



## CITY OF HENDERSONVILLE LAND DISTURBANCE PERMIT APPLICATION CHECKLIST

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

**Date:** \_\_\_\_\_

### **GENERAL DOCUMENTS REQUIRED**

- Completed Application with Application Fee
- Include a copy of all required permits (Include the permit applications)
  - TDEC Permits (NOC, ARAP, Sinkhole UIC, etc.)
  - USACE Permits (Section 404, etc.)
  - TVA Permits
- Complete EPSC set of plans and any other plan sheets required to evaluate the EPSC Plan (Site Layout, Grading Plan, Landscaping Plan, etc.)
- Drainage Report
- Copy of the USDA Web Soil Survey
- Copy of the FEMA Map
- Copy of the National Wetlands Inventory Overlay

### **SPECIFIC PLAN REQUIREMENTS**

**Note: All EPSC plan sheets should contain the following:**

- Show and label the 100-year floodplain and all hydrologic features
- Show and label any required buffers. Show the stream buffer sign locations.
  - See buffer design criteria below
  - Show the stream buffer sign locations
  - Install High Visibility Fencing around the hydrologic features
- Show the survey benchmark, property lines, ROW lines, and easements
- Label the roadways
- The limits of disturbance should encompass all EPSC measures and not overlap them in the plans. Note the acreage of the limits of disturbance.
- Show and label the site outfalls. Note the acreage.



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### COVER SHEET

- Include the project name and site address
- Include Owner and Engineer's information
- Provide a vicinity map with north arrow

### EXISTING CONDITIONS / DEMOLITION SHEET

- Existing topography
- Tree Survey and Tree Removal (To be reviewed by Planning Department)
- Existing utilities & easements (storm sewer, gas, electric sanitary sewer, etc.)

### EPSC STAGE 1 PLAN SHEET

- Pre-Development Conditions
- Show and label the existing contours
- Show the existing site features and stormwater system
- Show the existing forest line
- Show any haul roads, stream crossings, parking areas, and/or equipment staging areas that may be required prior to the roadway installation. Provide appropriate pollution prevention measures such as fuel tank secondary containment.
- Provide perimeter EPSC measures
- Provide the construction exit and concrete washdown location(s)
- Provide any required sediment basins or traps
- Provide EPSC measures around stockpile locations
- Provide outlet protection for all concentrated discharges
- Provide check dams in all channels receiving drainage from disturbed areas. These do not always need to be rock check dams. Specify weir height and spacing.
- Provide all other EPSC measures required to control sediment during the initial stage of construction

### EPSC STAGE 2 PLAN SHEET

- Intermediate contours for Pre-Roadway Binder Conditions
- Show and label the existing and proposed contours
- Show the proposed site layout as it will exist during pre-binder conditions. Include the outline of the roadway.
- Show the proposed stormwater features and any existing stormwater features to remain
- Adequate perimeter EPSC measures, the construction exit, and concrete washdown locations must remain in place
- Sediment basins/traps should remain in place unless replaced by permanent detention ponds



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- Sediment should be controlled as close to the disturbance as possible to prevent sediment travelling across the site. Perimeter EPSC measures should be considered secondary treatment.
- Provide inlet protection for all proposed inlets that will receive flow at this stage
- Provide outlet protection for all concentrated discharges
- Provide check dams in all channels receiving drainage from disturbed areas.

### EPSC STAGE 3 PLAN SHEET

- Post-Roadway Asphalt Conditions
- Show and label the existing and proposed contours
- Show the final site layout including all stormwater infrastructure
- The concrete washdown location should remain in place
- Provide FlexStorm Catch It (or equivalent) inlet protection for all right of way inlets
- Provide any temporary EPSC measures that could not be installed until Stage 2 was complete.
- Note which EPSC measures shown in Stage 3 are permanent (such as culvert outlet protection)
- Call-out all stabilization measures for the site. Include seeding specifications, including temporary and permanent seed, soil amendments based on site specific soil test(s), mulch, seeding schedule and/or sod specifications and planting schedule.
- Remove all rip-rap aprons, and provide permanent downstream stabilization

### EPSC DETAIL SHEETS

- Provide details for all EPSC measures shown in Stages 1-3
- Details must meet minimum design criteria specified in TDEC EPSC Handbook. It is the City's preference that designers use TDEC provided details.
- Provide a stream buffer sign detail (if required)

### REQUIRED PLAN NOTES

- Note if the site drains to impaired (habitat alteration or siltation) or exceptional TN waters. If so, note the stream name.
- Note the TDEC NOC number if applicable
- Note the FEMA information for the site. List the community map, panel number, and date.
- Add a note that the Site Designer must certify that all initial EPSC measures are installed per the plan and details prior to beginning grading operations. The Site Designer must also perform a site assessment after 30 days of construction within watershed(s) for outfalls with drainage areas greater than or equal to 10 acres (or 5 acres if draining to waters with unavailable parameters for siltation or habitat alteration or to ETWs).
- Add a note the Contractor is required to sweep the streets daily where the construction exit(s) is located



