# Stormwater Conveyance As-built Submittal Checklist

Checklist V1.2025

The as-built drawing submittal set must be approved prior to acceptance of the improvements and/or issuance of a certificate of occupancy. This stormwater as-built submittal does not take the place of any other submittals required by Development Services. Acceptance of the as-built data does not constitute the City's acceptance for maintenance purposes.

## Submittal Documents

Stormwater conveyance as-built submittals shall be submitted electronically through a secure file sharing platform through a means that can be submitted to and received by asbuiltsubmittal@raleighnc.gov. The link should be available for 30 days. In general, the following documents shall be included with all as-built submittals:

- [ ] Stormwater Conveyance As-Built Submittal Checklist – A completed copy of this checklist in .pdf format including the sealed statement provided by a qualified North Carolina (NC) licensed design professional which certifies that the as-built stormwater infrastructure (both public and private) complies with the approved plans and meets all Unified Development Ordinance (UDO) requirements. The certification is contained in the checklist.

- [ ] As-Built Drawings – A certified set of as-built drawings, signed and sealed by a North Carolina PE or RLA, in (.PDF format) for stormwater infrastructure only.

- [ ] As-Built Survey Submittals
  - [ ] As-Built Survey – A certified post construction as-built survey, signed and sealed by an NCPLS, in (.PDF) format for stormwater infrastructure only.
  - [ ] Survey File – An electronic drawing file of the NCPLS certified post-construction as-built survey in (.SHP), (.DWG), (.DGN), or file geodatabase format for stormwater infrastructure only.
  - [ ] Survey Point File – A comma-delimited point file of the NCPLS certified post construction as-built survey in (.cvs) or (.xls) format for stormwater infrastructure only.
  - [ ] All recorded public and private drainage easements properly labeled and provided as polygons in (.SHP), (.DWG), (.DGN) or file geodatabase format. This can be included in the Survey File or as a separate file.
  - [ ] Recorded plat(s) files in .PDF format

## Project Details

Project Name:

Project Address:

Case Number(s):

## Items to be included in As-Built Submittal

| Yes | NA | |
|---|---|---|
| ☐ | ☐ | A certified set of as-built drawings with each sheet signed and sealed by a North Carolina PE or RLA, in (.PDF format) and includes: |

- ☐ As-built date
- ☐ Revision dates
- ☐ Project name
- ☐ Page numbering
- ☐ North Arrow
- ☐ Scale of drawing
- ☐ Scale bar
- ☐ Vicinity map
- ☐ Permit number
- ☐ Engineer-in-charge
- ☐ All recorded public and private drainage easement properly identified and dimensioned
- ☐ Pipe size (dimensions in heigh and width in inches)
- ☐ Pipe material (noted in NASSCO PACP coded format)
- ☐ Pipe Length
- ☐ Pipe slope
- ☐ Upstream and downstream pipe depths from control point (in survey feet)
- ☐ Manhole and inlet size noting the largest dimension (length and width in survey feet)
- ☐ SCM risers, SCM control structures, SCM flow splitters
- ☐ Connections to existing infrastructure
- ☐ Reference City or State design standard drawings
- ☐ Infrastructure Facility IDs provided by the City for each asset
- ☐ Top/Rim and invert elevations noting the control point on structure
- ☐ Manhole, junction box, and inlet depth (in survey feet)
- ☐ Manhole, junction box, and inlet material
- ☐ Abandoned or removed features
- ☐ Stormwater Control Measures (SCM) facilities
- ☐ Strike-through updates of all items shown on the approved construction drawings
- ☐ Glossary of abbreviations

- [ ] [ ] Location of all open conveyance (channel/swale/ditch) with the following labeled: channel material/lining type, length, bottom width, side slopes, and channel slope (measurements in survey feet)

- [ ] [ ] A coversheet for the as-built drawings (.PDF format) including, at minimum, the following information:
  - [ ] Project Name
  - [ ] Name of firm which prepared the data
  - [ ] Drawings labeled as Final as-built drawings including the date
  - [ ] Permit number(s)
  - [ ] COR plan identification number (if applicable)

- [ ] [ ] Stormwater conveyance labeled with their respective North Carolina State Plane Grid X and Y coordinates (and in US Survey feet)

- [ ] [ ] All units are in US survey feet

- [ ] [ ] Horizontal datum of as-builts provided is in NAD 83, and the appropriate realization of NAD 83 has been specified (NOTE: The NC CORS Base Station Network is referenced to the NAD 83[2011] datum; vertical datum must be NAVD88, geoid 03 or later and indicated in survey text file)

