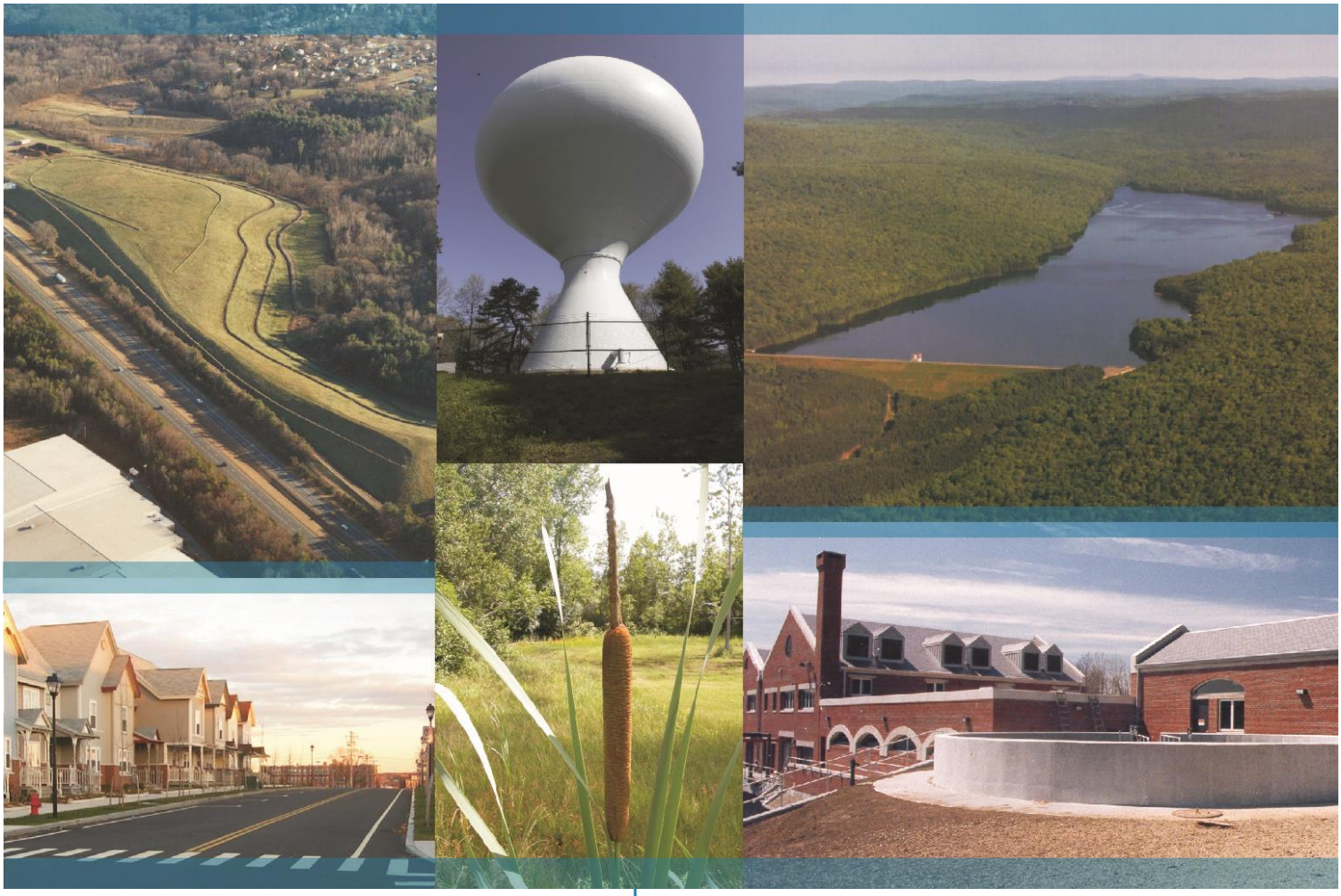


Tighe&Bond

Former Polymerine Site – 241 Duchaine Boulevard

Stormwater Report

Prepared For:

City of New Bedford
133 William Street
New Bedford, Massachusetts

December 2015

Section 1 Registered Professional Engineer's Certification

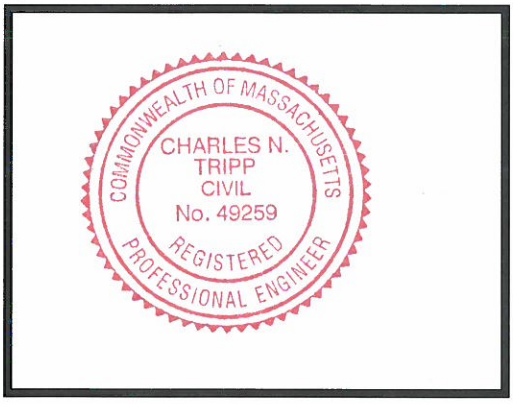
Section 2 Project Description

Section 3 Regulatory Compliance

Appendices

Section 1
Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including attached soils information, computations, Long-term Pollution Prevention Plan, the Construction Period Pollution Prevention Plan, the Illicit Discharge Compliance Statement and the plans showing the proposed site improvements, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist, provided in Appendix A, is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.



Registered Professional Engineer Block and Signature 12/17/15

Signature, Date

Section 2
Project Description

2.1 Project Summary

The proposed Former Polymerine Site Redevelopment project (herein referred to as "the project") includes the demolition of approximately 66,833 square feet of impervious area, which includes an existing 33,757 square foot manufacturing building and its associated parking lots and walkway areas. After demolition, limited cleanup of soils impacted by elevated concentrations of polychlorinated biphenyls (PCBs) will occur. The project will then seek to develop a paved parking lot area that will serve as a capping system for remaining PCB impacted soils at the project site. This will provide a future beneficial use of the site by way of a new potential parking lot.

The project is being undertaken by the Owner, the City of New Bedford. As proposed, the new capping system/paved potential parking lot area and the site's paved entrance roads would occupy approximately 55,000 square feet, with any previously existing paved areas (outside the cap) being removed as part of the demolition work. This would allow the level of impervious cover at the site to be reduced (by approximately 11,833 square feet) as part of site redevelopment, and it will provide adequate capping for the contaminated soils located at the site. Based on the City of New Bedford's assessor's data, the project parcels within the City of New Bedford consist of:

- Parcel ID: 135-32 (8.02 acres) located at 241 Duchaine Boulevard

The following Stormwater Management Report was prepared in support of this project as required by the Massachusetts Department of Environmental Protection (MassDEP) Stormwater Standards and in accordance with guidance provided by the Massachusetts Stormwater Handbook.

2.2 Existing Conditions

The 241 Duchaine Boulevard property for which the project is focused consists of an approximately 8-acre parcel of land located in an industrial setting. The eastern portion of the site parcel is currently developed with a single-story 33,757 square foot manufacturing building that was constructed circa 1960. The building is currently vacant and is scheduled for demolition as part of the proposed project.

An abandoned railroad spur line is located at the south end of the property. On the northern portion of the property is an asphalt parking area, followed by an undeveloped wooded lot. The eastern portion of the property consists of a landscaped lawn area beyond which has a drainage swale that borders Duchaine Boulevard. To the west of the site building is grassy lawn area beyond which is wetlands associated with Hobomock Swamp.

The site was first developed in 1960 and was operated by Polyply, Inc., a manufacturer of composite fiberglass boards. In 1990, Polyply filed for bankruptcy and restructured under the name Polymerine, Inc. Polymerine ceased operations at the site in the mid-1990s. Polyply and Polymerine produced composite fiberglass boards by laminating several layers of fiberglass sheets together, coating them with a water-based epoxy resin, then bonding them using pressure and heat. In later years, the boards were purchased pre-

impregnated, and then joined at the facility. For a majority of the operations history at the site, PCB laden oil was used in the heat transfer system. Based on the site history and the known extent of PCB impacts, it appears that poor industrial housekeeping (i.e., storage and handling of PCB oils) and/or possible illegal dumping during the composite fiberglass board manufacturing operations was the primary cause(s) of the impacts to the site environment.

2.1 Proposed Improvements

The proposed project includes demolition of an abandoned manufacturing building and its associated paved parking lots, and the development of a new paved lot. After demolition and before new parking lot construction, a cleanup program will be conducted under Toxic Substance Control Act (TSCA) regulations at 40 CFR §761.61(c) and the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000). In general this will involve the following:

- excavation of soils with PCB concentrations greater than 500 parts per million (ppm) for proper off-site disposal,
- consolidation of the remaining PCB impacts in upland areas (i.e., outside of the wetland areas) beneath a capping system installed in accordance with TSCA and MCP regulations, and
- placement of a restriction on the deed for the capped area in accordance with TSCA and MCP regulations.

The new paved lot (i.e., the capped area) and new paved entrances of Duchaine Boulevard will occupy approximately 55,767 square feet in area, and will be centered over the area in which the previous 33,757 square foot manufacturing building footprint existed. In total, approximately 11,066 square feet of impervious surface will be removed from the site.

The paved lot centered over the previous building footprint will be constructed utilizing a permanent capping system consisting of a filter fabric barrier, 12 inches of gravel borrow (with an orange warning barrier located in the middle), and six inches of asphalt placed over the consolidated PCB-impacted soils to meet TSCA capping requirements per 40 CFR 761.61(a)(7).

For the remaining paved surfaces to the north and south of where the TSCA cap will be installed, the asphalt material will be removed and incorporated into the capped area.

In a number of areas, the topography of the TSCA cap will create a berm, which will be designed to mimic existing flow patterns of stormwater runoff and to prevent new ponding of stormwater on the paved lot.

The proposed improvements will not have a detrimental impact to stormwater management on-site. The following section details the aspects of the project as they pertain to the Massachusetts Stormwater Management Regulations and how the project complies with each standard in detail.

Section 3
Regulatory Compliance

The project is required to comply with the ten Massachusetts Stormwater Standards (Standards). The Massachusetts Stormwater Checklist is provided in Appendix A.

3.1 LID Measures

MassDEP allows for reductions in stormwater Best Management Practice (BMP) requirements for water quantity and quality when certain criteria are met. The applicant is not requesting credit for LID measures for this project.

3.2 Standard 1: No New Untreated Discharges

There are no new stormwater conveyance outfalls discharging untreated stormwater directly to waters of the Commonwealth as a result of the proposed development. Existing drainage patterns are maintained and new outfalls are not proposed.

3.3 Standard 2: Peak Discharge Rate Attenuation

Tighe & Bond modeled the hydrologic conditions for the pre- and post-developed conditions of the site using HydroCAD Rel. 10.00. HydroCAD is a hydrology and hydraulics program based on the SCS TR-55 and TR-20 methodology. We developed the soil runoff curve numbers and times of concentration using SCS TR-55 standard procedures for calculating travel times. The rainfall data used in the models was an SCS Type III, 24-hour storm distribution. We obtained the rainfall data from the Extreme Precipitation Webtool internet website currently operated by Cornell University, which can be found at: http://precip.eas.cornell.edu.

