

2024 Summary of Revisions and Changes

Water, Sanitary Sewer, Storm Drainage Infrastructure Standards and Specifications

Section 1.00 Introduction

1.05 Critical Infrastructure Section DELETED

1.06 Regional Infrastructure

Section title revised to 1.05 Critical Infrastructure.

Text updates revised from regional references to critical.

Added “any source of supply pipeline” to list of critical infrastructure.

1.08 Definitions and Terms

Section title revised to 1.07 Definitions and Terms

1.08.1 Added OSHA to associations list.

1.08.3 Added Contractor Services Water Service Specialist definition.

Section 3.00 Permits, Extension Agreements, Inspections and Acceptance of Work

3.03 Utility Main Construction (Water Distribution, Sanitary Sewer and Storm Drainage)

3.03.1 Added “All construction or maintenance on a City of Aurora reclaimed water line shall require the Contractor to notify the Sand Creek Reclaimed Water Treatment Plant Supervisor (303-326-8362) to schedule and receive training per requirements set forth in State Regulation 84. Utility Permits will not be issued without this requirement”.

3.04 Water Services

3.04.5 Revised Warranty period to 3 years.

3.07 Warranty Period

3.07 Revised Warranty period to 3 years.

Section 5.00 Utility Design Criteria and Construction Plans

5.02 Water Distribution Lines Design Criteria

5.02.2 Main Size

Updated Fire Flow for Industrial Use from 3,500 gpm to 4,000 gpm.

5.02.4 Fire Hydrants

Hydrants are to be spaced and located per the International Fire Code as adopted by the City of Aurora Life Safety Division. Hydrant laterals may be tapped from transmission lines as approved by Aurora Water Engineering. See Section 16 for further information on hydrants and hydrant lateral specifications.

5.05 Civil Construction Plan Requirements

Text updates to remove requirement on pre-design potholing for all projects and revised the section to be based on quality levels A through D per the USDOT Federal Highway Association structure. Aurora Water reserves the right to require pre-design potholing as necessary to confirm horizontal or vertical information of existing utility infrastructure when applicable.

5.06 Manhole Spacing

Updated text for maintenance access path requirements: Maintenance access for water, sanitary and storm sewer lines and manholes are required unless otherwise approved by Aurora Water Engineering. Access path shall be twelve inches (12") road base or to be designed for HS-20 loading.

Section 10.00 Manholes, Vaults and Inlets

10.01 Materials

10.01.3 Precast Manholes, Inlets and Vault Bases

Added requirement for geotextile fabric on these installations between the native soil and coarse aggregate.

10.03 Manhole Bases and Channels

Corrected language to require manhole bases to be two feet (2') greater than the *inside* diameter of the manhole barrel section, instead of the *outside* diameter.

10.07 Sanitary Sewer System Manholes

Added requirement for manholes within the 100-year floodplain.

Section 11.00 Water Pipe Installation

11.08 Cradles and Encasements for Utility Crossings

11.08.4 Water or Sanitary Sewer over Storm Sewer

Added "Minimum vertical clearance shall be six inches (6)".

ADDED 11.08.5 Critical Infrastructure Crossings

“Minimum vertical clearance is sixty inches (60”) for all dry utilities crossing source of supply lines or critical infrastructure as determined by Aurora Water”.

11.12 Disinfection of Water Lines

11.12.2 Disinfection of Pipe

Removed reference to AWWA specifications.

Removed requirement for Calcium Hypochlorite granules.

11.12.3 Filling the Line

Updated timeline from twenty-four to sixteen hours.

Minor text updates.

11.12.4.1 Application of Chlorine

Updated process and requirements for chlorine injection method.

11.12.6 Special Conditions

Revised text for the responsible party from the Inspector to the Water Service Specialist.

Updated timeline from twenty-four to sixteen hours.

11.12.7 Bacteria Test

Removed Reference to AWWA specifications.

Revised process requirements for continued failure of the bacteria test. The process now specifies that upon the third failing test, the Aurora Water Department will request removal and replacement of the water line.

Revised text for the responsible party from the Inspector to the Water Service Specialist.

11.13 Flushing the Line

Added requirements for the use of jumpers when testing.

Revised text for requirements of blow offs on sixteen-inch waterline.

Minor text edits.

Section 12.00 Ductile Iron (DIP) Water Pipe

12.03 Pressure Class Design of Pipe

12.03.1 Thickness Class Design of Pipe

Minor text edits.

Table revised to include thickness class for each diameter of pipe.

Section 17.00 Water Service Lines

17.08 Meter Pit Installations

Revised horizontal clearances for shrubs and trees from meter pits to three feet (3') and five feet (5') respectively.

Section 23.00 Sanitary Sewer Service Line Construction

23.12 Warranty of Work

Revised text to reference Roadway Design and Construction Specifications.

Section 30.00 Open Channels and Ponds

30.02 Access

30.02.2 Public and Private Basins

Revised continuous all-weather vehicular maintenance access width to twelve feet (12').

Revised to specify that recycled asphalt is not an approved material for continuous all-weather vehicular maintenance access.

Revised text to reference the City of Aurora Storm Drainage Design and Technical Criteria Manual for low flow channel design.

30.04 Acceptance

30.04.2 Final Acceptance

Revised Warranty period to 3 years.

Appendix A - Details

100 Series-General

100-2 Pipe Bedding Classes

- Changed ENCASUREMENT to CONCRETE ENCASUREMENT.

