

**Erosion Prevention and Sediment Control (EPSC)  
Phase 2 & 3**

**For**

**State of Vermont Agency of Transportation (VTrans)  
Rochester BRF 0162 (17) - Bridge 16  
Rochester, Vermont**

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**EPSC Plan Preparation Date:**

June 23, 2014

Estimated Project Dates:

**Project Start Date: June 9, 2014  
Project Completion Date: October 31, 2014**

**DRAFT**

Project No. 12455

Prepared By:



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## **1.0 EROSION PREVENTION AND SEDIMENT CONTROL NARRATIVE**

### **1.1 Project Description**

The intent of this Phase 2 and 3 EPSC Plan is to update the previously submitted Phase 1 EPSC Plan to address the remaining scope of site work for the project site that will include removal of the existing bridge and abutments, construction of the replacement bridge and abutments, preparation of additional on and off-site access and staging areas not previously covered in Phase 1, completion of bridge approaches, roadway rehabilitation, installation of guardrails and shoulder treatments, embankment stabilization, site restoration, final stabilization and any other incidental work. Phase 2 and 3 also includes the installation of a debris catchment in the stream beneath the bridge, and several other staging areas near the bridge that will be used for crane access during the bridge work.

The in-stream work identified in this EPSC plan is based on the detailed submittal provided by the contractor, entitled “Water Control Plan Bridge 16” (Water Control Plan), prepared by TAW Associates, dated June 12, 2014, which provides design, layout, dimensions and material details on the proposed debris catchment, in addition to supporting calculations addressing the impacts on stream flows. The EPSC plans should be updated in the event that any changes are made to this approach.

Since this is an update to the Phase 1 EPSC Plan, the information provided in this Phase 2 and 3 EPSC Plan is focused primarily on the remaining scope of work (Phases 2 and 3) for the overall project. Please refer to the previously approved Phase 1 EPSC Plan for the following information:

- Site Map
- General erosion prevention and sediment control information
- Typical details
- Contact information and responsible parties
- EPSC responsibilities
- EPSC inspection form
- Other general procedures and requirements for the overall project

### **1.2 Risk Evaluation Related to Additional Impacts**

Although some additional impacts are necessary during Phase 2 and 3, the cumulative impact areas are still less than one acre, so the project will not require coverage under Vermont Agency of Natural Resources (VANR) Construction General Permit No. 3-9020, and a Risk Evaluation is not required. In the event that changes are made prior to or during construction that result in the disturbance of one or more acres, the contractor shall be responsible for additional permitting with the VANR.

Please see the updated EPSC Plans in Appendix A that depict the overall impacts that are necessary for all phases of the project, including addition areas required for Phases 2 and 3. The total impacts for the Phase 1 work were approximately 40,252 square feet (SF) of area, including previously permitted limits and

additional off-site impacts. It should be noted that this total does not match the exact areas outlined in the Phase 1 EPSC plan (39,796 SF) due to a minor discrepancy in the impact limits depicted on the Phase 1 plan. The additional impacts for Phases 2 and 3 are approximately 762 SF including the previously permitted area under the bridge, and the minimal areas that were recently amended by the contractor with the United States Army Corps of Engineers (USACE). The total project impact area for all phases is approximately 41,014 SF for the overall project. Since the total impact area is less than one acre, the project is not expected to require coverage under the VANR Construction General Permit.

### **1.3 Erosion Prevention and Sediment Control**

Please refer to the Phase 1 EPSC Plan for information related to general erosion prevention and sediment controls and typical details prepared for VTrans for this project. Section 1.4 provides a detailed construction sequence that identifies the type of work activity to be performed, the specific earth disturbances to be addressed, and specific erosion control measures (relating to the typical measures discussed on Sheets 166 to 171 of the Contract Plans) that will be implemented during Phase 2 and 3 of the project to prevent erosion, control sediment transport, and achieve timely stabilization of disturbed areas.

See Appendix A for updated EPSC Plans (Phase 2 and 3) that include detailed site-specific information provided by the Contractor to supplement the general EPSC Plan information provided in the Contract Plans, and document and address construction activities and related erosion and sediment controls to be implemented during the phases 2 and 3 of construction.

