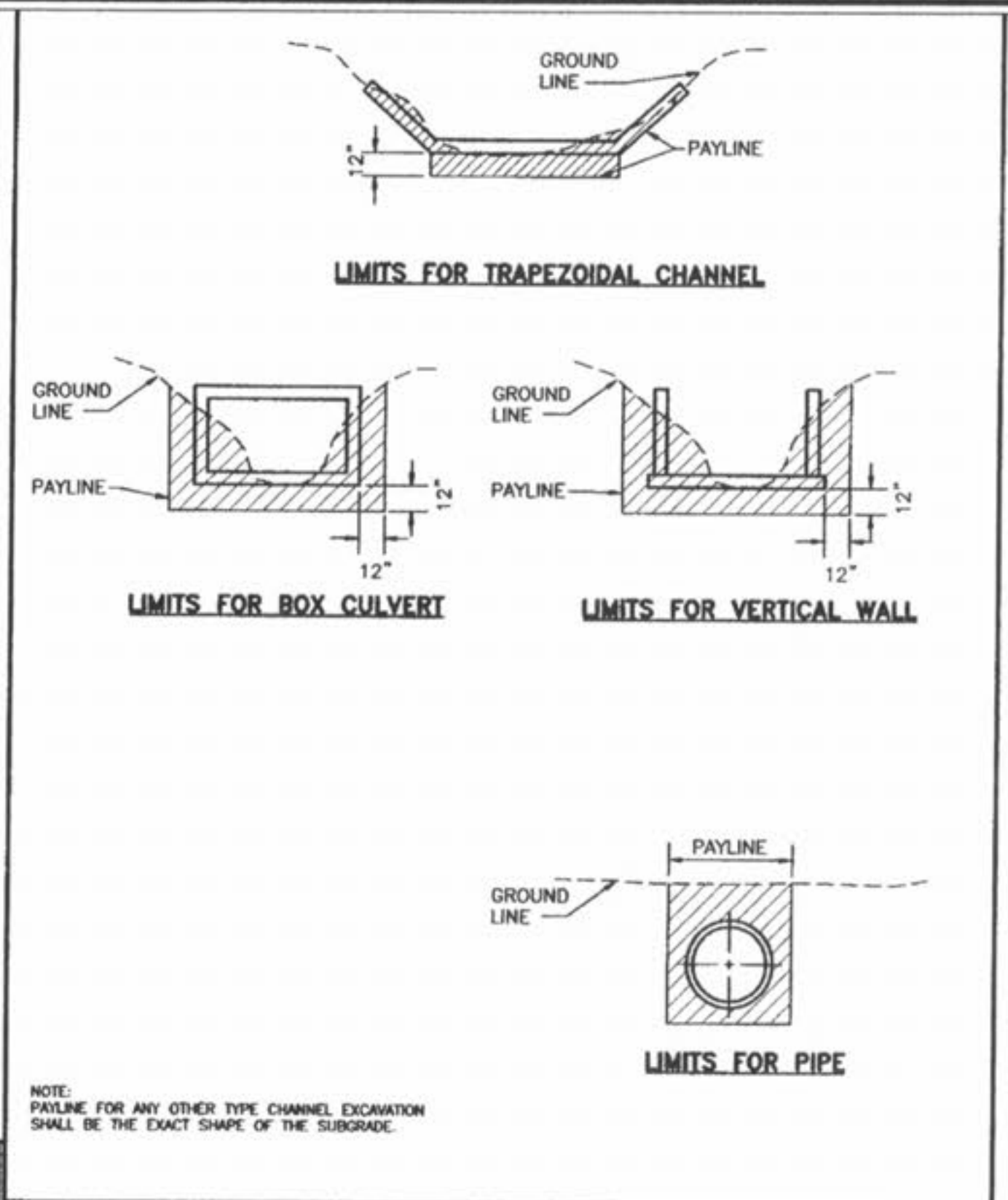


ROUND PIPE				HORIZONTAL ELLIPTICAL PIPE			
INSIDE DIAMETER OF PIPE (INCHES)	"W" PAYLINE WIDTH OF TRENCH (INCHES)	"W" PAYLINE WIDTH OF TRENCH (FEET)	PAY-VOLUMES CU. FT. PER FT. CONCRETE ENCASUREMENT	INSIDE DIAMETER OF PIPE (INCHES)	"W" PAYLINE WIDTH OF TRENCH (INCHES)	"W" PAYLINE WIDTH OF TRENCH (FEET)	PAY-VOLUMES CU. FT. PER FT. CONCRETE ENCASUREMENT
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	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		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 166	202	16.83	64.48
144	182	15.17	72.40	116 x 180	218	18.17	73.59

