

TYPE "A" FRAME AND COVER TO BE MARKED EITHER "SEWER" OR "DRAIN" SEE DETAILS F1-D01 AND F1-D04

CONCRETE COLLAR SEE DETAIL B-03

FINISHED GRADE

GRADE RING

PRECAST CONCRETE SECTIONS TO CONFORM TO ASTM-478, CONCRETE OF 4,000 PSI AT 28 DAYS

MASTIC GASKET, TYPICAL ALL MANHOLE JOINTS
FILL LIFTING HOLES WITH CONCRETE

TYPICAL REINFORCEMENT, WELDED WIRE FABRIC 6x6x4Wx4W

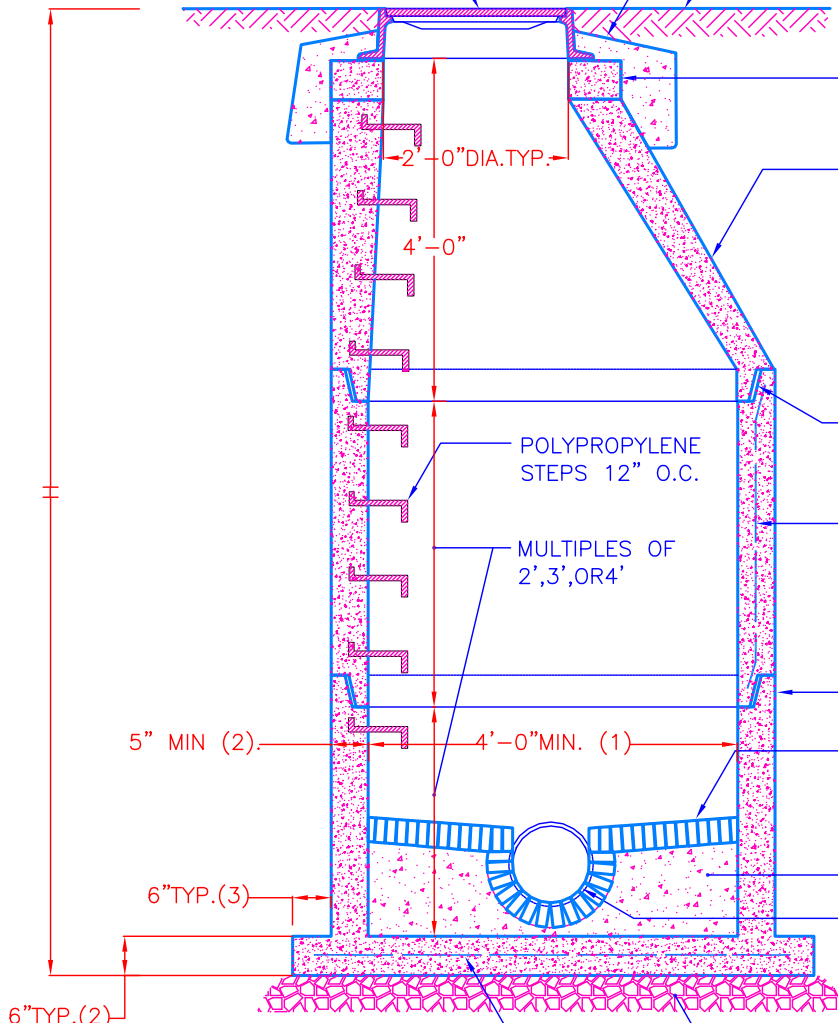
PRECAST REINFORCED CONCRETE MANHOLE BARRELS

SHELVE TO BE BRICKS LAID FLAT AT A SLOPE OF 1" PER FOOT (4)

CONCRETE FILL

INVERT TO BE INVERTED ARCH WITH BRICKS LAID AS STRECHERS AND ON EDGE

6" SCREENED GRAVEL BEDDING



H= 10' OR LESS -#4 AT 18 EW MIDDEPTH
H= 10' TO 20' -#4 AT 12 EW MIDDEPTH
H= 20' TO 30' -#5 AT 12 EW MIDDEPTH
IN ADDITION TO WELDED WIRE FABRIC

