

BEING PART  
OF PARCEL 6  
261,360 sq. ft.  
6 Ac.±

### AS-BUILT SANITARY AND STORM SEWER MEASUREMENTS

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All public sewers are located within designated existing or proposed easements except as follows:  
 SANITARY SEWER "C" TO SANITARY SEWER "D",  
 SANITARY SEWER "K" TO SANITARY SEWER "J"  
 Donald W. Taylor, Missouri P.L.S. No. 2041



LOCATION MAP  
NOT TO SCALE

- ② - 05/17/04 AS-BUILTS STORM #2
- ① - 05/04/04 AS-BUILTS

**LAKESIDE SHOPPES**  
OVERALL PLAN

**STOCK & ASSOCIATES**  
**CONSULTING ENGINEERS, INC.**

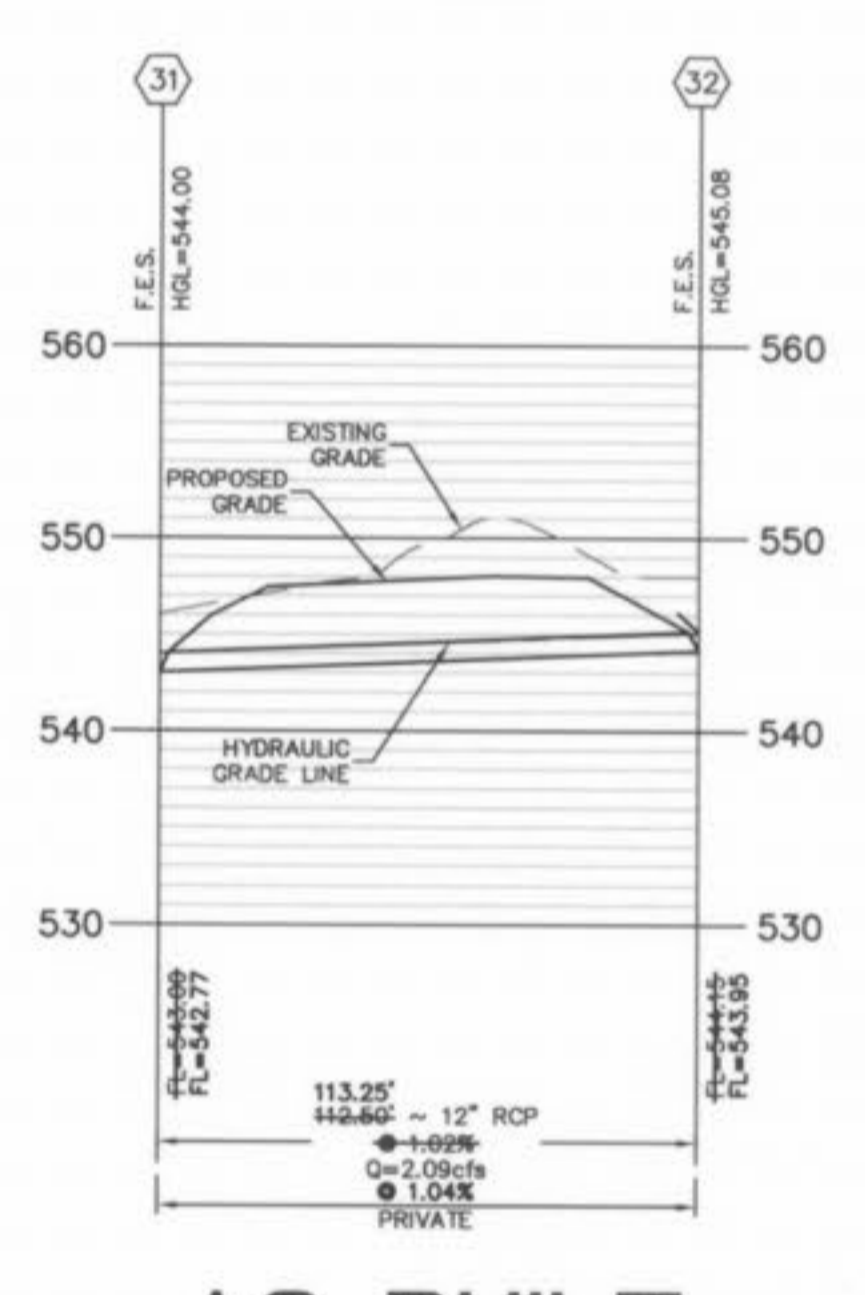
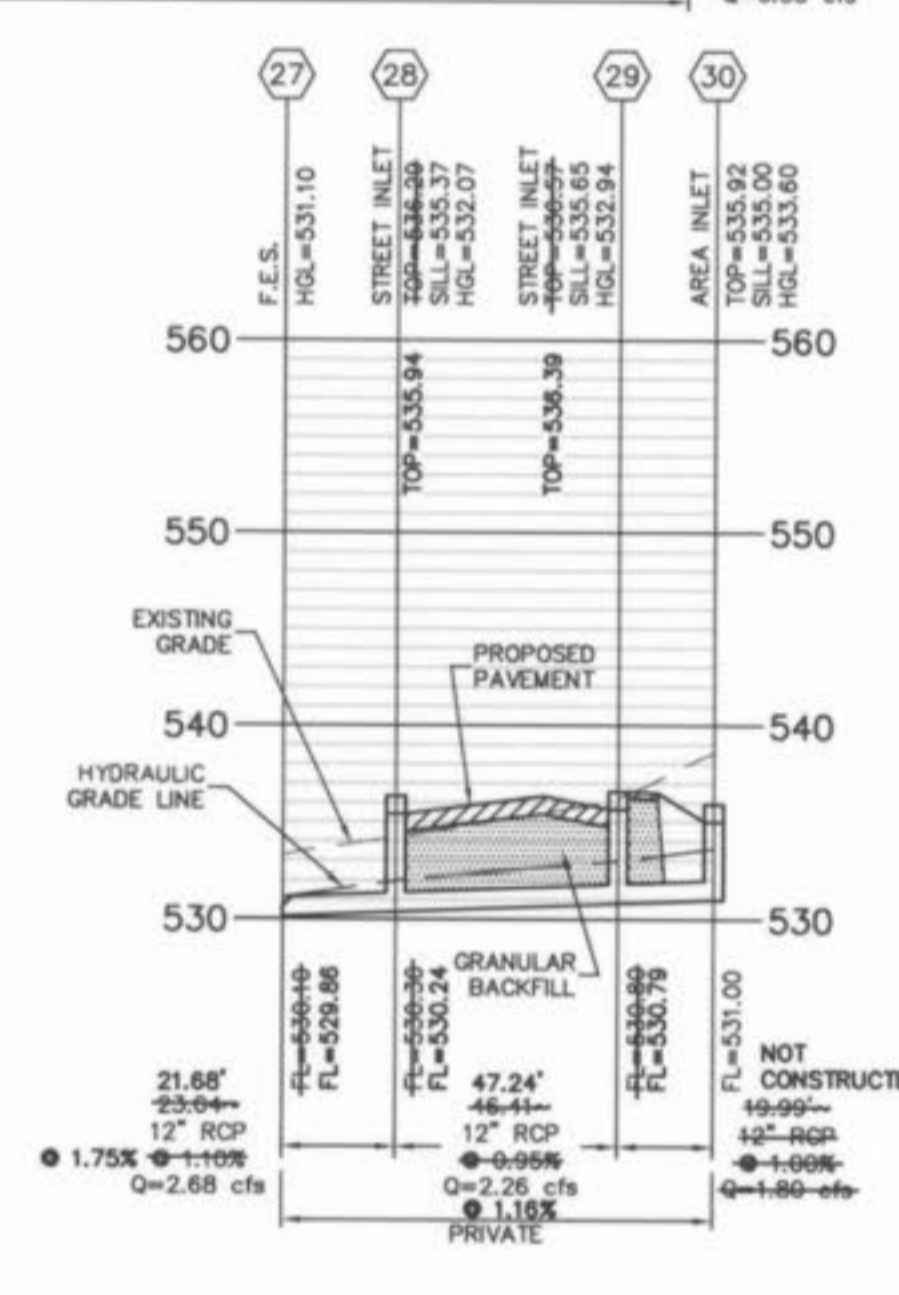
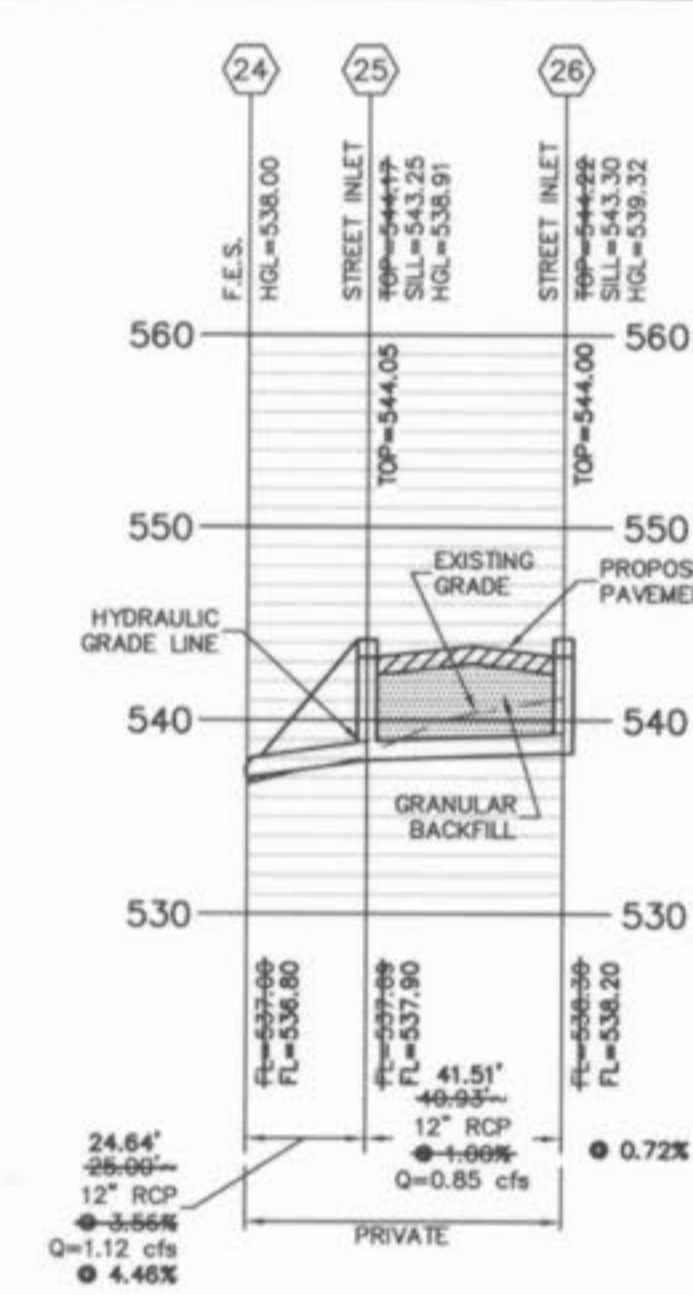
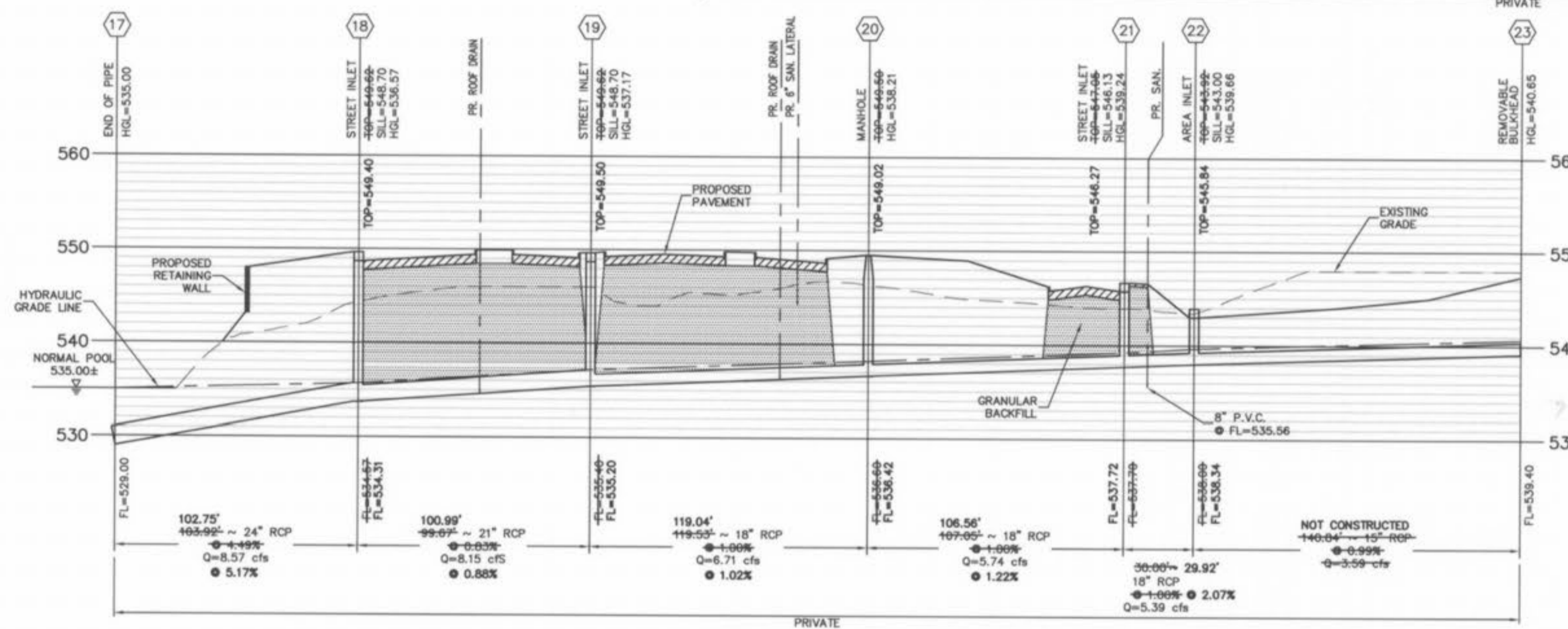
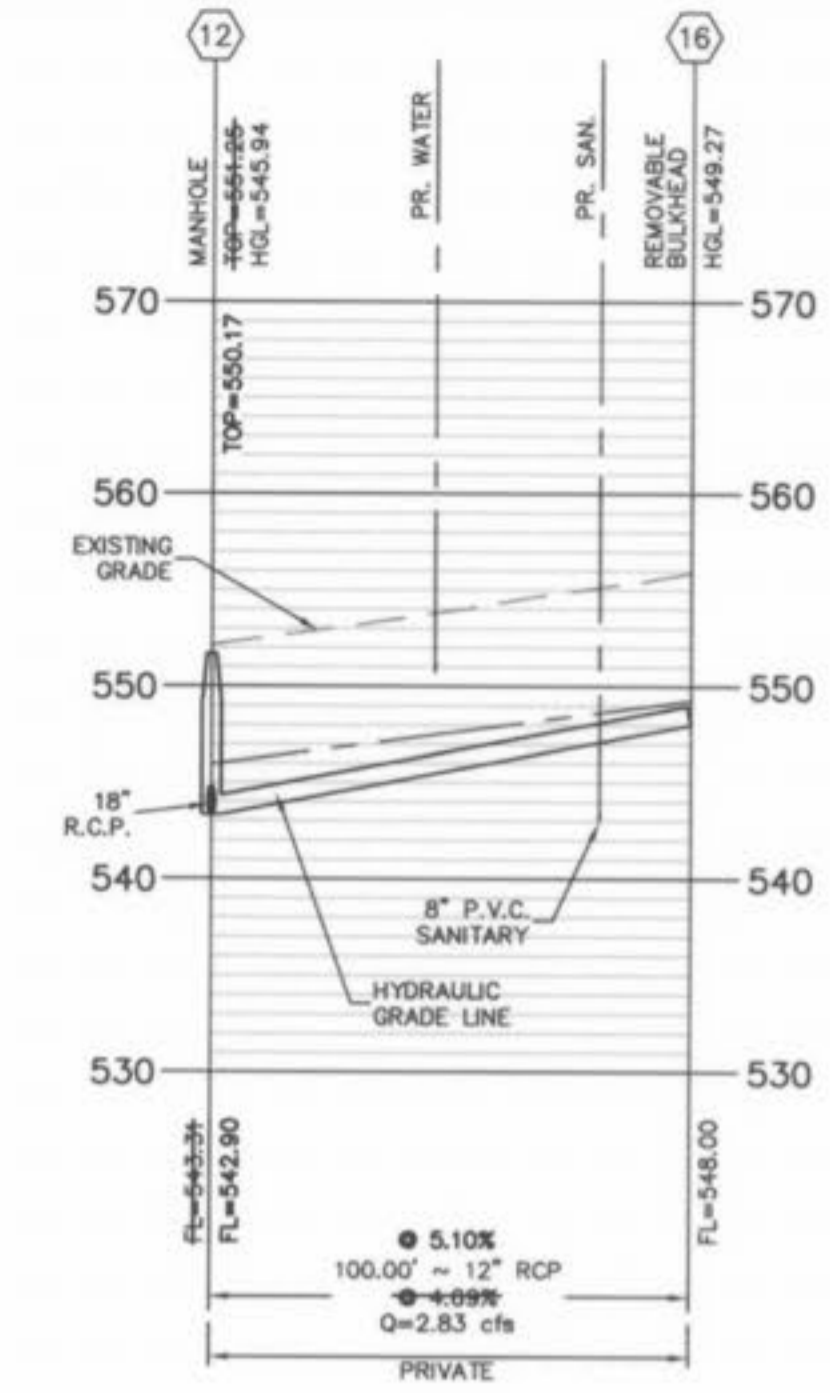
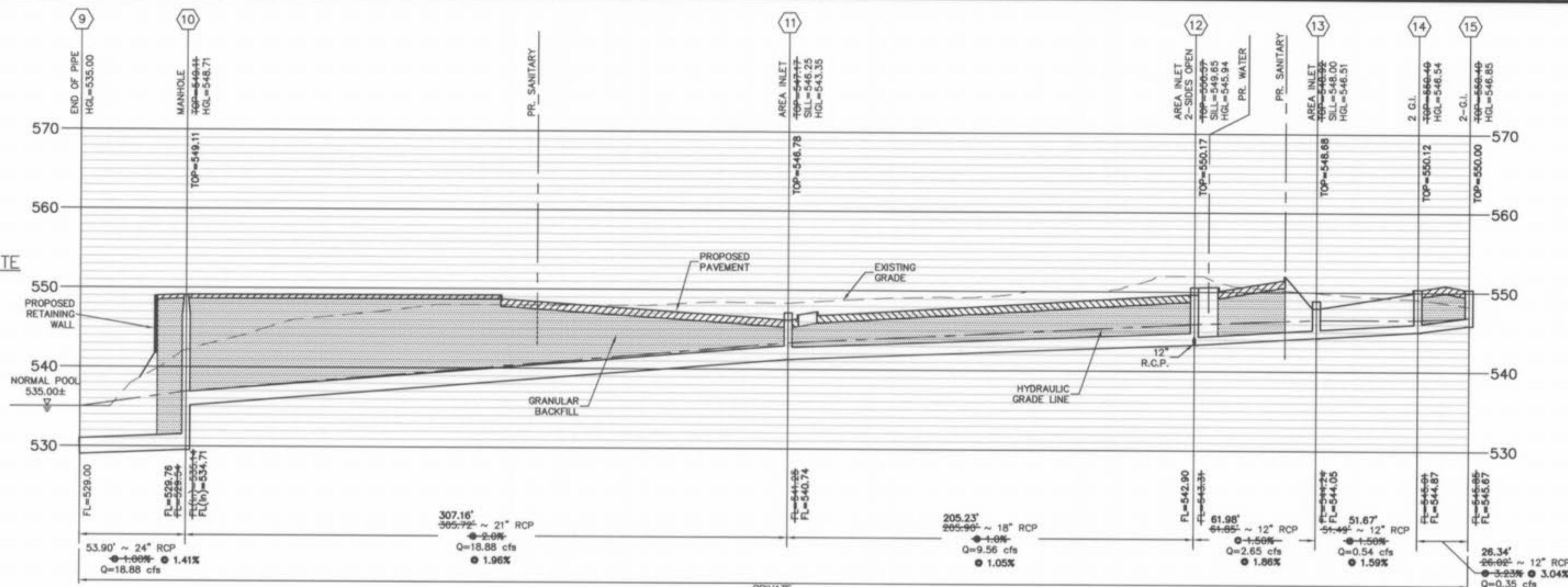
425 NORTH NEW BALLAS ROAD  
SUITE 103  
ST. LOUIS, MO. 63141  
PH. (314) 432-8100  
FAX (314) 432-8171  
e-mail: general@stockassoc.com

