

STORM SEWER PLANS FOR WILLOWBEND HEIGHTS PRIVATE PROJECT NO. 468-76-245-80001-000-000-130

CITY OF WICHITA, KANSAS
MICHAEL E. LINDEBAK, CITY ENGINEER

GENERAL NOTES

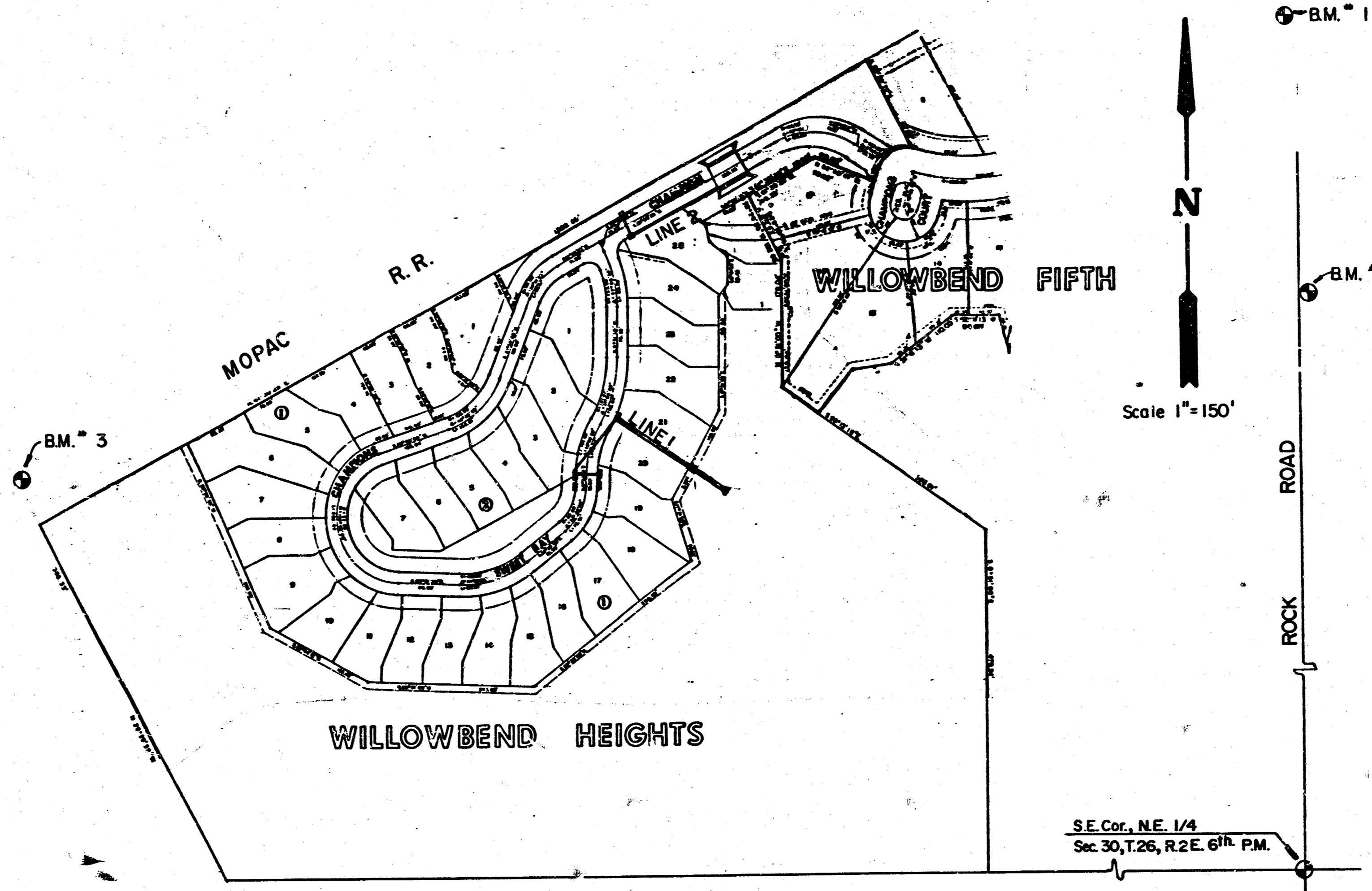
1. THE TOPS OF INLET AS NOTED ON THE PLANS MAY VARY SO AS TO MEET PROPOSED TOP OF CURB ELEVATIONS OR PAVEMENT ELEVATIONS. THE FIELD ENGINEER SHALL LOCATE INLETS AND MANHOLES WITH REFERENCE TO PROPOSED PAVING PLANS OF THE PERTINENT STREETS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR SHALL 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 OR A LICENSED PROFESSIONAL ENGINEER IN ACCORDANCE WITH STATE LAWS.
3. CONSTRUCTION OF PIPE OUTLET INTO LAKE MAY REQUIRE LOWERING OF THE EXISTING LAKE INTO WHICH THESE LINES EMPTY OR CONSTRUCTION OF A COFFERDAM. THE PLAN SHEETS SHOWING THESE OUTLETS ALSO SHOW THE SURVEYED WATER LEVEL AND THE DATE OF THE SURVEY. PRESENT WATER LEVELS AND WATER LEVELS AT THE TIME OF CONSTRUCTION MAY VARY FROM THIS SURVEYED WATER LEVEL.
4. UNDERGROUND UTILITY SERVICE LINES AND OVERHEAD UTILITY POLE LINES 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. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT OF WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.

NOTE: NOTIFY THE FOLLOWING COMPANIES PRIOR TO ANY EXCAVATION:

ARKLA GAS COMPANY	942-8350
BELL TELEPHONE COMPANY	1-316-571-2115
CABLEVISION	262-0661
KP&L COMPANY	263-7511
KANSAS GAS & ELECTRIC	264-1141

BENCH MARKS

- B.M. #1 = □ = cut on SW corner of North cart path underpass on Rock Road. Elev. = 188.79
- B.M. #2 = □ = cut on NE corner of Big RCB under Rock Road + 900' N of E Quarter corner section 30, Township 26 South, Range 2 East. Elev. = 186.99
- B.M. #3 = NE cor of RCB under MoPac + 415' Northeastly of the W 1/4 of the NE Quarter, Section 30, Township 26 South, Range 2. Elev. = 185.31



INDEX TO DRAWINGS

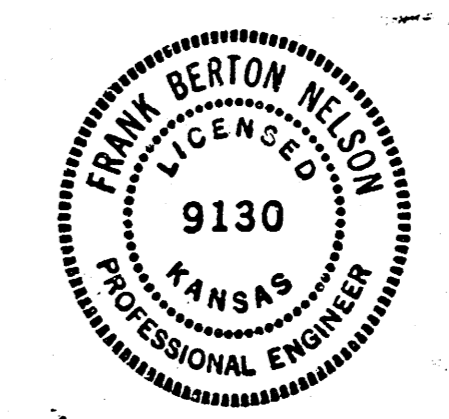
Sheet No.	Description
1	Title Sheet
2	Plan & Profile Line 1
3	Plan & Profile Line 2
4-5	Type IA Curb Inlet Details
6	Type I Curb Inlet Details

NOTE TO CONTRACTOR

This project will be constructed under the supervision of the CITY ENGINEER and conforming to the SPECIFICATIONS of the CITY OF WICHITA. The CONTRACTOR will pay the City of Wichita for all costs of plan review, inspection and booking per contract.

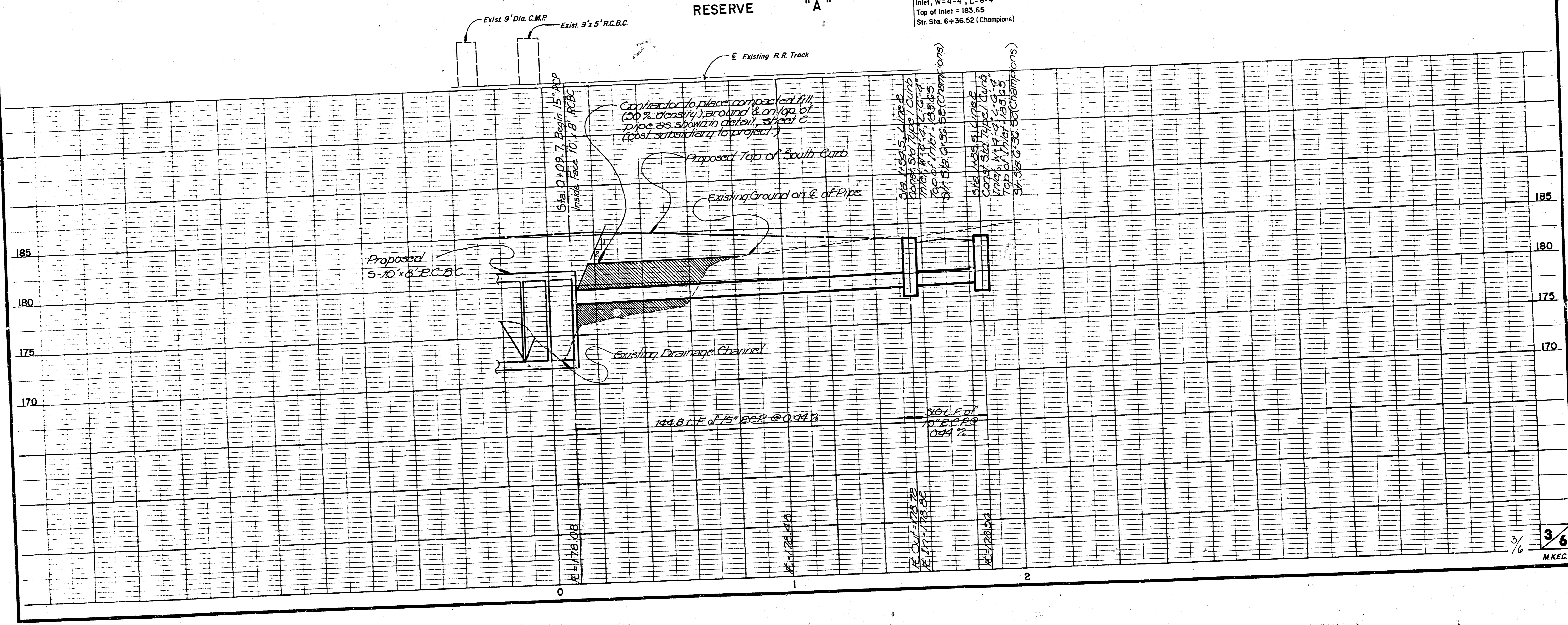
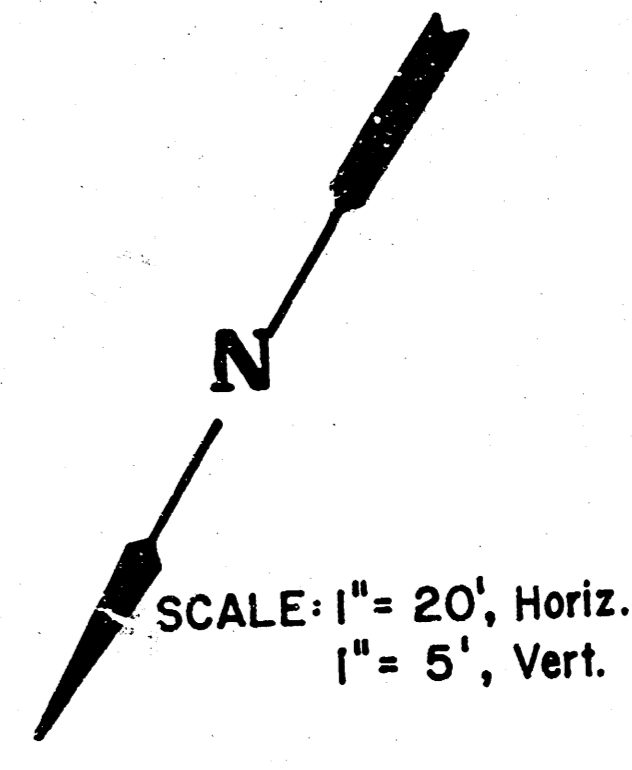
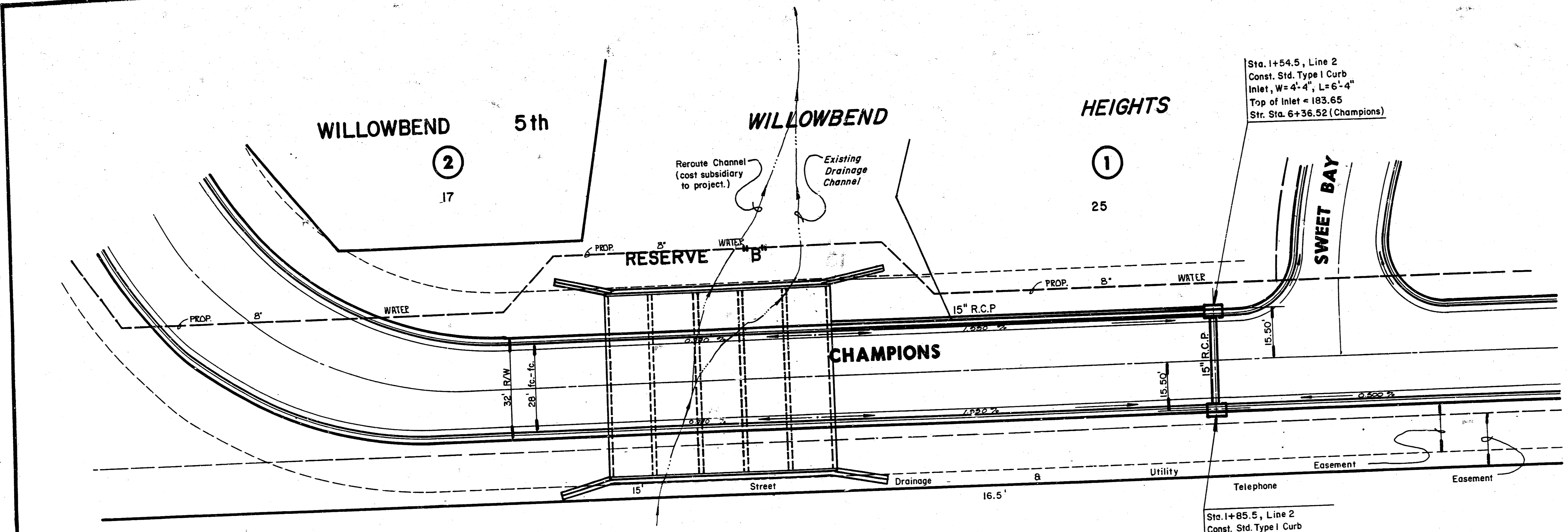
APPROVED AS NOTED
By CITY ENGINEER OF WICHITA

