MODIFICATIONS TO

CONTRACT EROSION PREVENTION

AND

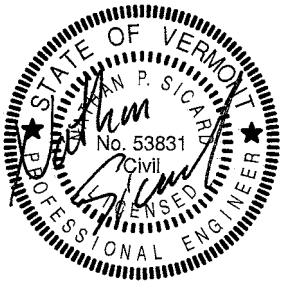
SEDIMENT CONTROL (EPSC) PLAN

FOR

JOHNSON BRF 030-2(26)

FOR

A.L. St. Onge Contractor, Inc.
PO BOX 65
MONTGOMERY, VT 05470



October, 2014

RUGGLES ENGINEERING SERVICES INC.

Ruggles Engineering Services, 4580 Memorial Drive St. Johnsbury, VT 05819

www.rugglesengineeringservices.com

EPSC NARRATIVE AMENDED

Section 1.1 through 1.4 are available as part of the Contract Plans (Sheet 57 of 69, dated 07/01/2014). The following amendments are to be considered with the Project Narrative. The project narrative is in the appendix.

1.1 Project Description

Add. – 1.1.1: The Project will also include a field office site, waste and borrow. *Site staging will be within the limits of the work area limits of disturbance and at the field office site. The field office site is located approximately 0.7 miles east of the project at 949 VT Highway 15 (across from the Forget Me Not Shop). The site is a previously developed gravel and grass commercial area.*

Borrow for the project will be from an approved pit with an active 3-9003 MSGP for industrial activity.

1.2 Site inventory

1.2.1 Topography:

Add – 1.2.1.1: The proposed staging area includes slopes approximately 2%. Site drainage is toward Foot Brook.

1.2.3 Vegetation:

Add – 1.2.2.1: The proposed access and staging includes vegetated lawn and gravel areas.

1.2.4 Soils:

Add - 1.2.4.1: Staging area/Waste Area. The USDA NRCS Soil Map indicates that the soils at the staging and waste area include Limerick Variant Silt Loam and Ondawa fine sandy Loam. The site is previously developed with no earth disturbance proposed.

1.3 Risk Evaluation

1.3.1 Notice of Addition

The required Notice of Addition for the Vermont ANR General Permit 3-9020 will be submitted. A copy is included in the appendix.

1.5 Sequence and Staging

1.5.1 Construction Sequence and Implementation of EPSC Measures.

The construction sequence will be coordinated with the CPM schedule. A copy of the current CPM schedule is included in the appendix.

1.5.1.1. Initial EPSC Measures.

Initial EPSC measures will be installed when the EPSC plan has been approved by the Agency. Project Delineation Fence will be installed to identify the limits of disturbance. Project delineation fence will be installed for the Phase 1 work area and will be expanded after winter shut down for the remaining phases. Silt Fence with wire mesh will be installed in areas within 100' of the stream and silt fence will be installed along the limits of disturbance shown on the EPSC Plan.

1.5.1.2. Detour Construction (Phase 1).

The detour construction will occur prior to winter shut down however the detour will be stabilized and remain inactive until spring startup. The temporary bridge installation will require erosion stone, a temporary culvert and silt fence installation since vegetation is not expected to establish during winter conditions.

After the bridge erection, the detour approaches will be constructed. The approaches will remain at approximately the same elevation as the existing highway so the excavation plan shown on the contract plans will not be required. Only temporary ditching will be used to channelize flow as shown on the EPSC plan. The ditch will be stabilized with erosion matting and stone check dams.

Slope excavation will also occur during phase 1. Slope excavation will begin at station 92+75 left and work back toward 89+50. The slope will be stabilized with filter fabric and stone fill as the work progresses. This will create a final stabilization condition. Work will progress as late into the fall as possible until winter conditions no longer allow construction. The new toe of slope and road shoulder will be stabilized with crushed stone and stone check dams until the drainage system is constructed next year.

1.5.1.3. Embankment and Channel Riprap (Phase 2)

Embankment and Channel Riprap can begin after spring startup when traffic is moved to the detour and the existing superstructure is removed. Access will be established to begin excavation for Type II stone fill that will project 2-3 feet below the bottom of the stream channel.

Prior to beginning excavation, temporary measures will be used to control stream flow since the excavation will be approximately 2-3 feet below the bottom of the channel.

These measures include sand bags and plastic. Filter curtain is not expected to function to manufacturers standards at this site. Stream channel work has been incorporated into this plan based on VTrans requirements however NPDES requirements are not expected to specifically satisfy the requirements of the Stream Alteration or the USACE Permit. Additional coordination with these agencies may be required. The original plan included steel sheeting for cofferdams but has been removed at the request of VTrans. It is anticipated that flow can be diverted to each side of the stream while the opposite site is excavated to final grades. Work is expected to begin first on the Westerly side of the stream bank. Removable sand banks can divert the majority of the stream flow to each side of the cofferdam as need.

Control of seepage water is not anticipated for the work since channel excavation will immediately be replaced with fabric and stone fill.

1.5.1.4. Detour Removal, Approach Construction, Intersection Construction and West Shoulder Embankment Construction.

The Detour will be removed and traffic will be moved to the final alignment. The detour disturbance will be restored and protected with final EPSC measures as shown on the plan. After the temporary bridge area is stabilized the northwest road shoulder embankment can be excavated to finish grade and stabilized with Type III stone fill. Any areas that do not receive stone stabilization during construction will be protected with erosion matting until the stone can be installed.

1.5.1.5. Final Stabilization

Silt fence and culvert inlet protection will remain until vegetation has been established on the site. Once the site is stable, all structural measures will be removed and property disposed.

1.5.2 Off-site Activities.

Off-site activities will include mobilization and demobilization of the office trailer. There will also be an area of the field behind the office trailer where materials may be stored. If erosive materials are stored, silt fence will be installed around the temporary piles.

1.5.3 Updates

When updates are necessary A.L. St. Onge will contact Ruggles Engineering Services to submit a revised narrative.

1.6 Contact Information

1.6.1 On-Site Plan Coordinator:

Carl Gleason
A.L. St. Onge
PO Box 65
Montgomery, VT 05470
(802) 782-3978
gleason.cardl@gmail.com

Carl has over 30 years' experience in highway construction. Carl was previously a project resident engineer for VTrans highway projects. Carl is familiar with the EPSC contractor requirements, installation and maintenance methods.Carl will be onsite to implement the phases of EPSC and to coordinate the monitoring and inspections.

Carl will have the authority to hault construction and he is capable of ensuring the project will be constructed in accordance with the Plan and the terms of the project permits.

1.6.2 Plan Preparer:

Ruggles Engineering Services, Inc.
Nathan P. Sicard, P.E., VT License # 53831
4580 Memorial Drive
St. Johnsbury, VT 05819
(802)-748-5898
nate.res@myfairpoint.net

Ruggles Engineering is familiar with the VT Standards and Specifications for Erosion Prevention and Sediment Control, relative sections of the VT Agency of Transportation Standard Specifications for Construction and Contract Special Provisions, and project specific permits.

1.7 Schedule

The contractor is attaching their proposed schedule to this plan. See Appendix A - SCHEDULES.

1.8 Inspection Form

See Appendix B - FORMS.

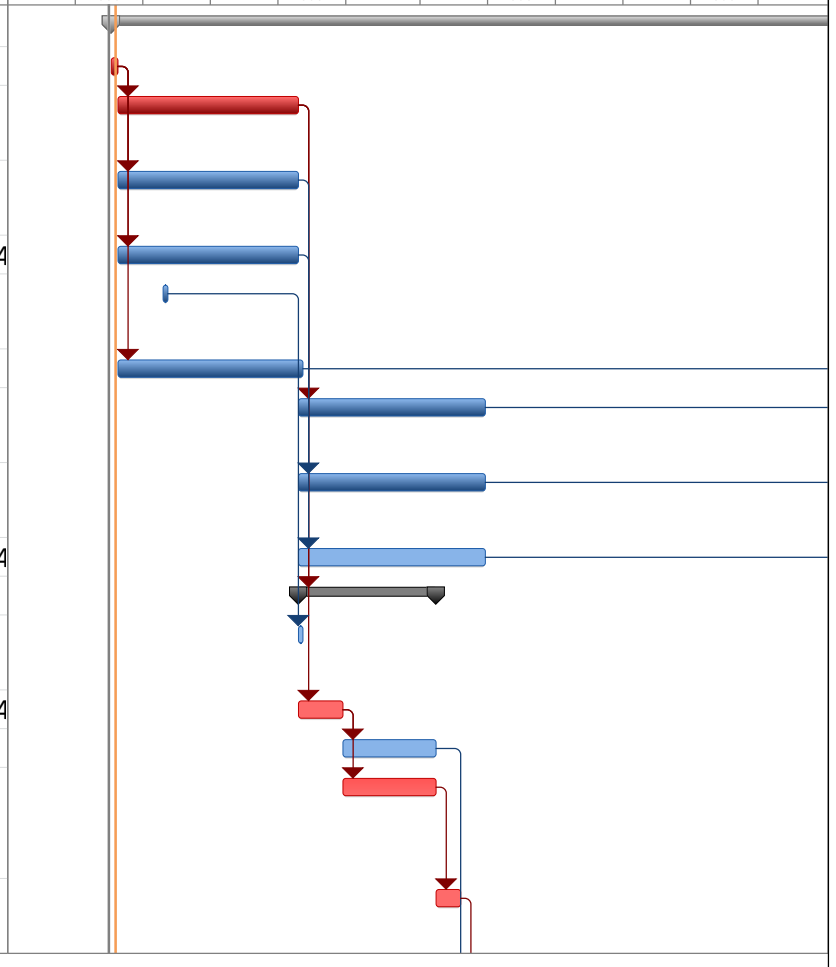
2 Erosion Prevention and Sediment Control Plan

See Appendix C – PLANS.

