STORMWATER SYSTEMS MANAGEMENT PLAN

GREAT BAY KENNEL – DOG DAY CARE
27 NEWMARKET ROAD
DURHAM, NH 03824
TAX MAP 6, LOT 11-7

PREPARED FOR:

GREAT BAY KENNEL
P.O. BOX 14
DURHAM, NH 03824

PREPARED BY:

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2.0 EXECUTIVE SUMMARY

The Storm Water Systems Management Plan (SWSMP) provides a complete reference guide for use by the property owner and their chosen maintenance subcontractor for the inspection and maintenance of the storm water best management practices (BMPs) at the Great Bay Kennel Dog Day Care in Durham, NH. While the primary purpose of the SWSMP is to establish inspection and maintenance requirements, the plan also summarizes the purpose and function of each practice. The SWSMP, in conjunction with the construction plans and details found in the Site Plan Package, describe the construction requirements of each BMP and standards for their protection and initial stabilization during the construction phase of the development and therefore shall be incorporated into the construction bid documents. Compliance with the requirements in the SWSMP will assure expected operation, performance, and life cycle of the BMPs which have a common purpose of collecting and treating storm water runoff in an effort to protect the quality of public waters. All best management practices are to be installed in accordance with the current NH Stormwater Manual

3.0 TEMPORARY BEST MANAGEMENT PRACTICES

This section describes the temporary best management practices to be employed during construction whose purposes are to protect downstream water quality from sediment/ contaminants carried in storm water surface run off during the site construction phase of the development. The temporary BMPs are summarized below.

3.1 SILT SOXX™ (PERIMETER CONTROL)

Silt Soxx is a 12 to 18 inch diameter tube of geotextile fabric filled on site with bark mulch/compost. This is used along the down gradient side of disturbed site areas where surface runoff is non-concentrated sheet flow or minimal shallow concentrated flow. The material in the tubes filters the runoff and allows sediment to settle out by temporarily ponding runoff on the up gradient side.

These tubes are placed as shown in the construction plans prior to any soil disturbance on the site and maintained in accordance with the manufacturers requirements throughout construction. The tubes are removed once the development site has achieved greater than 75% stabilization. Bare soil areas resulting from the removal of the tubes are revegetated. Alternatively, the tubes can be slit along the top and the mulch/compost distributed to either side. The tube material then gets removed and disposed of in a normal trash container used by the contractor.

3.2 SWEEPING OF PUBLIC WAY

Sweeping is accomplished by power broom or hand broom as needed whenever soil or debris from site construction activities are deposited on the public way. At a minimum, sweeping shall take place at the end of each work day during the site work and landscaping phase of construction.

3.3 SILTATION POND

Storm water runoff from disturbed areas associated with site construction tends to concentrate more easily than on naturally vegetated soils. The velocity of the runoff becomes erosive as it concentrates in the resulting conveyance of sediment. Properly placed siltation ponds allow temporary ponding of this runoff which allows much of the sediment to settle out. The siltation

pond is provided with a stable overflow channel such as a rip rap spillway underlain with a geotextile fabric or sand filter to allow runoff to exit the pond during more intense rain events.

In many instances, the pond areas used as a permanent BMP can temporarily be used as a siltation pond. In this case, it is recommended that the area of the bioretention system not be used as the siltation pond to avoid degradation of the infiltration capacity of the surrounding soils. The siltation pond should be constructed to the north of the bioretention system adjacent to the proposed access drive.

3.4 STONE CHECK DAMS

As the name implies, stone check dams are physical dams made from 1-1/2 inch and smaller crushed stone, often referred to as erosion stone. They are used in areas of concentrated flow such as swales, but also in areas prone to rilling. Check dams decrease the velocity of the runoff, filter runoff, and allow soil particles to settle out by creating a temporary "pond" on the up gradient side of the dam. The shape of the dam shall always cross from one side of bank to the other, or in the case of placement on a slope, shall be shaped as a horse shoe so that runoff can not run around the outside edges of the dams. Stone check dams shall be replaced when sediment accumulates to 2/3 the original height of the dam.

3.5 INLET PROTECTION

The purpose of inlet protection is to collect and contain the majority of soil particles conveyed in storm water runoff prior to the runoff entering a drainage structure inlet (catchbasin, manhole opening, culvert, etc.). The use of silt sock is acceptable for inlet protection during this project.

