



PO Box 666, 97 Great Road, Suite 6
Acton, MA 01720
Phone: 978-263-3666 Fax: 978-635-0218
actonsurvey@actonsurvey.com

ASE 5781

December 10, 2010

Acton Conservation Commission
472 Main Street
Acton, MA 01720

Re: 50 Powder Mill Road
DEP 85-1002

Dear Commission Members:

Please find enclosed 3 full and 9 reduced scale copies of the Notice of Intent Amend Plan for the rehabilitation of the building at 50 Powder Mill Road, which have been revised to hopefully conform to our on site discussions of Thursday evening. These documents have also been forwarded to you via e-mail.

The stone dripline strip has been terminated at the emergency access door at the rear of the building. This is approximately equal to the eastern end of the second window from the dam side of the building.

Porous pavement will be utilized in the loading dock area and to pave the area resulting from the removal of 56 Power Mill Road.

The erosion control plan has been revised to include the environmental safe guards and procedures/restrictions we discussed on site.

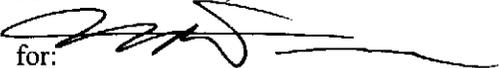
Instead of describing purely construction measures to be taken in the rehabilitation of the stormwater management works we incorporated the measures into a maintenance program and have included an inspection form to provide guidance.

An Invasive Species Control Program has also been prepared and is attached to the Stormwater Program as the elimination of invasive species is important to the program.

We performed calculations utilizing TR-55 methodologies that confirm that the existing stormwater management works provide for best management practices given the constraints at this site. It is important to note that the use of porous pavement in the loading dock area and in the paving of the 56 building area will result in a decrease in runoff.

Thank you for the considerations given to this matter.

Very truly yours,
Mark T. Donohoe, PE

for: 
Acton Survey & Engineering, Inc.

cc: Leo Bertolami



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 8²
- 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.



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.

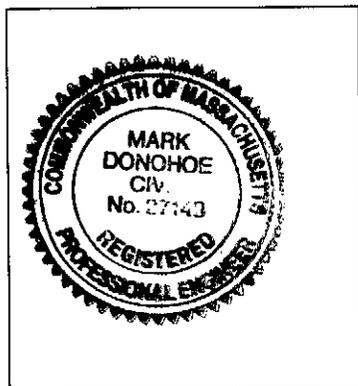
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the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



 12-10-10

Signature and Date

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 *EXISTING*
- 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. *SITE IS OUTWASH TERRACE - EXTENSIVE EXCAVATIONS FOR ADJ BLDG AND EXISTING BASIN*
- 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 Field¹
- 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. *SRR STORMWATER MAINTENANCE*
 - 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.



Acton Survey & Engineering, Inc.

P.O. Box 666 97 Great Rd. Suite 6
Acton, MA 01720-0666
(978) 263-3666 Fax (978) 635-0218
Email: actonsurvey@verizon.net

JOB 50 POWDER MILL ROAD

SHEET NO. 1 OF 2

CALCULATED BY WTO DATE 12-07-10

CHECKED BY _____ DATE _____

SCALE _____

INCREASE/DECREASE IN RUNOFF DUE TO PROPOSED CHANGES

LOADING DOCK AREA

PRESENT CONDITIONS - PACKED GRAVEL CN = 96
PROPOSED CONDITION - POROUS PAVEMENT
W/ STONE UNDER LAYMENT CN = 90

RUNOFF WILL BE DECREASED

56 POWDER MILL ROAD

PRESENT CONDITIONS 25+35' STRUCTURE (875 SF)
AND 200 SF OF LANDSCAPE AND 60 SF OF
IMPERVIOUS LANDSCAPE TIES AND ADJACENTS

$$\text{COMPOSITE CN} = \frac{875 \times 96 + 200 \times 75 + 60 \times 90}{1165} = 91.5$$

NOTE: DRY WELL SYSTEM HAS LIMITED RECHARGE CAPACITY

PROPOSED CONDITIONS - POROUS PAVEMENT CN = 90

RUNOFF WILL BE DECREASED

AREA TRIBUTARY TO BASIN \approx 12000 SF

$$\text{IMPROV 172} \quad \text{CN} = \frac{10000 \times 96 + 2000 \times 90}{1200} = 97$$

USE TR-55 EQ 2.3 TO DETERMINE DEPTH OF RUNOFF



Acton Survey &
Engineering, Inc.

P.O. Box 666 97 Great Rd. Suite 6
Acton, MA 01720-0666
(978) 263-3666 Fax (978) 635-0218
Email: actonsurvey@verizon.net

JOB 50 POWDER MILL ROAD
SHEET NO. 2 OF 2
CALCULATED BY M 70 DATE 12-9-10
CHECKED BY _____ DATE _____
SCALE _____

YR	2	10	25	100
24 HOUR RAINFALL	3.1"	4.5"	5.4"	6.4"
RUNOFF DEPTH	3.0	4.3	5.2	6.3
VOLUME	3000 CF	4300 CF	5200 CF	6300 CF

RUNOFF DEPTH YANRA (12,000 SF) + 1/2 FEET

VOLUME OF BASIN $\approx 30 \times 12 \times 2 = 720$ CF

RECHARGE SOIL CLASS 1 SAND USE 0.3"/HWL

AREA OF BASIN 360 SQ

RECHARGE $360 \times 24 \times 0.3/12 = 5976$ CF

STORAGE VOLUME + RECHARGE
= $720 + 5976 \approx 6700$ CF

7100 YR STORAGE

BUT PEAK DISCHARGES WILL BY PASS
BASIN

50-56 Powder Mill Road

1985 Nelson Plan

The enclosed June 20, 1985 Plan by Nelson Engineering Inc. represents the eastern portion of the site as it existed at that time. Of relevance is the demarcation of a gravel parking lot to a distance of about 25 feet beyond the rear building line and a building at the rear of 50 Powder Mill Road.

