

City of Columbia, SC
Department Engineering

Developer's Guide to Columbia Water: Water & Sewer Services



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Greetings,

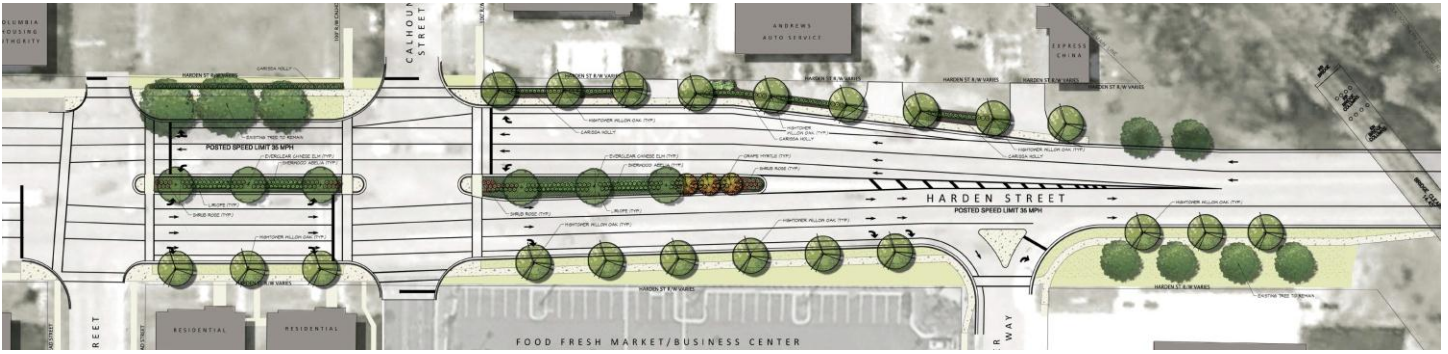
This document is intended to provide general information to developers, consulting engineers, project managers, builders, and contractors regarding procedures for approval and acceptance of new water, sanitary sewer, storm drain and/or street facilities into the City of Columbia's utility system for operation and maintenance. It should be used in conjunction with the City of Columbia's Regulation Manual that outlines and provides minimum standards for the design and construction of these systems.

We hope the information provided is helpful. As always, you may contact our office at (803) 545-3400 with questions or concerns.

Sincerely,

Dana R. Higgins, P.E.

Director of Engineering



Section I: Project Duties

Any new project requires coordination between the Developer, the Consulting Engineer, the City of Columbia, and the Contractor, and each have specific duties to carry out for the project's success. Below are the duties on a typical project by role.

Developer

The project's developer is responsible for:

- Executing or obtaining the property owner's signature on all legal documents required by the City for the project. This includes:
 - All applicable deeds
 - [Form #2](#)
 - Declaration of Covenant
 - Agreement to Comply Form
 - All applicable agreements
 - Any other documents related to the project.

The originally executed documents must be returned to the City for acceptance and processing.

- Construction of utilities in accordance with the [City Engineering Regulations](#), the City-approved plans, and terms and conditions of the Project Approval Letter. *Generally, this is done through a Contractor.*
- Providing proof of Contractor's insurance to Columbia Water Administration Project Coordinator prior to beginning construction.
- Construction of all individual services off the on-site and off-site mains. *Generally, this is done through a Contractor.*
- Making application for service and paying the appropriate fees.
- Insuring there are no encroachments of permanent structures within the City's easements.

Consulting Engineer

The project's consulting engineer is responsible for:

- Researching records to efficiently plan the project and prepare drawings. These records might include:
 - Tax maps
 - Flood maps
 - Public records
 - City records for availability of existing utilities
 - Applicable City zoning records
 - [City Engineering Regulations](#) and Specifications for Utility Projects
 - Coordination of site inspections and surveying
- Plan preparation and submittal.