101-2 Manhole Base Detail

- Removed pipe joint at manhole and deleted note 4.
- Added geotextile fabric requirement to note 7.

101-3 Drop Manhole

- Note 8 revised from NOT ALLOWED to SUBJECT TO REVIEW AND APPROVAL.

NEW DETAIL 101-6 Inside Drop

- Added new detail for manhole base construction on inside drops up to 18 inches.

NEW DETAIL 102-4 24" Storm Manhole or Inlet Ring and Cover

- Added detail for Public Storm Main covers.

107-1 Typical Steel Encasement Construction

- Revised table caption to specify that casing chocks shall meet or exceed the Aurora Water Approved Products List manufacturer standards.

200 Series – Water

200-1 Meter Installation Procedure

- Graphic updated to instruct contractors to contact Operations Service Center to schedule meter installations.

201-1 Meter Installation ¾" & 1" Service

- Note 13 revised to PLANTINGS, SHRUBS, AND BRANCHES MUST REMAIN 3 FEET CLEAR OF THE METER PIT LID.
- Graphic updated to show 2' MIN distance from back of curb to edge of meter pit lid and hardscape to edge of meter pit lid.

203-1 Banked Meter Pit

- Graphic updated showing individual points of connection rather than a manifold configuration.
- Removed note 6

204-1 1 ½" Disc and 2" Turbine Irrigations Meter Vault Installation

- Revised the graphic to relocate the brick supports underneath the valve.

- Note 11 revised to NO SHRUBS ALLOWED WITHIN 5' OF LID AND VALVE BOXES.
- Added note 14 to state UPSIZE AND DOWNSIZE OF PLUMBING MATERIALS IS NOT ALLOWED INSIDE METER VAULT.

204-2 3", 4", and 6" Turbine Irrigation Meter Vault Installation

- Note 12 revised to NO SHRUBS ALLOWED WITHIN 5' OF LID AND VALVE BOXES.
- Added note 15 to state UPSIZE AND DOWNSIZE OF PLUMBING MATERIALS IS NOT ALLOWED INSIDE METER VAULT.

205-1 1 1/2" and 2" Disc Meter Custom Setter Installation for Domestic Service

- Height dimension within the vault revised from 5' to 5' MIN.
- Note 9 revised to NO SHRUBS ALLOWED WITHIN 5' OF LID AND VALVE BOXES.
- Added note 12 to state UPSIZE AND DOWNSIZE OF PLUMBING MATERIALS IS NOT ALLOWED INSIDE METER VAULT.

206-1 3", 4", and 6" Compound Meter Vault Installation for Domestic Service

- Height dimension within the vault revised from 5' to 5' MIN.
- Note 6 revised to NO SHRUBS ALLOWED WITHIN 5' OF LID AND VALVE BOXES.
- Added note 9 to state UPSIZE AND DOWNSIZE OF PLUMBING MATERIALS IS NOT ALLOWED INSIDE METER VAULT.
- Note 10 removed from materials section.
- Added Note 13 in materials stating GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN NATIVE SOIL AND COARSE AGGREGATE.

209-1 2" Blowoff

- Gate Valve callout revised to 4" GATE VALVE.

211-2 Air & Vacuum Valve Installation

- Graphically revised Detail A to show a corporation stop as called out and shown in Section A-A.

212-1 Butterfly Valve Installation

- Removed 36" dimension callout.
- Revised 12" dimension between the corporation stop and butterfly valve to 24".
- Added callout on Elevation View to label 2" CORP STOP or THREADED INLET.
- Added Note 5 stating GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN NATIVE SOIL AND COARSE AGGREGATE.

221-1 Water Line Lowering Detail

- Removed reference to body clamps.
- Added minimum rebar size for gravity block installations.

- Concrete Quantities revised from cubic feet to cubic yards.
- Revised Note 2 to REBAR SHALL BE PREFABRICATED BENT REBAR AND EPOXY COATED. FIELD REPAIR OF REBAR COATING IS ALLOWED.

400 Series – Storm

401-1 Inlet Connection into Storm Sewer Main

- Added Note 4 stating PIPE PENETRATION GASKETS ARE ALLOWED, TO ENSURE A SILT-PROOF CONNECTION, AS APPROVED BY AURORA WATER.
- Specified that drilling into the concrete pipe to install epoxy dowels is allowed in lieu of bending exposed reinforcing steel.

404-1 Low Flow Channel

- Minimum Width of channel revised from 6' MIN to "Varies".
- Removed Note 3.

NEW DETAIL 406-1 RCP Concrete Collar Joint

- Added detail for RCP connection without the benefit of a compatible bell and spigot.

Appendix B

Approved Products List has been removed from these Specifications. The Approved Products List will now be hosted on the City of Aurora website.

Appendix C

No changes.

Appendix D

Added layout requirements for individual residential lots.

Updated pop-up spray head minimum pop-up height to six (6) inches, while allowing four (4) inches of pop-up height for single-family detached lots.

Added requirements for pop-up heads with rotary style nozzles.

Specified that all heads within a zone must be of the same manufacturer.

Added requirements for point-source drip emitters.

Provided calculations for total gallons budgeted per 1,000 square feet of irrigated native vegetation. Added a requirement to identify native vegetation designated in Z-zones on irrigation plans.

Updated Table C to include native.

Added requirements for soil preparation.

Appendix E

Revised the minimum recycled water requirement for in-bay automatic and/or conveyor car washes from 50% to 75%.

Appendix F

No changes.