

3-#4 J BARS,
4'-8" LONG, 3" OC
CONTINUE ADDITIONAL
BARS 6" OC TO INSIDE
EDGE OF MANHOLE

STATION

5"x2" PIPE SEAT

3-D BARS, 3" OC
CONTINUE 6" OC

4-#6 E BARS
SEE NOTE 3

#3 OR #4 @ 18"
OC TIE BARS

A & B BARS

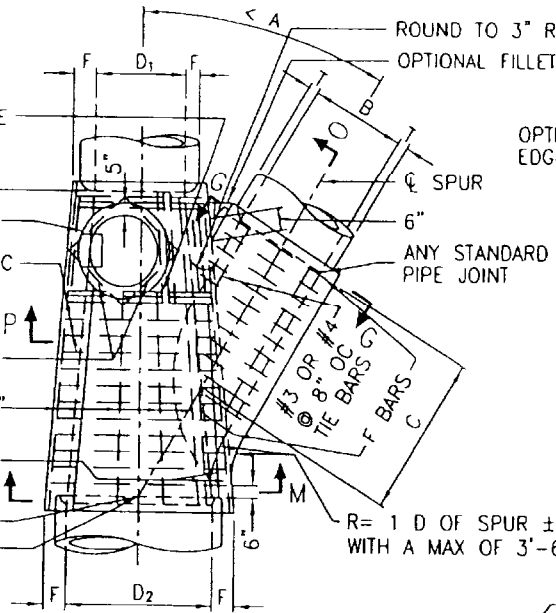
STATION PT.
STATION

ROUND TO 3" R
OPTIONAL FILLET

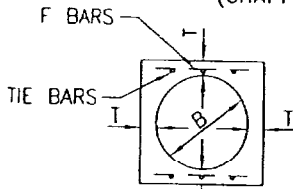
OPTIONAL OUTSIDE
EDGE OF CONCRETE

#4 H BARS
3'-0" LONG

DETAIL "N"
(RINGS AND COVER
NOT SHOWN)
SEE NOTE 2

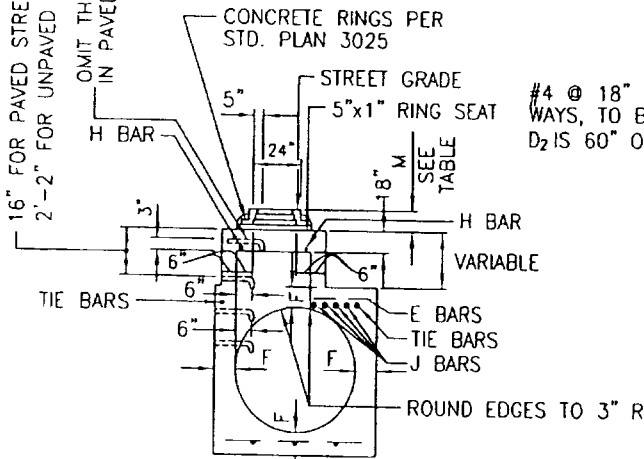


PLAN
(SHAFT NOT SHOWN)

