

July 31, 2018

Re: Stormwater Management at Merri Mar Yacht Basin

Planning Board Members and Staff

Attached is a letter from Paul G. Richard, P.E., Senior Program Director at AMEC Foster Wheeler giving an overview of Merri Mar's Federal Stormwater Pollution Prevention Plan (SWPPP). The US EPA first licensed Merri Mar in 2008. At that time stormwater calculations were made and a plan devised to handle stormwater and prevent pollution. This is an on-going program that requires periodic review to assure that intended goals, including pollution prevention, are met. Merri Mar's current license is valid until June 4, 2020. The pollution prevention methods used are both passive and active. The existing parking area is a mix of pavement and gravel designed to comply with federal permitting requirements, it is an example of passive pollution prevention. Merri Mar also has an active system that collects wash water, filters and treats it as required by EPA standards.

No change is being proposed to the parking area with the exception of the two driveway entrances to be permanently closed. The two entrances to be closed will have the existing pavement removed and will become part of the landscaped area. Not only will this improve the streetscape as viewed from the road it will reduce the amount of impervious surface by approximately 700 sq. ft. These new landscaped areas will help reduce stormwater runoff from this property.

The family owners of Merri Mar Yacht Basin had requested a waiver from stormwater calculation as they were done as part of the initial permit application to the EPA. Stormwater management and pollution prevention are an ongoing priority at Merri Mar Yacht Basin. The proposed plan before the Planning Board will maintain compliance with EPA stormwater license and regulations.



Tim DeCoteau, Land Use Consultant



July 30, 2018

via electronic mail:
jay.mmyb@comcast.net

Mr. Jay Lesynski
President
Merri-Mar Yacht Basin, Inc.
364 Merrimac Street
Newburyport, MA 01950

Re: Summary of Stormwater Management Compliance
NPDES Permit#: MAR053455

Dear Mr. Lesynski:

Per your request, AMEC Massachusetts, Inc. (AMEC) is pleased to provide Merri-Mar Yacht Basin, Inc. (Merri-Mar) with a summary of its historical stormwater permitting and the status of compliance with the United States Environmental Protection Agency (US EPA) for your facility located at 364 Merrimac Street, Newburyport, Massachusetts.

As a provision of the Clean Water Act (CWA), US EPA developed a stormwater permitting program that regulates stormwater discharges from the Merri-Mar facility under its National Pollutant Discharge Elimination System (NPDES) permitting program. This program requires the Merri-Mar facility to obtain a US EPA NPDES Multi-Sector General Permit (MSGP) for stormwater discharges associated with industrial activities. These permits are effective for five (5) years, requiring facilities to seek permit coverage prior to permit expiration. Prior to seeking permit coverage under the MSGP program, facilities, like Merri-Mar, are required to develop and maintain a site specific Stormwater Pollution Prevention Plan (SWPPP).

The intent of the SWPPP is to evaluate potential stormwater pollution sources at the site and to select and implement appropriate measures to prevent or control the discharge of pollutants in stormwater runoff. The development of Merri-Mar's SWPPP involved the following steps:

- Formation of a pollution prevention team of qualified plant personnel and contractors who will be responsible for preparing the plan and assisting in its implementation;
- Assessment of potential stormwater pollution sources;
- Selection and implementation of appropriate management practices and controls; and
- *Periodic evaluation of the ability of the plan to prevent stormwater pollution and to comply with the terms and conditions of the permit. These evaluations include:*
 - Routine Facility Inspections (Monthly) – Entire Facility
 - Quarterly Visual Inspection – Stormwater Discharges
 - Quarterly Outfall Monitoring – Stormwater Discharges



Merri-Mar has been permitted by the US EPA for its stormwater discharges since 2008. Merri-Mar's current permit (NPDES# - MAR053455) was approved on October 3, 2015 and expiring on June 4, 2020. The facility's SWPPP meets all of the US EPA's general consideration requirements and also identifies the Best Management Practices (BMPs) that are currently in place. Merri-Mar and its contractors are implementing all of the SWPPP specific BMPs and have all of the following historical compliance records documenting evaluation compliance. The following records are maintained at Merri-Mar and/or with US EPA's on-line reporting programs:

- Routine and quarterly visual inspections,
- Stormwater monitoring and discharge monitoring reports (DMRs),
- Annual pollution prevention team training, and
- *Annual reporting.*

I trust that this letter sufficient summarizes your stormwater permitting applicability with the US EPA Region I. However, should you have any questions or need additional information, please contact me by phone at 978-392-5328 or via e-mail at paul.richard@amecfw.com.