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

Location:Filename: V:\eng\ACAD_STD\Technical Details\B - Sewer Details\B-02a-f - Precast Concrete Manhole Details.dwg
Plotted on: Thursday, April 29, 2021 - 2:27 PM by Devin Denise



Boston Water and Sewer Commission

980 HARRISON AVE., BOSTON, MA 02119
(617) 989-7000 www.bwsc.org

TYPICAL PRECAST CONCRETE MANHOLE

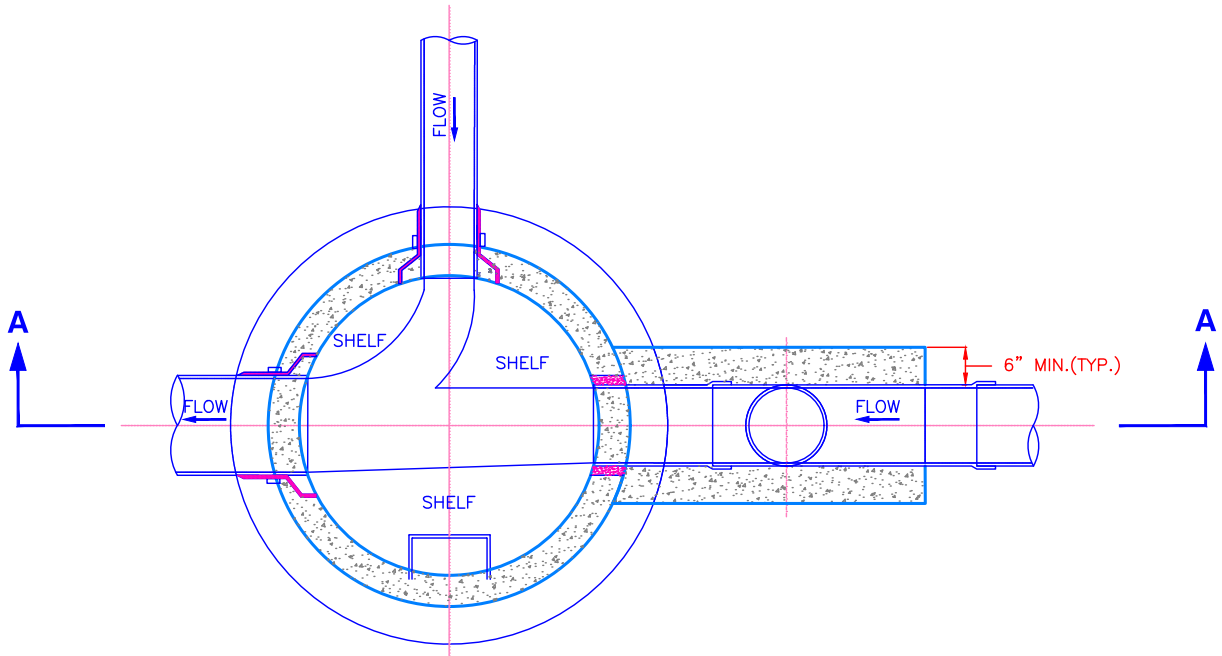
Scale: Not To Scale

DATE:

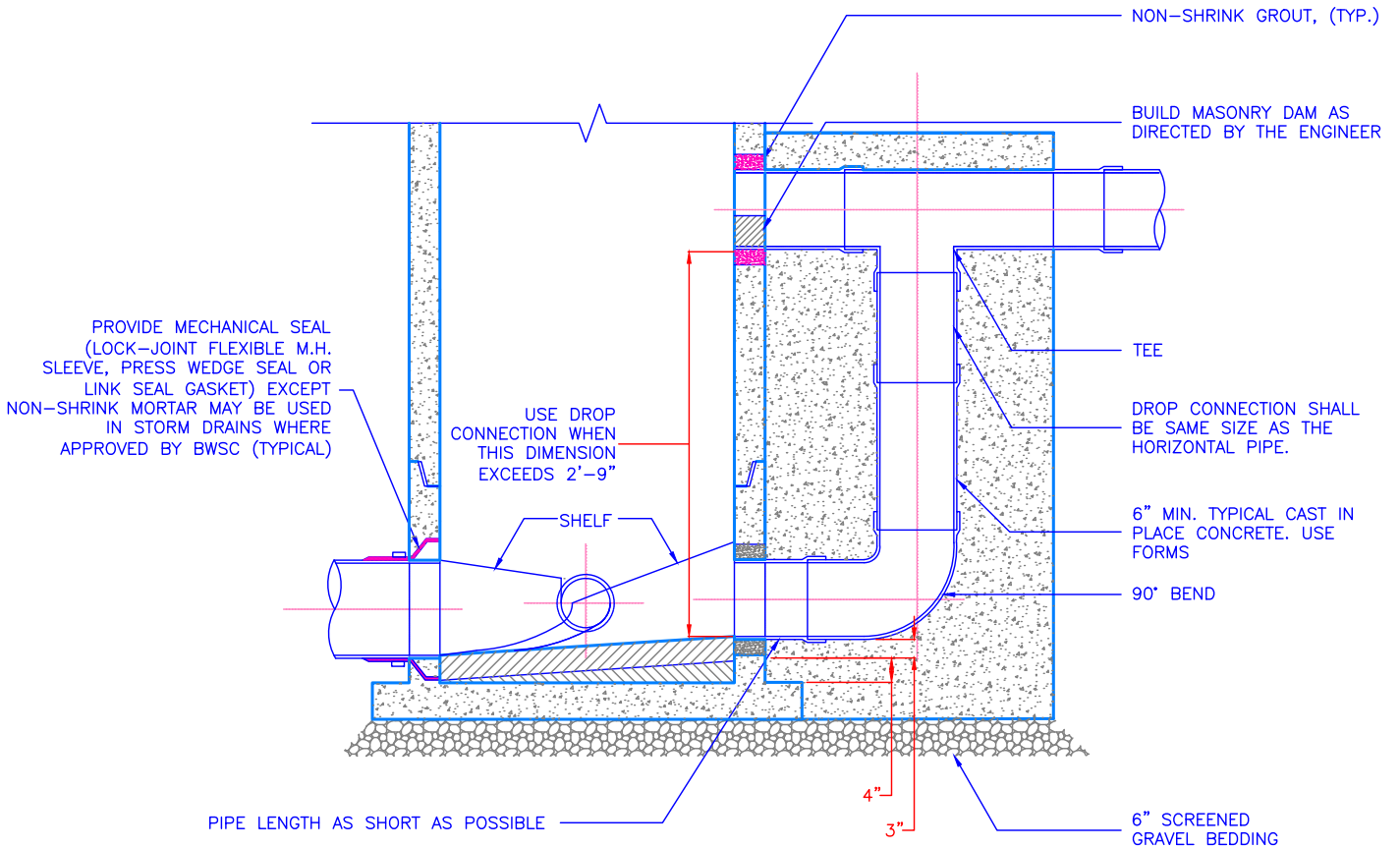
April 29, 2021

DETAIL NO.

B-02a



PLAN



SECTION A - A

Location: V:\eng\ACAD_STD\Technical Details\B - Sewer Details\B-02 - Precast Concrete Manhole Details.dwg
 Plotted on: Tuesday, January 15, 2013 - 12:52 PM by Donohoe, William