September 2002 Plan

The enclosed 2002 Notice of Intent Plan shows the building behind 50 Powder Mill Road and a shed that was added at the northeast corner of 50 Powder Mill Road since the 1985 Plan. The shed covered the area now designated as the loading dock area.

The area of bituminous concrete pavement was found to have expanded and the gravel parking area in the vicinity of the river was occupied by box trailers and sundry other things separated by pioneer vegetation.

The plan shows the edge of proposed pavement extending seven feet back from the northeast corner of 50 Powder Mill Road and following an "arc" in an easterly direction with the pavement being located a maximum distance of 30 feet behind the rear line of the building and within 42 feet of the river.

Pressure treated wood posts are shown to be located along the edge of the proposed parking lot parallel to the river.

Stormwater management works are shown to be installed in the northeast corner of the site.

August 2008 Plan

The enclosed 2008 Notice of Intent Plan shows the edge of pavement as constructed since 2002. The edge of pavement is further from the river than proposed, by the 2002 plan, for 90 feet and closer than proposed for 25 feet.

The proposed "bump out" at the rear of the building was shown to be enlarged by an addition towards the river and the area of the shed at the northeast corner of the building was designated as "proposed loading dock area".

December 2010 Plan

The present plan excludes the addition to the "bump out" and pertains mostly to the rehabilitation of the site to allow occupancy to occur for the only apparent use of the building.

50 -56 Powder Mill Road –Stormwater Management

PURPOSE

The purpose of the stormwater management basin is to remove a portion of the total suspended solids contained in runoff from the portion of the parking tributary to the stormwater inlet that discharges the collected runoff to the basin. The basin also provides for some recharge to groundwater and reduces a possible spot thermal load to a portion of the Assabet River.

The stormwater inlet collects runoff from the parking lot through an open throat and allows for the removal of some materials by settling. The inlet structure contains a baffle between the inlet and outlets to retain floating materials, including possible hydrocarbons [oil] contained in the runoff.

The inlet structure contains two outlets with tees installed to control flows. The lower outlet tee [by three inches] directs flows to the stormwater management basin. The higher outlet tee directs flows to a discharge near the Powder Mill Road drain discharge to the Assabet River. Details of the inlet structure are attached.

By offsetting the tees the “first flush” of runoff is directed to the stormwater management basin and only after the basin has reached capacity will runoff flow to the river discharge. The first flush is expected to contain more materials and be warmer than the discharge to the river and the stormwater management and it is important the first discharge be directed to the basin.

TRIBUTARY AREA

The area tributary to the stormwater inlet consists of a parking lot of about a third of an acre in size. There is a one story building located within the parking lot.

It is important that Powder Mill Road through snow plowing or regarding of the parking not be allowed to become tributary to the stormwater management works have not been designed to receive the resulting stormwater flows.

As any materials deposited on the parking lot could be carried to the stormwater management works, keeping the parking lot clean will reduce the need to remove materials from the stormwater inlet structure and basin, enhancing their ability to remove materials.

Snow shall not be plowed into the basin or the woods adjacent to the river.

STORMWATER INLET

The throat of the inlet shall be kept unobstructed. If debris, including beverage containers, are observed they should be removed as removal from the throat is cheaper than from the inlet structure.

The structure shall be scheduled for cleaning by a vacuum pump truck on a yearly basis.

The stormwater inlet has a three foot sump and the amount of debris and sediment can be determined by lowering a dipstick through the open grate and measuring the depth of water. If the depth is less than three feet there is over a foot of material in the sump and the basin should be cleaned.

When the dipstick is withdrawn from the sump its surface should be observed for the sheen that usually indicates the presence of hydrocarbons being retained on the surface of the sump. These materials should be at the top of the dipstick. If hydrocarbons are detected the sump shall be pumped by a properly licensed hauler and the source of the hydrocarbons determined and abated.

If tell tale odors are detected in the area of the stormwater inlet their nature should be determined and the sump should be pumped and the source abated.

STORMWATER BASIN

The stormwater basin shall be kept free of litter and other debris including tree branches.

Leaf and other litter will decrease the ability of the basin to drain and their removal will decrease the period in which water will be retained in the basin.

In the past the basin and environs have become overgrown with brush, including a variety of invasive species – see the Invasive Plant Species Control sheets for additional information. The presence of brush and vines in and around the basin will inhibit the maintenance of the basin and any vegetation that limits access to the basin should be removed.

To decrease the area required to be altered for the basin was constructed with rock sides to allow steeper side slopes to be utilized. The rock sides should be maintained in a stable condition.

The area around the inlet pipe should be kept erosion resistant by the placement of a rock splash pad.

If runoff is contained in the basin for over 72 hours the design engineer should be contacted and the bottom of the basin should be observed for the presence of materials

that could cause the clogging of the soil surface. If materials are found they should be removed and disposed of properly. The nature and source of the materials should be determined and abated.

Clean coarse sand or pea stone to a depth equal to the materials removed shall be placed in the basin

DISCHARGE AREA

The second inlet from the stormwater inlet discharges to a swale that flows to the Assabet River.

The swale is flooded by the river and can be subject to erosion caused by runoff being impounded or concentrated by debris. The swale should be observed after periods of flooding and debris removed. If areas of erosion are found they should be covered with 3 to 6 inch tailings in a manner that will not impede the flow of runoff.

