

2020 SUMMARY OF MAJOR CHANGES

Highlighted sections are additions, strikethroughs are deletions

1) WATER VALVES & APPURTENANCES – SECTION 351

I.3 LOCATING MARKERS FOR VALVES & VACANT LOT SERVICES

- I.3.1. A 'V' cut shall be carved in the curb/asphalt closest/adjacent to a below grade valve. This 'V' cut shall be painted blue. Water services serving vacant lots (service not in use), shall include a "W" cut in the curb (closest to the meter box), and painted blue.
- I.3.2. A blue water marker ball shall be installed on all buried valves. Marker ball shall be as shown on Plate W-18 of the WATER & RECLAIM CONSTRUCTION DETAILS.

~~X.4 VALVE BOX DEBRIS SHEILD~~

- ~~X.4.1. All buried valves 3 inch through 12 inch requiring a valve box shall be furnished with a valve box shield (alignment device). The device shall minimize debris-infiltration and center the valve box over the operating nut. The device shall be of HDPE or plastic and colored white or black. It shall be furnished in two pieces that will lock together under the operating nut without requiring the removal of the op-nut. The device shall not affect the operation of the valve. No one-piece device will be accepted. The device shall be Box Lok American Flow Control (AFC) or approved equal.~~

XIII.6 VALVE STEM AND THRUST WASHERS

- XIII.6.1 Insertion valves shall be NRS (non-rising stem) and operate with standard turns 3 turns per diameter inch to open and close.
- XIII.6.2. The gate valve stem must be made of stainless steel.
- XIII.6.3. The gate valve stem shall be able to withstand torque of 700 ft. lbs. of torque without compromising operation.
- XIII.6.4. The NRS stem must have an integral thrust collar in accordance with Section 4.4.5.3 of AWWA C515 Standard. Two-piece stem collars are not acceptable. The wedge nut shall be independent of the wedge and held in place on three sides by the wedge to prevent possible misalignment. The gate valve stem and wedge nut shall be a copper alloy in compliance with AWWA Standard 515, Section 4.4.5.1.
- XIII.6.5. Two thrust washers are used. One is located above, and one is located below the stem thrust collar.
- XIII.6.6. The valve shall be operated by 2" square wrench nut according to ASTM A126 CL.B – open left (counter-clockwise).

2) EXCAVATION AND EARTHWORK – SECTION 408

- V.3 If dewatering with a sock drain system, contractor shall not install more than 400 feet per run. Upon completion of dewatering with a sock, the contractor shall remove the sock. If unable to remove the sock drain system, contractor shall abandon and fill the system with grout. Contractor shall remove grout-filled sock drain ends to a depth of 48 inches below finished grade and seal/cap each end. The contractor shall locate the ends of all capped sock drains and show the limits of the abandoned drain system on the as-built plans. No separate payment shall be made for seals/caps, but all cost shall be included in the associated item of work.

3) GRAVITY WASTEWATER – SECTION 428

IV. FIELD TESTING

IV.2.5 General Requirements:

Pipe to be televised shall be cleaned and free of any dirt, sand or debris. Immediately prior to CCTV inspection and in the presence of an authorized JEA representative, the wastewater line shall be introduced with enough water at the upstream manhole that it flows through the downstream manhole. The authorized JEA representative shall verify the adequacy of the water flow and depth. Inspection shall commence within thirty (30) minutes of said verification. Underdrains if used shall be plugged and other ground water drainage (i.e. well point systems) shall be stopped to permit the ground water to return to normal levels insofar as practicable. If possible, service connections at the right-of-way shall not be made until after TV test have been successfully completed. The contractor shall provide at no additional cost to JEA a temporary plug and/or by-pass pumping on wastewater with active wastewater service laterals, if deemed necessary by the JEA representative to assure a quality TV inspection. If required by JEA, the contractor shall eliminate active flow in wastewater laterals by shutting off the water supply service to the contributing house(s). Contractor shall comply with the current JEA water outage procedures for shutting off customers' water service. A mandrel is required on PVC SDR-26 (12 inches and smaller). The mandrel shall be pulled through the pipe ahead of the TV camera at a rate of speed slow enough not to displace any standing water. A mandrel is not required for gravity wastewater pipes larger than 12-inch size and constructed of PVC SDR-26 or DR-18 Pipe. A full report, as to the condition of pipe, type, depth, location of services, length, type joint, and distance between manholes, etc., shall be furnished to JEA prior to the final acceptance of the main. Each manhole shall be identified on the DVD and report by manhole number and nearest address or intersection. In addition to the written report, a DVD disc (formatted for Windows Media Player or JEA approved equal) of the TV