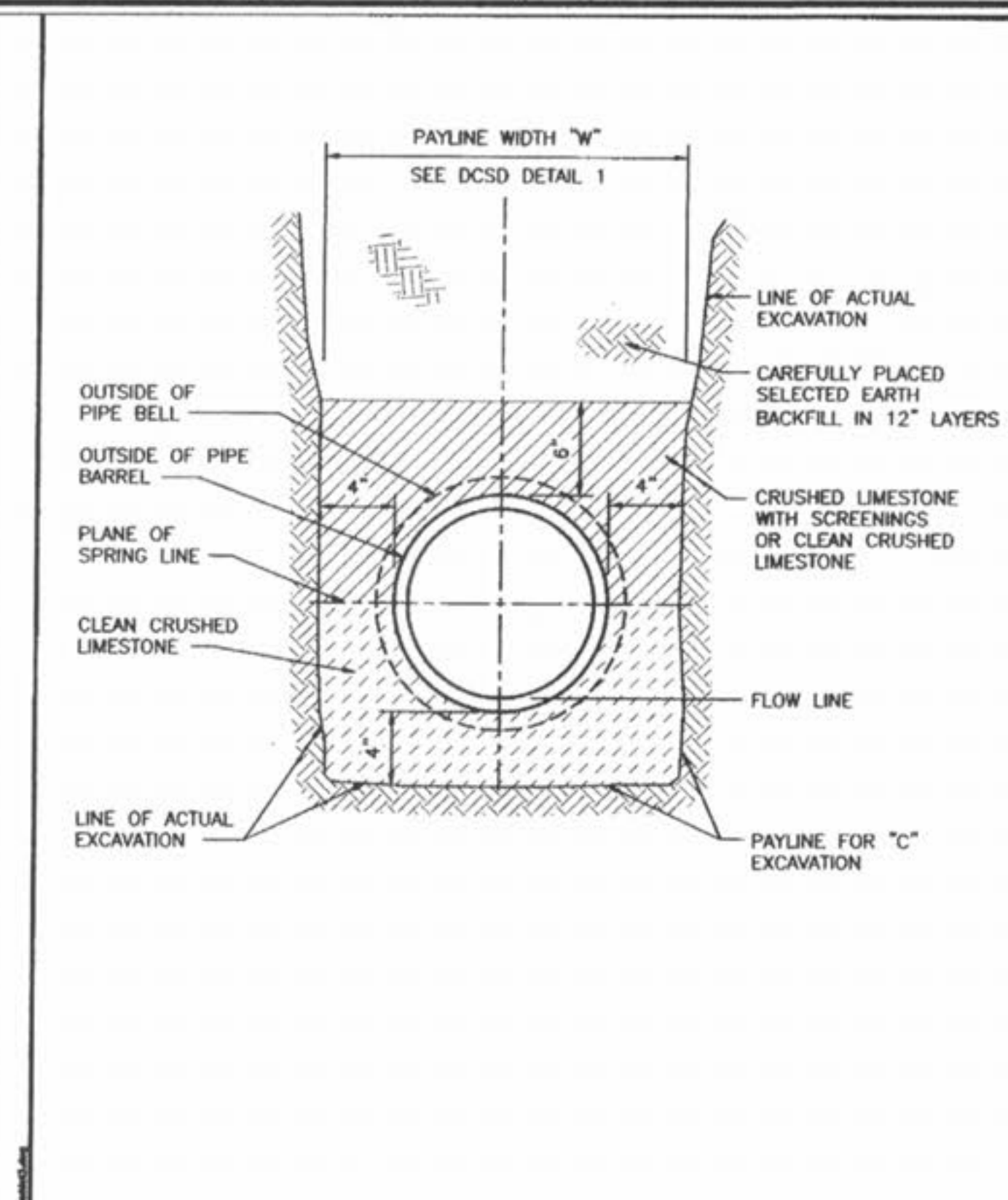
**Duckett Creek Sanitary District**

PAYLINE WIDTHS OF TRENCH AND PAY-QUANTITIES OF CONCRETE	Des. By: BSM	App. By: KLA	Detail No. 1
	Chk. By: MDOB	Date: 12-21-99	



