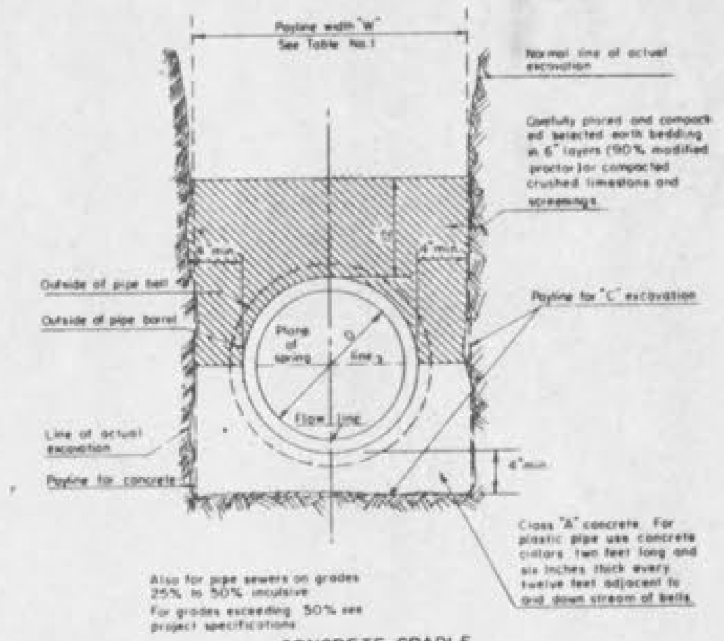
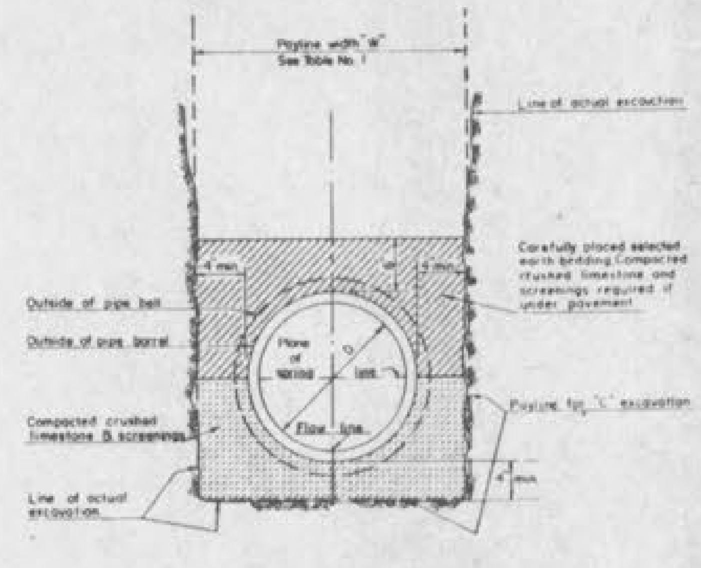
COPPERFIELD PHASE 2
CONSTRUCTION DETAILS
#82-9893B 12/1/82

