

**STORMWATER OPERATION AND MAINTENANCE
AGREEMENT AND SECURITY**

Project Name: _____

Town Project Number: _____

Town BMP ID: _____

PIN Number: _____

Mail after recording to: Town of Morrisville
Engineering Department
P.O. Box 166
Morrisville, NC 27560

NORTH CAROLINA

WAKE COUNTY

This STORMWATER OPERATION AND MAINTENANCE AGREEMENT AND SECURITY,

made this day _____ of _____, 20 _____

by _____

whose principal address is _____

with, to, and for the benefit of the Town of Morrisville, a municipal corporation of the State of North Carolina, whose address is P.O. Box 166, Morrisville, North Carolina 27560.

Bioretention Operation and Maintenance Agreement

I will keep a maintenance record on this BMP. This maintenance record will be kept in a log in a known set location. Any deficient BMP elements noted in the inspection will be corrected, repaired or replaced immediately. These deficiencies can affect the integrity of structures, safety of the public, and the removal efficiency of the BMP.

Important operation and maintenance procedures:

- Immediately after the bioretention cell is established, the plants will be watered twice weekly if needed until the plants become established (commonly six weeks).
- Snow, mulch or any other material will NEVER be piled on the surface of the bioretention cell.
- Heavy equipment will NEVER be driven over the bioretention cell.
- Special care will be taken to prevent sediment from entering the bioretention cell.
- Once a year, a soil test of the soil media will be conducted.

After the bioretention cell is established, I will inspect it **once a month and within 24 hours after every storm event greater than 1.0 inches**. Records of operation and maintenance will be kept in a known set location and will be available upon request.

Inspection activities shall be performed as follows. Any problems that are found shall be repaired immediately.

BMP element:	Potential problems:	How I will remediate the problem:
The entire BMP	Trash/debris is present.	Remove the trash/debris.
The perimeter of the bioretention cell	Areas of bare soil and/or erosive gullies have formed.	Regrade the soil if necessary to remove the gully, and then plant a ground cover and water until it is established. Provide lime and a one-time fertilizer application.
The inlet device: pipe, stone verge or swale	The pipe is clogged (if applicable).	Unclog the pipe. Dispose of the sediment off-site.
	The pipe is cracked or otherwise damaged (if applicable).	Replace the pipe.
	Erosion is occurring in the swale (if applicable).	Regrade the swale if necessary to smooth it over and provide erosion control devices such as reinforced turf matting or riprap to avoid future problems with erosion.
	Stone verge is clogged or covered in sediment (if applicable).	Remove sediment and clogged stone and replace with clean stone.

BMP element:	Potential problems:	How I will remediate the problem:
The pretreatment area	Flow is bypassing pretreatment area and/or gullies have formed.	Regrade if necessary to route all flow to the pretreatment area. Restabilize the area after grading.
	Sediment has accumulated to a depth greater than three inches.	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and restabilize the pretreatment area.
	Erosion has occurred.	Provide additional erosion protection such as reinforced turf matting or riprap if needed to prevent future erosion problems.
	Weeds are present.	Remove the weeds, preferably by hand.
The bioretention cell: vegetation	Best professional practices show that pruning is needed to maintain optimal plant health.	Prune according to best professional practices.
	Plants are dead, diseased or dying.	Determine the source of the problem: soils, hydrology, disease, etc. Remedy the problem and replace plants. Provide a one-time fertilizer application to establish the ground cover if a soil test indicates it is necessary.
	Tree stakes/wires are present six months after planting.	Remove tree stake/wires (which can kill the tree if not removed).
The bioretention cell: soils and mulch	Mulch is breaking down or has floated away.	Spot mulch if there are only random void areas. Replace whole mulch layer if necessary. Remove the remaining mulch and replace with triple shredded hard wood mulch at a maximum depth of three inches.
	Soils and/or mulch are clogged with sediment and/or the infiltration rate is less than 1 inch per hour.	Determine the extent of the clogging - remove and replace either just the top layers or the entire media as needed. Dispose of the spoil in an appropriate off-site location. Use triple shredded hard wood mulch at a maximum depth of three inches. Search for the source of the sediment and remedy the problem if possible.
	An annual soil test shows that pH has dropped or heavy metals have accumulated in the soil media.	Dolomitic lime shall be applied as recommended per the soil test and toxic soils shall be removed, disposed of properly and replaced with new planting media.