Sanitary Sewers	_____
Storm Sewers	VRH 10/26/87
Driveway Approaches	_____
Water Mains	_____
Paving	_____

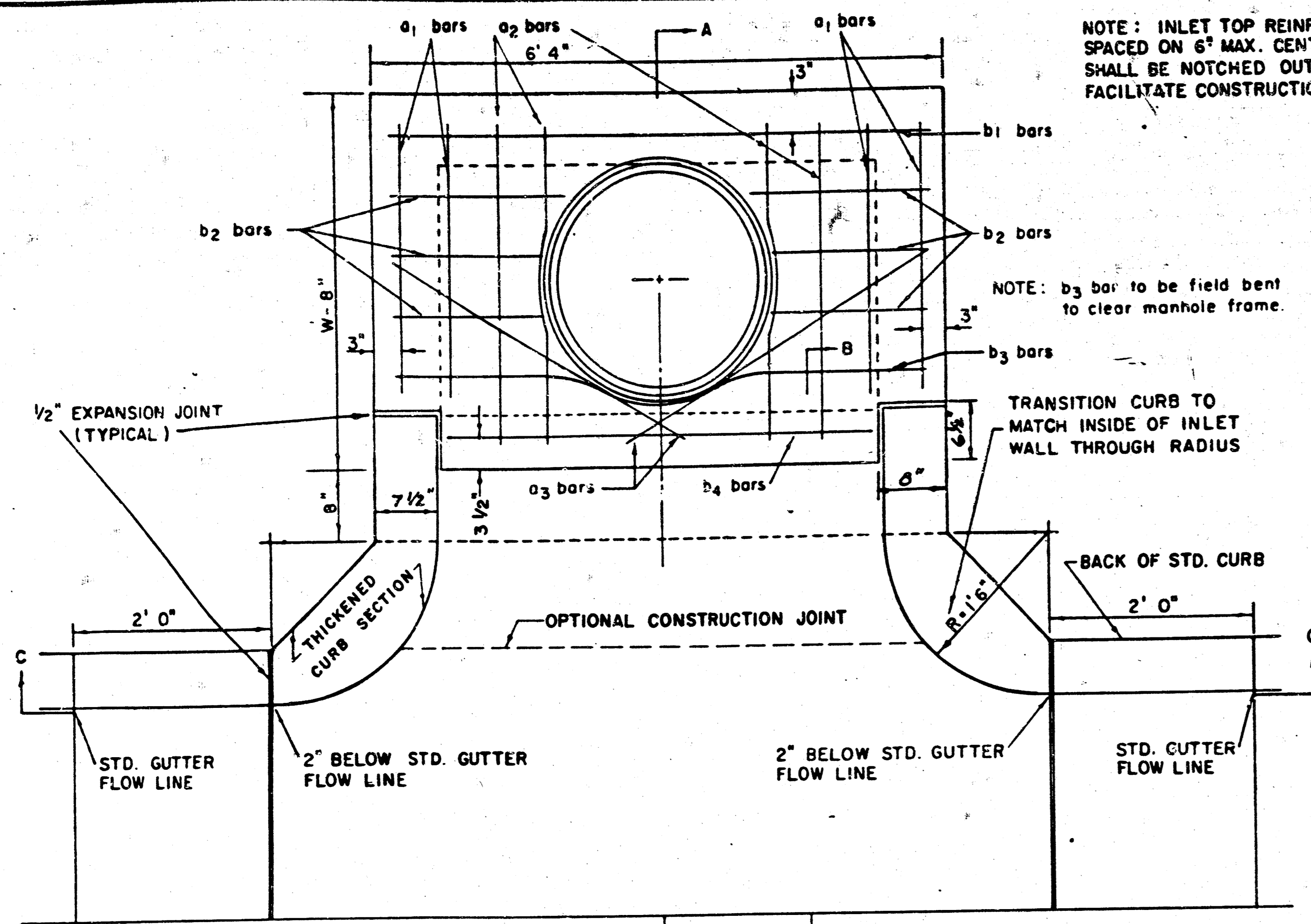


	WILLOWBEND HEIGHTS	Design
	STORM WATER SEWER PLANS	Drawn by
		Checked by
		Date
		Job no.
MID-KANSAS ENGINEERING CONSULTANTS PA 3500 NORTH ROCK ROAD BUILDING 1800 WICHITA, KANSAS 67226		Sheet 1 of 6

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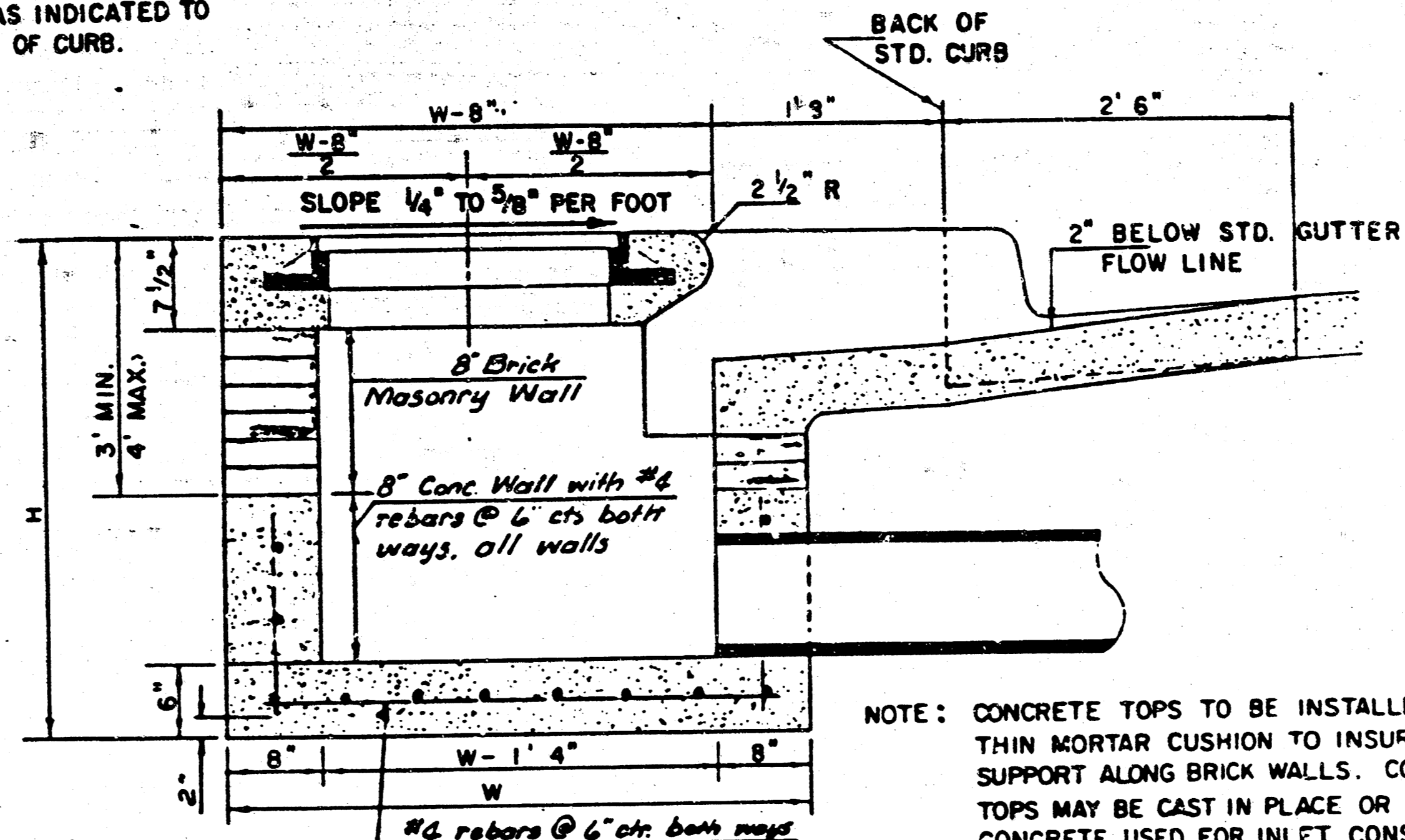
NOTE: EXPANSION JOINT ONLY IN CURB AREA WITH CONC. PAVEMENT.

PLAN

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

NOTE: b3 bar to be field bent to clear manhole frame.

