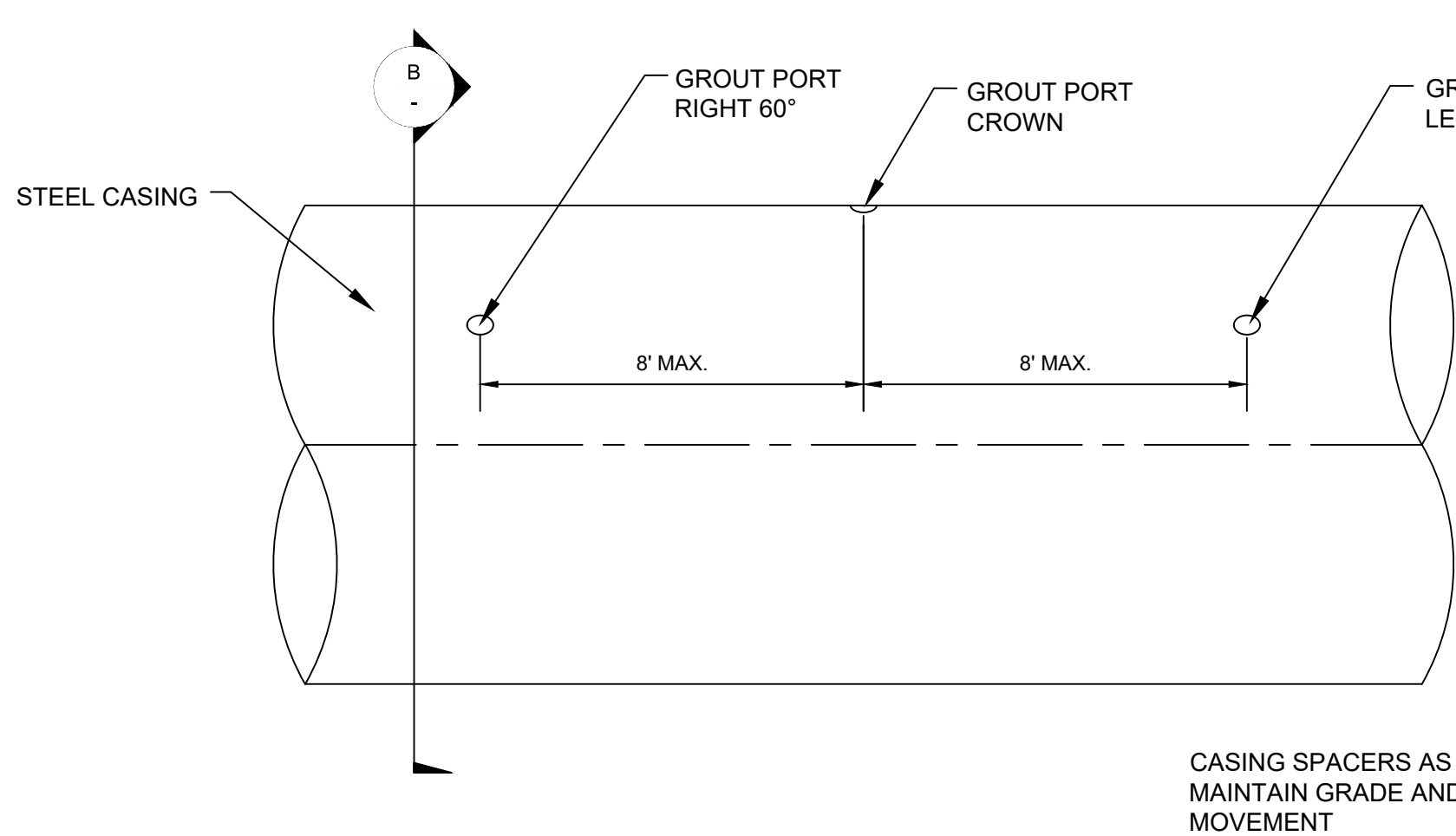