The areas around the discharge from the stormwater inlet and the town drain should be observed for erosion and the presence of materials in the runoff that stain the leaves or ground surface at the discharge. If staining is observed the nature of the materials causing the staining and the source should be determined and appropriate action including the notification of the Conservation Commission and Board of Health.

If erosion is observed at the discharge stones should be placed to provide for impact resistance and dispersal of runoff.

INSPECTION FORM

A sample inspection form for the stormwater management system is attached and it is recommended that it be utilized for regular monthly inspections of the system.

The form presents the minimum inspections recommended and the form, type and frequency of inspections should be modified as dictated by experiences.

The inspection form includes the inspection of the river bank for the presence of debris, falling trees and erosion. The entire site should be inspected for erosion and other potential impacts to the river front area. The Conservation Commission should be consulted prior to any remedial actions taking place.

RESPONSIBILITY

The record owner of the building shall be responsible for the maintenance of the system unless designated on the Inspection Form A preliminary yearly budget of \$ 1,000 is to be allocated for maintenance of the stormwater management system.

50 Powder Mill Road – Stormwater Management System Inspection Form

Date of Inspection: _____ Preparer _____

Weather or Storm/Flooding Event since last inspection: _____

Parking Lot: Clean: Y __ N __ Sweeping recommended/performed _____

Date of last sweeping _____ Contractor _____ Tele _____

Dumped materials present Y __ N __ Actions Taken _____

Stormwater Inlet: Throat cleaned of debris Y __ N __ Type _____

Date of last cleaning _____ Contractor _____ Tele _____

Depth of material in sump _____ Hydrocarbons present Y __ N __ Odors Y __ N __

Actions taken _____

Stormwater Basin: Water present Y __ N __ Depth: _____ Present after 72 hours Y __ N __

Debris in bottom Y __ N __ Type/source _____ Removed Y __ N __

Brush vegetation requiring removal Y __ N __ Actions taken _____

Erosion of sides Y __ N __ Actions taken _____

Erosion at inlet Y __ N __ Actions taken _____

Discharge Area: Flooded by river Y __ N __ Debris present Y __ N __ Debris removed Y __ N __

Type/source/disposal location _____

Erosion present Y __ N __ Cause _____

Actions taken _____

River Bank: Debris/falling trees/erosion present Y __ N __ Consult with Conservation Commission prior to taking any action. Use additional sheets to describe actions taken.

File 5781
50 Powder Mill Road.
Acton, Massachusetts

Illicit Discharge Compliance Statement

Standard 10: All illicit discharges to the stormwater management system are prohibited.

Standard 10 prohibits illicit discharges to stormwater management systems. The stormwater management system is the system for conveying, treating, and infiltrating stormwater on-site, including stormwater best management practices and any pipes intended to transport stormwater to the groundwater, a surface water, or municipal separate storm sewer system. Illicit discharges to the stormwater management system are discharges that are not entirely comprised of stormwater. Notwithstanding the foregoing, an 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.

Proponents of projects within Wetlands jurisdiction must demonstrate compliance with this requirement by submitting to the issuing authority an Illicit Discharge Compliance Statement verifying that no illicit discharges exist on the site and by including in the pollution prevention plan measures to prevent illicit discharges to the stormwater management system, including wastewater discharges and discharges of stormwater contaminated by contact with process wastes, raw materials, toxic pollutants, hazardous substances, oil, or grease. The Illicit Discharge Compliance Statement may be filed with the Notice of Intent. If the Illicit Discharge Compliance Statement has not been filed, the Final Order of Conditions shall require the submission of an Illicit Discharge Compliance Statement prior to the discharge of stormwater runoff to the post-construction stormwater best management practices. The issuing authority should not issue a Certificate of Compliance until it has determined that the Illicit Discharge Compliance Statement has been submitted, has reviewed the Illicit Discharge Compliance Statement, and has verified that there are no illicit discharges at the site.

The Illicit Discharge Compliance Statement must be accompanied by a site map that is drawn to scale and that identifies the location of any systems for conveying stormwater on the site and shows that these systems do not allow the entry of any illicit discharges into the stormwater management system. The site map shall identify the location of any systems for conveying wastewater and/or groundwater on the site and show that there are no connections between the stormwater and wastewater management systems and the location of any measures taken to prevent the entry of illicit discharges into the stormwater management system. For redevelopment projects, the Illicit Discharge Compliance Statement shall also document all actions taken to identify and remove illicit discharges, including, without limitation, visual screening, dye or smoke testing, and the removal of any sources of illicit discharges to the stormwater management system.

Many municipal and state agencies that own and operate roadways are also subject to coverage under the NPDES General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (the MS4 Permit). State agencies and municipalities covered by the MS4 Permit are required to have a stormwater management program that includes illicit discharge detection and elimination. For roadways covered by the MS4 Permit, the proponent may demonstrate compliance with Standard 10 by documenting the actions taken to identify and eliminate illicit discharges under the MS4 Permit. To prevent duplication of effort, the proponent may submit copies of reports prepared to satisfy the illicit discharge detection and elimination program requirements of the MS4 Permits as its Illicit Discharge Compliance Statement.

Building owner & operator shall comply with requirements of Acton Board of Health and provide all necessary data concerning storage of materials in building, disposal of waste materials and discharges to stormwater management system and environs.

Owner's Signature _____ **Date** _____
Building Operator's Signature _____ **Date** _____

50 Powder Mill Road
Invasive Plant Species Control
Protection of Wetlands

GENERAL

The entire site is within 200 feet of the Assabet River and is regulated under the Massachusetts Wetlands Protection Act and the Acton Wetlands Bylaw.

