SOIL EROSION AND SEDIMENT CONTROL PLAN

Pare Project No. 23099.01

Mt. Hope High School 199 Chestnut Street Bristol, Rhode Island 02809 Assessors Map 117, Lot 3, 4, 5, 6, & 7

Prepared for:

Bristol Warren Regional School District 235 High Street Bristol, RI 02809

Prepared by:

Pare Corporation 8 Blackstone Valley Place Lincoln, RI 02865

JANUARY 2025



Soil Erosion and Sediment Control Plan

For:

MT. HOPE HIGH SCHOOL

199 CHESTNUT STREET

BRISTOL, RHODE ISLAND 02809

Assessor's Plat 117, Lot 3, 4, 5, 6 & 7

	Bristol Warren Regional School District
	C/O Ana Riley, Superintendent
•	235 High Street
Owner:	Bristol, Rhode Island 02809
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	Name
Operator:	Address
TO BE DETERMINED UPON CONTRACT AWARD	City, State, Zip Code
	Telephone Number
	Email Address
Estimated Project Dates:	Start Date: June 2025
Estimated Project Dates.	Completion Date: December 2027
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SESC Plan Preparation Date:

January 2025

SESC Plan Revision Date:

OPERATOR CERTIFICATION

Upon contract award, the OPERATOR must sign this certification statement before construction may begin.

I certify under penalty of law that this document and all attachments were prepared under the direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I am aware that it is the responsibility of the owner/operator to implement and amend the Soil Erosion and Sediment Control Plan as appropriate in accordance with the requirements of the RIPDES Construction General Permit.

Operator Signature:

Date

Contractor Representative: Name Contractor Title: Title Contractor Company Name: Company Name (if applicable) Address: Mailing Address Phone Number: Phone Number Email Address: Email

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LIST OF ATTACHMENTS

INTRODUCTION

This Construction Site Soil Erosion and Sediment Control Plan (SESC Plan) has been prepared for Bristol Warren Regional School District for the Mt.Hope High School. In accordance with the RIDEM Rhode Island Pollutant Discharge Elimination System (RIPDES) General Permit for Stormwater Discharge Associated with Construction Activity (RIPDES Construction General Permit ("CGP")), projects that disturb one (1) or more acres require the preparation of a SESC Plan. This SESC Plan provides guidance for complying with the terms and conditions of the RIPDES Construction General Permit and Minimum Standard 10 of the RI Stormwater Design and Installation Standards Manual. In addition, this SESC Plan is also consistent with Part D of the *RI SESC Handbook* entitled "Soil Erosion and Sediment Control Plans". This document does not negate or eliminate the need to understand and adhere to all applicable RIPDES regulations.

The purpose of erosion, runoff, and sedimentation control measures is to prevent pollutants from leaving the construction site and entering waterways or environmentally sensitive areas during and after construction. This SESC Plan has been prepared prior to the initiation of construction activities to address anticipated worksite conditions. The control measures depicted on the site plan and described in this narrative should be considered the minimum measures required to control erosion, sedimentation, and stormwater runoff at the site. Since construction is a dynamic process with changing site conditions, it is the operator's responsibility to manage the site during each construction phase so as to prevent pollutants from leaving the site. This may require the operator to revise and amend the SESC Plan during construction to address varying site and/or weather conditions, such as by adding or realigning erosion or sediment controls to ensure the SESC Plan remains compliant with the RIPDES Construction General Permit. Records of these changes must be added to the amendment log attached to the SESC Plan, and to the site plans as "red-lined" drawings. Please Note: Even if practices are correctly installed on a site according to the approved plan, the site is only in compliance when erosion, runoff, and sedimentation are effectively controlled throughout the entire site.

It is the responsibility of the site owner and the site operator to maintain the SESC Plan at the site, including all attachments, amendments and inspection records, and to make all records available for inspection by RIDEM during and after construction. (RIPDES CGP - Part III.G)

The site owner, the site operator, and the designated site inspector are required to review the SESC Plan and sign the Party Certification pages (Section 8). The primary contractor (if different) and all subcontractors (if applicable) involved in earthwork or exterior construction activities are also required to review the SESC Plan and sign the certification pages before construction begins.

Any questions regarding the SESC Plan, control measures, inspection requirements, or any other facet of this document may be addressed to the RIDEM Office of Water Resources, at 401-222-4700 or via email: water@dem.ri.gov.

ADDITIONAL RESOURCES

Rhode Island Department of Environmental Management Office of Water Resources 235 Promenade Street Providence, RI 02908-5767 phone: 401-222-4700 email: <u>water@dem.ri.gov</u>

RIDEM <u>*RI Stormwater Design and Installation Standards Manual*</u> (RISDISM) (as amended) <u>http://www.dem.ri.gov/pubs/regs/regs/water/swmanual15.pdf</u>

<u>RI Soil Erosion and Sediment Control Handbook</u> http://www.dem.ri.gov/soilerosion2014final.pdfRIDEM 2013 RIPDES Construction General Permit http://www.dem.ri.gov/pubs/regs/regs/water/ripdesca.pdfRhode Island Department of Transportation <u>Standard Specifications for Road and Bridge Design and Other Specifications</u> and <u>Standard Details</u>

http://www.dot.ri.gov/business/bluebook.php

RIDEM Office of Water Resources Coordinated Stormwater Permitting website http://www.dem.ri.gov/programs/water/permits/ripdes/stormwater/coordinated-stormwaterpermitting.phpRIDEM RIPDES Stormwater website http://www.dem.ri.gov/programs/water/permits/ripdes/stormwater/RIDEM Water Quality website (for 303(d) and TMDL listings) http://www.dem.ri.gov/programs/water/quality/

RIDEM Rhode Island Natural Heritage Program mailto:plan@dem.ri.gov

RIDEM Geographic Data Viewer – Environmental Resource Map <u>http://www.dem.ri.gov/maps/</u>

Natural Resources Conservation Service - Rhode Island Soil Survey Program http://www.ri.nrcs.usda.gov/technical/soils.html

Note:

The *Soil Survey of Rhode Island*, issued in 1980 is no longer available or supported. More information on site-specific soil data and maps for Rhode Island is available from the Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture through the Web Soil Survey. This information is available online at: <u>http://websoilsurvey.nrcs.usda.gov</u>.

EPA NPDES – Stormwater Discharges from Construction Activities webpage: http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-Discharges-From-Construction-Activities.cfm

EPA Construction Site Stormwater Runoff Control BMP Menu http://water.epa.gov/polwaste/npdes/swbmp/Construction-Site-Stormwater-Run-Off-Control.

SECTION 1: SITE DESCRIPTION

1.1 Project/Site Information

Project/Site Name:

- Mt.Hope High School
- The Bristol Warren Regional School District is proposing the construction of the new Mt. Hope High School at their existing high school facility located at 199 Chestnut Street in Bristol, RI. Proposed site improvements include construction of a two story high school building, new access drives, parking areas, a synthetic turf field, utility connections and stormwater management areas.

Project Street/Location:

- 199 Chestnut Street Bristol RI 02809
- See general location map attachment in appendix A of this SESC Plan.

The following are estimates of the construction site area:

•	Total Project Area	44.40 acres
•	Total Project Area to be Disturbed	29.80 acres

1.3 Natural Heritage Area Information

RIPDES CGP - Part III.H

Are there any Natural Heritage Areas being disturbed by the construction activity or will discharges be directed to the Natural Heritage Area as a result of the construction activity?

X Yes □ No

If yes, describe or refer to documentation which determines the likelihood of an impact on this area and the steps that will be taken to address any impacts.

• The Natural Hertitage Area will not be disturbed or impacted by discharges directed to natural resource areas. Refer to the freshwater waterland application perpared by LEC for natural heritage information.

1.4 Historic Preservation/Cultural Resources

Are there any historic properties, historic cemeteries or cultural resources on or near the construction site?

🗌 Yes 🛛 🖾 No

Describe how this determination was made and summarize state or tribal review comments:

• Per the Rhode Island National Register search, RIGIS data and Bristol's Comprehensive Plan, the property is not within a historic district, or has evidence of cultural resources on site. The property is adjacent to the Gooding Avenue Historic District to the North and St.Mary's Cemetery to the South.

SECTION 2: EROSION, RUNOFF, AND SEDIMENT CONTROL

RIPDES Construction General Permit – Part III.J.1

The purpose of <u>erosion controls</u> is to prevent sediment from being detached and moved by wind or the action of raindrop, sheet, rill, gully, and channel erosion. Properly installed and maintained erosion controls are the primary defense against sediment pollution.

<u>Runoff controls</u> are used to slow the velocity of concentrated water flows. By intercepting and diverting stormwater runoff to a stabilized outlet or treatment practice or by converting concentrated flows to sheet flow erosion and sedimentation are reduced.

<u>Sediment controls</u> are the last line of defense against moving sediment. The purpose is to prevent sediment from leaving the construction site and entering environmentally sensitive areas.

This section describes the set of control measures that will be installed before and during the construction project to avoid, mitigate, and reduce impacts associated with construction activity. Specific control measures and their applicability are contained in <u>Section Four: Erosion Control Measures</u>, <u>Section Five:</u> <u>Runoff Control Measures</u>, and <u>Section Six: Sediment Control Measures</u> of the *RI SESC Handbook*. The *RI SESC Handbook* can be found at the following address:

http://www.dem.ri.gov/soilerosion2014final.pdf

2.1 Avoid and Protect Sensitive Areas and Natural Features

Areas of existing and remaining vegetation and areas that are to be protected as identified in the Section 1.6 of the SESC Plan must be clearly identified on the SESC Site Plans for each Phase of Construction. Prior to any land disturbance activities commencing on the site, the Contractor shall physically mark limits of disturbance (LOD) on the site and any areas to be protected within the site, so that workers can clearly identify the areas to be protected.

Note:

The *Soil Survey of Rhode Island*, issued in 1980 is no longer available or supported. More information on site-specific soil data and maps for Rhode Island is available from the Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture through the Web Soil Survey. This information is available online at: <u>http://websoilsurvey.nrcs.usda.gov</u>.

Feature Requiring Protection	Construction Phase #	Method of Protection	Sheet #
le clote d Watlend	1.0	Commont Filter Coold	\mathbf{C}
Isolated Wetland	1-2	Compost Filter Sock	62.1-62.9
Stream	1-2	Compost Filter Sock	C2.1-C2.9
		and Silt Fence	
QPA	1-2	Compost Filter Sock	C2.1-C2.9

2.2 Minimize Area of Disturbance

Will >5 acres be disturbed in order to complete this project?

🛛 Yes 🗌 No

Will <5 acres be disturbed or will disturbance activities be completed within a six (6) month window?

🗌 Yes 🛛 🖾 No

Based on the answers to the above questions will phasing be required for this project?

_	_	
🛛 Yes		No

The proposed work will require phasing for the project to limit the area of disturbance and maintain operational use of the existing high school during construction. Phase I of the project includes the limits of disturbance west of Silver Creek. Phase II of the project includes the limits of disturbance east of Silver Creek. Temporary work within each phasing area may be required based on the Contractor's construction sequencing.