BMP element:	Potential problems:	How I will remediate the problem:
The underdrain system (if applicable)	Clogging has occurred.	Wash out the underdrain system.
The drop inlet	Clogging has occurred.	Clean out the drop inlet. Dispose of the sediment off-site.
	The drop inlet is damaged	Repair or replace the drop inlet.
The receiving water	Erosion or other signs of damage have occurred at the outlet.	Contact the Stormwater Division of the Town of Morrisville Engineering Department at 919-463-7025.

BMP Operation and Maintenance Security

Performance Security

The Town of Morrisville requires the submittal of a performance security prior to issuance of a permit in order to ensure that the *structural BMPs* are

1. installed by the permit holder as required by the approved stormwater management plan, and/or
2. maintained by the *owner* as required by the operation and maintenance agreement.

Amount

1. Installation

The amount of an installation performance security shall be the total estimated construction cost of the BMPs approved under the permit, plus 25%.

2. Maintenance

The amount of a maintenance performance security shall be 30% of the total estimated construction cost of the BMPs approved under the permit.

General Requirements

1. This agreement grants to the Town of Morrisville a right of entry to inspect, monitor, maintain, repair, and reconstruct *structural BMPs*.
2. The Town of Morrisville is authorized to recover from the property owner and/or association and its members, any and all costs the Town of Morrisville expends to maintain or repair the *structural BMPs* or to correct any operational deficiencies. Failure to pay the Town of Morrisville all of its expended costs, after forty-five days written notice, shall constitute a breach of the agreement. The Town of Morrisville shall thereafter be entitled to bring an action against the property owner and/or association and its members to pay, or foreclose upon the lien hereby authorized by the agreement against the property, or both, in case of a deficiency. Interest, collection costs, and attorney fees shall be added to the recovery.
3. This agreement shall not obligate the Town of Morrisville to maintain or repair any *structural BMPs*, and the Town of Morrisville shall not be liable to any person for the condition or operation of *structural BMPs*.
4. This agreement shall not in any way diminish, limit, or restrict the right of the Town of Morrisville to enforce any of its ordinances as authorized by law.
5. The property owner and/or association and its members indemnifies and holds harmless the Town of Morrisville for any costs and injuries arising from or related to the structural BMP, unless the Town of Morrisville has agreed in writing to assume the maintenance responsibility for the BMP and has accepted dedication of any and all rights necessary to carry out that maintenance.

Special Requirement for Homeowners' and Other Associations

For all *structural BMPs* required pursuant to this ordinance and that are to be or are owned and maintained by a homeowners' association, property owners' association, or similar entity, the required operation and maintenance agreement shall include all of the following provisions:

1. Acknowledgment that the association shall continuously operate and maintain the stormwater control and management facilities.
2. Establishment of an escrow account, which can be spent solely for sediment removal, structural, biological or vegetative replacement, major repair, or reconstruction of the *structural BMPs*. If *structural BMPs* are not performing adequately or as intended or are not properly maintained, the Town of Morrisville, in its sole discretion, may remedy the situation, and in such instances the Town of Morrisville shall be fully reimbursed from the escrow account. Escrowed funds may be spent by the association for sediment removal, structural, biological or vegetative replacement, major repair, and reconstruction of the *structural BMPs*, provided that the Town of Morrisville shall first consent to the expenditure. This escrow account shall be established in lieu of the 30% maintenance performance security.
3. Both developer contribution and annual sinking funds shall fund the escrow account. Prior to plat recordation or issuance of construction permits, whichever shall first occur, the developer shall pay into the escrow account an amount equal to fifteen (15) per cent of the initial construction cost of the *structural BMPs*. Two-thirds (2/3) of the total amount of sinking fund budget, which shall be equal to 100% of the initial construction cost of the *BMPs*, shall be deposited into the escrow account within the first five (5) years and the full amount shall be deposited within ten (10) years following initial construction of the *structural BMPs*. Funds shall be deposited each year into the escrow account. A portion of the annual assessments of the association shall include an allocation into the escrow account. Any funds drawn down from the escrow account shall be replaced in accordance with the schedule of anticipated work used to create the sinking fund budget.
4. The percent of developer contribution and lengths of time to fund the escrow account may be varied by the Town of Morrisville depending on the design and materials of the stormwater control and management facility.

