

Street Improvements For **BROADMOOR**

From the North Line of Bayley to and Including the Cul-De-Sac

Project Number

472-76-245-81952-000-000-001

Index Code

760173

CITY OF WICHITA, KANSAS

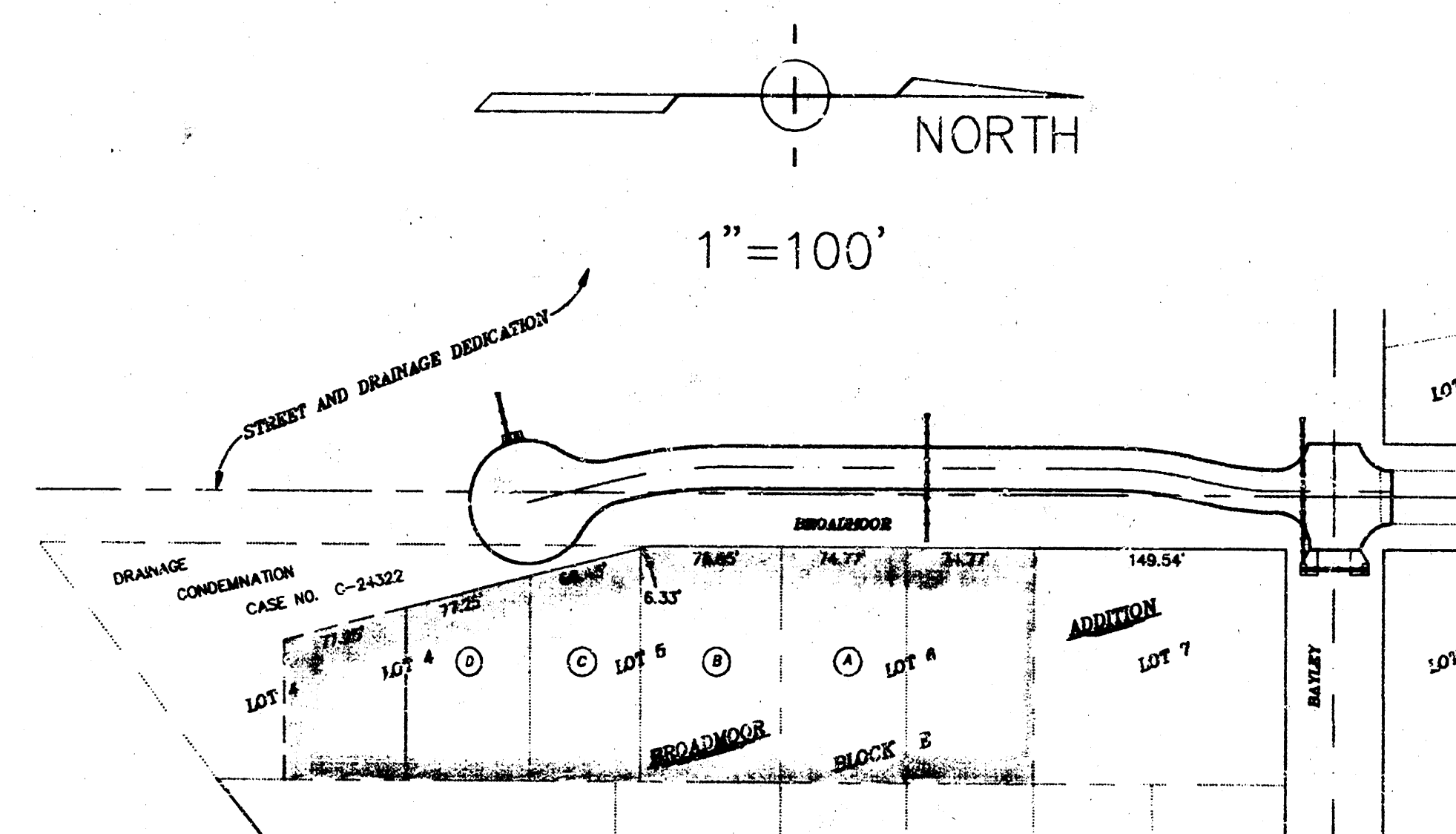
Michael E. Lindebak — City Engineer

GENERAL NOTES

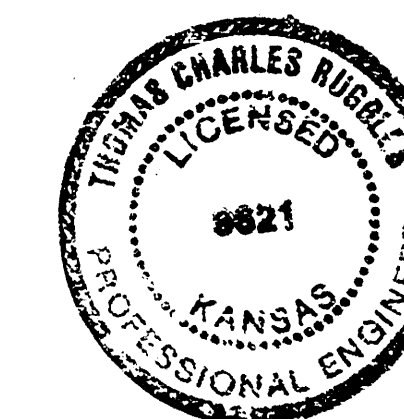
- Utility service lines, poles, valve boxes, meters, and etcetera are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.
- A saw cut of at least one-half the depth of existing surface courses or one-fourth the depth of the existing total pavement thickness shall be provided at locations where proposed construction abuts an existing surface course or pavement for which partial removal of that surface or pavement is required. Sawed joint to facilitate removal within three (3) feet of existing joints will not be permitted and for such instances the limits of removal shall extend to the existing joint. Such saw cuts will not be paid for directly and this cost shall be considered as subsidiary to the removal of the surface or pavement.
- Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be provided by the Contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations that, in the opinion of the Engineer, will leave an unsightly appearance will not be approved.
- This project does not include any provisions for construction of driveways.
- Trees and shrubs in public right-of-way which are in direct conflict with proposed new construction shall be removed by the Contractor with the Engineer's approval. Trees and shrubs which are not in direct conflict with proposed new construction shall be saved and protected from damage.
- All entrance and cross road pipe within the project limits shall be removed by the Contractor unless otherwise noted on the plans. Removal of such pipes shall conform to the applicable section of the Standard Specifications.
- The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor in accordance with state laws.
- Construction of this project shall be coordinated with water main extension project no. 448-76-245-88400-000-000-001. Water main construction will not begin until fill has been placed for this project.

INDEX

- TITLE AND IMPROVEMENT DISTRICT
- TYPICAL SECTION
- PAVEMENT PLAN
- INCIDENTAL DRAINAGE
- INLET DETAILS
- EARTHWORK SECTIONS



IMPROVEMENT DISTRICT

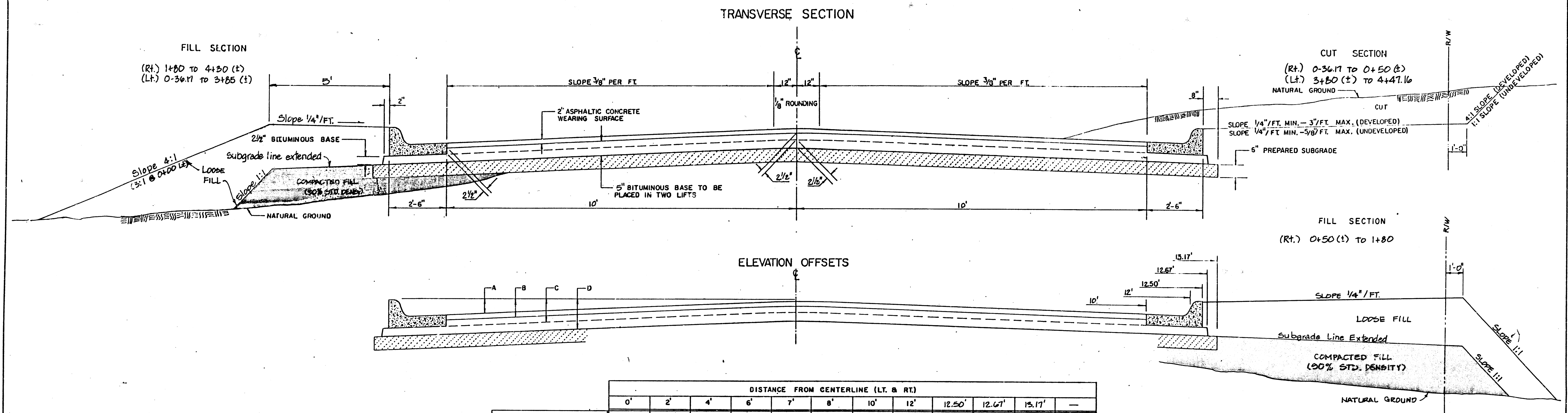


Incidental Drainage
Book B-22-90
M.C.G.

BAUGHMAN COMPANY P. A.		REV.
SURVEYING & ENGINEERING		
316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211		
PROJECT NUMBER		SHEET
472-76-245-81952-000-000-001		1
DESIGN	DRAWN	APPROVED
TCR	MGC	
DATE	SCALE	NOTED
9-25-89		
OF		11

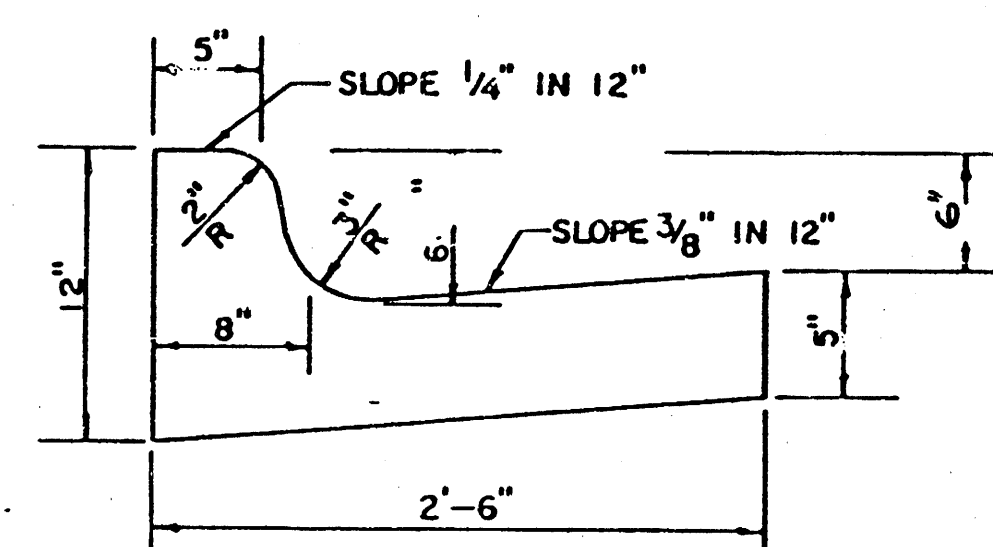
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TYPICAL 25' PAVEMENT DETAILS



	DISTANCE FROM CENTERLINE (LT. & RT.)											
	0'	2'	4'	6'	7'	8'	10'	12'	12.50'	12.67'	13.17'	—
A: TOP OF CURBS TO TOP OF SURFACE LIFT	0.17	0.24	0.30	0.37	0.37	0.40	0.43	—	—	—	—	—
B: TOP OF CURBS TO TOP OF UPPER BASE LIFT	0.34	0.41	0.47	0.54	0.57	0.60	0.66	—	—	—	—	—
C: TOP OF CURBS TO TOP OF LOWER BASE LIFT	0.55	0.62	0.68	0.75	0.78	0.81	0.86	0.92	0.94	0.94	—	—
D: TOP OF CURBS TO TOP OF SUBGRADE	0.76	0.83	0.89	0.96	0.99	1.02	1.07	1.13	1.15	1.15	1.17	—

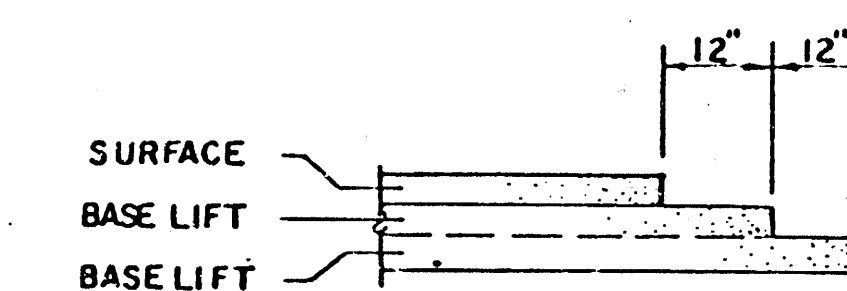
COMBINED CURB & GUTTER



GENERAL NOTES

- 1) THE ASPHALTIC CONCRETE PAVEMENT BETWEEN THE COMBINED CURB AND GUTTER SHALL BE PAID AS SQUARE YARDS OF 7" ASPHALTIC CONCRETE (5" BITUMINOUS BASE).
- 2) THE BITUMINOUS BASE UNDER AND BEHIND THE COMBINED CURB AND GUTTER SHALL BE PAID AS SQUARE YARDS OF 2 1/2" BITUMINOUS BASE.
- 3) A TACK COAT OF EMULSIFIED ASPHALT (SC-1H OR CSS-1H) SHALL BE APPLIED AT AN APPROXIMATE RATE OF 0.05 GALLONS PER SQUARE YARD BETWEEN EACH LIFT OF ASPHALTIC MATERIAL.
- 4) BITUMINOUS BASE AND ASPHALTIC CONCRETE WEARING SURFACE SHALL BE PLACED WITH A LAYDOWN MACHINE HAVING AUTOMATIC CONTROLS FOR LINE AND GRADE.
- 5) CONSTRUCTION JOINTS IN EACH LIFT SHALL BE STAGGERED A MINIMUM DISTANCE OF ONE (1) FOOT FROM JOINTS IN PRECEDING LIFTS AND PLACED SO THAT A JOINT WILL BE CONSTRUCTED ON THE CENTERLINE OF THE TOP LIFT.
- 6) CONTRACTOR TO BID ONLY ONE SUBGRADE TREATMENT ALTERNATE WHEN ALTERNATES ARE PROVIDED IN THE PROPOSAL AND CONTRACT. THE ALTERNATE CHOSEN BY THE SUCCESSFUL BIDDER SHALL BE USED IN CONSTRUCTING THIS PROJECT.