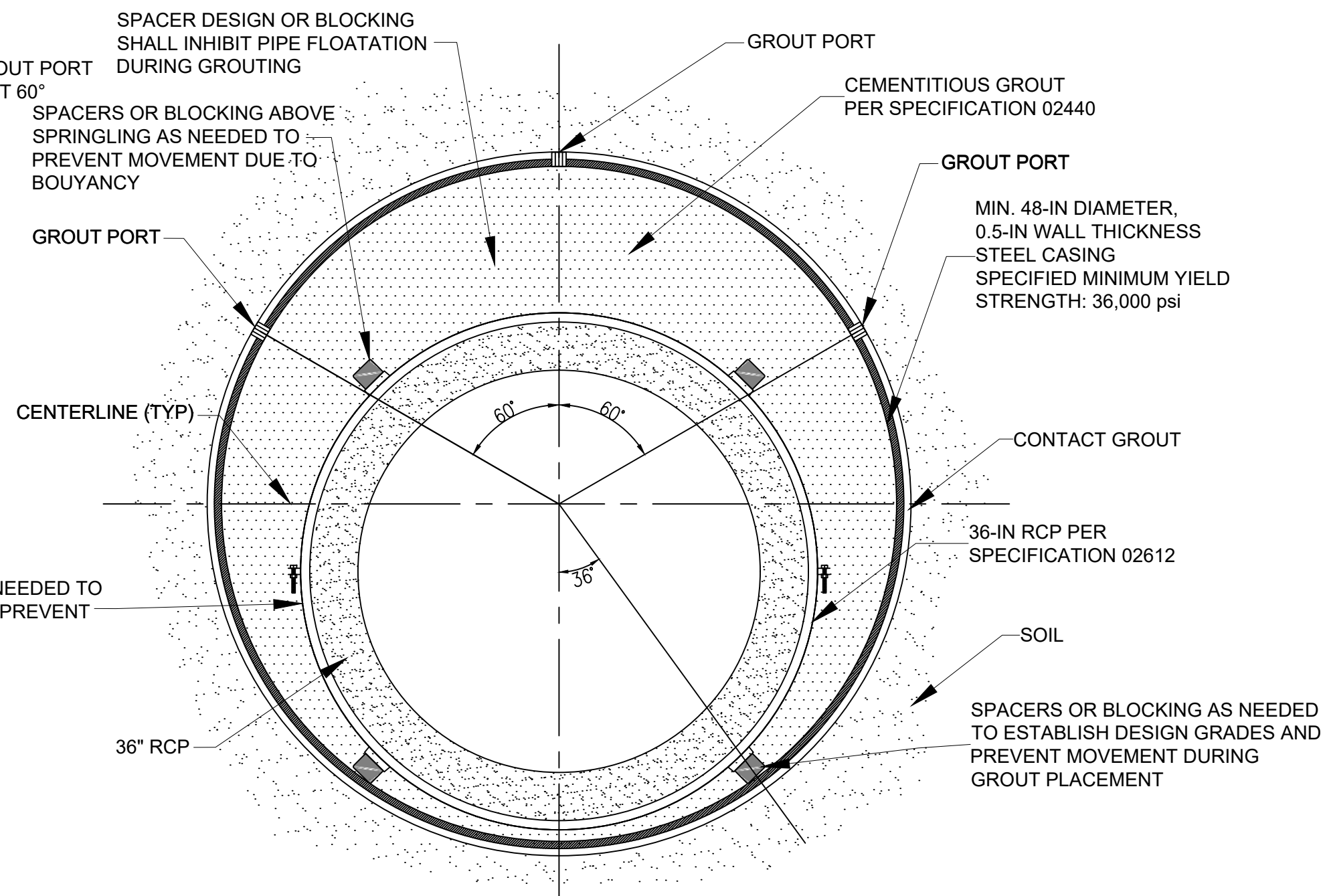
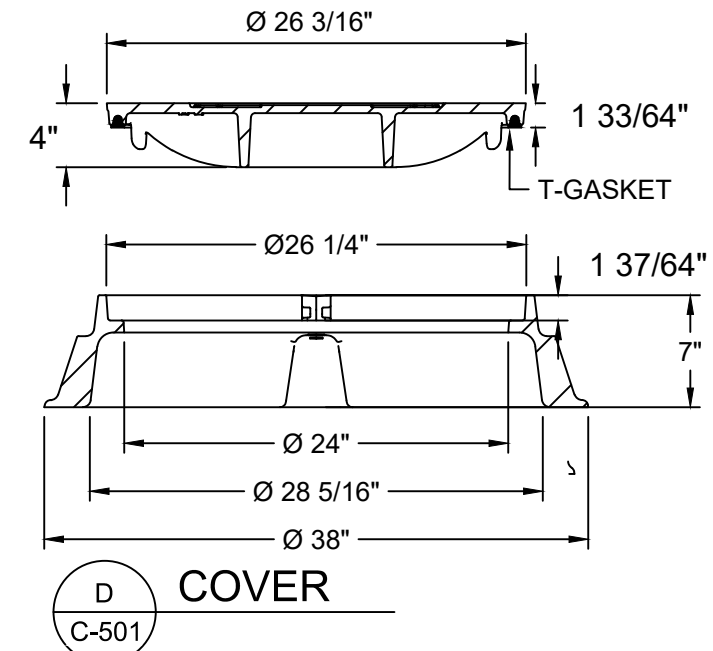