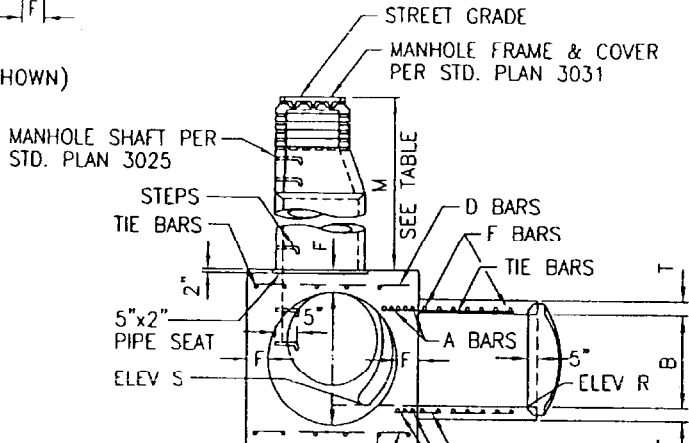


SECTION G-G

16" FOR PAVED STREETS.
2'-2" FOR UNPAVED STREETS
OMIT THIS STEP
IN PAVED STREETS



SECTION C-C

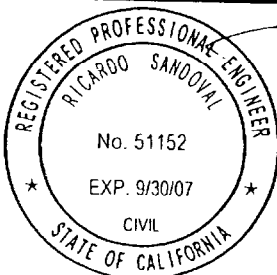


SECTION N-M-P-O

#4 @ 18" OC BOTH
WAYS, TO BE USED WHEN
D₂ IS 60" OR MORE

#4 @ 18" OC BOTH WAYS, TO BE
USED WHEN B IS 60" OR MORE

NOT TO SCALE



APPROVED BY: *Ricardo Sandoval* 10/18/06
CITY ENGINEER DATE
REVIEWED BY: *DG*
DATE OF LAST REVISION: _____

CITY OF FONTANA	
MANHOLE PIPE TO PIPE (LARGE SIDE INLET)	
STD. PLAN NO. 3011	SHT 1 OF 4

07/10/06

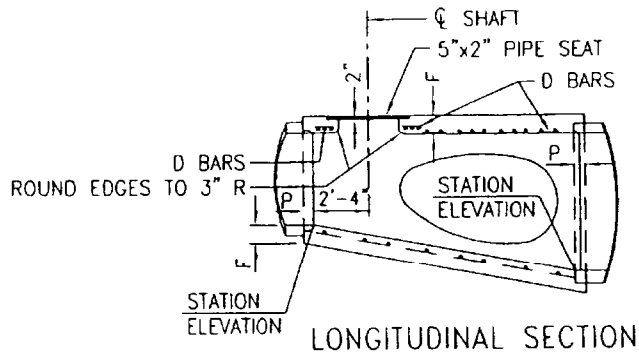


TABLE OF BARS SIZES

D2 OR B	A & B	D OR F
12"-39"	#5 @ 3"	#4 @ 6"
42"-84"	#6 @ 3"	#5 @ 6"
90"-144"	#7 @ 3"	#6 @ 6"

TABLE OF VALUES FOR M (SEE NOTE 2)

SECTION	PAVED STREET		UNPAVED STREET	
	MAX	MIN.	MAX	MIN.
N-M-P-O		2'-10 1/2"		3'-6"
C-C	11"	8 1/2"	16"	15"

TABLE OF VALUES FOR F

D2	F
36"	6 1/2"
39"	7"
42"	7 1/2"
45"	7 3/4"
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"

TABLE OF VALUES FOR F

D2	F
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"

TABLE OF VALUES FOR T

B	T
12"	4"
15"	4 1/4"
18"	4 1/2"
21"	5"
24"	5 1/4"
27"	5 1/2"
30"	6"
33"	6 1/4"
36"	6 1/2"
39"	7"
42"	7 1/2"
45"	7 3/4"
48"	8"
51"	8 1/2"
54"	9"
57"	9 1/4"
60"	9 1/2"

TABLE OF VALUES FOR T

B	T
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"

NOT TO SCALE

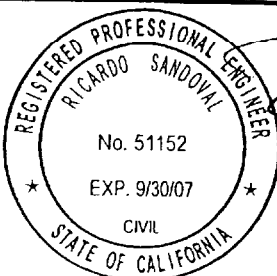


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 CITY ENGINEER
RICARDO SANDOVAL
 REVIEWED BY: *DS*
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CITY OF FONTANA
**MANHOLE PIPE TO PIPE
 (LARGE SIDE INLET)**
 07/10/06
 STD. PLAN NO. **3011** SHT 2 OF 4

