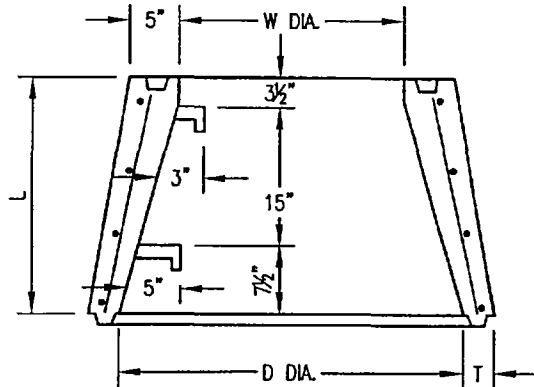


ECCENTRIC CONE

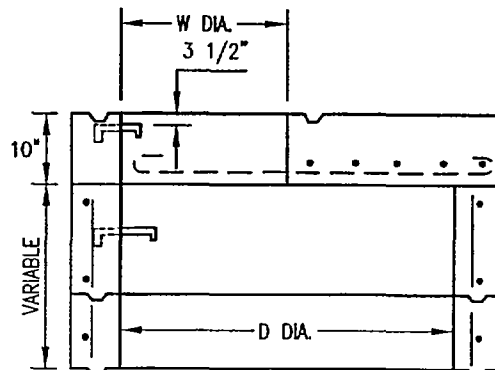
| TABLE OF DIMENSIONS | | | |
|---------------------|-----|---------|-----|
| D | W | T (min) | L |
| 36" | 24" | 3 1/2" | 26" |
| 48" | 24" | 4 1/2" | 36" |
| 60" | 36" | 5" | 36" |

NOTES:

1. Pre-cast reinforced concrete manhole components shall meet requirements of ASTM C 478 specifications.
2. Inside joints shall be neatly struck and shall not exceed 3/8" in thickness.
3. Concentric cone manholes shall be used only when specified in lieu of eccentric cones.
4. Flat top type manhole shall be used when total depth from surface to bottom of shaft is 4'-0" or less. See sheet 2 for details.
5. Jetted sand backfill (SE 50 of greater) required.
6. Storm drain manhole steps shall be 3/4"Ø galvanized steel rod per detail. Sewer manhole steps shall be steel reinforced polypropylene manufactured by M.A. Industries, Inc. or equal.
7. Raise M.H. frames and cover 18" above finish surface when in unpaved areas.
8. Place the bottom precast section on a 1/2" thick bed of mortar placed on manhole base or Junction structure.

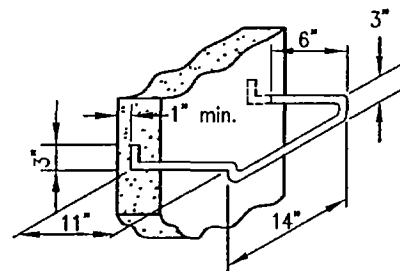


CONCENTRIC CONE



FLAT TOP MANHOLE

(see note no. 4)



