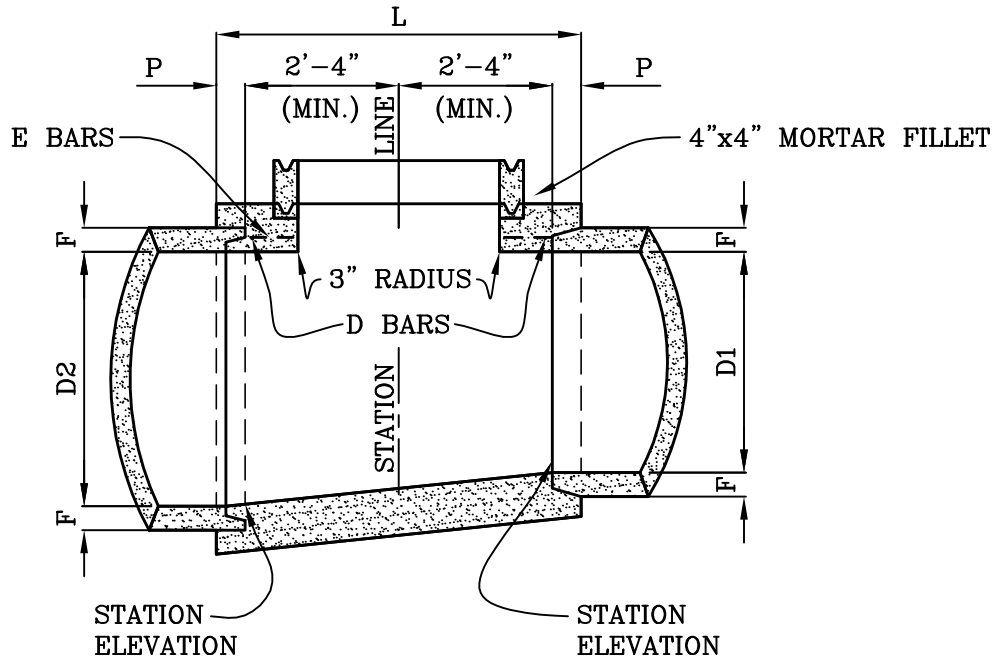


**PLAN**

(SHAFT NOT SHOWN)



