STORM WATER DRAIN #80

to Serve

TIMBER RIDGE ADDITION

Project No.

468-76-245-81964-000-000-001

INDEX CODE: 750208

CITY OF WICHITA, KANSAS

Michael E. Lindebak City Engineer

SCALE: 1" = 150'

Improvement District

General Notes

1. 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.
2. The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish and 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 law.
3. Construction of this project must be coordinated with incidental Drainage for Parkdale, project no. 472-76-245-81932-000-000-001.

BENCH MARKS:

#1 R.R. Spike in WLP Parkdale and 21st, 46.5' North and 131.6' East of ℄ Both; Elevation = 1164.46 City Datum
#2 R.R. Spike in WLP Prescott Cir. and 21st, 52.5' North and 150.0' East of ℄ Both; Elevation = 1167.75 City Datum
#3 R.R. Spike in WLP 65.0' North of N. 1/4 Corner 7-27 1W; Elevation = 1167.30 City Datum
#4 "□" Cut Top Curb 14.5' South and 15' West S.W. Corner Lot 19, Blk. 1; Elevation = 1163.85 City Datum
#5 "□" Cut Top Curb 11.0' South and 1.1' West of S.W. Corner Lot 1, Blk. 9; Elevation = 1158.23 City Datum

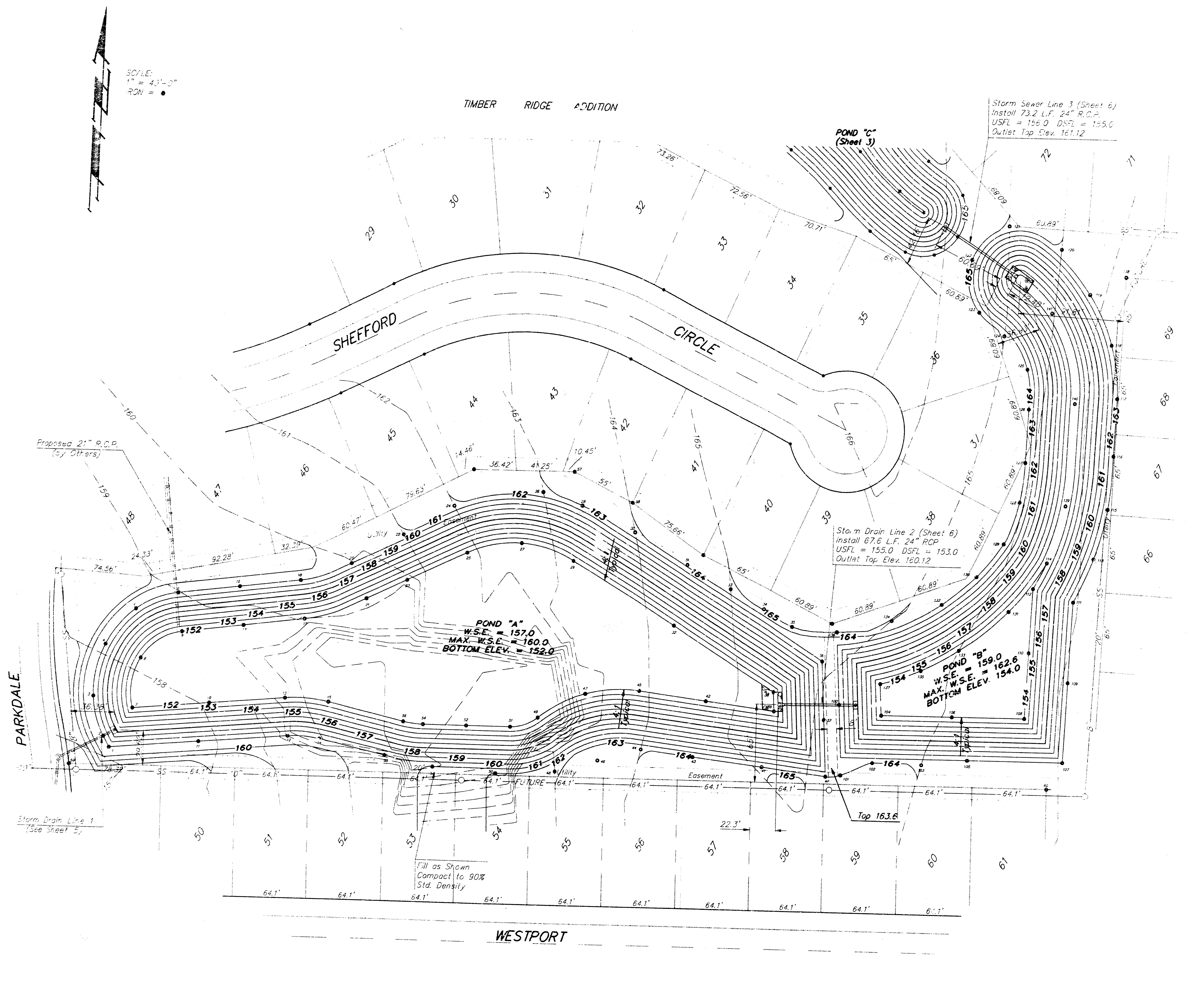
Index

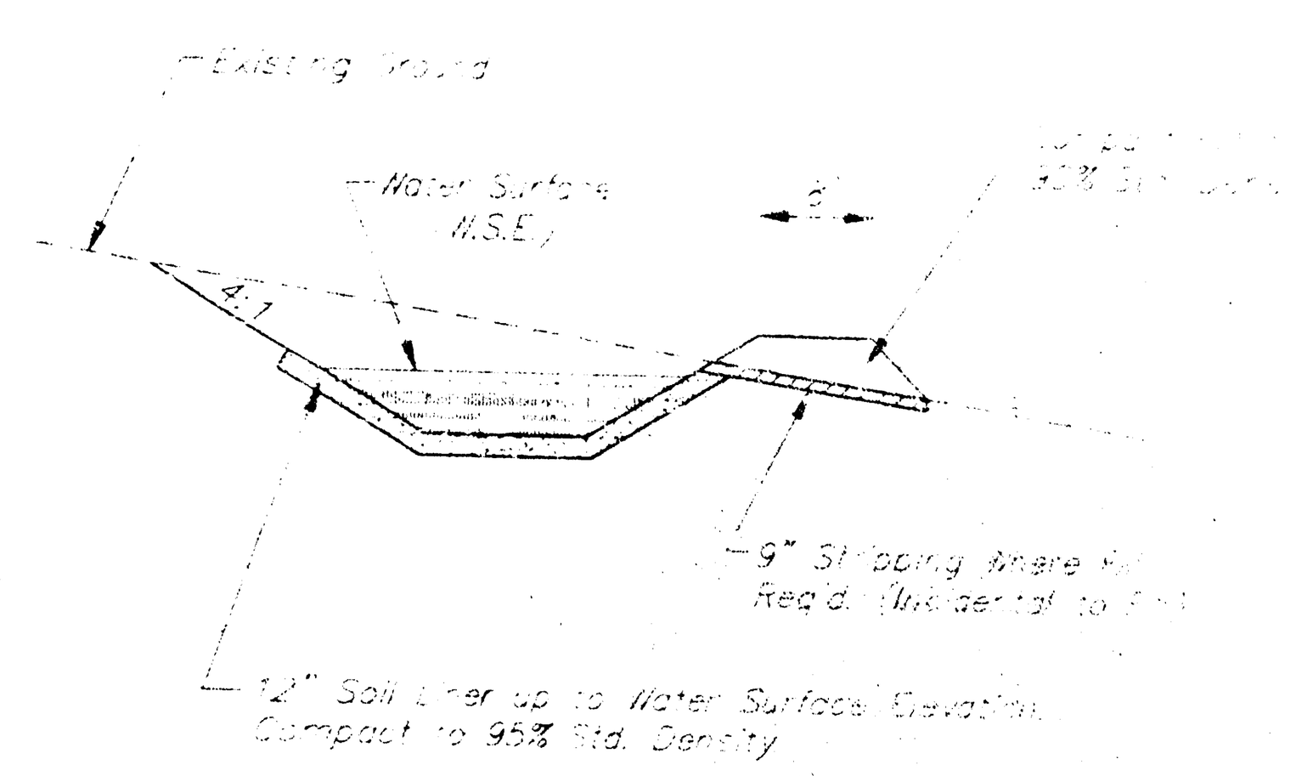
Booked
11-26-91
MCG

THOMAS CHARLES HUGHES LICENSED 9021 KANSAS PROFESSIONAL ENGINEER

May 1, 1991

BAUGHMAN COMPANY P. A.
ENGINEERING & SURVEYING
316/262-7571 • 316 E. DOUGLAS • WICHITA, KANSAS 67202





TYPICAL POND SECTION

Construction Notes:

1. The upper 12" of the finished pond bottom and side slopes, below the water surface elevation (W.S.E.) shall be compacted to 95% Std. Density. Compaction shall be accomplished by removing 6" of material, compacting the underlying 6", then replacing and compacting the additional 6" lift. Removal & Re-compaction to be paid C.Y. Compacted Fill (95%)
2. Any granular or non-cohesive soils encountered below the W.S.E. shall be removed and replaced with suitable material compacted per note #1.
3. Refer to recommendations by Terracon Consultants, report dated 12-15-88 (job no. 01885100).
4. See Sheet 7 for earthwork volumes and staking coordinate information.
5. All disturbed areas within the Floodway, including slope down to W.S.E. are to be seeded, fertilized, and mulched, using Rebel II Fescue grass seed.
6. Coordinate values for points indicated "•" are listed in the Coordinate Tables on sheet 7.
7. A stake-out data file for electronic field data recorder (SDR 2) is available from Baughman Company, P.A. Contact Chris Bohm or Tom Ruggles at 262-7271 for this information.