- Advising the Developer of project development process with the City and estimating time required to complete the entire process.
- Preparing all drawings, including:
 - Record drawings
 - Plans
 - Easement plats
 - Encroachment permits in the City's name
 - Recordable property plats for fee-simple acquisitions
 - And any other applicable drawings
- Adhering to all conditions in the Project Approval Letter and conducting final inspections of systems to be deeded to the City for operation and maintenance. *Must provide a copy of the Project Approval Letter to the Contractor.*
- Estimating the size of meters needed for the proposed development.
- Obtaining a copy of the [City Engineering Regulations](#) and following the regulations as they apply to the proposed development.
- Preparation and certification of record drawings.
- Submitting the Final Package to S.C. DHEC to request the Permit to Operate.

City of Columbia

The City of Columbia is responsible for:

- Reviewing obvious requirements for plans and addressing what needs to be done for the proposed project in the Project Approval Letter. **Additional requirements may be identified as a project progresses.**
- Inspecting construction of systems on behalf of the City to ensure compliance with regulations and approved plans.
- Inspecting construction of utilities in streets to ensure compliance with regulations and encroachment permit.
- Preparing legal documents necessary for transfer of systems to the City including:
 - Deeds
 - Easements
 - Agreements
 - Declaration of Covenants
 - Releases
 - And other applicable documents
- Verifying the availability of utility services for the property to be served.

Contractor

The contractor must be approved by the City of Columbia. The project's contractor is responsible for:

- Calling in a 48-hour work notice to Mr. Tim Sox at 803-545-3400. Tim.Sox@columbiasc.gov
- Attending a mandatory on-site pre-construction meeting with the Columbia Water's Utility Inspector. The contractor must maintain contact with inspector throughout construction. The contractor must also have on site:
 - Approved plans
 - Project Approval Letter
 - S.C. DHEC Construction Permit
 - Any encroachment permits, if applicable

- Providing proof of insurance when performing work within a public road right-of-way or a private easement.
- Providing a 72-hour notice to all property owners other than the developer before beginning work on property.
- Installing approved utility lines.
- Installing, maintaining and restoring sediment and erosion control throughout construction.
- All required testing such as:
 - Pressure testing
 - Setting up sample points for bacteriological testing
 - Air testing for sewer
 - Compaction testing for roads
 - Any other required testing
- Providing a signed [Form #3 Lien Waiver](#) and granting a 2-year warranty period from the date S.C. DHEC issues a Permit to Operate the utility or the date of acceptance for a new street by the City.



Section II: Submittals & Reviews

[Part 1: Specification for Submissions of Plans](#) in the [City Engineering Regulations](#) contains the detailed requirements for plan submittal. Generally, the Consulting Engineer follows these basic steps for Plan Preparation and Plan Submittal, Review, and Approval. The Developer then manages the Insurance requirements.

Plan Preparation

The Consulting Engineer does the following:

- Gathers file information. This will include:
 - Property ownership
 - Tax map numbers of subject property, off-site properties to be affected, and adjacent properties to the development site
 - Availability of services
 - Indication of existing line sizes and record drawing verification
- Advises Developer of procedures and time involved for project development
- Consults with the City's Subdivision Reviewer and/or City Engineer for assistance
- Advises Developer to apply for a Water Main Extension Agreement or Sanitary Sewer Main Extension Agreement with Columbia Water, if applicable. These agreements will be prepared by City Contracts Staff.
- Contacts Columbia Water to initiate a fire hydrant flow test. This test is performed by Columbia Water at a cost of \$175.00. Please allow two (2) weeks for test results. See [Fire Hydrant Flow Test Request](#).
- [Pretreatment Agreements](#) and [Grease Traps or Interceptors](#) are required for projects with kitchens and automotive operations.

- Follow the [Utility Review Checklist](#) (for new water/sewer main construction/connection) and [City Engineering Regulations](#).

