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

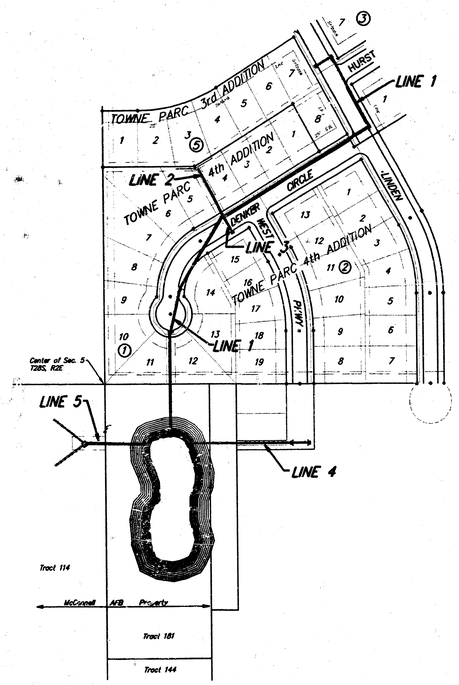
POND STAKING COORDINATES

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	265.3
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	570.6	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	757.2	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	1125.1	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	988.2	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	267.5	108	1006.7	107.3
56	884.6	309.3	109	1046.7	102.9
57	880.6	328.5	110	1048.2	116.5
58	851.9	307.0	111	1048.8	130.0
59	851.4	264.7	112	1049.8	140.8
60	796.1	272.6	113	1078.5	139.1
61	798.1	315.2			
62	797.8	320.6			

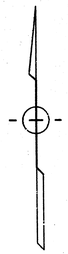
General Notes

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



Project Area



SCALE: 1" = 150'

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.

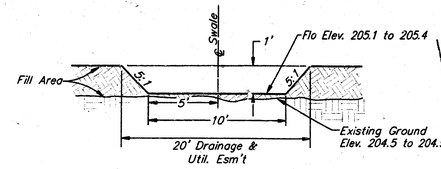
Booked
11-2-92
MG

THOMAS CHARLES BIERER
LICENSED
9621
KANSAS
PROFESSIONAL ENGINEER

Revised as built 10-9-92 TCR

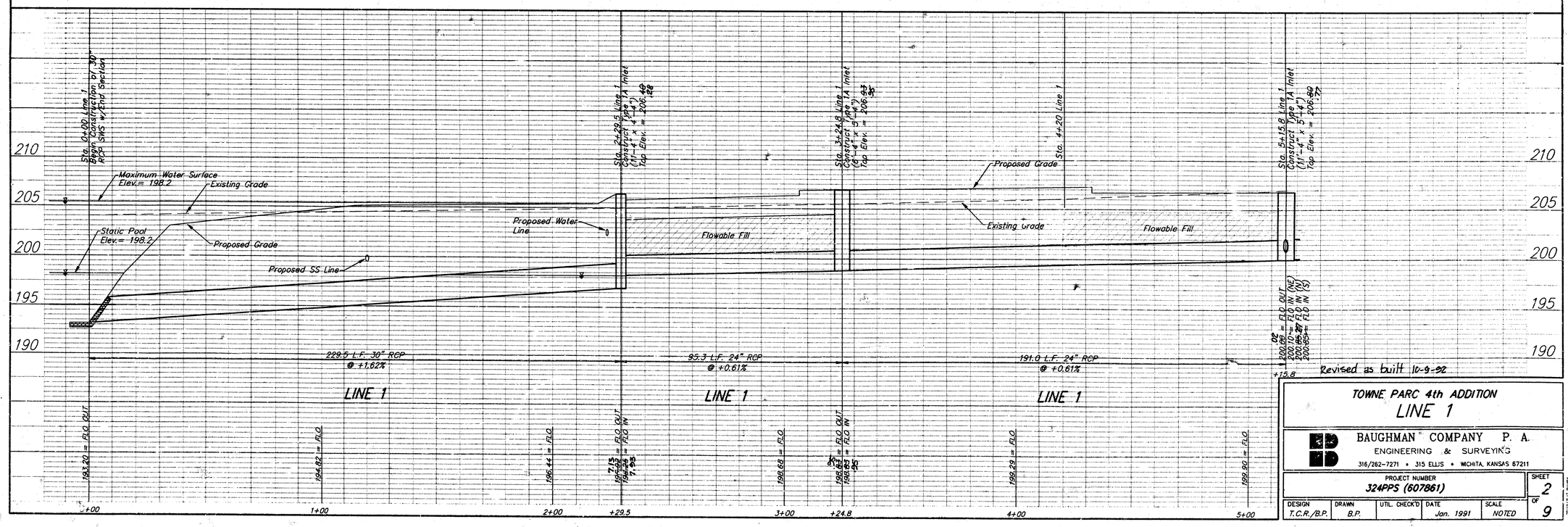
BAUGHMAN COMPANY P. A.
ENGINEERING & SURVEYING
316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

BENCH MARK:



Swale Cross Section

TOWNE PARC 4th ADDITION



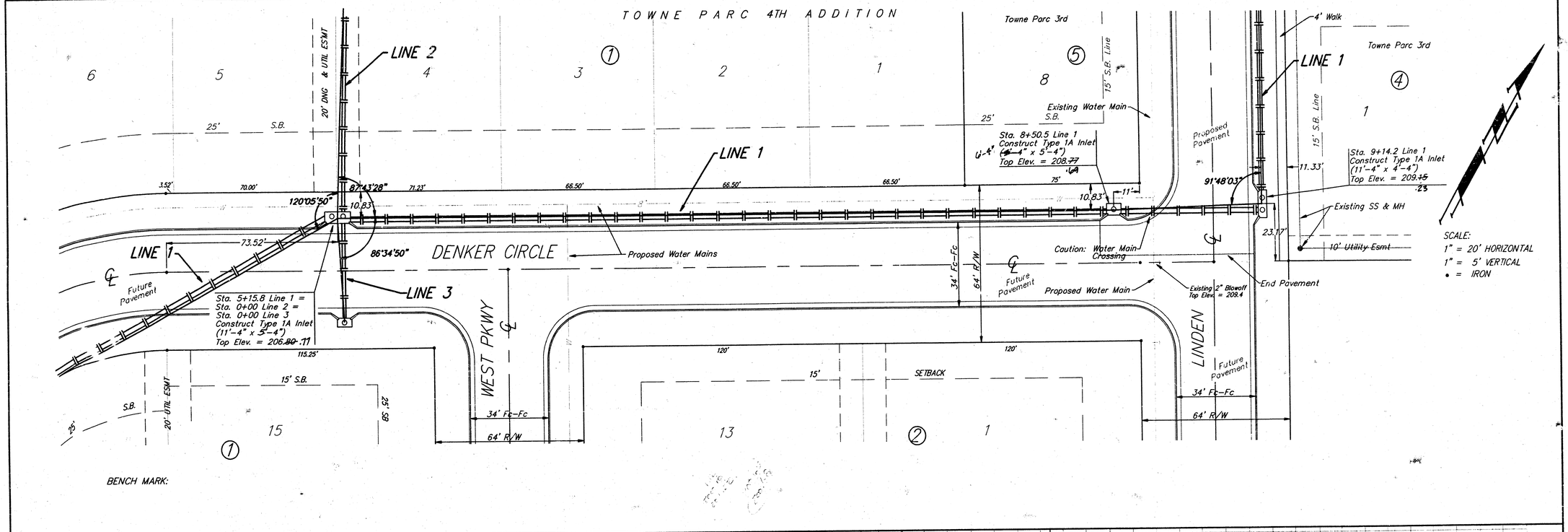
Revised as built 10-9-92

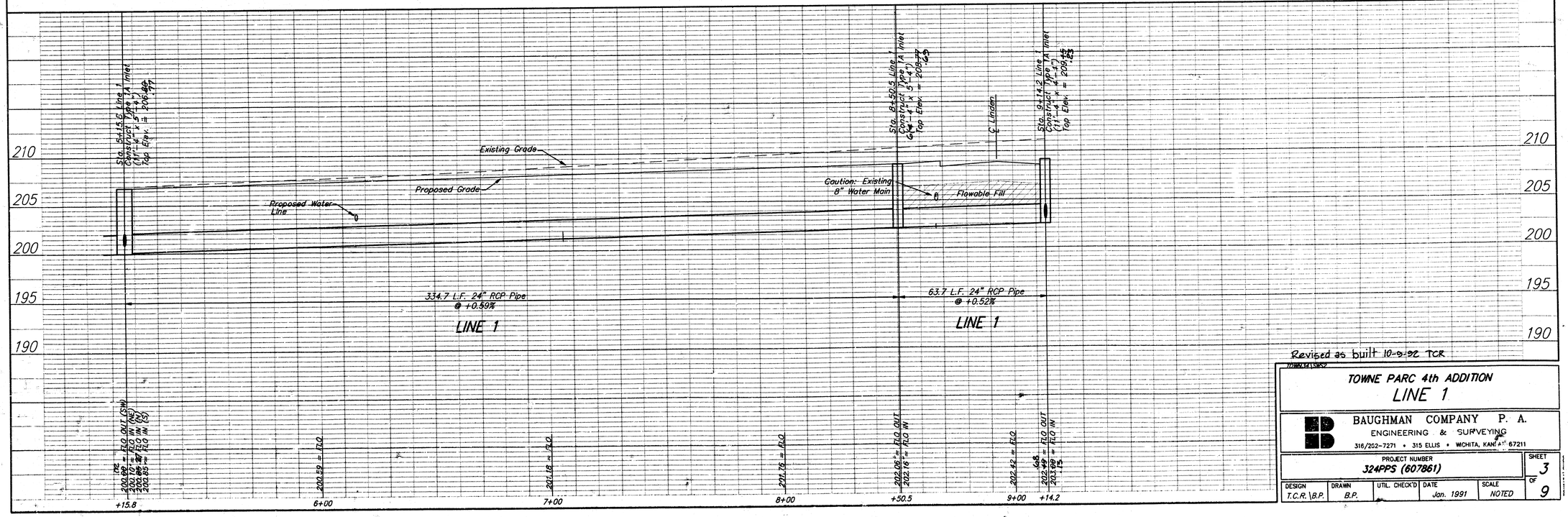
TOWNE PARC 4th ADDITION
LINE 1

BAUGHMAN COMPANY P. A.
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PROJECT NUMBER	SHEET
324PPS (607861)	2 OF 9