The site is important to protect not only of wildlife in and traveling along the river but also diverse interests including protection of water supplies, flood damage and prevention of pollution. Impacts to wetlands are cumulative and even though the environs of the site have been altered by man downstream impacts along the river must be considered.

In the past invasive species have encroached on and interfered with the operation and maintenance of the stormwater management system and the implementation of this plan should insure that the operation and maintenance costs related to the system are minimized.

ORDER OF CONDITIONS

An Order of Conditions has been issued by the Acton Conservation Commission regulating activities on the site. A copy of that order shall be kept with this document on site. The Order has been placed on file at the Registry of Deeds and can be obtained from the Registry.

Prior to any changes in the invasive species control program or proposed actions that will alter areas on the site the Conservation Commission should be notified. Application of chemicals shall only be performed after notifying the Commission.

The Conservation Commission [978-264-9631] may be contacted for additional information.

PREVENTION OF POLLUTION

The site and especially the areas between the building/parking lot and river shall be kept free of litter and maintained in an erosion resistant state at all times.

The use of herbicides, pesticides and other chemicals that can alter the environment should be utilized to the minimum extent possible and may be prohibited by the Order of Conditions.

The parking lot is flat and has excellent exposure to sunlight and limited sand and deicing chemicals should be utilized.

INVASIVE SPECIES

Invasive species are plants that are non-indigenous to Massachusetts that are able to proliferate and spread in areas such as the onsite wetlands and adjacent areas.

Invasive species can replace or cause damage to native species and in doing so replace natural habitats and foodstuffs and it should be expected that a variety of "invasives" will be present at the site. Most notable at this site are the bittersweet vines that are hanging and damaging trees along the river. Japanese knotweed, privet and winged burning bush are also present.

Invasive species include vines, bushes trees and herbaceous plants and updated lists are available from www.newfs.org.

It is important to properly identify invasive species so that native species are not removed and to insure that invasive species are removed prior to their becoming well established and of a size which makes removal difficult.

INVASIVE SPECIES REMOVAL

Removal of invasive species by mechanical means is preferred over broad applications of herbicides as chemicals are not introduced into the environment.

Mechanical means includes pruning the stem of the plant or pulling the plant from the ground.

PRUNING

Pruning of the plants should occur as soon as they are observed to stop them from becoming fully developed and more importantly to not allow them to become seed bearing.

Pruning is most effective if it can be done below the ground surface.

Most invasive species are not permanently impacted by pruning, unless the pruning is repeated over an extended period of time on a frequent basis. The goal of pruning is to prevent the effect of photosynthesis and require the plant to utilize all its stored energy resulting in death. In general pruning on a monthly basis from May through November for three to five years will be required.

Many invasive species form from stump sprouts and suckers from roots. Cutting roots or small sections out of roots will also serve to weaken the plants.

PULLING AND DIGGING

Disturbed ground enhances the ability of invasive species to become established and any disturbed areas should be promptly stabilized by an application of well rotted bark mulch.

Pulling of invasive species should be performed as soon as they are observed and if seeds are formed they should be harvested prior to pulling and disposed of with solid waste that is to be incinerated.

Digging of invasive species is possible if the resultant area of disturbance is small. Care should be taken to insure seeds are not spread by the digging and pulling process. The disturbed area shall be promptly stabilized and sealed against seeding.

CHEMICAL TREATMENTS

Chemical treatments should be used sparingly and in strict compliance with the manufacturer's instructions, applicable regulations and with all required safety measures. Application of any chemical in wetland area requires a permit.

Brushing chemicals on cut stems has been found to be effective. Application by utilizing squeeze bottles is also done.

The brand name herbicide Rodeo has been formulated for application in wetland environments and its active ingredient glyphosate is a broad spectrum herbicide. Glyphosate interferes with the formation of a plant enzyme and is reported not to impact animals and fish.

Brush-B-Gone and Garlon are for use with broadleaf plants and contain triclopyr as the active ingredient.

REMOVAL OF VINES

Vines can often be removed by hand pulling and should only be done when damage to supporting vegetation will not occur.

Most vines that are not wrapped around trunks will become detached by natural processes in a one or two year period. Dead wrapped vines will naturally decompose over time and will not impact trees.