3.6 MULCHING, TACKIFIER, GEOTEXTILE MATTING, CRUSHED GRAVEL

These temporary practices are employed to improve the resistance of bare soil to erosion. Mulching with weed free straw/hay, sprayed on liquid tackifier, and placement of decomposable fabrics reduce and disperse the impact of falling rain drops, minimize the velocity of runoff, and help hold soil particles in place. Use of a temporary 4" thick layer of crushed gravel provides a necessary means of equipment travel through otherwise unstable material and helps minimize the release and conveyance of soil particles. Any single or combined form of these practices is highly encouraged during construction. Examples include disturbed areas excavated to subgrade and then left un-worked for more than 3 consecutive days and on temporary soil stockpiles. This shall continue until the final permanent site stabilization is in place and at least 75% of the vegetation is established.

3.7 SITE DEWATERING

Efforts shall be made to eliminate excavating in extremely damp conditions. The use of equipment in soils where free water is present tends to cause erosion and increased sedimentation. Dewatering requires removal of free groundwater to below the depth of excavation and can be accomplished by digging a temporary sump adjacent to the excavation site and filling this sump with clean crushed stone embedded with a perforated stand pipe. A pump is then placed in the standpipe to extract the water. With time, the free groundwater in the vicinity of the excavation is lowered and then site excavation can occur with minimal release of fines into storm water.

3.8 WASHOUT AREA/BOOM

A washout area/boom can take the form of either a naturally vegetated area or manufactured system where water from dewatering can be directed for treatment prior to release into public waters. A simple practice is to encircle an area with haybales overlaid with geotextile and direct the discharge onto a splash plate in the middle of this circle. The size of the area will depend on

the amount of water to be discharged and therefore experimentation at the site is warranted. This area is often used to treat the discharge waters from the washout of concrete trucks. Maintenance is required as the area or system becomes 2/3 or more clogged with fines and fails to contain the majority of fines. Removal of the accumulated fines may be adequate, however, in many instances, full replacement of the practice may be necessary due to the difficulty of restoring the filtration of the practice.

3.9 SITE WATERING

Site watering is intended to dampen the surface of bare soils in order to reduce airborne dust associated with earth moving operations. It is important to establish an application rate suitable for each site that provides adequate dampening of the soils but does not generate runoff. The weather conditions will dictate the frequency of site watering needs.

4.0 PERMANENT BEST MANAGEMENT PRACTICES

The section identifies the BMPs employed on this development and provides a brief summary to establish their purpose in the collection and treatment train within the storm water system. See the included Storm Water Systems Overview Plan for the location(s) of each of the BMPs.

4.1 ROOF DRAINAGE COLLECTION

Portions of the building shall have a roof gutter system with down spouts and collector pipes that discharge to either drip strips or splash pads.

4.2 CLOSED DRAINAGE SYSTEM

The closed drainage system is composed of collection and conduit systems. The bioretention system has an underdrain system that outlets into an 8-inch pipe located in the downslope vegetated buffer. A 10 inch Nyloplast Inline drain will collect runoff from the up hill side of the building and covered canine play area. A drip strip with 4 inch drain will collect runoff for the rear of the proposed building and tie into this catchbasin. The 8-inch catchbasin outlet pipe connects with a wye connection to the bioretention system underdrain pipe.

4.3 TRENCH DRAINS

A trench drains (hillside ditch) is proposed to be relocated further to the south of the proposed building. Trench drains are 12 inch wide by 18 inch high trenches containing a 4" perforated pipe. The trench is lined with geotextile and filled with stone aggregate. These trench drains intercept runoff flowing down the hill toward the dog day care building and play area and minimize erosion of the slope.

4.4 BIORETENTION SYSTEM

The bioretention system is a landscaped depression that allows runoff to pond before it filters through a 15 inch deep soil mix, and infiltrates in to the ground or is collected by an underdrain system. The bioretention system incorporates a dense planting scheme specifically planned for the uptake of runoff.

The bioretention system is designed to temporarily hold runoff like a detention pond and allow time for the vegetation to uptake the runoff, effectively reducing the pollutant load. The bioretention system incorporates an underdrain and spillway.

4.5 DEVELOPMENT VEGETATION

The development plan includes additional landscaping around the parking area. Plants uptake water and thereby reduce contaminants through this water consumption process.

4.6 SEDIMENT FOREBAY

A sediment forebay is proposed to collect runoff from the gravel driveway. The forebay will provide pretreatment of runoff by allowing for the settling of coarse sediments prior to reaching the bioretention system. Runoff will outlet through a 3/4 inch crushed gravel check dam.

