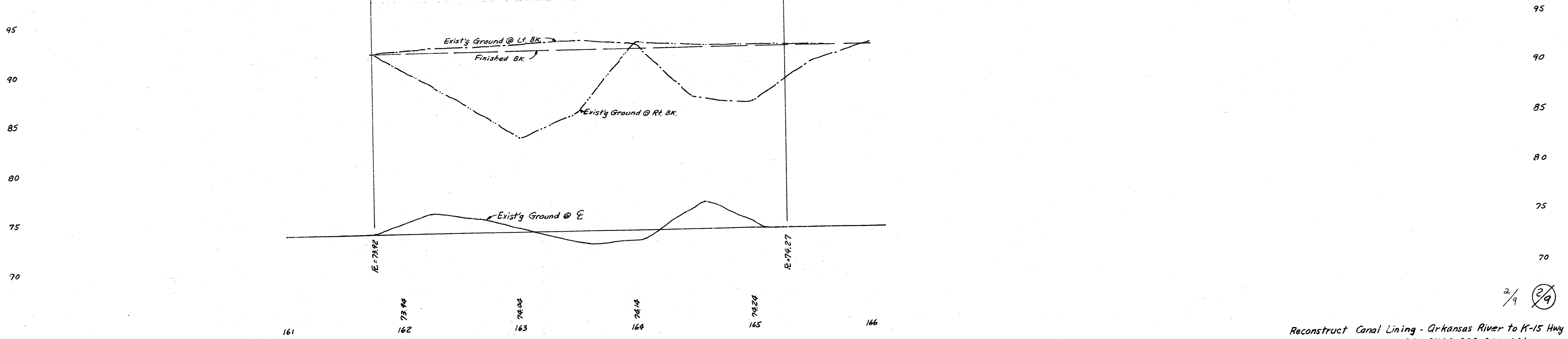
For this Project
 Beginning Sta. 161+75
 P.T. Sta. 162+73.90
 $\Delta = 6^{\circ} 25' 43''$
 $D = 6^{\circ} 30'$
 $L = 98.9$
 $R = 881.47$
 $T = 49.50$

Scale: Plan 1" = 40'
 Profile 1" = 40' Horiz.
 1" = 5' Vert.

B.M. 93.068 City Std. B.M. Disc, Hydraulic & Wassall, 42 ft. S. & 43.8 ft. E of E Both
 B.M. 93.28 M in Mueller Fire Hydrant @ SW Cor. Madison & Wassall

*Note: PF to be relocated by others.

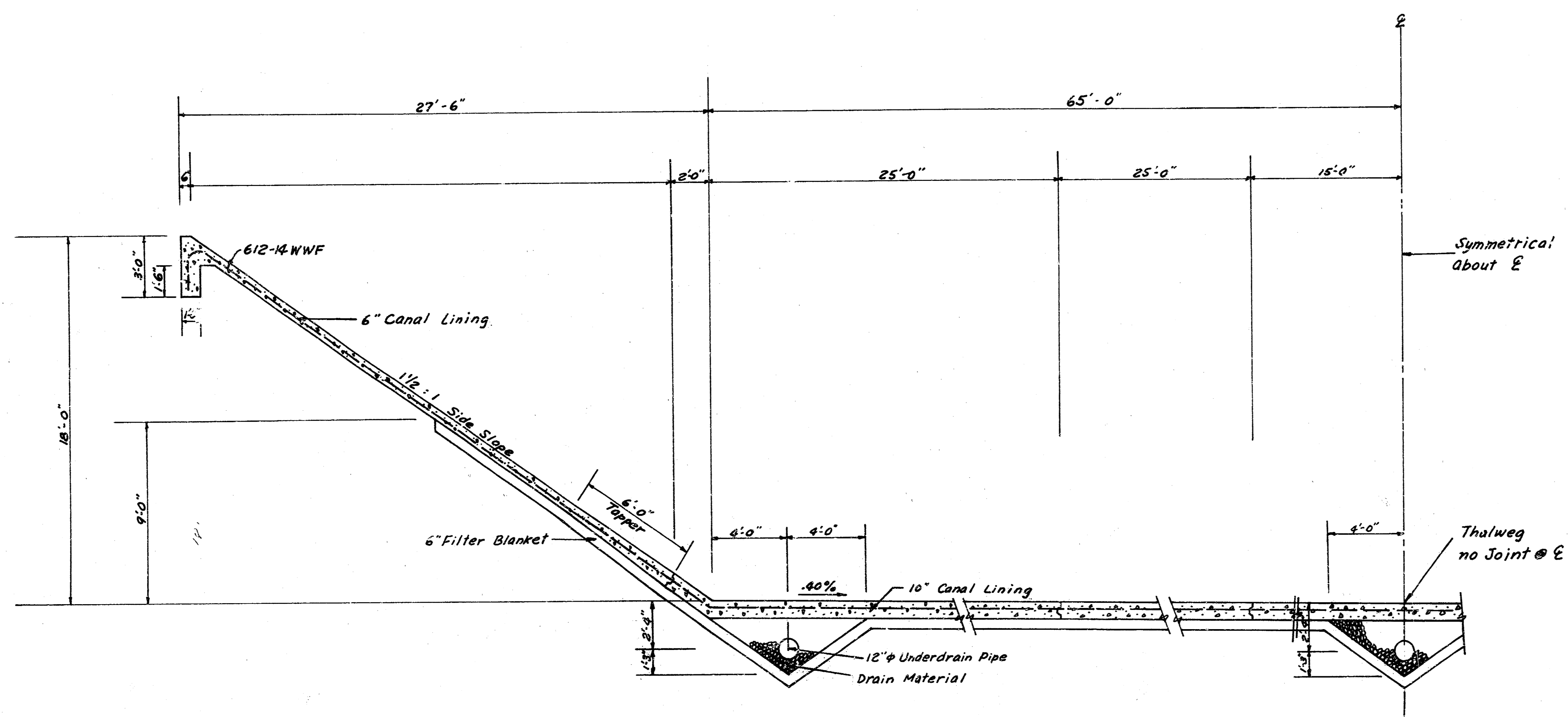
Constr. 355 LF of Concrete Lined Canal @ 0.10%
 bottom width = 130', 1 1/2 : 1 side slope



2/9 (29)

Reconstruct Canal Lining - Arkansas River to K-15 Hwy
 Project No: 468-76-245-81104-000-001

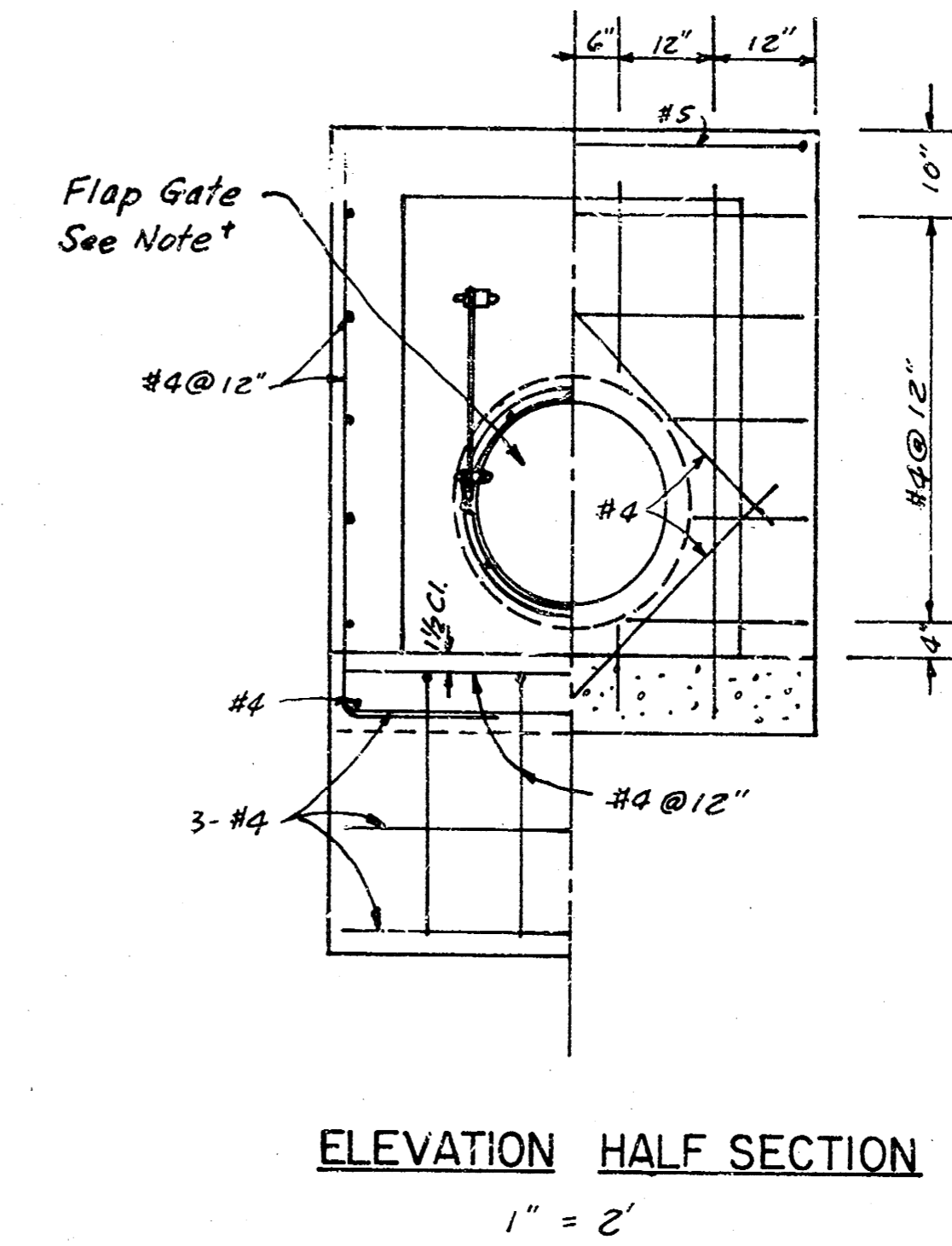
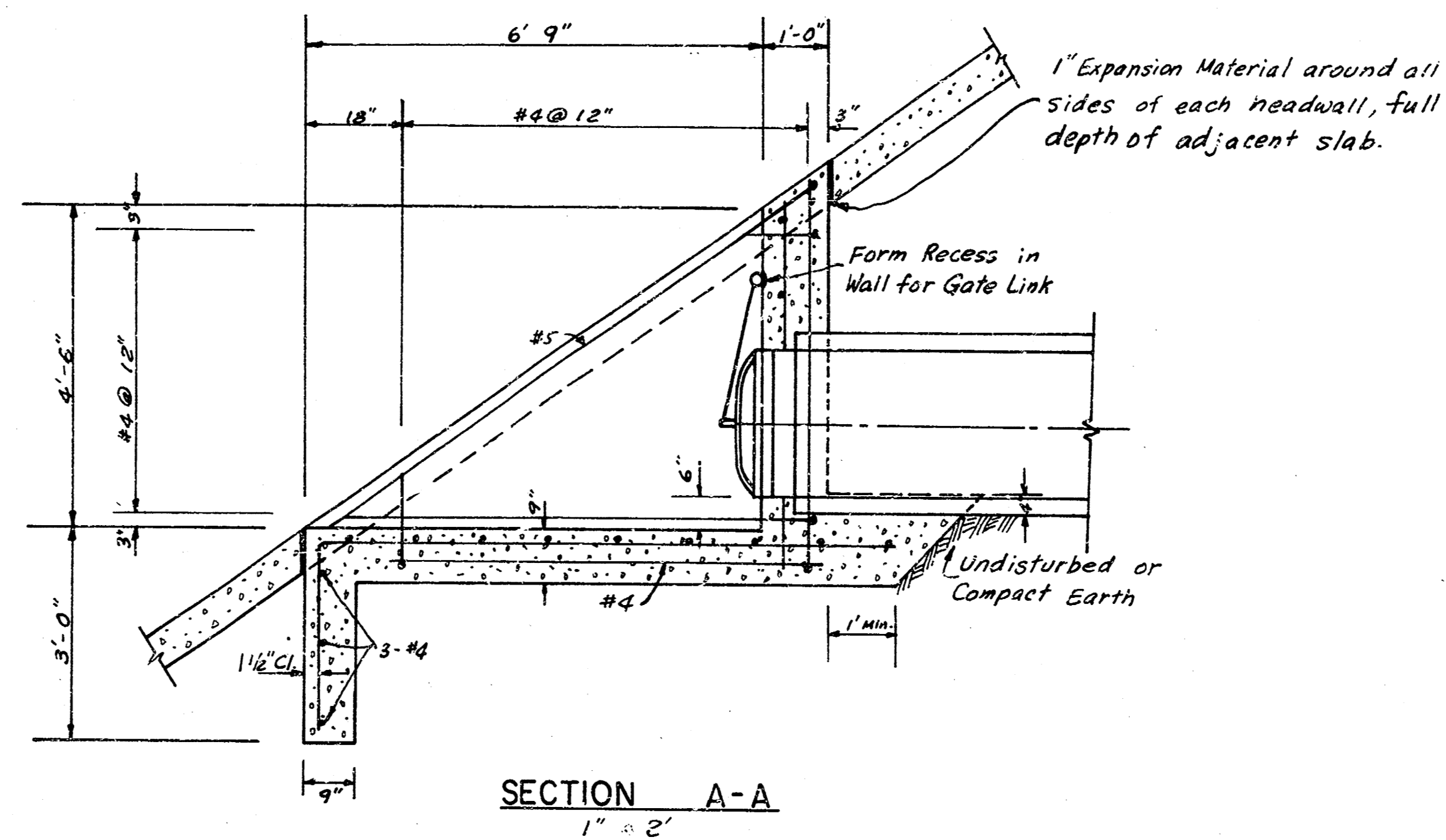
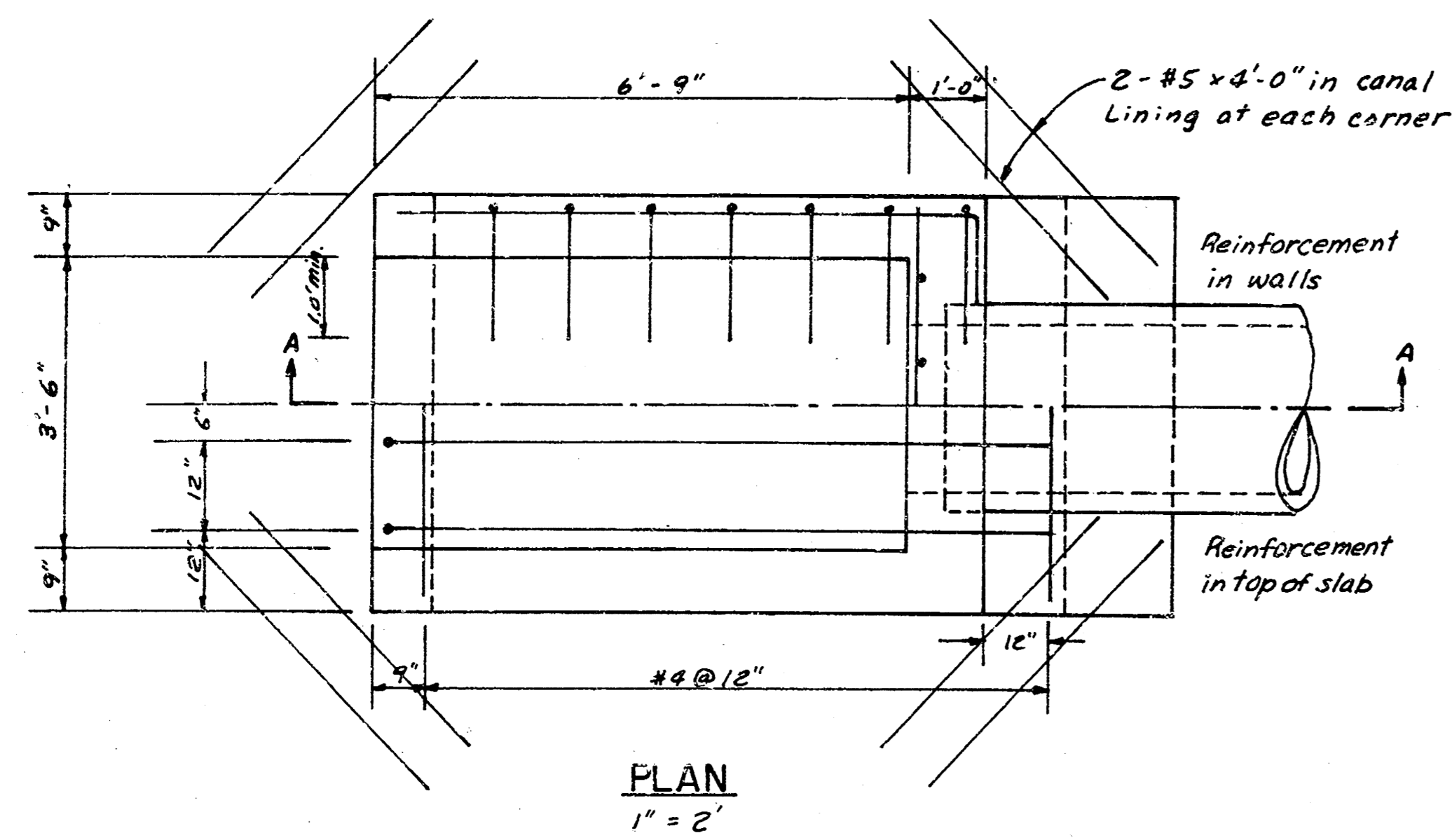
FILMED FROM THE BEST AVAILABLE COPY



