

Memorandum

To: Planning Commission

From: Jon Lundell, P.E., City Engineer

Date: February 17, 2022

Re: Santaquin City Standards and specifications update

Periodically Santaquin City's Standards and specifications must be updated to addresses product updates issues discovered with previous construction materials and methods and concerns from public safety.

The current update addresses the following

- 1. Division 3: Updates to pressure irrigation meter boxes
- 2. Division 3A: Update to the lid on culinary water meter cans.
- 3. Division 5: Sewer manhole design
- 4. Division 6: Specified manufacturer of butterfly valves and fire hydrant manufacturer
- 5. Division 12: Add maximum spacing for expansion joints in curb
- 6. Division 17: Add installation of communications conduit
- 7. Division 20: Add gravel driveway specification.
- 8. Standard Drawings
 - a. CG5 Increase the thickness of residential sidewalk and commercial road base
 - b. UT2-Location of communication conduit
 - c. ST3 Update Street cross section to remove 55' wide cross section and cul-de-sac diameter
 - d. ST2 Update street cross section to remove private cross section and rural local road cross section
 - e. W1 Provide part number for water meter lid.

These updates will address concerns expressed by Santaquin City Public Works and public safety.

Recommended Motion:

It is staff's recommendation that the Planning Commission forward the proposed amendments to the City Council for approval.



Standard Specifications and Drawings

Prepared by Santaquin City Engineering and Public Works. (Portions of text and Unaltered Drawings Provided by J-U-B Engineers, Inc.)

Pending Approval by the Santaquin City Council March 1, 2022

This Manual Updated Yearly

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Chapter 4

Standard Specifications

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2022 Standard and Specifications and Drawings Updates

Errata for

Changes made to the Santaquin City Standard Specification and Drawings

Division 3

• The proposed change to section 3.05 Subsection F addresses an issue of vehicles driving over the residential pressurized irrigation boxes and damaging the meter boxes. This update also adds text to match the standard drawing for pressure irrigation service connections shown on standard drawing PI 2??

Section 3.05 Subsection F.

Service box shall be an 11.34-13-inch by 16_24-inch standard greentraffic rated, fiberglass-irrigation box with cover. Service box shall be installed over the Ori-Seal valve and hose bibFord BA43-344W Ball Meter Valve. A sign shall be attached or embossed to or on the cover indicating as follows: "IRRIGATION" Box shall be Brooks 1419 series utility box with lid recessed and Box shall be DFW Plastics 1324C4-12-4T 63D or approved equivalent. The meter box shall be provided with Waterworks Pentagon Head locking device-or-equivalent. The meter will be supplied by the City. The City shall be responsible to locate and install the meter in the service box. A PVC pipe jumper, consisting of a PVC pipe and male adapter shall be installed from the service valve to the sleeve under the sidewalk to provide proper alignment of the meter from the service valve to the homeowner's property.

Division 3A

• The proposed change to section 3A.05 Subsection D is to address the issue of service meter antennas from being damaged from landscape maintenance and vehicles driving over the culinary water meter boxes.

Section 3A.05 Sub-section D:

The City will furnish and install the meter. The double check valve, meter setter assembly, meter box and cover will be furnished by the Developer/Contractor and the entire installation, excluding the meter, shall be made by the Developer/Contractor. The cover shall have a recessed center for the MXU antenna. The service line shall be installed from the house to where the service line was stubbed from the water main, a thirty-inch (30") diameter hole excavated where the meter is to be installed prior to City crews installing the meter. No meters shall be located in sidewalks or driveways.

The Developer/Contractor shall furnish the meter box and cover for meters larger than one-inch (1"). The materials and type of box shall be approved by the Public Works.

If a meter box is located within a drive approach the standard meter box shall be replaced with a H20 load traffic rated box.

Division 5

• The proposed change to Section 5.01 is to ensure that Santaquin City Standards match Utah State Administrative Rule R317-3-2-2.4-A-4

Section 5.01: Spacing between Sanitary sewer manholes shall not exceed 400 feet.

Division 6

• The proposed change to Section 6.03 is to allow for the more effective operation of Santaquin City's water system.