TRANSITION CURB TO MATCH INSIDE OF INLET WALL THROUGH RADIUS



SECTION A-A

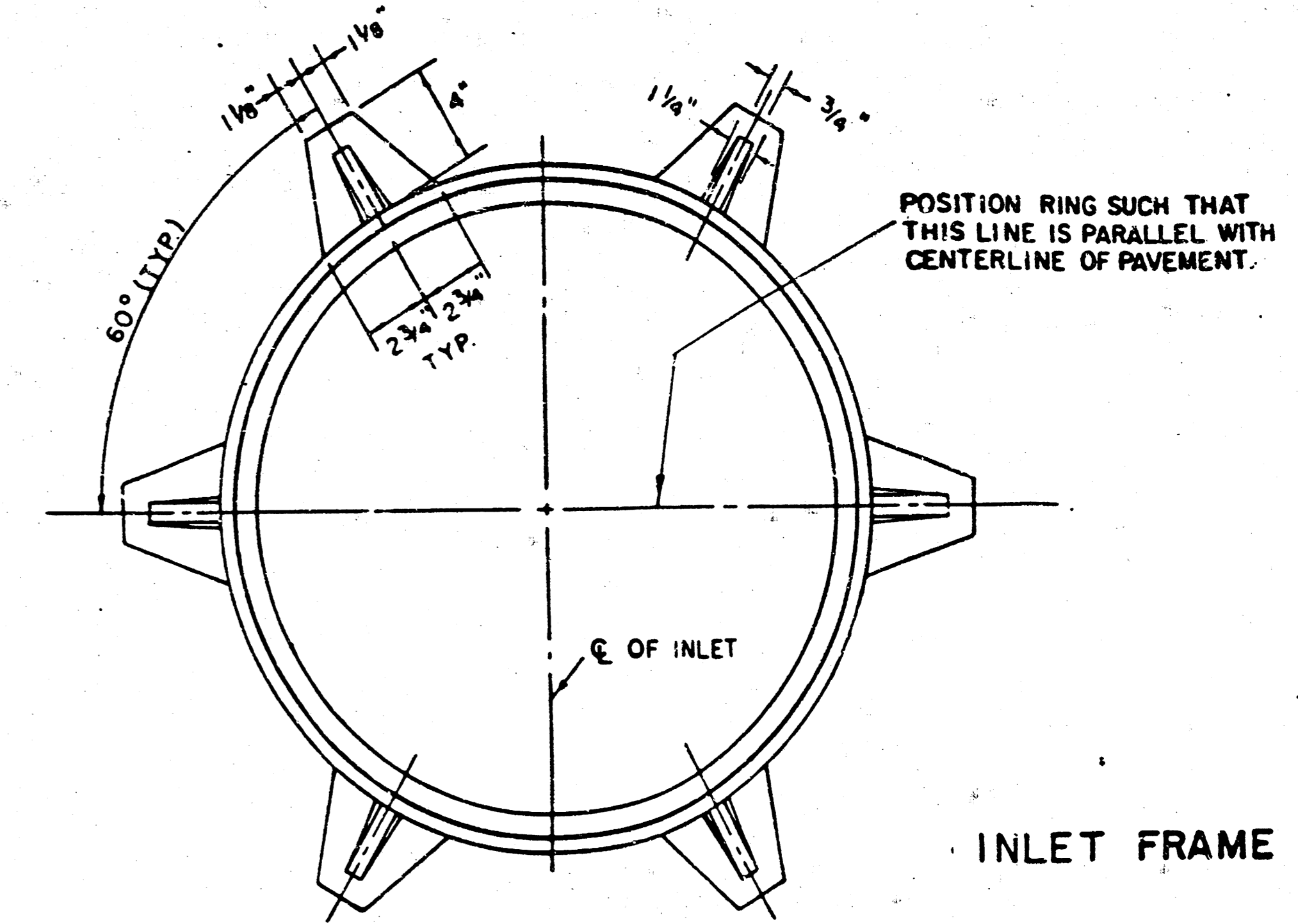
NOTE: CONCRETE TOPS TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK WALLS. CONCRETE TOPS MAY BE CAST IN PLACE OR PRECAST. CONCRETE USED FOR INLET CONSTRUCTION SHALL BE CONCRETE PAVEMENT MIX.

NOTE: CONTRACTOR SHALL HAVE THE OPTION OF CONSTRUCTING 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP ON THIS INLET WHEN W = 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.

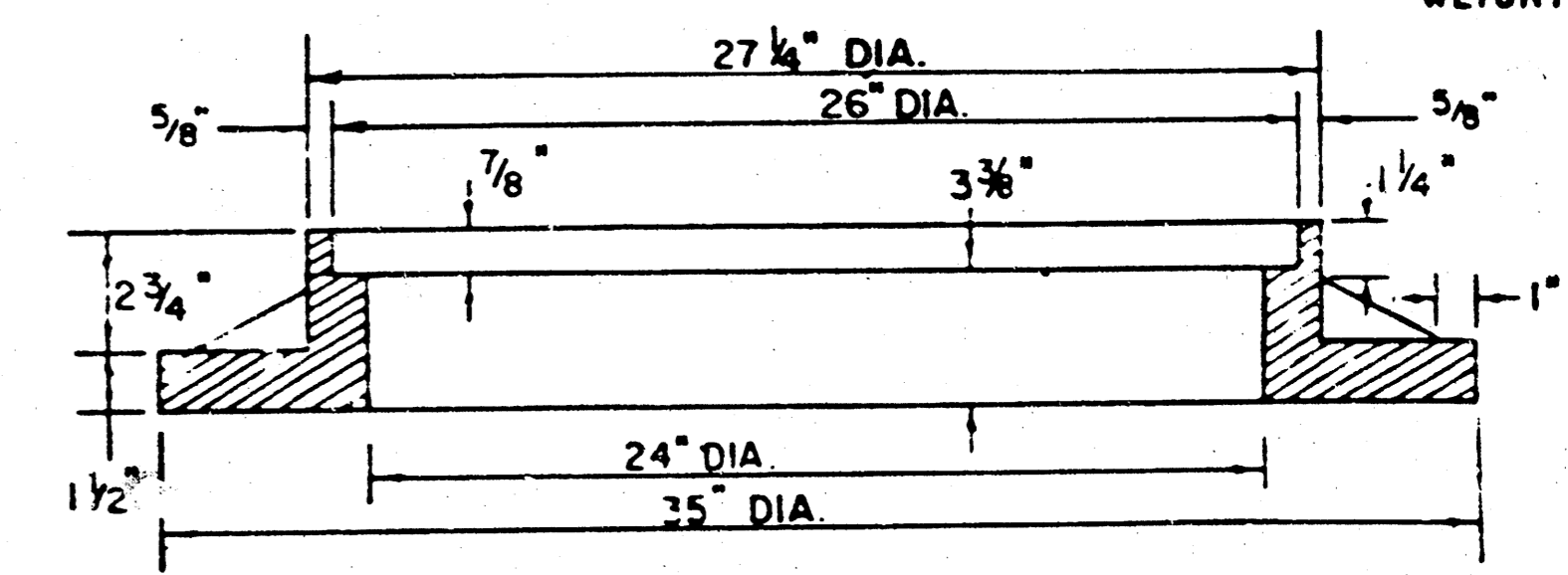
INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF-CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.

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



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.

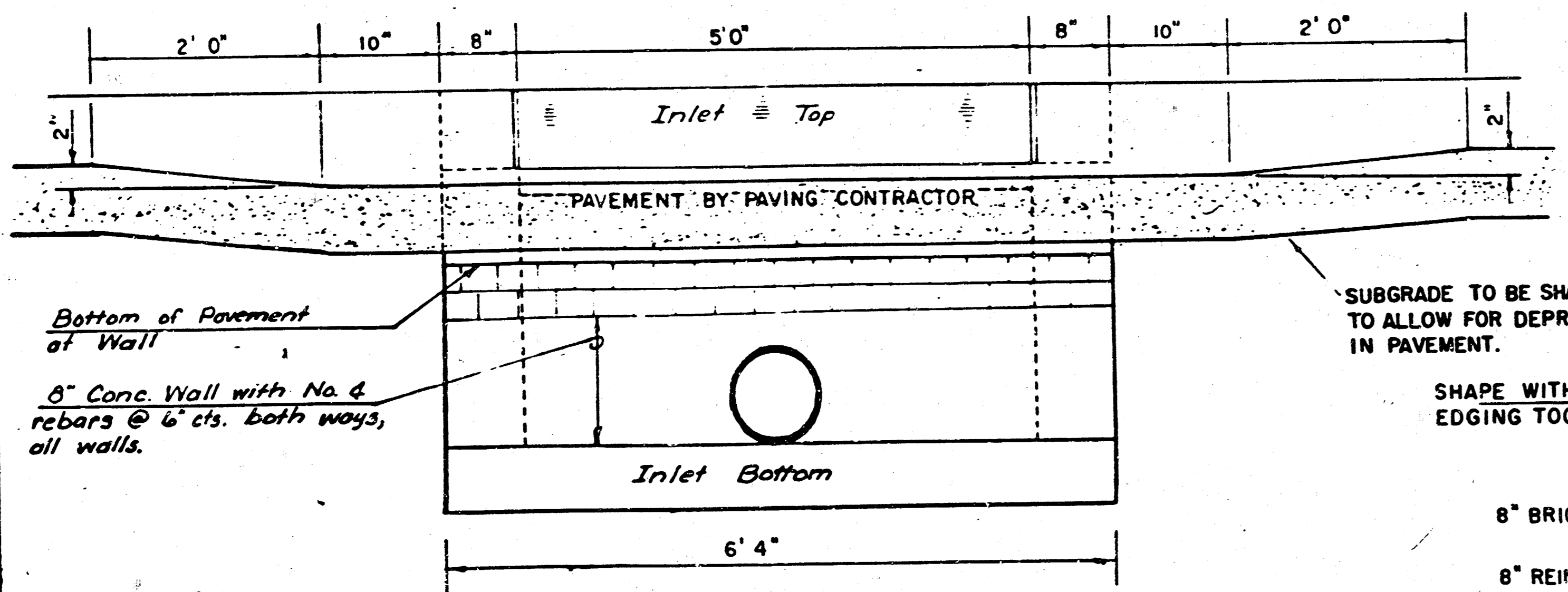
STEEL SCHEDULE

BAR NUMBER	a1	a2	a3	b1	b2	b3	b4	WT. LBS.
4	4	2	1	3	5	7	9	60 ±
5	4	4	4	4	4	4	4	81 ±
6	4	4	4	4	4	4	4	101 ±
7	4	4	4	4	4	4	4	121 ±
8	4	4	4	4	4	4	4	141 ±

