

Residential Plan Requirements

What Is Considered a Residential Project?

A project is considered a Residential project when it is a single-family development whose improvements include but are not limited to roads, storm drainage, water and sanitary sewer.

When Does It Apply?

All Residential projects are required to be submitted and reviewed by Development Services. There are some exceptions and a determination is made on a case-by-case basis.

What Is The Basic Requirements for a Residential Project?

Basic Required Items

- | | |
|---|---|
| <input type="checkbox"/> Notice of Intent (NOI) | <input type="checkbox"/> Full set of Construction Site Plans (to scale)(.pdf) |
| <input type="checkbox"/> Comprehensive SWPPP (C-SWPPP) | <input type="checkbox"/> 2012 Checklist for Design Professionals |
| <input type="checkbox"/> Permanent Stormwater Maintenance Agreement | <input type="checkbox"/> Other permits if applicable (e.g. USACE permit encroachment permits, and etc.) |

A Comprehensive SWPPP Must Include:

- Certification Statement
- Narrative
- Construction Sequence
- Site & Environmental Features (*Wetlands Flood Plain, Ditch, Creek, etc.*)
- BMP Narrative (*During & Post Construction for Water Quality & Quantity*)
- Management of Non-Stormwater Discharges
- Engineering Reports (*Calculations to Include:*)
 - Curve Number
 - Pre & Post Drainage Maps
 - Pre & Post Discharge Analysis
 - Permanent Water Quality Analysis
 - Dewatering Calculations
 - Sedimentology & Trapping Efficiencies
 - Detention Analysis (Includes:)
 - Summary Table
 - Peak Inflows vs Outflows
 - Pre vs. Post Discharge Velocities
 - Max Water Surface Elevations for the 2, 10, 25, and 100 Year Storms
 - Stage Storage Discharge Table
 - Dewatering Time

C-SWPPP (Continued)

- Information on How Temporary & Permanent Water Quality will be Addressed
- Geotechnical Report (*If Applicable*)
- Permanent Stormwater Management Maintenance Plan (*Include Temporary Plan*)
- Permanent Stormwater Maintenance Agreement.
- Buffer Zone Management
- Potential Sources of Pollution
- Maps: Topo (*Contours*), Floodway, Vicinity, & Soils
- Total Maximum Daily Loads (*TMDL & 303d List: Identify impaired areas in the receiving waters and show how the construction activities will not contribute or cause further impairments and, if there is a TMDL, describe the controls in place to meet the TMDL requirements*)

Construction Plans Should Include:

- Limits of Disturbance
- All BMP Locations
- Signed & Sealed Certification Statements
- Construction Sequence (*Subject to Phased Requirements*)
- 2012 SCDHEC Standard Notes
- Permanent & Temporary Stabilization
- Separate Plan Sheets for Phased Construction (*See Section Below on Phased Construction*)
- Scale, North Arrow, & Legend on each Plan

Types of Plans that Must be Submitted:

- Cover Sheet
- Existing Condition Plan
- Site Layout Plan
- Grading Plan

Types of Plans (*Continued*):

- Drainage and Water Quality Plan
- Water Quality Buffer Plan (*if Applicable*)
- Landscape Plan
- Utility Plan
- Traffic & Roads Plan (*If Applicable*)
- Profiles Sediment Basin & Water Quality Pond
- Profiles for Roads
- Profiles for Drainage
- Profiles for Sewer (*If Applicable*)
- All Details (*BMPs, Drainage, Signage, & etc.: See Section Below on Details*)
- Sediment & Erosion Control Plan (*Subject to Phased Requirements: See Section Below*)

Phased Construction Plans Requirements

➤ 5-10 acres (Minimum 2 Phases):

- Initial Land Disturbance Phase (Necessary controls to be installed prior to ***initial/mass*** grading):

Some Examples to Include in the Initial Phase are:

Construction Entrance

Perimeter BMPs

Sediment & Erosion Control BMPs (Ponds & Basins, Traps, Stormwater Conveyance Measures)

Stabilization Phase (Necessary controls to be installed, maintained or retrofitted until final

Stabilization is achieved.)