**SECTION B-B**

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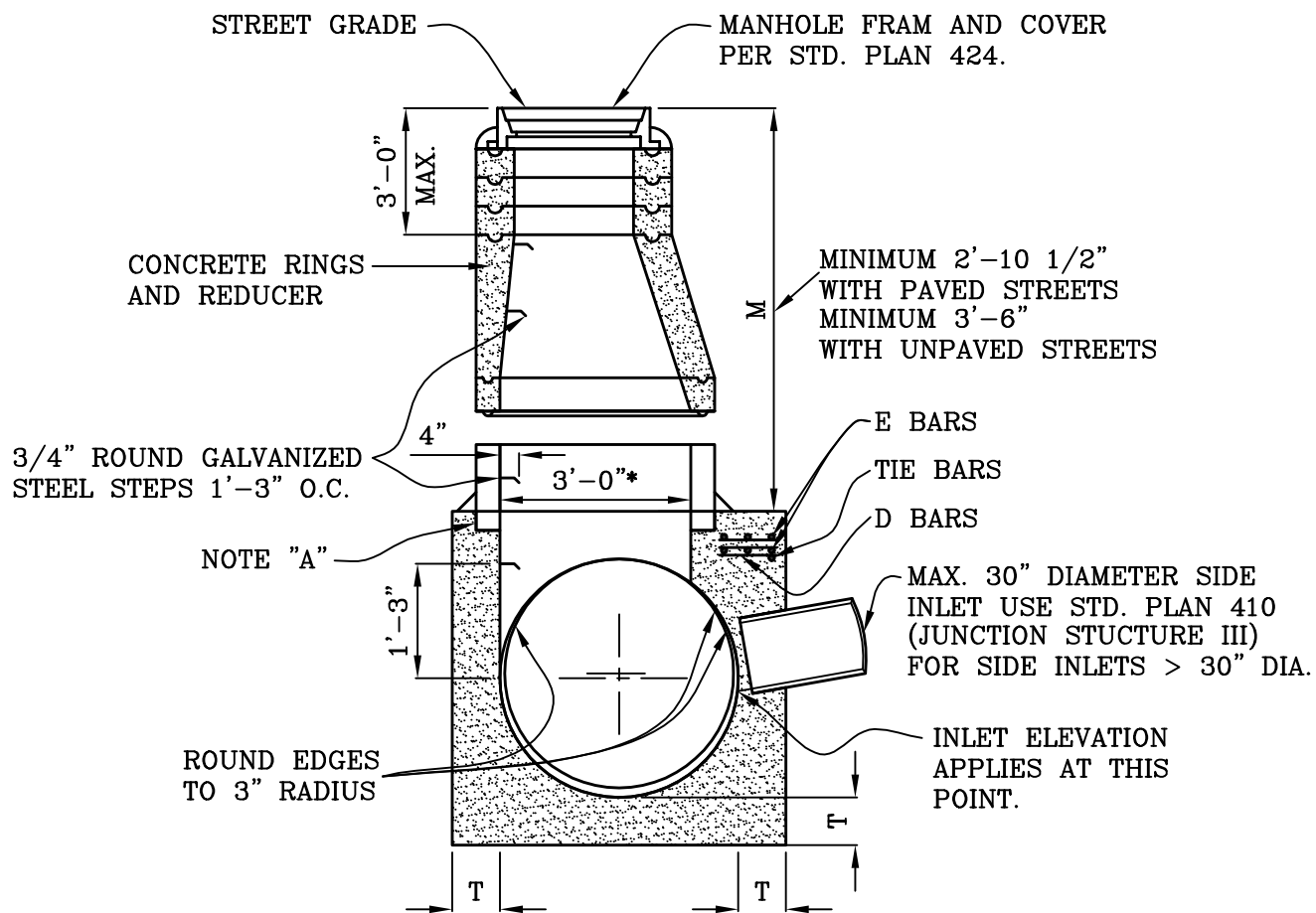
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SECTION A-A

NOTE "A"  
TWO (2) INCH DEEP SEAT TO CORRESPOND TO MANHOLE SHAFT, GROUT BETWEEN SHAFT AND SEAL.