PHASING PLAN

The following are estimates of each phase of the construction project:

Phase No. or Identifier	#1
Total Area of Phase	28.90 acres
Area to be Disturbed	16.80 acres

Description of Construction Sequencing for Phase #1

Proper sequencing of construction activities is essential to maximize the effectiveness of erosion, runoff, and sediment control measures. Construction sequencing of construction activities for each phase must address the following elements:

- 1. Installation of control measures identifying limits of disturbance and areas internal to the site that require protection before start of land disturbance.
- 2. Installation of all erosion, runoff, and sediment controls and temporary pollution prevention measures that are required to be in place and functional before any earthwork begins. This shall be done in accordance with the RI SESC Handbook and/or the RI Department of Transportation Standard Specifications for Road and Bridge Construction (as amended). Upon acceptable completion of site preparation and installation of erosion, runoff, and sediment controls and temporary pollution prevention measures, site construction activities may commence.
- 3. Upon commencement of site construction activities, the operator shall initiate appropriate stabilization practices on all disturbed areas as soon as possible, but not more than fourteen (14) days after the construction activity in that area has temporarily or permanently ceased. Such temporary or permanent soil stabilization measures must be installed prior to initiating land disturbance in subsequent phases. A general sequence of work for construction activities is provided below:
 - Contractor mobilization.
 - Stake out LOD
 - Install perimeter sedimentation controls and construction fencing.
 - Mark trees to remain and install tree protection.
 - Construct temporary sediment traps and diversions.
 - Clear and grub vegetation to be removed.
 - Remove and dispose of existing site features and utilities.
 - Rough grade site for building installation and site features.
 - Install drainage system.
 - Install underground utilities.
 - Site grading and slope stabilization.
 - Fine grade vehicular areas.

- Install asphalt paving and concrete walkway.
- Install landscape plantings and loam & seed.
- Install temporary phasing features for operation use of the phase I. Begin Phase I to Phase II transition with Owner.
- 4. Routine inspection and maintenance and/or modification of erosion, runoff, and sediment controls and temporary pollution prevention measures while earthwork is ongoing is required.
- 5. Final site stabilization of any disturbed areas after earthwork has been completed and removal of temporary erosion, runoff, and sediment controls and temporary pollution prevention measures.
- 6. Activation of post-construction stormwater treatment conveyances and practices.

Phase No. or Identifier	#2
Total Area of Phase	15.20 acres
Area to be Disturbed	15.20 acres

Description of Construction Sequencing for Phase #2

Proper sequencing of construction activities is essential to maximize the effectiveness of erosion, runoff, and sediment control measures. Construction sequencing of construction activities for each phase must address the following elements:

- 1. Installation of control measures identifying limits of disturbance and areas internal to the site that require protection before start of land disturbance.
- 2. Installation of all erosion, runoff, and sediment controls and temporary pollution prevention measures that are required to be in place and functional <u>before</u> any earthwork begins. This shall be done in accordance with the RI SESC Handbook and/or the RI Department of Transportation Standard Specifications for Road and Bridge Construction (as amended). Upon acceptable completion of site preparation and installation of erosion, runoff, and sediment controls and temporary pollution prevention measures, site construction activities may commence.
- 3. Upon commencement of site construction activities, the operator shall initiate appropriate stabilization practices on all disturbed areas as soon as possible, but not more than fourteen (14) days after the construction activity in that area has temporarily or permanently ceased. Such temporary or permanent soil stabilization measures must be installed prior to initiating land disturbance in subsequent phases. A general sequence of work for construction activities is provided below.
 - Contractor mobilization.
 - Stake out LOD
 - Install perimeter sedimentation controls and construction fencing.
 - Mark trees to remain and install tree protection.
 - Construct temporary sediment traps and diversions.
 - Clear and grub vegetation to be removed.
 - Remove and dispose of existing building, existing site features and utilities.
 - Rough grade site.
 - Install drainage system.
 - Install underground utilities.
 - Site grading and slope stabilization.
 - Fine grade vehicular areas.
 - Install asphalt paving and concrete walkway.
 - Install landscape plantings and loam & seed.

- Activation of post-construction stormwater treatment areas
- Complete punchlist items.
- Final site inspection by Local Building Inspector per Local regulations.
- Operation and maintenance plan review with Owner.
- Remove perimeter sedimentation controls and construction fence following site stabilization.
- 4. Routine inspection and maintenance and/or modification of erosion, runoff, and sediment controls and temporary pollution prevention measures <u>while</u> earthwork is ongoing is required.
- 5. Final site stabilization of any disturbed areas <u>after</u> earthwork has been completed and removal of temporary erosion, runoff, and sediment controls and temporary pollution prevention measures.
- 6. Activation of post-construction stormwater treatment conveyances and practices.

2.3 Minimize the Disturbance of Steep Slopes

Are steep slopes (>15%) present within the proposed project area?

🛛 Yes 🗌 No

Temporary erosion and sediment controls shall be used to control surface runoff amd reduce erosion potential on steep slopes as depicted on sheets C2.1-C2.9.

2.4 Preserve Topsoil

Site owners and operators must preserve existing topsoil on the construction site to the maximum extent feasible and as necessary to support healthy vegetation, promote soil stabilization, and increase stormwater infiltration rates in the post-construction phase of the project.

Will existing topsoil be preserved at the site?

🛛 Yes 🗌 No

Existing topsoil shall be stockpiled for future reuse. Loam and seed will be placed within disturbed areas.

Soil compaction must be minimized by maintaining limits of disturbance throughout construction. In instances where site soils are compacted the site owner and operator must restore infiltration capacity of the compacted soils by tilling or scarifying compacted soils and amending soils as necessary to ensure a minimum depth of topsoil is available in these areas. In areas where infiltrating stormwater treatment practices are located compacted soils must be amended such that they will comply the design infiltration rates established in the *RI Stormwater Design and Installation Standards Manual*.

Compacted soil shall be amended, tiled and revegetated at the completion of construction.

2.5 Stabilize Soils

Upon completion and acceptance of site preparation and initial installation of erosion, runoff, and sediment controls and temporary pollution prevention measures, the operator shall initiate appropriate temporary or permanent stabilization practices during all phases of construction on all disturbed areas as soon as

possible, but not more than fourteen (14) days after the construction activity in that area has temporarily or permanently ceased.

Any disturbed areas that will not have active construction activity occurring within 14 days must be stabilized using the control measures depicted in the SESC Site Plans, in accordance with the *RI SESC Handbook*, and per manufacturer product specifications.

Only areas that can be reasonably expected to have active construction work being performed within 14 days of disturbance will be cleared/grubbed at any one time. It is NOT acceptable to clear and grub the entire construction site if portions will not be active within the 14-day time frame. Proper phasing of clearing and grubbing activities shall include temporary stabilization techniques for areas cleared and grubbed that will not be active within the 14-day time frame.

All disturbed soils exposed prior to October 15 of any calendar year shall be seeded by that date if vegetative measures are the intended soil stabilization method. Any such areas that do not have adequate vegetative stabilization, as determined by the site operator or designated inspector, by November 15, must be stabilized through the use of non-vegetative erosion control measures. If work continues within any of these areas during the period from October 15 through April 15, care must be taken to ensure that only the area required for that day's work is exposed, and all erodible soil must be restabilized within 5 working days. In limited circumstances, stabilization may not be required if the intended function of a specific area of the site necessitates that it remain disturbed (i.e. construction of a motocross track).

Temporary Vegetative Control Measures

- Grass seeding shall be the main vegetative control used on site. Upon completion of grading
 activities, any disturbed or otherwise unstabilized soil shall be promptly protected.
- Vegetative control measures shall be initiated not more than fourteen (14) days after the construction activity has temporarily or permanently ceased.

Temporary Non-Vegetative Control Measures

- Compost filter socks are proposed and were selected for their proven efficiency in trapping sediments, ease of installation, and low impact to the site.
- Turf reinforcement matting shall be used on slopes 3:1 or greater to prevent erosion allow vegetation to become established.

Permanent Vegetative Control Measures

• Grass seeding will be the main vegetative control used on the site. Upon completion of grading activities, any disturbed or otherwise unstabilized soil shall be promptly protected by the application of a plantable soil, where necessary, and an appropriate permanent grass seed mixture.

Permanent Non-Vegetative Control Measures

The use of permanent non-vegetative control measures is not anticipated at this time.

2.6 Protect Storm Drain Outlets

Temporary or permanent outlet protection must be used to prevent scour and erosion at discharge points through the protection of the soil surface, reduction in discharge velocities, and through the promotion of infiltration. Outlets often have high velocity, high volume flows, and require strong materials that will withstand the forces of stormwater. Storm drain outlet control measures also offer a last line of protection against sediment entering environmentally sensitive areas.

All stormwater outlets that may discharge sediment-laden stormwater flow from the construction site must be protected using the control practices depicted on the approved plan set and in accordance with the *RI SESC Handbook*.

Will temporary or permanent point source discharges be generated at the site as the result of construction of sediment traps or basins, diversions, and conveyance channels?

🛛 Yes 🗌 No

Temporary and permanent stormwater discharge shall be protected with erosion control measures per the Contract Documents.

2.7 Establish Temporary Controls for the Protection of Post-Construction Stormwater Treatment Practices

Temporary measures shall be installed to protect permanent or long-term stormwater control and treatment measures as they are installed and throughout the construction phase of the project so that they will function properly when they are brought online.

Will long-term stormwater treatment practices be installed at the site?

🛛 Yes 🗌 No

Long term stormwater BMPs installed on site shall be protected from compaction during consturction. Stormwater BMPs shall be maintained per the Operations and Maintenance Plan.

2.8 Divert or Manage Run-on from Up-gradient Areas

Is stormwater from off-site areas anticipated to flow onto the project area or onto areas where soils will be disturbed?

Yes No

Pre-Construction and Construction sub-watershed maps are included for each phase in this SESC Plan submittal.

Structural control measures will be used to limit stormwater flow from coming onto the project area, and to divert and slow on-site stormwater flow that is expected to impact exposed soils for the purpose of minimizing erosion, runoff, and the discharge of pollutants from the site.

Control measures shall be installed as depicted on the approved plan set and in accordance with the RI SESC Handbook or the RI Department of Transportation Standard Specifications for Road and Bridge Construction. Run-on and Run-off Management

Construction Phase #	On-site or Off-site Run-on?	Control measure	Identified on Sheet #	Detail(s) is/are on Sheet #
1-2	Off - Site	Temporary Diversion Swales	C2.1-C2.9	C8.1
1-2	Onsite	Temporary Diversion Swales	C2.1-C2.9	C8.1
1-2	Onsite	Perimeter Erosion Controls	C2.1-C2.9	C8.1

A perimeter filter sock will prevent sediment laden stormwater from draining offsite for runoff generated onsite. Offsite flows that run on to the disturbed site will be managed within temporary sediment traps and temporary diversion swales.

2.9 Retain Sediment Onsite through Structural and Non-Structural Practices

SEDIMENT BARRIERS must be installed along the perimeter areas of the site that will receive stormwater from disturbed areas. This also may include the use of sediment barriers along the contour of disturbed slopes to maintain sheet flow and minimize rill and gully erosion during construction. Installation and maintenance of sediment barriers must be completed in accordance with the maintenance requirements specified by the product manufacturer or the *RI SESC Handbook*.

Will sediment barriers be utilized at the toe of slopes and other downgradient areas subject to stormwater impacts and erosion during construction?

🛛 Yes 🗌 No

Compost filter socks shall be implemented on site.

Will sediment barriers be utilized along the contour of slopes to maintain sheet flow and minimize rill and gully erosion during construction?

🛛 Yes 🗌 No

SEDIMENT BARRIERS				
Construction Phase #	Sediment Barrier Type	Sediment Barrier is Labeled on Sheet #	Detail is on Sheet #	
1-2	Compost Filter Sock	C2.1-C2.9	C8.1	

INLET PROTECTION will be utilized to prevent soil and debris from entering storm drain inlets. These measures are usually temporary and are implemented before a site is disturbed. ALL stormwater inlets &/or catch basins that are operational during construction and have the potential to receive sediment-laden stormwater flow from the construction site must be protected using control measures outlined in the *RI SESC Handbook*.

For more information on inlet protection refer to the *RI SESC Handbook*, Inlet Protection control measure.

Maintenance

The operator must clean, or remove and replace the inlet protection measures as sediment accumulates, the filter becomes clogged, and/or as performance is compromised. Accumulated sediment adjacent to the inlet protection measures should be removed by the end of the same work day in which it is found or by the end of the following work day if removal by the same work day is not feasible.

Do inlets exist adjacent to or within the project area that require temporary protection?

