

# MANHOLES (Sanitary & Storm)

## A. CONSTRUCTION:

- 1) SANITARY MANHOLES SHALL BE VACUUM TESTED.
- 2) ALL NEW MANHOLES SHALL BE 48" MINIMUM INSIDE DIAMETER, PRE-CAST CONCRETE CONFORMING TO ASTM C478. PRE-CAST BASES SHALL BE 6" MINIMUM.
- 3) NEW MANHOLES PLACED OVER EXISTING SEWER LINES, REFERRED TO AS "DOG-HOUSE" MANHOLES, SHALL HAVE CAST-IN-PLACE CONCRETE BASES WITH REINFORCEMENT; REBAR #4@12" O/C EACH WAY. BASES SHALL BE CLASS "C" CONCRETE WITH A MINIMUM THICKNESS OF 10".
- 4) MANHOLES WITH PRE-CAST CONCRETE BASES SHALL BE PLACED ON A COMPACTED GRAVEL BED OF NO.57 AGGREGATE, HAVING A MINIMUM THICKNESS OF 3".
- 5) RUBBER O-RING GASKETS SHALL BE USED BETWEEN PRE-CAST MANHOLE SECTIONS, MEETING ASTM C443. APPLY MASTIC TAR STRIP BETWEEN SECTIONS.
- 6) ALL PIPING THROUGH SANITARY MANHOLE WALLS SHALL BE SEALED WITH A GASKET EMBEDDED IN THE PRE-CAST, OR BY A NEOPRENE BOOT, OR BY ANOTHER METHOD FIRST APPROVED BY THE CITY ENGINEER AND MEETING ASTM C923.
- 7) THE CENTERLINE OF THE MANHOLE SHALL BE LOCATED OVER THE CENTERLINE OF THE MAIN SEWER, WHENEVER POSSIBLE.
- 8) MANHOLE STEPS MAY BE REINFORCED POLYPROPYLENE PLASTIC, 16" O/C MAXIMUM AND IN PROPER ALIGNMENT.
- 9) THE FRAMES SHALL BE SET EVEN AND FLUSH WITH THE INTERIOR WALLS OF THE MANHOLE.
- 10) GRADE ADJUSTMENT RINGS SHALL BE PRE-CAST CONCRETE ONLY AND CONFORMING TO ASTM C478 GRADE RINGS. BRICK OR BLOCK MATERIALS ARE NOT PERMITTED. A MAXIMUM 12" OF ADJUSTMENT RINGS MAY BE USED. FINAL ADJUSTMENTS SHALL USE EJ INFRA-SPACER TO ACCOUNT FOR LONGITUDINAL AND CROSS SLOPES.
- 11) SANITARY MANHOLE CASTINGS IN OR NEAR WATERWAYS AND DITCHES SHALL BE FITTED WITH A MANHOLE INFILTRATION PROTECTION DEVICE, THE COST OF WHICH SHALL BE INCLUDED IN THE PRICE OF THE MANHOLE.
- 12) MANHOLES LOCATED WITHIN THE SLOPE OF A DITCH SHALL BE INSTALLED SO THE STEPS ARE ON THE OPPOSITE SIDE OF MANHOLE FROM THE DITCH OR FLOWLINE. CONTRACTOR SHALL COORDINATE WITH THE MANUFACTURER FOR CORRECT ORIENTATION OF STEPS.

## B. CASTINGS:

- 1) APPROVED MANHOLE FRAMES AND LIDS ARE SHOWN IN THE TABLE:

MANHOLE USE TYPE	HT	EJ		NEENAH	
		CASTING	LID	CASTING	LID
MANHOLE WITHIN PAVEMENT	9"	1050	TYPE A	R-1760 NON-ROCKING	TYPE B NON-ROCKING
MANHOLE NOT IN PAVEMENT BUT IN R/W	9" 7" 4"	1050 *1022 *1037	TYPE A	R-1550-A R-1772-C R-1689	TYPE B
MANHOLE IN YARD NOT IN PAVEMENT NOT IN R/W	9" 7"	1050 ZPT *1045 ZPT	BOLT DOWN	R-1916-C R-1916-F	TYPE B BOLT DOWN

\* Must be preapproved by the City Engineer

- 2) FRAMES SHALL BE SET LEVEL, EXCEPT SET TO GRADE WHEN WITHIN THE PAVEMENT. LIDS SHALL BE FITTED AND FINISHED TO PROVIDE A FIRM AND EVEN SEAT IN THE FRAME.
- 3) FRAMES AND LIDS SHALL BE FITTED, MATCHED AND MARKED PRIOR TO DELIVERY TO THE PROJECT.
- 4) THE FRAME SHALL BE SET ON A MASTIC STRIP AROUND IT'S PERIMETER AND MORTARED TO THE SEAT OF THE CONCRETE STRUCTURE.
- 5) ANY SUBSTITUTIONS OF EQUAL QUALITY AND DIMENSIONS SHALL FIRST BE APPROVED BY THE CITY ENGINEER PRIOR TO PROCUREMENT.
- 6) ALL LIDS SHALL BE CAST WITH THE WORDS "SANITARY" OR "STORM" AS APPROPRIATE.
- 7) ALL CASTINGS AND LIDS SHALL BE COATED WITH A WATERBASED BITUMINOUS COATING OR EQUAL.
- 8) ALL CASTINGS AND LIDS SHALL MEET OR EXCEED ODOT H20 LOADING AND AASHTO M306 REQUIREMENTS.

## C. PAYMENT:

- 1) PAYMENT SHALL BE FOR THE MANHOLE COMPLETE IN PLACE, EXCAVATION AND BACKFILL INCLUDED.

**NOTE 1:** THIS DETAIL IS VALID ONLY WHEN USED AS PRESENTED HERE, WITHOUT CHANGES, AND IN CONJUNCTION WITH ANY GENERAL NOTES AND/OR OTHER DETAILS WHICH MAY APPLY. ANY CHANGES TO THIS DETAIL SHALL FIRST BE SUBMITTED TO AND APPROVED BY THE CITY ENGINEER.

**NOTE 2:** BEFORE ANY EXCAVATING, CALL THE FOLLOWING NUMBERS AT LEAST 48 HOURS IN ADVANCE: O.U.P.S. @ (800) 362-2764 AND O.A.G.P.U.P.S. @ (800) 925-0988.

## City of Wooster : Division of Engineering

538 N. Market Street    Wooster, Ohio 44691  
Phone: (330) 263-5236    Fax: (330) 263-5283

Roger Kobilarcsik, P.E.  
City Engineer

# GENERAL NOTES MANHOLES

NO.	DATE	REVISION	6	9/30/06	REVISED TABLE, ADDED NOTE 8
1	7/13/01	REVISED MISC. WORDING	7	7/7/10	REV. A.2,8-B.2 & ADD-A.11&12
2	3/29/02	ADDED "SANITARY" TO A. 6.)			REV. NEENAH CASTING
3	3/05/03	REVISED NEENAH LIDS AND MISC. WORDING	8	7/1/12	REV. A - 10
			9	01/06/14	REV. A - 2
4	7/22/03	ASTM SPEC FOR A.6. & A.10.			
5	6/08/05	ADDED B. 7 & REV CASTINGS			

CAD FILE:  
\\ENGINEERING STANDARDS\GN-6.DWG

SHEET:

DRWN BY: AJM	APPRVD BY: EPO	ISSUE DATE: 11/13/00	SCALE: NONE
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