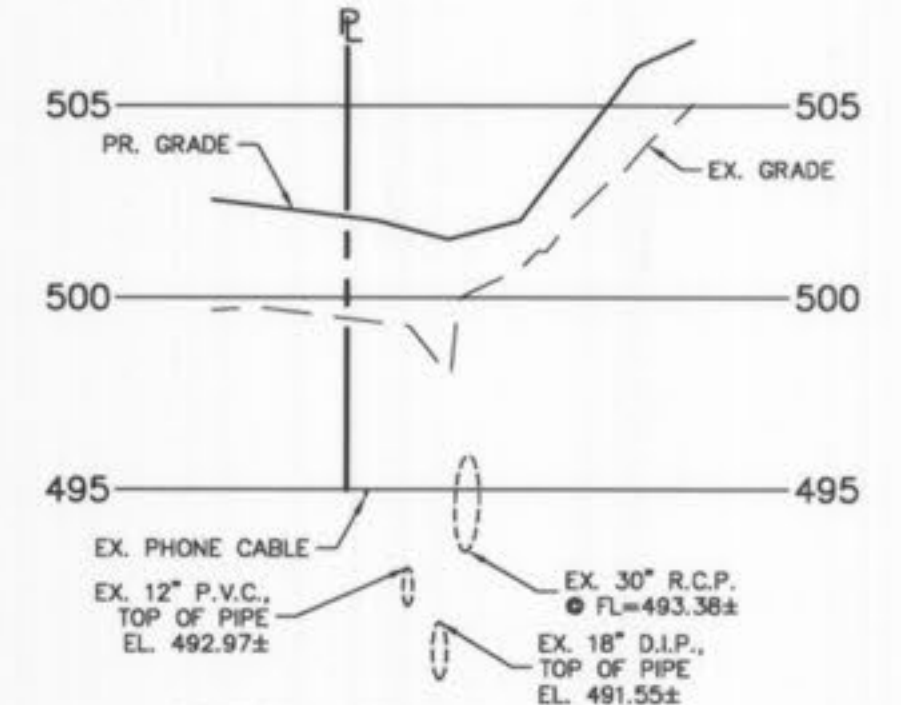


NOTE:
 Connection to Duckett Creek Sanitary Sewer District sewer requires Duckett Creek Sanitary Sewer District inspection. Contact Mr. Steve Overbey, DCSO Chief Inspector, at 636-441-1244 to schedule inspection. 24 hour advance notice required.

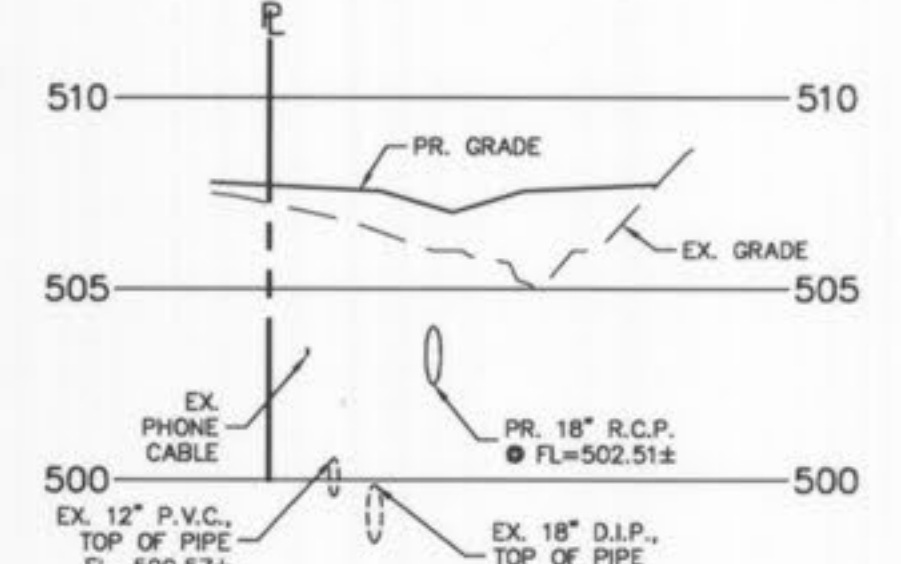
NOTE:
 Access to this tract and the adjoining tract to the north to be provided through the rear access road. Any access to these tracts from the main entrance drive would be a detriment to the development and cause undesirable backups onto Route K.

NOTE:
 Public Water Supply District No. 2 of St. Charles County shall be notified 48 hours prior to construction so that an inspector can be scheduled to be onsite when any excavation or grading will be performed.

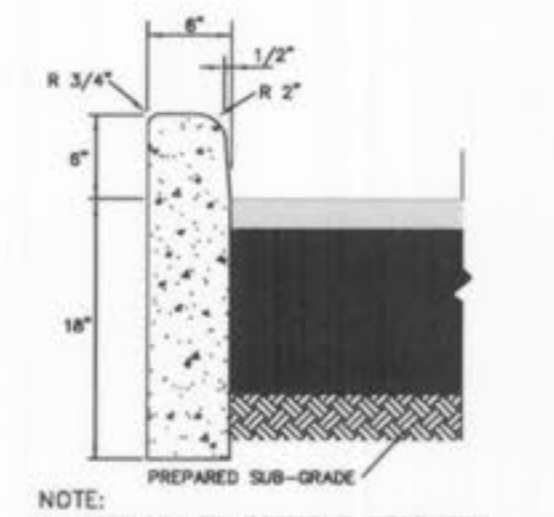
NOTE:
 Public Water Supply District No. 2 of St. Charles County shall be notified 48 hours prior to any grading or excavation near the existing 18" transmission main.



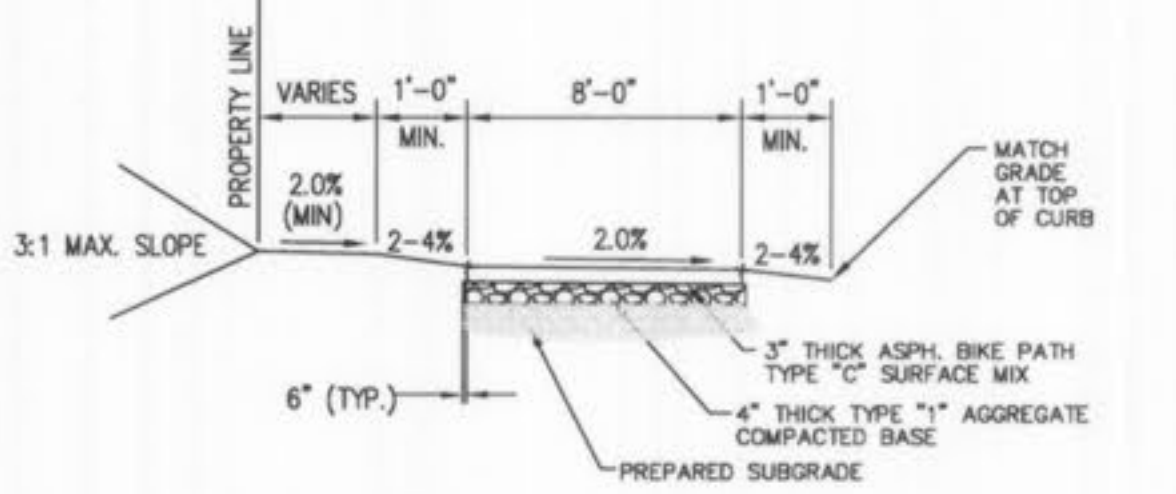
DITCH SECTION A - A
 HORIZONTAL SCALE: 1"=20'
 VERTICAL SCALE: 1"=5'



DITCH SECTION B - B
 HORIZONTAL SCALE: 1"=20'
 VERTICAL SCALE: 1"=5'



NOTE:
 1. MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS, 6% (±1%) AIR ENTRAINMENT.



MULTI-USE PATH DETAIL
 (n.t.s.)

AS-BUILT
 SEWER MEASUREMENTS

THE EXISTING SEWER LENGTHS, SIZES, FLOWLINES, DEPTHS OF STRUCTURES AND SEWERS AND LOCATIONS WITH RESPECT TO EXISTING OR PROPOSED EASEMENTS HAVE BEEN MEASURED. THE RESULTS OF THOSE MEASUREMENTS ARE SHOWN ON THIS SET OF FINAL MEASUREMENT PLANS. SINCE THE WYE LOCATIONS HAVE BEEN PLOTTED FROM INFORMATION PROVIDED BY THE SEWER CONTRACTOR OR OTHER SOURCES, I DISCLAIM ANY RESPONSIBILITY FOR THAT SPECIFIC INFORMATION.

