



Memorandum

To: City Council via 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.

The Planning Commission held a Public Hearing regarding the proposed updates and provided a positive recommendation to the city council on the proposed language.

Recommended Motion:

It is staff's recommendation that the City Council move to approve the noted Standard Specifications and Drawings changes as indicated in Ordinance 03-01-2022.

ORDINANCE NO. 03-01-2022

AN ORDINANCE AMENDING SANTAQUIN CITY'S STANDARD SPECIFICATIONS AND DRAWINGS, PROVIDING FOR CODIFICATION, CORRECTION OF SCRIVENER'S ERRORS, SEVERABILITY, AND AN EFFECTIVE DATE FOR THE ORDINANCE.

WHEREAS, the City of Santaquin is a fourth class city of the state of Utah and has responsibility of maintaining its infrastructure for the benefit of public health, safety, and welfare; and

WHEREAS, Santaquin City has adopted certain Standard Specifications and Drawings (hereafter "Standards") related to maintaining or constructing new public infrastructure within the city; and

WHEREAS, the Santaquin City Engineers have recommended updating the Standards to help ensure the best reasonably possible installation of infrastructure by development that will be dedicated to and owned by the City; and

WHEREAS, on February 23, 2022, the Santaquin City Planning Commission held a public hearing regarding the recommend changes to the Standards, which hearing was preceded by the posting of public notice in at least three public places within the City limits of Santaquin City; and

WHEREAS, after the noted public hearing, the Santaquin City Planning Commission forwarded a positive recommendation to the City Council for the recommended Standards changes; and

WHEREAS, the City Council desires to amend the City's Standard Specifications and Drawings as recommended by the City Engineers and Planning Commission; and

WHEREAS, the state legislature has granted general welfare power to the City Council, independent, apart from, and in addition to, its specific grants of legislative authority, which enables the city to pass ordinances which are reasonably and appropriately related to the objectives of that power, i.e. providing for the public safety, health, morals, and welfare; and

NOW, THEREFORE, BE IT ORDAINED by the City Council of Santaquin City, State of Utah, as follows:

Section I. Amendments

The Santaquin City Standard Specifications and Drawings are amended as indicated in Exhibit A which is attached hereto and by this reference made part hereof.

Section II. Severability

If any part of this ordinance or the application thereof to any person or circumstances shall, for any reason, be adjudged by a court of competent jurisdiction to be unconstitutional or invalid, such judgment shall not affect, impair or invalidate the remainder of this ordinance or the application thereof to other persons and circumstances, but shall be confined to its operation to the section,

subdivision, sentence or part of the section and the persons and circumstances directly involved in the controversy in which such judgment shall have been rendered. It is hereby declared to be the intent of the City Council that this section would have been adopted if such invalid section, provisions, subdivision, sentence or part of a section or application had not been included.

Section III. Contrary Provisions Repealed

Any and all other provisions of the Santaquin City Code that are contrary to the provisions of this Ordinance are hereby repealed.

Section IV. Codification, Inclusion in the Code, and Scrivener's Errors

It is the intent of the City Council that the provisions of this ordinance be made part of the Santaquin City Code as adopted, that sections of this ordinance may be re-numbered or re-lettered, and that the word ordinance may be changed to section, chapter, or other such appropriate word or phrase in order to accomplish such intent regardless of whether such inclusion in a code is accomplished. Typographical errors which do not affect the intent of this ordinance may be authorized by the City without need of public hearing by its filing a corrected or re-codified copy of the same with the City Recorder.

Section V. Posting and Effective Date

This ordinance shall become effective at 5:00 p.m. on Wednesday, March 2, 2022. Prior to that time, the City Recorder shall deposit a copy of this ordinance in the official records of the City and place a copy of this ordinance in three places within the City.

PASSED AND ADOPTED this 1st day of March 2022.

Daniel M. Olson, Mayor

Councilmember Art Adcock	Voted	___
Councilmember David Hathaway	Voted	___
Councilmember Lynn Mecham	Voted	___
Councilmember Elizabeth Montoya	Voted	___
Councilmember Jeff Siddoway	Voted	___

ATTEST:

Dennis L. Marker, City Recorder

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 3/4~~ 13-inch by ~~16~~ 24-inch ~~standard green~~ traffic rated, ~~fiberglass~~ irrigation box with cover. Service box shall be installed over the ~~Ori-Seal valve and hose bib~~ [Ford 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 ~~12~~10" shall be butterfly valves and Av-Tech Double Eccentric Butterfly valve 2504 or an "equal" as approved by the Public Works Director and City Engineer and shall 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 additional 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: Two – two-inch (2") (initially empty) communications conduits shall be 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.).

