

City of Harrisburg
Supplement to
the City of Sioux Falls
Supplemental Standard Specifications
Sections 100 – 635

Adopted: April 5, 2010

**City of Harrisburg
203 Prairie Street
Harrisburg, SD 57032**

**City of Harrisburg Supplement to
the City of Sioux Falls Supplemental Standard Specifications**

These Special Provisions modify the City of Sioux Falls Supplemental Standard Specifications and apply to all work completed within the City of Harrisburg.

1. Modifications to Section 100 – Sanitary Sewer Construction

- a. Replace Section 2.4.6 Sanitary Sewer Force Main Tracer Wire and Terminal Boxes with the following:

“2.4.6 SANITARY SEWER FORCE MAIN AND SERVICE LINE TRACER WIRE AND TERMINAL BOXES

The City of Harrisburg will require tracer wire and terminal boxes to be installed on all sanitary sewer force main and sanitary sewer service lines.

2.4.6.1 Force Main Tracer Wire

The City of Harrisburg will require contractors to install tracer wire on force main. The distance between tracer wire stations is not to exceed 1,000 lineal feet unless otherwise approved. The tracer wire shall also conform to the Sioux Falls Standard Plate for Sanitary Sewer Force Main Tracer Wire or the Harrisburg Supplemental Tracer Wire System Detail with Post Mounted Terminal Box plate at the end of this section. City will determine which detail applies.

2.4.6.2 Service Line Tracer Wire

The City of Harrisburg will also require contractors and homebuilders to install tracer wire from the sanitary sewer gravity wyes to where the service line enters the house for the purpose of locating household service lines. See the Standard Plates for “Tracer Wire for Sanitary Sewer Service” and “Tracer Wire Conduit for Services” at the end of these Supplemental Specifications for details.

2.4.6.3 Tracer Wire Materials

Tracer wire materials shall be in accordance with the Supplemental Specifications for Water Main Tracer Wire. The tracer wire color shall be green with a print line saying “SEWER”. The tracer wire shall be 12 AWG, solid-strand, soft-drawn copper per ASTM B-3.

Tracer wire valve boxes shall be suitable for flush burial with a 2 ½ inch cast iron top, integral stainless terminals, and a minimum 12-inch long

ABS bottom section. They shall be rated for an H-20 load. The cast iron casting shall be manufactured in accordance with ASTM A-48 Class 30. The ABS pipe shall be manufactured in accordance with ASTM D 1788. Acceptable manufacturers of the terminal boxes are Valvco Pipe Tracer Wire Terminal Box or equivalent. Access box should be labeled "SEWER".

Post Mounted Terminal Box:

1. Condulet style terminal box with minimum two-wire terminal board.
 - a. Terminal board shall be non-conductive material suitable for outdoor exposure (Lexan, UV protected polycarbonate plastic, etc.).
 - b. Terminal hardware for wire terminations shall be Series 300 stainless steel, nickel-plated brass, or bronze.
2. Condulet style terminal box shall be suitable for mounting on a threaded 3/4 inch or larger rigid galvanized steel conduit.
 - a. Terminal box shall be provided with all mounting hardware (conduit straps, wood screws, conduit bushing, etc.) necessary to provide a rigid support to a 4 inch x 4 inch x 5 foot long pressure-treated wood post.
 - b. Wood post shall be pressure treated with a waterborne preservative intended for fresh water or soil (burial) contact to a retention of 0.40 lb/CF (6.4 kilograms per cubic meter) in accordance with AWPA Standard C2 for Lumber and Timber and AWPA Standard P9 for Waterborne Preservatives.
3. Acceptable post mounted tracer wire access boxes are:
 - a. T-2 or T-4 Condulet Style Test Heads available for Tinker and Rasor.
 - b. Engineer approved equivalent.

2.4.6.4 Testing for Continuity

Testing for continuity will be the responsibility of the contractor and homebuilder. If the tracer wire system does not function as intended, the Contractor/homebuilder shall repair the system to the satisfaction of the Engineer."

- b. Add Section 2.4.7 Detection Tape:

“2.4.7 DETECTION TAPE

The City of Harrisburg will require contractors to install detectable warning tape above gravity sanitary sewer piping in the top lift, or top two (2) feet of sanitary sewer trenches. The tape shall be 3 inches in width, green in color, and be labeled “Buried Sewer Line”.