BENCH MARKS:

#1 R.R. Spike in HLP Parkdale and 21st, 46.5' North and 131.6' East of ℄ Both; Elevation = 164.46 City Datum
#2 R.R. Spike in HLP Prescott Cir. and 21st, 52.5' North and 150.0' East of ℄ Both; Elevation = 157.73 City Datum
#3 R.R. Spike in HLP 65.0' North of N. 1/4 Corner 7-27-1W; Elevation = 167.30 City Datum
#4 "□" Cut Top Curb 14.5' South and 15' West S.W. Corner Lot 19, Blk. 1; Elevation = 163.85 City Datum
#5 "□" Cut Top Curb 11.0' South and 13' West of S.W. Corner Lot 1, Blk. 9; Elevation = 158.23 City Datum

STORM WATER DRAIN #80
PLAN for PONDS "A" and "B"

BAUGHMAN COMPANY P. A.
ENGINEERING & SURVEYING
316/262-7271 • [illegible] • WICHITA, KANSAS [illegible]

PROJECT NUMBER					SHEET
468-76-245-81964-000-000-001					2
DESIGN: TCR	DRAWN: A. Lang	CHECKED	DATE: Apr 1991	SCALE: 1" = 40'	OF 10

POND "C"
W.S.E. = 160.0
MAX W.S.E. = 162.9
BTM. ELEV = 155.0

24" Storm Sewer
(by Others)

Storm Drain Line 4
(see Sheet 4)

POND "D"
(Sheet 4)

Storm Drain Line 3
(See Sheet 6)

STONEY POINT CT.

STONEY POINT

RESERVE B

Existing Utility Easement

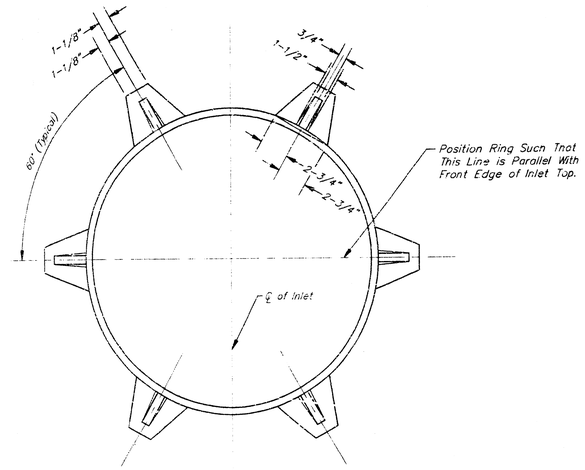
STORM WATER DRAIN #80
PLAN for POND "C"

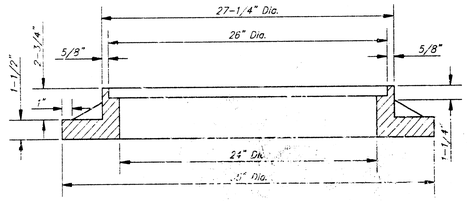
BAUGHMAN COMPANY P. A.
ENGINEERING & SURVEYING
316/262-2691 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER
468-76-245-81964-000-000-001

SHEET 3
10

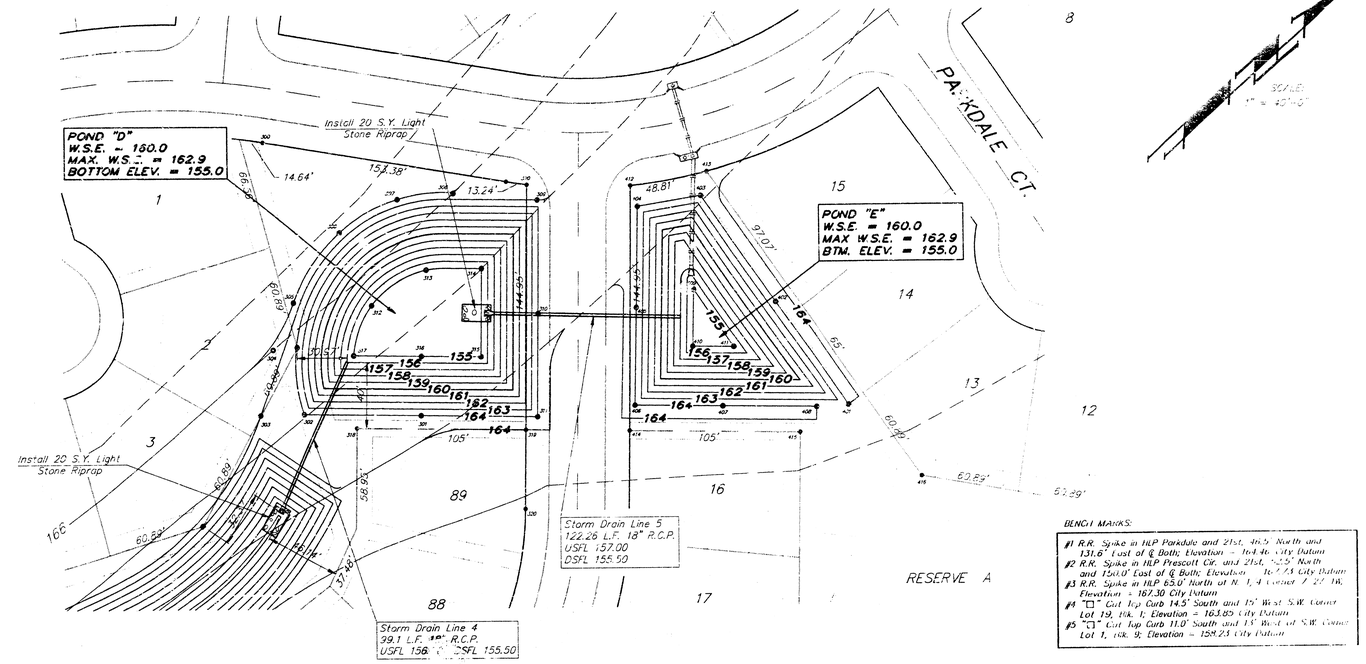
DESIGN	DRAWN	CHECK	DATE	SCALE
TGK	CMB, JL		AUG. 1992	1" = 40'





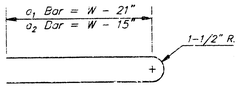
See City of Wichita Standard Manhole Frame and Cover Detail Sheet for Cover Details to Be Used With Inlet Frame.

INLET RING

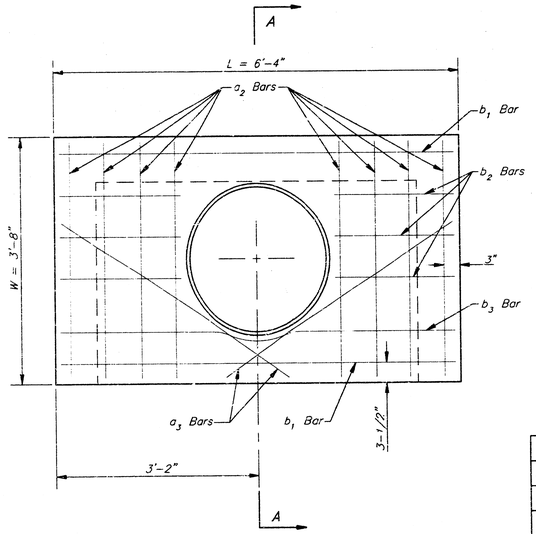


GENERAL NOTES:

1. 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 self cleaning between all inlet and/or outlet pipes.
2. The ends of all pipes installed in inlets shall be cut off flush with the inside face of the inlet wall.
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.



