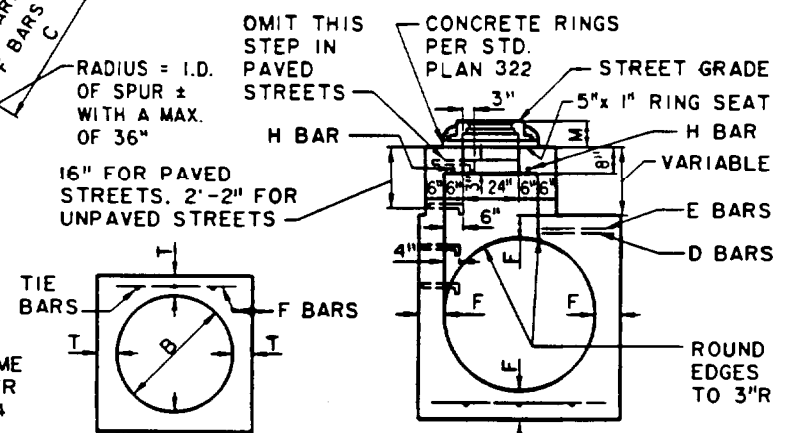
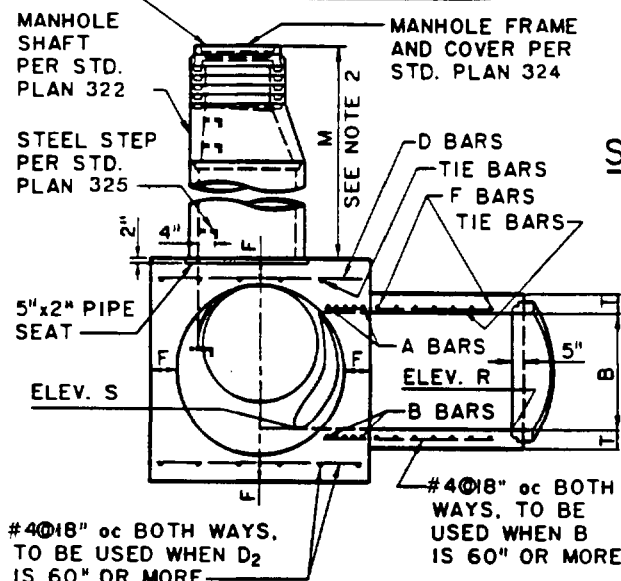


**DETAIL N**  
(RINGS AND COVER NOT SHOWN)

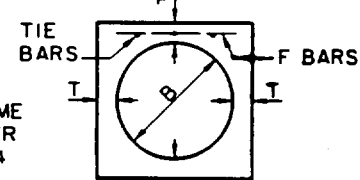
**PLAN**  
(SHAFT NOT SHOWN)



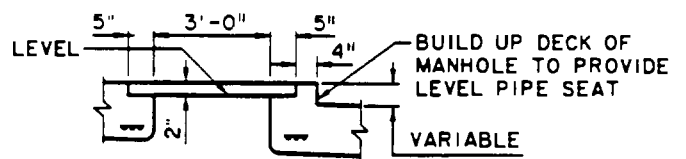
**SECTION C-C**  
(SEE NOTE 2)



**SECTION N-M-P-O**



**SECTION G-G**



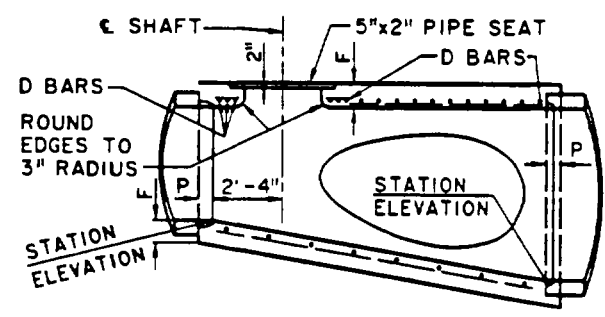
**SEAT FOR SHAFT**  
WHEN TOP IS NOT LEVEL