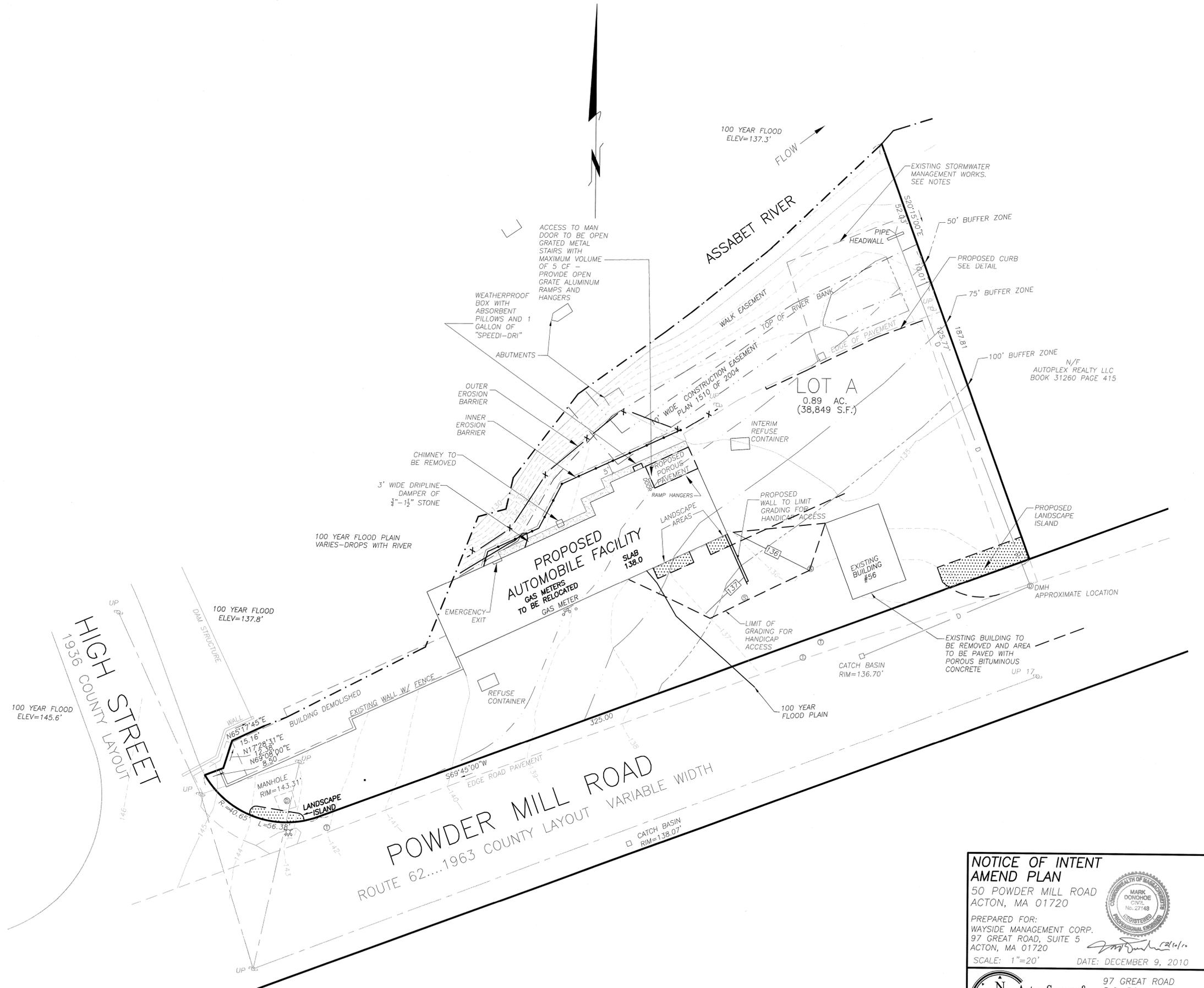
DISPOSAL

Disposal by incineration is desirable to limit the spread of seeds to other sites.

If removal occurs between January 1st and May 1st burning onsite may occur with a permit from the Fire Department. The foundation hole of 56 might be an appropriate burn pit.

GENERAL NOTES:

- Plans were prepared for named client and project. Reproduction in whole, in part or by adaptation for other purposes is expressly prohibited.
- Drawings shall not be scaled. If clarification of intent is REQUIRED, contractor shall obtain prompt clarification prior to continuing work.
- Contractor shall visit site prior to initiation of work and shall notify ACTON SURVEY & ENGINEERING, INC. and owner of any discrepancies with site conditions, or proposed construction, on date discovered.
- Contractor shall be responsible for coordinating proposed construction with existing conditions.
- Contractor shall notify Dig-Safe [1-888-344-7233] and verify all underground utilities prior to construction.
- Contractor shall be responsible for obtaining all necessary permits and licenses.
- All work shall conform to all local and state regulatory agencies and utility company requirements.
- Upon entering the site, the contractor shall become responsible for all erosion control, dewatering and shall undertake all measures to protect wetlands, the drainage system and streets from siltation and dust.
- Contractor shall be responsible for repairing any damage caused to roads, walks, utilities, site improvements [existing or proposed] both inside and outside the limit of work if damage due to work directly associated with this project.
- Existing utilities shall be maintained in service as required by the use of site and adjacent properties. Relocate utility lines as required.
- The drainage system shall be maintained and functional during construction and all catch basins, manholes & pipes shall be cleaned after the completion of the project.
- The "site plan" is based on topographic survey showing all visually apparent features of the site on the date(s) that surface explorations and topography were completed.
- No attempt was made, in preparing the plans, to ascertain the location of non-visually apparent subsurface utilities and structures, or conditions.
- The limit of work shall be as designated and / or the edge of the proposed grading and / or the property lines, if not indicated.
- Materials imported to the site shall be free of hazardous waste and noxious materials, stored as designated and shall not hamper the site activities.
- Materials exported from the site shall become the property of the contractor and be disposed of in a legal manner.
- All existing and new utility structures shall be adjusted to finished grades. Setting of rims temporarily at binder course may be required.
- All water mains, water services and force mains shall have a five (5') foot minimum cover.
- All pavements shall be cut to a vertical face outside limits of prior disturbance and prior to installing adjacent new pavements. All new pavements shall be installed in a manner that is uniform, with watertight joints resulting.
- The project shall be complete when the site is found to be litter/debris free, erosion resistant, all erosion barriers are removed and pavements, catch basins, manholes and pipes are clean.
- The contractor shall clearly mark the limits of work in the field prior to the start of construction.
- Hauling of earth to or from the site shall be done between the hours of 9:00 a.m. and 4:00 p.m. on weekdays only.
- Any alterations within 100 feet of a wetland [200 feet of a stream] shall require a filing with the Conservation Commission. Dewatering shall be controlled as to not impact wetland resource areas.