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- Add a note stating that all slopes 35% or steeper shall be stabilized with EPSC matting or sod. Slopes steeper than 35% must be stabilized within 7 days of stoppage in work to the area.
- Note that all disturbed areas must be stabilized within 14 days of any stoppage in work to the area
- Add a note stating that the Contractor shall repair/replace any EPSC measures that are failing or in disrepair as indicated on the Twice Weekly TDEC Construction Inspection Report (Appendix C of the Construction General Permit) and/or when notified by the City Stormwater Inspector. These repairs/replacements must be in accordance with the Construction General Permit timeline and/or the timeline provided by the City Stormwater Inspector.
- Note that all slopes 3:1 or steeper shall be stabilized with EPSC matting or sod
- Note that the Contractor shall repair/replace any EPSC measures that are failing or in disrepair as indicated on the 72 hour TDEC Construction Inspection Report and/or when notified by the City Stormwater Inspector
- Add a note stating that all dewatering practices on the site must comply with TDEC BMP Manual's dewatering criteria indicated in Section 7.21
- Add a note stating the proposed construction sequence- A description of when EPSC measures are to be implemented in relation to construction milestones and how permanent stormwater control measure(s) (SCMs) will be protected during construction.



### DESIGN CRITERIA

- All sites must at a minimum meet the TDEC CGP required technical standards for erosion prevention and sediment control measures. Sites discharging into streams with available parameters shall be designed to treat a 2 year, 24 hour storm. Sites discharging into streams with unavailable parameters or ETWs shall be designed to treat a 5 year, 24 hour storm.
- For an outfall in a drainage area of a total of 10 or more acres, a temporary sediment basin is required that provides storage and a spillway system for controlling runoff from a 2 year, 24 hour storm for each acre drained. A permanent pool must be designed into the sediment storage zone. In addition, a sediment forebay is required to aid in maintenance. Discharges from sediment basins cannot cause an objectionable color contrast with the receiving stream. Sediment basins must be designed to safely pass the 25 year, 24 hour storm.
- For streams with unavailable parameters or ETWs, sediment basins are required for a drainage area of 5 or more acres, and the basin must be designed to control volume of runoff from a 5 year, 24 hour storm. A permanent pool must be designed into the sediment storage zone. In addition, a sediment forebay is required to aid in maintenance. Discharges from sediment basins cannot cause an objectionable color contrast with the receiving stream. Basins must be designed to safely pass the 25 year, 24 hour storm.
- A 30-foot (minimum 15-foot) natural water quality riparian buffer is required for all construction sites discharging into streams with available parameters. The buffer shall be



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measured from the top of the stream bank independent from the opposite stream bank. All averaging shall occur on the same side of the stream buffer encroachment, immediately up or downstream, and shall be applied in the same construction phase and section permitted. Averaging for one buffer cannot be applied using the opposite stream bank.

- A 60-foot natural (minimum 30-foot) water quality riparian buffer is required for all construction sites discharging into streams with unavailable parameters or ETWs. The buffer shall be measured from the top of the stream bank independent from the opposite stream bank. All averaging shall occur on the same side of the stream buffer encroachment, immediately up or downstream, and shall be applied in the same construction phase and section permitted. Averaging for buffer encroachment cannot be applied using the opposite stream bank.



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### DRAINAGE REPORT

- DRAINAGE MAPS FOR PRE-DEVELOPMENT AND EACH EPSC STAGE**
  - Include drainage areas to all EPSC measures
  - Label the acreage and CN value for each drainage area
  - Label the outfall areas with acreage noted
    - Provide a plan to handle any increased runoff to an outfall
  - Include flow arrows
  - Label the contours
  - Off-site flows that are part of the drainage areas must be included
  
- SEDIMENT TRAP AND SEDIMENT BASIN CALCULATIONS**
  - Sediment traps/basins must be able to handle the 2-year storm or 5-year storm if draining to impaired or exceptional TN waters
  - Sediment traps/basins must be able to safely pass the 25-year storm
  - Include stage/storage tables to show the 2-year, 5-year, and 25-year stormwater elevation in the sediment trap/basin
  
- DIVERSION DITCH CALCULATIONS**
  - Ditches must be designed to handle the 2-year storm or 5-year storm if draining to impaired or exceptional TN waters
  - Note the ditch dimensions, slope, manning's n, and velocity
  
- TEMPORARY CULVERT CALCULATIONS**
  
- OUTLET PROTECTION CALCULATIONS**
  
- SILT FENCE CALCULATIONS**
  - Minimum of 100 LF of silt fence per  $\frac{1}{4}$  acre of drainage area
  - Only silt fence parallel to the contours should be used in the calculation

**Note:** All projects are to provide, at a minimum, the items specified in this EPSC Plan Review Checklist and must meet or exceed the requirements of the TDEC EPSC Handbook. **Check the City of Hendersonville Stormwater website for the most recent Plan Review Checklist.**