DRAWN BY:	DATE:	CHECKED BY:	DATE:
J.T.R.	03/03/03	G.M.S.	03/03/03
JOB NUMBER:		SHEET:	
202-2777		C1 of 1	



GEORGE M. STOCK E-25116

**STORM SEWER PERMITTING AND CONSTRUCTION NOTE**  
 STORM SEWER STRUCTURES 1-7 AND 6-8 TO BE PERMITTED AND CONSTRUCTED PER "STORM SEWER AND GRADING PLAN" PREPARED BY STOCK AND ASSOCIATES WITH AN ORIGINATION DATE OF 01/03/03. STRUCTURES NOTED ARE SHOWN ON THESE PLANS FOR OVERALL PROJECT REFERENCE ONLY.



**HYDRAULIC DATA SHEET (15yr/20min)**

structure number	line reach	flowline upper	flowline lower	inversion	length (ft)	slope (ft/ft)	pipe size (in)	drainage area (ac)	coeff (cfs/ac)	flow (cfs)	vel (ft/sec)	head loss (ft)	friction losses				existing HGL		entering HGL		top of structure	freeboard (ft)	roughness coeff	pipe capacity	drop structure	
													minor	major	total (ft)	ft + dia	HE + HF	HE	upper reach	lower reach						top of drop struc.
29	29	530.80	530.36	46.4	0.0066	12	x	x	2.28	2.88	0.13	0.29	0.19	0.08	0.61	0.69	531.80	532.25	532.07	532.96	531.80	535.65	2.75	0.013	3.48	0.00
29	28	530.36	530.10	23.6	0.0110	12	x	x	2.68	3.41	0.18	0.48	0.13	0.10	0.61	0.71	531.36	531.23	531.10	532.07	531.36	535.40	3.35	0.013	3.75	0.00
28	28	530.80	530.80	0.0	0.0000	12	x	x	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	530.80	530.80	530.80	530.80	530.80	535.40	3.35	0.013	3.75	0.00
28	26	538.30	537.89	48.9	0.0100	12	x	x	0.85	1.08	0.02	0.02	0.02	0.02	0.00	0.02	539.30	538.94	538.91	539.32	539.30	543.30	3.98	0.013	3.58	0.00
25	25	537.89	537.00	25.0	0.0356	12	x	x	1.12	1.43	0.03	0.04	0.02	0.02	0.00	0.02	538.89	538.02	538.00	538.91	538.89	543.25	4.34	0.013	6.74	0.00
24	24	537.00	537.00	0.0	0.0000	12	x	x	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	537.00	537.00	537.00	537.00	537.00	543.25	4.34	0.013	6.74	0.00
23	23	539.40	538.00	140.8	0.0099	15	x	x	3.59	2.93	0.13	0.48	0.43	0.00	0.00	0.00	540.65	537.60	537.17	540.65	540.65	543.00	2.35	0.013	6.46	0.00
22	22	538.00	537.70	30.0	0.0100	18	x	x	5.39	3.05	0.14	0.78	0.08	0.07	0.09	0.16	539.50	539.32	539.24	539.66	539.25	543.00	3.34	0.013	10.53	0.00
21	21	537.70	536.60	110.1	0.0100	18	x	x	5.74	3.25	0.16	0.94	0.33	0.04	0.00	0.04	539.20	538.54	538.21	539.24	539.20	545.50	6.26	0.013	10.53	0.00
20	20	536.60	535.40	119.5	0.0100	18	x	x	6.71	3.80	0.22	1.50	0.49	0.11	0.00	0.11	538.10	537.86	537.17	538.21	538.10	549.50	11.29	0.013	10.56	0.00
19	19	535.40	534.57	99.7	0.0083	21	x	x	8.15	3.39	0.18	1.45	0.26	-0.01	0.02	0.02	537.15	536.83	536.57	537.17	536.90	548.70	11.63	0.013	14.50	0.00
18	18	534.57	529.00	103.9	0.0449	24	x	x	6.57	2.73	0.12	0.99	0.15	-0.07	0.00	0.00	536.57	535.15	535.00	536.57	536.32	548.70	12.13	0.013	52.91	0.00
17	17	529.00	529.00	0.0	0.0000	24	x	x	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	529.00	529.00	529.00	529.00	529.00	548.70	12.13	0.013	52.91	0.00
16	16	548.00	543.31	100.0	0.0489	12	x	x	2.83	3.60	0.20	0.57	0.63	0.27	0.00	0.27	549.00	547.61	546.98	549.27	549.00	564.00	4.73	0.013	7.74	0.00
12	12	543.31	543.31	0.0	0.0000	12	x	x	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	543.31	543.31	543.31	543.31	543.31	564.00	4.73	0.013	7.74	0.00
15	15	545.85	545.01	26.0	0.0323	12	x	x	0.35	0.45	0.00	0.00	0.00	0.00	0.00	0.00	546.85	544.42	544.42	546.85	546.85	549.85	3.00	0.013	6.42	0.00
14	14	545.01	544.24	51.5	0.0150	12	x	x	0.54	0.69	0.01	0.00	0.01	0.01	0.01	0.02	546.01	547.56	547.55	547.58	546.01	549.85	2.27	0.013	4.37	0.00
13	13	544.24	543.31	61.9	0.0150	12	x	x	2.65	3.37	0.18	0.47	0.34	0.23	0.00	0.23	545.24	547.32	546.98	547.55	545.24	548.92	1.37	0.013	4.36	0.00
12	12	543.31	541.25	205.9	0.0100	18	x	x	9.58	3.41	0.45	4.34	1.70	0.54	0.32	0.86	544.81	546.12	544.42	546.98	544.31	549.85	2.67	0.013	10.53	0.00
11	11	541.25	535.14	305.7	0.0200	21	x	x	18.88	7.85	0.98	18.98	4.33	0.97	0.45	1.42	543.00	541.22	538.89	544.42	542.75	548.25	1.83	0.013	22.46	0.00
10	10	539.54	529.00	53.9	0.0100	24	x	x	18.88	6.01	0.56	10.59	0.37	-0.53	0.26	0.26	537.54	535.37	535.00	536.63	536.69	549.11	12.22	0.013	22.70	5.60
9	9	529.00	529.00	0.0	0.0000	24	x	x	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	529.00	529.00	529.00	529.00	529.00	549.11	12.22	0.013	22.70	5.60

**STORM SEWER PROFILES**  
 SCALE: HORIZ. 1"=40'  
 VERT. 1"=10'

PROFILE NOT SHOWN FOR YARD DRAIN AND 6" P.V.C. ON EAST END OF BUILDING 'B'.

**AS-BUILT**  
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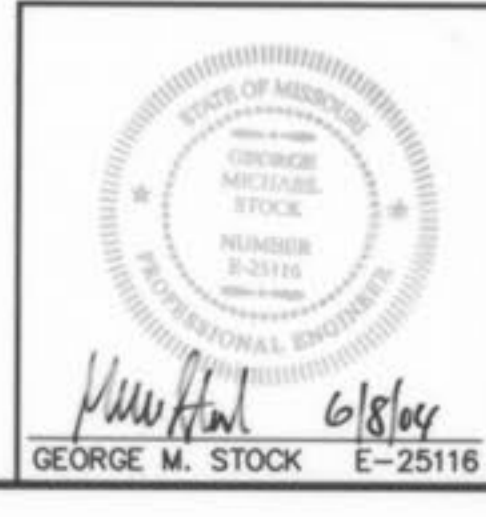
- SANITARY SEWER "C" TO SANITARY SEWER "D", SANITARY SEWER "I" TO SANITARY SEWER "J"

Donald W. Taylor, Missouri P.L.S. No. 2041

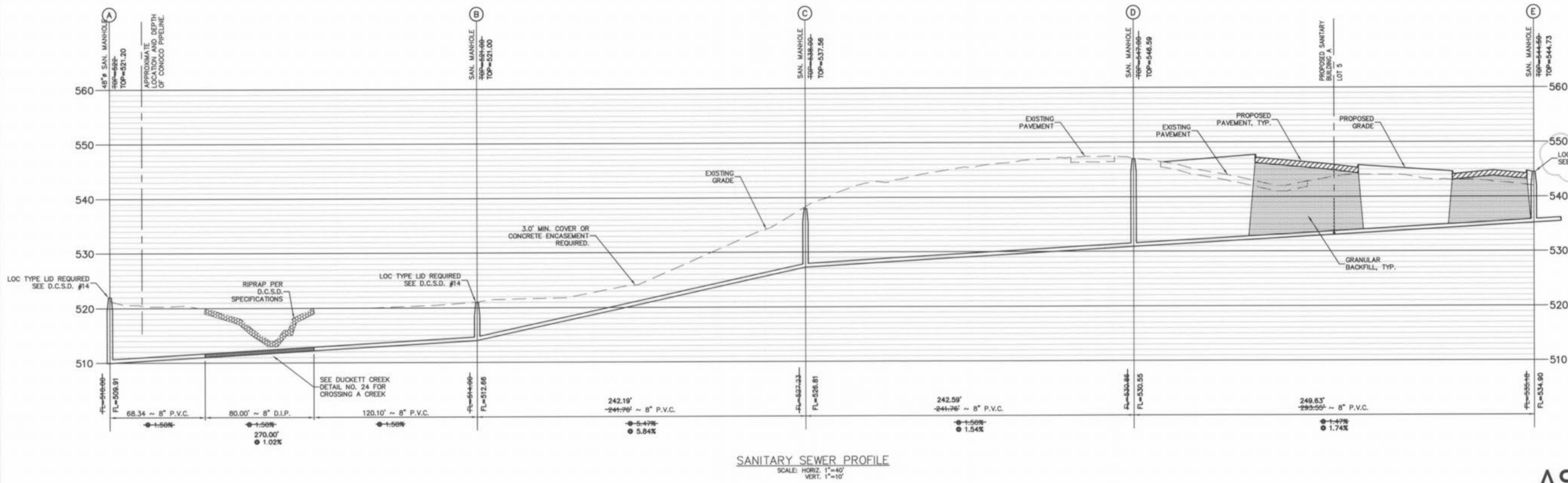
- 05/04/04 AS-BUILTS
- 03/20/03 O'FALLON COMMENTS
- 03/19/03 O'FALLON COMMENTS
- 01/08/03 DCSO COMMENTS

**LAKESIDE SHOPPES**  
**STORM SEWER PROFILES AND HYDRAULIC DATA**  
**STOCK & ASSOCIATES CONSULTING ENGINEERS, INC.**  
 425 NORTH NEW BALLAS ROAD  
 SUITE 165  
 ST. LOUIS, MO. 63141  
 PH. (314) 432-8100  
 FAX (314) 432-8171  
 e-mail: general@stockassoc.com

DATE: 11/21/02  
 CHECKED BY: G.M.S.  
 DATE: 11/21/02  
 JOB NUMBER: 202-2777  
 SHEET: C12 of 25



GEORGE M. STOCK  
 E-25116



SANITARY SEWER PROFILE  
SCALE: HORIZ. 1"=40'  
VERT. 1"=10'

PIPELINE CROSSING NOTE:  
CONTRACTOR TO CONTACT AND COORDINATE WITH CONDOCO TO REVIEW CROSSING PROCEDURES AND REQUIREMENTS PRIOR TO DIGGING AND CONSTRUCTION IN THIS AREA.

### AS-BUILT

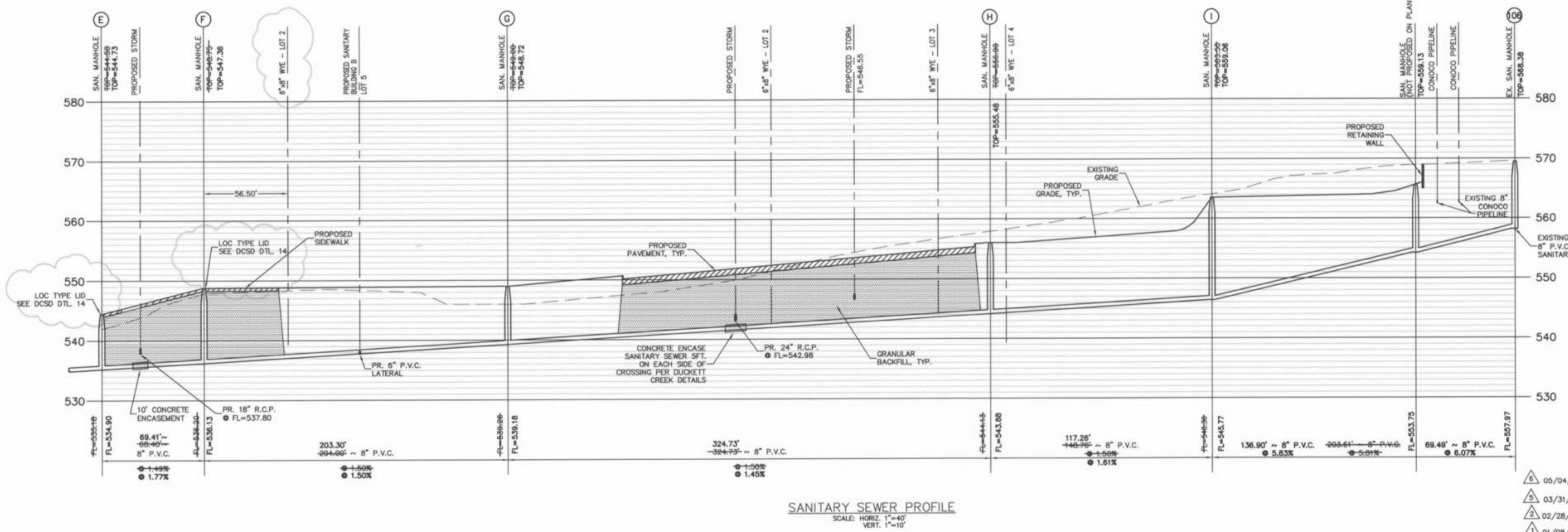
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SANITARY SEWER "I" TO SANITARY SEWER "J"

Donald W. Taylor, Missouri P.L.S. No. 2041  
REGISTERED LAND SURVEYOR



SANITARY SEWER PROFILE  
SCALE: HORIZ. 1"=40'  
VERT. 1"=10'

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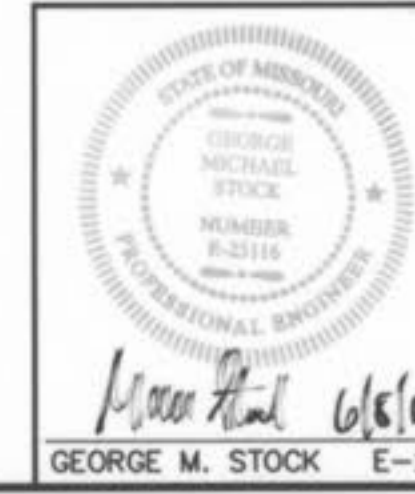
- 05/04/04 AS-BUILTS
- 03/31/03 O'FALLON AND DCSO COMMENTS
- 02/28/03 DCSO, MoDOT COMMENTS AND DESIGN COORDINATION
- 01/08/03 DCSO COMMENTS

LAKESIDE SHOPPES  
SANITARY SEWER PROFILE

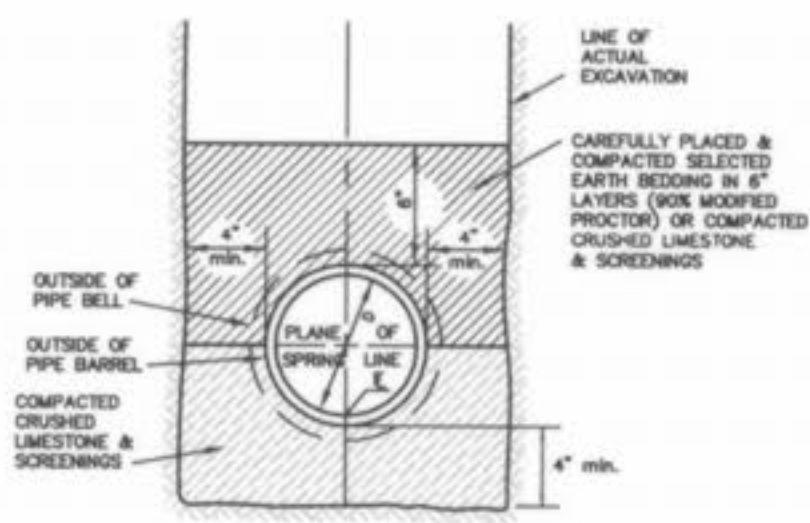
**STOCK & ASSOCIATES  
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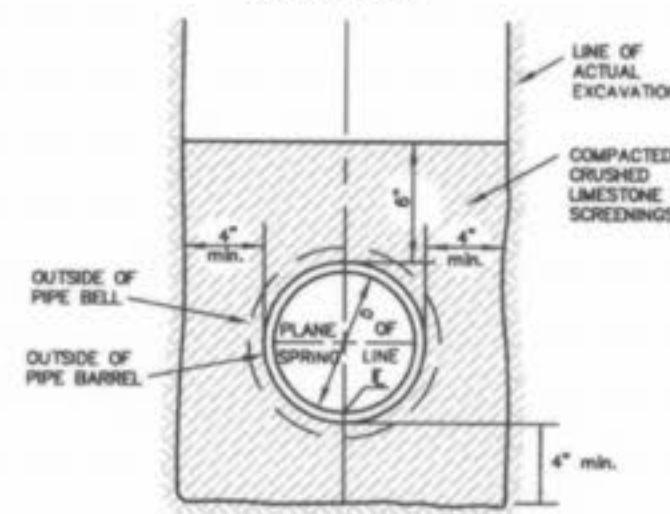
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GEORGE M. STOCK E-25116