inspection shall be provided to JEA for review. The disc shall become the property of JEA. Any pipe found to have defects, including but not limited to leaks, cracks, pipe deflection from external pressures, rolled or pinched gaskets, joint gaps (wider than 1 inch), or holding water greater than the following limits (a "dip") or otherwise defective shall be removed and replaced with new pipe at no additional cost to JEA.

4) WASTEWATER VALVES & APPURTENANCES – SECTION 430

I.7 LOCATING MARKERS FOR VALVES & SERVICES

- I.7.1. A 'V' cut shall be carved in the curb/asphalt closest/adjacent to a below grade valve. This 'V' cut shall be painted green. Sewer services shall include an "S" cut in the curb painted green. See WASTEWATER CONSTRUCTION DETAILS S-19 and S-30.
- I.7.2. A green wastewater marker ball shall be installed on all buried valves. Marker ball shall be as shown on Plate S-30 of the WASTEWATER CONSTRUCTION DETAILS.
- I.7.3. A green marker ball shall be installed on all sewer services at the property line. Marker ball shall be as shown on Plate S19 of the WASTEWATER CONSTRUCTION DETAILS.

~~VI.5 VALVE BOX DEBRIS SHEILD~~

- ~~X.5.1. All buried valves 3 inch through 12 inch requiring a valve box shall be furnished with a valve box shield (alignment device). The device shall minimize debris-infiltration and center the valve box over the operating nut. The device shall be of HDPE or plastic and colored white or black. It shall be furnished in two pieces that will lock together under the operating nut without requiring the removal of the op-nut. The device shall not affect the operation of the valve. No one piece device will be accepted. The device shall be Box Lok American Flow Control (AFC) or approved equal.~~

5) SUBMERSIBLE WASTEWATER PUMPING STATIONS – SECTION 433 DRAWINGS

- a) Updated Drawings Sheet "JEA STANDARD PUMP STATION CONSTRUCTION DETAILS MISCELLANEOUS DETAILS 2, WATER TEST STATION DETAIL".

Removed conflicting language "JEA FURNISH AND INSTALL TRANSDUCER"

- b) Updated Drawings Sheet "JEA STANDARD PUMP STATION PLAN AND SECTION SHEETS" (ALL CLASSES) CONSTRUCTION NOTES

- #3. Demarcation box shall be placed as close as possible to wet well. It shall be placed at least 3' from wet well hatch and at least 5' from vents. It shall be placed so as not to interfere with access to the wet well or discharge apparatus

and door shall face away from the wet well.

- c) Updated Drawings Sheet "JEA PUMP STATION PUMP STATION ELECTRICAL DETAILS, DEMARCATION BOX & POWER DISTRIBUTION PANEL"

Demarcation box pedestal upgraded to venting on all four sides.

- d) Updated Drawings Sheets CLASS 1 AND CLASS 2 PUMP STATION SITE PLANS

Moved wash-down station for Class 1 & Class 2 stations to the opposite side of the driveway.

SUBMERSIBLE WASTEWATER PUMPING STATIONS – SECTION 433

XVII. SITE WORK

XVII.3. DRIVEWAYS AND SITE

All JEA pump stations shall be provided with a permanent site access road structure of traffic rated concrete or asphalt. The access roadway shall be 12' wide and have adequate fillets for turning a vehicle around, if needed. The driveway apron from the roadway to the pump station shall be concrete only.

- 6) IN-LINE BOOSTER WASTEWATER PUMPING STATIONS – SECTION 435

XII. SITE WORK

XII.3. DRIVEWAYS AND SITE

All JEA pump stations shall be provided with a permanent site access road structure of traffic rated concrete or asphalt. The access roadway shall be 12' wide and have adequate fillets for turning a vehicle around, if needed. The driveway apron from the roadway to the pump station shall be concrete only.

