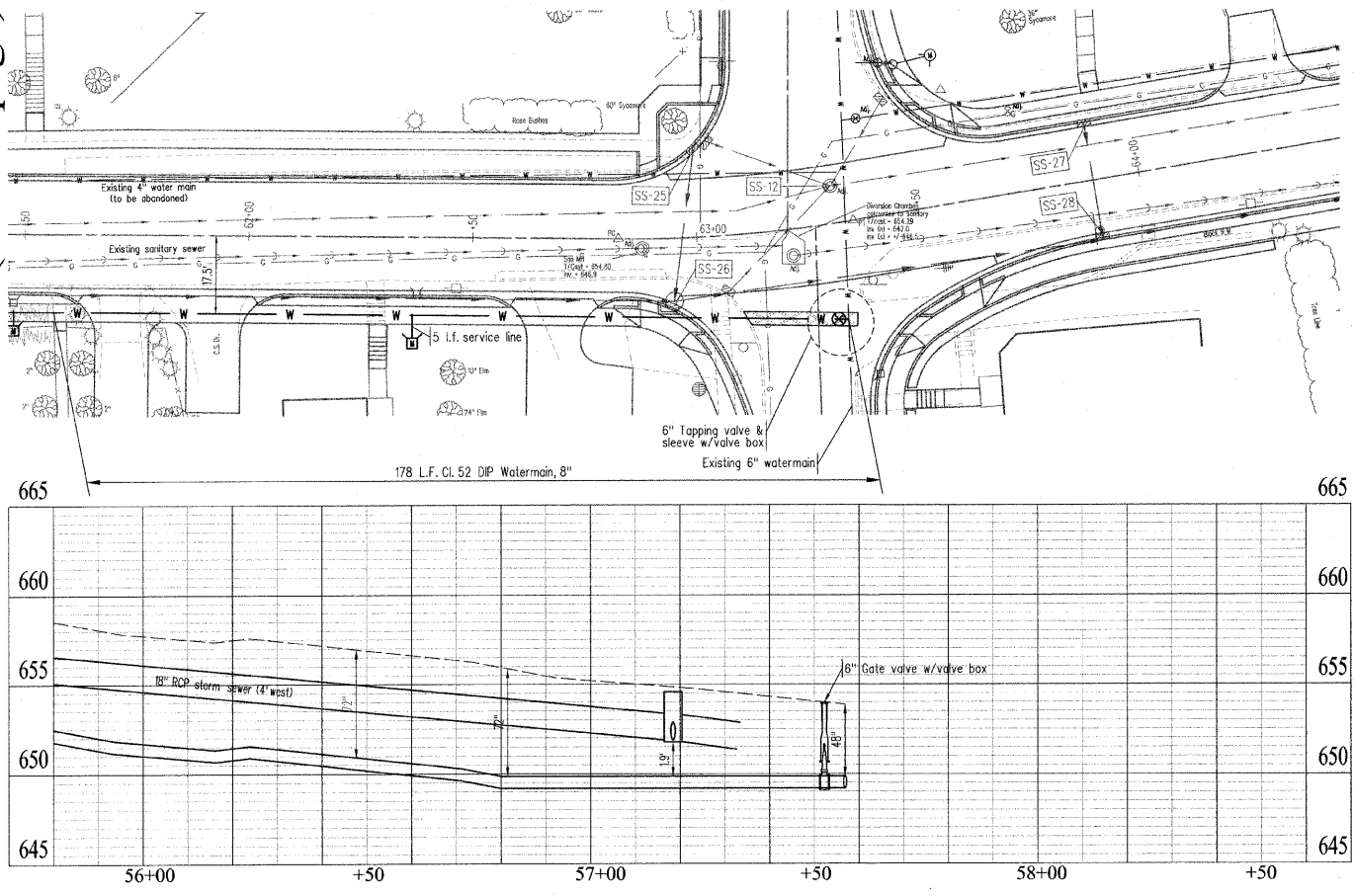


Matchline (see last page)