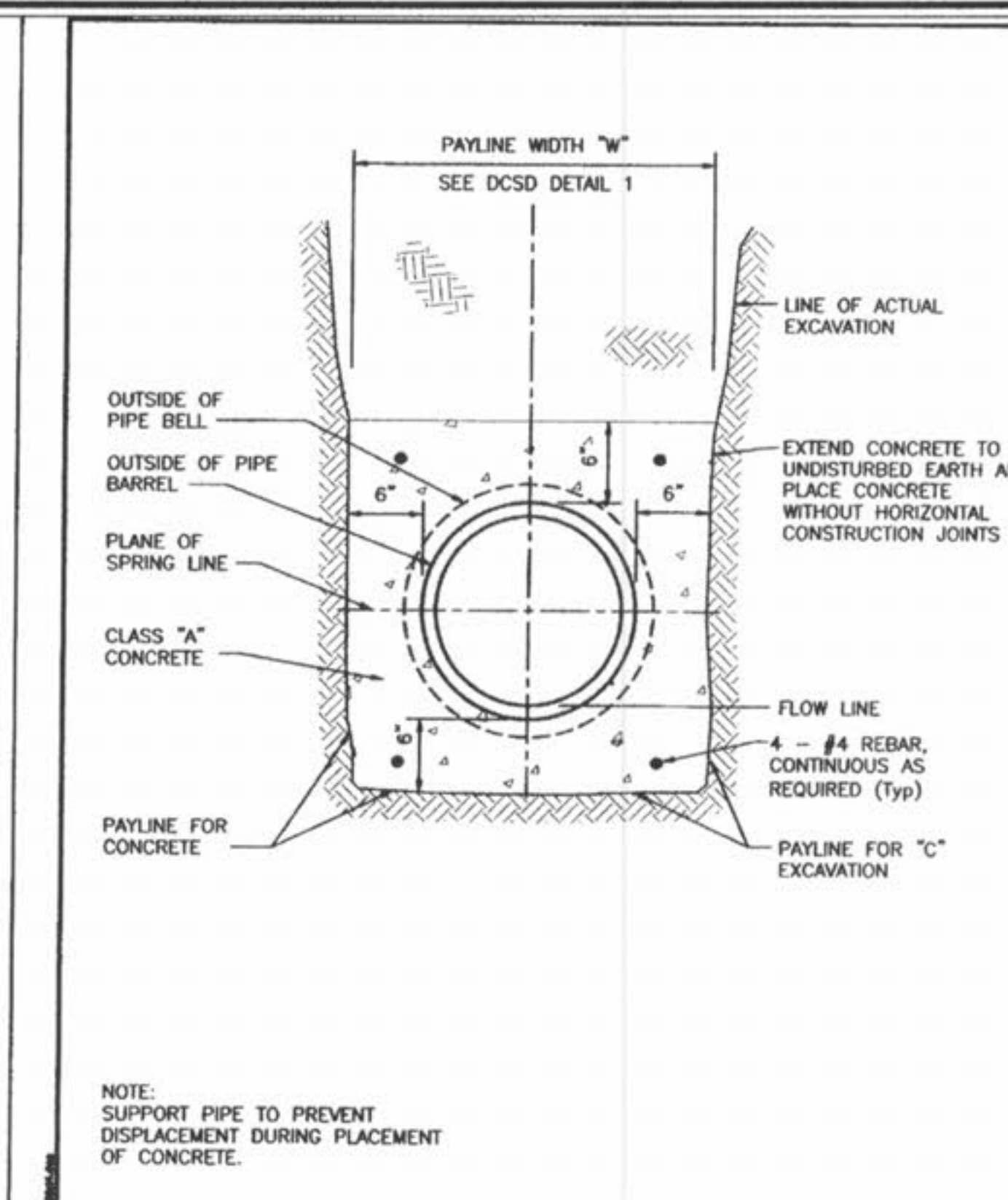
**Duckett Creek Sanitary District**

PAYLINE LIMITS FOR EXCAVATION	Des. By: BSM	App. By: KLA	Detail No. 2
	Chk. By: MDOB	Date: 12-21-99	