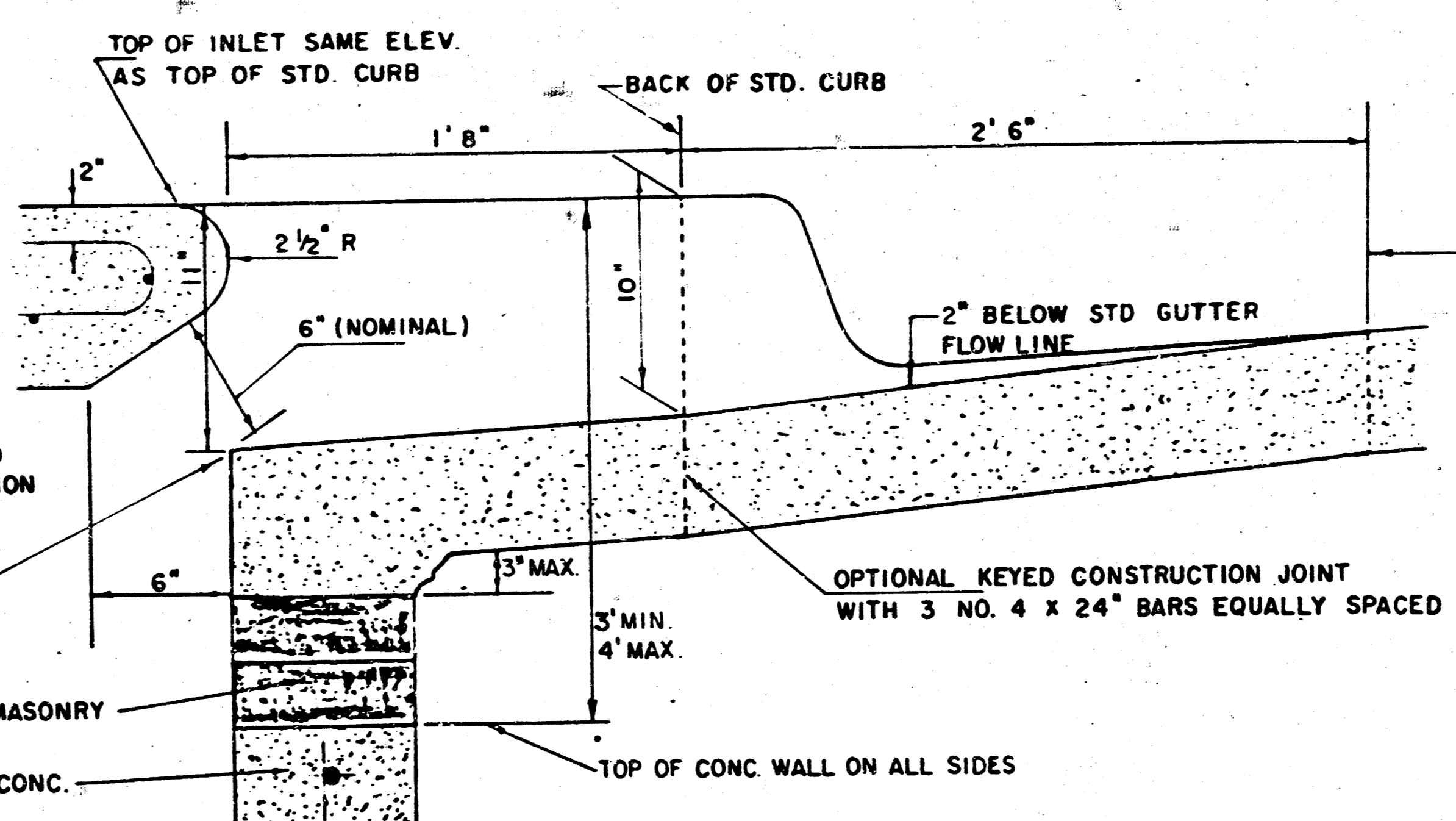
* NOTE: a3 BARS TO BE PLACED APPROX. 2" BELOW TOP OF INLET COVER

BENDING DIAGRAM

W	PRE-CAST TOP SIZE	PIPE SIZE	CU. YD. CONC.
4' 4"	5' 8" x 6' 4" x 7 1/2"	21" & SMALLER	0.38 ±
5' 4"	4' 8" x 6' 4" x 7 1/2"	24" & 30"	0.51 ±
6' 4"	5' 8" x 6' 4" x 7 1/2"	36" & 42"	0.64 ±
7' 4"	6' 8" x 6' 4" x 7 1/2"	48" & 54"	0.77 ±
8' 4"	7' 8" x 6' 4" x 7 1/2"	60" & 66"	0.90 ±



