

Note: Use when inlet diameter of main line is 36" or more.

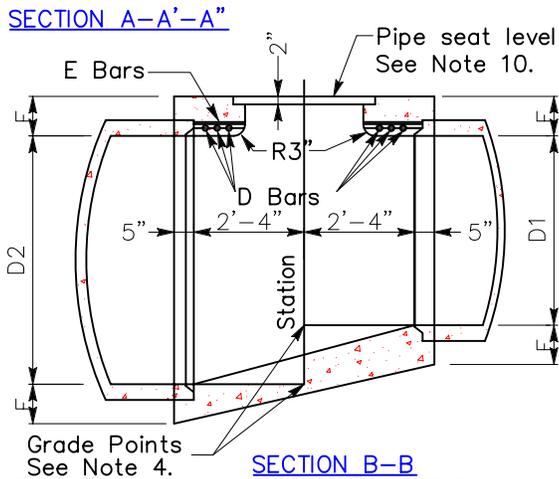
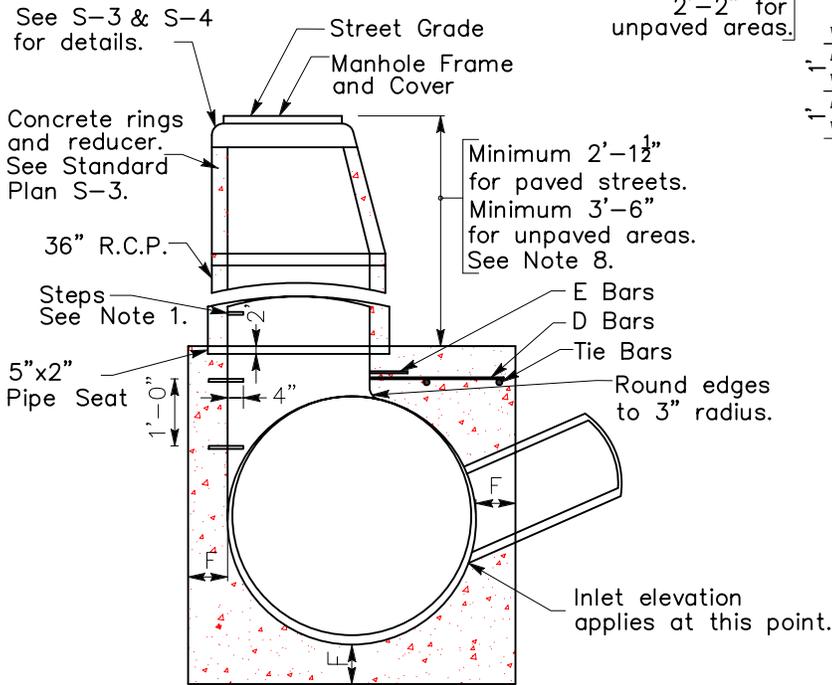