4.7 OUTLET PROTECTION

A riprap apron is provided at the outlet of the bioretention system underdrain. Outlet protection reduces the velocity of runoff exiting a pipe thereby preventing scour and downstream erosion.

4.8 VEGETATED SWALE

A vegetated swale is proposed along the hillside to the east of the proposed building. This conveyance swale will intercept runoff and divert it away from the building and into the bioretention system. This swale shall be lined with turf reinforcement matting to prevent erosion.

5.0 INITIAL STABILIZATION AND MAINTENANCE OF PERMANENT BMPS

The maintenance requirements of Best Management Practices will vary through their life span. It is critically important to establish the required maintenance needs during the initial stabilization period as well as those long term maintenance needs during the course of their useful life. This section addresses the maintenance requirements for the initial stabilization period. Long term maintenance, repair, and potential replacement needs are discussed in Section 6.0. Note that any accumulated sediments to be removed shall be removed off site or, if approved by the owner, can be incorporated in the soils used during final site stabilization. However, none shall be incorporated into the soils within the bioretention system.

5.1 ROOF DRAINAGE COLLECTION

Initial maintenance will include keeping the gutters and downspouts flushed clear of debris to ensure proper flow of roof runoff. The splash pads at the down spouts shall also be swept clear of leaves and debris. Any leaks from the gutters shall be addressed.

5.2 CLOSED DRAINAGE SYSTEM

Implementation of the Temporary BMPs, particularly the Silt Sock will protect the closed drainage system from siltation.

5.3 TRENCH DRAINS

To preserve the infiltration capacity of the underlying soils the trench drains (hillside ditches) should not be placed into service until all contributing disturbed areas are stabilized. Do not discharge sediment laden waters from construction activities to the trench drain. Do not traffic exposed soil surface with construction equipment.

5.4 BIORETENTION SYSTEM

The site work contractor is encouraged to refrain from final landscape installation in the bioretention system until the contributing disturbed areas are stabilized and all plant materials are immediately on hand prior to preparing the bedding material. However, it is not possible, especially when the unknown of weather patterns are considered, to time all site construction activities to eliminate accumulation of fines in the final stabilized bioretention system. The fines that do accumulate within the basin portion of the bioretention system during the final phase of construction shall be removed prior to placement of the reservoir course and soil mix.

The establishment of the vegetation shall be a priority including adequate watering and pruning as prescribed by the supplier. It is recommended that the owner hold a contingency/guarantee of growth on the landscape contractor for period of 6 months to one year depending on the timing of the installation.

5.5 DEVELOPMENT VEGETATION

The development incorporates landscaping as shown on the construction plans. Plant beds shall be prepared and plant material shall conform to the supplier's requirements.

5.6 SEDIMENT FOREBAY

The sediment forebay should be stabilized prior to receiving runoff. Initial stabilization requires a minimum of 85% vegetative growth. During construction frequent inspection will be necessary to ensure the sediment forebay is in good working order. Remove sediment, repair eroded areas, and replace vegetation as needed.

5.7 OUTLET PROTECTION

Refer to Long Term Maintenance for requirements.

5.8 VEGETATED SWALE

The vegetated swale shall be stabilized prior to receiving runoff. Initial stabilization requires a minimum of 85% vegetative growth. During construction frequent inspection will be necessary. Remove sediment, repair eroded areas, and replace vegetation as necessary.

6.0 LONG TERM MAINTENANCE OF PERMANENT BMPS

This section will be useful to the property owner and their maintenance subcontractor to establish a systematic approach for the inspection and maintenance of the on-site storm water system components. Included in Appendix B is an Inspection Matrix which summarizes the inspection needs described below. An Inspection Report is provided in Appendix C. It is required that completed Inspection Reports be filed with the Town Engineer annually.

6.1 ROOF DRAINAGE COLLECTION

As needed, but at a minimum of once per year after leaf fall, the gutters and downspouts shall be flushed clear of debris to ensure proper flow of roof runoff. The splash pads at the down spouts shall be swept clear of leaves and debris and replaced if necessary. The roof drainage system shall be observed during a rain event to ensure proper performance. Any leaks from the gutters shall be addressed.

6.2 CLOSED DRAINAGE SYSTEM

The catch basin and the bioretention system outlet pipe shall be inspected for debris and clogging. Provide maintenance as necessary.