SECTION C-C



SECTION B-B

LIMITS OF GUTTER SHAPING AND/OR EDGE OF COMB. CURB AND GUTTER

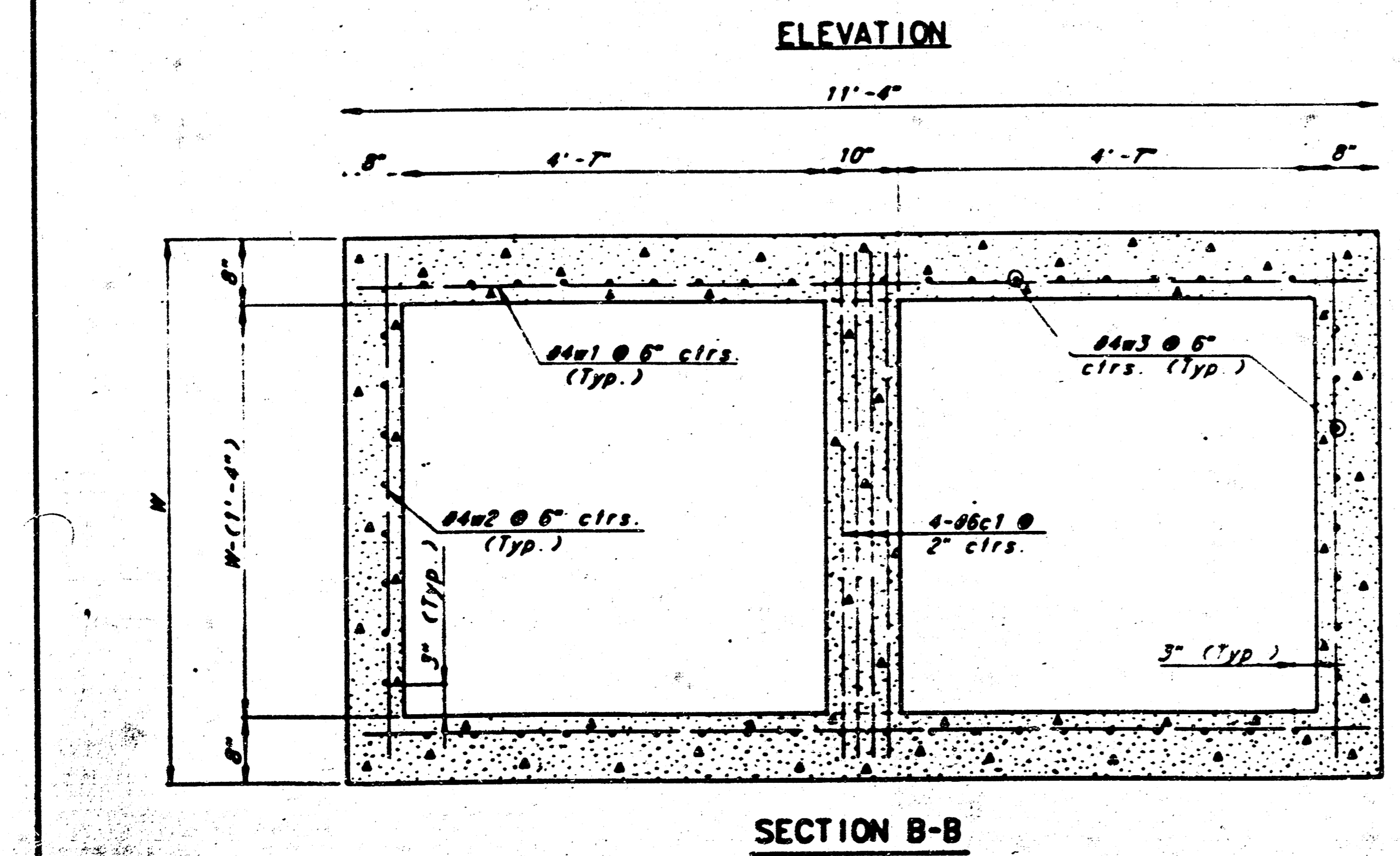
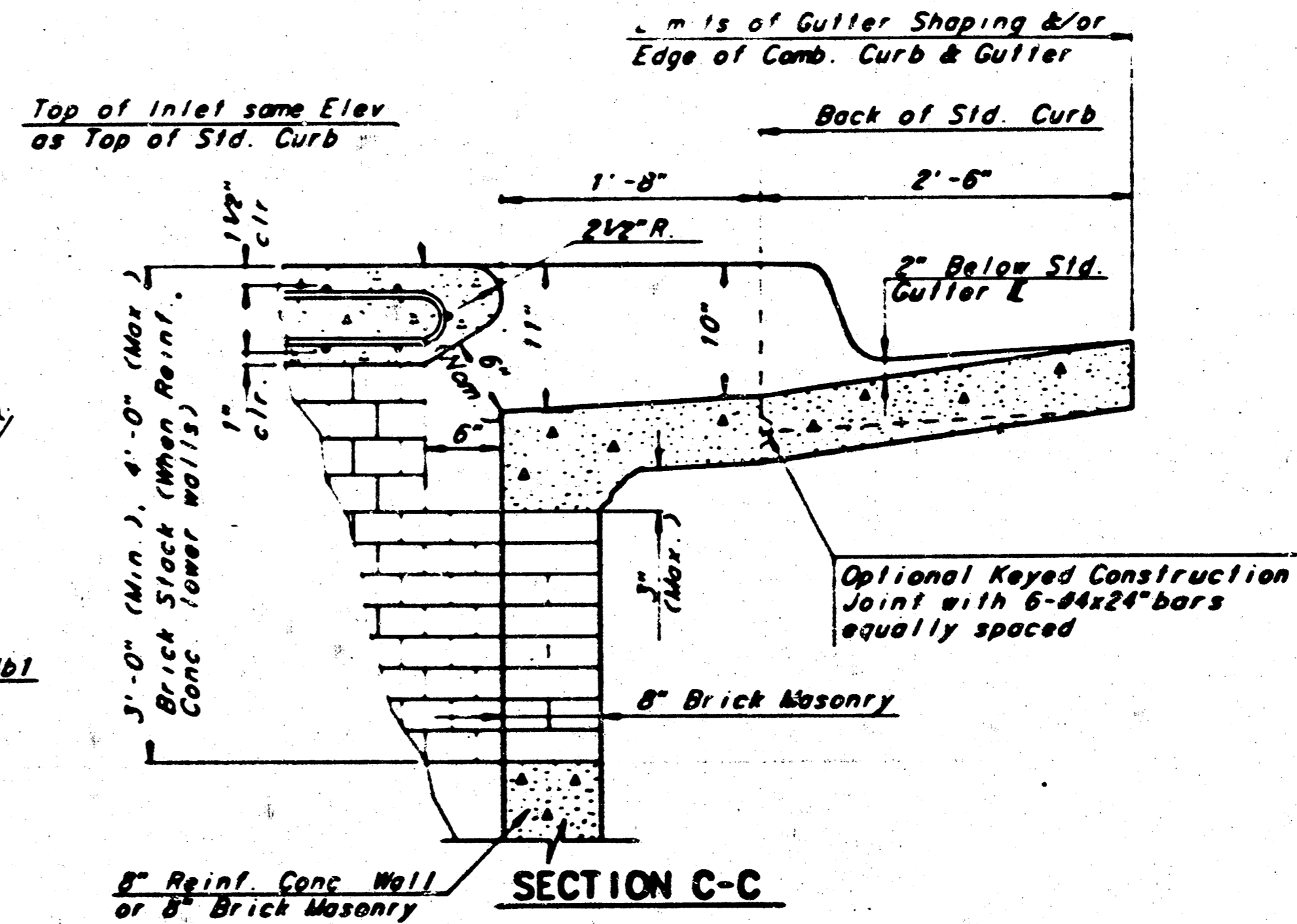
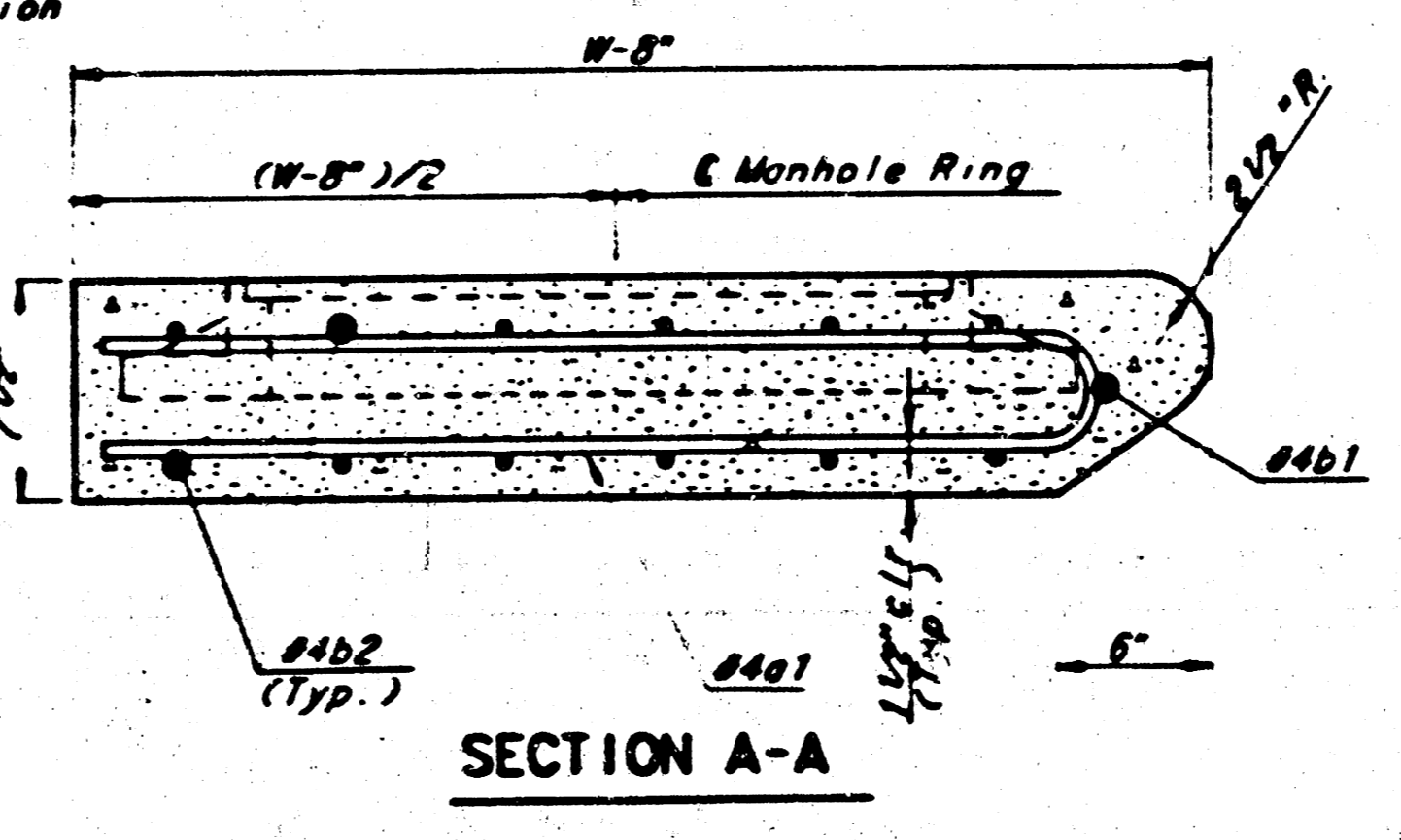
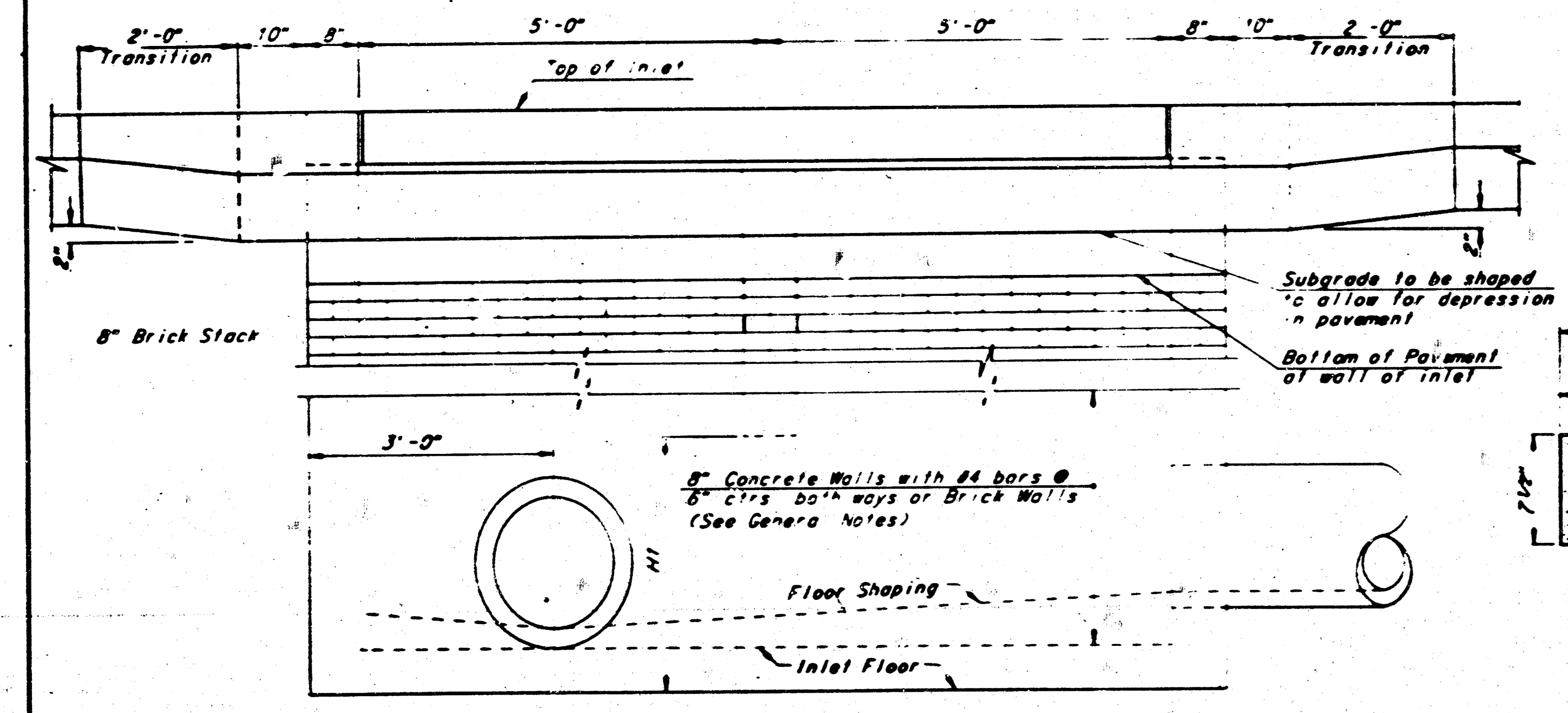
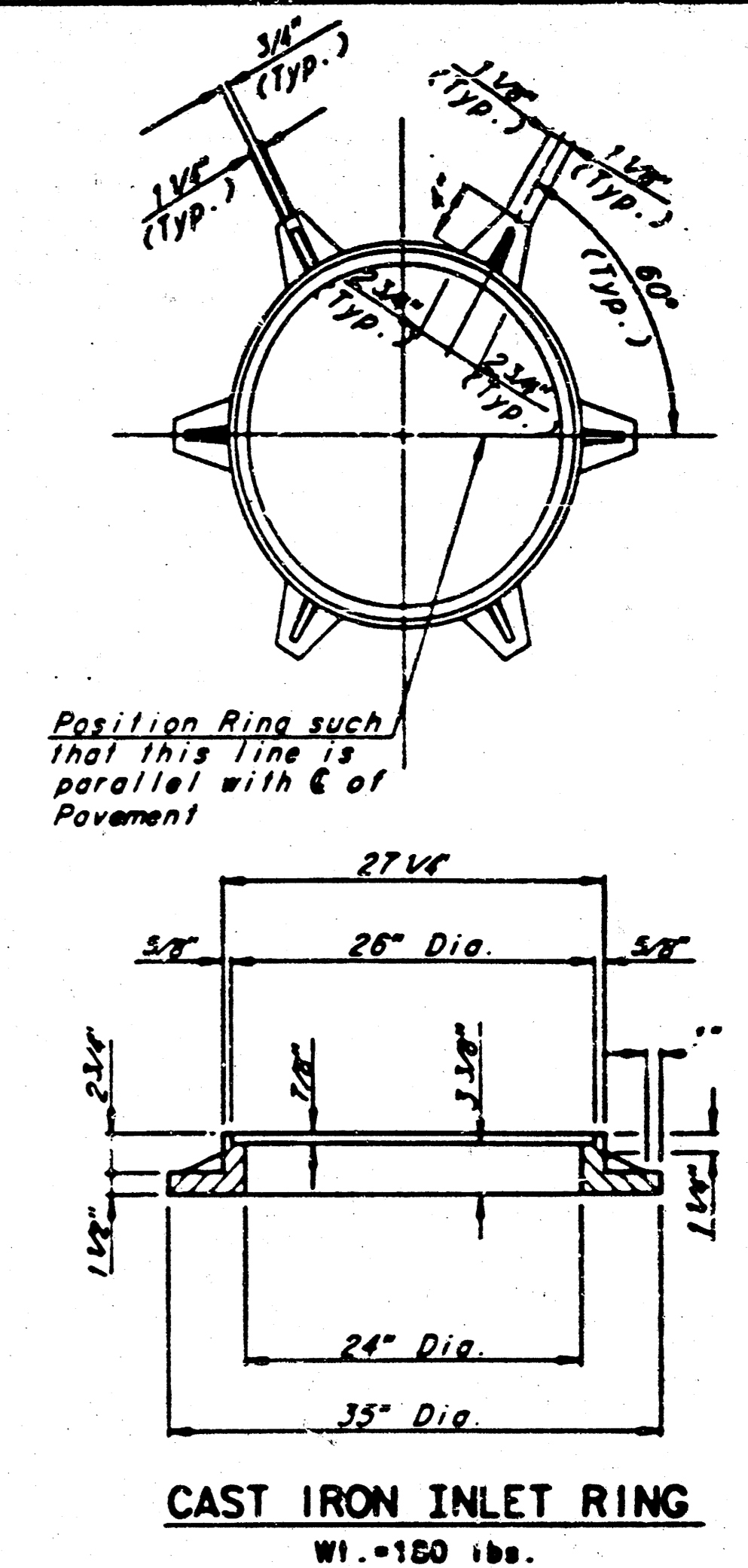
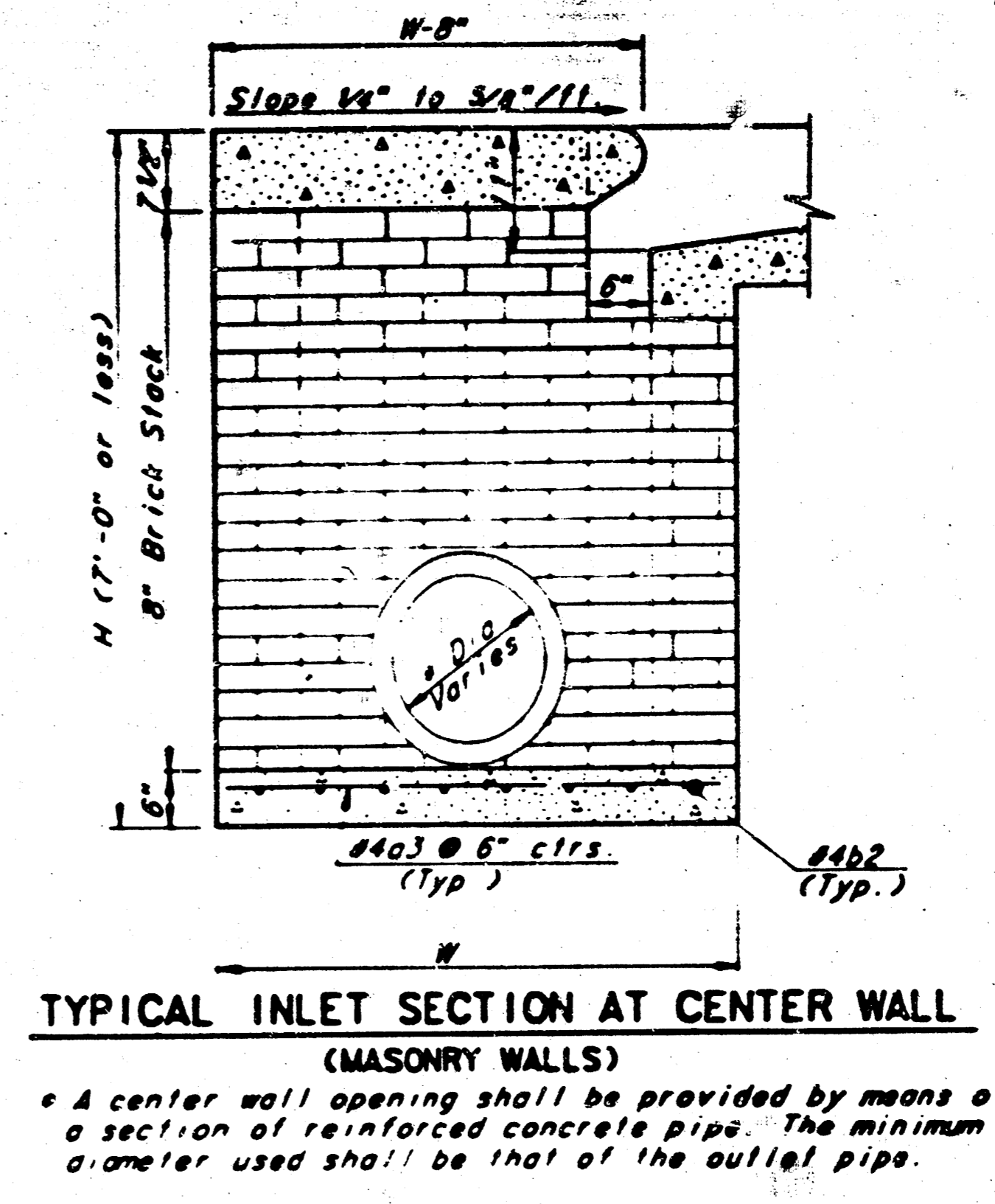
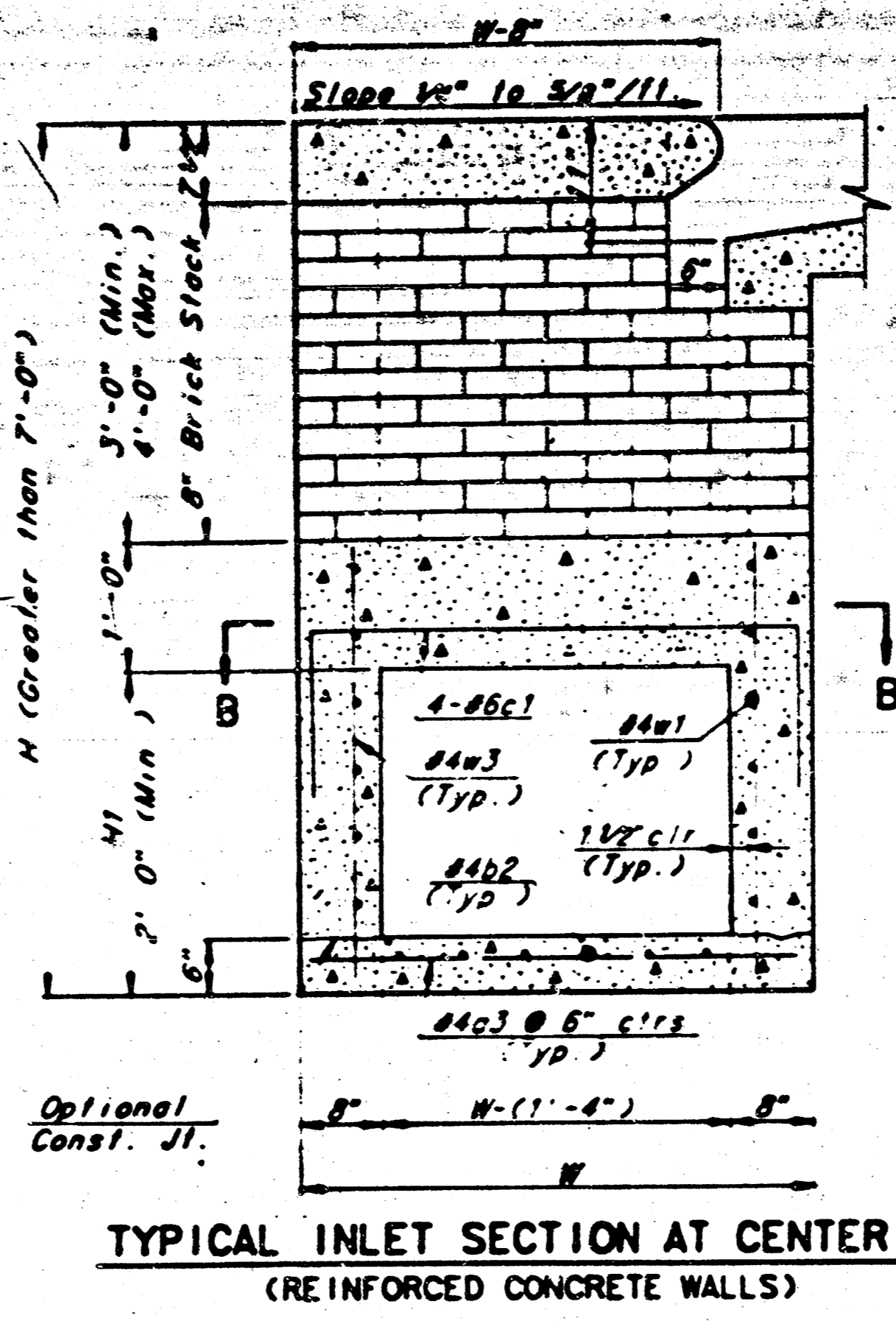
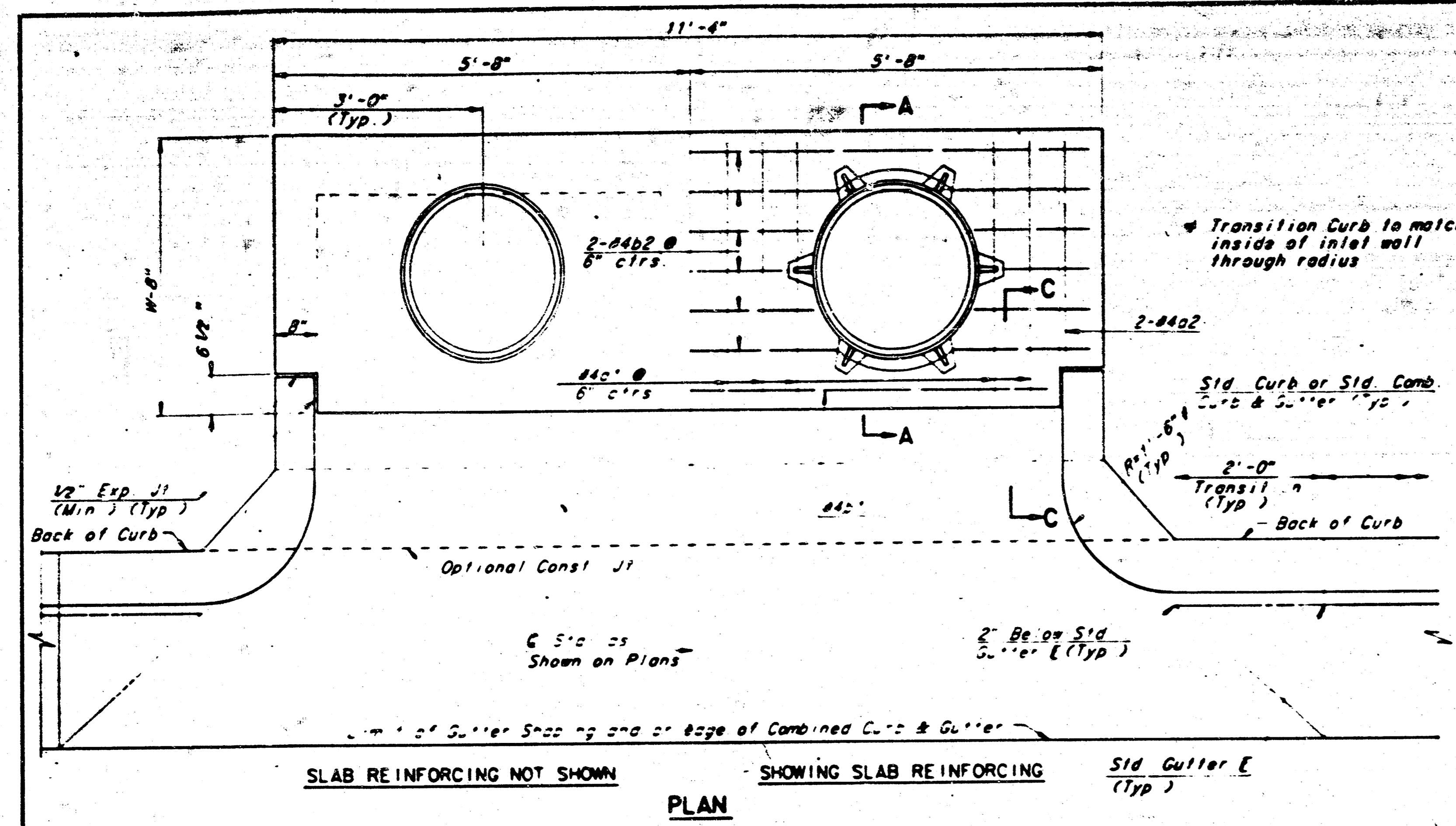
REVISED 12-21-1984