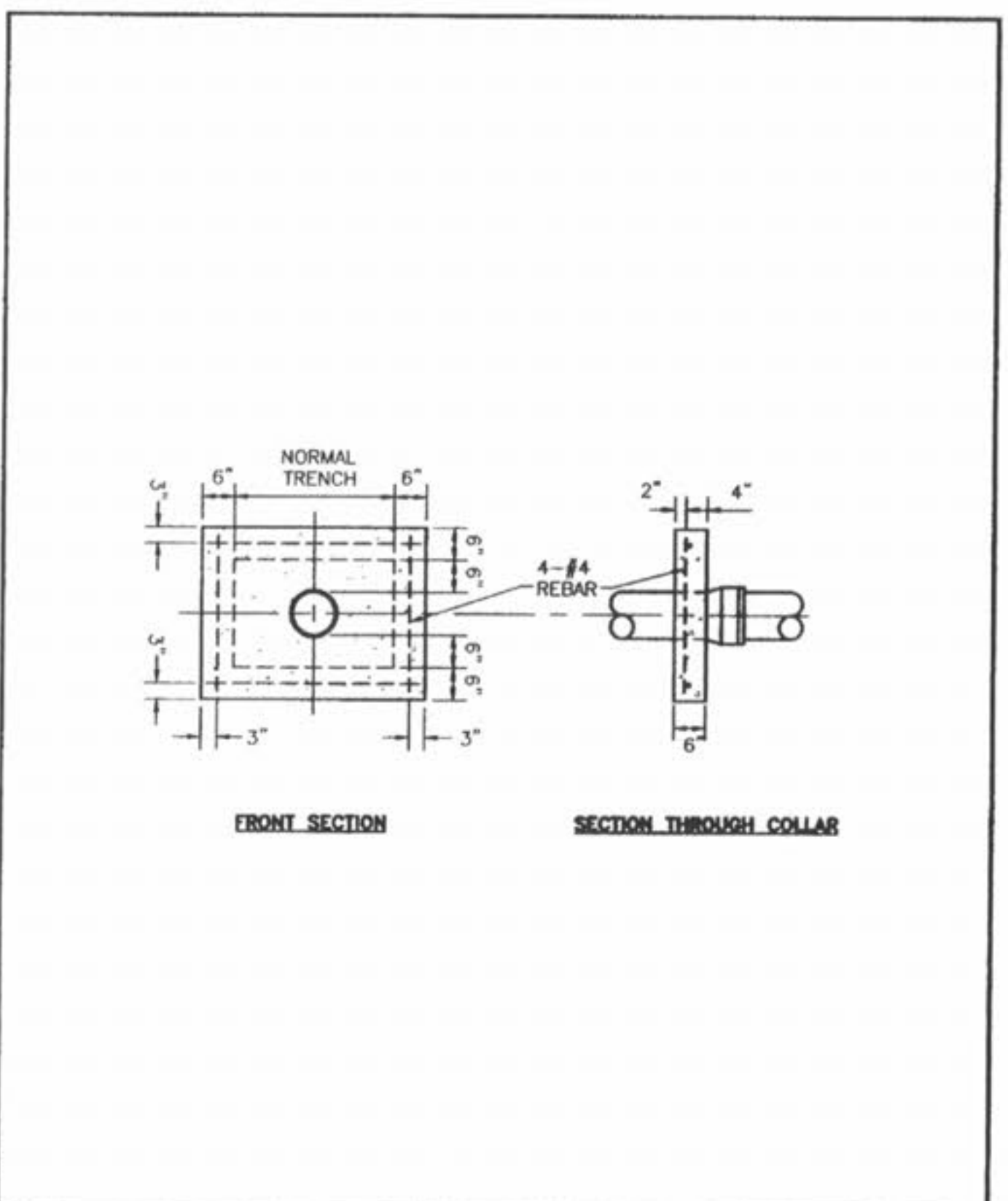
**Duckett Creek Sanitary District**

PAYLINE LIMITS FOR EXCAVATION	Des. By: BSM	App. By: KLA	Detail No. 3
	Chk. By: MDOB	Date: 12-21-99	