**NOTICE OF INTENT
AMEND PLAN**

50 POWDER MILL ROAD
ACTON, MA 01720

PREPARED FOR:
WAYSIDE MANAGEMENT CORP.
97 GREAT ROAD, SUITE 5
ACTON, MA 01720

SCALE: 1"=20' DATE: DECEMBER 9, 2010

Acton Survey & Engineering, Inc.
Since 1967

97 GREAT ROAD
P.O. BOX 666
ACTON, MA 01720
PH. (978) 263-3666
FAX (978) 635-0218

5781

SITE NOTES

GENERAL

The purpose of this plan is to show site related improvements necessary for the proposed renovation of the existing building for use as a vehicle repair facility and to describe procedures necessary to protect the Assabet River and adjacent resource areas.

A rapid well ordered construction process resulting in a limitation of the extent and time in which areas are exposed to wind and water erosion.

Runoff shall not be allowed to concentrate and flow across landscape surfaces. A supply of sand bags shall be maintained on site to provide for diversion and dispersal of runoff.

SOURCES OF EROSION

The site should not be subject to wind erosion unless litter and building debris are left in exposed areas. Containers shall be kept on site to allow the site to be maintained in a litter free condition. Any litter blown from the area of active construction shall be removed as soon as it is observed.

All surfaces at the site are presently erosion resistant and shall remain so during the entire construction process. Surfaces disturbed shall be promptly stabilized by the placement of bark mulch or crushed stone and concentration of runoff shall not be allowed to occur.

The integrity of the bank along the Assabet River shall not be impacted by any activities.

EROSION BARRIERS

Two erosion barriers are shown on the plan. The lower barrier shall be placed along the 135 contour and be set snug to the ground and the bottom sealed with woodchips or by the installation of a staked erosion sock/wattle. This barrier is to serve as a safety measure and is to remain in place until all construction activities at the rear of the building, including on the building, are completed. The Commission shall be notified of its installation and removal.

The lower barrier shall not intercept any products of erosion and if products are observed they shall be promptly removed and the source abated.

The barrier near the building is to insure that vehicles do not travel behind the building and to limit foot traffic to the flat area adjacent to the building.

Additional erosion barriers shall be stored and be available for use if required. The barriers shall include sand bags.

CHIMNEY REMOVAL

The brick chimney shall be removed in sections capable of being transported only by man power. The chimney shall not be toppled.

FOUNDATION REPLACEMENT

The excavations for foundations shall be made by equipment operating from within the existing building or in the loading dock area. Equipment shall not pass behind the addition.

All surplus earthen materials shall be removed from the site on the day of excavation.

The excavations shall be made, forms placed and removed and the foundation backfilled within the same work week.

BRANCH PRUNING

Branches within 10 feet of the structure maybe pruned and removed if they will interfere with the construction and maintenance of the building. Pruning shall be performed without equipment passing behind the building.

Branches shall be lowered to the ground and removed from site on the date pruned.

SIDING AND ROOF

Prior to the removal of siding and roof elements and their replacement nets shall be erected to insure materials are not deposited in the Assabet River or its bank.

All materials related to the removal of the roof and its replacement shall be transported to the roof from the front of the building

Any materials entrapped in the nets that could impair their integrity shall be promptly removed. All materials shall be removed by the end of the workday and deposited in containers.

Operations shall be undertaken to limit materials being caught in the nets.

FOUNDATION PARGING

The application of stucco or other material to seal the existing brick foundation shall be by hand with the material being transported to the point of application in buckets transported on foot.

Any materials dropped on the ground shall be promptly removed.

REMOVAL OF 56 BUILDING

The removal of the building at 56 Powder Mill Road shall be completed in a work week and sufficient containers and/or trucks shall be available to insure that materials need not be stored on the ground.

An erosion barrier consisting of sand bags, snugged to the ground or an erosion sock/wattle weighted with sand bags shall be placed between the building and the rear of the parking lot.

The removal process shall include the backfilling of the foundation hole so that it will store runoff until it is to be paved.

A portion of the backfilled foundation excavation maybe used for concrete truck washout if properly lined. The harden concrete must be removed prior to paving.

The generation of dust and windblown materials shall be controlled by the application of moisture or ceasing operations when windy.

The area disturbed by the removal of 56 shall be paved with porous bituminous concrete.

CONTAINERS

Sufficient containers shall be kept on site to store solid waste materials and containers shall be emptied promptly after being filled. Waste materials shall be stored on the ground.

Liquid wastes shall not be placed in onsite containers. They shall be placed in individual containers and transported offsite for proper disposal.

The container to the east of the building shall be removed upon the completion of the siding at the rear of the building.

GRADING FOR HANDICAPPED ACCESS

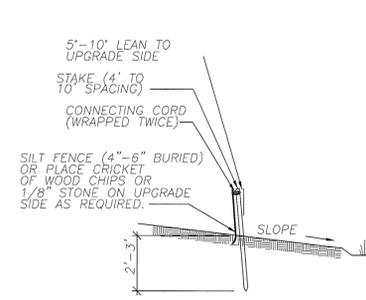
The area to be graded for handicapped access shall be completed within a work week, including cutting of the existing pavement, Placement of fill and at a minimum binder course of pavement.