BENDING DIAGRAM



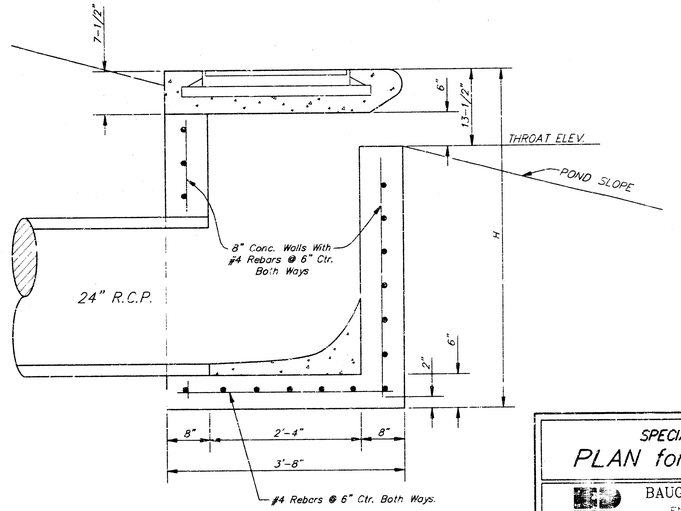
PLAN

NOTE: INLET TOP REINFORCING SHALL BE SPACED ON 6" MAXIMUM CENTERS

NOTE: b_3 BAR TO BE FIELD BENT TO CLEAR INLET FRAME

STEEL SCHEDULE

BAR	a_2	a_3	b_1	b_2	b_3
NUMBER	8	2	2	6	1
SIZE	#4	#4	#4	#4	#4
W=3'-8"	6'7"	4'0"	6'1"	1'9"	6'2"



SECTION A-A

PLAN

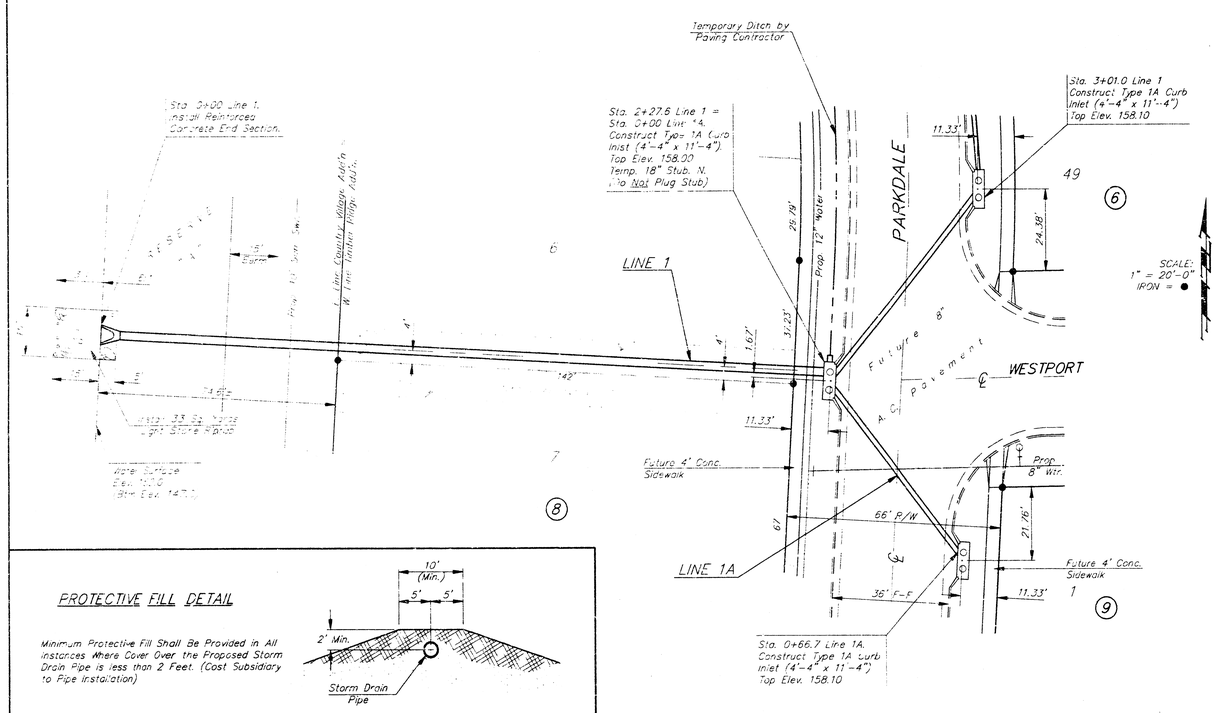
SPECIAL INLET DETAIL and PLAN for PONDS D and E

BAUGHMAN COMPANY P. A.
ENGINEERING & SURVEYING
316/262-7271 • 115 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER
468-76-245-81964-000-000-001

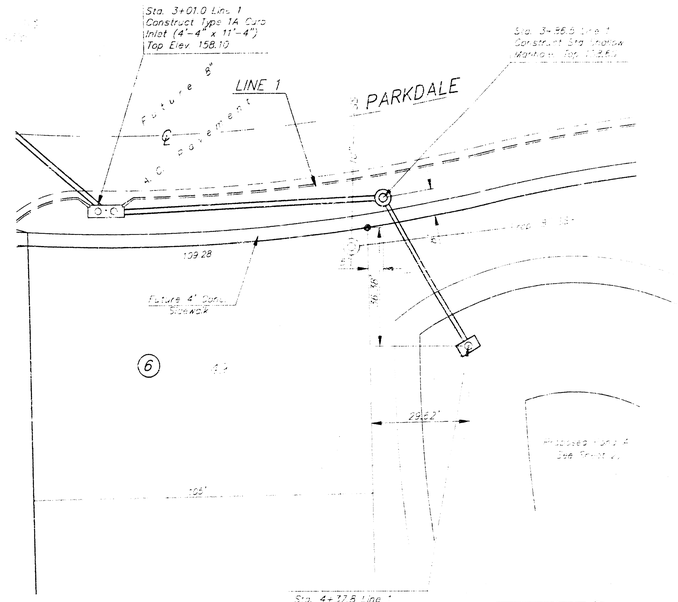
SHEET 4 OF 10

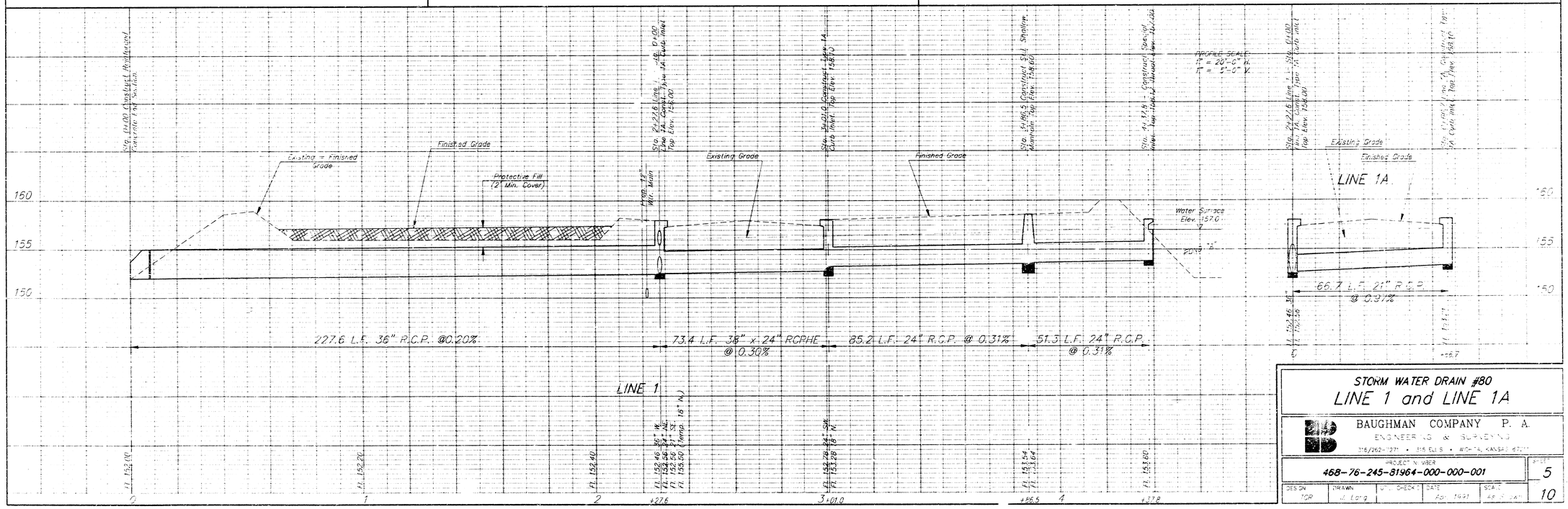
DESIGN	DRAWN	CHECKED	DATE	SCALE
TCR	CMB/JL		Apr 1991	1" = 40'



PROTECTIVE FILL DETAIL

Minimum Protective Fill Shall Be Provided in All Instances Where Cover Over the Proposed Storm Drain Pipe is less than 2 Feet. (Cost Subsidiary to Pipe Installation)