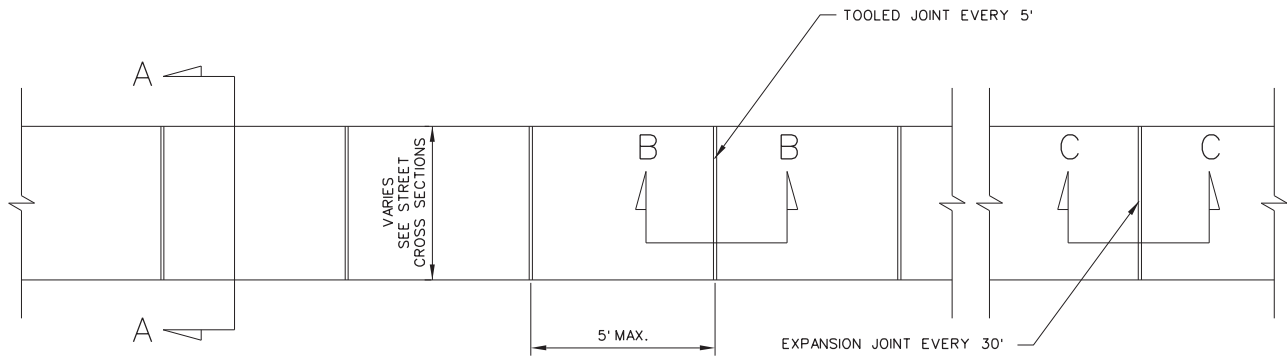
Division 20

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

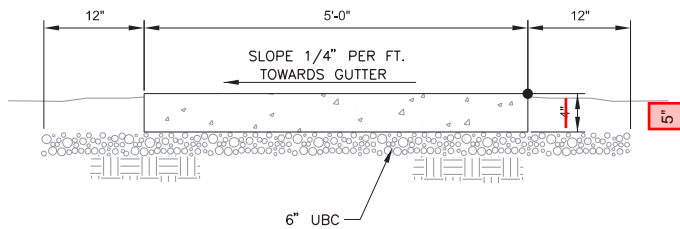
Section 20.03 GRAVEL DRIVE APPROACHES: All gravel driveway extensions shall have a minimum of 4 inches of one half (1/2) inch angular gravel over a Mirafi 600 or equivalent fabric. No pea-gravel or rounded type gravel materials are allowed.

Standard Drawings

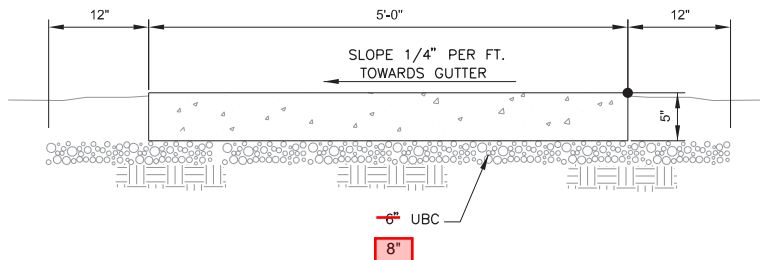
- Sheet CG5 – Changes the Sidewalk Cross Section to 5" of concrete for residential sidewalk and changes to 8" of road base for commercial sidewalks.
- Sheet UT2 - Include location of 2-2" utility conduits
- Sheet ST3 –
 - Added note: 55' street cross section will no longer be used within developments that submit a development application after the date that these specifications are approved.
 - 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)



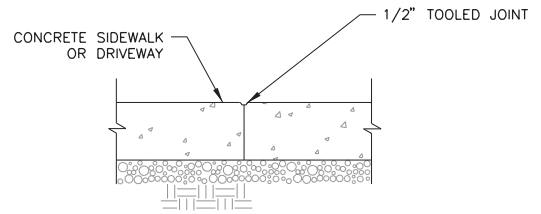
PLAN VIEW



RESIDENTIAL SIDEWALK SECTION A-A



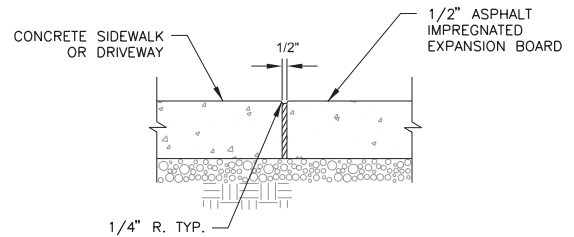
COMMERCIAL SIDEWALK SECTION A-A



SECTION B-B

NOTE:

TOOLED JOINT IS TYPICAL FOR CURB, GUTTER, SIDEWALK, AND BLOCKOUTS



SECTION C-C

NOTE:

EXPANSION JOINT IS TYPICAL FOR CURB, GUTTER, SIDEWALK, AND BLOCKOUTS

NOTES:

1. PROVIDE A TOOLED JOINT EVERY 10'-0" IN CURB & GUTTER, & EVERY 5'-0" IN SIDEWALK.
2. PROVIDE AN EXPANSION JOINT EVERY 30'-0" IN SIDEWALK.
3. PLACE UBC UNDER CONCRETE SIDEWALK, AND 12" BEYOND FRONT AND BACK OF WALK

SIDEWALK DETAILS

NOT TO SCALE



STATEMENT OF USE

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REVISION

NO.	DESCRIPTION	BY	APR.	DATE
1	CHANGED EXPANSION JOINT SPACING TO 30 FEET	NEB	MLC	11/2/2011



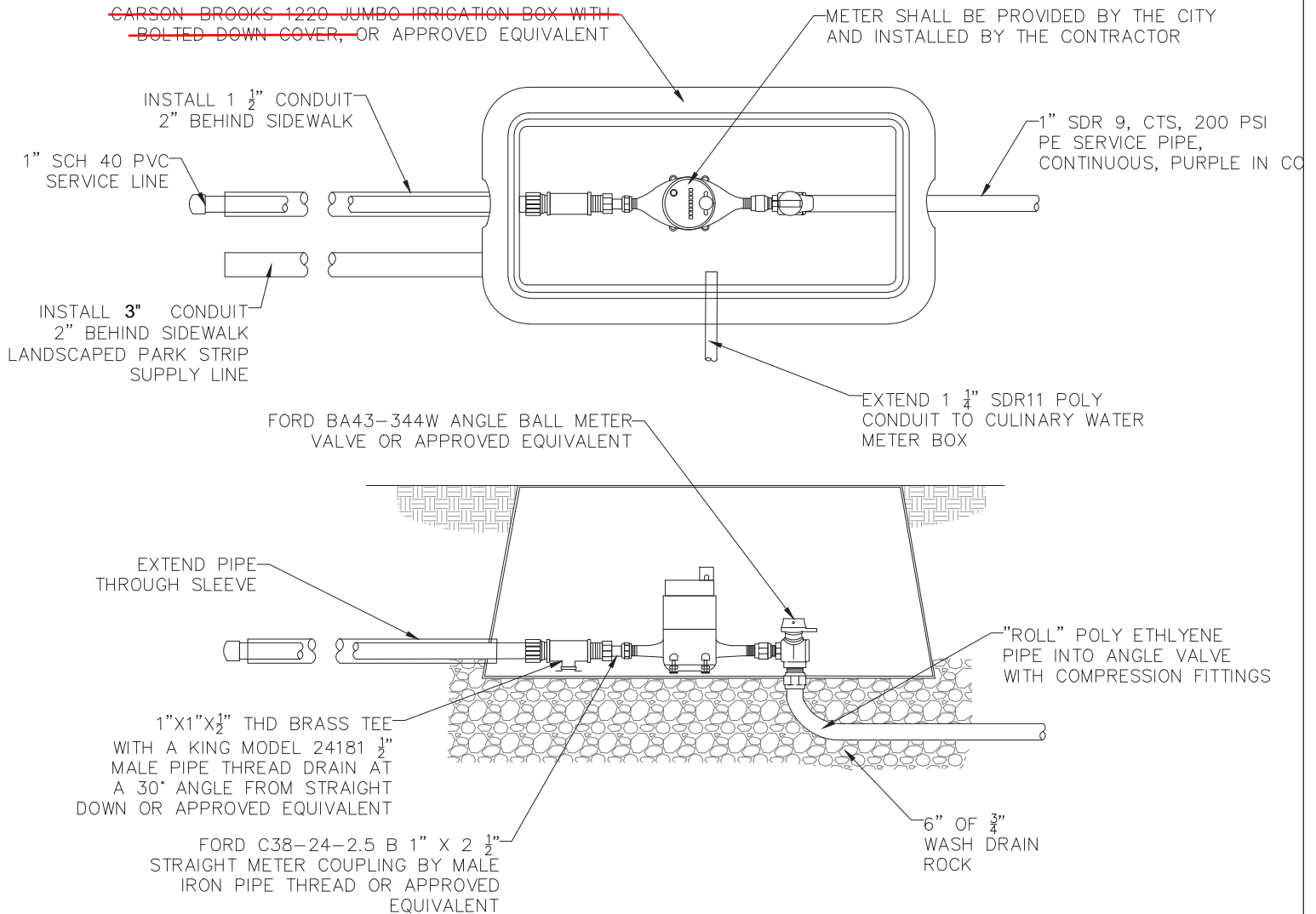
SIDEWALK DETAILS

SANTAQUIN CITY
275 WEST MAIN STREET

STANDARD DRAWING NUMBER:	CG5
CAD DWGd.dwg_6-12.dgn	
PLOT SCALE:	1:000
DRAWN BY:	BTW
DESIGN BY:	NEB
CHECKED BY:	MLC
ADOPTED DATE:	20 JUN 12