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"

D <sub>2</sub> OR B	F	D <sub>2</sub> OR B	F
36"	6 1/2"	78"	11 3/4"
39"	7"	84"	12 1/2"
42"	7 1/2"	90"	13 1/4"
45"	7 3/4"	96"	14"
48"	8"	102"	15 1/2"
51"	8 1/2"	108"	16"
54"	9"	114"	16 1/2"
57"	9 1/4"	120"	17"
60"	9 1/2"	126"	17 1/2"
63"	10"	132"	17 1/2"
66"	10 1/4"	138"	17 1/2"
69"	10 3/4"	144"	18"
72"	11"		

B	T	B	T
12"	4"	63"	10"
15"	4 1/4"	66"	10 1/4"
18"	4 1/2"	69"	10 3/4"
21"	5"	72"	11"
24"	5 1/4"	78"	11 3/4"
27"	5 1/2"	84"	12 1/2"
30"	6"	90"	13 1/4"
33"	6 1/4"	96"	14"
36"	6 1/2"	102"	15 1/2"
39"	7"	108"	16"
42"	7 1/2"	114"	16 1/2"
45"	7 3/4"	120"	17"
48"	8"	126"	17 1/2"
51"	8 1/2"	132"	17 1/2"
54"	9"	138"	17 1/2"
57"	9 1/4"	144"	18"
60"	9 1/2"		

D <sub>2</sub> OR B	A & B	D OR F
12"-39"	#5 AT 3"	#4 AT 6"
42"-84"	#6 AT 3"	#5 AT 6"
90"-144"	#7 AT 3"	#6 AT 6"



**LONGITUDINAL SECTION**

# CITY OF RANCHO CUCAMONGA, CALIFORNIA

APPROVED BY:  
*W. Orrell* 6.1.92  
CITY ENGINEER  
R.C.E. 24953

MANHOLE NO. 4  
USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

STANDARD PLAN  
321  
SHEET 1 OF 2


NOTES

1. VALUES FOR A, B, C, D<sub>1</sub>, D<sub>2</sub>, ELEVATION R AND ELEVATION S ARE SHOWN ON THE PROJECT DRAWINGS.
2. WHEN DEPTH M FROM STREET GRADE TO THE TOP OF THE BOX IS LESS THAN 2'-10" 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 D<sub>1</sub> 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 D<sub>1</sub> 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 D<sub>2</sub>=96" OR LESS AND 8" FOR D<sub>2</sub> 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. IF LATERALS ENTER ON BOTH SIDES OF MANHOLE, SHAFT SHALL BE LOCATED ON SIDE RECEIVING THE SMALLER LATERAL.
10. ELEVATION S APPLIES AT INSIDE WALL OF STRUCTURE.
11. STEPS SHALL CONFORM TO STANDARD PLAN 325. UNLESS OTHERWISE SHOWN STEPS SHALL BE SPACED 14" TO 15" ON CENTER. THE LOWEST STEP SHALL NOT BE MORE THAN 24" ABOVE THE LEDGE AT THE SIDE OF THE MANHOLE FLOOR.
12. MANHOLE FRAME AND COVER SHALL CONFORM TO STANDARD PLAN 324.
13. MANHOLE SHAFT SHALL CONFORM TO STANDARD PLAN 322. UNLESS OTHERWISE SHOWN.

THE FOLLOWING STANDARD PLANS ARE INCORPORATED HEREIN:

- 322 STANDARD MANHOLE SHAFT
- 324 24-INCH MANHOLE FRAME AND COVER
- 325 STEEL STEPS

**CITY OF RANCHO CUCAMONGA, CALIFORNIA**

APPROVED BY:  CITY ENGINEER R.C.E. 24953	MANHOLE NO. 4  USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION	STANDARD PLAN 321 SHEET 2 OF 2
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