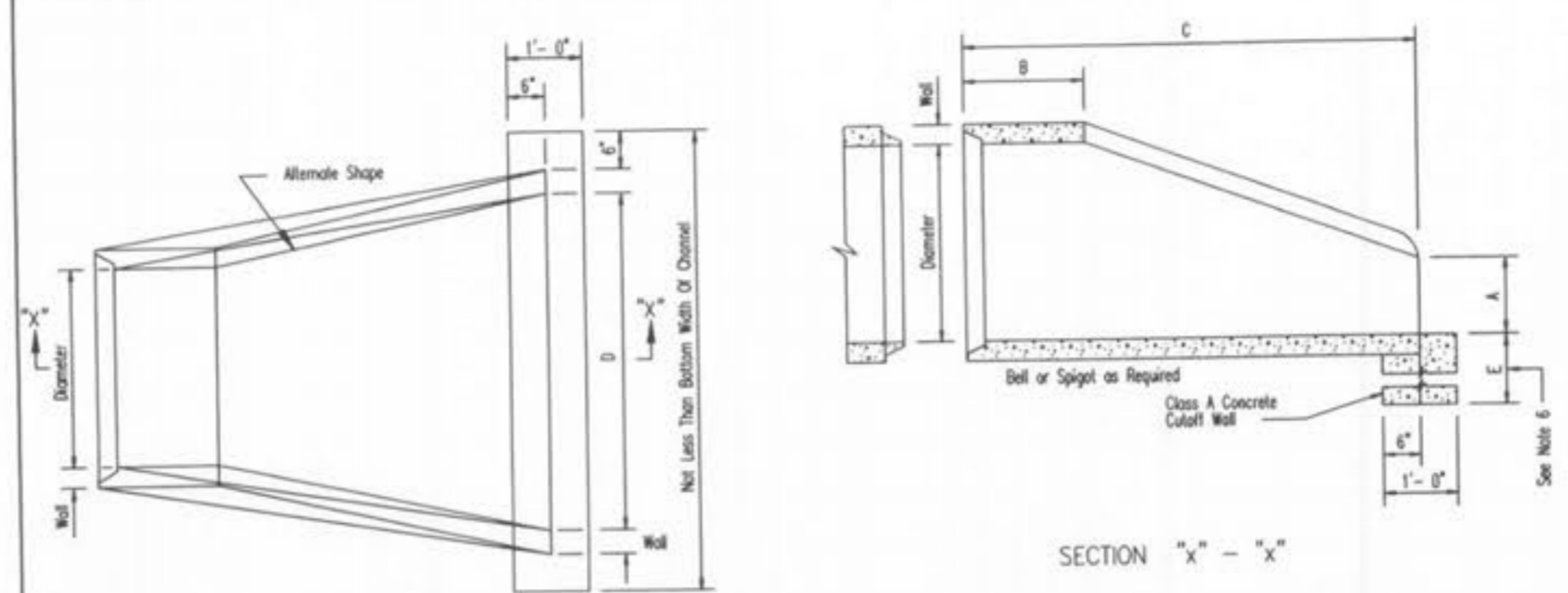


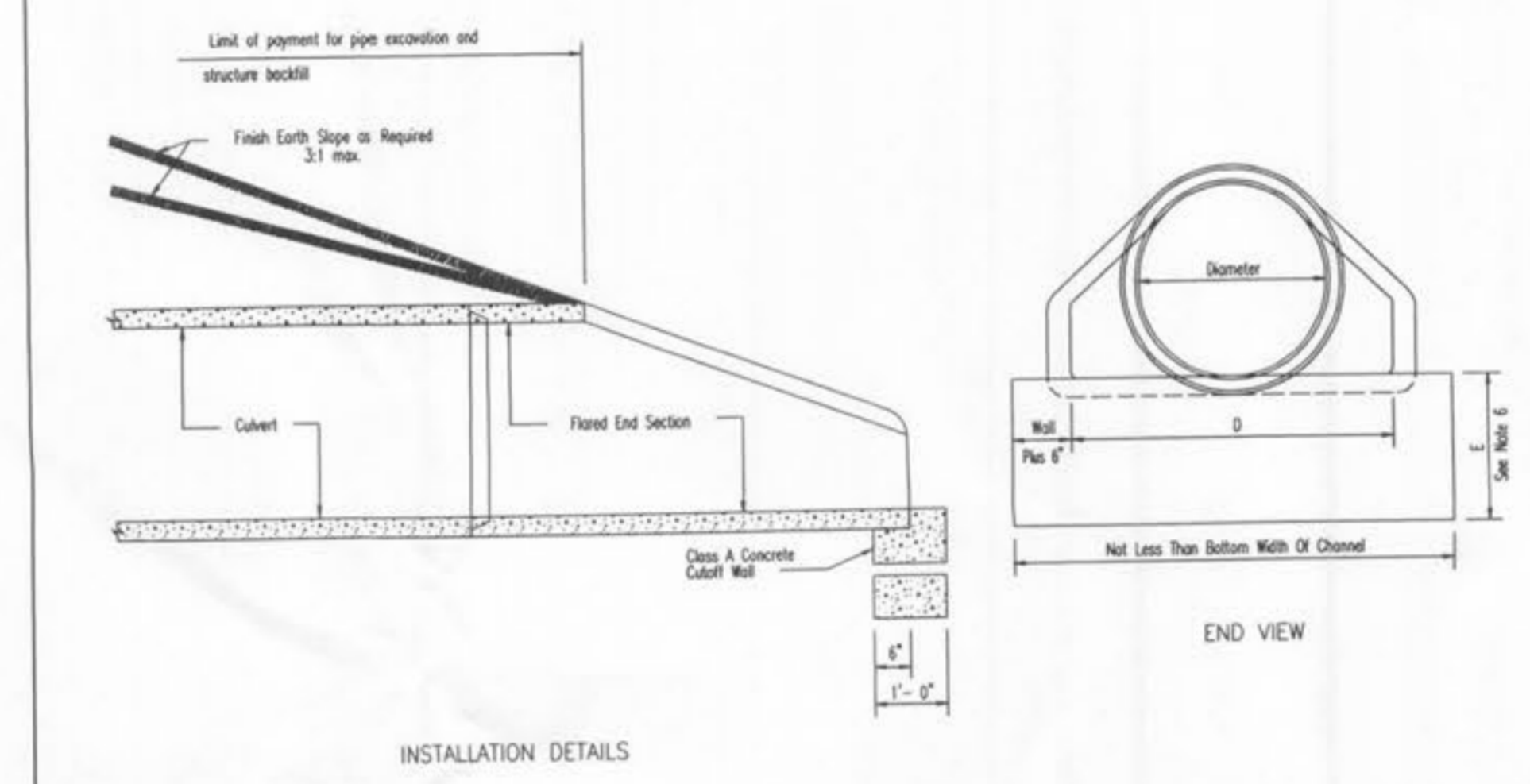
SAINT CHARLES COUNTY
HIGHWAY DEPARTMENT
ST. CHARLES, MISSOURI
SEWER CONSTRUCTION DETAILS
FLARED END SECTION
(INLET/OUTLET PROTECTION)
DATE: September, 2002
DRAWING: C604.42