TRANSVERSE CONSTRUCTION JOINTS

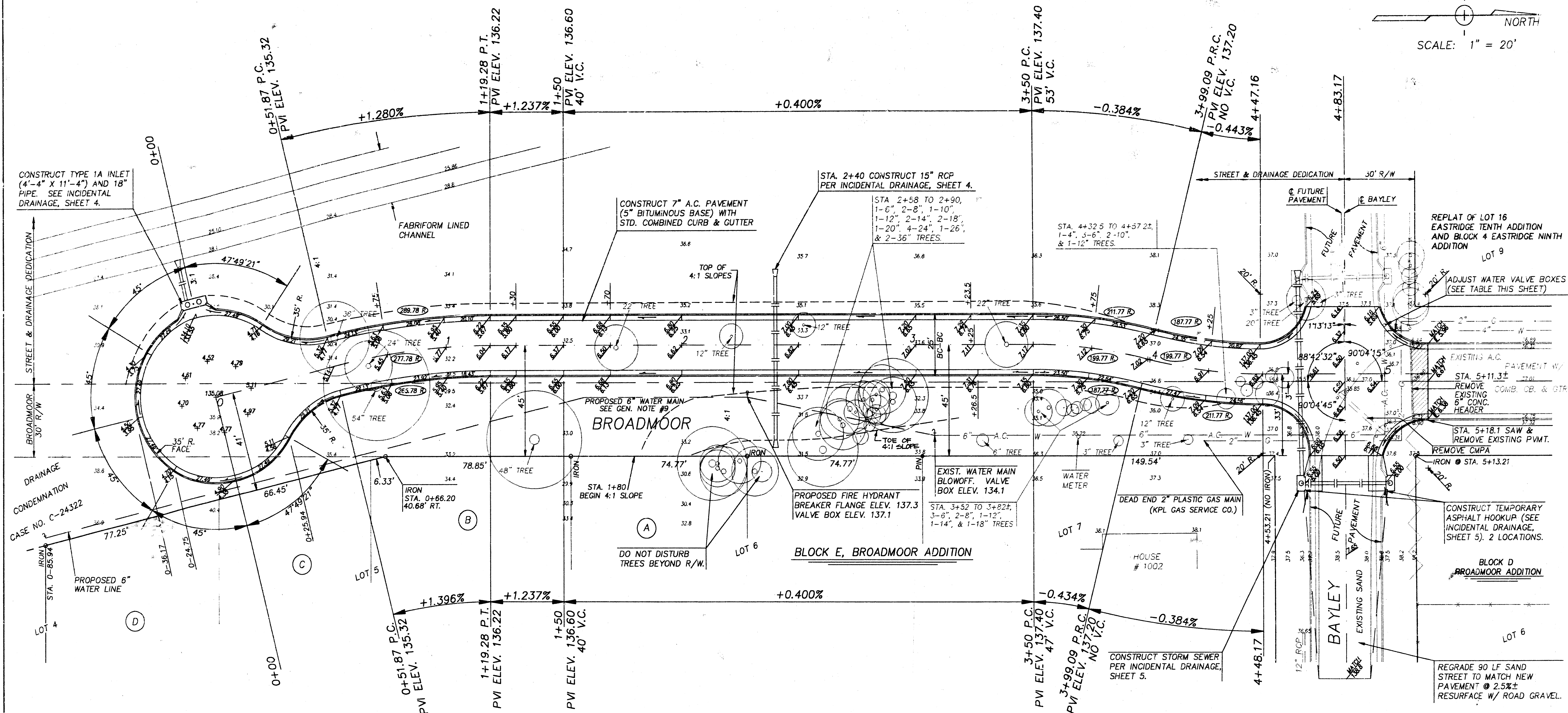


TRANSVERSE CONSTRUCTION JOINTS SHALL BE CONSTRUCTED IN FLEXIBLE BASE PAVEMENTS AT LOCATIONS WHERE PAVEMENT JOINTS EXISTING FLEXIBLE BASE PAVEMENT AS SHOWN BY THE DETAIL. ALL COSTS ASSOCIATED WITH THE CONSTRUCTION OF THE TRANSVERSE JOINT SHALL BE INCLUDED IN THE BID PRICE FOR SQUARE YARDS 7" ASPHALTIC CONCRETE (5" BITUMINOUS BASE).

7 INCH RESIDENTIAL ASPHALTIC CONCRETE
PAVEMENT WITH INCH BITUMINOUS BASE
CITY OF WICHITA, KANSAS
PROJECT NUMBER
472-76-245-81952-000-000-001 2/11

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SCALE: 1" = 20'



CURVE #1

CURVE DATA BASED ON CENTERLINE

R = 277.78' DELTA = 135°41'0" T = 33.87'
L = 67.41' 1/2 DELTA = 6°57'05" DEFL = 6.187262 MIN./FT.

STATION	ARC	CHORD LENGTHS	DEFL.	TOTAL DEFL.
		8' LT. PC 8' RT. PC	8' LT. PC 8' RT. PC	
0+51.87 P.C.	-	-	0"	0"
0+75	23.13'	4.79'	2'23'07"	2'23'07"
1+00	25'	26.79'	2'34'41"	4'57'48"
1+19.28 P.T.	19.28'	20.66'	1'59'17"	6'57'05"

CURVE #2

CURVE DATA BASED ON CENTERLINE

R = 199.77' DELTA = 14°04'40" T = 24.67'
L = 49.09' 1/2 DELTA = 7°02'20" DEFL = 8.603246 MIN./FT.

STATION	ARC	CHORD LENGTHS	DEFL.	TOTAL DEFL.
		8' LT. PC 8' RT. PC	8' LT. PC 8' RT. PC	
3+50 P.C.	-	-	0"	0"
3+75	25'	27.48'	2'24'48"	3'35'05"
3+99.09 P.R.C.	24.09'	26.48'	2'16'6"	3'27'15"

CURVE #3

CURVE DATA BASED ON CENTERLINE

R = 199.77' DELTA = 14°04'40" T = 24.67'
L = 49.09' 1/2 DELTA = 7°02'20" DEFL = 8.604999 MIN./FT.

STATION	ARC	CHORD LENGTHS	DEFL.	TOTAL DEFL.
		8' LT. PC 8' RT. PC	8' LT. PC 8' RT. PC	
3+99.09 P.R.C.	-	-	0"	0"
4+25	25.91'	23.30'	28.49'	3'42'57"
4+48.17 P.T.	23.17'	20.84'	25.48'	3'79'23"

EARTHWORK QUANTITIES:

EXCAVATION	2516.8 CU. YDS.
+10%	2768.5 CU. YDS.
COMPACTED FILL	1361.7 CU. YDS.
+10%	1497.9 CU. YDS.
BORROW	539.4 CU. YDS.
SUBGRADE MANIPULATION	2024.0 SQ. YDS.

WATER VALVE BOX ADJUSTMENT TABLE

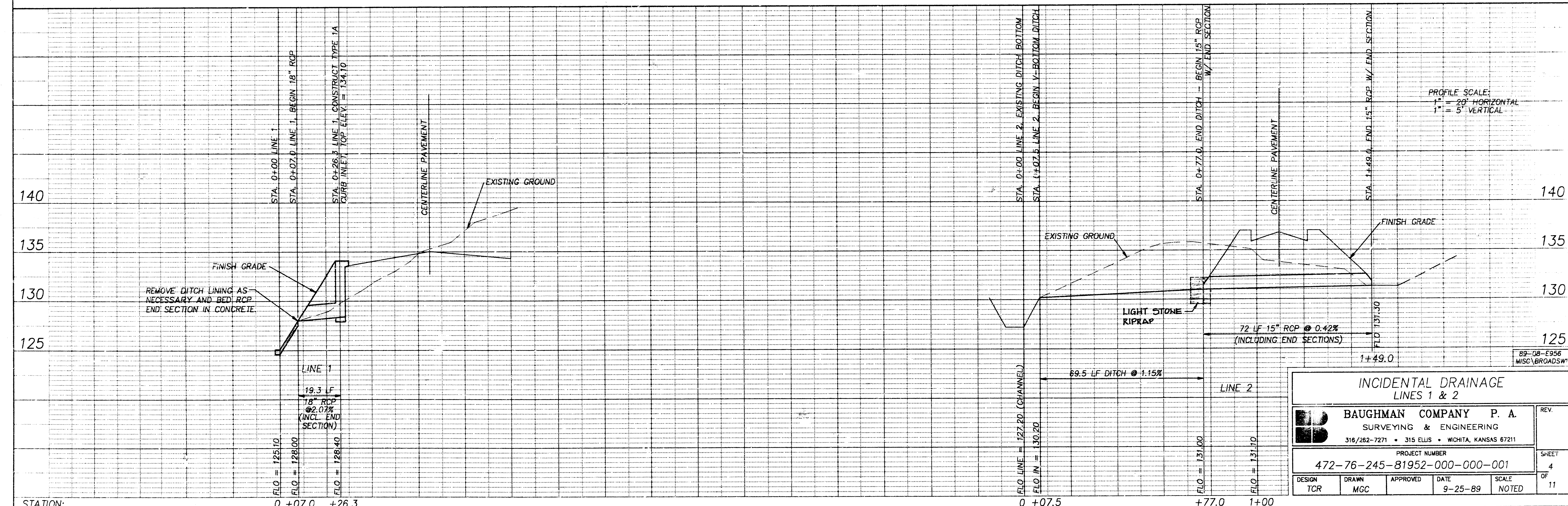
STATION	LOCATION	EXIST. ELEV.	FIN. ELEV.
3+08	24.7' RT.	134.09	134.1
5+00.2	19.5' LT.	137.01	135.82
5+04.2	17.2' LT.	136.85	136.35

BROADMOOR

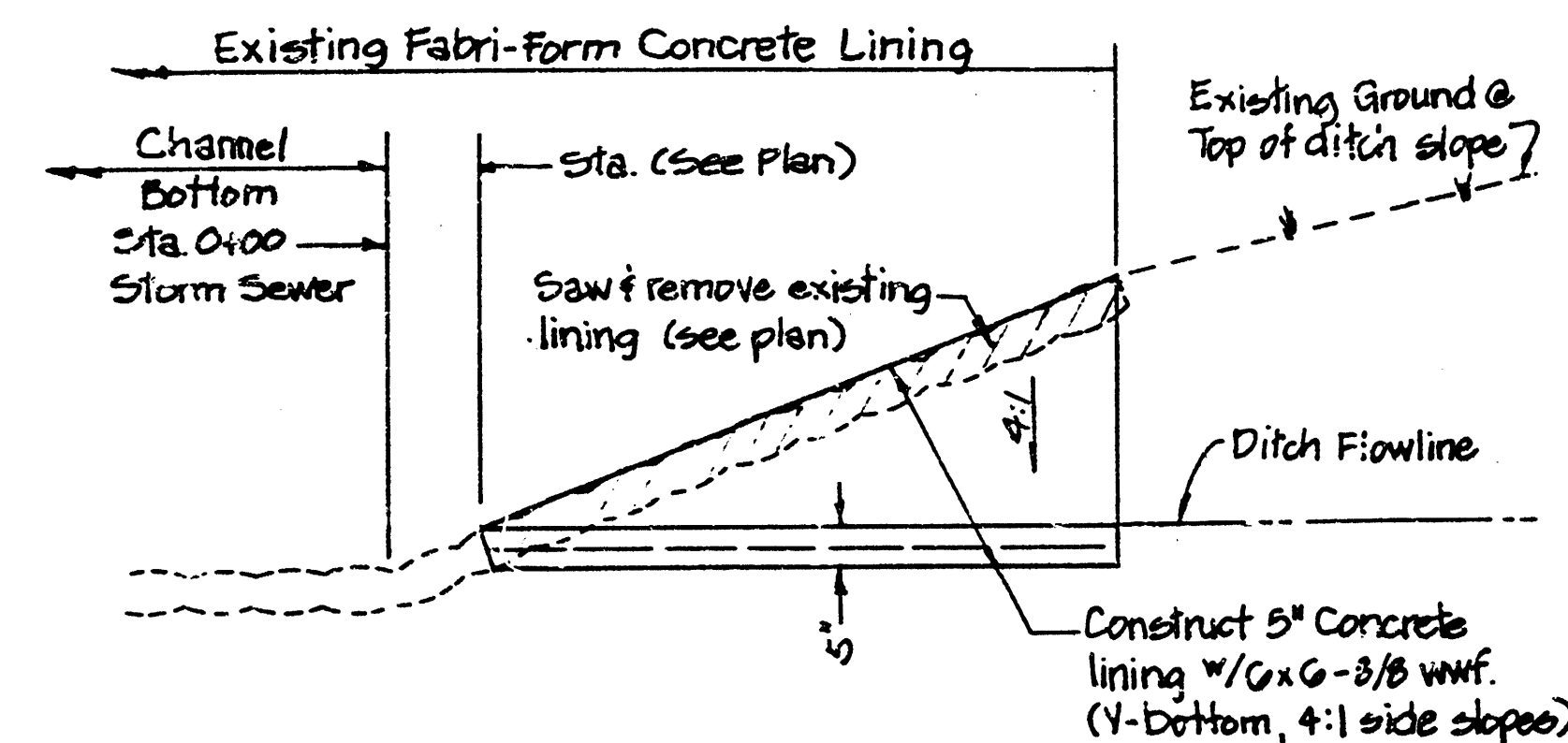
FROM N. L. BAYLEY TO & INCLUDING CUL-DE-SAC

BAUGHMAN COMPANY P. A. SURVEYING & ENGINEERING 316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211		REV.
PROJECT NUMBER 472-76-245-81952-000-000-001		SHEET 3
DESIGN TCR	DRAWN MGC	APPROVED
DATE 9-25-89	SCALE NOTED	OF 11

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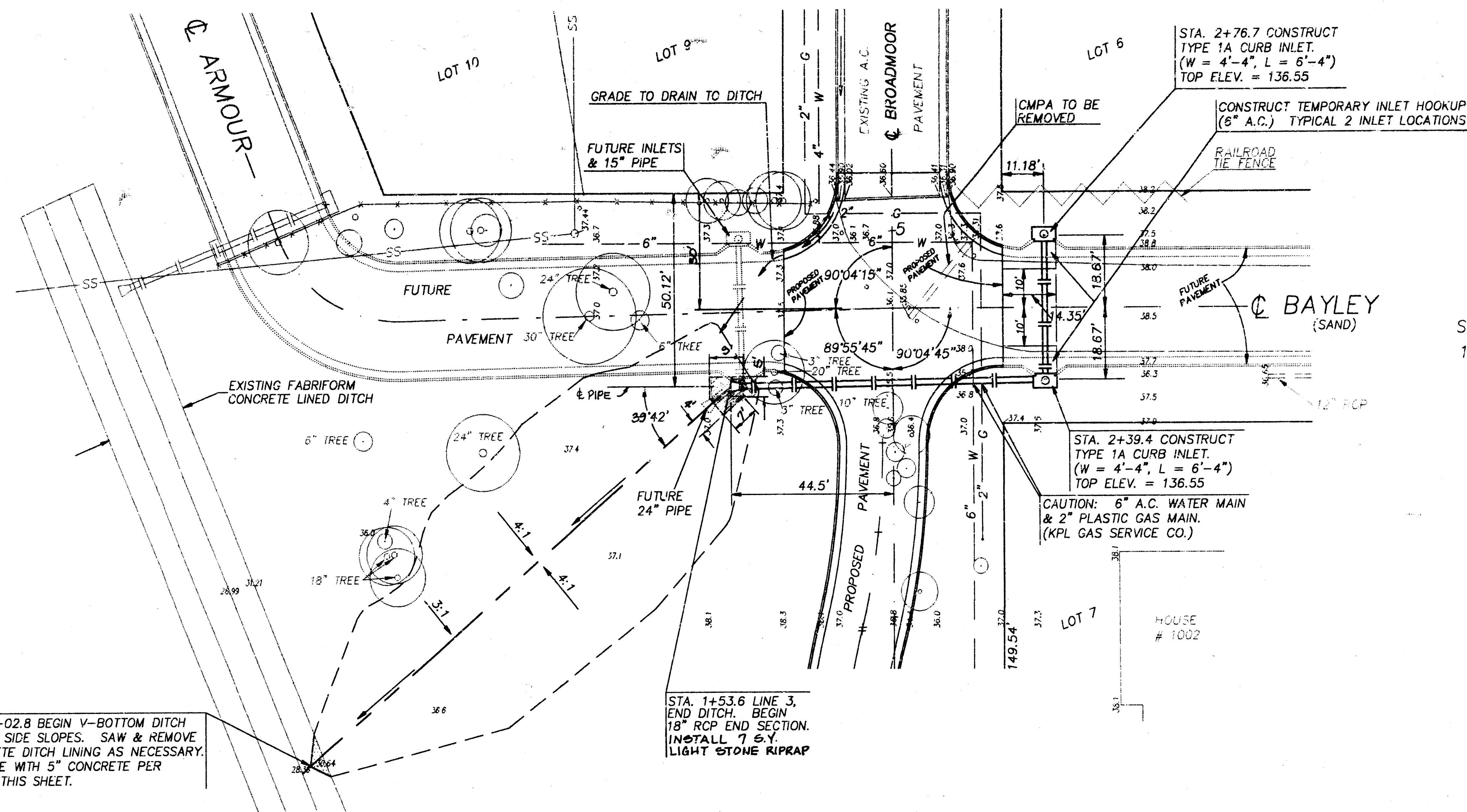