DFW PLASTICS 1324C4-12-4T 63D

~~CARSON BROOKS 1220 JUMBO IRRIGATION BOX WITH
BOLTED DOWN COVER, OR APPROVED EQUIVALENT~~



PRESSURIZED IRRIGATION METER BOX

NOT TO SCALE

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NO.	BY	APR	DATE

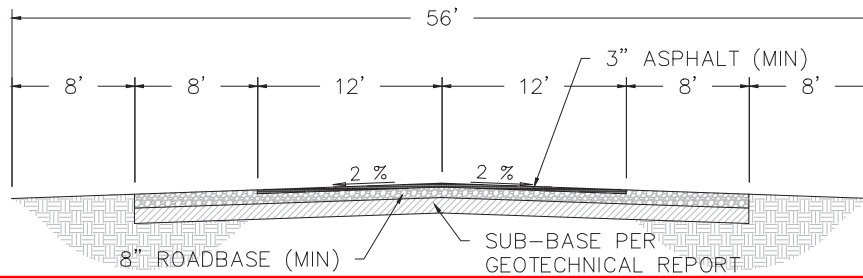


PRESSURE IRRIGATION METER BOX

SANTAQUIN CITY
275 WEST MAIN STREET

PI2

ADOPTED DATE:
19 - OCT - 16



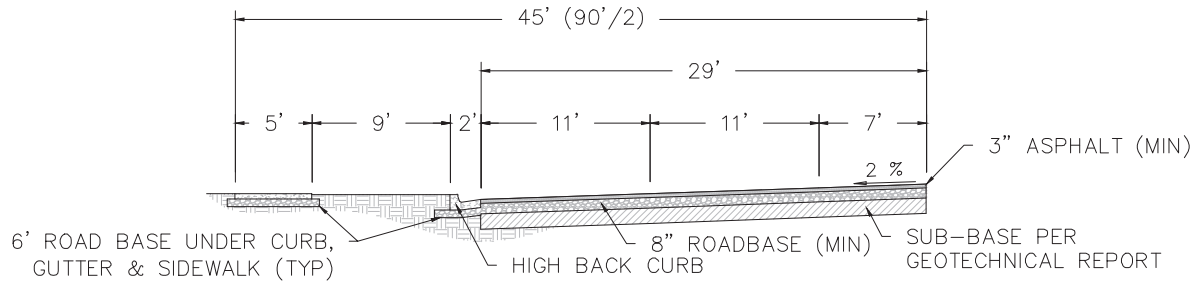
55' RURAL LOCAL ROAD STREET CROSS SECTION WILL NO LONGER BE USED WITHIN DEVELOPMENTS THAT SUBMIT A COMPLETE DEVELOPMENT APPLICATION AFTER THE DATE THAT THESE SPECIFICATIONS ARE APPROVED.

NOTES:

THE TURN-A-ROUND TO MEET THE REQUIREMENTS OF THE INTERNATIONAL FIRE CODE APPENDIX D (LATEST ADOPTED VERSION).

55' RURAL LOCAL ROAD CROSS SECTION

NOT TO SCALE

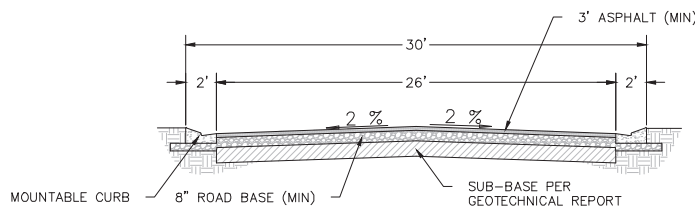


NOTES:

1. THE DEVELOPMENT REVIEW COMMITTEE (DRC) MAY REQUIRE THE ADDITION OF RIGHT TURN LANES AT INTERSECTIONS.
2. THE DEVELOPMENT REVIEW COMMITTEE (DRC) MAY MODIFY THIS SECTION FOR DEVELOPMENTS WITH AVERAGE BUILDABLE SLOPE > 10%.

