

SPECIAL PROVISIONS
SECTION 02720
STORM DRAIN SYSTEMS

This special provision modifies the corresponding Montana Public Works Standard Specifications, Seventh Edition – April 2021. All provisions that are not amended or supplemented remain in full force.

Part 1.4 – STANDARD DRAWINGS – delete subsection A of the standard in its entirety and replace with the following:

- A. Standard Drawings applicable to this section can be found in the City of Kalispell Standards for Design and Construction as follows:
1. DR.1 Typical Stormwater Catch Basin Detail
 2. DR.2 Typical Stormwater Manhole Detail
 3. DR.7 Stormwater Manhole Cover
 4. DR.8 Ponding Basin Skimmer Structure
 5. DR.9 Ponding Basin Skimmer Structure with Baffle Wall
 6. DR.10 Riprap at Outlets

Part 2.2 – PIPE MATERIALS – add the following to the standard immediately following subsection D

- E. Polypropylene Pipe
1. Furnish Polypropylene Pipe produced as a twin wall pipe with smooth interior bore and corrugated outside wall formed with co-extrusion techniques. Assure that the material meets or exceeds ASTM F2736 and AASHTO M330 for pipes 12 inches through 30 inches and ASTM F2881 and AASHTO M330 for pipes 36 inches through 60 inches in diameter.
 2. The normal laying length is a maximum of 20 feet except shorter runs are permitted adjacent to manholes, catch basins or other appurtenances. Assure each pipe length is marked with the size and code number. Assure that each pipe has a bell and spigot with rubber gasket. Make the rubber gasket joint using a rubber gasket compressed between the outer surface of the spigot and the inner surface of the bell. Make any field fabricated corrugated connections with corrugated coupling having split collar engaging at least two full corrugations. Assure all joints are watertight connections under all service conditions including expansion, contraction, settlement and pipe deformation.
 3. Furnish fittings as required of the same material, construction and joint design as the main sewer pipe.

Part 2.3 – MANHOLES – delete subsection D in its entirety and replace with the following:

D. Frames and Covers

1. Furnish frames and covers meeting Standard Drawing DR.7 unless noted or specified otherwise.

Part 3.2.A – MANHOLES – delete subsection 1 in its entirety and replace with the following:

1. Construction manholes to the specified dimensions. Provide a 24-inch sump below the lowest pipe invert elevation. Downstream pipe shall be placed 0.1 feet below the upstream pipe invert. If pipes of different size are joined at a junction, the pipe crowns shall be placed at the same elevation.

Part 3 – EXECUTION – delete subsection 4 of the standard in its entirety.

Part 3.5 – TESTS – delete subsections A & B of the standard in their entirety and replace with the following:

A. Light Test (Visual)

1. Once the trench is backfilled, perform a light test between manholes to check alignment and grade of the pipe for displacement. The completed pipeline must permit a true circle of light to be seen from manhole to manhole.

B. Leakage Test

1. Unless specified a leakage test will not be required. Any potential obvious and concentrated leaks, such as open joints, pinched gaskets, cracked barrels or bells will not be allowed. A leakage test pursuant to SECTION 02730 SANITARY SEWER COLLECTION SYSTEM, may requested by the ENGINEER upon questionable results from T.V. Inspection.

Part 3.5 – TESTS – add the following immediately following subsection C:

D. T.V. Inspection

1. All storm mains shall be inspected using a television camera before final acceptance. Laterals shorter than 30 feet do not require a T.V. Inspection.
2. A storm main is defective and unacceptable if:
 - a. the alignment is outside the specified limits;
 - b. Gravel, sediment, or other construction debris is visible in the pipe;
 - c. water ponds in any section are equal to or greater than 2 times the grade tolerance specified herein under Section 02720.3.1.E.1; or
 - d. the pipe has visible defects such as open joints, pinched gaskets, cracked barrels or bells or similar defects.

3. Perform the T.V. Inspection within 30-minutes of flushing the main. When flushing the main, add water at the upstream end of the main and do not stop adding water until water begins to flow out of the downstream end of the main.
4. Equip the camera with a visual measuring device capable of measuring ponding in the pipe to the level specified in part 2.b above.
5. Record all television inspections in a format acceptable to the Owner. Pull the camera through the sewer at 30 feet per minute maximum. If the camera is pulled by attaching to the hose of a hydraulic sewer cleaner, assure the hose is not active during the pulling process.
6. All main deemed by the Engineer as defective or unacceptable shall have repeated T.V. inspections completed by the Contractor until accepted by the Engineer.

Part 4 – MEASUREMENT AND PAYMENT – Delete sections 4.1 – 4.6 in their entirety and replace with the following:

4.1 MEASUREMENT AND PAYMENT

- A. See Section 01150.

END OF SECTION