DETAIL STANDARD TYPE IA CURB INLET
CITY OF WICHITA, KANSAS
INLET OPENING = 6" x 5' 0"

JUNE 1984

4/6

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SLAB AND FLOOR REINFORCING

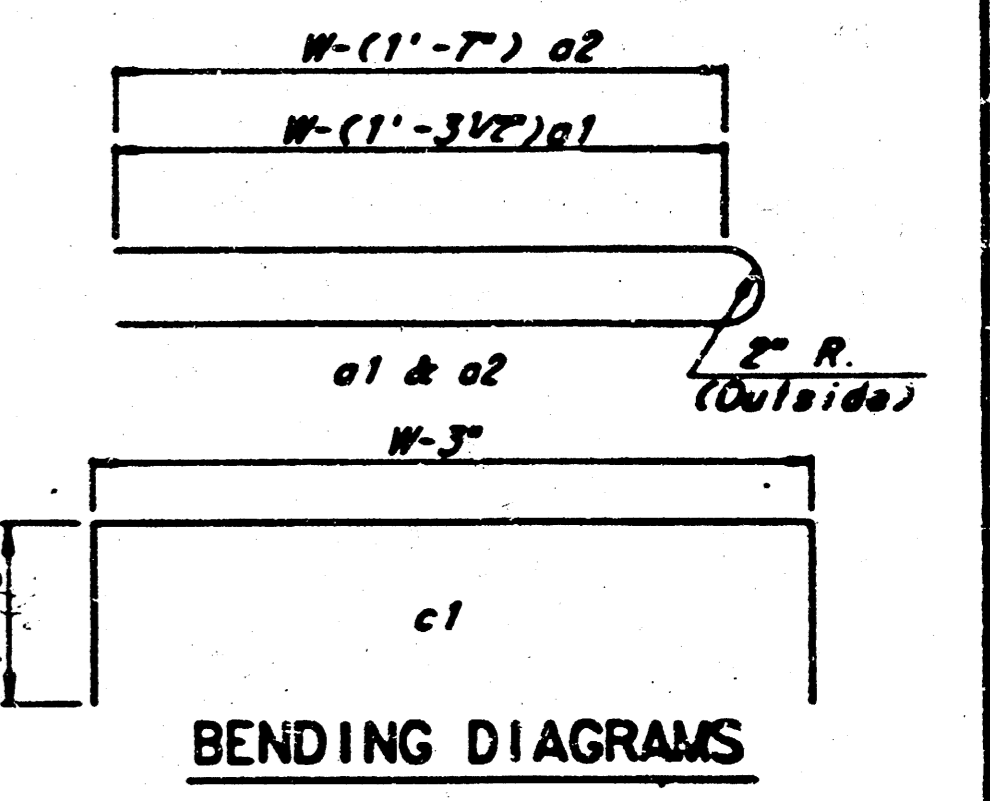
MARK	SIZE	W=4'-4"		W=5'-4"		W=6'-4"		W=7'-4"		W=8'-4"	
		NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
a1	#4	13	6'-7 1/4"	13	8'-7 1/4"	13	10'-7 1/4"	13	12'-7 1/4"	13	14'-7 1/4"
a2	#4	2	8'-0"	2	8'-0"	2	10'-0"	2	12'-0"	2	14'-0"
a3	#4	20	4'-1"	20	5'-1"	20	6'-1"	20	7'-1"	20	8'-1"
b1	#4	1	9'-8"	1	9'-8"	1	9'-8"	1	9'-8"	1	9'-8"
b2	#4	18	11'-1"	24	11'-1"	30	11'-1"	36	11'-1"	42	11'-1"

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
c1	#6	4	6'-1"	4	7'-1"	4	8'-1"	4	9'-1"	4	10'-1"
w1	#4	1	11'-1"	1	11'-1"	1	11'-1"	1	11'-1"	1	11'-1"
w2	#4	1	4'-1"	1	5'-1"	1	6'-1"	1	7'-1"	1	8'-1"
w3	#4	2	9	2	9	2	9	2	9	2	9

* Field bend or cut Reinforcing as required for clearance.
 ① 4(N1-8")=4 (N1-8") Rounded down to nearest 0.5"
 ② 40=4(N-16") ③ N1=(8")

- 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=6'-4" OR LESS AND H=7'-0" OR LESS WHEN W IS GREATER THAN 6'-4" AND H IS LESS THAN 7'-0". THE OUTSIDE INLET WALLS BELOW THE BRICK STACK SHALL BE REINFORCED CONCRETE CONSTRUCTION AND THE CENTER WALL SHALL BE OF MASONRY CONSTRUCTION AS SHOWN FOR THE MASONRY WALL OPTION.
 - 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.
 - 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 8" 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.