Sincerely,

AMEC Massachusetts, Inc.

By

A handwritten signature in cursive script that reads "Paul G. Richard".

Paul G. Richard, P.E.
Senior Program Director

SECTION 1: CONSTRUCTION

SWPPP CUT SHEET

Filtrex[®] Sediment/Perimeter Control (SiltSoxx[™])

PURPOSE & DESCRIPTION

Filtrex[®] SiltSoxx[™] is a three-dimensional tubular sediment control and stormwater runoff filtration device typically used for **Sediment/Perimeter Control** of sediment and soluble pollutants (such as phosphorus and petroleum hydrocarbons), on and around construction activities.

APPLICATION

Perimeter control is to be installed down slope of any disturbed area requiring erosion and sediment control and filtration of soluble pollutants from runoff. Perimeter control is effective when installed perpendicular to sheet or low concentrated flow, and in areas that silt fence is normally considered appropriate. 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
- Along the toe of stream and channel banks
- 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. Perimeter control used for control of sediment and soluble pollutants in storm runoff shall meet Filtrex[®]Soxx[™] Material Specifications and use Filtrex[®] CertifiedSM FilterMedia[™].
2. Contractor is required to be Filtrex Certified or use pre-filled Filtrex[®] SiltSoxx[™] products manufactured by a Filtrex Certified Manufacturer as determined by Filtrex International (call Filtrex at 877-542-7699 for a current list of

installers). Certification shall be considered current if appropriate identification is shown during time of bid or at time of application Look for the Filtrex Certified Seal.

3. Perimeter control will be placed at locations indicated on plans and in a manner as directed by the Engineer or Manufacturer.
4. Perimeter control should be installed parallel to the base of the slope or other disturbed area. In challenging conditions (i.e., 2:1 slopes), a second perimeter control shall be constructed at the top of the slope, or staking may be increased.
5. Effective Soxx height in the field should be as follows: 5" diameter Soxx = 4" high; 8" diameter Soxx = 6.5" high; 12" diameter Soxx = 9.5" high; 18" diameter Soxx = 14.5" high; 24" diameter Soxx = 19" high.
6. Stakes should be installed through the middle of the perimeter control on 10 ft (3m) centers, using 2 in (50mm) by 2 in (50mm) by 3 ft (1m) wooden stakes. In the event staking is not possible, i.e., when perimeter control is used on pavement, heavy concrete blocks shall be used behind the perimeter 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 perimeter control, filling the seam between the soil surface and the device, improving filtration and sediment retention.
9. If the perimeter control is to be left as a permanent filter or part of the natural landscape, it may be seeded at time of installation for establishment of permanent vegetation. The Engineer will specify seed requirements.
10. Perimeter control is not to be used in perennial, ephemeral, or intermittent streams.

See design drawing schematic for correct 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. Perimeter control should be regularly inspected to make sure they maintain their shape and are producing adequate hydraulic flow-through. If ponding becomes excessive, additional perimeter control may be required to reduce effective slope length or sediment removal may be necessary. Perimeter control shall be inspected until area above has been permanently stabilized and construction activity has ceased.

1. The Contractor shall maintain the perimeter control in a functional condition at all times and it shall be routinely inspected.
2. If the perimeter control has been damaged, it shall be repaired, or replaced if beyond repair.
3. The Contractor shall remove perimeter at the base of the upslope side of the perimeter control when accumulation has reached 1/2 of the effective height of the Soxx™, or as directed by the Engineer. Alternatively, a new perimeter control can be placed on top of and slightly behind the original one creating more sediment storage capacity without soil disturbance.
4. Perimeter 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, perimeter 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.

ADDITIONAL INFORMATION

For other references on this topic, including additional research reports and trade magazine and press coverage, visit the Filtrexx website at www.filtrexx.com

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61 N Clev-Mass Rd, Ste E, Akron, OH 44333
877-542-7699 | 234-466-0810 (fax)
www.filtrexx.com | info@filtrexx.com
Call for complete list of international installers.