| ROUND PIPE | | | | HORIZONTAL ELLIPTICAL PIPE | | | |
|---|---|---|---|---|---|---|---|
| Inside Diameter of Pipe (Inches) | "W" Payline Width of Trench (Inches) | "W" Payline Width of Trench (Feet) | Pay-volumes cu ft per ft Concrete Encasement | Inside Dimensions of Pipe (Inches) | "W" Payline Width of Trench (Inches) | "W" Payline Width of Trench (Feet) | Pay-volumes cu ft per ft Concrete Encasement |
| 4 | 28 | 2.33 | 3.20 | | | | |
| 6 | 28 | 2.33 | 3.46 | | | | |
| 8 | 28 | 2.33 | 3.70 | | | | |
| 10 | 28 | 2.33 | 3.86 | | | | |
| 12 | 28 | 2.33 | 3.98 | | | | |
| 15 | 32 | 2.67 | 4.89 | | | | |
| 18 | 35 | 2.92 | 5.63 | 14 x 23 | 41 | 3.42 | 5.94 |
| 21 | 39 | 3.25 | 6.61 | | | | |
| 24 | 42 | 3.50 | 7.39 | 19 x 30 | 49 | 4.08 | 7.68 |
| 27 | 45 | 3.75 | 8.18 | 22 x 34 | 53 | 4.42 | 8.61 |
| 30 | 49 | 4.08 | 9.30 | 24 x 38 | 58 | 4.83 | 9.70 |
| 33 | 53 | 4.42 | 10.53 | 27 x 42 | 62 | 5.17 | 10.71 |
| 36 | 56 | 4.67 | 11.43 | 29 x 45 | 66 | 5.50 | 11.72 |
| 39 | DISCONTINUED | | | 32 x 49 | 71 | 5.92 | 13.14 |
| 42 | 63 | 5.25 | 13.38 | 34 x 53 | 75 | 6.25 | 14.05 |
| 48 | 70 | 5.83 | 15.67 | 38 x 60 | 83 | 6.92 | 16.18 |
| 54 | 77 | 6.42 | 18.15 | 43 x 68 | 92 | 7.67 | 18.81 |
| 60 | 84 | 7.00 | 20.73 | 48 x 76 | 101 | 8.42 | 21.59 |
| 66 | 91 | 7.58 | 23.45 | 53 x 83 | 109 | 9.08 | 24.35 |
| 72 | 98 | 8.17 | 26.37 | 58 x 91 | 118 | 9.83 | 27.45 |
| 78 | 105 | 8.75 | 29.39 | 63 x 98 | 126 | 10.50 | 30.50 |
| 84 | 112 | 9.33 | 32.57 | 68 x 106 | 135 | 11.25 | 33.91 |
| 90 | 119 | 9.92 | 35.90 | 72 x 113 | 143 | 11.92 | 36.99 |
| 96 | 126 | 10.50 | 39.37 | 77 x 121 | 152 | 12.67 | 40.69 |
| 102 | 133 | 11.08 | 42.99 | 82 x 128 | 160 | 13.33 | 44.45 |
| 108 | 140 | 11.67 | 46.75 | 87 x 136 | 168 | 14.00 | 47.79 |
| 114 | 147 | 12.25 | 50.66 | 92 x 143 | 176 | 14.67 | 51.70 |
| 120 | 154 | 12.83 | 54.72 | 97 x 151 | 185 | 15.42 | 56.01 |
| 126 | 161 | 13.42 | 58.92 | | | | |
| 132 | 168 | 14.00 | 63.27 | 106 x 166 | 202 | 16.83 | 64.48 |
| 144 | 182 | 15.17 | 72.40 | 116 x 180 | 218 | 18.17 | 73.59 |