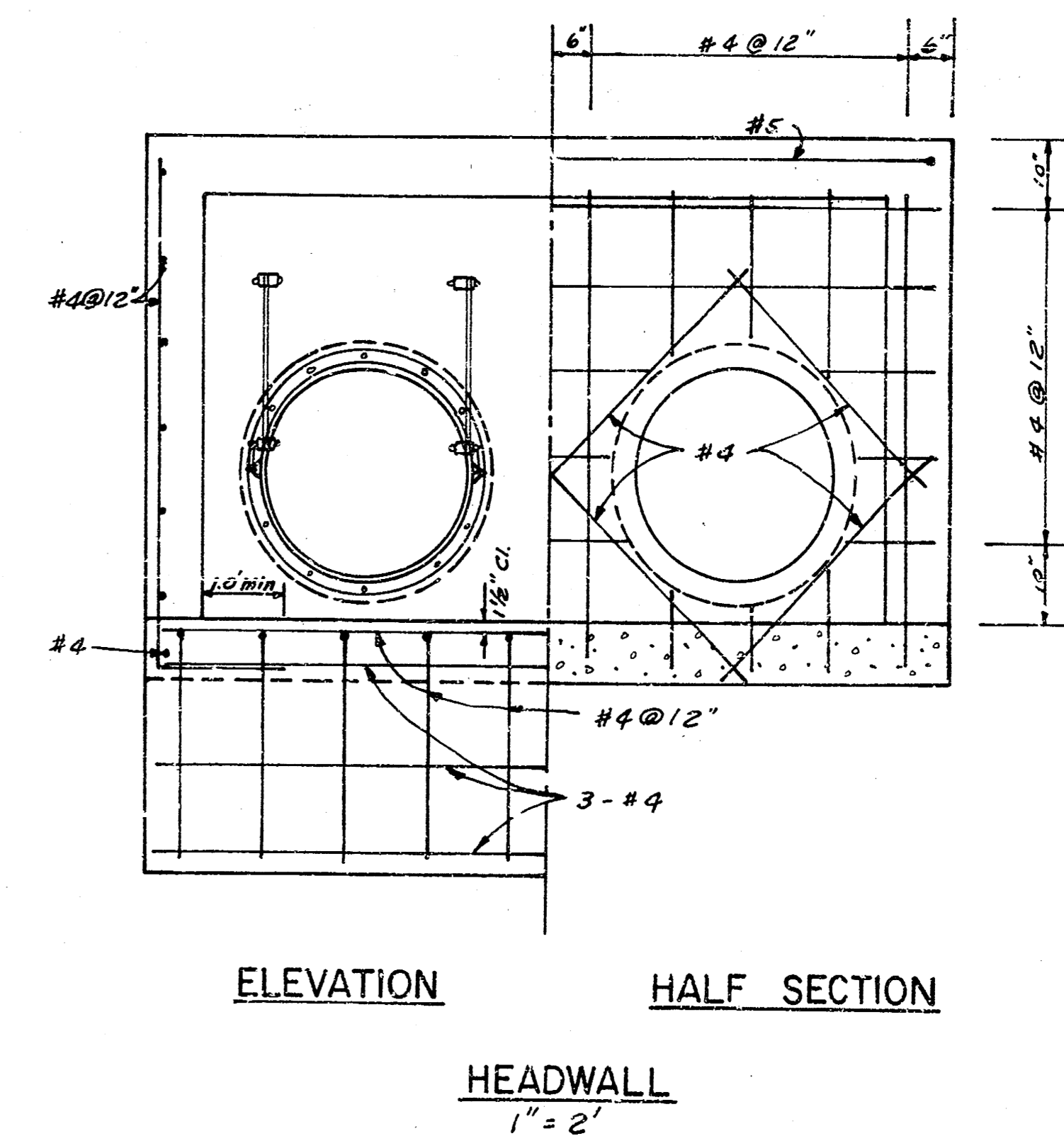
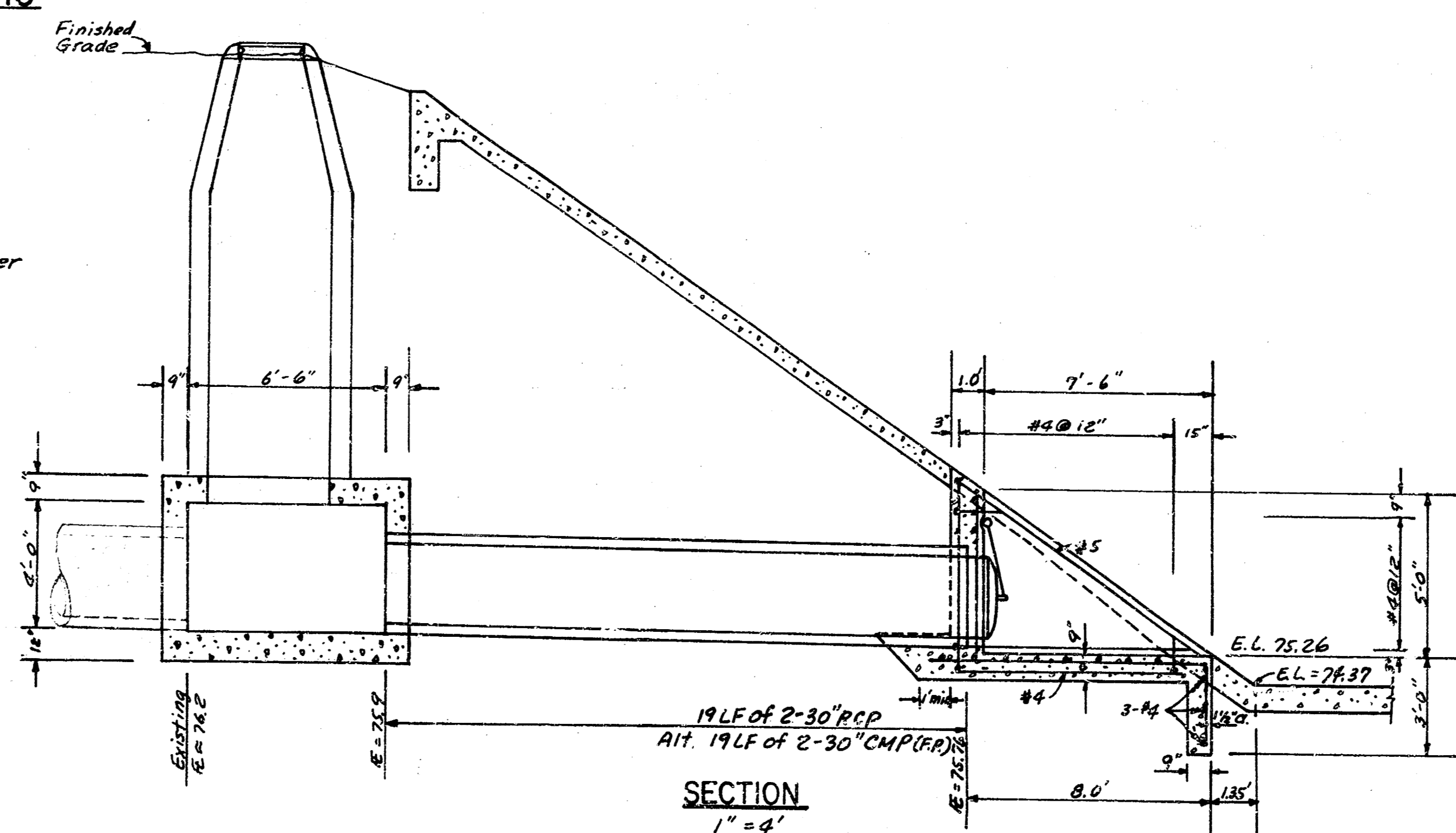
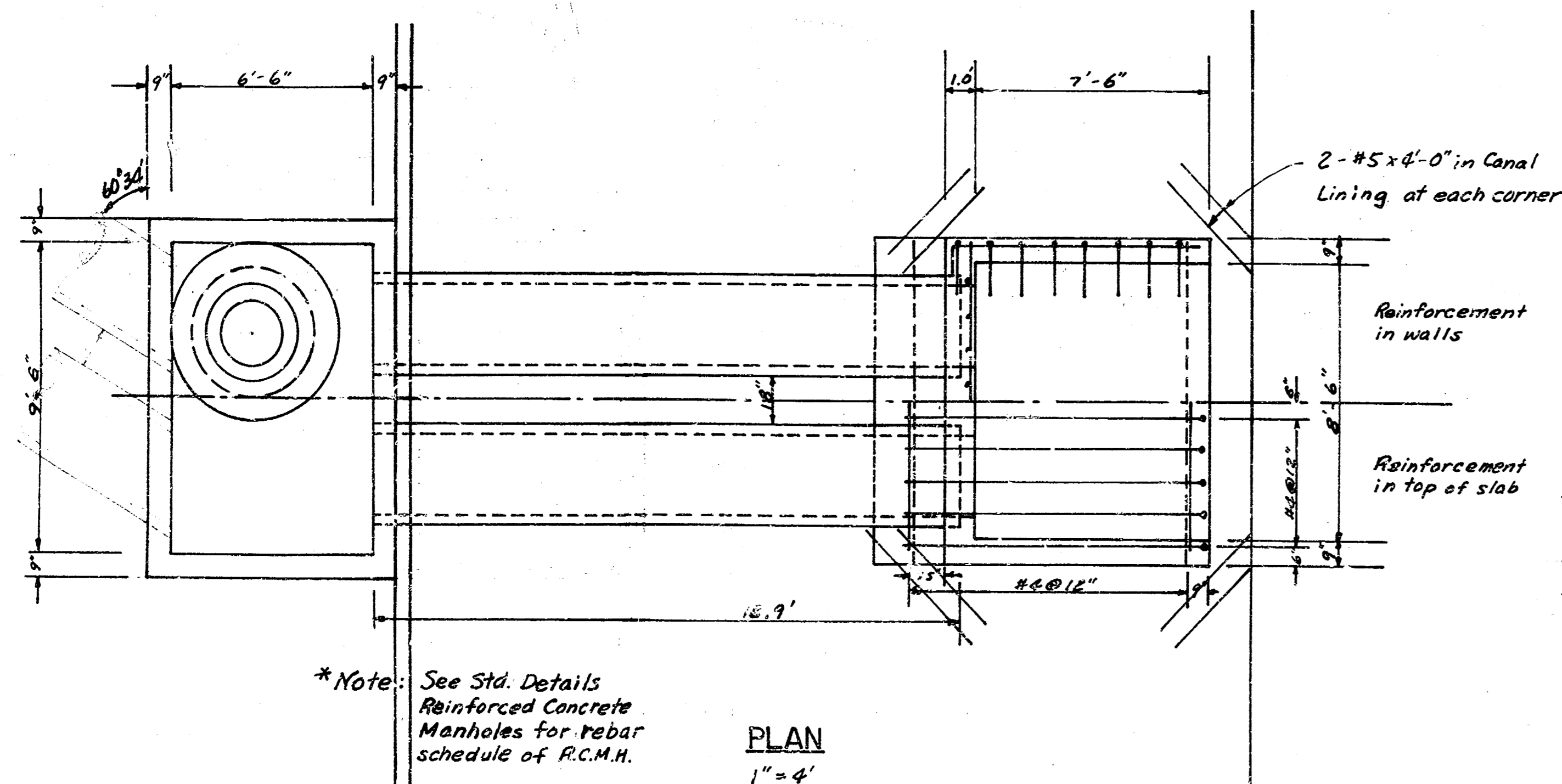
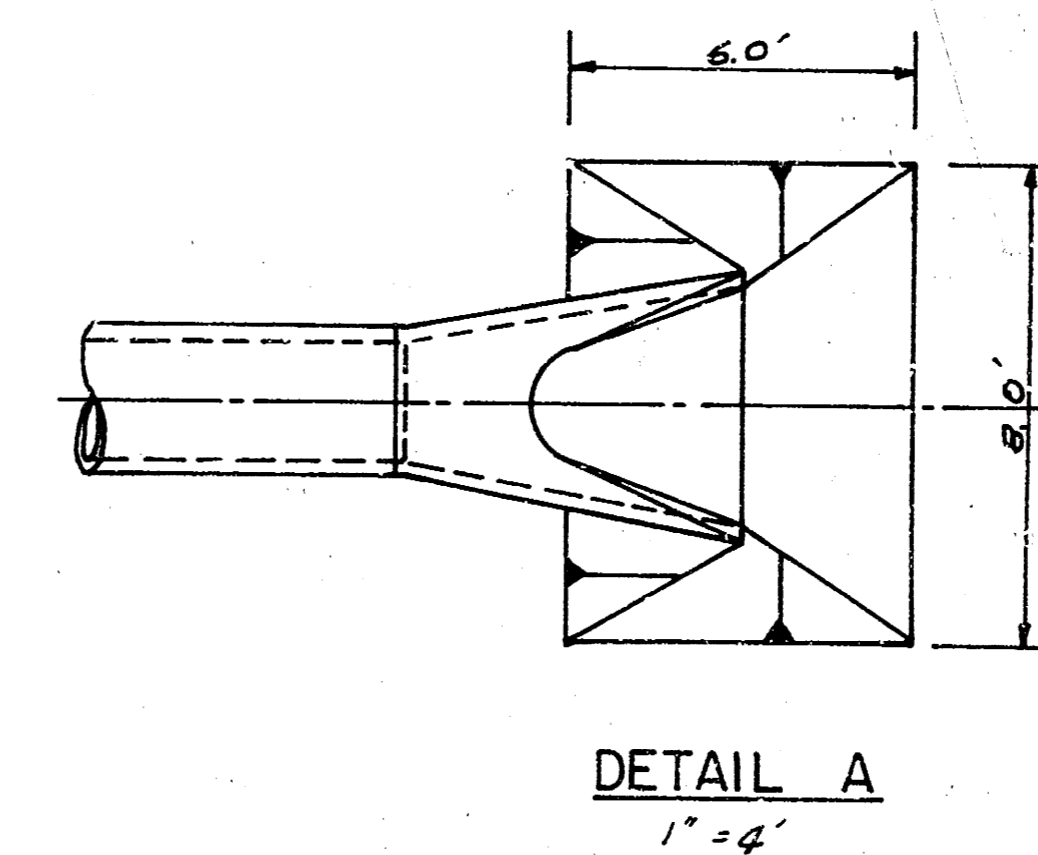
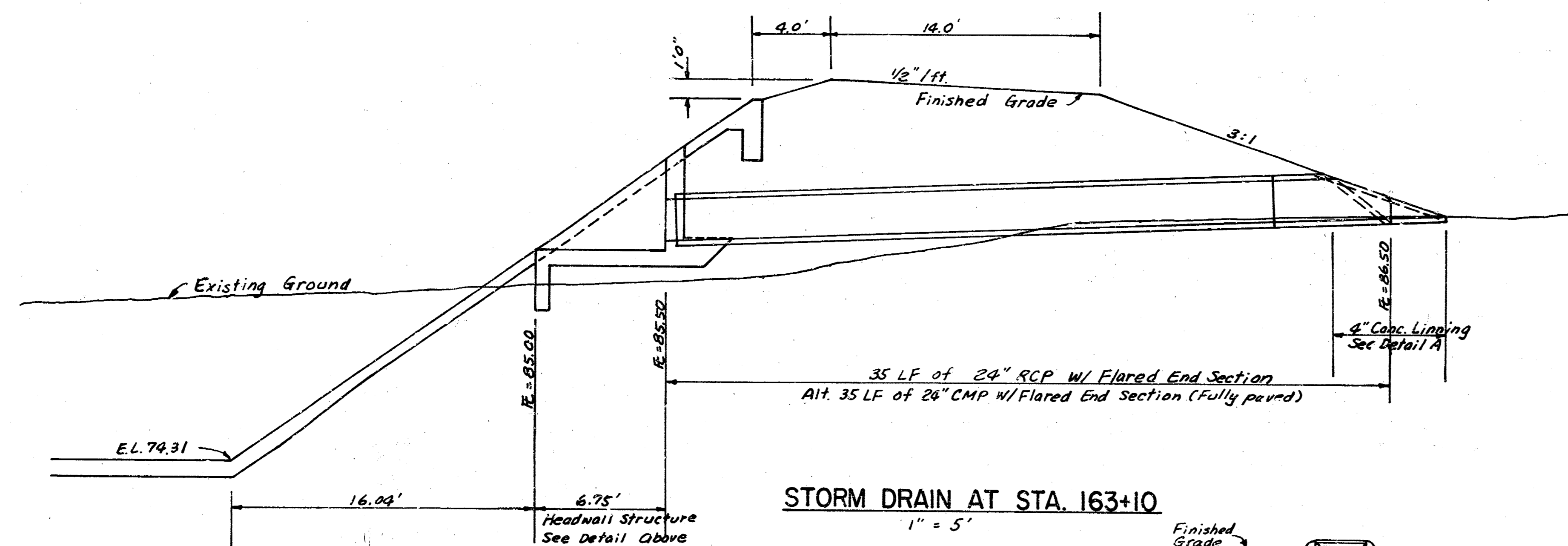
CANAL LINING DETAIL