ALL PUBLIC SEWERS ARE LOCATED WITHIN DESIGNATED EXISTING OR PROPOSED EASEMENTS.



Randall S. Rossion 2-1-08
 RANDALL S. ROSSON, MISSOURI P.L.S. NO. 200600171 DATE

- ▲ STORM AS-BUILT 2/1/08
- ▲ PUBLIC WATER SUPPLY DISTRICT COMMENTS 11/29/06
- ▲ MODOOT/CITY/PUBLIC WATER SUPPLY DISTRICT/COTLEVILLE FIRE PROTECTION DISTRICT COMMENTS 11/01/06
- ▲ MODOOT/DUCKETT CREEK SANITARY SEWER DISTRICT/CITY/PUBLIC WATER SUPPLY DISTRICT COMMENTS 08/03/06

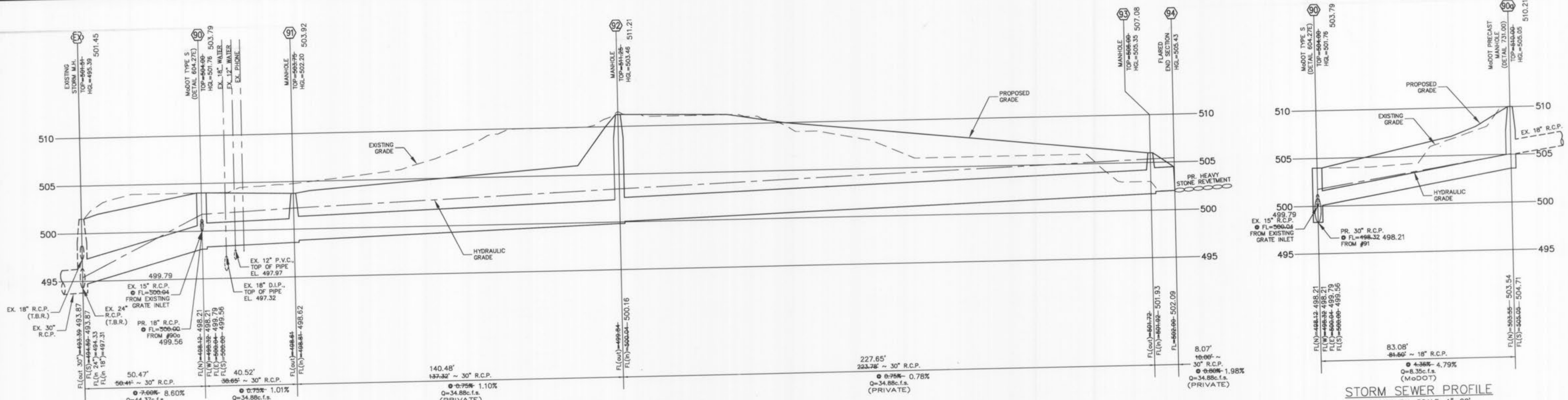
MARKETCENTER L.L.C. - KEHOE PROPERTY
 SITE AND GRADING PLAN

STOCK & ASSOCIATES
 Consulting Engineers, Inc.