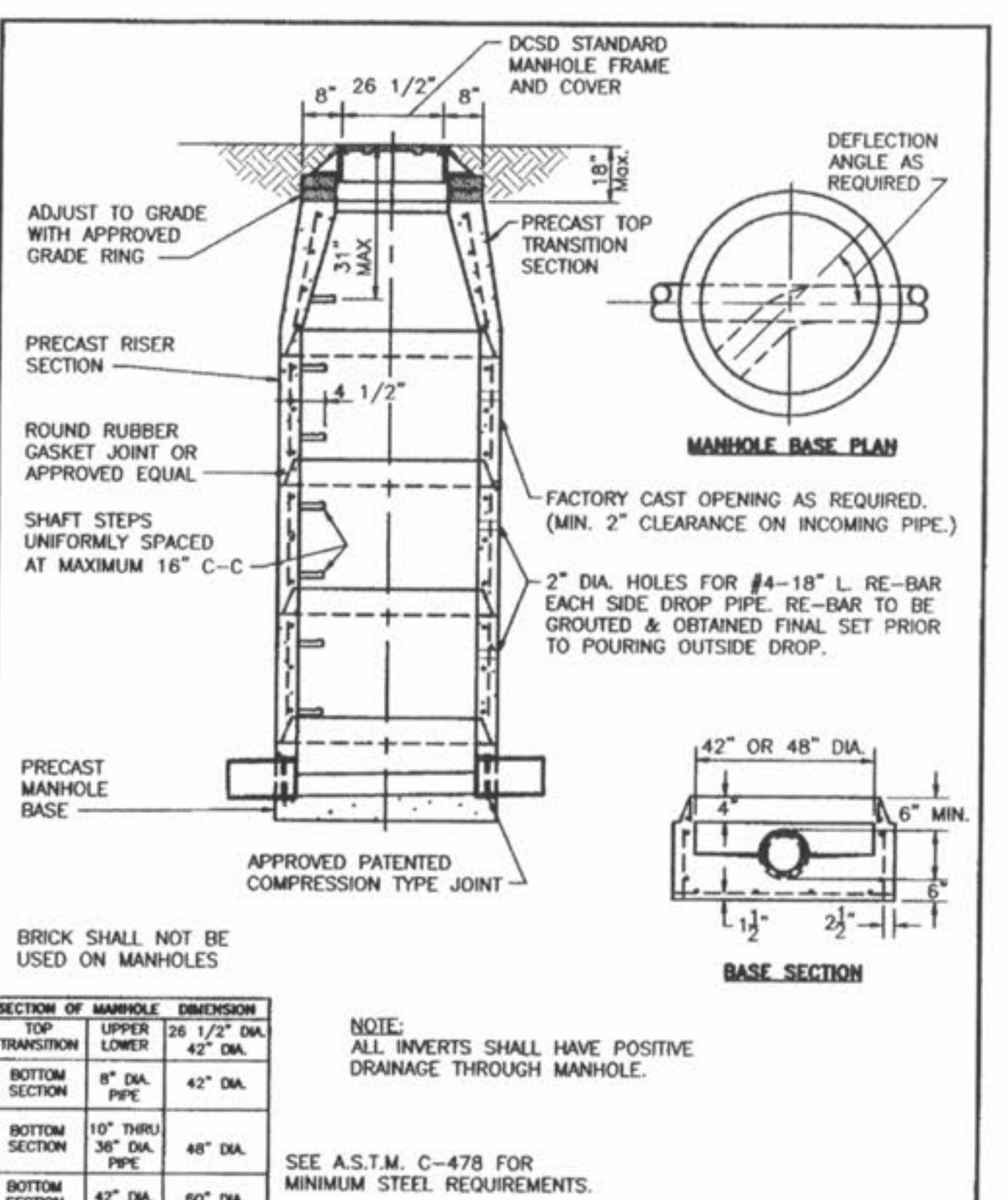
**Duckett Creek Sanitary District**

PAYLINE LIMITS FOR EXCAVATION	Des. By: BSM	App. By: KLA	Detail No. 4
	Chk. By: MDOB	Date: 12-21-99	



