SEWER AND WATER MAIN AS-BUILTS AND SERVICE CONNECTION FINAL INSTRUCTIONS AND REQUIREMENTS for SERVICE EXTENSION PERMIT PROJECTS

The purpose of these instructions is to provide direction and assistance in completing service connection finals and sewer and water main as-builts for the Washington Suburban Sanitary Commission using Commission standards. As-built information enables our Customer Care Team and Infrastructure Systems Group to easily locate appurtenances such as water valves and manholes that over time may be covered by pavement or vegetation. If there are any questions concerning as-builts please contact Mr. Thomas Mayers @ 301-206-8797 at the Washington Suburban Sanitary Commission, 14501 Sweitzer Lane, Laurel Md. 20707-5902.

As-builts and service connection finals are to be submitted by the Applicant or their designated representative. The as-built information package is to be submitted to the Contract Manager allowing 2 weeks for review. Their approval is part of the WSSC requirements for obtaining a Certificate of Substantial Completion and water meter release(s).

I. SEWER AND WATER MAIN AS-BUILT

A. The package will include:
   1. Three (3) Green Line copies of Water As-built Drawings, showing the most current revisions to the Drawings and Profile, including connection permit numbers with the water survey final as-built data as specified below.
   2. Three (3) Red Line copies of Sewer As-built Drawings, showing the most current revisions to the Drawings and Profile, including connection permit numbers with the sewer survey final as-built data as specified below.
   3. Three (3) copies of Fire Hydrant Summary Sheet.
   4. Three (3) copies of Sewer As-built Data Work Sheet.
   5. One (1) copy of the water and sewer grade note sheets, including field notes.

B. All field changes will be shown on as-built drawings. Manhole to manhole distances and swing tie measurements shall be carried to the nearest tenth. Manhole depths shall be carried to the nearest hundredth. The as-built information will be submitted on the most current, revised Drawings. A Registered Surveyor or Engineer will certify the as-built.

C. Provide a table of as-built coordinates for manholes, fire hydrants and water valves on the as-built drawing where space permits or on a separate sheet in accordance with NAD 83/91 datum. Coordinates may be placed on the profile view above each manhole, fire hydrant and water valve station in lieu of a table.

D. Complete the as-built Data box on Sheet 1 of the Drawings:
   1. Contract manager – WSSC contract manager on the job
   2. Contractor – who installed
   3. Inspector – site inspector for WSSC
   4. L&G – surveyor
   5. Date started

6. Date completed – substantial date per CM
7. Type of pipe W. – water main type of pipe
8. Date Finaled
9. Finaled by – name of the Survey company preparing the as-built

E. SEWER MAIN AS-BUILT INFORMATION

1. The following information will be provided on the horizontal plan sheet in a tie box **in RED type**:
   a) Three swing ties to the center of each manhole cover (see Swing Tie Requirements).
   b) When manholes are built over an existing sewer, provide a distance from the center of the upstream and downstream manhole covers to the center of the built over manhole cover.

2. The following information will be shown on the profile **in RED type**:
   a) The profile view will be completed by placing a check next to those elevations and stations that were built per Drawings. Where they have changed, they will be crossed out with a single line and the as-built elevation and station will be written in red.
   b) Depth of the manhole (in vertical feet) from top of rim to channel centerline.
   c) Sewer line lengths (in linear feet) from centerline of manhole cover to centerline of manhole cover.
   d) Drop connection elevation at the centerline of manhole and inside wall of manhole.
   e) Manhole rim elevations.
   f) Percent of sewer line grade to be calculated from centerline of manhole to centerline of manhole except for those lines **built** @ .50% of grade or less. In those cases the lines are to be calculated and indicated on the as-built from the incoming invert at the inside manhole wall to the next upstream manhole's outgoing invert at the inside manhole wall.

F. WATER MAIN AS-BUILT INFORMATION

1. Provide three swing ties to the center of each water fitting listed below (see Swing Tie Requirements) in a tie box on the horizontal plan using **GREEN type**:
   a) Caps/plugs (include depth in vertical feet)
   b) Valves
   c) Test stations

2. Provide the fire hydrant data listed below, in a tie box on the horizontal plan using **GREEN type**:
   a) Fire Hydrant station
   b) Street name
   c) Measurement from center of fire hydrant valve to fire hydrant
   d) Height (in vertical feet) of fire hydrant
   e) Fire Hydrant Manufacturer
   f) Operating nut (top of hydrant) elevation

3. Note all changes in Green on profile.
   a) If station on water main is the same put a check next to it
   b) 0+00 never changes

II. SERVICE CONNECTION FINAL

The Applicant is to supply two (2) copies of the Service Connection Certification form and two (2) complete sets of Drawings showing all revisions and connection permit numbers.

A. The Service Connection Certification form will show the following information:
   1. Lot, block and connection permit number.
   2. Mainline sewer tee station when both water and sewer connections are in the same location, measuring from the downstream manhole.
   3. Mainline water station when there are no sewer connections.
   4. Linear footage of the service connections from the centerline of the main[s] to the property line.
   5. Depth (in vertical feet) of each connection at the cleanout stack and/or curb stop.
   6. Ties: Three swing ties from the green board and/or cleanout stack. When water service is in different trench than sewer service, three swing ties to the curb stop. Always provide three swing ties for outside water meter even if water service is in same trench as sewer service.

III. SWING TIE REQUIREMENTS

A. Swing ties, **preferably under 100-feet**, are to be taken from above ground structures **provided in the following order of preference** and are to be labeled.
   1. Manholes (sewer, water, storm drain) (taken at the center of the cover)
   2. Telecommunications and electric manholes or structures (C&P, PEPCO, BG&E) with the location plotted on as-built drawings and the measurement taken at the center of the structure.
   3. Fire hydrants

4. House or building corners
5. Valve Box
6. Telephone poles (pole number must be included on as-built drawings)
7. Curb box or cleanout stack, which are located on a different property.
8. Retaining wall corners.
9. Point on line from the downstream manhole to upstream manhole (use only one point on line tie per water main fitting).
10. Property corners, if nothing else exists.

Note: Be sure that all structures used for ties are clearly sketched and labeled on the as-built drawings. A tie to a feature not shown on the as- built drawings is not acceptable.