➤ 10 acres or more (Minimum 3 Phases):

- Initial Land Disturbance Phase (Necessary controls to be installed prior to ***initial/mass*** grading):

- Some Examples to Include in the Initial Phase are:

Construction Entrance

Perimeter BMPs

Sediment & Erosion Control BMPs (Ponds & Basins, Traps, Stormwater Conveyance Measures).

If Applicable: show locations of swales and/or diversions to be installed to indicate how runoff is routed on site during construction to the BMPs.

Construction Phase

- Additional BMPs: To control, maintain, and contain sediment within the site. For example, stormwater conveyance measures that may be needed to route stormwater as the infrastructure is installed.

Stabilization Phase (Necessary controls to be installed, maintained or retrofitted until final

Stabilization is achieved.)

Note: Construction Sequence must correspond with their respective Phased Plan Sheet.

Resources:

- NOI Application: [2012 NOI Form d-2617](#)
- SWPPP Template: <http://www.scdhec.gov/Environment/docs/SWPPP-CGP-template.doc>
- Stormwater Management & Sediment & Erosion Control Plan Review Checklist for Design Professionals: [DHEC SWPPP Checklist](#)
- SCDHEC BMP Handbook: [DHEC BMP Manual](#)
- Permanent Stormwater Maintenance Agreement: [DHEC Permanent Stormwater Maintenance Agreement](#)
- SC NPDES General Permit for Stormwater Discharges from Construction Activities: [Construction General Permit](#)
- Construction Sequence Guidance: [DHEC Sample Construction Sequence](#)
- Larger Common Plan (LCP): [DHEC Larger Common Plan \(LCP\) Guidance](#)
- 303(d) List: http://www.scdhec.gov/Environment/docs/tmdl_10-303d.pdf
- Approved TMDL List: [DHEC Approved TMDL List](#)
- Richland County Land Development Ordinance (Stormwater Pollution Prevention Plans): http://rcgov.us/Portals/0/Departments/DevServices/ENGLandDevelopment/Docs/Stormwater%20Management%20and%20SWPPPs%2026_202.pdf

Details/Specifications: (Below is a list of commonly used details)

- Silt Fence <http://www.scdhec.gov/Environment/docs/sedim-siltFence.pdf>
- Construction Entrance <http://www.scdhec.gov/Environment/docs/sedim-construction.pdf>
- Sediment Basins & Detention Ponds http://www.scdhec.gov/Environment/docs/tmdl_10sites.pdf
- Cleanout Stake and Elevation http://www.scdhec.gov/Environment/docs/Appendix_H.pdf
- Baffles http://www.scdhec.gov/Environment/docs/Appendix_H.pdf
- Skimmer & Dewatering http://www.scdhec.gov/Environment/docs/Appendix_H.pdf
- Forebay and Spillway http://www.scdhec.gov/Environment/docs/Appendix_H.pdf
- Outlet Protection <http://www.scdhec.gov/Environment/docs/eros-outlet.pdf>
- Rock Check Dams <http://www.scdhec.gov/Environment/docs/sedim-Dams.pdf>
- Sediment Traps <http://www.scdhec.gov/Environment/docs/sedim-Trap.pdf>
- Sediment Tubes <http://www.scdhec.gov/Environment/docs/sedim-Tubes.pdf>
- Level Spreaders <http://www.scdhec.gov/Environment/docs/runoff-Spreader.pdf>
- Swales and Berms <http://www.scdhec.gov/Environment/docs/Runoff-dMeasures.pdf>
- Erosion Control Mats <http://www.scdhec.gov/Environment/docs/eros-mats.pdf>
- Catch Basins [SCDOT Catch Basin Details](#)
- Seeding Schedule <http://www.scdhec.gov/Environment/docs/eros-tSeeding.pdf>
- Inlet Protection <http://www.scdhec.gov/Environment/docs/sedim-inletprotect.pdf>
- Bioretention <http://www.scdhec.gov/Environment/docs/wqc-bioretention.pdf>
- Infiltration http://www.scdhec.gov/Environment/docs/Appendix_J.pdf
- Low Impact Development BMPs http://www.lid-stormwater.net/lid_techniques.htm
- Roads [Richland County Road Design Standards](#)
- Signage, Striping, and Sidewalks (ADA Compliant)