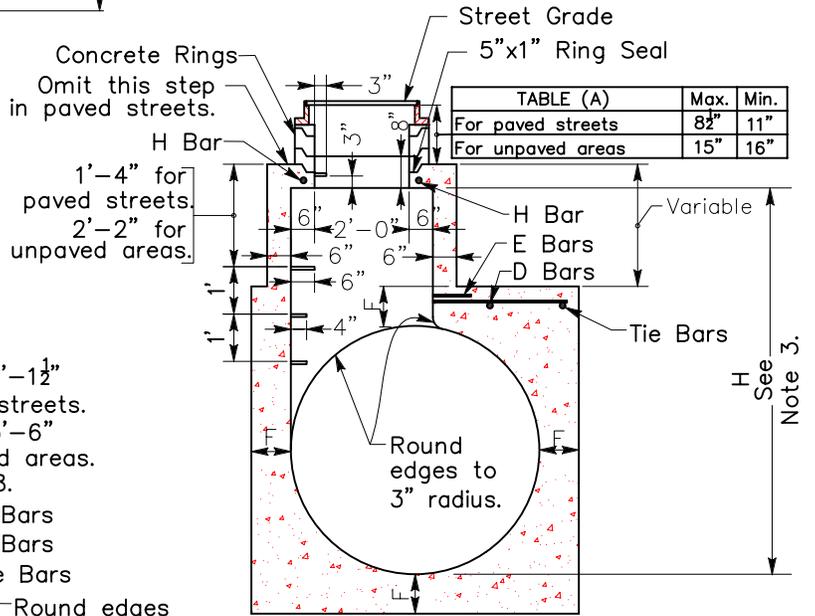
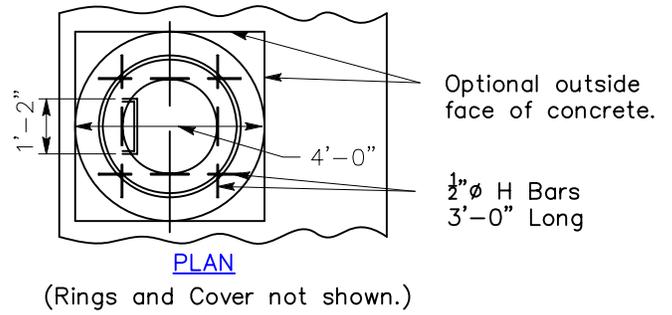
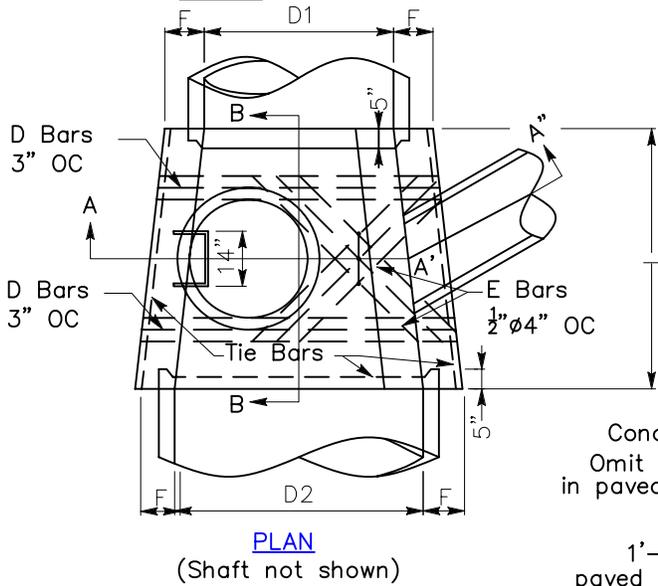