Copies of the Pre and Post-Development HydroCAD analyses appear in Appendix B, along with associated plans indicating the location of the catchment area within the subject watershed.

We established one design point to compare the pre- and post-development site hydrology. Design Point 1, located at the westernmost point of the site was the subject wetland resource area associated with the Hobomock Swamp as described previously.

Tables 1 provides a summary of the pre- and post-development runoff rates at the site.

TABLE 1
Peak Discharge Rates for Design Point (Hobomock Swamp)

Return Freq.	Existing Peak Discharge (cfs)	Proposed Post-development Peak Discharge (cfs)
2-year	5.78	4.98
10-year	10.34	9.37
25-year	13.95	12.91
100-year	21.16	20.06

As shown in Table 1 and Appendix B, the proposed Project will not significantly alter stormwater flow paths, nor will it impact peak stormwater discharge rates throughout the site. While the proposed pavement cap is an impervious surface, stormwater will be allowed to sheet flow off the edge of the parking lot and into the existing vegetated surfaces as under existing conditions. All stormwater will continue to be allowed to percolate into the existing vegetated surfaces, matching pre-development conditions.

3.4 Standard 3: Groundwater Recharge

The project site is made up of B and D type soils, as depicted on the soil map developed by the U.S. Natural Resources Conservation Service, and provided in Appendix C.

It should be noted that the primary location of the project is a PCB contaminated, former industrial site that now falls under TSCA (and MCP) regulations for cleanup. This situation and the proposed improvements essentially mimic a landfill. The proposed pavement cap system includes a "low permeability layer" (i.e. pavement cap), similar to a landfill which prohibits stormwater from percolating through the landfill cap and to groundwater. As is typically the case, a landfill site is not an appropriate location for groundwater recharge. Therefore, for the purposes of this project, groundwater recharge has not been proposed.

3.5 Standard 4: Water Quality

Standard 4 of the Massachusetts Stormwater Standards addresses stormwater quality requirements. This standard requires that new stormwater management systems be designed to achieve an 80% Total Suspended Solids (TSS) removal rate prior to discharge. Additionally, this standard addresses the required volume of stormwater runoff that is to be treated by the BMPs, as well as components of a long-term source control and pollution prevention plan.

The proposed project will not significantly impact the existing stormwater quality. The impervious area associated with this project consists of a bituminous concrete pavement capping system. This type of impervious surface is expected to produce clean runoff in comparison to the existing conditions of the site, and any runoff will shed onto adjacent vegetated surfaces. Therefore, TSS removal and water quality provisions are not required.

3.6 Standard 5: Land Uses with Higher Potential Pollutant Loads (LUHPPLs)

A number of the requirements that a LUHPPL site must comply with do not apply to the proposed use. These requirements include an increased percentage of TSS removal prior to infiltration and an increased volume to be treated for water quality. Infiltration measures are not proposed as part of the stormwater management system as peak discharge rates are have been decreased by the proposed use, and the proposed impervious areas allow stormwater to runoff directly to the vegetative surfaces adjacent to the Hobomock Swamp. Furthermore, the proposed impervious surfaces are anticipated to be subject to vehicular traffic far less than 1,000 vehicle trips per day, which is the threshold criteria for a parking lot with high potential pollutant loading. However, provisions for long-term source control and pollution prevention are included in the Stormwater O&M Plan provided in Appendix D.

In closing, this proposed project does not have land use associated with a higher potential pollutant load. Therefore, Standard 5 is not applicable.

3.7 Standard 6: Critical Areas

The site straddles the boundary between a Potentially Productive Aquifer (PPA) and a Non-Potential Drinking Water Source Area. The site is not located within 500 feet of a Zone II or an Interim Wellhead Protection Area of a public water supply, or a Public Surface Water Supply Protection Area (Zone A), therefore the project is not considered to have an impact upon any critical areas.

Additionally, the project will not result in any new stormwater discharges to the nearby wetland areas. Existing drainage patterns will be maintained, and stormwater quality will not be impacted as a result of the development. Stormwater BMPs are not proposed as part of the project due to the nature of the project and the applicability of Stormwater Standards 3 and 4.

3.8 Standard 7: Redevelopment Projects

The project is considered a combination of new development and redevelopment of an existing use. The re-use of the industrial site is considered a redevelopment; however new impervious ground cover is considered new development. The new impervious features of the development include a bituminous concrete paved lot acting as a cap for contaminated soils beneath it. Stormwater that encounters the impervious areas will sheet flow off of the pavement cap and surrounding areas and will mimic existing drainage patterns. The impervious pavement cap prohibits groundwater recharge. The project will comply with the provisions of the Standards as previously addressed.

3.9 Standard 8: Construction Period Pollution Prevention, Erosion and Sedimentation Control

There will be more than one acre of land disturbed as a result of this project, therefore an EPA NPDES Construction General Permit will be developed prior to construction. A Construction Period Pollution Prevention and Erosion and Sedimentation control Plan is included in Appendix E. Upon issuance of final permits for the project, the SWPPP will be prepared by the Contractor. A copy of the finalized SWPPP will be forwarded to the Planning Board at that time.

3.10 Standard 9: Long-Term Operation and Maintenance Plan

The project does not include stormwater controls that require long-term operation and maintenance procedures.

3.11 Standard 10: Prohibition of Illicit Discharges

The Applicant is not aware of any existing illicit discharges at the Site and is not proposing any illicit discharges as part of the project. If any illicit discharges are discovered during the execution of the project, MassDEP will be notified. An Illicit Discharge Statement is provided in Appendix F.

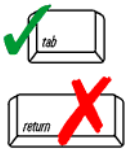
Appendix A
Massachusetts Stormwater Report Checklist

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

A. Introduction

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A Stormwater Report must be submitted with the Notice of Intent permit application to document compliance with the Stormwater Management Standards. The following checklist is NOT a substitute for the Stormwater Report (which should provide more substantive and detailed information) but is offered here as a tool to help the applicant organize their Stormwater Management documentation for their Report and for the reviewer to assess this information in a consistent format. As noted in the Checklist, the Stormwater Report must contain the engineering computations and supporting information set forth in Volume 3 of the Massachusetts Stormwater Handbook. The Stormwater Report must be prepared and certified by a Registered Professional Engineer (RPE) licensed in the Commonwealth.

The Stormwater Report must include:

- The Stormwater Checklist completed and stamped by a Registered Professional Engineer (see page 2) that certifies that the Stormwater Report contains all required submittals.[1] This Checklist is to be used as the cover for the completed Stormwater Report.
- Applicant/Project Name
- Project Address
- Name of Firm and Registered Professional Engineer that prepared the Report
- Long-Term Pollution Prevention Plan required by Standards 4-6
- Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan required by Standard 8[2]
- Operation and Maintenance Plan required by Standard 9

In addition to all plans and supporting information, the Stormwater Report must include a brief narrative describing stormwater management practices, including environmentally sensitive site design and LID techniques, along with a diagram depicting runoff through the proposed BMP treatment train. Plans are required to show existing and proposed conditions, identify all wetland resource areas, NRCS soil types, critical areas, Land Uses with Higher Potential Pollutant Loads (LUHPPL), and any areas on the site where infiltration rate is greater than 2.4 inches per hour. The Plans shall identify the drainage areas for both existing and proposed conditions at a scale that enables verification of supporting calculations.

As noted in the Checklist, the Stormwater Management Report shall document compliance with each of the Stormwater Management Standards as provided in the Massachusetts Stormwater Handbook. The soils evaluation and calculations shall be done using the methodologies set forth in Volume 3 of the Massachusetts Stormwater Handbook.

To ensure that the Stormwater Report is complete, applicants are required to fill in the Stormwater Report Checklist by checking the box to indicate that the specified information has been included in the Stormwater Report. If any of the information specified in the checklist has not been submitted, the applicant must provide an explanation. The completed Stormwater Report Checklist and Certification must be submitted with the Stormwater Report.

[1] The Stormwater Report may also include the Illicit Discharge Compliance Statement required by Standard 10. If not included in the Stormwater Report, the Illicit Discharge Compliance Statement must be submitted prior to the discharge of stormwater runoff to the post-construction best management practices.

[2] For some complex projects, it may not be possible to include the Construction Period Erosion and Sedimentation Control Plan in the Stormwater Report. In that event, the issuing authority has the discretion to issue an Order of Conditions that approves the project and includes a condition requiring the proponent to submit the Construction Period Erosion and Sedimentation Control Plan before commencing any land disturbance activity on the site.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

B. Stormwater Checklist and Certification

The following checklist is intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Stormwater Report. The checklist is also intended to provide conservation commissions and other reviewing authorities with a summary of the components necessary for a comprehensive Stormwater Report that addresses the ten Stormwater Standards.

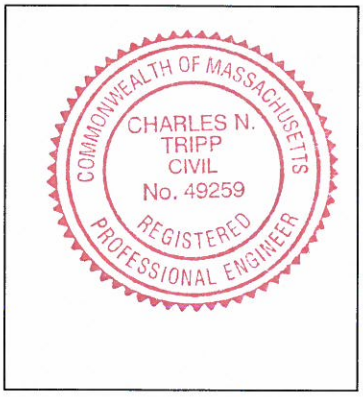
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.

A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan (if included), the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature



Signature and Date 12/17/15

Checklist

Project Type: Is the application for new development, redevelopment, or a mix of new and redevelopment?

☐ New development

☐ Redevelopment

☒ Mix of New Development and Redevelopment

Checklist for Stormwater Report

Checklist (continued)

LID Measures: Stormwater Standards require LID measures to be considered. Document what environmentally sensitive design and LID Techniques were considered during the planning and design of the project:

- ☒ No disturbance to any Wetland Resource Areas
- ☐ Site Design Practices (e.g. clustered development, reduced frontage setbacks)
- ☐ Reduced Impervious Area (Redevelopment Only)
- ☐ Minimizing disturbance to existing trees and shrubs
- ☐ LID Site Design Credit Requested:
  - ☐ Credit 1
  - ☐ Credit 2
  - ☐ Credit 3
- ☐ Use of "country drainage" versus curb and gutter conveyance and pipe
- ☐ Bioretention Cells (includes Rain Gardens)
- ☐ Constructed Stormwater Wetlands (includes Gravel Wetlands designs)
- ☐ Treebox Filter
- ☐ Water Quality Swale
- ☐ Grass Channel
- ☐ Green Roof
- ☐ Other (describe): _____

Standard 1: No New Untreated Discharges

- ☒ No new untreated discharges
- ☐ Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth
- ☐ Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.

Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation

☐ Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.