The proposed staging areas, access and other information for Phase 2 and 3 was provided by the Contractor. The EPSC plans should be updated in the event that any changes are made to this approach. Information on the subsequent work phases will be provided under a separate EPSC Plan submission at a later date.

### **1.4 Sequence and Staging**

**General Construction Sequence:** The overall work related to this project involves the removal and replacement of bridge #16 on Vermont (VT) Route 73 over the Corporation Brook in Rochester, VT, as described in the Phase 1 EPSC Plan. The project includes complete removal and replacement of the existing concrete bridge superstructure and substructure, stream channel and bank stabilization, and approximately 300 feet of the roadway work on VT Route 73. Phase 1 included the preliminary work necessary for site setup, establishing access and staging areas, removal of the existing bridge wingwalls, guardrail removal and initial erosion and sediment controls related to this limited work scope. Phase 2 and 3 include the remaining work required for overall project completion, including bridge removal, construction of the new bridge, bridge approaches, roadway rehabilitation, establishing additional staging and access areas for bridge work, temporary in-stream work for bridge staging, site restoration and final stabilization.

The following is a general summary of the overall project phases anticipated for completion of this project, as presented in the Phase 1 EPSC Plan:

- Phase 1 - During this phase, traffic will continue over the existing bridge and on VT Route 73 during the initial site setup. Limited single-lane closures will be utilized on each side of the road to accommodate the necessary work.
- Phase 2 - This phase will involve complete removal and replacement of the existing bridge superstructure and substructure, stream channel work and associated stream diversion measures, and roadway and approach work. Limited duration road closures and a potential off-site detour will be implemented to accommodate the necessary work.
- Phase 3 - This phase will involve completion of any remaining roadway and approach work, final pavement, guardrail and shoulder treatments, embankment restoration, and final site restoration. At the completion of Phase 2, the new bridge will be fully operational, allowing traffic to resume over the new bridge. During this phase, limited single-lane closures will be utilized on each side of the road to accommodate the necessary work.

**Traffic Sequencing:** While Phase 1 work only required temporary single-lane closures, a short-duration road closure (60 hours) will be implemented during Phase 2 to facilitate bridge removal and replacement. All traffic controls shall be in accordance with the approved traffic control plan. Once the bridge replacement has been completed, traffic will resume on VT Route 73 for the remainder of the project, with only temporary single-lane road closures for any subsequent work.

**Stream Diversion Sequencing:** The approved Water Control Plan addresses the work that will take place within the stream channel during Phase 2. The enclosed EPSC Plans have also been updated to depict the anticipated measures, which are limited to the installation of a temporary debris catchment beneath the bridge during removal and replacement of the bridge. The debris catchment will consist of two rows of jersey barriers placed along the toe of the stream banks parallel to the existing bridge abutments, covered with steel plates and/or crane mats to form a temporary level surface beneath the bridge. The original USACE wetland permit has been amended to include 200 SF of additional stream impacts below OHW at the four corners of the existing bridge to facilitate installation of the jersey barriers.

During the bridge removal and replacement activities, the stream will continue to flow unimpeded beneath the debris catchment under normal flow conditions. In the event of higher stream flows where there is a risk that stream levels will submerge the debris catchment, the contractor shall, at a minimum, remove all equipment and debris from the catchment surface prior to the rise of the stream level to prevent any impacts to the stream. If the stream level rises above the restricted flow capacity of the debris catchment, as calculated in the Water Control Plan, the contractor shall remove the surface plates and/or mats until the stream flow subsides to a normal level. It is critical that the contractor monitor

weather forecasts at all times during the project, to ensure that no impacts occur to the stream. The contractor shall also ensure that adequate labor and equipment are available at the site at all times during the project to implement any preventive measures that will avoid impacts to the stream or other damage to surrounding infrastructure.