5-LANE/NO PARKING 90' ARTERIAL

NOT TO SCALE



NOTES:

THE TURN-A-ROUND TO MEET THE REQUIREMENTS OF THE INTERNATIONAL FIRE CODE APPENDIX D (LATEST ADOPTED VERSION).

26' PRIVATE STREET CROSS SECTION

NOT TO SCALE

26' PRIVATE STREET CROSS SECTION WILL NO LONGER BE USED WITHIN DEVELOPMENTS THAT SUBMIT A COMPLETE DEVELOPMENT APPLICATION AFTER SEPTEMBER 2, 2017

NOTES:

STANDARD ROAD CROSS SECTIONS MAY BE MODIFIED IN HILLSIDE DEVELOPMENT ZONES ACCORDING TO A DEVELOPMENT AGREEMENT.

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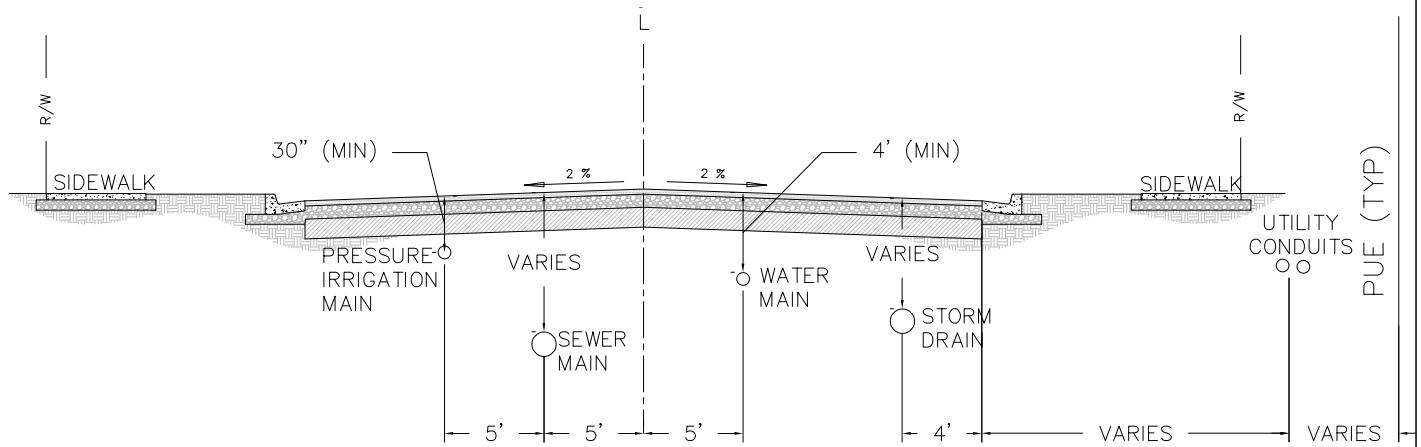
REVISION			
NO.	BY	APR	DATE