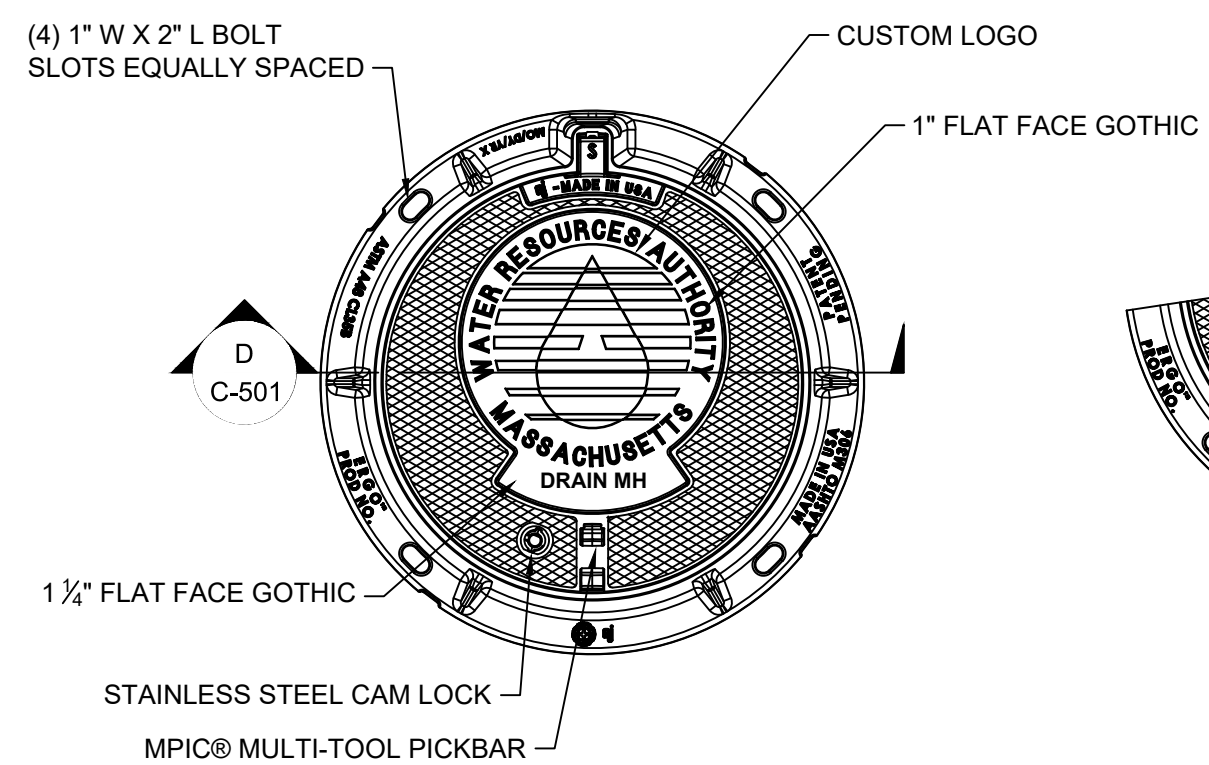