Once bridge removal and replacement have been completed, the remaining work will take place primarily landward and/or above the ordinary high water level normal stream level. At this point the stream banks should be stabilized with stone fill below the ordinary high water level. In fact, the new abutments will be constructed landward of the existing ordinary high water line, so most of the subsequent work will take place outside of the stream, except for final stabilization of the stream banks. Geotextile filter curtains (a.k.a. turbidity barrier) that were installed during Phase 1 shall be extended along the stream banks on each side of the Corporation Brook to fully enclose and control sediment from any disturbed work areas during this phase.

Additional temporary perimeter erosion controls and stabilization (i.e., stone check dams, silt fence, etc.) will be installed in conjunction with impacts along the brook, as detailed in the EPSC Plans. Once Phase 2 has been completed, all disturbed areas will be temporarily stabilized in anticipation of the remaining project work.

**Updated Project Phasing:** The overall project phasing will be as follows:

1. Phase 1 Activities - Mobilization, site setup, establish initial work areas, complete removal of bridge wingwalls and other infrastructure, install temporary stabilization
2. Phase 2 - Establish revised construction limits.
3. Phase 2 - Setup additional staging areas outside previous construction limits.
4. Phase 2 - Establish new perimeter erosion controls and relocate turbidity barriers along subsequent work areas.
5. Phase 2 - Tree clearing, as needed.
6. Phase 2 - Install temporary debris catchment in stream, including temporary staging area and related shoring
7. Phase 2 - Setup traffic controls for short-duration road closure of VT Route 73.
8. Phase 2 - Complete bridge removal and replacement activities.
9. Phase 2 - Install temporary and/or permanent stone fill stabilization below ordinary high water line.
10. Phase 3 - Remove temporary in-stream measures, including debris catchment, cofferdam and stone fill extension, and staging areas.
11. Phase 3 - Complete embankment stabilization including stone fill and other measures.
12. Phase 3 - Complete remaining roadway and shoulder work.
13. Phase 3 - Final stabilization, general site restoration, and demobilization.

Within each work phase, it is important to limit the area of disturbance to locations where construction activities are underway and stabilize them as quickly

as possible. The construction activities will be sequenced according to the construction sequencing provided below to minimize the duration and area of exposed soils within the limits of disturbance and to allow for efficient completion of work. Some variation in the sequence of construction activities and erosion control measures may eventually be necessary at each work area, depending on the specific site conditions and progress of work. In this case, the EPSC Plans and narrative will be updated by the Contractor as necessary to document these changes for the project site and specific activities.

The intended construction sequence related to Phase 2 and 3 is as follows:

1. **Clearing Limits:** Flag all clearing limits with survey tape where tree or vegetation removal will be necessary for additional areas to be impacted for Phase 2 and 3.
2. **Wetland Limits:** Flag all wetland areas, including top of stream bank, with survey tape within project limits, including any additional areas to be impacted for Phase 2 and 3.
3. **Limits of Construction:** Install additional project demarcation fencing to delineate the new limits of construction, which the Contractor will access with vehicles or equipment, or disturb during completion of all Phase 2 and 3 work. This task shall include clearly delineating jurisdictional wetland areas that are permitted for disturbance or to remain undisturbed. Project demarcation fencing will generally be installed along the top of slopes above areas of excavation or to cordon off areas and to prevent access during unsafe working conditions.
4. **Traffic Controls:** Install all necessary traffic controls along VT Route 73 per the Contract Plans and the VTrans requirements. Temporary traffic controls are anticipated to include separate temporary traffic barricades, jersey barriers, markings and signage for short-term lane closures as necessary during Phase 2 and 3 activities such as installation of temporary staging areas, stabilized construction entrances, roadway work, guardrail and shoulder work, temporary facility removal, final site restoration and stabilization, material deliveries or movement of equipment and vehicles. This access may vary during the progress of work depending on the side of the road that will be closed off, and the requirement to maintain thru-lanes for one-way or two-way traffic. Prior to Phase 2 bridge removal and replacement, a short-duration road closure and detour will be implemented on VT Route 73.
5. **Perimeter Controls:** Install silt fence perimeter controls at the limit of disturbance for any additional areas that will be impacted for Phase 2 and 3. This task will include, at a minimum, a line of silt fence down-gradient of all temporary or permanent disturbances within the project limits, as shown on the EPSC Plans for each project phase. Additional silt fence will also be installed along the top of the river banks, at the top of slopes above areas of excavation, at the toe of graded slopes, limits of work, or other areas as necessary to control erosion and prevent sediment from