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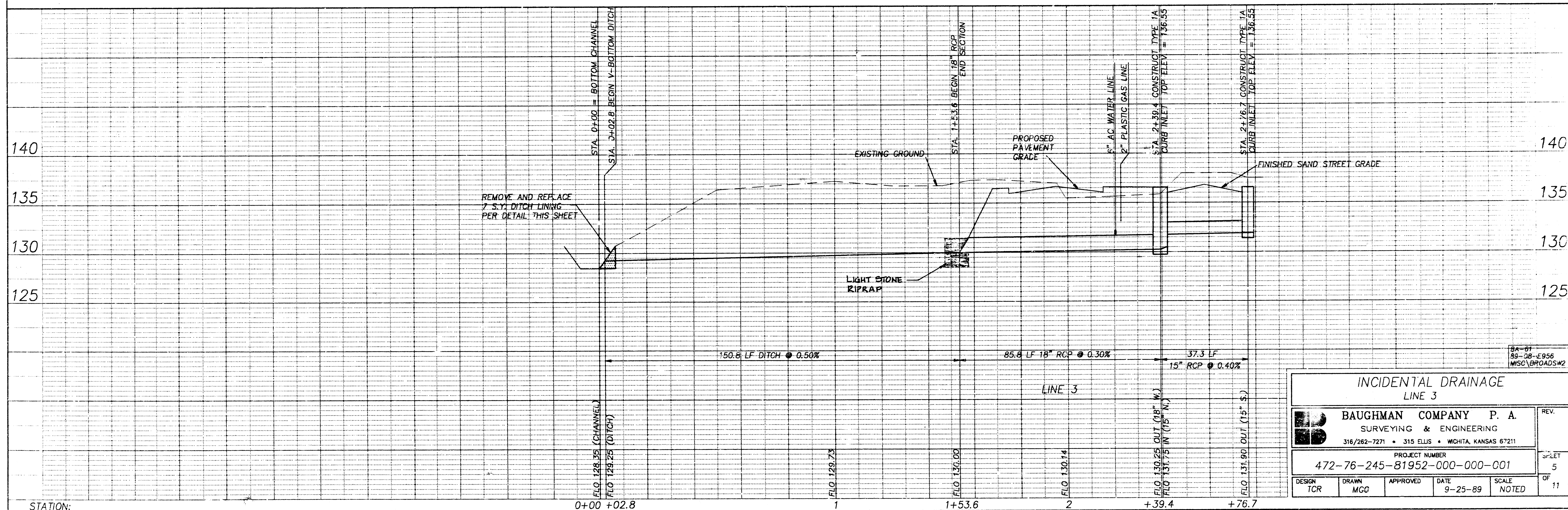


LINING REPLACEMENT DETAIL

STA. 0+02.8 BEGIN V-BOTTOM DITCH W/ 4:1 SIDE SLOPES. SAW & REMOVE CONCRETE DITCH LINING AS NECESSARY. REPLACE WITH 5" CONCRETE PER DETAIL THIS SHEET.

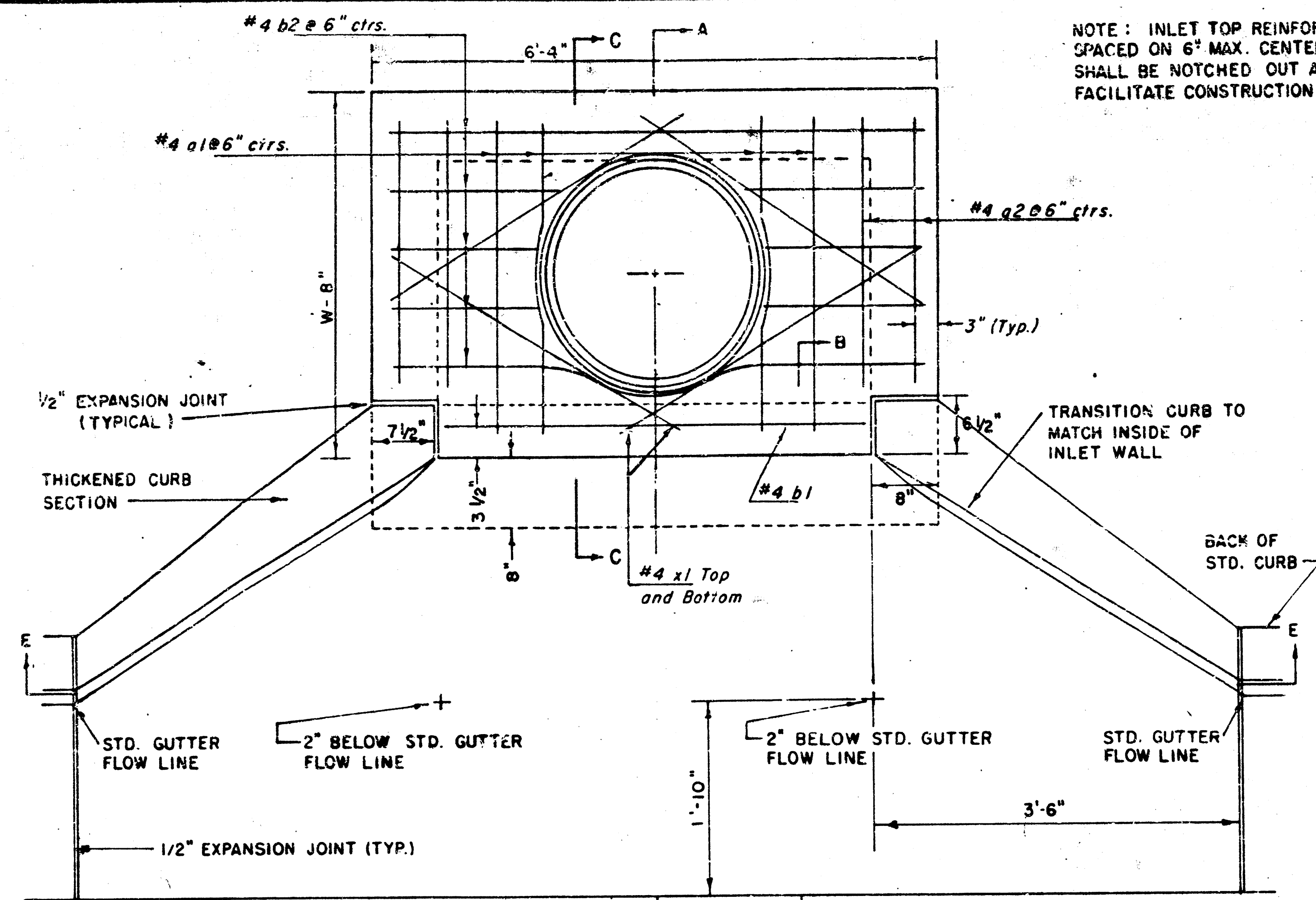


SCALE:
1" = 20' HORIZONTAL
1" = 5' VERTICAL



INCIDENTAL DRAINAGE LINE 3			
BAUGHMAN COMPANY P. A. SURVEYING & ENGINEERING 316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211			
PROJECT NUMBER 472-76-245-81952-000-000-001			
DESIGN TCR	DRAWN MCC	APPROVED	DATE 9-25-89
SCALE NOTED		REV. 5 OF 11	

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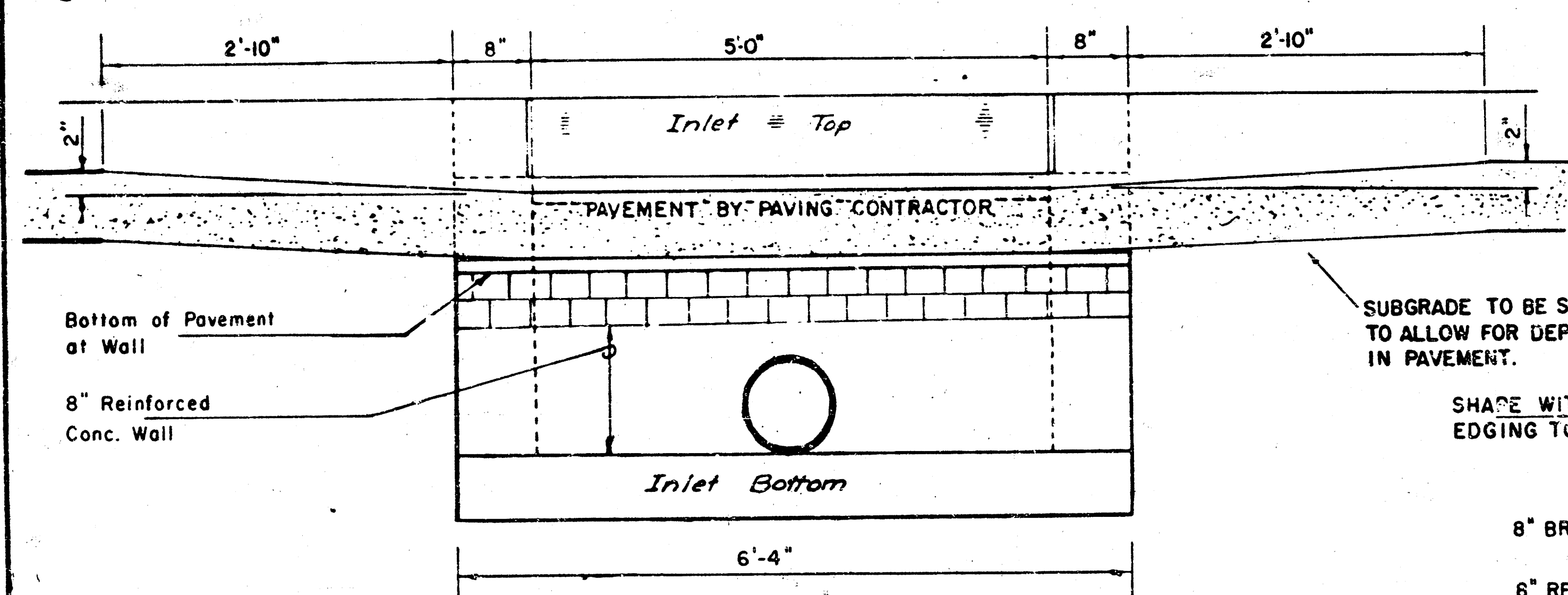


PLAN

PRECAST SLAB AND FLOOR REINFORCING											
Mark	Size	W=4'-4"		W=5'-4"		W=6'-4"		W=7'-4"		W=8'-4"	
		No.	Length	No.	Length	No.	Length	No.	Length	No.	Length
a1	#4	6	6'-7"	6	8'-7"	6	10'-7"	6	12'-7"	6	14'-7"
a2	#4	4	6'-0"	4	8'-0"	4	10'-0"	4	12'-0"	4	14'-0"
a3	#4	13	4'-1"	13	5'-1"	13	6'-1"	13	7'-1"	13	8'-1"
b1	#4	1	4'-9"	1	4'-9"	1	4'-9"	1	4'-9"	1	4'-9"
b2	#4	23	6'-1"	29	6'-1"	35	6'-1"	41	6'-1"	47	6'-1"
x1	#4	8	3'-10"	8	4'-2"	8	4'-6"	8	4'-10"	8	5'-2"

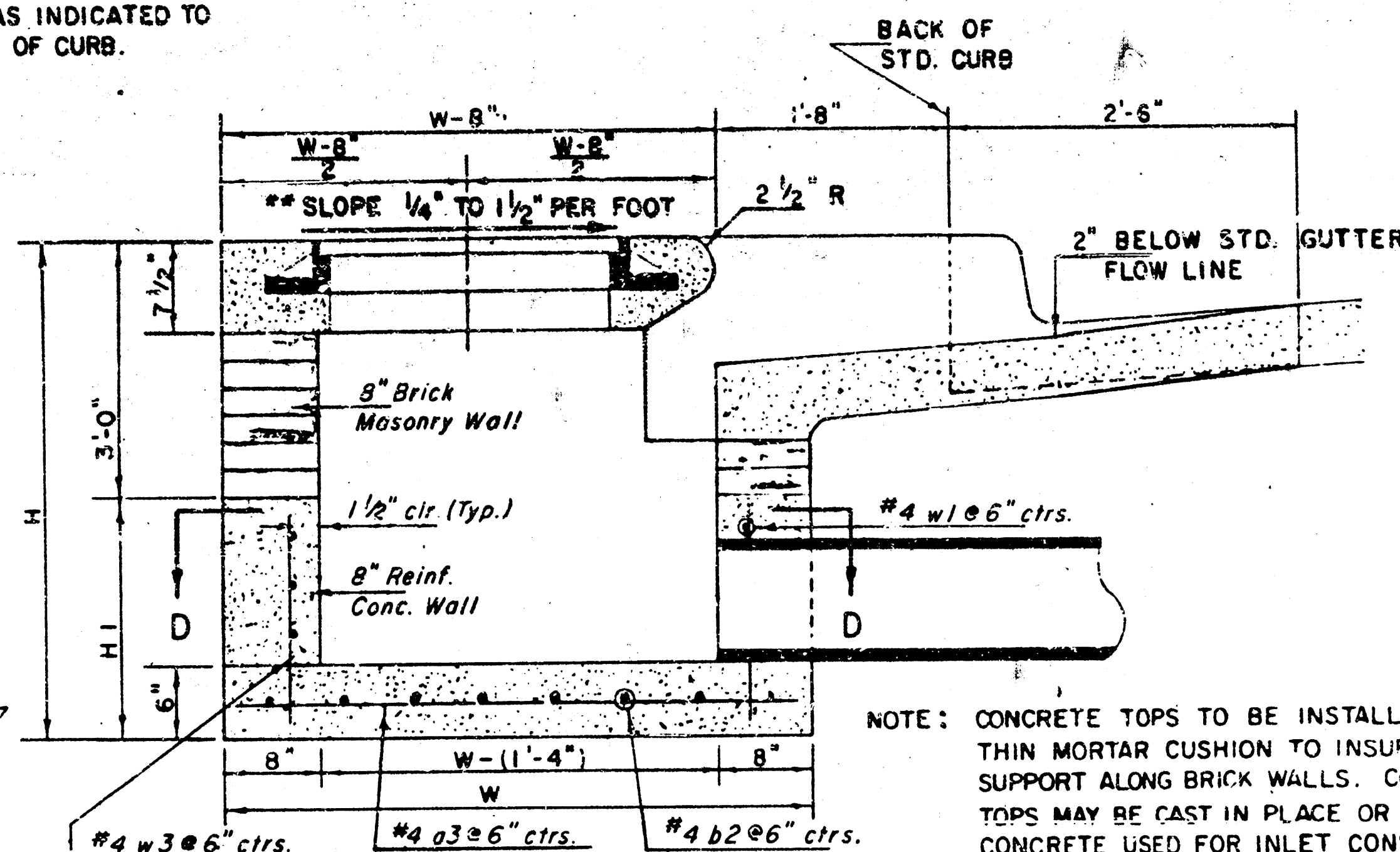
WALL REINFORCING											
Mark	Size	W=4'-4"		W=5'-4"		W=6'-4"		W=7'-4"		W=8'-4"	
		No.	Length	No.	Length	No.	Length	No.	Length	No.	Length
w1	#4	1	6'-1"	1	6'-1"	1	6'-1"	1	6'-1"	1	6'-1"
w2	#4	1	4'-1"	1	5'-1"	1	6'-1"	1	7'-1"	1	8'-1"
w3	#4	32	(2)	36	(2)	40	(2)	44	(2)	48	(2)

- * Field bend or cut Reinforcing as required for clearance.
- 4 (H1-12"): (H1-12") Round down to nearest 0.5'
 - H1-3"



SECTION E-E

NOTE: INLET TOP REINFORCING SHALL BE SPACED ON 6" MAX. CENTERS. INLET LIDS SHALL BE NOTCHED OUT AS INDICATED TO FACILITATE CONSTRUCTION OF CURB.