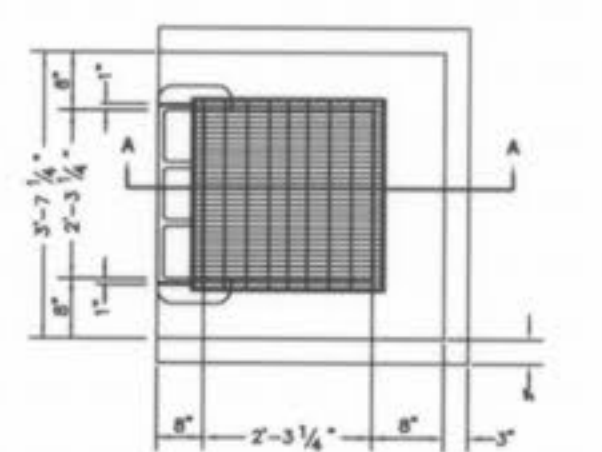


PIPE BEDDING CLASS "C"  
(MODIFIED FOR REINFORCED CONCRETE PIPE)

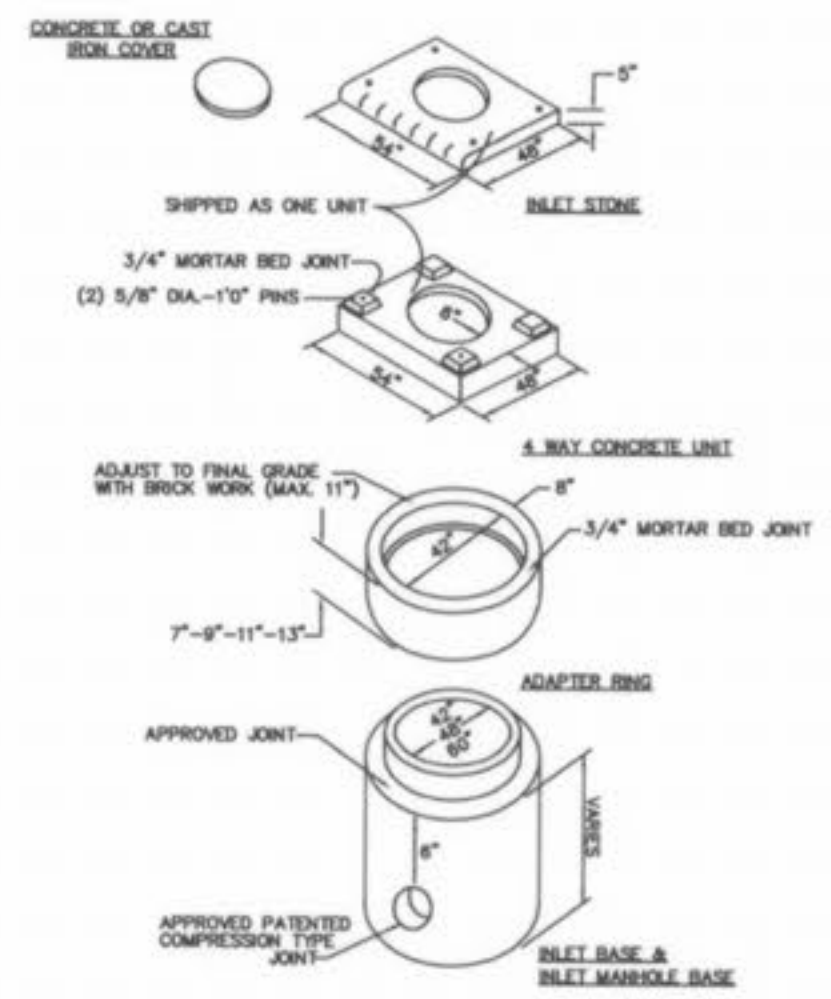
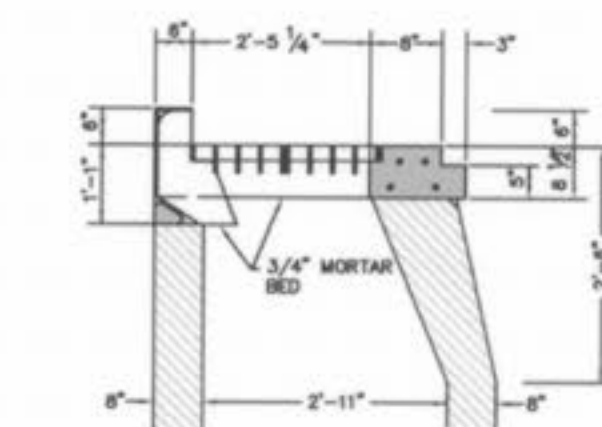


PIPE BEDDING CLASS "C"  
(FOR ALL PIPE EXCEPT REINFORCED CONCRETE PIPE)

PIPE BEDDING DETAILS  
(n.l.s.)

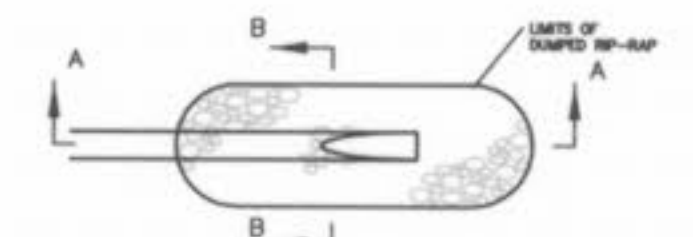


SECTION "A-A"  
2 GRATE INLET  
W/SIDE INTAKE  
(n.l.s.)

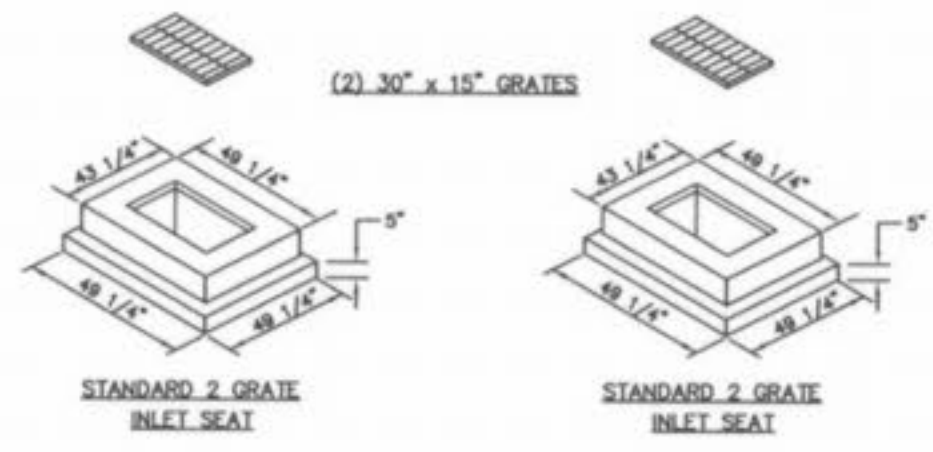


PRECAST AREA INLET DETAIL  
(n.l.s.)

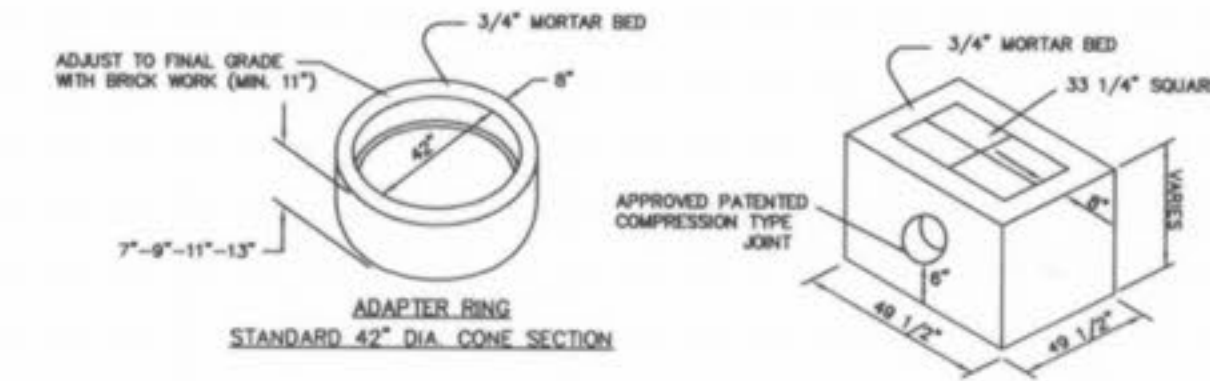
NOTE:  
EACH INLET TO HAVE 5/8" TRASH BAR INSTALLED PER MSD SPECIFICATIONS.



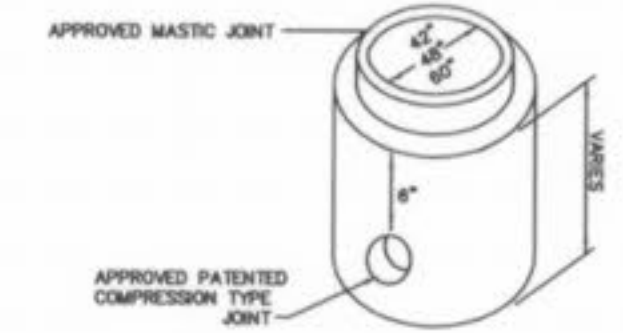
RIP-RAP DETAIL FOR  
PIPE PLACEMENT INTO LAKE  
(n.l.s.)



STANDARD 2 GRATE  
INLET SEAT



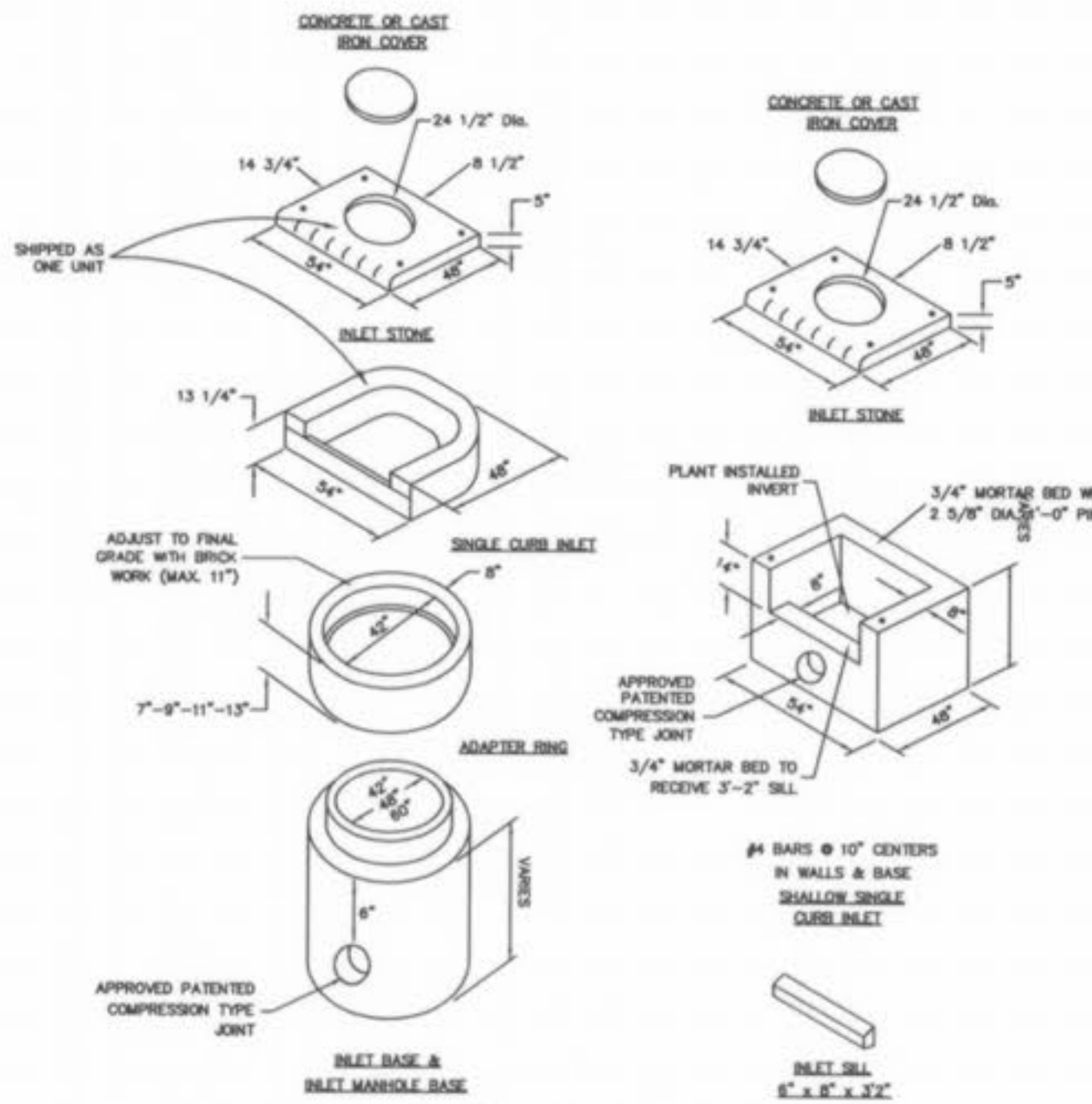
ADAPTER RING  
STANDARD 42" DIA. CONE SECTION



2 GRATE INLET  
INLET MANHOLE BASE

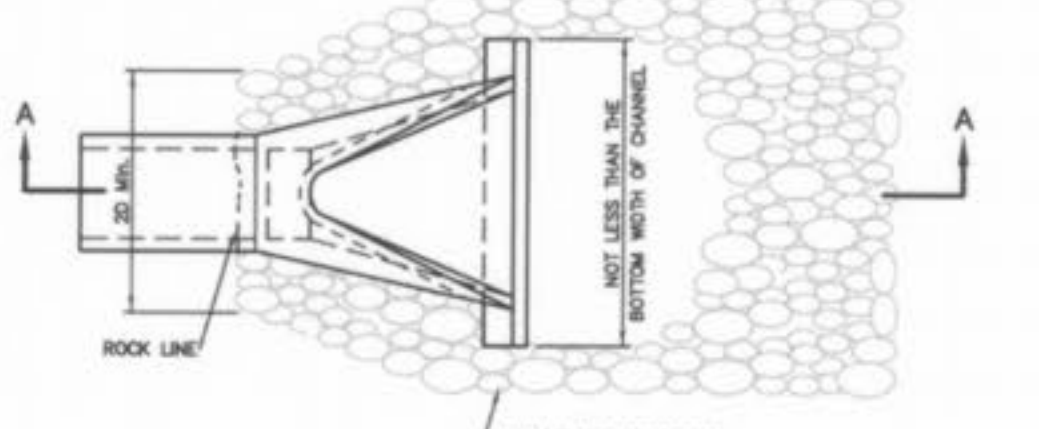
2 GRATE INLET DETAIL  
(n.l.s.)

NOTE:  
INLETS ON THIS SHEET ARE TO BE USED IN LOCATIONS WHERE STANDARD OPEN THROAT INLETS CAN NOT BE USED, IN PAVED TRAFFIC WAY AND IN LIMITED EASEMENTS.

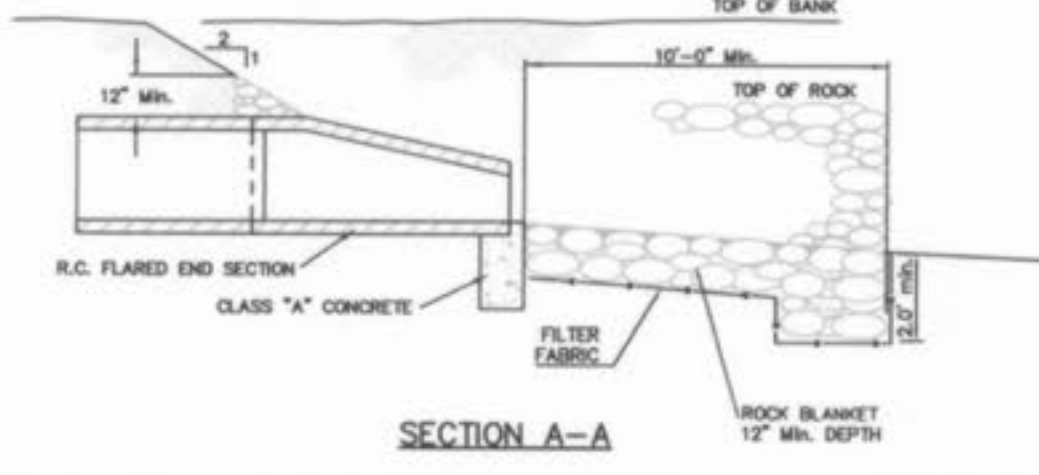


CURB INLET DETAILS  
(n.l.s.)

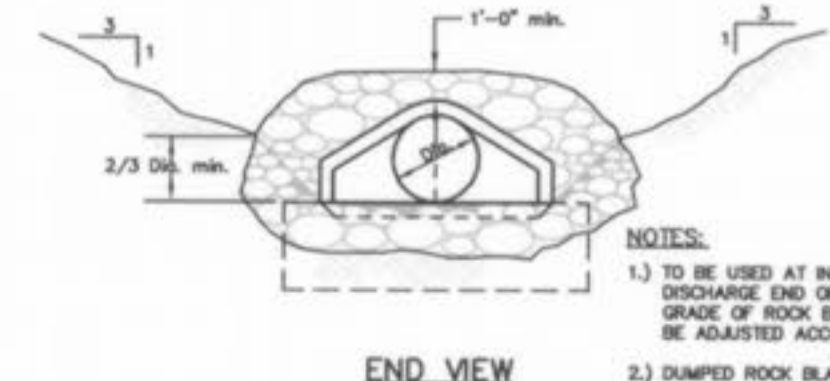
NOTE:  
EACH INLET TO HAVE 5/8" TRASH BAR INSTALLED PER MSD SPECIFICATIONS.