impacting adjacent undisturbed areas and surface waters. Silt fence may also be needed down-gradient of temporary travelways and access roads, since significant grading and surface disturbances are possible during access road and staging area setup and usage. Silt fence will be installed parallel with the existing contours and where appropriate to protect downstream undisturbed areas. All Phase 1 perimeter controls shall be continually maintained until the completion of Phase 2 and 3.

6. **Tree Clearing:** Clear all trees and significant vegetation, in accordance with the project clearing limits or as directed by the Resident Engineer, within previously flagged or fenced construction limits, and simultaneously install temporary stabilization measures, including temporary seed and mulch, wood chips, and/or crushed stone on disturbed areas. All disturbed slopes steeper than 3:1 will be protected with temporary erosion matting, where necessary. This may include additional areas that will be impacted for Phase 2 and 3.
7. **Stabilized Construction Entrances:** Grade and install stabilized construction entrances where needed within the work area, as shown on EPSC Plans. Since VT Route 73 is a paved roadway, stabilized construction entrances may only be required where the existing pavement and subbase materials have been removed, or during initial work to install access and staging areas. Stabilized construction entrances may only require short tracking pads where temporary access roads meet existing pavement as necessary to control tracking of sediment beyond the work areas, and to assist with dust control on each end of the work area. Full-length stabilized construction entrances may not be needed in most cases, and the layout and dimensions will be determined in the field. Some form of stabilized construction entrance or tracking pad is anticipated for temporary access and staging on the northwest and southwest sides of the work area during use of the off-site areas, and these shall be left in place until the areas are no longer being used. Adequate traffic controls shall be in place along VT Route 73 in the vicinity prior to installing and using the stabilized construction entrances.
8. **Temporary Construction Access and Staging Areas (Phase 2 and 3):** Temporary construction access and staging areas are anticipated during Phase 2 and 3 for accessing the off-site properties, existing bridge structures, and installing the debris catchment and temporary staging areas in the stream, as shown on the EPSC Plans. All necessary temporary stabilization, erosion controls, and surface runoff measures shall be installed simultaneously with grading activities to prevent erosion on disturbed areas, contain sediment, and convey stormwater through the disturbed areas, especially in any areas of concentrated drainage. This process may include, in addition to perimeter controls already installed, diversion and stone-lined swales, stone check dams, temporary erosion matting on slopes, water bars, and temporary mulch. Where difficult or unsuitable soil conditions (wet, soft, etc.) are encountered within access roads or staging areas, temporary surface stabilization may require an application of crushed stone placed on geotextile fabric, as directed by the

Resident Engineer. Stone fill or existing stone materials from areas to be excavated may be utilized for creating level staging pads adjacent to the work areas, if approved by the Resident Engineer.

**Temporary Access Roads:** Where temporary access roads have to be benched into the existing slopes, stormwater runoff from up-gradient areas may concentrate along the perimeter silt fence at the toe of slope, and a temporary diversion ditch may be necessary along this silt fence to convey drainage to a discharge point into the existing stream channel. Stone check dams and/or stone lining shall be installed along the silt fence as necessary to control flow velocity, contain sediment, and limit turbidity at the discharge point. Temporary erosion matting shall be installed on all cut and fill slopes steeper than 3:1 within 48 hours of slope grading and prior to any rain events. Water bars may be installed along the surface of the access road at 50-foot intervals as necessary to control runoff. All related erosion controls shall be in place prior to utilizing access roads. Any portion of the access roads that are installed below the ordinary high water level of the stream shall consist of clean stone fill with minimal fine materials. Geotextile filter fabric is also recommended below any stone fill that is placed in the stream to minimize impacts to existing vegetation and river bed materials.