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





Revised as built 10-9-92 TCR

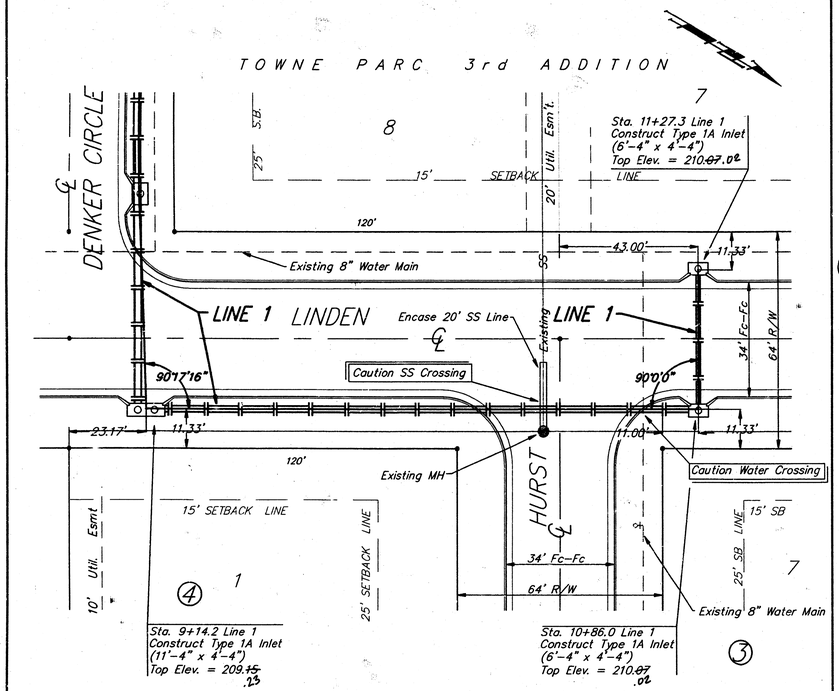
TOWNE PARC 4th ADDITION
LINE 1

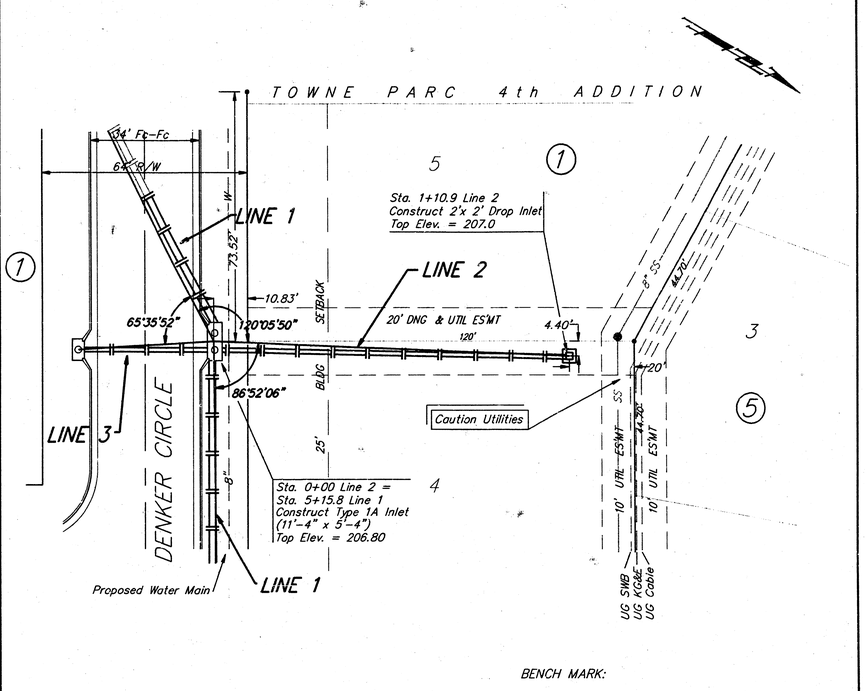
BAUGHMAN COMPANY P. A.
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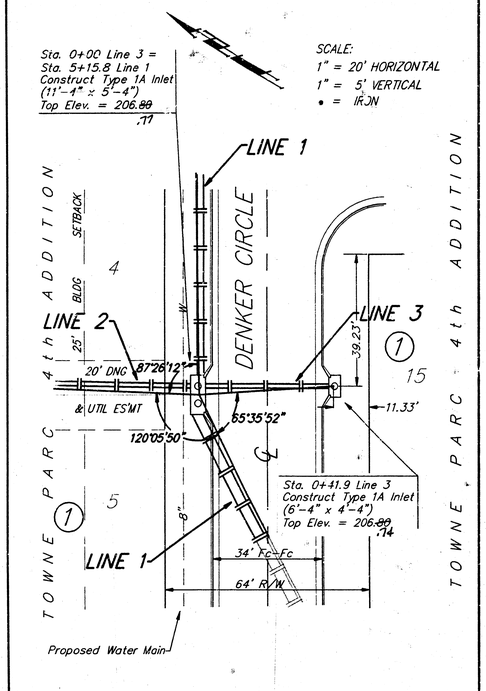
PROJECT NUMBER 324PPS (607861)

