



STORMWATER MANAGEMENT FACILITY **POST CONSTRUCTION VERIFICATION DOCUMENT** **SUBMITTAL CHECKLIST**

2.0 Bioretention **Submittal Requirements**

- Post Construction Verification Document survey plan in accordance with the items of this Checklist
- Supporting calculations in accordance with the items of this Checklist
- A copy of the completed Post Construction Verification Document Submittal Checklist
- Stormwater Management Facility Construction Checklist completed during construction of the facility, if applicable
- Narrative stating whether the BMP was constructed in accordance with an approved plan or if not constructed to plan, provide justification, approvals and supplement calculations as required. Please include the plan or applicable revision approval being used for the PCVD.
- Geotechnical engineer's report, if applicable
- Resubmittal documents to include point by point response letter as applicable.

Post Construction Verification Document **Plan Requirements**

All Plans:

- Plans must be submitted on minimum 24" x 36" sheets
- Provide a location map on the plan
- Provide a north arrow on the plan
- Provide all applicable BMP O&M notes
- Provide location of BMP by labeling Latitude/Longitude
- Specify total acres treated by BMP
- Specify impervious acres treated by BMP
- Responsible party for maintenance including phone number and email address

The title block must include:

- Project name indicating "Post Construction Verification Document" in the plan title
- Name, address, telephone and fax numbers of the individual preparing the plan
- Scale of plan (maximum plan scale accepted will be 1"=50')
- Date of the survey
- Hundred, County, and State
- Street address of the project site
- Signature and seal of Delaware Registered Professional Engineer or Professional Land Surveyor



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Delineate and properly label the following (as applicable):

- Roads adjoining the stormwater management facility
- Property lines adjacent to the stormwater management facility
- Easements (i.e. drainage, utility, access, etc.) adjacent to the stormwater management facility

Provide the following as it relates to the bioretention facility's surface area and available storage:

- Post construction verification contours of the bioretention facility shown in red, including any forebays, at 1-foot intervals. This should be overlaid on the previously approved plan.
- A minimum of two cross sections showing elevations, inside slopes, top width and backslope, as applicable (to scale). Cross sections should be taken through inlet and outlet structures as applicable.
- Lowest top of bank elevation ****The constructed top of bank elevation may be no lower than the design elevation for top of bank.*
- Calculations of the surface area of the bioretention soil surface. ****The constructed area of the bioretention surface shall be no less than 90% of the design surface area.*
- Calculations of the volume of the bioretention facility as constructed with incremental storage and cumulative storage volumes in cubic feet for each one-foot elevation contour as well as the design incremental/cumulative storage volumes in a table. ****The constructed volume of the bioretention storage shall be no less than 90% of the design volume.*

Provide the following information related to the inlet and outlet structures within the bioretention facility. ****The constructed elevation of any structure shall be within 0.15 foot of the design:*

- Diameter and material of all inlet and outlet pipes
- Invert elevations of all inlet and outlet pipes
- Dimensions (length, width, depth, d50) for all areas of rock outlet protection
- Dimensions and material of overflow structures
- Profile through principal spillway showing inverts and dimensions of all pipes, weirs, orifices, risers and other appurtenances, as applicable (to scale)
- Cross-section of emergency spillway (to scale)
- Profile through emergency spillway (to scale)

****When the allowable tolerances are exceeded for bioretention facility surface area or volume or structure elevations, supplemental calculations must be submitted to determine if the bioretention facility, as constructed, meets the design requirements. Submit the following:*

- Calculations of outflow from the bioretention facility for all design storms. Routing computations must be based on the constructed volumes and elevations for the facility.
- Calculations demonstrating that the design requirements have been met in the constructed condition.