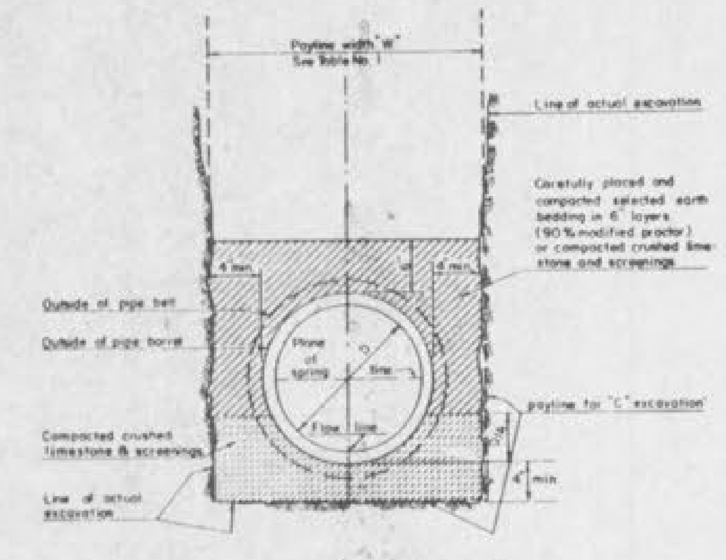
TABLE NO. I
PAYLINE WIDTHS OF TRENCH AND PAY-QUANTITIES OF CONCRETE



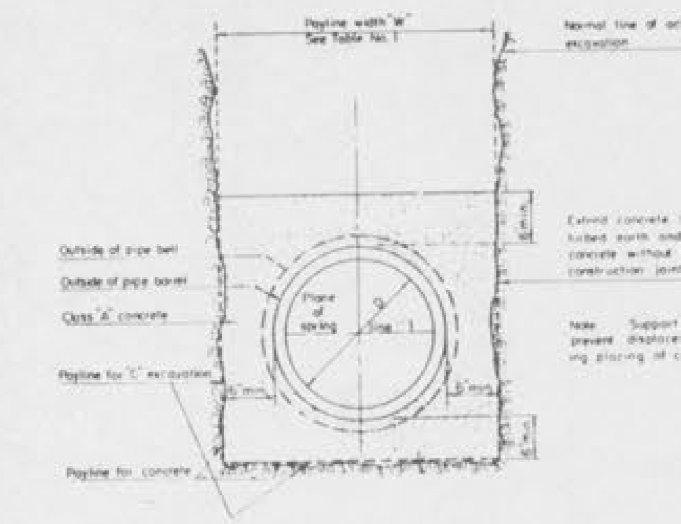
CONCRETE CRADLE
(CLASS "A" BEDDING)



PIPE BEDDING CLASS "C"
( MODIFIED FOR REINFORCED CONCRETE PIPE )



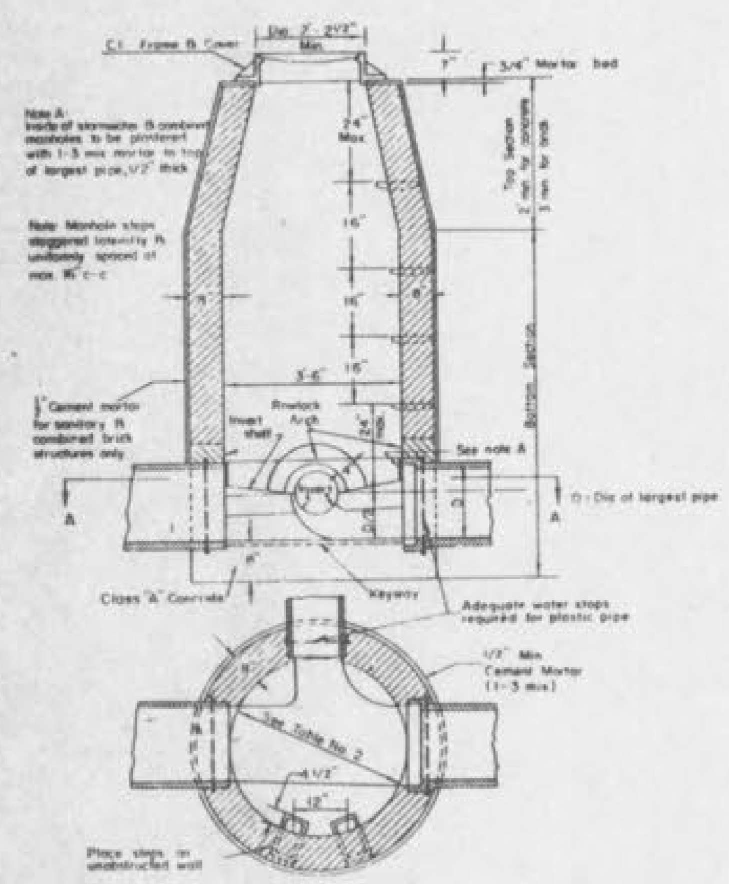
PIPE BEDDING CLASS "C"
( FOR ALL PIPE EXCEPT REINFORCED CONCRETE PIPE )



