

# STORM SEWER IMPROVEMENTS INCLUDING DETENTION POND

FOR

## TOWNE PARC 3rd AND 4th ADDITION

Private Project Number

324PPS (607861)

CITY OF WICHITA, KANSAS

Michael E. Lindebak City Engineer

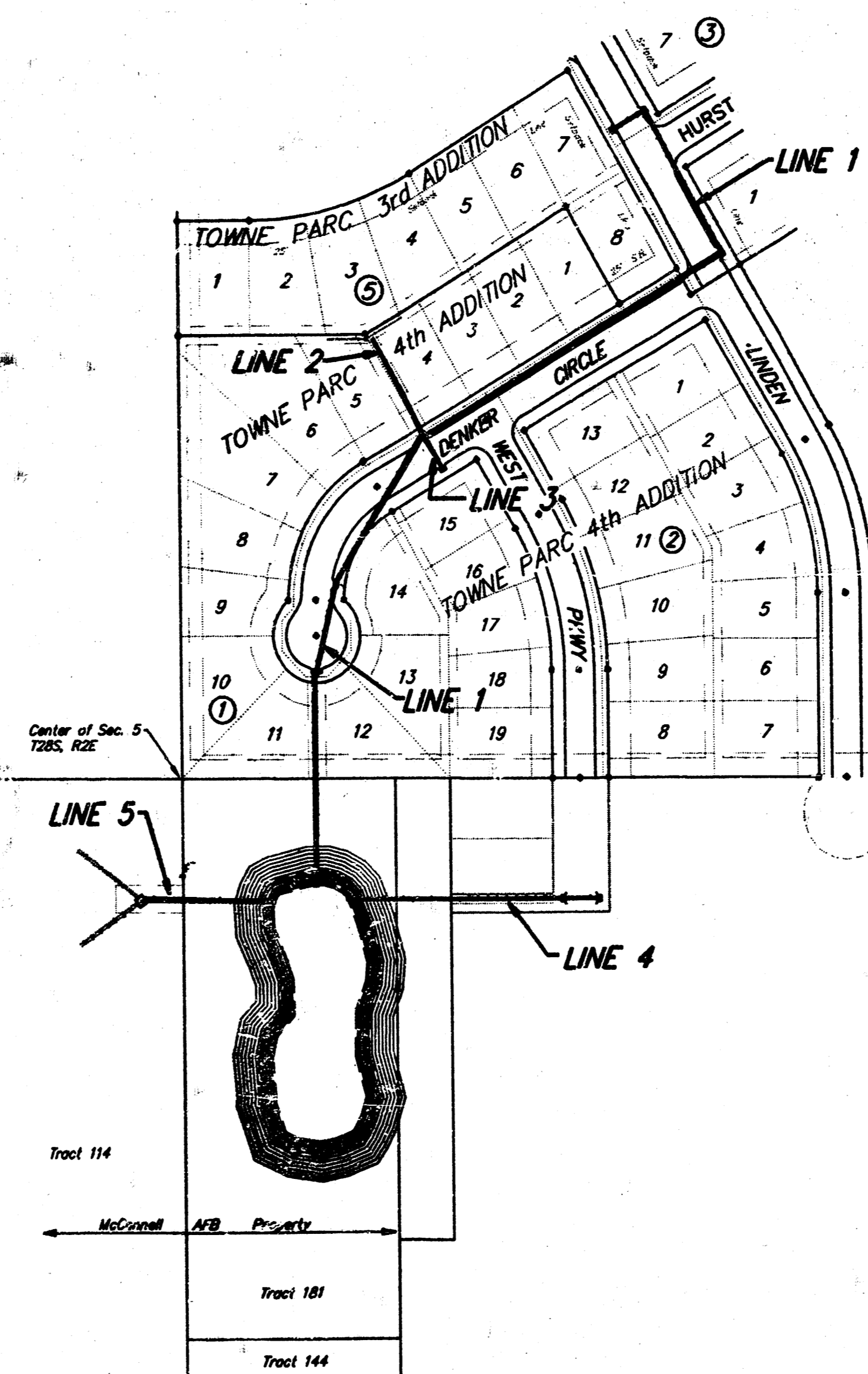
### POND STAKING COORDINATES

Pt.	Northing	Easting	Pt.	Northing	Easting
10	1140.67	71.00	63	744.4	309.1
11	1140.39	223.00	64	747.1	303.1
12	1140.8	84.5	65	765.7	285.3
13	1140.6	92.5	66	750.4	245.8
14	1140.6	105.1	67	715.4	271.6
15	1140.6	107.2	68	688.4	279.5
16	1140.6	109.7	69	604.5	328.8
17	1121.0	111.6	70	599.3	313.4
18	1089.9	95.9	71	576.6	314.4
19	1092.7	106.9	72	585.2	308.1
20	1096.1	119.6	73	597.4	282.9
21	1105.1	127.6	74	611.7	287.8
22	1110.9	129.8	75	633.3	222.7
23	1118.6	133.6	76	646.8	229.5
24	1129.6	137.0	77	680.4	238.2
25	1126.7	167.6	78	704.6	233.1
26	1112.8	168.7	79	746.7	230.6
27	1101.5	169.0	80	750.8	193.2
28	1077.3	167.0	81	710.1	183.6
29	1067.4	167.0	82	701.3	180.4
30	1044.3	170.3	83	690.8	174.2
31	1016.3	180.2	84	678.6	165.4
32	1023.2	209.5	85	741.5	120.6
33	1053.4	207.3	86	746.0	134.9
34	1059.3	207.0	87	767.2	178.8
35	1063.7	207.2	88	804.1	170.7
36	1116.0	204.0	89	796.2	123.0
37	1124.9	201.0	90	794.7	108.1
38	1133.1	199.6	91	850.4	108.0
39	1139.5	213.9	92	849.9	123.1
40	1139.4	216.1	93	845.0	170.6
41	1134.0	223.3	94	869.5	182.0
42	1140.4	230.3	95	889.1	136.3
43	1132.1	238.9	96	897.2	123.7
44	1095.7	240.6	97	908.3	129.9
45	1123.1	269.8	98	906.6	144.8
46	1079.6	307.1	99	902.2	192.6
47	1061.4	257.3	100	944.5	185.3
48	1020.0	244.7	101	930.8	139.4
49	988.3	264.3	102	926.0	125.1
50	1005.8	302.7	103	964.6	112.6
51	1020.6	323.4	104	968.2	127.1
52	939.0	333.8	105	972.3	173.1
53	938.3	318.5	106	1002.8	171.8
54	937.1	276.4	107	1005.1	136.1
55	892.6	267.6	108	1006.7	107.3
56	884.6	309.3	109	1046.7	102.9
57	880.6	328.9	110	1040.2	116.5
58	851.9	307.0	111	1048.8	130.0
59	851.4	284.7	112	1049.8	140.8
60	796.1	272.6	113	1078.5	139.1
61	796.1	315.2			
62	797.8	320.6			

### General Notes

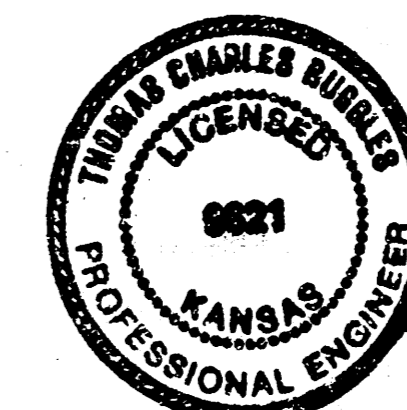
The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor in accordance with state laws.

Bench Mark:  
"□" Cut Top of Curb 68'± W. of 1/4  
Section Line, S. side of Hurst.  
Elev. = 211.22 City Datum



SCALE: 1" = 150'

Booked  
11-2-92  
MG



### Sheet Index

1. TITLE SHEET
- 2-3. LINE 1
4. LINE 1, LINE 2 & LINE 3
5. LINE 4, LINE 5
6. DETENTION POND
- 7-8. TYPE 1A INLET DETAILS
9. DROP INLET DETAILS

APPROVED AS NOTED  
BY CITY ENGINEER OF WICHITA

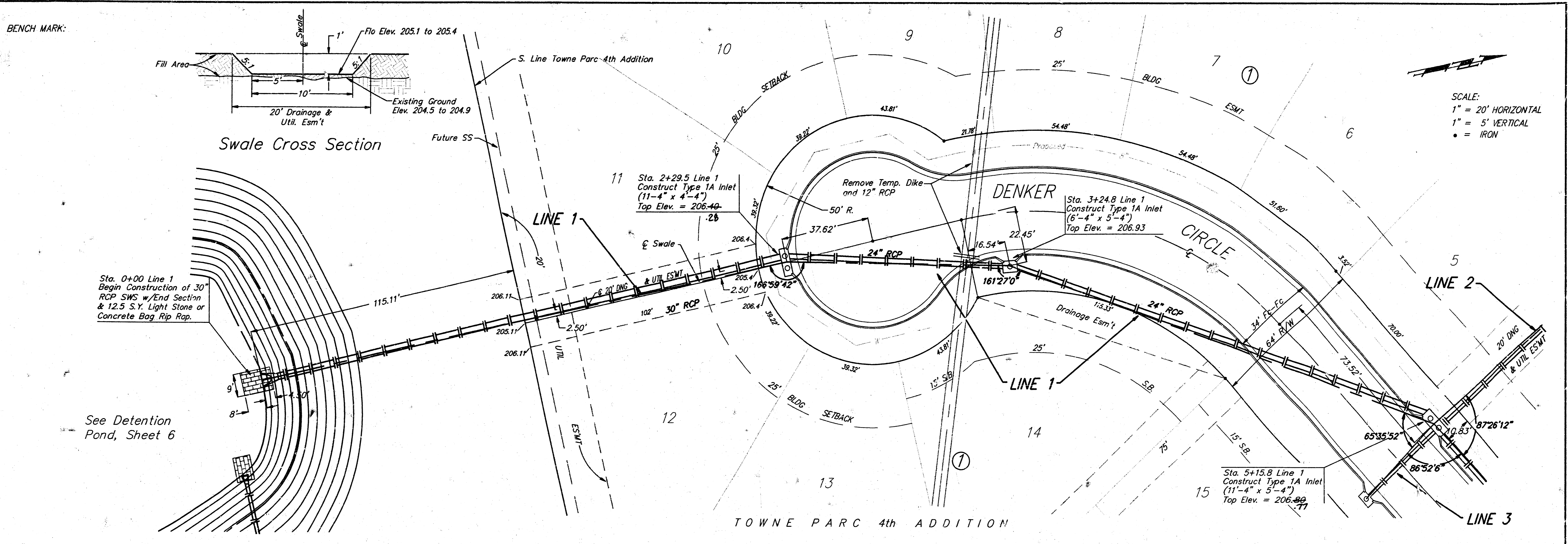
Sanitary Sewers \_\_\_\_\_  
Storm Sewers VRH 1/28/92  
Driveway Approaches \_\_\_\_\_  
Water Mains \_\_\_\_\_  
Paving \_\_\_\_\_

#### NOTE TO CONTRACTORS

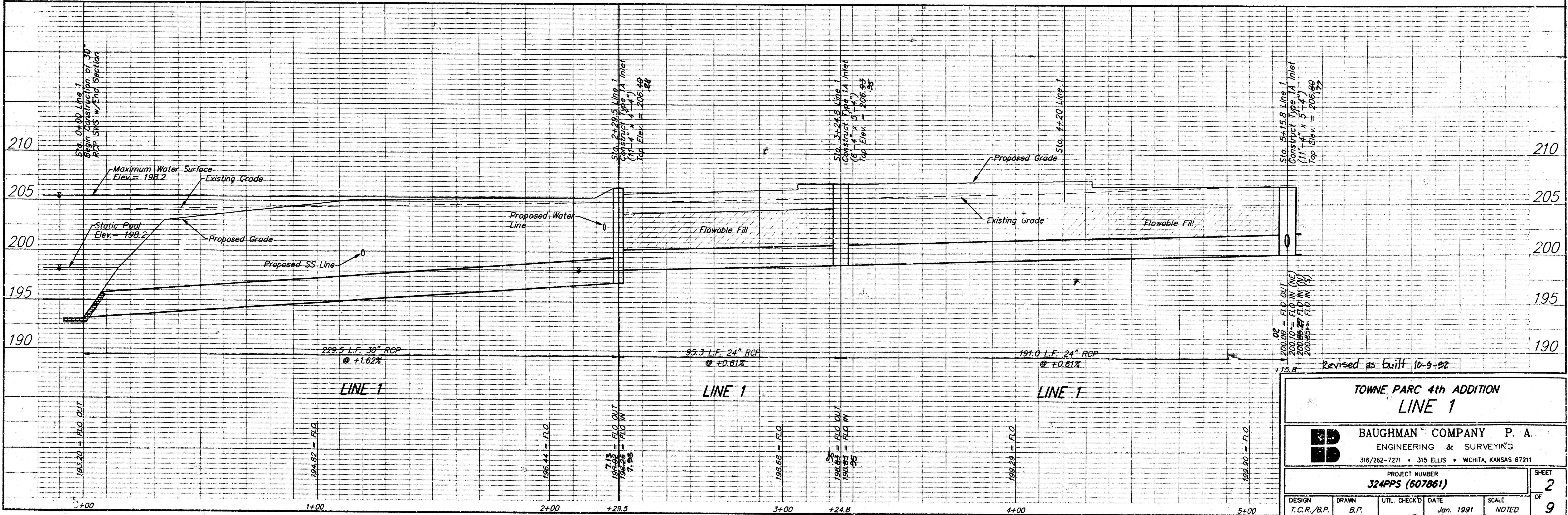
Inspection and testing for this project is to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed Professional Engineer. No work shall be performed in dedicated easements or public right-of-way by the Contractor without such inspection nor shall any work be commenced without written authorization by the City Engineer.