APPENDIX A – SCHEDULES

1. Contractor CPM Schedule – PREPARED BY CONTRACTOR.

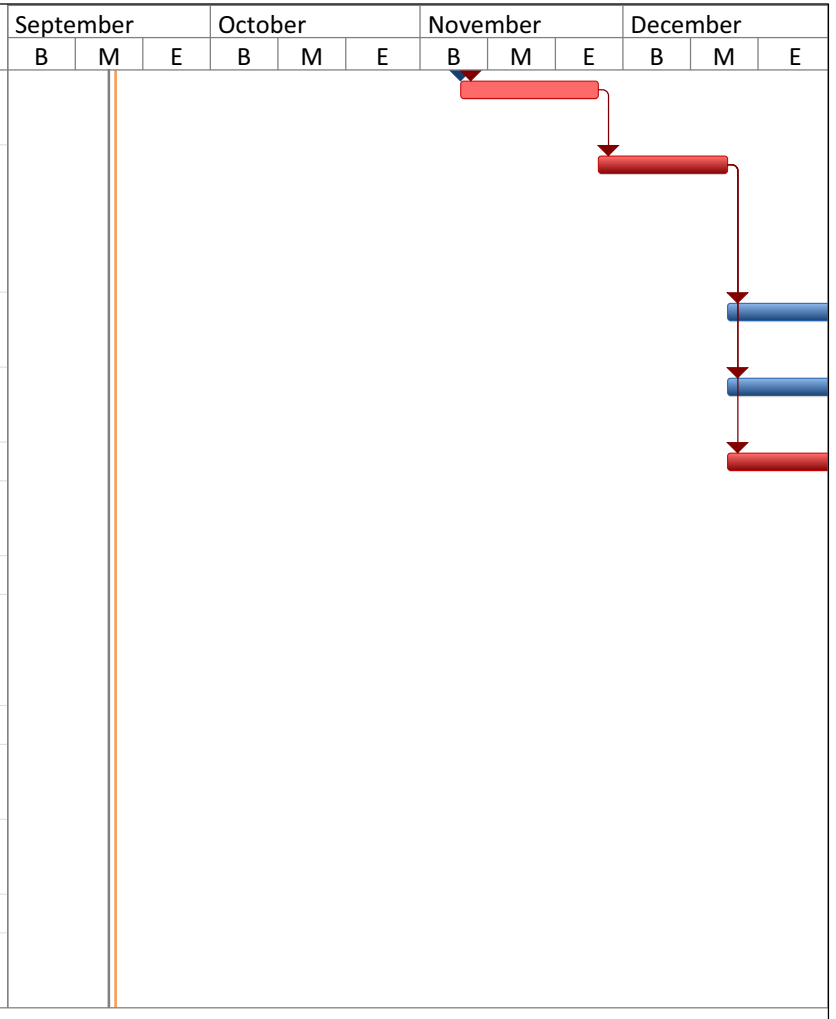
ID	Task Mode	Task Name	Duration	Start	Finish
0		**Johnson BRF 030-2(26)**	**187 days**	**Tue 9/16/14**	**Fri 9/18/15**
1		Notice To Proceed	1 day	Tue 9/16/14	Wed 9/17/14
2		Temporary Bridge Design	20 days	Wed 9/17/14	Mon 10/13/14
3		Traffic Control Plan Design	20 days	Wed 9/17/14	Mon 10/13/14
4		EPSC Plan Design	20 days	Wed 9/17/14	Mon 10/13/14
5		Pre Construction Meeting	1 day	Wed 9/24/14	Wed 9/24/14
6		Schedule for review	21 days	Wed 9/17/14	Tue 10/14/14
7		Temporary Bridge Review	21 days	Tue 10/14/14	Mon 11/10/14
8		Traffic Control Plan For Review	21 days	Tue 10/14/14	Mon 11/10/14
9		EPSC Plan For Review	21 days	Tue 10/14/14	Mon 11/10/14
10		**Partial Mobilization**	**15 days**	**Tue 10/14/14**	**Mon 11/3/14**
11		Install Construction Signs	1 day	Tue 10/14/14	Tue 10/14/14
12		Partial Clearing	5 days	Tue 10/14/14	Mon 10/20/14
13		Field Office	10 days	Mon 10/20/14	Mon 11/3/14
14		Construct Temporary Bridge Approaches	10 days	Mon 10/20/14	Mon 11/3/14
15		Install Temporary Bridge Abutments	4 days	Mon 11/3/14	Thu 11/6/14



Project: Johnson BRF 030-2(26)
Date: Wed 9/17/14

Task	Inactive Task	Start-only	
Split	Inactive Milestone	Finish-only	
Milestone	Inactive Summary	Deadline	
Summary	Manual Task	Critical	
Project Summary	Duration-only	Critical Split	
External Tasks	Manual Summary Rollup	Progress	
External Milestone	Manual Summary		

ID	Task Mode	Task Name	Duration	Start	Finish
16		Install Temporary Bridge Superstructure	15 days	Fri 11/7/14	Thu 11/27/14
17		Partial Excavate 92+00 LT - 92+75 LT: Stabilize for the Winter	14 days	Thu 11/27/14	Tue 12/16/14
18		Approve Design Bearing Devices	1 day	Tue 12/16/14	Thu 4/16/15
19		Approve Design of Precast Next F Beams	1 day	Tue 12/16/14	Thu 4/16/15
20		Mobilization	1 day	Tue 12/16/14	Thu 4/16/15
21		Install Traffic Control Plan	10 days	Thu 4/16/15	Wed 4/29/15
22		Open Detour to traffic	1 day	Wed 4/29/15	Thu 4/30/15
23		Submit Pile Driving Equipment Form, WEAP	10 days	Thu 4/30/15	Thu 5/14/15
24		Removal Of Structure	11 days	Thu 4/30/15	Fri 5/15/15
25		Stone Fill At Abutments	4 days	Fri 5/15/15	Thu 5/21/15
26		Dynamic Pile Load Test Abutment 1	1 day	Fri 5/15/15	Mon 5/18/15
27		Piles- Abutment 1	2 days	Mon 5/18/15	Wed 5/20/15
28		Dynamic Pile Load Test Abutment 2	1 day	Wed 5/20/15	Thu 5/21/15



Project: Johnson BRF 030-2(26)
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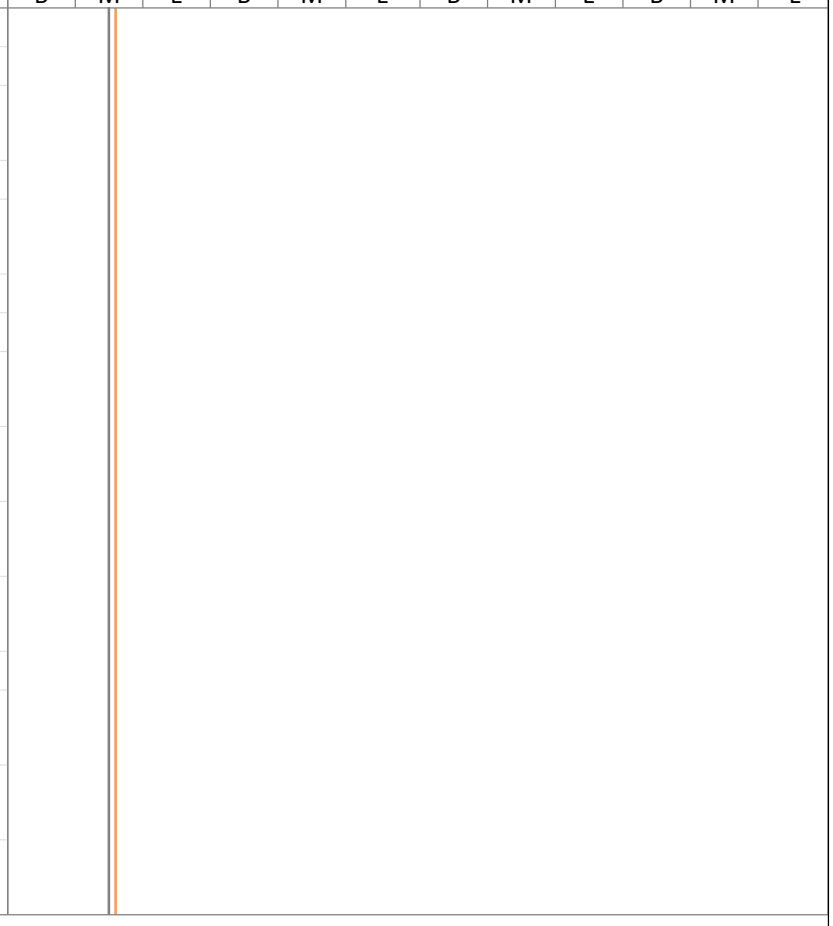
Task	Inactive Task	Start-only	
Split	Inactive Milestone	Finish-only	
Milestone	Inactive Summary	Deadline	
Summary	Manual Task	Critical	
Project Summary	Duration-only	Critical Split	
External Tasks	Manual Summary Rollup	Progress	
External Milestone	Manual Summary		

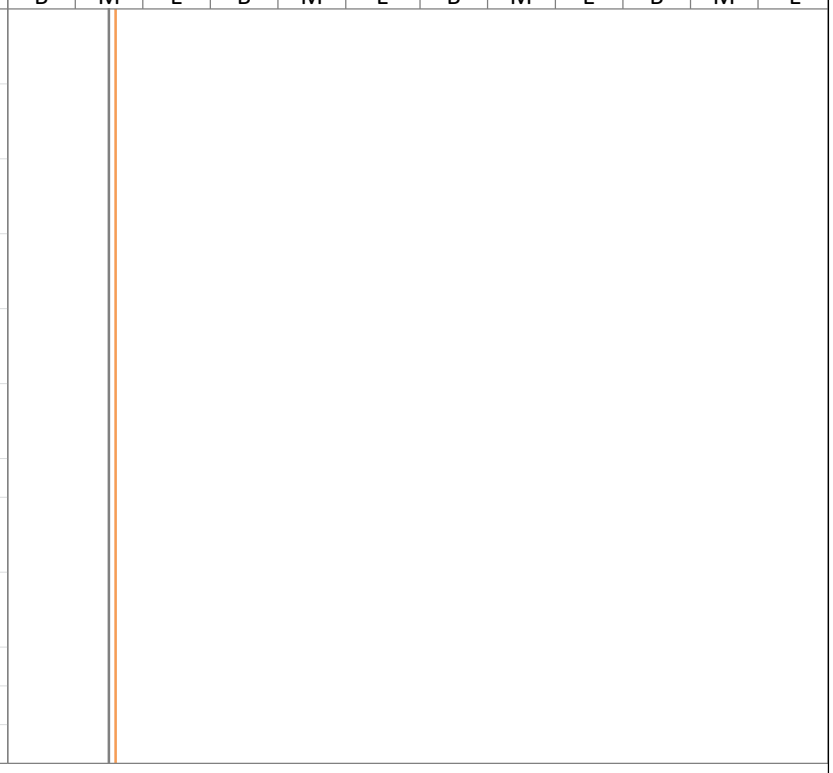
ID	Task Mode	Task Name	Duration	Start	Finish
29		Piles- Abutment 2	2 days	Thu 5/21/15	Fri 5/22/15
30		Form Abutment 1	5 days	Wed 5/20/15	Tue 5/26/15
31		Abutment 1 HP,Class B	7 days	Tue 5/26/15	Thu 6/4/15
32		Form Abutment 2	5 days	Fri 5/22/15	Fri 5/29/15
33		Abutment 2 HP, Class B	7 days	Fri 5/29/15	Tue 6/9/15
34		Install Next F Units	10 days	Tue 6/9/15	Mon 6/22/15
35		Form Super Structure	10 days	Mon 6/22/15	Mon 7/6/15
36		Install Bridge Rail Anchorage	5 days	Mon 7/6/15	Fri 7/10/15
37		Pour Deck- HP, Class A	10 days	Mon 7/13/15	Fri 7/24/15
38		Form Abutment 1 Approach Slab	2 days	Fri 7/24/15	Tue 7/28/15
39		HP, Class B, Abutment 1	7 days	Tue 7/28/15	Wed 8/5/15
40		Retaining Wall	5 days	Thu 8/6/15	Wed 8/12/15
41		Form Abutment 2 Approach Slab	2 days	Tue 7/28/15	Thu 7/30/15
42		HP, Class B, Abutment 2	7 days	Thu 7/30/15	Fri 8/7/15
43		Install Box Beam Bridge Rail	3 days	Fri 8/7/15	Wed 8/12/15