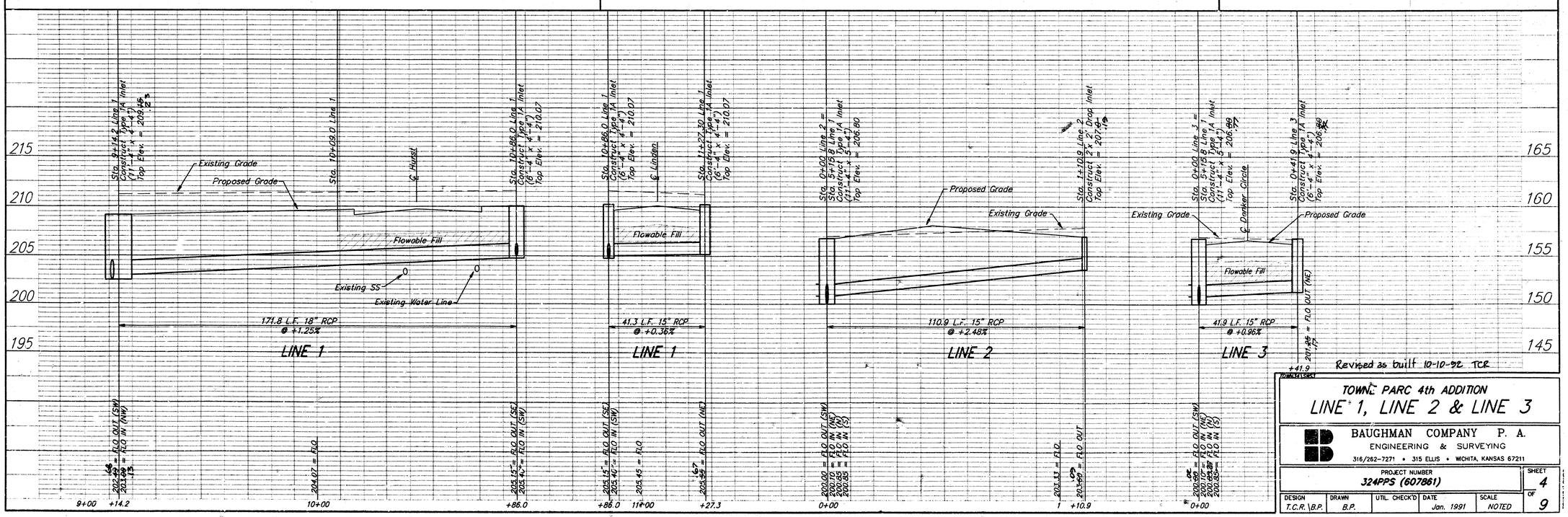
SHEET 3 OF 9

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









Revised as built 10-10-92 TCR

TOWNE PARC 4th ADDITION

LINE 1, LINE 2 & LINE 3

BAUGHMAN COMPANY P. A.
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PROJECT NUMBER 324PPS (607861)

SHEET 4 OF 9

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

TOWNE PARC 4th ADDITION

12 ① 13 19

Proposed SS — SS

WEST PKWY

N.E. Corner of McConnell AFB Property (Tract 181)

LINE 1
See Sheet 2

Temp. Cul-De-Sac (50 R.)

11.34

64' Drainage Esm't (by Separate Instrument) (Future Street R/W (64'))

130'

64' Drainage Esm't (by Separate Instrument)

LINE 4

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

8"

2.38'

41.34'

7"

20' Drainage Esm't (by Separate Instrument)

Sta. 0+00 Line 4
Begin Construction of 18" RCP SWS w/End Section & 8.0 S.Y. Light Stone or Concrete Bag Rip Rap.

See Detention Pond Plan Sheet 6

Sta. 2+49.7 Line 4
Construct Type 1A Inlet (6'-4" x 4'-4")
Top Elev. = 206.49 .48

Sta. 2+91.0 Line 4
Construct Type 1A Inlet (6'-4" x 4'-4")
Top Elev. = 206.49 .99

TOWNE PARC 4th ADDITION

Center of (N.W. corner of McConnell AFB Tract 181)

SS MH

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

115'

131.92'

Sta. 0+00 Line 5
Extend 21" RCP (E) from Existing Drop Inlet.

Sta. 1+36.1 Line 5
End Line w/End Section.

30" CMP

6"

LINE 5

80'

30'

Drainage Esm't (by Separate Instrument)

86.36'

22"x36" CMP

10"

40"

Sta. 0+00 Line 4
Begin Construction of 18" RCP SWS w/End Section

Sta. 2+49.7 Line 4
Construct Type 1A Inlet (6'-4" x 4'-4")
Top Elev. = 206.49 .48

Sta. 2+91.0 Line 4
Construct Type 1A Inlet (6'-4" x 4'-4")
Top Elev. = 206.49 .99

Sta. 0+00 Line 5
Extend 21" RCP (E) from Existing Drop Inlet.

Sta. 1+36. Line 5
End Line w/End Section.

210
205
200
195
190

Finished Elev. = 205.4

Existing Grade

Max. WS elev. = 205.4

Proposed Grade

Static Pool Elev. = 198.2

℄ WEST PARKWAY (Future)

Flowable Fill

Top of Dike Elev. = 206.4

Proposed Grade

Existing Grade

Maximum Design Water Surface Elev. 205.4

Permanent Pool Elev. = 198.2

Existing SS (McConnell AFB)