**Staging and Stockpiling:** Where additional staging areas are located outside immediate work areas, such as on level terrain within the right-of-way (ROW), within lane closures, or on off-site areas, additional surface water, or erosion controls are required as the specific field conditions dictate. Earth stockpiles shall be temporarily stabilized with seed and mulch if the duration of exposure is expected to be greater than 14 days. Silt fence shall be placed on the down-gradient side only if necessary to contain stockpiled materials and prevent sediment from being washed into the existing ditches, stream, or onto undisturbed areas. The Contractor may utilize temporary lane closures along roads adjacent to the work areas for equipment or material delivery, such as concrete trucks, if approved by the Resident Engineer.

**Off-Site Staging and Disposal Area:** Activities that will take place at approved off-site areas shall adhere to all applicable erosion and sediment control requirements contained in this EPSC Plan, property owner requirements, and other applicable requirements contained in the VTrans approval of this area. This may include installation of stabilized construction entrances, site perimeter controls, perimeter controls around stockpile areas, and stabilization measures, where necessary, at the off-site locations, as determined in the field. The off-site areas shall also be monitored in conjunction with on-site areas for the entire duration of usage and until all disturbed areas have been fully stabilized.

9. **Stream Diversion Measures:** Setup stream diversion measures for Phase 2 prior to any disturbances to the streambed or banks in accordance with the approved EPSC Plan. This task is anticipated to include a debris catchment and temporary stone fill below the existing bridge, and

relocation of the turbidity barriers installed in Phase 1 to encompass Phase 2 and 3 work areas, as detailed on the EPSC Plans.

**Turbidity Barriers:** Turbidity barriers and/or sand bag cofferdams shall be in place around all active work areas that will involve disturbances on the bed and/or banks of the Corporation Brook. These measures shall be installed prior to any upgradient disturbances, and shall be maintained until all disturbed areas are fully stabilized. The turbidity barriers shall be adequately secured in a fixed position within the river with anchors and lines as necessary to prevent excessive movement during varying flow levels and velocities. The turbidity barriers shall be long enough to extend from the water surface to the river bed during normal high water conditions. It is critical that the Contractor maintains the turbidity barriers to ensure that they are functioning as intended, are maintained in a relatively fixed position, do not collect excessive debris, and are repaired in the event of damage from debris or other causes.

10. **Stream Channel and Bank Disturbances:** No significant channel or bank impacts are anticipated for Phase 2 or 3. However, prior to any disturbances within the river channel and banks, turbidity barriers, and/or cofferdams shall be in place around the work areas and functioning as intended. Excavated soil and stone materials shall be stockpiled in the construction staging areas for re-use or disposal, and shall only be placed in areas contained by adequate perimeter erosion and sediment controls.

During any demolition work, the Contractor shall also ensure that no excess concrete, or associated debris is allowed to pass into downstream surface waters during these operations.

11. **Bridge Removal and Replacement Work:** Complete Phase 2 bridge removal, excavation, and replacement work, as specified in the Contract Plans. Prior to any disturbances on the stream banks, turbidity barriers and/or cofferdams shall be in place and operating to limit water within the respective work areas and contain sediment.

During any concrete work, the Contractor shall also ensure that no excess grout, concrete, or associated washwater is allowed to pass into downstream surface waters during these operations. A separate dewatering sump and treatment measures may be needed around isolated areas during concrete work to prevent mixing of waters contaminated with concrete with other dewatering flows, as deemed necessary by the Resident Engineer.

If any additional dewatering from areas contaminated with concrete is deemed necessary during concrete work, dewatering flows shall be pumped to a treatment basin, or a filter bag with additional treatment measures, since a filter bag alone is not typically adequate for removing the fine particles and turbidity associated with concrete contamination. A detail has been provided on the Phase 1 EPSC Plans in the event that this additional treatment measure is needed. The Contractor shall continuously

monitor the filter bag and/or treatment basin throughout the duration of these activities to ensure that adequate filtration is achieved, and that no untreated water escapes from these areas into the stream.