Project: Johnson BRF 030-2(26)
Date: Wed 9/17/14

Task	Inactive Task	Start-only	
Split	Inactive Milestone	Finish-only	
Milestone	Inactive Summary	Deadline	
Summary	Manual Task	Critical	
Project Summary	Duration-only	Critical Split	
External Tasks	Manual Summary Rollup	Progress	
External Milestone	Manual Summary		

ID	Task Mode	Task Name	Duration	Start	Finish
44		Install Bridge Approach Rail	5 days	Wed 8/12/15	Wed 8/19/15
45		Longitudinal Deck Grooves	2 days	Wed 8/12/15	Fri 8/14/15
46		Open Bridge To Traffic	1 day	Fri 8/14/15	Mon 8/17/15
47		Remove Temporary Bridge	10 days	Mon 8/17/15	Mon 8/31/15
48		Excavate and Stone Fill 89+00 to 92+52 Lt	15 days	Mon 8/17/15	Fri 9/4/15
49		Install 8" underdrain 92+00 to 93+34 LT	3 days	Fri 9/4/15	Wed 9/9/15
50		Install Box Beam Rail	5 days	Wed 8/19/15	Wed 8/26/15
51		Install Drainage System 1	1 day	Fri 9/4/15	Mon 9/7/15
52		Install Drainage System 2	1 day	Mon 9/7/15	Tue 9/8/15
53		Install Steel Beam	2 days	Fri 9/4/15	Tue 9/8/15
54		Install Transition Rail	1 day	Tue 9/8/15	Wed 9/9/15
55		Install EPSC measures	7 days	Wed 9/9/15	Fri 9/18/15



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Task	Inactive Task	Start-only	
Split	Inactive Milestone	Finish-only	
Milestone	Inactive Summary	Deadline	
Summary	Manual Task	Critical	
Project Summary	Duration-only	Critical Split	
External Tasks	Manual Summary Rollup	Progress	
External Milestone	Manual Summary		

APPENDIX B – FORMS

1. 3-9020 Permit – Notice of Addition.
2. Off-Site Activities Form.
3. Inspection Form.

Notice of Addition
Of Owners or Operators To Coverage
Under Vermont Construction General Permit 3-9020

VERMONT
ENVIRONMENTAL CONSERVATION

Submission of this completed form constitutes notice that the entity in Section C seeks to be added as a co-permittee to an existing authorization to discharge under Vermont's Stormwater Construction General Permit (CGP) from the project identified in Section A. All landowners and persons who meet the definition of Principal Operator (Subparts 2.1B, 3.1B of the CGP) and who were not included on the original NOI must submit a Notice of Addition form.

A. Project Information

1. Project Name: Johnson BRF 030-2(26) 2. Notice of Intent Number: 7103-9020

B. Original Permittee Information

1.Name: Vermont Agency of Transporation

2. Mailing Address:
a. Street/PO Box: _____

b. City/Town: _____ c. State: _____ d. Zip: _____

3. Contact Information

a. Phone: _____ b. Fax: _____ c. Email: _____

C. New Co-Permittee Information

Check one or both: ☐ New Landowner ☑ New Principal Operator

1.Name: Carl Gleason

2. Business Name: A.L. St. Onge Contractor's, Inc.

3. Mailing Address:
a. Street/PO Box: P.O. Box 65

b. City/Town: Montgomery c. State: VT d. Zip: 05470

4. Contact Information

a. Phone: (802) 326-4792 b. Fax: _____ c. Email: gleason.carl@gmail.com

D. Request for Addition as Co-Permittee

I hereby request that the entity in Section C be added as co-permittee to the existing authorization to discharge stormwater from construction activities stated in Section A. In requesting co-permittee status, I hereby certify under the penalty of law that I have read, understand, and meet the eligibility conditions of the CGP; that I agree to comply with all applicable terms and conditions of the CGP; that I understand that continued authorization under the CGP is contingent on maintaining eligibility for coverage, and that the applicable practices in the authorized Erosion Prevention and Sediment Control Plan must be implemented and maintained for the duration of the construction activities. I agree to comply with all applicable terms and conditions of the General Permit 3-9020.

Signature: _____ Date: _____

Submit Original Form to:
VT DEC, Watershed Management Division
1 National Life Drive, Main 2
Montpelier, VT, 05620-3522

Notice of Authorization

Under Vermont Construction General Permit 3-9020
For **Low Risk Projects**

VERMONT
ENVIRONMENTAL CONSERVATION

Project Name:	**Notice of Intent Number:** 7103-9020
Johnson BRF 030-2(26)	**Date of Authorization:** November 14, 2013
Permittee Name:	
Vermont Agency of Transportation	**Date of Expiration:** November 14, 2015

The project listed above has received authorization under General Permit 3-9020 to discharge stormwater from the following construction activities:

Construction of a temporary bridge and replace bridge 32 with a new bridge.

This authorization includes the following requirements:

1. Implementation of erosion prevention and sediment control practices required by the Low Risk Site Handbook for Erosion Prevention and Sediment Control.

2. All areas of disturbance must have temporary or final stabilization within **7 days** of the initial disturbance. After this time, all disturbed soil must be stabilized at the end of each work day. Between October 15 and April 15 all disturbed soil must be stabilized at the end of each work day. The following exceptions apply:
   a. Stabilization is not required if work is to continue in the area within the next 24 hours and there is no precipitation forecast for the next 24 hours.
   b. Stabilization is not required if the work is occurring in a self-contained excavation (i.e. no outlet) with a depth of 2 feet or greater (e.g. house foundation excavation, utility trenches).

3. No more than **2 acres** of land may be disturbed at any one time.

4. Inspections shall be conducted at least once every (7) calendar days and within twenty-four (24) hours of the end of a storm event resulting in discharge of Stormwater from construction site.

5. If there is a discharge of visibly discolored stormwater from the construction site or from the construction site to waters of the State, the permittee shall take immediate corrective action.

6. If, after completing corrective action, there continues to be a discharge of sediment from the construction site to waters of the State, the permittee shall notify DEC by submitting a report within 72 hours of the discharge.

To request information on this authorization, or to report compliance concerns, please contact:

Vermont DEC, Watershed Management Division
Main Building, Second Floor
One National Life Drive
Montpelier, VT 05620-3522
(802) 828-1535

[See next page for posting requirements]

OFF-SITE ACTIVITY SUBMITTAL

- **This form is to be completed in its entirety by the Contractor/District Tech** when proposing any waste, borrow, or staging area or any work outside the defined Contract construction limits.
- **Submit to Karen Spooner:** karen.spooner@state.vt.us, Phone: (802)828-2169, Fax: (802)828-2334, VTrans Program Development Division, Environmental Section, One National Life Drive, Montpelier, VT 05633-5001
- **Submit a copy to the Resident Engineer**
- **Allow 21 calendar days (see Section 105.25 (c) of the VTrans Standard Specifications For Construction) for review once the application is administratively complete**.

- **SUBMITTAL INFORMATION**

Project Name/District:_____ **Contractor/District Tech:**_____

Contact:_____ **Phone:**_____ **Fax:**_____ **E-mail:**_____

Resident Engineer:_____ **Phone:** _____ **Fax:**_____

- **PROPOSAL INFORMATION** (Select one type of area being proposed for use per submittal and describe associated characteristics)

□ Waste □ Borrow □ Staging □ Other (ex. dewatering location):_____

Material: Type (asphalt, concrete, earthen, etc.)_____ Quantity (yds^3)_____

Total Area of Land Disturbance (sq ft)_____

Additional Info:_____

- **LANDOWNER/PROPERTY INFO** (Fill all applicable boxes; **attach a Location Map and Sketch of Area**)

Name:_____ **Address:**_____ **Phone:**_____
Print Name

□ Private Residential/Commercial □ Town/State Owned Facility □ Other

Additional Info:_____

Are there other users of this site? □ Yes □ No

Known past uses:_____

□ Location Map (must be USGS Geological Survey Map (7.5'))

□ Sketch of Area: □ North arrow □ Approx scale □ Recognizable features

Permit Info:

Act 250 Permit Exists? □ Yes □ No If Yes, #_____ Copy Enclosed? □ Yes □ No

List of Other Existing Permits:_____ _____

Landowner Agreement (Signature is required for all private-, town-, and state-owned properties)

I, _____, warrant that the information in the above permit application is accurate and agree
Landowner/Facility Manager Signature

to the use of the proposed area by _____ as shown on the attached sketch. If acting as the agent of
Name of Contractor