6.3 TRENCH DRAINS

Inspect trench (hillside ditch) and outfalls for blockage and debris and remove as necessary. Check for settlement of stone aggregate and replenish as necessary. Trench drains should be inspected at least twice annually and following any rainfall event exceeding 2.5 inches in a 24 hour period, with maintenance or rehabilitation conducted as warranted by such inspection. Inspect down slope side of trench drain for erosion which may indicate overtopping during storm events. Restoration of trench may be required which may include removal of sediment or reconstruction of the trench.

6.4 BIORETENTION SYSTEM

Bioretention system shall be inspected at least twice annually and following any rainfall event

exceeding 2.5 inches in a 24 hour period, with maintenance or rehabilitation conducted as warranted by such inspection. At least once annually the bioretention system shall be inspected for drawdown time. If bioretention system does not drain within 72 hours following a rainfall event, then a qualified professional should assess the system, to determine required measures to restore infiltration and filtration capacity which may include removal of sediment or reconstruction of filter media.

The landscaping and stone mulch will be the major visible features of this BMP. Pruning of the landscaping to the extent necessary and practical to prevent overgrowth of the vegetation. Watering may be necessary during extended periods of extremely hot and/or dry weather.

6.5 DEVELOPMENT VEGETATION

Regularly heading, pruning, and removal of accumulated leaves will encourage proper growth and healthiness of vegetation. Augment mulching at a rate necessary to keep up with decomposition of mulch. Watering may be necessary during extended periods of extremely hot and/or dry weather.

6.6 SEDIMENT FOREBAY

Inspect annually for debris and sediment deposition. Remove sediment when it reaches one half the height of the stone check dam at the outlet of the sediment forebay. Mow embankments twice a year to control growth of woody vegetation. Repair eroded areas as necessary and replace vegetation as needed.

6.7 OUTLET PROTECTION

Inspect for damage and deterioration and repair as necessary.

6.8 VEGETATED SWALE

Inspect annually for sediment accumulation, erosion, and condition of vegetation and repair as necessary. Mow swale to a height of 4 inches or higher as necessary but at a minimum of once per year.

7.0 REFERENCES

The Storm Water Systems Management Plan incorporates many standard and accepted practices. Specifically the following references were utilized:

Stormwater Management and Erosion and Sediment Control Handbook for Urban and Developing Areas in New Hampshire. Rockingham County Conservation District, August 1992, or latest edition.

The New Hampshire Stormwater Manual, December 2008, Revision 1.0.

APPENDIX A:

STORMWATER SYSTEMS OVERVIEW PLAN

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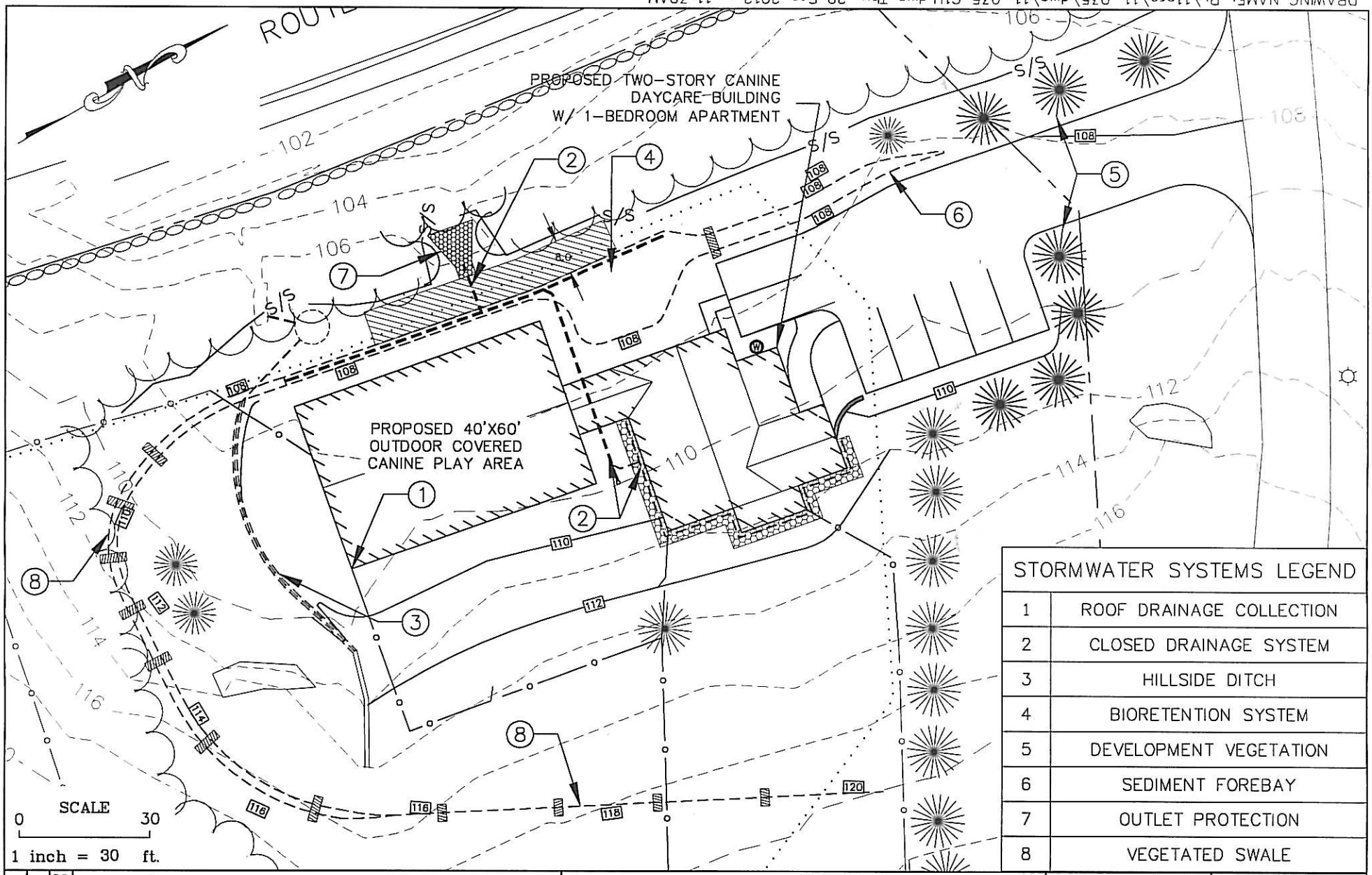

STORMWATER SYSTEMS LEGEND	
1	ROOF DRAINAGE COLLECTION
2	CLOSED DRAINAGE SYSTEM
3	HILLSIDE DITCH
4	BIORETENTION SYSTEM
5	DEVELOPMENT VEGETATION
6	SEDIMENT FOREBAY
7	OUTLET PROTECTION
8	VEGETATED SWALE

SW PLAN | JOB: 11-035 | SHEET 1 OF 1

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STORMWATER SYSTEMS OVERVIEW PLAN

prepared for

GREAT BAY KENNEL

(TAX MAP 6, LOT 11-7)
27 NEWMARKET ROAD DURHAM, NH

DATE:	9/19/12
SCALE:	1"=30'
DESIGNER:	MS
DRAWN BY:	MS
APPROVED BY:	MJS
DRAWING FILE:	11-035 C1H.dwg

SEAL:

APPENDIX B:

MAINTENANCE MATRIX

LONG TERM BMP INSPECTION / MAINTENANCE MATRIX

BMP	Major Inspection / Maintenance Criterion [1]	Inspection / Maintenance Interval				
		Spring [2]	Summer	Fall [3]	Winter	Other / Notes
Roof Drainage	I - check for debris in gutters M - flush gutters clear of debris	I - R M - R	I - O	I - RQ M - RQ	I - O	
Closed Drainage	I - check inlets and outlets for proper function M - remove fallen leaves, branches, etc M - remove accumulated sediment at inlet/outlets	I - RQ M - R	I - O	I - RQ M - R	I - O	
Trench Drain	I - check erosion on downslope side of trench indicating overflow I - check for settlement of stone aggregate M - remove fallen leaves, branches, etc M - remove accumulated sediment	I - RQ M - R	I - O	I - RQ M - RQ	I - O	
Bioretention System	I - check for drawdown time I - check earthen dam for settlement, rodent damage, failures M - remove fallen leaves, branches, etc M - mow, head, prune to control overgrowth. Cut back ground cover if necessary. M - remove accumulated sediment	I - RQ M - R	I - O	I - RQ M - RQ	I - O	
Development Vegetation	I - check for disease or dead branches/spurs. M - prune, head and remove accumulated leaves and branches within and around vegetation. M - Water during extended dry periods or extremely hot weather.	I - RQ M - R	I - O	I - RQ M - RQ	I - O	
Sediment Forebay	I - check erosion on embankments I - check condition of grass M - remove fallen leaves, branches, etc M - remove accumulated sediment M - repair erosion and plant grass seed	I - RQ M - R	I - O	I - RQ M - RQ	I - O	
Outlet Protection	I - check for damage and deterioration M - repair damage and deterioration	I - RQ M - R	I - O	I - RQ M - RQ	I - O	
Vegetated Swale	I - Inspect for sediment accumulation, erosion, and condition of vegetation M - Remove accumulated sediment M - Repair erosion and plant grass seed	I - RQ M - R	I - O	I - RQ M - RQ	I - O	