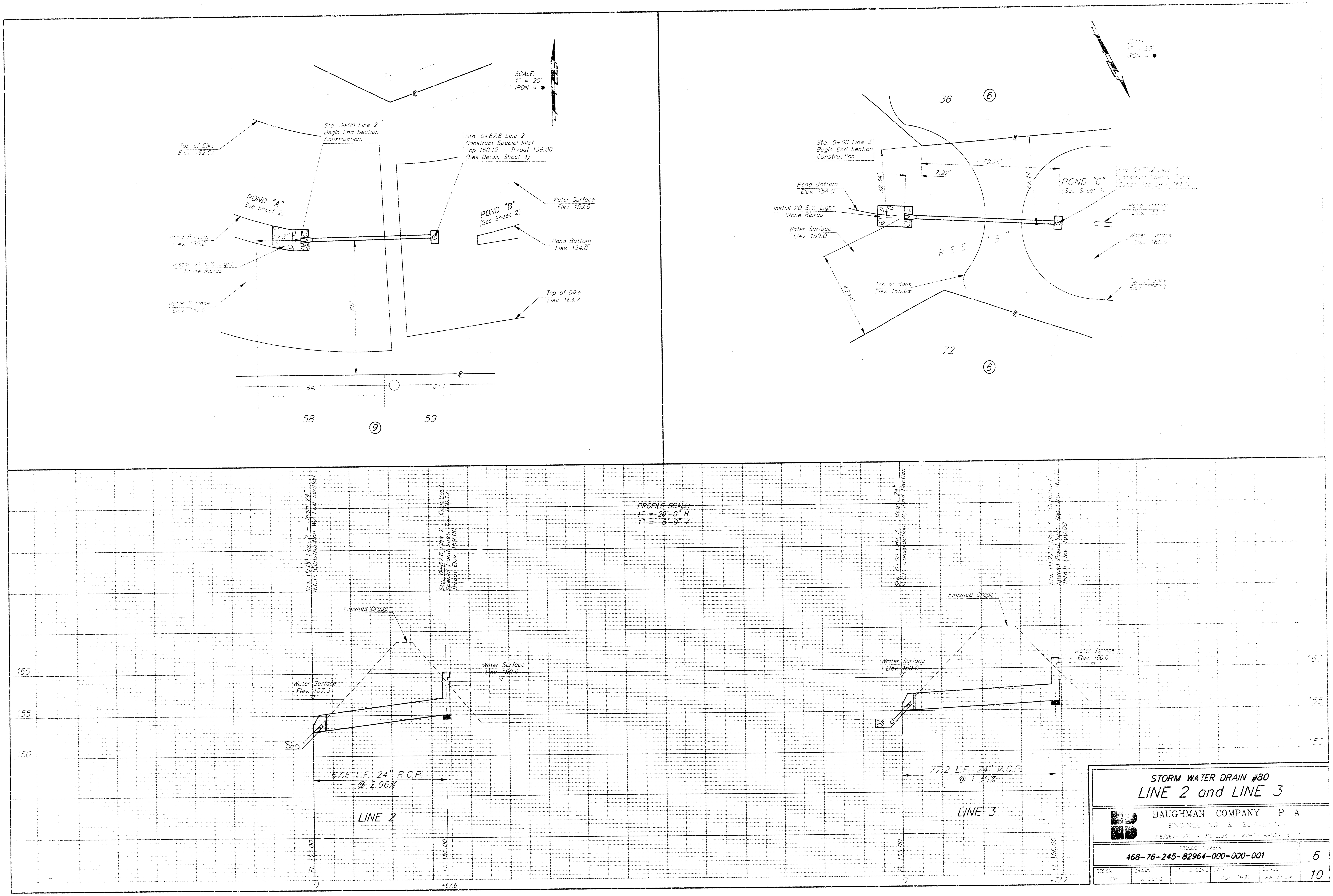
STORM WATER DRAIN #80

LINE 1 and LINE 1A

BAUGHMAN COMPANY P. A.
ENGINEERING & SURVEYING
316/262-1271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER	SHEET
468-76-245-81964-000-000-001	5

DESIGN	DRAWN	CHECKED	DATE	SCALE	SHEETS
TDR	H. LONG		FEB. 1991	AS SHOWN	10



STORM WATER DRAIN #80

LINE 2 and LINE 3

BAUGHMAN COMPANY P. A.

ENGINEERING & SURVEYING

PROJECT NUMBER 468-76-245-82964-000-000-001

DESIGN TCR | DRAWN J. Long | SCALE As Shown

6

10

POND "A" EARTHWORK VOLUMES

ELEV.	EXC. AREA	EXC. VOLUME	FILL AREA	FILL VOLUME
152.0	46,521	0	0	0
153.0	51,500	49,011	0	0
154.0	56,596	54,048	0	0
155.0	55,763	56,180	863	432
156.0	51,943	53,853	3,308	2,086
157.0	54,071	53,007	4,252	3,780
158.0	56,294	55,183	8,828	6,540
159.0	42,982	49.638	9,651	9,240
160.0	40,419	41,701	9,167	9,409
161.0	41,423	40,921	3,616	6,392
162.0	37,406	39,415	1.072	4,688
163.0	32,702	35,054	0	536
164.0	22.516	27,609	0	0
165.0	9,538	16,027	0	0
165.5	0	2,385	0	0

TOTAL EXC. = 574,032 C.F. = 21,260 C.Y.
TOTAL FILL = 43,103 C.F. = 1,596 C.Y.

PT. 1	N	17665.246	E	20118.114
PT. 2	N	17674.525	E	20112.559
PT. 3	N	17708.044	E	20102.653
PT. 4	N	17750.473	E	20111.014
PT. 5	N	17780.249	E	20136.004
PT. 6	N	17795.386	E	20172.332
PT. 7	N	17699.453	E	20136.533
PT. 8	N	17740.847	E	20142.229
PT. 9	N	17763.762	E	20177.338
PT. 10	N	17707.272	E	20203.248
PT. 11	N	17674.286	E	20195.763
PT. 12	N	17683.090	E	20273.735
PT. 13	N	17714.734	E	20270.127
PT. 14	N	17682.000	E	20300.563
PT. 15	N	17713.371	E	20306.750
PT. 16	N	17803.190	E	20225.500
PT. 17	N	17771.642	E	20230.306
PT. 18	N	17811.076	E	20278.907
PT. 19	N	17779.406	E	20283.554
PT. 20	N	17827.655	E	20321.611
PT. 21	N	17798.908	E	20335.931
PT. 22	N	17853.848	E	20366.109
PT. 23	N	17816.224	E	20370.753
PT. 24	N	17879.504	E	20409.294
PT. 25	N	17841.710	E	20422.373
PT. 26	N	17894.564	E	20485.786
PT. 27	N	17852.025	E	20468.915
PT. 28	N	17885.507	E	20520.790
PT. 29	N	17839.161	E	20515.357
PT. 30	N	17865.799	E	20566.443
PT. 31	N	17841.041	E	20614.039
PT. 32	N	17790.203	E	20604.309
PT. 33	N	17822.474	E	20652.244
PT. 34	N	17807.389	E	20681.492
PT. 35	N	17794.258	E	20707.438
PT. 36	N	17767.720	E	20734.917
PT. 37	N	17720.254	E	20738.650
PT. 38	N	17740.443	E	20693.111
PT. 39	N	17725.035	E	20694.390
PT. 40	N	17672.512	E	20742.6[illegible]
PT. 41	N	17677.767	E	20685.732
PT. 42	N	17730.379	E	2[illegible]35.057
PT. 43	N	17683.226	E	20625.958
PT. 44	N	17687.502	E	20579.826
PT. 45	N	17735.967	E	20576.040
PT. 46	N	17676.158	E	20543.288
PT. 47	N	17731.215	E	20530.146
PT. 48	N	17664.695	E	20506.792
PT. 49	N	17709.429	E	20489.547
PT. 50	N	17660.586	E	20454.934
PT. 51	N	17700.683	E	20465.404
PT. 52	N	17699.912	E	20427.530
PT. 53	N	17663.189	E	20399.953
PT. 54	N	17698.742	E	20389.701
PT. 55	N	17670.707	E	20357.256
PT. 56	N	17700.316	E	20372.457
PT. 57	N	17912.320	E	20513.082
PT. 58	N	17889.764	E	20563.244
PT. 59	N	17649.367	E	20086.231
PT. 60	N	17670.653	E	20933.483

POND "B" EARTHWORK VOLUMES

ELEV.	EXC. AREA	EXC. VOLUME	FILL AREA	FILL VOLUME
154.0	7,188	0	0	0
155.0	11,106	9,147	0	0
156.0	15,140	13,123	0	0
157.0	19,292	17,216	0	0
158.0	23,561	21,427	0	0
159.0	27,948	25,755	0	0
160.0	32,454	30,201	0	0
161.0	37,077	34,766	0	0
162.0	41,819	39,448	0	0
163.0	42,309	42,064	0	0
164.0	19,951	31,130	0	0
165.0	3,027	11,489	0	0
165.6	0	908	0	0

TOTAL EXC. = 276,674 C.F. = 10,247 C.Y.
TOTAL FILL = 0 C.F. = 0 C.Y.