Revised as built 10-2-92 TCR

**BAUGHMAN COMPANY P. A.**  
ENGINEERING & SURVEYING  
316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211



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



Revised as built 10-9-92

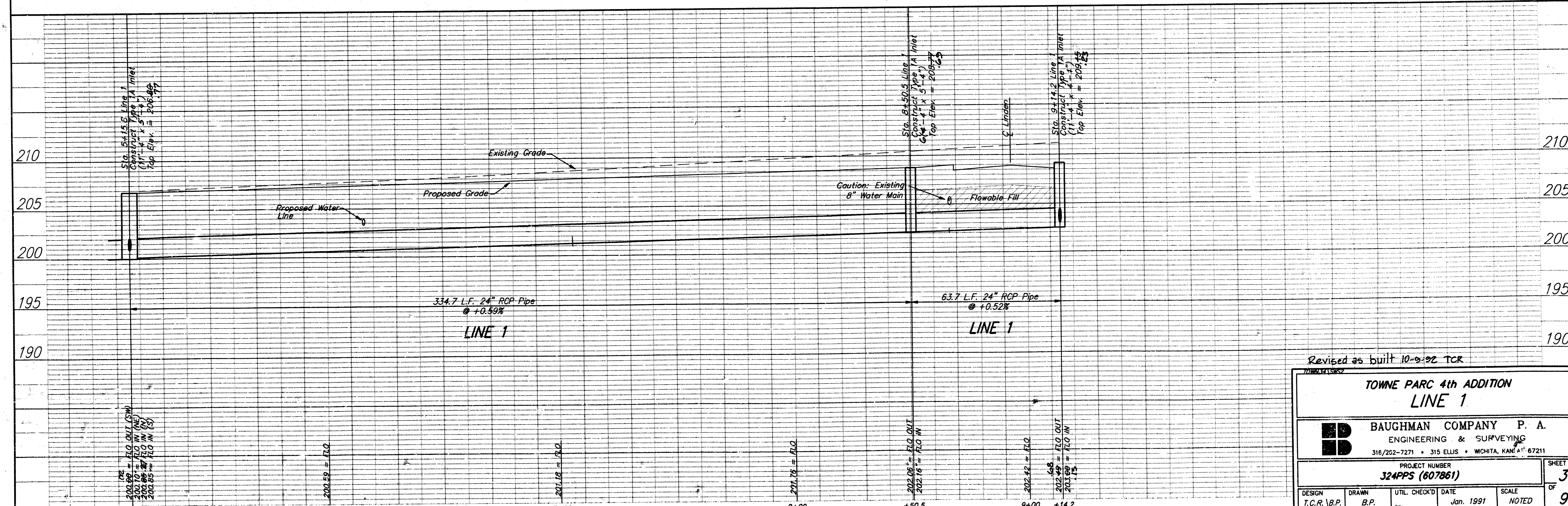
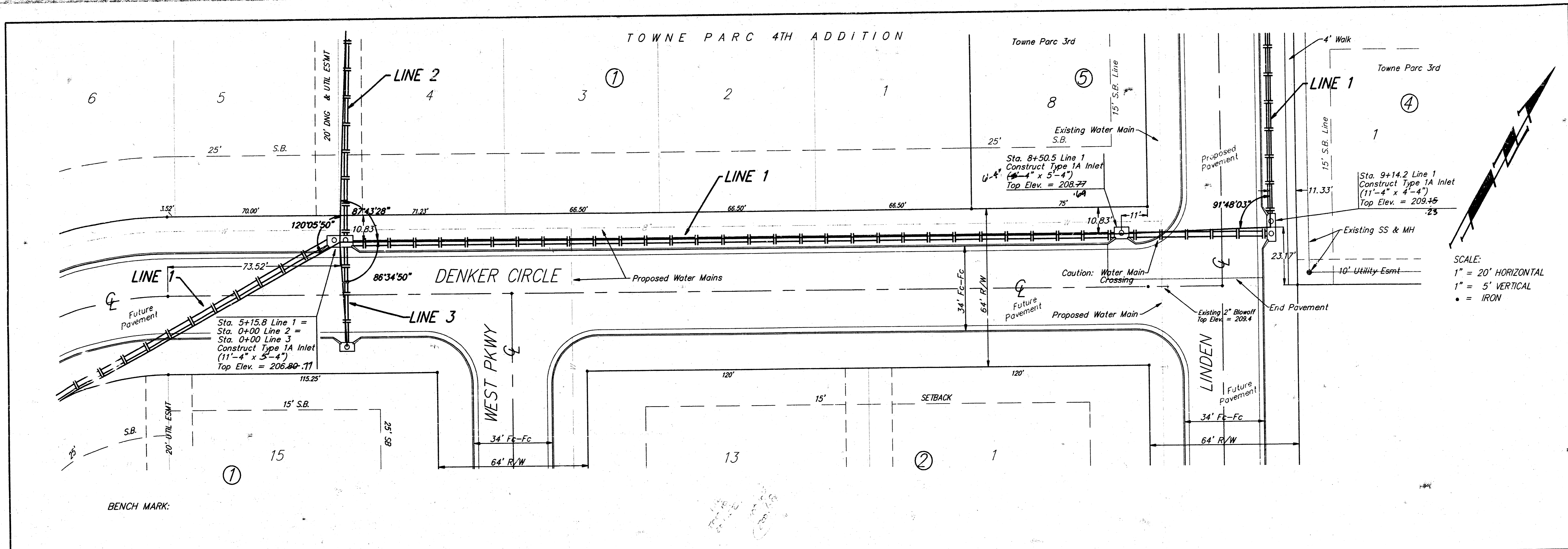
**TOWNE PARC 4th ADDITION**  
**LINE 1**

**BAUGHMAN COMPANY P. A.**  
 ENGINEERING & SURVEYING  
 316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER  
**324PPS (607861)**

DESIGN: T.C.R./B.P. DRAWN: B.P. UTIL. CHECK'D: DATE: Jan. 1991 SCALE: NOTED

SHEET  
 2  
 OF  
 9



Revised as built 10-9-92 TCR

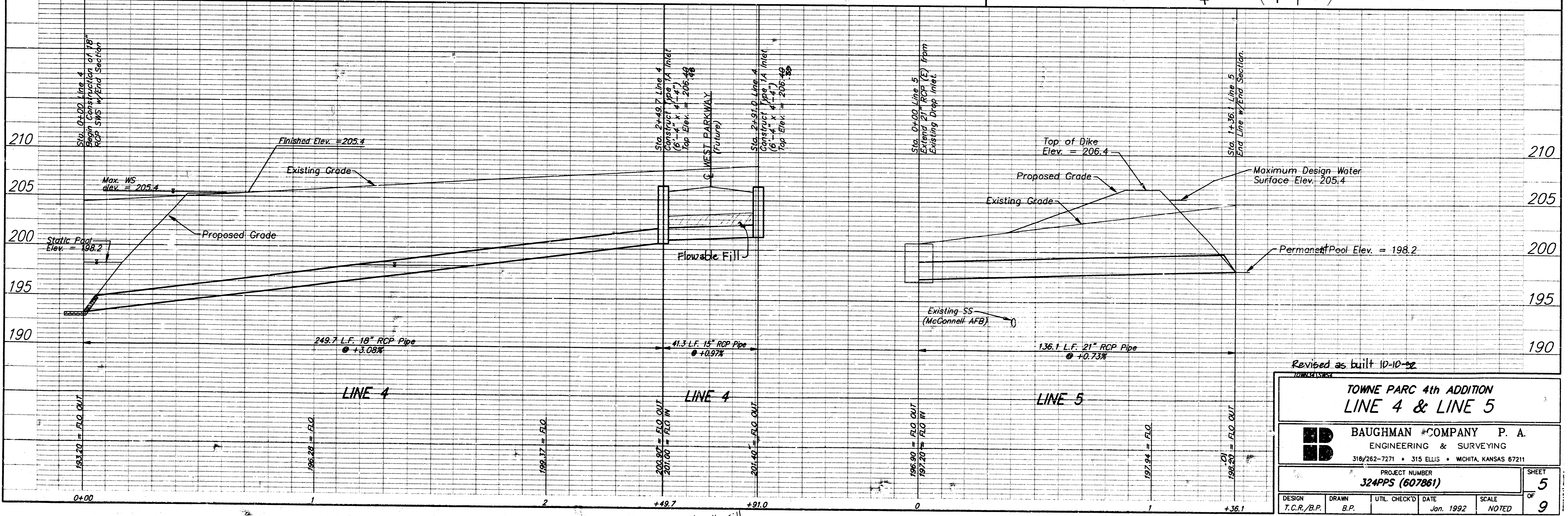
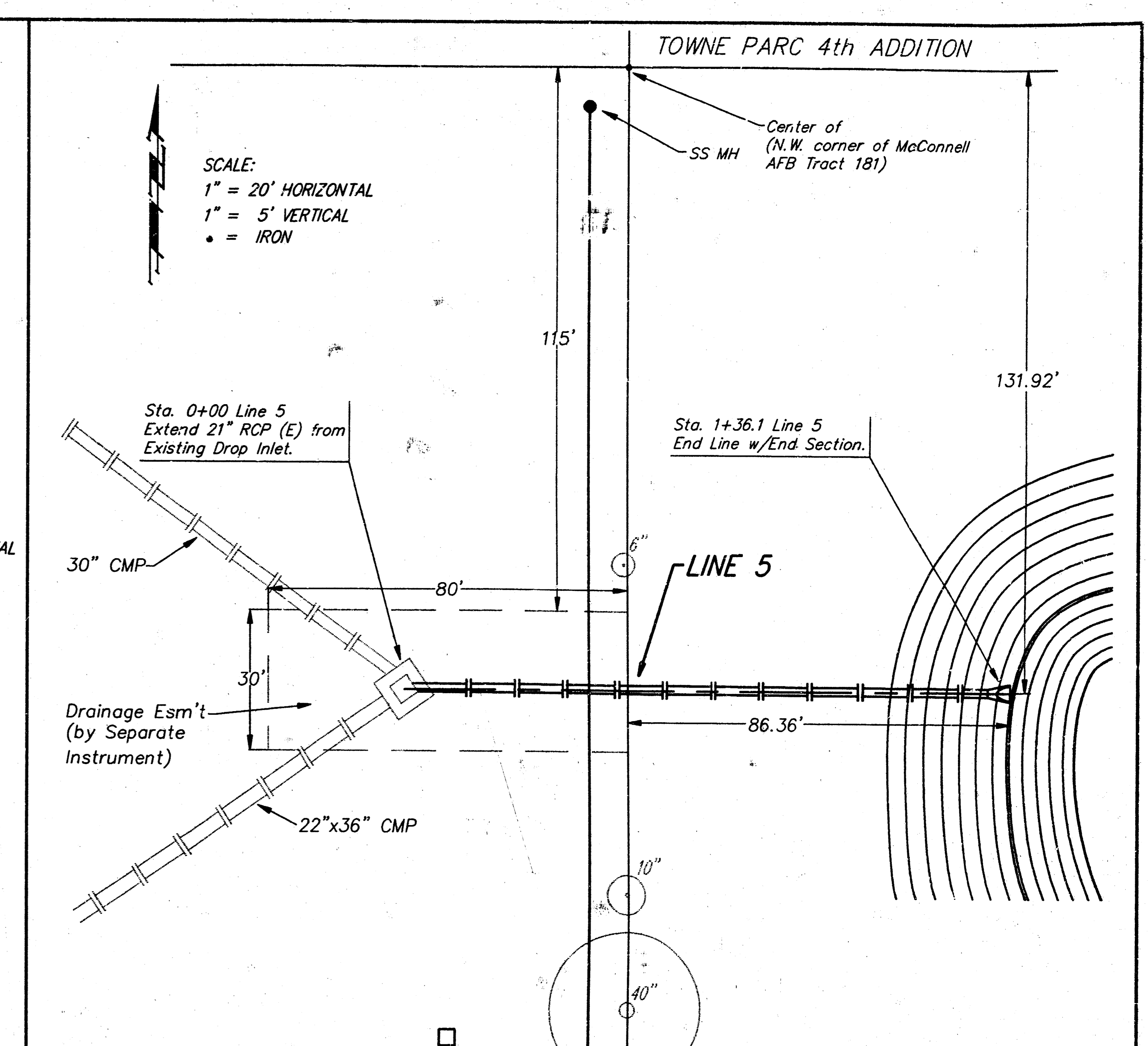
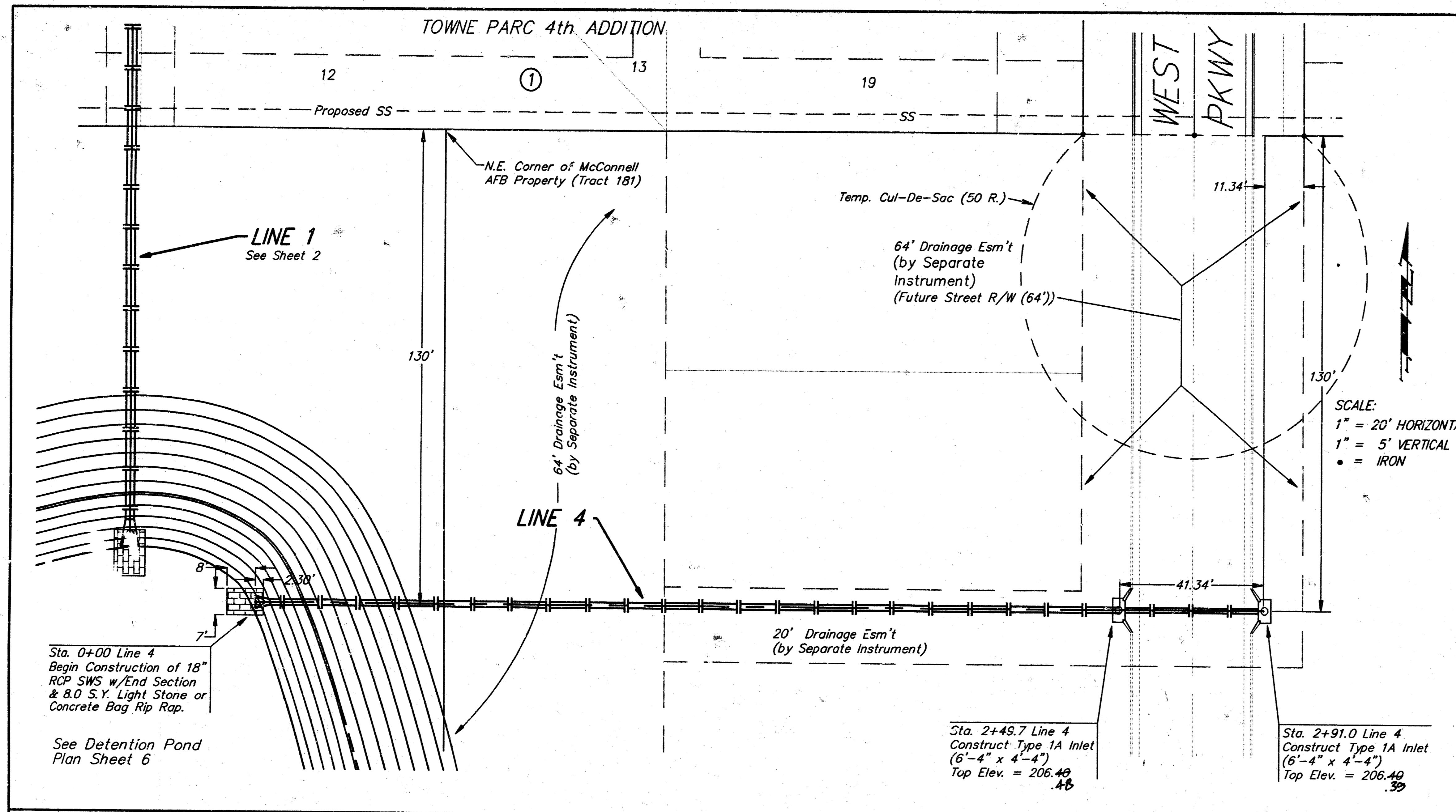
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LINE 1**

