

**City of Lorain
STANDARD DESIGNS - INDEX**

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03/01/2020 WT-1.0, 1.1: GENERAL NOTES

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.

City of Lorain
200 West Erie Avenue Lorain, Ohio 44052
Phone: (440) 204-2003

**STANDARD DESIGNS
GENERAL
INDEX**

NO.	DATE	REVISION	NO.	DATE	REVISION
1	10/27/2015		12	02/04/2021	SS-3.0 & ST-2.0 REVISED
6	06/20/2017				
8	07/01/2018				
10	06/20/2019	UPDATED DATES ADDED			
11	06/23/2020	ADDED MS-1.1			
11	06/23/2020	SS-8.0 REVISED			

CAD FILE:
GN-1.0.dwg

DRWN BY: EA	APPRVD BY: DV	ISSUE DATE: 08/19/2015	SCALE: NONE
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SHEET:

GN-1.0

CONSTRUCTION

1. THE FRAMES SHALL BE SET EVEN AND FLUSH WITH THE INTERIOR WALLS OF THE MANHOLE.
2. GRADE ADJUSTMENT RINGS SHALL BE PRE-CAST CONCRETE ONLY AND CONFORMING TO ASTM C478 GRADE RINGS. A MAXIMUM 12" OF ADJUSTMENT RINGS MAY BE USED FOR CONCRETE STRUCTURES. ONLY MASONRY CLAY-SOLID BRICK (ASTM C-32, GRADE S.S.) SHALL BE USED FOR EXISTING STRUCTURE ADJUSTMENTS.
3. 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. RECOMMEND AN EXTERNAL WRAP SEAL FOR CASTING AND CHIMNEY SEAL AND AT MANHOLE JOINTS SUCH AS WRAPIDSEAL.
4. **MANHOLE RUNGS ARE NOT PERMITTED.**

CASTINGS

1. APPROVED MANHOLE FRAMES AND LIDS ARE EAST JORDAN #1715 OR EQUAL; OR NEENAH R-1782.
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. REFER TO ST-3.0.
6. ALL LIDS SHALL BE CAST WITH THE WORDS "SANITARY"; USE CITY OF LORAIN MANHOLE COVERS..
7. ALL CASTINGS AND LIDS SHALL MEET OR EXCEED ODOT H20 LOADING AND AASHTO M306 REQUIREMENTS.
8. MANHOLE RUNGS ARE NOT PERMITTED.

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**STANDARD DESIGNS
 SANITARY SEWER
 GENERAL NOTES-MANHOLES**

NO.	DATE	REVISION	NO.	DATE	REVISION
7	01/01/2018	01/01/2018			
11	02/10/2020	NO. 1, 5 & 6 REVISED			
11	02/10/2020	OLD NO. 7 REMOVED			
11	02/10/2020	OLD NO. 1-9 & 13 REM.			
12	02/04/2021	NEW CONST. NOTE NO. 4			

CAD FILE: SS-3.0.dwg			
DRWN BY: EA	APPRVD BY: DV	ISSUE DATE: 08/19/2015	SCALE: NONE

SHEET:
SS-3.0

A. CONSTRUCTION:

1. THE FRAMES SHALL BE SET EVEN AND FLUSH WITH THE INTERIOR WALLS OF THE MANHOLE.
2. GRADE ADJUSTMENT RINGS SHALL BE PRE-CAST CONCRETE ONLY AND CONFORMING TO ASTM C478 GRADE RINGS. A MAXIMUM 12" OF ADJUSTMENT RINGS MAY BE USED FOR CONCRETE STRUCTURES. ONLY MASONRY CLAY-SOLID BRICK (ASTM C-32, GRADE S.S.) SHALL BE USED FOR EXISTING STRUCTURE ADJUSTMENTS.
3. **MANHOLE RUNGS ARE NOT PERMITTED.**

B. CASTINGS:

1. APPROVED MANHOLE FRAMES AND LIDS ARE EAST JORDAN #1715 OR EQUAL. 1710Z MAY BE SUBSTITUTED; OR NEENAH R-1782.
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 "STORM"; USE CITY OF LORAIN MANHOLE COVERS.
7. 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.

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**STANDARD DESIGNS
 STORM SEWER
 GENERAL NOTES-MANHOLES**

CAD FILE:
 ST-2.0.dwg

SHEET:

ST-2.0

NO.	DATE	REVISION	NO.	DATE	REVISION
9	01/01/2019				
11	02/10/2020	CASTINGS NO. 1 & 6 REV.			
11	02/10/2020	CAST. OLD NO. 7 REM.			
11	02/10/2020	CONST. OLD NO. 1-7 REM.			
12	02/04/2021	CONST. OLD NO. 4 REV.			

DRWN BY: EA	APPRVD BY: DV	ISSUE DATE: 08/19/2015	SCALE: NONE
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