Notes
(1) The BMP should be inspected as recommended and maintenance shall be performed as needed. Maintenance may be needed at shorter or longer intervals depending on weather conditions, and use of the property and contributing watershed
(2) Early Spring as vegetation begins to blossom or earlier
(3) Late Fall after majority of leaf fall, but prior to snow fall

Abbreviations
I - Inspection
M - Maintenance
O - Optional
R - Recommended
RQ - Required

APPENDIX C:

MAINTENANCE REPORTS

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BMP Maintenance Report

Site Name:	Great Bay Kennel Dog Day Care
Site Location:	27 Newmarket Road, Durham, NH
Installation Date:	Summer 2012

Owner:	Great Bay Kennel	Contractor:	
Contact Name:	Geoff Sawyer	Contact Name:	
Company Name:		Company Name:	
Telephone:	603-868-1707	Telephone:	
Fax:		Fax:	
Address:	P.O. Box 14 Durham, NH 03824	Address:	

Maintenance Log

Items Inspected	Checked		Maintenance Needed		Comments
	Yes	No	Yes	No	
Roof Drainage					
Closed Drainage					
Trench Drain					
Bioretention System					Refer to Checklist for Inspection of Bioretention System in Appendix B.
Development Vegetation					
Sediment Forebay					
Outlet Protection					
Vegetated Swale					

APPENDIX D:

MANUFACTURERS DATA SHEETS

SWPPP Cut Sheet:

Filtrexx® Sediment Control

Sediment & Perimeter Control Technology

PURPOSE & DESCRIPTION

Filtrexx® Sediment control is a three-dimensional tubular sediment control and storm water runoff filtration device typically used for **perimeter control** of sediment and other soluble pollutants (such as phosphorus and petroleum hydrocarbons), on and around construction activities.

APPLICATION

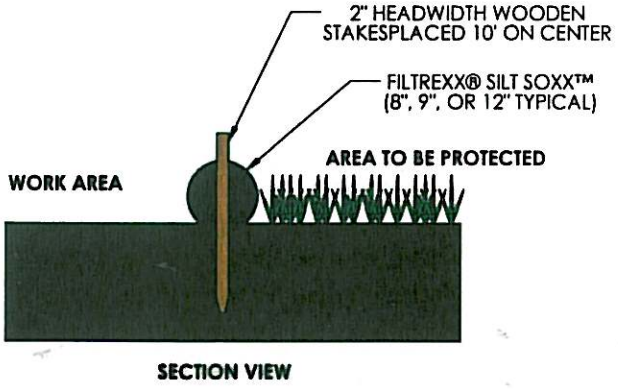
Filtrexx® Sediment control is to be installed down slope of any disturbed area requiring erosion and sediment control and filtration of soluble pollutants from runoff. Sediment control is effective when installed perpendicular to sheet or low concentrated flow. Acceptable applications include:

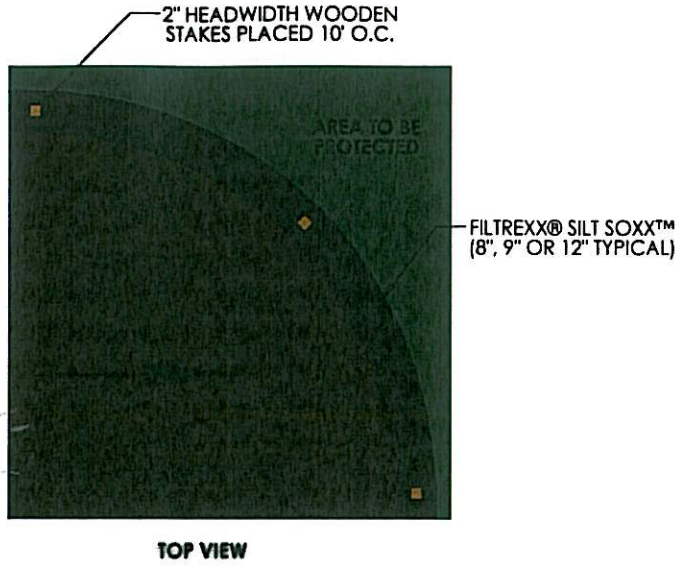
- Site perimeters
- Above and below disturbed areas subject to sheet runoff, interrill and rill erosion
- Above and below exposed and erodable slopes
- Around area drains or inlets located in a 'sump'
- On compacted soils where trenching of silt fence is difficult or impossible
- Around sensitive trees where trenching of silt fence is not beneficial for tree survival or may unnecessarily disturb established vegetation.
- On frozen ground where trenching of silt fence is impossible.
- On paved surfaces where trenching of silt fence is impossible.

