



To: Justin Miller, City Administrator
From: Zachary Johnson, City Engineer
Date: January 31, 2020
Re: 2020 City of Lakeville Specification Book Update

The City of Lakeville has completed an update to its Standard Specifications and Detail Plates, dated January, 2020. Updates to the Specifications are detailed below. All projects submitted for February 1, 2020 approval, or later, must be in accordance with the 2020 Standard Specification Book.

Section 1 – Utility and Street Construction Plan Requirements

Construction Plan Sheet Format Requirements

1. All construction drawings must be submitted in pdf format or with GIS shape files as a record drawing upon completion of the project.
3. Remove mylar thickness requirements
4. Remove mylar color requirements

Storm Sewer and Street Plan Sheets

- A. The following information shall be shown (North arrow up or to the right on sheets):
 19. Pedestrian Curb Ramp design details including spot elevations along curb meeting ADA and PROWAG requirements must be included

Miscellaneous

- I. Reproducible mylars are not required to be submitted with the construct plan record drawings

Section 2 – Site Work in Public Right-of-Way

9. Seeding and Sodding
 - 9.08 – Revised seed mixes to be consistent with MnDOT Standard Seeding Manual.

Section 3 – Underground Construction for Public Improvements to be Maintained by the City

3. All materials required for this work shall be new, **USA** made materials.



3.02. Sanitary Sewer Poly-vinyl Chloride (PVC) Pipe and Fittings

Epoxy lined DIP tee fittings for sanitary sewer application shall be used in the depth range from 18vf to 28vf.

3.03. Reinforced Concrete Pipe and Fittings

Specify that Gator Wrap brand butyl wrap, or approved equal, at least 12" wide shall be used on all joints for reinforced arch pipe and precast concrete box culvert pipe. Additionally, all joints on reinforced arch pipe and precast concrete box culverts must be tied.

3.04. Precast Concrete Manhole and Catch Basin Sections

Removed the specification language for internal chimney seals. Includes requirement that butyl wrap shall be Gator Wrap brand, or approved equal, and at least 12 inches wide.

3.05. Ductile Iron Pipe and Fittings

C – Anchoring of Watermain Fittings

Include provisions that Trumbull "Tie-lugs" shall be used to offset threaded rods from the flange connection.

D – Ductile Iron Pipe

Restraining rods are to be stainless steel and manufactured in the USA. Anti-seize lubricant shall be used on all stainless steel bolts and restraining rods at connection points.

3.06. Watermain Polyvinyl Chloride Pipe

Tracer wire shall be installed in accordance with the Minnesota Rural Water Association "Street/Water Utility – Tracer Wire Specification" as modified by the City of Lakeville (Section 8 of the Underground Construction of Public Improvements to be Maintained by the City).

All hydrant lead piping (hydrant assembly) shall conform to AWWA Standard C-900-97 (DR 18).

Remove reference to tracer wire specifications, as this is included in Section 8.



3.08. Fire Hydrants

Remove specification for epoxy coated hydrant bottoms to be bridged with a conductivity strap.

Remove requirement that all hydrant leads shall be wrapped DIP.

3.12. Gate Valves

Include provisions that butterfly valves will be permitted on raw watermain applications as approved by the City Engineer.

3.13. Valve Boxes

Include provision that prior to acceptance of a valve box a 4-inch PVC pipe or approved equal must be placed in each valve box to demonstrate the proper alignment with the valve box sections and operating nut on the gate valve.

3.17. Corporation Stop

Saddles shall be PowerSeal 3412AS all stainless steel double stud bolt design or approved equal.

4.11. Interruption of Water Service

Interruption of water service to business or in commercial areas must be approved by the City prior to each interruption of service. The City will determine the time and duration of the service interruption.

4.12. Jacking Steel Casing Pipe

The most recently public MnDOT specifications for Construction shall govern except as modified herein.

4.12. Jacking Concrete Pipe

The most recently public MnDOT specifications for Construction shall govern except as modified herein.

5.01. Sanitary Sewer Stubs and Cleanouts



The Contractor shall install PVC cleanouts at the end of all mainline sanitary sewer stubs which are installed for future connection. PVC cleanouts must be 6" diameter SDR 26 and must have cast iron caps capable of being located with a metal detector.

6.04. Disinfection of Watermains

The Contractor shall supply third party certified testing and collection is required for meeting the water quality requirements.

6.08. Television Inspection.

The pipe sidewalls must be substantially dry after cleaning before television inspection is initiated. A nominal flow through the pipe should be established during televising to indicate the presence of dips in the pipe flowline.

Television inspection of storm sewer shall be conducted no more than three months prior to paving wear course; if wear course is not installed within three months of the television inspection, the inspection shall be performed again prior to paving. No television inspection shall be performed during or immediately after a rain event.

