

## SECTION I - GENERAL INFORMATION

### **1.01 Application of the Standard**

The Construction Specifications in this manual generally refer to work located in the street right-of-way, utility easements and/or storm drainage easements. It is not the intent of the manual to specify how general construction on private property shall be performed.

The following terms and abbreviations may be used in this manual and shall have the meanings ascribed to them in this section:

AASHTO - American Association of State Highway and Transportation Officials

ANSI - American National Standards Institute

ASTM - American Society for Testing Materials

AWWA - American Water Works Association

City - City of Salisbury

NCDOT - North Carolina Department of Transportation

SRU - Salisbury-Rowan Utilities

SRU Management - Salisbury-Rowan Utilities Director or designee

### **1.02 General Arrangement of Plans**

Water, sewer, grading, streets, and drainage plans are generally preferred on one consolidated plan. However, if information is cluttered, separate plans may be prepared if the other information is provided in a light line weight.

In general, all plans shall show:

1. scale(s) Plans shall be prepared to a minimum standard engineering scale of 1" = 40'
2. date of issue
3. purpose of issue (i.e. for review only, for construction only, etc.)
4. north arrow
5. USGS elevations and benchmark(s)
6. existing streets, underground utilities (including lines, valves, manholes, etc.), structures, power poles, rights-of-way, easements, etc., labeled with an identification and size, i.e. "existing 8" water line", "Elm Road (SR 0001), 60' ROW, 30' pavement", "Duke Power R/W, 100"
7. creeks and drainage ways
8. flood plain
9. lot lines
10. cover sheet with vicinity map
11. preparer's seal with signature

The nature and date of all revisions must be included on all revised pages. Incomplete submittals will not be reviewed until all the required items are received.

### **1.03 Permits, Approvals and Encroachments**

The City shall review all plans prior to submittal to any other reviewing agency.

All approvals by all regulating authorities shall be obtained before any construction is started. The City shall incur no costs for plan approvals. Copies of all approvals, including all permits, maps, plans, and executed agreements shall be received by the City before construction begins.

Application for approval of water and sewer facilities by NC State Authorities shall be completed in the name of the City for public extensions and be submitted for signatures accompanied by all required documentation, plans and fees. Privately owned extensions should be submitted in the name of the owner/developer.

Other approvals must be obtained from (but not limited to) Rowan County (sedimentation and erosion control), NC Department of Transportation (right-of-way encroachment), railroads and utilities (right-of-way encroachment), and private property owners (right-of-way). All permanent rights-of-way shall be obtained in the name of the owner/developer and transferred to the City or in the City's name initially.

The City shall incur no expense for permitting or right-of-way procurement.

### **1.04 Approval by the City**

Approval by the City shall be obtained by the following procedure:

1. Submit three (3) sets of plans with a letter requesting approval of the plans. One (1) set of reproducible plans shall be submitted upon final approval.
2. The City shall review the plans for conformance with the City's ordinances and standards and make appropriate comments. The City shall return plans with comments or stamp the reproducible plans upon final approval.
3. All approvals, easements and rights-of-way shall be obtained in accordance with Item 1.03 of this section.
4. Shop Drawings shall be submitted and approved prior to the start of construction.
5. A mandatory pre-construction conference shall be held prior to the start of construction. The pre-construction conference shall be attended by the City, owner/developer, engineer, and contractor. A minimum advance notice of 2 business days is required to schedule the conference. The Engineer shall bring a copy of the approved plans, permits, right-of-way encroachments, recorded easements, etc. The contractor shall bring a construction schedule, shop drawings, copy of insurance policy with the appropriate liability coverage (\$1,000,000 per occurrence) etc.
6. SRU Management or City Engineer shall allow construction to begin when all permits have been received and all requirements of the appropriate Review Board(s) have been met.

## **1.05 Construction Records and Inspections**

### **Record Drawings**

Record drawings shall be prepared to reflect all changes made during construction. A field survey (by a Professional Land Surveyor) to locate all roads, structures, and new manholes, and to determine the inverts of new storm and sanitary sewer lines as well as location of all water lines, hydrants, bends and connection points shall be conducted by the owner/developer.

All elevations shall be tied to USGS benchmarks and a permanent easily accessible benchmark shall be established at the site and noted on the plans.

Record drawings shall show locations of all sewer laterals and water services referenced to fixed points so as to be easily located in the event that the markers are destroyed. Record drawings shall show the location of all drainage easements and utility rights-of-way. Drainage discharges shall be referenced to fixed points so as to be easily located. The method of location of these items shall be as directed by SRU Management or City Engineer. The City will review the record drawings, if corrections are needed, the drawings will be returned to the Engineer for revisions. Record drawings shall consist of a complete set of corrected plans and be printed on mylar and a digital copy (.PDF format) on the appropriate media.

### **Inspection**

Construction inspection shall be as described in Section IV of this manual. Care shall be taken to notify the proper authority in sufficient time to inspect and/or witness all phases of construction and testing as required. The owner/developer shall see that adequate inspection is provided at the job site to ensure all installation is done in accordance with the approved plans and these standards and specifications and to allow certification(s) as required.