NOTES

1. VALUES FOR A, B, C, D₁, D₂, ELEVATION R AND ELEVATION S ARE SHOWN ON THE PROJECT DRAWINGS. ELEVATION S APPLIES AT INSIDE WALL OF STRUCTURE.
2. WHEN DEPTH M FROM STREET GRADE TO THE TOP OF THE BOX IS LESS THAN 2'-10 1/2" FOR PAVED STREETS OR 3'-6" FOR UNPAVED STREETS, CONSTRUCT MONOLITHIC SHAFT PER SECTION C-C AND DETAIL "N". SHAFT FOR ANY DEPTH OF MANHOLE MAY BE CONSTRUCTED PER SECTION C-C. WHEN DIAMETER D₁ IS 48" OR LESS, CENTER OF SHAFT MAY BE LOCATED PER NOTE 3.
3. CENTER OF MANHOLE SHAFT SHALL BE LOCATED OVER CENTER LINE OF STORM DRAIN WHEN DIAMETER D₁ IS 48" OR LESS, IN WHICH CASE PLACE E BARS SYMMETRICALLY AROUND SHAFT AT 45° WITH CENTER LINE.
4. LENGTH OF MANHOLE MAY BE INCREASED AT OPTION TO MEET PIPE ENDS, BUT ANY CHANGE IN LOCATION OF SPUR MUST BE APPROVED BY THE ENGINEER.
5. P SHALL BE 5" FOR D₂=96" OR LESS AND 8" FOR D₂ OVER 96".
6. REINFORCEMENT SHALL CONFORM TO ASTM A 615, GRADE 40, AND SHALL TERMINATE 1 1/2" CLEAR OF CONCRETE SURFACES UNLESS OTHERWISE SHOWN.
7. FLOOR OF MANHOLE SHALL BE STEEL TROWELED TO SPRING LINE.
8. BODY OF MANHOLE SHALL BE POURED IN ONE CONTINUOUS OPERATION EXCEPT THAT A CONSTRUCTION JOINT WITH A LONGITUDINAL KEYWAY MAY BE PLACED AT SPRING LINE.
9. THICKNESS OF THE DECK SHALL VARY WHEN NECESSARY TO PROVIDE A LEVEL SEAT BUT SHALL NOT BE LESS THAN THE TABULAR VALUES OF F SHOWN ON TABLE, SH. 1.
10. IF LATERALS ENTER BOTH SIDES OF MANHOLE, SHAFT SHALL BE LOCATED ON SIDE RECEIVING THE SMALLER LATERAL.
11. STEPS SHALL CONFORM TO STANDARD PLAN 3024. UNLESS OTHERWISE SHOWN, STEPS SHALL BE UNIFORMLY SPACED 14" TO 15" OC. THE LOWEST STEP SHALL NOT BE MORE THAN 24" ABOVE THE INVERT.
12. THE FOLLOWING CRITERIA SHALL BE USED FOR THIS MANHOLE:
 - A. THIS STANDARD PLAN IS USED WHEN STANDARD PLAN 3012 INADEQUATE. MAIN LINE = 36" INSIDE DIAMETER OR LARGER.
 - B. LATERAL = 12" TO 144" INSIDE DIAMETER; HOWEVER THE INSIDE DIAMETER SHALL NOT EXCEED THE INSIDE DIAMETER OF THE MAIN LINE.
13. MANHOLE FRAME AND COVER SHALL CONFORM TO STANDARD PLAN 3018 UNLESS OTHERWISE SHOWN.
14. MANHOLE SHAFT SHALL CONFORM TO STANDARD PLAN 3014 UNLESS OTHERWISE SHOWN.
15. WHERE A MANHOLE SHAFT - 36" WITHOUT REDUCER IS SPECIFIED REFER TO STANDARD PLAN 3015.
16. WHERE A PRESSURE MANHOLE SHAFT - WITH ECCENTRIC REDUCER IS SPECIFIED REFER TO STANDARD PLAN 3016.



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 CITY ENGINEER DATE
RICARDO SANDOVAL
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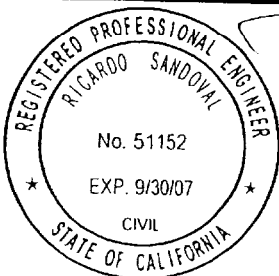
CITY OF FONTANA	
MANHOLE PIPE TO PIPE (LARGE SIDE INLET)	
<small>07/10/06</small>	
STD. PLAN NO. 3011	SHT 3 OF 4

17. WHERE A PRESSURE MANHOLE SHAFT - 36" WITHOUT REDUCER IS SPECIFIED REFER TO STANDARD PLAN 3017.

18. DIMENSIONS SHOWN ON THIS PLAN ARE NOT EXACT EQUAL VALUES.

THE FOLLOWING STANDARD PLANS ARE INCORPORATED HEREIN:

- 3014 MANHOLE SHAFT - WITH ECCENTRIC REDUCER
- 3015 MANHOLE SHAFT - 36" WITHOUT REDUCER
- 3016 PRESSURE MANHOLE SHAFT - WITH ECCENTRIC REDUCER
- 3017 PRESSURE MANHOLE SHAFT - 36" WITHOUT REDUCER
- 3019 24" MANHOLE FRAME AND COVER
- 3023 36" MANHOLE FRAME AND COVER
- 3024 STEEL STEP



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CITY OF FONTANA

MANHOLE PIPE TO PIPE
(LARGE SIDE INLET)

07/10/06

STD. PLAN NO. 3011

SHT 4 OF 4