INSTALLATION

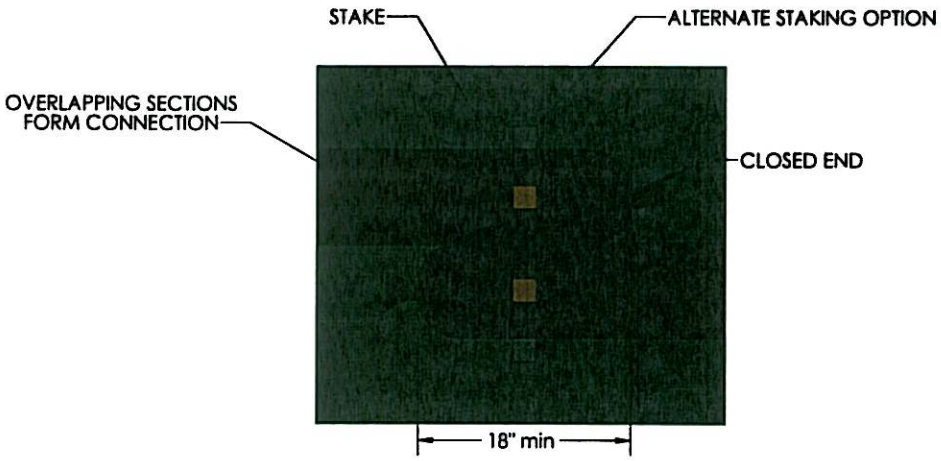
1. Sediment control used for perimeter control of sediment and soluble pollutants in storm runoff shall meet Filtrexx® Soxx™ Material Specifications and use Certified Filtrexx® FilterMedia™.
2. Contractor is required to be Filtrexx® Certified™, or use pre-filled Filtrexx® Sediment control products manufactured by a Filtrexx® Certified Manufacturer™ as determined by Filtrexx® International, LLC (440-926-2607 or visit www.filtrexx.com). Certification shall be considered current if appropriate identification is shown during time of bid or at time of application. Look for the Filtrexx® Certified™ Seal.
3. Sediment control will be placed at locations indicated on plans as directed by the Engineer.
4. Sediment control should be installed parallel to the base of the slope or other disturbed area. In extreme conditions (i.e., 2:1 slopes), a second Sediment control shall be constructed at the top of the slope.
5. Effective Soxx™ height in the field should be as follows: 8" Diameter Sediment control = 6.5" high, 12" Diameter Sediment control = 9.5" high, 18" Diameter SiltSoxx™ = 14.5" high, 24" Diameter Sediment control = 19" high.
6. Stakes shall be installed through the middle of the Sediment control on 10 ft (3m) centers, using 2 in (50mm) by 2 in (50mm) by 3 ft (1m) hard wood stakes. In the event staking is not possible, i.e., when Sediment control is used on pavement, heavy concrete blocks shall be used behind the Sediment control to help stabilize during rainfall/runoff events.
7. Staking depth for sand and silt loam soils shall be 12 in (300mm), and 8 in (200mm) for clay soils.
8. Loose compost may be backfilled along the upslope side of the Sediment control, filling the seam between the soil surface and the device, improving filtration and sediment retention.
9. If the Sediment control is to be left as a permanent filter or part of the natural landscape, it may be seeded at time of installation for