PLAN VIEW



SECTION A-A



END VIEW

FLARED END SECTION DETAIL  
(n.l.s.)

NOTES:  
1) TO BE USED AT INTAKE AND DISCHARGE END OF PIPE GRADE OF ROCK BLANKET TO BE ADJUSTED ACCORDINGLY.  
2) SLOPED ROCK BLANKET REQUIRED.

## AS-BUILT

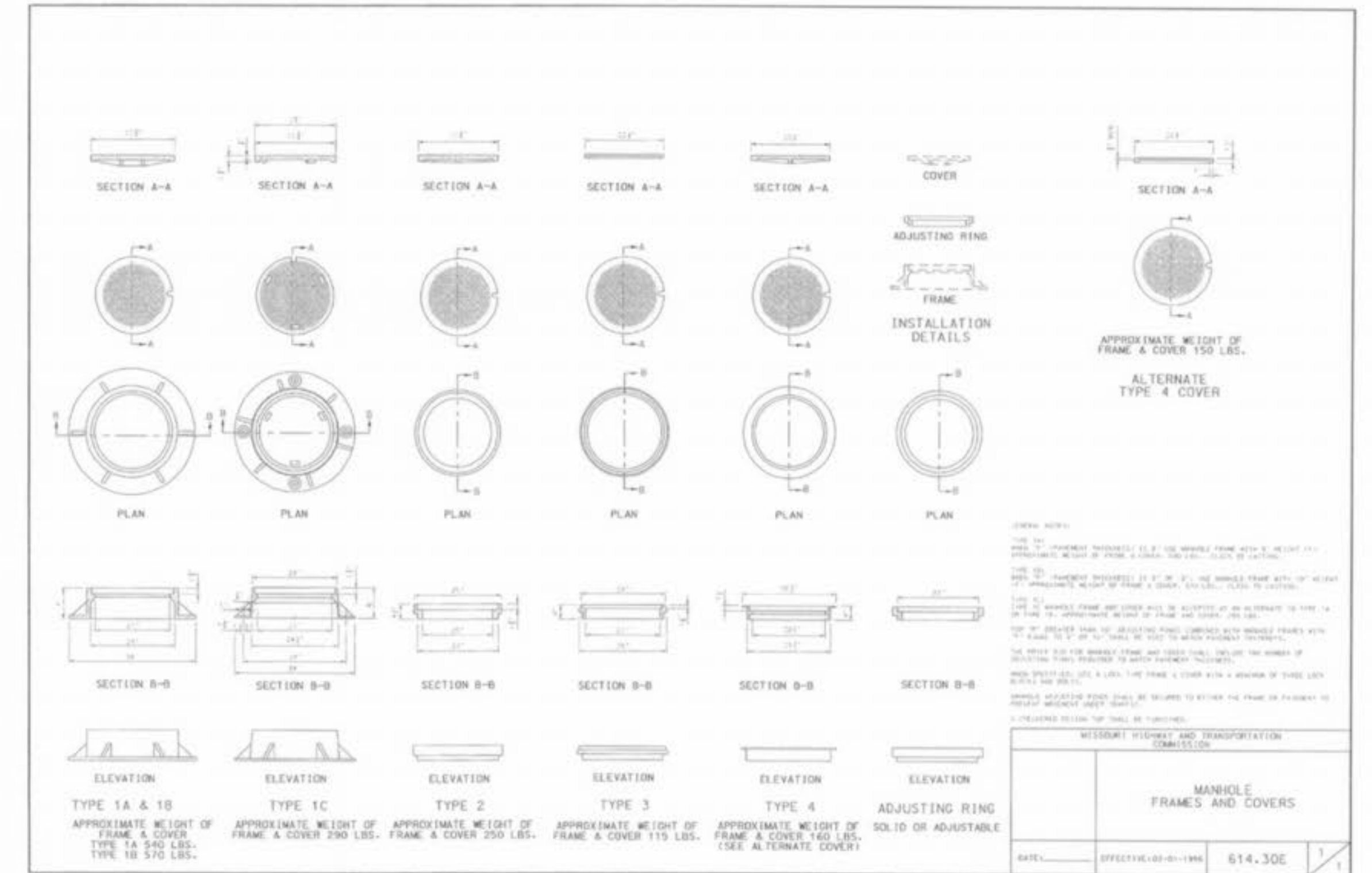
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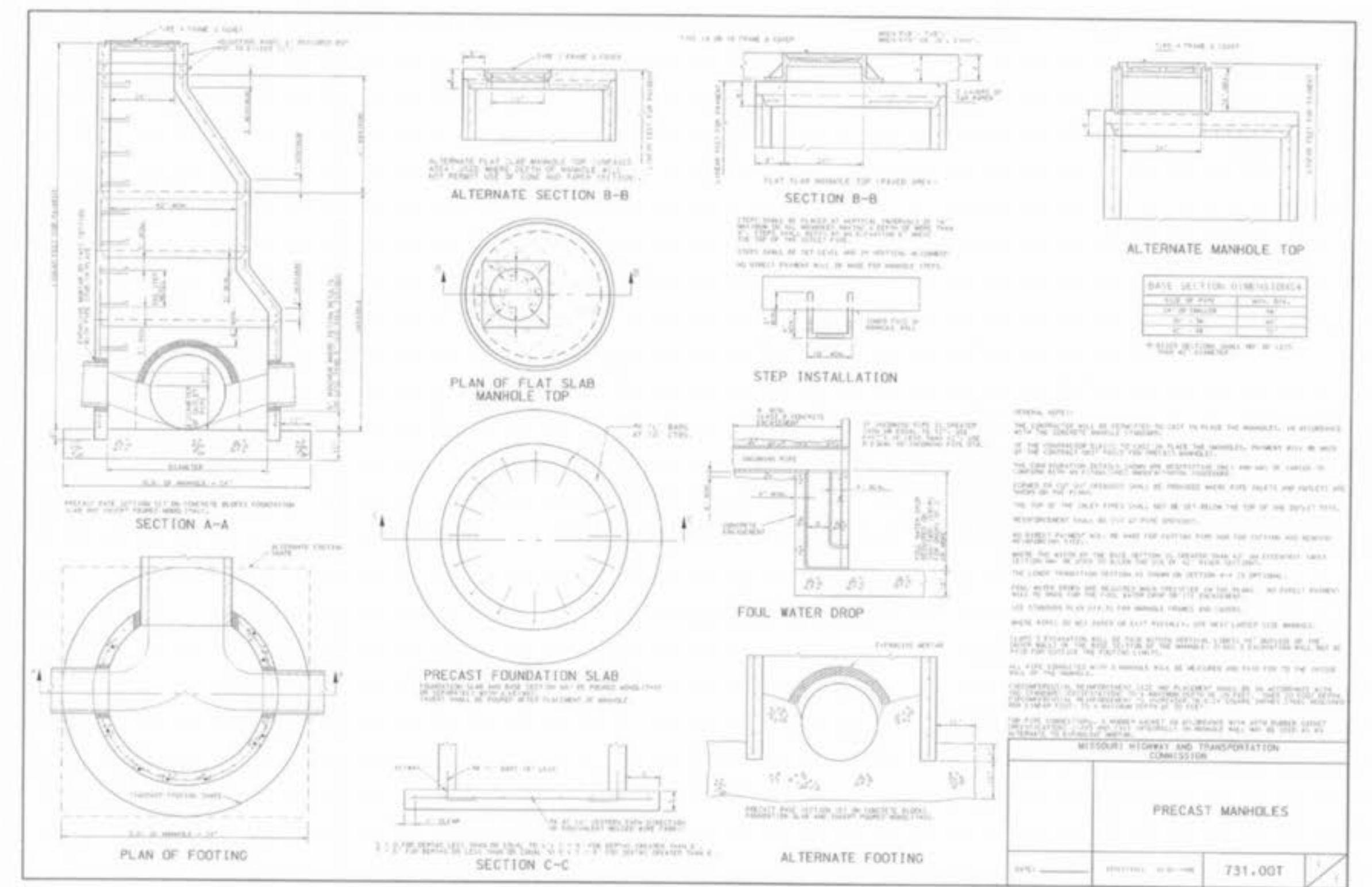
SANITARY SEWER "C" TO SANITARY SEWER "D",  
SANITARY SEWER "I" TO SANITARY SEWER "J"

*Donald W. Taylor*  
Donald W. Taylor, Missouri P.L.S. No. 2041



GENERAL NOTES:  
1. ALL MANHOLES SHALL BE CONSTRUCTED WITH A MINIMUM OF 12" THICK CONCRETE OR CAST IRON COVER AND FRAME.  
2. ALL MANHOLES SHALL BE CONSTRUCTED WITH A MINIMUM OF 12" THICK CONCRETE OR CAST IRON COVER AND FRAME.  
3. ALL MANHOLES SHALL BE CONSTRUCTED WITH A MINIMUM OF 12" THICK CONCRETE OR CAST IRON COVER AND FRAME.  
4. ALL MANHOLES SHALL BE CONSTRUCTED WITH A MINIMUM OF 12" THICK CONCRETE OR CAST IRON COVER AND FRAME.  
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10. ALL MANHOLES SHALL BE CONSTRUCTED WITH A MINIMUM OF 12" THICK CONCRETE OR CAST IRON COVER AND FRAME.

TYPE	APPROXIMATE WEIGHT OF FRAME & COVER
TYPE 1A & 1B	350 LBS.
TYPE 1C	290 LBS.
TYPE 2	250 LBS.
TYPE 3	175 LBS.
TYPE 4	140 LBS. (SEE ALTERNATE COVER)



GENERAL NOTES:  
1. ALL PRECAST MANHOLES SHALL BE CONSTRUCTED WITH A MINIMUM OF 12" THICK CONCRETE OR CAST IRON COVER AND FRAME.  
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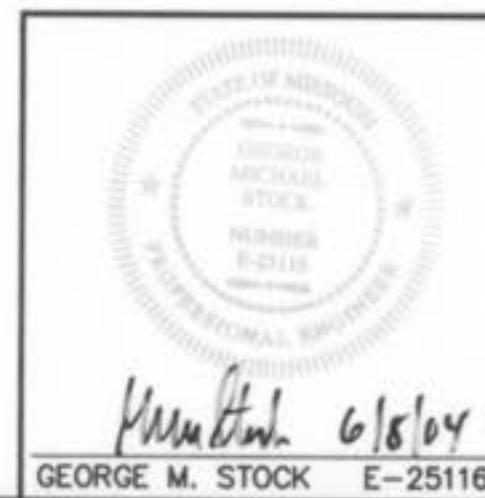
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05/04/04 AS-BUILTS

LAKESIDE SHOPPES  
SEWER DETAILS

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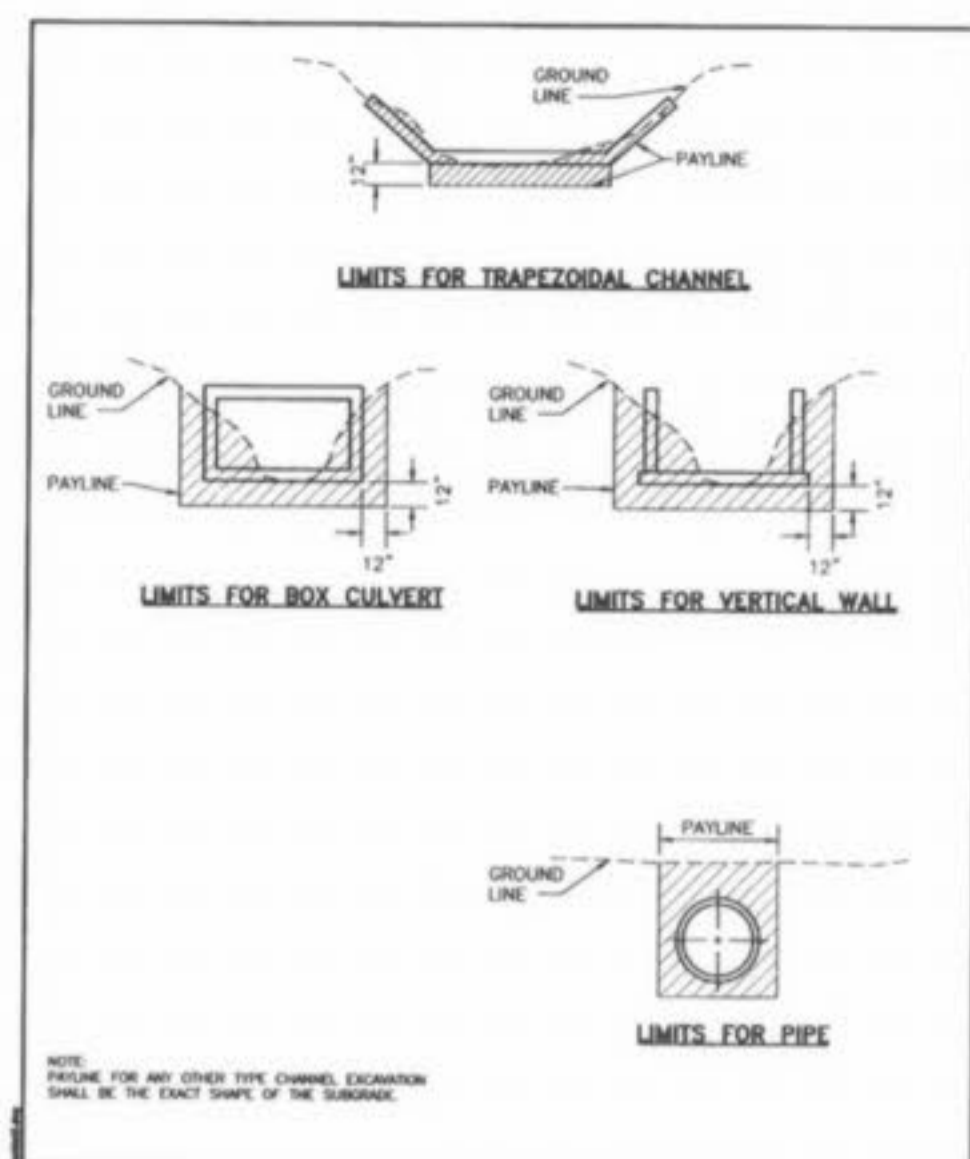


DRWN BY:	DATE:	CHECKED BY:	DATE:	JOB NUMBER:	SHEET:
GEORGE M. STOCK	11/21/02	G.M.S.	11/21/02	202-2777	C14 of 25

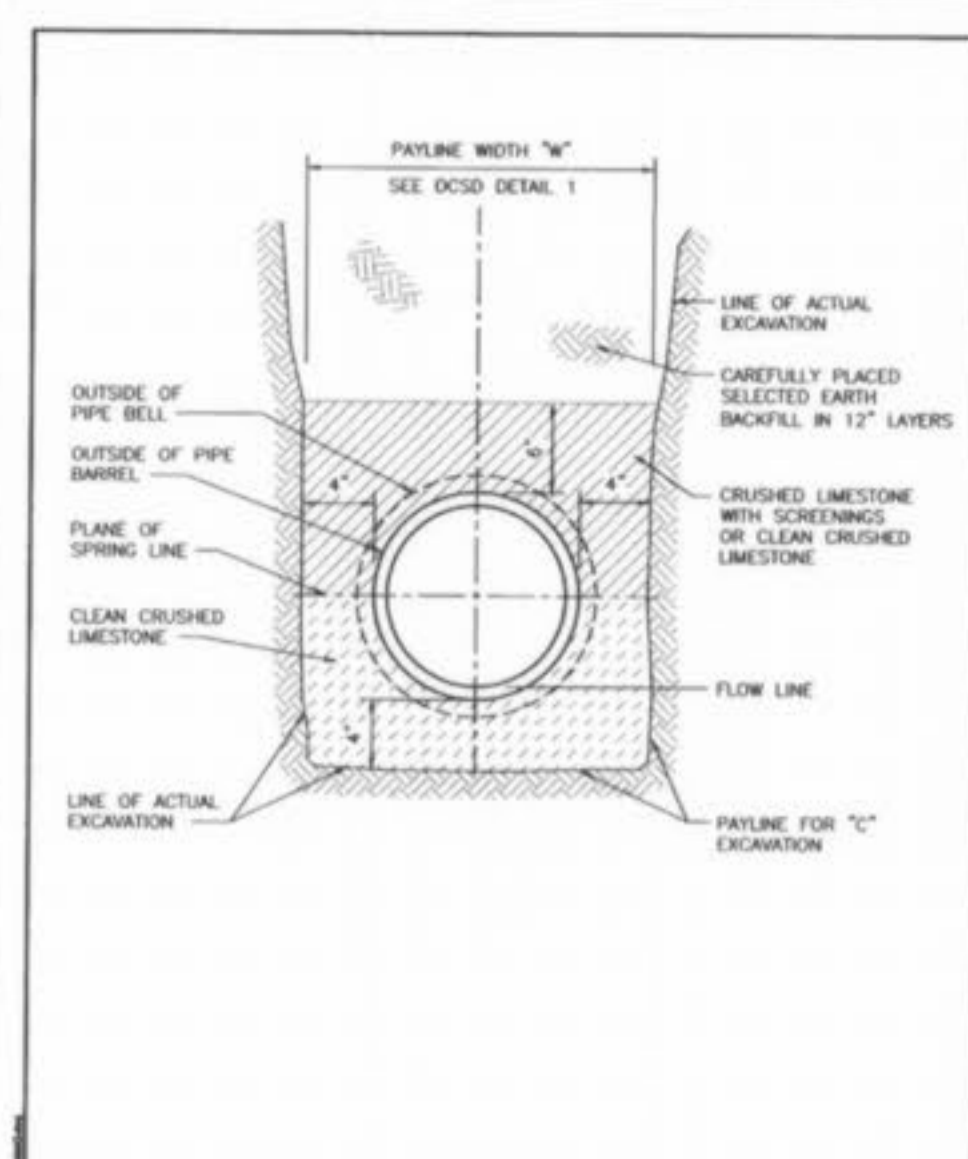
Lakeside Shoppes A/B

ROUND PIPE				HORIZONTAL ELLIPTICAL PIPE			
INSIDE DIAMETER OF PIPE (INCHES)	PAYLINE WIDTH OF TRENCH (INCHES)	FIN-VOLUMES SQ. FT. PER FT. (CONCRETE ENCASUREMENT)	CONCRETE ENCASUREMENT (INCHES)	INSIDE DIAMETER OF PIPE (INCHES)	PAYLINE WIDTH OF TRENCH (FEET)	FIN-VOLUMES SQ. FT. PER FT. (CONCRETE ENCASUREMENT)	CONCRETE ENCASUREMENT (INCHES)
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	5.55				
21	39	3.25	6.61	14 x 23	41	3.42	5.94
24	42	3.50	7.39	19 x 30	49	4.08	7.88
27	45	3.75	8.18	22 x 34	53	4.42	8.61
30	49	4.08	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						
42	63	5.25	13.38	34 x 53	75	6.25	14.65
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	30.00
84	112	9.33	32.57	68 x 106	135	11.25	33.91
90	118	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 166	202	16.83	64.48
144	182	15.17	72.40	116 x 180	218	18.17	73.59