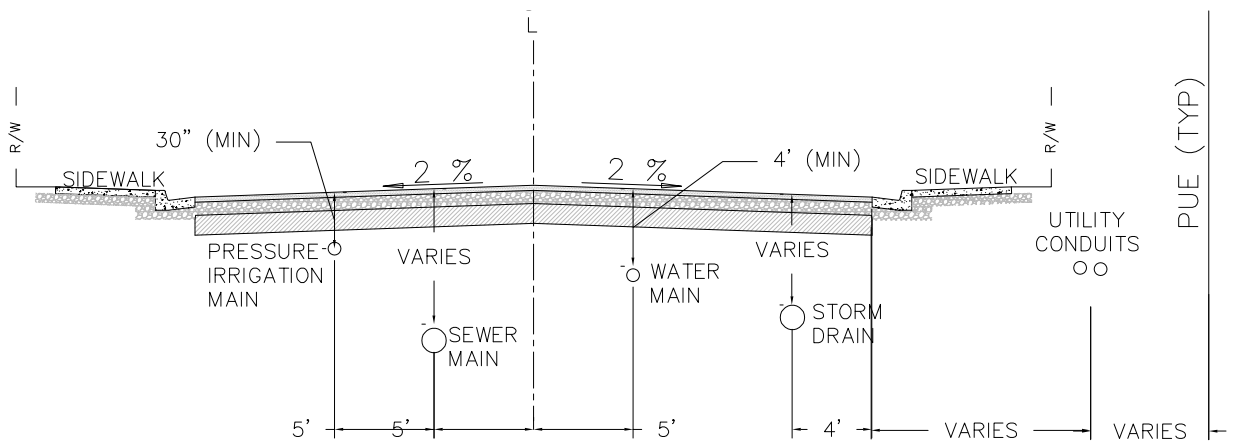
**STANDARD STREET
CROSS SECTION**
SANTAQUIN CITY
275 WEST MAIN STREET

ST2

ADOPTED DATE:
19 - OCT - 16



STREET UTILITY LOCATIONS WITH PLANT STRIP



STREET UTILITY LOCATIONS SECTIONS

1. IRRIGATION MAINS SHALL BE LOCATED 10 FEET SOUTH & WEST OF CENTER OF THE STREET.
2. WATER MAINS SHALL BE LOCATED 5 FEET NORTH & EAST OF CENTER OF THE STREET.
3. SEWER MAINS SHALL BE LOCATED 5 FEET SOUTH & WEST OF THE CENTER OF THE STREET.
4. STORM DRAIN SHALL BE LOCATED 4 FEET FROM THE LIP OF GUTTER ON NORTH & EAST SIDE OF THE STREET.
5. STORM DRAIN SHALL BE LOCATED LOWER THAN THE WATER MAIN.
6. UTILITY CONDUITS: SEE SECTION 17.02