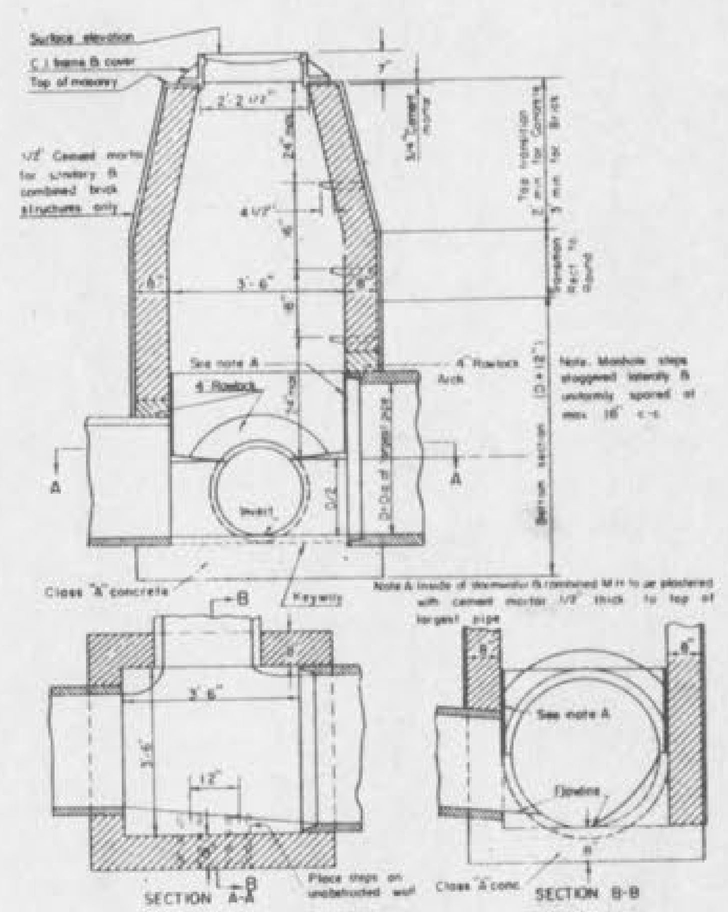
CONCRETE ENCASEMENT

| Section of Manhole | | Dimension |
|---|---|---|
| Top Transition | Upper | 2'-2½" Dia |
| | Lower | 3'-6" Dia |
| Bottom * Section | 8" thru 24" Dia. Pipe | 3'-6" Dia |
| Bottom Section | 27" thru 36" Dia. Pipe | 3'-6" Square |