☐ Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.

☒ Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-year and 10-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24-hour storm.

Standard 3: Recharge

☐ Soil Analysis provided.

☐ Required Recharge Volume calculation provided.

☐ Required Recharge volume reduced through use of the LID site Design Credits.

☐ Sizing the infiltration, BMPs is based on the following method: Check the method used.

☐ Static ☐ Simple Dynamic ☐ Dynamic Field[1]

☐ Runoff from all impervious areas at the site discharging to the infiltration BMP.

☐ Runoff from all impervious areas at the site is *not* discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the infiltration BMPs is sufficient to generate the required recharge volume.

☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume.

☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume *only* to the maximum extent practicable for the following reason:

☐ Site is comprised solely of C and D soils and/or bedrock at the land surface

☐ M.G.L. c. 21E sites pursuant to 310 CMR 40.0000

☐ Solid Waste Landfill pursuant to 310 CMR 19.000

☒ Project is otherwise subject to Stormwater Management Standards only to the maximum extent practicable.

☐ Calculations showing that the infiltration BMPs will drain in 72 hours are provided.

☐ Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.

[1] 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.

Checklist for Stormwater Report

Checklist (continued)

Standard 3: Recharge (continued)

☐ The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided.

☐ Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland resource areas.

Standard 4: Water Quality

The Long-Term Pollution Prevention Plan typically includes the following:

- Good housekeeping practices;
- Provisions for storing materials and waste products inside or under cover;
- Vehicle washing controls;
- Requirements for routine inspections and maintenance of stormwater BMPs;
- Spill prevention and response plans;
- Provisions for maintenance of lawns, gardens, and other landscaped areas;
- Requirements for storage and use of fertilizers, herbicides, and pesticides;
- Pet waste management provisions;
- Provisions for operation and management of septic systems;
- Provisions for solid waste management;
- Snow disposal and plowing plans relative to Wetland Resource Areas;
- Winter Road Salt and/or Sand Use and Storage restrictions;
- Street sweeping schedules;
- Provisions for prevention of illicit discharges to the stormwater management system;
- Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL;
- Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;
- List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.

☒ A Long-Term Pollution Prevention Plan is attached to Stormwater Report and is included as an attachment to the Wetlands Notice of Intent.

☐ Treatment BMPs subject to the 44% TSS removal pretreatment requirement and the one inch rule for calculating the water quality volume are included, and discharge:

- ☐ is within the Zone II or Interim Wellhead Protection Area
- ☐ is near or to other critical areas
- ☐ is within soils with a rapid infiltration rate (greater than 2.4 inches per hour)
- ☐ involves runoff from land uses with higher potential pollutant loads.

☐ The Required Water Quality Volume is reduced through use of the LID site Design Credits.

☐ Calculations documenting that the treatment train meets the 80% TSS removal requirement and, if applicable, the 44% TSS removal pretreatment requirement, are provided.

Checklist for Stormwater Report

Checklist (continued)

Standard 4: Water Quality (continued)

☐ The BMP is sized (and calculations provided) based on:

- ☐ The ½" or 1" Water Quality Volume or
- ☐ The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.

☐ The applicant proposes to use proprietary BMPs, and documentation supporting use of proprietary BMP and proposed TSS removal rate is provided. This documentation may be in the form of the propriety BMP checklist found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.

☐ A TMDL exists that indicates a need to reduce pollutants other than TSS and documentation showing that the BMPs selected are consistent with the TMDL is provided.

Standard 5: Land Uses With Higher Potential Pollutant Loads (LUHPPLs)

☐ The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report.

☒ The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted ***prior to*** the discharge of stormwater to the post-construction stormwater BMPs.

☐ The NPDES Multi-Sector General Permit does ***not*** cover the land use.

☐ LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.

☐ All exposure has been eliminated.

☐ All exposure has ***not*** been eliminated and all BMPs selected are on MassDEP LUHPPL list.

☐ The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.

Standard 6: Critical Areas

☐ The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.

☒ Critical areas and BMPs are identified in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum extent practicable

☒ The project is subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:

- ☐ Limited Project
- ☐ Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area.
- ☐ Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area
- ☐ Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff
- ☐ Bike Path and/or Foot Path
- ☐ Redevelopment Project
- ☒ Redevelopment portion of mix of new and redevelopment.

☐ Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.

☐ The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the following information:

- Narrative;
- Construction Period Operation and Maintenance Plan;
- Names of Persons or Entity Responsible for Plan Compliance;
- Construction Period Pollution Prevention Measures;
- Erosion and Sedimentation Control Plan Drawings;
- Detail drawings and specifications for erosion control BMPs, including sizing calculations;
- Vegetation Planning;
- Site Development Plan;
- Construction Sequencing Plan;
- Sequencing of Erosion and Sedimentation Controls;
- Operation and Maintenance of Erosion and Sedimentation Controls;
- Inspection Schedule;
- Maintenance Schedule;
- Inspection and Maintenance Log Form.

☐ A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control (continued)

☐ The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has ***not*** been included in the Stormwater Report but will be submitted ***before*** land disturbance begins.

☐ The project is ***not*** covered by a NPDES Construction General Permit.

☐ The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.

☒ The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

Standard 9: Operation and Maintenance Plan

☒ The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:

- ☒ Name of the stormwater management system owners;
- ☒ Party responsible for operation and maintenance;
- ☒ Schedule for implementation of routine and non-routine maintenance tasks;
- ☐ Plan showing the location of all stormwater BMPs maintenance access areas;
- ☐ Description and delineation of public safety features;
- ☐ Estimated operation and maintenance budget; and
- ☒ Operation and Maintenance Log Form.

☐ The responsible party is ***not*** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:

- ☐ A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
- ☐ A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.

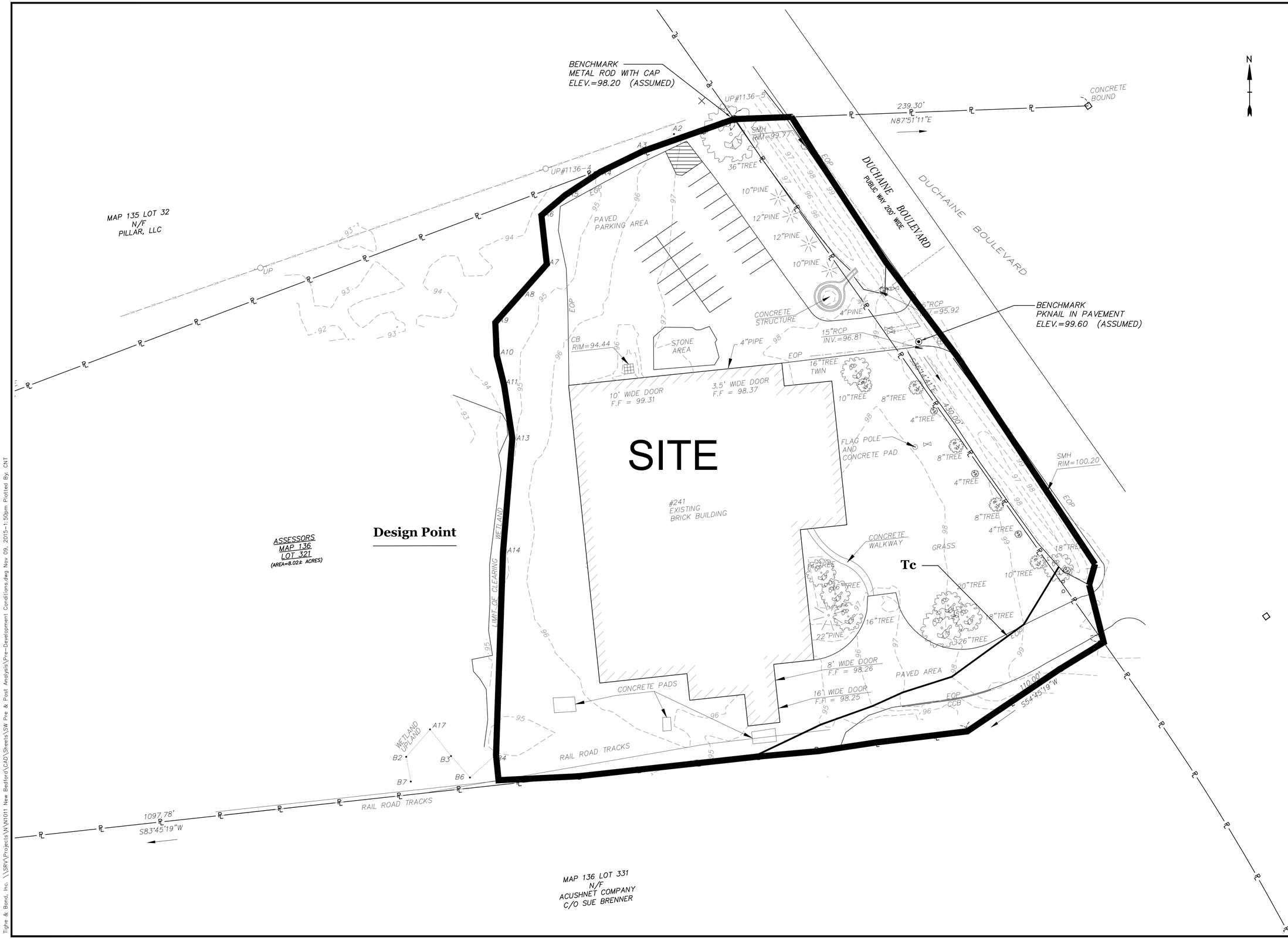
Standard 10: Prohibition of Illicit Discharges

☐ The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;

☒ An Illicit Discharge Compliance Statement is attached;

☐ NO Illicit Discharge Compliance Statement is attached but will be submitted ***prior to*** the discharge of any stormwater to post-construction BMPs.