General Specifications for Water Main Construction

- All water main construction and testing shall be in accordance with these plans, the "Standard Specifications for Water and Sewer Main Construction in Illinois", Fifth Edition, May 1996 and its revisions to date and the City of Charleston "Unified Development Code (UDC) March 2003 Requirements.
 - Dispose of excess excavated material off-site. In the event that the developer has no place to dispose of the excess excavation, the developer (at his discretion) may make arrangements with the City of Charleston for disposal at various directed locations.
 - Limits of construction are the public right-of-way and easements except where otherwise shown.
 - All field tiles, drains, and utilities cut during construction shall be replaced or plugged at the direction of the City of Charleston. It shall be the responsibility of the trenching Contractor to inform the Engineer and the City of Charleston Public Works Department of all severed lines and to repair promptly at no added compensation, unless tile re-routing results in 50' or more of new tile lines. In addition the contractor will be required to install an inspection well on the repaired tile at opposite ROW lines for future locating. All utility poles, telephone pedestals, monuments, valve boxes and utility lines shall be braced and protected as necessary. The Contractor shall notify the respective utility company of any damage to public utility lines or service lines and shall be responsible for the cost of any repair.
 - Utility locations shown on the plans (if any) are approximate as supplied by respective utility companies. The Contractor shall contact J.U.L.I.E. System (800-892-0123) for precise field verification prior to any construction.
 - The contractor shall notify the City of Charleston two (2) days before starting or restarting of any construction and/or testing.
 - All testing shall be incidental to the cost of water main construction. All pressure tests and leakage tests shall conform to the current "Standard Specifications for Water and Sewer Main Construction in Illinois" and shall be witnessed/inspected by a City of Charleston representative. City of Charleston personnel shall sterilize, sample and provide the appropriate reports.
 - Water main disinfection must be in accordance to section 41-2.12 ("Disinfection of Water Mains") of the current edition of "Standard Specifications for Water and Sewer Main Construction in Illinois."
 - Minimum cover for water mains shall be 48" and for service lines shall be 36". To avoid conflicts with existing and proposed utilities, 72" cover is assumed.
 - The proposed water mains and appurtenances shall meet the following specifications:
 - Water Main: "Class 52, Cement Lined, Bituminous Coated, Ductile Iron Pipe" (UDC Section 7.02 (D) @ Pg. 7-8). Approved pipe manufacturers: Clow, Tyler, Griffith or US Pipe
 - Water Main Fittings - All elbows, tees, crosses, and reducers shall be ductile iron, cement lined, bituminous coated, mechanical joint, Class 350 short-radius fittings, and shall conform to Section 40 of the Standard Specifications for Water and Sewer Main Construction in Illinois, 5th Edition. Flange kits shall be included for each mechanical joint. All fittings shall be Tyler or the same manufacturer as the water main.
 - Tapping Sleeves - Tapping Sleeves shall be stainless steel with ductile iron or stainless steel flanges and a test plug. Tapping sleeves shall have removable bolts, welded bolts will not be permissible. Tapping Sleeves shall fit ductile or cast iron pipe of the nominal size listed. Tapping Sleeves shall be one of the following manufacturers; Mueller, Clow, Ford, or Cascade.
 - Gate Valves - Gate Valves shall be mechanical joint, resilient seat gate valves conforming to Section 42 of the Standard Specifications for Water and Sewer Main Construction in Illinois, 5th Edition. Flange kits shall be provided for each mechanical joint. Gate Valves shall be one of the following manufacturers; Mueller or Clow.
 - Tapping Valves - Tapping Valves shall be flange joint to mechanical joint, resilient seat gate valves conforming to Section 42 of the Standard Specifications for Water and Sewer Main Construction in Illinois, 5th Edition. Flange kits shall be provided for the flange joint and the mechanical joint. Tapping Valves shall be one of the following manufacturers; Mueller or Clow.
 - Fire Hydrants - Fire Hydrants shall be 6", 3-way (1 @ 4-1/2" & 2 @ 2-1/2"), mechanical joint, yellow hydrants conforming to Section 42 of the Standard Specifications for Water and Sewer Main Construction in Illinois, 5th Edition. One flange kit shall be included for each hydrant. Fire hydrants shall be one of the following manufacturers; Mueller Centurian or Clow Medallion.
 - Anchor Couplings - Anchor Couplings shall be ductile iron, cement lined, bituminous coated, with stainless steel split rings and ductile iron flanges. The actual length of the anchor couplings furnished may exceed the specified length by a maximum of 4". Anchor Couplings shall be Tyler, Fab Pipe, or of the same manufacturer as the water main.
 - Restraining Glands - Restraining glands shall be ductile iron, bituminous coated, and equipped with serrated rectangular metal pads between the set screws and the pipe. Restraining glands shall be one of the following manufacturers; Megalug or Ford.
 - Caps - Caps shall be ductile iron, bituminous coated, with mechanical joints for mounting to an exposed pipe end of the specified diameter. One flange kit shall be included for each cap. Caps shall be Tyler or the same manufacturer as the water main.
 - Plugs - Plugs shall be ductile iron, bituminous coated, with mechanical joints for mounting to a mechanical joint valve. Flange kits are not required to be included. Plugs shall be Tyler or the same manufacturer as the water main.