Uses of Performance Security

1. Forfeiture Provisions

The performance security shall contain forfeiture provisions for failure, after proper notice, to complete work within the time specified, or to initiate or maintain any actions which may be required of the applicant or *owner* in accordance with this ordinance, approvals issued pursuant to this ordinance, or an operation and maintenance agreement established pursuant to this ordinance.

2. Default

Upon default of the *owner* to construct, maintain, repair and, if necessary, reconstruct any *structural BMP* in accordance with the applicable permit or operation and maintenance agreement, the Stormwater Administrator shall obtain and use all or any portion of the security to make necessary improvements based on an engineering estimate. Such expenditure of funds shall only be made after requesting the *owner* to comply with the permit or maintenance agreement. In the event of a default triggering the use of installation performance security, the Town of Morrisville shall not return any of the unused deposited cash funds or other security, which shall be retained for maintenance.

3. Costs in Excess of Performance Security

If the Town of Morrisville takes action upon such failure by the applicant or *owner*, the Town of Morrisville may collect from the applicant or *owner* for the difference should the amount of the reasonable cost of such action exceed the amount of the security held.

4. Refund

After the Town's final approval of record drawings, as-builts and certifications, the installation performance security shall be refunded to the applicant or terminated, in accordance with the Town of Morrisville Unified Development Ordinance (UDO) and Engineering Design and Construction Manual (EDCM).

I acknowledge and agree by my signature below that I am responsible for the performance of the maintenance procedures listed above. I agree to notify the Town of Morrisville of any problems with the system or prior to any changes to the system or responsible party.

Project name: _____

BMP drainage area number: _____

Print name: _____

Title: _____

Address: _____

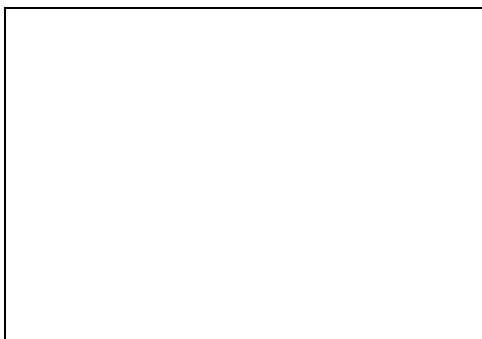
Phone: _____

Signature: _____

Date: _____

Note: The legally responsible party should not be a homeowners association unless more than 50% of the lots have been sold and a resident of the subdivision has been named the president.

I, _____, a Notary Public for the State of _____, County of _____, do hereby certify that _____ personally appeared before me this _____ day of _____, _____, and acknowledge the due execution of the forgoing bioretention maintenance requirements. Witness my hand and official seal,



SEAL

My commission expires _____

Town of Morrisville, North Carolina

Signature: _____

Print Name: _____

Title: _____

Acknowledgment of Town of Morrisville:

Wake County, North Carolina

I certify that the following person personally appeared before me this day and acknowledged to me that he or she executed the foregoing document on behalf of the Town of Morrisville in the capacity indicated with his or her signature: _____.

Date: _____
(affix notary seal or stamp here)

Notary Public

Printed/Typed Name: _____

My Commission Expires: _____