🛛 Yes 🗌 No

The following lists the proposed storm drain inlet types selected from Section Six of the *RI SESC Handbook*. Each row is unique for each phase and inlet protection type.

INLET PROTECTION				
Construction Phase #Inlet ProtectionInlet Protection is Iabeled on Sheet #Detail(s) is/are on Sheet #				
1-2	Silt Sack	C2.1-C2.9	C8.1	

CONSTRUCTION ENTRANCES will be used in conjunction with the stabilization of construction roads to reduce the amount of sediment tracking off the project. This project has avoided placing construction entrances on poorly drained soils where possible. Where poorly drained soils could not be eliminated, the detail includes subsurface drainage.

Any construction site access point must employ the control measures on the approved SESC site plans and in accordance with the *RI SESC Handbook*. Construction entrances shall be used in conjunction with the stabilization of construction roads to reduce the amount of mud picked up by construction vehicles. All construction access roads shall be constructed prior to any roadway accepting construction traffic.

The site owner and operator must:

- 1. Restrict vehicle use to properly designated exit points.
- 2. Use properly designed and constructed construction entrances at all points that exit onto paved roads so that sediment removal occurs prior to vehicle exit.
- 3. When and where necessary, use additional controls to remove sediment from vehicle tires prior to exit (i.e. wheel washing racks, rumble strips, and rattle plates).
- 4. Where sediment has been tracked out from the construction site onto the surface of off-site streets, other paved areas, and sidewalks, the deposited sediment must be removed by the end of the same work day in which the track out occurs. Track-out must be removed by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal.

Will construction entrances be utilized at the proposed construction site?

Yes No

CONSTRUCTION ENTRANCE

Construction Phase #	Soil Type at the Entrance	Entrance is located on Sheet #	Detail is on Sheet #
1-2	Crushed Stone	C2.2-C2.3	C8.1

STOCKPILE CONTAINMENT will be used onsite to minimize or eliminate the discharge of soil, topsoil, base material or rubble, from entering drainage systems or surface waters. All stockpiles must be located within the limit of disturbance, protected from run-on with the use of temporary sediment barriers and provided with cover or stabilization to avoid contact with precipitation and wind where and when practical.

Stock pile management consists of procedures and practices designed to minimize or eliminate the discharge of stockpiled material (soil, topsoil, base material, rubble) from entering drainage systems or surface waters.

For any stockpiles or land clearing debris composed, in whole or in part, of sediment or soil, you must comply with the following requirements:

- 1. Locate piles within the designated limits of disturbance.
- 2. Protect from contact with stormwater (including run-on) using a temporary perimeter sediment barrier.
- 3. Where practicable, provide cover or appropriate temporary vegetative or structural stabilization to avoid direct contact with precipitation or to minimize sediment discharge.
- 4. <u>NEVER</u> hose down or sweep soil or sediment accumulated on pavement or other impervious surfaces into any stormwater conveyance, storm drain inlet, or surface water.
- 5. To the maximum extent practicable, contain and securely protect from wind.

Earthwork materials (loam, gravel, etc.) are anticipated to be stockpiled on site.

STOCKPILE CONTAINMENT				
Construction Phase #	Run-on measures necessary? (yes/no)	Stabilization or Cover Type	Stockpile Containment Measure	Sheet #
1-2	No	PVC liner, vegetation or spray applied tackifier	Compost Filter Sock	C8.1

CONSTRUCTED SEDIMENT STRUCTURES

TEMPORARY SEDIMENT TRAPS will be utilized onsite. There will be no disturbed drainage areas greater than one acre that will be exposed for longer than six months. Design and sizing calculations in accordance with the *RI SESC Handbook*, Section Six are found in <u>Attachment H</u> of this SESC Plan. A summary of the calculations are provided below:

Are temporary sediment traps required at the site?

🛛 Yes 🗌 No

SEDIMENT TRAPS				
Construction Phase #	Exposed Area (acres)	Trap #	Sheet #	Detail found on Sheet#
1	5.03	TST-1	C2.8	C8.1
1	2.47	TST-2	C2.9	C8.1
1	3.12	TST-3	C2.2-C2.5	C8.1
1	2.74	TST-4	C2.2-C2.5	C8.1
2	2.76	TST-5	C2.2	C8.1
2	4.93	TST-6	C2.4	C8.1
1	3.32	TST-7	C2.6	C8.1
1	3.58	TST-8	C2.1	C8.1
2	0.96	TST-09	C2.2	C8.1

Trap #	Wet Storage Volume (cu.ft)	Dry Storage Volume (cu.ft.)	Cleanout Depth (ft)	Provide Reference to Location of Supporting Design and Sizing Calculations
TST-1	9,754	8,754	1.5	Attachment H
TST-2	4,666	4,452	1.5	Attachment H
TST-3	6,247	5,804	1.5	Attachment H
TST-4	5,355	5,064	1.5	Attachment H
TST-5	5,355	5,064	1.5	Attachment H
TST-6	10,327	9,244	1.5	Attachment H
TST-7	10,327	9,244	1.5	Attachment H
TST-8	8,670	7,864	1.5	Attachment H
TST-9	1,912	2,004	1.5	Attachment H

All traps will be functional and installed prior to disturbance in the contributing drainage area. Access for sediment removal is provided on the plans with cleanout depth requirements. The removed sediment will be utilized onsite or disposed of properly off-site.

TEMPORARY SEDIMENT BASIN(S) will be utilized onsite. Every effort must be made to prevent erosion and control it near the source.

Are temporary sediment basins required at the site?

🗌 Yes 🛛 🖾 No

2.10 Properly Design Constructed Stormwater Conveyance Channels

Are temporary stormwater conveyance practices required in order to properly manage runoff within the proposed construction project?

🛛 Yes 🗌 No

Temporary diversion swales or berms shall be used to convey stormwater as necessary and shall be installed in accordance with the RI SESC Handbook.

The conveyance will be maintained as depicted on SESC Site Plans and in accordance with the *RI SESC Handbook* and if applicable.

2.11 Erosion, Runoff, and Sediment Control Measure List

It is expected that this table and corresponding Inspection Reports will be amended as needed throughout the construction project as control measures are added or modified.

Phase No. 1 and Phase No.2			
Location/Station	Control Measure Description/Reference	Maintenance Requirement	
Perimeter (C2.1-C2.9)	Compost Filter Sock. Section Six, Sediment Control Measures – Straw Wattles, Compost Tubes and Fiber Rolls – RI SESC Handbook	Inspection should be made after each storm event and repair or replacement should be made promptly as needed. Cleanout of accumulated sediment behind the filter sock if sediment accumulates to at least ½ of the original height of the barrier becomes filled with sediment. Compost filter sock should be inspected regularly, and sediment shall be cleared often to prevent buildup or damages	
Construction Entrance (See Sheet C2.1 and C2.3)	Stone Stabilized Pad. Section Six: Sediment Control Measures – Construction Entrances –RI SESC Handbook.	The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto pave surfaces. Provide periodic top dressing with additional stone or additional length as conditions demand. Roads adjacent to entrance shall be clean at the end of each day. If maintenance alone is not enough to prevent excessive track out, increase length of entrance, modify construction access road surface, or install washrack or mudrack.	
Inlet Protection (See Sheet C2.1-C2.9)	Inlet Protection. Section Six: Sediment Control Measures – Inlet Protection – RI SESC Handbook.	Inspections should be made after every rain event and/or weekly. Sediment should be removed when 50 percent of the storage volume is achieved. The sediment removed during maintenance shall be disposed of in an approved location. Inlet protection should be removed within 30 days of permanent stabilization.	

Stockpiles (See Sheet C2.2-C2.6)	Stockpile Management. Section Three: Pollution Prevention and Good Housekeeping – Stockpile and Staging Area Management – RI SESC Handbook.	Inspections should be made weekly during the rainy season and bi-monthly during the non-rainy season.
Temporary Sediment Trap (See Sheet C2.1-C2.9)	Temporary Sediment Trap. Section Six: Sediment Control Measures – Temporary Sediment Traps – RI SESC Handbook.	Inspections should be made after rainfall events greater than 0.25 in. and/or once a week. Sediment should be removed when one half of the required wet storage volume has been achieved. A sediment marker shall be installed in the trap for visual identification of when the trap has accumulated enough sediment to require clean out.

SECTION 3: CONSTRUCTION ACTIVITY POLLUTION PREVENTION

The purpose of construction activity pollution prevention is to prevent day to day construction activities from causing pollution.

This section describes the key pollution prevention measures that must be implemented to avoid and reduce the discharge of pollutants in stormwater. Example control measures include the proper management of waste, material handling and storage, and equipment/vehicle fueling/washing/maintenance operations.

Where applicable, include *RI* SESC Handbook or the *RI* Department of Transportation Standard Specifications for Road and Bridge Construction (as amended) specifications.

3.1 Existing Data of Known Discharges from Site

Are there known discharges from the project area?

🗌 Yes 🛛 🖾 No

Describe how this determination was made:

• A project survey and field review were conducted and no known discharges aside from stormwater facilities were observed at the site.

If yes, list discharges and locations:

• N/A

Is there existing data on the quality of the known discharges?

🗌 Yes 🛛 🖾 No

If yes, provide data:

• N/A

3.2 Prohibited Discharges

The following discharges are prohibited at the construction site:

- Contaminated groundwater, unless specifically authorized by the DEM. These types of discharges may only be authorized under a separate DEM RIPDES permit.
- Wastewater from washout of concrete, unless the discharge is contained and managed by appropriate control measures.
- Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials.
- Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance. Proper storage and spill prevention practices must be utilized at all construction sites.
- Soaps or solvents used in vehicle and equipment washing.
- Toxic or hazardous substances from a spill or other release.

All types of waste generated at the site shall be disposed of in a manner consistent with State Law and/or regulations.

Will any of the above listed prohibited discharges be generated at the site?

🗌 Yes 🛛 🖾 No

Fuels, oils or other pollutants used in vehicle and equipment operation and maintenance shall be properly stored and spill prevention practices must be utilized at the construction site.

3.3 Proper Waste Disposal

Building materials and other construction site wastes must be properly managed and disposed of in a manner consistent with State Law and/or regulations.

- A waste collection area shall be designated on the site that does not receive a substantial amount of runoff from upland areas and does not drain directly to a waterbody or storm drain.
- All waste containers shall be covered to avoid contact with wind and precipitation.
- Waste collection shall be scheduled frequently enough to prevent containers from overfilling.
- All construction site wastes shall be collected, removed, and disposed of in accordance with applicable regulatory requirements and only at authorized disposal sites.
- Equipment and containers shall be checked for leaks, corrosion, support or foundation failure, or other signs of deterioration. Those that are found to be defective shall be immediately repaired or replaced.

Is waste disposal a significant element of the proposed project?

No No Yes

Waste disposal will be limited to removal of demolished material in addition to waste as a result of site construction. All wastes shall be disposed of in a manner consistent with State and Local Regulations.

3.4 Spill Prevention and Control

All chemicals and/or hazardous waste material must be stored properly and legally in covered areas, with containment systems constructed in or around the storage areas. Areas must be designated for materials delivery and storage. All areas where potential spills can occur and their accompanying drainage points must be described. The owner and operator must establish spill prevention and control measures to reduce the chance of spills, stop the source of spills, contain and clean-up spills, and dispose of materials contaminated by spills. The operator must establish and make highly visible location(s) for the storage of spill prevention and control equipment and provide training for personnel responsible for spill prevention and control on the construction site.

Are spill prevention and control measures required for this particular project?