Appendix B
- HydroCAD Stormwater Calculations: Pre-Development vs. Post-Development
-Pre and Post Development Subcatchment Area Drawings



Tighe & Bond, Inc. \\SRV\Projects\N\N1011 New Bedford\CAD\Sheets\SW Pre & Post Analysis\Pre-Development Conditions.dwg Nov 09, 2015-1:50pm Plotted By: CNT

Tighe&Bond
Consulting Engineers
www.tighebond.com

City of New Bedford

Former Polymerine Site
241 Duchaine Boulevard

New Bedford, Massachusetts

VERIFY SCALE
BAR IS 1 INCH ON ORIGINAL DRAWING
0 ——— 1 INCH
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

Mark	Date	Description

PROJECT NO:	N1011
FILE:	Pre:Development Conditions.dwg
DRAWN BY:	CNT
CHECKED:	X
APPROVED BY:	X

PRE:DEVELOPMENT CONDITIONS

SCALE: 1"=□0'

SHEET 1 OF 2

BENCHMARK
METAL ROD WITH CAP
ELEV.=98.20 (ASSUMED)

239.30'
N87°51'11"E

DUCHAINE BOULEVARD
PUBLIC WAY 200' WIDE

135 LOT 32
N/F
ILLAR, LLC

R10.0'
R15.0'
R15.0'
R15.0'
R15.0'
R15.0'

BENCHMARK
PKNAIL IN PAVEMENT
ELEV.=99.60 (ASSUMED)

N54°44'41"E
430.00'

SITE

Design Point

ASSESSORS
MAP 136
LOT 321
(AREA=8.02± ACRES)

Tc

110.00'
S54°45'19"W

1097.78'
S83°45'19"W

MAP 136 LOT 331
N/F
ACUSHNET COMPANY
C/O SUE BRENNER

N

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Consulting Engineers
www.tighebond.com

City of New Bedford

Former Polymerine Site
241 Duchaine Boulevard

New Bedford, Massachusetts

VERIFY SCALE
BAR IS 1 INCH ON ORIGINAL DRAWING
0 1 INCH
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

Mark	Date	Description

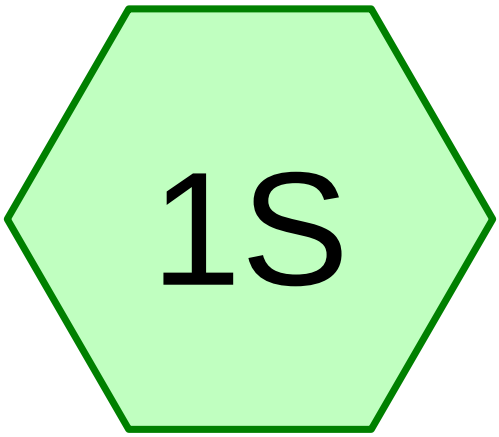
PROJECT NO:	N1011
FILE:	Post Development Conditions.dwg
DRAWN BY:	CNT
CHECKED:	X
APPROVED BY:	X

POST DEVELOPMENT CONDITIONS

SCALE: 1"=□0'

SHEET 2 OF 2

Tighe & Bond, Inc. \\SRV\Projects\W\N1011 New Bedford\CAD\Sheets\SW Pre & Post Analysis\Post Development Conditions.dwg Nov 09, 2015-1:50pm Plotted By: CNT



Site - Pre Development

Subcat Reach Pond Link

Routing Diagram for Pre-Development
Prepared by Microsoft, Printed 11/9/2015

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.934	61	>75% Grass cover, Good, HSG B (1S)
0.566	80	>75% Grass cover, Good, HSG D (1S)
0.738	98	Paved parking, HSG B (1S)
0.779	98	Roofs, HSG B (1S)
3.017	**83**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
2.451	HSG B	1S
0.000	HSG C	
0.566	HSG D	1S
0.000	Other	
3.017		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.934	0.000	0.566	0.000	1.500	>75% Grass cover, Good	1S
0.000	0.738	0.000	0.000	0.000	0.738	Paved parking	1S
0.000	0.779	0.000	0.000	0.000	0.779	Roofs	1S
0.000	**2.451**	**0.000**	**0.566**	**0.000**	**3.017**	**TOTAL AREA**	

Summary for Subcatchment 1S: Site - Pre Development

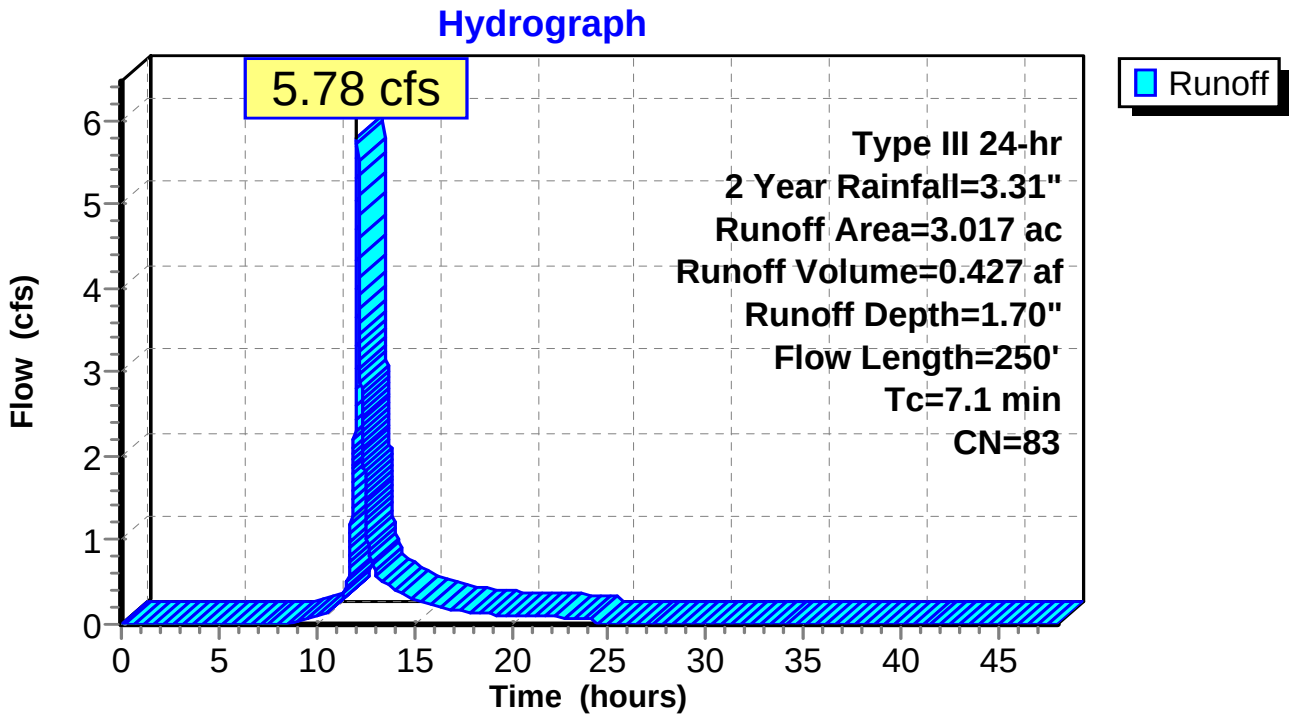
Runoff = 5.78 cfs @ 12.10 hrs, Volume= 0.427 af, Depth= 1.70"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 Year Rainfall=3.31"

Area (ac)	CN	Description
0.779	98	Roofs, HSG B
0.738	98	Paved parking, HSG B
0.566	80	>75% Grass cover, Good, HSG D
0.934	61	>75% Grass cover, Good, HSG B
3.017	83	Weighted Average
1.500		49.72% Pervious Area
1.517		50.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.5	50	0.0200	0.15		**Sheet Flow, Sheet - Grass** Grass: Short n= 0.150 P2= 3.31"
1.6	200	0.0100	2.03		**Shallow Concentrated Flow, Shallow - Paved** Paved Kv= 20.3 fps
7.1	250	Total			

Subcatchment 1S: Site - Pre Development



Summary for Subcatchment 1S: Site - Pre Development

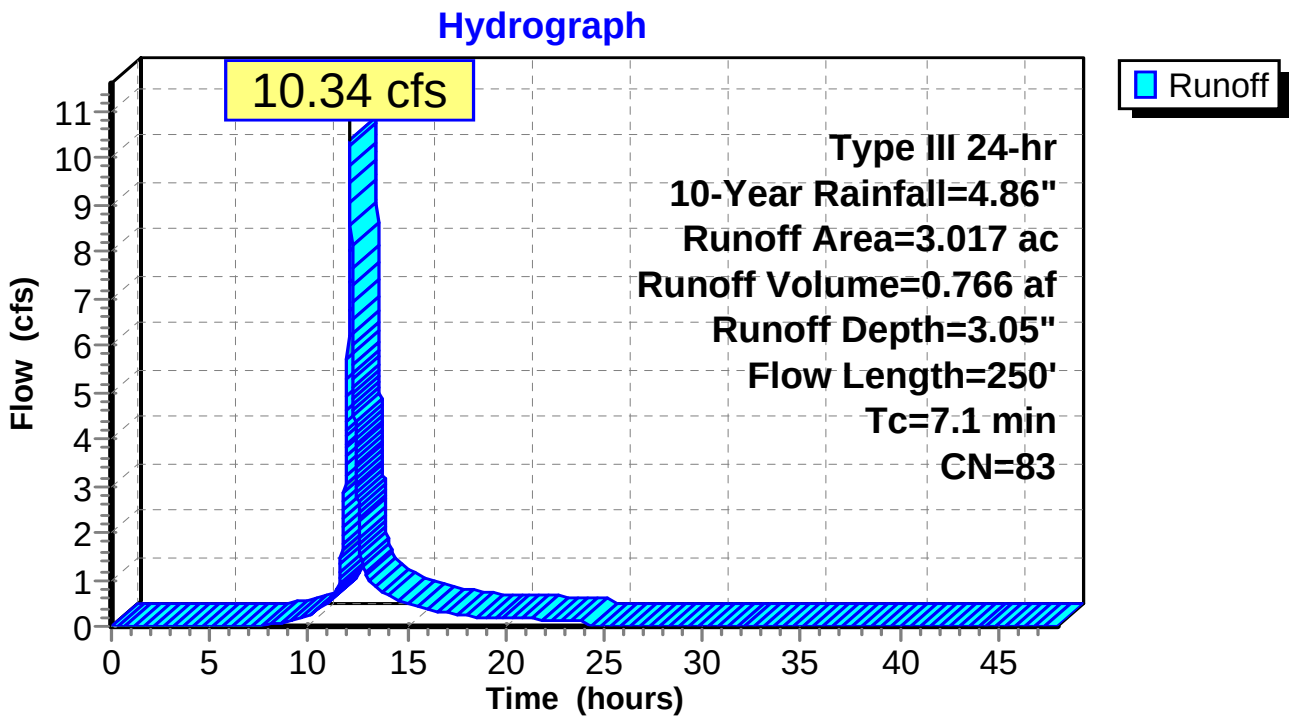
Runoff = 10.34 cfs @ 12.10 hrs, Volume= 0.766 af, Depth= 3.05"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.86"

Area (ac)	CN	Description
0.779	98	Roofs, HSG B
0.738	98	Paved parking, HSG B
0.566	80	>75% Grass cover, Good, HSG D
0.934	61	>75% Grass cover, Good, HSG B
3.017	83	Weighted Average
1.500		49.72% Pervious Area
1.517		50.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.5	50	0.0200	0.15		**Sheet Flow, Sheet - Grass** Grass: Short n= 0.150 P2= 3.31"
1.6	200	0.0100	2.03		**Shallow Concentrated Flow, Shallow - Paved** Paved Kv= 20.3 fps
7.1	250	Total			