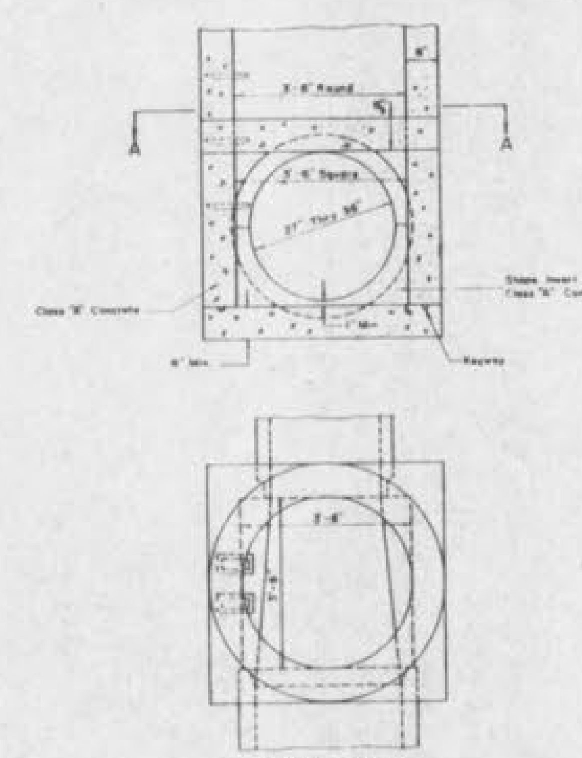
TABLE NO 2
STANDARD MANHOLE DIMENSIONS



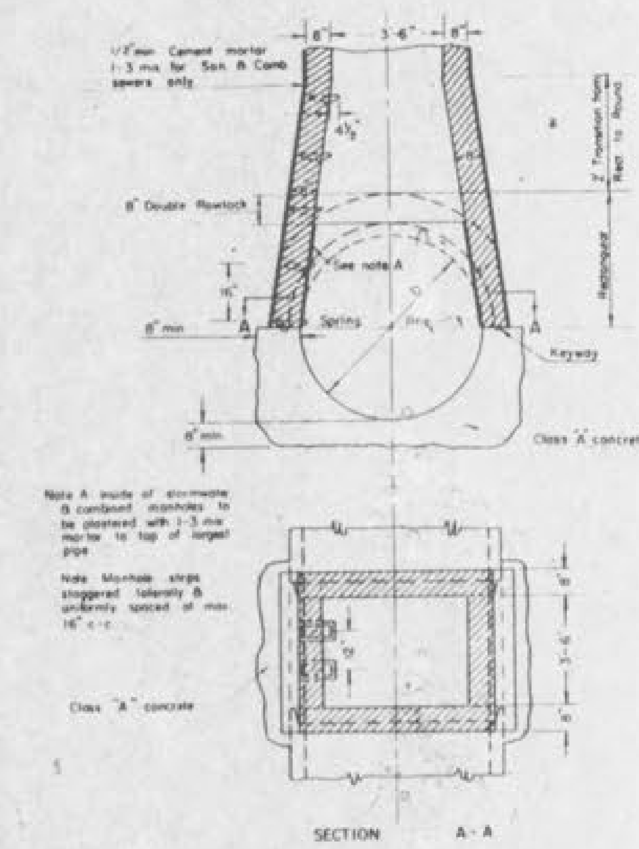
LINE MANHOLE
PIPE SEWERS 8"-24" DIA.



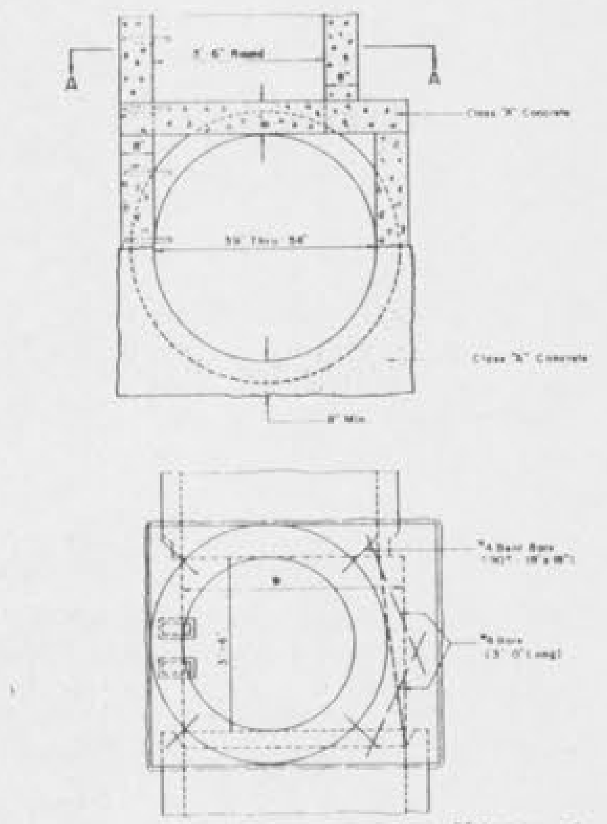
TYPICAL LINE MANHOLE
ON PIPE SEWER 27" THRU 36" IN DIAMETER



