



8/17/99

REVISIONS

5 FT. PRECAST REINFORCED CONCRETE MANHOLE

FLAT TOP SECTIONS USED SHALL BE DESIGNED TO SUPPORT AN H-20 WHEEL LOAD. USE OF A FLAT TOP MUST BE APPROVED BY THE ENGINEER.

FIVE FOOT MANHOLE TO BE USED FOR PIPE WITH A DIAMETER OF 18" OR GREATER, UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.

PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C-478. MANHOLES MUST BE ALLOWED TO CURE A MINIMUM OF 3 DAYS PRIOR TO SHIPMENT. THE DATE OF MANUFACTURE AND NAME OF MANUFACTURER SHALL BE ON ALL MANHOLE SECTIONS. CONCRETE SHALL BE 4,000 P.S.I. CIRCUMFERENTIAL REINFORCEMENT WILL BE PLACED AT A MINIMUM OF 0.15 SQ. INS. PER LINEAL FOOT.

TYPE 1 OR 2 RING AND COVER - TYPE 2 TO BE BOLTED TO CONE W/4" TYPE 304 STAINLESS STEEL EXPANSION ANCHORS (3/4" HLT. KWIK BOLT II OR APPROVED EQUAL)

MAX. 3 COURSES OF BRICK (8 IN.) OR 2"-5" GRADE RINGS MAY BE ADDED VERTICALLY. (NOT ALLOWED W/TYPE 2 RING AND COVER)

MAX 24" FROM TOP OF RING & COVER TO TOP STEP - TOP STEP MUST BE IN CONE SECTION

STEPS NOT TO BE PLACED OVER INFLUENT OR EFFLUENT PIPES. STEPS TO BE ALONG VERTICAL WALL SURFACE FROM SHELF TO TOP OF CONE.

NOTE: DO NOT BOLT RING TO CONE IF DIRT OR CONCRETE SURROUNDS THE RING (EX. YARD, SHOULDER, ETC.)

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DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

N.T.S. REVISED 9-1-08 APPROVED

TYPE "B" 4' & 5' PRECAST REINFORCED CONCRETE MANHOLE

RING & COVER, TYPE 3 CAST IN MH TOP AT CONCRETE PLANT.

WALL PIPE TO BE CAST IN MH TOP AT CONCRETE PLANT.

2 FEET ABOVE THE 100 YEAR FLOOD ELEVATION

2-FLANGED 90° D.I. BENDS (SHORT RADIUS) OR FLANGED D.I. RETURN BEND.

TYPE 304 STAINLESS STEEL SCREEN (18 x 18 MESH)

FLANGED JOINTS

MIN. 6"

COMpanion FLANGE WITH 4" OPENING.

3"-4" D.I. PIPE.

0 RING JOINT OR FORSHEDA 114 OR BUTYL RUBBER.

4" I.D. I. WALL PIPE CAST IN MH TOP

1'-0"

MANHOLE TO CONFORM TO CITY STANDARD DETAILS FOR 4' AND 5' PRECAST CONCRETE MANHOLES.

NOTE: ALL MANHOLES SHALL HAVE WALL PIPE INSTALLED. IF NO VENT IS SHOWN ON ENGINEERS DRAWING, WALL PIPE SHALL BE CAPPED WITH 4" D.I. BLIND FLANGE.

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N.T.S. REVISED 9-1-08 APPROVED

MANHOLE BUILT OVER EXISTING LINE

NEW SEWER LINE

FLEXIBLE CONNECTOR

WATERPROOFING

CONCRETE COLLAR

8" ALL AROUND PIPE (TYP.)

EXISTING SEWER LINE

1. PLACE HORSESHOE MH BASE IN WET CONCRETE (4000 PSI).

2. AFTER CONCRETE SETS CORE HOLE & SET NEW SEWER LINE.

3. CUT OUT TOP HALF OF EXISTING PIPE. FINISH INVERTS & WATERPROOF ALL COLD JOINTS & AROUND ALL PIPE.

4. POUR CONCRETE COLLARS.

STABILIZATION STONE EXTENDED 12" PAST CONCRETE BASE OR TO THE UNDISTURBED EARTH.

PLAN

SECTION

HORSESHOE MH BASE

NEW SEWER LINE

EXISTING SEWER LINE

CONCRETE BLOCKS - 4" MAX.

PLACE STABILIZATION STONE UNDER COLLAR OR POUR CONCRETE TO UNDISTURBED EARTH (TYPICAL).

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PRECAST REINFORCED CONCRETE MANHOLE WITH PRECAST INVERT

NOTES:

1) MANHOLE SHALL BE MANUFACTURED AS PER THE REQUIREMENTS OF ASTM C-478.

2) STANDARD FALL THROUGH MANHOLE IS 1" (28") (INCLUDING 4" AND 6" CONNECTIONS INTO MANHOLE).

35° MIN. ANGLE

FLEXIBLE CONNECTOR (ALL INFLUENT AND EFFLUENT PIPES)

PLAN

SECTION

PIPE MFR'S APPROVED JOINT

4'-0" OR 5'-0"

MFR'S JOINT

5" SLOPE

MIN. BOTTOM 6" AT C/L

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FLEXIBLE MANHOLE CONNECTOR

NOTE: FLEXIBLE MANHOLE CONNECTORS SHALL CONFORM TO ASTM C923. CONNECTORS BY PRESS-SEAL GASKET CORPORATION, HAMILTON KENT OR NPC, INC. ARE ACCEPTABLE. MAXIMUM DEFLECTION FOR CONNECTOR IS 7" (12%). SLOPES GREATER THAN 12% MUST HAVE CONNECTORS DESIGNED FOR HIGHER DEFLECTION.

MIN. 5" WALL

ALL STAINLESS STEEL EXPANSION RING

STAINLESS STEEL CLAMP (2 REQUIRED FOR 15" V.C. AND ABOVE)

FLEXIBLE CONNECTOR

MONOLITHIC MANHOLE BASE

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MANHOLE RING & COVER TYPE 3

NOTE: RING AND COVER WILL HAVE MACHINED SEAT AND WILL CONFORM TO ASTM A48, CLASS 35B.

DETAIL "C" C

MATCH GROOVES

TOP OF COVER

BOTTOM OF COVER

3/4" R

1" R

2 - NON-PENETRATING PICK HOLES

4-1/2" x 1 3/4" HEXHEAD, STAINLESS STEEL BOLTS AT 90° COUNTERSUNK. BOLTS TO BE TYPE 316 STAINLESS STEEL.

PLAN

SECTION

CONTINUOUS RUBBER GASKET (1/8" THICK) GLUED TO RING SEAT.

MINIMUM AVERAGE WEIGHTS

RING 136 LBS.

COVER 120 LBS.

256 LBS.

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POLYPROPYLENE MANHOLE STEP

MIN. 5" WALL

1 1/8"

9 1/8"

3 3/8"

1 1/4"

10 3/4"

12"

SECTION A-A

1/2" GRADE 60 STEEL REINFORCEMENT

COPOLYMER POLYPROPYLENE PLASTIC

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CAST IRON VALVE BOX

NOTES:

1. VALVE BOX WILL CONFORM TO ASTM A48, CLASS 30 B

2. MINIMUM WEIGHTS:

COVER..... 29 LBS.

TOP SECTION..... 60 LBS.

BOTTOM SECTION..... 49 LBS.

TOTAL..... 138 LBS.

VALVE BOX COVER

SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

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