SECTION A-A

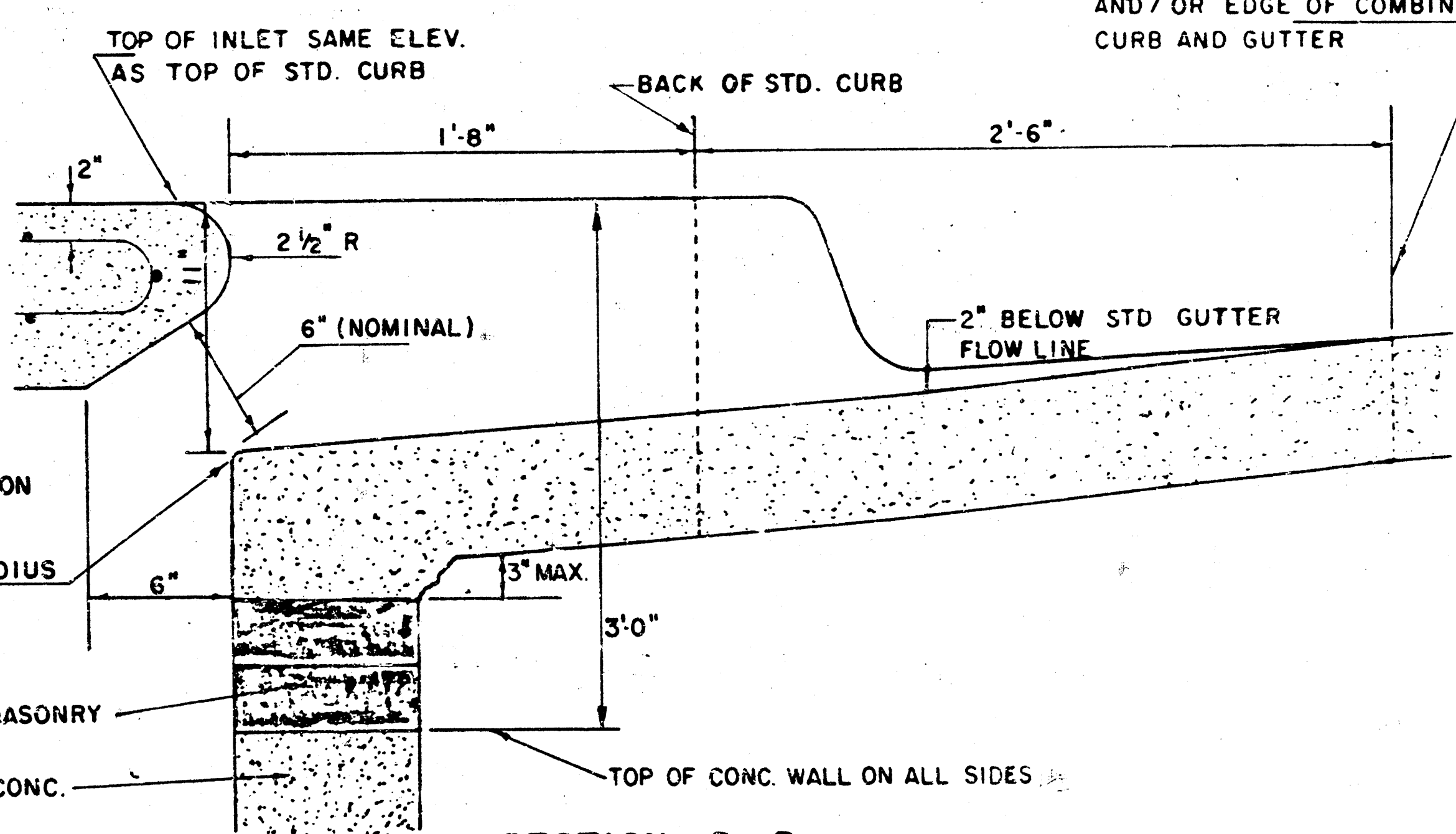
NOTE: CONTRACTOR SHALL HAVE THE OPTION OF CONSTRUCTING 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP ON THIS INLET WHEN H = 6'-4" AND H = 7'-0" OR LESS.

ADDITIONAL CURB AND GUTTER CONSTRUCTION NECESSARY TO CONNECT SET-BACK INLET TO PAVEMENT WILL BE PAID FOR AT THE UNIT PRICE BID FOR EACH INLET HOOKUP.

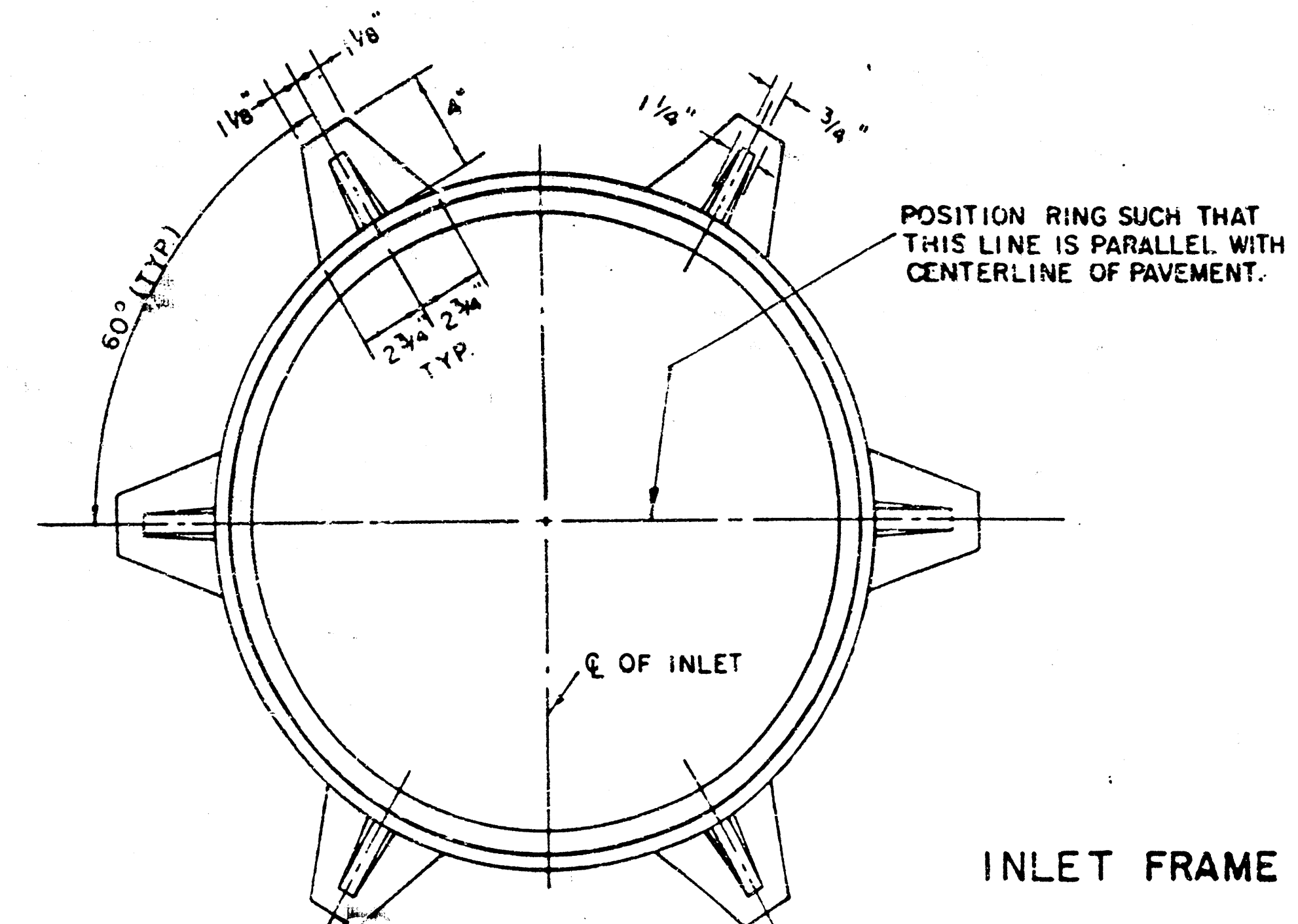
INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF-CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.

THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.

** NOTE: Slope of Inlet Tops to match Sidewalk or Parking Slopes within Limits indicated.

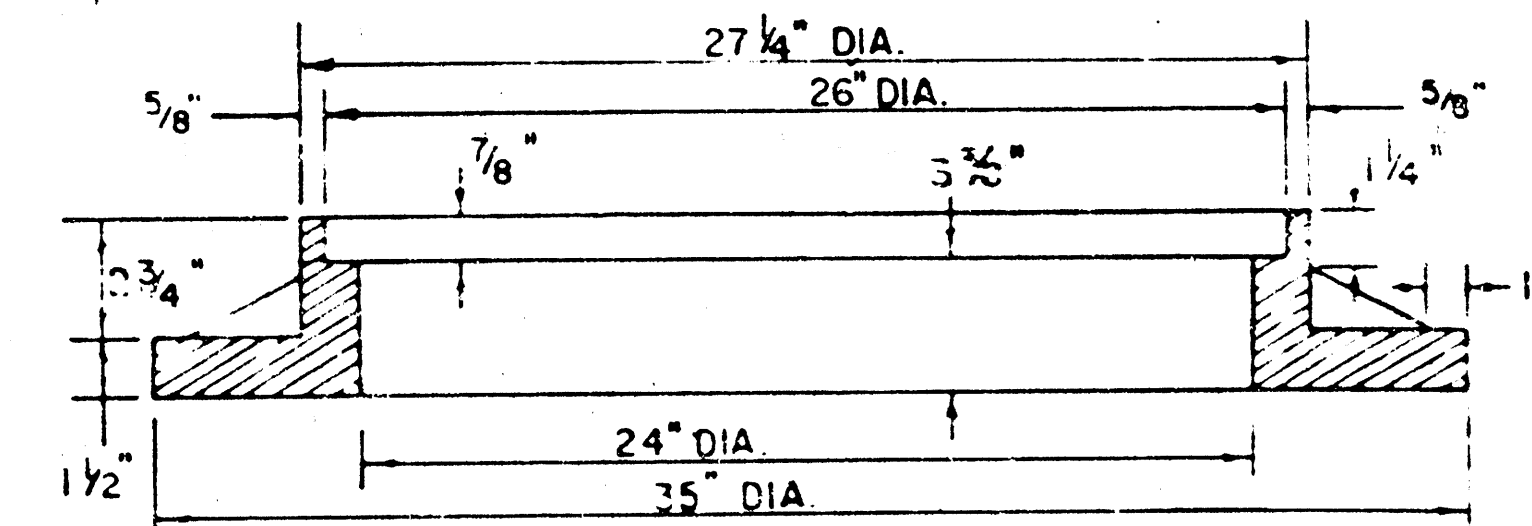


SECTION B-B

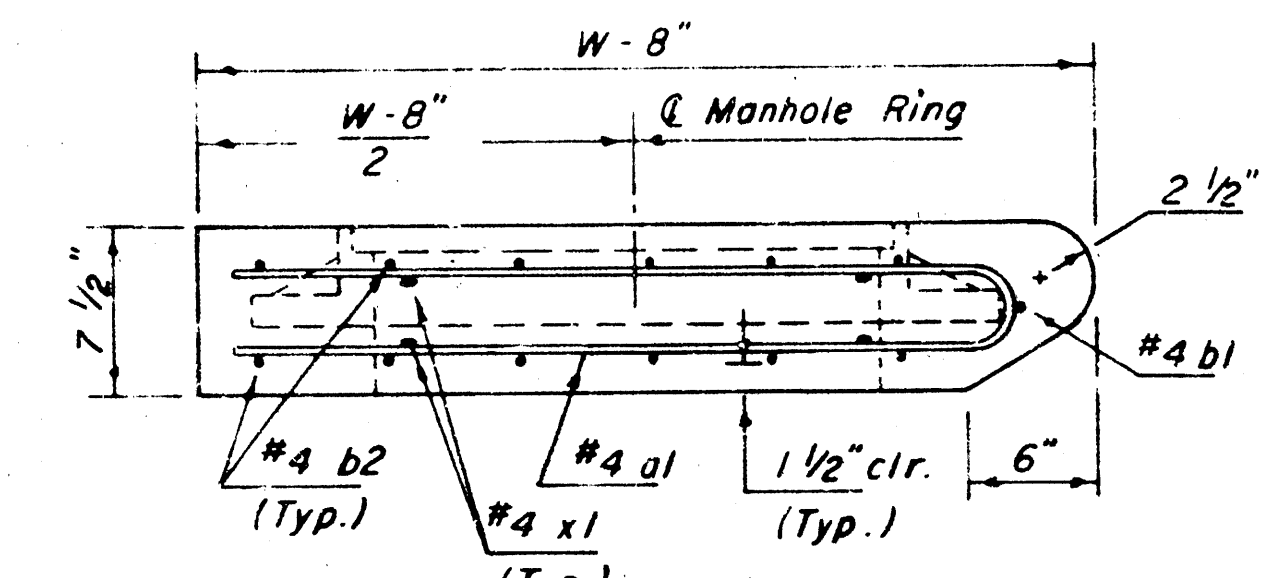


INLET FRAME

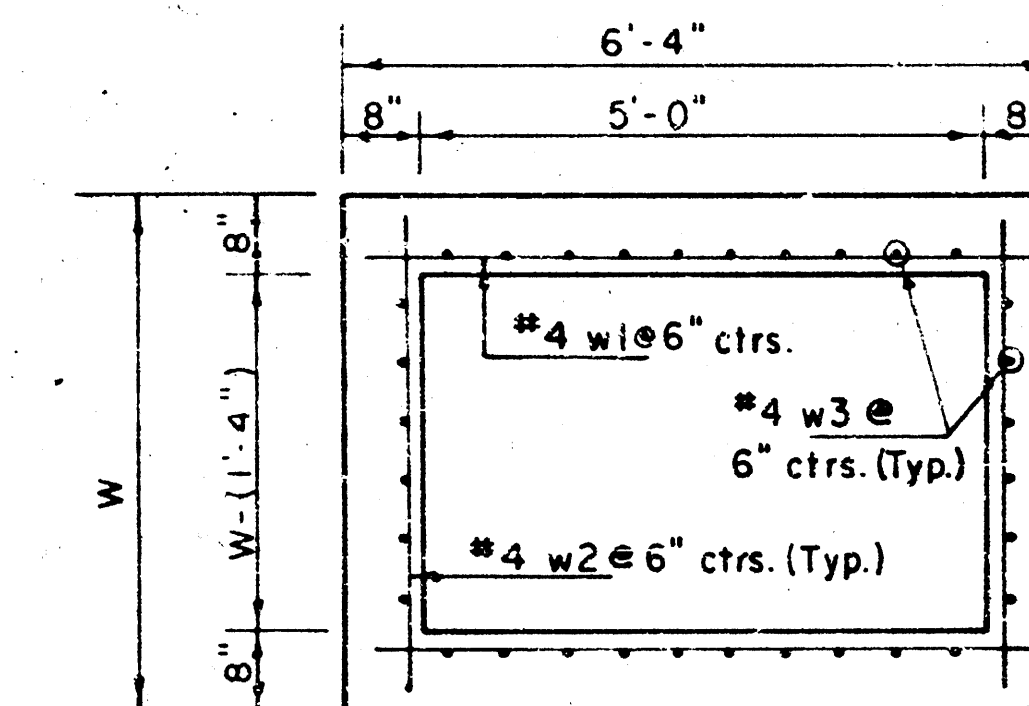
WEIGHT = 180 LBS.