🛛 Yes	🗌 No
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Spills related to construction vehicles and materials shall be prevented by the following procedures:

- 1. No vehicles shall be left unattended in project areas, which, in the event of a hazardous material spill, would flow into any portion of the drainage system.
- 2. Vehicles shall be fueled in areas and using procedures that will not lead to a discharge of fuel into Waters of the State.
 - a. Discourage "topping-off" of fuel tanks.
 - b. Make available absorbent spill cleanup materials and spill kits in fueling areas and on fueling trucks, and should be disposed of properly after use.
 - c. Use drip pans or absorbent pads during vehicle and equipment fueling, unless the fueling is performed over an impermeable surface in a dedicated fueling area.
 - d. Use absorbent materials on small spills. Do not hose down or bury the spill. Remove the absorbent materials promptly and dispose of properly.
 - e. Avoid mobile fueling of mobile construction equipment around the site: rather, transport the equipment to designated fueling areas. With the exception of tracked equipment such as bulldozers and large excavators, most vehicles should be able to travel to a designated area with little lost time.
 - f. Train employees and subcontractors in proper fueling and cleanup procedures.
 - g. When fueling must take place onsite, designate an area away from drainage courses to be used. Fueling areas should be identified in the SESC Measures.
 - h. Protect dedicated fueling areas from stormwater run-on and runoff with berms and dikes to prevent run-on, runoff, and to contain spills.
- 3. In the event of a release of hazardous material, the equipment operator shall take all measures to stop and/or contain the leak and without exacerbating the release and attempt to remove equipment from areas likely to cause a discharge of hazardous materials into Water of the State. Further, site

supervisors, and the Owner and his Representative shall be contacted and, should it be determined that the spill is of a reportable quantity, the RIDEM shall be notified. A licensed hazardous waste remediation contractor shall be engaged to remediate any such spills in accordance with RIDEM Regulations and procedures.

Any hazardous materials used for construction shall be stored away from the drainage system components and protected from precipitation. In the event of a release beyond the ability of construction staff to contain, emergency services of the Town of Bristol, and the State of Rhode Island, and a licensed hazardous waste remediation contractor shall be contacted for assistance.

To prevent pollution of surface waters, the following construction procedures shall be prohibited:

- 1. Dumping of or discharging of spoil material or excessively turbid water into any drainage structures, stream corridor, any wetland, or any surface waters.
- 2. Indiscriminate, arbitrary or capricious operations of equipment in any drainage structures, stream corridors, any wetlands, or any surface waters.
- Pumping of silt-laden water from trenches or other excavations into any drainage structures, surface waters, any stream corridors or any wetlands. All disposal of silt-laden water shall be carried out within the use of approved filter basins.
- 4. Disposal of trees, brush, and other debris in any stream corridors, any wetlands, any surface waters, or at unspecified locations.
- 5. Disposal of excess or unsuitable excavation material in wetlands or floodplain areas, even with permission of the property owner.
- 6. Open burning of project debris.
- 7. Location of storage stockpiles in environmentally sensitive areas.

3.5 Control of Allowable Non-Stormwater Discharges

Are there allowable non-Stormwater discharges present on or near the project area?

🛛 Yes 🗌 No

List of allowable non-stormwater discharge(s) and the associated control measure(s):

- Washdown of vehicles where no detergents are used
- Use of water to control dust
- Uncontaminated groundwater
- Waterline flushing
- Irrigation drainage
- Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled materials have been removed), and where detergents are not used.

All allowable non-stormwater discharges shall be controlled with temporary erosion controls including perimeter control, inlet control, and temporary sedimentation structures.

Are there any known or proposed contaminated discharges, including anticipated contaminated dewatering operations, planned on or near the project area?

🗌 Yes 🛛 🖾 No

3.6 Control Dewatering Practices

Site owners and operators are prohibited from discharging groundwater or accumulated stormwater that is removed from excavations, trenches, foundations, vaults, or other similar points of accumulation, unless such waters are first effectively managed by appropriate control measures.

Examples of appropriate control measures include, but are not limited to, temporary sediment basins or sediment traps, sediment socks, dewatering tanks and bags, or filtration systems (e.g. bag or sand filters) that are designed to remove sediment. Uncontaminated, non-turbid dewatering water can be discharged without being routed to a control.

At a minimum the following discharge requirements must be met for dewatering activities:

- 1. Do not discharge visible floating solids or foam.
- 2. To the extent feasible, utilize vegetated, upland areas of the site to infiltrate dewatering water before discharge. In no case will surface waters be considered part of the treatment area.
- 3. At all points where dewatering water is discharged, utilize velocity dissipation devices.
- 4. With filter backwash water, either haul it away for disposal or return it to the beginning of the treatment process.
- 5. Replace and clean the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturer's specifications.
- 6. Dewatering practices must involve the implementation of appropriate control measures as applicable (i.e. containment areas for dewatering earth materials, portable sediment tanks and bags, pumping settling basins, and pump intake protection.)

Is it at all likely that the site operator will need to implement construction dewatering in order to complete the proposed project?

- 🛛 Yes 🗌 No
- Dewatering may be required at the footprint of the proposed high school and within the utility trenches.

3.7 Establish Proper Building Material Staging Areas

All construction materials that have the potential to contaminate stormwater must be stored properly and legally in covered areas, with containment systems constructed in or around the storage areas. Areas must be designated for materials delivery and storage. Designated areas shall be approved by the site owner/engineer. Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in the discharge of pollutants, or where exposure of a specific material or

product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use).

Materials expected to be stored on site: extra perimeter erosion controls, earthwork material (loam, gravel, crushed stone, etc.), drainage and utility pipe and structures, and building materials. Materials stored on the site (as shown on Sheets C2.2-C2.6) shall be protected from exposure to precipitation through the use of tarps and other overhead cover. All construction debris shall be properly disposed of and/or cover at the end of each working day to avoid contact with precipitation.

Earthwork materials stockpiles shall be surrounded by erosion controls to prevent sediment from being carried downstream.

3.8 Minimize Dust

Dust control procedures and practices shall be used to suppress dust on a construction site during the construction process, as applicable. Precipitation, temperature, humidity, wind velocity and direction will determine amount and frequency of applications. However, the best method of controlling dust is to prevent dust production. This can best be accomplished by limiting the amount of bare soil exposed at one time. Dust Control measures outlined in the *RI SESC Handbook* shall be followed. Other dust control methods include watering, chemical application, surface roughening, wind barriers, walls, and covers.

Water application or other approved methods shall be used to control dust as necessary or as directed by the Owner or Owner's Representative. Work shall attempt to limit the amount of soil exposed at one time.

3.9 Designate Washout Areas

At no time shall any material (concrete, paint, chemicals) be washed into storm drains, open ditches, streets, streams, wetlands, or any environmentally sensitive area. The site operator must ensure that construction waste is properly disposed of, to avoid exposure to precipitation, at the end of each working day.

Will washout areas be required for the proposed project?

🛛 Yes 🗌 No

Washout shall remain within specified locations (i.e. concrete washout area) on site as shown on Sheet C2.1-C2.9. Washout areas shall be constructed and maintained in accordance with the RI SESC Handbook. When temporary concrete washout facilities are no longer required for work, the hardened concrete, slurries, and liquids shall be removed and properly disposed of.

3.10 Establish Proper Equipment/Vehicle Fueling and Maintenance Practices

Vehicle fueling shall not take place within regulated wetlands or buffer zone areas, or within 50-feet of the storm drain system. Designated areas shall be depicted on the SESC Site Plans, or shall be approved by the site owner.

Vehicle maintenance and washing shall occur off-site, or in designated areas depicted on the SESC Site Plans or approved of by the site owner. Maintenance or washing areas shall not be within regulated wetlands or buffer zone areas, or within 50-feet of the storm drain system. Maintenance areas shall be clearly designated, and barriers shall be used around the perimeter of the maintenance area to prevent stormwater contamination.

Construction vehicles shall be inspected frequently for leaks. Repairs shall take place immediately. Disposal of all used oil, antifreeze, solvents and other automotive-related chemicals shall be according to applicable regulations; at no time shall any material be washed down the storm drain or in to any environmentally sensitive area.

Vehicle fueling and maintenance shall only occur in the designated fueling area as depicted on See Sheets C2.2-C2.3. See section 3.4 of this report.

3.11 Chemical Treatment for Erosion and Sediment Control

Chemical stabilizers, polymers, and flocculants are readily available on the market and can be easily applied to construction sites for the purposes of enhancing the control of erosion, runoff, and sedimentation. The following guidelines should be adhered to for construction sites that plan to use treatment chemicals as part of their overall erosion, runoff, and sedimentation control strategy.

The U.S. Environmental Protection Agency has conducted research into the relative toxicity of chemicals commonly used for the treatment of construction stormwater discharges. The research conducted by the EPA focused on different formulations of chitosan, a cationic compound, and both cationic and anionic polyacrylamide (PAM). In summary, the studies found significant toxicity resulting from the use of chitosan and cationic PAM in laboratory conditions, and significantly less toxicity associated with using anionic PAM. EPA's research has led to the conclusion that the use of treatment chemicals for erosion, runoff, and sedimentation control requires proper operator training and appropriate usage to avoid risk to aquatic species. In the case of cationic treatment chemicals additional safeguards may be necessary.

Application/Installation Minimum Requirements

If a site operator plans to use polymers, flocculants, or other treatment chemicals during construction the SESC plan must address the following:

- 1. <u>Treatment chemicals shall not be applied directly to or within 100 feet of any surface water body,</u> wetland, or storm drain inlet.
- Use conventional erosion, runoff, and sedimentation controls prior to and after the application of treatment chemicals. Use conventional erosion, runoff, and sedimentation controls prior to chemical addition to ensure effective treatment. Chemicals may only be applied where treated stormwater is directed to a sediment control (e.g. temporary sediment basin, temporary sediment trap or sediment barrier) prior to discharge.
- 3. <u>Sites shall be stabilized as soon as possible using conventional measures to minimize the need to use chemical treatment.</u>
- 4. <u>Select appropriate treatment chemicals.</u> Chemicals must be selected that are appropriately suited to the types of soils likely to be exposed during construction and to the expected turbidity, pH, and flow rate of stormwater flowing into the chemical treatment system or treatment area. Soil testing is essential. Using the wrong form of chemical treatment will result in some form of performance failure and unnecessary environmental risk.
- 5. <u>Minimize discharge risk from stored chemicals.</u> Store all treatment chemicals in leak-proof containers that are kept under storm-resistant cover and surrounded by secondary containment structures (e.g., spill berms, decks, spill containment pallets), or provide equivalent measures, designed and maintained to minimize the potential discharge of treatment chemicals in stormwater or by any other means (e.g., storing chemicals in covered areas or having a spill kit available on site).
- 6. <u>Use chemicals in accordance with good engineering practices and specifications of the chemical provider/supplier.</u> You must also use treatment chemicals and chemical treatment systems in

accordance with good engineering practices, and with dosing specifications and sediment removal design specifications provided by the supplier of the applicable chemicals, or document specific departures from these practices or specifications and how they reflect good engineering practice.

Will chemical stabilizers, polymers, flocculants or other treatment chemicals be utilized on the proposed construction project?

☐ Yes ⊠ No

3.12 Construction Activity Pollution Prevention Control Measure List

It is expected that this table will be amended as needed throughout the construction project.

Phase No. 1 and Phase No.2			
Location/Station	Control Measure Description/Reference	Maintenance Requirement	
Concrete Washout Area	Concrete washout area. Section Three: Pollution Prevention and Good Housekeeping, Concrete Washout, RI SESC Handbook.	Verify that concrete washout container(s) are in place prior to pouring concrete. Inspect daily to verify continued proper performance. Check remaining capacity during pouring operations. Check for leaks periodically.	
Dust Control	Dust Control. Section Three: Pollution Prevention and Good Housekeeping, Dust Control, RI SESC Handbook.	Exposed areas shall be limited during construction. All exposed areas shall be inspected daily.	
Waste Management	Waste Management. Section Three: Pollution Prevention and Good Housekeeping, Waste Management, RI SESC Handbook.	All loose trash and debris must be disposed of properly at the end of each working day.	
Spill Prevention and Control	Spill Prevention and Control. Section Three: Pollution Prevention and Good Housekeeping, Spill Prevention and Control Plans, RI SESC Handbook.	All construction vehicles shall be regularly inspected for leaks and repaired as necessary. Spills shall be cleaned in accordance with RI SESC Handbook.	