Plan Submittal, Review, and Approval

When the plans are ready for submittal, the Consulting Engineer should do the following:

- Prepare a package that includes:
 - Two (2) sets of plans
 - A short cover letter for connection or construction plan review
 - All necessary encroachment permits. Encroachment permits must be in the City's name as permittee. An encroachment permit must be submitted for each main line tap, utility crossing and/or railroad crossing.
 - All necessary off-site easement plats. Off-site easement plats are for utility construction on property not owned by the Developer.
 - A complete Delegated Construction Permit Package assembled using the [Delegated Review Program Checklist](#). This package will be submitted to S.C. DHEC for Delegated Construction Permit Review Program.
 - A completed [Utility Review Checklist](#) to make sure that package is complete.
- Submit the package:
 - For projects inside City limits: to the Development Center
 - For projects outside City limits: to the Columbia Water Administration Receptionists.

Once the City receives the complete package, the review process begins. The City has up to 30 days for plan review. If the project is approved:

- A Project Approval Letter will be transmitted to the Planning/Zoning Office of any appropriate public office
- The Delegated Construction Permit Package will be forwarded to S.C. DHEC for application for the Construction Permit.
- Copies of the Project Approval Letter will be sent to the Consulting Engineer and Developer. PLEASE READ the Project Approval Letter and follow the provisions outlined.

Insurance

The Developer, through his Contractor, is responsible for providing proof of insurance prior to issuance of a Construction Permit to the Columbia Water Administration Project Coordinator.



Section III: Pre-Construction Requirements

The Developer or Consulting Engineer is responsible for working with the City in obtaining proper easements and encroachment permits before work on a project that requires them begins.

Off-site Easements

Off-site easements are for those situations where new water or sewer utility lines will need to cross another property not already owned by the City in order to reach the project site. Although the City prepares the off-site Easement Documents, it is the responsibility of the Developer or Consulting Engineer to acquire the proper signatures. The Developer should be aware of the following:

- Identifying properties for easements:
 - The Developer or Consulting Engineer identifies properties that will need an off-site easement during the design process. Plats for these properties are submitted after receipt of a Project Approval Letter.
 - Always obtain permission to survey where off-site easements are required for extension of the main from the City's existing utility to the proposed development site.
- Securing the signatures:
 - The City supplies Easement Documents to the Developer or Consulting Engineer.
 - The Developer or Consulting Engineer must acquire the proper signatures for these documents in the presence of an attorney.
 - Return the original, executed Easement Documents to the City for acceptance and recording.
- Final Easement Documents:
 - Easements must be obtained prior to construction.
 - All easements are prepared naming the City as Grantee.
 - All easements are **EXCLUSIVE** to the City.
 - Do not alter the easement language without first obtaining approval from the City.
 - The City is not responsible for any agreements made between the Property Owner and the Developer. Any written agreements between them must be done in a separate document and should not include the City.

Easement Plats

The Consulting Engineer is responsible for preparing easement plats and should follow the [Easement Plat Guidelines](#). The requirements are as follows:

- The package submitted to the City should include:
 - [Easement Plat Checklist](#)
 - One (1) reproducible original plat
 - Three (3) blueprints
- Format as follows:
 - Prepare on 8½" x 14" (legal size) paper.
 - Do not show proposed utility on the easement plat.
 - Use centerline distances unless the easement is irregular in shape, then use perimeter measurements.
 - Water easements parallel to road rights-of-way are generally ten (10) feet in width; otherwise, easement widths vary according to the location, size, and depth of the pipe.
 - Sewer easements are a minimum of fifteen (15) feet in width; otherwise, easement widths vary according to the location, size, and depth of the pipe.
 - Storm drain easements are a minimum of twenty (20) feet in width; otherwise, easement widths vary according to the location, size, and depth of the pipe.

Easement Releases

If an easement needs to be abandoned, the Consulting Engineer also depicts the easement to be abandoned on the construction plans during Plan Submittal.