Scale: 1" = 4'-0"

HEADWALL STRUCTURE AT STA. 163+10



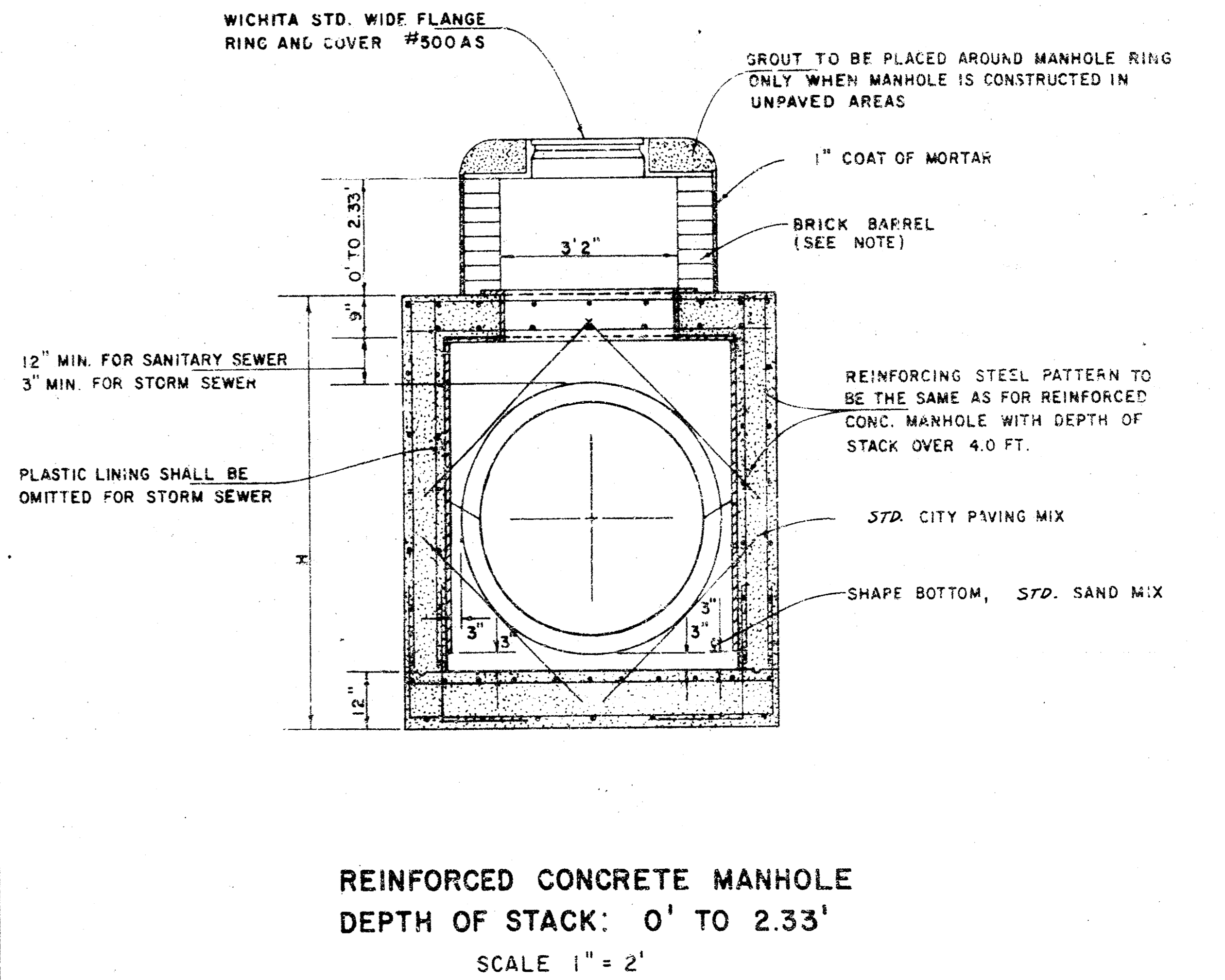
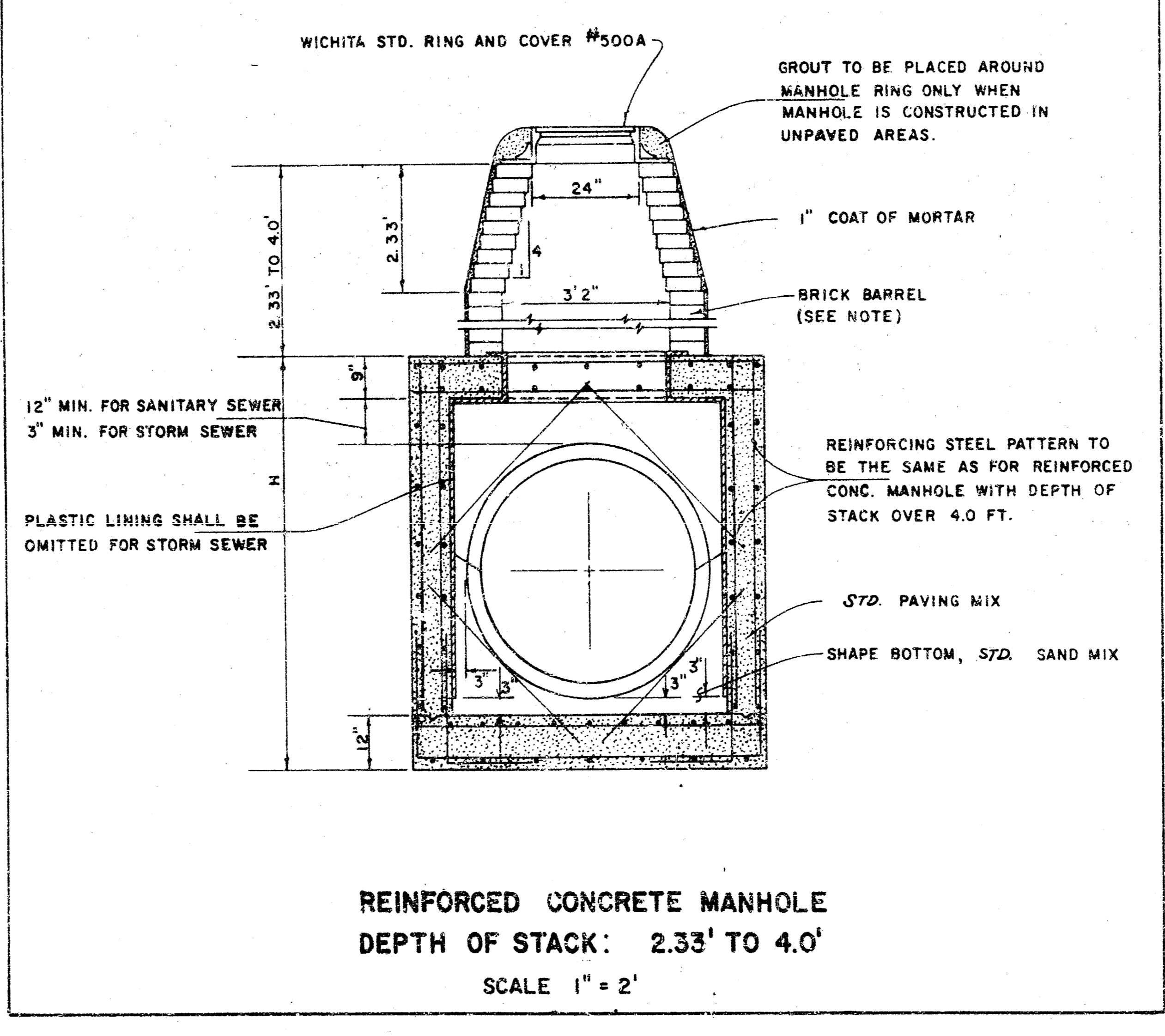
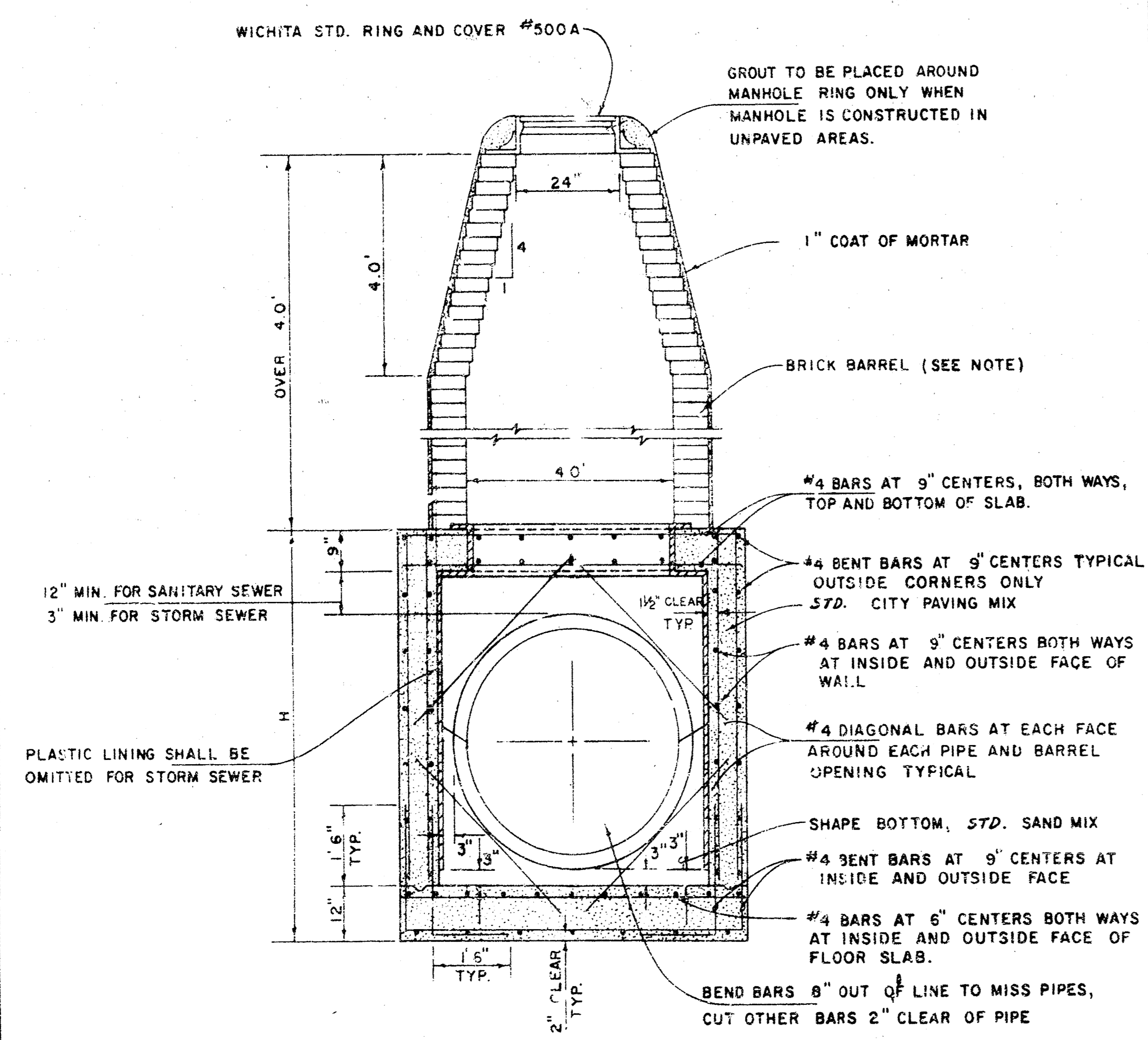
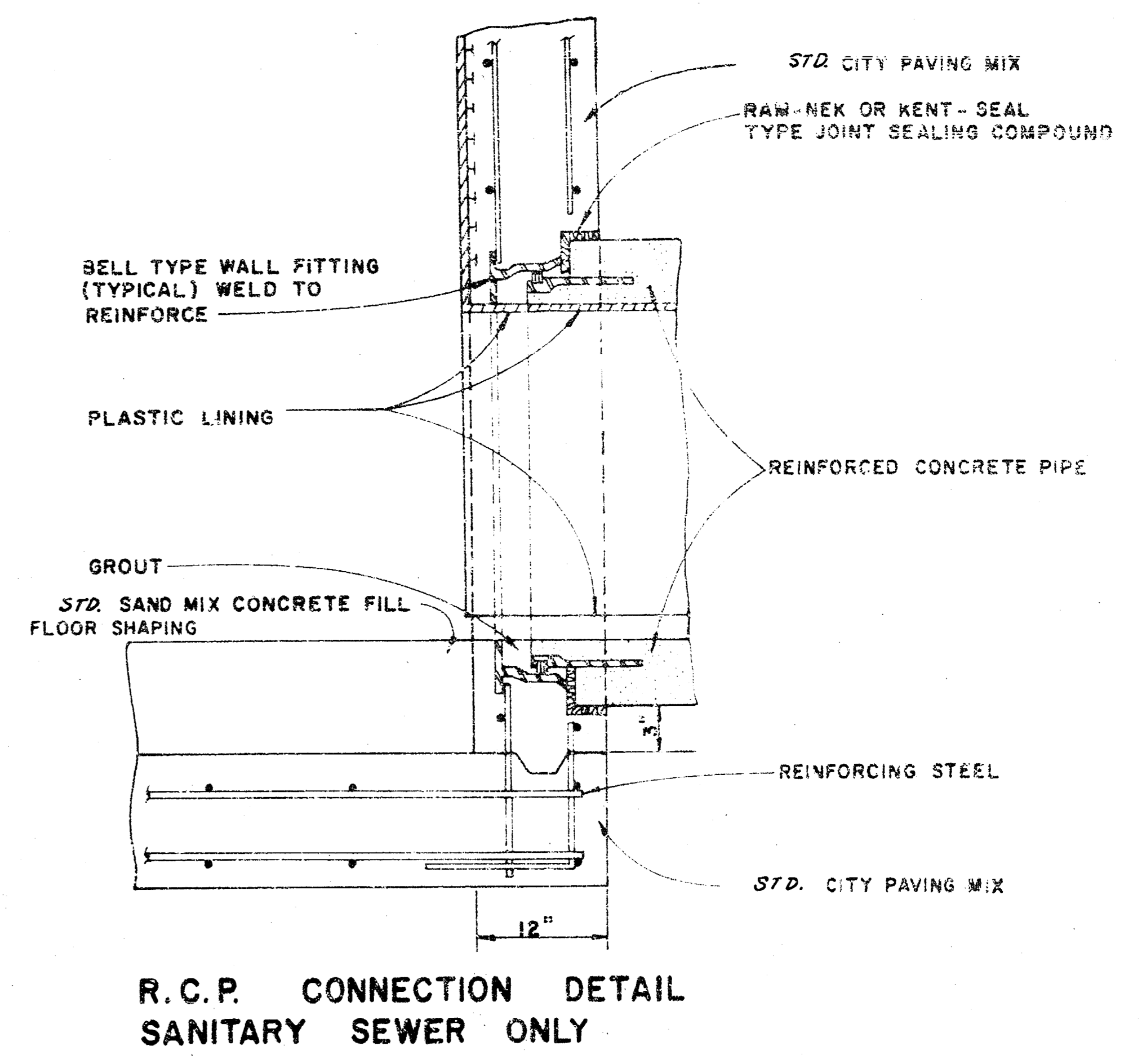
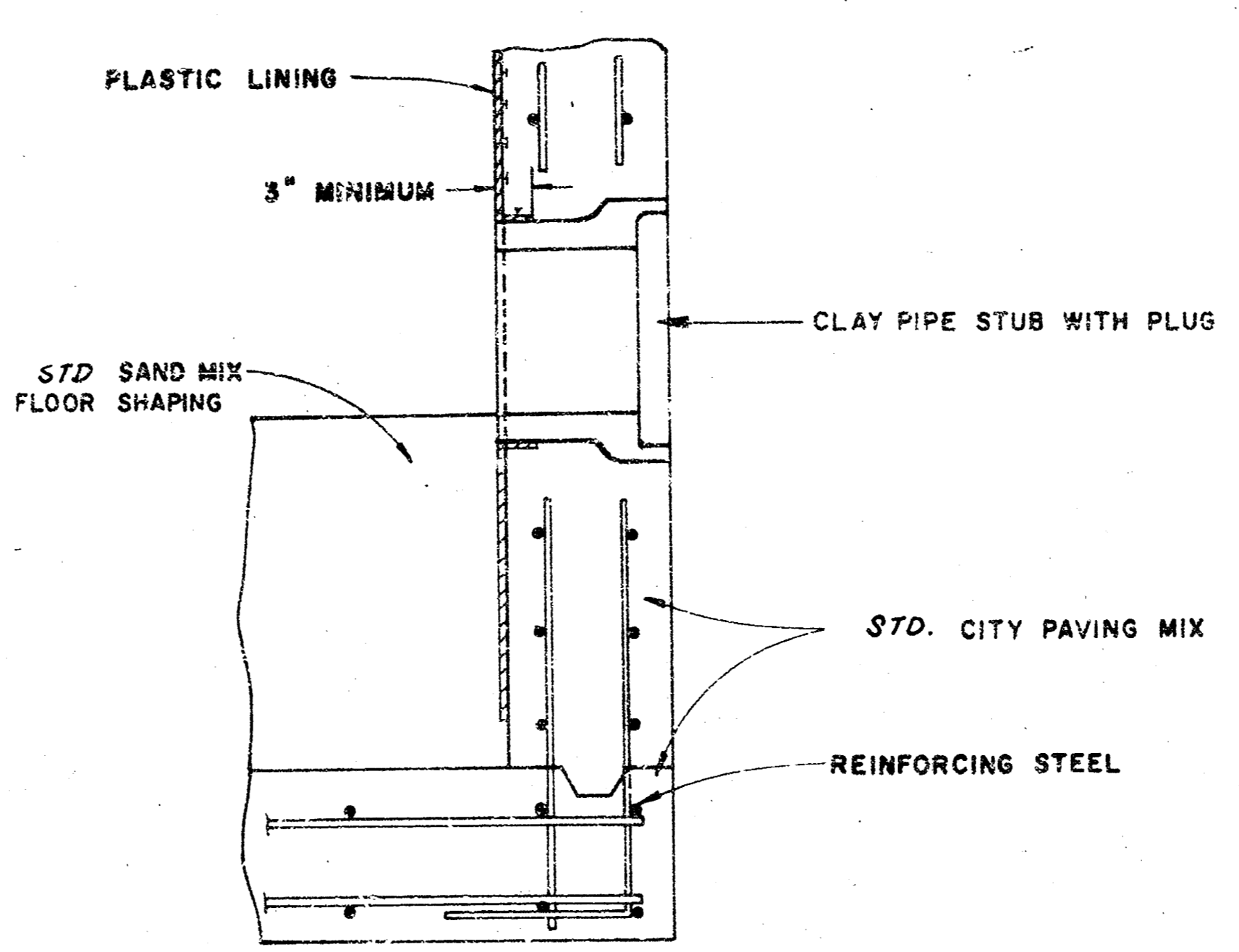
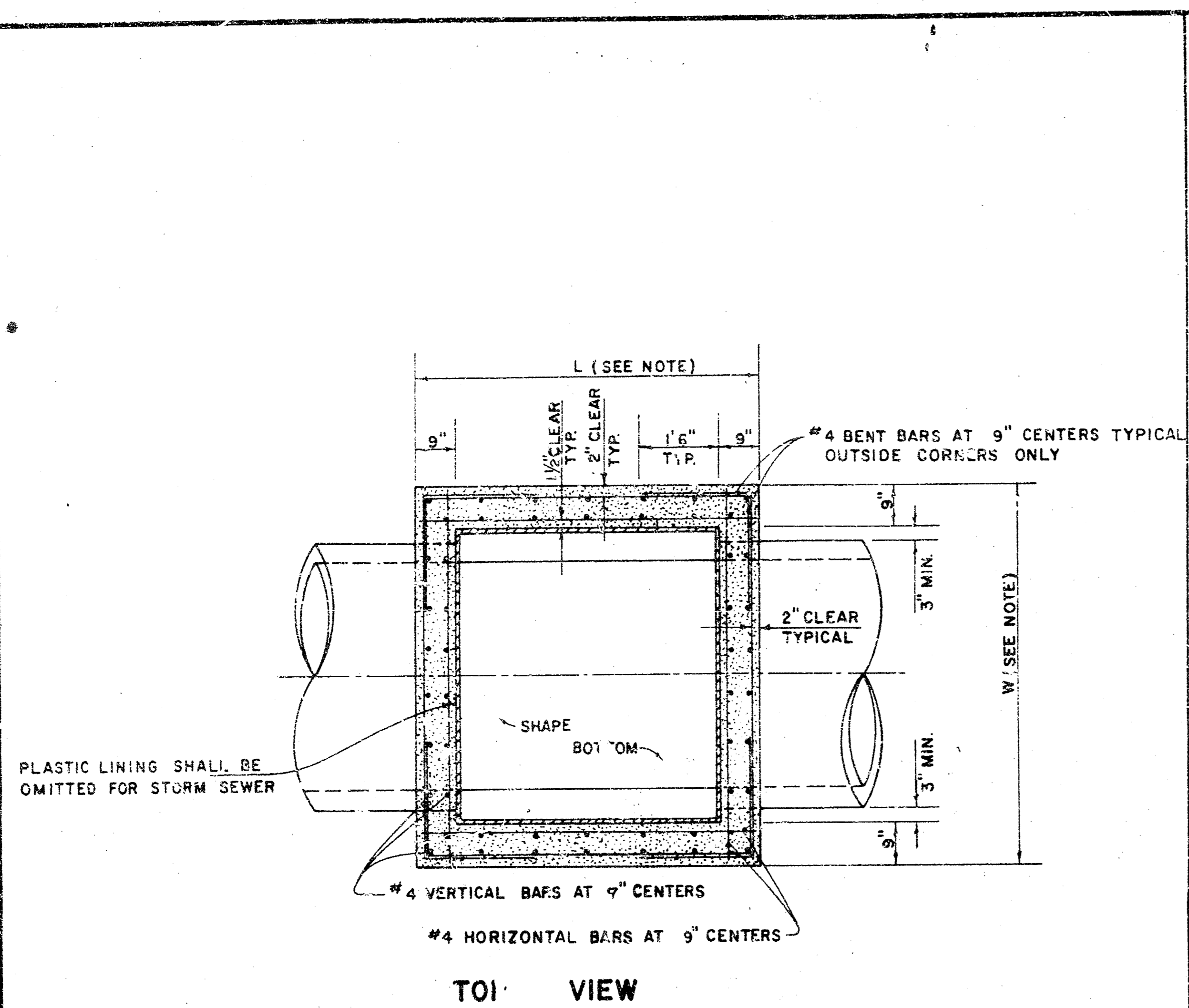
Note* The Gate Flap, frame and links shall be cast iron. Anchor bolts, assembly bolts and nuts shall be galvanized steel.
The gate shall be designed to withstand an operating head of twenty (20) feet of water on the check side measured from the center line of the gate to the high water level. The gate shall be installed in accordance with manufacturer's recommendations.
Gates to have one shopcoat of zinc dust paint followed with two field coats of aluminum paint.