- c. Omit Section 2.5.4 Manhole Liners. Manhole liners will not be required.
- d. In Section 3.3.6 Rock Excavation, replace the last sentence with the following:
“Explosive permits must be obtained from the City of Harrisburg.”
- e. For Section 3.3.8 Sanitary Sewer Temporary Bypass:
 - i. In the second paragraph, the Contractor shall inform the residents not to discharge sanitary sewer during the time(s) when the residents’ sewer service is not connected to the City of Harrisburg sanitary sewer system.
 - ii. In the third paragraph, the City of Harrisburg will not be responsible for providing door hangers. The Contractor will be required to provide door hangers or other means of notification.
- f. In Section 3.6.3 Bench and Invert, the camera dimensions are available from City Engineering.
- g. In Section 3.6.12 Manhole Construction Plate Marker, replace the first sentence with the following:
“The manhole construction plate markers shall be used on all City bid projects, or where designated.”
- h. In Section 3.10 Service Connections, replace the first sentence of the second paragraph with the following:
“Any future taps of the existing main shall be made by the Contractor where the sewer main is clay or PVC truss pipe material.”
- i. Section 3.16.7.1 General:
 - i. Replace the last sentence of the first paragraph with the following:
“If pumping is required on a 24-hour basis, engines shall be equipped in a manner to keep noise to City of Harrisburg noise ordinance standards.”
 - ii. Replace the last paragraph with the following:
“Post inspection: The Contractor shall videotape the service line repairs for CIPP projects and submit a copy to the property owner and the City of Harrisburg Inspector for review. All measurements for the repairs shall be provided to the Inspector at the time of inspection.”
- j. Add Section 3.18 Separation of Sanitary Sewer and Water Main:

“3.19 Separation of Sanitary Sewer and Water Main

3.19.1 Horizontal Separation

Sewers shall be laid at least 10 feet (3.0 m) horizontally from any existing or proposed water main. The distance shall be measured edge to edge. In cases where it is not practical to maintain a 10 foot (3.0 m) separation, deviation may be allowed on a case-by-case basis, if supported by data from the design engineer and approved by the South Dakota Department of Environment and Natural Resources (SD DENR). Such deviation may allow installation of the sewer closer to a water main, provided that the water main is in a separate trench or on an undisturbed earth shelf located on one side of the sewer and at an elevation so the bottom of the water main is at least 18 inches (450 mm) above the top of the sewer.

If it is impossible to obtain proper horizontal separation as described above, both the water main and sewer shall be constructed of slip-on or mechanical joint pipe complying with public water supply design standards of the SD DENR and be pressure tested to 150 psi (1034 kPa) to assure water tightness before backfilling.

3.19.2 Vertical Separation

3.19.2.1 Sewers Crossing Under Water Mains

The sewer shall be laid to provide a minimum of 18 inches (450 mm) from the top of the sewer to the bottom of the water main. The crossing shall be arranged so the sewer joints will be equidistant and as far as possible from the water main.

3.19.2.2 Sewers Crossing Over Water Mains

Either the water main or the sewer main must be encased in a watertight carrier pipe that extends 10 feet (3.0 m) on both sides of the crossing, measured perpendicular to the water main. The carrier pipe shall be PVC, ABS, or HDPE, and the ends sealed with a rubber gasket or boot.

3.19.3 Special Conditions

When it is impossible to obtain the proper horizontal and vertical separation as stipulated above, one of the following methods shall be specified:

3.19.3.1 Water Pipe
The sewer shall be designed and constructed equal to water pipe and shall be pressure tested at 150 psi (1034 kPa) prior to backfilling to assure water tightness.

3.19.3.2 Carrier Pipe
Either the water main or the sewer main may be encased in a watertight carrier pipe that extends 10 feet (3.0 m) on both sides of the crossing, measured perpendicular to the water main. The carrier pipe shall be PVC, ABS, or HDPE, and the ends sealed with a rubber gasket or boot.”

k. Replace Section 4.41 Sanitary Sewer Force Main Tracer Wire with the following:

“4.41 SANITARY SEWER TRACER WIRE

Sanitary sewer tracer wire shall be measured by lineal foot of wire furnished and installed. The measured length shall be rounded up to the nearest 1-foot increment.

The sanitary sewer tracer wire shall be paid for at the contract unit price per lineal foot furnished and installed. Payment for sanitary sewer tracer wire will be full compensation for furnishing, installing, and all appurtenances necessary for the proper installation of the sanitary sewer tracer wire.”

l. Replace Section 4.42 Sanitary Sewer Force Main Tracer Wire Terminal Box with the following:

“4.42 SANITARY SEWER TRACER WIRE TERMINAL BOX

Sanitary sewer tracer wire terminal boxes shall be measured by each unit furnished and installed. The furnishing and installing of the sanitary sewer tracer wire terminal box shall be paid for at the contract unit price per each furnished and accepted. Payment for sanitary sewer tracer wire terminal box will be full compensation for furnishing, installing, testing for continuity, and all appurtenances necessary for the proper installation of the sanitary sewer tracer wire terminal box.”

