BIORETENTION FACILITY #1 PLAN VIEW

NOTE:

CONSTRUCTION OF THE BIORETENTION FACILITY WILL COMPLY WITH THE REQUIREMENTS OF THE MARYLAND DEPARTMENT OF THE ENVIRONMENT'S (MDE) STORMWATER MANAGEMENT REGULATIONS.

PROPOSED GABION WEIR

BIORETENTION FACILITY SECTION A-A

BIORETENTION FACILITY SECTION B-B

NOTE: REFER TO STORMDRAIN PROFILES ON SHEET #23 FOR STORMDRAIN INFORMATION.
OPERATION AND MAINTENANCE SCHEDULE FOR BIO-RETENTION FACILITIES

1. The maintenance schedule for construction of the bioretention facility shall include but not be limited to:
   a. Post-construction period: within 12 months of construction
   b. Annual maintenance: during the growing season
   c. Biennial maintenance: during the dormant season

2. The duration of maintenance activities shall be as follows:
   a. Post-construction period: six months
   b. Annual maintenance: six months
   c. Biennial maintenance: six months

3. The maintenance schedule shall be accomplished by the owner or the owner's authorized representative.

4. The maintenance schedule shall be included in the operation and maintenance manual.

5. The maintenance schedule shall be provided to the owner or the owner's authorized representative.

6. The maintenance schedule shall be updated annually.

7. The maintenance schedule shall be revised as necessary.

8. The maintenance schedule shall be reviewed by the owner or the owner's authorized representative.

9. The maintenance schedule shall be approved by the owner or the owner's authorized representative.

10. The maintenance schedule shall be filed with the applicable regulatory agency.

DURING CONSTRUCTION INSPECTION OF BIO-RETENTION FACILITIES

1. The inspection of the bio-retention facility shall be performed by the owner or the owner's authorized representative.

2. The inspection of the bio-retention facility shall be performed in accordance with the following:
   a. The inspection shall be performed at least once per month.
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TABLE 11.0.1 MATERIALS SPECIFICATIONS FOR MICRO-BIOTREATMENT, RAIN GARDENS & LANDSCAPE INFILTRATION - MDIA FACILITIES ONLY

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>SPECIFICATION</th>
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<tbody>
<tr>
<td>Fluoride</td>
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<tr>
<td>Carbon</td>
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<tr>
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<tr>
<td>Nitrogen</td>
<td>See Attachment Table A</td>
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B.3 SPECIFICATIONS FOR BIORETENTION

1. Minimum depth of bio-retention area: 0.5 feet
2. Depth of bio-retention area: 0.5 to 1.0 feet
3. Minimum depth of bio-retention area: 1.0 feet
4. Maximum depth of bio-retention area: 1.5 feet

STORMWATER MANAGEMENT AS-BUILT CERTIFICATION

The stormwater management system shall be constructed in accordance with the approved design and specifications.

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STORM DRAIN DRAINAGE AREAS

- **A** DRAINAGE AREA A
- **B** DRAINAGE AREA B
- **C** DRAINAGE AREA C
- **D** DRAINAGE AREA D
- **E** DRAINAGE AREA E
- **F** DRAINAGE AREA F
- **G** DRAINAGE AREA G
- **H** DRAINAGE AREA H

**LEGEND**
- **GRAY** = IMPERVIOUS AREA
- **DARK GRAY** = LIMIT OF DRAINAGE AREAS
- **DARK GRAY** = DRAINAGE AREA BOUNDARY
- **WATER** = DRAINAGE AREA

**STORM DRAIN DRAINAGE AREA MAP**

REFER TO ON-SITE CONSTRUCTION DOCUMENTS (SOP-18-044) FOR WORK ON PRIVATE PROPERTY.

**STORM STRUCTURE SCHEDULE**

<table>
<thead>
<tr>
<th>NAME</th>
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**STORM SEWER PIPE SCHEDULE**

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**STORM DRAIN PIPE LENGTH**

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**STORM DRAIN PIPE SIZE**

<table>
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<th>P.H.</th>
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</table>
REFER TO ON-SITE CONSTRUCTION DOCUMENTS (SDP-18-044) FOR WORK ON PRIVATE PROPERTY.
B-4.5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

PERMANENT SEEDING SUMMARY

<table>
<thead>
<tr>
<th>NO.</th>
<th>SPECIES</th>
<th>PER</th>
<th>DIA.</th>
<th>R</th>
<th>A</th>
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OVERALL QUANTITY TAKEOFF OF SEED

<table>
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<th>QUANTITY</th>
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<tbody>
<tr>
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<td>STABILIZATION MATTING</td>
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B-4.6 STANDARDS AND SPECIFICATIONS FOR SOIL STABILIZATION

PROJECT SIGNIFICANCE

The project involves the construction of a new road or improvement of an existing road, which requires soil stabilization. This is necessary to prevent erosion and soil displacement during and after construction. The project includes the placement of permanent and temporary stabilization measures to ensure the long-term stability and safety of the road.

SITE DESCRIPTION

The site is characterized by a variety of soil types, including sandy, loamy, and clayey soils, which require specific stabilization techniques to meet project standards. The slope gradients range from 1% to 30%, and the area includes both steep and level sections.

B-4.5.1 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

SEEDING

- Timing: Apply seeding within 24 hours of moisture restoration after completion of site preparation.
- Species: Use a mix of annual and perennial species to promote quick establishment and long-term sustainability.
- Rate: Apply a rate of 150 lb per acre for the entire project area.
- Mulching: Apply a layer of organic mulch to protect the seeds and enhance germination.

B-4.5.2 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

- Timing: Implement stabilizing measures immediately after disturbance to control erosion.
- Method: Use a combination of seed and mulching to create a stable surface.
- Material: Select appropriate stabilizing materials based on soil type and project specifications.

B-4.5.3 STANDARDS AND SPECIFICATIONS FOR SOIL AMENDMENTS

- Timing: Apply soil amendments before planting to improve soil quality.
- Product: Use a blend of organic and inorganic amendments tailored to the project's needs.
- Rate: Apply the required amount based on soil test results.

B-4.5.4 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

- Timing: Perform incremental stabilization as needed to maintain stability.
- Method: Use a combination of seed, mulching, and soil amendments as necessary.
- Material: Select materials based on the current soil conditions and project requirements.

B-4.5.5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

- Timing: Implement permanent stabilization measures at the end of the project.
- Method: Use a combination of permanent and temporary stabilization techniques.
- Material: Select materials based on long-term durability and project specifications.

B-4.5.6 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

- Timing: Apply temporary stabilization during construction phases.
- Material: Select materials based on the project's duration and environmental conditions.

B-4.5.7 STANDARDS AND SPECIFICATIONS FOR SYNTERTM MATING

- Timing: Apply stabilization matting at the end of the construction season.
- Method: Use a durable, non-woven geotextile to enhance soil stabilization.
- Material: Select the appropriate type based on soil type and project specifications.

B-4.6.1 DEVELOPERS CERTIFICATE

- Timing: Submit the certificate within 30 days of project completion.
- Method: Include all required documentation and certifications.
- Material: Use a standard form approved by the appropriate regulatory agency.

B-4.6.2 CONTRACTOR'S CERTIFICATE

- Timing: Submit the certificate within 10 days of project completion.
- Method: Include all required documentation and certifications.
- Material: Use a standard form approved by the appropriate regulatory agency.

B-4.6.3 ENGINEER'S CERTIFICATE

- Timing: Submit the certificate within 15 days of project completion.
- Method: Include all required documentation and certifications.
- Material: Use a standard form approved by the appropriate regulatory agency.