249.7 L.F. 18" RCP Pipe @ +3.08%

41.3 L.F. 15" RCP Pipe @ +0.97%

136.1 L.F. 21" RCP Pipe @ +0.73%

193.20 = FLO OUT

198.28 = FLO

198.37 = FLO

200.90 = FLO OUT
201.00 = FLO IN

201.40 = FLO OUT

196.90 = FLO OUT
197.20 = FLO IN

197.94 = FLO

198.29 = FLO OUT

LINE 4

LINE 4

LINE 5

0+00 1 2 +49.7 +91.0 0 1 +36.1

Flowable Fill

Revised as built 10-10-92

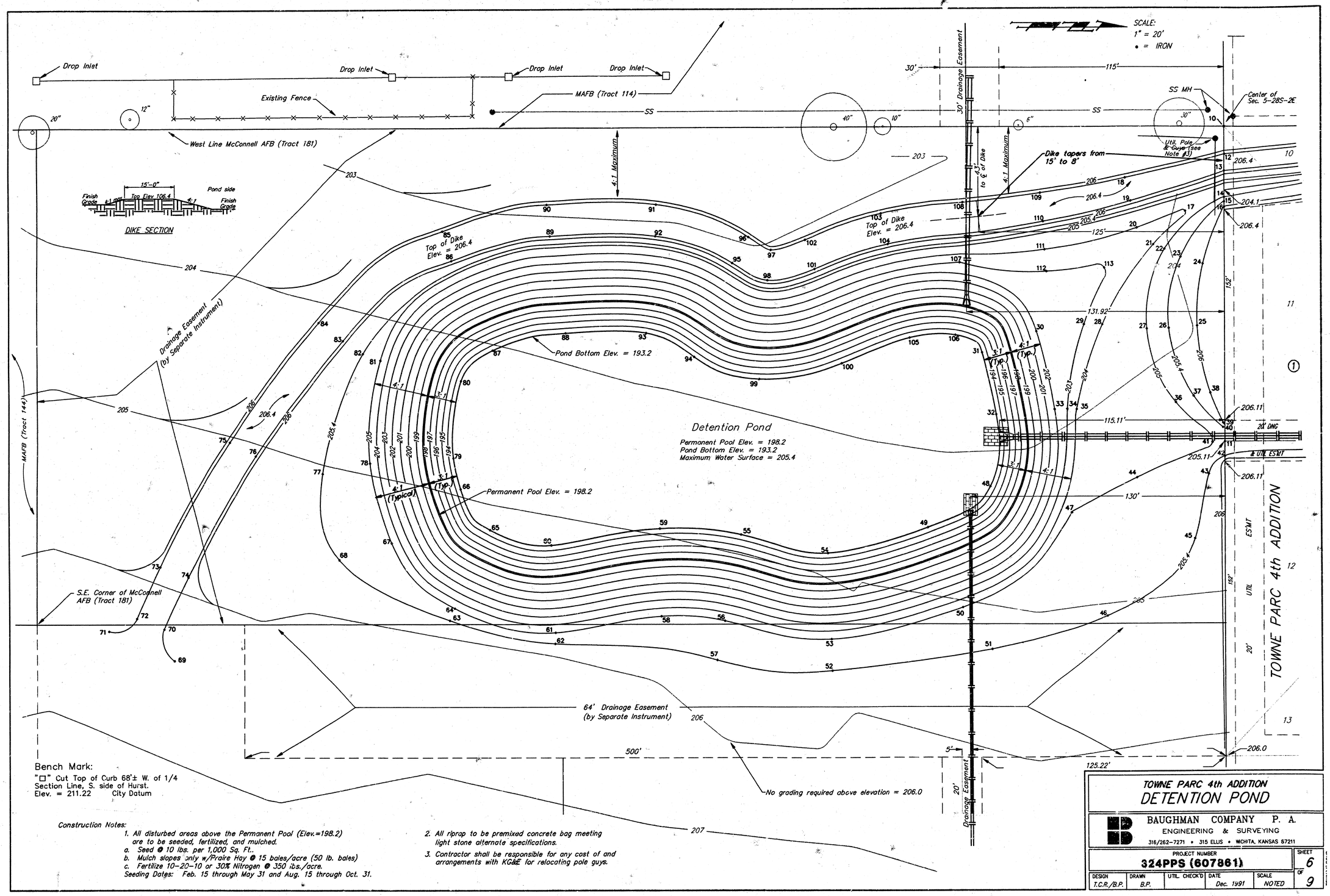
TOWNE PARC 4th ADDITION
LINE 4 & LINE 5

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

PROJECT NUMBER
324PPS (607861)

SHEET 5 OF 9

DESIGN	DRAWN	UTIL. CHECK'D	DATE	SCALE
T.C.R./B.P.	B.P.		Jan. 1992	NOTED



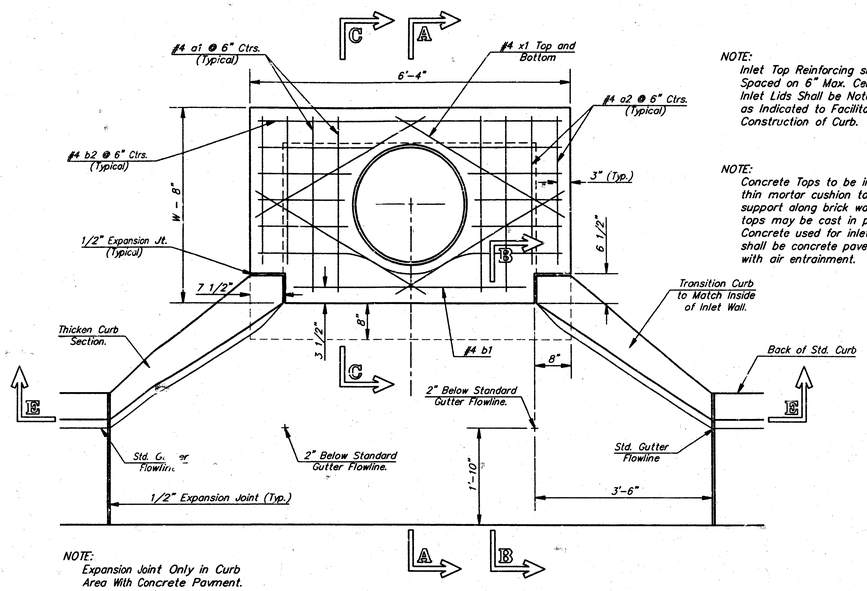
TOWNE PARC 4th ADDITION

DETENTION POND

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

PROJECT NUMBER	SHEET
324PPS (607861)	6 OF 9

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

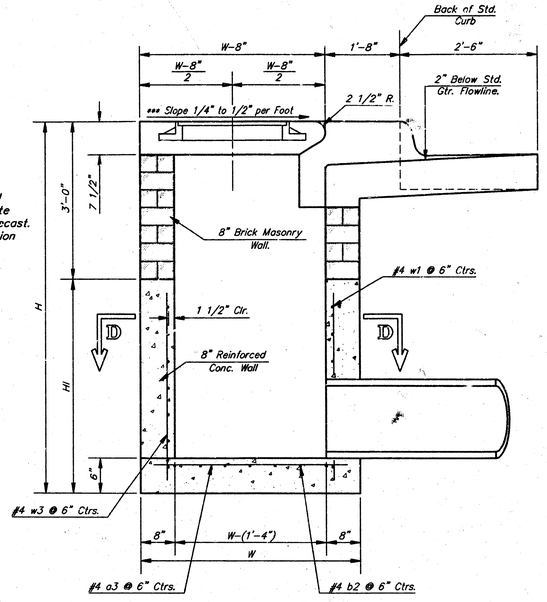


NOTE:
Expansion Joint Only in Curb Area With Concrete Pavment.