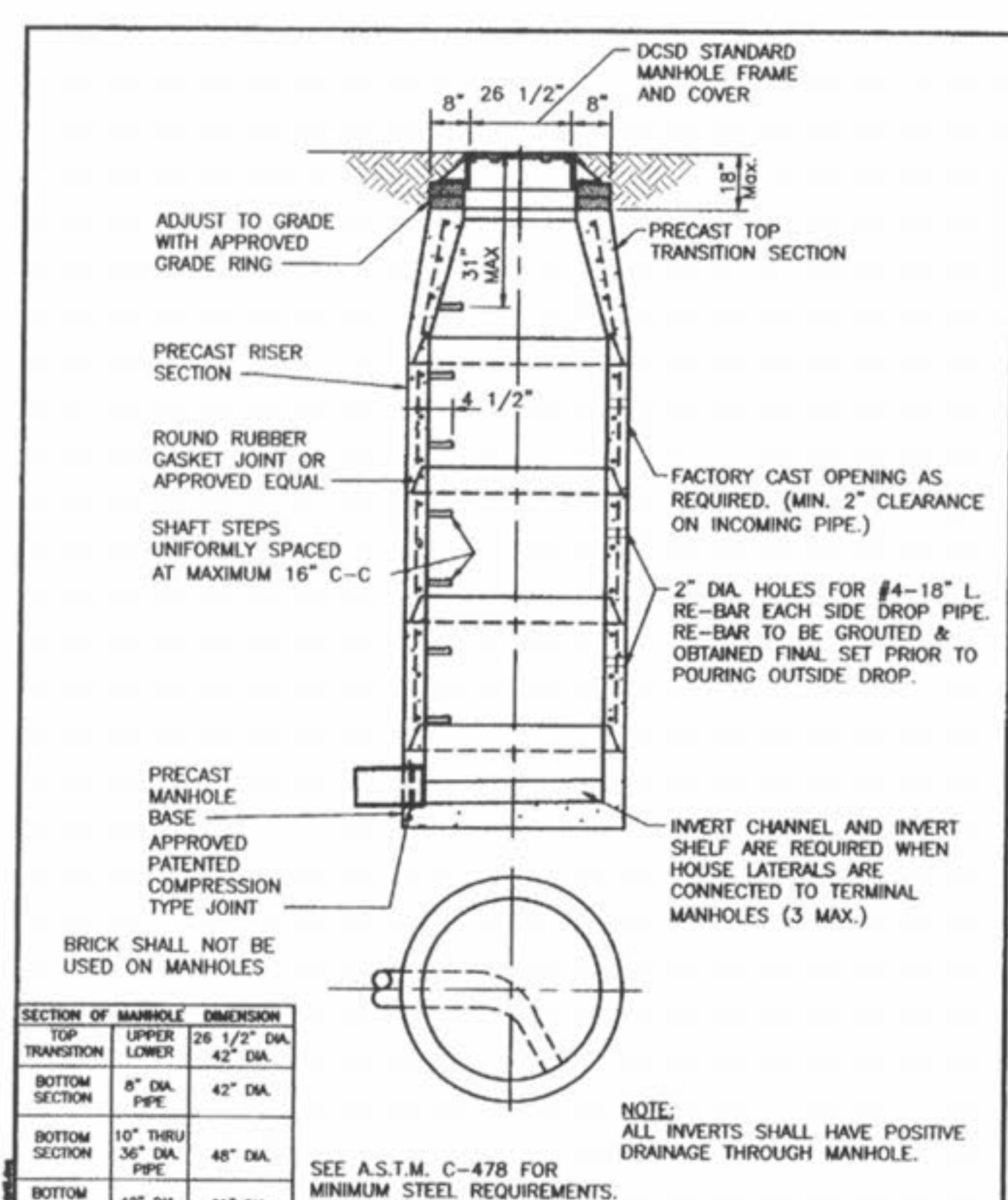
**Duckett Creek Sanitary District**

CONCRETE ANTI-SLIP COLLAR FOR PVC PIPE ON PIPE SLOPES FROM 15% TO 50%	Des. By: BSM	App. By: KLA	Detail No. 5
	Chk. By: MDOB	Date: 12-21-99	