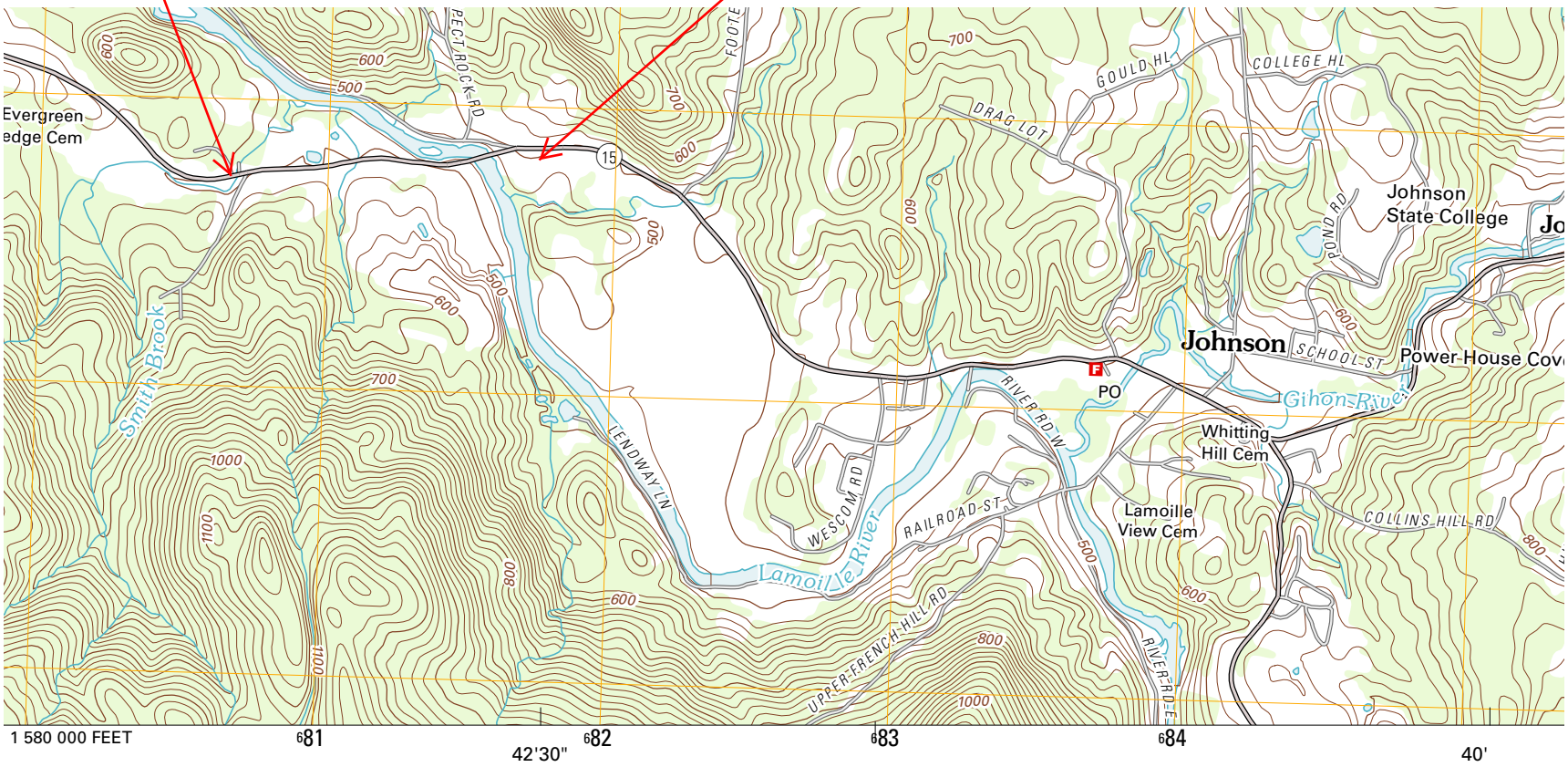
the Landowner, I warrant (1) that the Landowner has the full right, power, and authority to authorize the proposed use, (2) that I am authorized to act as the Landowner's agent, and (3) that my authority to act as the Landowner's agent has not been revoked.

Date: _____

This clearance is for the Natural and Cultural Resources Only.

Site

Staging/Office Trailer



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1 0.5 0 1

MILES

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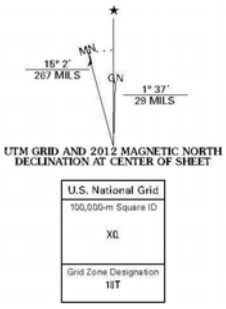
FEET

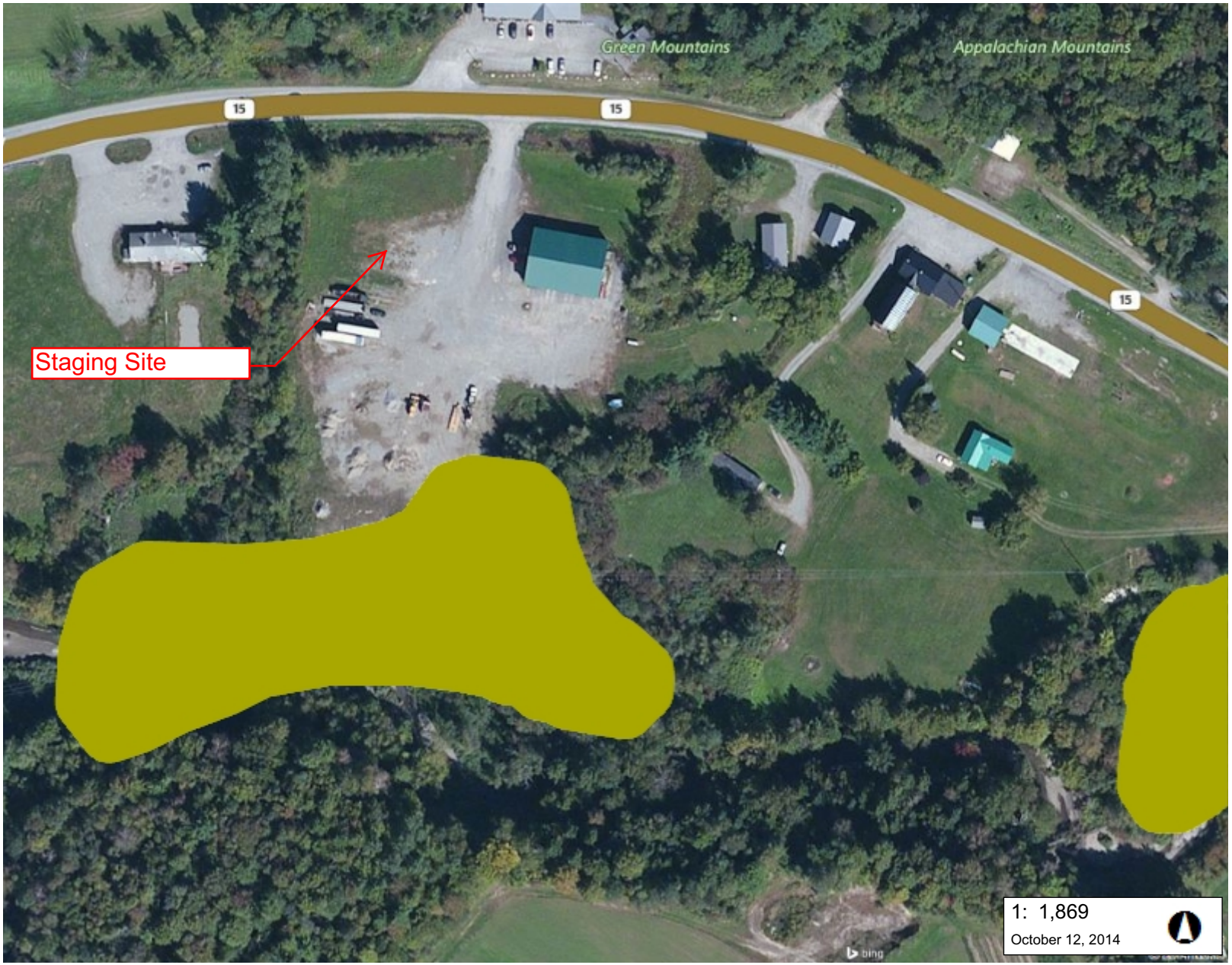


VERMONT

Vermont Agency of Natural Resources

Vermont Agency of Natural Resources

vermont.gov



LEGEND

Wetlands - VSWI

- Class 1 Wetland
- Class 2 Wetland

Town Boundary

NOTES

Map created using ANR's Natural Resources Atlas

312.0 0 156.00 312.0 Feet

WGS_1984_Web_Mercator_Auxiliary_Sphere 1" = 156 Ft. 1cm = 19 Meters

© Vermont Agency of Natural Resources

THIS MAP IS NOT TO BE USED FOR NAVIGATION

DISCLAIMER: This map is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. ANR and the State of Vermont make no representations of any kind, including but not limited to, the warranties of merchantability, or fitness for a particular use, nor are any such warranties to be implied with respect to the data on this map.

VTrans Vermont Agency of Transportation	**EPSC Plan Inspection Report** (Non-Jurisdictional and Low Risk Projects)	
Project Name:	**Date:**	**Time Since Last Storm:**
Inspector:	**On-Site Coordinator:** (signature required)	

Measure Inspected	Y	N	STA/Off	Corrective Action (CA) Required	Date CA Occurred
Boundary Limits					
Site boundary markers are up and visible					
Disturbance is only occurring within marked boundaries					
Disturbance Area Limit					
Only acreage listed on *Authorization to Discharge* is disturbed at one time					
Stabilized Construction Entrance/Exit					
Off site tracking of sediment prevented					
Sediment Barriers					
Measure has been installed properly and is functioning as designed					
Accumulated sediment < ½ height of measure					
Diversion					
Upland stormwater is diverted around the work area					
Channelized Runoff					
Check structures are in place, extend the width of the channel, and have capacity to retain sediment in the next storm event					
Channels are stable with no erosion					
Exposed Soils Stabilization					
Seed and mulch, and/or matting placed in accordance w/ permit requirements and/or Specifications					
Soil is seeded and mulched or covered in erosion matting within 48 hours of final grade					
Winter Stabilization					
After Sept. 15, all disturbed areas are seeded & mulched to 3" deep or covered w/ matting					
For ongoing construction, exposed soil is mulched prior to forecasted events					
Dewatering Treatment					
Measure is preventing a discharge of turbid water from leaving the site					
Accumulated sediment is removed to allow sufficient treatment					

* Additional Measures and Discharges shall be reported on the back side of this form.

VTrans Vermont Agency of Transportation

EPSC Plan Inspection Report (Non-Jurisdictional and Low Risk Projects)

Measure Inspected	Y	N	STA/Off	Corrective Action	Date Taken
Additional Measures					
Discharges Noted					

* If there is a discharge of visibly discolored stormwater from the construction site to waters of the state, the On-Site Plan Coordinator shall inform the Resident Engineer and take corrective action and report the discharge in accordance with Section 6.1 of Permit 3-9020.

APPENDIX C – PLANS

1. EPSC Narrative Section 1-4 (Contract Plans).
2. EPSC Plan and Detail Sheets.

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

JOHNSON BRF 030-2(26) INVOLVES THE REPLACEMENT OF BRIDGE 32 CARRYING VT 15 OVER THE SMITH BROOK IN JOHNSON, VT. THE BRIDGE WILL BE REPLACED ON THE EXISTING ALIGHMENT WITH MINIMAL WIDENING AND APPROACH WORK NECESSARY TO MATCH IN TO THE EXISTING ROADWAY. TWO-WAY TRAFFIC WILL BE MAINTAINED DURING CONSTRUCTION ON A TEMPORARY BRIDGE TO BE CONSTRUCTED NORTH (DOWNSTREAM) OF THE EXISTING BRIDGE.