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Table 1.3. Maximum Slope Lengths for Filtrex® Perimeter Control Based on a 1 in (25 mm)/24 hr Rainfall Event.

| Slope Percent | Maximum Slope Length Above Sediment Control in Feet (meters)* | | | | | |
|---------------|---|-----------------------------------|------------------------------------|------------------------------------|-----------------------------------|-----------------------------------|
| | 5 in (125 mm) Sediment control | 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 |
| | 4 in (100 mm)** | 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) | 360 (110) | 600 (180) | 750 (225) | 1000 (300) | 1300 (400) | 1650 (500) |
| 5 | 240 (73) | 400 (120) | 500 (150) | 550 (165) | 650 (200) | 750 (225) |
| 10 | 120 (37) | 200 (60) | 250 (75) | 300 (90) | 400 (120) | 500 (150) |
| 15 | 85 (26) | 140 (40) | 170 (50) | 200 (60) | 325 (100) | 450 (140) |
| 20 | 60 (18) | 100 (30) | 125 (38) | 140 (42) | 260 (80) | 400 (120) |
| 25 | 48 (15) | 80 (24) | 100 (30) | 110 (33) | 200 (60) | 275 (85) |
| 30 | 36 (11) | 60 (18) | 75 (23) | 90 (27) | 130 (40) | 200 (60) |
| 35 | 36 (11) | 60 (18) | 75 (23) | 80 (24) | 115 (35) | 150 (45) |
| 40 | 36 (11) | 60 (18) | 75 (23) | 80 (24) | 100 (30) | 125 (38) |
| 45 | 24 (7) | 40 (12) | 50 (15) | 60 (18) | 80 (24) | 100 (30) |
| 50 | 24 (7) | 40 (12) | 50 (15) | 55 (17) | 65 (20) | 75 (23) |

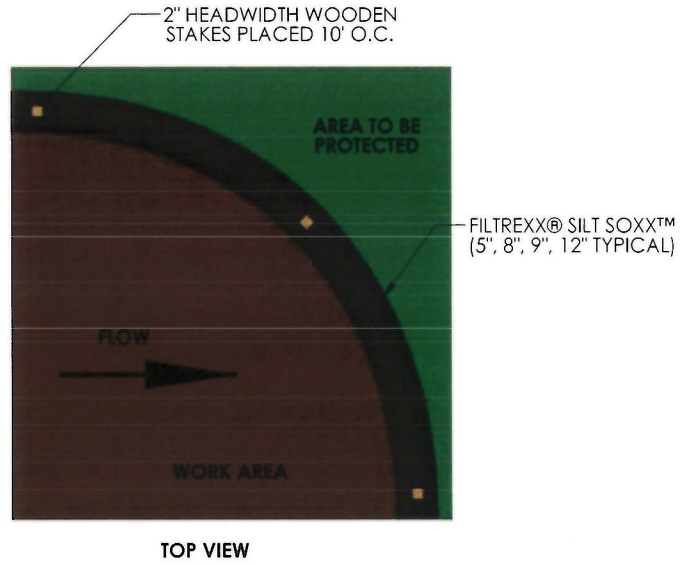
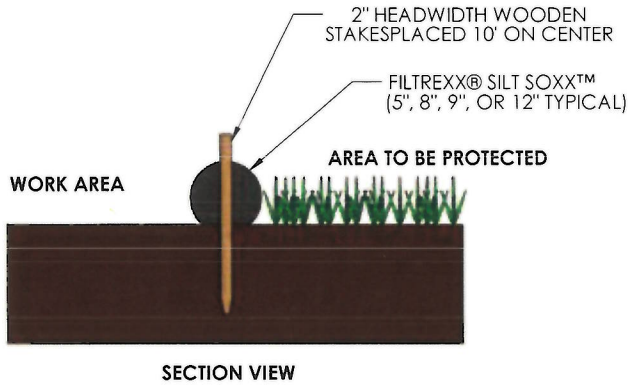
* Based on a failure point of 36 in (0.9 m) super silt fence (wire reinforced) at 1000 ft (303 m) of slope, watershed width equivalent to receiving length of perimeter control device, 1 in/ 24 hr (25 mm/24 hr) rain event.