Subcatchment 1S: Site - Pre Development



Summary for Subcatchment 1S: Site - Pre Development

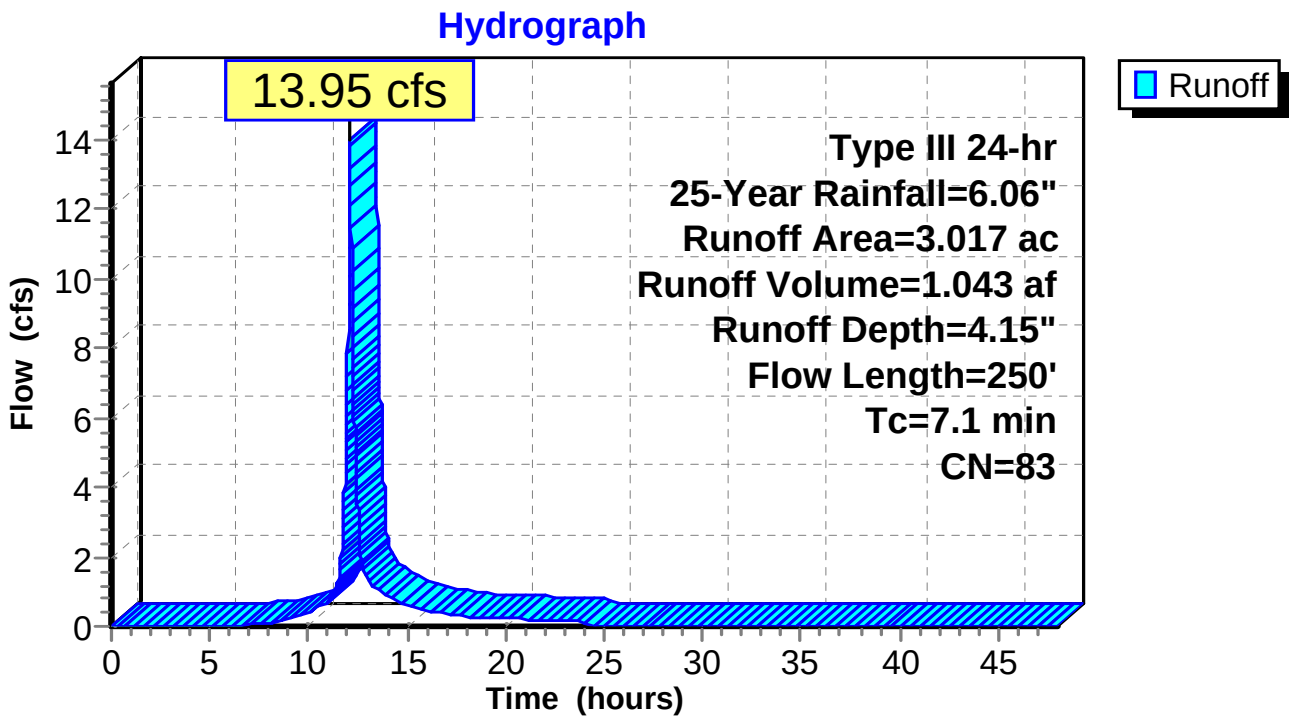
Runoff = 13.95 cfs @ 12.10 hrs, Volume= 1.043 af, Depth= 4.15"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.06"

Area (ac)	CN	Description
0.779	98	Roofs, HSG B
0.738	98	Paved parking, HSG B
0.566	80	>75% Grass cover, Good, HSG D
0.934	61	>75% Grass cover, Good, HSG B
3.017	83	Weighted Average
1.500		49.72% Pervious Area
1.517		50.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.5	50	0.0200	0.15		**Sheet Flow, Sheet - Grass** Grass: Short n= 0.150 P2= 3.31"
1.6	200	0.0100	2.03		**Shallow Concentrated Flow, Shallow - Paved** Paved Kv= 20.3 fps
7.1	250	Total			

Subcatchment 1S: Site - Pre Development



Summary for Subcatchment 1S: Site - Pre Development

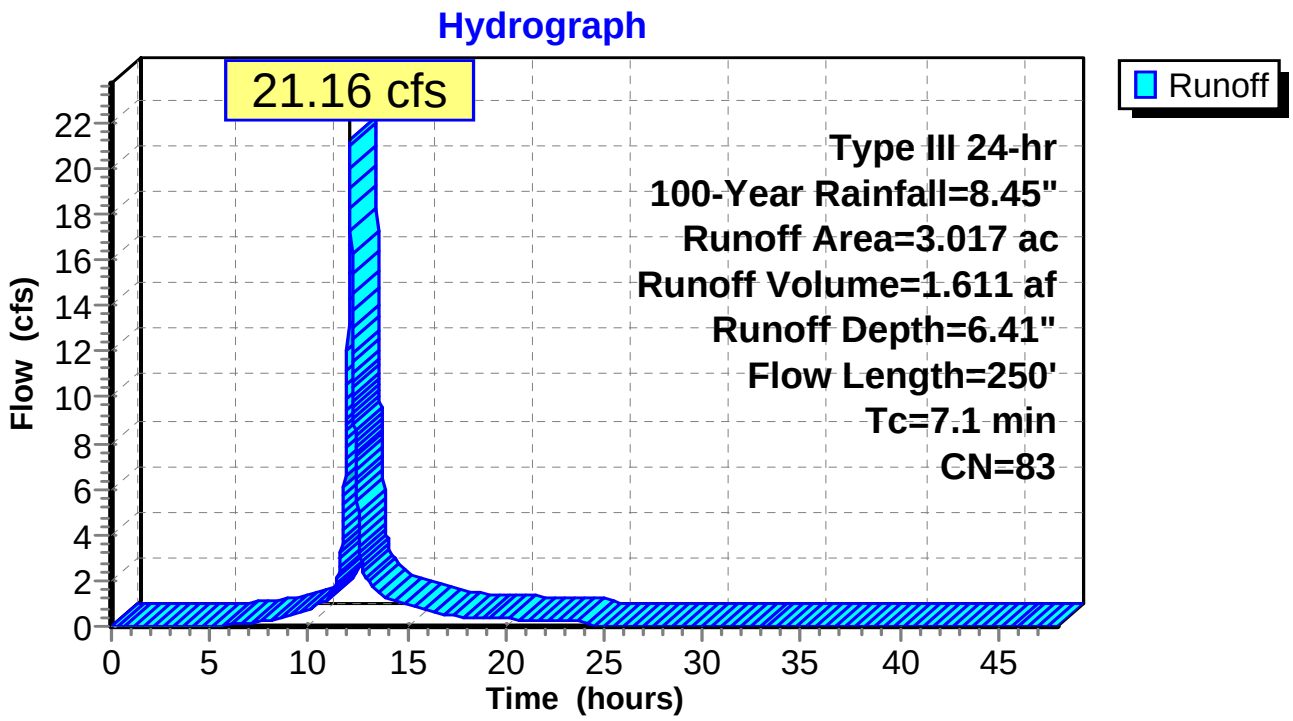
Runoff = 21.16 cfs @ 12.10 hrs, Volume= 1.611 af, Depth= 6.41"

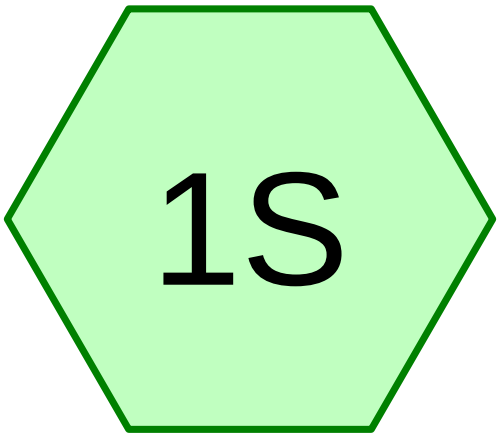
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.45"

Area (ac)	CN	Description
0.779	98	Roofs, HSG B
0.738	98	Paved parking, HSG B
0.566	80	>75% Grass cover, Good, HSG D
0.934	61	>75% Grass cover, Good, HSG B
3.017	83	Weighted Average
1.500		49.72% Pervious Area
1.517		50.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.5	50	0.0200	0.15		**Sheet Flow, Sheet - Grass** Grass: Short n= 0.150 P2= 3.31"
1.6	200	0.0100	2.03		**Shallow Concentrated Flow, Shallow - Paved** Paved Kv= 20.3 fps
7.1	250	Total			

Subcatchment 1S: Site - Pre Development





Site - Post Development

Subcat Reach Pond Link

Routing Diagram for Post-Development
Prepared by Microsoft, Printed 11/9/2015

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.170	61	>75% Grass cover, Good, HSG B (1S)
0.566	80	>75% Grass cover, Good, HSG D (1S)
1.280	98	Paved parking, HSG B (1S)
3.016	**80**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
2.450	HSG B	1S
0.000	HSG C	
0.566	HSG D	1S
0.000	Other	
3.016		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	1.170	0.000	0.566	0.000	1.736	>75% Grass cover, Good	1S
0.000	1.280	0.000	0.000	0.000	1.280	Paved parking	1S
0.000	**2.450**	**0.000**	**0.566**	**0.000**	**3.016**	**TOTAL AREA**	