12. **Restoration of Bridge Work Areas:** The disturbed portion of riverbed and banks will be re-established to finished grades in accordance with the Contract Plans. Cofferdams and/or turbidity barriers shall remain in place and functioning until finished grades have been achieved and all disturbed areas are stabilized.

All disturbed surfaces in the river and on the banks below the ordinary high water line shall be stabilized, per the Contract Plans or as directed by the Resident Engineer, with stone fill, permanent seed, and mulch, or erosion matting, where required for slopes steeper than 3:1 or where erosion, washout, or scouring may be a concern. Once this condition is achieved, the cofferdams and/or turbidity barriers can be removed.

13. **Remove Temporary Access and/or Staging Areas:** Remove all temporary construction access roads, staging areas, cofferdams, and in-stream measures once work is completed in these areas.
14. **Remaining Roadway Work:** Complete all remaining roadway work, including structure backfill, subbase, roadway paving, shoulder, guardrail, embankment filling and other work. All disturbed areas within the work areas shall be contained with perimeter controls until all areas have been fully stabilized.
15. **Final Stabilization:** Install landscaping and final stabilization within 48 hours of final grading activities for all disturbed areas including topsoiling, permanent seeding, mulching, sodding (if deemed necessary), mulch netting, erosion matting, and stone fill.
16. **Site Cleanup:** Remove stabilized construction entrances and stabilize with permanent seed, mulch, and erosion matting as necessary. Remove all temporary erosion and sediment control measures, and perimeter controls once final stabilization has been achieved for all disturbed areas. Remove traffic controls and reestablish normal traffic patterns once work has been deemed complete, or as directly by the Resident Engineer.
17. **On-going Monitoring and Maintenance Activities:** The Contractor shall continuously inspect and maintain all erosion and sediment control measures. Additional inspections shall be required by the On-Site Plan Coordinator and/or EPSC Plan Monitor on a weekly basis and after every rain event in which runoff is discharged from the site. The following Best Management Practices (BMPs) measures are recommended throughout duration of construction:

- The On-Site Plan Coordinator should utilize Accuweather website ([www.accuweather.com](http://www.accuweather.com)) or other appropriate service to predict precipitation events that could impact stream flows and erosion

controls. The Contractor shall be prepared to install all erosion and sediment controls prior to rain events.

- The Contractor shall have all necessary erosion control equipment and materials, including mulch and mulching equipment, on-site for the duration of work in order to stabilize disturbed slopes, inlets, outlets, and any other areas of potential concern.
- Maintain dust control in current work area at all times.
- Unpaved roadway areas intended for overnight travel shall be treated with water or another approved dust control product (e.g., Calcium Chloride) prior to the end of the work day.
- Continuously inspect and maintain all stormwater, erosion, and sediment control measures throughout construction, until disturbed areas have been stabilized.
- Remove trapped sediment from erosion and sediment control measures as appropriate for each type of BMP utilized, and as directed.
- Monitor the EPSC and erosion controls prior to, during, and after weather conditions that could cause erosion and or sedimentation issues. The Contractor shall also anticipate the need to return to the site to address any deficiencies, as directed, on a very short time frame.

18. **Site Completion:** Upon completion of all work, all disturbed areas must be stabilized.

**Off-Site Activities:** All work related to this project is anticipated to be within the bounds of the VTrans ROW with the exception of temporary access and staging areas where there is inadequate room for the necessary construction activities. It is the responsibility of the Contractor to secure authorization for access on adjacent properties as necessary to allow work to be undertaken outside the ROW.

The project will generate a limited amount of vegetation from tree clearing activities and typical construction related debris. Any debris that requires removal from the project site will be disposed of by the Contractor in accordance with any applicable laws and regulations. All excavated soil materials (such as topsoil, soil, boulders, rock, etc.) will remain on-site and shall be utilized in final grading and stabilization of disturbed areas, to the extent possible. It is anticipated that the Contractor will need to import limited volumes of stone fill to establish finished grades within the work areas.