Boston Water and Sewer Commission

980 HARRISON AVE., BOSTON, MA 02119
 (617) 989-7000 www.bwsc.org

DROP MANHOLE

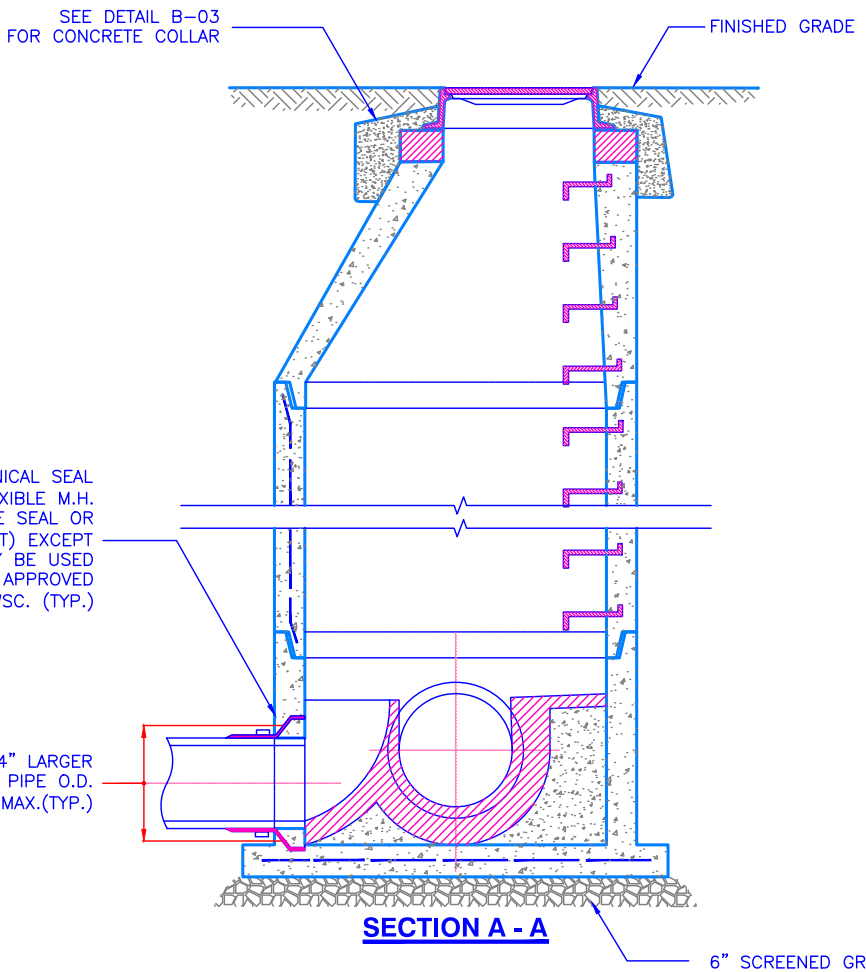
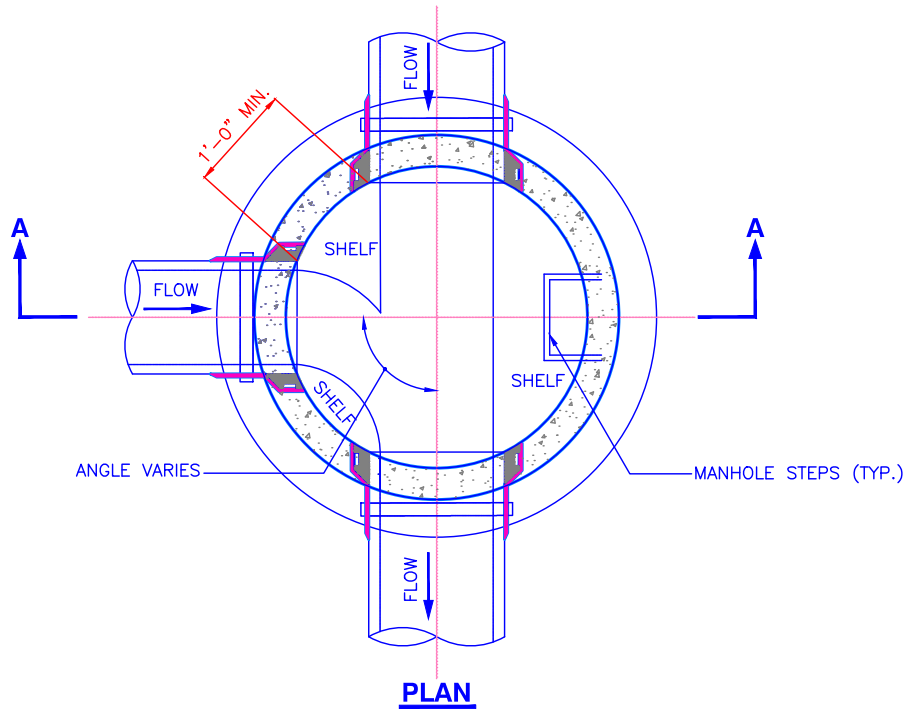
Scale: Not To Scale

DATE:

June 30, 2012

DETAIL NO.