- [ ] [ ] At least two manholes or inlets (one upstream and one downstream) of the project area LOD have been defined and labeled (including inverts and top elevations). Labeled as existing infrastructure

- [ ] [ ] All current Wake County parcel information and properly labeled

- [ ] [ ] All streets defined and labeled

- [ ] [ ] The closest geodetic monument to the project has been identified and labeled

- [ ] [ ] Ground surface elevations, while not shown on the as-built plan, have been included in the survey text file

- [ ] [ ] A certified post construction as-built survey, signed and sealed by an NCPLS, in (.PDF) format is provided

- [ ] [ ] An electronic file of the NCPLS certified post-construction as-built survey is provided with the following information:
  - [ ] Project name
  - [ ] Name of firm which prepared the data
  - [ ] As-built date
  - [ ] Permit number(s)
  - [ ] COR plan identification number (if applicable)

  Note: (.SHP), (.DWG), (.DGN), and file geodatabase are acceptable formats

- [ ] [ ] Provided CADD files are saved in “model space” on NC State Plane grid

☐ ☐ Comma-delimited text file (.csv format) or Microsoft Excel file (.xls format) provided of survey information with the following columns:

- ☐ Feature type (inlet, manhole, pipe outlet, etc.)
- ☐ X, Y, Z (rim or top)
- ☐ Size
- ☐ Description (see example) and Pipe Upstream (US) X, Y, Z (invert)
- ☐ Pipe Downstream (DS) X, Y, Z (invert)
- ☐ Diameter or Size (pipe dimensions are to be noted in inches)
- ☐ Material (in NASSCO PACP coded format)
- ☐ Facility ID provided by COR GIS

☐ ☐ All recorded public and private drainage easements properly labeled and provided as polygons in (.SHP), (.DGN), (.DWG) or file geodatabase format. This can be included in the Survey File or as a separate file

☐ ☐ Recorded plat(s) files in .PDF format are provided

☐ ☐ A sealed statement provided by a North Carolina (NC) licensed design professional which certifies that the as-built stormwater infrastructure (both public and private) complies with the approved plans and meets all Unified Development Ordinance (UDO) requirements

## Professional Certification

**I, _____ as a duly registered _____ in the State of North Carolina attest that on _____, 20____ all new stormwater conveyance systems are accurately shown on the as-built drawings and that all information provided is correct to the best of my knowledge. The approved hydraulic design remains valid or updated calculations have been submitted. It is a violation of UDO 9.2.5(F) to falsify this certification. A civil penalty for falsifying this certification shall be assessed by the City of Raleigh in the amount of $3000.00.**

Professional Seal:

Applicant's Signature: _____

Date: _____

## Examples:

### Structures

| Feature ID from approved construction drawing | Facility ID from COR GIS | X | Y | Z | Depth | Size | Description |
|---|---|---|---|---|---|---|---|
| CB-1 | | | | | | 3x2 | NCDOT 840.1 |
| DI-2 | | | | | | 2x2 | Non-standard grate inlet |
| BES-1 | | | | | | 18” | Bare-end Section Pipe inlet |
| MH-1 | | | | | | 4’ | NCDOT 840.52 |
| FES-1 | | | | | | 36” | Flare End Section Pipe outlet |

### Pipes

| Pipe ID from approved construction drawing | Facility ID from COR GIS | Material | Diameter (or Height) | Width | US X | US Y | US Z | DS X | DS Y | DS Z |
|---|---|---|---|---|---|---|---|---|---|---|
| Pipe-1 | | RCP | 15” | | | | | | | |
| Pipe-2 | | RCP | 18” | | | | | | | |
| Pipe-3 | | RCP | 48” | 36” | | | | | | |
| Pipe-4 | | RCP | 36” | | | | | | | |

### Channels/Swales/Ditches

| Reach ID | Facility ID from COR GIS | Material or Lining Type | Top Width | Bottom Width | Depth | US X | US Y | US Z | DS X | DS Y | DS Z |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Reach-1 | | Grass | 6-feet | 3-feet | 2-feet | | | | | | |
| Reach-2 | | Riprap | 8-feet | 4-feet | 3-feet | | | | | | |
| Reach-3 | | Concrete | 10-feet | 5-feet | 3-feet | | | | | | |
| Reach-4 | | Forested | 12-feet | 6-feet | 3.5-feet | | | | | | |