



### RECORD DRAWING CHECK LIST

**ALL Record Drawing submittals must include the following:**

- As Built Record Drawing Review Fee (check only)
- One (1) full-size set and PDF file(s) of each signed/sealed record drawing sheet
- Engineer's Water and/or Sewer Certification of Completion, if applicable
- Signed Record Drawing Checklist
- Signed/sealed bond estimates
- GIS Database or shapefile that contains the surveyed locations /attributes of all features installed
- AutoCAD as-built file

**This Record Drawing checklist does not apply to SCMs.** Record drawings which reflect "As-Built" conditions must be submitted prior to start of one-year warranty period for acceptance by the Town of Pittsboro for streets, public utilities and other infrastructure. *Plat and/or Certificate of Occupancy issuance will not occur until all submittals have been received and approved by Town of Pittsboro Engineering Department.*

**Project Name:** \_\_\_\_\_

**Engineering Firm:** \_\_\_\_\_

**Engineer (First, Last Name):** \_\_\_\_\_ **PE License #** \_\_\_\_\_

**Phone:** \_\_\_\_\_ **Email:** \_\_\_\_\_

**All applicable information listed below shall be included on all Record Drawings:**

- 1. Field verified locations (tied to NC Plane Coordinate System) for all visible infrastructure. Constructed utilities located below grade shall have reference to known point if the constructed utilities are different than the approved construction drawings.
- 3. Utility easements are shown and centered on the as-built utility locations.
- 4. AutoCAD submittal includes Base file (reference data to include parcels, lot numbers, streets, streams, ponds, etc.) and survey layer.
- 5. PDF and full-size plan sheets shall show approved Construction Plans in a transparent manner and surveyed data shall be shown in a bolder/solid color.
- 6. Drawings include the following:
  - A. General Information**
    - Boundary of tract with all courses and distances indicated. One corner (minimum) of the tract shall be tied to the NC Plane Coordinate System. Horizontal tie to North American Datum (NAD83). Vertical tie to North American Vertical Datum of 1988 (NAVD88).
    - Vicinity map, scale of drawings, and north arrow.
    - All easements identified and dimensioned. Include legal reference (Deed, Page #).
    - Benchmark location and elevation.
  - B. Street System (Public, Private, Fire Lane)**
    - Street Widths (back-to-back of curb) and right-of-way dimensions.
    - Pedestrian paths, including sidewalks, greenways, multi-use trails.
    - Horizontal alignment with radii, Points of Curvature (PC), and Points of Tangent (PT) of all curves.
    - Vertical alignment with centerline grades, vertical curve lengths, station numbers, and elevation of all Points of Vertical Curvature (PVC) and Points of Vertical Tangent (PVT), and centerline profiles.
    - Pavement sections and typical cross sections.
    - Engineering Certification for structures (retaining walls, bridges, boardwalks, etc.), if applicable.
    - Signage (parking, speed limits, stop, bicycle lane, etc.).
    - Landscaping.

**C. Public and Private Storm Drainage System**

- 100-year flood limits and elevations.
- Structure top and invert elevations.
- Pipe size, location and material.
- Pipe grades and distances.
- Include all outlet structure details and invert elevations.
- Include any applicable maintenance clauses from homeowner covenants.

**D. Potable and/or Reclaimed Water Distribution System**

- Pipe size, location, and material.
- Separation from reclaimed water, sanitary and storm sewer systems.
- Location of valves, fittings, fire hydrants, meters, blow-off assemblies, back flow units, tracer wire, marker balls, and each end of casing pipe with distance to reference points including depth to top of casing.
- For all valves: type (butterfly/gate/etc.), manufacturer, model number, and number of turns to close (use form below).
- Copy of Project Engineer's Certification indicating construction of the water system in accordance with the approved plans and specifications.

Valve Type	Valve Size	Manufacturer	Model	Number of Turns to Close Valve

**Sanitary Sewer System**

- Pipe size, location, and material.
- Location of manhole (center), diameter of manhole, and invert (in & out) elevations noting directions.
- 100-year flood plain elevation (if applicable).
- Pipe grades and manhole to manhole distances.
- Locations of clean-outs, valves, tracer wire, marker balls and each end of casing pipe with distance to reference points including depth to top of casing.
- Separation from water distribution and storm water systems.
- Copy of the Project Engineer's Certification indicating construction in accordance with the approved plans and specifications.

**Pump Stations & Force Mains**

- Pump station test results.
- Force main location, size, material type, location of air release valves and check valves, etc.
- Location of each end of casing pipe with distance to reference points including depth to top of casing.
- 100-year flood plain elevation (if applicable).
- Pump station and associated appurtenances operation and maintenance manuals.
- Pump Station Engineer's Certification.
- Pump Station / Force Main Design Calculations.
- Pump Station Record Drawings.
- Certified Pump Curves.
- Startup Report.

# TOWN OF PITTSBORO

ENGINEERING DEPARTMENT



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### Engineer's and Surveyor's Certification Statement:

I certify that the submitted As-Built Record Drawings are accurate and that each of the items listed on the Town's "Record Drawing Checklist" as contained in the Town of Pittsboro Standard Specifications is provided on this set of record drawings (\_\_\_\_ total sheets in this set).

I certify that all of the information provided is field-verified record drawing information.

Professional Engineer's Signature \_\_\_\_\_ Date \_\_\_\_\_

SEAL

Registered Land Surveyor's Signature \_\_\_\_\_ Date \_\_\_\_\_

SEAL



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#### AUTOCAD RECORD DRAWING REQUIREMENTS

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The following requirements for submittal of CAD data have been prepared for the purpose of incorporating the digital submittal information into the Town's Geographic Information System (GIS) base mapping, so that accurate data may become available to emergency responders and Town of Pittsboro Public Utilities staff.

- **CAD file must contain public utility infrastructure and plat information within a single drawing in DWG format.** Files in DXF, DWF, or DGN format are not acceptable. Drawing must be "stand-alone" without the necessity of attaching Reference or XREF files, or modifying and levels and layers.
- The CAD data is not meant to be printed. As such, it should not be all inclusive of the information displayed on the plan sheets. Objects normally set up in the layout tab ("paper space") for the purposes of plotting plan sheets, such as title blocks, page borders, legends, vicinity maps, and north arrows, should **NOT** be included in the CAD file. Callout detail boxes also should not be included.
- CAD data must be drawn at full scale (1:1), and oriented to true north.
- The data must be tied to Town monumentation data, in real world coordinates, and spatially referenced to the Town's GIS projected coordinate system: North American Datum 1983 (NAD 83), NC State Plane, FIPS 3200; Units: US Feet.
- All polygons must be closed without overlaps. All lines must be snapped at their endpoints and free of gaps or dangles. Annotation text that breaks the continuity of lines should be shifted out of the way of the line.
- Public/private utility infrastructure and plat information must be organized into **separate layers** according to feature type, and drawn as polylines (except for annotation). All layers must be turned on and visible/unfrozen. **IMPORTANT: Layer names should be intuitive and descriptive of the objects on that layer.** Features must be clearly segregated into their appropriate layer, and not appear on other unrelated layers. Remnants of lines or points used in the development of the drawing but not representative of actual real-world features (trim lines, transit points, etc.) should be removed from the drawing. *Existing* infrastructure should be on separate layers from *proposed* infrastructure and should be differentiated as such in layer names (i.e. "EXIST\_WATER\_MAIN" versus "PROP\_WATER\_MAIN"). This information shall also be included in the CAD drawing. Elevation contours are not required.