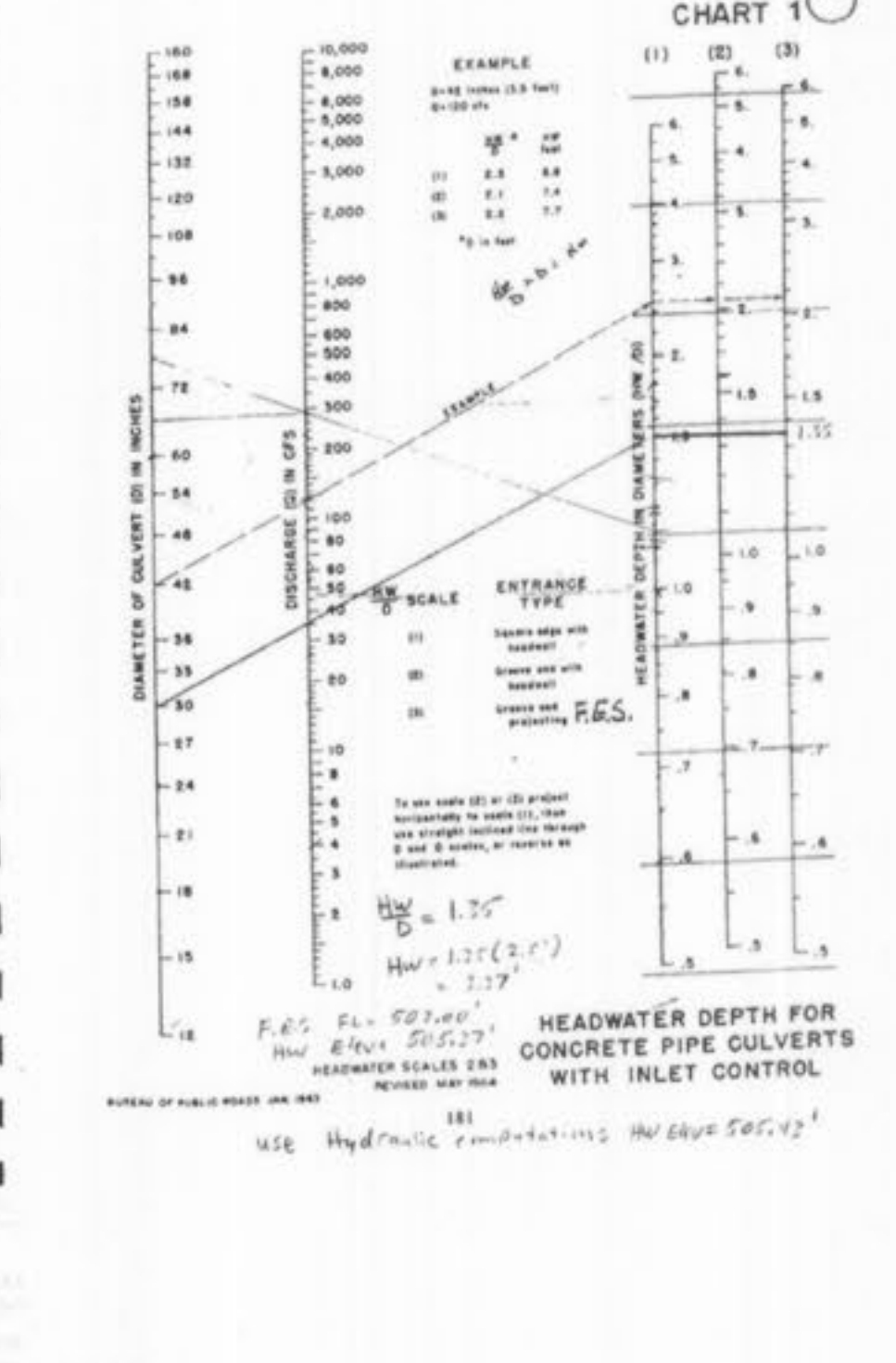
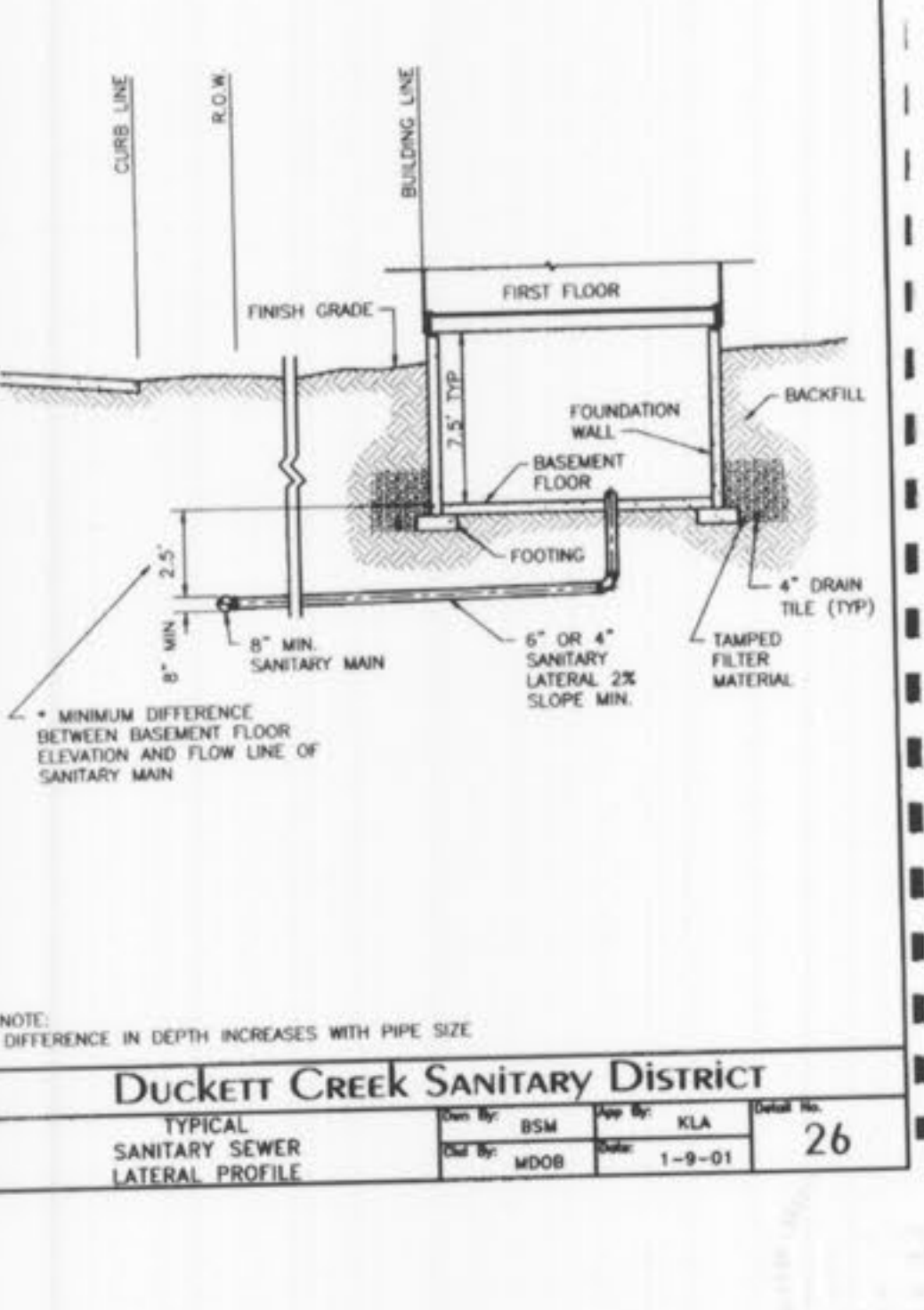
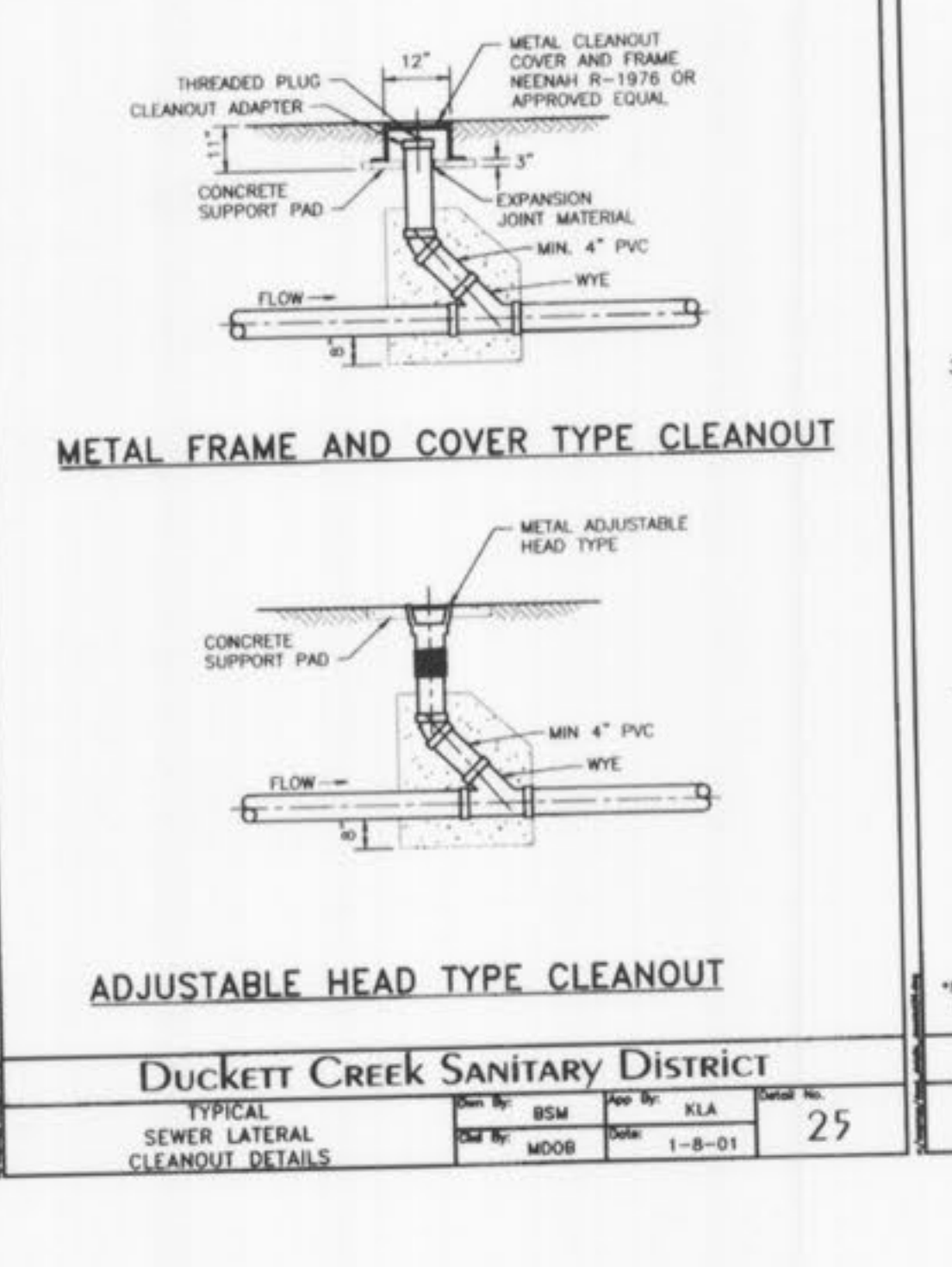
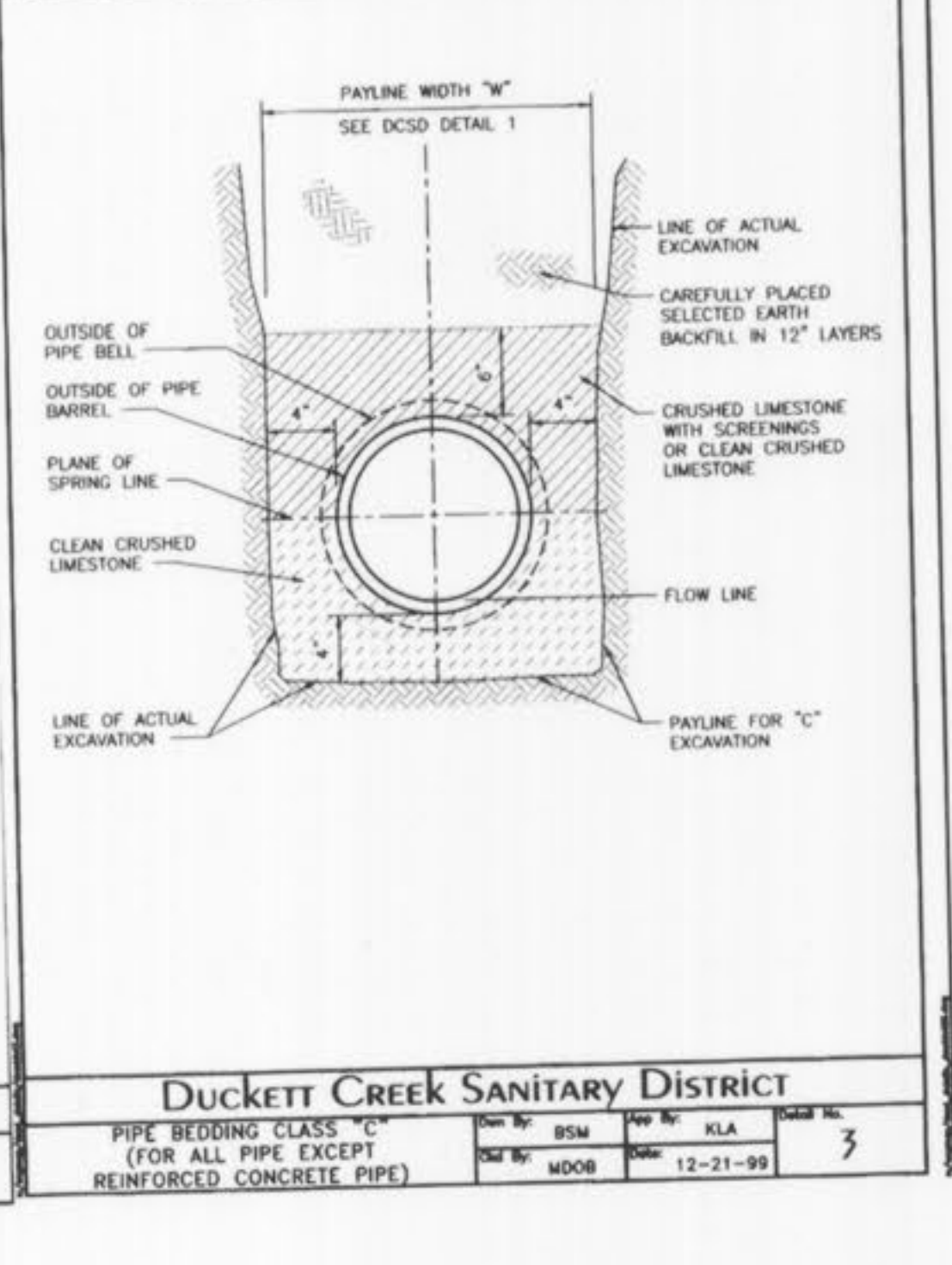