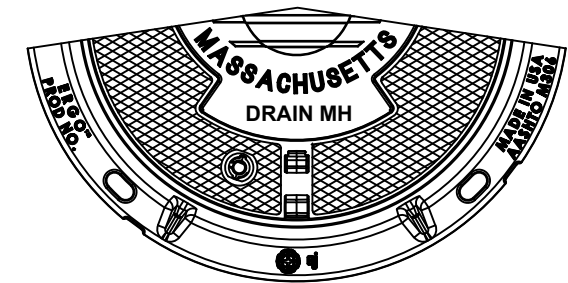
A
-
GROUT PORT LAYOUT PROFILE
NOT TO SCALE



B
-
AUGER BORE CASING CROSS SECTION
NOT TO SCALE

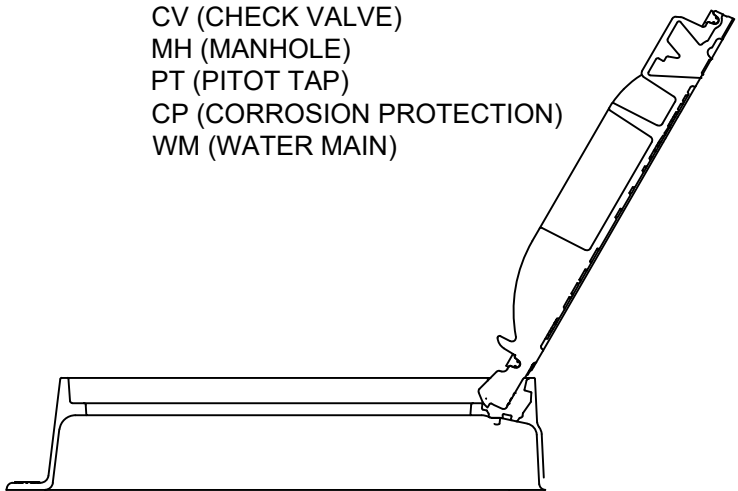


C
-
24" MWRA STANDARD FRAME AND COVER
NOT TO SCALE

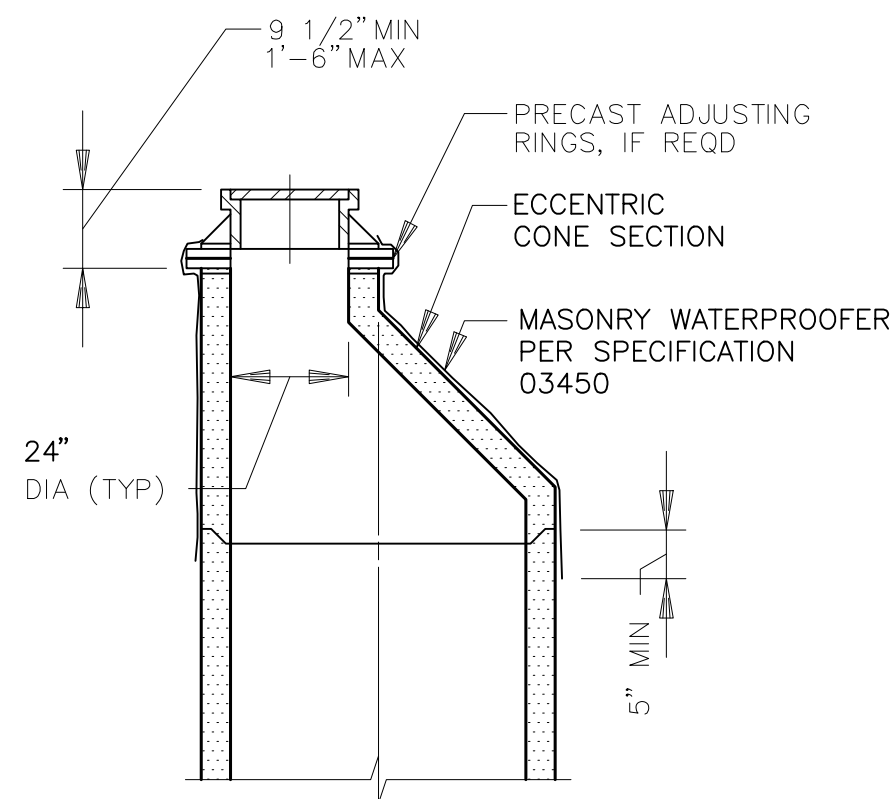


LETTER CODES FOR COVERS
AV (AIR RELEASE VALVE)
BO (BLOW OFF VALVE)
BP (BY-PASS ACCESS)
BV (BUTTERFLY VALVE)
GV (GATE VALVE)
CV (CHECK VALVE)
MH (MANHOLE)
PT (PITOT TAP)
CP (CORROSION PROTECTION)
WM (WATER MAIN)