FILTREXX® SILT SOXX™

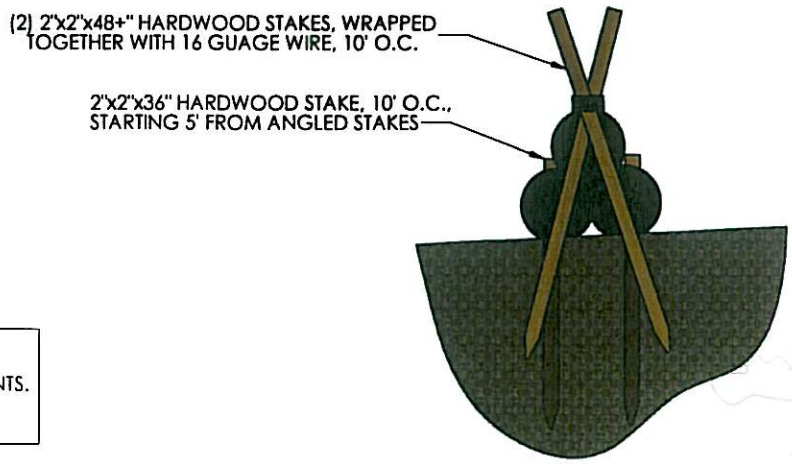




COMPOST SOCK CONNECTION/ATTACHMENT DETAIL



FILTREXX® PYRAMID STAKING DETAIL



NOTES:
1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. SILT SOXX™ FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

establishment of permanent vegetation. The Engineer will specify seed requirements.

10. Filtrexx® Sediment control is not to be used in perennial, ephemeral, or intermittent streams.

See design drawing schematic for correct Filtrexx® Sediment control installation (Figure 1.1).

INSPECTION AND MAINTENANCE

Routine inspection should be conducted within 24 hrs of a runoff event or as designated by the regulating authority. Sediment control should be regularly inspected to make sure they maintain their shape and are producing adequate hydraulic flow-through. If ponding becomes excessive, additional Sediment control may be required to reduce effective slope length or sediment removal may be necessary. Sediment control shall be inspected until area above has been permanently stabilized and construction activity has ceased

1. The Contractor shall maintain the Sediment control in a functional condition at all times and it shall be routinely inspected.
2. If the Sediment control has been damaged, it shall be repaired, or replaced if beyond repair.
3. The Contractor shall remove sediment at the base of the upslope side of the Sediment control when accumulation has reached 1/2 of the effective height of the Sediment control, or as directed by the Engineer. Alternatively, a new Sediment control can be placed on top of and slightly behind the original one creating more sediment storage capacity without soil disturbance.
4. Sediment control shall be maintained until disturbed area above the device has been permanently stabilized and construction activity has ceased.
5. The FilterMedia™ will be dispersed on site once disturbed area has been permanently stabilized, construction activity has ceased, or as determined by the Engineer.
6. For long-term sediment and pollution control applications, Sediment control can be seeded at the time of installation to create a vegetative filtering system for prolonged and increased filtration of sediment and soluble pollutants (contained vegetative filter strip). The appropriate seed mix shall be determined by the Engineer.

Slope Percent	Maximum Slope Length Above Sediment Control in Feet (meters)*				
	8 in (200 mm) Sediment control	12 in (300 mm) Sediment control	18 in (450 mm) Sediment control	24 in (600mm) Sediment control	32 in (800mm) Sediment control
	6.5 in (160 mm)**	9.5 in (240 mm) **	14.5 in (360 mm) **	19 in (480 mm) **	26 in (650 mm) **
2 (or less)	600 (180)	750 (225)	1000 (300)	1300 (400)	1650 (500)
5	400 (120)	500 (150)	550 (165)	650 (200)	750 (225)
10	200 (60)	250 (75)	300 (90)	400 (120)	500 (150)
15	140 (40)	170 (50)	200 (60)	325 (100)	450 (140)
20	100 (30)	125 (38)	140 (42)	260 (80)	400 (120)
25	80 (24)	100 (30)	110 (33)	200 (60)	275 (85)
30	60 (18)	75 (23)	90 (27)	130 (40)	200 (60)
35	60 (18)	75 (23)	80 (24)	115 (35)	150 (45)
40	60 (18)	75 (23)	80 (24)	100 (30)	125 (38)
45	40 (12)	50 (15)	60 (18)	80 (24)	100 (30)
50	40 (12)	50 (15)	55 (17)	65 (20)	75 (23)

* Based on a failure point of 36 in (0.9 m) super silt fence (wire reinforced) at 1000 ft (303 m) of slope, watershed width equivalent to receiving length of sediment control device, 1 in/ 24 hr (25 mm/24 hr) rain event.

** Effective height of Sediment control after installation and with constant head from runoff as determined by Ohio State University.