PT. 100	N	17733.443	E	20751.425
PT. 101	N	17674.468	E	20755.180
PT. 102	N	17686.126	E	20782.324
PT. 103	N	17686.756	E	20825.154
PT. 104	N	17726.360	E	20787.961
PT. 105	N	17692.295	E	20864.325
PT. 106	N	17727.952	E	20849.640
PT. 107	N	17694.471	E	20946.577
PT. 108	N	17729.424	E	20911.322
PT. 109	N	17760.466	E	20948.047
PT. 110	N	17782.665	E	20912.356
PT. 111	N	17826.501	E	20949.516
PT. 112	N	17836.070	E	20913.667
PT. 113	N	17863.268	E	20965.268
PT. 114	N	17858.111	E	20924.693
PT. 115	N	17904.639	E	20975.445
PT. 116	N	17947.755	E	20978.408
PT. 117	N	17995.442	E	20979.433
PT. 118	N	18040.030	E	20972.507
PT. 119	N	18080.050	E	20952.211
PT. 120	N	18115.354	E	20925.663
PT. 121	N	18132.738	E	20879.045
PT. 122	N	18103.534	E	20848.570
PT. 123	N	18061.275	E	20856.386
PT. 124	N	18043.023	E	20878.919
PT. 125	N	18016.278	E	20899.803
PT. 126	N	17982.629	E	20902.833
PT. 127	N	17938.859	E	20901.837
PT. 128	N	17906.564	E	20898.256
PT. 129	N	17871.845	E	20886.394
PT. 130	N	17843.549	E	20864.379
PT. 131	N	17815.787	E	20893.228
PT. 132	N	17818.810	E	20836.165
PT. 133	N	17781.662	E	20852.946
PT. 134	N	17803.270	E	20792.966
PT. 135	N	17763.943	E	20820.566
PT. 136	N	17791.801	E	20746.359
PT. 137	N	17751.667	E	20785.757
PT. 138	N	18095.269	E	20982.826
PT. 139	N	17905.765	E	20938.667
PT. 140	N	17989.142	E	20943.190
PT. 141	N	18063.168	E	20919.660

POND "C" EARTHWORK VOLUMES

ELEV.	EXC. AREA	EXC. VOLUME	FILL AREA	FILL VOLUME
155.0	55,769	0	0	0
156.0	64,713	60,241	0	0
157.0	74,867	69,790	0	0
158.0	85,149	80,008	0	0
159.0	95,562	90,356	0	0
160.0	106,104	100,833	0	0
161.0	115,779	111,442	0	0
162.0	127,587	122,183	0	0
163.0	136,952	132,270	0	0
164.0	136,136	136,544	0	0
165.0	127.072	131,604	0	0
166.0	115,532	121,302	0	0
167.0	85,310	100,421	0	0
168.0	16,495	50,903	0	0
169.0	0	8,248	0	0

TOTAL EXC. = 1,316,145 C.F. = 48,746 C.Y.
TOTAL FILL = 0 C.F. = 0 C.Y.

PT. 200	N	18172.634	E	20825.676
PT. 201	N	18130.358	E	20841.821
PT. 202	N	18106.183	E	20818.788
PT. 203	N	18106.123	E	20785.224
PT. 204	N	18130.878	E	20746.240
PT. 205	N	18187.918	E	20749.952
PT. 206	N	18152.946	E	20708.660
PT. 207	N	18199.028	E	20722.613
PT. 208	N	18169.166	E	20659.574
PT. 209	N	18219.002	E	20672.892
PT. 210	N	18188.176	E	20631.646
PT. 211	N	18238.934	E	20623.250
PT. 212	N	18198.221	E	20606.846
PT. 213	N	18202.246	E	20582.257
PT. 214	N	18245.927	E	20579.322
PT. 215	N	18200.753	E	20530.819
PT. 216	N	18240.956	E	20525.254
PT. 217	N	18224.531	E	20486.562
PT. 218	N	18273.620	E	20495.487
PT. 219	N	18261.176	E	20545.572
PT. 220	N	18302.194	E	20517.294
PT. 221	N	18293.535	E	20567.502
PT. 222	N	18331.978	E	20527.197
PT. 223	N	18331.795	E	20575.188
PT. 224	N	18416.074	E	20528.225
PT. 225	N	18415.851	E	20576.296
PT. 226	N	18458.330	E	20545.843
PT. 227	N	18487.735	E	20574.081
PT. 228	N	18470.590	E	20642.645
PT. 229	N	18417.640	E	20622.635
PT. 230	N	18420.091	E	20677.432
PT. 231	N	18429.352	E	20715.188
PT. 232	N	18479.353	E	20699.705
PT. 233	N	18452.278	E	20746.516
PT. 234	N	18542.180	E	20762.877
PT. 235	N	18500.685	E	20791.089
PT. 236	N	18532.749	E	20810.883
PT. 237	N	18613.044	E	20767.264
PT. 238	N	18569.989	E	20817.163
PT. 239	N	18664.993	E	20815.843
PT. 240	N	18697.451	E	20758.370
PT. 241	N	18733.877	E	20801.433
PT. 242	N	18726.149	E	20747.971
PT. 243	N	18757.985	E	20724.373
PT. 244	N	18786.874	E	20711.226
PT. 245	N	18821.146	E	20719.067
PT. 246	N	18792.984	E	20763.234
PT. 247	N	18844.171	E	20745.117
PT. 248	N	18846.183	E	20778.822
PT. 249	N	18787.890	E	20790.761
PT. 250	N	18785.427	E	20811.222
PT. 251	N	18842.135	E	20833.746
PT. 252	N	18787.623	E	20832.134
PT. 253	N	18854.793	E	20870.641
PT. 254	N	18810.585	E	20881.423
PT. 255	N	18870.482	E	20896.887
PT. 256	N	18843.082	E	20926.474
PT. 257	N	18902.306	E	20913.270
PT. 258	N	18942.970	E	20923.375
PT. 260	N	19008.710	E	20926.190
PT. 261	N	18928.242	E	20960.440
PT. 262	N	19070.427	E	20903.925
PT. 263	N	19080.044	E	20945.410
PT. 264	N	19092.239	E	20980.984
PT. 265	N	19041.521	E	20989.341
PT. 266	N	18991.078	E	20998.020
PT. 267	N	18881.172	E	20995.226
PT. 268	N	18867.230	E	20958.994
PT. 269	N	18771.103	E	20992.709
PT. 270	N	18806.141	E	20957.348
PT. 271	N	18767.465	E	20947.664
PT. 272	N	18789.883	E	20907.378
PT. 273	N	18742.916	E	20901.228
PT. 274	N	18754.323	E	20861.814
PT. 275	N	18701.419	E	20869.548
PT. 276	N	18706.063	E	20832.410
PT. 277	N	18651.766	E	20857.708
PT. 278	N	18652.689	E	20821.803
PT. 279	N	18609.564	E	20856.674
PT. 280	N	18567.244	E	20855.558
PT. 281	N	18567.966	E	20819.771
PT. 282	N	18514.007	E	20868.112
PT. 283	N	18473.688	E	20905.087
PT. 284	N	18471.998	E	20853.488
PT. 285	N	18449.554	E	20881.975
PT. 286	N	18419.014	E	20857.793
PT. 287	N	18430.425	E	20814.393
PT. 288	N	18377.563	E	20825.516
PT. 289	N	18390.102	E	20774.077
PT. 290	N	18351.637	E	20798.636
PT. 291	N	18358.992	E	20754.473
PT. 292	N	18318.654	E	20789.654
PT. 293	N	18307.864	E	20746.123
PT. 294	N	18264.526	E	20746.870
PT. 295	N	18241.510	E	20790.697
PT. 296	N	18213.475	E	20798.911
PT. 297	N	18551.206	E	20714.387
PT. 298	N	18281.525	E	20805.184
PT. 299	N	18242.743	E	21091.346

POND "D" EARTHWORK VOLUMES

ELEV.	EXC. AREA	EXC. VOLUME	FILL AREA	FILL VOLUME
155.0	3,437	0	0	0
156.0	4,449	3,943	0	0
157.0	5,583	5,016	0	0
158.0	6,837	6,210	0	0
159.0	8,210	7,524	0	0
160.0	9,702	8,956	0	0
161.0	11,313	10,508	0	0
162.0	13,042	12,178	0	0
163.0	14,888	13,965	0	0
164.0	15,983	15,436	843	422
165.0	10,283	13,133	0	0
166.0	2,638	6,460	0	0
167.0	0	1,320	0	0

TOTAL EXC. = 104,649 C.F. = 3.876 C.Y.
TOTAL FILL = 422 C.F. = 16 C.Y.

PT. 300	N	19178.066	E	20775.550
PT. 301	N	19153.060	E	20962.675
PT. 302	N	19097.314	E	20916.717
PT. 303	N	19075.274	E	20900.155
PT. 304	N	19106.414	E	20874.082
PT. 305	N	19133.925	E	20860.445
PT. 306	N	19181.652	E	20847.028
PT. 307	N	19221.735	E	20854.467
PT. 308	N	19251.182	E	20873.173
PT. 309	N	19289.825	E	20909.829
PT. 310	N	19248.558	E	20961.250
PT. 311	N	19209.419	E	21009.015
PT. 312	N	19170.398	E	20892.525
PT. 313	N	19209.847	E	20897.541
PT. 314	N	19237.312	E	20918.240
PT. 315	N	19204.284	E	20958.532
PT. 316	N	19175.713	E	20934.925
PT. 317	N	19143.188	E	20908.344
PT. 318	N	19117.282	E	20944.114
PT. 319	N	19198.471	E	21010.698
PT. 320	N	19290.389	E	20898.619
PT. 321	N	19168.907	E	21046.746

POND "E" EARTHWORK VOLUMES

ELEV.	EXC. AREA	EXC. VOLUME	FILL AREA	FILL VOLUME
155.0	424	0	0	0
156.0	922	673	0	0
157.0	1,610	1,266	0	0
158.0	2,468	2,039	0	0
159.0	3,467	2,968	0	0
160.0	4,609	4,038	0	0
161.0	5,893	5,251	0	0
162.0	7,320	6,607	0	0
163.0	8,889	8,105	0	0
164.0	703	4,796	2,898	1,449
165.0	0	352	0	0

TOTAL EXC. = 36,095 C.F. = 1,337 C.Y.
TOTAL FILL = 1,449 C.F. = 54 C.Y.