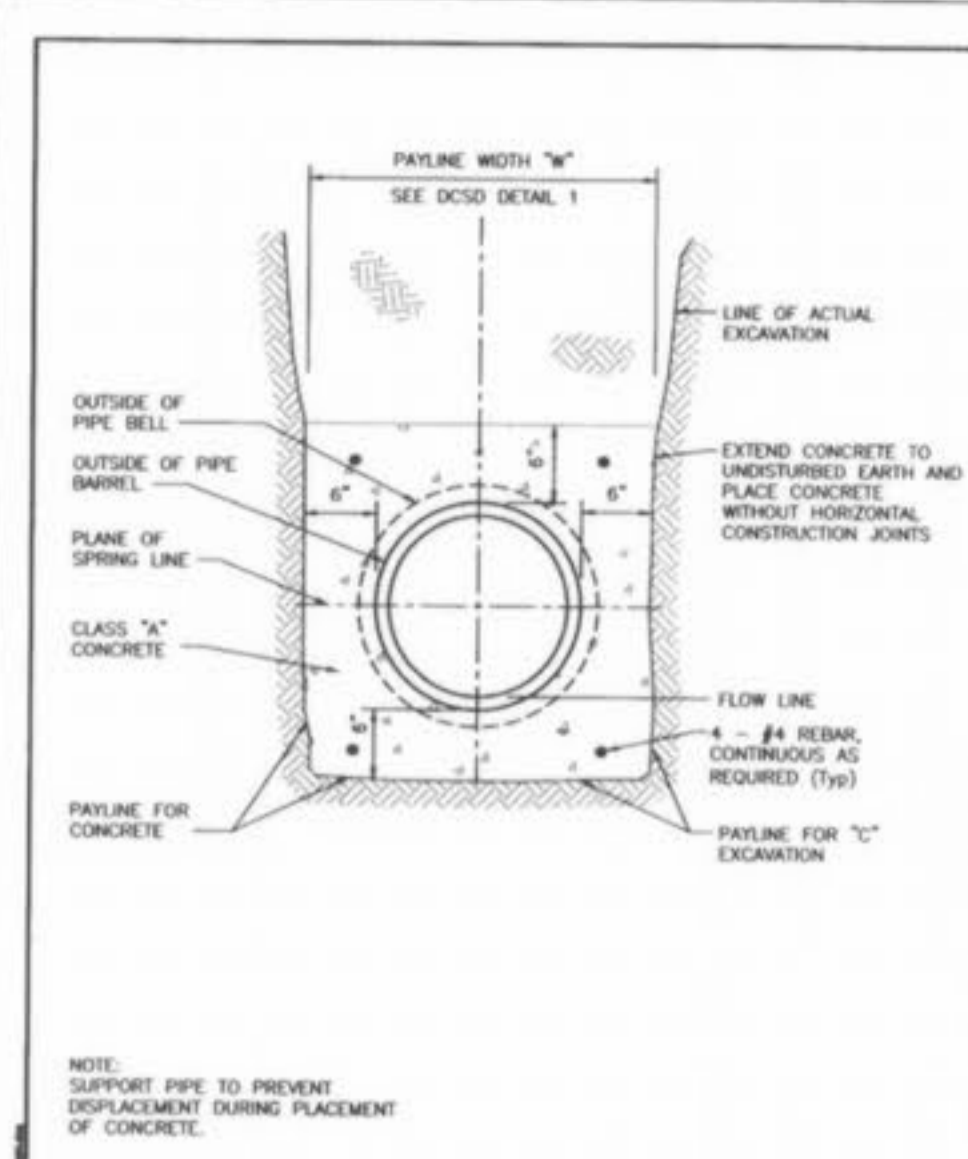
**Duckett Creek Sanitary District**  
PAYLINE LIMITS FOR EXCAVATION  
DATE: 12-21-99



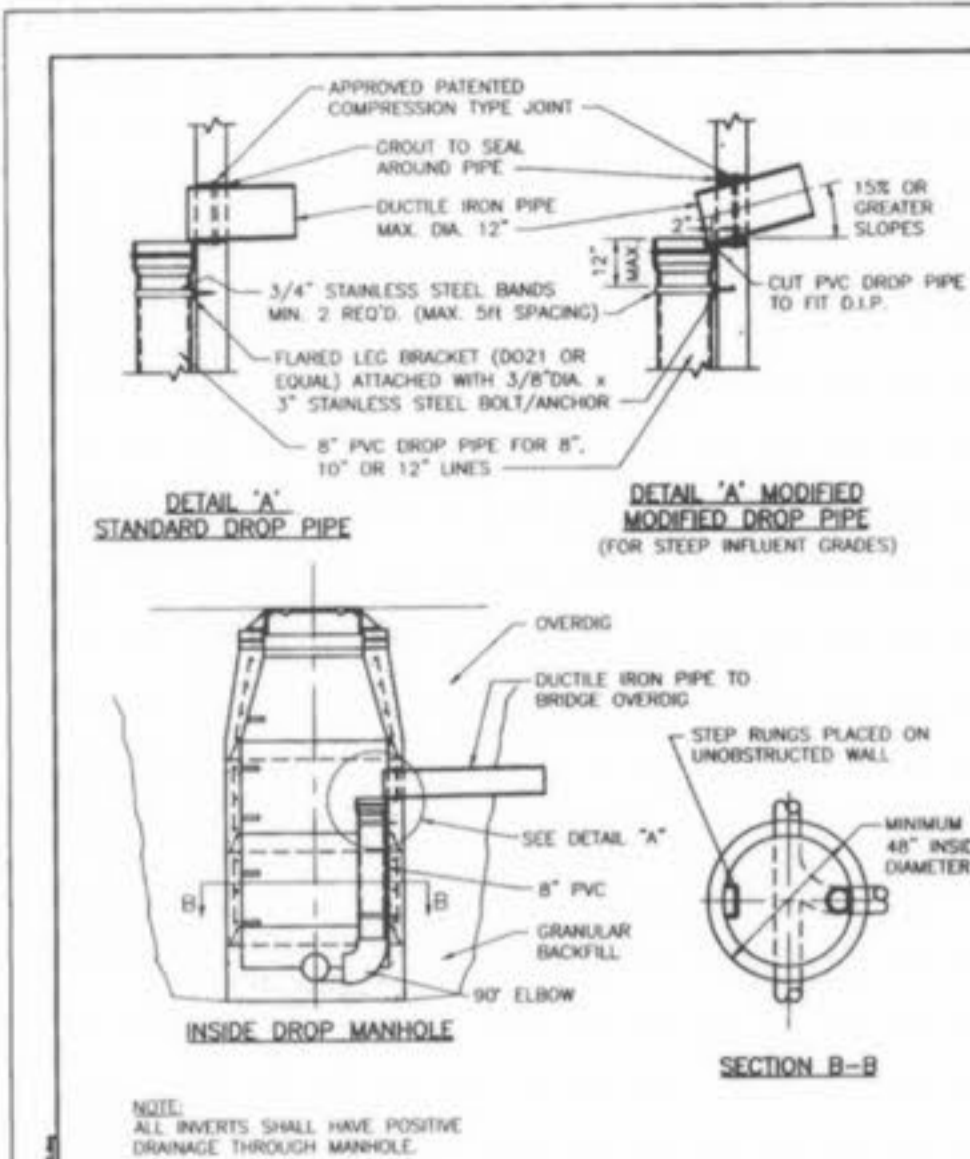
**Duckett Creek Sanitary District**  
PAYLINE LIMITS FOR EXCAVATION  
DATE: 12-21-99



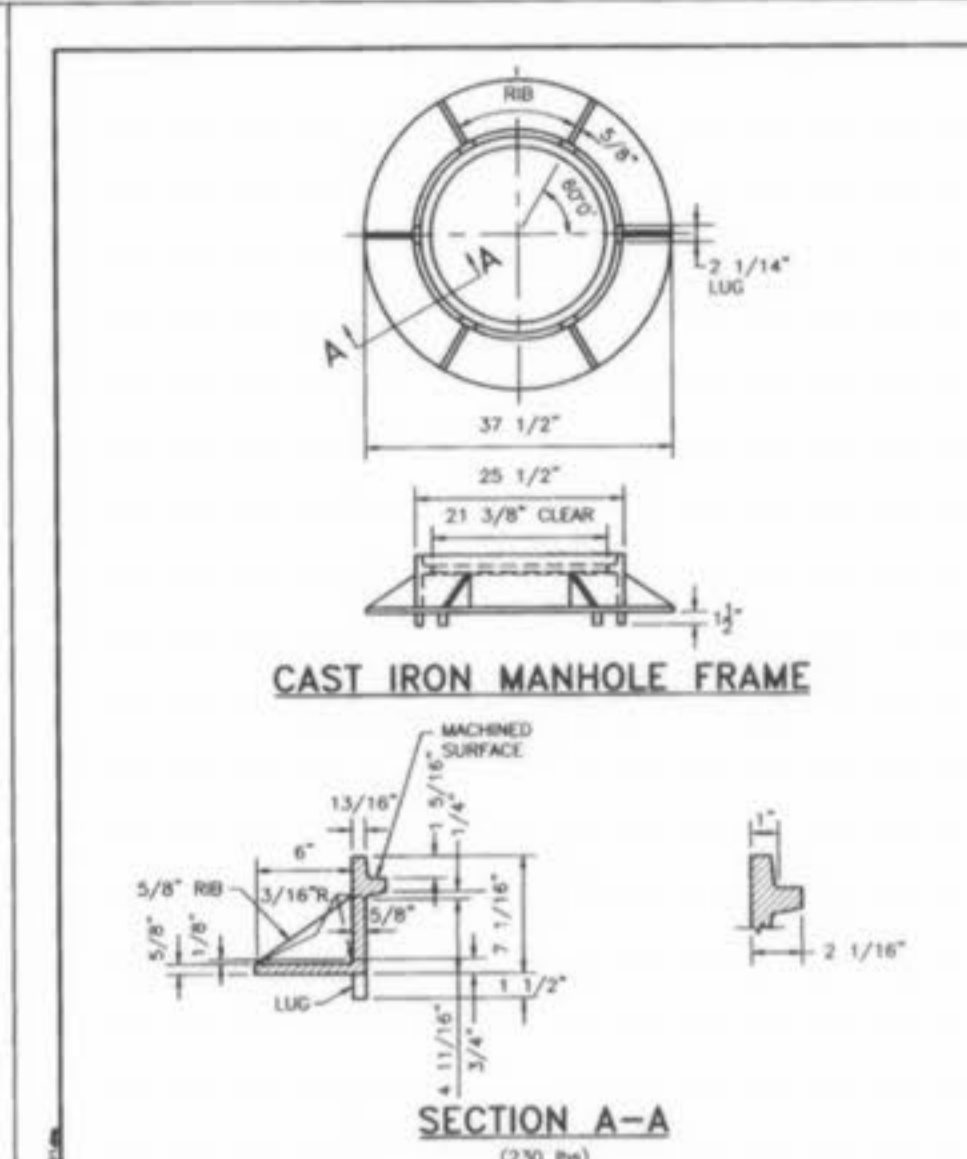
**Duckett Creek Sanitary District**  
PIPE BEDDING CLASS "C"  
DATE: 12-21-99



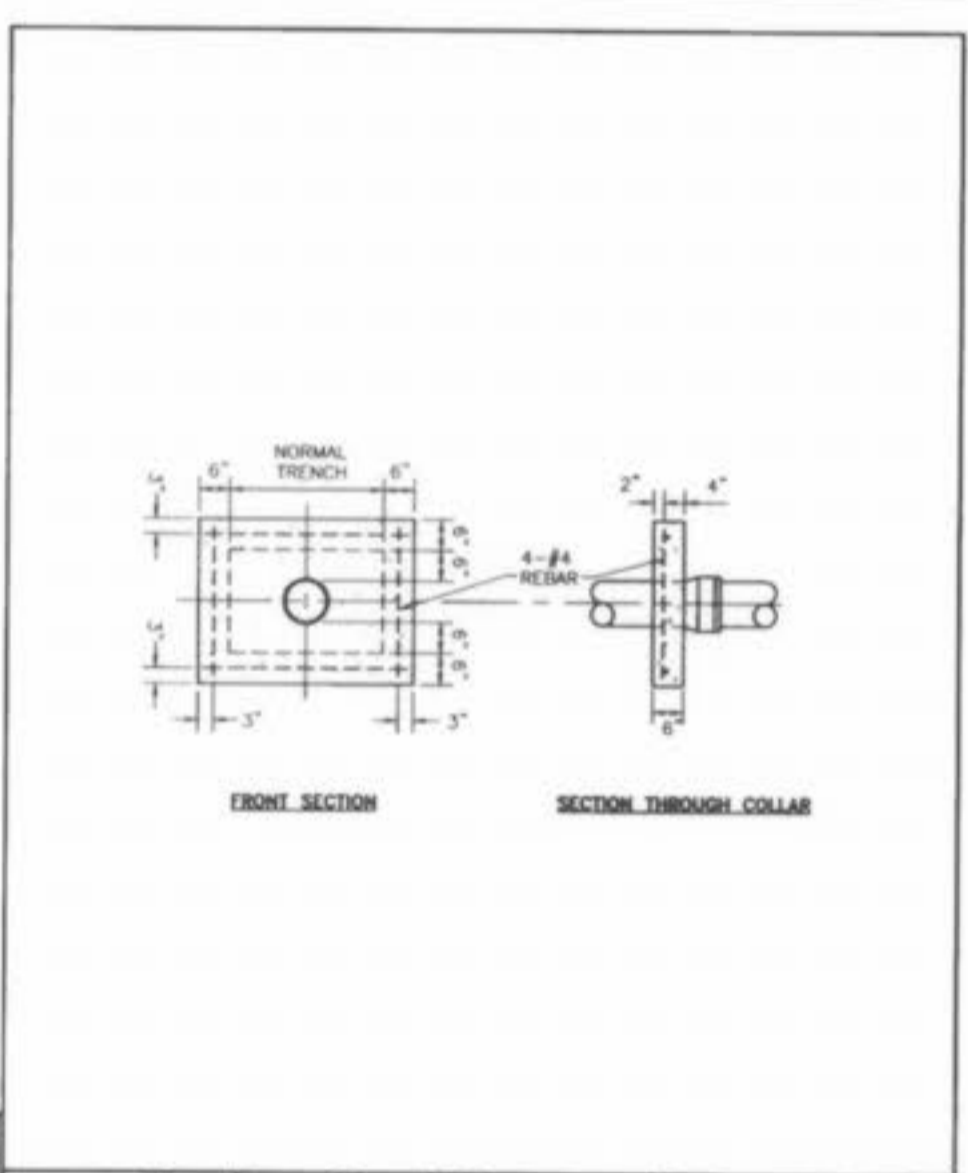
**Duckett Creek Sanitary District**  
TYPICAL CONCRETE ENCASUREMENT  
DATE: 12-21-99



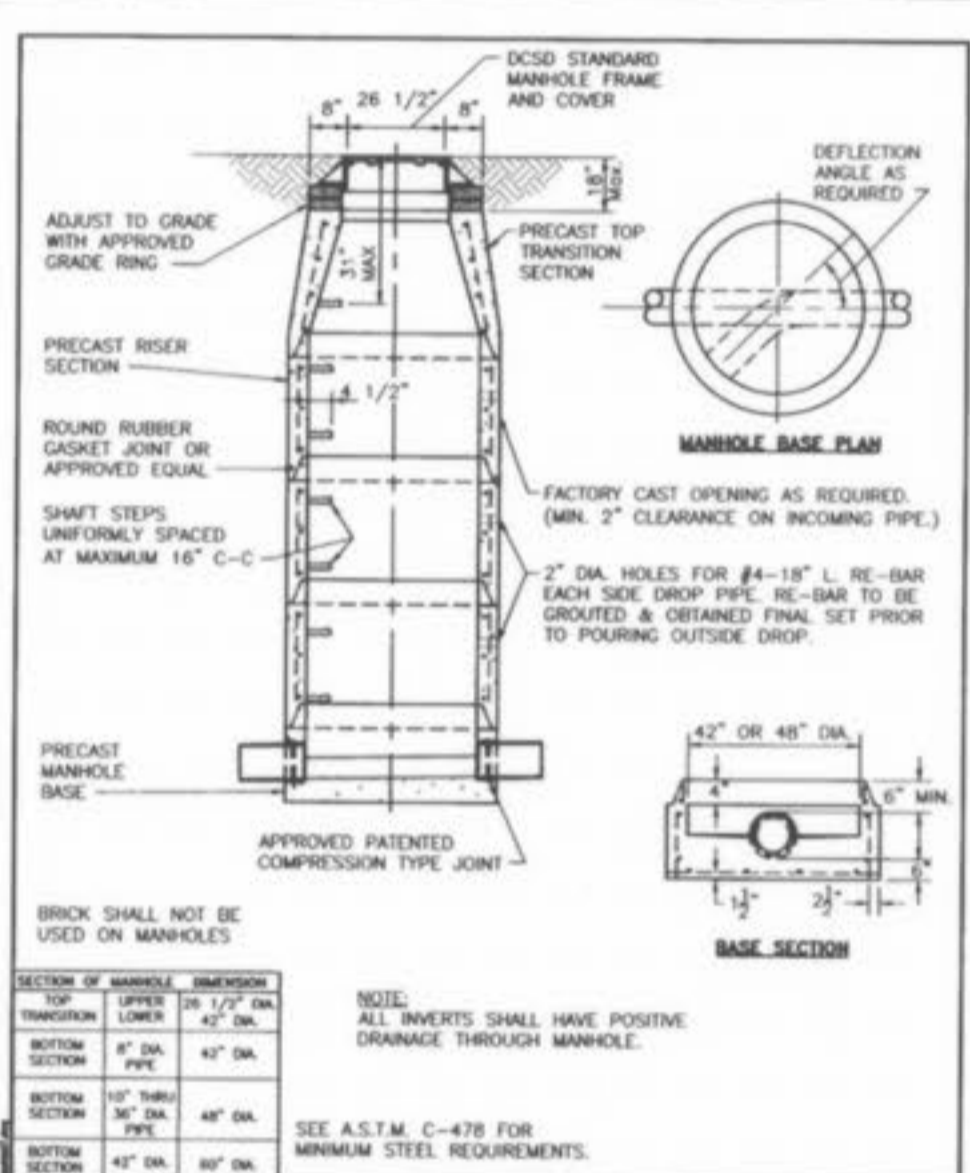
**Duckett Creek Sanitary District**  
INSIDE DROP MANHOLE  
DATE: 01-10-00