- After the Project Approval Letter has been issued, the Consulting Engineer transmits an easement drawing to the City on 8½" x 14" (legal size) paper depicting:
 - The portion of the easement to be abandoned

- Location of new easement for relocation of utility. This is separate from the easement plats.
- Important information about Easement Releases:
 - Require City Council approval.
 - Cannot be processed until the new utility is constructed and accepted by the City for operation and maintenance.
 - The City Real Estate Division will process the Easement Releases.

Encroachments (Easement & Utility Rights-of-Way)

The Consulting Engineer is responsible for preparing drawings for any needed utility encroachment permits.

An encroachment permit must be obtained when new utility construction crosses an existing right-of-way of another utility such as power lines, transmission lines, railroads, and others. In preparing an Encroachment Permit Application:

- A representative of the utility company will be invited to the mandatory project meeting.
- A copy of the construction plans and exhibit showing the proposed encroachment must be submitted to the affected utility company at the same time it is submitted to the City.
- The City will approve the development plans subject to approval of the proposed encroachment by the affected utility company.

Encroachments (Public Road Rights-of-Way)

The Consulting Engineer also prepares drawings for any needed public road encroachment permits.

Right-of-way encroachment permits will be processed only after plans have been reviewed and approved by the Subdivision Plan Reviewer. When preparing a public road Encroachment Permit Application:

- All public road permit applications must:
 - Include an original Encroachment Permit Application
 - For City roads, use the [City Application for Encroachment Permit](#)
 - For SCDOT roads, fill out an [SCDOT Application for Encroachment Permit](#) and submit to the City. **DO NOT submit this application to SCDOT.** The City will submit this application to SCDOT for the project.
 - Include Five (5) copies of the exhibit showing the proposed encroachment
 - Name the City as permittee
- City Public Road Encroachment Permits also include a [Liability, Hold Harmless and Indemnification Agreement](#) signed by the Developer. Any permit application not including the Agreement will not be considered complete and thus will not be processed.

The City is the permittee on all encroachment agreements and processes the requests internally. All costs associated with obtaining encroachment permits are the Developer's costs. A check for the encroachment permit costs must be submitted to the City with the exhibits.

The time required to receive an encroachment permit can be lengthy and varies by agency. The Developer and Consulting Engineer are encouraged to allow adequate time in their schedule for the encroachment permitting process.



Section IV: The Bonding Process

The Developer must enter into a bond agreement called an Agreement for the Completion of Subdivision Improvements (see [Sample Agreement](#)) with the City or County, depending on where the proposed development is located. This agreement will be prepared by the City or County for the project. After the project has been approved and all off-site easements and encroachment permits have been obtained, the project can be submitted for processing under bond.

The Process

- The Developer or Consulting Engineer submits:
 - A copy of the property deed and Bonded Plat to the City's Project Coordinator
 - Submits the Bonded Plat to the appropriate City or County Planning Department
 - For projects within City limits, the following should be submitted to the Project Coordinator:
 - Engineer's certification of the work completed and to be completed with cost to complete
 - Copy of the contract between the Developer and the Contractor
 - Agreement for the Completion of Subdivision Improvements (see [Sample Agreement](#); prepared by the City or County)
 - Bond or Irrevocable Standby Letter of Credit in the amount of 150% of the cost of the work to be completed
- The Project Coordinator and appropriate Planning Department review the application
- Once approved, the easement for bonding the project is written and submitted to the Developer for execution
- To execute the bond, the Developer is responsible for providing:
 - An original, City or County stamped, approved plat
 - An 11"x17" reduced copy of the approved plat
 - For projects located outside City limits, a Declaration of Covenant signed by the Property Owner
- To release the bond, the Developer is responsible for providing:
 - A letter requesting the release of the bond
 - A statement from the Engineer of work that is outstanding or indicating that the job is completed. All applicable water, sewer, stormwater and/or street deeds must be completed.



Section V: Inspections & Field Work

The newly constructed system will need to be inspected and approved before a water meter is installed and it is deeded to the City.

