JEA Design Guidelines (Update January 2021

Major Changes of Note

1. Paper plans or applications will no longer be submitted to JEA. Instructions for all Development Related tasks below will be submitted through JEA's SagesGov program. Details are outlined in the applicable sections.
    a. Availability Letters
    b. Availability Letter Updates
    c. Asbuilt Requests
    d. Sewer Locates
    e. Fire Flow Tests (Hydrant Flow Tests)
    f. Connection Pressure Letters
    g. Alternative Connect Requests
    h. Development Meeting Requests
    i. New Service Applications
        i. Residential
        ii. Commercial
        iii. Multi-Family
    j. Special Estimate Requests
    k. Plan Submissions
    l. Infill Layout Submissions
    m. Residential Flow Tests
    n. Cost Participation Agreements
    o. Developer Agreements
    p. Permit Determination
        i. Water & Wastewater Permit Submittal
        ii. JEA Permit Extension Request
        iii. JEA Permit Transfer Request
        iv. JEA Permit Modification Request
    q. Shop Drawing Submittal
    r. Approved Plan Revision Submittal
    s. Real Estate
        i. Easement Approval Request
        ii. Hold Harmless Request
        iii. Plat Approval Request
        iv. Temporary Construction Easement Request
        v. Deed Submittal
    t. Pre-Construction Meeting Request
    u. Inspections
    v. As-Built Submittal
    w. Permit COC
    x. Pre-Acceptance Letter
    y. Acceptance Package Submittal
    z. Pump Out Agreement Request

2. Section 1.1.1

   6. Electronic Signatures- The requirement of electronic signatures is only applicable for the PE and PS signature.

3. Section 1.2.3 Update Existing Availability Letter Request

   Updated Availability Letters can only be requested by the original requestor or the Engineer of Record, if they are listed as a collaborator on the project.

   Expired letters will not be updated and you will need to request a new letter. Exception: Project that already has plans submitted.

4. Section 1.2.4 Project Phasing

   For projects that will be constructed in more than one phase, JEA shall be provided with a phased master plan, which shall be submitted as its own separate availability request. JEA will require projects be broken into logical phases, each with their own availability number. Each phase will be a separate project and will require a separate plan review and permit. These separate projects will be linked within the Sages program.

5. Section 1.3 Development Meeting

   Development Meetings will be required for the following projects/situations:

   - Residential projects of 100 or more lots
   - Phased projects
   - HDD or Jack & Bore installations
   - Including meters 3-inchs or larger
   - Project included in an existing Developer Agreement
   - You will be requesting any of the following:
     1. Cost Participation
     2. Developer Agreement
     3. Cost Recovery

6. Section 1.5 Master Plan Requirements

   - Total wastewater flow (both average daily flow and peak) to each pump station. A summary of each unit, tract, or phase, including the contribution to each pump station stating: Type of use (single family residential, master-metered residential, commercial, etc.), and average daily flow (gpd)
   - Wastewater model for networks with multiple pump stations;
   - Wastewater master plan should minimize the connections to existing JEA infrastructure by utilizing master pump stations and limiting manifolded systems.
   - Calculations for maximum potable water demand based on full or projected ultimate development or use gross acreage and land use. Required fire flows to be noted
   - Total potable water flow for each unit, tract, or phase stating: Type of use (single family residential, master-metered residential, commercial, etc.), and average daily flow (gpd);
   - Total reclaimed water flow for each unit, tract, or phase stating: Type of use (single family residential, master-metered residential, commercial, etc. and average daily flow (gpd);
   - Clear delineation of existing versus future units or tracts.

7. Section 2.4.1 Infill Development

   Line extension projects are designed under and constructed under the direction of the customer, and dedicated to JEA when construction is complete.

   If the point of connection abuts the property, a layout of the property will need to be submitted if requesting sewer service. After the infill layout is approved, a special estimate can be requested to determine the cost of the tap(s). Costs are dependent primarily on depth of pipe. After a special estimate has been completed, the final step is to apply for new service.

8. Section 2.4.1.1 Infill Layouts-Required for Sewer Services and all lot splits
9. Section 2.4.2 Special Estimates

   All requests for JEA to install new service taps will need to be proceeded by a special estimate determination.

   If your project requires an infill layout to be submitted, it will have to be approved prior to you submitting for a special estimate.

   If you have a commercial project, you will have to have approved plans proior to submitting for a special estimate.

   For a cost to install new water, sewer and/or irrigation services please submit a Special Estimate Request by:

   - Log into www.sagesgov.com;
   - Select Step 2;
   - Enter your availability number;
   - Select “Special Estimate Request”.

   Not all Special Estimate requests will result in a special estimate for tap fees. Field factors that would designate the need for a special estimate are as follows:

   - Main Depth 8+ feet deep
   - Required work within FDOT, St. Johns County, Nassau County
   - Pavement less than 5 years old
   - Multiple services being installed
   - Taps on water mains 20-inch and larger
   - Water taps larger than 2-inches
   - Sewer taps greater than 6-inches
   - Low Pressure Sewer Service Connections
   - Installation of Sewer Vac Pods
   - Approved commercial development plans

10. Section 2.4.5 Wastewater Plan Submittal Requirements

    If alteration to existing infrastructure is proposed that will result in temporary bypass pumping, then areas of service interruption as well as areas of needed TCE will be identified on the plans. If additional information is needed the plan reviewer will request those details. Our Planning team will review and provide the flow so that the contractor can determine pump capacity needs. Bypass pumping plan shall be submitted as a shop drawing and be approved prior to requesting a pre-construction meeting.