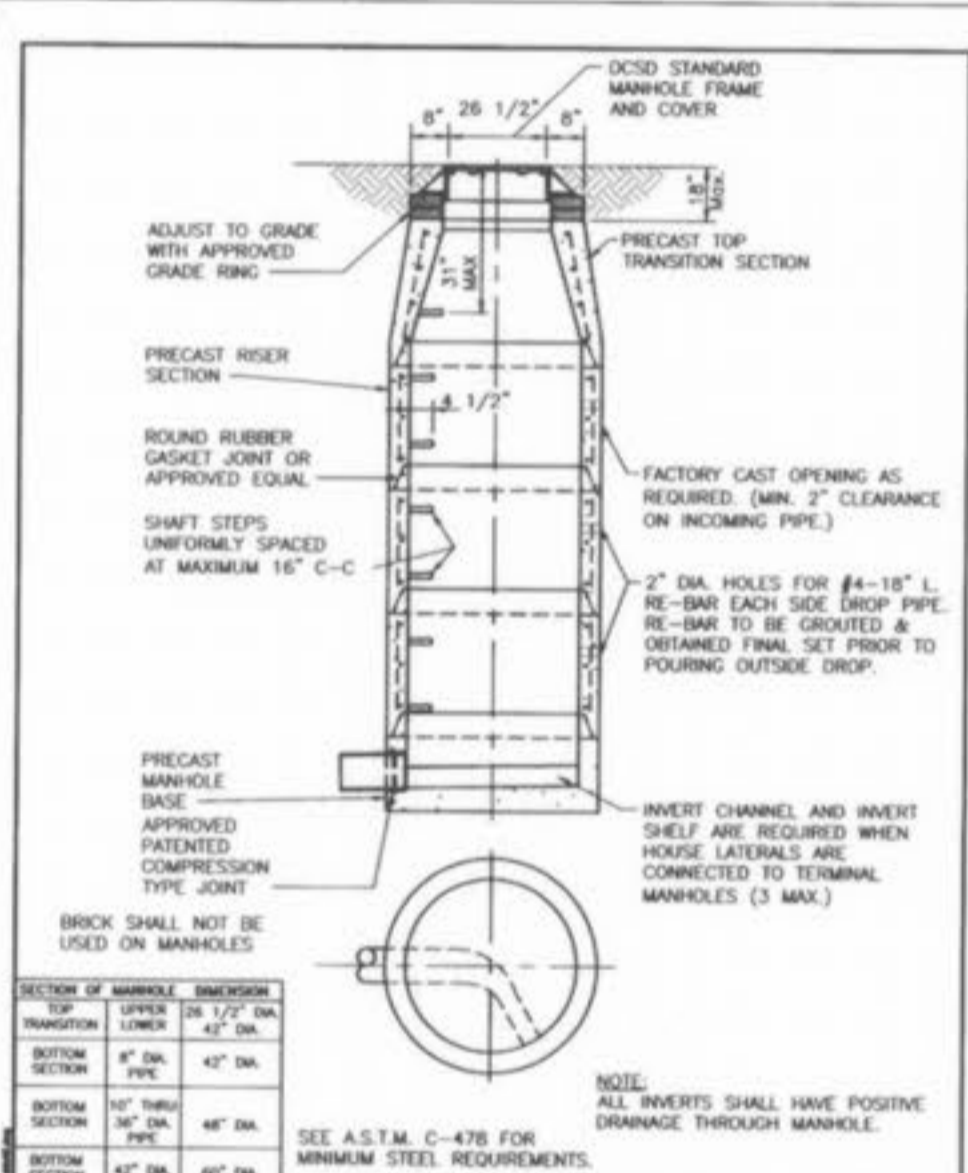
**Duckett Creek Sanitary District**  
CAST IRON MANHOLE FRAME  
DATE: 01-14-00



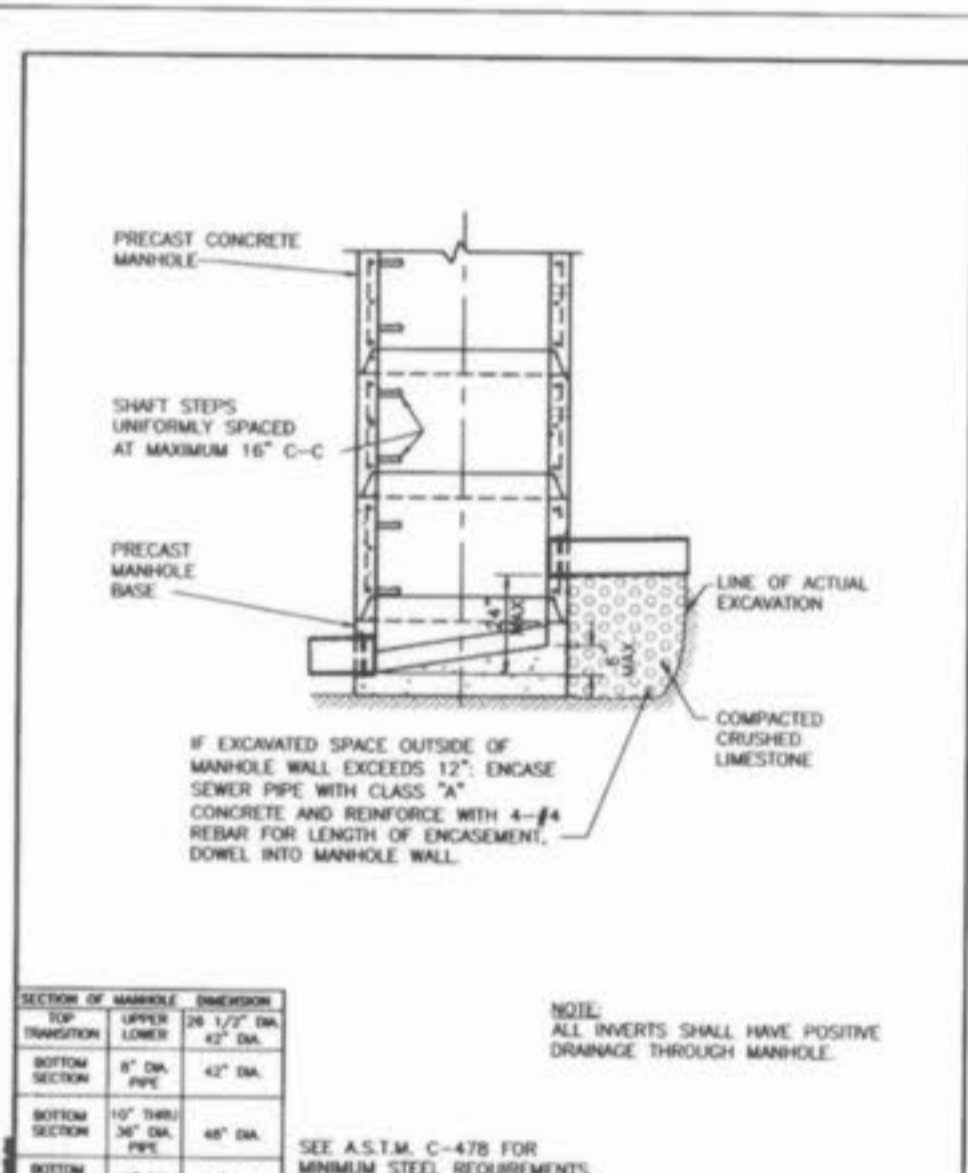
**Duckett Creek Sanitary District**  
CONCRETE ANTI-SLIP COLLAR FOR PVC PIPE ON PIPE SLOPES FROM 15% TO 50%  
DATE: 12-21-99



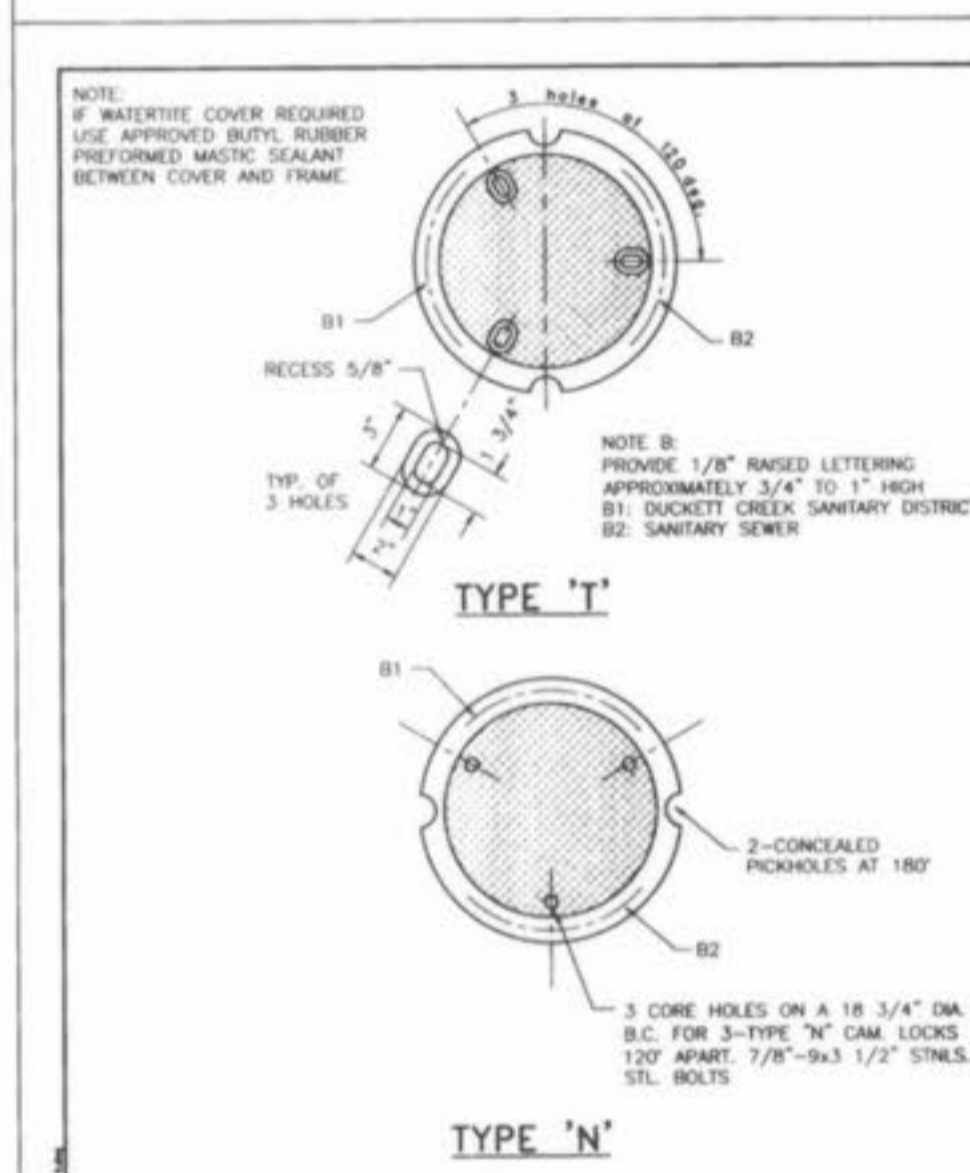
**Duckett Creek Sanitary District**  
PRE-CAST CONCRETE MANHOLE FOR SEWERS 8" THROUGH 18"  
DATE: 12-30-99



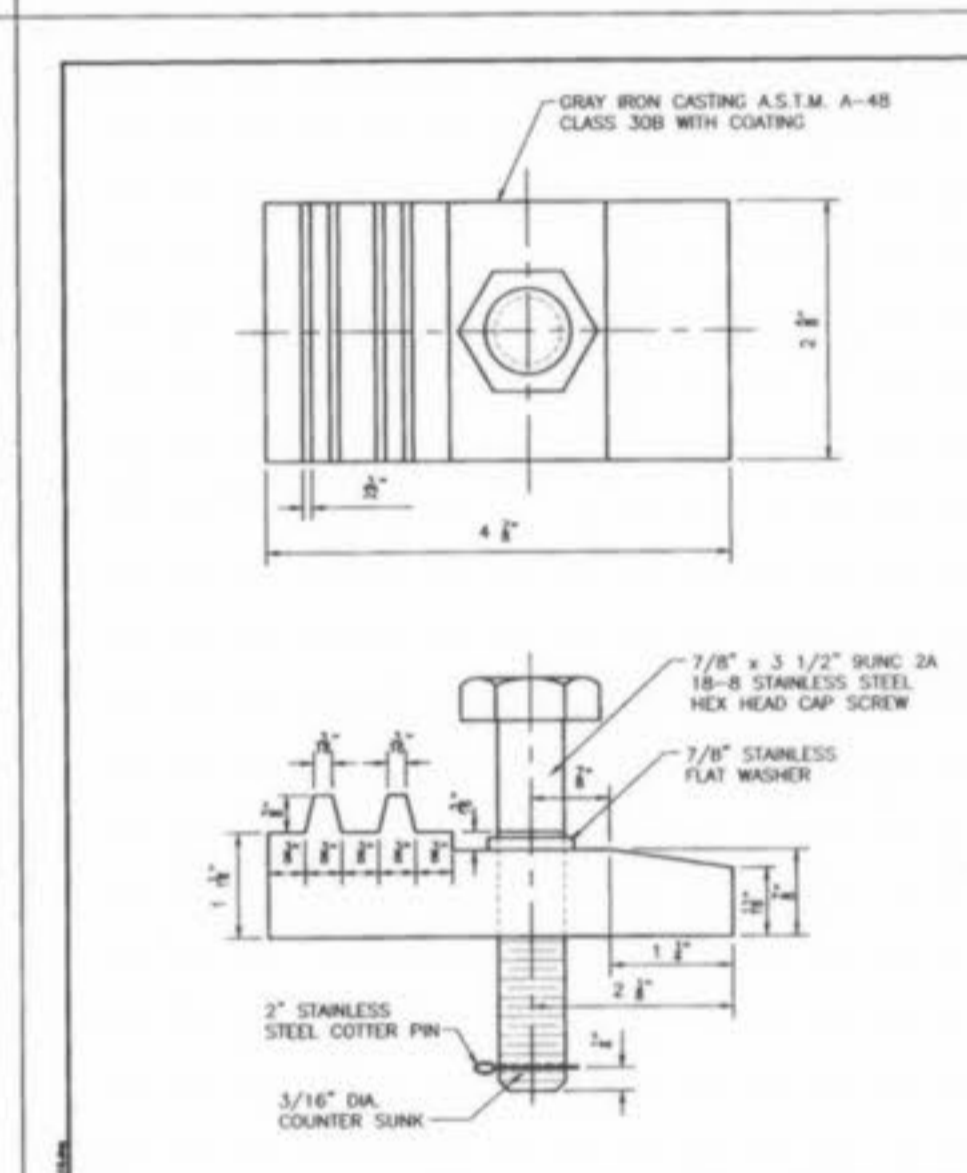
**Duckett Creek Sanitary District**  
TERMINAL MANHOLE FOR SEWERS 8" THROUGH 18"  
DATE: 01-03-00



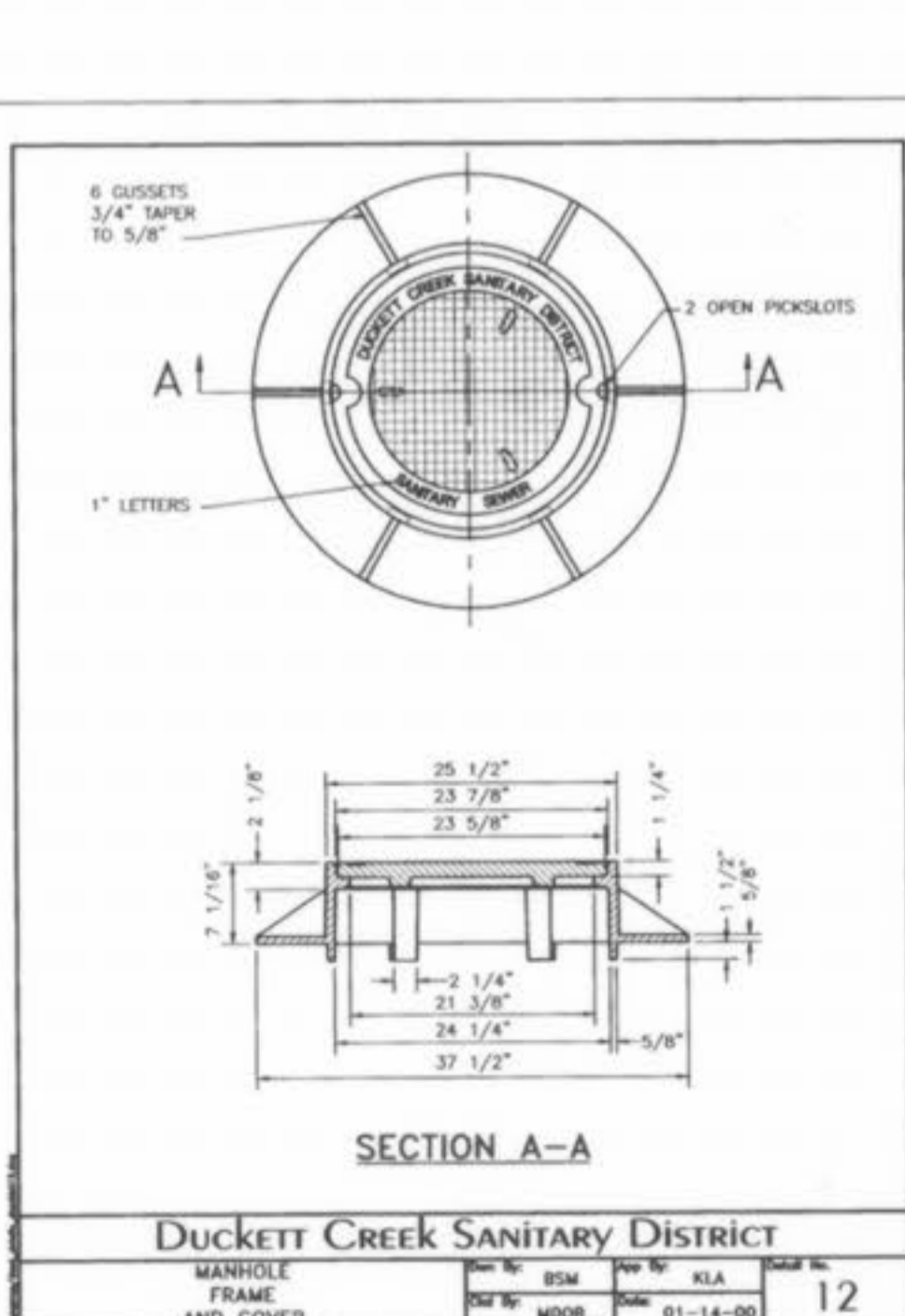
**Duckett Creek Sanitary District**  
INSIDE FOULWATER DROP MANHOLE (SWEEP INVERT)  
DATE: 01-04-00