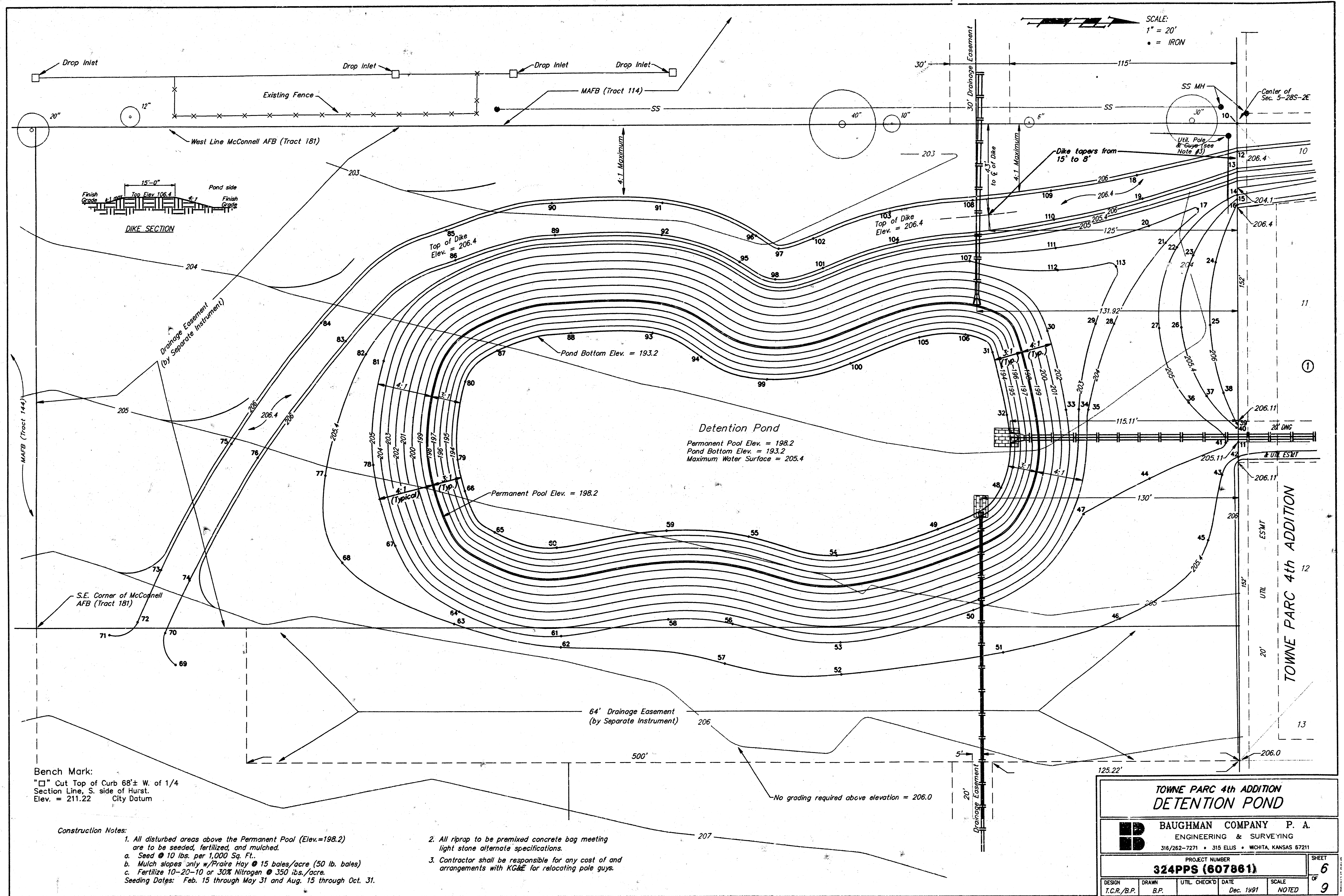
**BAUGHMAN COMPANY P. A.**  
ENGINEERING & SURVEYING  
316/202-7271 • 315 ELLIS • WICHITA, KAN. 67211

PROJECT NUMBER  
**32APPS (607861)**

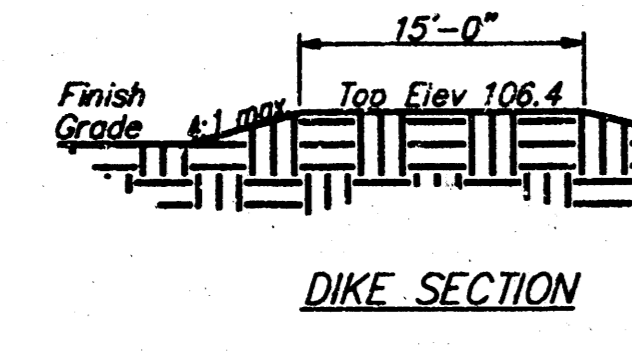
DESIGN T.C.R. | DRAWN B.P. | UTIL. CHECKED | DATE Jan. 1991 | SCALE NOTED | SHEET 3 OF 9







SCALE:  
1" = 20'  
• = IRON

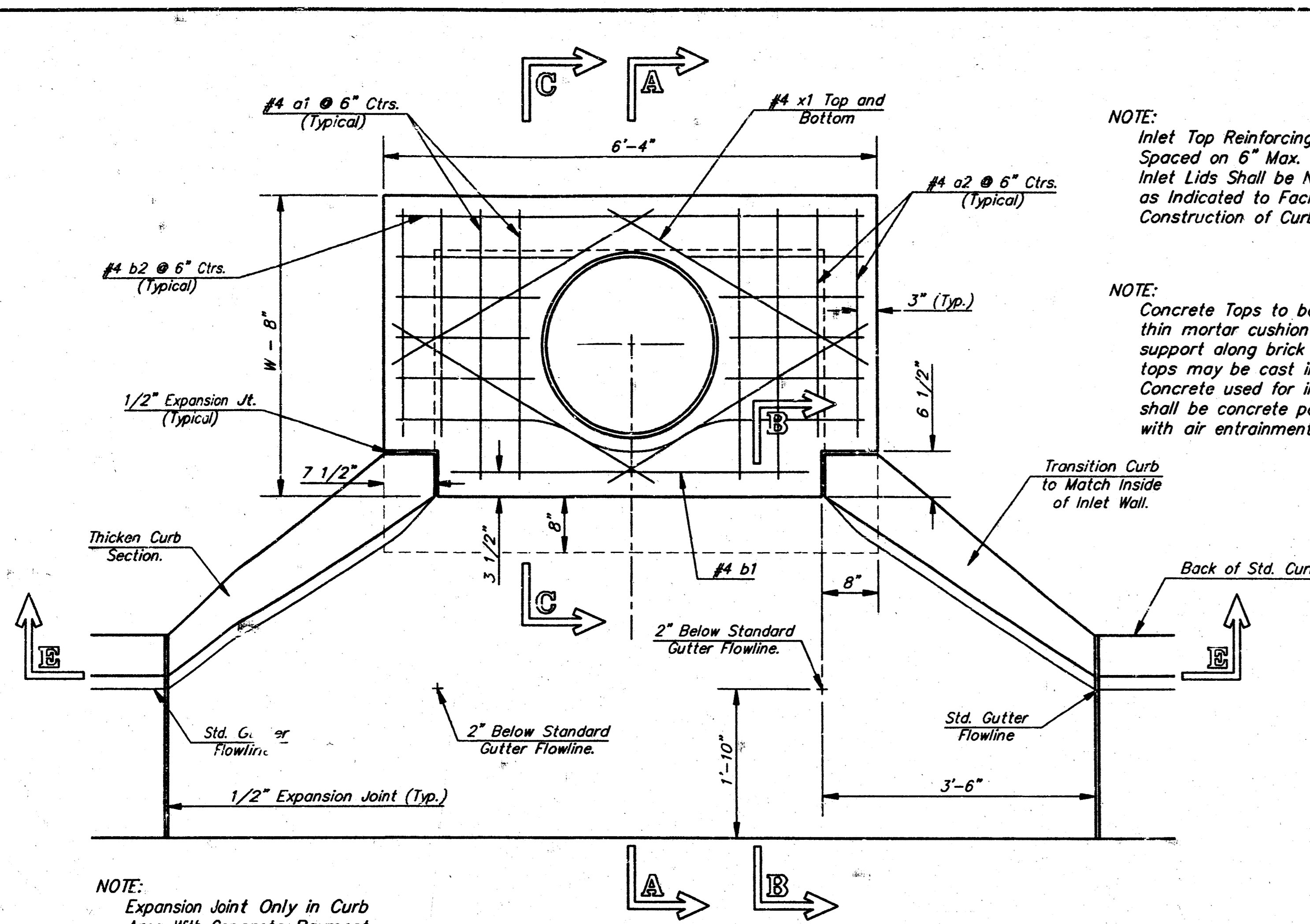


**Detention Pond**  
Permanent Pool Elev. = 198.2  
Pond Bottom Elev. = 193.2  
Maximum Water Surface = 205.4

Bench Mark:  
"□" Cut Top of Curb 68'± W. of 1/4  
Section Line, S. side of Hurst.  
Elev. = 211.22 City Datum

- Construction Notes:
1. All disturbed areas above the Permanent Pool (Elev.=198.2) are to be seeded, fertilized, and mulched.
    - a. Seed @ 10 lbs. per 1,000 Sq. Ft.
    - b. Mulch slopes only w/Prairie Hay @ 15 bales/acre (50 lb. bales)
    - c. Fertilize 10-20-10 or 30% Nitrogen @ 350 lbs./acre.
  2. All riprap to be premixed concrete bag meeting light stone alternate specifications.
  3. Contractor shall be responsible for any cost of and arrangements with K&E for relocating pole guys.
- Seeding Dates: Feb. 15 through May 31 and Aug. 15 through Oct. 31.

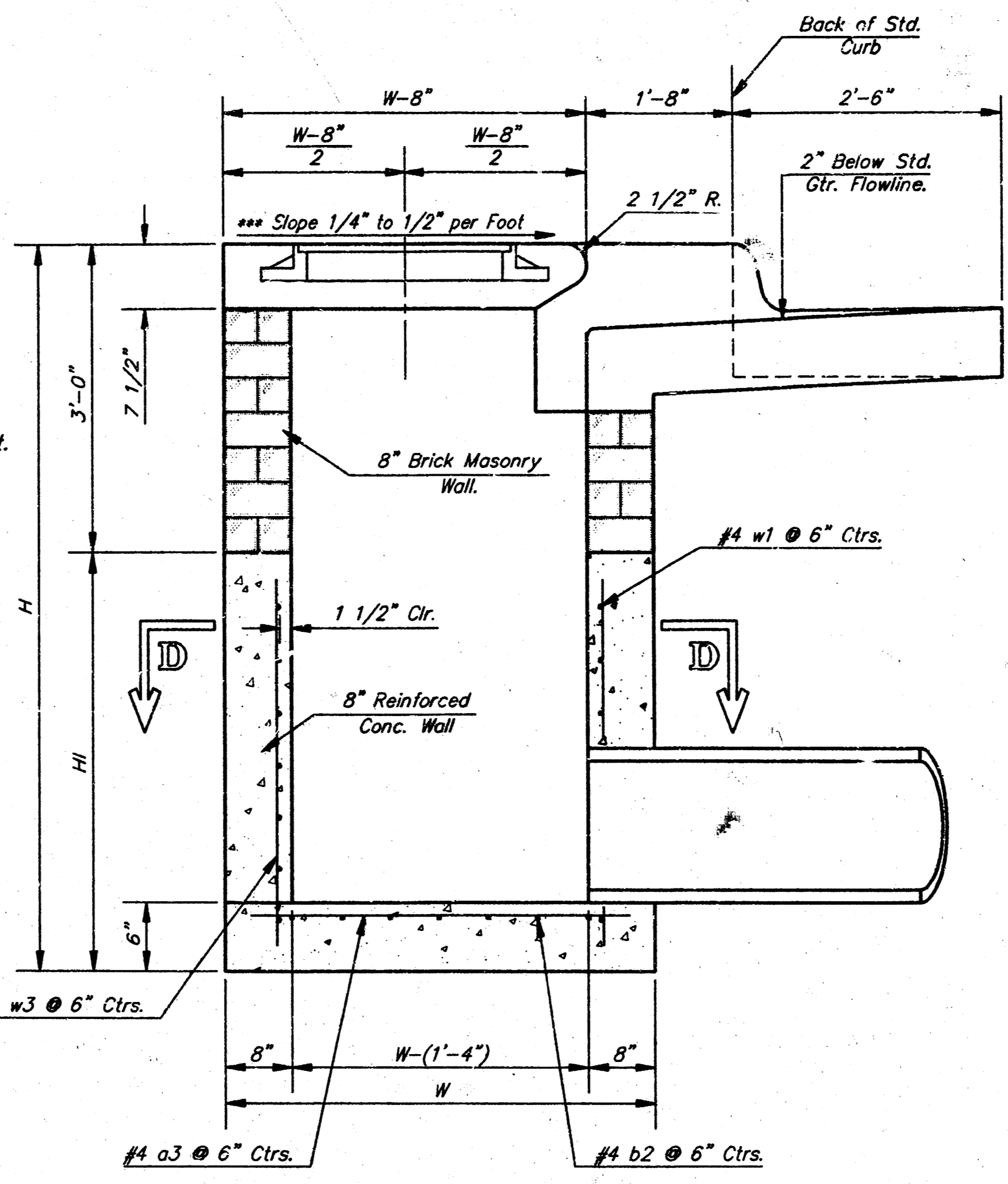
<b>TOWNE PARC 4th ADDITION DETENTION POND</b>			
<b>BAUGHMAN COMPANY P. A.</b> ENGINEERING & SURVEYING 316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211			
PROJECT NUMBER <b>324PPS (607861)</b>			
DESIGN T.C.R./B.P.	DRAWN B.P.	UTIL. CHECK'D DATE Dec. 1991	SCALE NOTED
			SHEET OF <b>6</b> OF <b>9</b>



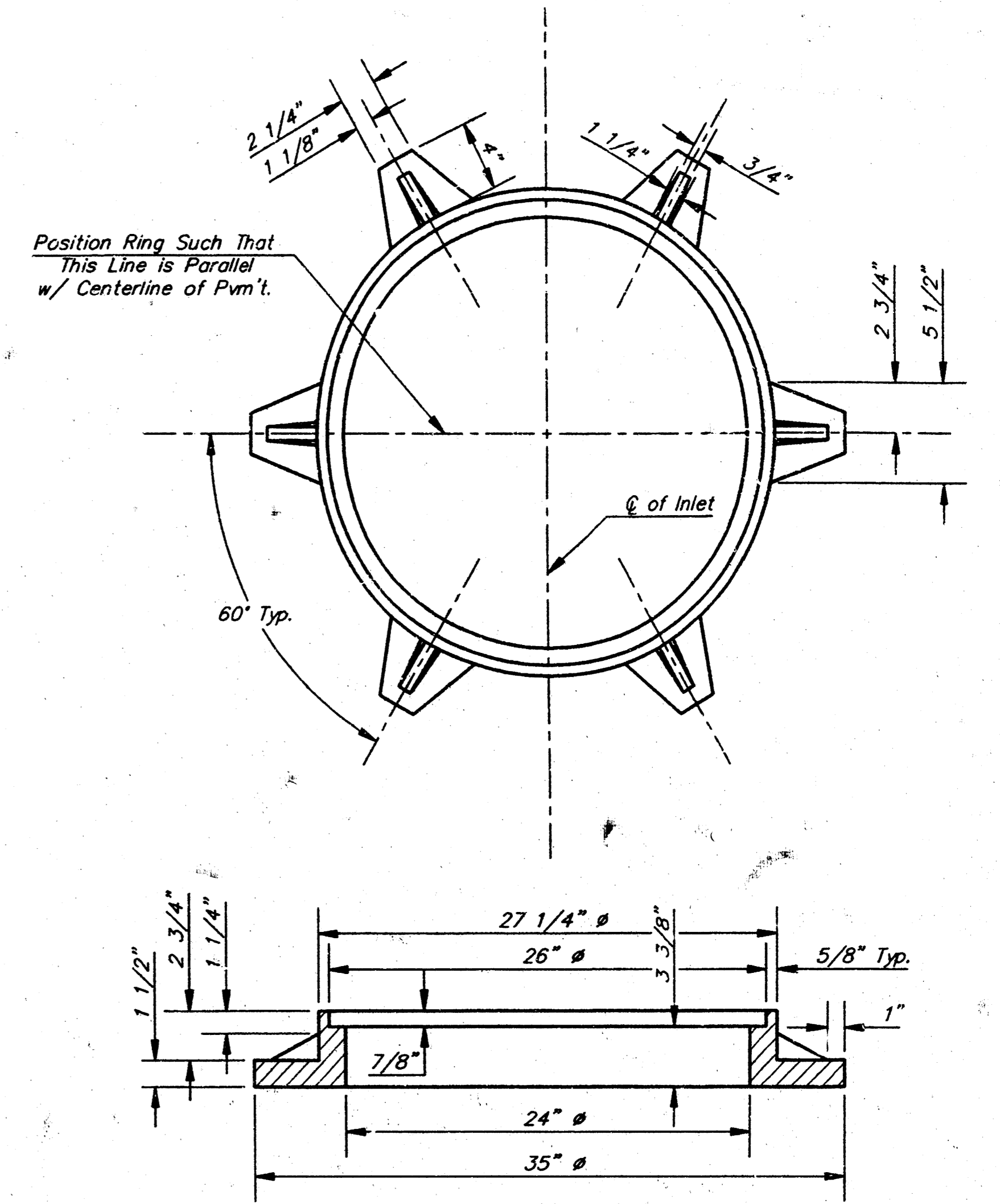
NOTE: Inlet Top Reinforcing shall be Spaced on 6" Max. Centers. Inlet Lids Shall be Notched Out as Indicated to Facilitate Construction of Curb.