- 7) OPERATION AND MAINTENANCE DATA - SECTION 445

IV. PUMP STATION STANDARD ATTRIBUTE WORKSHEETS

Pump station standard excel worksheets describing key asset information is required to be submitted with station as-builts in both paper and electronic form (excel). See www.jea.com for the Pump Station Standard Attributes excel Worksheet.

Delete references and examples of Vendor-Manufacturer Worksheet, Local Representative Worksheet, Preventative Maintenance Worksheet, Preventative Maintenance Tasks, Assets Worksheet, Spare Parts Worksheet, JEA Standard Pump Station Asset Data Tables.

8) EMERGENCY PUMP ENGINES

VII. FUEL STORAGE TANK

VII.4.13.4 Supplier shall provide 90% of fuel for 72 hour operation, at rated tank capacity for any and all turnkey installations by supplier. Fuel shall be off road ultra-low sulfur diesel. No Biodiesel Permitted. Fuel delivery shall take place prior to load bank test. Supplier shall treat fuel with Hydro Clean made by Gulf Select.

9) AS-BUILT DRAWINGS – SECTION 501

I. GENERAL

I.3 Upon completion of the Work and prior to dedication of utilities to JEA or final payment under the Contract with JEA, Contractor shall furnish to JEA electronic copies of asset data tables and as-built drawings or record drawings and certified paper copies of the as-built or record drawings which have been ~~re-drawn~~ revised to indicate final as-built data (true to scale) and in accordance with all addenda, change orders, verbal field changes, JEA directives, Supplemental Work Account (SWA)s, and all requirements with respect to the drawings specified herein. A JEA representative shall verify as-built information is consistent with observable field conditions. Re-drawn as-builts will be deemed unacceptable.

II. DRAWING REQUIREMENTS

II. 2. Legibly mark the drawings to record the following:

II.2.8 As-builts shall show physical dimensioning of the separation between water mains, sewer mains, reclaimed mains and chilled water mains at crossings with all water mains, wastewater mains and facilities, reclaimed mains, chilled water mains, and storm drains and facilities. This can be shown by providing elevations of each pipe or structure, or noting measurement taken at the conflict crossing between the pipes or structures on the plan view. As-builts shall also show measurement of vertical and horizontal separation in areas where water mains are parallel to wastewater mains, reclaimed mains, or storm drains. The vertical and horizontal separation shall be shown for the full length of the parallel run.

IV. ASSET SPECIFIC REQUIREMENTS – WATER, WASTEWATER, RECLAIMED WATER AND CHILLED WATER

IV.6. METER BOXES

IV.6.2. Each meter box shall be designated in a meter box table, inserted in a conspicuous location within the As-Built, with the following data. Minimum font on as-built data tables

shall be 8 pts. Provide a separate meter box table for water and reclaimed water meter boxes.

- Meter Box Number
- Service Type (Water or Reclaimed Water)
- Meter Subtype = Minor Meter (<2"), Major Meter
- Facility Owner (JEA or PRIVATE)
- Meter box manufacturer
- Meter Box Material
- State Plane Northing, X Coord
- State Plane Easting, Y Coord
- Latitude
- Longitude

**For platted subdivisions with lot numbers on the as-builts, as-builts will not be required to identify each water meter or reclaimed meter individually at each point. The lot number combined with a meter prefix will be used to identify the customer points in the meter table.

IV.7. WASTEWATER SERVICE POINTS

IV.7.2. Each wastewater service points shall be designated in a wastewater service point table, inserted in a conspicuous location within the As-Built, with the following data. Minimum font on as-built data tables shall be 8 pts.

- Wastewater Service Point Number
- Wastewater Service Point Subtype = Customer point, Major Meter
(See data table file for subtypes)
- Finished Grade Elevation (feet)
- Top of Pipe Elevation (feet)
- Depth of Cover (feet)
- State Plane Northing, X Coord
- State Plane Easting, Y Coord
- Latitude
- Longitude

**For platted subdivisions with lot numbers on the as-builts, as-builts will not be required to identify each wastewater connection point individually at each point. The lot number combined with a meter prefix will be used to identify the customer points in the meter table.

IV.9. WASTEWATER, WATER, RECLAIMED WATER PUMPING STATIONS

IV.9.1 Wastewater, water, and reclaimed water standard attribute worksheets shall be submitted in excel format using the JEA standard excel file which can be downloaded from jea.com.