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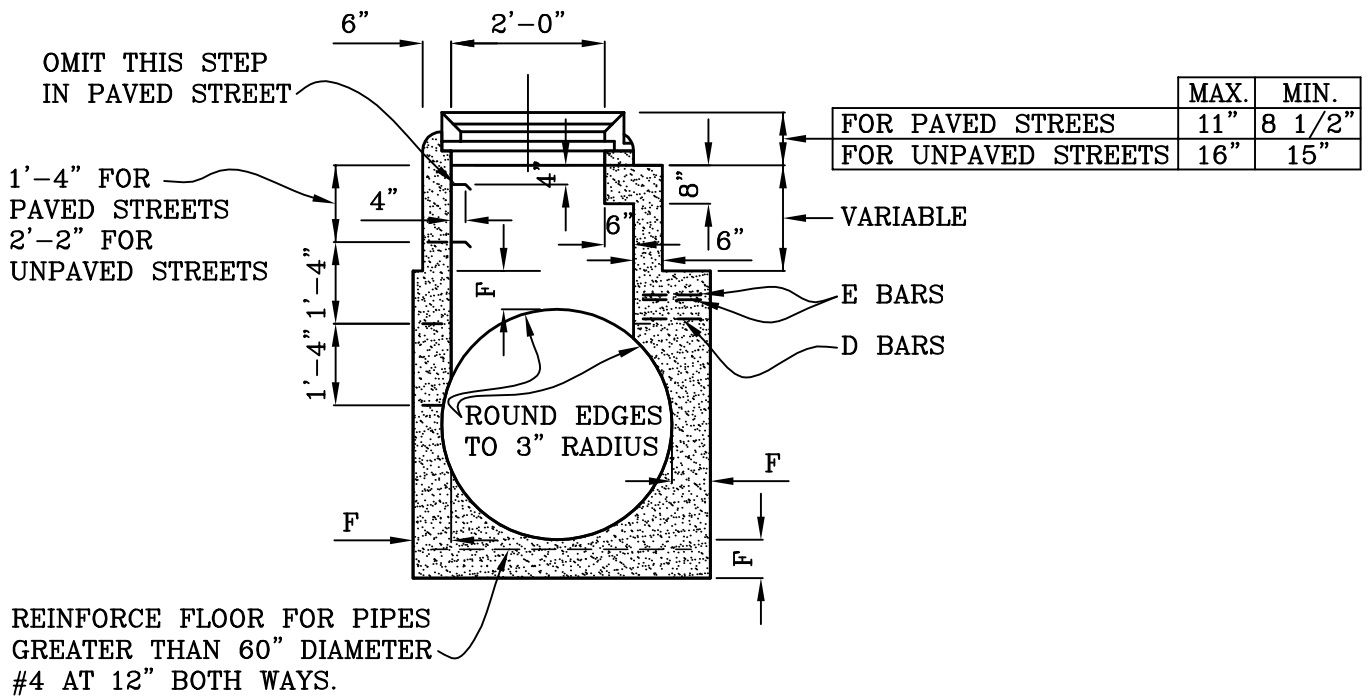
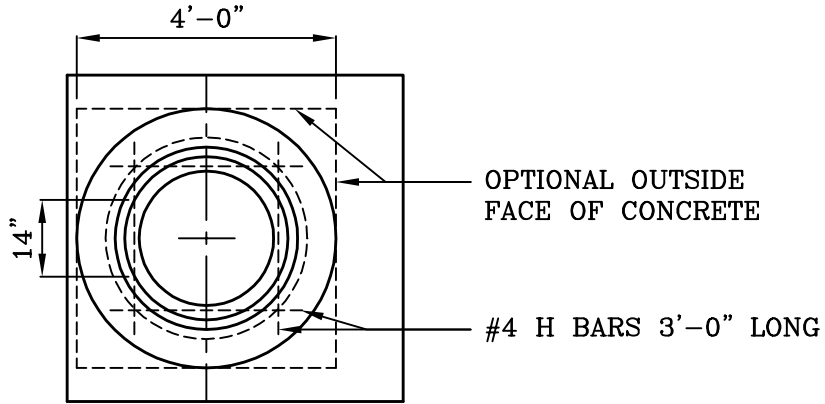
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DETAIL M

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STEEL TABLE FOR JUNCTION STRUCTURE-TYPE II						
D BARS				E BARS		
DIAM. D2	MINIMUM NO. REQ'D	SIZE	LENGTH	MINIMUM NO. REQ'D	SIZE	LENGTH
42" *	6	#5	4'-6"	4	#4	3'-2"
45" *	6	#5	4'-10"	4	#4	3'-5"
48"	6	#5	5'-1"	4	#4	3'-7"
51"	6	#5	5'-5"	6	#4	4'-9"
54"	6	#5	5'-9"	6	#4	5'-1"
57"	6	#5	6'-1"	6	#4	5'-6"
60"	6	#5	6'-4"	6	#4	5'-11"
63"	6	#5	6'-8"	6	#4	6'-3"
66"	6	#5	7'-0"	8	#4	6'-8"
69"	6	#5	7'-4"	8	#4	6'-8"
72"	6	#5	7'-7"	8	#4	6'-8"
78"	6	#5	8'-3"	8	#4	6'-8"
84"	6	#5	8'-10"	10	#4	6'-8"
90"	6	#6	9'-6"	10	#4	6'-8"
96"	6	#6	10'-1"	10	#4	6'-8"
102"	6	#6	10'-10"	11	#4	6'-8"
108"	6	#6	11'-5"	11	#4	6'-8"
114"	6	#6	12'-0"	12	#4	6'-8"
120"	6	#6	12'-7"	12	#4	6'-8"
126"	6	#6	13'-1"	13	#4	6'-8"
132"	6	#6	13'-8"	13	#4	6'-8"
138"	6	#6	14'-2"	14	#4	6'-8"
144"	6	#6	14'-7"	14	#4	6'-8"