PLAN

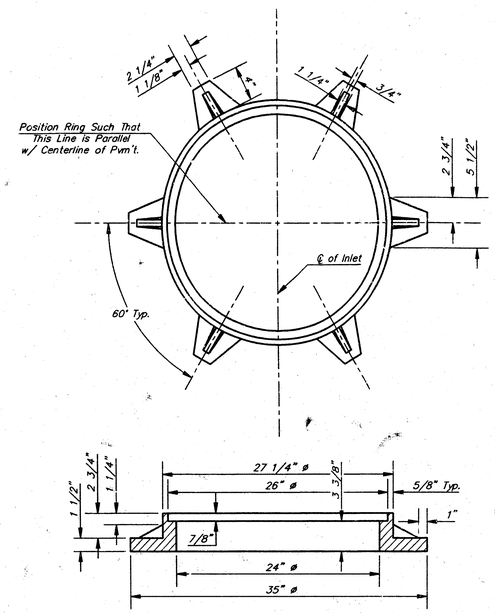
NOTE:
Inlet Top Reinforcing shall be Spaced on 6" Max. Centers. Inlet Lids Shall be Notched Out as Indicated to Facilitate Construction of Curb.

NOTE:
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.



SECTION A-A

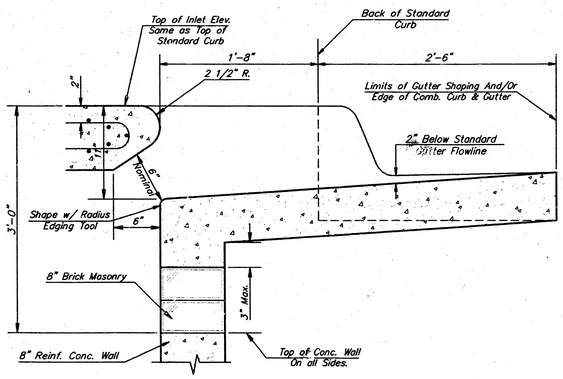
***NOTE: Slope of Inlet tops to Match Sidewalk or Parking Slopes within Limits Indicated.



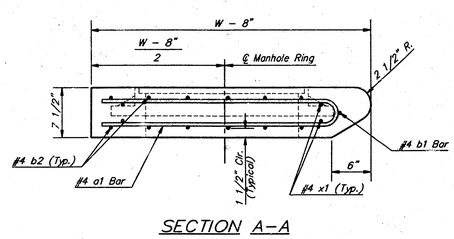
MANHOLE RING AND COVER

Weight = 180 Lbs.

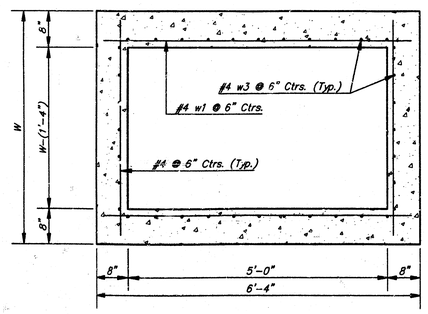
*See City of Wichita Standard Manhole Ring and Cover Detail Sheet for Cover Details to Be Used With Inlet Frame.



SECTION B-B



SECTION A-A



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.

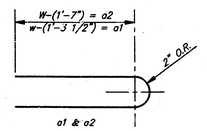
Inlet invert shall be shaped with 8 sack sand mix concrete to create flow channels and to increase hydraulic efficiency such that the inlet will be self-cleaning between all inlet and/or outlet pipes.

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 (HI - 12") (HI - 21") Rounded down to nearest 0.5'
② HI - 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

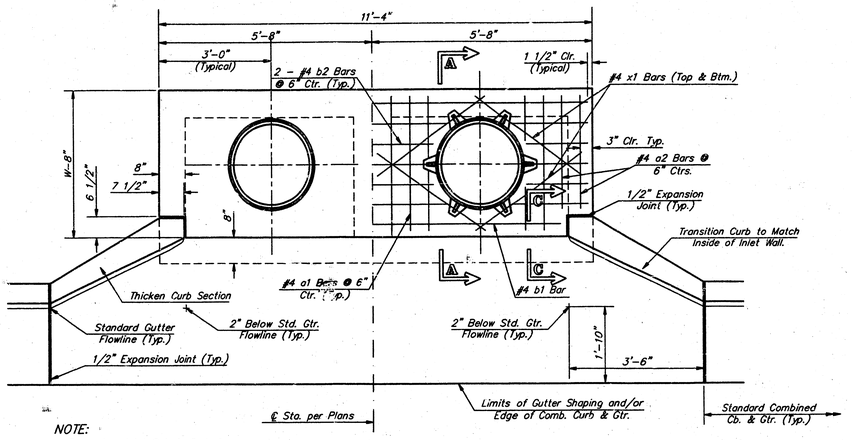
CURB INLET DETAILS

INLET OPENING = 6" x 5'-0"