SEE CITY OF WICHITA STANDARD MANHOLE FRAME AND COVER DETAIL SHEET FOR COVER DETAILS TO BE USED WITH INLET FRAME.



SECTION C-C

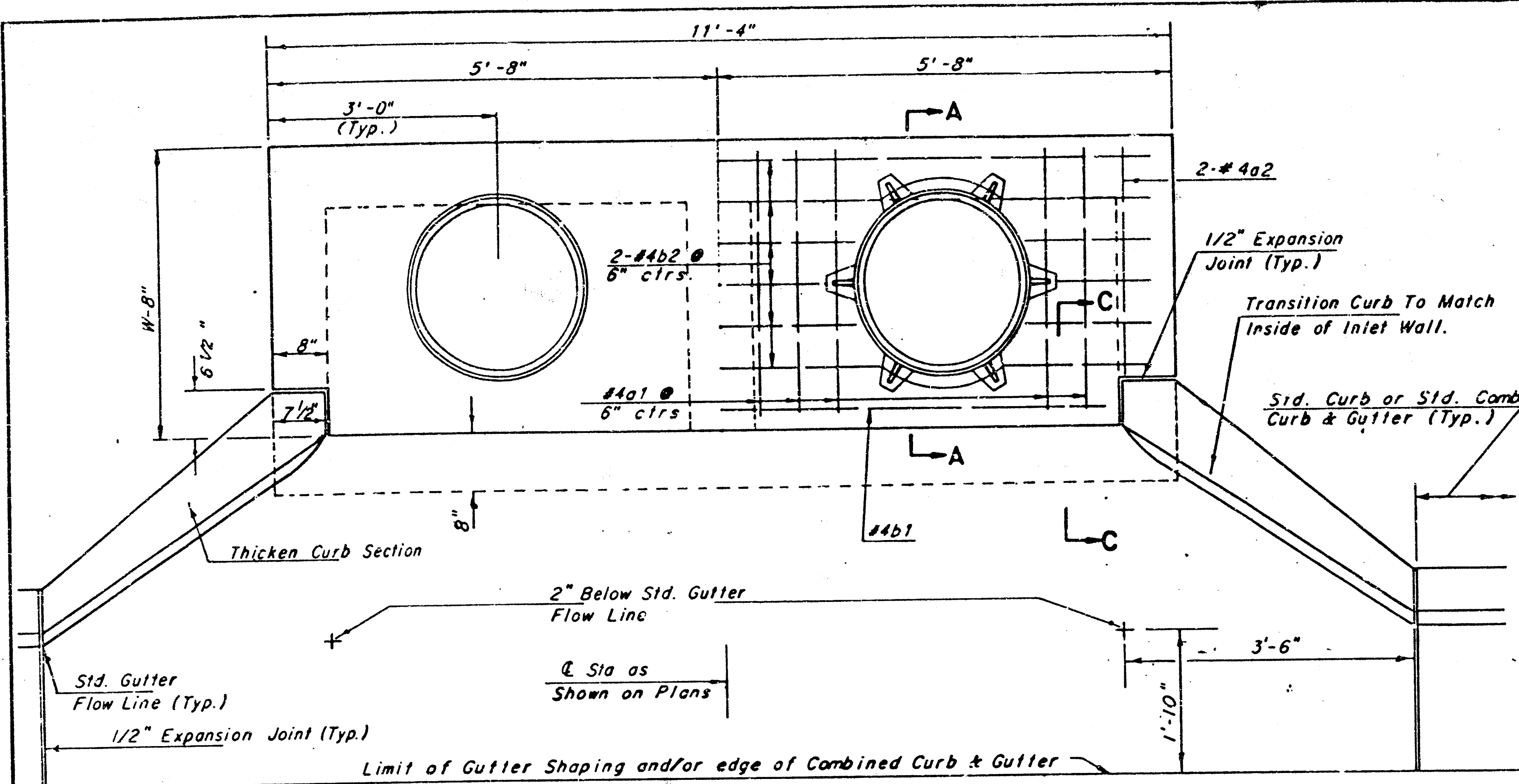


SECTION D-D

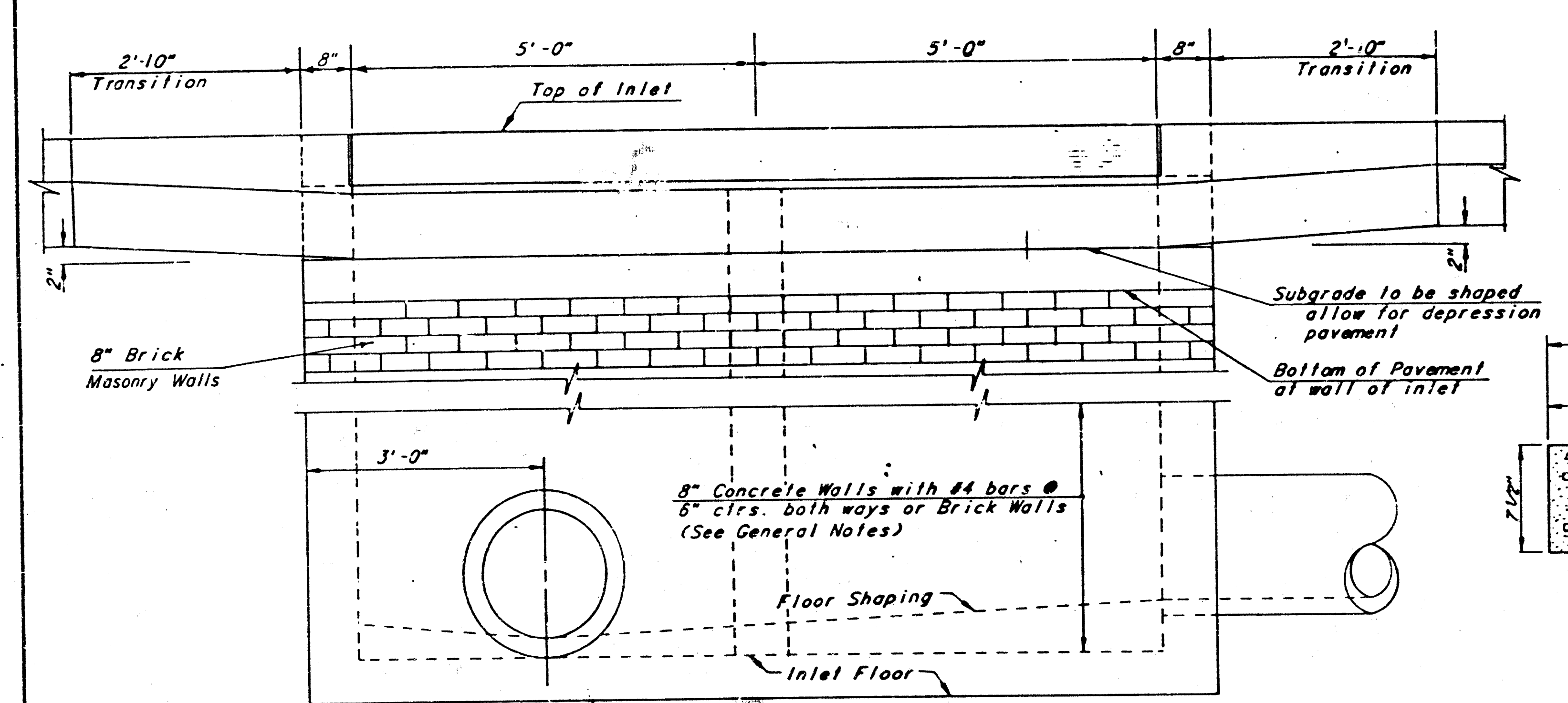
REVISED 11-30-1983
REVISED 12-21-1984
Revised 2-16-1989

DETAIL STANDARD TYPE IA CURB INLET
CITY OF WICHITA, KANSAS
INLET OPENING = 6" x 5' 0"
472-76-245-81952-000-000-001
JUNE 1984

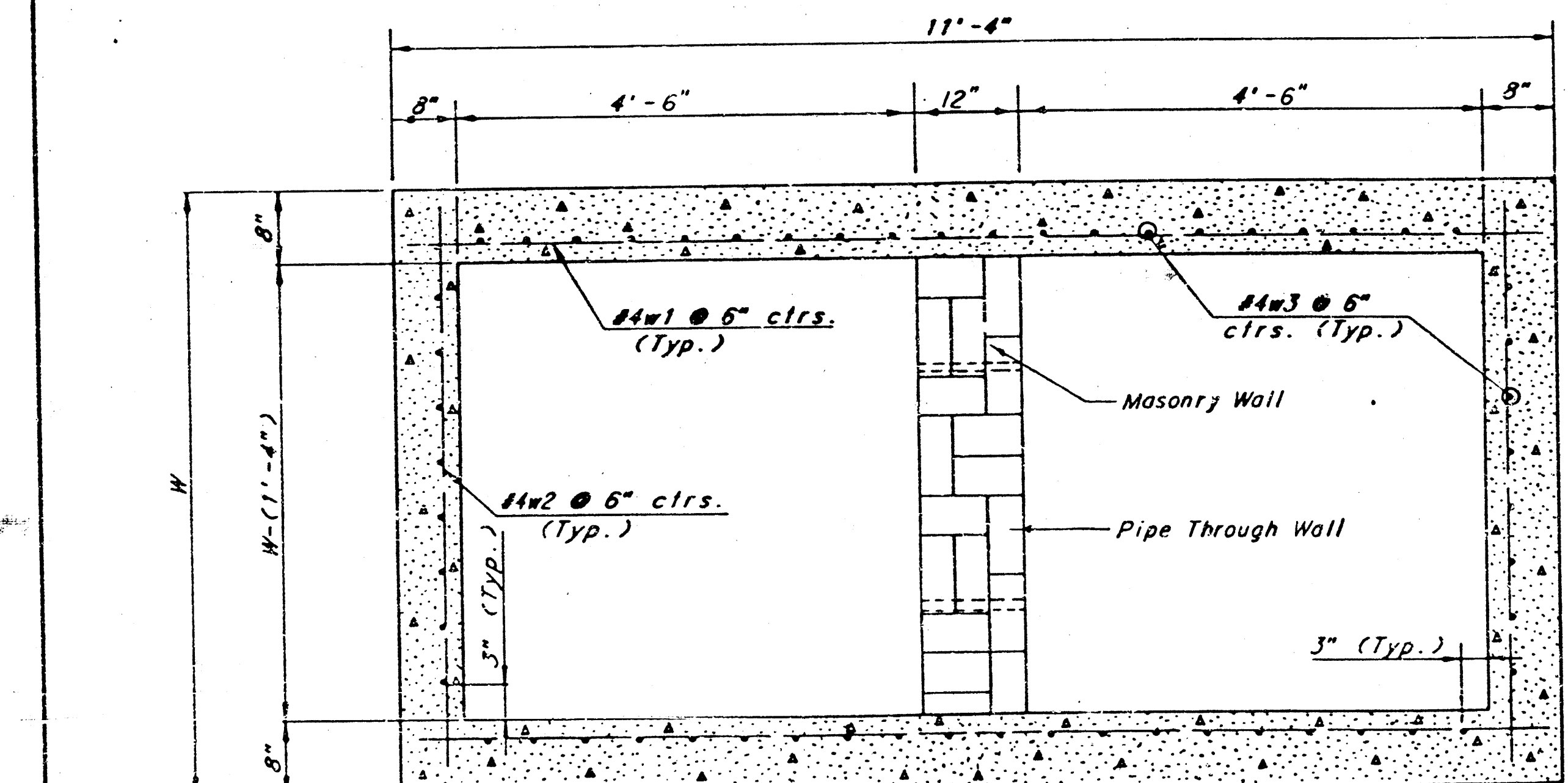
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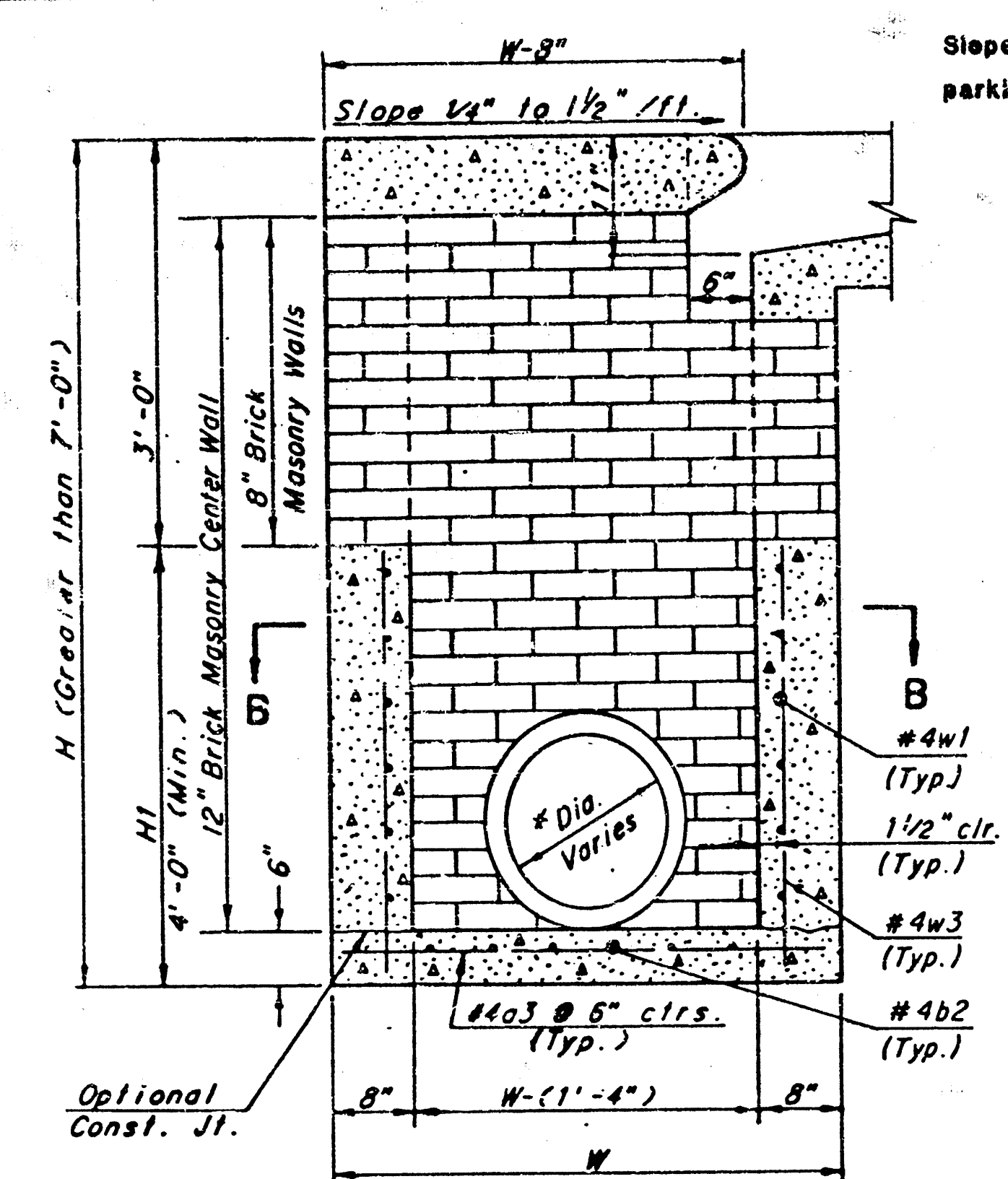
SLAB REINFORCING NOT SHOWN
SHOWING SLAB REINFORCING
NOTE Expansion Joint only in Curb Area with Conc. Pavement.



