

GREEN ROOF SCM DESIGN CHECKLIST

**Stormwater Management Division
c/o Development Services Department**

One Exchange Plaza, 4th Floor
Raleigh, NC 27601
Telephone (919) 996-3773

I. PROJECT INFORMATION

Project Name: _____ Phase: _____
 Project Address: _____ Disturbed Area (sf): _____
 PIN: _____ Case #: _____ Submittal Date: _____
 Previous Permit numbers (if applicable): _____
 Zoning District: _____
 Legal Name of Owner: _____
 Owner Contact: _____ Phone: _____
 Owner Address: _____
 Design Contact Person: _____ Phone: _____
 Design Contact Email: _____
 The regulatory drainage basin in which the site is located: _____
 The water supply watershed in which the site is located: _____

| Function of Facility [check all that apply]: | |
|--|--|
| <input type="checkbox"/> | Nutrient (Total Nitrogen) Reduction |
| <input type="checkbox"/> | Green Stormwater Infrastructure |
| <input type="checkbox"/> | TSS Reduction |
| <input type="checkbox"/> | Peak Flow Rate Attenuation |
| <input type="checkbox"/> | <input type="checkbox"/> 1-Year event |
| <input type="checkbox"/> | <input type="checkbox"/> 10-Year event |
| <input type="checkbox"/> | <input type="checkbox"/> 100-Year event |
| <input type="checkbox"/> | <input type="checkbox"/> Other [_____] |
| <input type="checkbox"/> | <input type="checkbox"/> Other [_____] |

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- II. **SUBMITTAL REQUIREMENTS** - See COR Stormwater Management Design Manual Chapter 5 for additional guidance. This completed checklist shall be submitted to the City of Raleigh with any proposed Green Roof. All files shall also be submitted electronically via CD or flash drive.

| Routed flows and water surface elevations (WSE) at SCM [as applicable]: | | | |
|---|--------|---------|-----------|
| Storm Event | Inflow | Outflow | WSE |
| 1-Year | | | |
| 10-Year | | | |
| 100-Year | | | |
| ____-Year | | | |
| Peak flow rates at immediate point of analysis to which the SCM drains: | | | |
| Condition | 1-year | 10-year | ____-year |
| Pre-development | | | |
| Post-development | | | |

| General Design Criteria | |
|--------------------------|---|
| <input type="checkbox"/> | Sizing: The design volume of the SCM accounts for the runoff at full build-out from all surfaces draining to it (calculations provided in Stormwater Development Analysis). |
| <input type="checkbox"/> | Design Storm Volume: _____ cf |
| <input type="checkbox"/> | Maintenance Access: SCM has been provided with adequate access per City standards. |
| <input type="checkbox"/> | Easements (except for SCMs located on single family residential lots): Includes maintenance access, entire SCM footprint, and an additional 10 ft or more around the SCM. |
| <input type="checkbox"/> | Single Family Residential Lots: Plats for residential lots that contain an SCM shall include the location of SCM, typical detail of SCM, and note that the SCM on the property is required to meet stormwater regulations and that the property owner may be subject to enforcement actions if the SCM is removed, relocated, or altered without prior approval. |
| <input type="checkbox"/> | Operation and Maintenance (O&M) Agreement. |
| <input type="checkbox"/> | Operation and Maintenance (O&M) Plan. |
| <input type="checkbox"/> | <i>Operation and Maintenance (O&M) Manual Submittal Checklist.</i> |

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| Specific Green Roof Design Criteria | |
|-------------------------------------|--|
| <input type="checkbox"/> | Media Specification: The organic fraction of the media is no more than 10% by volume. |
| <input type="checkbox"/> | Design Volume: The design volume equals the media depth times the plant available water (PAW). |
| <input type="checkbox"/> | PAW of Media: _____ % |
| <input type="checkbox"/> | Minimum Media Depth: The media depth is at least 4 inches (or 3 inches if the roof is irrigated – note, an irrigation plan is required). |
| <input type="checkbox"/> | Media Depth: _____ in |
| <input type="checkbox"/> | Vegetation: The planting plan has been designed to achieve a 75% vegetative cover within 2 years. |
| <input type="checkbox"/> | Maximum Storm Depth: _____ in |
| <input type="checkbox"/> | Slope: The green roof does not have a slope (pitch) greater than 8%, unless a container system designed for a greater slope has been utilized. |
| <input type="checkbox"/> | Roof Slope: _____ % |
| <input type="checkbox"/> | A geotextile layer and a drainage layer has been placed beneath the media for roofs with slopes less than 2%. |
| <input type="checkbox"/> | Structural Evaluation: The roof meets its hydrologic and structural goals and is strong enough to support the loads associated with construction, maintenance, and ongoing loads of media, plants, and water. |
| <input type="checkbox"/> | A NC licensed structural engineer has sealed the structural evaluation of the roof. |
| <input type="checkbox"/> | Safety: Measures have been implemented to minimize the potential for dangerous falls from the green roof (e.g. railing, fencing, suitable access, etc.). |

| The SCM Plan Submittal shall also include the following elements: | |
|---|--|
| <input type="checkbox"/> | A plan view of the SCM, with grading and appropriate critical spot shots, has been provided. |
| <input type="checkbox"/> | A profile (showing all relevant component elevations and WSEs) through the riser, dam, and outlet structure/outfall has been provided. |
| <input type="checkbox"/> | Details of other required SCM elements have been provided. |
| <input type="checkbox"/> | All supporting design calculations (including all applicable site design calculations and drainage area exhibits) have been provided. |

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III. PROFESSIONAL CERTIFICATION

Name: _____

Contact Email: _____

Contact Phone Number: _____

Professional Seal:



FOR REVIEW ONLY