B-02b



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. (TYP.)

OPENING 4" LARGER
THAN PIPE O.D.
MAX. (TYP.)

SECTION A - A

6" SCREENED GRAVEL BEDDING

Location: V:\eng\ACAD_STD\Technical Details\B - Sewer Details\B-02 - Precast Concrete Manhole Details.dwg
Plotted on: Tuesday, January 15, 2013 - 12:52 PM by Donohoe, William



**Boston Water and
Sewer Commission**
980 HARRISON AVE., BOSTON, MA 02119
(617) 989-7000 www.bwsc.org

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

Scale: Not To Scale

DATE:
June 30, 2012

DETAIL NO.
B-02c

PLATFORM 2"x3/16" AT
1-3/16" ALUMINUM
SERRATED GRATING WITH
BANDED EDGES, TYP.

MANHOLE STEPS FROM
1'-0" ABOVE GRATING

EXP. BOLTS

MANHOLE

1/4" RETAINER BAR

4 STAINLESS STEEL
FASTENERS \perp EACH
SECTION

MANHOLE STEPS AT 12"
O.C. STARTING 4'-0"
ABOVE GRATING DOWN TO
MANHOLE SHELF

**5'-0" DIA. MANHOLE
PLAN VIEW**

PLATFORM
4'-11 1/2" DIA.

3/16" CLEAR

1/4" CLEAR

3/16"
BANDED
EDGE

RETAINER BAR
1/4"x1-1/4"

1/2" SST EXP BOLT AT 1'-6"

L 1-1/2" x 1-1/2"x1/4"

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

SECTION A-A

Location: V:\eng\ACAD_STD\Technical Details\B - Sewer Details\B-02 - Precast Concrete Manhole Details.dwg
Plotted on: Tuesday, January 15, 2013 - 12:52 PM by Donohoe, William



**Boston Water and
Sewer Commission**

980 HARRISON AVE., BOSTON, MA 02119
(617) 989-7000 www.bwsc.org

**LANDING PLATFORM DETAIL
5-FT DIA. MANHOLE**

Scale: Not To Scale

DATE:

June 30, 2012

DETAIL NO.

B-02d

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.

Location: \\eng\ACAD_STD\Technical Details\B - Sewer Details\B-02 - Precast Concrete Manhole Details.dwg
Plotted on: Tuesday, January 15, 2013 - 12:52 PM by Donohoe, William