NOTE: 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 with air entrainment.

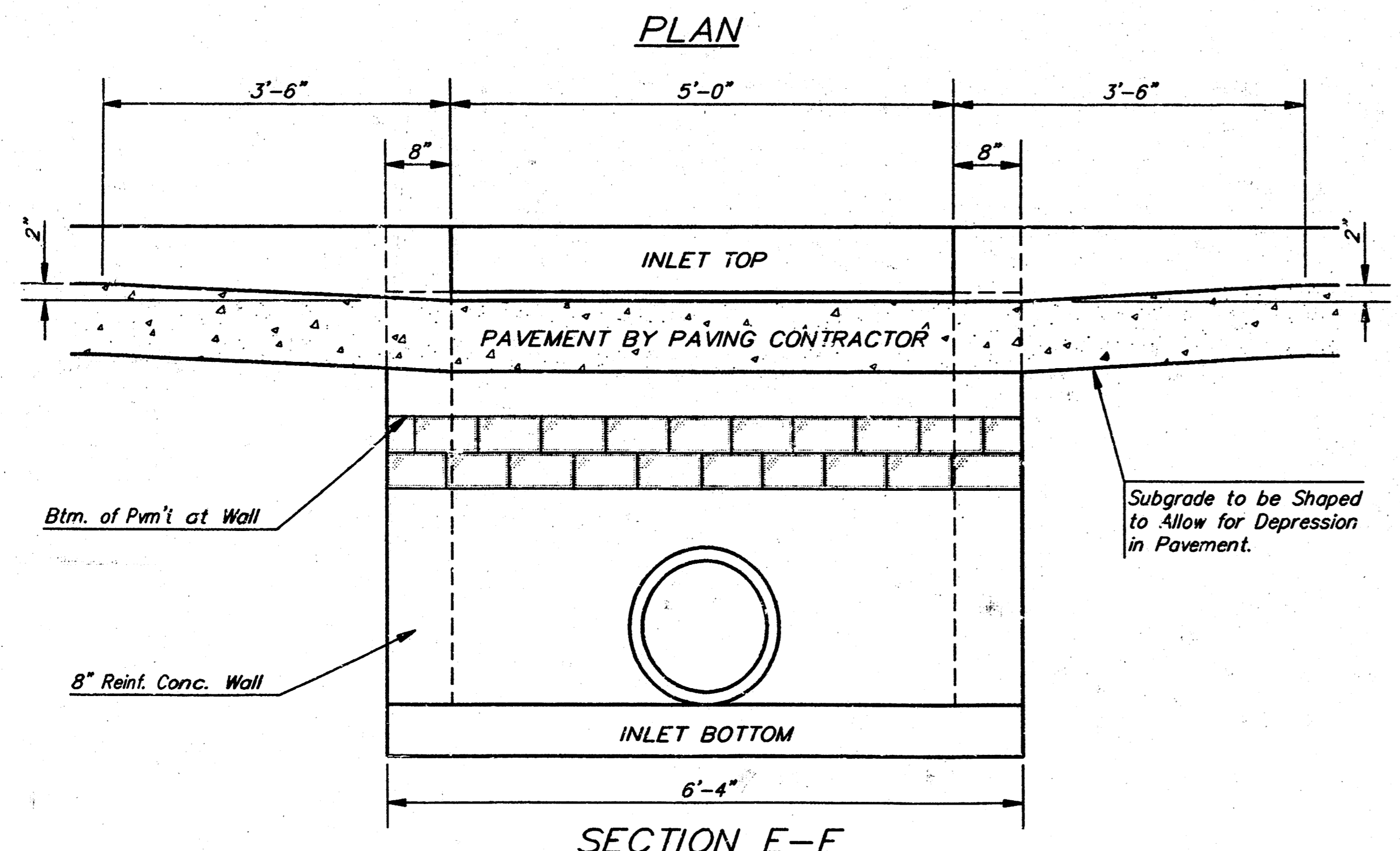
NOTE: Expansion Joint Only in Curb Area With Concrete Pavement.



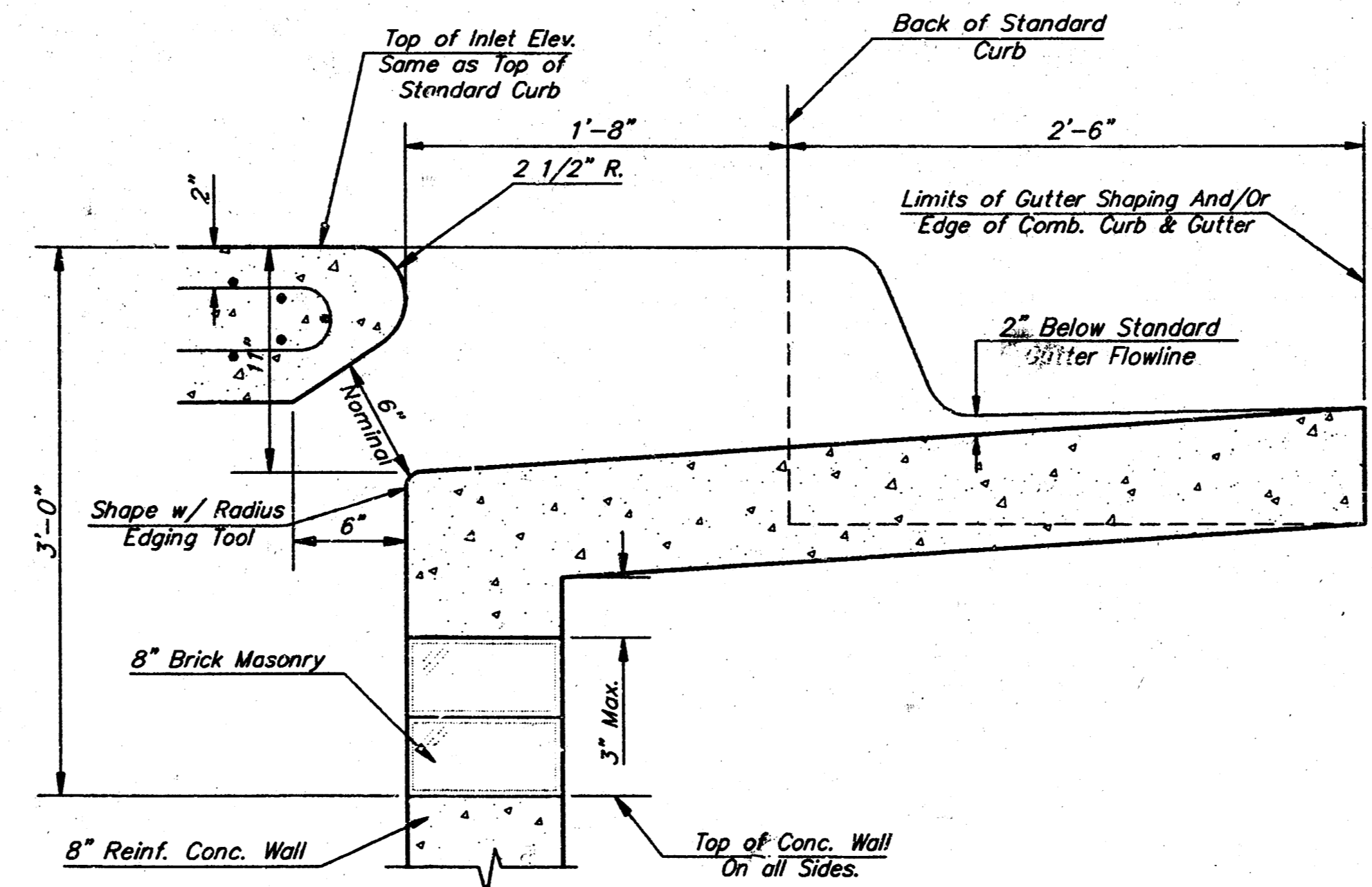
SECTION A-A  
 \*\*\*NOTE: Slope of Inlet Tops to Match Sidewalk or Parking Slopes within Limits Indicated.



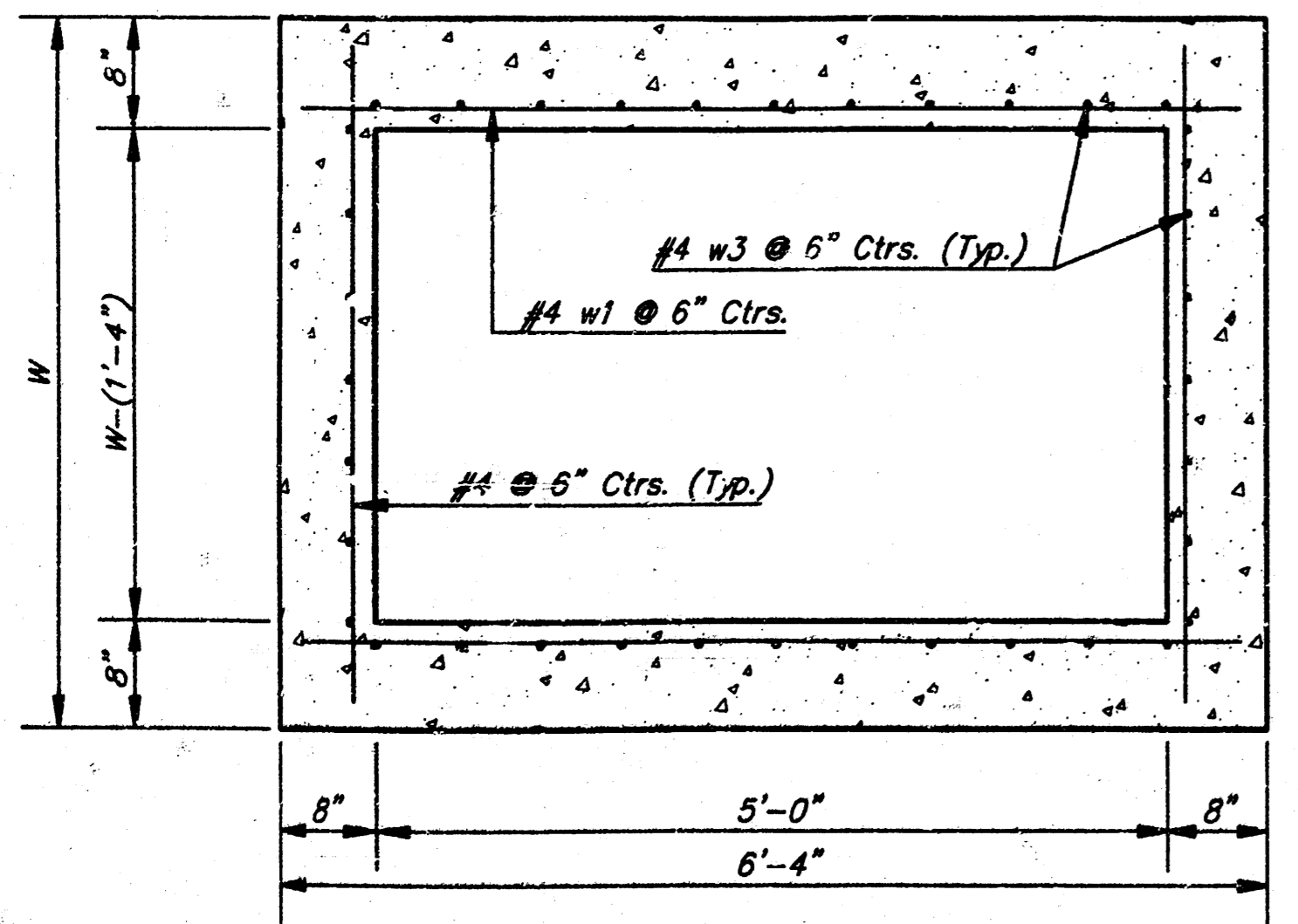
MANHOLE RING AND COVER  
 Weight = 180 Lbs.  
 \*See City of Wichita Standard Manhole Ring and Cover Detail Sheet for Cover Details to Be Used With Inlet Frame.



SECTION E-E



SECTION B-B



SECTION D-D

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.