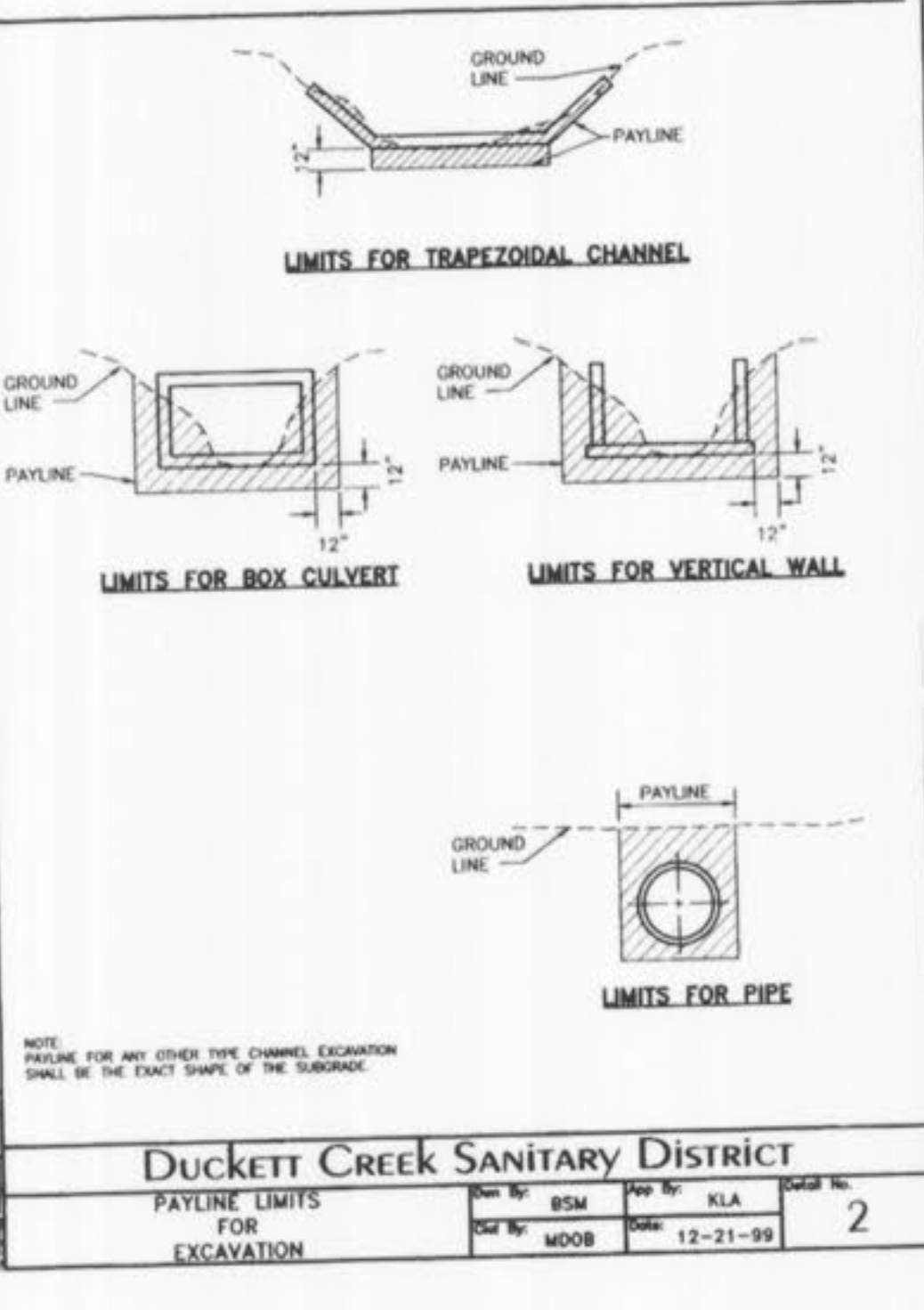
257 Chesterfield Business Parkway
 St. Louis, MO 63005
 PH. (636) 530-9100
 FAX (636) 530-9130
 e-mail: general@stockassoc.com
 Web: www.stockassoc.com