PROJECT NUMBER **324PPS (607861)**

SHEET 7 OF 9

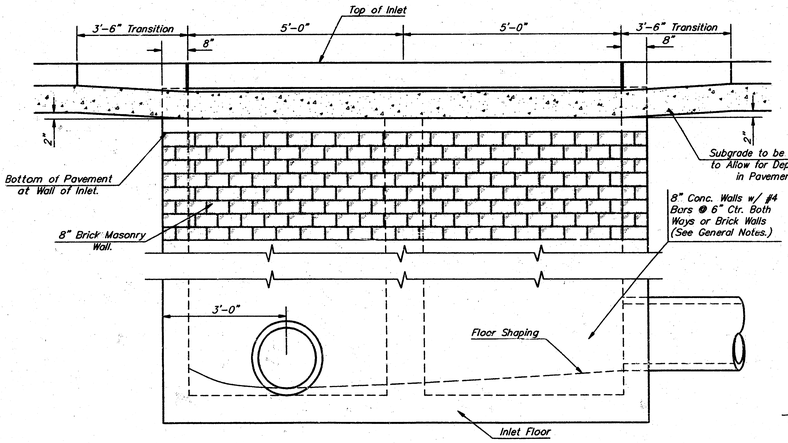
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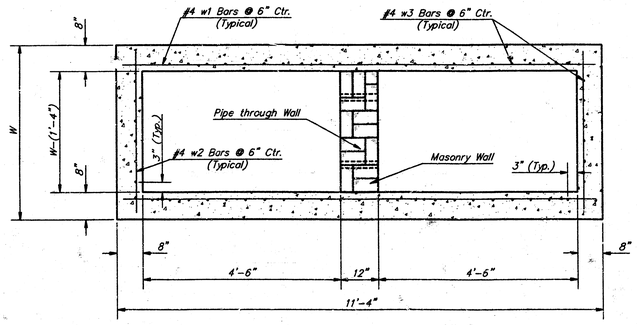
NOTE:
Expansion Joint Only in Curb Area with Concrete Pavement.

PLAN

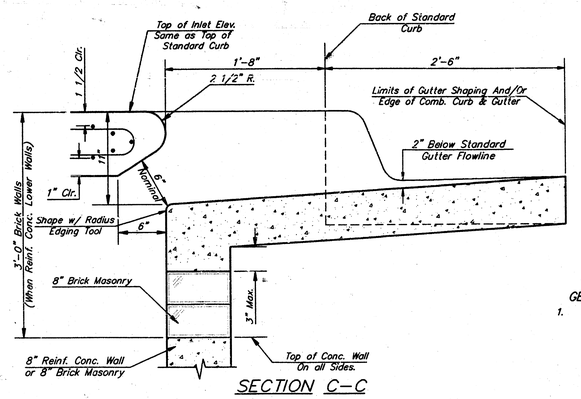
*Left Side Shown Without Slab Reinforcing, Right Side Shown With Slab Reinforcing



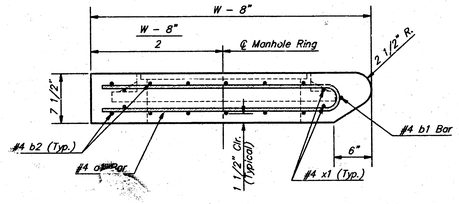
ELEVATION



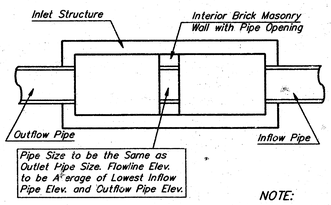
SECTION B-B



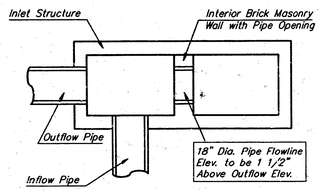
SECTION C-C



SECTION A-A

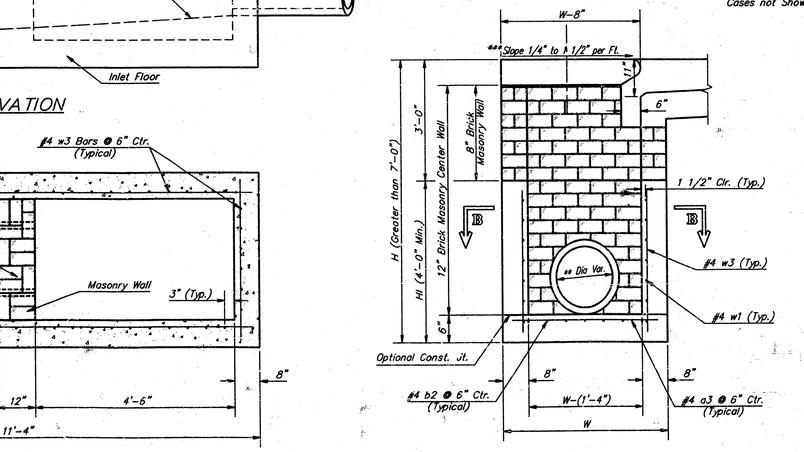


CASE I



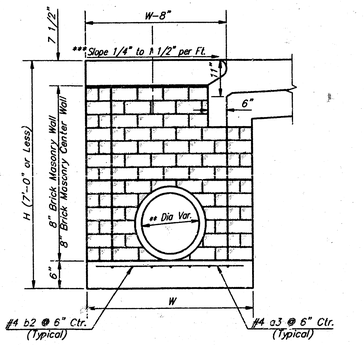
CASE II

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



TYPICAL INLET SECTION AT CENTER WALL

(Reinforced Concrete Walls)



TYPICAL INLET SECTION AT CENTER WALL

(Masonry Walls)

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

		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	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"

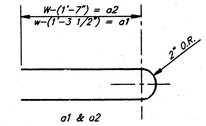
WALL REINFORCING

		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	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 4 (HI - 12") (HI - 21") Rounded down to nearest 0.5'
② HI - 3"

GENERAL NOTES:

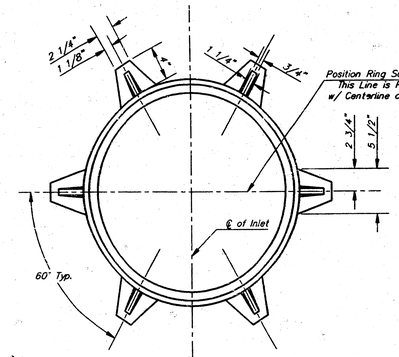
1. The contractor shall be required to construct 8" brick masonry walls between the concrete inlet base and top on this inlet when W=6'-4" or less and H=7'-0" or less. When W is greater than 6'-4" and H is less than 7'-0" the outside inlet walls below the brick stack shall be reinforced concrete construction and the center wall shall be of masonry construction as shown for the masonry wall option.
2. 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.
3. 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.
4. 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.
5. The ends of all pipes installed in inlets shall be cut off flush with the inside face of the inlet wall.