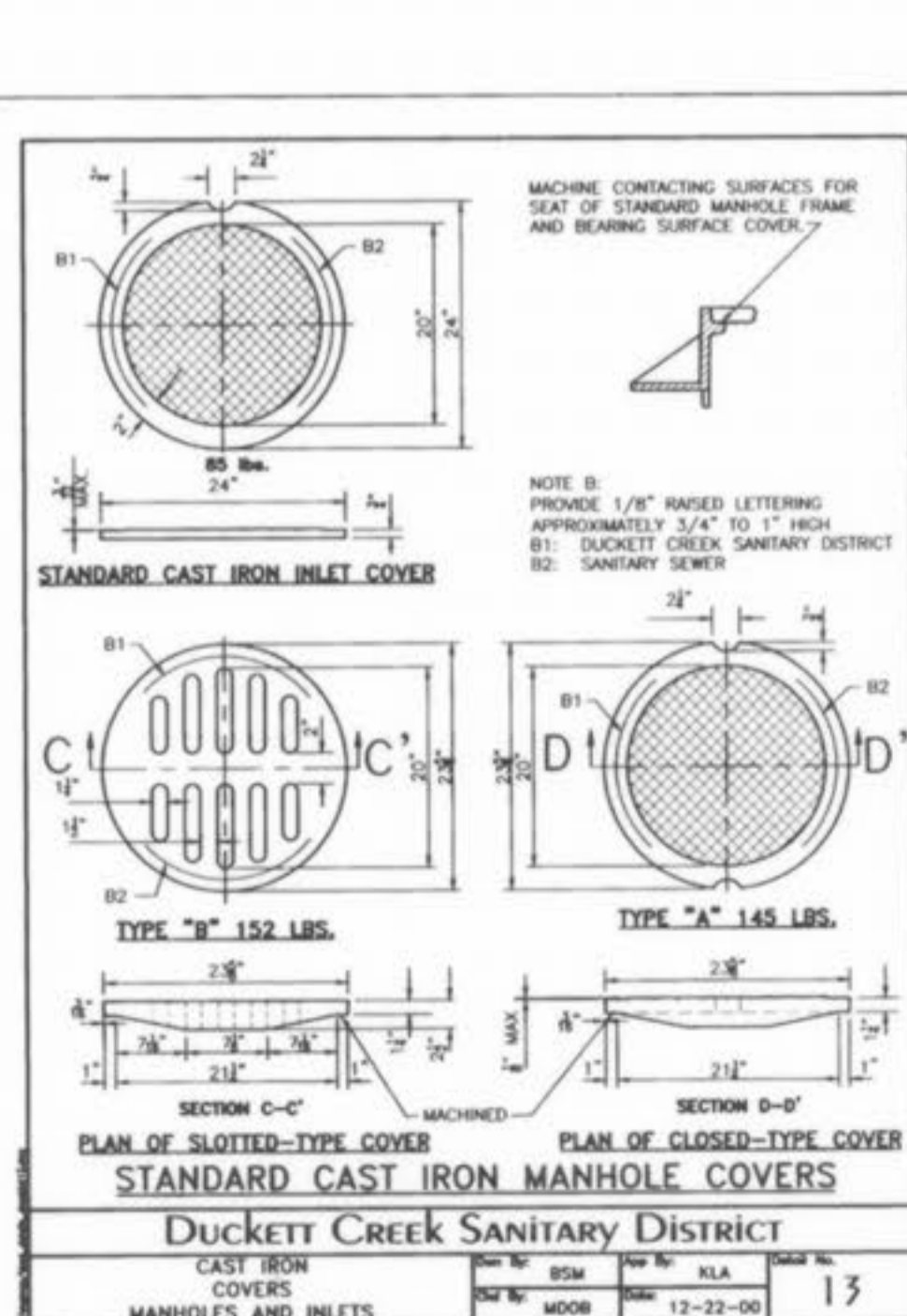
**Duckett Creek Sanitary District**  
CAST IRON MANHOLE COVERS (LOCK TYPE)  
DATE: 12-27-00



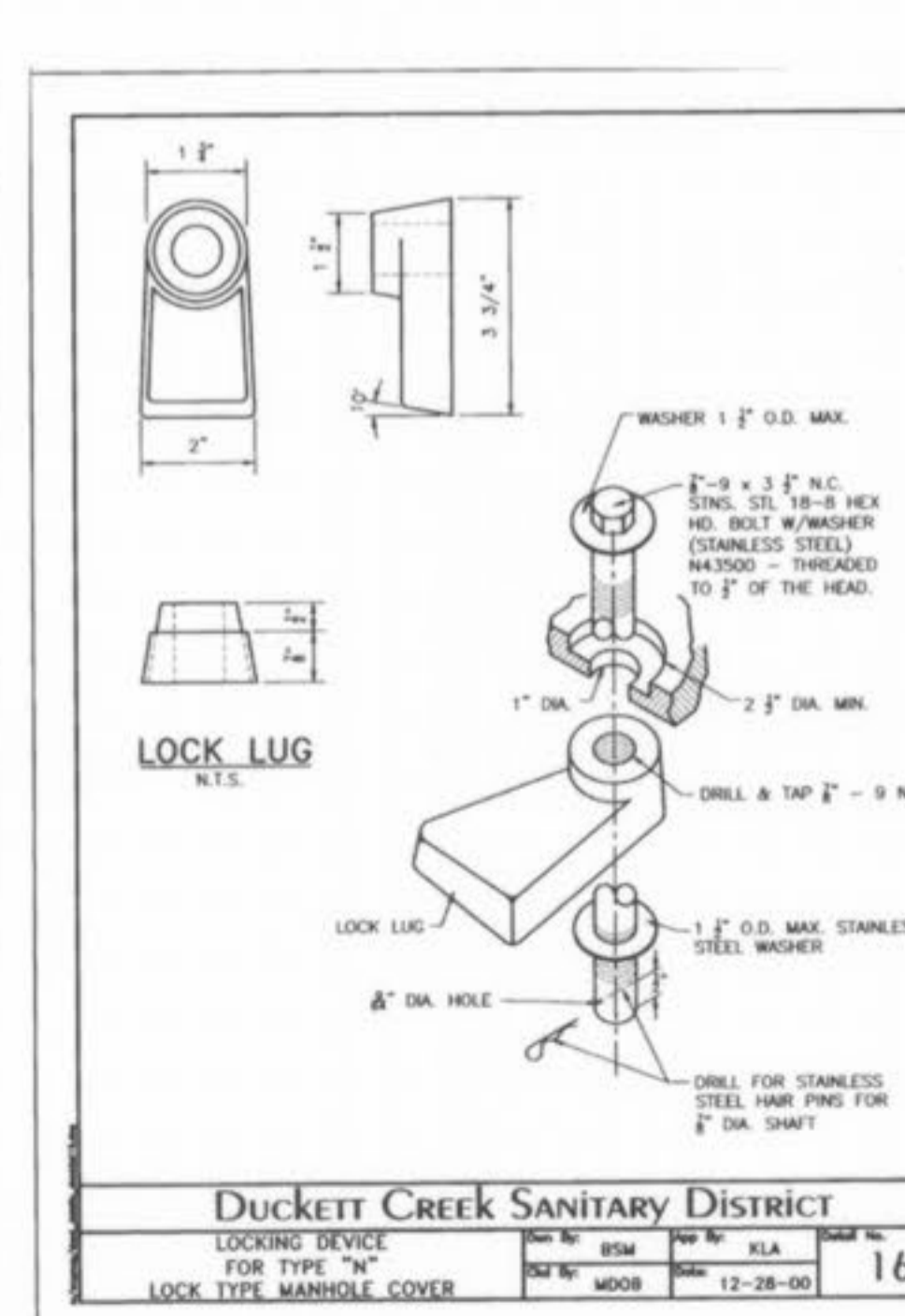
**Duckett Creek Sanitary District**  
LOCK TYPE MANHOLE COVER  
DATE: 12-27-00



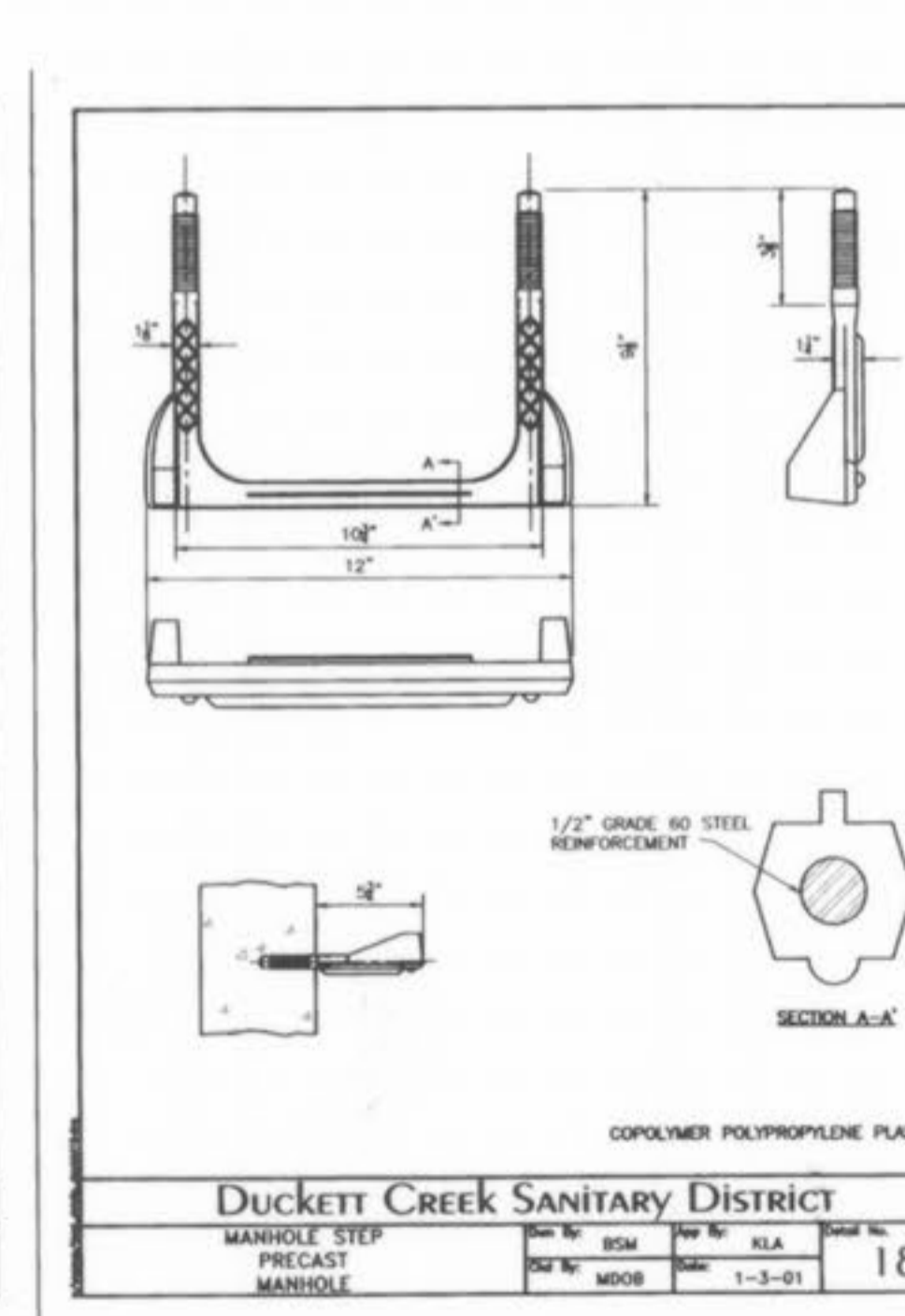
**Duckett Creek Sanitary District**  
MANHOLE FRAME AND COVER  
DATE: 01-14-00



**Duckett Creek Sanitary District**  
STANDARD CAST IRON MANHOLE COVERS  
DATE: 12-22-00



**Duckett Creek Sanitary District**  
LOCKING DEVICE FOR TYPE "A" LOCK TYPE MANHOLE COVER  
DATE: 12-28-00



**Duckett Creek Sanitary District**  
MANHOLE STEP  
DATE: 1-3-01

# AS-BUILT

SANITARY AND STORM SEWER MEASUREMENTS

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SANITARY SEWER "C" TO SANITARY SEWER "D",  
SANITARY SEWER "I" TO SANITARY SEWER "J"

Donald W. Taylor, Missouri P.L.S. No. 2041  
LS-2011

05/04/04 AS-BUILTS

LAKESIDE SHOPPES  
SANITARY SEWER DETAILS

**STOCK & ASSOCIATES**  
CONSULTING ENGINEERS, INC.

425 NORTH NEW BALLAS ROAD  
SUITE 165  
ST. LOUIS, MO. 63141  
PH. (314) 432-8100  
FAX (314) 432-8171  
e-mail: general@stockassoc.com

DATE: 11/21/02  
CHECKED BY: G.M.S.  
DATE: 11/21/02  
DRAWN BY: j.t.r.  
JOB NUMBER: 202-2777  
SHEET: C15 of 25



**SOR-35 x C900 BELL & SPIGOT ADAPTERS**

SIZE	CATALOG NO.	A	B	C	D	E	F	G	H	CT	PT
4"	334-040	4.56	8.23	4.25	4.10	3.94	4.80	2.72	2.7	32	25
6"	334-060	6.68	9.93	6.31	4.57	5.80	6.90	3.72	3.5	45	36

**Duckett Creek Sanitary District**  
SOR-35 x C900 BELL AND SPIGOT ADAPTERS  
19A

**SOR-35 x C900 BELL & SPIGOT ADAPTERS**

SIZE	CATALOG NO.	A	L	STYLE
4"	335-040	3.2	10.0	FABRICATED
6"	335-060	2.9	3.5	HARC0
8"	335-080	4.0	12.5	FABRICATED

**Duckett Creek Sanitary District**  
SOR-35 x C900 BELL AND SPIGOT SPECIAL 4", 6" & 8" ADAPTERS  
19B

**SOR-35 x C900 BELL & SPIGOT ADAPTERS**

SIZE	CATALOG NO.	OD	ID	OD	ID	CTN	CTN
4x4	337-040	4.80	4.215	4.88	4.25	10.0	1
6x6	337-060	6.90	6.275	6.96	6.32	11.5	1
8x8	337-080	9.05	8.400	9.13	8.45	12.50	1

**Duckett Creek Sanitary District**  
SOR-35 x C900 BELL AND BELL 4", 6" & 8" ADAPTERS  
19C

**PLASTIC SADDLE TEE OR WYE FITTING (SOLVENT WELD)**

WHEN CONNECTION TO A PLASTIC PIPE IS ALLOWED AND A CONNECTION IS LARGER THAN 6" IN DIAMETER, A SOLVENT WELD WYE OR TEE FITTING OF A SIMILAR MATERIAL MUST BE USED. (EXAMPLE: 10" x 8") THIS IS ACCOMPLISHED BY CAREFULLY CUTTING A HOLE IN THE MAIN AT THE REQUIRED LOCATION AFTER CUTTING AND SHAPING THE HOLE TO THE SIZE OF THE FITTING. THE FOLLOWING STEPS SHOULD BE TAKEN:

- CLEAN AND DRY BOTH INSIDE THE SADDLE WYE SURFACE AND PIPE SURFACE TO BE SOLVENT CEMENTED.
- APPLY A LIBERAL HEAVY COAT OF ONE-STEP SOLVENT CEMENT TO THE INSIDE SURFACE OF THE SADDLE WYE AND TO THE EXTERIOR WELDING SURFACE TO THE PIPE.
- WITHOUT DELAY, MATCH THE SURFACES AND STRAP DOWN TIGHTLY. A BEAD OF SOLVENT SHOULD APPEAR AFTER THE SADDLE HAS BEEN STRAPPED DOWN TIGHTLY.
- USING A RAG OR PAPER TOWEL, WIPE AWAY ANY EXCESS SOLVENT CEMENT OFF PIPE AND SADDLE.
- ALLOW 30-60 MINUTES FOR SET-UP TIME BEFORE BACKFILLING. CURE TIME DEPENDS ON SIZE FIT OF MATERIALS BEING INSTALLED AND VARIOUS CLIMATIC CONDITIONS.
- DISCARD OLD SOLVENT IF IT BECOMES ALLEL OR LUMPY.
- A CLEAR, DRY BEDDING MATERIAL IS REQUIRED AROUND THE COMPLETED CONNECTION BEFORE BACKFILLING. THE BEDDING MATERIAL SHOULD BE ONE OF THE FOLLOWING:
  - 1 TO 3 CENT TO SAND MIX
  - "FINE" SAND CONCRETE
  - DCSD APPROVED BEDDING FOR SANITARY SEWERS

**Duckett Creek Sanitary District**  
8" & LARGER CONNECTION TO PLASTIC MAIN  
20A

**Duckett Creek Sanitary District**  
TYPICAL CREEK CROSSING  
24

**Duckett Creek Sanitary District**  
SEWER LATERAL CLEANOUT DETAILS  
25

**INSERTA TEE**

**Duckett Creek Sanitary District**  
INSERTA TEE DETAILS AND SPECIFICATIONS  
20B

**ROLL-IN (FOR EXISTING CLAY OR CONCRETE PIPE)**

**Duckett Creek Sanitary District**  
ROLL-IN (FOR EXISTING CLAY OR CONCRETE PIPE)  
21

**APPROVED CLOSURES ON 1/8" BEND**

**Duckett Creek Sanitary District**  
FORCE MAIN CLEANOUT (6" DIA. & SMALLER)  
22

**BORING DETAIL**

**Duckett Creek Sanitary District**  
ROADWAY BORING DETAIL  
23

**MANHOLE**

**Duckett Creek Sanitary District**  
LOW PRESSURE SEWER MAIN CONNECTION AT MANHOLE  
28

**THRUST BLOCK DETAIL AND SIZE SCHEDULE**

MAIN SIZE	A x B	A x B	A x B	A x B
2"	5" x 1"	5" x 1"	1" x 1"	1" x 1"
4"	1" x 1"	1" x 1"	1.5" x 1"	1" x 1"
6"	1" x 1"	1.5" x 1"	2" x 1"	1.5" x 1"
8"	1" x 1"	2" x 1"	2" x 1"	2" x 1"