11. Section 2.7.2 Revision to Approved Plans with Permit

    See JEA Permit Modification Request for instructions on submitting permit modifications.

    If you revision requires a permit modification you must submit both within the SagesGov site at the same time, otherwise they will not be approved.

12. Section 2.8 Permits

    The Engineer shall submit all completed permit applications with electronic signatures.

13. Section 2.11 Pre-Construction Meeting

    Before you can request a pre-construction meeting, you must meet the following pre-requisites, as applicable:

    - Approved Plans
    - Issued Permits
    - Approved Shop Drawings
    - Temporary Construction Easements in place and approved by JEA

    The following information will need to be uploaded, as applicable:

    - Contractor license
    - Subcontractor license
    - Jack & Bore qualifications and license
    - HDD Contractor qualifications and license
    - HDD work plan

    Pre-Construction meetings will be scheduled and held as either a conference call or a webex meeting. Meeting information and details to connect will be provided in the meeting invitation email.

14. Section 2.12 Construction and Inspection

    All inspection requests will be made through SagesGov. You will not be able to request any inspection until you have had a pre-construction meeting.

15. Section 2.13 As-Built Drawings

    DO NOT include your permit COC applications with your as-built submittal. See Permit COC for instructions on closing out your permit(s).

16. Section 2.24 Pre-Acceptance Letters

    For projects located within St. Johns County, the county will not issue building permits provided one of the following:

    - Project Acceptance Letter;
    - Receipt showing water services were paid for;
    - Pre-Acceptance Letter.

    The Pre-Acceptance Letter will only allow the customer to receive the building permit, not the building CO.

17. Section 2.25 Pump Out Agreement

    It is JEA's policy to not issue water meters before project acceptance. Under the following conditions, JEA will enter into a Pump Out Agreement with a customer:

    - JEA Lift Station backup power is delayed (generator or pump); OR
    - Delayed permanent power to a JEA lift station.

    The Pump Out Agreement will expire on the date of project acceptance.

18. Section 2.25.1 Pump Out Agreement Requirements

    All applicable water and wastewater permits must be cleared

    No more than 20% of permitted lots, with a maximum of 20 lots

    If the backup power is delayed:

    - Developer agreement and bond to cover the cost of the backup power

    Applicable water services and sewer mains must be cleared for use by the inspector prior to agreement issuance

    Agreement will be between Developer and JEA

    Developer will be responsible for the following costs:

    - Plugging the manhole;
    - Pumping out and disposal of waste;
    - Removal of plug;
    - Cleaning line prior to project acceptance.

19. Section 3.6 Water Main and Reclaimed Water Main Locations

    In locations where water/reclaim mains cross under a box-culvert, or 36-inch diameter and larger storm water main, JEA will require DIP to be utilized for the main.

20. Section 3.16 Water Meters

    Water meters shall have a minimum 10 ft. separation from all fixed objects (buildings, signage, shade trees, etc.).

21. Section 4.3 Wastewater Main Separation Requirements

    In locations where gravity wastewater mains cross under a box-culvert, or 48-inch diameter and larger storm water main, JEA will require an approved flowable fill material surrounding the wastewater main. In these cases, provide 12-inches of excavatable flowable fill around the outside of the wastewater main, approximately 10-feet in each direction from the crossing point. On a case-by-case basis, JEA may require DR-18 pipe for the main as well.

22. Section 4.4.2 Multi-Family Residential, Commercial and Industrial Use

    Wastewater inflow from a general dumpster area, including storm-water runoff, is not permitted to enter the JEA wastewater system.

23. Section 4.6 Wastewater Manholes

    Unless otherwise approved by JEA, a minimum 0.1' drop between incoming and outgoing inverts shall be provided at all manholes.

24. Section 4.7.4 Location

    If new main extension is parallel with an existing main, the existing main and services shall be transferred to the new main. The existing main shall be properly abandoned after the new main is cleared for service.

25. Section 5.0.1 General

    Station piping shall be sized to meet 5-10 fps.

26. Section 5.0.6 Pumps

    Design head is the head at the operation point on the pump curve.

    Pump shut-off head shall be less than 230 ft

    For Pony Pump Calculations Only: Net Positive Suction Head (NPSH) shall be calculated at the "station only" condition flow rate and use the pump off elevation.

    Check valves shall be sized with adequate velocity to operate fully-open.

    Header piping shall be sized for 5-10 ft/sec to allow the check valve to operate fully-open.

27. Section 5.0.8 Emergency Operations

    Emergency Storage for wastewater calculations will no longer be accepted.

    For Class One pump stations with Low Flow up to 100 lots or 100 GPM for commercial or multi-family developments, emergency operation system is not required to be provided.

    For Class One pump stations that meet the following criteria, the design will require an emergency operation system:

    - 101 lots or more;
    - Receive flow of 101 GPM or more for commercial projects;
    - Receive flow from one or more pump stations through a forcemain (re-pump);
    - Pump stations discharging through pipes 12-inches or larger.

    Any development triggering the requirements for an emergency operation system on an existing JEA Lift Station downstream may be required to add in the emergency operation system as part of their development plans. Discuss this with the Development and Planning team.

28. Section 5.2.1 Low Pressure Design Requirements

    Allows the following low pressure forcemain sizes and provides design and material requirements:

    - 2-inch
    - 3-inch
    - 4-inch