BENDING DIAGRAM

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"	1.09±
6'-4"	5'-8" 11'-4" 7 1/2"	36" & 42"	1.35±
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±



MANHOLE RING AND COVER

Weight = 180 lbs.

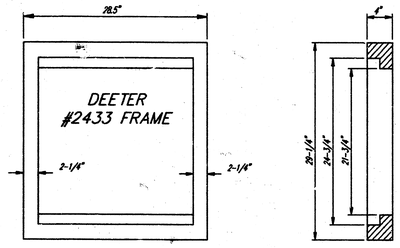
*See City of Wichita Standard Manhole Ring and Cover Detail Sheet for Cover Details to Be Used With Inlet Frame.

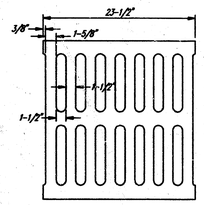
Revised - Feb. 16, 1989

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

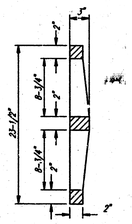
PROJECT NUMBER **324PPS (607861)** | SHEET 8 OF 9

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



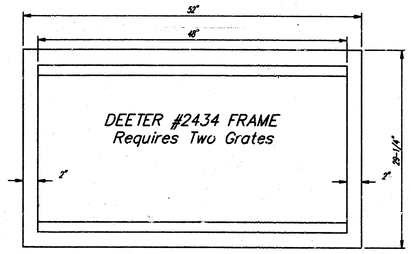


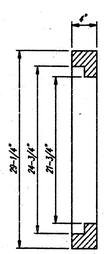
DEETER #2433 GRATE



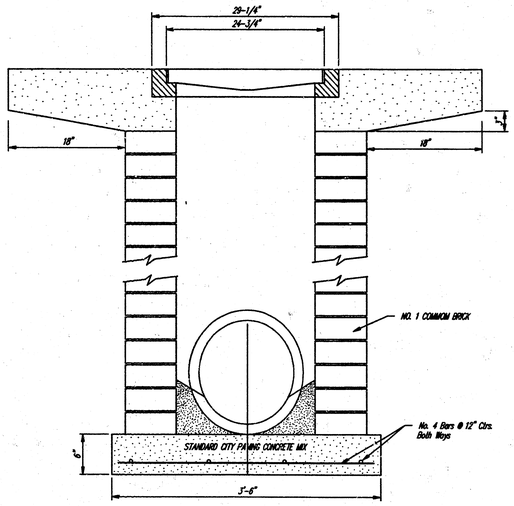
NOTE: Grates shall be imprinted on the top surface with "CITY OF WICHITA" using letters at least 1" in height. Other marking methods may be approved by the engineer.

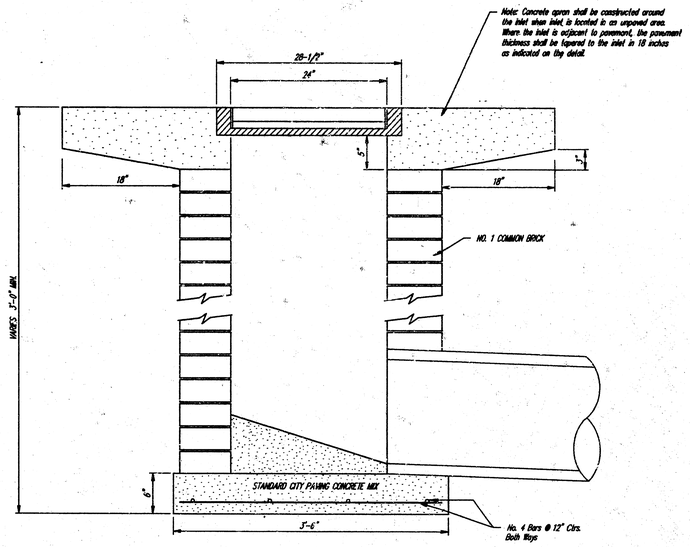
2-1" x 24" Frame and Grate Detail

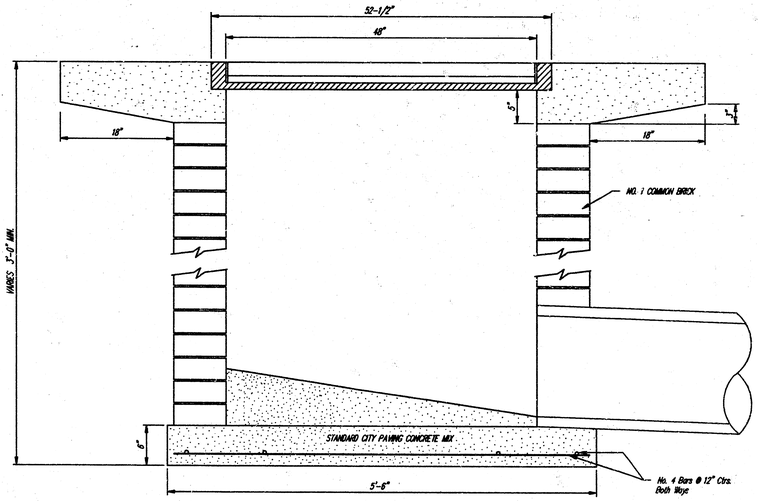




Double 24" x 24" Frame Detail







DROP INLET DETAILS

M.E. Lindebak, City Engineer
City of Wichita, Kansas

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