STEEL STEP DETAIL



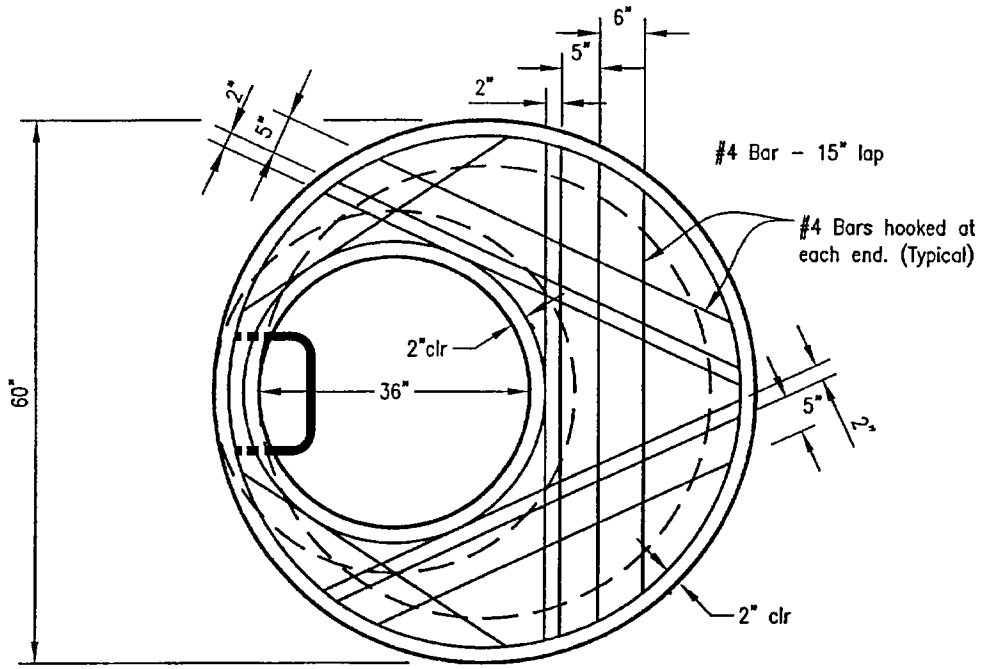
4-16-04
DATE APPROVED

CITY OF ORANGE PUBLIC WORKS DEPARTMENT

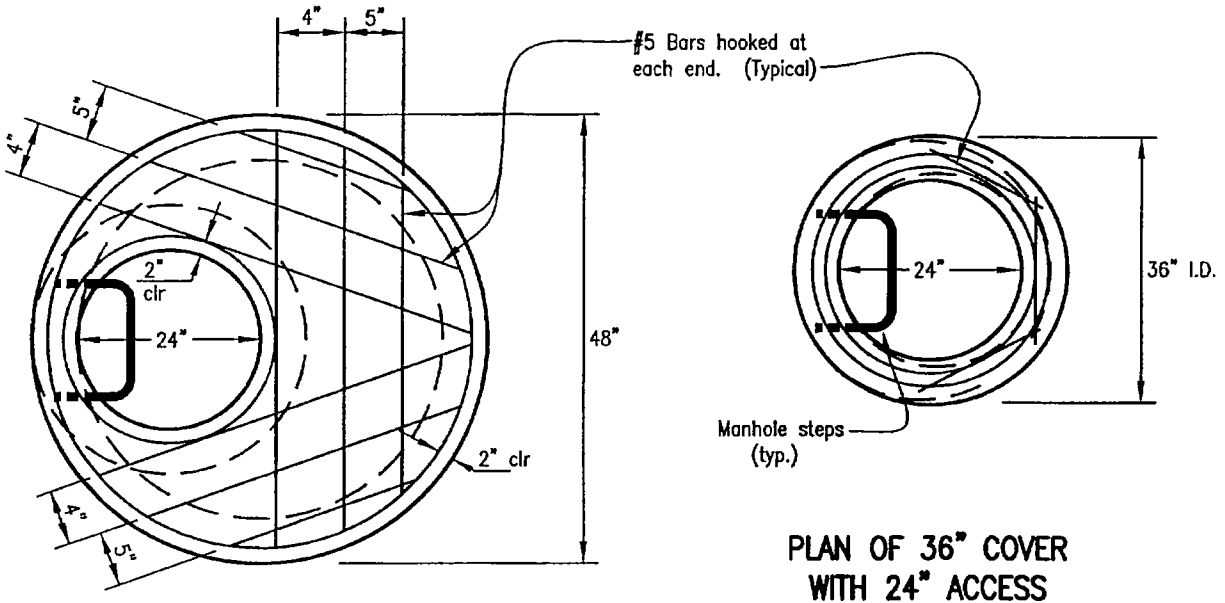
STANDARD
PLAN No.
408
SHEET 1 OF 2

PRECAST REINFORCED
CONCRETE MANHOLE

[Signature]
PUBLIC WORKS DIRECTOR/C.E.
[Signature]
ASSISTANT CITY ENGINEER



PLAN OF 60" COVER
WITH 36" ACCESS



PLAN OF 48" COVER
WITH 24" ACCESS

PLAN OF 36" COVER
WITH 24" ACCESS



4-16-04
DATE APPROVED

CITY OF ORANGE PUBLIC WORKS DEPARTMENT

STANDARD
PLAN No.
408
SHEET 2 OF 2

FLAT TOP MANHOLE

[Signature]
PUBLIC WORKS DIRECTOR/C.E.
[Signature]
ASSISTANT CITY ENGINEER