

This document is provided as guidance on meeting the WVRDCS As-Built Requirement. It is not the intent or desire of this document to require constant presence of a Surveyor on the project site. It is also not the desire or intent of this document to require a licensed professional to seal any work outside of their direct supervision. Where a Contractor is obtaining the services of a consultant for preparation of these documents, it is expected that the Contractor will engage with the consultant prior to executing work in order to reach a common understanding of each entity's line of responsibility for collecting the necessary data for satisfying these requirements.

As-built drawings completed by a licensed engineer or surveyor are required per WVRDCS Specification CS-1. The intent of these drawings is to capture an accurate representation of what was actually constructed on a project.

Contractor's as-built documents include Issued for Construction documents (including any revisions/change order documents) red-lined by the Contractor with site condition and horizontal/vertical placement information. Refer to General Conditions Paragraph 7.11 of General Conditions. Documents that are unclear, illegible, torn, etc will not be accepted. The WVWA must receive, review, and accept as-built documents prior to issuance of Substantial Completion.

Provide location and elevations of any survey benchmarks and controls used for the preparation of as-built documents.

AS-BUILT shall be clearly printed in large bold letters on every sheet.

Where there is a change in alignment of the proposed pipe, or when any valves, manholes, or other appurtenances are moved to a location other than shown on the latest approved plans, the as-built plan must accurately reflect such changes. The old proposed design shall be stuck-thru from the final as-built so that it is clearly communicated what was and was not constructed.

Clearly identify base lines used for stationing and offset of as-built data. Base lines of a typical project are the center line of the original design alignment, and are clearly annotated on design drawings. If a project does not have design base lines, this may be substituted with coordinate data. Triangulation measurements from field features are acceptable supplementary notes, but shall not substitute for station and offset information. Triangulation shall use permanent field features that are not expected to be moved whenever possible. Tie to other Authority assets whenever possible.

Utility crossings shall be documented as encountered in the field, not as shown on the design drawings. Actual horizontal location and vertical information shall be shown on plan and profile views. For each crossing, denote utility type (gas, storm, telecom, etc.), material (concrete, plastic, etc.), dimension, and depth. Clearly annotate separation distance between existing and new utility at each location.

Water

- All surface features such as valves, hydrants, blow-offs, sampling stations, manholes, water vaults, valve boxes, service line features, water meters, utility crossings, and all other water features and

appurtenances shall be shown in their actual location. Features shall be located at the center point of each feature. Plan and profile views shall agree.

- Provide water main profile as shown on original plans with any material, measurement, corrections and/or modifications noted on the profile sheet. Note location of service connections on profile. Note location and depth of utilities crossed during construction on profile.
- For all new water valves, the 'top of nut' elevation of each valve shall be shown.
- Identify locations of abandoned pipe ends and lines that have been physically removed.
- Provide as-built information of all pipe segments (size, type, length, material, thickness, etc)
- Label all meters, including size and type. Provide station and offset.

Sewer

- All surface features such as valves, manholes, air vents, sewer taps, laterals, utility crossings, and all other sanitary sewer features and appurtenances shall be shown in their actual location. Plan and profile views shall agree.
- Provide sanitary sewer profile as shown on original plans with any material, measurement, corrections and/or modifications noted on the profile sheet. Note location of service laterals on profile. Note location and depth of utilities crossed during construction on profile.
- Provide as-built information of all manholes, identifying rim elevation, all invert elevations (note in and out), and distance between manholes (center to center).
- Identify locations of abandoned pipe ends and lines that have been physically removed.
- Locate and label all sanitary clean outs. Note size and material type. Provide station, offset, and invert elevation.

Submittal:

Submittal shall consist of

Contractor's original hard copy red-line annotated as-built documents. Contractor shall provide a statement and signature on this set of documents certifying that the work was done in accordance with these documents, with reasonable accuracy, and that any deviations have been red-line annotated or otherwise captured in change order documentation.

A full-size paper copy of final as-built (sealed)

PDF copy of final as-built (sealed)

CAD or Shape file of as-built drawings, Virginia State Plane Coordinate System, South Zone, NAD 1983, FIPS 4502 Feet, US Survey Feet, suitable for incorporation into Authority geodatabase (unsealed)

As-built drawings, as noted, shall be sealed, signed, and dated by the licensed professional who prepared them.