**Duckett Creek Sanitary District**  
THRUST BLOCK DETAIL AND SIZE SCHEDULE  
29

**TYPICAL SANITARY SEWER LATERAL PROFILE**

**Duckett Creek Sanitary District**  
TYPICAL SANITARY SEWER LATERAL PROFILE  
26

**SANITARY SEWER LATERAL RISER DETAIL**

**Duckett Creek Sanitary District**  
SANITARY SEWER LATERAL RISER DETAIL  
27

## AS-BUILT

SANITARY AND STORM SEWER MEASUREMENTS

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Donald W. Taylor, Missouri P.L.S. No. 2041

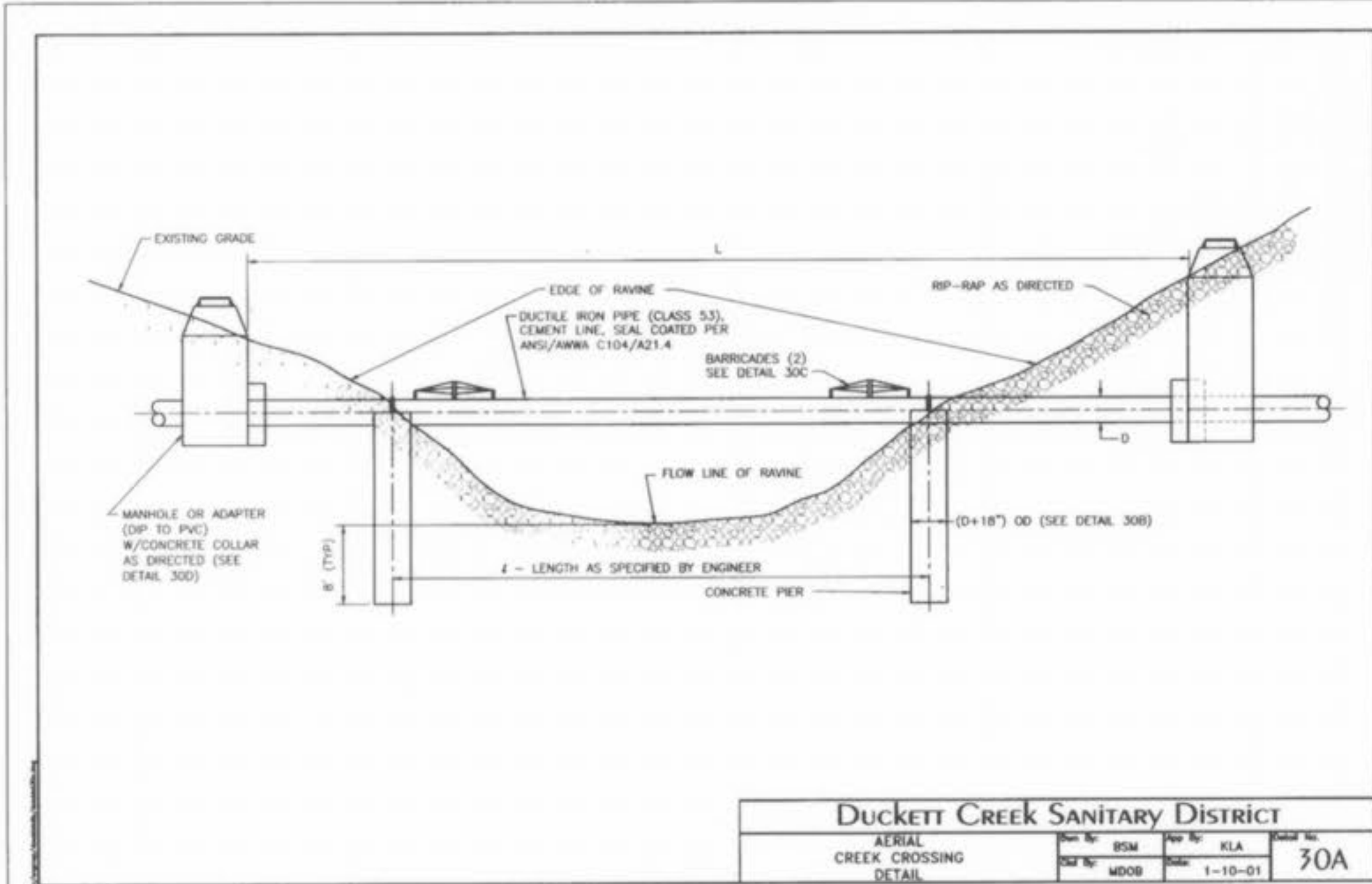
05/04/04 AS-BUILTS

LAKESSIDE SHOPPES  
SANITARY SEWER DETAILS

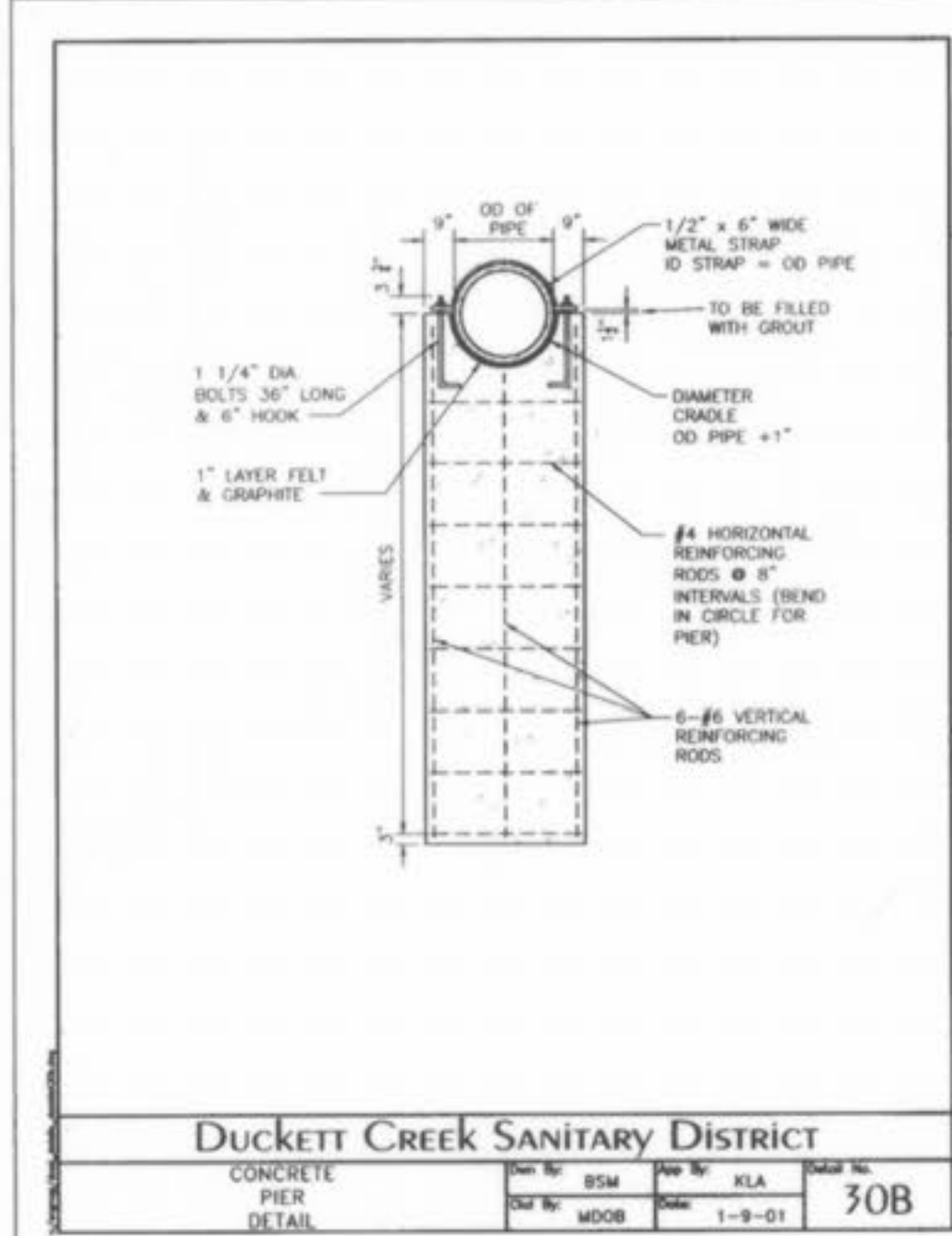
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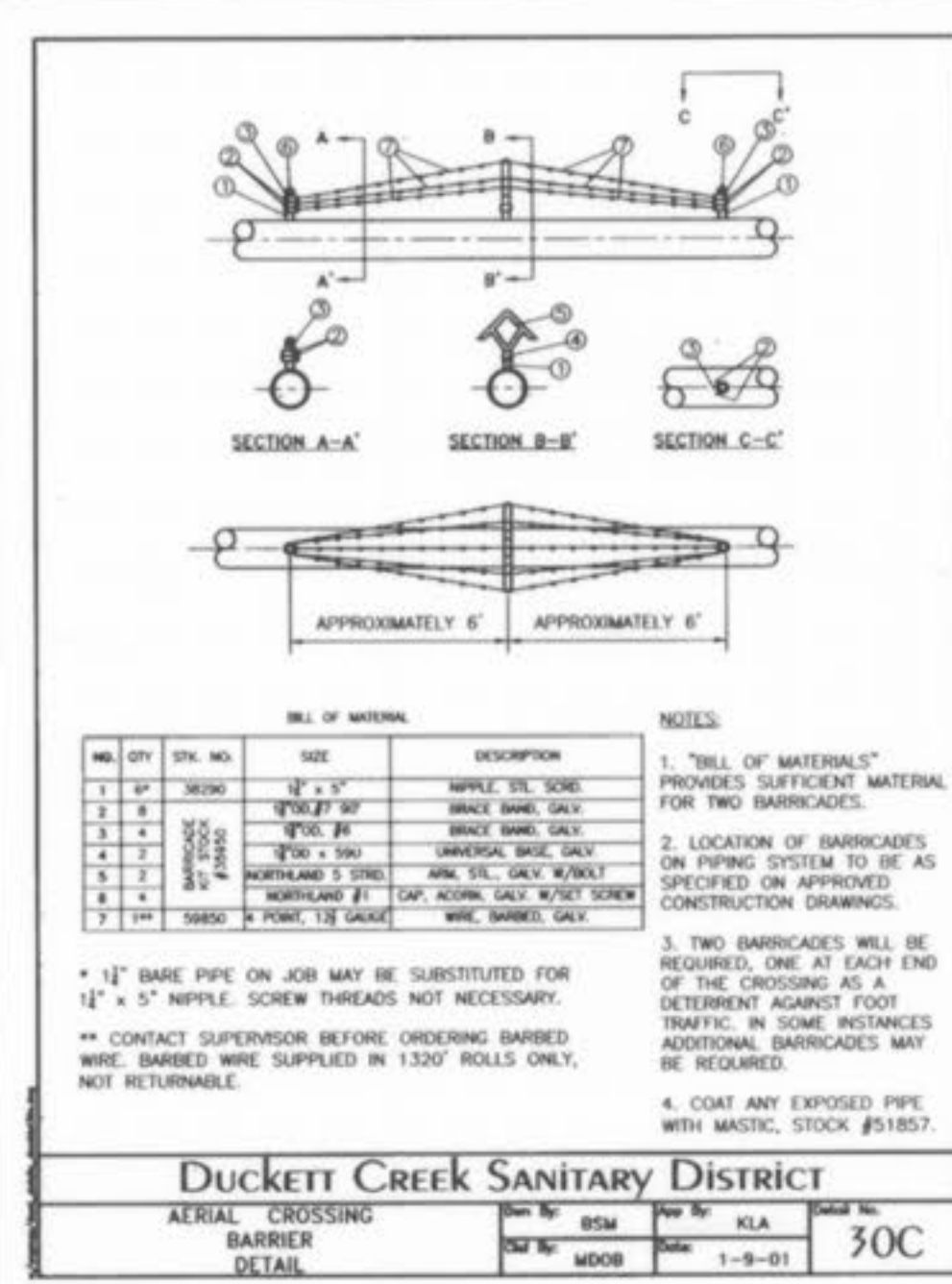
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SHEET: C16 of 25



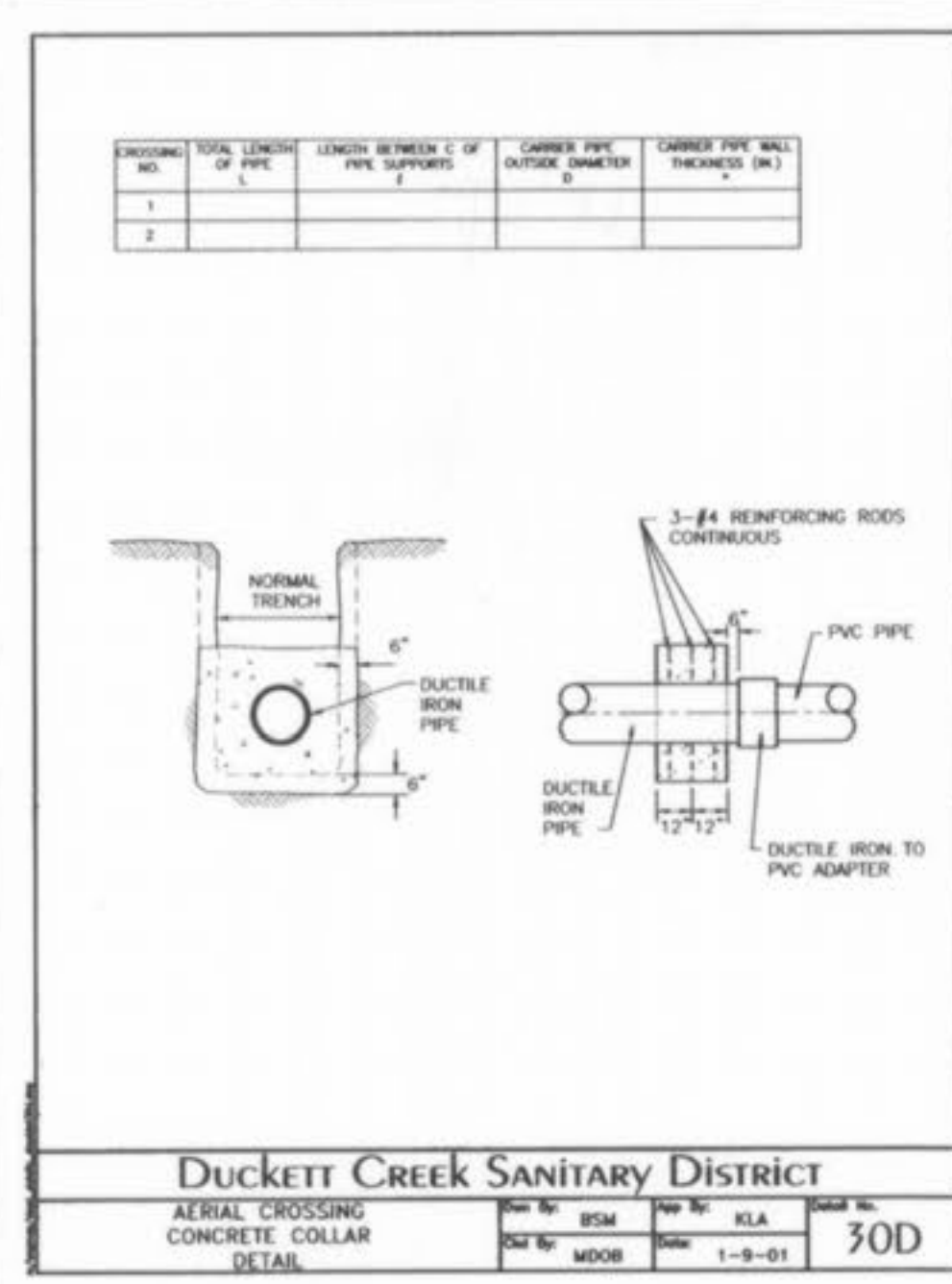
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Rev. No. BSM Date 1-9-01  
Job No. MOOB  
Sheet No. KLA  
30A



DUCKETT CREEK SANITARY DISTRICT  
CONCRETE PIER DETAIL  
Rev. No. BSM Date 1-9-01  
Job No. MOOB  
Sheet No. KLA  
30B



DUCKETT CREEK SANITARY DISTRICT  
AERIAL CROSSING BARRIER DETAIL  
Rev. No. BSM Date 1-9-01  
Job No. MOOB  
Sheet No. KLA  
30C



DUCKETT CREEK SANITARY DISTRICT  
AERIAL CROSSING CONCRETE COLLAR DETAIL  
Rev. No. BSM Date 1-9-01  
Job No. MOOB  
Sheet No. KLA  
30D

# AS-BUILT

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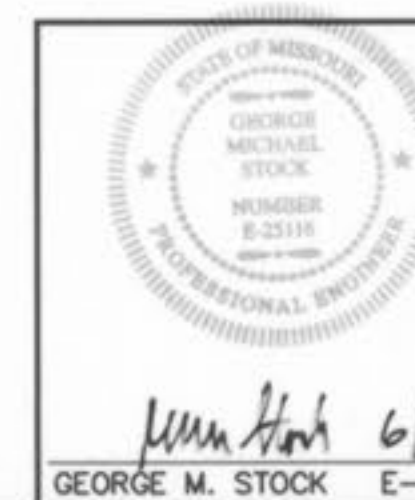
*Donald W. Taylor*  
Donald W. Taylor, Missouri P.L.S. No. 2041  
REGISTERED LAND SURVEYOR  
NUMBER 65-2041

05/04/04 AS-BUILTS

LAKESIDE SHOPPES  
SANITARY SEWER DETAILS

STOCK & ASSOCIATES  
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SUITE 160  
ST. LOUIS, MO. 63141  
PH. (314) 432-8100  
FAX (314) 432-8171  
e-mail: general@stockassoc.com



*George M. Stock*  
GEORGE M. STOCK E-25116

DRAWN BY: j.t.r. DATE: 11/21/02 CHECKED BY: G.M.S. DATE: 11/21/02 JOB NUMBER: 202-2777 SHEET: C17 of 25

Lakeside Shoppes A/B