FILE No. 305.04
 P & Z APPROVAL MAY 11th, 2006

GEORGE M. STOCK E-25116



ROUND PIPE				HORIZONTAL ELLIPTICAL PIPE			
INSIDE DIAMETER OF PIPE (INCHES)	"W" PAYLINE WIDTH OF TRENCH (INCHES)	"W" PAYLINE WIDTH OF TRENCH (FEET)	PAY VOLUMES cu. ft. PER FT.	INSIDE DIAMETER OF PIPE (INCHES)	"W" PAYLINE WIDTH OF TRENCH (INCHES)	"W" PAYLINE WIDTH OF TRENCH (FEET)	PAY VOLUMES cu. ft. PER FT.
4	30	2.50	3.28				
6	30	2.50	3.59				
8	30	2.50	3.87				
10	30	2.50	4.09				
12	30	2.50	4.25				
15	36	3.00	5.55				
18	36	3.00	5.77	14 x 23	41	3.42	5.94
21	39	3.25	6.61				
24	42	3.50	7.39	19 x 30	49	4.08	7.68
27	45	3.75	8.18	22 x 34	53	4.42	8.61
30	48	4.00	9.30	24 x 38	58	4.83	9.70
33	53	4.42	10.53	27 x 42	62	5.17	10.71
36	56	4.67	11.43	29 x 45	66	5.50	11.72
39		DISCONTINUED		32 x 49	71	5.92	13.14
42	63	5.25	13.38	34 x 53	75	6.25	14.05
48	70	5.83	15.67	38 x 60	83	6.92	16.18
54	77	6.42	18.15	43 x 68	92	7.67	18.81
60	84	7.00	20.73	48 x 76	101	8.42	21.59
66	91	7.58	23.45	53 x 83	109	9.08	24.35
72	98	8.17	26.37	58 x 91	118	9.83	27.45
78	105	8.75	29.39	63 x 98	126	10.50	30.50
84	112	9.33	32.57	68 x 106	135	11.25	33.91
90	119	9.92	35.90	72 x 113	143	11.92	36.99
96	126	10.50	39.37	77 x 121	152	12.67	40.69
102	133	11.08	42.99	82 x 128	160	13.33	44.45
108	140	11.67	46.75	87 x 136	168	14.00	47.79
114	147	12.25	50.66	92 x 143	176	14.67	51.70
120	154	12.83	54.72	97 x 151	185	15.42	56.01
126	161	13.42	58.92				
132	168	14.00	63.27	106 x 168	202	16.83	64.48
144	182	15.17	72.40	116 x 180	218	18.17	73.59



AS-BUILT
SEWER MEASUREMENTS

THE EXISTING SEWER LENGTHS, SIZES, FLOWLINES, DEPTHS OF STRUCTURES AND SEWERS AND LOCATIONS WITH RESPECT TO EXISTING OR PROPOSED EASEMENTS HAVE BEEN MEASURED. THE RESULTS OF THOSE MEASUREMENTS ARE SHOWN ON THIS SET OF FINAL MEASUREMENT PLANS. SINCE THE WYE LOCATIONS HAVE BEEN PLOTTED FROM INFORMATION PROVIDED BY THE SEWER CONTRACTOR OR OTHER SOURCES, I DISCLAIM ANY RESPONSIBILITY FOR THAT SPECIFIC INFORMATION.

ALL PUBLIC SEWERS ARE LOCATED WITHIN DESIGNATED EXISTING OR PROPOSED EASEMENTS.