The Process

- The Developer is responsible for:
 - Installing and maintaining all individual services on the off-site and on-site mains until the City water meter is installed.
 - Repairing any damage to the system at his/her own expense until the City water meter is installed. This can include, but is not limited to, paying an additional new tap fee.
 - Reporting all field changes to the Columbia Water’s Utility Inspector for approval.
 - Conducting final inspections of the system through the Consulting Engineer.
- The Columbia Water’s Utility Inspector then performs an inspection on behalf of the City to ensure compliance with regulations and approved plans.



Section VI: Record Drawings

Once the project has been approved, the Consulting Engineer should prepare the record drawings for the Developer.

What to Submit

- Final revised and certified record drawing¹ in the following three (3) formats:
 - One (1) 24x36 printed version
 - One (1) Adobe Acrobat PDF format of printed version²
 - One (1) AutoCAD DWG format version²³
- Original [Form #2](#)
 - Must include the project name, location, phase, and City File Number
 - Must be signed by the Developer
- Original [Form #3 Lien Waiver](#)

- Must include the project name, location, phase, and City file number
- Must be signed by the Contractor who installed the pipe
- Must be signed and certified by authorized utility company representative
- An itemized list of materials
 - Should be on the Contractor's company letterhead
 - Must include the project name, location, phase, and City File Number
- Sanitary Sewer Acceptance Letter
 - Required when there is a sanitary sewer extension constructed that will not be maintained by Columbia Water
 - Should include the project name, location, and City File Number
 - The Sewer System Owner must provide to Columbia Water an acceptance letter from the utility service company that will be treating the sewer line. The Owner would have received this letter during the project permitting process.
- Deed to the Property
- Additional documents that may be provided by the City Real Estate Division
 - Declaration of Covenant⁴
 - Required for all properties outside the City limits
 - Gives the City permission to annex the property upon the property becoming contiguous
 - Must be completed, signed, and submitted with the application
 - Partial Mortgage Release⁴
 - Required if there is a mortgage on the property being developed
 - Releases Columbia Water's utility lines and corresponding easements from the lien holder
 - If there is no mortgage on the property, the Owner must return the form to the City identifying the project name and address with the notation, "There is no mortgage on this property."
- Any additional requirements as deemed appropriate by the City
- Completed [Record Drawing Checklist](#) (OPTIONAL)
 - The City will use this checklist to review all projects
 - Submittal may help the Consulting Engineer include all relevant information
 - Should include the project name, location, phase, and City File Number

1. Do NOT send digital submissions or final revised print until requested. Final submittal should include ALL drawing revisions made during the review process. Drawings will be reviewed and must conform to the approved construction plans and [City Engineering Regulations](#).
2. Digital submittals must be saved:
 - With AutoCAD Version 2008 or newer for all DWG files
 - Using the format CF{CityFileNumber}_{ProjectName}.{FileType}. Fill in the brackets with the relevant information
Ex: If the City File Number was 00001 and the Project Name was MyProject, you would use CF00001_MyProject.DWG and CF00001_MyProject.PDF.
 - With all users given full file permissions
3. The DWG CD must conform to the South Carolina State Plane (SCSP) Coordinates and contain the correct spatial standards and digital submission standards as outlined in the [City of Columbia Engineering Regulations, Part 28: COC Digital Data Submission Standards](#). Additional requirements apply to all federal installations. Refer GIS questions to the City of Columbia Engineering GIS Technician, (803) 545-3400.

What to Expect After Applying

Upon receipt of all required application documents, Columbia Water will oversee the following:

- Bacteriological testing
 - Begins upon receipt of complete Record Drawings Submittal
 - Testing will take a minimum of 3 days and will require 2 samples approved consecutively.
 - The City's Inspector will then flow the fire hydrants for final approval and acceptance.
- Deeds will be prepared from the approved record drawings and forwarded to the Developer along with a Mortgage Release for proper execution.
- Upon receipt of complete Record Drawings Submittal and approval of the necessary tests, the City will issue a letter accepting ownership, operation and maintenance of the utility system. This letter, along with test results, will be forwarded to the Consulting Engineer.
- The Consulting Engineer must forward the Final Package to S.C. DHEC to request the Permit to Operate the new system.