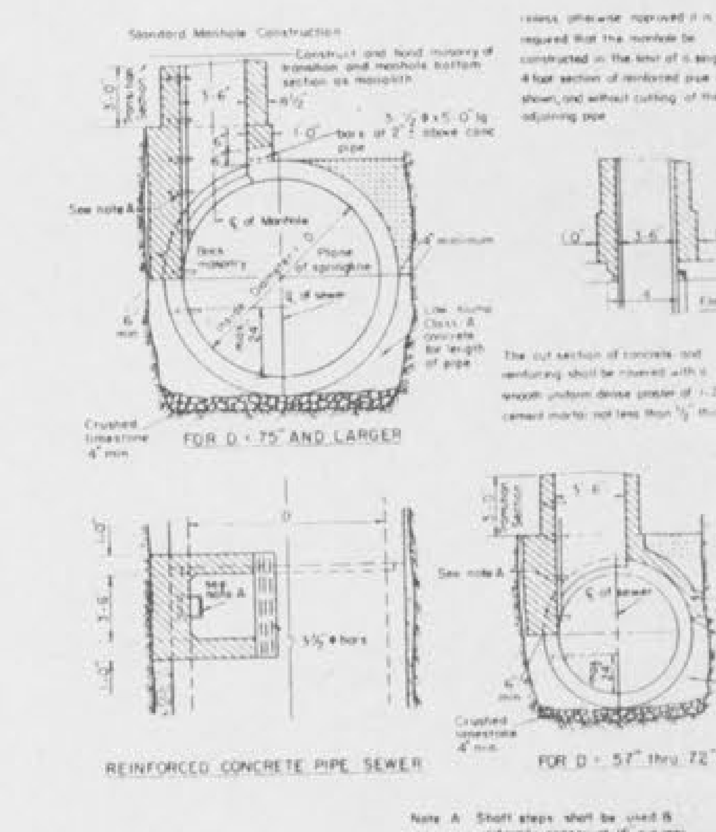
MANHOLE ON PIPE SEWER
27" THRU 36" (ALTERNATE)



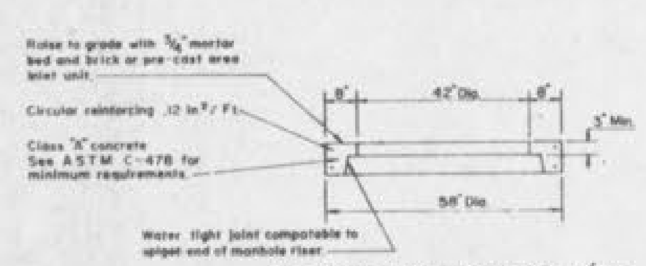
MANHOLE ON CONCRETE PIPE
SEWERS 39" THRU 54" DIAMETER



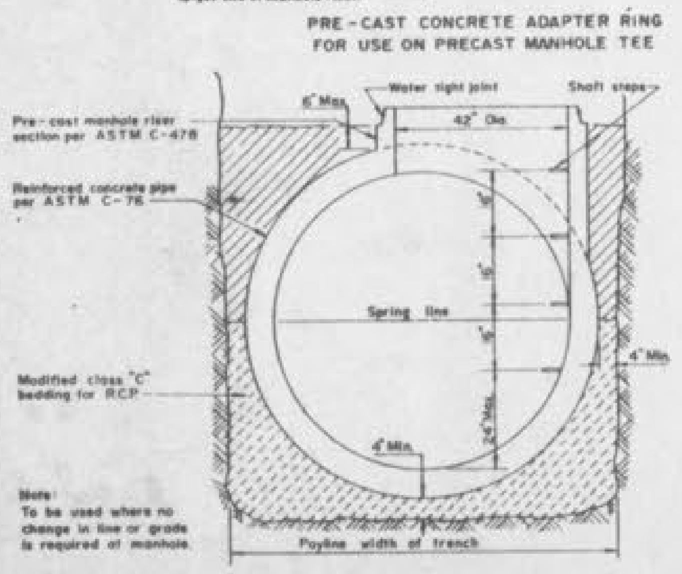
MANHOLE ON CONC PIPE
39" THRU 54" (ALTERNATE)



