

FOR USE IN TRAFFIC AREAS ONLY.

AN ALUMINUM 3'-6" SQUARE SINGLE LEAF HINGED DOOR (BILCO H20, OR EQUAL) SHALL BE INSTALLED IN THE MANHOLE SLAB TOP. THE HINGED SIDE OF THE SQUARE LID IS TO BE ORIENTED PARALLEL TO THE DOWNSTREAM FLOW DIRECTION.

DOWNSTREAM CONDUIT SLOPE SHALL BE GREATER THAN OR EQUAL TO UPSTREAM CONDUIT SLOPE WITH NO NO OBSTRUCTION WITHIN TEN PIPE DIAMETERS DOWNSTREAM OF THE CENTER OF THE MANHOLE.

NO BENDS, DROP MANHOLES, FLOW JUNCTIONS, ETC., SHALL BE LOCATED WITHIN 25 PIPE DIAMETERS UPSTREAM OF THE CENTER OF THE MANHOLE.

ALLOWABLE CONDUIT SLOPE ENTERING AND EXITING THE MANHOLE SHALL BE LIMITED TO A SPECIFIC MAXIMUM AND MINIMUM AS PER THE FOLLOWING TABLE:

PIPE SIZE	MIN. % SLOPE	MAX. % SLOPE
6"	2.00	2.2
8"	0.70	2.0
10"*	0.50	1.8
12"	0.40	1.6
15"	0.30	1.5
18"	0.24	1.4
21"	0.19	1.4

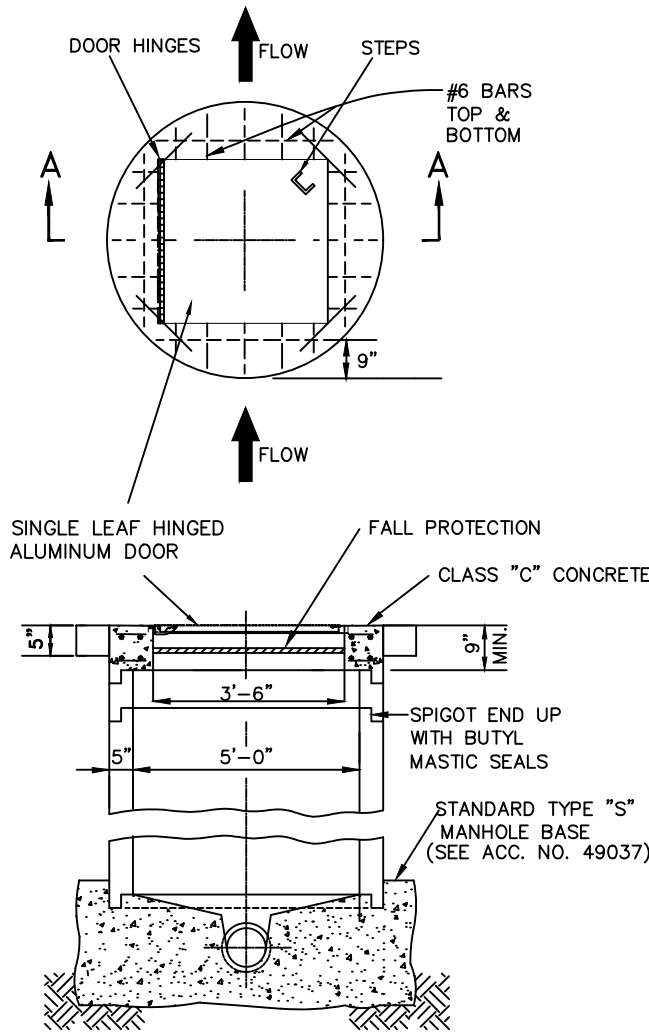
\* 10" CONDUIT NOT APPROVED FOR NEW INSTALLATIONS

STEPS IN THE BARREL SECTION OF THE PRE-CAST MANHOLE ARE TO BE INSTALLED IN ALIGNMENT WITH THE DOWNSTREAM CORNER OF THE SQUARE LID ON THE OPPOSITE SIDE FROM THE LID HINGE.

IN A TRAFFIC AREA, THE SLAB COVER MUST BE SLIGHTLY RAISED ABOVE THE SURROUNDING AREA TO PREVENT INFILTRATION OF STORMWATER.

**FALL PROTECTION REQUIREMENT:**

A GRATED COVER CAPABLE OF SUPPORTING AT LEAST 1,600 POUNDS AND SECURED TO PREVENT ACCIDENTAL DISPLACEMENT SHALL BE PROVIDED. THE COVER SHALL BE OF A SLOTTED MATERIAL TO ALLOW VISUAL INSPECTION, VENTILATION, AND PASS THROUGH OF SAMPLE & BUBBLE LINES AS NEEDED. ADDITIONALLY, THE COVER MUST HAVE A HATCH OR FLOOR HOLE CENTRALLY LOCATED OVER THE PRIMARY MEASURING DEVICE THAT IS AT LEAST 8", BUT NOT MORE THAN 12"x12", THROUGH WHICH SAMPLES CAN BE TAKEN. THIS REQUIREMENT IS WAIVED FOR MANHOLES LESS THAN 4' IN DEPTH.



SECTION A-A

**NOTES:**

- ALL REINFORCING STEEL SHALL HAVE A MINIMUM COVER OF 2" BOTH FACES
- JOINTS ON MANHOLE SECTIONS SHALL BE MADE WITH A RUBBER GASKET MEETING THE REQUIREMENT OF ASTM C-443, EXCEPT THAT ONLY "O" RING AND PROFILE GASKETS ARE ACCEPTABLE.
- LIFT HOLES IN MANHOLES TO BE SEALED WITH HYDRAULIC CEMENT.
- 1' PRECAST MANHOLE SECTION TO BE SET WHEN MANHOLE TOP IS POURED.
- ALL OTHER CHARACTERISTICS ARE SIMILAR TO STANDARD MANHOLES.
- ALL CONCRETE SHALL BE CLASS "C".
- PRECAST CONCRETE BARRELS SHALL BE IN ACCORDANCE WITH ITEM 706.13 OF THE SPECIFICATIONS.

THE  
METROPOLITAN SEWER DISTRICT  
OF  
GREATER CINCINNATI  
**STANDARD TYPE "D"**  
**SAMPLING & GAUGING MANHOLE**  
(FOR USE IN TRAFFIC AREAS ONLY)

NO SCALE DATE: JULY 2021

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