Summary for Subcatchment 1S: Site - Post Development

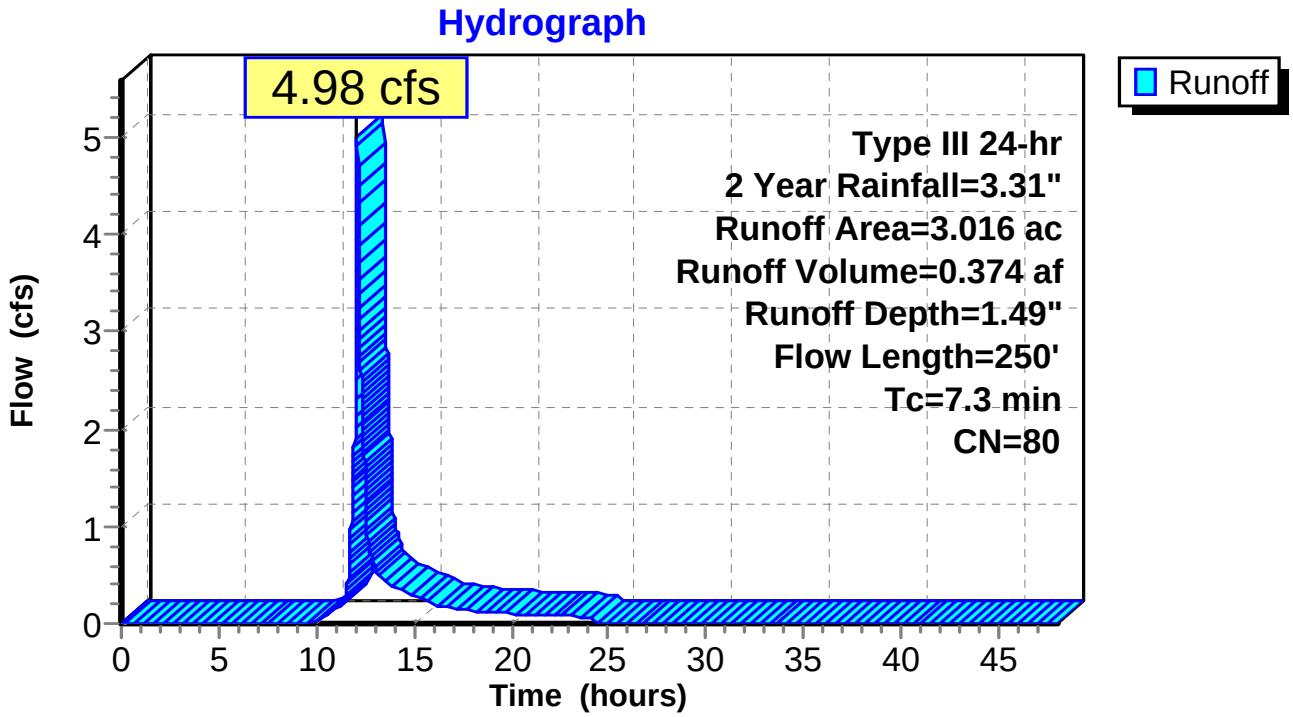
Runoff = 4.98 cfs @ 12.11 hrs, Volume= 0.374 af, Depth= 1.49"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 Year Rainfall=3.31"

Area (ac)	CN	Description
1.280	98	Paved parking, HSG B
0.566	80	>75% Grass cover, Good, HSG D
1.170	61	>75% Grass cover, Good, HSG B
3.016	80	Weighted Average
1.736		57.56% Pervious Area
1.280		42.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.5	50	0.0200	0.15		**Sheet Flow, Sheet - Grass** Grass: Short n= 0.150 P2= 3.31"
0.9	115	0.0100	2.03		**Shallow Concentrated Flow, Shallow - Paved** Paved Kv= 20.3 fps
0.9	85	0.0100	1.61		**Shallow Concentrated Flow, Shallow Concentrated - Grass** Unpaved Kv= 16.1 fps
7.3	250	Total			

Subcatchment 1S: Site - Post Development



Summary for Subcatchment 1S: Site - Post Development

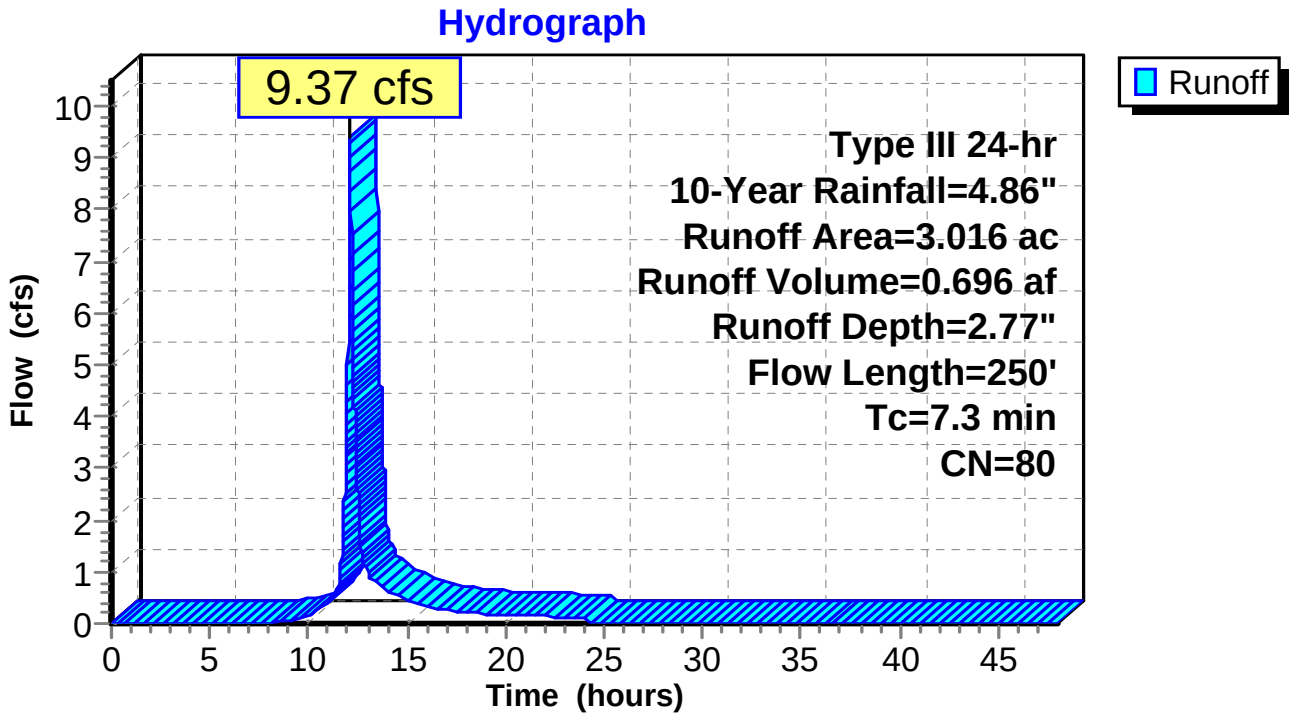
Runoff = 9.37 cfs @ 12.11 hrs, Volume= 0.696 af, Depth= 2.77"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.86"

Area (ac)	CN	Description
1.280	98	Paved parking, HSG B
0.566	80	>75% Grass cover, Good, HSG D
1.170	61	>75% Grass cover, Good, HSG B
3.016	80	Weighted Average
1.736		57.56% Pervious Area
1.280		42.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.5	50	0.0200	0.15		**Sheet Flow, Sheet - Grass** Grass: Short n= 0.150 P2= 3.31"
0.9	115	0.0100	2.03		**Shallow Concentrated Flow, Shallow - Paved** Paved Kv= 20.3 fps
0.9	85	0.0100	1.61		**Shallow Concentrated Flow, Shallow Concentrated - Grass** Unpaved Kv= 16.1 fps
7.3	250	Total			

Subcatchment 1S: Site - Post Development



Summary for Subcatchment 1S: Site - Post Development

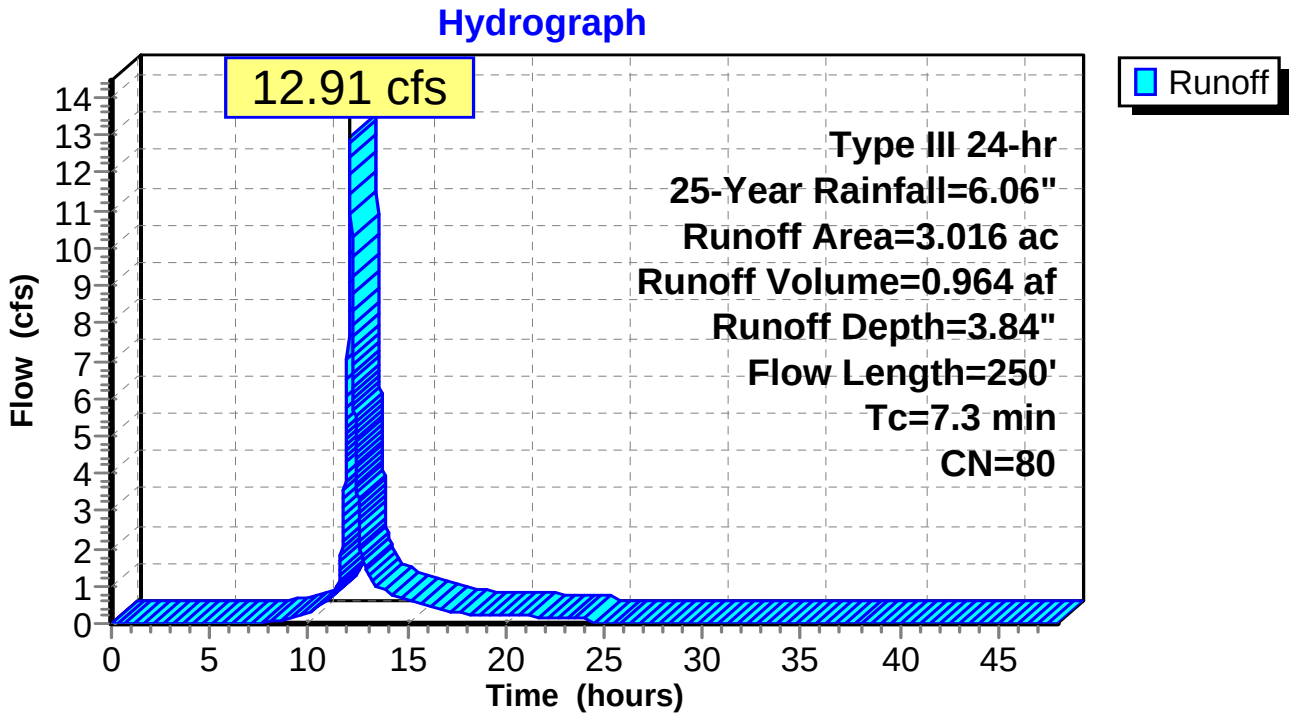
Runoff = 12.91 cfs @ 12.10 hrs, Volume= 0.964 af, Depth= 3.84"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.06"

Area (ac)	CN	Description
1.280	98	Paved parking, HSG B
0.566	80	>75% Grass cover, Good, HSG D
1.170	61	>75% Grass cover, Good, HSG B
3.016	80	Weighted Average
1.736		57.56% Pervious Area
1.280		42.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.5	50	0.0200	0.15		**Sheet Flow, Sheet - Grass** Grass: Short n= 0.150 P2= 3.31"
0.9	115	0.0100	2.03		**Shallow Concentrated Flow, Shallow - Paved** Paved Kv= 20.3 fps
0.9	85	0.0100	1.61		**Shallow Concentrated Flow, Shallow Concentrated - Grass** Unpaved Kv= 16.1 fps
7.3	250	Total			