2. Modifications to Section 200 – Storm Sewer Construction

a. In Section 3.8 Excavation, replace the last sentence with the following:
“Explosive permits must be obtained from the City of Harrisburg.”

3. Modifications to Section 300 – Water Main Construction

a. In Section 2.4 Valves, all valves installed in the City of Harrisburg shall open left (counter-clockwise).

- b. In Section 2.5 Hydrants:
 - i. All hydrants installed in the City of Harrisburg shall open left (counter-clockwise).
 - ii. The section of the hydrant above ground shall be painted red.
 - iii. Fire hydrants shall be the Waterous Pacer WB-67-250 or American-Darling B-84-B.
- c. Replace Section 3.1 Interruption of Service, with the following:

“The Contractor shall initiate valve operation requests with the City Public Works Superintendent. The Contractor shall notify all consumers affected by any interruption of water service at least 24 hours before the interruption of water service. Consumers shall be verbally notified when possible. In the event a consumer cannot be verbally notified, the Contractor shall place notice of the interruption on the most frequently used entrance.”
- d. In Section 3.3 Underground Interference, replace the “City of Sioux Falls” in the first sentence with the “City of Harrisburg”.
- e. In Section 3.4 Excavation, in the third paragraph under “Rock Excavation”, replace the last sentence with the following:

“Explosive permits must be obtained from the City of Harrisburg.”
- f. In Section 3.12 Connections to Existing Water Main, the City of Harrisburg will not furnish the tapping sleeve and valve to complete the tap. The Contractor will be responsible for furnishing these and completing the tap.
- g. In Section 3.13 Service Connections, the City of Harrisburg will not make all service connections or taps to the water main system. The Contractor will be responsible for completing this work.
- h. In Section 3.14 Tracer Wire, add the following:

“The City of Harrisburg will also require contractors and homebuilders to install tracer wire from the tap to where the service line enters the house for the purpose of locating household service lines. See the Standard Plates for “Tracer Wire for Water Service” and “Tracer Wire Conduit for Services” at the end of these Supplemental Specifications for details.

The Tracer Wire system shall include tracer wire terminal access boxes used for connection of tracer wire located next to the curb box. Tracer wire valve boxes shall be suitable for flush burial with a 2 ½ inch cast iron top, integral stainless terminals, and a minimum 12-inch long ABS bottom section. They shall be rated for an H-20 load. The cast iron casting shall be manufactured in accordance with ASTM A-48 Class 30. The ABS pipe shall be manufactured in accordance with ASTM D 1788. Acceptable manufacturers of the terminal boxes are Valvco Pipe Tracer Wire Terminal Box or equivalent. Access box should be labeled “WATER”.

Testing for continuity will be the responsibility of the contractor or home builder. If the tracer wire system does not function as intended, the

contractor or homebuilder shall repair the system to the satisfaction of the Engineer. “

- i. In Section 3.17 Disinfection and Bacteriological Testing, the City of Harrisburg will not assist with filling, flushing and bacteriological testing of water main. The Contractor will be responsible for completing this work and for properly disposing of chlorinated water per State regulations.
- j. In Section 4.20 Smith Tap and Box, the City of Harrisburg will not provide the tapping sleeve, valve, and labor to complete the smith tap and box installation. The Contractor will be responsible for completing this work.
- k. In Section 4.27 Water Service Reconnect, the City of Harrisburg will not complete the water service reconnections. The Contractor will be responsible for this work.
- l. In Section 4.35 Water Service Disconnect, the City of Harrisburg will not complete the water service disconnections. The Contractor will be responsible for this work.
- m. In Section 4.36 Water Service Setback, the City of Harrisburg will not complete the curb stop setback. The Contractor will be responsible for this work.

4. Modifications to Section 500 – Warranty for Construction Activity

- a. In Section 1.1 Utility Construction Activity, replace the last two paragraphs with the following:

“In compliance with the ordinances of the City of Harrisburg, the Contractor shall maintain all trenches and backfill any settlement, and provide and place any necessary base and/or surfacing needed due to trench settlement for the maintenance period, which shall run for two (2) years after the completion and acceptance of the system. The Contractor shall repair and/or replace all defective workmanship and materials, and correct all deficiencies noted in the system in a method approved by the Engineer.