TABLE OF VALUES FOR T	
D2	T
42"	8"
45"	8"
48"	8"
51"	8 1/2"
54"	9"
57"	9 1/4"
60"	9 1/2"
63"	10"
66"	10 1/4"
69"	10 3/4"
72"	11"
78"	11 3/4"
84"	12 1/2"
90"	13 1/4"
96"	14"
102"	15 1/2"
108"	16"
114"	16 1/2"
120"	17"
126"	17"
132"	17 1/2"
138"	17 1/2"
144"	18"

\*MANHOLE SHAFT SHALL BE 4'-0" AND JUNCTION STRUCTURE BOTTOM WIDTH SHALL BE INCREASED TO 4'0 MINIMUM WHEN M > 15. USE STD. PLAN 419 WITH 6" THICK RINGS WHEN M > 15.

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NOTES:

1. CENTER OF MANHOLE SHAFT SHALL BE LOCATED OVER CENTERLINE OF STORM DRAIN WHEN DIAMETER OF D1 IS 48" OR LESS, IN WHICH CASE PLACE E BAR SYMMETRICALLY AROUND SHAFT AT 45 DEGREES WITH CENTERLINE.
2. LENGTH L MAY BE INCREASED ONE (1) FOOT MAX. AT EACH END TO MEET PIPE ENDS. CONTINUE D BARS AT 3" O.C.
3. 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 AS PER DETAIL M. WHEN DIAMETER D IS 48" OR LESS, CENTER OF SHAFT SHALL BE LOCATED AS PER NOTE 2.
4. THICKNESS OF DECK SHALL VARY WHEN NECESSARY TO PROVIDE LEVEL PIPE SEAT, BUT SHALL NOT BE LESS THAN TABULAR VALUES FOR T, AS SHOWN ON SHEET 4 OF 5.
5. REINFORCING STEEL SHALL BE ROUND, DEFORMED BARS, 1 1/2" CLEAR FROM FACE TO CONCRETE UNLESS OTHERWISE SHOWN. SIZES AND LENGTHS ARE SHOWN IN TABLE ON SHEET 4 OF 5.
6. STEPS SHALL BE 3/4" ROUND, GALVANIZED STEEL AND ANCHORED NOT LESS THAN 6" IN THE WALLS OF THE STRUCTURE AND SHALL PROJECT A MIN. OF 4 INCHES FROM POINT OF EMBEDMENT.
7. RINGS, REDUCER, AND PIPE FOR ACCESS SHAFT SHALL BE SEATED IN 1:2 MORTAR AND NEATLY POINTED OR WIPED INSIDE THE SHAFT.
8. STATIONS OF MANHOLE SHOWN ON IMPROVEMENT PLAN APPLY AT CENTER OF SHAFT.
9. FLOOR OF MANHOLE SHALL BE STEEL-TROWELED TO SPRINGLINE.
10. BODY OF MANHOLE SHALL BE CONSTRUCTED IN ONE CONTINUOUS OPERATION, EXCEPT THAT THE CONTRACTOR SHALL HAVE THE OPTION OF PLACING A CONSTRUCTION JOINT WITH A LONGITUDINAL KEYWAY AT THE SPRINGLINE.
11. FOR PIPE SIZES NOT SHOWN, USE TABLED VALUES FOR NEXT LARGER PIPE.
12. D BARS SHALL BE PLACED 3" O.C. E BARS SHALL BE PLACED 4" O.C. TIE BARS SHALL BE #4 SPACED 18" O.C. OR CLOSER.  
WHEN L IS GREATER THAN 5'-6" AS SPECIFIED ON IMPROVEMENT PLAN, CONTINUE D BARS AT 6" O.C.  
LENGTHS SHOWN IN TABLE ARE FOR LONGEST BARS. WHERE SHORTER BARS ARE REQUIRED, BEND OR CUT TO MEET FIELD REQUIREMENTS.
13. USE JUNCTION TYPE II FOR D2 PIPE DIAMETERS OF 42" OR GREATER AND INLET PIPE DIAMETERS FOR 30" OR LESS.

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