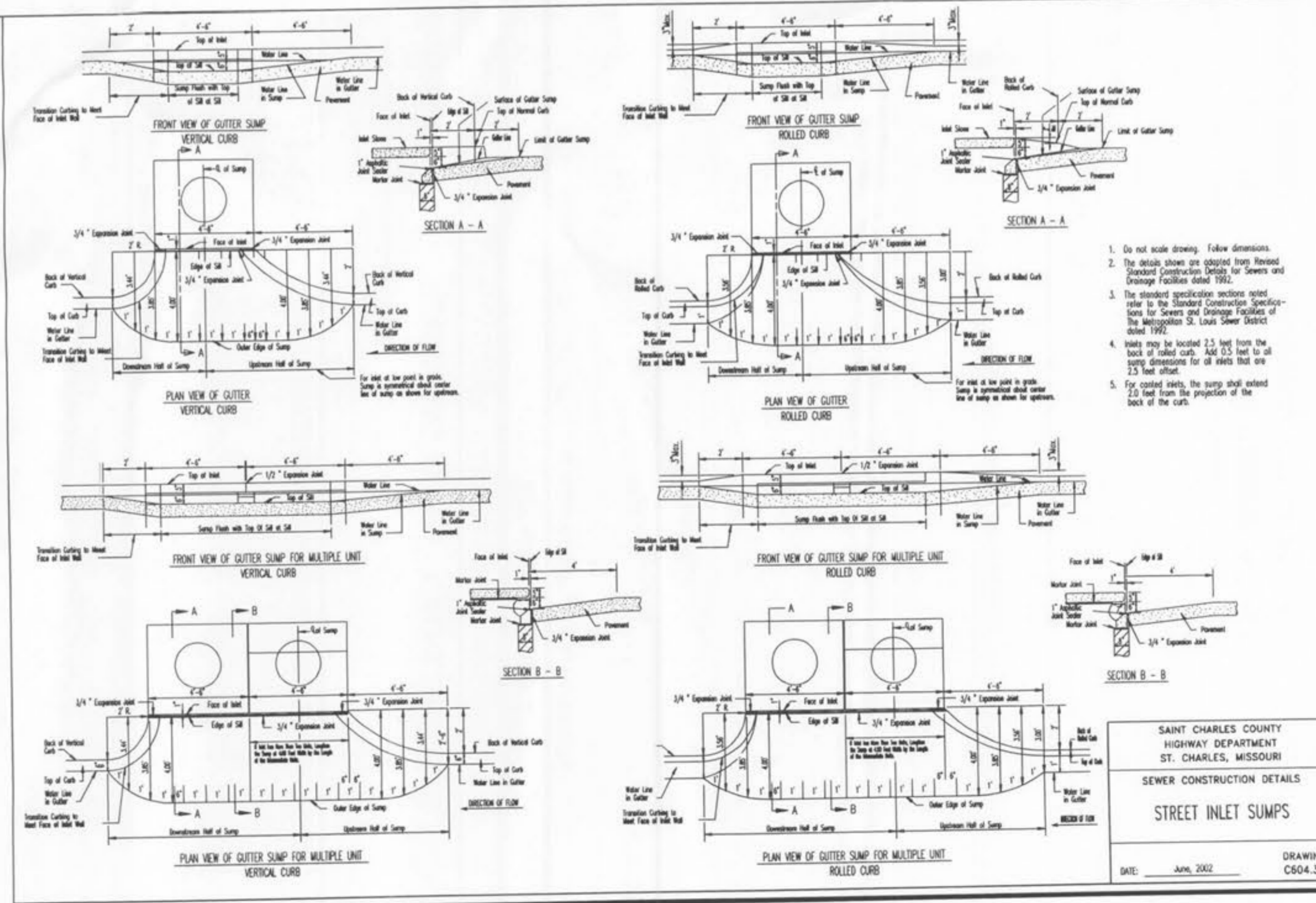
Dia.	Wall	A	B(min.)	C(min.)	D	E
12"	2"	4"	4'-0"	6"	2'-0"	
15"	2-1/4"	6"	3'-10"	6"	2'-0"	
18"	2-1/2"	9"	3'-10"	6"	3'-0"	
21"	2-3/4"	9"	3'-2"	6"	3'-6"	
24"	3"	9-1/2"	2'-6"	6"	4'-0"	
27"	3-1/4"	10-1/2"	2'-1"	6"	4'-6"	
30"	3-1/2"	1'-0"	1'-7"	6"	5'-0"	
36"	4"	1'-3"	2'-10"	6"	5'-0"	
42"	4-1/2"	1'-9"	2'-11"	6"	6'-6"	
48"	5"	2'-0"	2'-2"	6"	7'-0"	
54"	5-1/2"	2'-3"	2'-11"	6"	7'-6"	
60"	6"	2'-6"	3'-3"	6"	8'-0"	
66"	6-1/2"	2'-0"	1'-9"	6"	8'-6"	