Construction inspection by a registered professional engineer or a representative of the Engineer's office, under the Engineer's supervision, is required. The Engineer must submit a statement acceptable to State Agencies and the City of Salisbury, reflecting that the water and/or sewer system was constructed in accordance with the approved plans and specifications and submit a copy of his inspection log. The Engineer must also submit a statement certifying the streets and storm drainage have been constructed in substantial conformance with City Specifications and the approved plans.

An SRU Inspector will spot check the construction on all permitted projects both public and private (private water lines when these lines provide any type of fire protection and on all sewer lines). Salisbury-Rowan Utilities will also inspect the installation/construction of grease traps/interceptors (see FOG Control Program - Appendix "E"). Concurrent attendance by the SRU Inspector and the Engineer or engineer's representative is required for all water and sewer testing.

### **Final Inspection**

A final Inspection shall be conducted upon completion of all construction and testing. The purpose of the final inspection is to verify that all construction and materials meets the requirements of the approved plans and City of Salisbury standards and specifications. Concurrent attendance by the contractor, SRU Inspector and the Engineer or engineer's representative is required. During the final inspection the Engineer or engineer's representative shall make a "punch list" containing engineer's

and City's comments. Each section of sewer line shall be visually inspected ("lamped" by the Engineer or his representative) or CCTV inspected. All lot corners are to be located and staked prior to final inspection.

### **Test Results**

Tests of all type shall routinely be prepared at no cost to the City. The City shall receive copies of all tests. The Contractor shall be responsible for reviewing and retaining all test reports.

Prior to acceptance of the completed job, the Contractor shall submit a notarized statement certifying that all test reports were acceptable and/or all unacceptable materials have been replaced.

### **1.06 Guarantee of the Work**

The work shall be guaranteed by the owner/developer for a period of one year from acceptance by the City. The guarantee shall cover all materials and workmanship. Any defective work or materials shall be repaired or replaced at no expense to the City. The owner/developer shall submit a one-year warranty document to the City of Salisbury prior to final acceptance of the project.

### **1.07 Acceptance of Facilities by the City**

The City shall accept new facilities upon completion of the following:

1. All construction is complete, all tests are satisfactory, a final inspection has been held, and all punch list items have been addressed (release by SRU Inspector).
2. Plan originals on mylar with "record drawings" revisions are received. The engineer must also submit a digital copy (.PDF) of the record drawings.
3. Engineer's certifications of water, sewer, drainage, and streets are received, and necessary certifications are submitted to the State and the City of Salisbury.
4. Contractor's certification of tests has been received.
5. The Owner/Developer's statement of one-year guarantee has been received.
6. All permanent easements, rights-of-way, and permits are properly recorded and filed.
7. Any releases required by SRU Management and/or City Engineer have been made (including easement/property issues).
8. Evidence of final payments to suppliers and sub-contractors (for public designed utilities & utilities to be taken over by the City of Salisbury):
  - a. Contractor's Affidavit of Payment and Debts and Claims.
  - b. Contractor's Affidavit of Release of Liens.
  - c. Evidence that all claims have been settled.

## **1.08 Variance Procedure**

Requests for variances from the Standard City requirements shall be reviewed on a case by case manner as follows:

1. Any proposed deviation from current local standards shall be documented with the following as part of the application package:
  - a. Design engineer's sealed letter detailing the cause for deviation, a narrative description of proposed variance, and a statement that the deviation from local standards will not involve a deviation from state or federal standards.
  - b. Description of how the proposed variance would perform relative to City standards, measured over the expected life cycle of the system.
  - c. Detailed drawings and/or manufacturer's data in support of proposed variance.
2. City Staff will forward the request for deviation from local standards to SRU Management and/or the appropriate City Department head, who shall determine the acceptability of the request based on his judgment regarding:
  - a. Life cycle performance.
  - b. Compatibility with established City maintenance procedures.
  - c. Compliance with applicable standards as established by other jurisdictions having authority.
  - d. Other factors deemed appropriate by the applicable City Department head.

Engineering plans will not be approved until all variance requests have been approved in writing as described, or the design meets standard City requirements.

## **1.09 Erosion and Sedimentation Control**

All work shall be done in accordance with and subject to the limitations of City, Rowan County, and State rules and regulations for erosion and sediment control.

It shall be the responsibility of the owner/developer to obtain approval of a sedimentation and erosion control plan from Rowan County. Additional information as to required format and plan content is available from Rowan County Environmental Services, 402 North Main Street, Salisbury, North Carolina, 28144, telephone (704) 216-8588.

Erosion control measures shall be provided to prevent any erosion or sedimentation problems that might affect any existing utility lines or structures during construction. For public utility installations, the contractor shall stabilize (seed and mulch) the area around newly installed meter boxes & meter vaults, valve boxes, fire hydrants, manholes, and sewer clean-outs prior to acceptance by SRU.