SECTION 4: CONTROL MEASURE INSTALLATION, INSPECTION, and MAINTENANCE

4.1 Installation

Complete the installation of temporary erosion, runoff, sediment, and pollution prevention control measures by the time each phase of earth-disturbance has begun. All stormwater control measures must be installed in accordance with good judgment, including applicable design and manufacturer specifications. Installation techniques and maintenance requirements may be found in manufacturer specifications and/or the *RI SESC Handbook*.

Installation requirements of temporary erosion, runoff, sediment, and pollution prevention control measures are shown in the plans, Sheet C2.1-C2.9, and are described in the project specifications.

4.2 Monitoring Weather Conditions

<u>Anticipating Weather Events</u> - Care will be taken to the best of the operator's ability to avoid disturbing large areas prior to anticipated precipitation events. Weather forecasts must be routinely checked, and in the case of an expected precipitation event of over 0.25-inches over a 24-hour period, it is highly recommended that all control measures should be evaluated and maintained as necessary, prior to the weather event. In the case of an extreme weather forecast (greater than one-inch of rain over a 24-hour period), additional erosion/sediment controls may need to be installed.

<u>Storm Event Monitoring For Inspections</u> - At a minimum, storm events must be monitored and tracked in order to determine when post-storm event inspections must be conducted. Inspections must be conducted and documented at least once every seven (7) calendar days and within twenty-four (24) hours after any storm event, which generates at least 0.25 inches of rainfall per twenty-four (24) hour period and/or after a significant amount of runoff or snowmelt.

The weather gauge station and website that will be utilized to monitor weather conditions on the construction site is as follows:

Bristol Highlands Station (W1JWC - KRIBRIST92) in Bristol, RI shall be used to monitor weather conditions and storm events at the site and can be found on www.wunderground.com.

4.3 Inspections

<u>Minimum Frequency</u> - Each of the following areas must be inspected by or under the supervision of the owner and operator at least once every seven (7) calendar days and within twenty-four (24) hours after any storm event, which generates at least 0.25 inches of rainfall per twenty-four (24) hour period and/or after a significant amount of runoff or snowmelt:

- a. All areas that have been cleared, graded, or excavated and where permanent stabilization has not been achieved;
- b. All stormwater erosion, runoff, and sediment control measures (including pollution prevention control measures) installed at the site;
- c. Construction material, unstabilized soil stockpiles, waste, borrow, or equipment storage, and maintenance areas that are covered by this permit and are exposed to precipitation;

- d. All areas where stormwater typically flows within the site, including temporary drainage ways designed to divert, convey, and/or treat stormwater;
- e. All points of discharge from the site;
- f. All locations where temporary soil stabilization measures have been implemented;
- g. All locations where vehicles enter or exit the site.

<u>Reductions in Inspection Frequency</u> - If earth disturbing activities are suspended due to frozen conditions, inspections may be reduced to a frequency of once per month. The owner and operator must document the beginning and ending dates of these periods in an inspection report.

<u>Qualified Personnel</u> – The site owner and operator are responsible for designating personnel to conduct inspections and for ensuring that the personnel who are responsible for conducting the inspections are "qualified" to do so. A "qualified person" is a person knowledgeable in the principles and practices of erosion, runoff, sediment, and pollution prevention controls, who possesses the skills to assess conditions at the construction site that could impact stormwater quality, and the skills to assess the effectiveness of any stormwater controls selected and installed to meet the requirements of the permit.

<u>Recordkeeping Requirements</u> - All records of inspections, including records of maintenance and corrective actions must be maintained with the SESC Plan. Inspection records must include the date and time of the inspection, and the inspector's name, signature, and contact information.

General Notes

- <u>A separate inspection report will be prepared for each inspection.</u>
- The Inspection Reference Number shall be а combination of the • RIPDES Construction General Permit No consecutively numbered inspections. -Inspection reference number for the 4th inspection of a project would be: ex/ RIR10####-4
- Each report will be signed and dated by the Inspector and must be kept onsite.
- Each report will be signed and dated by the Site Operator.
- <u>The corrective action log contained in each inspection report must be completed, signed, and dated by the site operator once all necessary repairs have been completed.</u>
- It is the responsibility of the site operator to maintain a copy of the SESC Plan, copies of <u>all</u> completed inspection reports, and amendments as part of the SESC Plan documentation <u>at the site during construction</u>.

Failure to make and provide documentation of inspections and corrective actions under this part constitutes a violation of your permit and enforcement actions under 46-12 of R.I. General Laws may result.

4.4 Maintenance

Maintenance procedures for erosion and sedimentation controls and stormwater management structures/facilities are described on the SESC Site Plans and in the *RI SESC Handbook*.

Site owners and operators must ensure that all erosion, runoff, sediment, and pollution prevention controls remain in effective operating condition and are protected from activities that would reduce their effectiveness. Erosion, runoff, sedimentation, and pollution prevention control measures must be maintained throughout the course of the project.

Note: It is recommended that the site operator designates a full-time, on-site contact person responsible for working with the site owner to resolve SESC Plan-related issues.

4.5 Corrective Actions

If, in the opinion of the designated site inspector, corrective action is required, the inspector shall note it on the inspection report and shall inform the site operator that corrective action is necessary. The site operator must make all necessary repairs whenever maintenance of any of the control measures instituted at the site is required.

In accordance with the *RI SESC Handbook*, the site operator shall initiate work to fix the problem immediately after its discovery, and complete such work by the close of the next work day, if the problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance.

When installation of a new control or a significant repair is needed, site owners and operators must ensure that the new or modified control measure is installed and made operational by no later than seven (7) calendar days from the time of discovery where feasible. If it is infeasible to complete the installation or repair within seven (7) calendar days, the reasons why it is infeasible must be documented in the SESC Plan along with the schedule for installing the control measures and making it operational as soon as practicable after the 7-day timeframe. Such documentation of these maintenance procedures and timeframes should be described in the inspection report in which the issue was first documented. If these actions result in changes to any of the control measures outlined in the SESC Plan, site owners and operators must also modify the SESC Plan accordingly within seven (7) calendar days of completing this work.

SECTION 5: AMENDMENTS

This SESC Plan is intended to be a working document. It is expected that amendments will be required throughout the active construction phase of the project. Even if practices are installed on a site according to the approved plan, the site is only in compliance when erosion, runoff, and sedimentation are effectively controlled throughout the entire site for the entire duration of the project.

The SESC Plan shall be amended within seven (7) days whenever there is a change in design, construction, operation, maintenance or other procedure which has a significant effect on the potential for the discharge of pollutants, or if the SESC Plan proves to be ineffective in achieving its objectives (i.e. the selected control measures are not effective in controlling erosion or sedimentation).

In addition, the SESC Plan shall be amended to identify any new operator that will implement a component of the SESC Plan.

All revisions must be recorded in the Record of Amendments Log Sheet, which is contained in Attachment G of this SESC Plan, and dated red-lined drawings and/or a detailed written description must be appended to the SESC Plan. Inspection Forms must be revised to reflect all amendments. Update the Revision Date and the Version # in the footer of the Report to reflect amendments made.

All SESC Plan Amendments, except minor non-technical revisions, must be approved by the site owner and operator. Any amendments to control measures that involve the practice of engineering must be reviewed, signed, and stamped by a Professional Engineer registered in the State of RI.

The amended SESC plan must be kept on file <u>at the site</u> while construction is ongoing and any modifications must be documented.

Attach a copy of the Amendment Log.

A copy of the Amendment Log is included in Attachment G of this SESC Plan.

SECTION 6: RECORDKEEPING

RIPDES Construction General Permit - Parts III.D, III.G, III.J.3.b.iii, & V.O

It is the site owner and site operator's responsibility to have the following documents available at the construction site and immediately available for RIDEM review upon request:

- A copy of the fully signed and dated SESC Plan, which includes:
 - A copy of the General Location Map INCLUDED AS ATTACHMENT A
 - A copy of all SESC Site Plans INCLUDED AS ATTACHMENT B
 - A copy of the RIPDES Construction General Permit (*To save paper and file space, do not include in DEM/CRMC submittal, for operator copy only)* INCLUDED AS ATTACHMENT C
 - A copy of any regulatory permits (RIDEM Freshwater Wetlands Permit, CRMC Assent, RIDEM Water Quality Certification, RIDEM Groundwater Discharge Permit, RIDEM RIPDES Construction General Permit authorization letter, etc.) INCLUDED AS ATTACHMENT D
 - The signed and certified NOI form or permit application form (*if required as part of the application, see RIPDES Construction General Permit for applicability*) INCLUDED AS ATTACHMENT E
 - Completed Inspection Reports w/Completed Corrective Action Logs INCLUDED AS ATTACHMENT F
 - SESC Plan Amendment Log INCLUDED AS ATTACHMENT G
 - Temporary Sediment Trap Calculation Worksheets

INCLUDED AS ATTACHMENT H

SECTION 7: PARTY CERTIFICATIONS

RIPDES Construction General Permit – Part V.G

All parties working at the project site are required to comply with the Soil Erosion and Sediment Control Plan (SESC Plan including SESC Site Plans) for any work that is performed on-site. The site owner, site operator, contractors and sub-contractors are encouraged to advise all employees working on this project

of the requirements of the SESC Plan. A copy of the SESC Plan is available for your review at the following location: Job Site Trailer, or may be obtained by contacting the site owner or site operator.

The site owner and site operator and each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement.

I acknowledge that I have read and understand the terms and conditions of the Soil Erosion and Sediment Control (SESC) Plan for the above designated project and agree to follow the control measures described in the SESC Plan and SESC Site Plans.

Site Owner:

Bristol Warren Regional School District C/O Ana Riley, Superintendent 235 High Street Bristol, Rhode Island 02809 signature/date 401-253-4000 x5103 ana.riley@bwrsd.org Site Operator: Insert Company or Organization Name Insert Name & Title Insert Address Insert City, State, Zip Code signature/date Insert Telephone Number, Insert Fax/Email **Designated Site Inspector:** Insert Company or Organization Name Insert Name & Title Insert Address Insert City, State, Zip Code signature/date Insert Telephone Number, Insert Fax/Email SubContractor SESC Plan Contact: Insert Company or Organization Name Insert Name & Title Insert Address Insert City, State, Zip Code signature/date Insert Telephone Number, Insert Fax/Email Insert more contact/signature lines as necessary

LIST OF ATTACHMENTS

- **Attachment A General Location Map**
- **Attachment B SESC Site Plans**
- Attachment C Copy of RIPDES Construction General Permit and Authorization to Discharge (To save paper and file space, do not include in DEM/CRMC submittal, for operator copy only)

Attachment D - Copy of Other Regulatory Permits

- Attachment E Copy of RIPDES NOI (if required as part of application, see RIPDES Construction General Permit for applicability)
- Attachment F Inspection Reports w/ Corrective Action Log

Attachment G - SESC Plan Amendment Log

Attachment H- Temporary Sediment Trap

Bristol Warren Regional School District MT. HOPE HIGH SCHOOL

ATTACHMENT A

General Location Map



Bristol Warren Regional School District MT. HOPE HIGH SCHOOL

ATTACHMENT B

SESC Site Plans


9.01 BWRSD Mt Hope HS-RIDE Stage III-IV-RI\DWGS\EROSION & SEL

















PARE
OWNER/APPLICANT: BRISTOL WARREN REGIONAL SCHOOL DISTRICT 235 HIGH STREET BRISTOL, RI 02809 401-253-4000
SCALE ADJUSTMENT GUIDE 0" 1" BAR IS ONE INCH ON ORIGINAL DRAWING
MT. HOPE HIGH SCHOOL 199 Chestnut Street ASSESSOR'S PLAT 117, LOTS 3, 4, 5, 6, & 7 Bristol, Rhode Island
<u>REVISIONS:</u>
PROJECT NO.: 23099.01 DATE: JANUARY 10, 2025 SCALE: 1"=20' DESIGNED BY: ACB CHECKED BY: DLP DRAWN BY: AKL APPROVED BY: DI P
DRAWING TITLE: EROSION & SEDIMENT CONTROL PLAN 9 DRAWING NO.: C2.9 SHEET NO. 13 OF 152

