

- 1 - VALUES for A, B, C, D₁, E, L Elevation R and Elevation are shown on the improvement plan. TABLE of values for F and T hereon.
- 2 - LATERALS: If laterals enter on both sides of manhole, access shaft shall be located on side receiving the smaller lateral. Laterals shall be designated on improvement plan as right or left facing in the direction of stationing.
- 3 - CENTER OF MANHOLE SHAFT shall be located over center line of main storm drain when D₁ is 48" or less, in which case place 4 E bars symmetrically around shaft at 45° with center line.
- 4 - LENGTH L (shown on improvement plan) may be increased at option of Contractor to meet pipe ends, but any change in location of spur must be approved by the Engineer.
- 5 - DETAIL M: When depth of manhole from street grade to top of box is less than 2'-10-1/2" for paved streets or 3'-6" for unpaved streets, construct monolithic shaft per Detail M.
The Contractor shall have the option of constructing shaft per Detail M for any depth of manhole.
When diameter D₁ is 48" or less, center of shaft shall be located per Note 3.
- 6 - REINFORCING STEEL shall be round, deformed, straight bars, 1-1/2" clear from face of concrete unless shown otherwise. Tie bars shall be #3 and spaced 18" on centers or closer.
- 7 - EMBEDMENT P shall be 5" for D₂=96" or less and 8" for D₂ over 96".
- 8 - STEPS shall be 3/4" round, galvanized steel and anchored not less than 6" in the walls of structure. Unless otherwise shown the spacing shall be 1'-5" Max. on centers. The lowest step shall be not more than 2 feet above the invert.
- 9 - RINGS AND PIPE for access shaft shall be seated in class B mortar and neatly pointed or wiped inside shaft.
- 10 - Stationing through Junction Chamber as shown on plans.
- 11 - FLOOR of manhole shall be steel troweled to springing line.
- 12 - BODY of manhole, including spur, shall be poured in one continuous operation, except that the Contractor shall have the option of placing at the springing line a construction joint with longitudinal keyway.
- 13 - ELEVATION S applies at center of main line on prolongation of invert of spur.
- 14 - f_c=3000 PSI at 28 days.
- 15 - Manhole frame and cover shall be Alhambra Foundry A-1251. The identifying word "DRAIN" shall appear on storm drain covers.

TABLE OF VALUES FOR F AND T

D	F	B	T
12"	4"	12"	4"
15"	4-1/4"	15"	4-1/4"
18"	4-1/2"	18"	4-1/2"
21"	5"	21"	5"
24"	5-1/4"	24"	5-1/4"
27"	5-1/2"	27"	5-1/2"
30"	6"	30"	6"
33"	6-1/4"	33"	6-1/4"
36"	6-1/2"	36"	6-1/2"
39"	7"	39"	7"
42"	7-1/2"	42"	7-1/2"
45"	7-3/4"	45"	7-3/4"
48"	8"	48"	8"
51"	8-1/2"	51"	8-1/2"
54"	9"	54"	9"
57"	9-1/4"	57"	9-1/4"
60"	9-1/2"	60"	9-1/2"
63"	10"	63"	10"
66"	10-1/4"	66"	10-1/4"
69"	10-3/4"	69"	10-3/4"
72"	11"	72"	11"
78"	11-3/4"		
84"	12-1/2"		
90"	13-1/4"		
96"	14"		

TABLE OF BAR SIZES

D & B	A & B	D & F Bars
12"-39"	5 @ 3"	4 @ 6"
42"-84"	6 @ 3"	5 @ 6"
90"-144"	7 @ 3"	6 @ 6"

REVISIONS	
DATE OF	NATURE OF
10/7/69	Changed M/H Frame & Cover No.
8/24/77	Add to note 15 <i>JES</i>

CITY OF SANTA ANA IMPROVEMENT STANDARD		STD. NO. 8003
CONSTRUCTION NOTES FOR MODIFIED JUNCTION CHAMBER TYPE D		
APPROVED: <i>R. E. Wolford</i> CITY ENGINEER	DATE: 10/18/68	