Randall S. Rosson 2-1-08
 RANDALL S. ROSSON, MISSOURI P.L.S. NO. 2006000171 DATE



str #	line reach		flowline elevation		length (feet)	slope (ft/ft)	pipe size (in)	flow (cfs)	flow vel (ft/sec)	vel head (ft)	Q x Vh (ft ³ /sec)	head losses				hydraulic elevations										
	upper	lower	upper	lower								minor	minor	minor	total	upper	lower	lower	upper reach	top of pipe	top of structure	freeboard	manning	pipe capacity	drop	
	ft	ft	ft	ft								ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
94	94	93	502.09	501.93	8.07	0.0198	30	34.88	7.11	0.78	27.35	0.06	0.00	0.00	0.00	504.59	505.57	505.51	505.57	0.00	na	na	0.013	57.91	0.00	
93	93	92	501.93	500.16	227.65	0.0078	30	34.88	7.11	0.78	27.35	1.64	0.00	0.27	0.27	504.43	505.23	503.59	505.51	504.43	507.06	1.57	0.013	36.28	0.00	
92	92	91	500.16	498.62	140.48	0.0110	30	34.88	7.11	0.78	27.35	1.01	0.00	0.27	0.27	502.66	503.32	502.30	503.59	502.66	511.21	7.62	0.013	43.06	0.00	
91	91	90	498.62	498.21	40.52	0.0101	30	34.88	7.11	0.78	27.35	0.29	0.00	0.16	0.16	501.12	502.14	501.85	502.30	501.12	503.92	1.62	0.013	41.37	0.00	
90	90	ex	498.21	493.87	50.47	0.0860	30	44.37	9.04	1.27	56.29	0.59	0.87	0.27	1.14	500.71	496.96	496.37	501.85	500.71	503.79	1.94	0.013	120.60	0.00	
		ex	493.87																496.37							
90a	90a	90	503.54	499.56	83.08	0.0479	18	8.35	4.73	0.35	2.89	0.52	0.00	0.00	0.00	505.04	502.38	501.85	505.04	0.00	510.21	5.17	0.013	23.05	0.00	
90			498.21																501.85							

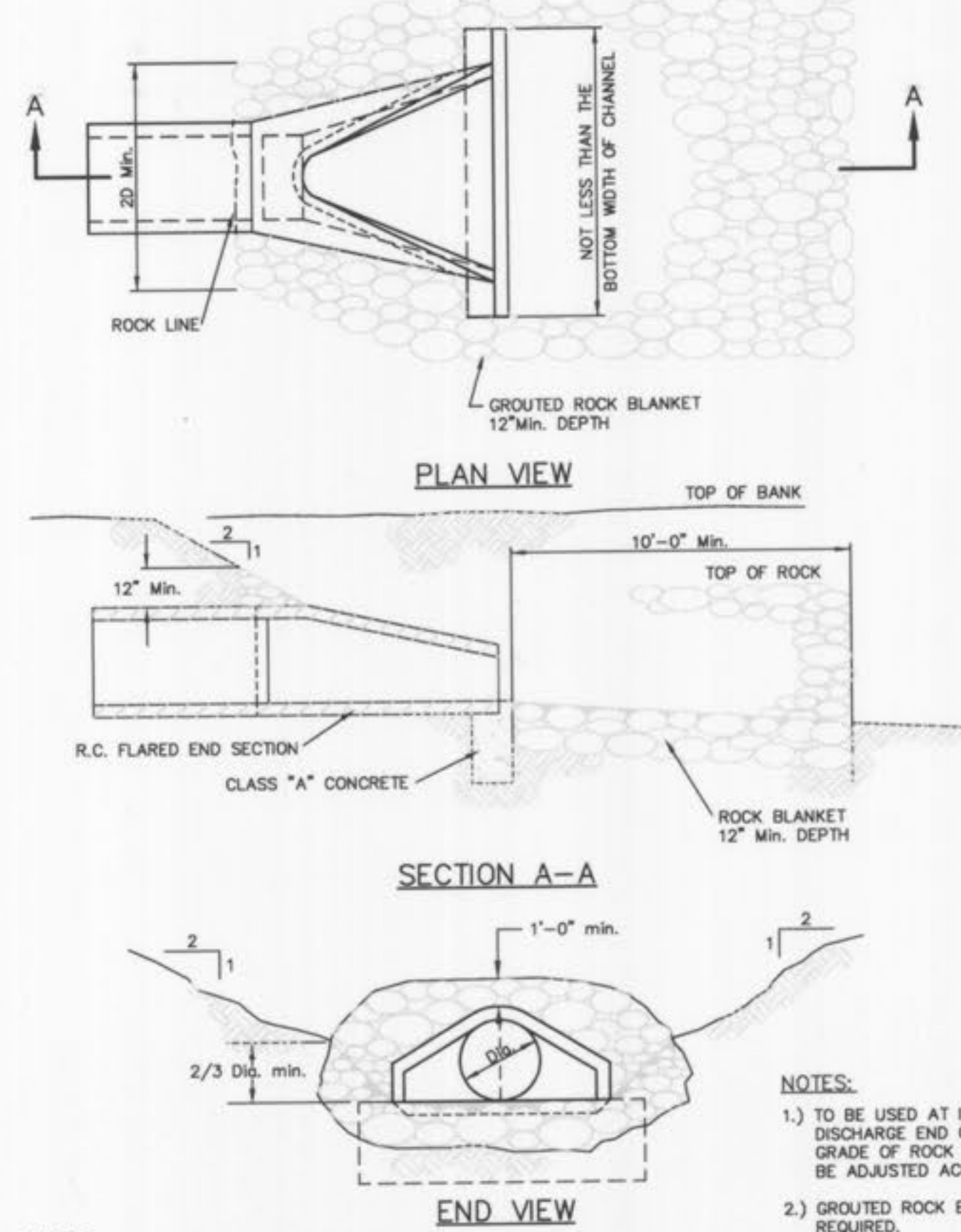
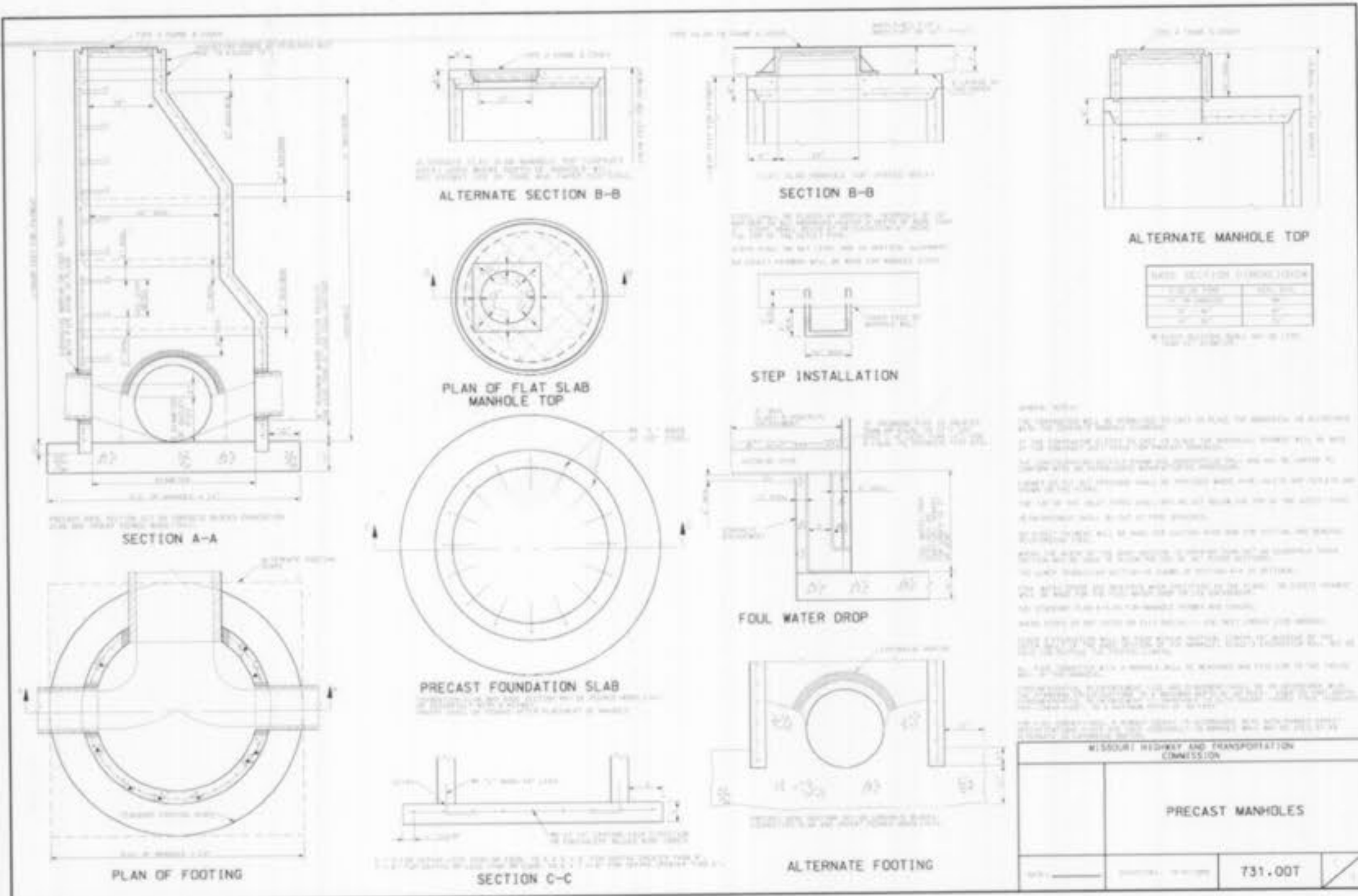
- STORM ASBUILT 2/1/08
- PUBLIC WATER SUPPLY DISTRICT COMMENTS 11/29/06
- MODOT/CITY/PUBLIC WATER SUPPLY DISTRICT/COTTEVILLE FIRE PROTECTION DISTRICT COMMENTS 11/01/06
- MODOT/CITY/PUBLIC WATER SUPPLY DISTRICT/CITY/PUBLIC WATER SUPPLY DISTRICT COMMENTS 08/03/06