JEA AS-BUILT OR RECORD DRAWING SUBMITTAL TRANSMITTAL

- Attached:
- _____ Water As-Builts & Data Tables – Paper & Electronic
 - _____ Wastewater As-Builts & Data Tables – Paper & Electronic
 - _____ Wastewater Pump Station Attribute Tables Electronic
 - _____ Reclaimed Water As-Builts & Data Tables – Paper & Electronic
 - _____ Chilled Water As-Builts & Data Tables – Paper & Electronic
 - _____ As-Built Submittal Checklist filled out by Engineer, Contractor or Surveyor
 - _____ As-Built Submittal Checklist filled out by JEA Project Manager

JEA AS-BUILT or RECORD DRAWING SUBMITTAL REQUIREMENTS CHECK LIST

POTABLE WATER SYSTEMS

WATER MAINS

_____ Elevations on the main and finished grade shown at:

- Points of connection to the existing system
- Points of crossing over or under wastewater mains, reclaimed mains, chilled water mains or storm drains
- At maximum of 100 ft. intervals
- Where less than 30 inches or greater than 48 inches of cover is provided
- Main stub outs

_____ Each water main section between fittings/valves is shown with pipe size, pipe material and pipe pressure class called out with a leader line pointing to the applicable main or group of mains for mains between fittings less than 10 feet apart.

WATER METER BOXES

_____ Each meter box shall be listed in the data table with meter number matching the Lot #. If no Lot # exists, assign a water meter ID not included in the Lot # series. Show this meter ID at the meter on the as-built and in the data table.

WASTEWATER SYSTEMS

GRAVITY MAINS

_____ Elevations on the main and finished grade shown at:

- Points of connection to the existing system
- Points of crossing over or under water mains, reclaimed mains, chilled water mains, wastewater mains or storm drains
- Lateral (service) end points
- Main stub outs

GRAVITY FITTINGS

Each fitting shows a call-out designating fitting number, fitting type (45, tee, etc.) and size with leader pointing to the installed fitting. Each fitting shall be listed in the sewer fitting data table with fitting number matching the Lot #. If no Lot # exists, assign a fitting number ID not included in the Lot # series. Show this fitting number ID at the fitting on the as-built and in the fitting data table.

Table included with data for each fitting:

- Fitting Number (matching lot number)
- Subtype = Fitting Type (see data table file for subtypes)
- Facility Owner (JEA or PRIVATE)
- Fitting Size Primary (Inches)
- Fitting Size Reducer (Inches)
- Manufacturer
- Fitting Material (DI, PVC or HDPE)
- Lining Material
- Fitting Top Elevation (feet)
- Final Grade Elevation (feet)
- State Plane Northing, X Coord
- State Plane Easting, Y Coord
- Latitude
- Longitude

MANHOLES & CLEANOUTS

Elevations of inverts and north rim of top of manhole covers shown for all manholes at the manhole

Manholes and cleanouts labeled with number at manhole or cleanout

Air release valve manholes shown and listed in manhole data table (if applicable)

Table with the following data for each manhole:

- Manhole Number
- Manhole Subtype = Collection, Force main, Low Pressure, Trunk, ARV
(See data file for subtypes)
- Facility Owner (JEA or PRIVATE)
- Manhole Type (A through J)
- Manhole Drop Type (Inside or Outside)
- Manufacturer/Supplier
- Manhole Size (feet)
- Manhole Material
- Manhole Lining Material
- Manhole Lining Manufacturer
- Rim Elevation (feet)

- Invert Elevations (feet) with Directions
- State Plane Northing, X Coord
- State Plane Easting, Y Coord
- Latitude
- Longitude
- Exterior Joint Tape Type & Manufacturer
- RFID/Barcode Number (future)

WASTEWATER SERVICE POINTS

Each service point (sewer lateral end point) shall be listed in the data table with meter number matching the Lot #. If no Lot # exists, assign a water meter ID not included in the Lot # series. Show this meter ID at the meter on the as-built and in the data table.