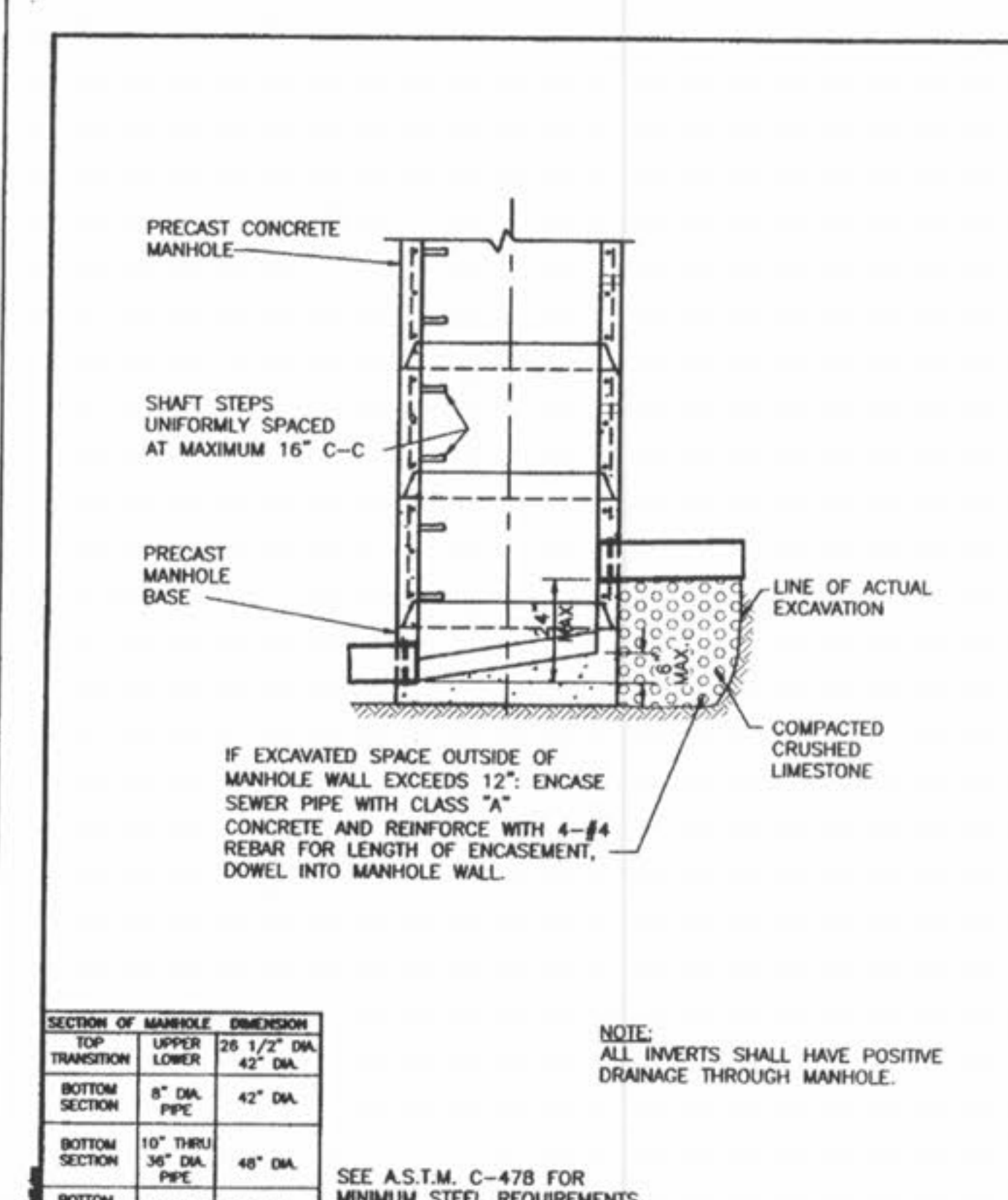
**Duckett Creek Sanitary District**

PRE-CAST CONCRETE MANHOLE FOR SEWERS 8" THROUGH 18"	Des. By: BSM	App. By: KLA	Detail No. 7
	Chk. By: MDOB	Date: 12-30-99	



**Duckett Creek Sanitary District**

TERMINAL MANHOLE FOR SEWERS 8" THROUGH 18"	Des. By: BSM	App. By: KLA	Detail No. 8
	Chk. By: MDOB	Date: 01-03-00	



**Duckett Creek Sanitary District**

INSIDE FOULWATER DROP MANHOLE (SWEEP INVERT)	Des. By: BSM	App. By: KLA	Detail No. 9
	Chk. By: MDOB	Date: 01-04-00	

PREPARED FOR:  
BRINKMANN CONSTRUCTORS  
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16650 CHESTERFIELD GROVE RD, SUITE 100  
CHESTERFIELD, MO 63005  
PH: (636) 537-9700  
FAX: (636) 537-9880



**O'FALLON AUTO MALL**  
**SANITARY SEWER DETAILS**

**J. R. GRIMES**  
**CONSULTING ENGINEERS, INC.**

12300 OLD TESSON ROAD  
SUITE 3000  
ST. LOUIS, MO. 63128  
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DRAWN BY: JLW DATE: 04/08/05 CHECKED BY: LJM DATE: 04/08/05 JOB NUMBER: 675N SHEET: C20