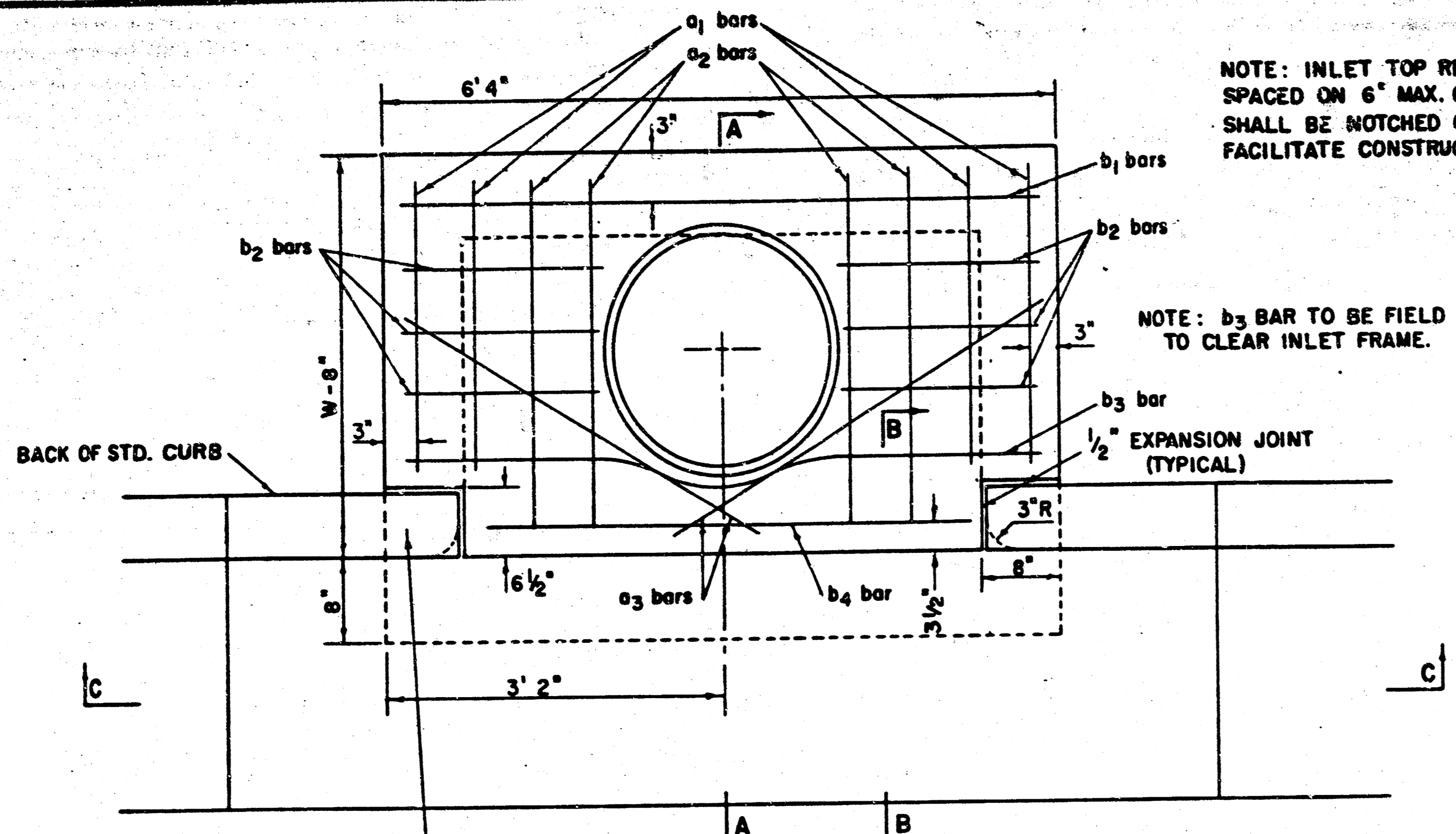
REVISD 12-21-84

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

WICHITA, KANSAS 5/6 5 6

Designed by *BER, KJS, AND* Checked by *AND*
 Drawn by *JCP* Date *Nov. 1984* Job No.

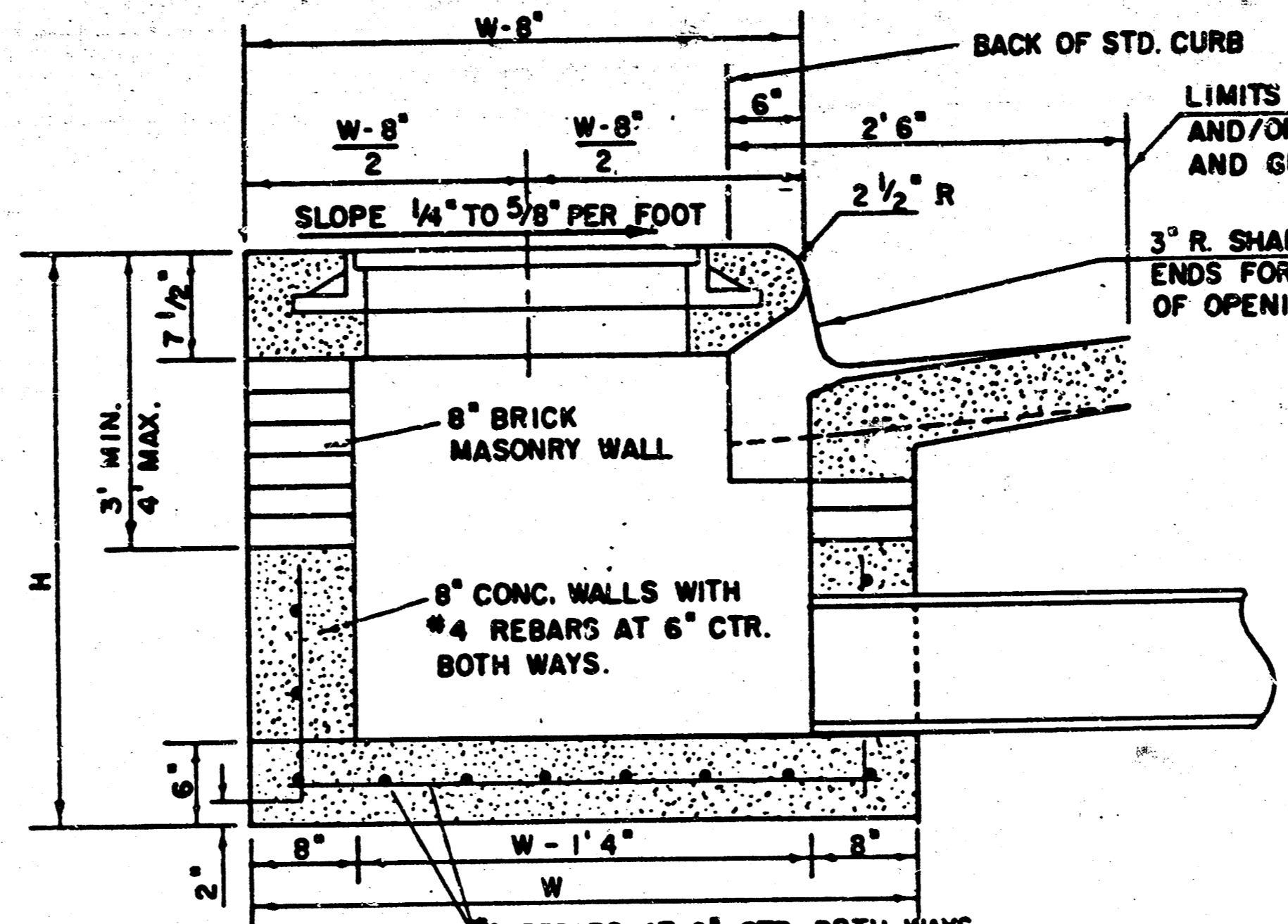
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WARP CURB TO MATCH INLET TOP WITH 1' MIN. TRANSITION LENGTH

PLAN

NOTE: 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.

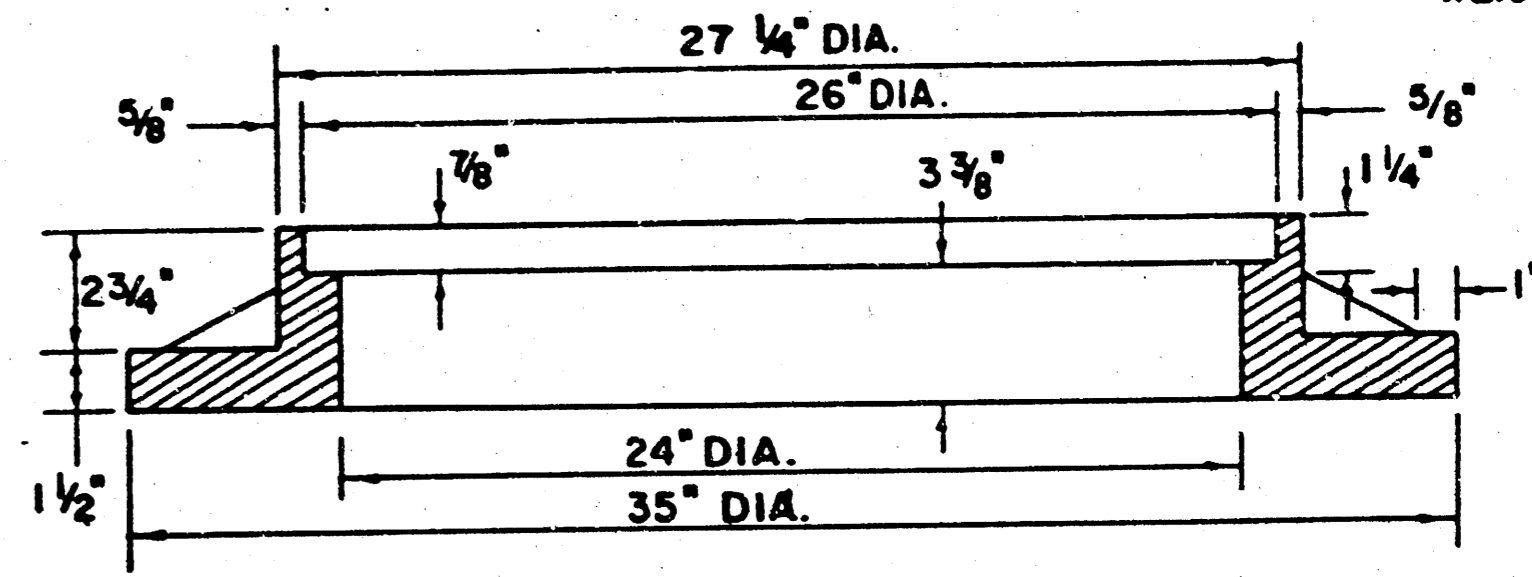
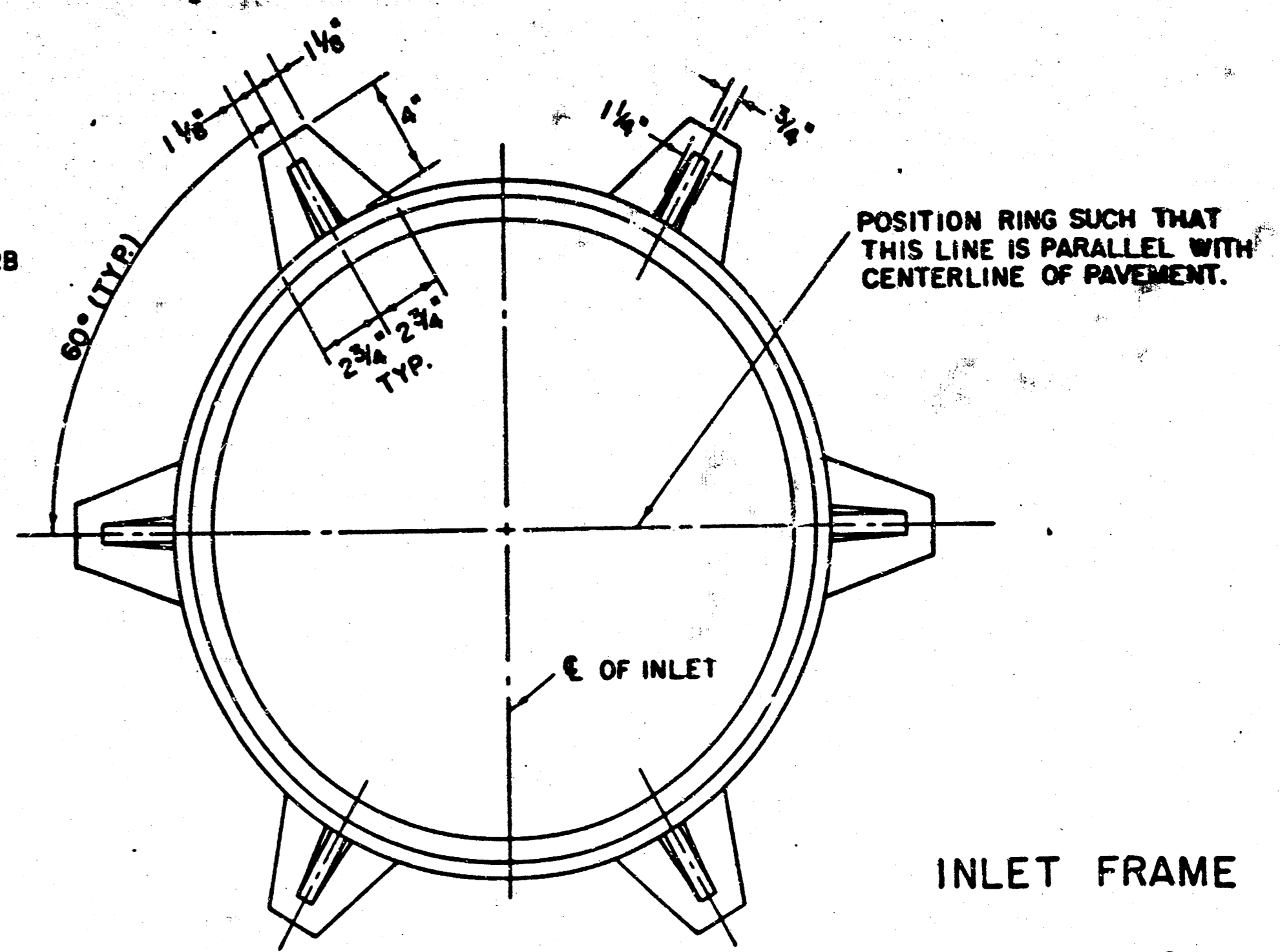