SAFETY LOCK@90°



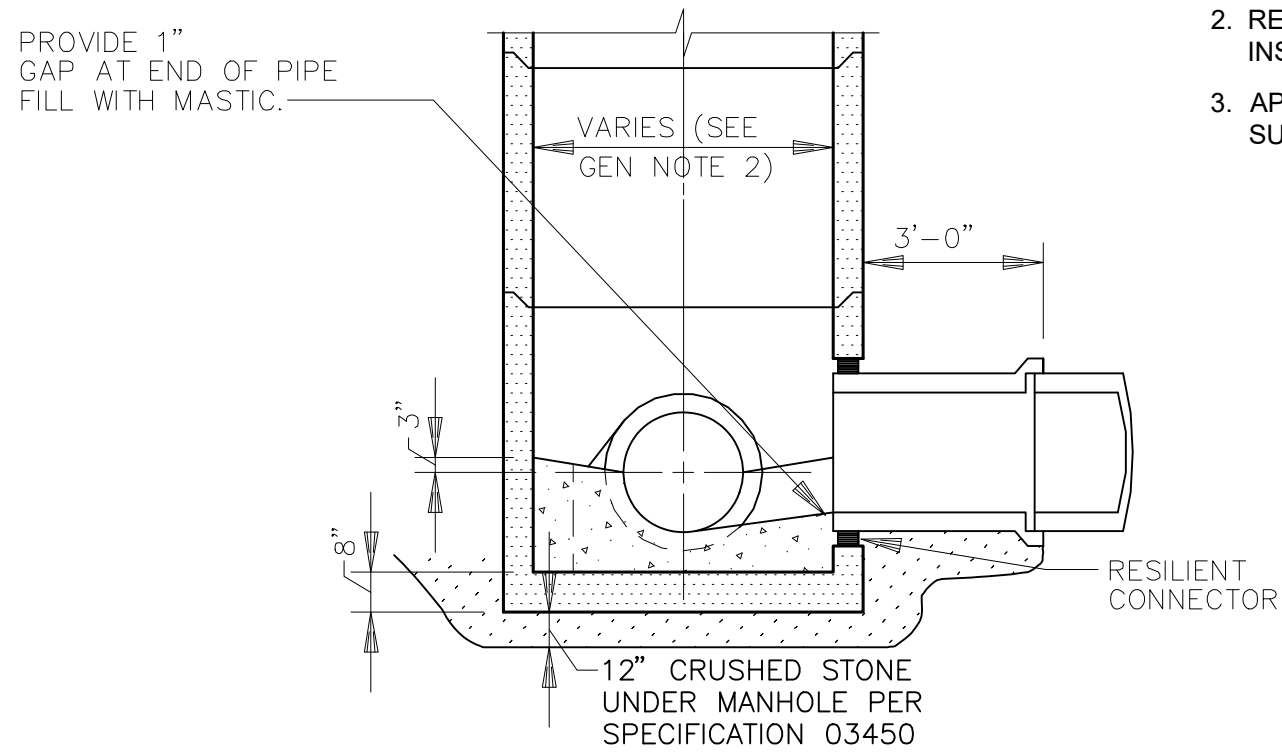
FULLY OPENED@120°



E
-
STANDARD PRECAST MANHOLE UPPER SECTION
NOT TO SCALE

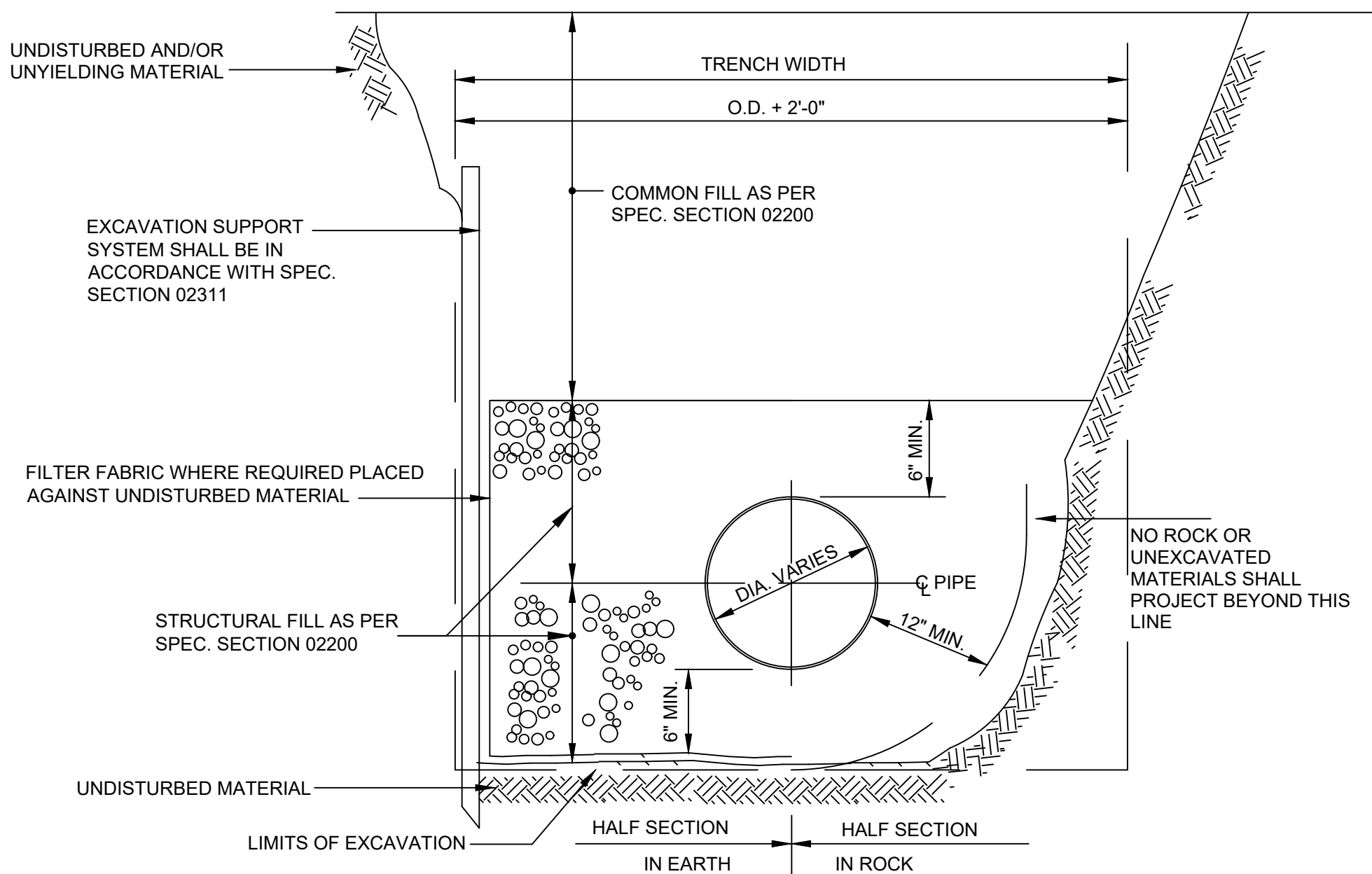
MANHOLE LOCATION AND SIZE TABLE			
MH #	PLAN SHEET	MH STA	MH DIAMETER (INCHES)
1	C-102	0+00	60
2	C-102	1+38	60
3	C-102	1+91	60
4	C-103	3+35	60
5	C-103	5+46	60
6	C-103	7+73	72
7	C-104	9+78	72
8	C-104	11+68	60