ADJUSTING REINFORCING BAR/PIPE DIAMETER INCHES	BARREL SECTION REINFORCEMENT		FLARE SECTION REINFORCEMENT (ONE LAYER ONLY IN CURB OF WALL)	
	CIRCULAR	ELLIPTICAL	CIRCULAR	ELLIPTICAL
INNER CASE SQ. IN./LIN. FT.	OUTER CASE SQ. IN./LIN. FT.	AREA OF BAR/PIPE (SQ. IN./LIN. FT.)	AREA OF BAR/PIPE (SQ. IN./LIN. FT.)	AREA OF BAR/PIPE (SQ. IN./LIN. FT.)
12"	0.07	—	0.048	0.048
15"	0.07	—	0.054	0.054
18"	0.07	—	0.060	0.060
21"	0.07	—	0.066	0.066
24"	0.07	—	0.072	0.072
27"	0.13	—	0.111	0.078
30"	0.14	—	0.12	0.084
36"	0.12	0.09	0.13	0.096
42"	0.15	0.12	0.17	0.108
48"	0.18	0.14	0.20	0.120
54"	0.22	0.16	0.24	0.132
60"	0.25	0.19	0.28	0.144
66"	0.31	0.23	0.34	0.156

- GENERAL NOTES
- Do not scale drawing. Follow dimensions.
 - Slight variations in both shape and dimensions from those shown may be accepted if approved by the Engineer.
 - Not more than three lift holes may be drilled or cast in the End Section for handling and laying.
 - Lift lugs or bars will be permitted in precast Curb Walls.
 - Curb Wall may be cast-in-place or precast.
 - Curb Wall to be constructed a minimum of 2' at intake end and 3' at outlet end or to rock.
 - For construction details refer to the Sewer Construction Details for Choppers, Cokers and Large Sewer Connections, Std. Dwg. C604.41.
 - The details shown are adopted from the Missouri Department of Transportation, Standard Drawings.



SAINT CHARLES COUNTY
HIGHWAY DEPARTMENT
ST. CHARLES, MISSOURI
SEWER CONSTRUCTION DETAILS
FLARED END SECTION
(PRECAST CONCRETE)
DATE: June, 2002
DRAWING: C604.40



- GENERAL NOTES
- Do not scale drawing. Follow dimensions.
 - The details shown are adopted from Revised Standard Construction Details for Sewers and Drainage Facilities dated 1992.
 - The standard specification sections noted refer to the Standard Construction Specifications for Sewers and Drainage Facilities of the Metropolitan St. Louis Sewer District dated 1992.
 - Inlets may be located 2.5 feet from the back of rolled curb. Add 0.5 feet to all sump dimensions for all inlets that are 2.5 feet offset.
 - For coated inlets, the sump shall extend 2.5 feet from the projection of the back of the curb.

SAINT CHARLES COUNTY
HIGHWAY DEPARTMENT
ST. CHARLES, MISSOURI
SEWER CONSTRUCTION DETAILS
STREET INLET SUMPS
DATE: June, 2002
DRAWING: C604.36

IMPROVEMENT PLANS
BELLEAU CROSSING
STORM DETAILS 3

ST. CHARLES ENGINEERING & SURVEYING, INC.
801 S. FIFTH STREET, SUITE 202
ST. CHARLES, MO 63301
TEL:(636) 947-0607 FAX:(636) 947-2448

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