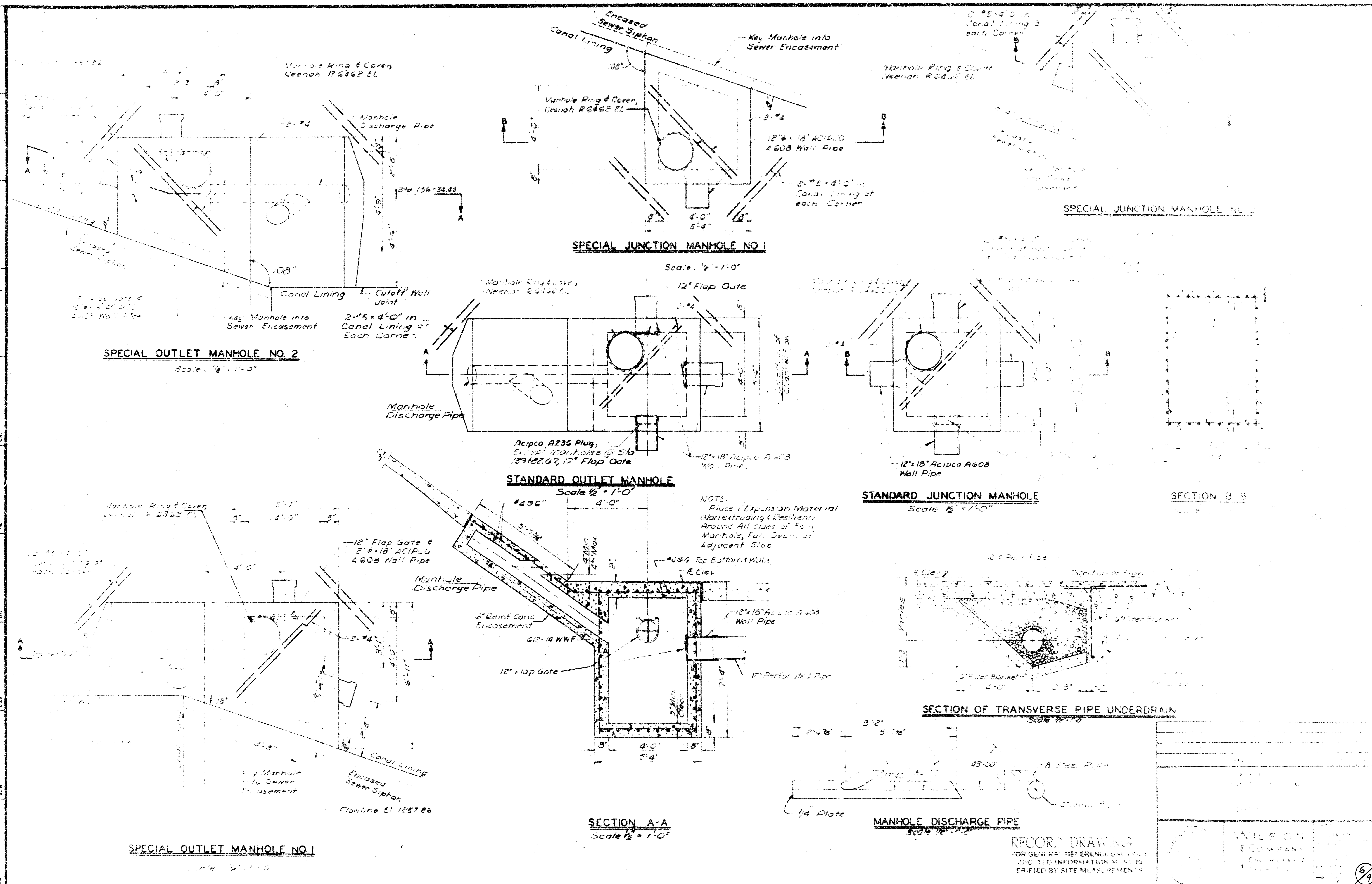
*Note: See Std. Details Reinforced Concrete Manholes for rebar schedule of R.C.M.H.

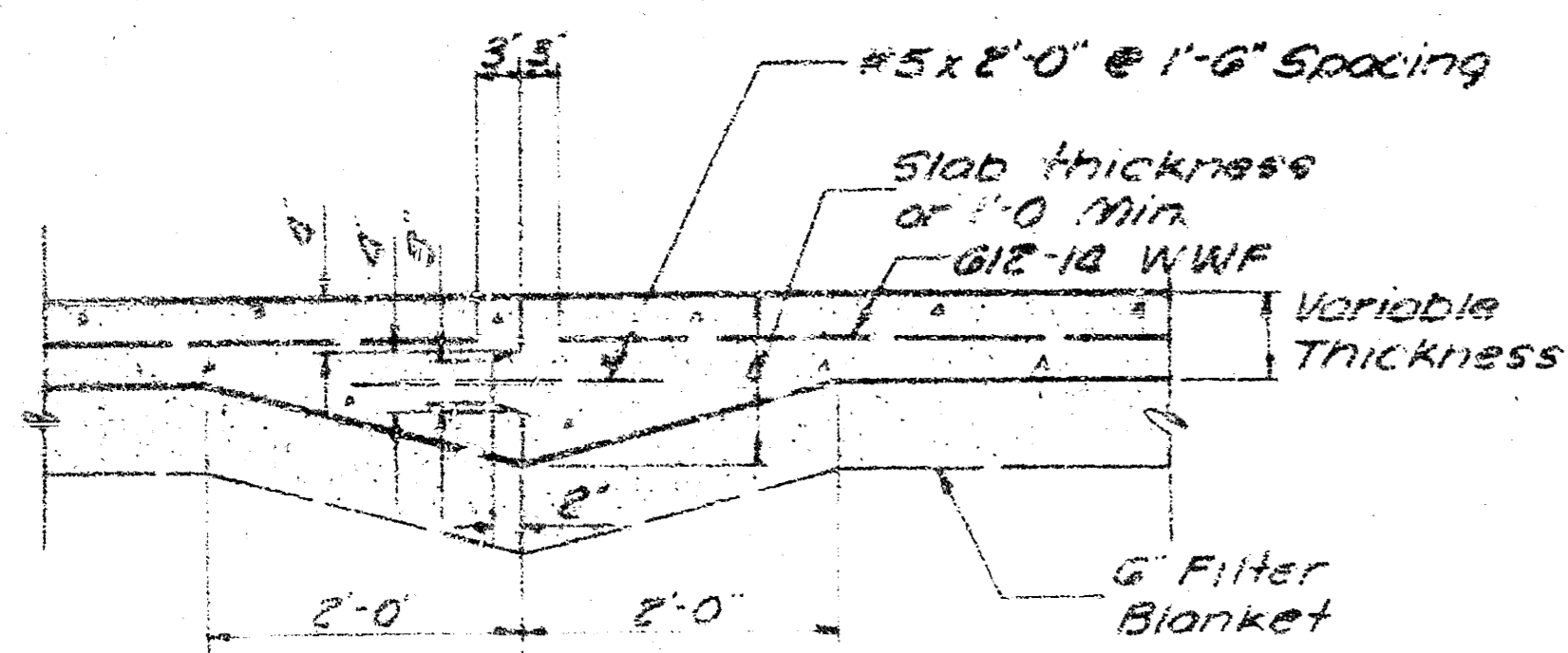
RC MANHOLE & OUTFALL STRUCTURE AT STA. 163+66

DETAILS OF OUTLET STRUCTURES
RECONSTRUCT CANAL LINING ARKR TO K-15

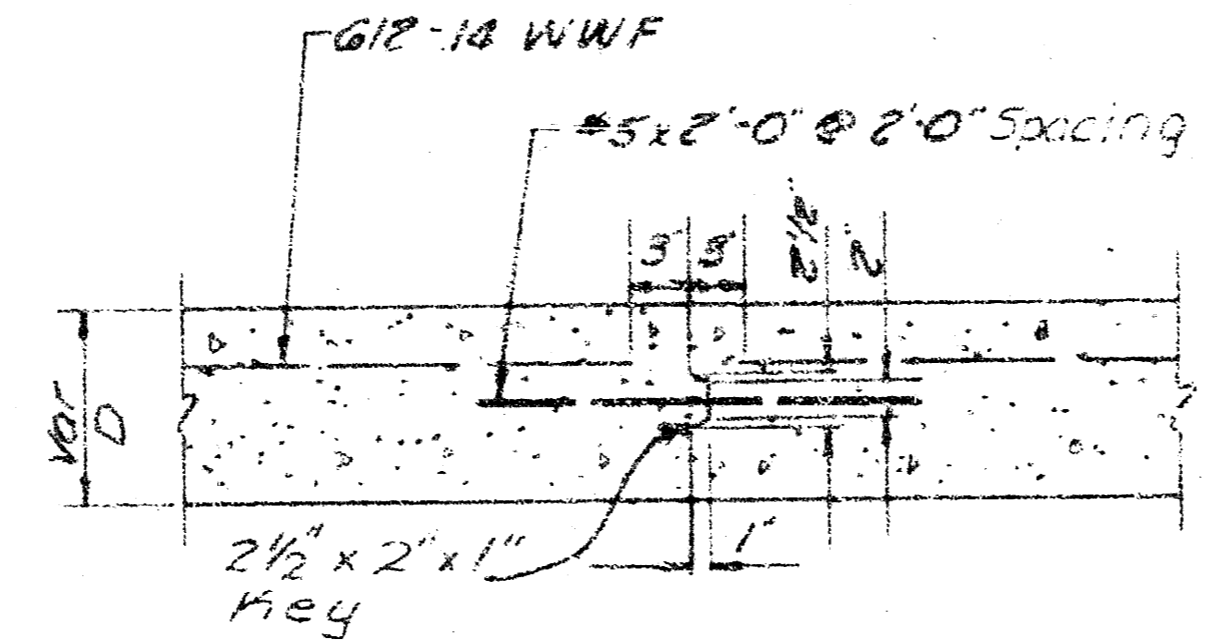


NOTE:
BRICK BARRELS LESS THEN 16' DEEP SHALL HAVE 8" WALLS EXCEPT WHEN LOCATED WITHIN PUBLIC STREET OR ALLEY PAVEMENT THEN THE WALL SHALL BE 12". BRICK BARRELS MORE THEN 16' DEEP SHALL HAVE 12" WALLS. THE "L" AND "W" DIMENSIONS SHALL BE A MINIMUM OF 5'6" FOR BRICK BARRELS WITH 8" WALLS AND 6'2" FOR BRICK BARRELS WITH 12" WALLS.