The camera operator shall manipulate the camera to fully inspect any potential damage within the pipe and all joints that appear to be damaged or have a visible gap.

Digital video files shall be made of the televising. The Owner shall be given a USB flash drive containing the video files and all reports and/or diagrams. Owner will provide comments or requests within two weeks of receipt of the digital video file.

8.00 Tracer Wire Specifications

Include the Minnesota Rural Water Association "Street/Water Utility – Tracer Wire Specification" as amended by the City of Lakeville. The updates to this specification include the inclusion of grounding rods and access boxes at watermain connection locations and services to ensure that the City can effectively locate the watermain distribution system.

Section 4 – Street Construction for Public Use to be Maintained by the City

3. Prosecution of Work – Special Project ADA Requirements

Include specifications for construction of pedestrian facilities to be constructed according to the Public Rights-of-way Accessibility Guidelines (PROWAG). This includes provisions to include an ADA Compliance Supervisor and criteria for construction of pedestrian facilities.



6.04. Street Design

Include the required typical street sections for local roadways in the specifications, rather than in the Standard Detail Plate.

7.00. Plant Mixed Bituminous Pavement (MnDOT 2360)

MnDOT Type SP 9.5 SPWEA240C shall be used for wear courses along local residential streets.

10.01. Walks

Revised concrete mix types to match MnDOT specifications.

10.02. Concrete Curbing

Revised concrete mix types to match MnDOT specifications.

12.00 Utilities

Modified the adjustment depths of all castings located within the street section. Modified language to require adjustment of castings prior to paving both base and wear courses.

Section 5: Standard Utilities Specifications (2018 C.E.A.M.)

Updated the specifications to include the 2018 Edition of the City Engineer Association of Minnesota Standard Specifications.

Section 8: Standard Detail Plates

1. Revised LV-SS-1 through LV-SS-5, LV-SS-10: Replace the use of HDPE adjustment rings with concrete. Add requirements that the Contractor shall use a 6" adjusting ring if the required adjustment is between 8" and 1 foot.
2. Revised LV-STM-1 through LV-STM-2, LV-STM-4, LV-STM-5, LV-STM-16 and LV-STM-17: Replace the use of HDPE adjustment rings with concrete. Add requirements that the Contractor shall use a 6" adjusting ring if the required adjustment is between 8" and 1 foot.
3. Revised LV-SS-1 through LV-SS-5, LV-SS-10 and LV-STM-1 through LV-STM-2, LV-STM-4, LV-STM-5, LV-STM-16 and LV-STM-17 to specify that Gator Wrap type butyl wrap at least 12" wide shall be used on all joints.
4. Revised LV-ST-5 and LV -ST-5A to match the requirements from the Post Office for mailbox installation.



Section 9: Review and Approval of Plans and Specifications

1. Utility and Street Construction Plans
 - A. Revised the construction plan review requirement from 3 weeks to 2 weeks.
Revised the requirements that pdf copies of the construction plans are required in lieu of printed copies.
2. Specifications
 - A. Removed the requirements of submitting contract specifications and bid proposals

Section 12: Procedures for Processing Partial Payment Requests

This section has been removed.

Section 14: Schedule of Required Utility Tests

6. Sanitary Sewer Televising Test
 - D. Provide digital files of the televising to the Owner on a USB flash drive.
7. Storm Sewer Televising Test
 - A. Television of storm sewer shall be conducted no more than three months prior to paving wear course.
 - B. Provide digital files of the televising to the Owner on a USB flash drive.

Section 18: Procedures for Final Acceptance of Utilities and Streets

1. Revised the conditions of final acceptance that the City Engineer can administratively accept the public streets and utilities once the required testing and final field inspection has been completed.
2. Revised the maintenance bond requirements that they should be dated beginning either on the 1st or 15th of the month after the requirements for final acceptance have been completed.
3. Revised the requirements that the City Engineer will accept the improvements after the requirements for final acceptance have been completed.

Section 19 – Construction Record Drawing Requirements

3. All GPS coordinates shall be submitted as x,y Dakota County coordinates using the North American Vertical Datum of 1988 (NAVD88).



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- A. Modified the specifications to require GPS coordinates of curb boxes and draintile services stubs, instead of services ties.
 - C. Modified the specifications to require GPS coordinates of ends of sanitary sewer, storm sewer, and watermain.
 - D. Modified the specifications to require GPS coordinates for watermain valves.
1. LV-WM-4: remove the 4"x4" hardwood blocking on hydrants
 2. Modified LV-ST-8 (typical street sections) to modify the wearing course mix type for local residential streets to Type SP 9.5 SPWEA240C.