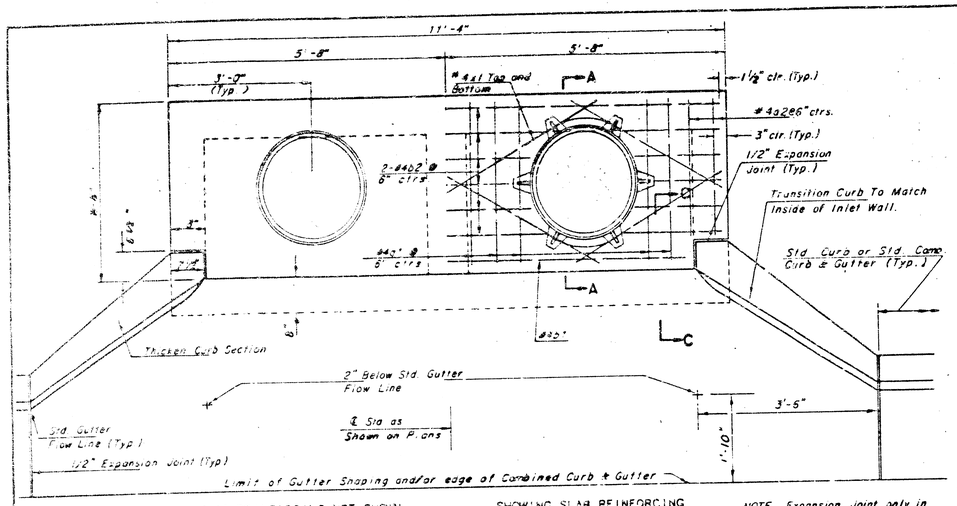
PT. 401	N	19362.964	E	21123.758
PT. 402	N	19366.634	E	21047.541
PT. 403	N	19370.131	E	20971.799
PT. 404	N	19335.170	E	20951.580
PT. 405	N	19297.603	E	20996.520
PT. 406	N	19259.854	E	21041.113
PT. 407	N	19302.530	E	21076.076
PT. 408	N	19346.172	E	21112.006
PT. 409	N	19332.505	E	21010.641
PT. 410	N	19310.770	E	21036.523
PT. 411	N	19330.283	E	21052.359
PT. 412	N	19339.875	E	20939.204
PT. 413	N	19382.548	E	20962.801
PT. 414	N	19247.957	E	21051.283
PT. 415	N	19329.145	E	21117.867
PT. 416	N	19372.001	E	21185.512

POND COORDINATES AND
EARTHWORK VOLUMES

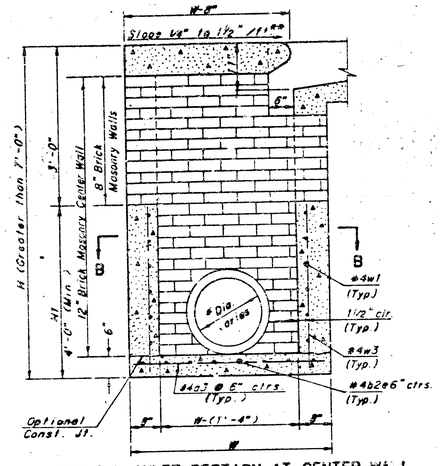
BAUGHMAN COMPANY P. A.
ENGINEERING & SURVEYING
316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67[illegible]

PROJECT NUMBER
468-75-245-81964-000-000-001

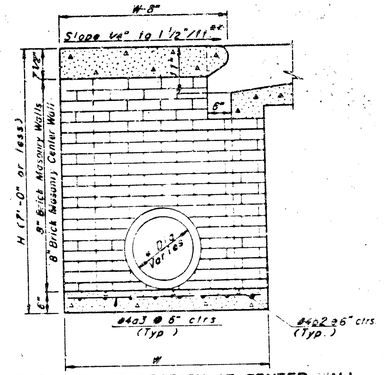
DESIGN	DRAWN	CHECK'D	DATE	SCALE	SHEET
	J. Long		Apr. 1991		7 / 10



NOTE Expansion Joint only in Curb Area with Conc. Pavement.



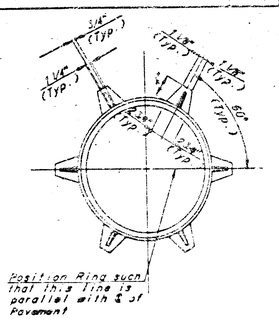
TYPICAL INLET SECTION AT CENTER WALL
(REINFORCED CONCRETE WALLS)



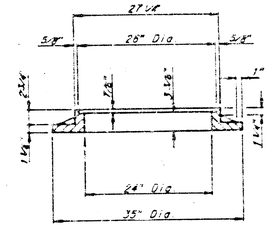
TYPICAL INLET SECTION AT CENTER WALL
(MASONRY WALLS)

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

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

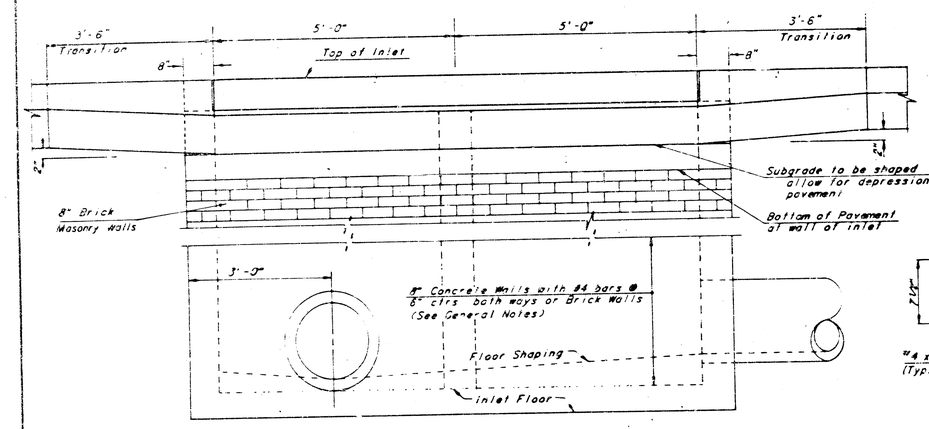


Position Ring such that this line is parallel with ℄ of Pavement

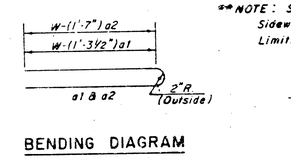


CAST IRON INLET RING
Wt.=180 lbs.

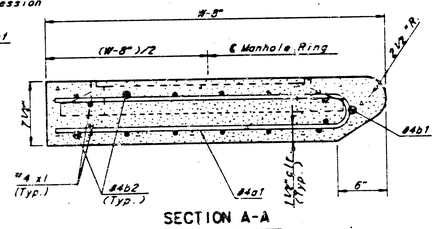
See City of Wichita Standard Manhole Frame and Cover Detail Sheet for Cover Details to be used with Inlet Frame.



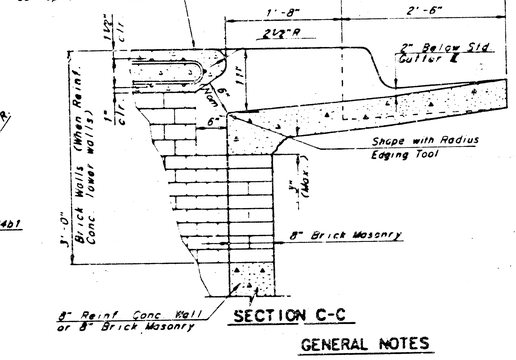
ELEVATION



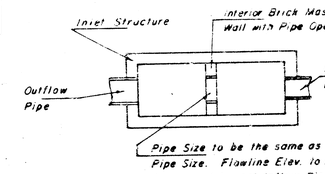
BENDING DIAGRAM



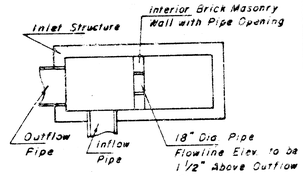
SECTION A-A



SECTION C-C

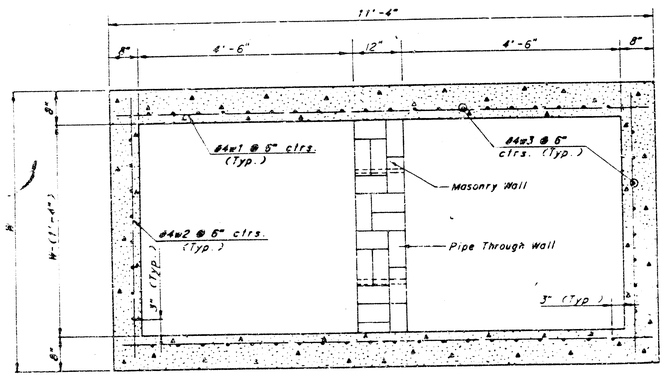


CASE I



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.