PLACEMENT OF FLOWABLE FILL

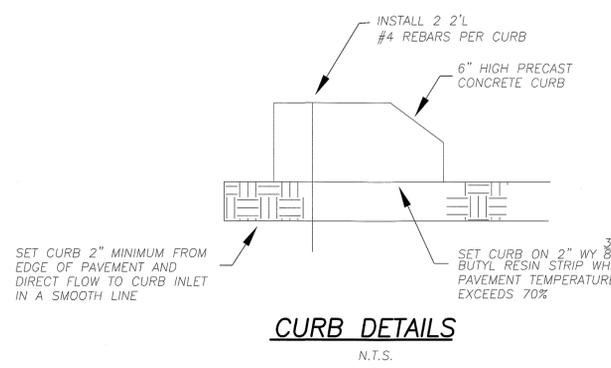
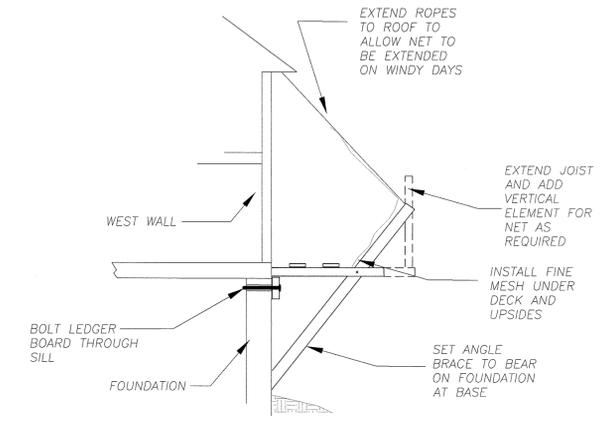
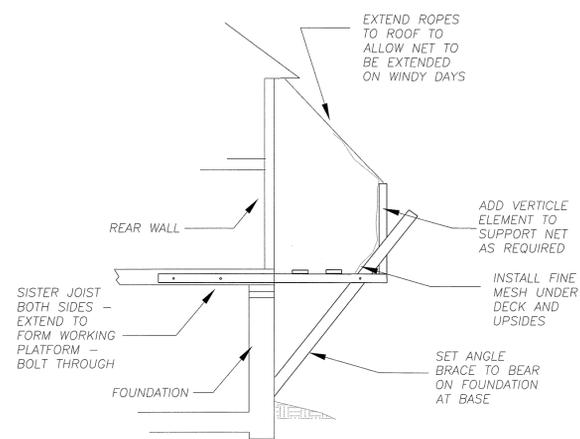
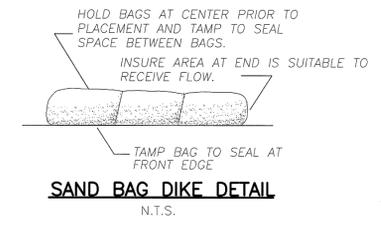
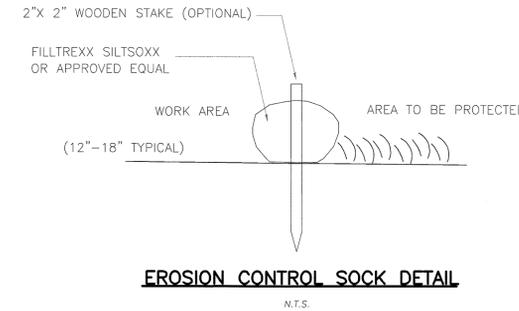
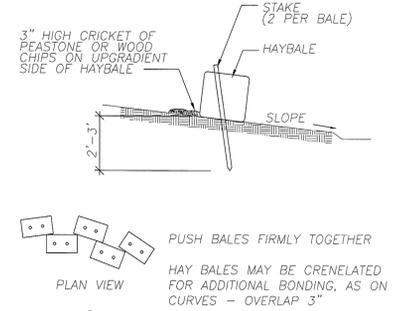
The existing foundation of 50 is to be filled with Flowable fill. The placement is to occur from vehicles operating in front of the building.

STORMWATER MANAGEMENT WORKS

The rehabilitation of the stormwater management works is described elsewhere and shall be accomplished in a workweek with minimal disturbance of areas outside of the works themselves. The majority of the work can and shall be performed by hand or by equipment operating from the parking lot surface.



- NOTES:**
1. FENCES SHALL BE LOCATED AT LIMIT OF WORK, OR AS SHOWN ON PLANS.
 2. PENETRATE OR "SNUG" GROUND WITH BOTTOM FOR ENTIRE LENGTH.
 3. DO NOT INSTALL IN A MANNER WHICH WILL CONCENTRATE RUNOFF.
 4. BACK FENCE WITH STAKED HAYBALES IN HIGH RISK AREAS.
 5. MAINTAIN AND REMOVE FENCE AS REQUIRED.
 6. REMOVE PRODUCTS OF EROSION FREQUENTLY.