- NOTES:
1. ALL MANHOLE RINGS TO BE SET IN NONSHRINKING GROUT.
 2. REFERENCE MANHOLE LOCATION AND SIZE TABLE FOR INSIDE DIAMETER OF MANHOLES.
 3. APPLY WATERPROOFER TO ALL INTERIOR AND EXTERIOR SURFACES OF PRECAST STRUCTURES.



F
-
STANDARD PRECAST MANHOLE LOWER SECTION
NOT TO SCALE

LEGEND:	
	PRECAST CONCRETE
	GROUTED BRICK
	PIPE BEDDING MATERIAL



G
-
36" MWRA DRAIN PIPE SECTION
NOT TO SCALE

- NOTES:
1. REFER TO SPECIFICATIONS FOR GEOTECHNICAL FABRIC OR SPECIAL EMBEDMENT REQUIREMENTS FOR TRENCHES IN FINE SOILS EXTENDING BELOW GROUNDWATER LEVEL.
 2. TRENCH OUTLINES DO NOT INDICATE ACTUAL TRENCH EXCAVATION SHAPE, SOIL CONDITIONS, OR PRESENCE OF SHEETING LEFT IN PLACE. EMBEDMENT MATERIAL SHALL EXTEND THE FULL WIDTH OF THE ACTUAL TRENCH EXCAVATION.

BID DOCUMENTS

REFERENCE:		CONTRACT NO. : 8086	CAD FILE NO. : 3-3-C-501		MASSACHUSETTS WATER RESOURCES AUTHORITY PREPARED BY: 100 SUMMER STREET BOSTON, MA 02110 617-426-7330	200 SUMMIT DRIVE, SUITE 340 BURLINGTON, MA 01803 781-656-5800	METROPOLITAN WATER TUNNEL PROGRAM CONTRACT PACKAGE 3.3 NEEDHAM DEWATERING DRAINAGE LINE	DRAWING NO.
		ACCESSION NO. : NOT USED	SECTION NO. :				C-501	
		DATE: SEPTEMBER, 2026	DESIGNED BY: ANW DRAWN BY: DB CHECKED BY: KRR APPROVED BY: WSW					
		SCALE: AS NOTED						
							CIVIL 36" MWRA GRAVITY DRAIN AND TRENCHLESS WORK DETAILS	15 of 41