NOTE: AREA OF DISTURBANCE INCLUDES LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, AS WELL AS WASTE, BORROW AND STAGING AREAS, AND OTHER EARTH DISTURBING ACTIVITIES WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS AS SHOWN ON THE ATTACHED EPSC PLAN.

TOTAL AREA OF DISTURBANCE AS SHOWN ON THE ATTACHED EPSC PLAN IS APPROXIMATELY 1.33 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL OCCUR DURING TWO CONSTRUCTION SEASONS.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE AREA IS A SADDLE THAT IS MOSTLY WELL ESTABLISHED FOREST WITH OCCASIONAL OPEN AREAS. VT ROUTE 15, SWEETSER RD (TH 71), AND WEST SETTLEMENT RD (TH 43) ARE WITHIN THE PROJECT SITE. THERE IS A RESIDENCE ON THE EAST SIDE OF THE PROJECT, AND A FEW HOUSES UP SLOPE TO THE WEST WITH GRASS AND TREE BUFFERS.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

SMITH BROOK IS THE ONLY WATER SOURCE ON THE PROJECT SITE. AN ASSOCIATED CLASS III WETLAND IS LOCATED SOUTHWEST OF THE BRIDGE.

DRAINAGE DITCHES ARE LOCATED ON THE NORTHWEST AND SOUTHEAST SIDES OF VT ROUTE 15 IN THE PROJECT AREA. A 12-INCH AND A 15-INCH CGMP CARRY SURFACE WATER FROM THESE DRAINAGE DITCHES UNDER TH 71 AND TH 43, RESPECTIVELY, TO THE SMITH BROOK. THESE CULVERTS WILL BE REPLACED AS PART OF THIS PROJECT. DUE TO THE NATURE OF THE SURROUNDING TERRAIN, THE PROJECT SITE COULD RECEIVE RUNOFF WATER FROM A FEW NEARBY SLOPES.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF HARDWOOD TREES AND UNDERGROWTH. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY REPLACEMENT OF THE EXISTING BRIDGE, THE CONSTRUCTION OF THE TEMPORARY BRIDGE AND THE BANK CUT. UPON PROJECT COMPLETION, THE CHANNEL WILL BE ARMORED WITH STONE FILL TYPE III AS SPECIFIED ON THE PLANS AND THE NORTH WEST BANK WILL BE ARMORED WITH STONE FILL TYPE II. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES UNLESS OTHERWISE NOTED.

1.2.4 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR LAMOILLE COUNTY, VERMONT. SOILS ON THE PROJECT SITE ARE ADAMS LOAMY FINE SAND, 2 TO 8 PERCENT SLOPES AND 25 TO 60 PERCENT SLOPES, K_w FACTOR = 0.17; AND PODUNK FINE SANDY LOAM, K_w FACTOR = 0.24.

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING:
0.0-0.23 = LOW EROSION POTENTIAL
0.24-0.36 = MODERATE EROSION POTENTIAL
0.37 AND HIGHER = HIGH EROSION POTENTIAL

1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: YES, FISH & WILDLIFE
HISTORICAL OR ARCHAELOGICAL AREAS: NO
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: SMITH BROOK
WETLANDS: YES, CLASS III WETLAND SOUTHWEST OF THE BRIDGE.

1.3 RISK EVALUATION

THIS PROJECT FALLS UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES FOR LOW RISK PROJECTS. ANY MODIFICATIONS TO THE PROJECT THAT INCREASE THE RISK TO ENVIRONMENTAL RESOURCES SHALL BE EVALUATED IN ACCORDANCE WITH THE PERMIT REQUIREMENTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION PRACTICES. THEY HAVE BEEN PROPOSED BY THE DESIGNER AS A BASIS FOR PROTECTING RESOURCES AND WILL NEED TO BE BUILT UPON BASED ON THE SPECIFIC MEANS AND METHODS OF THE CONTRACTOR. REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR SPECIFIC GUIDANCE AND CONSTRUCTION DETAILING.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

1.4.1 MARK SITE BOUNDARIES

SITE BOUNDARIES AND AREAS CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED.

PROJECT DEMARCATION FENCING (PDF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES.

1.4.2 LIMIT DISTURBANCE AREA

PREVENTING INITIAL SOIL EROSION BY MINIMIZING THE EXPOSED AREA IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. EARTH DISTURBANCE CAN BE MINIMIZED THROUGH CONSTRUCTION PHASING BY ONLY OPENING UP EARTH AS NECESSARY. THIS CAN LIMIT THE AREA THAT WILL BE DISTURBED AND EXPOSED TO EROSION. EMPLOY TEMPORARY CONSTRUCTION STABILIZATION PRACTICES IN INCREMENTAL STAGES AS PHASES CHANGE. FOR PROJECTS WHICH FALL UNDER THE CONSTRUCTION GENERAL PERMIT, ONLY THE ACREAGE LISTED ON THE PERMIT AUTHORIZATION MAY BE EXPOSED AT ANY GIVEN TIME.

MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

1.4.3 SITE ENTRANCE/EXIT STABILIZATION

TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTOR'S PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLAN AND ANYWHERE EQUIPMENT WILL BE GOING FROM AREAS OF EXPOSED SOILS TO PAVED SURFACES.

1.4.4 INSTALL SEDIMENT BARRIERS

SEDIMENT BARRIERS SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK.

SILT FENCE AND PIPE INLET PROTECTION WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

FILTER CURTAIN WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

1.4.5 DIVERT UPLAND RUNOFF

DIVERSIONARY MEASURES SHALL BE USED TO INTERCEPT RUNOFF FROM ABOVE THE CONSTRUCTION AND DIRECT IT AROUND THE DISTURBED AREA SO THAT CLEAN WATER DOES NOT BECOME MUDDIED WHILE TRAVELING OVER EXPOSED SOILS ON THE CONSTRUCITON SITE.

THE PROJECT AREA IS REALTIVELY FLAT. THERFORE IT IS NOT ANTICPIATED THAT DIVERSION MEASURES WILL BE NECESSARY.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

CHECK STRUCTURES SHALL BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSIVE POTENTIAL, OF CONCENTRATED FLOW IN CHANNELS.

STONE CHECK DAMS WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

1.4.7 CONSTRUCT PERMANENT CONTROLS

PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH PERMIT CONDITIONS.

NO PERMANENT CONTROLS ON THIS PROJECT.

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE OR IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT 3-9020 AUTHORIZATION.

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS. BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3.

THE FORECAST OF RAINFALL EVENTS SHALL TRIGGER IMMEDIATE PROTECTION OF EXPOSED SOILS.

1.4.9 WINTER STABILIZATION

VARIOUS MEASURES SPECIFIC TO WINTER MAY BE NECESSARY SHOULD THE PROJECT EXTEND INTO WINTER (OCTOBER 15 THROUGH APRIL 15). REFER TO THE LOW RISK SITE HANDBOOK FOR GUIDANCE.

1.4.10 STABILIZE SOIL AT FINAL GRADE

EXPOSED SOIL MUST BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

SEED, MULCH, FERTILIZER AND LIME SHALL BE USED TO ESTABLISH PERMANENT VEGETATION. FOR SLOPES STEEPER THAN 1:3, BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED INSTEAD OF MULCH.

1.4.11 DE-WATERING ACTIVITIES

DISCHARGE FROM DEWATERING ACTIVITIES THAT FLOWS OFF OF THE CONSTRUCTION SITE MUST NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE VERMONT WATER QUALITY STANDARDS.

1.4.12 INSPECT YOUR SITE

INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS OR CONSTRUCTION GENERAL PERMIT AUTHORIZATION STIPULATIONS.

1.5 SEQUENCE AND STAGING

THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR USING THE GUIDANCE OUTLINED IN THE VTRANS EPSC PLAN CONTRACTOR CHECKLIST.

1.5.1 CONSTRUCTION SEQUENCE

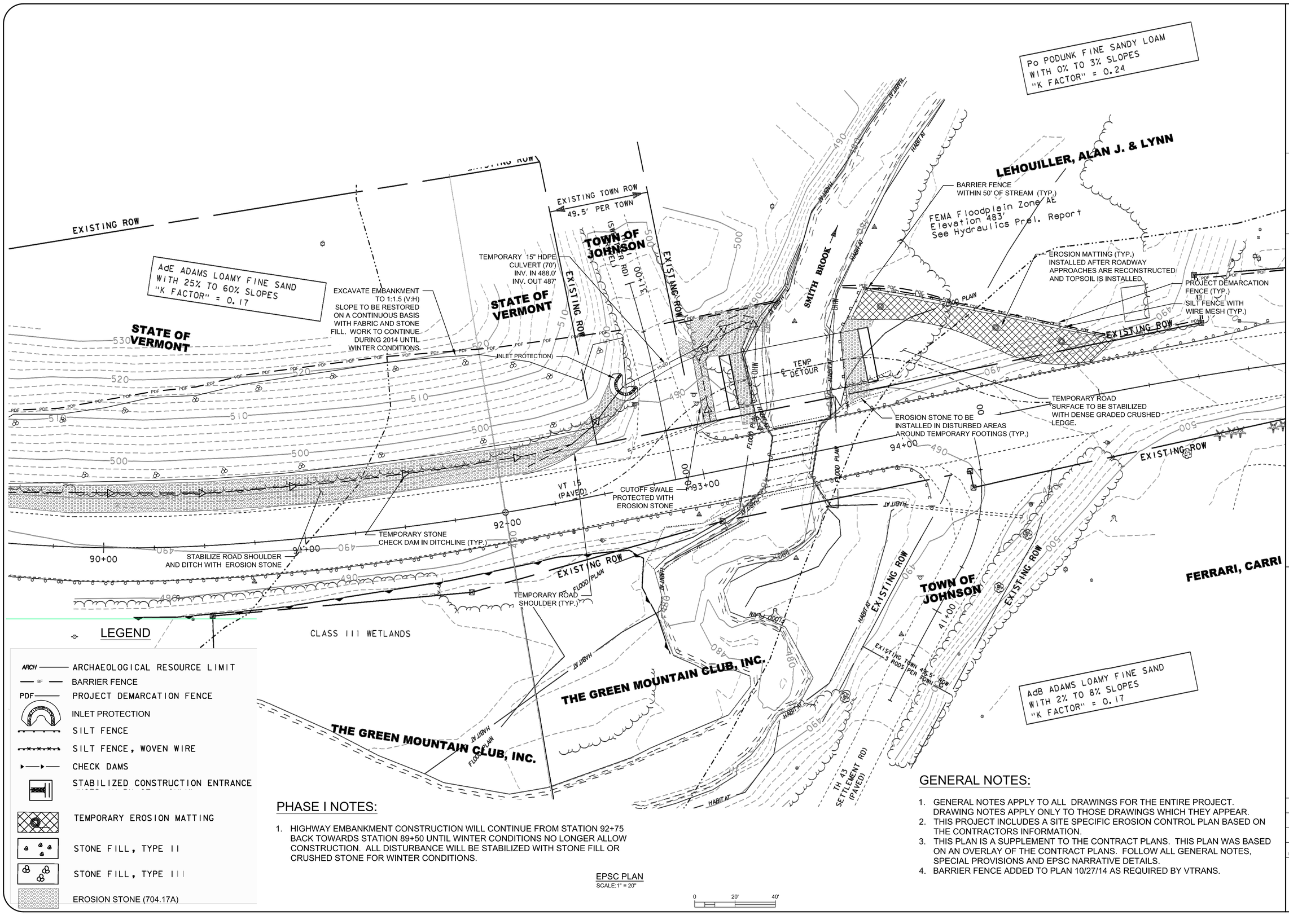
1.5.2 OFF-SITE ACTIVITIES

IN ADDITION TO THE CONTRACTOR CHECKLIST ANY ACTIVITIES OUTSIDE THE CONSTRUCTION LIMITS SHALL FOLLOW SUBSECTIONS 105.25- 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