SECTION B-B

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	8'-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' -0"	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
*a1	#4	①	11'-1"	①	11'-1"	①	11'-1"	①	11'-1"	①	11'-1"
a2	#4	①	4'-1"	①	5'-1"	①	6'-1"	①	7'-1"	①	8'-1"
a3	#4	52	②	56	②	60	②	64	②	68	②

* Field bend or cut Reinforcing as required for clearance
① 4(H1-12") (H1-12") Rounded down to nearest 0.5'
② H1-3"

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 H 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.

STANDARD CURB INLET PRECAST TOPS			
W	PRE-CAST TOP SIZE	SIDE OR INTERIOR WALL PIPE SIZE	CU. YD. CONC
4'-4"	3'-8"x 11'-4"x 7 1/2"	21" & SMALLER	0.83 ±
5'-4"	4'-8"x 11'-4"x 7 1/2"	24" & 30"	1.09 ±
6'-4"	5'-8"x 11'-4"x 7 1/2"	35" & 42"	1.35 ±
7'-4"	6'-8"x 11'-4"x 7 1/2"	48" & 54"	1.61 ±
8'-4"	7'-8"x 11'-4"x 7 1/2"	60" & 66"	1.87 ±

~~REVISED 12-5-88~~ Revised 2-16-89 ~~REVISED 12-21-84~~

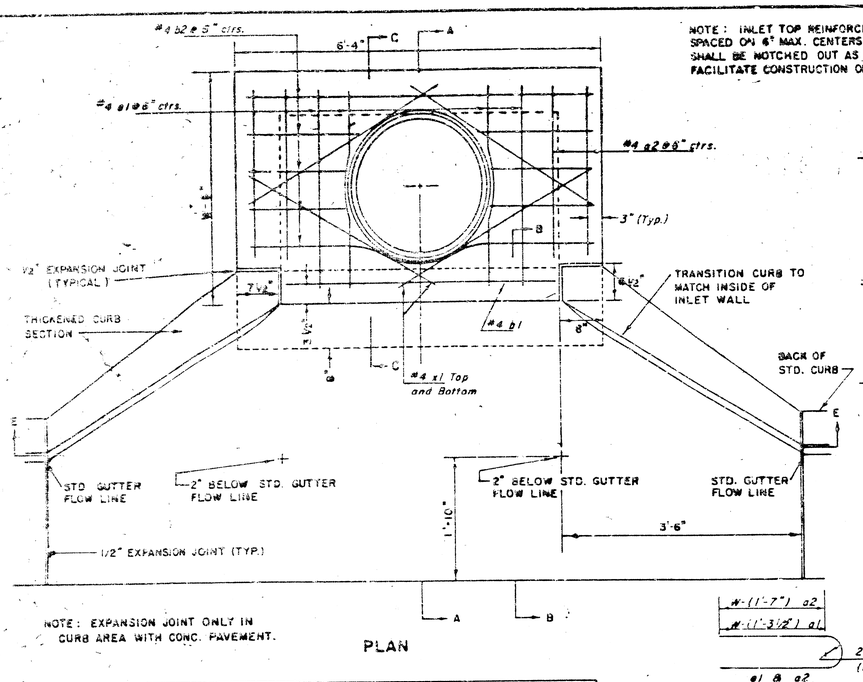
STANDARD TYPE 1A CURB INLET

INLET OPENING = 8" x 10'-0"

PROJECT NUMBER
#81964
WICHITA, KANSAS

SHEET NO. 8 OF TOTAL SHEETS 10

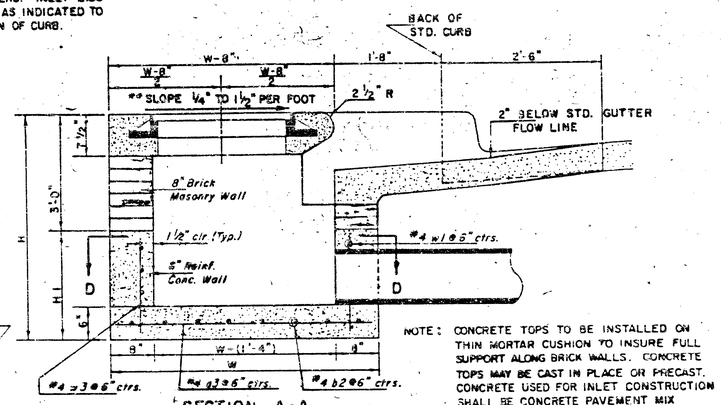
Designed by	BER, KJS, MWD	Checked by	MCP
Drawn by	JCP	Date	Nov., 1984



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.



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 WITH AIR ENTRAINMENT.

BENDING DIAGRAM

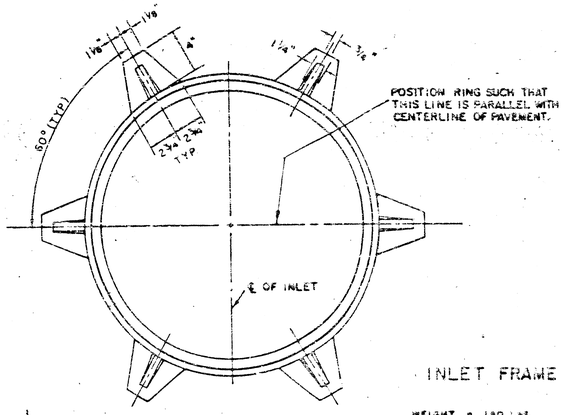
NOTE: CONTRACTOR SHALL HAVE THE OPTION OF CONSTRUCTING 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP OR THIS INLET WHEN W = 6'4" AND H = 7'0" OR LESS.

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.

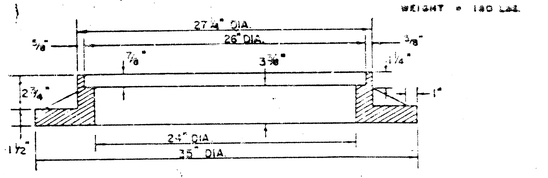
THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.

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



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.

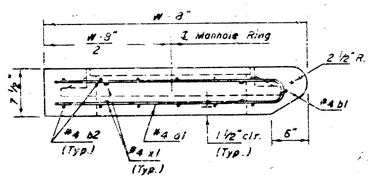
PRECAST SLAB AND FLOOR REINFORCING											
		W=4'-4"		W=5'-4"		W=6'-4"		W=7'-4"		W=8'-4"	
Mark	Size	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length
a1	#4	5	5'-7"	6	8'-7"	6	10'-7"	6	12'-7"	6	14'-7"
a2	#4	4	6'-0"	4	8'-0"	4	10'-0"	4	12'-0"	4	14'-0"
a3	#4	13	4'-1"	13	5'-1"	13	6'-1"	13	7'-1"	13	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.

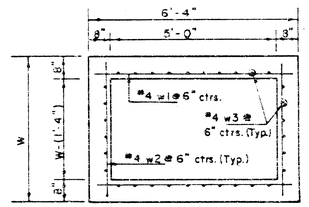
① 4(H1-12"), (H1-12") Round down to nearest 0.5'

② H1-3"

STANDARD CURB INLET PRECAST TOPS			
W	PRECAST TOP SIZE	PIPE SIZE	CU YD CONC
4' 4"	3'5"x 6'4" x7 1/2"	21" Ø SMALLER	0.38 ±
5' 4"	4'8"x 6'4" x7 1/2"	24" Ø 30"	0.51 ±
6' 4"	5'8"x 6'4" x7 1/2"	36" Ø 42"	0.64 ±
7' 4"	6'8"x 6'4" x7 1/2"	48" Ø 54"	0.77 ±
8' 4"	7'8"x 6'4" x7 1/2"	60" Ø 66"	0.90 ±



SECTION C-C



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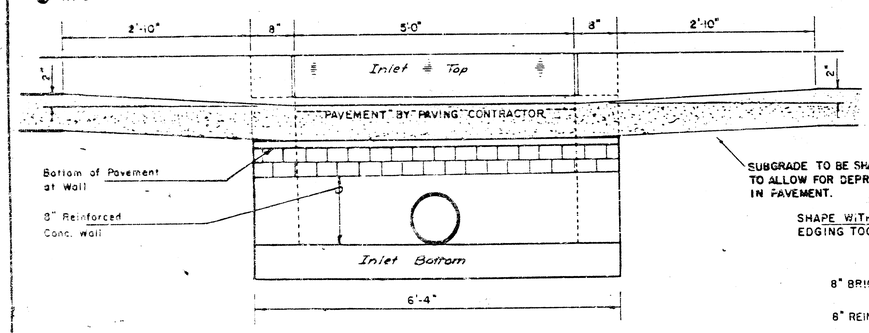