Section VII: Utility Deeds

Upon receipt of the approved record drawings, the City will prepare the deeds for transfer of the utility system to the City.

- The current, legal Owner of the property must sign the deed.
- A Mortgage Release for the deed is required for execution by any mortgage holders of record. This will be prepared by the City Real Estate Division.
- This is a legally binding document that follows the land and is recorded at the appropriate County Register of Deeds Office. It will be reviewed in advance by the City's Legal Department. This document must be signed in the presence of an attorney. It must be submitted as a legal size (8 1/2" x 14") document. An Attorney Certification Form will also be provided with the document by the City Real Estate Division.



Section VIII: Pump Station & Street Deeds

Many developments will require pressure relief valves, pump station sites, or streets to be installed by the Developer. In these cases, the deeds to the sites or streets will need to be transferred to the City upon project completion.

Pressure Relief Valve and Pump Station Sites

In closing out a project with a Pressure Relief Valve or Pump Station Site:

- The Developer provides the City a recordable Boundary Survey (see [Sample Survey](#)) showing the PRV/Pump Station Site and access road.
 - The area of the site must be approved by the City Engineer
 - The site should measure 60'x60'
 - A 20' wide access road to PRV/ Pump Station Site should be included
 - The plat should be prepared on 8 ½ "x 14" paper
- The City will prepare the deed and transmit it to the Developer to transfer ownership of the site and access road to the City.

Streets (Final Plat)

See the [Record Drawing Checklist](#) in closing out a project with new streets:

- Final Plat must include:
 - Street widths
 - Diameters of cul-de-sacs
 - Total linear feet of all streets
 - Street names (all streets must have names)
 - Ownership of any alleyways, private streets, landscape zones, parking areas, and common areas
 - Streets must meet the City's requirements and pass all required field inspections for acceptance
 - For streets to be dedicated to the City:
 - Must adjoin another public right-of-way
 - Note on plat which streets are dedicated to the City for public use
- Final Plat submittal
 - One (1) copy to Engineering
 - Four (4) copies to Zoning
 - Two (2) copies to the Project Coordinator
 - Include [Form #2](#) with plat submittal
- Reviewed by both the City's Engineering Division and Zoning Division in accordance with the previously submitted record drawing
- The Final Plat is the boundary survey of the development site showing all lots, utilities, and structures. Upon Final Plat acceptance, submit:
 - One (1) recorded copy to Zoning
 - One (1) 11"x17" copy to the Project Coordinator
 - Follow the [Record Drawing Checklist](#)



Section IX: Application for Service

Before water and/or sewer service can begin, the Developer must receive a Permit to Operate from S.C. DHEC and apply for water and/or sewer service.

- Permit to Operate Application:
 - The City prepares the Final Package for the Developer including:
 - The City's letter accepting ownership, operation, and maintenance of the system
 - Approved pressure tests
 - Approved bacteriological tests
 - Fire hydrant flow tests

- The Consulting Engineer submits the application to S.C. DHEC with:
 - The City's Final Package
 - The Consulting Engineer's certification letter
 - Infiltration certification for all sewer projects
 - Two (2) sets of final approved record drawings
- S.C. DHEC reviews the application
- Upon approval, S.C. DHEC issues the Permit to Operate to the Developer
- Applying for water and/or sewer service:
 - Owner signs Declaration of Covenant and returns original to the City Project Coordinator for recording
 - Owner applies and pays any applicable fees
 - Water meters are installed and billing is set up
 - New water and/or sewer service begins