PROJECT NAME: JOHNSON
PROJECT NUMBER: BRF 030-2(26)

FILE NAME: s88bl93eronotes.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. MOONEY
EPSC NARRATIVE

PLOT DATE: 11-JUL-2014
DRAWN BY: R. PELLETT
CHECKED BY: H. SALLS
SHEET 57 OF 69



LEGEND

- ARCH — ARCHAEOLOGICAL RESOURCE LIMIT
- BF — BARRIER FENCE
- PDF — PROJECT DEMARCATION FENCE
- INLET PROTECTION
- SILT FENCE
- SILT FENCE, WOVEN WIRE
- CHECK DAMS
- STABILIZED CONSTRUCTION ENTRANCE
- TEMPORARY EROSION MATTING
- STONE FILL, TYPE II
- STONE FILL, TYPE III
- EROSION STONE (704.17A)

PHASE I NOTES:

1. HIGHWAY EMBANKMENT CONSTRUCTION WILL CONTINUE FROM STATION 92+75 BACK TOWARDS STATION 89+50 UNTIL WINTER CONDITIONS NO LONGER ALLOW CONSTRUCTION. ALL DISTURBANCE WILL BE STABILIZED WITH STONE FILL OR CRUSHED STONE FOR WINTER CONDITIONS.

EPSC PLAN
SCALE:1" = 20"

0 20' 40'

GENERAL NOTES:

1. GENERAL NOTES APPLY TO ALL DRAWINGS FOR THE ENTIRE PROJECT. DRAWING NOTES APPLY ONLY TO THOSE DRAWINGS WHICH THEY APPEAR.
2. THIS PROJECT INCLUDES A SITE SPECIFIC EROSION CONTROL PLAN BASED ON THE CONTRACTORS INFORMATION.
3. THIS PLAN IS A SUPPLEMENT TO THE CONTRACT PLANS. THIS PLAN WAS BASED ON AN OVERLAY OF THE CONTRACT PLANS. FOLLOW ALL GENERAL NOTES, SPECIAL PROVISIONS AND EPSC NARRATIVE DETAILS.
4. BARRIER FENCE ADDED TO PLAN 10/27/14 AS REQUIRED BY VTRANS.

RUGGLES ENGINEERING SERVICES, INC.
307 SHADOW LAKE ROAD, GLOVER, VT 05839
Civil Engineering-Site Development
Septic System Design-Soils Analysis
802-525-9130

JOB No. 140 - -

STATE OF VERMONT — JOHN P. RUGGLES — No. 53831 — REGISTERED PROFESSIONAL ENGINEER

PREPARED FOR: A.L. ST. ONGE CONTRACTORS, INC.
Address
P.O. BOX 65 MONTGOMERY, VT 05470

SITE SPECIFIC EPSC PLAN - PHASE 1
JOHNSON BRF 030-2(26)

REVISIONS			
No.	Description	Date	
1	VTRANS COMMENTS/SCHEDULE	10/27/14	

Designed: NPS
Drawn: NPS
Checked: -
DATE: 10/10/14

EPSC 1

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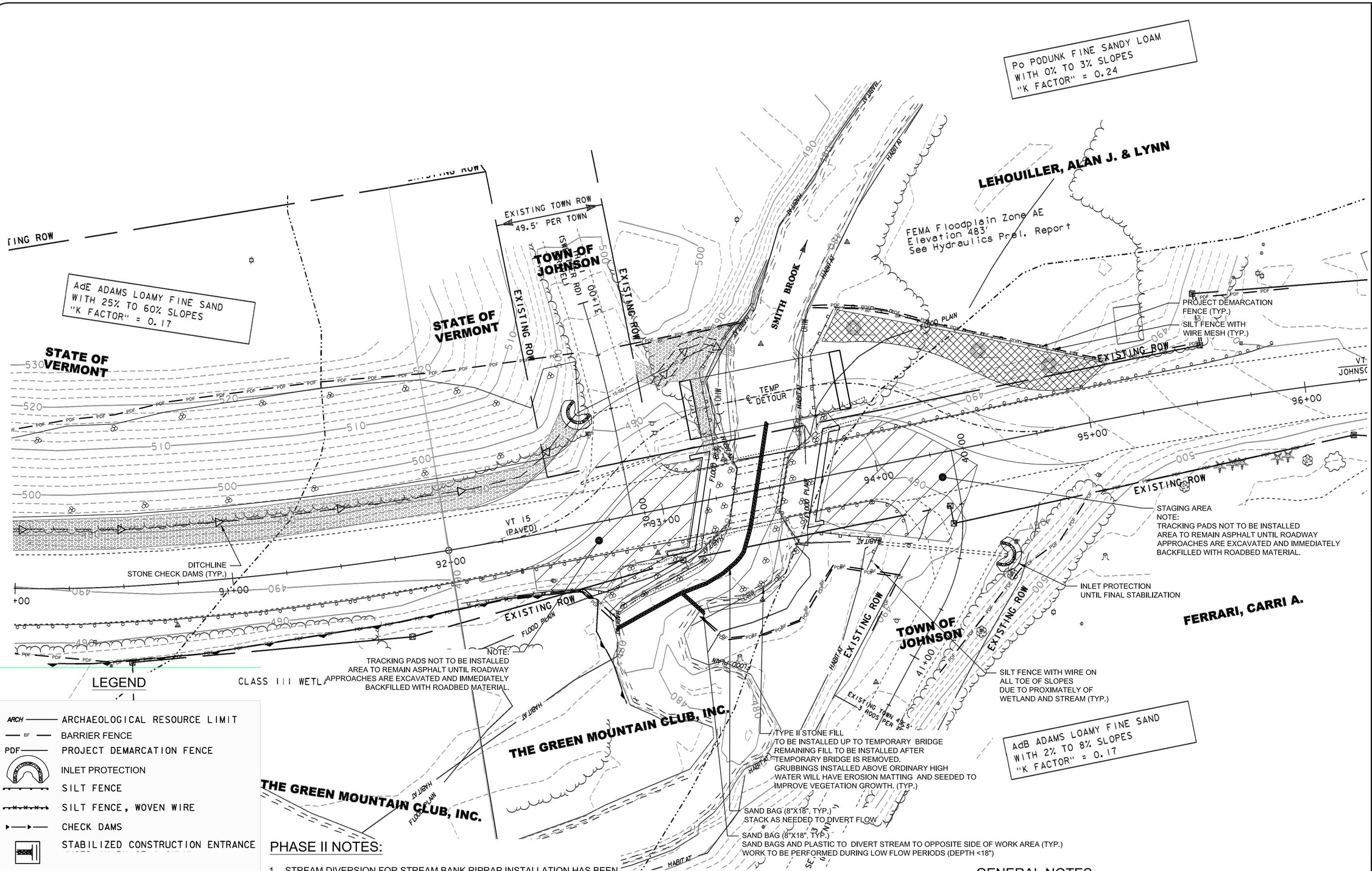

LEGEND

- ARCH — ARCHAEOLOGICAL RESOURCE LIMIT
- BF — BARRIER FENCE
- PDF — PROJECT DEMARCATION FENCE
- INLET PROTECTION
- SILT FENCE
- SILT FENCE, WOVEN WIRE
- CHECK DAMS
- STABILIZED CONSTRUCTION ENTRANCE
- TEMPORARY EROSION MATTING
- STONE FILL, TYPE II
- STONE FILL, TYPE III
- EROSION STONE (704.17A)

PHASE II NOTES:

1. STREAM DIVERSION FOR STREAM BANK RIPRAP INSTALLATION HAS BEEN INCLUDED AS PART OF THE EROSION CONTROL PLAN. NPDES REQUIREMENTS NEED TO BE COORDINATED WITH STATE STREAM PERMIT AND USACE PERMIT REQUIREMENTS. STREAMS DEPTHS VARY DEPENDING ON RAIN EVENTS. RIPRAP TO BE INSTALLED DURING LOW FLOW CONDITIONS. THE USE OF FILTER CURTAIN IS NOT ANTICIPATED TO FUNCTION RESULTING IN THE USE OF SAND BAGS FOR COFFERDAMS. AT THE REQUEST OF VTRANS, STEEL COFFERDAMS WERE REMOVED FROM THIS PLAN.

EPSC PLAN
SCALE:1" = 20"

0 20' 40'

GENERAL NOTES:

1. GENERAL NOTES APPLY TO ALL DRAWINGS FOR THE ENTIRE PROJECT. DRAWING NOTES APPLY ONLY TO THOSE DRAWINGS WHICH THEY APPEAR.
2. THIS PROJECT INCLUDES A SITE SPECIFIC EROSION CONTROL PLAN BASED ON THE CONTRACTORS INFORMATION.
3. THIS PLAN IS A SUPPLEMENT TO THE CONTRACT PLANS. THIS PLAN WAS BASED ON AN OVERLAY OF THE CONTRACT PLANS. FOLLOW ALL GENERAL NOTES, SPECIAL PROVISIONS AND EPSC NARRATIVE DETAILS.
4. BARRIER FENCE ADDED TO PLAN 10/27/14 AS REQUIRED BY VTRANS.