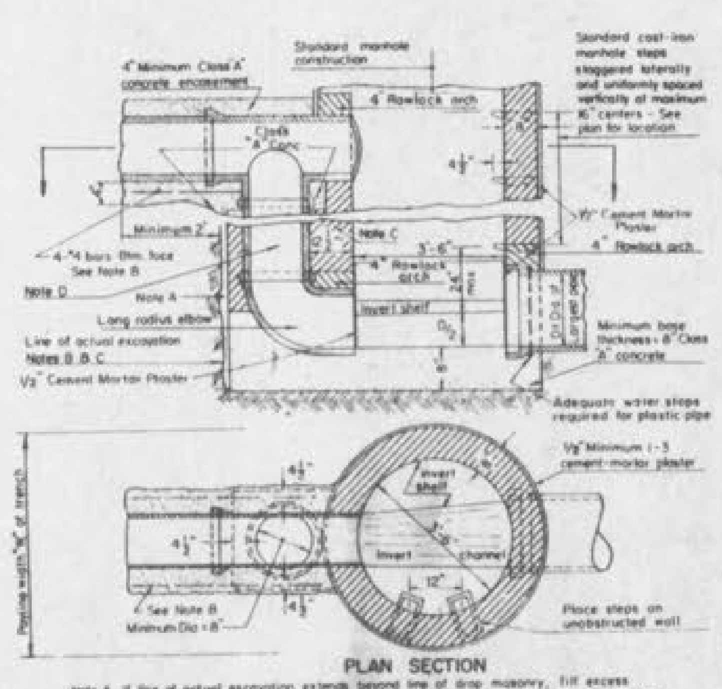
TYPICAL MANHOLE BASE
REINFORCED CONCRETE PIPE
SEWERS 57" AND LARGER
IN DIAMETER



PRE-CAST CONCRETE ADAPTER RING
FOR USE ON PRECAST MANHOLE TEE

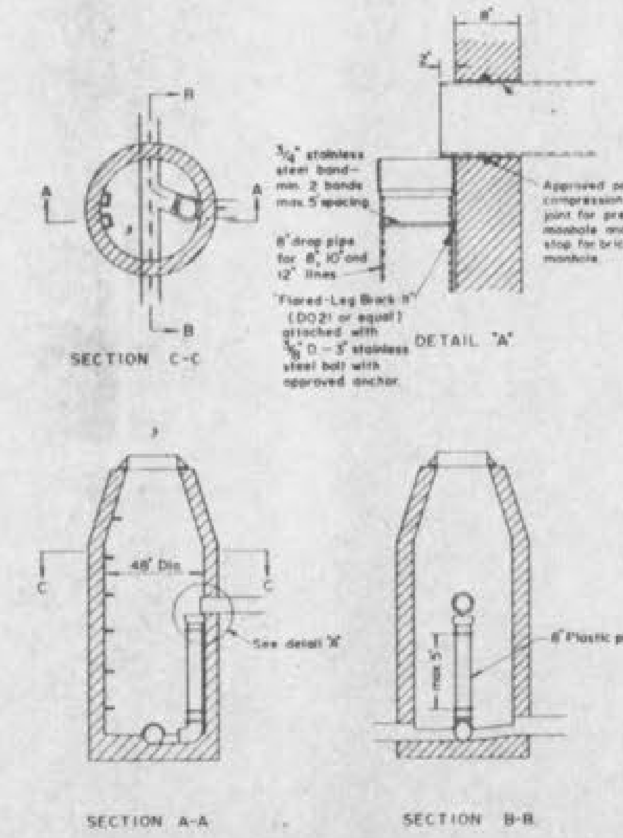


TYPICAL PRE-CAST M.H. TEE
FOR REINFORCED CONCRETE
PIPE SEWERS 48" AND
LARGER IN DIAMETER

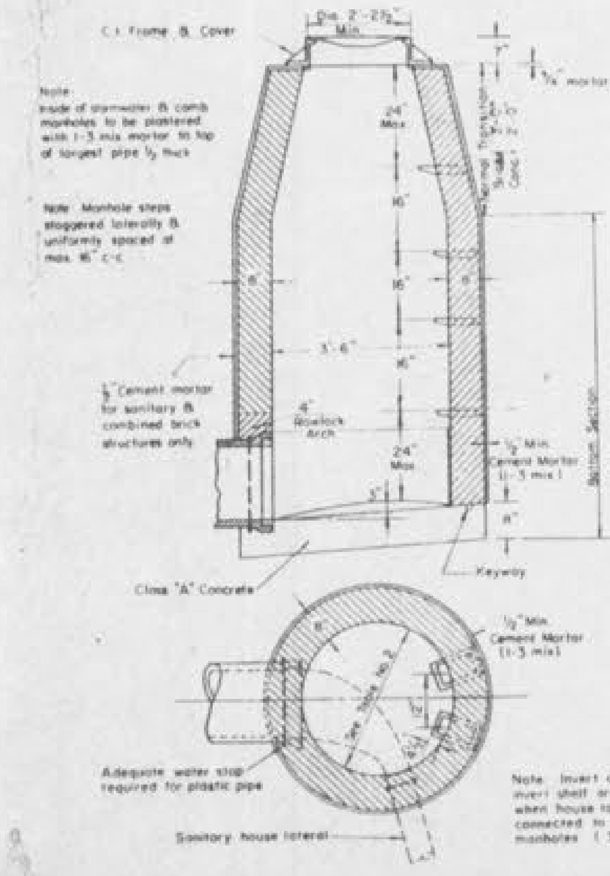


Note A: If line of actual excavation extends beyond line of drop masonry, fill excess excavated space with construction material of drop or pack with low-slump Class "A" concrete to base of Class "A" concrete encasement.
Note B: If excavated space outside of drop pipe masonry exceeds 1 foot, reinforce sewer pipe encasement with a minimum of 4 No. 4 bars for length of encasement.
Note C: Masonry encasement of drop-pipe shall be bonded and placed integrally with manhole masonry.
