

### TOWN OF MIDDLETOWN

19 West Green Street Middletown, DE 19720 PHONE: 302-378-2711 • WWW.MIDDLETOWNDE.ORG

# STORMWATER MANAGEMENT FACILITY AS-BUILT INFORMATION

Project Name:

Date Submitted:

# **1.0 Minimum Submission Information**

- 1.1 \_\_\_\_\$250 review fee per BMP, payable to the Town of Middletown
- 1.2 \_\_\_\_One (1) paper copy of bound as-built package and electronic file consisting of: (all originals, signed and sealed, and dated)
  - 1.2.1 \_\_\_\_\_Stormwater Management Facility As-Built Information (Form)
  - 1.2.2 \_\_\_\_\_All applicable individual Stormwater Construction Checklists (Form)
  - 1.2.3 \_\_\_\_\_Daily CCR reports throughout the construction and stabilization of the facility
  - 1.2.4 \_\_\_\_Plans
  - 1.2.5 <u>Narrative Report consisting of the following items:</u>
    - 1.2.5.1 <u>Identification of any discrepancies from the regulations</u> and/or approved plans and any design changes from the original design
    - 1.2.5.2 \_\_\_\_\_Identification of any installation issues
    - 1.2.5.3 \_\_\_\_\_Revised volume and routing computations along with an evaluation of the facility, if applicable. (If necessary modifications to the facility or outlet structure may be required)
  - 1.2.6 \_\_\_\_\_Certification from a Delaware RLA of landscape plantings within the facility, if applicable
  - 1.2.7 \_\_\_\_Outfall Data Sheet(s)
  - 1.2.8 Copy of the Post Development Drainage Area Plan submitted with the approved design in the electronic form of a CAD file with the .DWG extension. \*If the drainage area has changed, provide a revised drainage area plan and file.

#### 2.0 Minimum Required Plan Information

- 2.1\_\_\_\_24" x 36" Sheet
- 2.2 Engineering firm and address, phone number and fax number
- 2.3 \_\_\_\_\_Record subdivision name, Instrument number, and Town project number.
- 2.4 Name, address, phone number and fax number of maintenance corporation representative or owner
- 2.5 \_\_\_\_Hundred, County, State
- 2.6 \_\_\_\_\_Scale (must match design plan)
- 2.7 \_\_\_\_Date of Survey
- 2.8 \_\_\_\_\_Signature, seal and date of P.E. or P.L.S.
- 2.9 \_\_\_\_Certification as prescribed below:

I, the undersigned, hereby certify that I am a Professional Engineer / Land Surveyor registered in the State of Delaware. To the best of my knowledge and belief, I certify that the stormwater management facility, as shown on the Stormwater Management Facility As-Built Plan prepared by

\_\_\_\_\_\_ and dated\_\_\_\_\_, is in general compliance with the latest approved Sediment and Stormwater Plan.

Signature and Seal of Professional

Date

- 2.10 \_\_\_\_\_Adjoining roads with names
- 2.11 Property lines
- 2.12 Easements
- 2.13 <u>Maintenance access</u>
- 2.14 \_\_\_\_\_Sediment disposal area per Record Plan
- 2.15 Contours at 1-2 foot intervals based on design plan datum
- 2.16\_\_\_\_Type, size, length of pipes
- 2.17\_\_\_\_Rock outlet protection with pipe diameter, length, width, depth and size of rock
- 2.18 Location plan (1"=800 scale)
- 2.19 North arrow

2.20 Facili	y Data as	prescribed below	(required for	each facility)
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Facility Type	
Impervious	
Cover (ac.)	
DE State Plane	N:
Coordinates	W:
GPS Coordinates	Latitude: N Longitude: W
Drainage Area	
to Facility	
(ac.)*	

\* If there are BMP's in a series, start with the most upstream BMP and assign the appropriate drainage area to it; proceed downstream adding only the incremental increase in drainage area at each BMP.

3.0 The as-built drawing shall include a complete as-built survey of **all** design elevations of the facility in plan view and, at a minimum, the following:

#### **Cross-Sections and Details**

- 3.1 \_\_\_\_\_Through each pipe discharge into the basin (include forebays)
- 3.2 \_\_\_\_\_ Through outfall structure
- 3.3 <u>Through principal spillway including outfall treatment such as stilling basins or riprap channels.</u>
- 3.4 \_\_\_\_\_Through the emergency spillway
- 3.5\_\_\_\_\_Two (2) cross sections of each bio-retention, underground detention, sand filter, or infiltration facility
- 3.5 \_\_\_\_Design storm water elevations; revised storm elevations if re-routed
- 3.6\_\_\_\_Type(s), size(s), length(s), and slope(s) of pipes
- 3.7 \_\_\_\_\_Weir(s) opening size; description of trash rack
- 3.8 \_\_\_\_Orifice opening size; description of trash rack
- 3.9 Outlet structure type, material and applicable dimensions (see item 4). The cross-sections should include all relevant existing and design storm water elevations.
- 3.10 \_\_\_\_\_ Invert elevations of all pipes
- 3.11 \_\_\_\_\_ Top elevations of outlet structures and risers
- 3.12\_\_\_\_\_Type of grate and trash rack with manufacturer's information for each orifice
- 3.13 \_\_\_\_Outlet protection length, width, depth, type, and size of rock

August 18, 2021

3.14 Embankment

- 3.14.1 \_\_\_\_\_Height (existing grade and top of embankment as-built)
- 3.14.2 \_\_\_\_\_ Top width
- 3.14.3 \_\_\_\_\_Side slopes (horizontal: vertical ratio)
- 3.14.4 \_\_\_\_\_Cutoff trench, if applicable per design
- 3.14.5 \_\_\_\_\_Anti-seep collar(s)
- 3.15 \_\_\_\_Emergency spillway
  - 3.15.1 \_\_\_\_\_Width and side slopes
  - 3.15.2 \_\_\_\_Crest elevation
  - 3.15.3 \_\_\_\_Length
  - 3.15.4 \_\_\_\_\_Top of berm elevation
  - 3.15.5 \_\_\_\_\_Type stabilization methods
- 3.16 Bio-retention

3.16.1 \_\_\_\_\_Elevation of top of mulch, top of media, top of stone, bottom of stone, invert of the under drain

- 4.0 \_\_\_\_\_ Provide a detailed as-built survey of the outfall structure, including all relevant elevations and views.
- 5.0 \_\_\_\_\_ The plan shall include the maintenance specifications and schedule for the facility.
- 6.0 \_\_\_\_\_ Provide details of the condition and adequacy of the vegetative stabilization of the facility. (Photos required)

## **CERTIFICATION OF ENGINEER / LAND SURVEYOR**

I, the undersigned, hereby certify that I am a Professional Engineer / Land Surveyor registered in the State of Delaware and it is my opinion that, to the best of my knowledge, each element of this checklist was considered and addressed in accordance with all applicable regulations, codes, standards, guidelines and policies.

Signature and Seal of Professional

Date

Submission of this Checklist does not relieve the Applicant from the responsibility to comply with all applicable regulations, codes, standards, guidelines and

policies. The Town of Middletown reserves the right to revise this checklist periodically as the need arises.