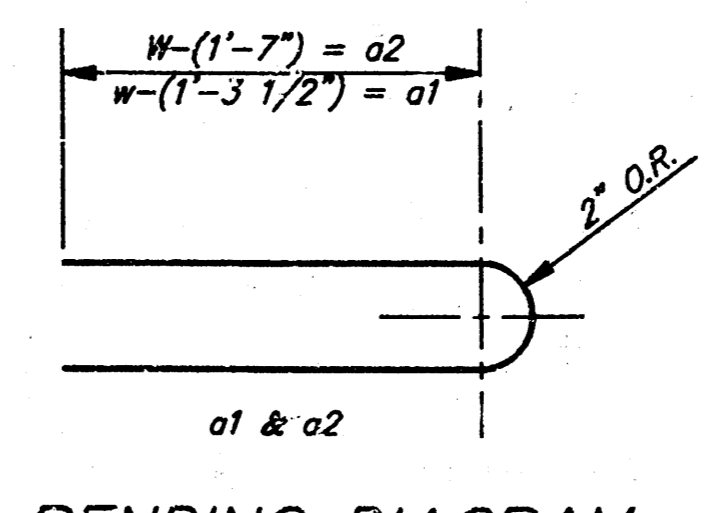
The ends of all pipes installed in inlets shall be cut off flush with the inside face of the inlet wall

PRECAST SLAB AND FLOOR REINFORCING											
		W = 4'-4"		W = 5'-4"		W = 6'-4"		W = 7'-4"		W = 8'-4"	
MARK	SIZE	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											
		W = 4'-4"		W = 5'-4"		W = 6'-4"		W = 7'-4"		W = 8'-4"	
MARK	SIZE	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.  
 ① 4 (H = 12") (H = 21") Rounded down to nearest 0.5"  
 ② H = 3"



BENDING DIAGRAM

STANDARD CURB INLET PRECAST TOPS			
W	PRE-CAST TOP SIZE	PIPE SIZE	CU. YD. CONC.
4'-4"	3'-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±

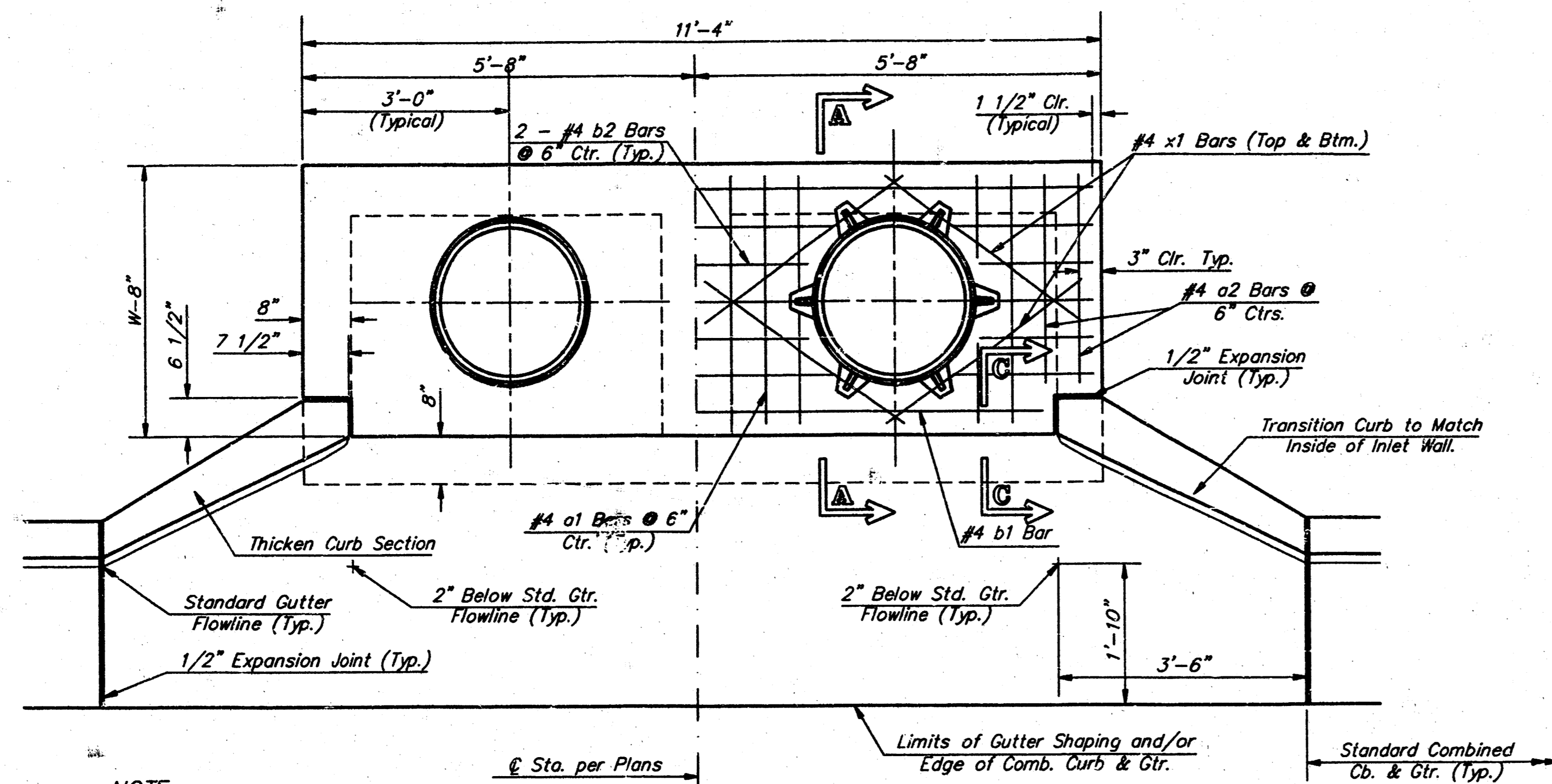
Revised - Feb. 16, 1989

CITY OF WICHITA STANDARD TYPE 1A  
 CURB INLET DETAILS  
 INLET OPENING = 6" x 5'-0"