Subcatchment 1S: Site - Post Development



Summary for Subcatchment 1S: Site - Post Development

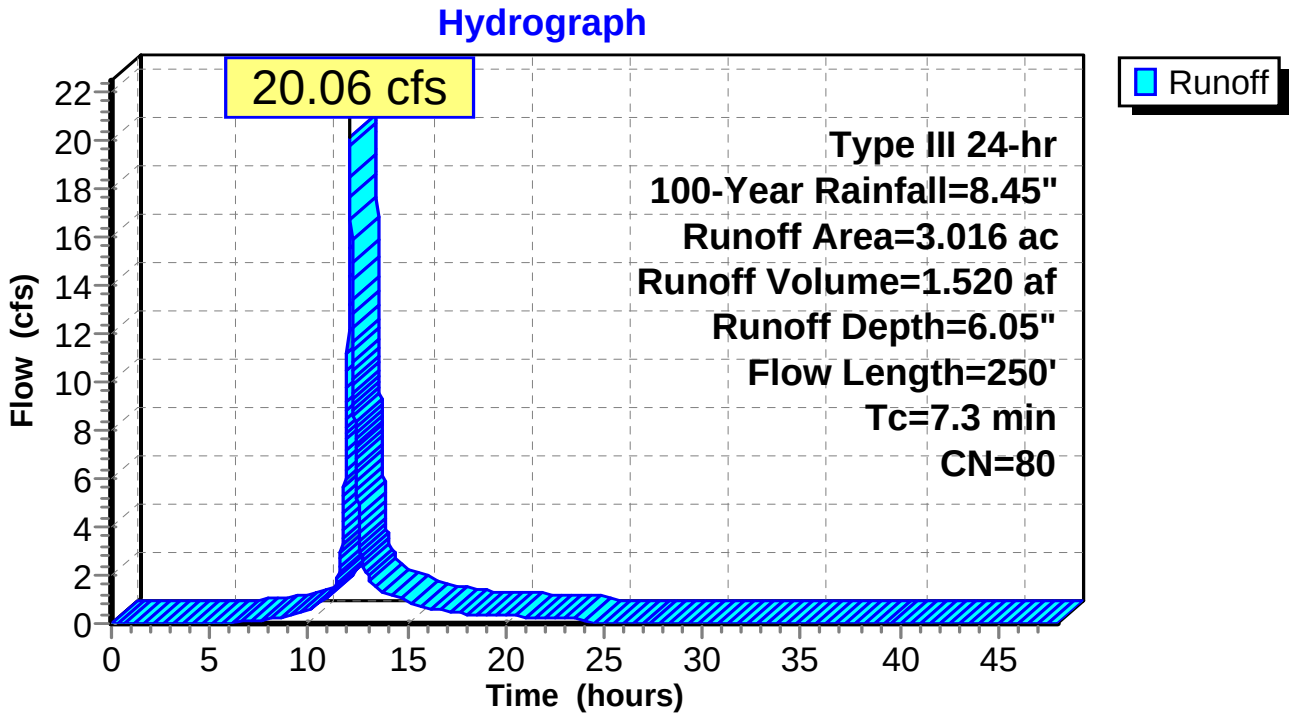
Runoff = 20.06 cfs @ 12.10 hrs, Volume= 1.520 af, Depth= 6.05"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.45"

Area (ac)	CN	Description
1.280	98	Paved parking, HSG B
0.566	80	>75% Grass cover, Good, HSG D
1.170	61	>75% Grass cover, Good, HSG B
3.016	80	Weighted Average
1.736		57.56% Pervious Area
1.280		42.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.5	50	0.0200	0.15		**Sheet Flow, Sheet - Grass** Grass: Short n= 0.150 P2= 3.31"
0.9	115	0.0100	2.03		**Shallow Concentrated Flow, Shallow - Paved** Paved Kv= 20.3 fps
0.9	85	0.0100	1.61		**Shallow Concentrated Flow, Shallow Concentrated - Grass** Unpaved Kv= 16.1 fps
7.3	250	Total			

Subcatchment 1S: Site - Post Development



Appendix C
NRCS Soils Report

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Bristol County, Massachusetts, Southern Part

241 Duchaine Boulevard

November 6, 2015

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bristol County, Massachusetts, Southern Part
Survey Area Data: Version 9, Sep 28, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 30, 2011—Oct 8, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Bristol County, Massachusetts, Southern Part (MA603)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
52A	Freetown muck, 0 to 1 percent slopes	0.6	15.8%
602	Urban land	3.1	84.2%
Totals for Area of Interest		**3.7**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Bristol County, Massachusetts, Southern Part

52A—Freetown muck, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2t2q9
Elevation: 0 to 1,110 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Freetown and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Freetown

Setting

Landform: Swamps, bogs, depressions, depressions, kettles, marshes
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Highly decomposed organic material

Typical profile

Oe - 0 to 2 inches: mucky peat
Oa - 2 to 79 inches: muck

Properties and qualities

Slope: 0 to 1 percent
Percent of area covered with surface fragments: 0.0 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Rare
Frequency of ponding: Frequent
Available water storage in profile: Very high (about 19.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D

Minor Components

Scarboro

Percent of map unit: 5 percent
Landform: Depressions, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, tread, dip

Down-slope shape: Concave
Across-slope shape: Concave

Whitman
Percent of map unit: 5 percent
Landform: Depressions, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave

Swansea
Percent of map unit: 5 percent
Landform: Depressions, depressions, kettles, marshes, swamps, bogs
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave

602—Urban land

Map Unit Setting
National map unit symbol: v5ry
Frost-free period: 120 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition
Urban land: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting
Parent material: Excavated and filled land

Minor Components

Udorthents
Percent of map unit: 15 percent

Soil Information for All Uses

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

Water Features

This folder contains tabular reports that present soil hydrology information. The reports (tables) include all selected map units and components for each map unit. Water Features include ponding frequency, flooding frequency, and depth to water table.

Hydrologic Soil Group and Surface Runoff (241 Duchaine Boulevard)

This table gives estimates of various soil water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils

of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. The concept indicates relative runoff for very specific conditions. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

Report—Hydrologic Soil Group and Surface Runoff (241 Duchaine Boulevard)

Absence of an entry indicates that the data were not estimated. The dash indicates no documented presence.

Hydrologic Soil Group and Surface Runoff–Bristol County, Massachusetts, Southern Part			
Map symbol and soil name	**Pct. of map unit**	**Surface Runoff**	**Hydrologic Soil Group**
52A—Freetown muck, 0 to 1 percent slopes			
Freetown	85	Negligible	B/D
602—Urban land			
Urban land	85	—	—

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Appendix D
Stormwater Operations and Maintenance Plan

Section 1
Introduction

The following Long-Term Operations and Maintenance Plan has been prepared for the stormwater management system Former Polymerine Site in New Bedford, Massachusetts. The purpose of the plan is to provide guidance and procedures for proper stormwater management following construction completion.

The proposed project does not significantly alter the existing site conditions and the existing stormwater management system. Existing stormwater flow paths will be retained and will not be significantly altered by solar facility features. The quality of the stormwater collected from impervious areas on-site will not change from existing conditions prior to discharging off-site.

Section 2
Ownership and Responsibilities

The City of New Bedford is responsible for maintaining and paved lot and stormwater management facilities post construction.

During construction the contractor will be responsible for stormwater management system maintenance. After construction is complete, all stormwater and property maintenance within the project area will be the responsibility of the City of New Bedford.

Section 3
General BMPs

Prior to the start of construction, the site will be inspected to document current conditions and areas identified as needing maintenance, if any, will be addressed as appropriate. Following construction and re-establishment of any vegetation impacted during construction, the operation and maintenance of the site should not be significantly altered from the current requirements. The site should continue to be inspected regularly for erosion and to ensure the stormwater system is operating as designed. Any erosion to the vegetative surfaces should be stabilized and repaired immediately upon discovery.

The following items described are the general Best Management Practices (BMPs) to be implemented for the proposed improvements at the Former Polymerine Site.

3.1 Good Housekeeping

The goal of the good housekeeping policy is to keep the site in a clean orderly condition. A disorderly site can lead to improper materials management, and can reduce the efficiency of any response to potential pollution problems.

The following good housekeeping measures will be followed at the site to aid in pollution prevention:

- Promptly clean and remove any spills or contamination from vehicles.
- Perform preventative maintenance on all equipment and on the structural components of the stormwater system.

3.2 Preventative Maintenance

Preventative maintenance is an important factor in minimizing the release of pollution from the site. Preventative maintenance for this project will consist of primarily equipment maintenance.

It is important that all of the equipment used to access the site and perform routine maintenance paved lot undergo routine maintenance and service so that fluid leaks are managed. Any equipment exhibiting fluid leaks will be repaired or removed from the site and repaired prior to returning to service.

3.3 Management of Run-off

The stormwater collected from the impervious areas of the post-development site will sheet flow into the existing vegetated surface adjacent to the Hobomock Swamp, conveying stormwater off-site as under existing conditions. The proposed site improvements do not utilize formal stormwater management control systems. Stormwater runoff quantity and quality will not be detrimentally impacted by the proposed development. Vegetative surfaces within the limits of the project site will be maintained by the City of New Bedford.

3.4 Snow Management

Snow removal will occur within the paved lot and access roads as needed. Snow removal will not occur in and existing vegetative surfaces.

3.5 Inspections

Inspections will be performed in accordance with the Massachusetts Department of Environmental Protection (MassDEP) Stormwater Handbook. The following items will be evaluated during each inspection:

- Vegetated Surfaces will be observed to identify locations of settlement, erosion and other impacts from the paved lot installation.
- The Paved Lot and Access Roads be observed for signs of sediment accumulation, deterioration, or ponding of surface runoff.

Inspections shall be logged using the Inspection Forms provided in Section 4.

Section 4 Operation and Maintenance Log Form

Date: _____

Person conducting Inspection: _____

Reason for Inspection (Routine / Significant Rainfall): _____

Stormwater Management System Components:

Vegetated Surfaces

Component inspected during this inspection_____

Any Repair Necessary_____

Other Comments_____

Paved Lot and Access Roads

Component inspected during this inspection_____

Any Repair Necessary_____

Other Comments_____

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Appendix E

Construction Period Pollution Prevention Plan

Construction Period Pollution Prevention Plan

1.1 Description of Construction Activities

The construction of the proposed improvements to the Former Polymerine Site – 241 Duchaine Boulevard, with associated drainage and stormwater management features will involve the following principal components:

- Paving of approximately 55,767 square feet of a paved lot area and its access roads.
- Restoration of all surfaces outside of the proposed paved lot as shown on the construction drawings
- Restoration of other items within the project limits disturbed by construction activities

1.2 Construction Sequence

Construction activities for this project will be based on the Contractor's preference for installation of components and may be affected by weather, availability and progress of subcontractors, and any other adjustments deemed necessary by the contractor to complete the job in a timely manner.