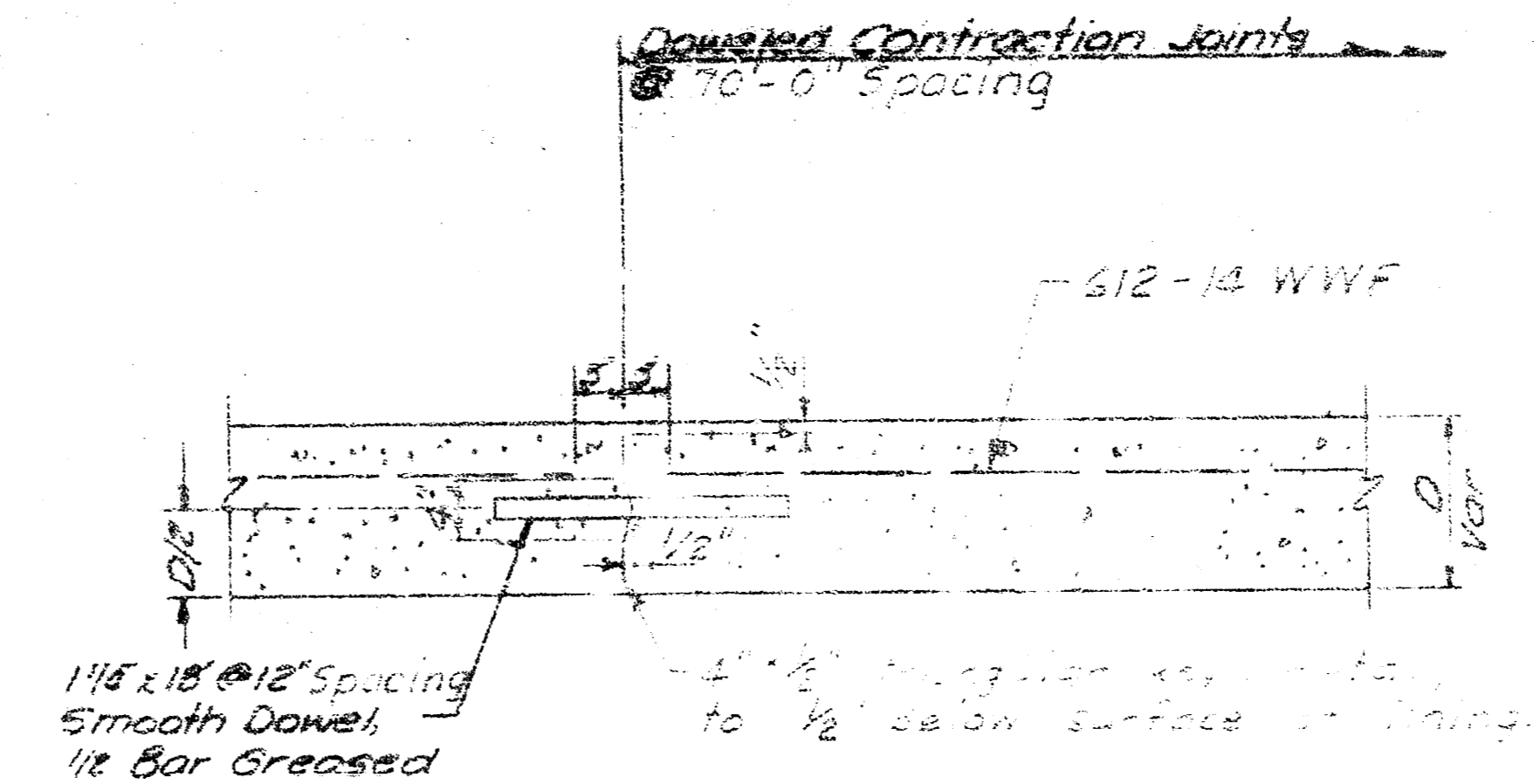


CONSTRUCTION JOINT DETAIL
 To be used for any construction joint not located at a doveled contraction joint or a longitudinal joint or at a cutoff wall.
 Scale: 3/4" = 1'-0"

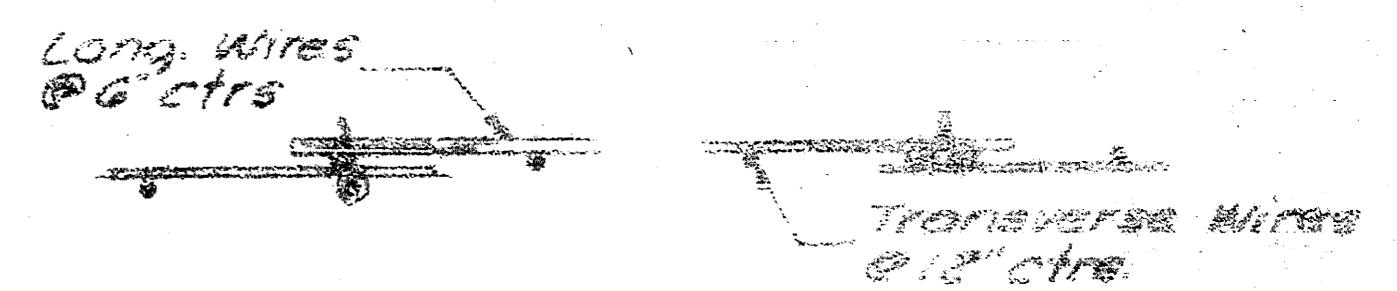


LONGITUDINAL JOINT DETAIL
 Scale: 1" = 1'-0"

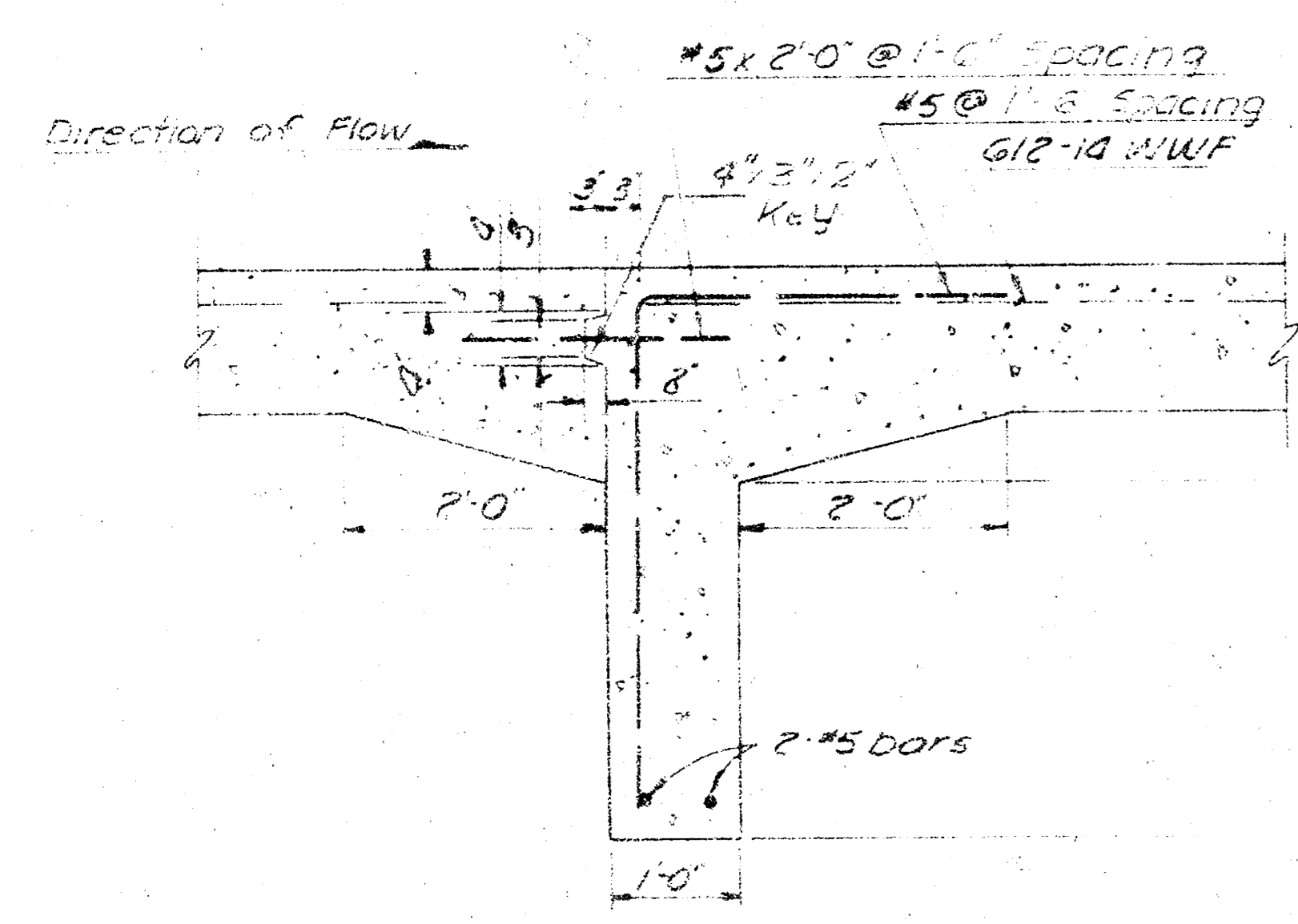
NOTE:
 612-14 WWF will be welded wire fabric.
 Number 4 ga wires transverse @ 18" ctrs. and number 1 ga wires longitudinal @ 6" ctrs. Approximate wt of fabric = 61 lbs per 100 sq ft.



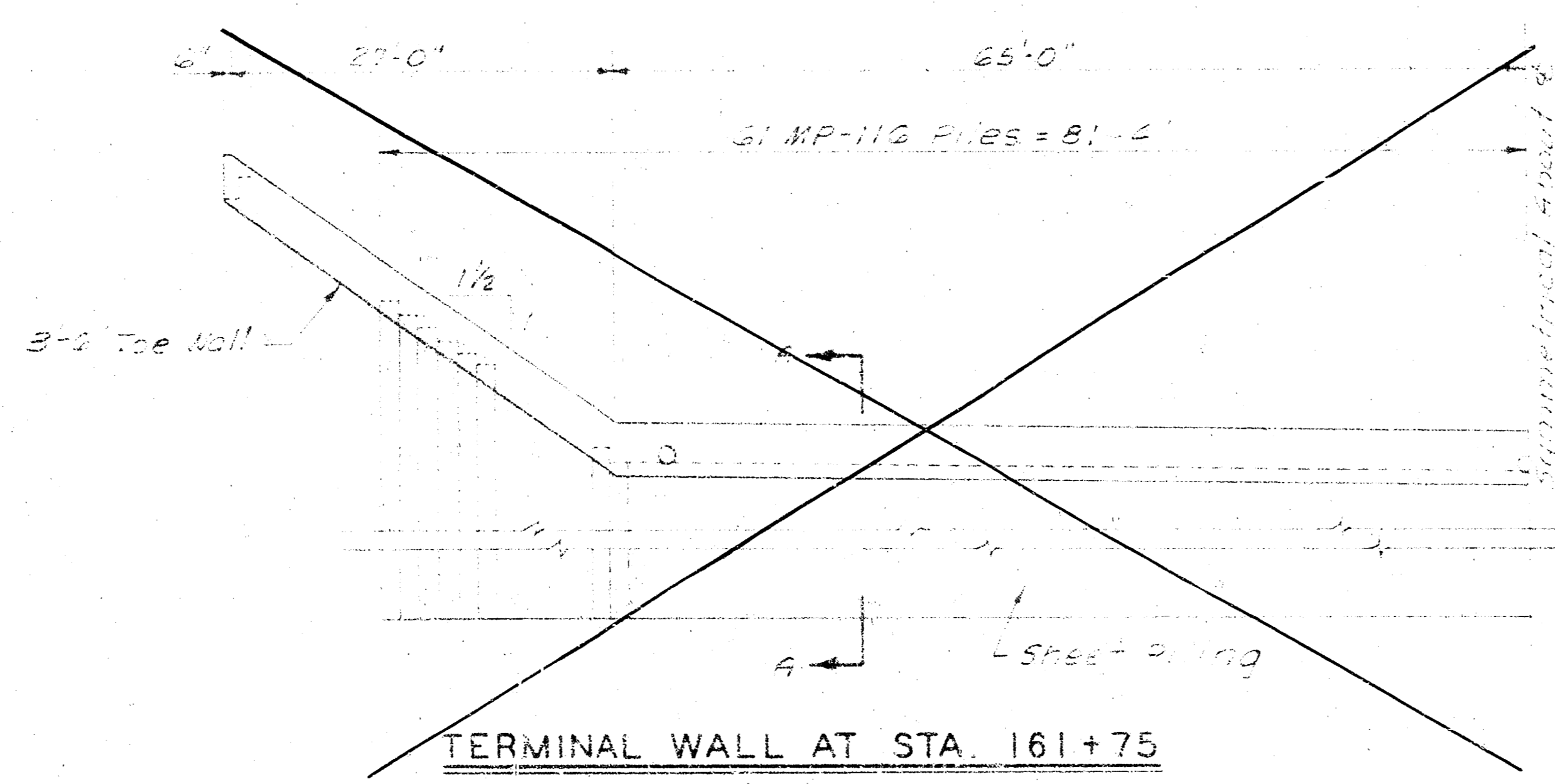
CONTRACTION JOINT DETAILS
 Scale: 1" = 1'-0"