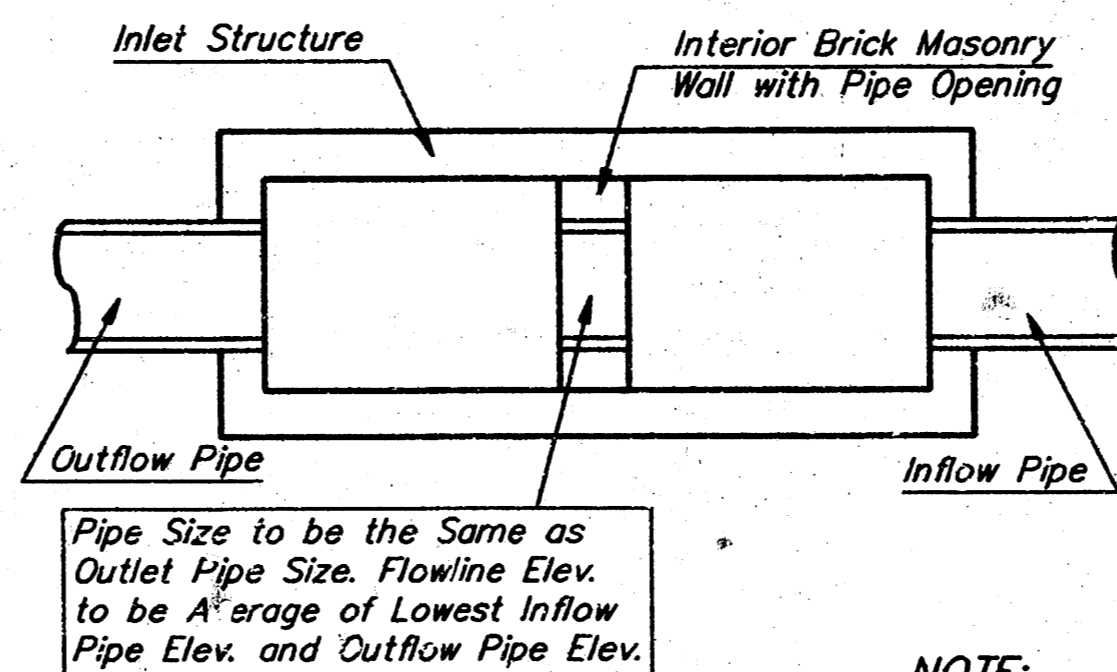
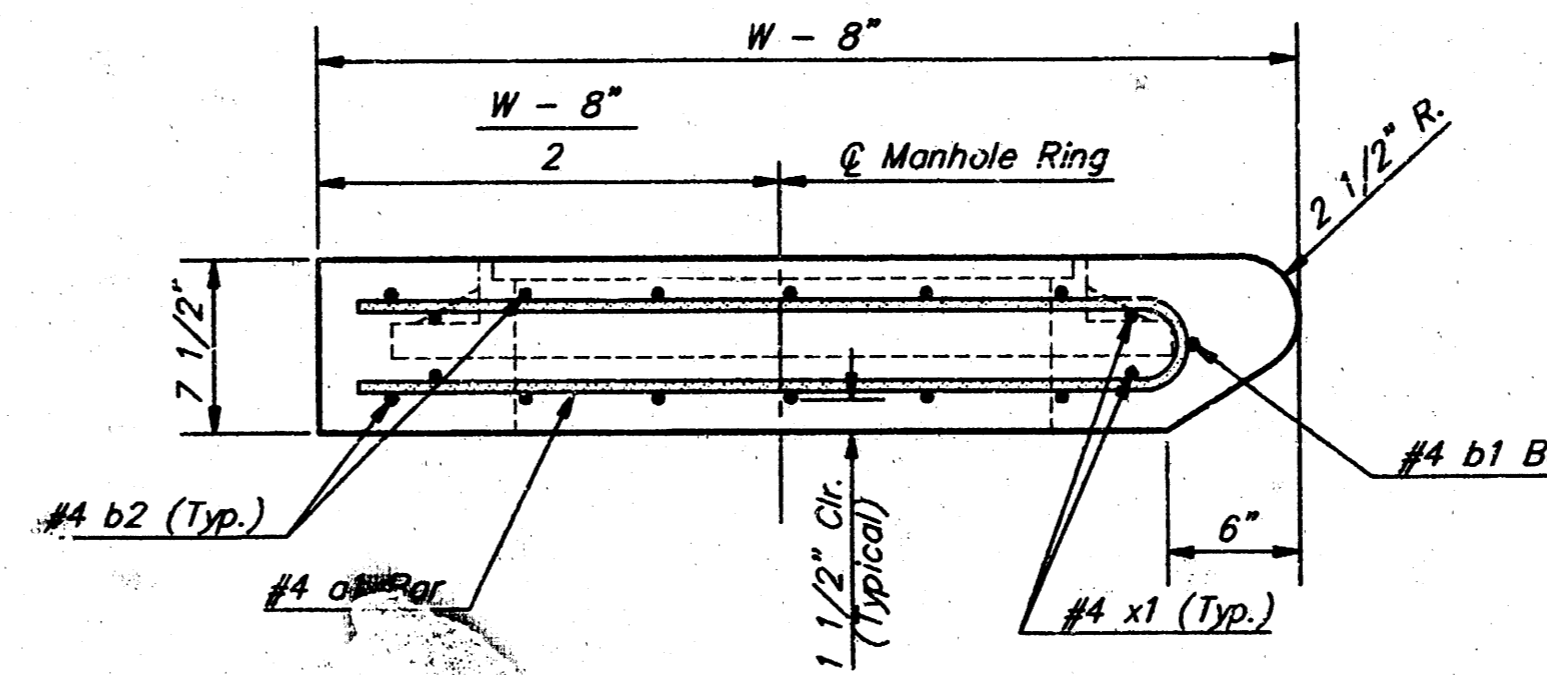
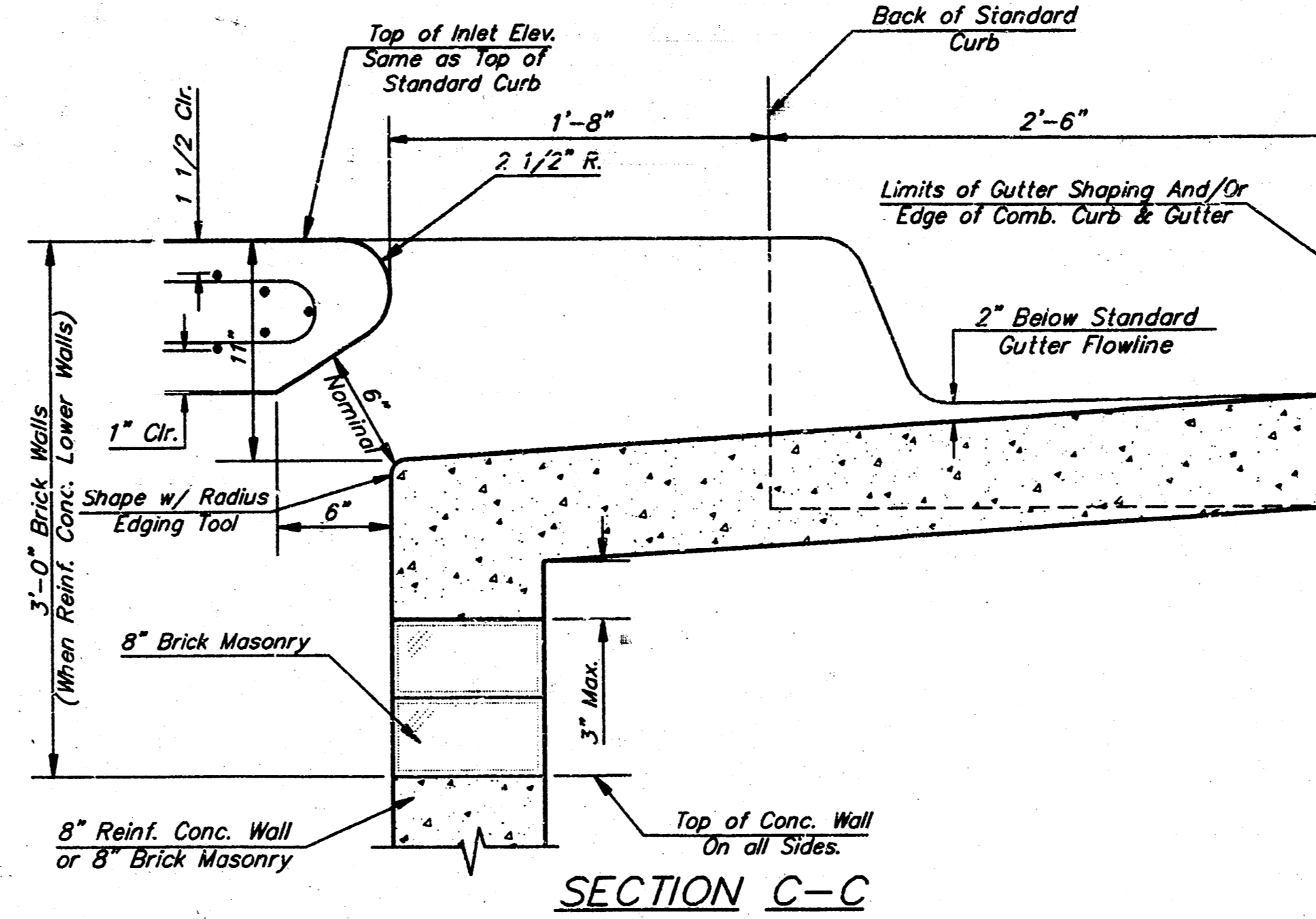
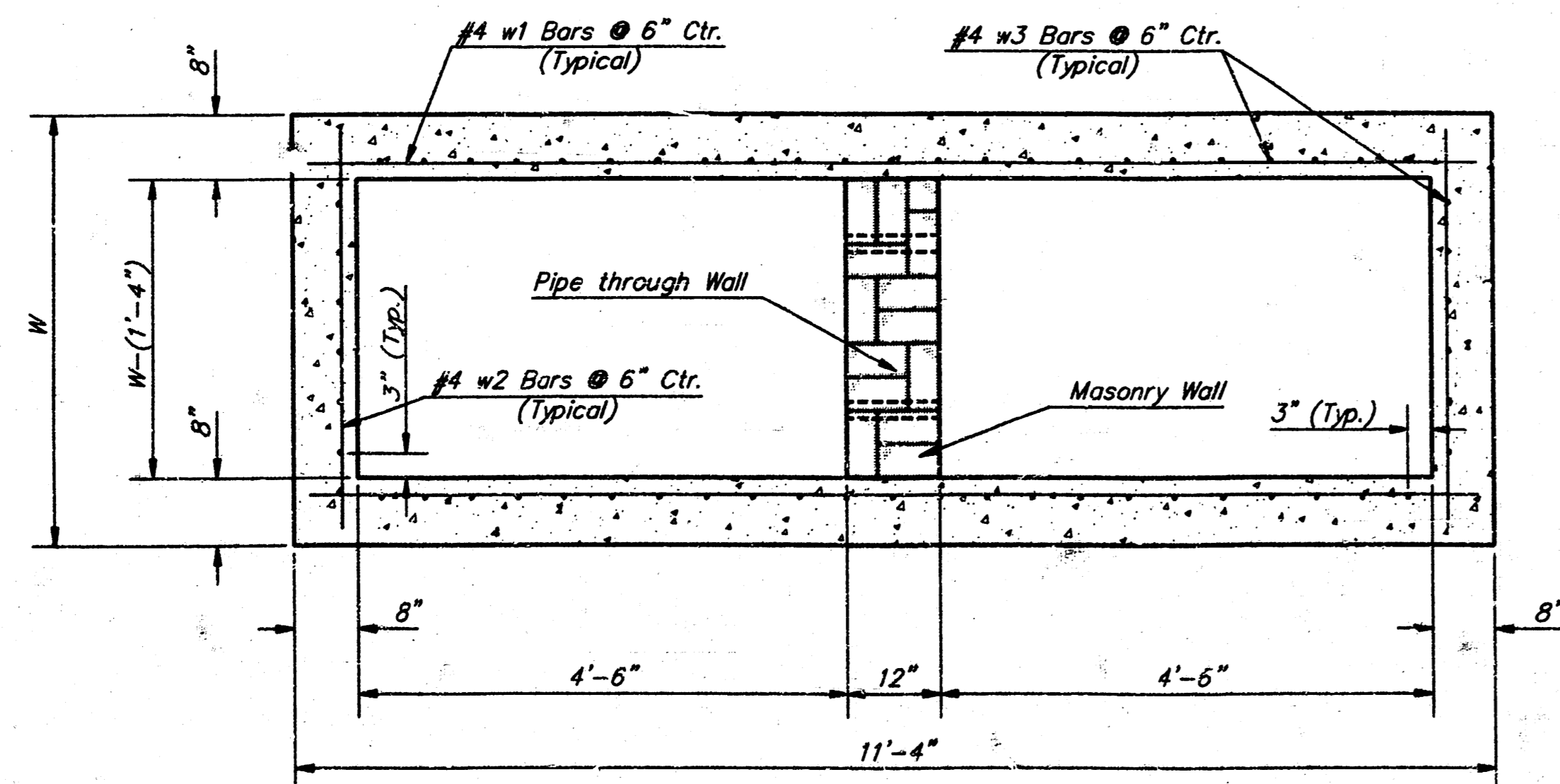
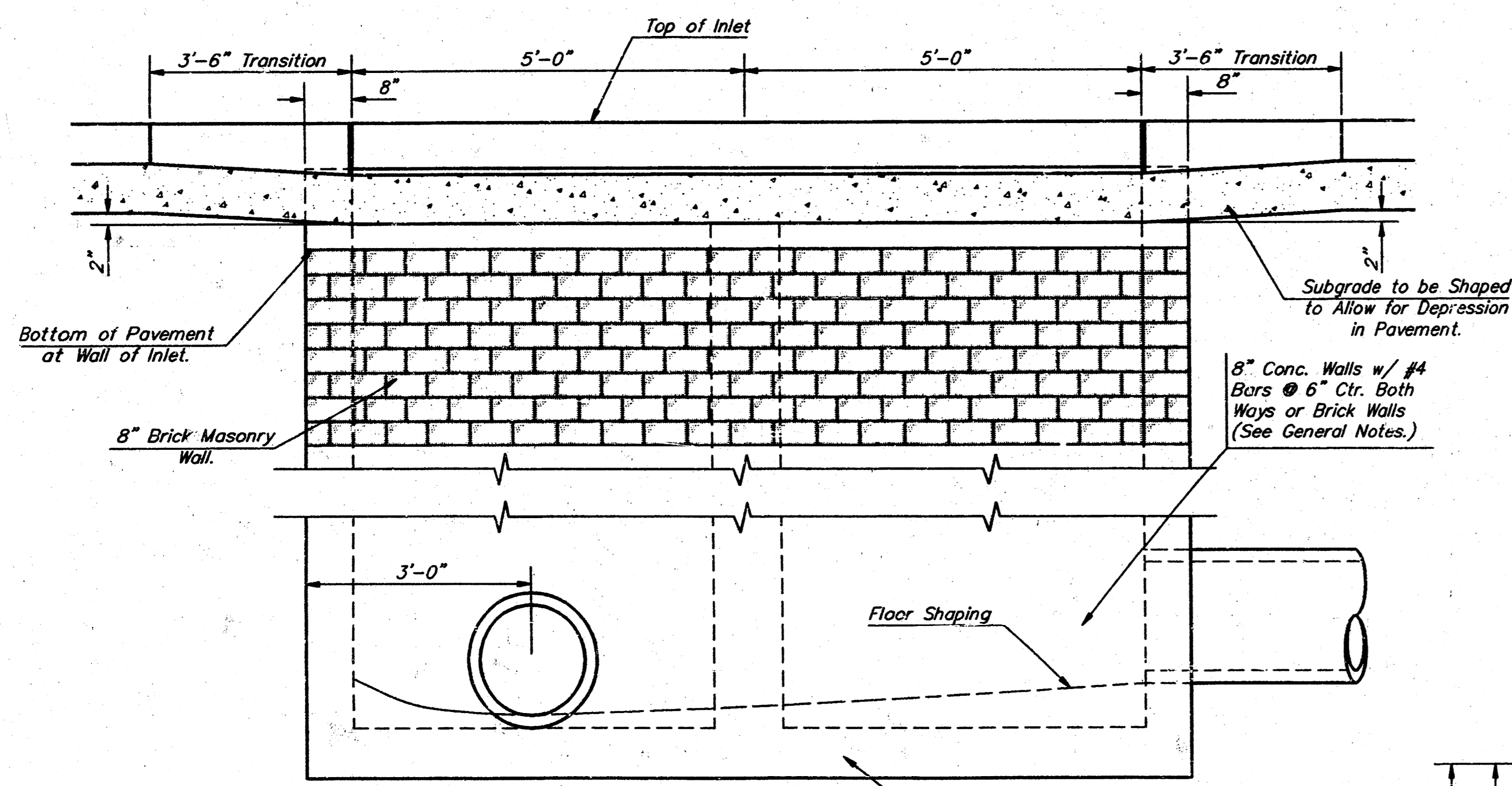
PROJECT NUMBER  
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SHEET / OF  
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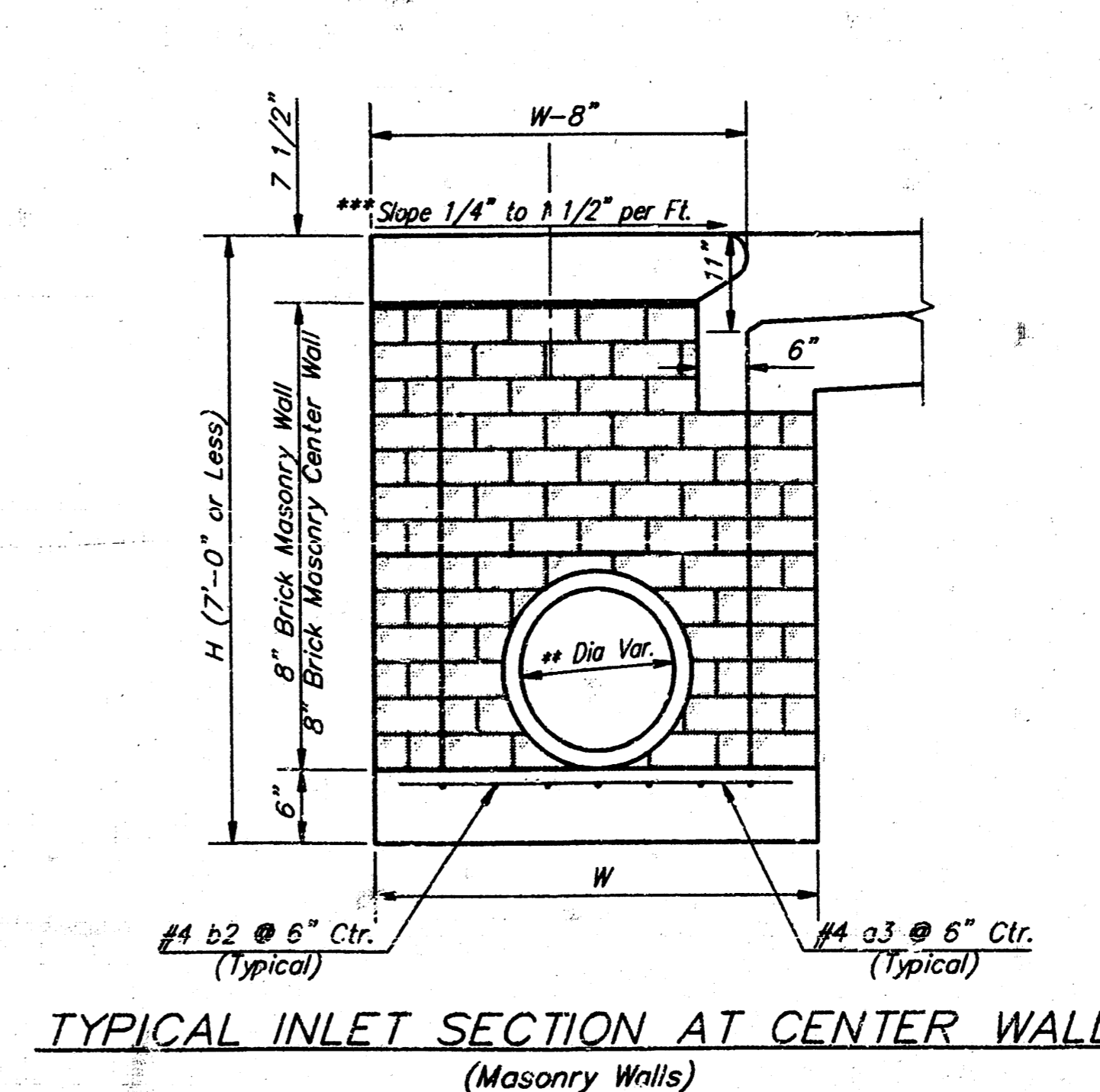
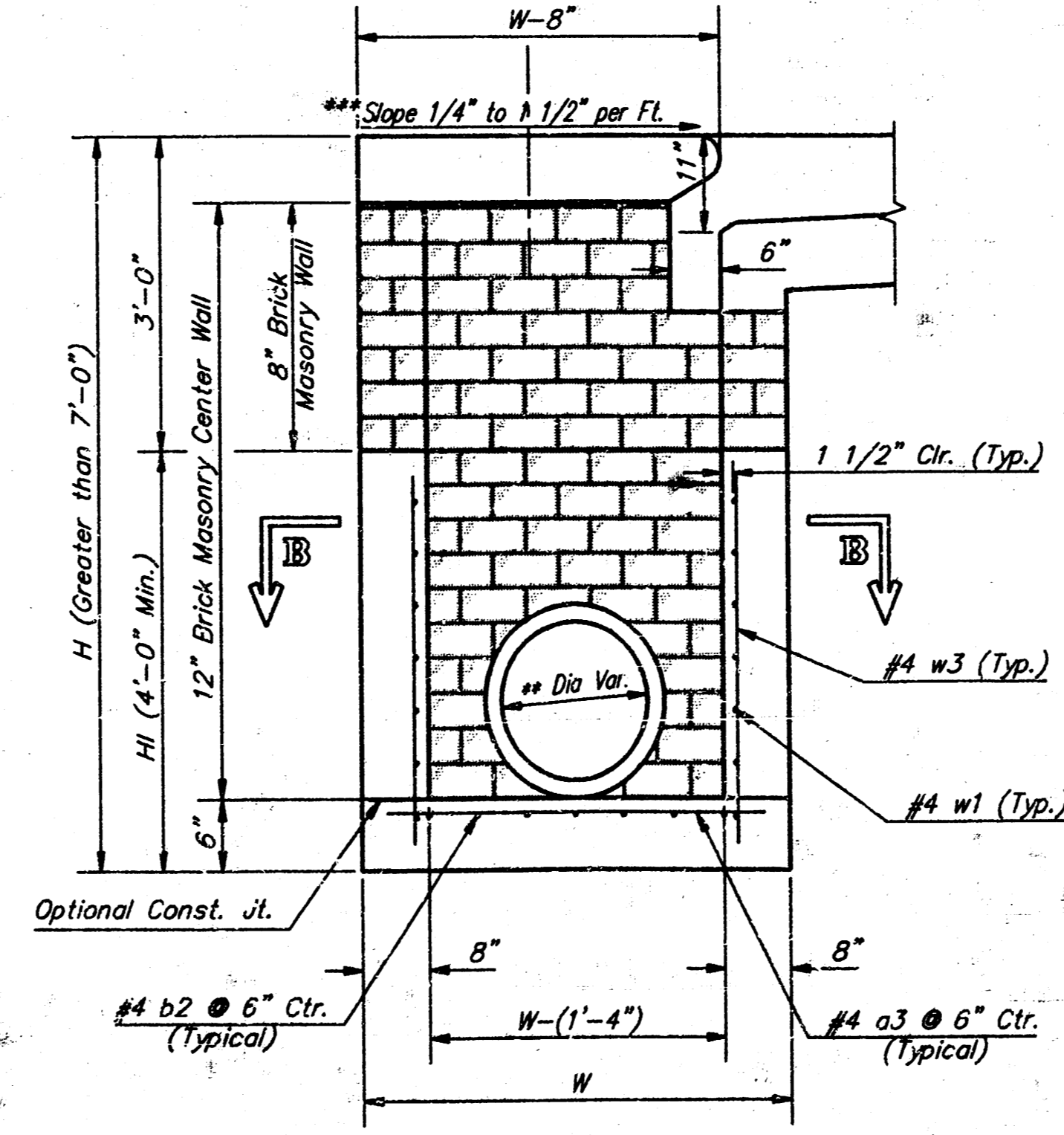
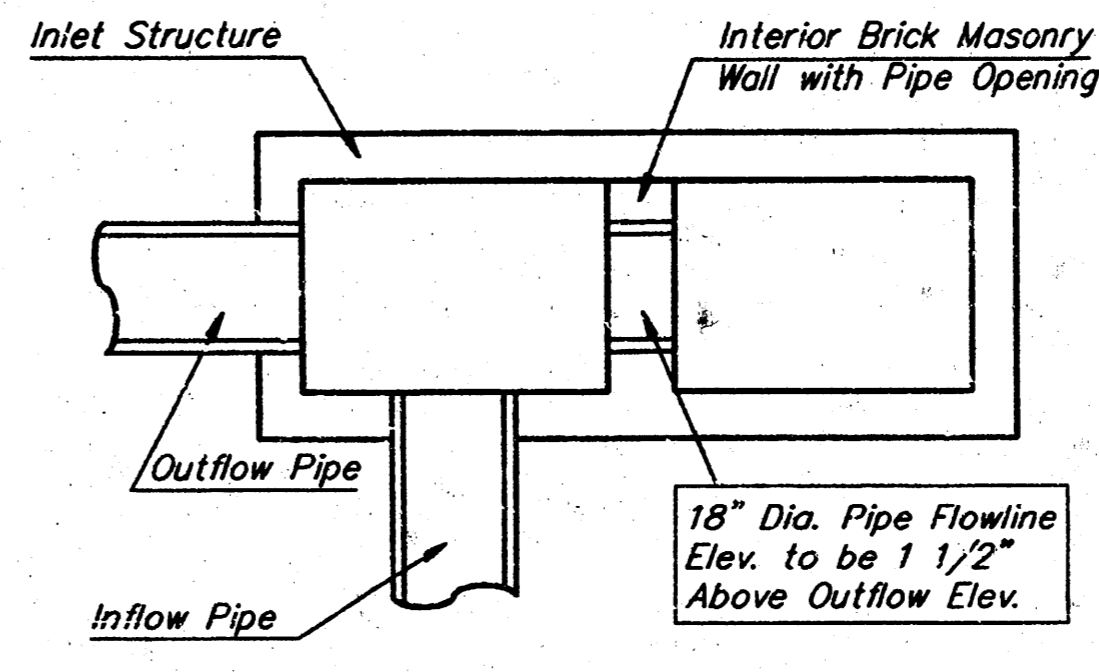
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 ENGINEERING & SURVEYING  
 316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211



NOTE:  
Expansion Joint Only in Curb Area  
with Concrete Pavement.