MARKETCENTER L.L.C. - KEHOE PROPERTY
 SEWER PROFILES AND HYDRAULICS

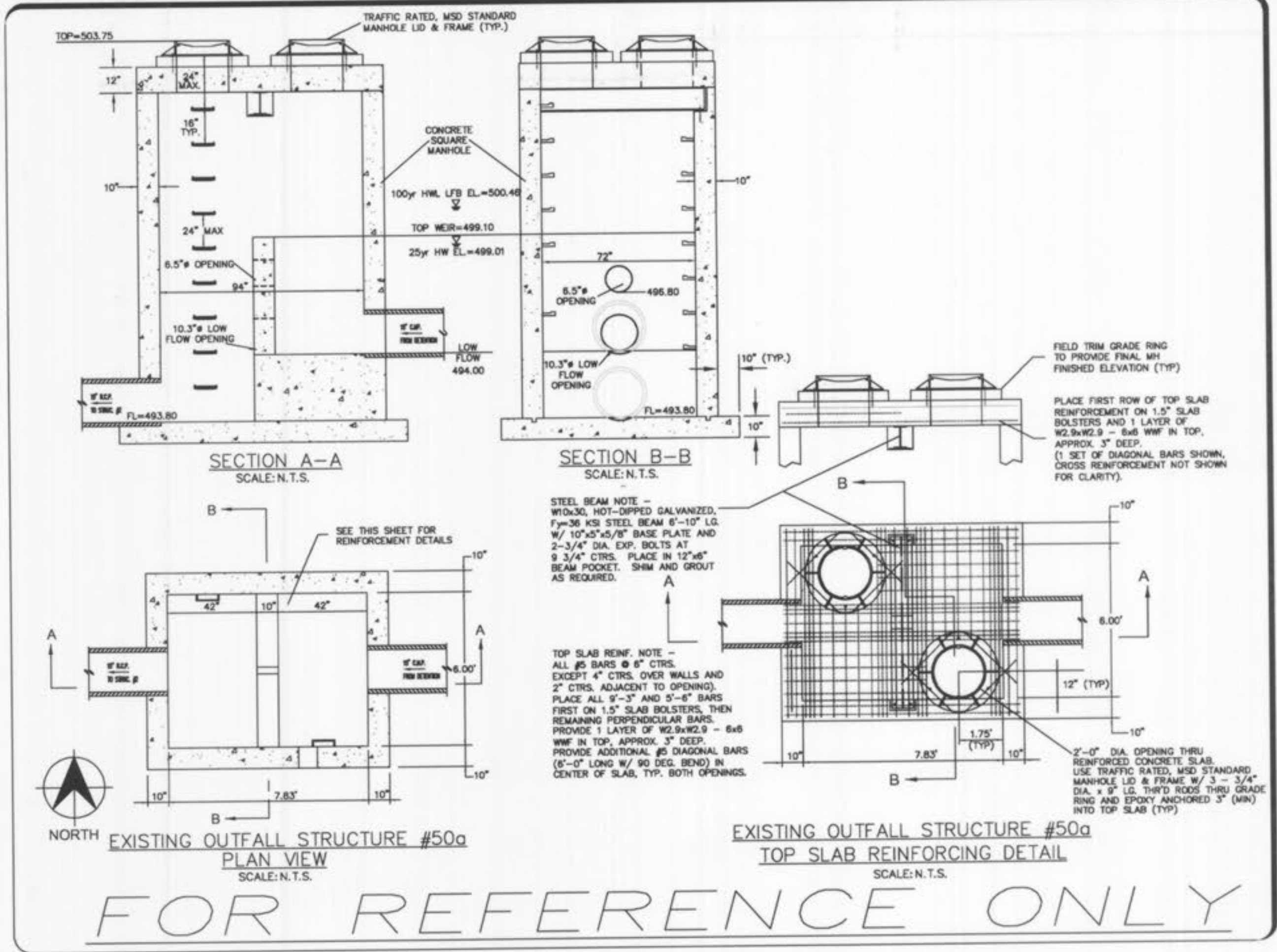
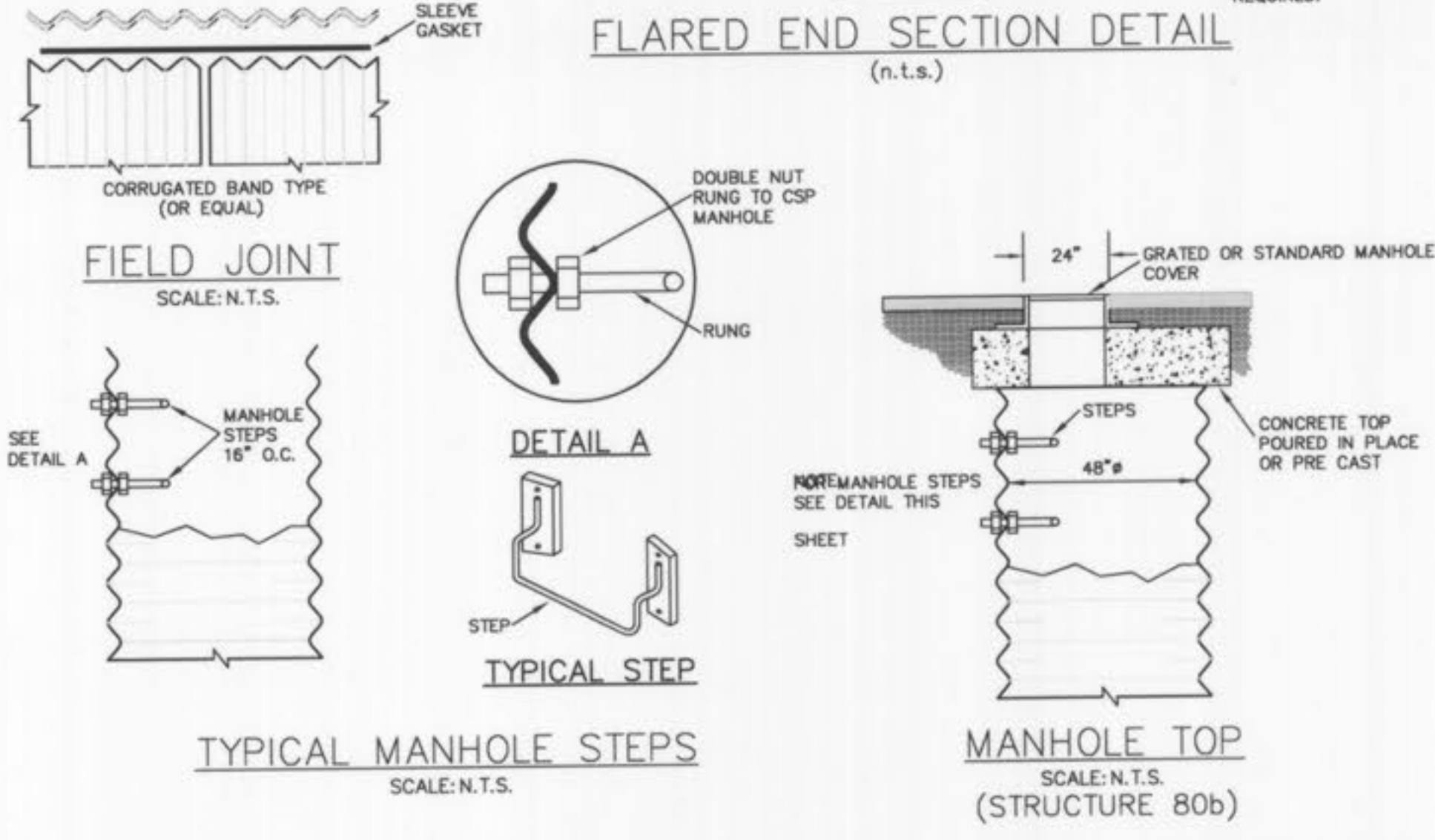
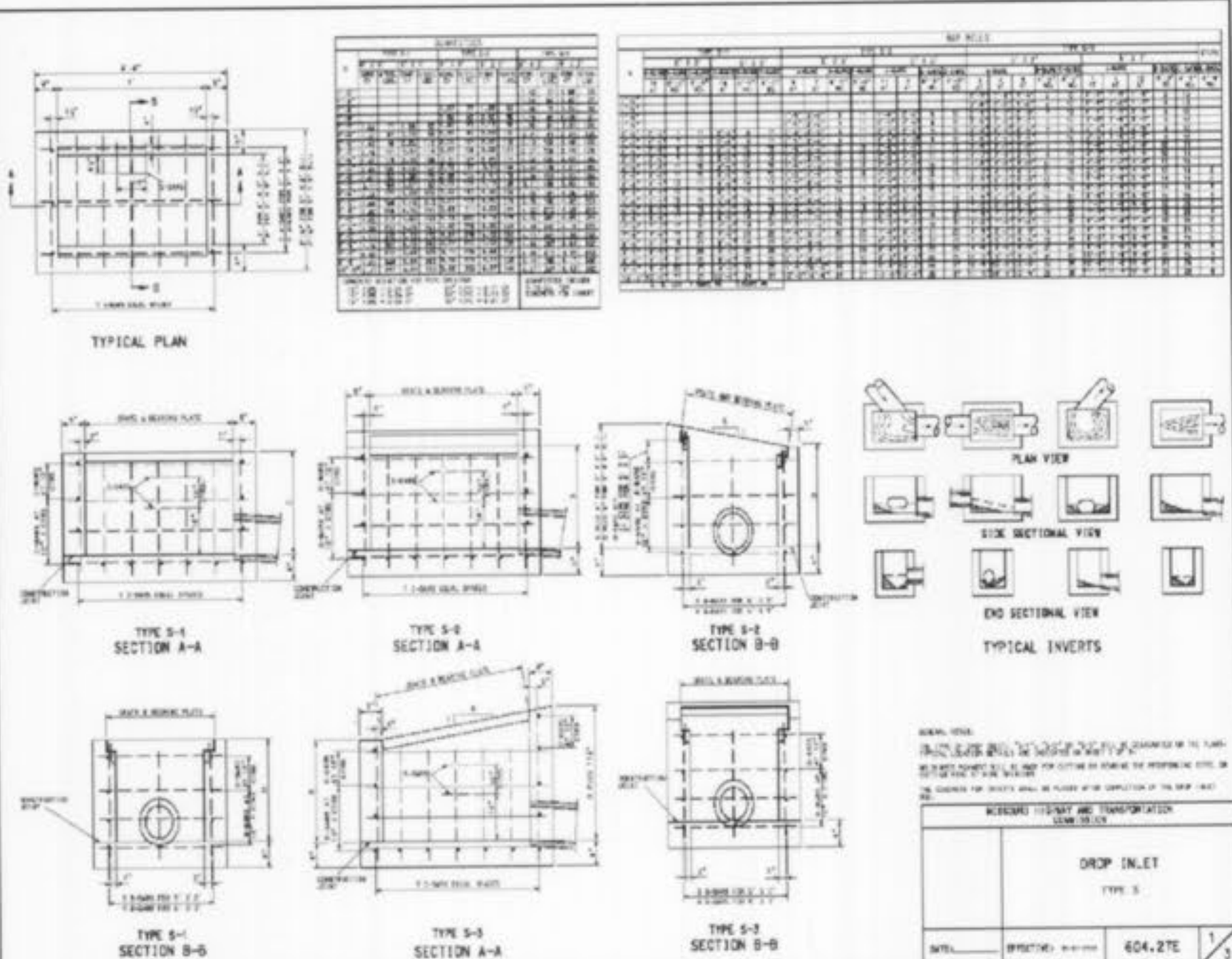
Stock & Associates
Consulting Engineers, Inc.
 257 Chesterfield Business Parkway
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 PH. (636) 530-9100
 FAX (636) 530-9130
 e-mail: general@stockassoc.com
 Web: www.stockassoc.com