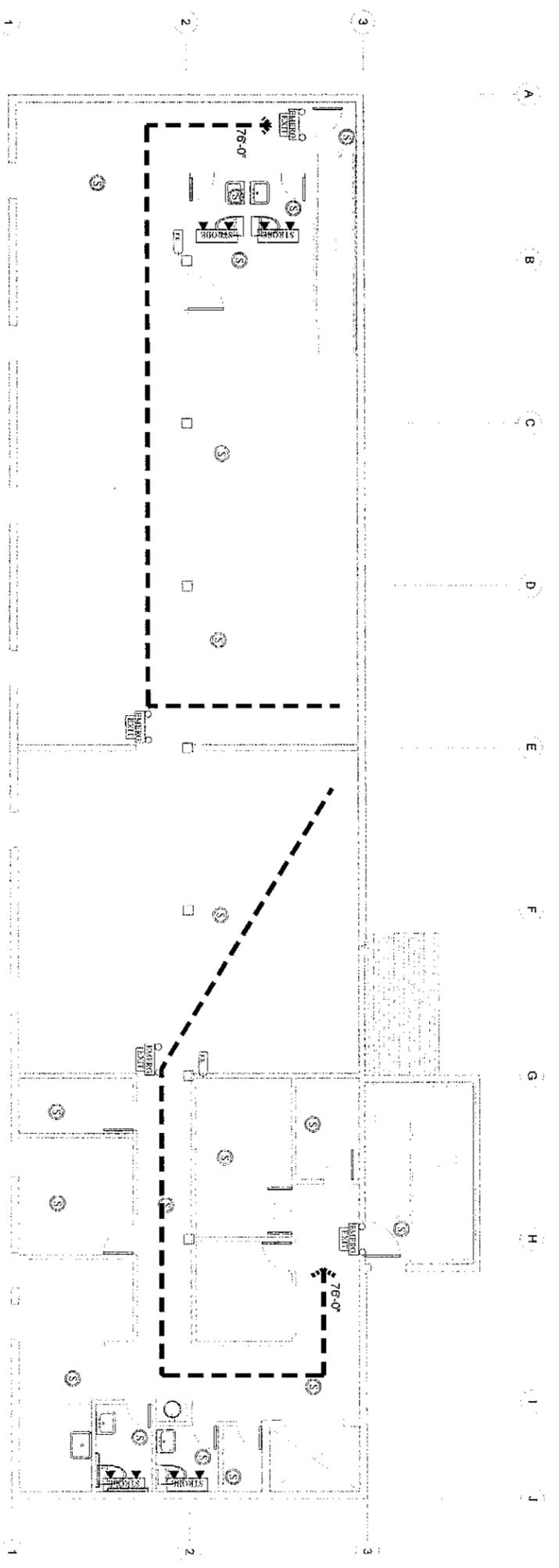
NOTICE OF INTENT AMEND PLAN
 50 POWDER MILL ROAD
 ACTON, MA 01720

PREPARED FOR:
 WAYSIDE MANAGEMENT CORP.
 97 GREAT ROAD, SUITE 5
 ACTON, MA 01720

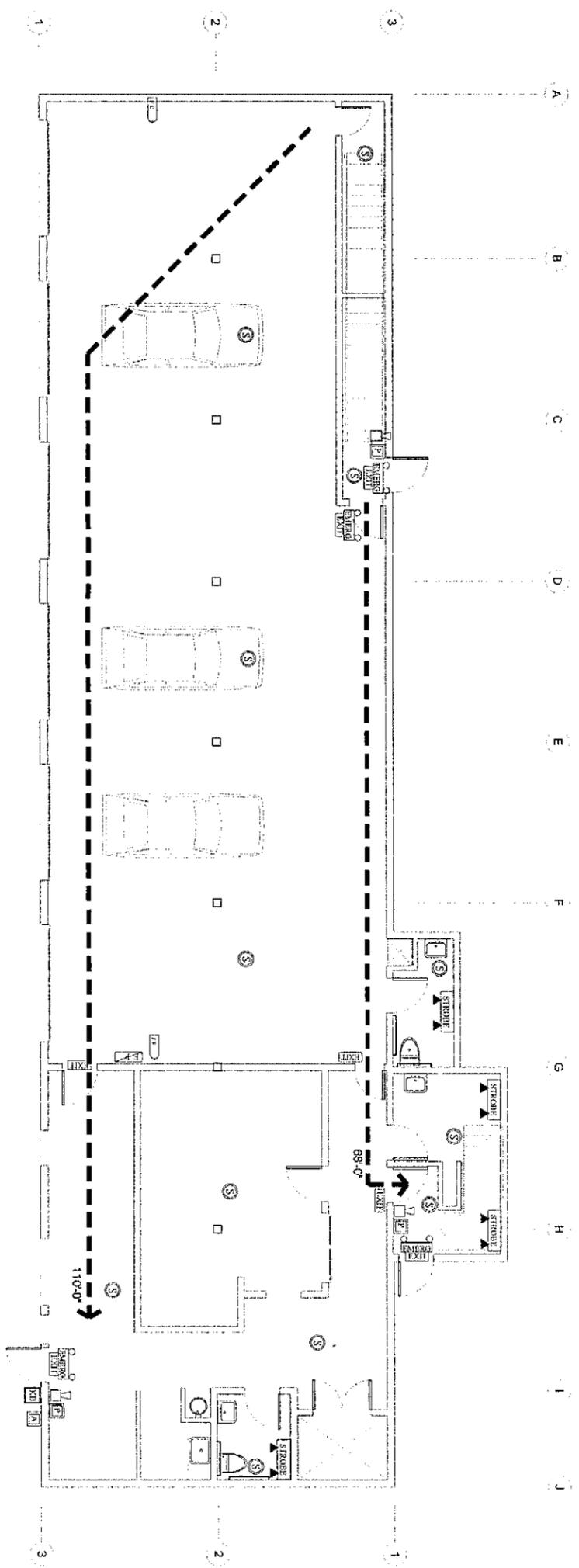
SCALE: 1"=20' DATE: DECEMBER 9, 2010

Acton Survey & Engineering, Inc.
 Since 1967

97 GREAT ROAD
 P.O. BOX 666
 ACTON, MA 01720
 PH. (978) 263-3666
 FAX (978) 635-0218



SECOND FLOOR



FIRST FLOOR

- Ⓢ SMOKE DETECTOR HARD WIRE
- Ⓜ FIRE ALARM PANEL
- Ⓜ KNOX BOX
- Ⓜ ANNUNCIATOR
- Ⓜ HORN
- Ⓜ PULL BOX @ 2' AFF
- Ⓜ EXIT SIGNAGE
- Ⓜ EMERGENCY LIGHT
- Ⓜ STROBE LIGHT
- Ⓜ FIRE EXTINGUISHER IN RECESSED CABINET
- ← XX-X' MAXIMUM TRAVEL DISTANCE IN FEET

FIRE ALARM SYSTEM

F - 1.01

DV
KL
3/16" = 1'-0"