WASTEWATER FORCE MAINS

Elevations on the main and finished grade shown at:

- Points of connection to the existing system
- Points of crossing over or under water mains, reclaimed mains, chilled water mains, wastewater mains or storm drains
- At maximum of 100 ft. intervals
- Where less than 30 inches or greater than 48 inches of cover is provided.
- Main stub-outs

Each force main section between fittings/valves is shown with pipe size, pipe material and pipe pressure class called out with a leader line pointing to the applicable main or group of mains for mains between fittings less than 10 feet apart. ~~(exceptions noted for extended pipe run)~~

RECLAIMED WATER SYSTEMS

RECLAIMED WATER MAINS

Elevations on the main and finished grade shown at:

- Points of connection to the existing system
- Points of crossing over or under water mains, reclaimed mains, chilled water mains, wastewater mains or storm drains
- At maximum of 100 ft. intervals
- Where less than 30 inches or greater than 48 inches of cover is provided
- Main stub-outs

Each reclaimed water main section between fittings/valves is shown with pipe size, pipe material and pipe pressure class called out with a leader line pointing to the applicable main or group of mains for mains between fittings less than 10 feet apart. ~~(exceptions noted for extended pipe run)~~

Pipe size and type indicated on service lateral piping

_____ Location of reclaim signage indicating reclaim water in use

RECLAIMED WATER METER BOXES

_____ Each meter box shall be listed in the data table with meter number matching the Lot #. If no Lot # exists, assign a reclaimed water meter ID not included in the Lot # series. Show this meter ID at the meter on the as-built and in the data table.

CHILLED WATER SYSTEMS

CHILLED WATER MAINS

_____ Elevations on the main and finished grade shown at:

- Points of connection to the existing system
- Points of crossing over or under water mains, reclaimed mains, chilled water mains, wastewater mains or storm drains
- At maximum of 100 ft. intervals
- Where less than 30 inches or greater than 48 inches of cover is provided

_____ Each chilled water main section between fittings/valves is shown with pipe size, pipe material and pipe pressure class called out with a leader line pointing to the applicable main or group of mains for mains between fittings less than 10 feet apart. . (exceptions noted for extended pipe run)

10) RECLAIMED WATER METER, VALVES & APPURTENANCES – SECTION 702

I.7 LOCATING MARKERS FOR VALVES & VACANT LOT SERVICES

I.7.1. A 'V' cut shall be carved in the curb/asphalt closest/adjacent to a below grade valve. This 'V' cut shall be painted pantone purple. Reclaimed water services serving vacant lots (service not in use), shall include an "R" cut in the curb (closest to the meter box), and painted pantone purple.

I.7.2. A pantone purple reclaimed water marker ball shall be installed on all buried valves. Marker ball shall be as shown on Plate W-18 of the WATER & RECLAIM CONSTRUCTION DETAILS.

11) HORIZONTAL DIRECTIONAL DRILLING –SECTION 750 (SMALL DIAMETER PIPE 12 INCHES OR LESS)

VII. TESTING

VII. 3. LOCATE WIRE

Two locate wires shall be provided on all installations. For HDD projects, locate wire shall be 8 AWG high strength copper-clad carbon steel with 45 mils (min) insulation.

12) HORIZONTAL DIRECTIONAL DRILLING – SECTION 755 (LARGE DIAMETER PIPE >THAN 12 INCHES)

VII. TESTING

VII. 3. LOCATE WIRE

Two locate wires shall be provided on all installations. For HDD projects, locate wire shall be 8 AWG high strength copper- clad carbon steel with 45 mils (min) insulation.

Standard Request Changes - Not Approved

- 1) The requirement to call out each pipe length between fittings should be changed. A general note on each page should be required instead. Any pipes that are not as indicated in the general pipe data not will be called out separately and tied to the affected pipe by a new leader line. This change is only for pressure pipe. Gravity pipe will still have the pipe information and slope on each pipe between manholes.

This request was not approved as the data is integral to inspection, investigation, maintenance and repair of our utility. Being able to see the pipe lengths relative to the fittings directly on the as-built is more efficient and less likely to produce error than having to refer to a table.

- 2) Eliminate the profile drawings for as-builts

This request was not approved as these drawings are necessary to allow operations to get the right depths in GIS, identify conflicts when designing future projects that cross sewer mains, ensure level of accuracy in reference to the data in GIS.