EROSION AND SEDIMENT CONTROL NOTES:

1. REFER TO SHEET C2.1 EROSION & SEDIMENT CONTROL PLAN 1 FOR EROSION AND SEDIMENT CONTROL NOTES.



ATTACHMENT C

Copy of RIPDES Construction General Permit and Authorization to Discharge

(To save paper and file space, do not include in DEM/CRMC submittal, for operator copy only)

ATTACHMENT D

Copy of Other Regulatory Permits

ATTACHMENT E

(if required as part of application, see RIPDES Construction General Permit for applicability)

ATTACHMENT F

Inspection Reports w/Correction Action Log

SESC Plan Inspection Report

Project Information					
Name	Mt. Hope Hi	gh School			
Location	199 Chestnu	t Street, Brist	tol RI 0280	9	
DEM Permit No.					
Site Owner	Name		Phone		Email
Site Operator	Name		Phone		Email
Inspection Information					
Inspector Name	Name		Phone		Email
Inspection Date			Start/End	Time	
Inspection Type	re-storm event	During sto	rm event	Post-storm event	Other
		Weath	er Informa	tion	
Last Rain Event Date:	Duration (hrs	s):	Approxi	mate Rainfall (in):	
Rain Gauge Location & Source:					
Weather at time of this	inspection:				

Check statement that applies then sign and date below:

□ I, as the designated Inspector, certify that this site has been inspected as required by regulation and I have determined that maintenance and corrective actions are not required at this time.

□ I, as the designated Inspector, certify that this site has been inspected as required by regulation and I have made the determination that the site requires corrective actions. The required corrective actions are noted within this inspection report.

Inspector:	Print Name	Signature	Date			
The Site Operator acknowledges by his/her signature, the receipt of this SESC Plan inspection report and its findings. He/she acknowledges that all recommended corrective actions must be completed and documentation of all such corrective actions must be made in this inspection report per applicable regulations.						
Operator:	Print Name	Signature	Date			

Site-specific Control Measures

Number the structural and non-structural stormwater control measures identified in the SESC Plan and on the SESC Site Plans and list them below (add as necessary). Bring a copy of this inspection form and any applicable SESC Site Plans with you during your inspections. This list will assist you to inspect all control measures at your site. FILL THIS TABLE USING THE SESC PLAN TABLES 2.11 & 3.12.

<u> FILL</u>	THIS TABLE USING	THE SESC PLAN TABLES Z.T	1 & J. 12.		
	Location/Station	Control Measure Description	Installed 8 Operating Properly?	Assoc. Photo/ Figure #	Corrective Action Needed (Yes or No; if 'Yes', please detail action required)
1	Example 1: Eastern Parcel – Slope No. 4 Adjacent to I-95. Straw Wattles	Straw Wattle. Section Six, Sediment Control Measures, Straw Wattles, Compost Tubes and Fiber Rolls - <i>RI</i> <i>SESC Handbook</i> .	⊡Yes ⊡N	lo	
2	Example 2: Western Parcel – Green Street Construction Entrance	Stone Stabilized Pad. Section Six: Sediment Control Measures – Construction Entrances – <i>RI</i> SESC Handbook.	□Yes □N		
3	Example 3: Hospital Main Footings – Excavation Area – SESC Site Plan Sheet No. 3.	Pump Intake Protection Using Stone Filled Sump with Standpipe. Section Six: Sediment Control Measures, Pump Intake Protection, <i>RI</i> <i>SESC Handbook.</i>	□Yes □N	lo	
4	Example 4: Bridge Abutment Construction Southbound Bridge Abutment, Bridge No. 244 – SESC Site Plan Sheet No. 18.	Prefabricated Concrete Washout Container with Ramp. Used to contain concrete washout during concrete pouring operations. Section Three: Pollution Prevention and Good Housekeeping, Concrete Washouts, <i>RI SESC</i> Handbook.	□Yes □N	lo	
5	INSERT TEXT	INSERT TEXT	□Yes □N	lo	
6	Attention Operator:	You must modify this inspection form as the project progresses, control measure locations change, and amendments to the SESC Plan are instituted in the field.	QYes QN		
7			Yes IN	lo	
8			□Yes □N	lo	

	Location/Station	Control Measure Description	Installed & Operating Properly?	Assoc. Photo/ Figure #	Corrective Action Needed (Yes or No; if 'Yes', please detail action required)
9			□Yes □No		
10			□Yes □No		
11			□Yes □No		
12			□Yes □No		
13			□Yes □No		
14			□Yes □No		
15			□Yes □No		
16			□Yes □No		
17			□Yes □No		
18			□Yes □No		
19			□Yes □No		
20			□Yes □No		
21			□Yes □No		
22			□Yes □No		
23			□Yes □No		
24			□Yes □No		

	Location/Station	Control Measure Description	Installed & Operating Properly?	Assoc. Photo/ Figure #	Corrective Action Needed (Yes or No; if 'Yes', please detail action required)
25			□Yes □No		
26			□Yes □No		
27			□Yes □No		
28			□Yes □No		
29			□Yes □No		
30			□Yes □No		

(add more as necessary)

General Site Issues

Below are some general site issues that should be assessed during inspections. Please **customize** this list as needed for conditions at the site.

	Compliance Question			Assoc. Photo/ Figure #	Corrective Action Needed (If 'Yes', please detail action required and include location/station)
1	Have all control measures been installed as specified in the RISESC Handbook and prior to any earth disturbing activities?	□Yes □ N/A	□No		
2	Are appropriate limits of disturbance (LOD) established?	□Yes □ N/A	□No		
3	Are controls that limit runoff from exposed soils by diverting, retaining, or detaining flows (such as check dams, sediment basins, etc.) in place?	□Yes □ N/A	□No		
4	Are all temporary conveyance practices installed correctly and functioning as designed?	□Yes □ N/A	□No		
5	Has maintenance been performed as required to ensure continued proper function of all temporary conveyances practices?	□Yes □ N/A	□No		
6	Were all exposed soils seeded by October 15 th ?	□Yes □ N/A	□No		
7	Have soils been stabilized where earth disturbance activities have permanently or temporarily ceased on any portion of the site and will not resume for more than 14 days?	□Yes □ N/A	□No		
8	In instances where adequate vegetative stabilization was not established by November 15 th , have non-vegetative erosion control measures must be employed?	□Yes □ N/A	□No		
9	If work is to continue from October 15 th through April 15 th , are steps taken to ensure that only the day's work area will be exposed and all erodible soil is stabilized within 5 working days?	□Yes □ N/A	□No		
10	Have inlet protection measures (such as fabric drop inlet protection, curb drop inlet protection, etc.) been properly installed?	□Yes □ N/A	□No		
11	Has the operator cleaned and maintained inlet protection measures when needed?	□Yes □ N/A	□No		
12	Has the operator removed accumulated sediment adjacent to inlet protection measures within 24 hours of detection?	□Yes □ N/A	□No		

SESC Plan Inspection Report

Page ____ of ____

	Compliance Question			Assoc. Photo/ Figure #	Corrective Action Needed (If 'Yes', please detail action required and include location/station)
13	Has the operator properly installed outlet protection (such as riprap, turf mats, etc.) at all temporary and permanent discharge points?	□Yes □ N/A	□No		
14	Are all outlet protection measures functioning properly in order to reduce discharge velocity, promote infiltration, and eliminate scour?	□Yes □ N/A	□No		
15	Have all discharge points been inspected to ensure the prevention of scouring and channel erosion?	□Yes □ N/A	□No		
16	Have sediment controls been installed along perimeter areas that will receive stormwater from earth disturbing activities?	□Yes □ N/A	□No		
17	Is the operator maintaining sediment controls in accordance with the requirements in the <i>RI SESC</i> Handbook?	□Yes □ N/A	□No		
18	Have temporary sediment barriers been installed around permanent infiltration areas (such as bioretention areas, infiltration basins, etc.)?	□Yes □ N/A	□No		
19	Have staging areas and equipment routing been implemented to avoid compaction where permanent infiltration areas will be located?	□Yes □ N/A	□No		
20	Are surface outlet structures (such as skimmers, siphons, etc.) installed for each temporary sediment basin? [Exception: frozen conditions]	□Yes □ N/A	□No		
21	Have all temporary sediment basins or traps been inspected and maintained as required to ensure proper function?	□Yes □ N/A	□No		
22	Does the project include the use of polymers, flocculants, or other chemicals to control erosion, sedimentation, or runoff from the site?	□Yes □ N/A	□No		
23	Are all chemicals being managed in accordance with Appendix J of the <i>RISESC Handbook</i> and current best management practices?	□Yes □ N/A	□No		
24	Has the site operator taken steps to prohibit the following pollutant discharges on the site?				
а	Contaminated groundwater.	□Yes □ N/A	□No		

	Compliance Question		Assoc. Photo/ Figure #	Corrective Action Needed (If 'Yes', please detail action required and include location/station)
b	Wastewater from washout of concrete; unless properly contained, managed, and disposed of.	□Yes □No □ N/A		
с	Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction products.	⊡Yes ⊡No □N/A		
d	Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance.	□Yes □No □ N/A		
е	Soaps or solvents used in vehicle and equipment washing.	□Yes □Nc □N/A		
f	Toxic or hazardous substances from a spill or other release.	□Yes □No □N/A		
25	Is the operator using properly constructed entrances/exits to the site so sediment removal occurs prior to vehicles exiting?	□Yes □No □ N/A		
26	If needed, are additional controls (such as rumble strips, rattle plates, etc.) in place to remove sediment from tires prior to exiting?	⊡Yes ⊡No □ N/A		
27	Is sediment track-out being removed by the end of the same workday in which it occurs (via sweeping, shoveling, or vacuuming)?	⊡Yes ⊡No □N/A		
28	Are all wastes generated at the site being managed and properly disposed of by the end of each workday?	□Yes □No □ N/A		
29	Are all chemicals and hazardous waste materials stored properly in covered areas and surrounded by containment control systems?	□Yes □No □ N/A		
30	Has the operator established highly visible locations for the storage of spill prevention and control equipment on the construction site?	□Yes □No □ N/A	,	
31	Are allowable non-stormwater discharges being managed properly with adequate controls?	□Yes □No □ N/A		
32	Is the site operator properly managing groundwater or stormwater that is removed from excavations, trenches, or similar points of accumulation?	□Yes □Nc □ N/A		
33	Are proper procedures and controls in place for the storage of materials that may discharge pollutants if	□Yes □No □ N/A		

SESC Plan Inspection Report

Compliance Question			Assoc. Photo/ Figure #	Corrective Action Needed (If 'Yes', please detail action required and include location/station)
exposed to stormwater?				
Are stockpiles located within the limits of disturbance?	□Yes □ □ N/A	INo		
Are stockpiles being protected from contact with stormwater using a temporary sediment barrier?	□Yes □ □ N/A	INo		
Where needed, has cover or appropriate temporary vegetative or structural stabilization been utilized for stockpiles?	□Yes □ □ N/A	No		
Is the operator effectively managing the generation of dust through the use of water, chemicals, or minimization of exposed soil?	□Yes □ □ N/A	INo		
Are designated washout areas (such as wheel washing stations, washout for concrete, paint, stucco, etc.) clearly marked on the site?	□Yes □ □ N/A	INo		
Are vehicle fueling and maintenance areas properly located to prevent pollutants from impacting stormwater and sensitive receptors?	□Yes □ □ N/A	INo		
(Other)				

(add more as necessary)

General Field Comments:

Photos:

(Associated photos – each photo should be dated and have a unique identification # and written description indicating where it is located within the project area. If a close up photo is required, it should be preceded with a photo including both the detail area and some type of visible fixed reference point. Photos should be annotated with Station numbers and other identifying information where needed.)