Note: DHEC Coverage may be required regardless of the amount of acres disturbed

Special Conditions

- **Detention Waivers:** A detention waiver must be submitted as separate document. Click on link for Detention Waiver Requirements: [Detention Waiver Requirements](#)
- **Low Impact Development (LID) and Alternative Designs:**
 - For all infiltration practices, submit a copy of the geotechnical report indicating the soils have sufficient permeability to allow water to infiltrate.
 - Submit all plan and details for all proposed alternative and/or LID BMPs.
 - Submit all calculations where applicable related to sedimentology, peak flow rate, pre & post discharge, trapping efficiency, and dewatering.
 - Submit information on BMP installation requirements and specifications.
 - Submit Permanent Stormwater Maintenance Agreement and Permanent & Temporary Maintenance Plan(s).
 - Note that LID and infiltration practices, in general for post construction stormwater management, should be constructed only after the drainage area to these practices has been stabilized.
 - Note that other BMPs not listed in SC DHEC Stormwater Management Handbook or Richland County Stormwater Manual must be designed, installed, and maintained to achieve maximum pollutant removal to the extent that the permittee's discharges will not cause or contribute to violations of water quality standards, as outlined by the design criteria identified in *State Regulation 72-307 – Specific Design Criteria, Minimum Standards and Specifications, unless specifically exempted by SC Regulation 72-302.A.*
- **Regional Detention/Retention:**
 - If using off-site or regional detention, submit calculations that include of the entire proposed development and any areas that could potentially be developed in the future. If the calculations have already been completed in an earlier phase, be sure to submit them with the latest proposed project and ensure that the submitted calculations consider both the past development, proposed, and any potential future development that may utilize the detention pond or basin.
 - Submit Permanent Stormwater Maintenance Agreement and Permanent & Temporary Maintenance Plan(s).

- **Roads:**
 - Include profiles and details that include specifications on all surface courses and composition.
 - Provide information used to determine strength of pavement component layers, paving course stages and stage construction.
 - Place calculated structural number on plans.
 - Note location of stop signs, road name signs and all pavement markings on plans. Also provide details for all signage and pavement markings and include a note that states: *all pavement markings within the right-of-way are to be thermoplastic.*
 - If sidewalks are proposed, please provide sidewalk detail to reflect the sidewalk cross slope as no steeper than 1:48. **2010 ADA Standards for Accessible Design section 403.3.**
 - If applicable, provide a copy of the SCDOT encroachment permit application.

➤ **Required Geotechnical Information & Inspections:**

- **Compaction Testing Required When:**
 - Detention pond built with fill
 - Detention pond dikes and trenches
 - Storm drain boxes placed in fill areas
 - Trenching and Backfilling for Storm Drainage Lines
 - Roadway Embankments
 - Underdrains
 - Sub-Grade surface
 - Base Course
- **Other Required Geotechnical Testing:**
 - Infiltration Rates (*Required for all Infiltration BMPS*)
- **Proof Rolls Required:**
 - Sub-Base
 - Base Course
 - Curb & Gutter
 - Road Easement

Note: Submit detailed a Geotechnical Report
Asphalt Core Testing for all phases of paving: Binder, Intermediate, and Surface Course

As-Builts:

- Closeout Requirements:
 - Submit Record Drawing (*Include: As-Builts, Storm Drainage & Inverts, Roads, Drainage Profiles, Signage & Pavement Markings, Any Permanent Stormwater BMPs, Buffers, & Easement Widths*)
 - Submit Record Drawing Plan in pdf & (Digital) dwg Formats
 - Notice of Termination (NOT)
 - Approved SCDOT Permit (*If Applicable*)
 - Approval for Water Services & DHEC Approval if Well (*If Applicable*)
 - Approval for Sewer Services & DHEC Approval if Septic (*If Applicable*)
- Sidewalks: Show Linear Footage (*Plan View*)
- Sidewalk Crosswalk Slope (*ADA Compliance*)
- Storm Drainage Profiles (*Design vs. As-Built*)
- Storm Drainage (*Plan View*) Locations & Easements (*Widths*)
- Pavement Markings And Signage.

- As-Built Surveys:
 - All existing grades, contours, and depths of structures
 - All elevations and dimensions of all outlet structures, including:
 - Pipe & orifice inverts and diameters
 - Weir elevations and dimensions
 - Riser dimensions and elevations
 - Emergency spillway dimensions and elevations
 - Locations and inverts for all pipes discharging into pond(s)
 - Spot Elevations along the top of structural BMP's embankment
 - Contours, dimension, and locations of all structural components (e.g. forebays, level spreaders, rip-rap aprons, inlet structures) of all structural BMPs.
 - Notice of Termination (NOT)
- Bond Information

Review Process

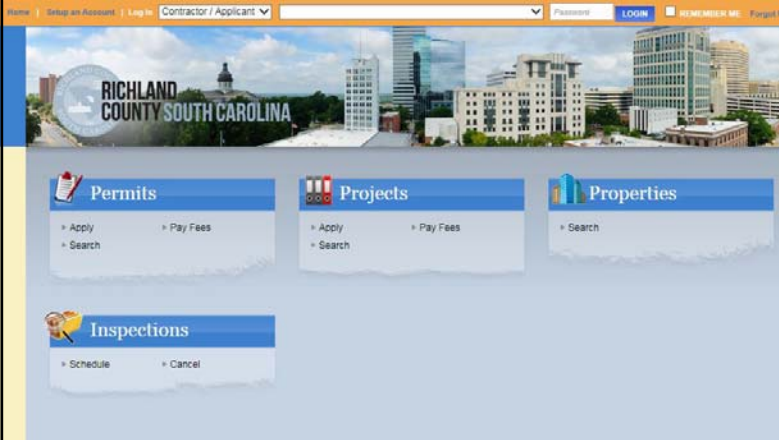
Step 1: Upload project into Trakit9 (Link) SELECT: [\[Apply for "Project"\]](#)

- Commercial Project Reviews are part of the 17-review process.

Step 2: Project is reviewed by the Department (17) Business days within and an email notification will be sent with status.

- If **Approved**:
 - Applicant will receive overall planning approval letter and a copy of the email sent to DHEC approving the land disturbance portion of the project.
 - Once DHEC has been notified that the County has approved the project (DHEC email), the fees can be paid directly to DHEC.
 - Once the project has been approved by Planning and the NPDES coverage letter has been issued by DHEC, the applicant may apply for the Land Disturbance Permit in **eTrakit**, if they are ready to schedule a Pre-Construction Meeting. When applying for the Land Disturbance Permit in **eTrakit**, choose "Apply" under "Permit" and select Land Disturbance Permit. Be sure to upload the SCDHEC Coverage Letter and (if applicable) the approved SCDOT Encroachment Permit. Upon completion, this will prompt a request to the County for a Pre-Construction Meeting, and you will be contacted within 24 (business) hours.
- If **Disapproved**:
 - The applicant will receive a comment letter that needs to be sufficiently addressed before resubmittal. When resubmitting a revised project, include a written summary of how the changes were addressed.

<http://etrakit.rcgov.us/etrakit3/>



www.richlandmaps.com



To SETUP a New Account: <http://etrakit.rcgov.us/etrakit3/publicUserAccount.aspx?action=npa>