TABLE OF VALUES FOR (F)	
D2	F
36"	6 $\frac{1}{2}$ "
39"	7"
42"	7 $\frac{1}{2}$ "
45"	7 $\frac{1}{2}$ "
48"	8"
51"	8 $\frac{1}{2}$ "
54"	9"
57"	9 $\frac{1}{4}$ "
60"	9 $\frac{1}{2}$ "
63"	10"
66"	10 $\frac{1}{4}$ "
69"	10 $\frac{1}{2}$ "
72"	11"
78"	11 $\frac{1}{2}$ "
84"	12 $\frac{1}{2}$ "
90"	13 $\frac{1}{2}$ "
96"	14"

F is minimum thickness allowed.

See sheet 2 for notes. See sheet 3 for steel table.

Not to Scale



[Signature]
City Engineer

01/16/07
Date

NO	BY	DATE	REVISION

SHEET
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STANDARD
STORM DRAIN
MANHOLE TYPE 2

S-2

NOTES

1. Steps shall be $\frac{3}{4}$ " round galvanized steel and anchored not less than 6" in the walls of structure. Unless otherwise shown the spacing shall be 12" OC. The lowest step shall not be more than 2'-6" above the invert. Steps may be $\frac{1}{2}$ " steel with polypropylene plastic coating conforming to State Standard Plan D74C. All steps shall be cast-in-place.
2. Concrete shall be class "A".
3. Reinforcing steel shall be #4 deformed bars. Sizes and lengths are shown in table on page 3. Wall reinforcing not required when H = 8'-0" or less and the unsupported width or length equals 7'-0" or less. Walls exceeding these limits shall be reinforced with #4 bars @ 18" OC placed $1\frac{1}{2}$ " clear to inside of box unless otherwise shown.
4. Stations of manholes shown on improvement plan apply at center of shaft. Elevations shown at stations refer to prolonged invert grade lines.
5. Floor of manhole shall be steel-troweled.
6. Rings, reducer and pipe for access shaft shall be seated in mortar and neatly pointed or wiped inside the shaft.
7. Length (L) shall be 5'-6" unless shown otherwise on improvement plan. Any change of manhole location requires City Engineer approval.
8. Detail "M":
When depth of manhole from street grade to top of box is less than 2'-10 $\frac{1}{2}$ " for paved streets or 3'-6" for unpaved areas, construct monolithic shaft as per detail "M". The contractor shall have the option of constructing shaft as per detail "M" for any depth of manhole. When diameter D1 is 48" or less, center shaft shall be located as per note 11.
9. Thickness of deck shall vary when necessary to provide level pipe seat but shall not be less than tabular values for F shown on this plan.
10. Body of manhole shall be poured in one continuous operation, except that the contractor may place a construction joint with a longitudinal keyway at the spring line.
11. 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.

See sheet 3 for steel table.

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			NO BY DATE REVISION					

STEEL TABLE FOR MANHOLE

DIAM D2	D BARS			E BARS		
	NO REQ'D	SIZE	LENGTH	NO REQ'D	SIZE	LENGTH
36"	6	$\frac{1}{2}$ "	3'-10"	4	$\frac{1}{2}$ "	2'-9"
39"	6	$\frac{1}{2}$ "	4'-2"	4	$\frac{1}{2}$ "	2'-11"
42"	6	$\frac{5}{8}$ "	4'-6"	4	$\frac{1}{2}$ "	3'-2"
45"	6	$\frac{5}{8}$ "	4'-10"	4	$\frac{1}{2}$ "	3'-5"
48"	6	$\frac{5}{8}$ "	5'-1"	4	$\frac{1}{2}$ "	3'-7"
51"	6	$\frac{5}{8}$ "	5'-5"	6	$\frac{1}{2}$ "	4'-9"
54"	6	$\frac{5}{8}$ "	5'-9"	6	$\frac{1}{2}$ "	5'-1"
57"	6	$\frac{5}{8}$ "	6'-1"	6	$\frac{1}{2}$ "	5'-6"
60"	6	$\frac{5}{8}$ "	6'-4"	6	$\frac{1}{2}$ "	5'-11"
63"	6	$\frac{5}{8}$ "	6'-8"	6	$\frac{1}{2}$ "	6'-3"
66"	6	$\frac{5}{8}$ "	7'-0"	8	$\frac{1}{2}$ "	6'-8"
69"	6	$\frac{5}{8}$ "	7'-4"	8	$\frac{1}{2}$ "	6'-8"
72"	6	$\frac{5}{8}$ "	7'-7"	8	$\frac{1}{2}$ "	6'-8"
78"	6	$\frac{5}{8}$ "	8'-3"	8	$\frac{1}{2}$ "	6'-8"
84"	6	$\frac{5}{8}$ "	8'-10"	10	$\frac{1}{2}$ "	6'-8"
90"	6	$\frac{3}{4}$ "	9'-6"	10	$\frac{1}{2}$ "	6'-8"
96"	6	$\frac{3}{4}$ "	10'-1"	10	$\frac{1}{2}$ "	6'-8"

D bars shall be spaced 3" OC E Bars shall be spaced 4" OC
Tie Bars shall be $\frac{1}{2}$ " ϕ , spaced 18" OC or closer.

When L greater than 5'-6" is specified on improvement plan,
continue D Bars at 6" OC

H Bars shall be $\frac{1}{2}$ " ϕ , 3'-0" long (4 total).

Lengths shown in table are for longest bars. Where shorter
bars are required, bend or cut to meet field requirements.

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[Signature]
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01/16/07
Date

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NO	BY	DATE	REVISION

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STANDARD
STORM DRAIN
MANHOLE TYPE 2

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