FILE NO. 305.04
 P & Z APPROVAL MAY 11th, 2006

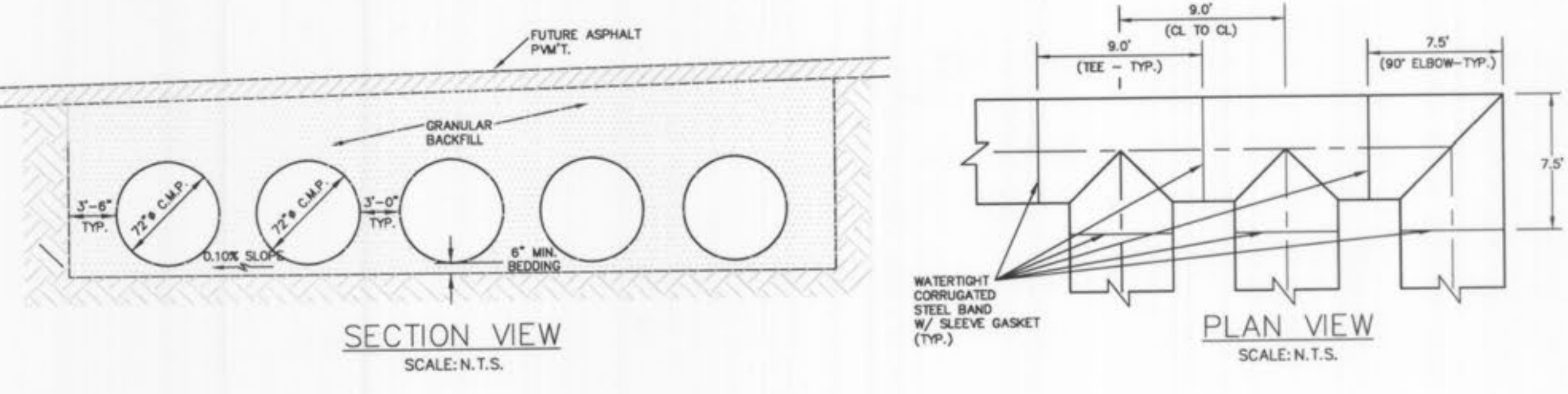
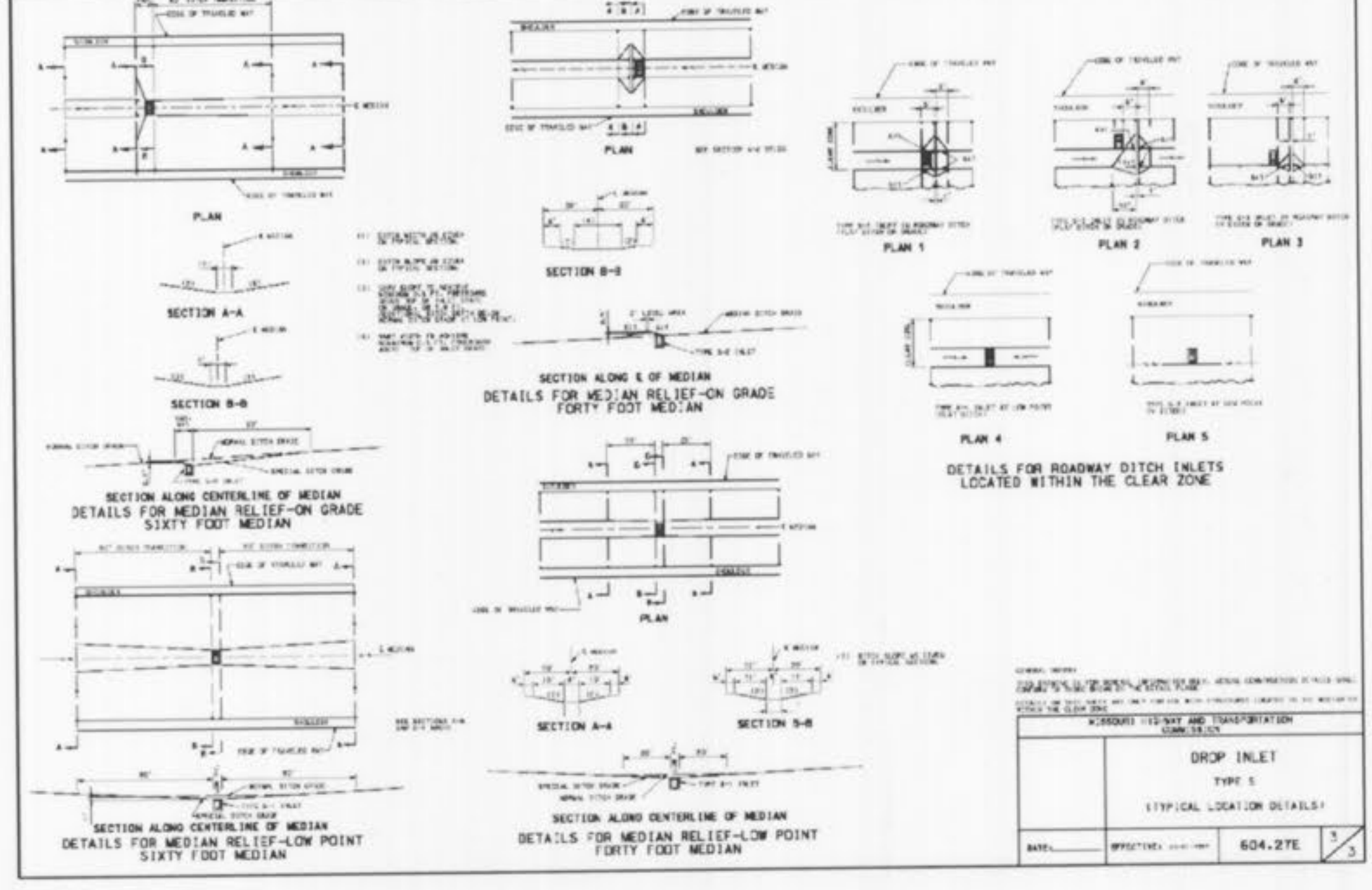
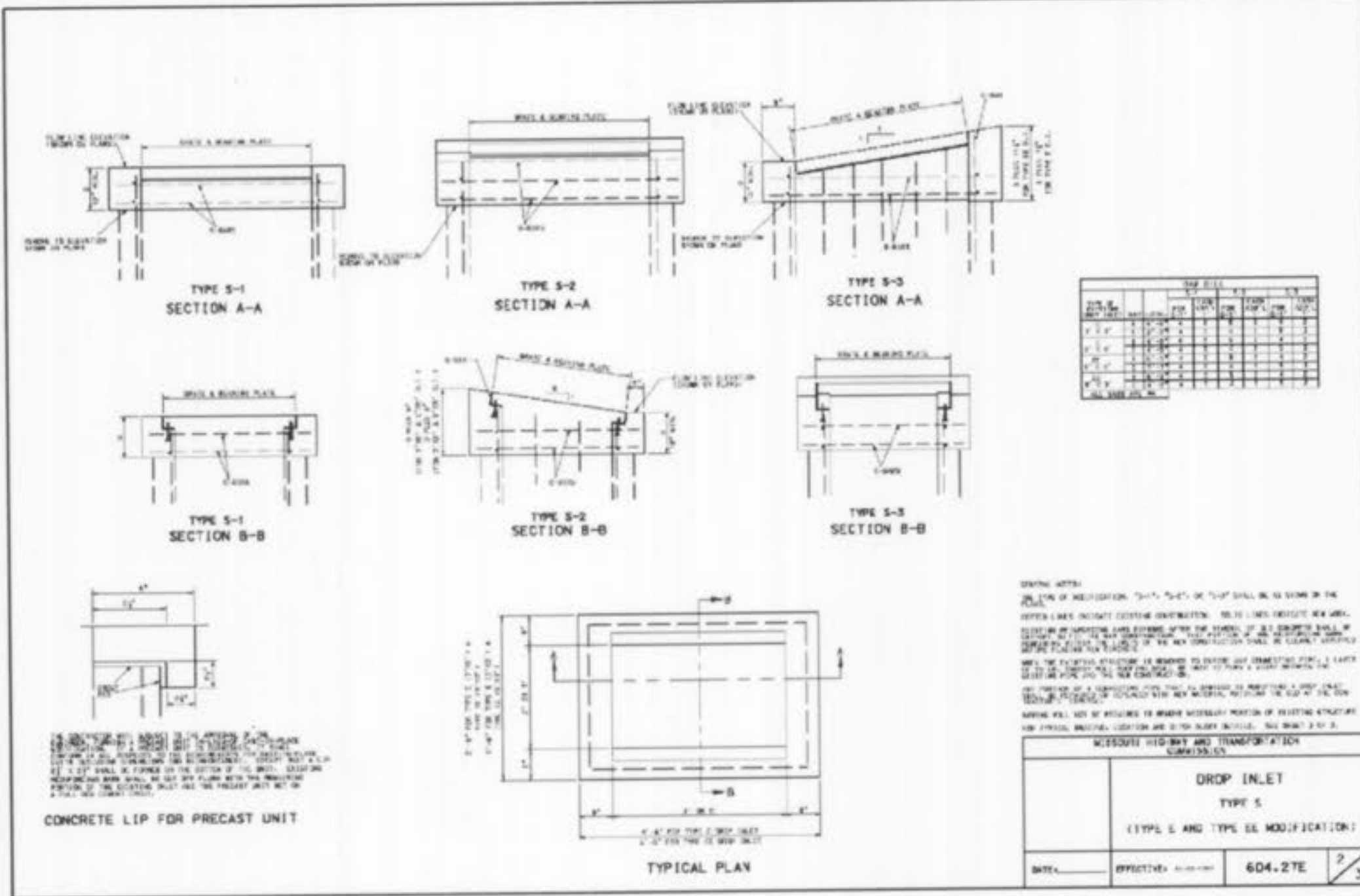
DRAWN BY: GEORGE M. STOCK E-25116	DATE: 05/30/06	CHECKED BY: G.M.S.	DATE: 05/30/06	DATE: 05/30/06	JOB NUMBER: 204-3380.11	SHEET: C5 of 11
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NOTES:
1.) TO BE USED AT INTAKE AND DISCHARGE END OF PIPE. GRADE OF ROCK BLANKET TO BE ADJUSTED ACCORDINGLY.
2.) GROUTED ROCK BLANKET REQUIRED.



FOR REFERENCE ONLY



NOTES:
1.) CORRUGATED METAL PIPE SHALL BE INSTALLED ON A 6" LOOSE GRANULAR BEDDING LAYER WITH GRANULAR FILL MATERIAL (1" CLEAN) PLACED ALTERNATELY IN LAYERS WITH A MAXIMUM THICKNESS OF 8" ON BOTH SIDES OF THE PIPES AND COMPACTED TO 95% OF "ASTM D-99" DENSITY. PARTICULAR CARE SHALL BE GIVEN TO PLACE BACKFILL MATERIAL AROUND THE PIPE HAUNCHES AND COMPACT THE BACKFILL MATERIAL BY HAND TAMPING. BACKFILL MATERIAL SHALL NOT BE DUMPED INTO PILES AND COMPACTION ATTEMPTED WITHOUT SPREADING.
2.) PIPE CONNECTORS TO BE CORRUGATED TYPE WITH SLEEVE TYPE GASKET.
3.) MAINTAIN 0.10% SLOPE IN ALL 72" C.M. STORAGE PIPES.



Randall S. Robson 2-1-08

STORM ASBULT 2/1/08
PUBLIC WATER SUPPLY DISTRICT COMMENTS 11/29/06
MODOT/CITY/PUBLIC WATER SUPPLY DISTRICT/COTTLVILLE FIRE PROTECTION DISTRICT COMMENTS 11/01/06
MODOT/DUCKETT CREEK SANITARY SEWER DISTRICT/CITY/PUBLIC WATER SUPPLY DISTRICT COMMENTS 08/03/06

MARKETCENTER L.L.C. - KEHOE PROPERTY
CONSTRUCTION DETAILS

STOCK & ASSOCIATES
Consulting Engineers, Inc.

257 Chesterfield Business Parkway
St. Louis, MO 63005
PH. (636) 530-9100
FAX (636) 530-9130
e-mail: general@stockassoc.com
Web: www.stockassoc.com

FILE No. 305.04
P & Z APPROVAL MAY 11th, 2006
DRAWN BY: GEORGE M. STOCK E-25116
DATE: 05/30/06
CHECKED BY: G.M.S. 05/30/06
DATE: 05/30/06
JOB NUMBER: 204-3380.11
SHEET: C6 of 11