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

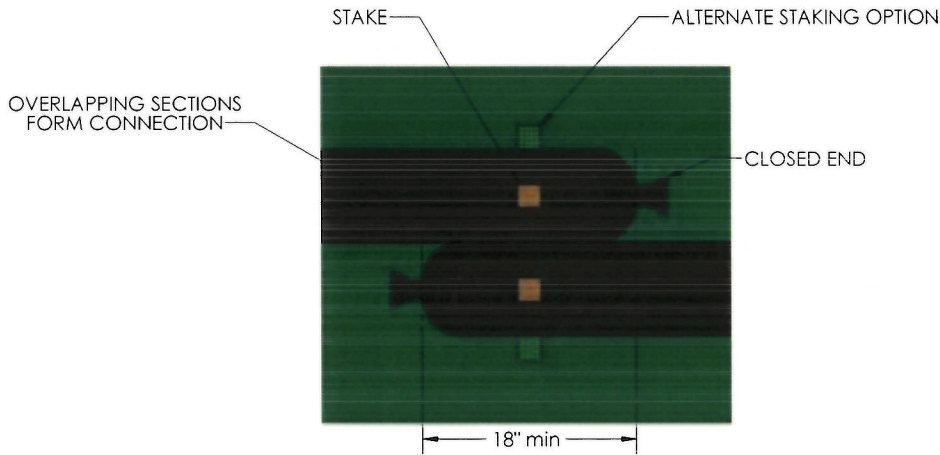


Figure 1.1. Engineering Design Drawing for Perimeter Control

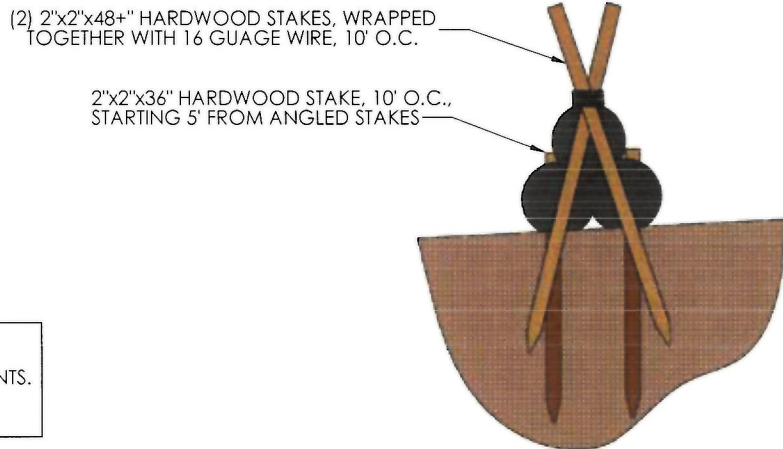
FILTREXX® SILT SOXX™



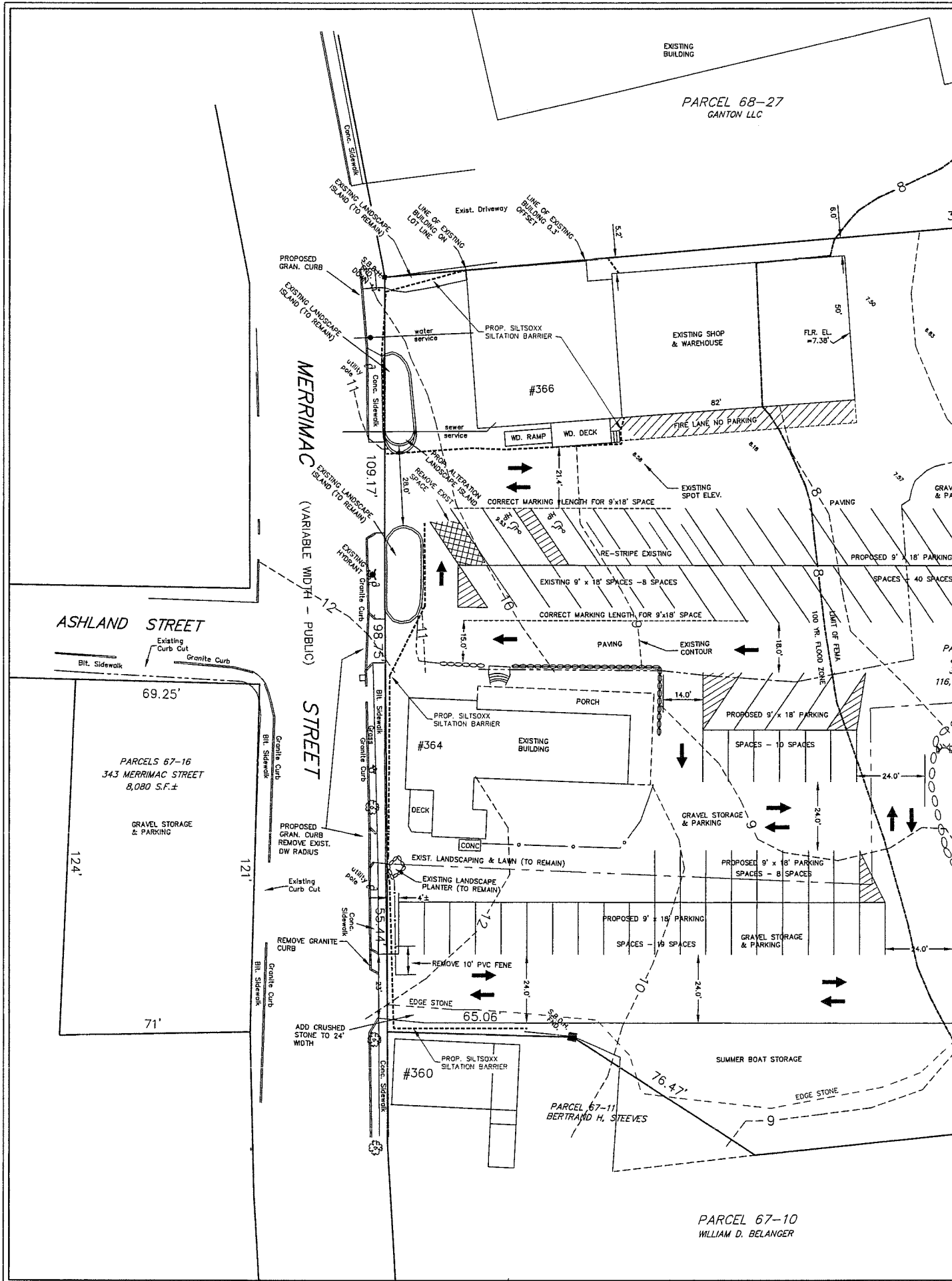
COMPOST SOCK CONNECTION/ATTACHMENT DETAIL



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.



PARCEL 68-27
GANTON LLC

ASHLAND STREET

MERRIMAC STREET
(VARIABLE WIDTH - PUBLIC)

STREET

PARCELS 67-16
343 MERRIMAC STREET
8,080 S.F.±

GRAVEL STORAGE & PARKING

71'

#364

EXIST. BUILDING

EXIST. LANDSCAPING & LAWN (TO REMAIN)

EXIST. LANDSCAPE PLANTER (TO REMAIN)

REMOVE 10' PVC FENCE

#360

PROP. SILTISOXX SILTATION BARRIER

PARCEL 67-11
BERTRAND H. STEEVES

PARCEL 67-10
WILLIAM D. BELANGER

EXISTING BUILDING

EXISTING SHOP & WAREHOUSE

WD. RAMP

WD. DECK

EXISTING SPOT ELEV.

EXISTING CONTOUR

PORCH

PROP. SILTISOXX SILTATION BARRIER

DECK

CONC.

GRAVEL STORAGE & PARKING

PROP. 9' x 18' PARKING SPACES - 8 SPACES

PROP. 9' x 18' PARKING SPACES - 10 SPACES

GRAVEL STORAGE & PARKING

SUMMER BOAT STORAGE

EDGE STONE

PROPOSED GRAN. CURB

EXISTING LANDSCAPE ISLAND (TO REMAIN)

EXISTING LANDSCAPE ISLAND (TO REMAIN)

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