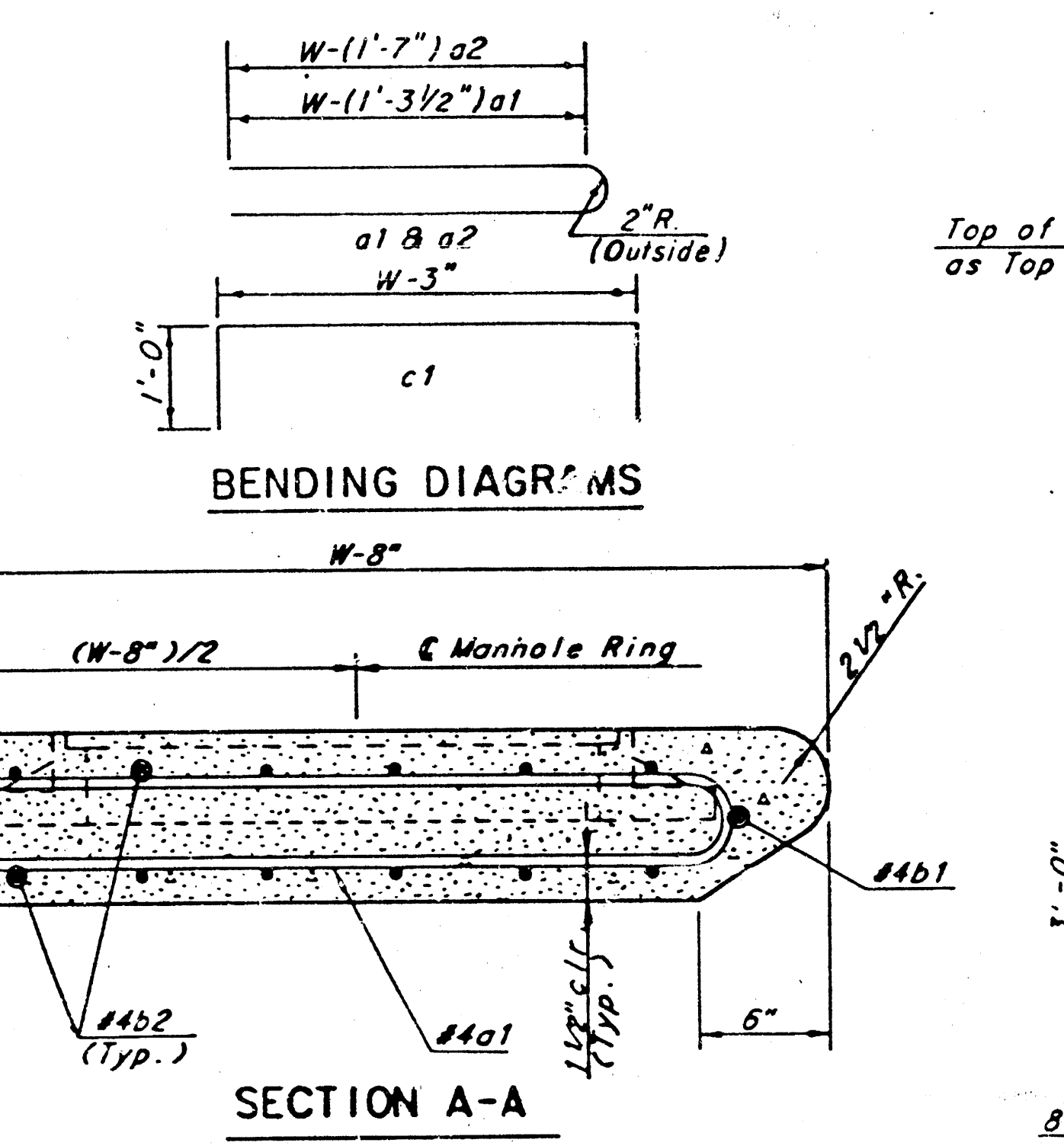
ELEVATION



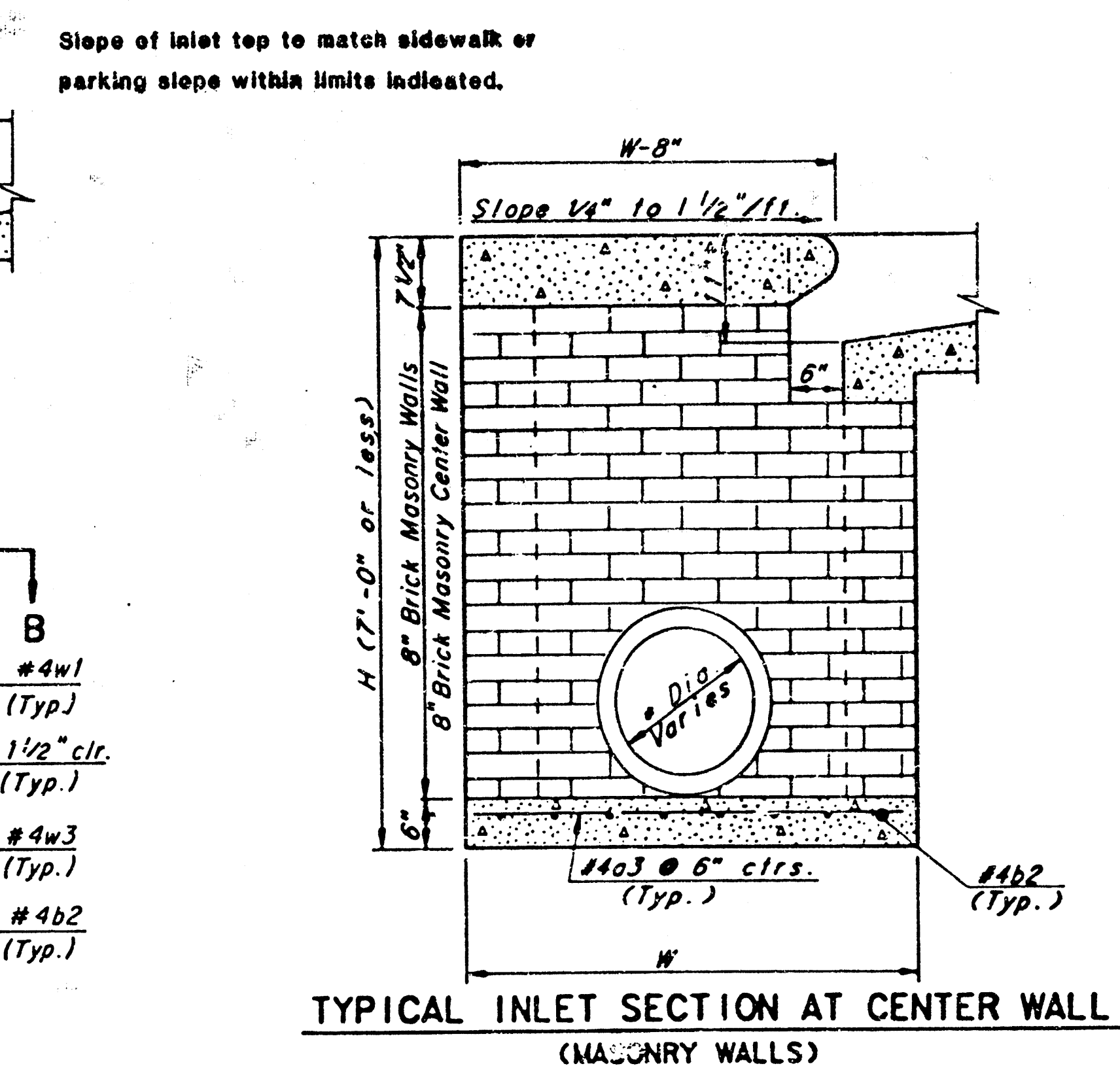
SECTION B-B



TYPICAL INLET SECTION AT CENTER WALL
(REINFORCED CONCRETE WALLS)

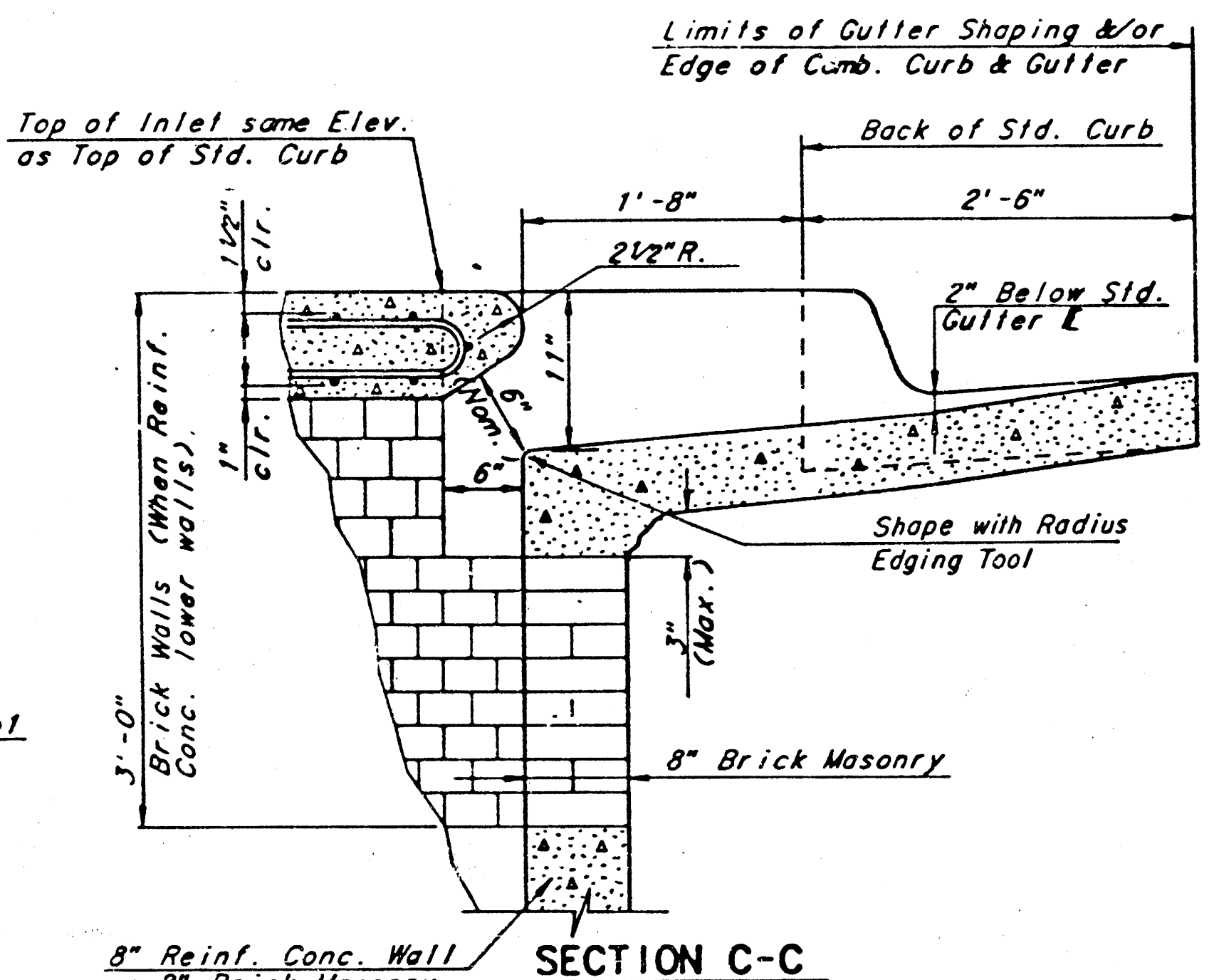


SECTION A-A



TYPICAL INLET SECTION AT CENTER WALL
(MASONRY WALLS)

A center wall opening shall be provided by means of a section of reinforced concrete pipe. See Case I and Case II Below.