RUGGLES ENGINEERING SERVICES, INC.
307 SHADOW LAKE ROAD, GLOVER, VT 05839
Civil Engineering-Site Development
Septic System Design-Soils Analysis
802-525-9130

JOB No. 140 - -

STATE OF VERMONT — JOHN P. RUGGLES — No. 53831 — REGISTERED PROFESSIONAL ENGINEER

PREPARED FOR: A.L. ST. ONGE CONTRACTORS, INC.
Address: P.O. BOX 65 MONTGOMERY, VT 05470

SITE SPECIFIC EPSC PLAN - PHASE 2
JOHNSON BRF 030-2(26)

REVISIONS			
No.	Description	Date	
1	VTRANS COMMENTS/SCHEDULE	10/27/14	

Designed: NPS
Drawn: NPS
Checked: -
DATE: 10/10/14

EPSC 2

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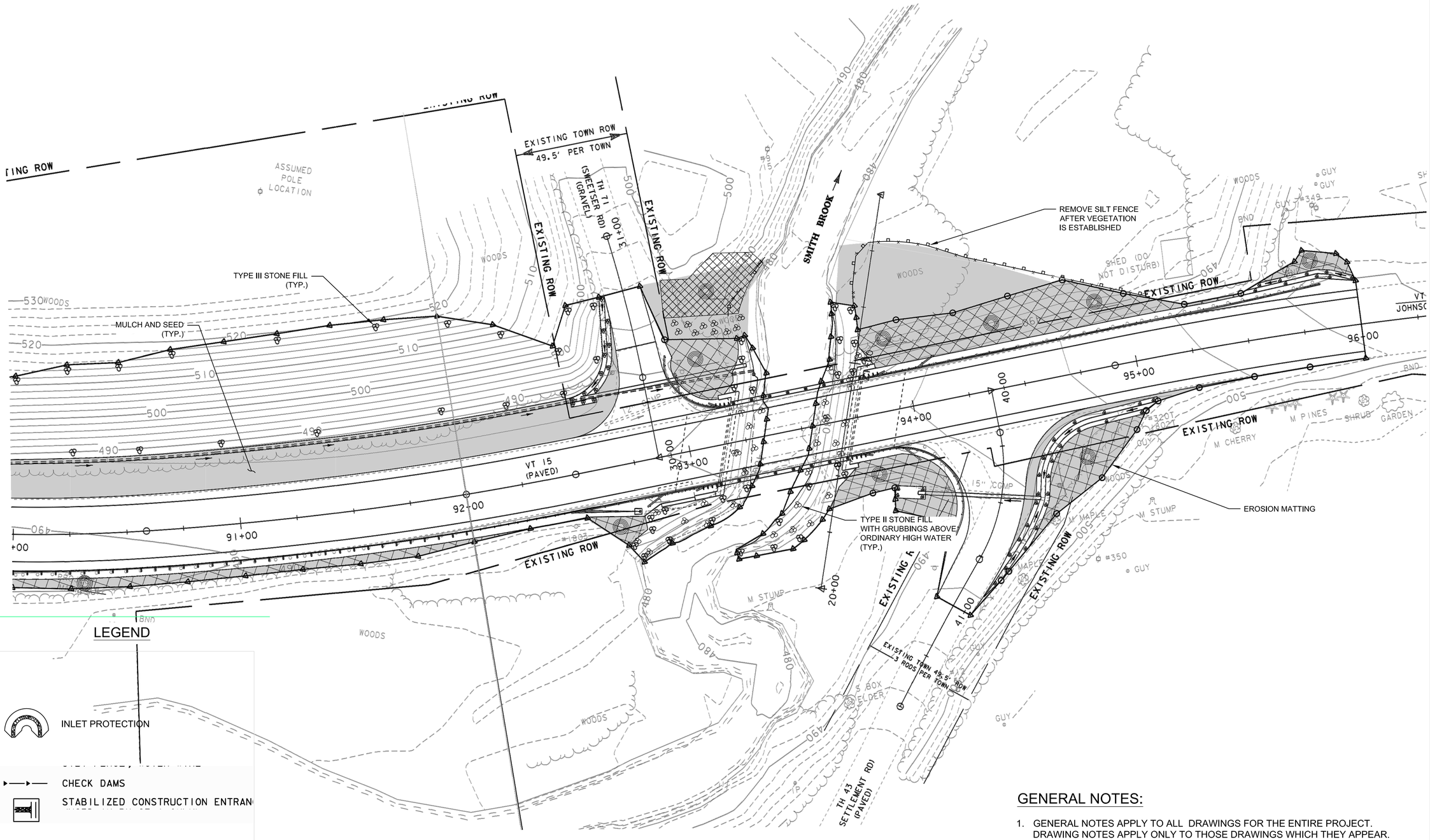

LEGEND

- INLET PROTECTION
- CHECK DAMS
- STABILIZED CONSTRUCTION ENTRAN
- EROSION STONE (704.17A)

EPSC PLAN
SCALE:1" = 20"

0 20' 40'

GENERAL NOTES:

1. GENERAL NOTES APPLY TO ALL DRAWINGS FOR THE ENTIRE PROJECT. DRAWING NOTES APPLY ONLY TO THOSE DRAWINGS WHICH THEY APPEAR.
2. THIS PROJECT INCLUDES A SITE SPECIFIC EROSION CONTROL PLAN BASED ON THE CONTRACTORS INFORMATION.
3. THIS PLAN IS A SUPPLEMENT TO THE CONTRACT PLANS. THIS PLAN WAS BASED ON AN OVERLAY OF THE CONTRACT PLANS. FOLLOW ALL GENERAL NOTES, SPECIAL PROVISIONS AND EPSC NARRATIVE DETAILS.

RUGGLES ENGINEERING SERVICES, INC.
307 SHADOW LAKE ROAD, GLOVER, VT 05839
Civil Engineering-Site Development
Septic System Design-Soils Analysis
802-525-9130

JOB No. 140 - -

STATE OF VERMONT — JOHN P. RUGGLES — No. 53831 — REGISTERED PROFESSIONAL ENGINEER

PREPARED FOR: A.L. ST. ONGE CONTRACTORS, INC.
Address: P.O. BOX 65 MONTGOMERY, VT 05470

SITE SPECIFIC EPSC PLAN - PHASE 3 - FINAL
JOHNSON BRF 030-2(26)

REVISIONS		
No.	Description	Date
-	-	-

Designed: NPS
Drawn: NPS
Checked: -
DATE: 10/10/14

EPSC 3

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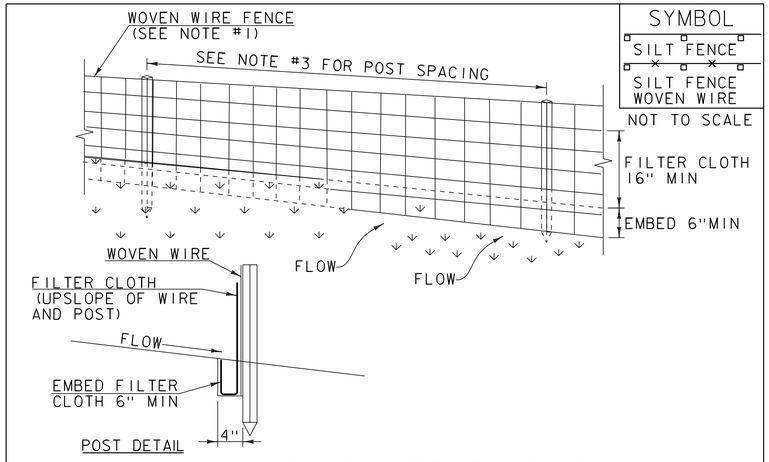


CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE REINFORCED FENCE IS REQUIRED WITHIN 100' UPSLOPE OF RECEIVING WATERS WHEN THE PROJECT FALLS UNDER A CONSTRUCTION STORMWATER PERMIT. WOVEN WIRE SHALL BE A MIN. 14 GAUGE WITH A 6" MAX. MESH OPENING.
2. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI100X, STABILINKA T140N OR APPROVED EQUIVALENT.
3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4' AND WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

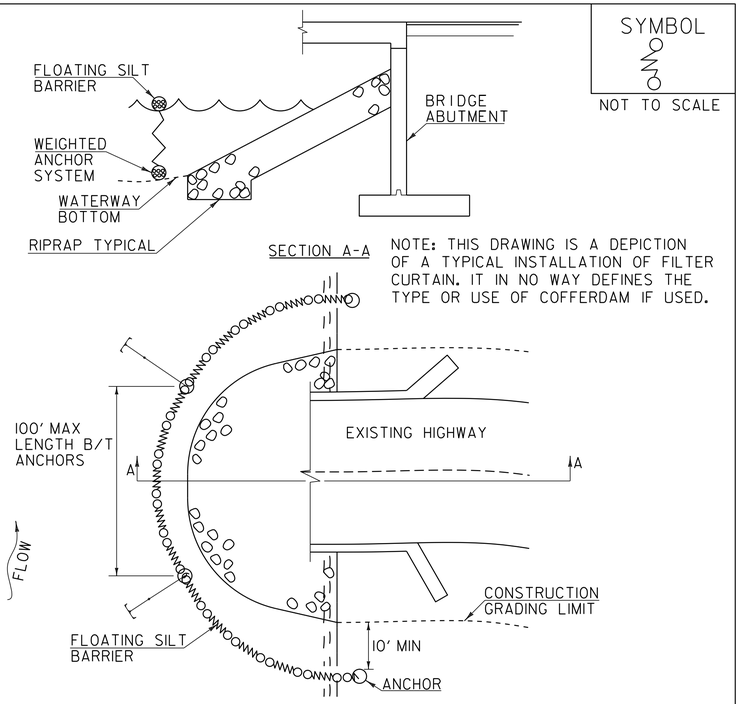
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SILT FENCE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 AND AS SHOWN IN THE PLANS FOR GEOTEXTILE FOR SILT FENCE (PAY ITEM 649.51) OR GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED (PAY ITEM 649.515).

REVISIONS	
MARCH 21, 2008	WHF
DECEMBER 11, 2008	WHF
JANUARY 13, 2009	WHF



CONSTRUCTION SPECIFICATIONS

1. FILTER CURTAIN SHALL NOT BE PLACED ACROSS A FLOWING WATERWAY, OR IN A WATERWAY WITH STREAM VELOCITIES GREATER THAN 1.5 FEET/SECOND.
2. MAXIMUM 100' LENGTH BETWEEN ANCHORS.
3. LAST SECTION SHALL TERMINATE A MINIMUM OF 10' BEYOND LIMIT OF DISTURBANCE.
4. THE WEIGHTED ANCHOR SYSTEM SHALL BE A TYPE WHICH ALLOWS THE CURTAIN TO CONFORM TO THE BOTTOM OF THE WATERWAY.
5. THE CURTAIN SHALL BE REMOVED BY SLOWLY PULLING TOWARD THE SHORE MINIMIZING THE ESCAPE OF SEDIMENTS INTO WATERWAY.