Photo #:	Station:
(insert Photo here)	Description:

Photo #:	Station:
(insert Photo here)	Description:

Photo #:	Station:
(insert Photo here)	Description:

Photo #:	Station:
(insert Photo here)	Description:

Photo #:	Station:
(insert Photo here)	Description:

Photo #:	Station:
(insert Photo here)	Description:

(add more as necessary)

SESC Plan Inspection Report

Corrective Action Log

TO BE FILLED OUT BY SITE OPERATOR

Describe repair, replacement, and maintenance of control measures, actions taken, date completed, and note the person that completed the work.

	Location/Station	Corrective Action	Date Completed	Person Responsible
			·	
Ор	erator Signature:		Date:	

SESC Plan Inspection Report

ATTACHMENT G

SESC Plan Amendment Log

Amendment Log

TO BE FILLED OUT BY SITE OPERATOR

Describe amendment(s) to be made to the SESC Plan, the date, and the person/title making the amendment. ALL amendments must be approved by the Site Owner.

#	Date	Description of Amendment	Amended by: Person/Title	Site Owner Must Initial
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Add more lines/pages as necessary

ATTACHMENT H

Temporary Sediment Traps



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		PRO	JECT NUMBER	23099.01
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1/2/2025

DATE

DATE

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TEMPORARY SEDIMENTATION TRAP - 1

REQUIRED TRAP VOLUME

Required Basin Volume taken from RI Soil Erosion and Sediment Control Handbook (RISESCH), revised August 2014, 2016 Updates, Section 6 Temporary Sediment Traps.

Mt. Hope High School

Temporary Sediment Trap

TEMPORARY SEDIMENT TRAP

MAXIMUM AREA CONTRIBUTING TO TST =	219,123	sf
	5.03	acres

Required Trap storage volume is the greater of A, B, and C.

A. Initial Storage Volume of 134 cubic yards per acre of drainage area (Per RISESCH Temporary Sediment Trap- Trap Capacity)

	Required Volume A =	674 18,200	cy cf
Wet Storage Volume - Half of In	itial Storage Volume		
-	Required Volume =	337	су
		9.100	cf

Dry Storage Volume - Remaining portion of Initial Storage Volume Required Volume = 337 cy

	_	-	-	
9,	1	0	0	c

Temporary sediment trapping measures must be sized to store 1 inch of runoff from the contributing area or per the sediment volume method, whichever is greater.

B. V (1" of Rainfall) = 18260 cf

C. Accommodate at least one (1) year of sediment load

V= (DA) (A) (DR) (TE) (1/Y) (2000lbs/ton)		DA = Total drainage area, in acres
		A = Average annual erosion, in tons/ac/year
V=	DA (50) (.38) (.80) (1/85) (2000)	DR = Sediment delivery ratio
		TE = Sediment Trap Efficiency
V=	1799 cf/year	Y = Sediment density, in lbs/cf

Required total storage volume = 18260 cf

PROVIDED TRAP VOLUME

5'		45
		00
Dimensions		
Length =	85 ft (at surfac	e of wet storage area / base of stone outlet)
Width =	45 ft (at surfac	e of wet storage area / base of stone outlet)
Aw =	3825 sf. (wet sto	age surface area)
Ad =	4929 sf (compute	d using 2:1 sideslopes)
Dw =	3 ft (depth of	wet storage)
Dd =	2 ft (depth of	dry storage)
	(,
WET STORA	GE VOLUME	
$V = 0.85 \times \Delta v$	M X Dw	
v = 0.05 X A		0.400
V =	9753.75 CT >	9,130 ct required
	05. V01. 11. 45	
DRY STORA	GE VOLUME	
V = ((Aw + Ao	d)/2) * Dd	
V =	8754 cf >	9,130 cf required

 TOTAL STORAGE VOLUME

 Total Storage Volume = Dry Storage Volume + Wet Storage Volume

 Total Storage Volume =
 18508 cf
 >
 18260 cf required



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		PROJECT	NUMBER	23099.01

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TEMPORARY SEDIMENTATION TRAP - 2

REQUIRED TRAP VOLUME

Required Basin Volume taken from RI Soil Erosion and Sediment Control Handbook (RISESCH), revised August 2014, 2016 Updates, Section 6 Temporary Sediment Traps.

Mt. Hope High School

Temporary Sediment Trap

TEMPORARY SEDIMENT TRAP

MAXIMUM AREA CONTRIBUTING TO TST = 107,617 sf 2.47 acres

Required Trap storage volume is the greater of A, B, and C.

A. Initial Storage Volume of 134 cubic yards per acre of drainage area (Per RISESCH Temporary Sediment Trap- Trap Capacity)

	Required Volume A =	331 8,938	cy cf
Wet Storage Volume - Half of Initial	Storage Volume		
-	Required Volume =	166	су
		4,469	cf

Dry Storage Volume - Remaining portion of Initial Storage Volume Required Volume = 166 cy

4,469 cf

Temporary sediment trapping measures must be sized to store 1 inch of runoff from the contributing area or per the sediment volume method, whichever is greater.

B. V (1" of Rainfall) = 8968 cf

C. Accommodate at least one (1) year of sediment load

V=	(DA) (A) (DR) (TE) (1/Y) (2000lbs/ton)	DA = Total drainage area, in acres
		A = Average annual erosion, in tons/ac/year
V=	DA (50) (.38) (.80) (1/85) (2000)	DR = Sediment delivery ratio
		TE = Sediment Trap Efficiency
V=	884 cf/year	Y = Sediment density, in lbs/cf

Required total storage volume = 8968 cf

PROVIDED TRAP VOLUME

5'		30
		61
Dimensions		
Length =	61 ft (at surfac	e of wet storage area / base of stone outlet)
Width =	30 ft (at surfac	e of wet storage area / base of stone outlet)
Aw =	1830 sf, (wet stor	age surface area)
Ad =	2622 sf (compute	d using 2:1 sideslopes)
Dw =	3 ft (depth of	wet storage)
Dd =	2 ft (depth of	dry storage)
WET STORAG	E VOLUME	
V = 0.85 X Aw 2	X Dw	
V = 4	4666.5 cf >	4,484 cf required
DRY STORAGE V = ((Aw + Ad)/	E VOLUME 2) * Dd	
V =	4452 cf >	4,484 cf required

 TOTAL STORAGE VOLUME

 Total Storage Volume = Dry Storage Volume + Wet Storage Volume

 Total Storage Volume = 9119 cf > 8968 cf required



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TEMPORARY SEDIMENTATION TRAP - 3

REQUIRED TRAP VOLUME

Required Basin Volume taken from RI Soil Erosion and Sediment Control Handbook (RISESCH), revised August 2014, 2016 Updates, Section 6 Temporary Sediment Traps.

Mt. Hope High School

Temporary Sediment Trap

TEMPORARY SEDIMENT TRAP

Wet Storage Volume -

MAXIMUM AREA CONTRIBUTING TO TST = 136,069 sf 3.12 acres

Required Trap storage volume is the greater of A, B, and C.

A. Initial Storage Volume of 134 cubic yards per acre of drainage area (Per RISESCH Temporary Sediment Trap- Trap Capacity)

Required Volume A =	419 11,302	cy cf
Half of Initial Storage Volume		
Required Volume =	209	су
	5,651	cf

Dry Storage Volume - Remaining portion of Initial Storage Volume Required Volume = 209 cy

5.651	C

Temporary sediment trapping measures must be sized to store 1 inch of runoff from the contributing area or per the sediment volume method, whichever is greater.

B. V (1" of Rainfall) = 11339 cf

C. Accommodate at least one (1) year of sediment load

V=	(DA) (A) (DR) (TE) (1/Y) (2000lbs/ton)	DA = Total drainage area, in acres
		A = Average annual erosion, in tons/ac/year
V=	DA (50) (.38) (.80) (1/85) (2000)	DR = Sediment delivery ratio
		TE = Sediment Trap Efficiency
V=	1117 cf/year	Y = Sediment density, in lbs/cf

Required total storage volume = 11339 cf

PROVIDED TRAP VOLUME

ase of stone outlet)
ase of stone outlet)
d
d

 TOTAL STORAGE VOLUME

 Total Storage Volume = Dry Storage Volume + Wet Storage Volume

 Total Storage Volume =
 12052 cf >

 11339 cf required



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Mt. Hope High School		PRO	JECT NUMBER	23099.01	
Temporary Sediment Trap					
ACB			DATE	1/2/2025	

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TEMPORARY SEDIMENTATION TRAP - 4

REQUIRED TRAP VOLUME

Required Basin Volume taken from RI Soil Erosion and Sediment Control Handbook (RISESCH), revised August 2014, 2016 Updates, Section 6 Temporary Sediment Traps.

TEMPORARY SEDIMENT TRAP

MAXIMUM AREA CONTRIBUTING TO TST = 119,311 sf 2.74 acres

Required Trap storage volume is the greater of A, B, and C.

A. Initial Storage Volume of 134 cubic yards per acre of drainage area (Per RISESCH Temporary Sediment Trap- Trap Capacity)

	Required Volume A =	367 9,910	cy cf
Wet Storage Volume - Half of Initia	l Storage Volume		
-	Required Volume =	184	су
		4,955	cf

Dry Storage Volume - Remaining portion of Initial Storage Volume Required Volume = 184 cy

4	955	C

Temporary sediment trapping measures must be sized to store 1 inch of runoff from the contributing area or per the sediment volume method, whichever is greater.

V (1" of Rainfall) = 9943 cf Β.

C. Accommodate at least one (1) year of sediment load

V= (DA) (A) (DR) (TE) (1/Y) (2000lbs/ton)		DA = Total drainage area, in acres
		A = Average annual erosion, in tons/ac/year
V=	DA (50) (.38) (.80) (1/85) (2000)	DR = Sediment delivery ratio
		TE = Sediment Trap Efficiency
V=	980 cf/year	Y = Sediment density, in lbs/cf

Required total storage volume = 9943 cf

PROVIDED TRAP VOLUME

		LOWE		
5'			30	1
		70		
Dimensions				
Length =	70	ft (at surface of w	et stora	ge area / base of stone outlet)
Width =	30	ft (at surface of w	et stora	ge area / base of stone outlet)
Aw =	2100	sf, (wet storage si	urface a	irea)
Ad =	2964	sf (computed usin	ig 2:1 si	deslopes)
Dw =	3	ft (depth of wet st	orage)	
Dd =	2	ft (depth of dry sto	orage)	
WET STORAGE	E VOL	UME		
V = 0.85 X Aw X	(Dw			
V =	5355	cf >	4,971	cf required
DRY STORAGE V = ((Aw + Ad)/2	E VOLU 2) * Dd	JME I		
V =	5064	cf >	4,971	cf required

TOTAL STORAGE VOLUME Total Storage Volume = Dry Storage Volume + Wet Storage Volume Total Storage Volume = 10419 cf > 9943 cf required



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TEMPORARY SEDIMENTATION TRAP - 5

REQUIRED TRAP VOLUME

Required Basin Volume taken from RI Soil Erosion and Sediment Control Handbook (RISESCH), revised August 2014, 2016 Updates, Section 6 Temporary Sediment Traps.

TEMPORARY SEDIMENT TRAP

MAXIMUM AREA CONTRIBUTING TO TST = 120,186 sf 2.76 acres

Required Trap storage volume is the greater of A, B, and C.