NOTE:  
Center Wall Pipe Size shall be as  
Specified in Inlet Construction Notes  
on the Plan/Profile Sheets for those  
Cases not Shown Here.



NOTES:  
\*\* A center wall opening shall be provided by  
means of a section of reinforced concrete  
pipe. See Case I and Case II above.  
\*\*\* Slope of inlet tops to match sidewalk of  
parking slopes within limits indicated

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	13	6'-7"	13	8'-7"	13	10'-7"	13	12'-7"	13	14'-7"
a2	#4	4	6'-0"	4	8'-0"	4	10'-0"	4	12'-0"	4	14'-0"
a3	#4	23	4'-1"	23	5'-1"	23	6'-1"	23	7'-1"	23	8'-1"
b1	#4	1	9'-9"	1	9'-9"	1	9'-9"	1	9'-9"	1	9'-9"
b2	#4	23	11'-1"	29	11'-1"	35	11'-1"	41	11'-1"	47	11'-1"
x1	#4	16	3'-10"	16	4'-2"	16	4'-6"	16	4'-10"	16	5'-2"

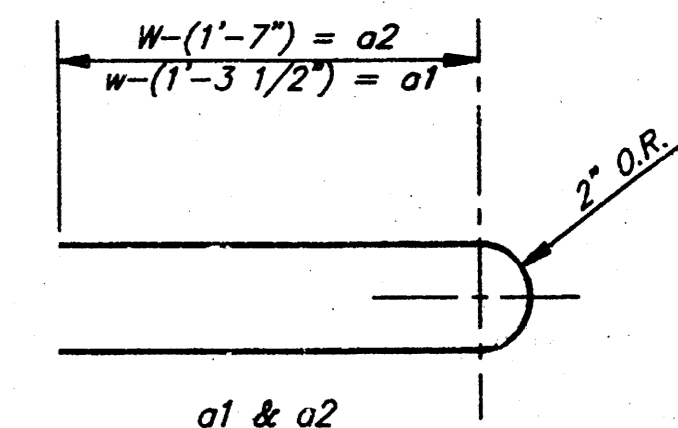
  

WALL REINFORCING											
MARK	SIZE	W = 4'-4"		W = 5'-4"		W = 6'-4"		W = 7'-4"		W = 8'-4"	
		NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
w1	#4	1	11'-1"	1	11'-1"	1	11'-1"	1	11'-1"	1	11'-1"
w2	#4	1	4'-1"	1	5'-1"	1	6'-1"	1	7'-1"	1	8'-1"
w3	#4	52	2	56	2	60	2	64	2	68	2

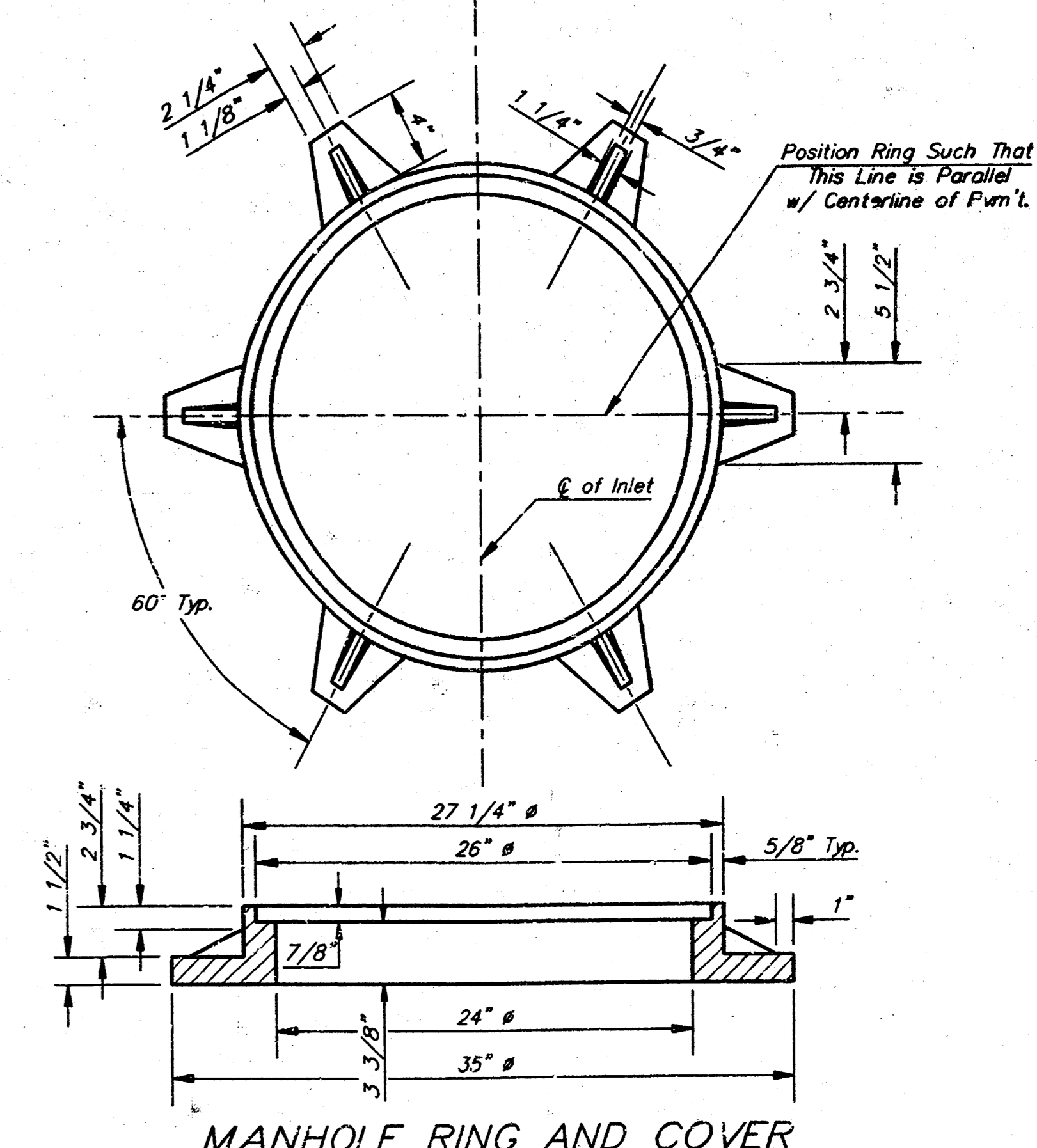
\* Field Bend or Cut Reinforcing as Required for Clearance.  
① H - 12" (H - 21" Rounded down to nearest 0.5"  
② H - 3"

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 6" max. centers. Inlet lids shall be matched 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	PIPE SIZE	CU. YD. CONC.
4'-4"	3'-8" 11'-4" 7 1/2"	21" & SMALLER	0.83±
5'-4"	4'-8" 11'-4" 7 1/2"	24" & 30"	1.08±
6'-4"	5'-8" 11'-4" 7 1/2"	36" & 42"	1.33±
7'-4"	6'-8" 11'-4" 7 1/2"	48" & 54"	1.61±
8'-4"	7'-8" 11'-4" 7 1/2"	60" & 66"	1.87±



\*See City of Wichita Standard Manhole Ring and Cover Detail Sheet for Cover Details to Be Used With Inlet Frame.

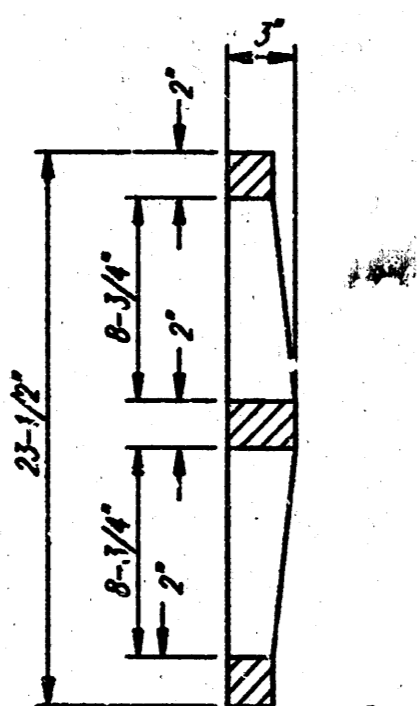
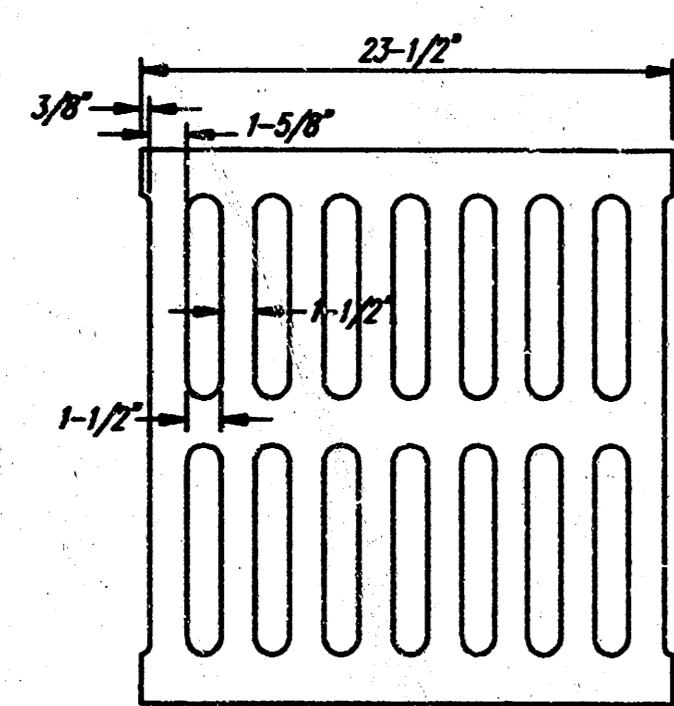
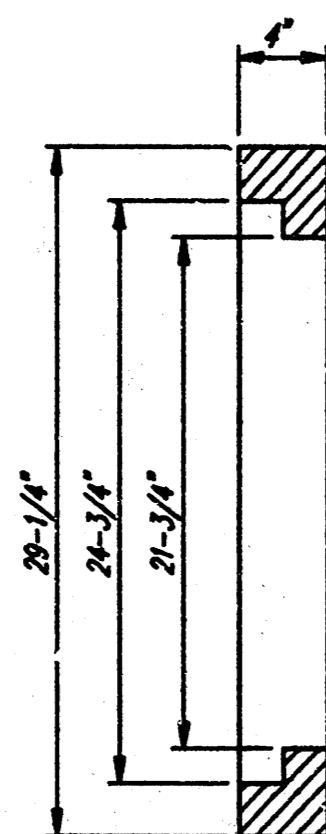
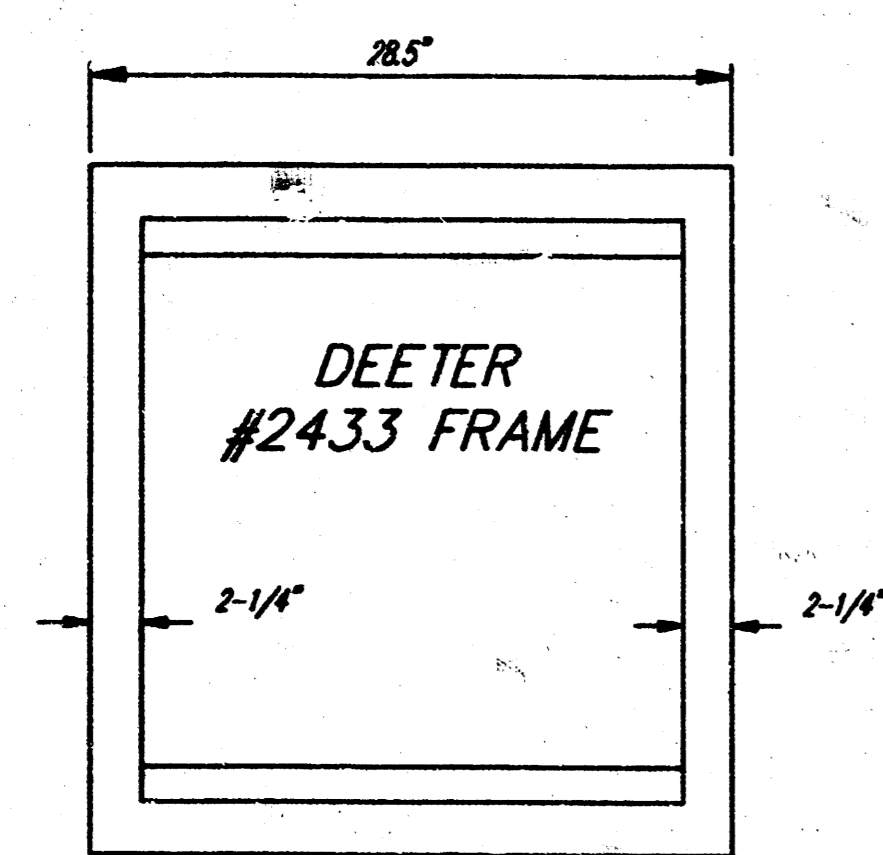
Revised - Feb. 16, 1989

CITY OF WICHITA STANDARD TYPE 1A  
CURB INLET DETAILS  
INLET OPENING = 6" x 10'-0"