 - Full Circle Clamps - Full Circle Clamps shall be stainless steel single band type repair clamps. Clamps shall fit ductile iron or cast iron pipe of the nominal size listed unless specified otherwise. Clamps shall have removable bolts, welded on bolts will not be permissible. Full Circle Clamps shall be one of the following manufacturers; Ford, Smith Blair, Cascade, or Mueller.
 - Bell Joint Clamps - Bell Joint Clamps shall include split interlocking steel rings and split interlocking rubber gaskets. Clamps shall fit ductile or cast iron pipe of the nominal size listed. Bell joint clamps shall be one of the following manufacturers; Ford or Smith Blair.
 - Valve Boxes - Valve boxes shall be ductile iron. Valve boxes shall be screw type adjustable vaults. Lids shall be marked "WATER". Valve boxes shall be one of the following manufacturers; Tyler.
 - Brass Corp Stops - Corporation Stops shall include ball valves and taper threads to flare. One flare nut shall be included for each corp stop. Corp Stops shall be one of the following manufacturers; Mueller or Ford.
 - Copper Yokes, 3/4" & 1" - Yokes shall be one piece design, equipped with brass fittings, and brass angle meter valves. Yokes shall include horizontal inlet and outlet for pipe connections. Two multi-purpose nuts shall be included for each yoke. Yokes shall be equipped with meter saddle nuts for connection to the meter. Angle meter valves shall be 90 degree with ball valves and lock wings. Copper yokes shall be one of the following manufacturers; Mueller H-1400 or Ford VB72.
 - Copper Yokes, 1-1/2" & 2" - Yokes shall be one piece design, equipped with brass fittings, and brass angle meter valves. Yokes shall include horizontal inlet and outlet for pipe connections with compression fittings. Yokes shall be equipped with Ball Type Angle Meter Valves on both sides. The yokes shall include flanged connections for meters. Yokes shall include a bypass with a Ball Type Angle Meter Valve. All three angle meter valves shall include lock wings. Copper Yokes shall be one of the following manufacturers; Mueller or Ford.
 - Copper Tubing - Copper tubing shall be Type K. Copper tubing shall conform to Section 42 of the Standard Specifications for Water and Sewer Main Construction in Illinois, 5th Edition.
 - Brass Service Saddles - Service Saddles shall be manufactured for use on C-900 PVC pipe of the specified inside diameter. Saddles shall include double brass straps, brass saddle, rubber O ring, and CC threads. Brass Service Saddles shall be one of the following manufacturers; Mueller or Ford.
 - Brass Fittings - All other brass fittings shall be one of the following manufacturers; Mueller or Ford.
 - Brass Angle Meter Valves - Angle Meter Valves shall be 90 degree with ball valves, lockwings, female IP threads, and a meter saddle nut. Angle meter valves shall be one of the following manufacturers; Mueller or Ford.
 - Meter Covers - Meter covers shall include frames and lids. The lids shall be marked "WATER METER" with a side mounted nut lock. Meter Covers shall be one of the following manufacturers; Tyler or Mueller.
 - Meter Pits - Meter Pits shall be A-2000 PVC.
 - Water Meters - Water Meters shall include brass housings and cast iron bottoms. Meters shall read in gallons and be equipped with flow finders. Water Meters shall be one of the following manufacturers; Badger Recordall 25, or Sensus SR11.
 - Use Compacted Granular Trench Backfill under current and proposed paved areas. Trench Backfill requirements shall conform to the applicable portion of the "Standard Specifications for Water and Sewer Main Construction in Illinois". See detail for trench backfill beneath paved areas.
 - Wherever a water main passes over, under, or within 10' (as measured horizontally, of any sewer the Contractor shall construct water main in accordance to Section 41-2.01 of the "Standard Specifications for Water and Sewer Main Construction in Illinois". (See Standard Drawings this sheet).
- The following Division V Standard Drawings shall be included and utilized for separation (as applicable) as a part of the water main extension portion of this project:
- Std. Dwg. #18, Water and Sewer Separation Requirements - Horizontal Separation
 - Std. Dwg. #19, Water and Sewer Separation Requirements - Vertical Separation
 - Std. Dwg. #20, Water and Sewer Separation Requirements - Vertical Separation
 - Std. Dwg. #22, Water and Sewer Separation Requirements - Vertical Separation
 - Std. Dwg. #23, Water and Sewer Separation Requirements - Vertical Separation
 - Std. Dwg. #24, Water and Sewer Separation Requirements - Vertical Separation
- IMPORTANT:** Per City of Charleston UDC, Sec 7.02, Par. C,1 (Pg 7-8) Poured concrete thrust blocks are not allowed.
 - Any sewer service damaged during water main installation shall be repaired in accordance with the City of Charleston requirements.
 - Contractor shall be responsible for verifying the location and depth any buried utility that may conflict with the proposed water main installation. In the event that an unforeseen conflict arises water main depth adjustment shall be directed by the engineer.
 - All service taps will be made by City of Charleston personnel.

Important:

These "Water Main Construction Specific" General Notes are to be utilized in conjunction with the Standard Specifications for Road and Bridge Construction, Adopted January 2007. In the event that a conflict arises between these General Notes, the Standard Specification for Sewer and Water Main Construction in the State of Illinois, current edition, the requirements as set out in the City of Charleston "Unified Development Code" and/or pertinent ordinances governing municipal water main construction and the aforementioned Standard Specifications for Road and Bridge Construction the more restrictive shall apply (unless otherwise directed by the Engineer).

CSI CONSOLIDATED SERVICES INC.
of Coles County

ENGINEERING - SURVEYING - CONSTRUCTION MANAGEMENT
520 Jackson Avenue - P.O. Box 644 - Charleston, Illinois - 61920 - (217) 345-9511
CSI File #0378-06-05

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4th Street
Waterline plans

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53
of 57 Sheets