City of Columbia Services & Contacts

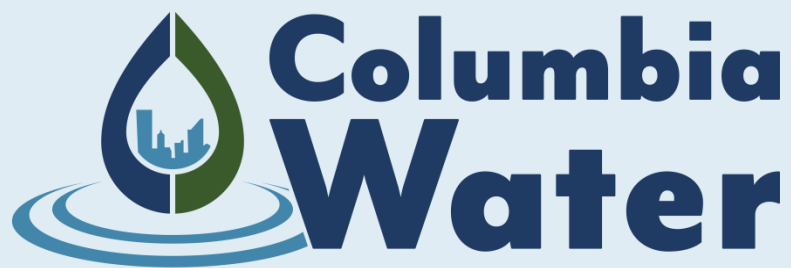
| Contact | Information Available or Service Provided |
|--|--|
| Ms. Michelle Brazell Assistant Engineering Administrator Phone: (803) 545-3246 | Water/ Sanitary Sewer Main Extension Agreements Encroachment Permits in City Right-of-Way Addressing inside City limits Change-In-Use Sewer Expansion Fees |
| EngSpecialServices@columbiasc.gov 803-545-3400 Jeremy.Yates@columbiasc.gov | Application and payment for Fire Hydrant Flow Test |
| Mr. Stephen Sealy Wastewater Treatment Plant Phone: (803) 545-0208 | Pretreatment: Fats, Oils, Grease Interceptor Program Compliance |
| Ms. Gale Nash Real Estate Division Manager Phone: (803) 545-3231 | Bonded Plats/ Easements for Bonding Boundary Surveys for Pump Stations & PRVs Easements /Easement Plats Hold Harmless Agreements Encroachment Agreements (Utility R/W Crossings) Release & Abandonment of Easements |

| | |
|---|--|
| <p>Mr. Scott Rogers Subdivision Plan Review Phone: (803) 545-3290</p> | <p>Utility Plan Review (Water and Sewer)</p> |
| <p>Mr. Andrew Livengood Annexation Coordinator Phone: (803) 545-3217</p> | <p>Annexation</p> |
| <p>Mr. Todd Beiers Building Official Phone: (803) 545-3420</p> | <p>Curb Cuts/ Entrance Drives/ Parking Lots Residential /Commercial Bldg. Inspections</p> |
| <p>Mr. Ali Kahn Floodplain Manager Phone: (803) 545-3386</p> | <p>Floodplain Management</p> |
| <p>EngProjects@columbiasc.gov Utility Project Coordinators Phone: (803) 545-3400</p> <p>Mr. Paxton Williams Engineering Administrator Phone: (803) 545-3250</p> | <p>Development Project Coordinator Final Plats / Bonded Plats Insurance for Construction Purposes Project Status Record Drawings Review Utility Testing</p> |
| <p>Mr. Tim Sox Construction Management Phone: (803) 545-3400</p> | <p>Pre-Construction Meeting Utility inspections Minor Field Changes During Construction Plan Changes/ Alternate Routes Utility Testing</p> |
| <p>Mr. Christopher Williams Special Services Phone: (803) 545-3400 EngSpecialServices@columbiasc.gov EngResearch@columbiasc.gov</p> | <p>Water/Sewer Tap/Meter Sales Availability of Water/ Sewer Service Copies of Record Drawings</p> |

Important Links

<https://columbiascwater.net>

- [City Application for Encroachment Permit](#)
- [City Engineering Regulations](#)
- [Delegated Review Program Checklist](#)
- [Fire Hydrant Flow Test Request](#)
- [Form #2](#)
- [Form #3 Lien Waiver](#)
- [Grease Traps or Interceptors](#)
- [Liability, Hold Harmless and Indemnification Agreement](#)
- [Pretreatment Agreements](#)
- [Record Drawing Checklist](#)
- [**SAMPLE** Boundary Survey](#)
- [SCDOT Application for Encroachment Permit](#)
- [Utility Review Checklist](#)



Drinking Water • Wastewater • Stormwater

1136 Washington St., 7th Floor

Columbia, SC 29201

(803) 545-3400

www.ColumbiaSCWater.net