SECTION A-A

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

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.



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

STEEL SCHEDULE

BAR	a1	a2	a3	b1	b2	b3	b4	WT. LBS.					
NUMBER	4	4	2	1	3	5	7	9	6	1	1		
SIZE	"4	"4	"4	"4	"4	"4	"4	"4	"4	"4	"6		
LENGTH	W=4'4"	5'7"	6'7"	4'0"	6'1"	-	-	-	-	1'9"	6'2"	4'8"	60±
	W=5'4"	7'7"	8'7"	5'0"	-	6'1"	-	-	-	1'9"	6'2"	4'8"	81±
	W=6'4"	9'7"	10'7"	6'0"	-	6'1"	-	-	-	1'9"	6'2"	4'8"	101±
	W=7'4"	11'7"	12'7"	7'0"	-	-	6'1"	-	-	1'9"	6'2"	4'8"	121±
	W=8'4"	13'7"	14'7"	8'0"	-	-	-	6'1"	-	1'9"	6'2"	4'8"	141±

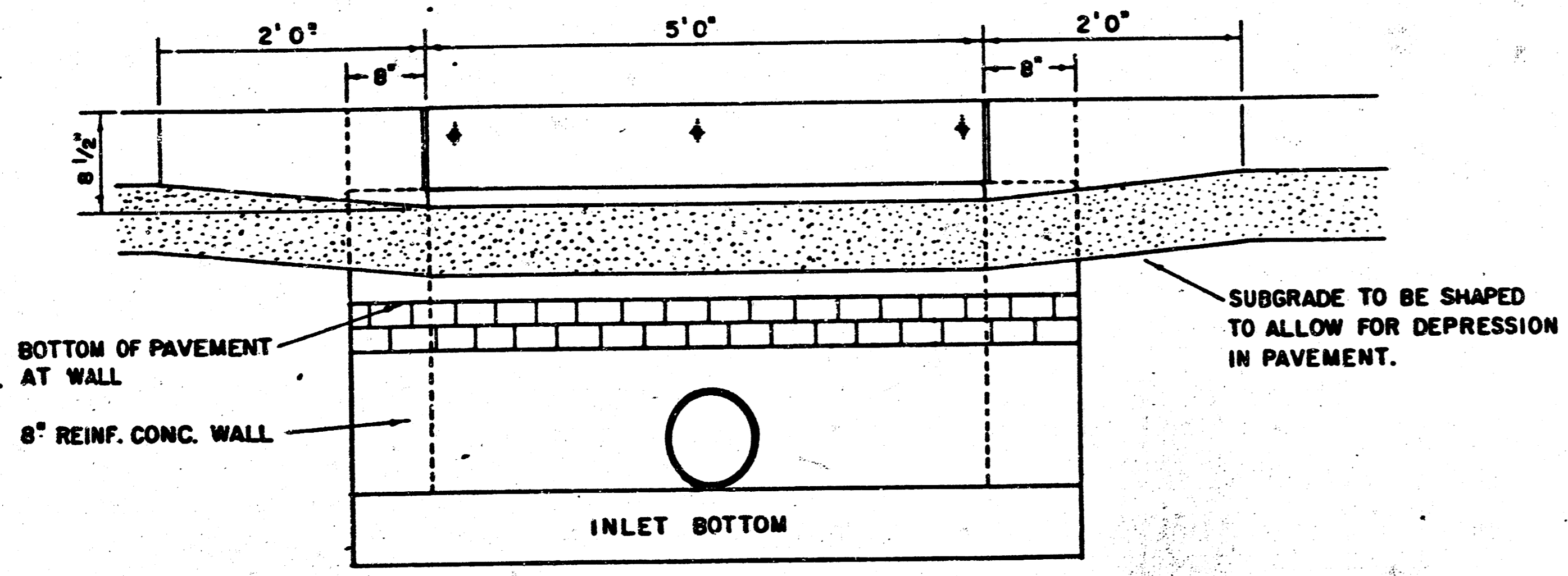
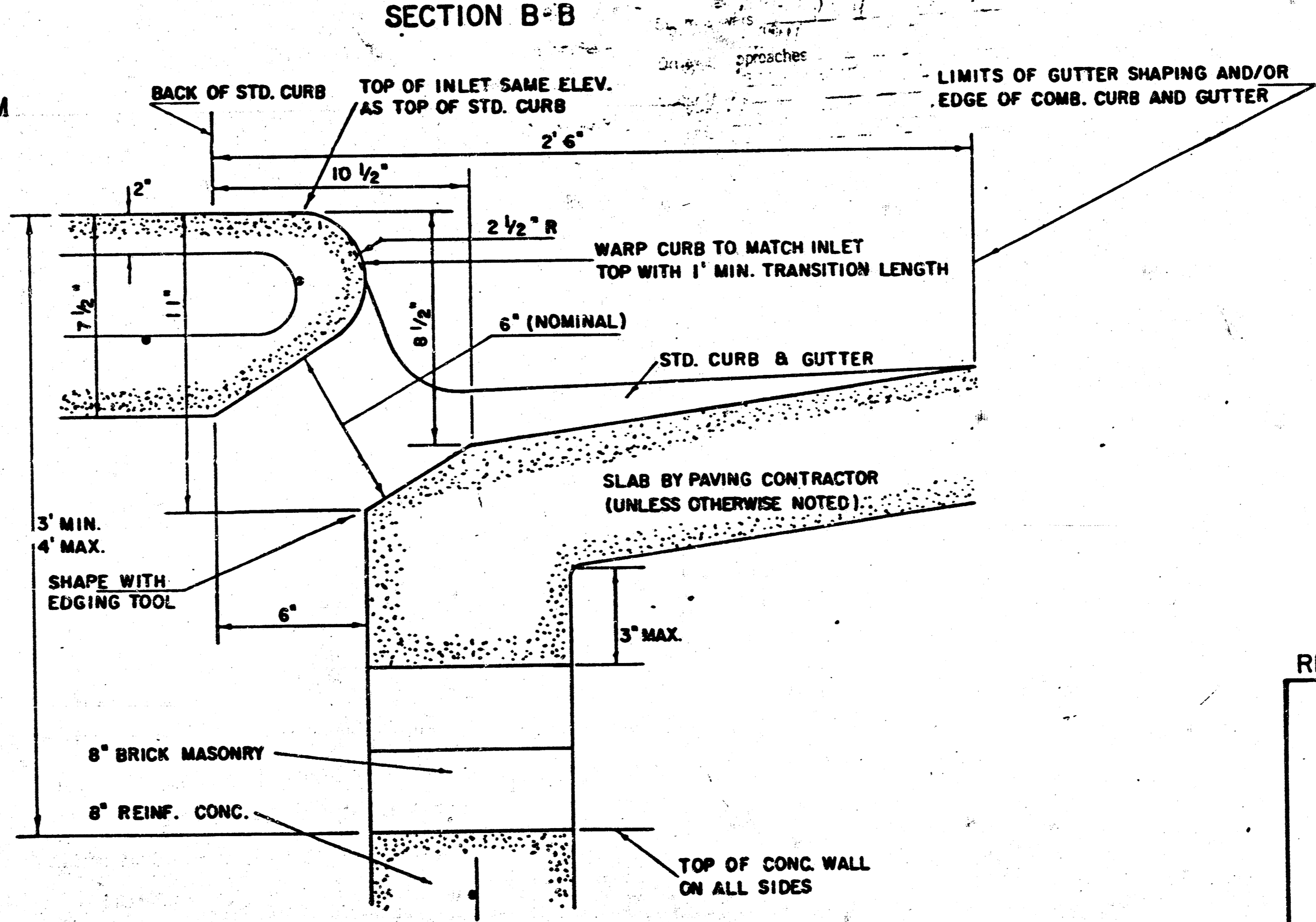
NOTE: a_3 BARS TO BE PLACED APPROX. 2" BELOW TOP OF INLET COVER.

STANDARD CURB INLET PRECAST TOPS

W	PRE-CAST TOP SIZE	PIPE SIZE	CU. YD. CONC.
4' 4"	3' 6" 6' 4" 7 1/2"	21" & SMALLER	0.38 ±
5' 4"	4' 8" 6' 4" 7 1/2"	24" & 30"	0.51 ±
6' 4"	5' 8" 6' 4" 7 1/2"	36" & 42"	0.64 ±
7' 4"	6' 8" 6' 4" 7 1/2"	48" & 54"	0.77 ±
8' 4"	7' 8" 6' 4" 7 1/2"	60" & 66"	0.90 ±

a_1 bar = W-21"
 a_2 bar = W-15"

BENDING DIAGRAM



SECTION C-C

REVISED 12-21-1984

DETAIL STANDARD TYPE I CURB INLET

CITY OF WICHITA, KANSAS

INLET OPENING = 6" x 5' 0"

JUNE 1984

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