In general, the work will be phased for the contract as follows:

1. Conduct a Pre-Construction meeting with the Owner, Owner's Representative, and Contractor. The meeting will include review of environmental permit requirements, construction documents and procedures, review limits of disturbance (material storage and staging areas), review restoration requirements, review schedule and phasing, and exchange of contact personnel and information.
2. Coordination with the City of New Bedford Conservation Commission representative for the installation of erosion controls and for work nearby wetlands jurisdictional areas. Install erosion control barriers in advance of each phase of work as shown on the construction drawings. Install stabilized construction entrances at all points of entry or exit from the disturbed portion of the site. Install sediment and erosion controls prior to any up-gradient disturbance and in locations were necessary to control release of sediments.
3. Stockpiles shall be located within the limit of work. Provide erosion control barriers around soil stockpile areas.
4. For any construction that will require dewatering, install temporary sediment basins and erosion and sediment controls at the point of discharge.
5. Complete construction of the paved lot including the installation of subbase and pavement courses.
6. Once construction has been completed, and permanent stabilization has occurred throughout the project, temporary erosion and sediment control devices shall be removed.

1.3 Pollution Control Measures

1.3.1 Erosion and Sediment Control

Erosion and sediment control Best Management Practices (BMPs) will be maintained throughout the project in accordance with the specifications included in the Project Manual. Implementation of specific BMPs is summarized below:

- Dust Control – Prevent dust from becoming a nuisance or hazard. Carefully monitor for fugitive dust. If noticed, control dust during the work on-site using water, calcium chloride and/or salt applied judiciously until the problem is controlled. All vehicles used to transport materials which could be a source of dust generation must be covered.
- Stockpiling of Temporarily Stored Materials – Do not store material or equipment in any wetland or environmentally sensitive area. Stockpile sites shall be level, devoid of mature stands of natural vegetation, and removed from drainage facilities and features, wetlands, and stream corridors. Stockpiles must be surrounded by hay bales and siltation fences.
- Temporary seeding and mulching – On areas that will remain disturbed but inactive for more than 14 days, provide fast germinating native seed as approved by the engineer and straw mulch crimped or tacked and anchored in place to prevent erosion.
- Preservation of existing features not to be disturbed by construction activities – No trees, shrubs or turf shall be removed unless specified by the Engineer. Check the actual locations of water, sewer, gas, electric, cable, and telephone service connection lines to avoid potential interferences.
- Hay bales/Straw Wattles and Silt Fence – Place and maintain both hay bales/straw wattles and a staked filter fabric siltation fence where shown on the drawings. Install the siltation fence parallel and immediately adjacent to the hay bales/straw wattles as shown on the drawings. Siltation fences need to be buried 6 inches into trench to prevent undermining by stormwater run-off. Trapped sediment must be removed from silt fences before the deposit reaches 1/3 the height of the above ground fence height or lower based on manufacturer's specifications.
- Permanent Seeding and Mulching – Place seed only between the periods from April 15th to June 1st, and from August 15th to October 1st, unless otherwise approved by the Engineer. Lime and starter fertilizer application rates shall be based on laboratory soil tests. The starter seed mixture shall be applied at a rate of 4 lbs/ 1000 sf.
- Stabilized Construction Entrance - Stabilized construction entrances shall be used to reduce transport of sediment on tires of vehicles leaving the construction area. Entrance shall be clean, washed, uniformly-graded stone over filter fabric of sufficient length to remove sediment from exiting vehicles. If sediment is observed off-site it is to be removed daily.

1.3.2 Control of Other Pollutants

Control of other potential pollutants will be provided as follows:

1. Waste materials - Construction debris from the site will be disposed in a legal manner. No construction waste material will be buried on the site. All personnel

will receive instructions regarding the correct procedure for waste disposal including litter. Notices describing these practices shall be posted in the construction office.

2. Hazardous waste - All hazardous waste materials will be disposed of in the manner specified by local, state or federal regulation or by the manufacturer.

3. Sanitary waste - Portable sanitary units will be provided throughout the course of the project for use of Contractor's employees. A licensed sanitary waste management contractor will regularly collect all sanitary waste from the portable units.

4. Off-site Tracking – Roads will be swept periodically in the area of activity to limit the extent of tracking. Stabilized construction entrances shall be used to the extent feasible to reduce mud from tires on vehicles leaving the construction area. Trucks carrying loose materials (soil, gravel, stone, debris) entering or leaving the site shall be covered.

5. Non-Stormwater Discharges – Some non-stormwater discharges will occur at the site during the construction period. A description of these discharges and how they will be mitigated if necessary are as follows:

   - Dewatering discharges - Water pumped from the construction area during dewatering operations. These discharges will be directed to structural controls to prevent migration of fines from the existing soil during the dewatering operation.
   - Pavement wash waters – Water used during pavement sweeping/cleaning. These discharges will be directed to siltation basins, catch basins with sedimentation controls or vegetative buffer strips.
   - Dust Control – Water spray used during construction shall be sufficient to control dust but shall not be excessive. Such water spray will only be used during active dust generation and shall be stopped shortly after the activity has ceased.
   - Vehicle wash water - Only spot washing of vehicles and construction equipment, necessary for the safe and proper operation of such equipment shall be performed. Detergents may not be used for spot washing. Cleaning solvents may be used, as long as the solvent is dispensed using a wiper or hand-held airless sprayer and all of the solvent is collected using wipers or equivalent after application.
   - Uncontaminated air conditioning or compressor condensate – The volume of water generated from this source is near negligible and will likely infiltrate into underlying soils or evaporate to the atmosphere.

1.3.3 Housekeeping Measures for Spill Prevention

The following good housekeeping practices shall be employed at the construction site to deter chemical spills from occurring. These measures are also described below:

1. Handling of Potential Pollutants

   1.1 Storage - Materials stored on site will be stored in a neat, orderly manner in their appropriate containers in a covered area. If storage in a covered area is

not possible, the materials shall be covered with polyethylene or polypropylene sheeting to protect them from the elements.

1.2 Labeling - Products will be stored in their original containers with the manufacturer's label affixed.

1.3 Mixing - Substances will not be mixed with one another unless recommended by the manufacturer.

1.4 Disposal - Whenever possible, all of a product will be used before disposal of the container. Manufacturers' recommendations for proper use and disposal will be followed.

2. Product-Specific Practices

2.1 Petroleum products - On-site vehicles will be monitored for leaks and will receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers that are clearly labeled. Asphalt substances used on site will be applied according to the manufacturer's recommendations.

2.2 Concrete – Concrete trucks will not be allowed to wash out or discharge surplus concrete or drum wash water uncontrolled at the site.

2.3 Paints and Coatings - Containers will be tightly sealed and stored when not required for use. Excess paint/coatings will be properly disposed of according to manufacturers' instructions, state and local regulations.

1.4 Spill Response

Spill response shall be implemented whenever a spill of oil or hazardous substances occurs. The objective of the spill response will be to protect human health and the environment by limiting the extent and/or toxicity of the spill. Spill responders shall be properly trained in accordance with the requirements under the Hazardous Waste Operations and Emergency Response regulations in 29 CFR 1910.120.

1. Responsibility - The Contractor shall designate his spill prevention and response team. Team members may be comprised of on-site personnel employed by the contractor or off-site contract personnel. Where off-site personnel are employed for spill response duties, the name and telephone number of the spill response organization shall be conspicuously posted.
2. Equipment - Materials and equipment necessary for spill cleanup will be present on the site at all times. Equipment and materials will include but not limited to brooms, shovels, rags, gloves, absorbent materials (sand, sawdust, etc.), and plastic or metal trash containers. The materials and equipment necessary for spill cleanup will be dependent upon the nature and quantity of the material stored on site.
3. Response - Spills will be contained and the spilled materials will be removed immediately upon discovery. All available resources at the Contractor's disposal will be used to control the limit and extent of any emergency spills and to protect the welfare of employees and the public in and around the spill area. Dewatering activities at or near the spill area shall cease until the spilled materials are collected.

4. Decontamination – Sufficient water will be provided and used to decontaminate personnel and spill control equipment following an emergency response. Decontamination wash water may not be discharged to the storm water distribution system.
5. Safety - Personnel will wear appropriate protective clothing to prevent injury from contact with hazardous substances.
6. Reporting
   - 6.1 The owner or owner's representative will be notified immediately of all spills.
   - 6.2 Spills of oil or hazardous substances, in excess of the state reportable quantities listed in 310 CMR 40.1600 of the Massachusetts Contingency Plan shall be reported to the DEP at 888-304-1133 within two hours of discovery.
   - 6.3 Spills of oil or hazardous substances, in excess of the Federal reportable quantities established in 40 CFR 110, 117 and 302, shall be reported to the National Response Center at 800-424-8802 immediately upon discovery.
   - 6.4 Spills of oil which cause a sheen or emulsion in water (unless specifically authorized) shall be reported to the DEP and the National Response Center within the timeframes discussed in 6.2 and 6.3 above.
7. Recordkeeping - The spill prevention plan will be reviewed and modified, as appropriate, to include measures to prevent a spill from recurring as well as improved methods for cleaning up any future spills. A description of each spill, what caused it, and the cleanup measures used will be kept with the plan.
8. Incidental spills shall be collected immediately upon identification. The cause of the spill will be investigated and corrective measures will be implemented to ensure that further spills do not occur again (e.g., equipment hydraulic repair).

1.5 Listing of Materials

The following is a general list of materials anticipated on site during construction activities. Any variation or addition to this list shall require an amendment to this list by indicating the change, dated and initialed by the responsible individual making the change.

1. Bituminous concrete also known as hot mix asphalt
2. Lumber
3. Aggregates
4. Calcium chloride (for dust control).
5. Diesel fuel and lubricating oils
6. Precast concrete structures with frame and covers
7. RCP piping
8. PVC piping
9. Lawn seed mix, lime and fertilizer
10. Cleaning solvents
11. Detergents

Appendix F
Illicit Discharge Statement

Illicit Discharge Compliance Statement

Project Location: Former Polymerine Site
241 Duchaine Boulevard
New Bedford, Massachusetts 02745

Illicit discharges to the stormwater management system are discharges that are not entirely comprised of stormwater. Illicit discharge does not include discharges from the following activities or facilities: firefighting, water line flushing, landscape irrigation, uncontaminated groundwater, potable water sources, foundation drains, air conditioning condensation, footing drains, individual resident car washing, flows from riparian habitats and wetlands, dechlorinated water from swimming pools, water used for street washing, and water used to clean residential buildings without detergents.

To the best of my knowledge, I am not aware of any existing illicit discharges located at the Project Location. If any illicit discharges are discovered during the execution of the project, DEP and EPA will be notified.

Signature: _____

Printed Name & Title: MICHELLE PAUL, DIRECTOR OF ENVIRONMENTAL STEWARDSHIPS

\\SRV\Projects\N\N1011 New Bedford\Stormwater\Template Illicit Discharge Statement.doc

Appendix G
Design Plans (Separately Bound)