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REVISION			
NO.	BY	DATE	



**STREET UTILITY LOCATIONS
PROFILE VIEW**
SANTAQUIN CITY
275 WEST MAIN STREET

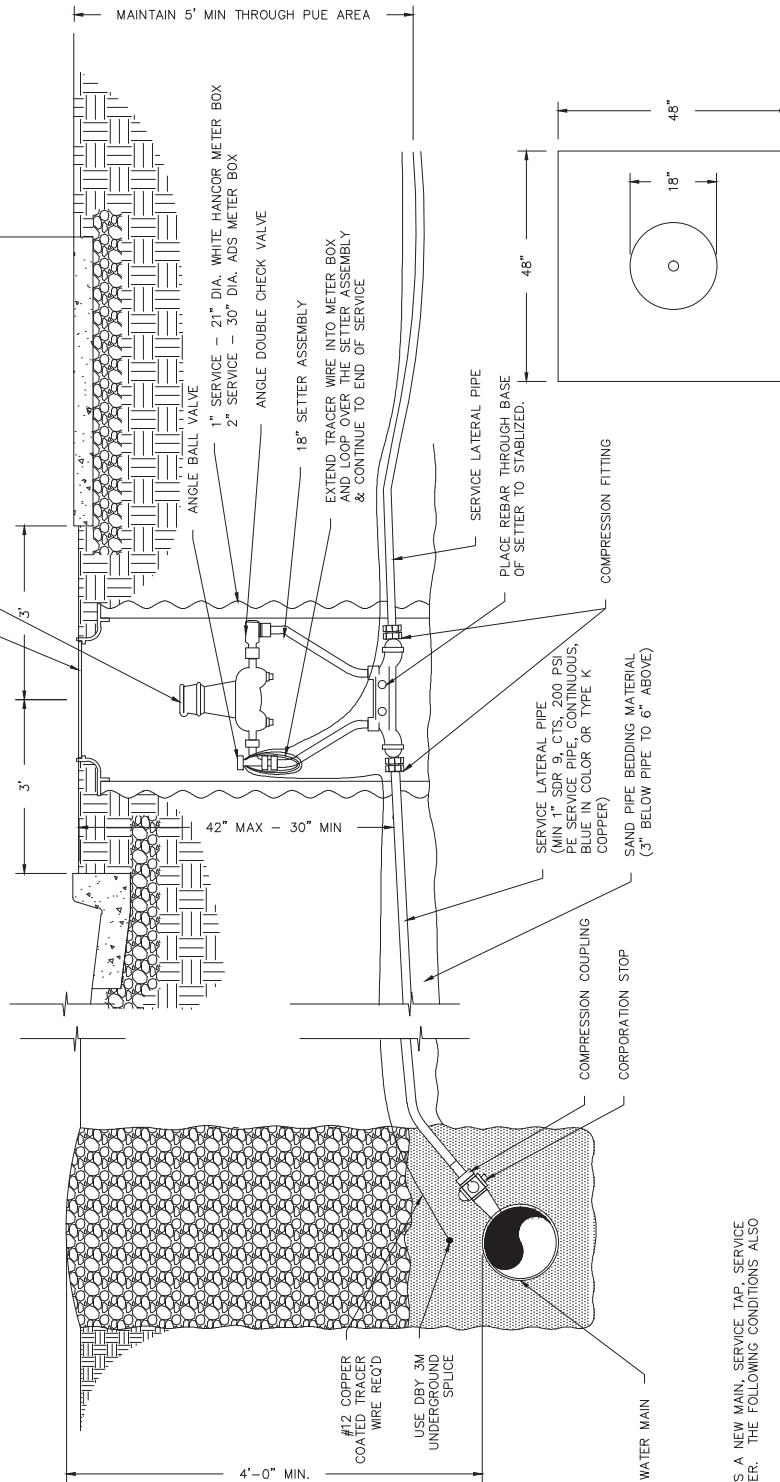
UT2

ADOPTED DATE:
19 - OCT - 16

DFW PLASTICS DFW12AFD-1WT 63D-LID

METER BOX TOP RING AND COVER
~~63D-LID-1WT-63D~~
(LOCATE WITHIN 1" OF THE TOP OF SIDEWALK)

METER VARIES ACCORDING TO SERVICE SIZE (FURNISHED BY SANTAQUIN CITY) (18" TO 22" FROM THE TOP OF BOX LID)



FOR METERS LOCATED IN DRIVEWAYS:
1. TOOL JOINT OR CUT IN CONCRETE.
2. INSTALL 18" FLAT LID WITH HOLE.
EXISTING METERS THAT MUST BE RELOCATED MAY NEED TO BE TURNED IN ORDER FOR THEIR ORIENTATION TO MATCH THE ALIGNMENT OF THE SERVICE LINE.

- NOTES:
- A. NEW MAIN, SERVICE TAP AND SERVICE LATERAL CONNECTED TO EXISTING WATER.
 - B. NEW MAIN AND SERVICE TAP CONNECTED TO EXISTING SERVICE LATERAL.
 - C. NEW SERVICE TAP AND SERVICE LATERAL CONNECTED TO EXISTING MAIN AND METER.
 - D. NO COUPLERS SHALL BE ALLOWED BETWEEN THE MAIN, METER, BLAST SETTER, OR SERVICE LATERAL.
 - E. WATER METERS SHALL NOT BE PLACED IN CONCRETE SURFACE. (DRIVEWAYS, WALKWAYS ETC.)

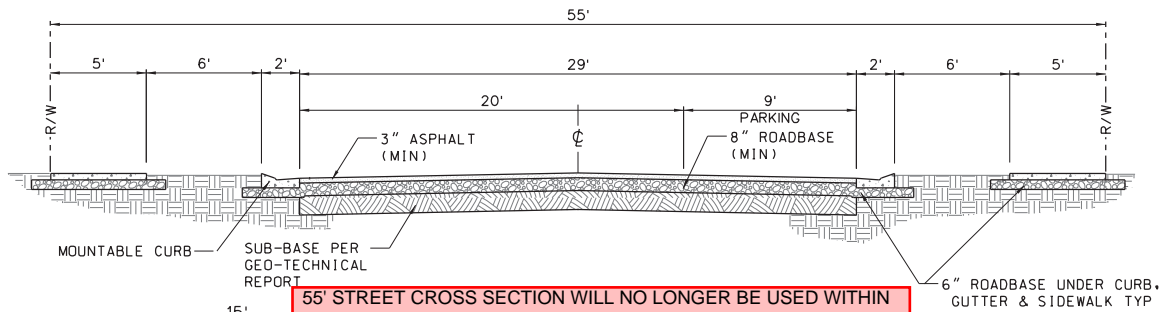
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REVISION				
NO.		BY	APP.	DATE



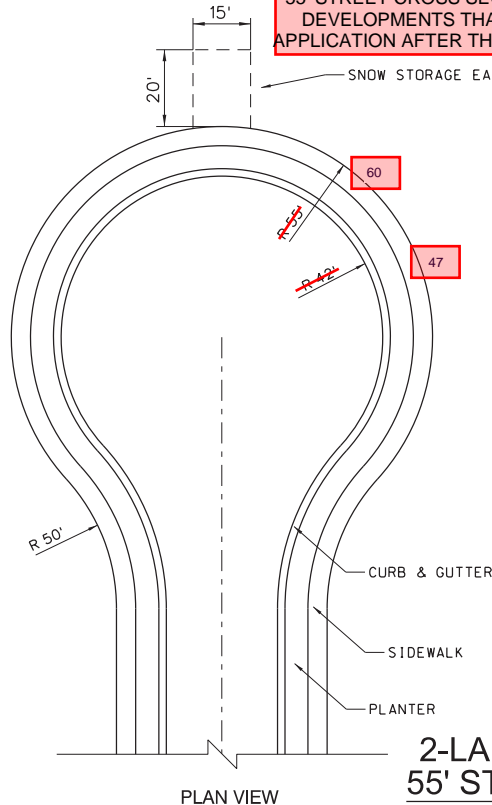
CULINARY WATER SERVICE CONNECTION
SANTAQUIN CITY
275 WEST MAIN STREET

W1

ADOPTED DATE:
19 - OCT - 16



55' STREET CROSS SECTION WILL NO LONGER BE USED WITHIN DEVELOPMENTS THAT SUBMIT A COMPLETE DEVELOPMENT APPLICATION AFTER THE DATE THAT THESE SPECIFICATIONS ARE APPROVED.