Note D: Diameter of drop pipe for combined sewers and sanitary sewers, is same as incoming 8", 10" or 12" pipe sewer, and 12" for larger combined sewers unless otherwise shown on project plans. For sanitary sewers 15" or larger, a drop is not to be used; connect to manhole at, or within 3" above its flowline.
Note E: New outside drop on existing manhole requires No. 4 re-bars spaced vertically at 24" c-c, one on each side of the drop pipe, grouted through 2" dia. holes in M.H. wall. (min. length of bars 18")
Note F: For inside drops, notes A & B shall apply

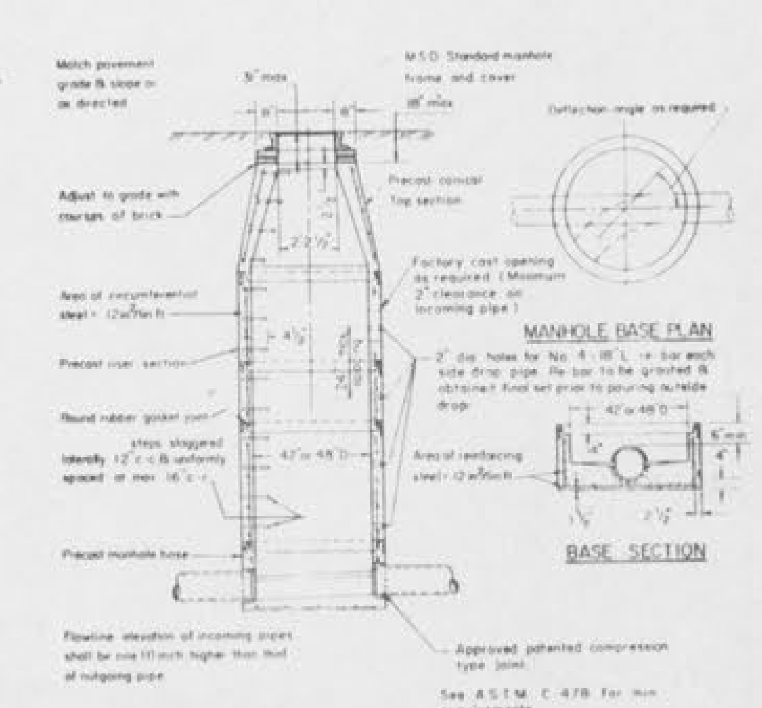
DROP MANHOLE OF BRICK MASONRY ON COMBINED, STORM OR SANITARY SEWERS



INSIDE DROP MANHOLE
FOR
PLASTIC PIPE



TERMINAL MANHOLE



PRE-CAST CONCRETE MANHOLE
FOR SEWERS
8" THROUGH 12"