A. Initial Storage Volume of 134 cubic yards per acre of drainage area (Per RISESCH Temporary Sediment Trap- Trap Capacity)

		Required Volume A =	370 9,982	cy cf
Wet Storage Volu	ıme - Half of Initial	Storage Volume		
-		Required Volume =	185	су
			4,991	cf

Dry Storage Volume - Remaining portion of Initial Storage Volume Required Volume = 185 cy

4.9	9	1	С
	-		-

Temporary sediment trapping measures must be sized to store 1 inch of runoff from the contributing area or per the sediment volume method, whichever is greater.

B. V (1" of Rainfall) = 10016 cf

C. Accommodate at least one (1) year of sediment load

V= (DA) (A) (DR) (TE) (1/Y) (2000lbs/ton)		DA = Total drainage area, in acres
		A = Average annual erosion, in tons/ac/year
V=	DA (50) (.38) (.80) (1/85) (2000)	DR = Sediment delivery ratio
		TE = Sediment Trap Efficiency
V=	987 cf/year	Y = Sediment density, in lbs/cf

Required total storage volume = 10016 cf

PROVIDED TRAP VOLUME

5'		30
		70
Dimensions		
Length =	70 ft (at surfac	e of wet storage area / base of stone outlet)
Width =	30 ft (at surfac	e of wet storage area / base of stone outlet)
Aw =	2100 sf, (wet stor	age surface area)
Ad =	2964 sf (compute	d using 2:1 sideslopes)
Dw =	3 ft (depth of	wet storage)
Dd =	2 ft (depth of	dry storage)
WET STORAG	E VOLUME	
V = 0.85 X Aw 2	X Dw	
V =	5355 cf >	5,008 cf required
DRY STORAGI V = ((Aw + Ad)/	E VOLUME (2) * Dd	
V =	5064 cf >	5,008 cf required

 TOTAL STORAGE VOLUME

 Total Storage Volume = Dry Storage Volume + Wet Storage Volume

 Total Storage Volume =
 10419 cf
 >
 10016 cf required



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TEMPORARY SEDIMENTATION TRAP - 6

REQUIRED TRAP VOLUME

Required Basin Volume taken from RI Soil Erosion and Sediment Control Handbook (RISESCH), revised August 2014, 2016 Updates, Section 6 Temporary Sediment Traps.

TEMPORARY SEDIMENT TRAP

MAXIMUM AREA CONTRIBUTING TO TST = 214,796 sf 4.93 acres

Required Trap storage volume is the greater of A, B, and C.

A. Initial Storage Volume of 134 cubic yards per acre of drainage area (Per RISESCH Temporary Sediment Trap- Trap Capacity)

	Required Volume A =	661 17,840	cy cf
Wet Storage Volume - Half of Initia	l Storage Volume		
-	Required Volume =	330	су
		8.920	cf

Dry Storage Volume - Remaining portion of Initial Storage Volume Required Volume = 330 cy

000	сy
8,920	cf

Temporary sediment trapping measures must be sized to store 1 inch of runoff from the contributing area or per the sediment volume method, whichever is greater.

B. V (1" of Rainfall) = 17900 cf

C. Accommodate at least one (1) year of sediment load

V= (DA) (A) (DR) (TE) (1/Y) (2000lbs/ton)		DA = Total drainage area, in acres
		A = Average annual erosion, in tons/ac/year
V=	DA (50) (.38) (.80) (1/85) (2000)	DR = Sediment delivery ratio
		TE = Sediment Trap Efficiency
V=	1764 cf/year	Y = Sediment density, in lbs/cf

Required total storage volume = 17900 cf

PROVIDED TRAP VOLUME

5'		45		
. .	9	0		
Dimensions				
Length =	90 ft (at surface	of wet storage area / base of stone outlet)		
Width =	45 ft (at surface	of wet storage area / base of stone outlet)		
Aw =	4050 sf. (wet stora	de surface area)		
Ad =	5194 sf (computed	using 2:1 sideslopes)		
	3 ft (denth of w	vet storage)		
Dw -				
Da =	2 ft (depth of d	ry storage)		
WET STORA V = 0.85 X Av V =	GE VOLUME v X Dw 10327.5 cf >	8,950 cf required		
DRY STORA V = ((Aw + Ac	GE VOLUME 1)/2) * Dd			
V =	9244 cf >	8,950 cf required		

 TOTAL STORAGE VOLUME

 Total Storage Volume = Dry Storage Volume + Wet Storage Volume

 Total Storage Volume =
 19572 cf
 >
 17900 cf required



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TEMPORARY SEDIMENTATION TRAP - 7

REQUIRED TRAP VOLUME

Required Basin Volume taken from RI Soil Erosion and Sediment Control Handbook (RISESCH), revised August 2014, 2016 Updates, Section 6 Temporary Sediment Traps.

TEMPORARY SEDIMENT TRAP

MAXIMUM AREA CONTRIBUTING TO TST =	144,815	sf
	3.32	acres

Required Trap storage volume is the greater of A, B, and C.

A. Initial Storage Volume of 134 cubic yards per acre of drainage area (Per RISESCH Temporary Sediment Trap- Trap Capacity)

	Required Volume A =	445 12,028	cy cf
Wet Storage Volume - Half of Initi	al Storage Volume	000	
	Required volume =	223	су
		6 0 1 4	cf

Dry Storage Volume - Remaining portion of Initial Storage Volume Required Volume = 223 cy

6.	01	4	С

Temporary sediment trapping measures must be sized to store 1 inch of runoff from the contributing area or per the sediment volume method, whichever is greater.

V (1" of Rainfall) = 12068 cf Β.

C. Accommodate at least one (1) year of sediment load

V=	(DA) (A) (DR) (TE) (1/Y) (2000lbs/ton)	DA = Total drainage area, in acres
		A = Average annual erosion, in tons/ac/year
V=	DA (50) (.38) (.80) (1/85) (2000)	DR = Sediment delivery ratio
		TE = Sediment Trap Efficiency
V=	1189 cf/year	Y = Sediment density, in lbs/cf

Required total storage volume = 12068 cf

PROVIDED TRAP VOLUME

5'		45
Dimonoiono		
Dimensions		• • • • • • • • • • • • • • • • • • •
Length =	90 ft (at surface	e of wet storage area / base of stone outlet)
Width =	45 ft (at surface	e of wet storage area / base of stone outlet)
Aw =	4050 sf, (wet stor	age surface area)
Ad =	5194 sf (compute	d using 2:1 sideslopes)
Dw =	3 ft (depth of	wet storage)
Dd =	2 ft (depth of	dry storage)
Du -		ary storage,
V = 0.85 X AW	/ X DW	
V =	10327.5 cf >	6,034 cf required
DRY STORAC	GE VOLUME	
V = ((Aw + Ad)/2) * Dd	
``V=	9244 cf >	6 034 cf required
•	0201	0,001 01.044.04

TOTAL STORAGE VOLUME Total Storage Volume = Dry Storage Volume + Wet Storage Volume Total Storage Volume = 19572 cf > 12068 cf required



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TEMPORARY SEDIMENTATION TRAP - 8

REQUIRED TRAP VOLUME

Required Basin Volume taken from RI Soil Erosion and Sediment Control Handbook (RISESCH), revised August 2014, 2016 Updates, Section 6 Temporary Sediment Traps.

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TEMPORARY SEDIMENT TRAP

MAXIMUM AREA CONTRIBUTING TO TST = 156,161 sf 3.58 acres

Required Trap storage volume is the greater of A, B, and C.

A. Initial Storage Volume of 134 cubic yards per acre of drainage area (Per RISESCH Temporary Sediment Trap- Trap Capacity)

	Required Volume A =	480 12,970	cy cf
Wet Storage Volume - Half of Initial	Storage Volume		
-	Required Volume =	240	су
		6,485	cf

Dry Storage Volume - Remaining portion of Initial Storage Volume ~ . . Required Volume =

240	су
6,485	cf

Temporary sediment trapping measures must be sized to store 1 inch of runoff from the contributing area or per the sediment volume method, whichever is greater.

V (1" of Rainfall) = 13013 cf Β.

C. Accommodate at least one (1) year of sediment load

V=	(DA) (A) (DR) (TE) (1/Y) (2000lbs/ton)	DA = Total drainage area, in acres
		A = Average annual erosion, in tons/ac/year
V=	DA (50) (.38) (.80) (1/85) (2000)	DR = Sediment delivery ratio
		TE = Sediment Trap Efficiency
V=	1282 cf/year	Y = Sediment density, in lbs/cf

Required total storage volume = 13013 cf

PROVIDED TRAP VOLUME

		-		
5'		85	40	
Dimensions				
Length =	85 ft (at	surface of wet	storad	ge area / base of stone outlet)
Width =	40 ft (at	surface of wet	storad	area / base of stone outlet)
Aw =	3400 sf. (v	vet storage surfa	ace a	rea)
Ad =	4464 sf (co	omputed using 2	2:1 si	deslopes)
Dw =	3 ft (de	pth of wet store	age)	. ,
Dd =	2 ft (de	pth of dry stora	ige)	
WET STORAGI	E VOLUME			
V = 0.85 X Aw >	K Dw			
V =	8670 cf >	6	,507	cf required
DRY STORAGE V = ((Aw + Ad)/2	E VOLUME 2) * Dd			
V =	7864 cf >	6	,507	cf required

TOTAL STORAGE VOLUME Total Storage Volume = Dry Storage Volume + Wet Storage Volume Total Storage Volume = 16534 cf > 13013 cf required



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TEMPORARY SEDIMENTATION TRAP - 9

REQUIRED TRAP VOLUME

Required Basin Volume taken from RI Soil Erosion and Sediment Control Handbook (RISESCH), revised August 2014, 2016 Updates, Section 6 Temporary Sediment Traps.

TEMPORARY SEDIMENT TRAP

MAXIMUM AREA CONTRIBUTING TO TST =	41,767	sf
	0.96	acres

Required Trap storage volume is the greater of A, B, and C.

A. Initial Storage Volume of 134 cubic yards per acre of drainage area (Per RISESCH Temporary Sediment Trap- Trap Capacity)

	Required Volume A =	128 3,469	cy cf
Wet Storage Volume - Half of	Initial Storage Volume Required Volume =	64	су
		1 735	of

Dry Storage Volume - Remaining portion of Initial Storage Volume Required Volume = 64 cy

Temporary sediment trapping measures must be sized to store 1 inch of runoff from the contributing area or per the sediment volume method, whichever is greater.

V (1" of Rainfall) = 3481 cf Β.

C. Accommodate at least one (1) year of sediment load

V=	(DA) (A) (DR) (TE) (1/Y) (2000lbs/ton)	DA = Total drainage area, in acres
		A = Average annual erosion, in tons/ac/year
V=	DA (50) (.38) (.80) (1/85) (2000)	DR = Sediment delivery ratio
		TE = Sediment Trap Efficiency
V=	343 cf/year	Y = Sediment density, in lbs/cf

Required total storage volume = 3481 cf

PROVIDED TRAP VOLUME

5'		25			
		30			
Dimensions					
Length =	30 ft (at surfa	ce of wet storage area / base of stone outlet)			
Width =	25 ft (at surfa	5 ft (at surface of wet storage area / base of stone outlet)			
Aw =	750 sf, (wet st	orage surface area)			
Ad =	1254 sf (compu	ted using 2:1 sideslopes)			
Dw =	3 ft (depth o	3 ft (depth of wet storage)			
Dd =	2 ft (depth o	f dry storage)			
WET STORAG	SE VOLUME				
V = 0.85 X Aw	X Dw				
V =	1912.5 cf >	1,740 cf required			
DRY STORAGE VOLUME V = ((Aw + Ad)/2) * Dd					
V =	2004 cf >	1,740 cf required			

TOTAL STORAGE VOLUME Total Storage Volume = Dry Storage Volume + Wet Storage Volume Total Storage Volume = 3917 cf > 3481 cf required