CUL-DE-SAC NOTES:

WHERE AVERAGE SLOPE OF PROPERTY > 10%:

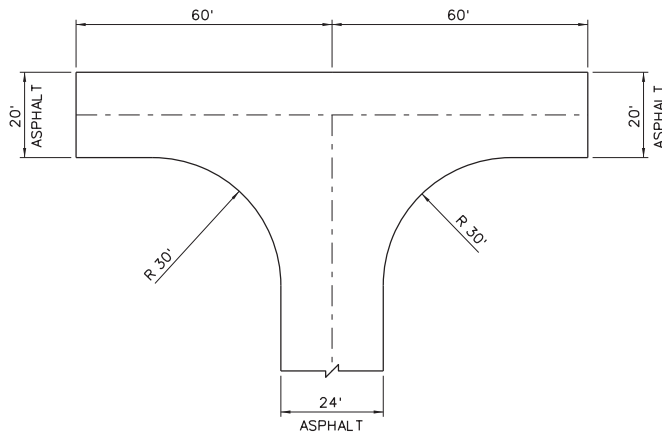
1. 20 LOT MAXIMUM
2. LENGTH OF STREET LIMITATION-1000 FEET MEASURED FROM CENTER OF INTERSECTION TO CENTER OF TURN AROUND.
3. INTERMEDIATE TURN AROUND AS PER THE INTERNATIONAL FIRE CODE APPENDX D (LATEST EDITION) FOR CUL-DE-SAC > 750 FEET IN LENGTH.
4. TURN-A-ROUND TO MEET THE REQUIREMENTS OF THE INTERNATIONAL FIRE CODE APPENDIX D (LATEST CITY ADOPTED VERSION) **IFC D103.1**

WHERE AVERAGE SLOPE OF PROPERTY < 10%:

1. 10 LOT MAXIMUM
2. LENGTH OF STREET LIMITATION-500 FEET MEASURED FROM CENTER OF INTERSECTION TO CENTER OF TURN AROUND.
3. TURN-A-ROUND TO MEET THE REQUIREMENTS OF THE INTERNATIONAL FIRE CODE APPENDIX D (LATEST CITY ADOPTED VERSION) **IFC D103.1**

2-LANE/PARKING ONE SIDE 55' STREET CROSS-SECTION

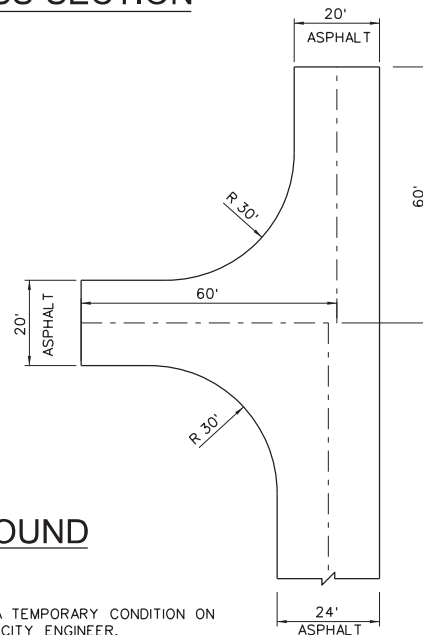
NOT TO SCALE



HAMMERHEAD TURNAROUND

NOT TO SCALE

NOTE:
HAMMERHEAD TURNAROUNDS ARE TO BE INSTALLED AS A TEMPORARY CONDITION ON STANDARD STREETS AND ONLY BY PERMISSION OF THE CITY ENGINEER.



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REVISION

NO.	DESCRIPTION	BY	APR	DATE
1	SNOW STORAGE AREA ADDED	NEB	MLC	11/2/2011



STANDARD STREET CROSS SECTIONS

SANTAQUIN CITY
275 WEST MAIN STREET

STANDARD DRAWING NUMBER:	ST3
CAD DWG.dwg_6-12.dgn	
PLOT SCALE:	1,000
DRAWN BY:	BTW
DESIGN BY:	NEB
CHECKED BY:	MLC
ADOPTED DATE:	20 JUN 12