PROJECT NUMBER  
**324PPS (607861)**

SHEET 8 OF 9

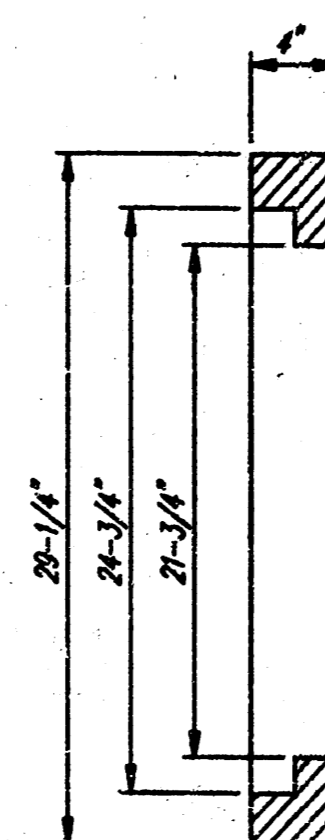
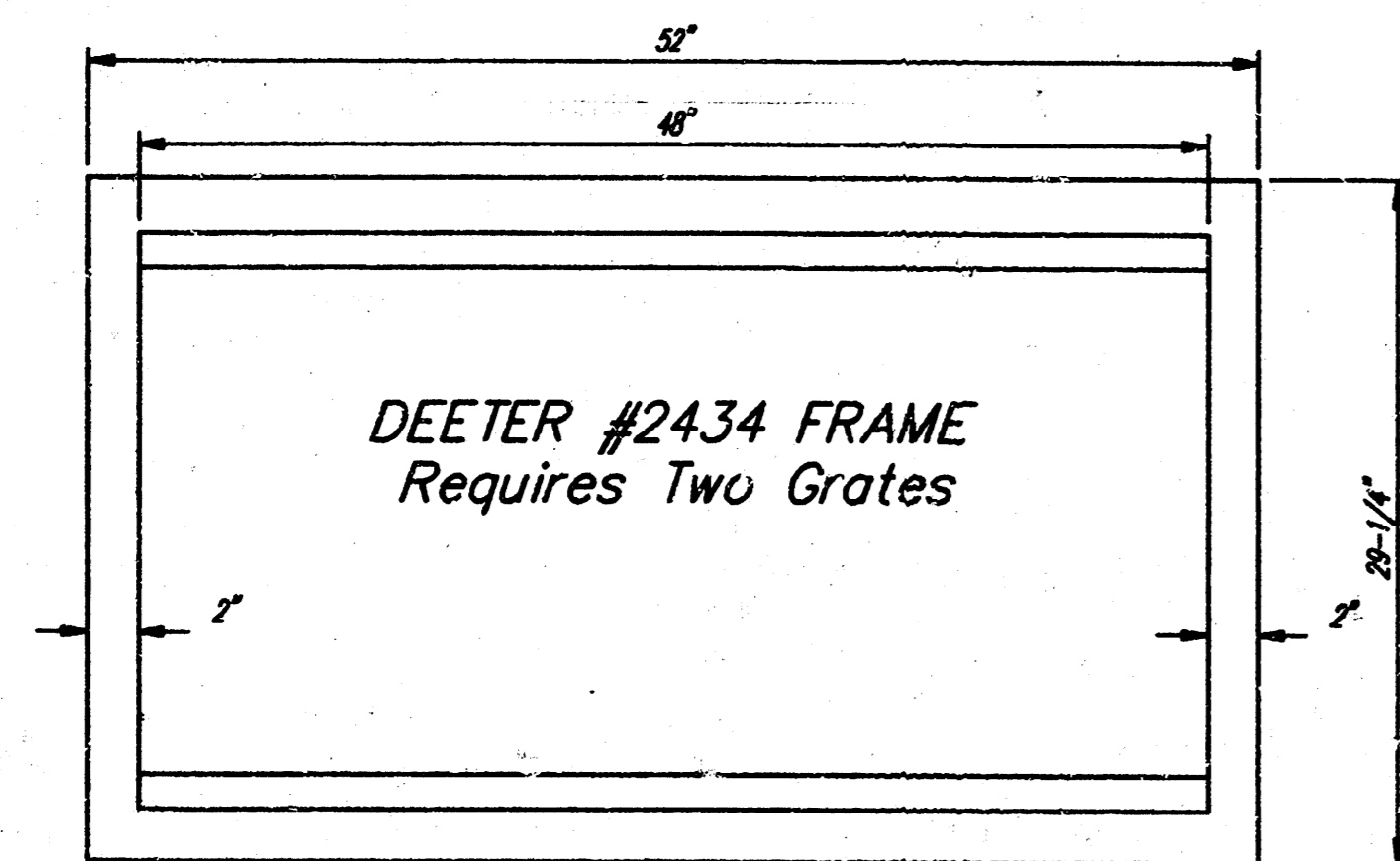
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316/282-7271 • 315 ELLIS • WICHITA, KANSAS 67211



DEETER #2433 GRATE

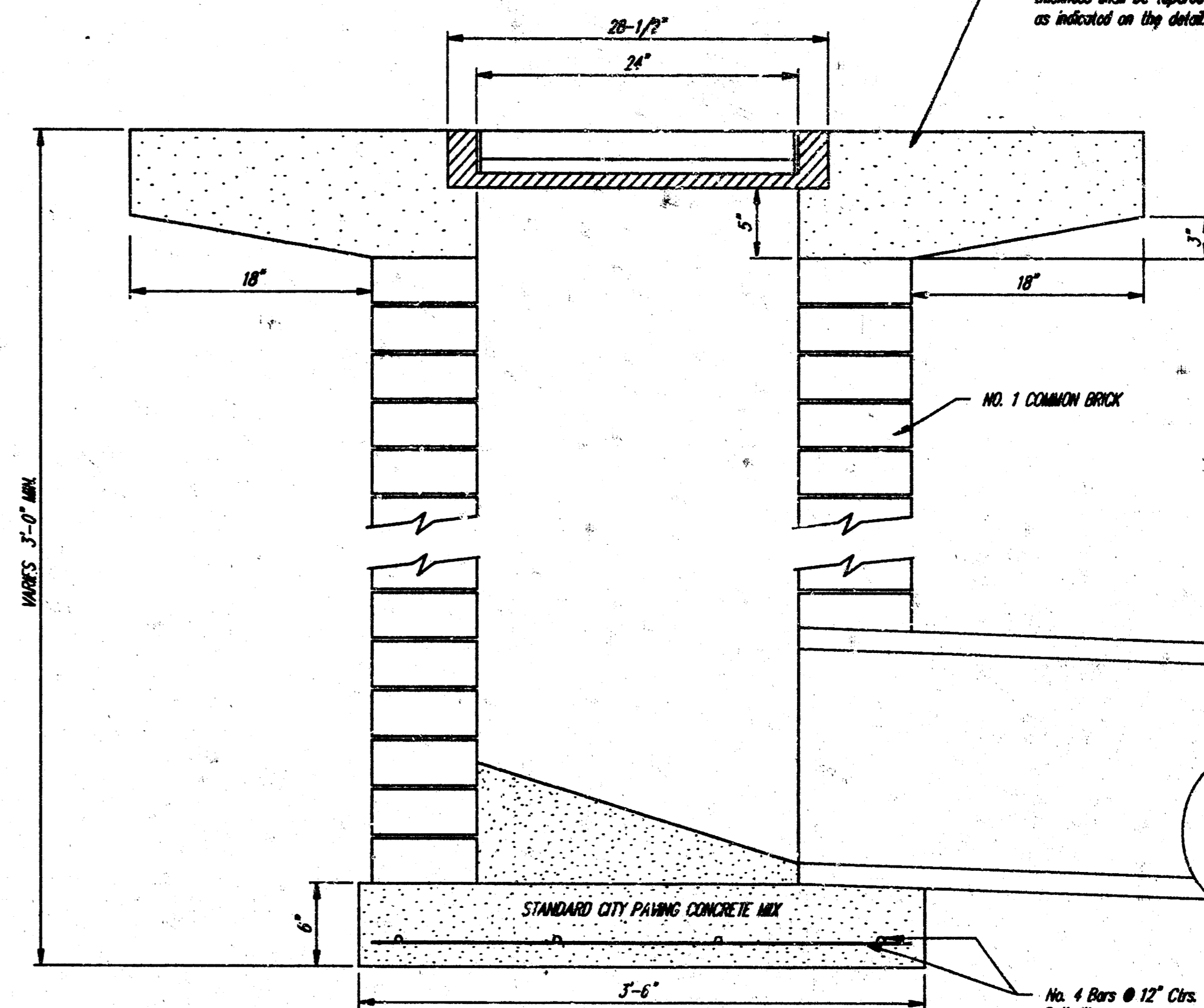
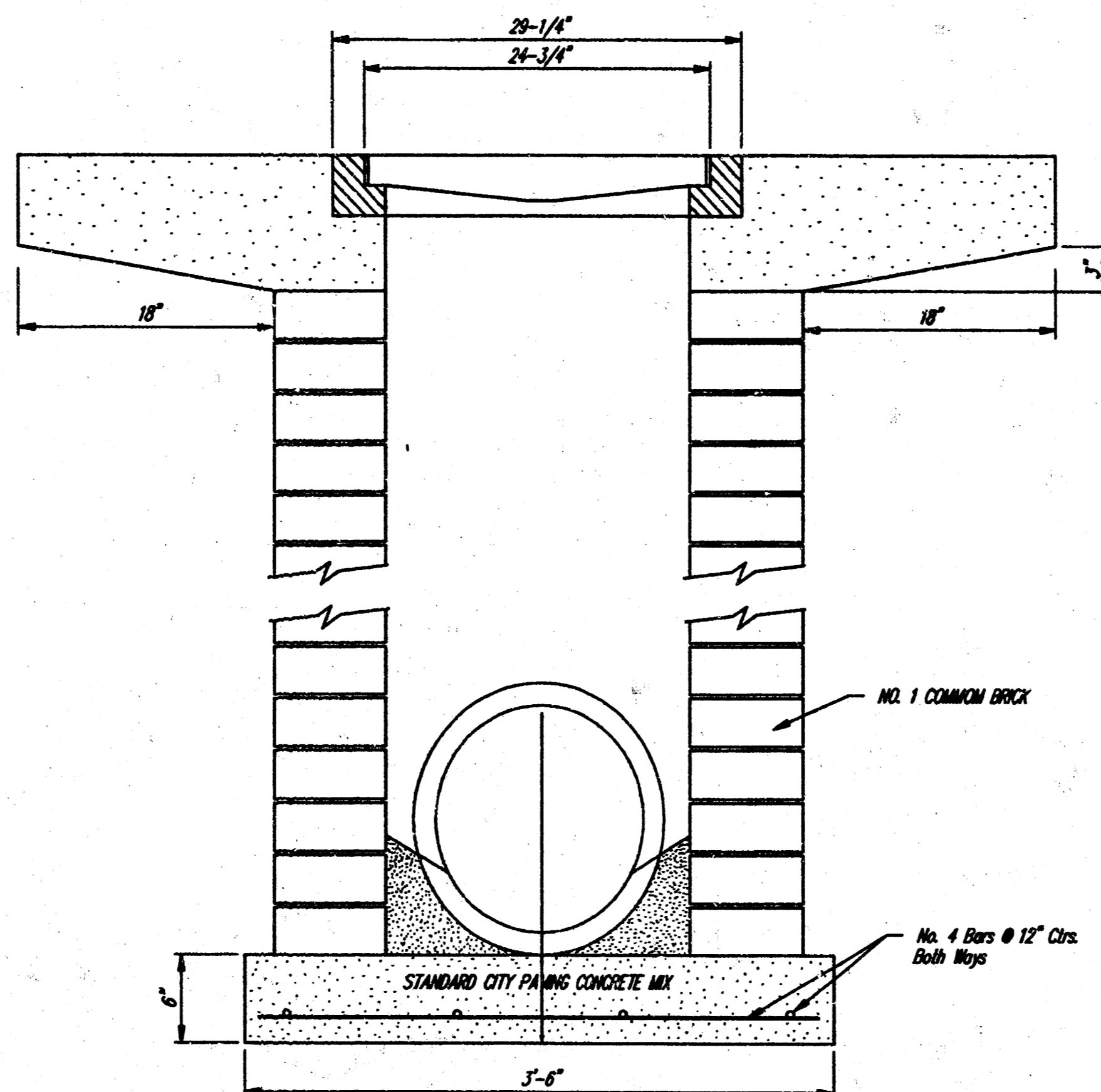
24" x 24" Frame and Grate Detail

NOTE: Grates shall be imprinted on the top surface with "CITY OF WICHITA" using letters at least 1" in height. Other marking methods may be approved by the engineer.

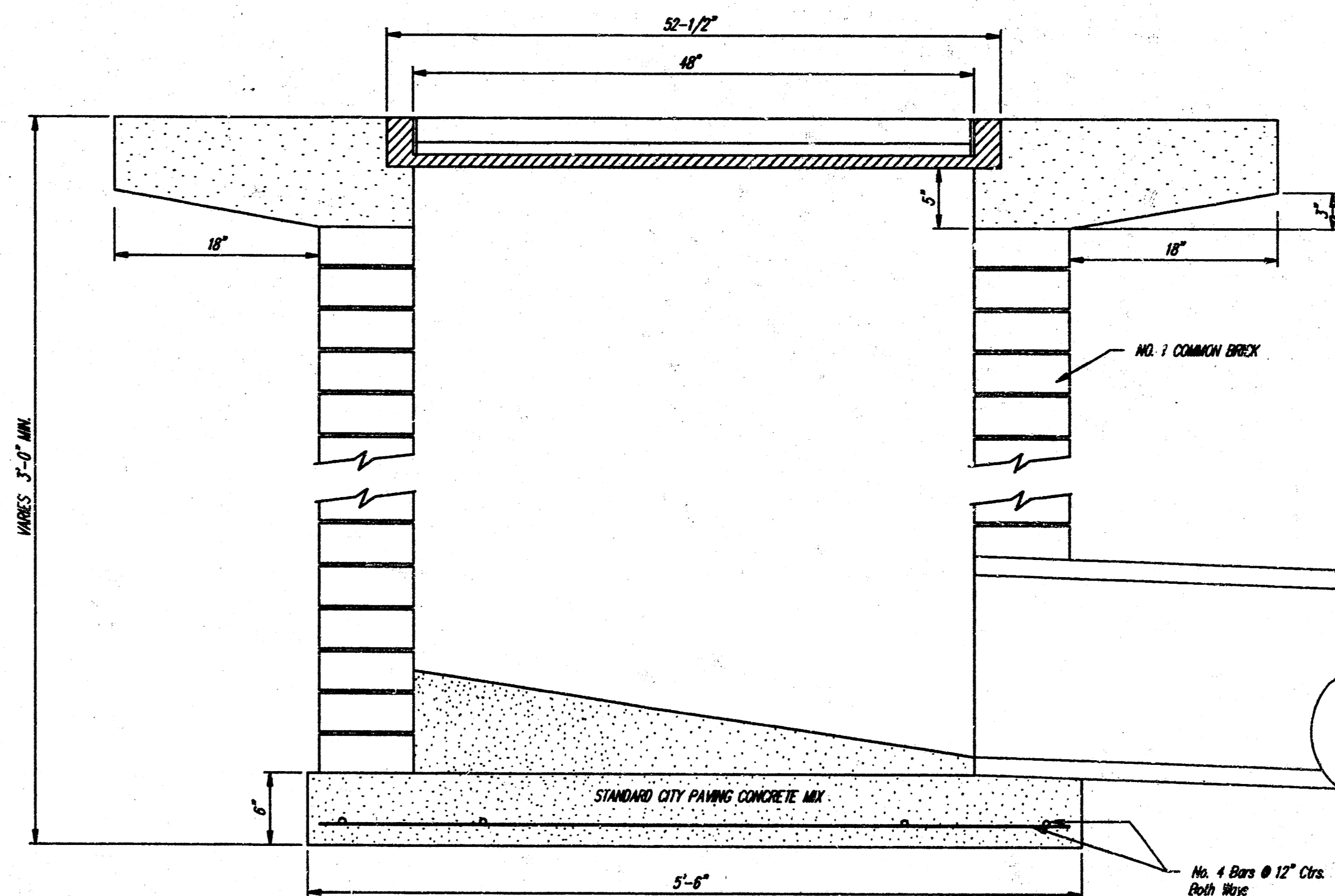


DEETER #2434 FRAME  
Requires Two Grates

Double 24" x 24" Frame Detail



Note: Concrete apron shall be constructed around the inlet when inlet is located in an unpaved area. Where the inlet is adjacent to pavement, the pavement thickness shall be tapered to the inlet in 18 inches as indicated on this detail.



DROP INLET DETAILS  
M.E. Lindebak, City Engineer  
City of Wichita, Kansas

Project Number

324PPS (607861)

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