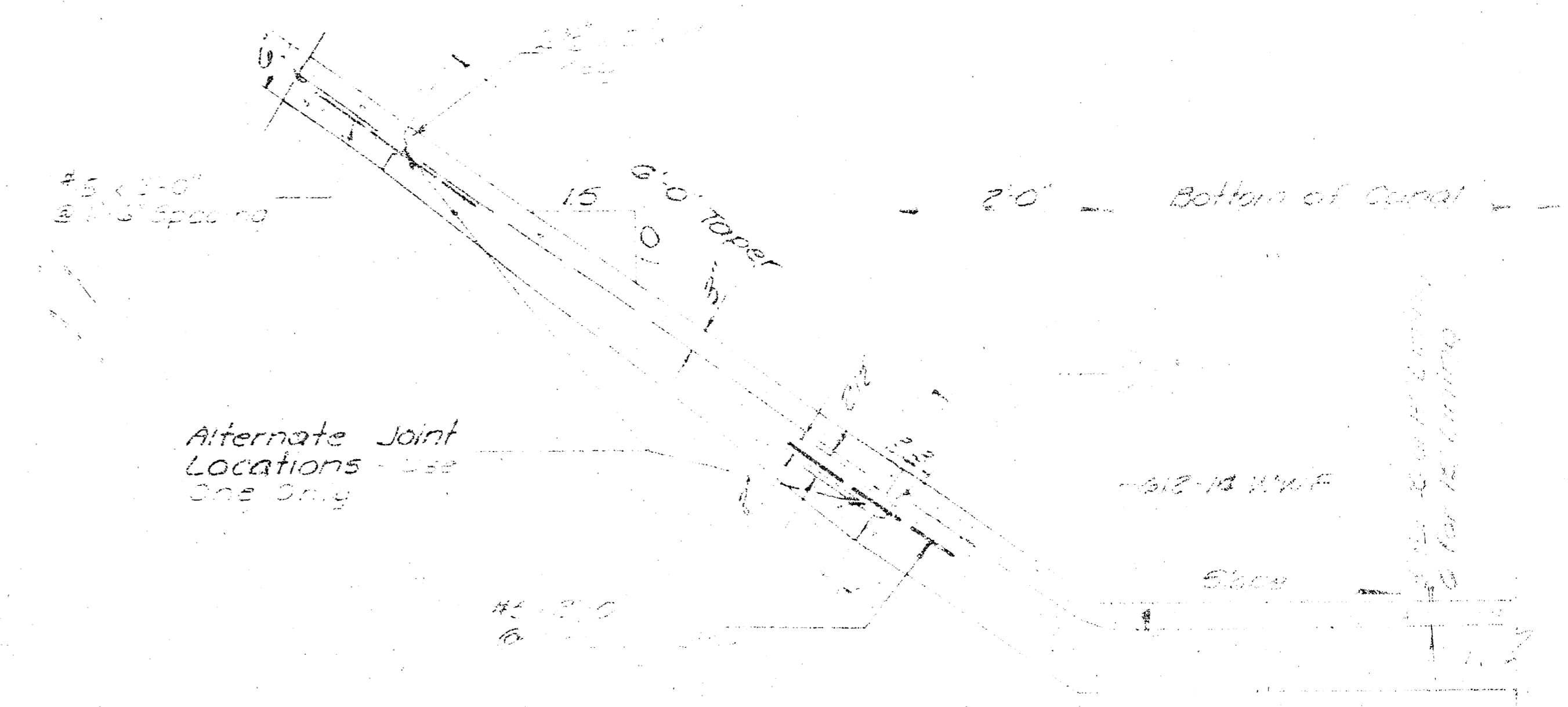
DETAIL OF LAP FOR WIRE MESH
 NOTE: The lap shall extend beyond the first transverse wire of each sheet. The sheets shall be wired securely at the edges and at intervals not to exceed 2'-6" for the full width of the sheet.



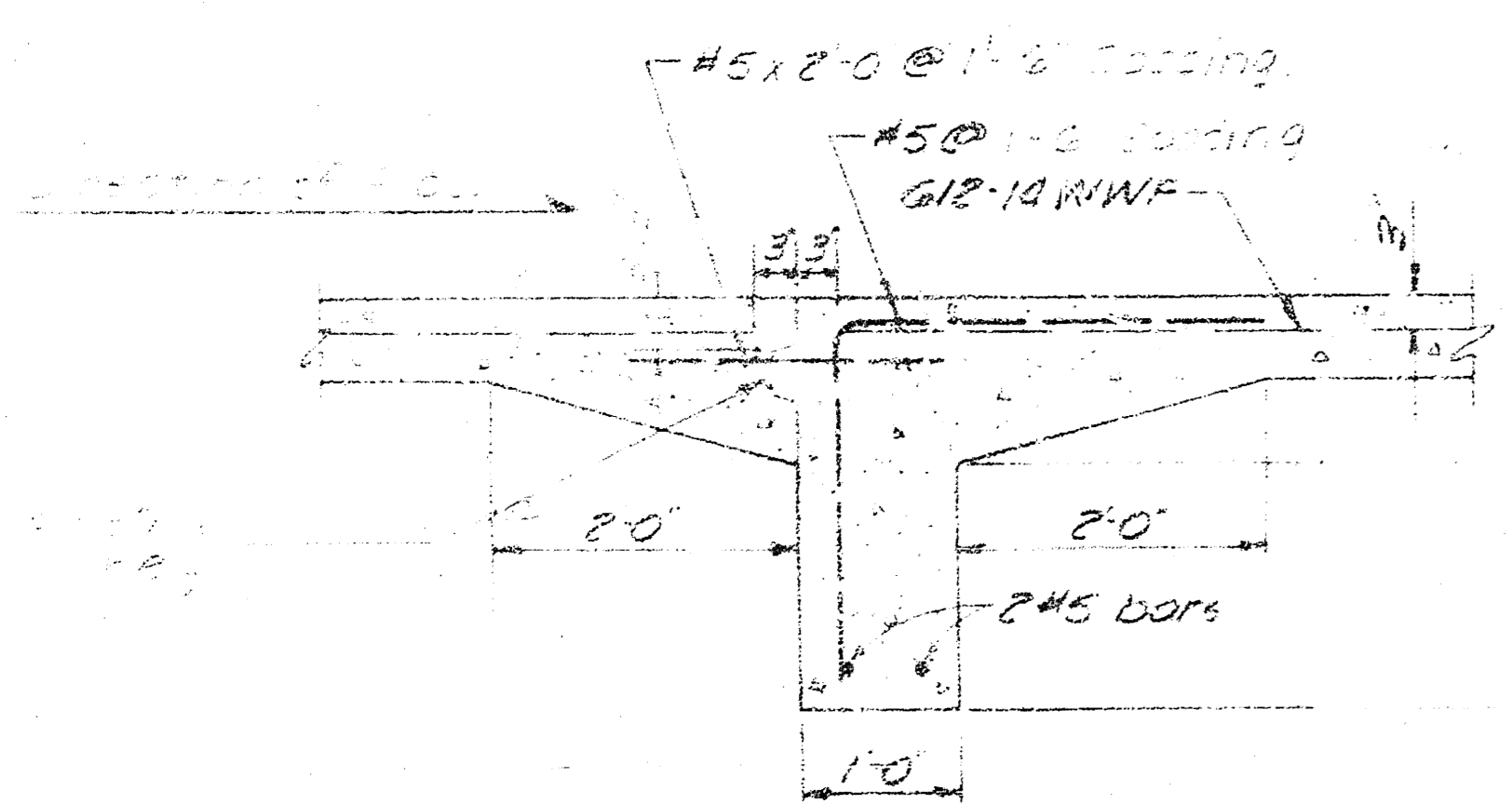
BOTTOM SLAB CUTOFF WALL
 Scale: 1/2" = 1'-0"



TERMINAL WALL AT STA. 161+75
 Scale: 1" = 10'-0"

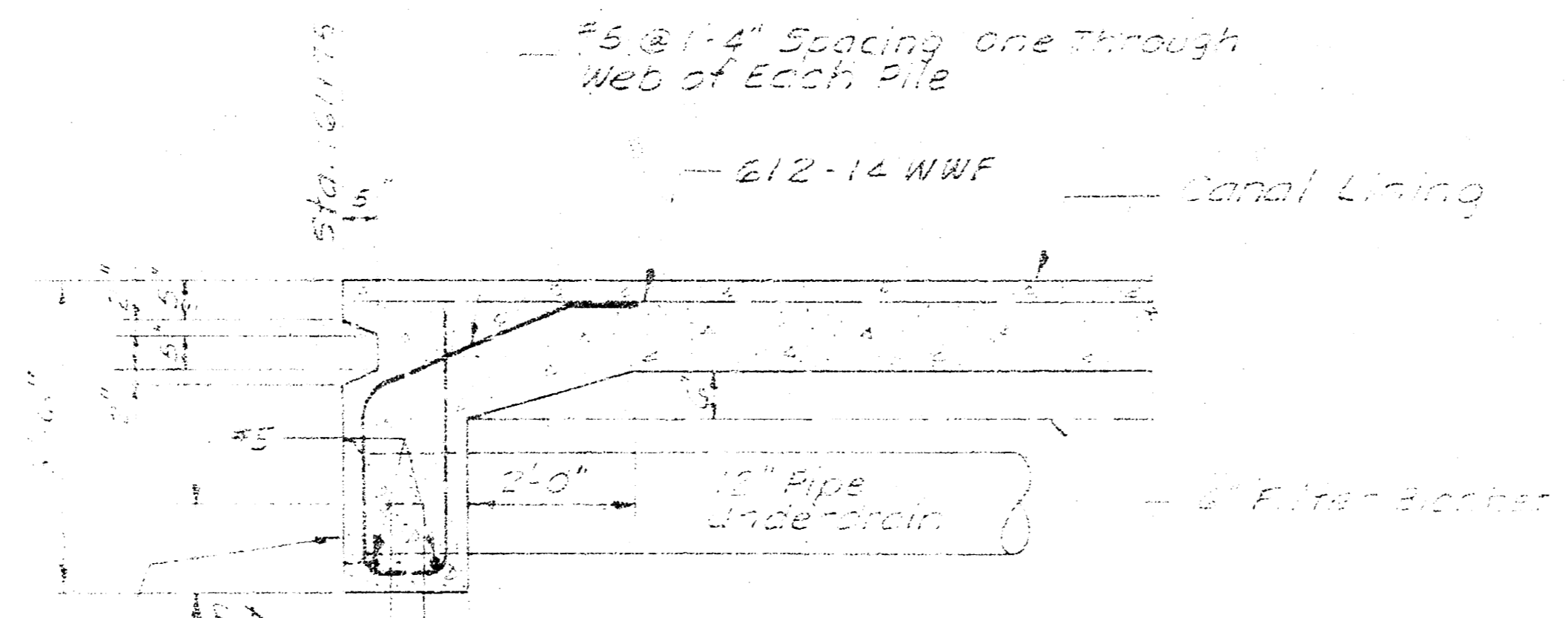


LONGITUDINAL EDGE JOINT DETAIL
 Scale: 1/2" = 1'-0"



SIDE SLOPES CUTOFF WALL
 Scale: 1/2" = 1'-0"

Plug Bell End of pipe with 2" wooden stopper and seal with Mortar. But filling to clear pipe.

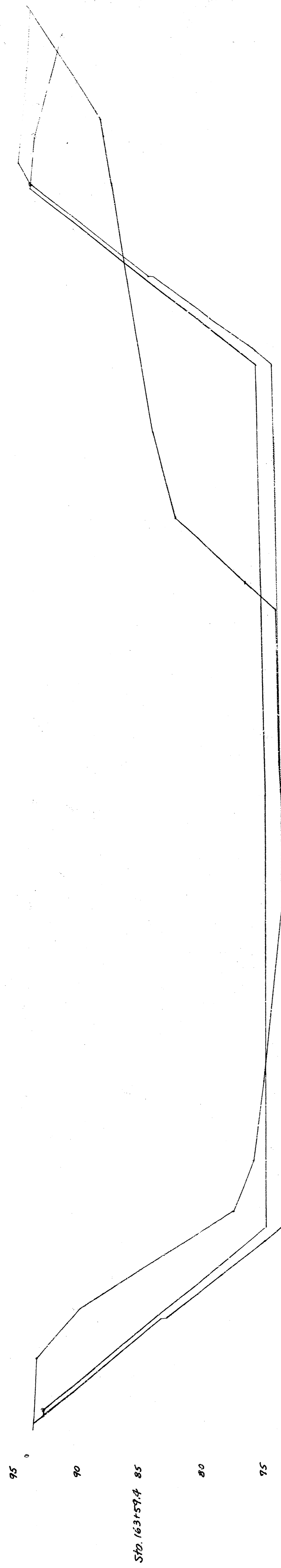


SECTION A-A
 Scale: 1/2" = 1'-0"

28 MP-116 steel sheet piling. Piles shall be driven to penetrate into shale and to a minimum computed bearing value of 50 tons per pile.

