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
100 Town Hall Drive
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 100 Town Hall Drive, Morrisville, North Carolina 27560.

Sand Filter 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 maintenance procedures:

- The drainage area will be carefully managed to reduce the sediment load to the sand filter.
- The sedimentation chamber or forebay will be cleaned out whenever sediment depth exceeds six inches.
- Once a year, sand media will be skimmed.
- The sand filter media will be replaced whenever it fails to function properly after maintenance.

The sand filter will be inspected **quarterly 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 problem:	How I will remediate the problem:
Entire BMP	Trash/debris is present.	Remove the trash/debris.
Adjacent pavement (if applicable)	Sediment is present on the pavement surface.	Sweep or vacuum the sediment as soon as possible.
Perimeter of sand filter	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.
	Vegetation is too short or too long.	Maintain vegetation at an appropriate height.
Flow diversion structure	The structure is clogged.	Unclog the conveyance and dispose of any sediment offsite.
	The structure is damaged.	Make any necessary repairs or replace if damage is too large for repair.
Forebay or pretreatment area	Sediment has accumulated to a depth of greater than six inches.	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and stabilize or dispose of it in a location where it will not cause impacts to streams or the BMP.
	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. If a herbicide is used, wipe it on the plants rather than spraying.

BMP element:	Potential problem:	How I will remediate the problem:
Filter bed and underdrain collection system	Water is ponding on the surface for more than 24 hours after a storm, and/or the infiltration rate of the sand is less than 2 inches per hour.	Check to see if the collector system is clogged and flush if necessary. If water still ponds, remove the top few inches of filter bed media and replace. If water still ponds, then consult an expert.
Outlet device	Clogging has occurred.	Clean out the outlet device. Dispose of the sediment offsite.
	The outlet device is damaged	Repair or replace the outlet device.
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.

Dry Extended Detention Basin

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.

The dry extended detention basin system is defined as the dry detention basin, outlet structure, pretreatment including forebays and the vegetated filter if one is provided.

This system (*check one*):
☐ does ☐ does not **incorporate a vegetated filter at the outlet.**

This system (*check one*):
☐ does ☐ does not **incorporate pretreatment other than a forebay.**

Important maintenance procedures:

- The drainage area will be managed to reduce the sediment load to the dry extended detention basin.
- Immediately after the dry extended detention basin is established, the vegetation will be watered twice weekly if needed until the plants become established (commonly six weeks).
- No portion of the dry extended detention pond will be fertilized after the first initial fertilization that is required to establish the vegetation.
- I will maintain the vegetation in and around the basin at a height of approximately six inches.
- Once a year, a dam safety expert will inspect the embankment.

After the dry extended detention basin is established, it will be inspected **once a quarter 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 problem:	How I will remediate the problem:
The entire BMP	Trash/debris is present.	Remove the trash/debris.
	Weeds, cattails, or other invasive plants are present.	Remove the plants by hand or by wiping them with herbicide (do not spray).
The perimeter of the dry extended detention basin	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.

BMP element:	Potential problem:	How I will remediate the problem:
The inlet device: pipe 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.
The forebay	Sediment has accumulated and reduced the depth to 75% of the original design depth (see diagram below).	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the BMP.
	Erosion has occurred or riprap is displaced.	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. If herbicides are used, wipe them on the plants rather than spraying.
The main treatment area	Sediment has accumulated and reduced the depth to 75% of the original design depth (see diagram below).	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the BMP. Revegetate disturbed areas immediately with sod (preferred) or seed protected with securely staked erosion mat.
	Water is standing more than 5 days after a storm event.	Check outlet structure for clogging. If it is a design issue, consult an appropriate professional.
The embankment	Shrubs or trees have started to grow on the embankment.	Remove shrubs or trees immediately.
	Grass cover is unhealthy or eroding.	Restore the health of the grass cover – consult a professional if necessary.
	Signs of seepage on the downstream face.	Consult a professional.
	Evidence of muskrat or beaver activity is present.	Use traps to remove muskrats and consult a professional to remove beavers.
	An annual inspection by an appropriate professional shows that the embankment needs repair.	Make all needed repairs.
The outlet device	Clogging has occurred.	Clean out the outlet device. Dispose of the sediment off-site.
	The outlet device is damaged	Repair or replace the outlet device.
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 BMP*s 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.

Installation Amount

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

General Requirements

1. This agreement grants to the Town of Morrisville a right of entry to inspect, monitor, maintain, repair, and reconstruct *structural BMP*s.
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 BMP*s 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 BMP*s, and the Town of Morrisville shall not be liable to any person for the condition or operation of *structural BMP*s.
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.
6. The property owner and/or association shall continuously operate and maintain the stormwater control and management facilities.

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 and, if necessary, reconstruct any *structural BMP* in accordance with the applicable permit, 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.

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 sand filter 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: _____