SECTION C-C

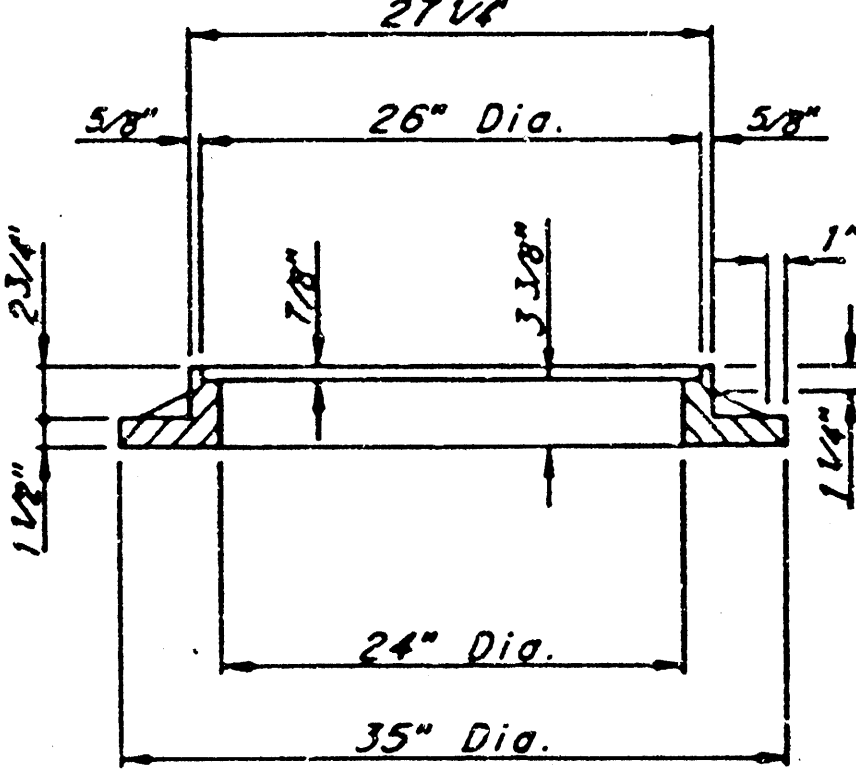
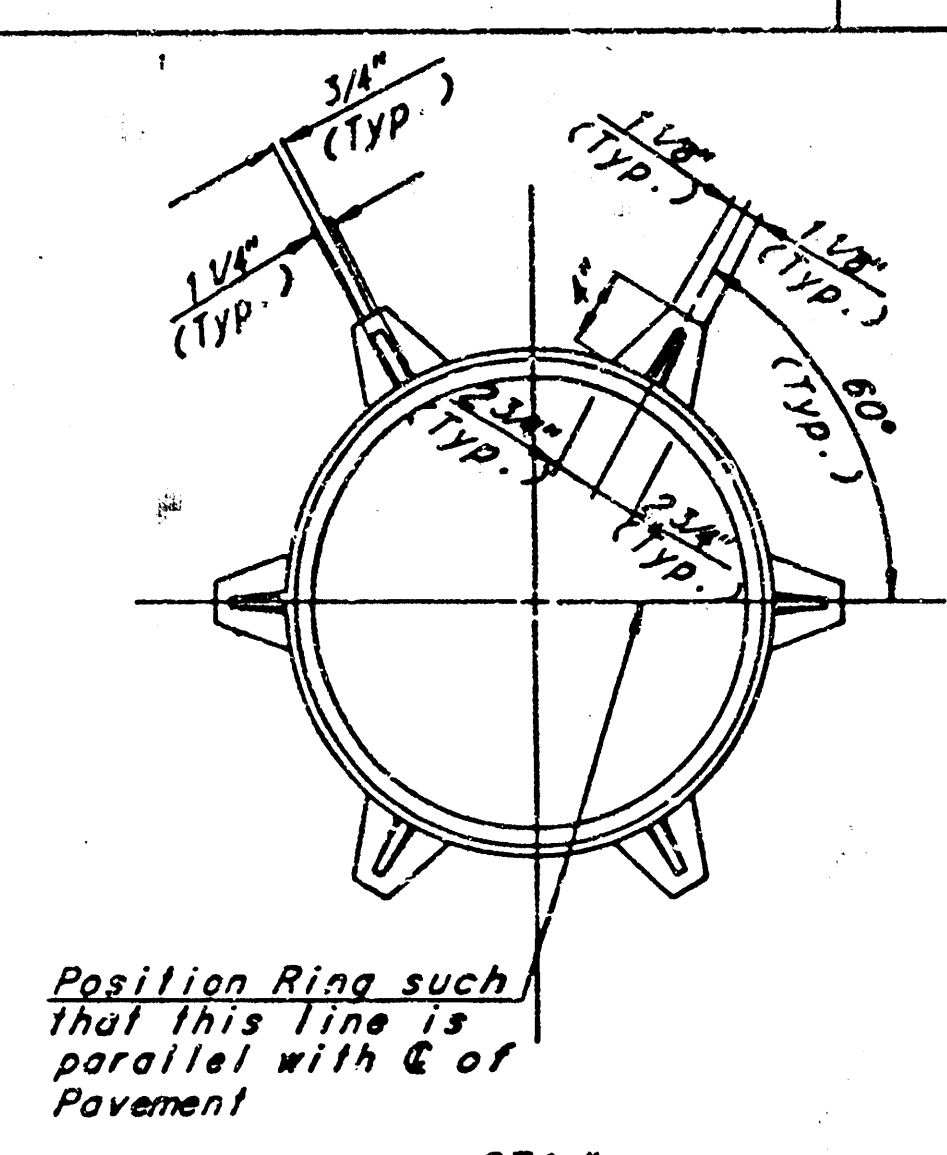
GENERAL NOTES

- THE CONTRACTOR SHALL BE REQUIRED TO CONSTRUCT 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP ON THIS INLET WHEN W=4'-4" OR LESS AND H=7'-0" OR LESS. WHEN W IS GREATER THAN 4'-4" AND H IS LESS THAN 7'-0", THE OUTSIDE INLET WALLS BELOW THE BRICK STACK SHALL BE OF MASONRY CONSTRUCTION AND THE CENTER WALL SHALL BE OF MASONRY CONSTRUCTION AS SHOWN FOR THE MASONRY WALL OPTION.
- INLET INVERT SHALL BE SHAPED WITH A SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.
- CONCRETE TOPS TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK WALLS. CONCRETE TOPS MAY BE CAST IN PLACE OR PRECAST. CONCRETE USED FOR INLET CONSTRUCTION SHALL BE CONCRETE PAVEMENT MIX.
- INLET TOP REINFORCING SHALL BE SPACED ON 6" MAX. CENTERS. INLET LIDS SHALL BE NOTCHED OUT AS INDICATED TO FACILITATE CONSTRUCTION OF CURB. BARS IN INLET TOP TO BE FIELD BENT OR CUT TO CLEAR MANHOLE RING.
- THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.

STANDARD CURB INLET PRECAST TOPS				
W	PRE-CAST TOP SIZE	SIDE OR INTERIOR WALL PIPE SIZE	CU. YD. CONC.	
4'-4"	3'6" x 11'4" x 7 1/2"	21" & SMALLER	0.83 ±	
5'-4"	4'6" x 11'4" x 7 1/2"	24" & 30"	1.09 ±	
6'-4"	5'6" x 11'4" x 7 1/2"	36" & 42"	1.35 ±	
7'-4"	6'6" x 11'4" x 7 1/2"	48" & 54"	1.61 ±	
8'-4"	7'6" x 11'4" x 7 1/2"	60" & 66"	1.87 ±	

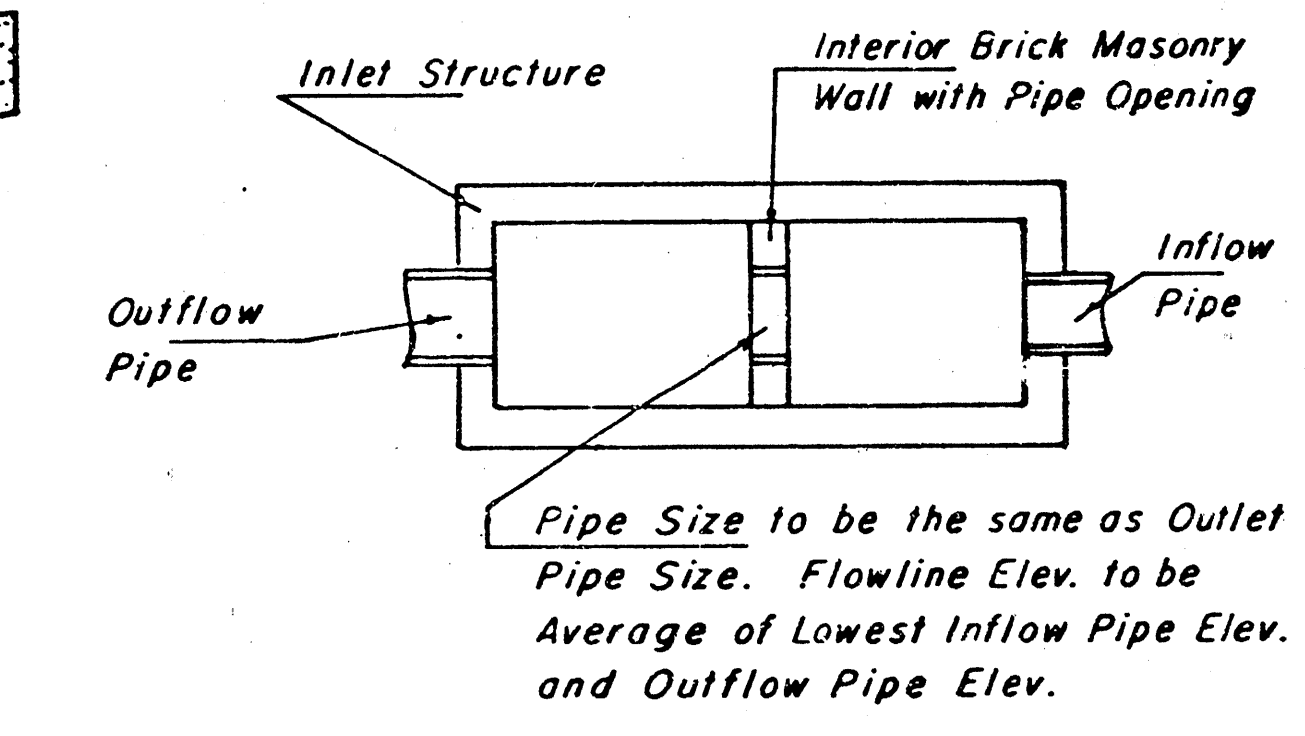
REVISED 12-5-88

REVISED 12-21-84

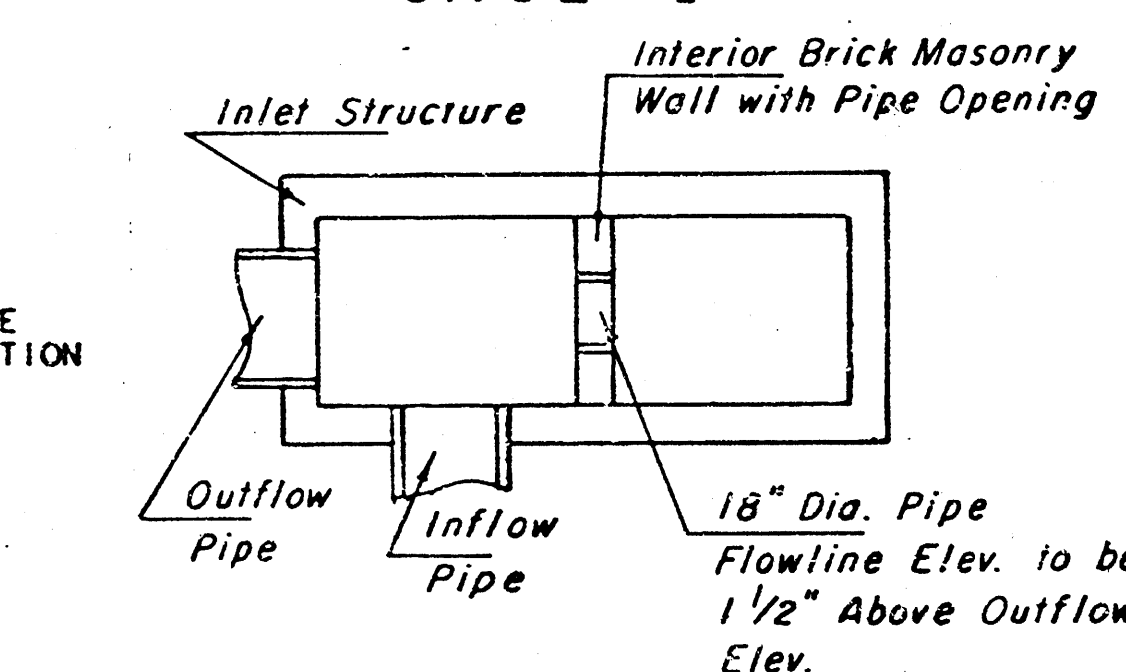


CAST IRON INLET RING
Wt. - 180 lbs.

See City of Wichita Standard Manhole Frame and Cover Detail Sheet for Cover Details to be used with Inlet Frame.



CASE I



CASE II

NOTE Center Wall Pipe Size shall be as Specified in Inlet Construction Note on the Plan/Profile. Sheets for those Cases not shown here.

STANDARD TYPE 1A
CURB INLET
INLET OPENING = 6" x 10' - 0"

472-76-245-81952-000-001

WICHITA, KANSAS

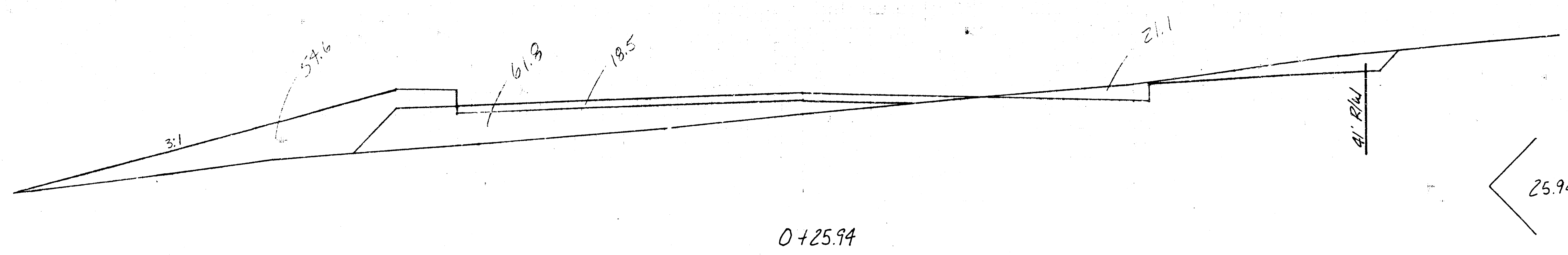
Designed by BER, KJS, LMS
Drawn by JGP
Date Nov., 1984
Job No.