**Boston Water and
Sewer Commission**

980 HARRISON AVE., BOSTON, MA 02119
(617) 989-7000 www.bwsc.org

**MANHOLE STRUCTURES
GENERAL NOTES**

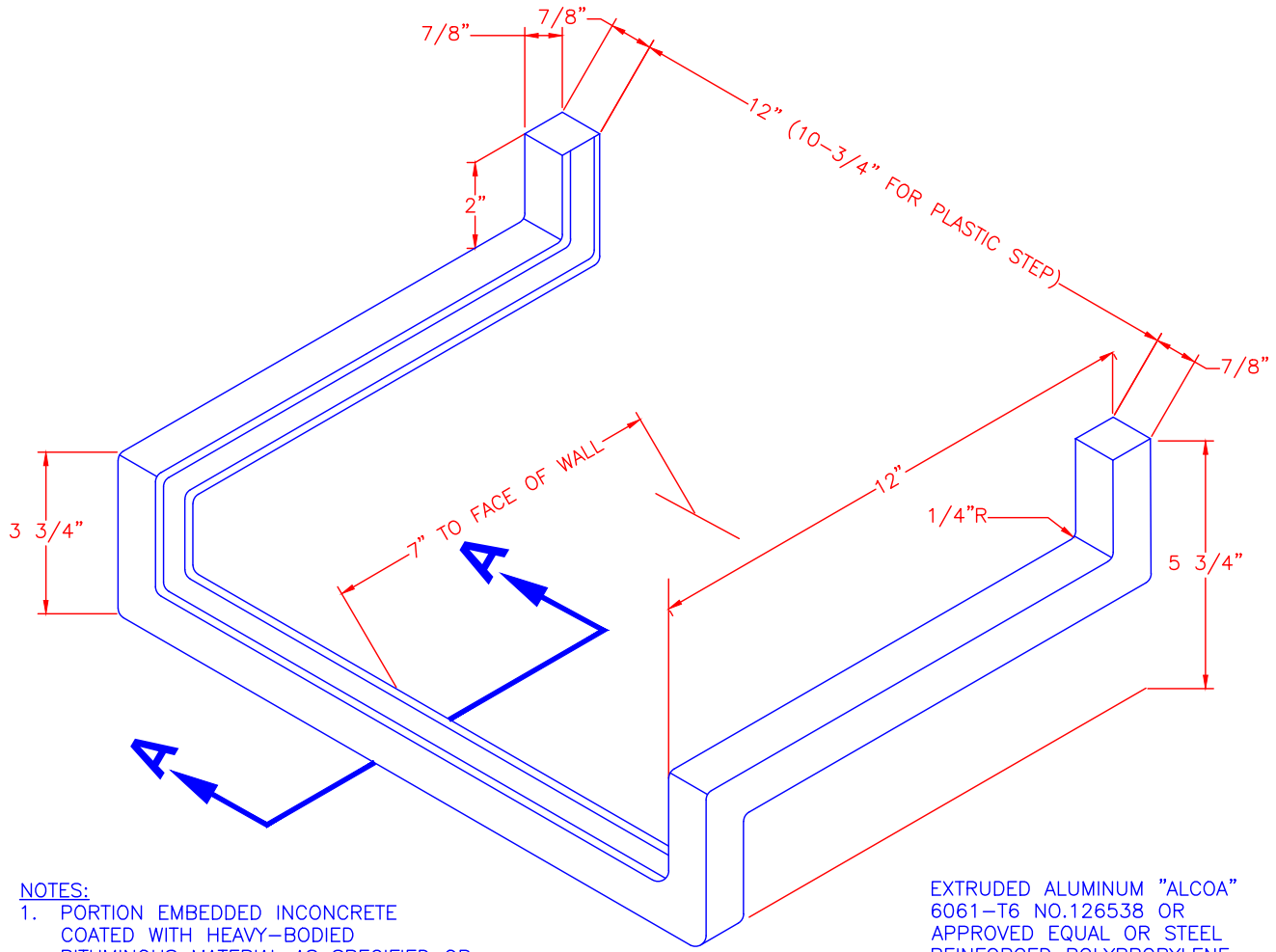
Scale: Not To Scale

DATE:

June 30, 2012

DETAIL NO.

B-02e

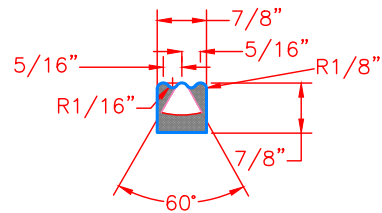


NOTES:

1. PORTION EMBEDDED IN CONCRETE 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

Location: V:\eng\ACAD_STD\Technical Details\B - Sewer Details\B-02 - Precast Concrete Manhole Details.dwg
 Plotted on: Tuesday, January 15, 2013 - 12:52 PM by Donohoe, William



Boston Water and Sewer Commission

980 HARRISON AVE., BOSTON, MA 02119
 (617) 989-7000 www.bwsc.org

ALUMINUM MANHOLE STEP

Scale: Not To Scale

DATE:

June 30, 2012

DETAIL NO.

B-02f