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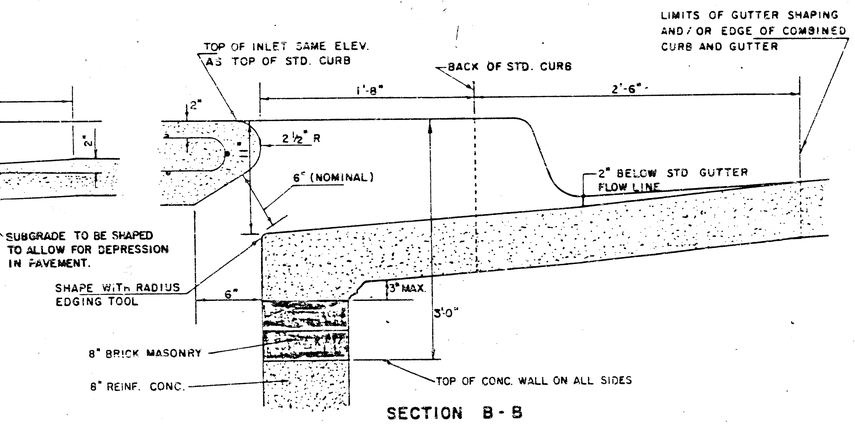


SECTION B-B

~~REVISED 11-30-1987~~

~~REVISED 12-31-1988~~

Revised 2-16-1989

DETAIL STANDARD TYPE IA CURB INLET

CITY OF WICHITA, KANSAS

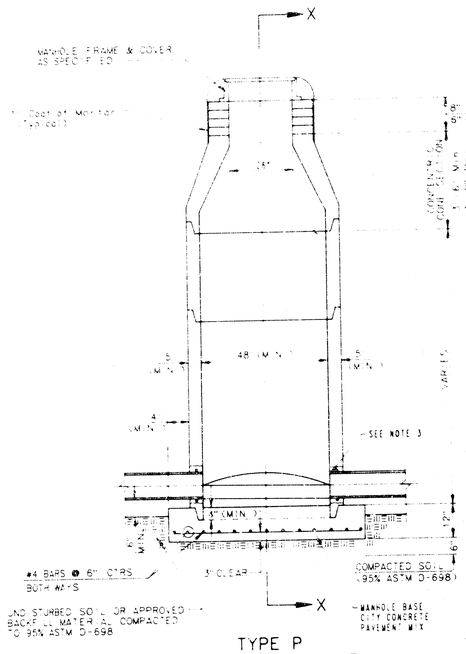
INLET OPENING = 6" x 5'0"

PROJECT NUMBER
#81964

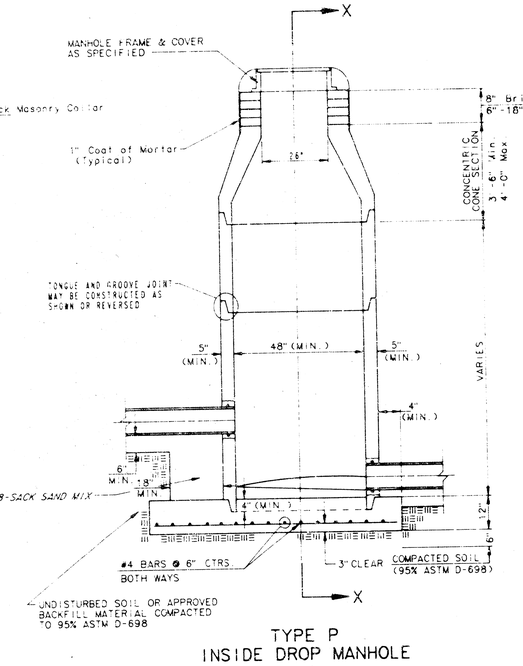
JUNE 1984

9
10

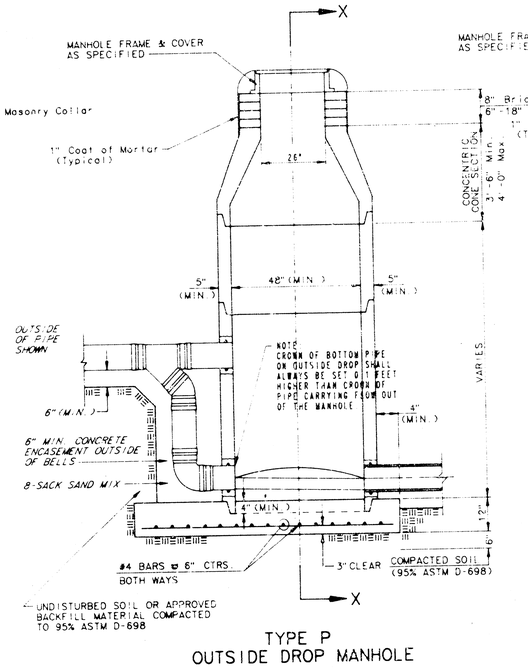
SEWER APPURTENANCES DETAILS
ADOPTED AS STANDARD DESIGN
BY
CITY OF WICHITA



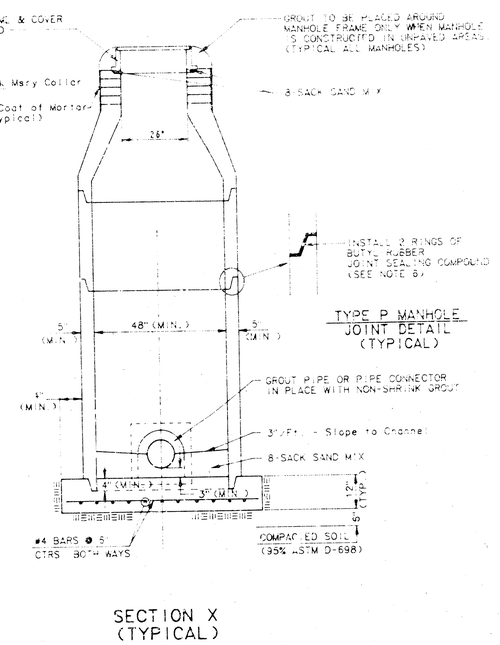
TYPE P
STANDARD MANHOLE



TYPE P
INSIDE DROP MANHOLE



TYPE P
OUTSIDE DROP MANHOLE



TYPE P MANHOLE
JOINT DETAIL
(TYPICAL)

SECTION X
(TYPICAL)

GENERAL NOTES

PRECAST MANHOLE NOTES

1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISION OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.

2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE

3. APPROVED FLEXIBLE WATERSTOP GASKETS SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN A.S.T.M. COMPATIBLE PIPE OR P.V.C. PIPE IS USED. FOR OTHER TYPES OF PIPE THE SEWER SHALL BE GROUTED IN PLACE WITH NON-SHRINK GROUT. THE SEWER PIPE SHALL BE SUPPORTED WITH CONCRETE ENCASEMENT A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR P.V.C. PIPE SUCH THAT THE JOINT REMAINS FLEXIBLE.

4. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS (MINIMUM) OF SEWPER 88 H (BUILD EPOXOLINE) DRY THICKNESS OF 8 MILS (MIN.).

5. EXTERIOR OF MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMOR 633 BITUMINOUS COATING.

6. JOINT SEALING COMPOUND SHALL BE KENT SEAL NO. 2 OR APPROVED EQUAL.

7. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.

8. TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.

9. LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.

10. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE SMALLER THAN 24" SHALL HAVE AN INSIDE DIAMETER OF 4'. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE 24" OR LARGER SHALL HAVE AN INSIDE DIAMETER OF 5'. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.

11. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.

12. OPENINGS SHALL BE CUT INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS CUT INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. AND A.B.S. COMPOSITE PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOUR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.

13. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS EXCEPT FOR INSIDE DROP MANHOLES. FLOW CHANNELS FOR INSIDE DROP MANHOLES SHALL BE CONSTRUCTED AS INDICATED BY THE DRAWING. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.

14. PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE MANHOLE SHALL BE CRADLED WITH CONCRETE TO THE LIMITS OF THE MANHOLE EXCAVATION. WHEN CLAY PIPE IS USED, THE CRADLE SHALL EXTEND TO THE FIRST JOINT OUTSIDE THE MANHOLE. THE CRADLE SHALL BE TERMINATED AT THE CLAY PIPE JOINT IN A MANNER WHICH WILL MAINTAIN THE FLEXIBILITY OF THE JOINT. COST OF CRADLE WITHIN MANHOLE EXCAVATION OR TO CLAY PIPE JOINTS ADJACENT TO MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.

15. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.

16. THE VERTICAL DROP IN INSIDE DROP MANHOLES SHALL NOT EXCEED 4' FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLOWING PIPES LARGER THAN 12". THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.

17. STANDARD MANHOLES AND STANDARD INSIDE DROP MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.

18. A BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR.

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