RECORD DRAWING
 WILSON COMPANY ENGINEERS ARCHITECTS

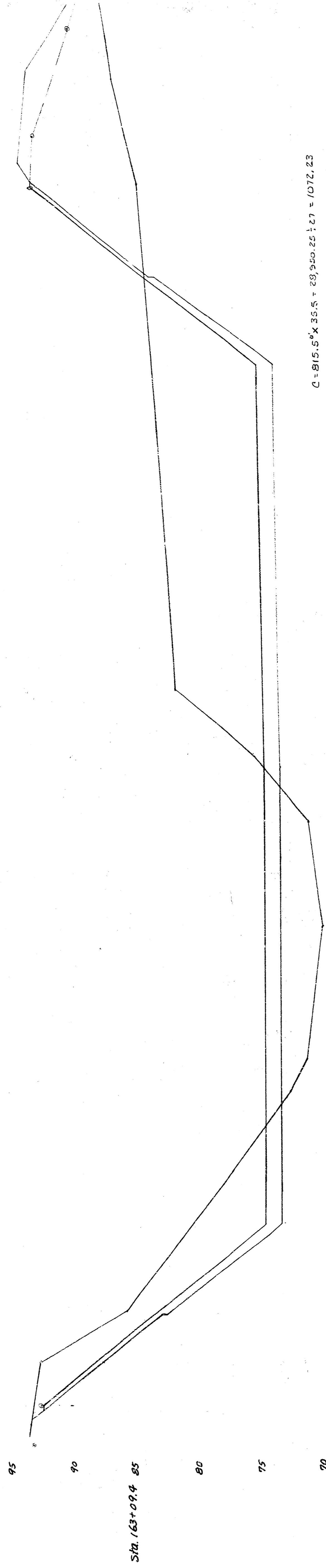
DATE	1944
PROJECT NO.	100
DATE OF ISSUE	10/1/44
NO.	10
BY	[Signature]
CHECKED BY	[Signature]
APPROVED BY	[Signature]



Sta. 163+74.85

$VC = 406 \text{ ft}^2$
 $F = 140 \text{ ft}^2$
 $F = 119 \text{ ft}^2$

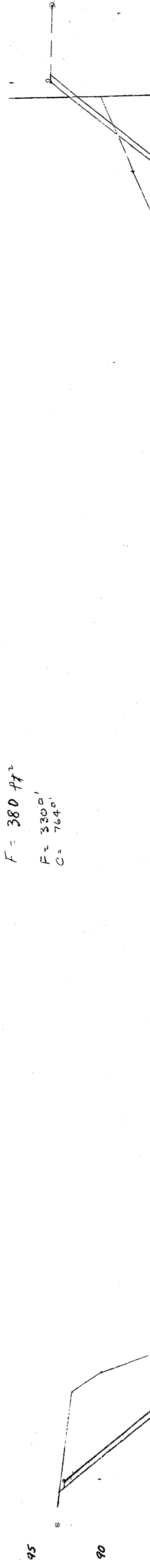
$C = 680' \times 50' = 34,000 \pm 27 = 1268.82$
 $F = 274.5' \times 50' = 11,225 \pm 27 = 415.74$



Sta. 163+89.85

$C = 730 \text{ ft}^2$
 $F = 380 \text{ ft}^2$
 $F = 330 \text{ ft}^2$
 $C = 764 \text{ ft}^2$

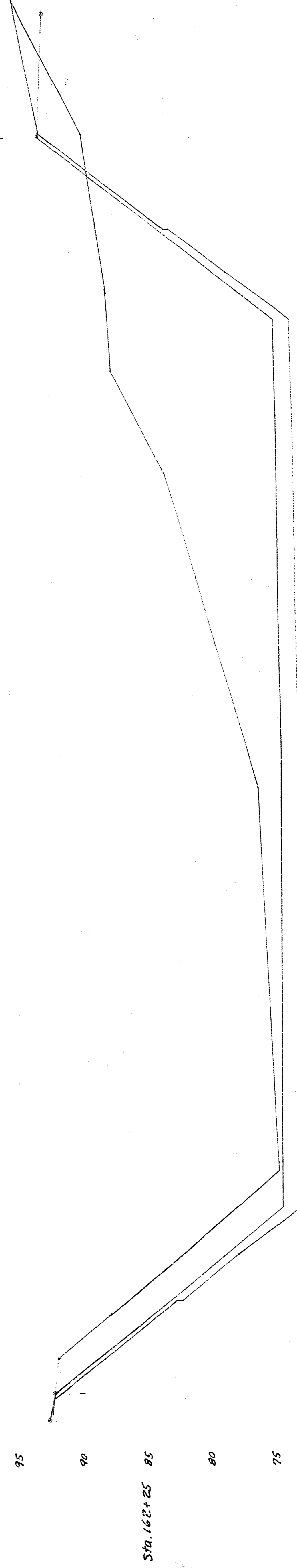
$C = 815.5' \times 35.5' = 29,350.25 \pm 27 = 1072.23$
 $F = 473.5' \times 35.5' = 16,788.25 \pm 27 = 618.42$



Sta. 162+73.985

$VC = 267 \text{ ft}^2$
 $F = 116 \text{ ft}^2$
 $F = 140.5$

$C = 334.5' \times 49.5' = 16,557.75 \pm 27 = 1691.58$
 $F = 294' \times 49.5' = 14,652 \pm 27 = 1521.3$



Sta. 162+29.185

$VC = 1001 \text{ ft}^2$
 $F = 400 \text{ ft}^2$
 $F = 375$

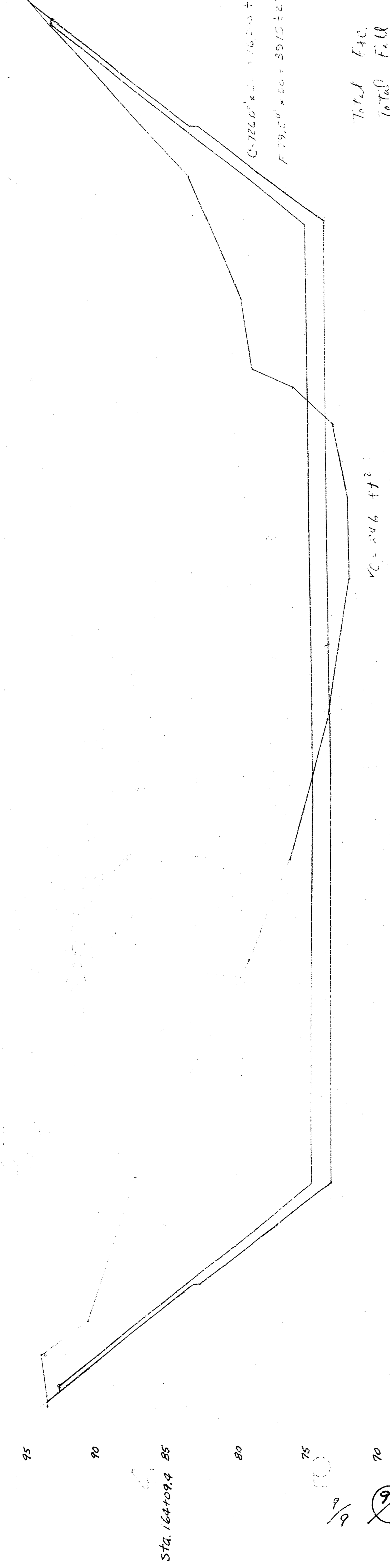
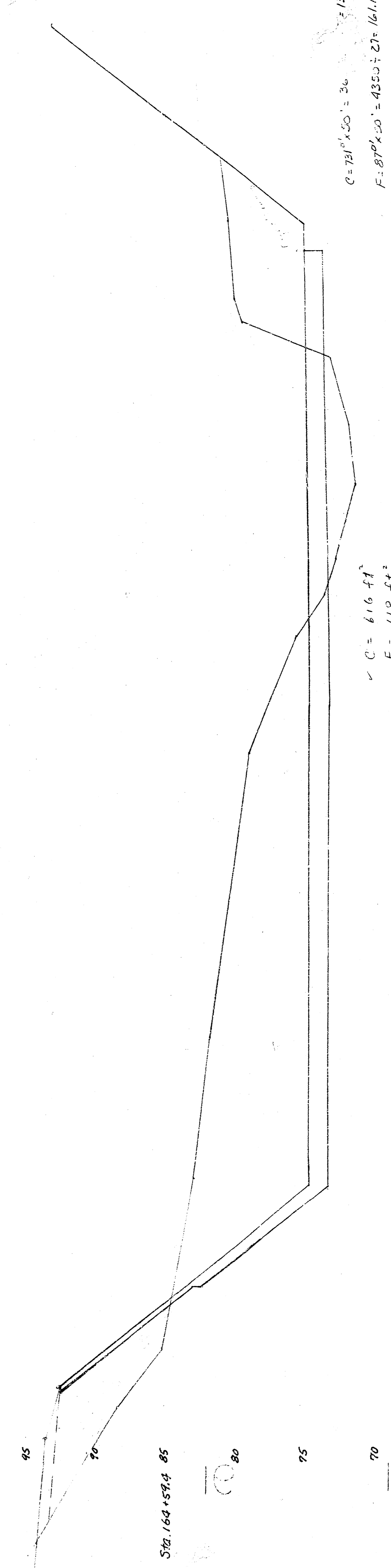
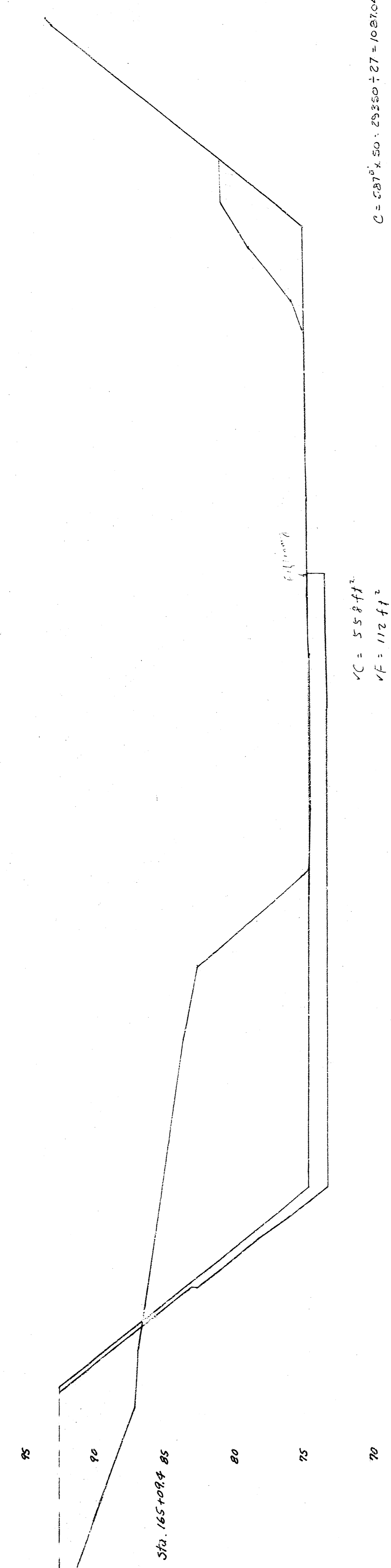
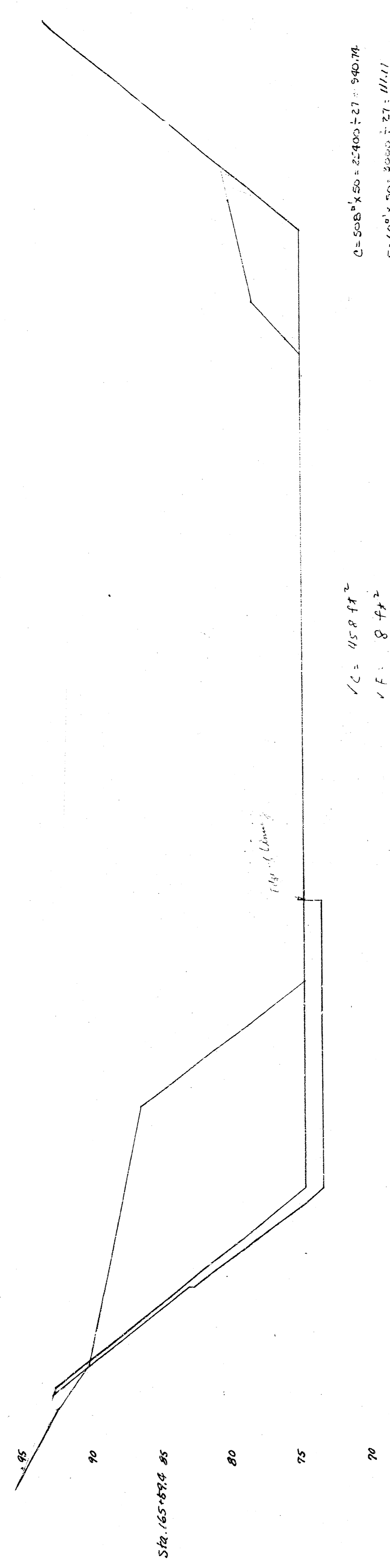
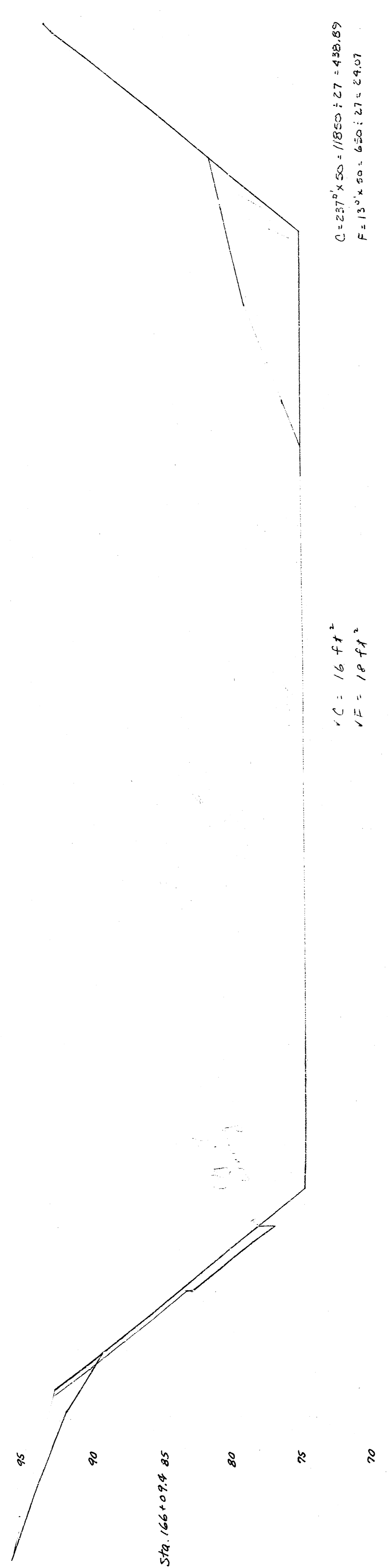
$C = 2000' \times 20' = 40,000 \pm 27 = 926.85 \text{ cu yd}$
 $F = 1315' \times 20' = 26,300 \pm 27 = 2,246 \text{ cu yd}$



Sta. 161+75

$C = 0$
 $F = 0$

Final Totals
 Exc. 10,124 CY
 Fill 1883 CY



Total E.C. 10,070 C.Y.
Total F.C. 1,850 C.Y.

$C = 216 \text{ ft}^2$
 $F = 90 \text{ ft}^2$