140
135
130
125

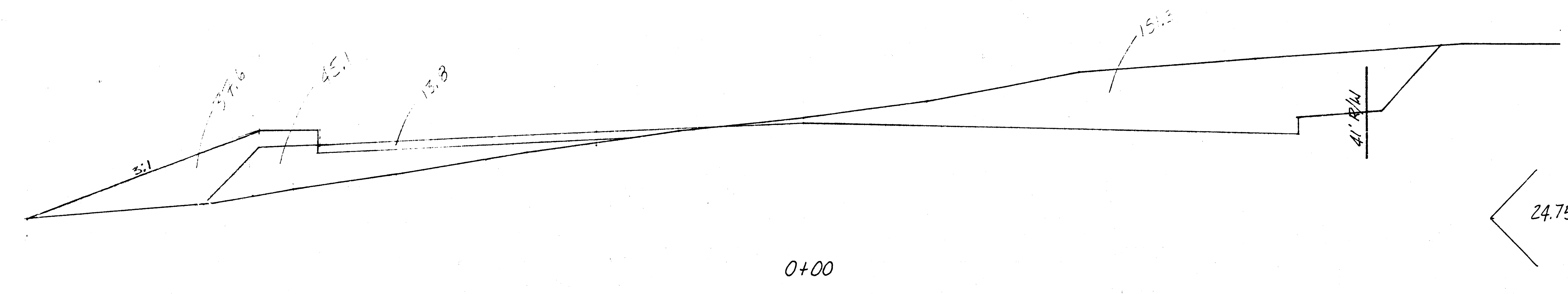
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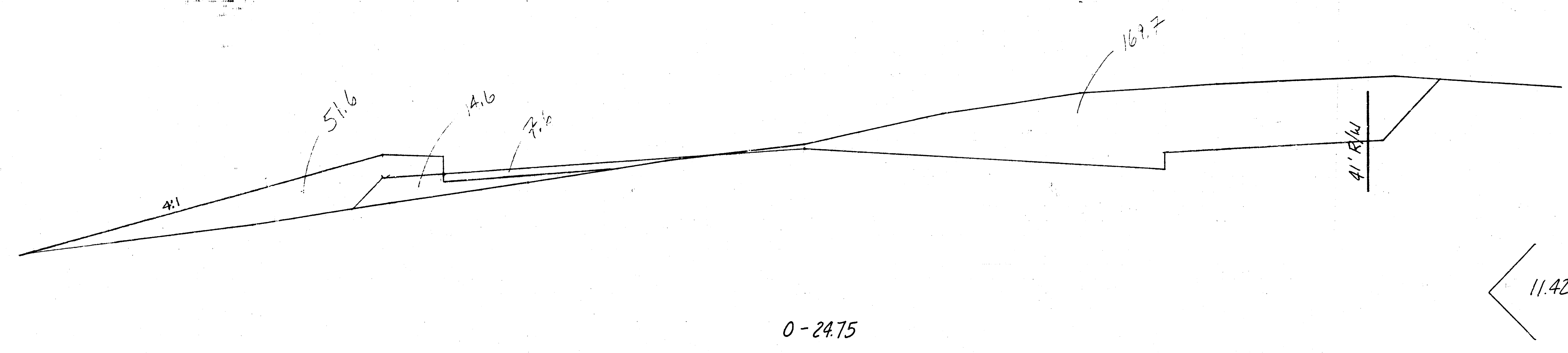
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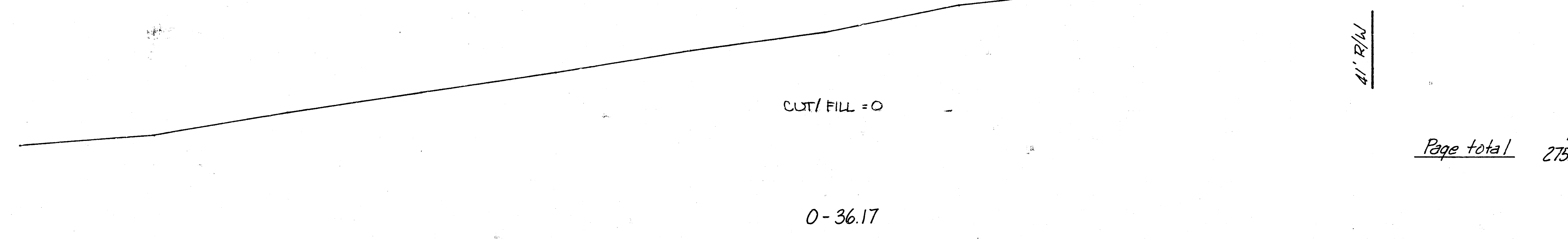
25.93	EXC. 10.1 cu yd	L.F. 61.4 cu yd
	C.F. 74.4 cu yd	M.F. 15.2 cu yd
25.94	EXC. 82.8 cu yd	L.F. 44.3 cu yd
	C.F. 51.4 cu yd	



24.75	EXC. 147.1 cu yd	L.F. 40.9 cu yd
	C.F. 27.4 cu yd	

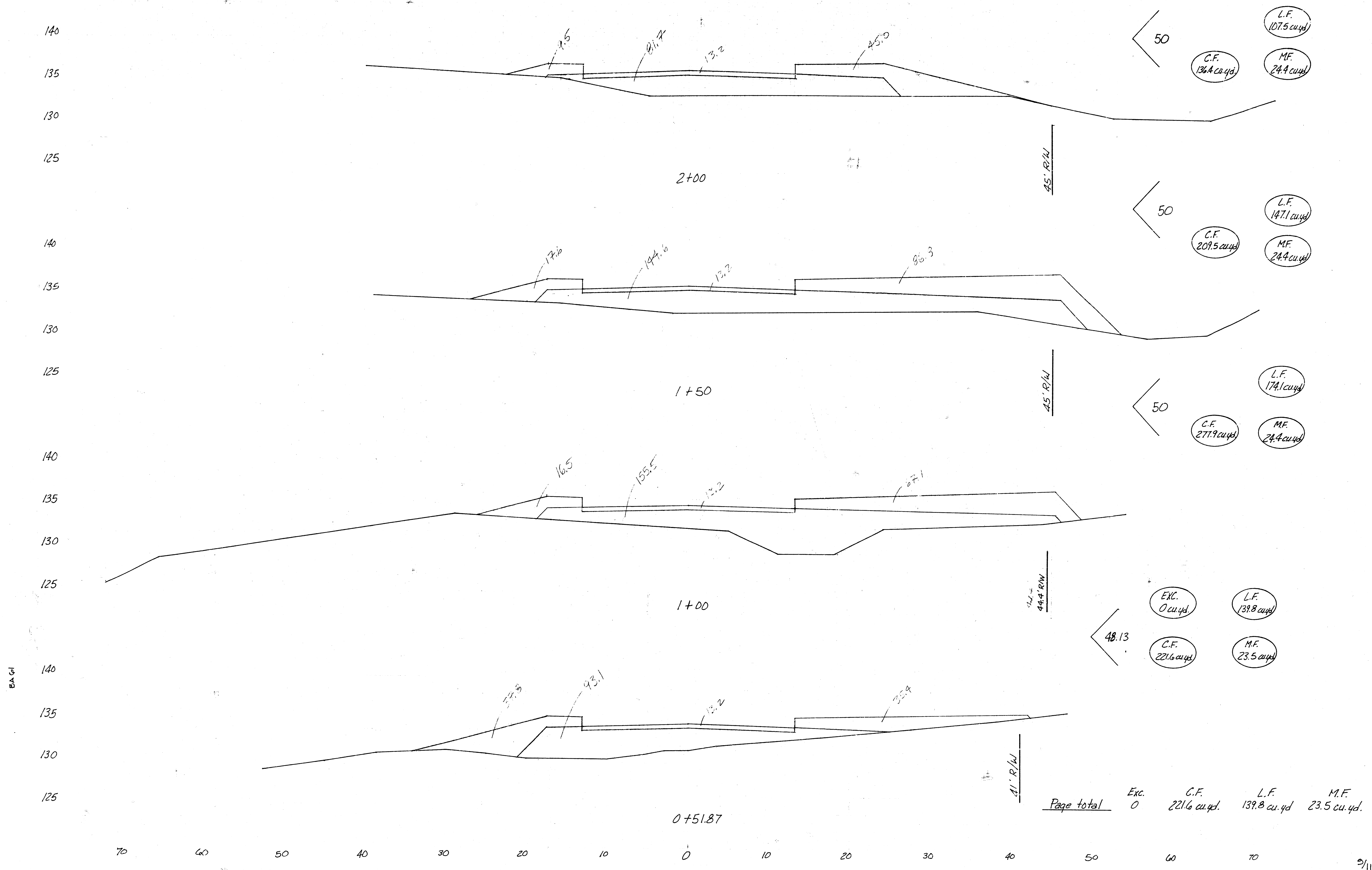


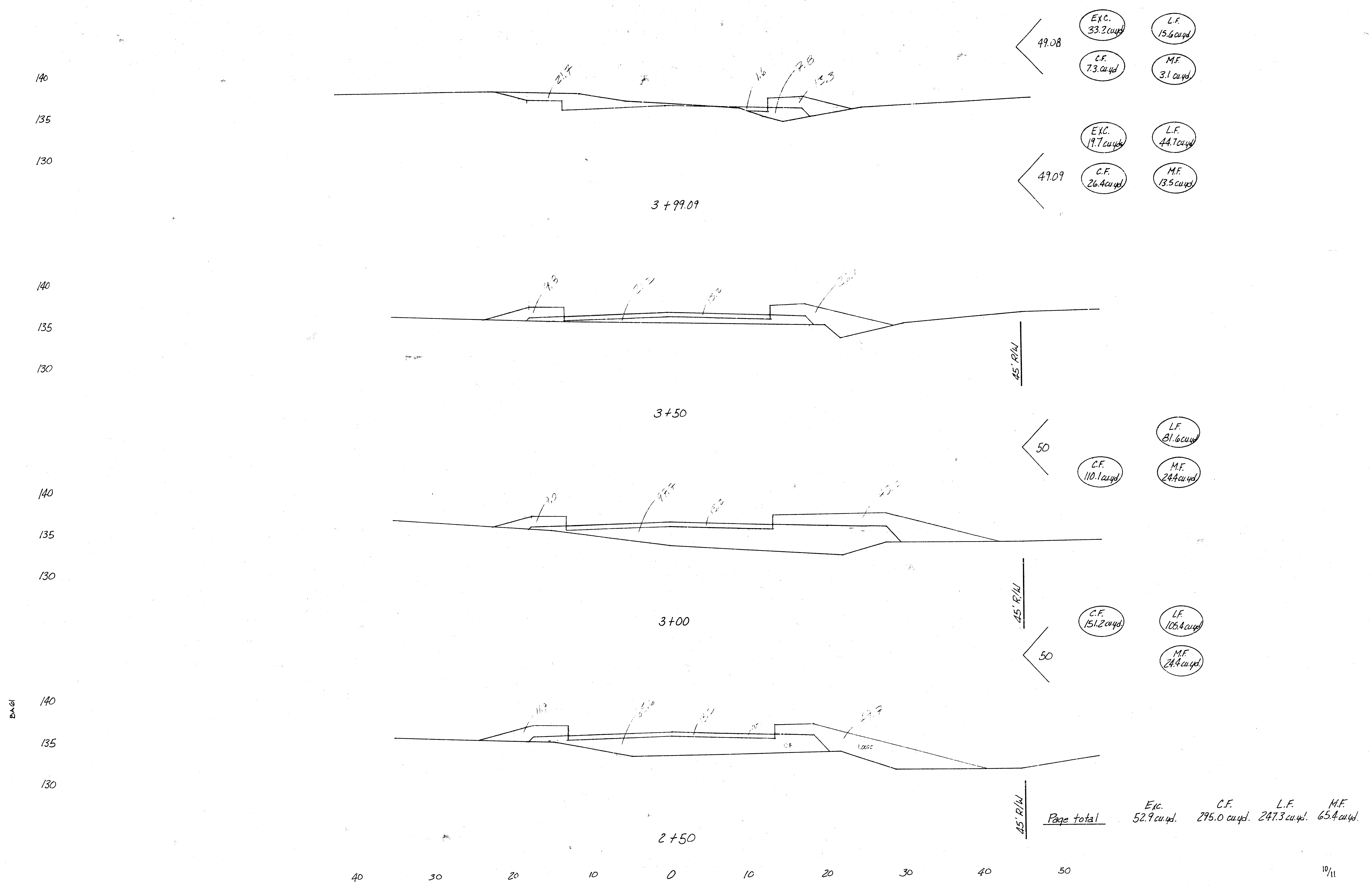
11.42	EXC. 35.9 cu yd	L.F. 10.9 cu yd
	C.F. 3.1 cu yd	



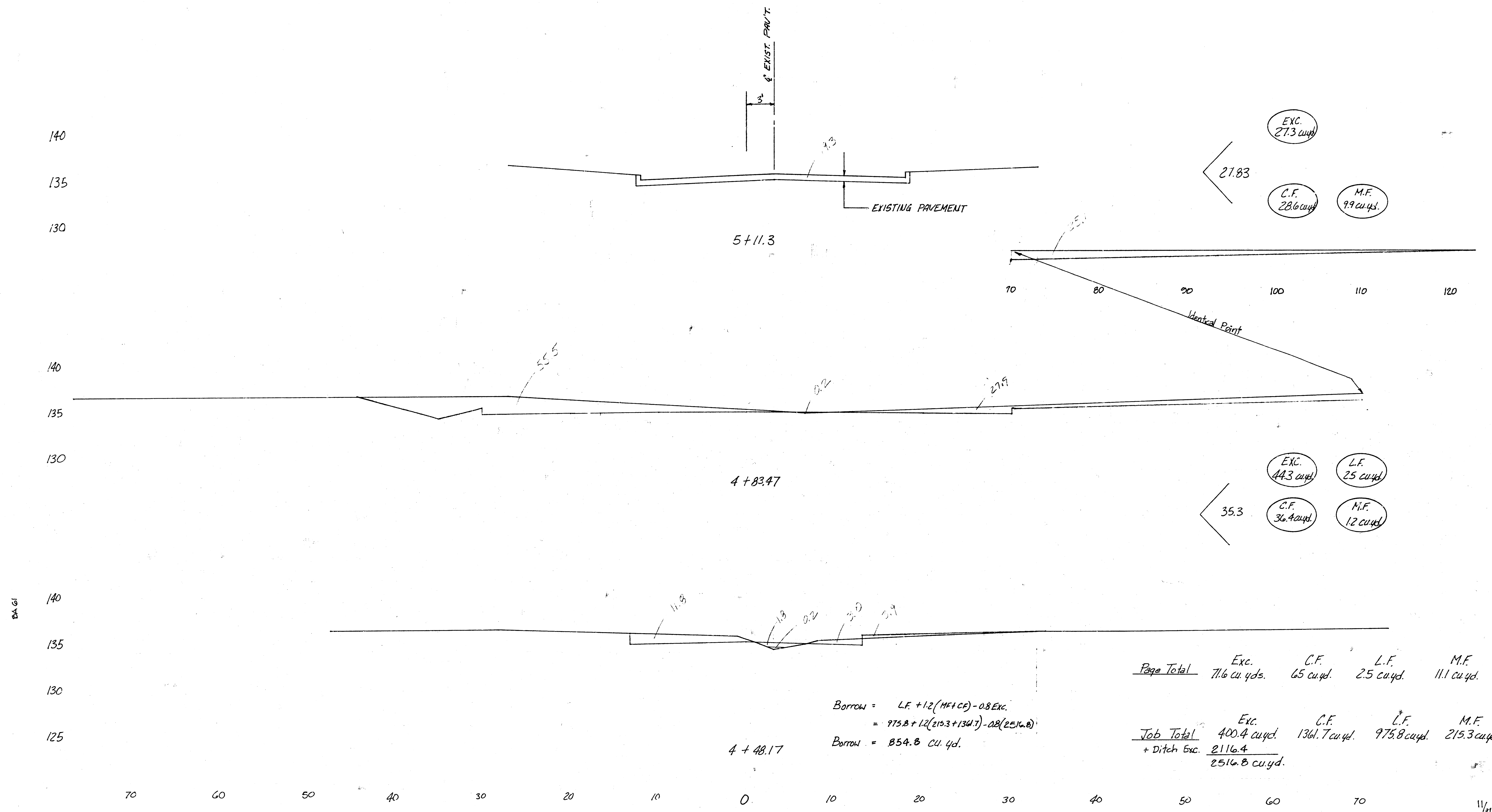
Page total	Exc. 275.9 cu yd	C.F. 156.3 cu yd	L.F. 157.5 cu yd	M.F. 42.1 cu yd
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60 50 40 30 20 10 0 10 20 30 40 50 60 70 8/11





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$$\begin{aligned} \text{Borrow} &= L.F. + 1/2(M.F. + C.F.) - 0.8 \text{ Exc.} \\ &= 975.8 + 1/2(215.3 + 136.7) - 0.8(2516.8) \\ \text{Borrow} &= 854.8 \text{ cu. yd.} \end{aligned}$$

Page Total	Exc.	C.F.	L.F.	M.F.
71.6 cu yds.	65 cu yd.	2.5 cu yd.	11.1 cu yd.	
Job Total	Exc.	C.F.	L.F.	M.F.
400.4 cu yd.	136.7 cu yd.	975.8 cu yd.	215.3 cu yd.	
+ Ditch Exc.	2116.4			
	2516.8 cu yd.			

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