Section 6.03: Valves in sizes greater than <u>1210</u>" shall be butterfly valves and <u>Av-Tech Double Eccentric</u> <u>Butterfly valve 2504 or an "equal" as approved by the Public Works Director and City Engineer and</u> <u>shall</u> conform to the latest revision of AWWA Standard C504, Class 150-B, and comply with the following:

The proposed change to Section 6.06 is to allow Santaquin City Public Works Director and City engineer to review multiple options for fire hydrants.

Section 6.06_FIRE HYDRANTS: Fire hydrants shall be "traffic model" type designed to conform to AWWA Specification C502 and shall be of either the compression or toggle joint type. Hydrants shall be Waterous "Pacer" or an equal as approved by the City Engineer and Public Works Director.

Hydrant valves shall be a minimum of 6-inch size. Hydrants shall be supplied complete with two 2 1/2-inch hose nozzles and one 4 1/2-inch pumper nozzle. All nozzles shall be provided with National Standard threading. A one cubic yard gravel sump shall be provided at each hydrant. All hydrants shall be mechanical joint end and shall be connected to the main by means of a mechanical joint by flanged tee and flanged by mechanical joint auxiliary gate valve and box as shown on the Standard Drawings. Each hydrant shall also be supplied with O-ring seals, a National Standard pentagon operating nut which is designed for clockwise rotation closing, and a 6-inch mechanical joint inlet. The color of the hydrant shall be red.

Set hydrants plumb with the pumper nozzle perpendicular to and facing roadway. The hydrant shall be set so the flange is one-tenth of a foot (0.10') above the elevation of the top back of curb. Hydrants shall be located in planter strips and at property lines where possible.

Final fire hydrant placement, design, demand, operating pressure and fire flow will be approved by the City engineer/fire chief for compliance with applicable local, state and national codes.

Division 12

• The proposed change to Section 12.07 is to allow for a slip forming and placement method for curb and gutter installation and would extend the maximum expansion joint spacing from 30 feet to 100 feet only for slip formed curbing.

Section 12.07 Construction of curb, gutter and sidewalk - Curb and gutter to be installed with bituminous asphalt cement pavement shall have contraction joints placed every 10 feet by use of 1/8-inch steel template of the exact cross section of the curb and gutter. Where dividing plates are used joints shall have a minimum of 2-inches of concrete under the plate, or the joint will be sealed with an approved sealant. Remove the templates as the concrete takes initial set. Cut the joint 1-1/2 inches deep when using the slip form method to place the concrete. Use 1/2-inch thick, pre-molded, expansion joint filler at curb and gutter radii, where the curb and gutter abuts a solid object and at intervals not to exceed 30 feet, unless otherwise specified by the Public Works Representative/Engineer. When a slip forming method is used to install curb and gutter, expansion joints shall be a maximum spacing of 100 feet.

Division 17

• The proposed change to Section 17.02 will add two addition 2" conduits along the frontage of the development in order to provide conduits to be available for future communications infrastructure.

Section 17.02 Utility Conduit: <u>Two – two-inch (2") (initially empty) communications conduits shall be</u> installed parallel and congruent to all primary and secondary power conduits such that communication lines can serve all lots individually. Communications service boxes labeled "Communications" shall be installed above the communications conduits directly adjacent to all power boxes (i.e. ground sleeves, transformers, etc.).

Division 20

• The proposed change to Section 20.03 is to provide City standards for accessory type gravel driveways

Section 20.03 GRAVEL DRIVE APPROACHES: All gravel driveway extensions shall have a minimum of 4 inches of one half (1/2) inch angular gravel over a Mirafi 600 or equivalent fabric. No pea-gravel or rounded type gravel materials are allowed.

Standard Drawings

- Sheet CG5 Changes the Sidewalk Cross Section to 5" of concrete for residential sidewalk and changes to 8" of road base for commercial sidewalks.
- Sheet UT2 Include location of 2-2" utility conduits
- Sheet ST3
 - Added note: 55' street cross section will no longer be used within developments that submit a development application after the date that these specifications are approved.
 - o Adjusted Cul-de-sac diameter to be 96 feet (per IFC code appendix D103.1)
- Sheet ST2 Added note:
 - 26' private street cross section will no longer be used within developments that submit a complete development application after the September 2, 2017.
 - 55" Rural local road cross section will no longer be used within developments that submit a development application after the date that these specifications are approved.
- Sheet W1 Water meter lid update Part # DFW12AFD-1WT 63D-LID (Consistent with Division 3A text change listed above)

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