City-furnished materials, unless otherwise specified, shall be warranted by the product manufacturer. This warranty shall apply to workmanship only when materials are furnished by the City of Harrisburg.”

- b. In Section 1.2 Surface Construction Activity, replace the section with the following:

“The warranty shall cover the contract as to workmanship and materials for a period of two (2) years for the following construction activity:

- A. Grading—Subgrade and fill.
- B. Base course.
- C. Pavement.
- D. Curb and gutter.
- E. Driveways and sidewalks.

In compliance with the ordinances of the City of Harrisburg, the Contractor shall maintain any deficiencies in workmanship and materials for the maintenance period, which shall run for two (2) years after the

completion and acceptance of the construction. The Contractor shall repair and/or replace all deficiencies noted in the construction in a method approved by the Engineer.”

- c. In Section 1.3 Revegetation Activity, replace “B” with the following:
“B. Shrubbery and trees shall be warranted for a period of one year from completion of the contract.”

5. Modifications to Section 632 – Traffic Signs and Delineators

- a. In Section 632.3 A. Remove or Salvage Signs and Delineators, salvaged signs, delineators, and object markers shall be returned to the Harrisburg maintenance shop.

6. Modifications to Section 635A – Traffic Signals

- a. Delete Section 635A.2.A City Furnished Equipment and Contractor Furnished Equipment, and replace with the following:
“A. Contractor Furnished Equipment: The contractor will be required to furnish and install all traffic signal equipment and supplies unless stated differently in the plans.”
- b. Delete Section 635A.2.B, Tax on City Furnished Materials
- c. In Section 635.A.3 Construction Requirements, Section E. Salvage Signal Equipment, salvaged equipment shall be returned to the Harrisburg maintenance shop.

7. Modifications to Section 635B – Roadway Lighting

- a. In Section 635B.2 Materials, replace Section A, City Furnished Equipment and Contractor Furnished Equipment with the following:
“A. Contractor Furnished Equipment: The Contractor will be responsible for furnishing and installing all materials required for roadway lighting, or coordinate with the private utility to furnish and install all materials required for roadway lighting.”
- b. Delete Section 635B.2.B, Tax on City Furnished Materials
- c. In Section 635B.3.A, replace the last paragraph with the following:
“The utility company will be responsible for all line to line connections in all light bases, junction boxes, and meter locations. It is the responsibility of the Contractor to coordinate with the utility company on when to install and energize the system. “
- d. In section 635.B.3.C Salvage Luminaire Pole, Salvaged material shall be returned to the Harrisburg maintenance shop.
- e. In Section 635B.3.I Concrete Footings, Replace the last sentence with the following:
“The Contractor will be required to install Contractor furnished anchor bolts into the concrete footing.”

- f. In Section 635B.3.J Install City Furnished Street Light Wire, Replace the heading “Install City Furnished Street Light Wire” with the following:
“Furnish and Install Street Light Wire”

Replace the first paragraph with the following:
“All wire shall be furnished and installed by the Contractor.”

- g. In Section 635B.3.L Roadway Lighting Poles, Replace the first sentence with the following:
“The Contractor will be required to furnish and install the roadway lighting poles which includes the base, the pole or shaft, UF wire, luminaire arm, luminaire, bulb, and photo eye and is considered a unit.”
- h. In Section 635B.3.M Install Wood Utility Pole, Replace the first sentence with the following:
“The Contractor shall furnish and install a wood utility pole at specified locations.”
- i. In Section 635B.3.N Install Locator Ball and Tracer Wire, Replace the first sentence with the following:
“The Contractor shall furnish and install a the locator ball and 14 AWG THWN or THHN solid strand copper wire on all empty conduits 10’ and longer in length.”
- j. Delete Section 635B.4.A, Tax on City Furnished Roadway Lighting Material
- k. In Section 635B.4.J Install Street Light Wire, Replace the first sentence with the following:
“The plan shown quantity of Contractor furnished and installed wire will be the measured quantity unless changes are ordered by the Engineer.”
- l. In Section 635B.4.L Install Luminaire Pole, Replace the first sentence with the following:
“Measurement will be by actual count of the various types and sizes of luminaire poles furnished and installed by the Contractor.”
- m. In Section 635B.4.M Install Wood Utility Pole, Replace the first sentence with the following:
“Measurement will be by actual count of wood utility poles furnished and installed by the Contractor.”
- n. In Section 635B.4.N Install Locator Ball and Tracer Wire, Replace the first sentence with the following:
“Measurement will be by actual count of locator balls furnished and installed by the Contractor.”