FILTER CURTAIN

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 FOR GEOTEXTILE FOR FILTER CURTAIN (PAY ITEM 649.61).

REVISIONS	
APRIL 1, 2008	WHF
JANUARY 13, 2009	WHF
SEPTEMBER 4, 2009	WHF

PROJECT NAME: JOHNSON
PROJECT NUMBER: BRF 030-2(26)

FILE NAME: s88b193EPSC_details.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
EPSC DETAILS (1)

PLOT DATE: 10-JUN-2014
DRAWN BY: R. PELLETT
CHECKED BY: H. SALLS
SHEET 64 OF 69

SYMBOL

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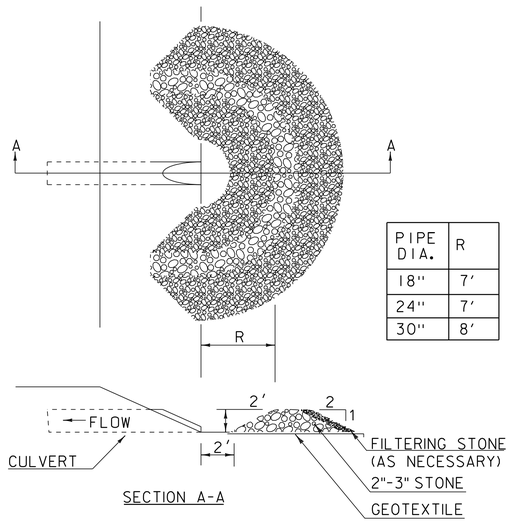


SECTION A-A

PIPE DIA.	R
18"	7'
24"	7'
30"	8'

CONSTRUCTION SPECIFICATIONS

1. USE 2" TO 3" STONE. FILTERING STONE SHALL BE 3/4".
2. PLACE STONE OVER GEOTEXTILE.
3. ONCE THE AREAS UPSTREAM FROM THE CHECK DAM ARE STABILIZED WITH VEGETATION, THE SEDIMENT TRAPPED BEHIND THE DAM SHALL BE DISPOSED OF IN AN APPROVED WASTE AREA.
4. THE CHECK DAM(S) SHALL BE FLATTENED AND GRADED IN A MANNER WHICH PROTECTS THE AREA FROM EROSION AND CHANNEL BLOCKAGE . (GEOTEXTILE MUST BE REMOVED).
5. THE GEOTEXTILE MUST BE DISPOSED OF APPROPRIATELY.
6. THE AREA CONTRIBUTING TO THE CHECK DAM SHALL NOT EXCEED 4 ACRES.

ADAPTED FROM DETAILS PROVIDED BY: ILLINOIS USDA-NRCS
ORIGINALLY DEVELOPED BY USDA-NRCS

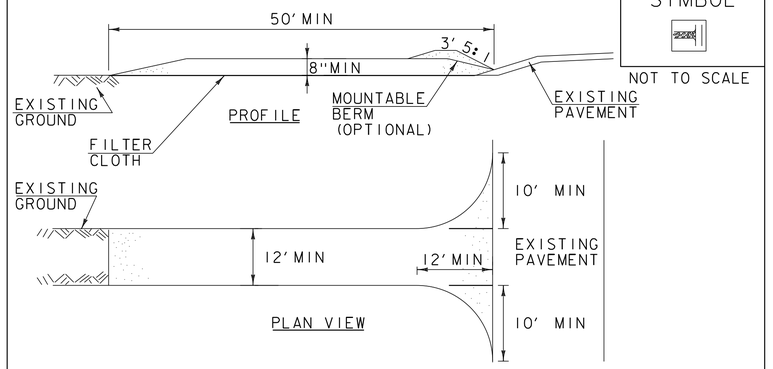
PIPE INLET PROTECTION

REVISIONS	
MARCH 6, 2008	WHF
JANUARY 13, 2009	WHF

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR INLET PROTECTION DEVICE, TYPE I (PAY ITEM 653.40).

SYMBOL

NOT TO SCALE



PLAN VIEW

CONSTRUCTION SPECIFICATIONS

1. STONE SIZE- USE 1-4" STONE, RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH- NOT LESS THAN 50' (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH APPLIES).
3. THICKNESS- NOT LESS THAN 8".
4. WIDTH- 12' MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24' IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
6. SURFACE WATER- ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

STABILIZED CONSTRUCTION ENTRANCE

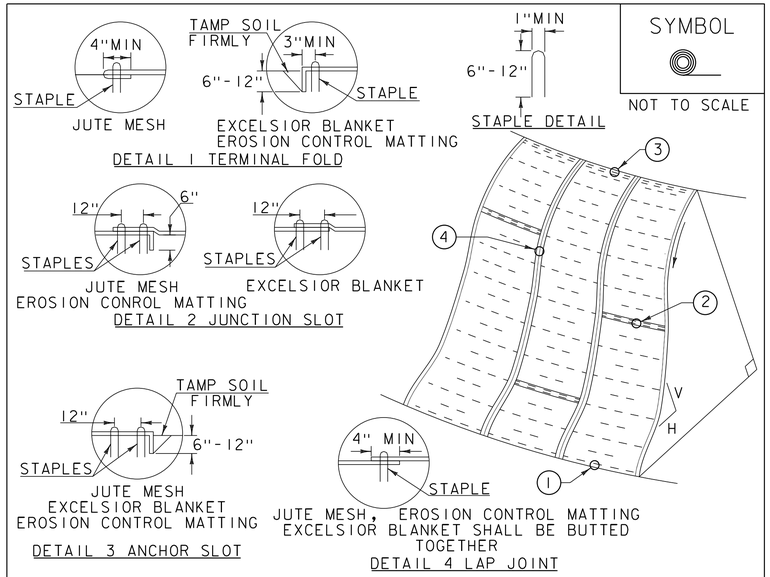
NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR VEHICLE TRACKING PAD (PAY ITEM 653.35) OR AS SPECIFIED IN THE CONTRACT.

REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF

SYMBOL

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION MATTING (PAY ITEM 653.20) OR PERMANENT EROSION MATTING (PAY ITEM 653.21).

REVISIONS	
APRIL 16, 2007	JMF
JANUARY 13, 2009	WHF

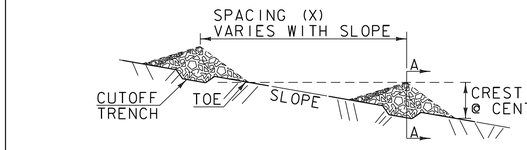
PROJECT NAME: JOHNSON
PROJECT NUMBER: BRF 030-2(26)

FILE NAME: s88bl93EPSC_details.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
EPSC DETAILS (2)

PLOT DATE: 10-JUN-2014
DRAWN BY: R. PELLETT
CHECKED BY: H. SALLS
SHEET 65 OF 69

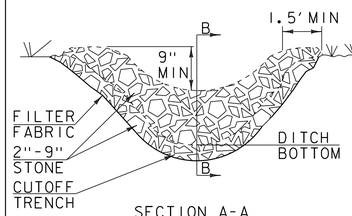
SYMBOL

NOT TO SCALE

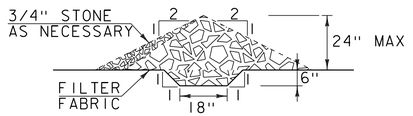


PROFILE

$$X = \frac{H\,(ft)}{SLOPE\,(ft/ft)}$$



SECTION A-A



SECTION B-B

CONSTRUCTION SPECIFICATIONS

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION.
2. CHECK DAMS SHALL BE SPACED SO THAT THE ELEVATION OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION AS THE TOE OF THE UPSTREAM DAM.
3. 3/4" FILTERING STONE MAY BE ADDED TO THE FACE OF THE CHECK DAM AS NECESSARY.
4. EXTEND THE STONE A MINIMUM OF 1.5' BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
5. PROTECT CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
6. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.
7. MAXIMUM DRAINAGE AREA 2 ACRES.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

CHECK DAM

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR TEMPORARY STONE CHECK DAM, TYPE I (PAY ITEM 653.25)

REVISIONS	
MARCH 21, 2008	WHF
JANUARY 8, 2009	WHF

VAOT RURAL AREA MIX

	LBS/AC				
% WEIGHT	BROADCAST	HYDROSEED	NAME	GERM %	PURITY %
37.5%	22.5	45	CREEPING RED FESCUE	85%	98%
37.5%	22.5	45	TALL FESCUE	90%	95%
5.0%	3	6	RED TOP	90%	95%
15.0%	9	18	BIRDSFOOT TREFOIL	85%	98%
5.0%	3	6	ANNUAL RYE GRASS	85%	95%
100%	60	120			

VAOT URBAN AREA MIX

	LBS/AC				
% WEIGHT	BROADCAST	HYDROSEED	NAME	GERM %	PURITY %
42.5%	34	68	CREEPING RED FESCUE	85%	98%
10.0%	8	16	PERENNIAL RYE GRASS	90%	95%
42.5%	34	68	KENTUCKY BLUE GRASS	85%	85%
5.0%	4	8	ANNUAL RYE GRASS	85%	95%
100%	80	160			

SOIL AMENDMENT GUIDANCE

FERTILIZER		LIME	
BROADCAST	HYDROSEED	BROADCAST	HYDROSEED
10-20-10	*FOLLOW*	PELLETIZED	*FOLLOW*
500 LBS/AC	*MANUFACTURER*	2 TONS/AC	*MANUFACTURER*

CONSTRUCTION GUIDANCE

1. RURAL SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
2. URBAN SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED LAWN AREAS DISTURBED BY THE CONTRACTOR.
3. ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
4. FERTILIZER AND LIMESTONE: SHALL FOLLOW RATES SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER
5. HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER.
6. TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.
7. HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED
8. TURF ESTABLISHMENT: PLACING SEED, FERTILIZER, LIME AND MULCH PRIOR TO SEPTEMBER 15 AND AFTER APRIL 15 CAN BETTER ENSURE A VIGOROUS GROWTH OF GRASS.

ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES

TURF ESTABLISHMENT

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 651

REVISIONS	
JUNE 23, 2009	WHF
JANUARY 15, 2010	WHF
FEBRUARY 16, 2011	WHF

PROJECT NAME: JOHNSON
PROJECT NUMBER: BRF 030-2(26)

FILE NAME: s88bl93EPSC_details.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H SALLS
EPSC DETAILS (3)

PLOT DATE: 11-JUL-2014
DRAWN BY: R. PELLETT
CHECKED BY: H. SALLS
SHEET 66 OF 69