NOTES:

1. 5'-0" DIAMETER FOR ALL MANHOLE DEPTHS GREATER THAN 20 FEET OR WHEN ORDERED BY THE ENGINEER
2. 6" MIN. WALL THICKNESS AND 7 INCH MIN. BASE THICKNESS WITH 5'-0" DIAMETER MANHOLES
3. 6 INCH LIP OPTIONAL UNLESS OTHERWISE NOTED
4. CONCRETE INVERT AND SHELF MAY BE SUBSTITUTED IN STORM DRAIN MANHOLES AS DIRECTED BY THE ENGINEER
**PLAN**

- Scale: Not To Scale
- Boston Water and Sewer Commission

**SECTION A - A**

- **DROP MANHOLE**
  - **Scale:** Not To Scale
  - **DATE:** June 30, 2012
  - **DETAIL NO.:** B-02b

- **NON-SHRINK GROUT, (TYP.)

- **BUILD MASONRY DAM AS DIRECTED BY THE ENGINEER**

- **USE DROP CONNECTION WHEN THIS DIMENSION EXCEEDS 2'-9"**

- **DROP CONNECTION SHALL BE SAME SIZE AS THE HORIZONTAL PIPE**

- **6" MIN. TYPICAL CAST IN PLACE CONCRETE, USE FORMS**

- **90° BEND**

- **PIPE LENGTH AS SHORT AS POSSIBLE**

- **3"**

- **6" SCREENED GRAVEL BEDDING**

- **PROVIDE MECHANICAL SEAL (LOCK-JOINT FLEXIBLE M-H SLEEVE, PRESS WEDGE SEAL, OR LINK SEAL GASKET) EXCEPT NON-SHRINK MORTAR MAY BE USED IN STORM DRAINS WHERE APPROVED BY BWSC (TYPICAL)**

- **FLOW**

- **SHELF**
PRECAST CONCRETE MANHOLE FOR USE AT PIPE JUNCTIONS

June 30, 2012

Scale: Not To Scale
LANDING PLATFORM DETAIL
5-FT DIA. MANHOLE

NOTE:
LANDING PLATFORMS SHALL BE PROVIDED FOR EACH 20 FEET OF MANHOLE HEIGHT.

Section A-A

Platforms 2" x 3/16" at 1-3/16" aluminum serrated grating with banded edges, typ.

Manhole steps from 1'-0" above grating

Exp. bolts

1/4" retainer bar

4 stainless steel fasteners at each section

Manhole steps at 12"
O.C. starting 4'-0"
Above grating down to manhole shell

5'-0" DIA. MANHOLE
PLAN VIEW

1/4" clear

3/16" clear

1/2" SST Exp. bolt at 1'-6"

L 1-1/2" x 1-1/2" x 1/4"

Retainer bar 1/4" x 1-1/4"
NOTES:

1. ALL CAST IN PLACE CONCRETE TO HAVE A MINIMUM 28 DAY STRENGTH OF 3000 LBS PER SQ. INCH, USING 3/4" MAXIMUM SIZE AGGREGATE

2. REINFORCING STEEL BARS ARE DEFORMED BARS OF BILLET STEEL ASTM A615 GRADE 60

3. WELDED WIRE FABRIC CONFORMS TO ASTM A185

4. CAST IRON FRAME, TYPE "A" AND COVER TYPE "A" FOR DETAILS SEE DETAILS NOS. F1-D01, F1-D04 AND F1-D05 COVERS TO BE MARKED EITHER "SEWER" OR "DRAIN".

5. DESIGN LIVE LOAD – HS 20 – 44

6. MINIMUM COVER FOR REINFORCING IN WALLS OR SLABS POURED AGAINST EARTH SHALL BE 3 INCHES. ALL OTHERS SHALL BE 2 INCHES UNLESS OTHERWISE NOTED

7. USE 2’-0” LENGTHS OF PIPE STUBS AT ALL MANHOLES FOR VC OR AC PIPE. USE 4’-0” MAX. LENGTHS OF PIPE STUBS AT ALL MANHOLES FOR RC, DI OR PVC.

8. THESE MANHOLE DETAILS TO BE USED FOR BOTH SANITARY SEWER AND STORM DRAIN MANHOLES

9. ALL MANHOLES SHALL BE CONSTRUCTED OF REINFORCED CONCRETE SHOP DRAWINGS SUBMITTALS SHALL SHOW ALL REINFORCING DETAILS

10. MWRA OIL AND GREASE SEPARATOR IS USED WITHIN BUILDINGS WHERE REQUIRED BY MWRA (MASSACHUSETTS WATER RESOURCES AUTHORITY) OR DEP (DEPARTMENT OF ENVIRONMENTAL PROTECTION) REGULATION. FOR DETAILS SEE DETAIL NO. B-04. FOR BWSC APPROVED GRIT AND OIL SEPARATORS, SEE DETAIL NOS. B-17 AND B-18.
NOTES:
1. PORTION EMBEDDED INCONCRETE
   COATED WITH HEAVY-BODIED
   BITUMINOUS MATERIAL AS SPECIFIED OR
   APPROVED.

2. MANHOLES GREATER THAN 15 FEET
   DEEP SHALL BE CONSTRUCTED
   WITHOUT STEPS

EXTRUDED ALUMINUM "ALCOA"
6061–T6 NO.126538 OR
APPROVED EQUAL OR STEEL
REINFORCED POLYPROPYLENE
PLASTIC.

ALUMINUM MANHOLE STEP

SECTION A-A