During Phase 2 and 3, the Contractor will continue to utilize two off-site abutting areas for construction access and staging of equipment and materials, as discussed in the Phase 1 EPSC Plan. The two off-site areas include the McGuffin and Knowles properties that have been reviewed and approved by VTrans, and the property owners have agreed to allow the Contractor to use the properties. The Contractor shall adhere to all applicable conditions of this approval, including installation, maintenance, and monitoring of general erosion and sediment controls at this location, as necessary, and in accordance with this EPSC Plan. Additional erosion and sediment control requirements have been incorporated into the construction sequence in Item Nos. 7, 8 and 15 above.

**EPSC Plan Updates:** The EPSC Plan is a document that must be amended to reflect changes occurring at the site. Revisions to the EPSC Plan may include additions of new BMPs, replacement of failed BMPs, significant changes in the activities or their timing on the project, changes in personnel, changes in inspection and maintenance procedures, and updates to the site plans. All revisions to the EPSC Plan should be documented on the revision documentation form provided in Appendix B.

If construction activities or design modifications are made that could impact the measures shown on the enclosed EPSC Plans, this EPSC Plan and this narrative will be amended appropriately, and include a description of the new activities, and the planned erosion control measures to be implemented.

## **1.5 Schedule**

The project began in early June with mobilization and site setup following the approval of the Phase 1 EPSC Plan. Phase 2 and 3 work will begin in early July, and the short-duration road closure is scheduled for the weekend of July 18th. Final completion is scheduled for October 31, 2014.

The specific schedule for construction activities at the site location are not known at this time, but the Contractor has provided a preliminary schedule of all project related activities. Once a more specific schedule is determined, dates should be added to this EPSC Plan, as appropriate.

## **2.0 EROSION PREVENTION AND SEDIMENT CONTROL PLANS**

EPSC Plans for this project are included in Appendix A. The EPSC plans also include the following information:

- Direction(s) of stormwater flow and approximate slopes before and after major grading activities;
- Areas of soil disturbance;
- Areas that will not be disturbed;
- Natural features to be preserved;
- Locations of major structural and non-structural BMPs identified in the EPSC;
- Locations and timing of stabilization measures;
- Locations of storm drain inlets;
- Standard Erosion Control Specifications (see Phase 1 EPSC Plan);
- Construction Sequencing (see Phase 1 EPSC Plan);
- Winter Construction Notes (see Phase 1 EPSC Plan); and
- Erosion Control Details (see Phase 1 EPSC Plan).

This EPSC Plan document shall be updated during construction activities in order to identify each type of erosion and sediment control BMP that will be utilized.

## **APPENDICES**

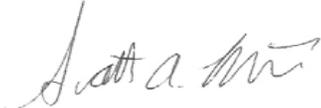
**APPENDIX A  
EPSC PLANS**

**APPENDIX B**  
**EPSC PLAN REVISION DOCUMENTATION FORM**

### EPSC Plan Revision Documentation Form

This Erosion Prevention and Sediment Control Plan (EPSC Plan) should be revised and updated to address changes in site conditions, new or revised government regulations, and additional on-site stormwater and erosion controls.

All revisions to the EPSC Plan must be documented on the EPSC Plan Revision Documentation Form, which should include the information shown below. The authorized facility representative who approves the EPSC Plan should be an individual at or near the top of the facility's management organization, such as the president, vice president, construction manager or supervisor, on-site coordinator, or environmental manager. The signature of this representative attests that the EPSC Plan revision information is true and accurate. Previous authors and facility representatives are not responsible for the revisions.

Revision Number	Description of the Revision	Date	Revision Preparer	Company Representative Signature
Originally Issued	Draft	June 23, 2014	Pathways Consulting, LLC	 Scott A. Williams, P.E.
1	Final Revisions per VTrans		Pathways Consulting, LLC	 Scott A. Williams, P.E.
2				
3				
4				
5				

TEMPORARY DEBRIS CATCHMENT TO BE INSTALLED BELOW EXISTING BRIDGE DURING REMOVAL. PER APPROVED WATER CONTROL PLAN, DEBRIS ON CATCHMENT SURFACE SHALL BE REMOVED ON DAILY BASIS AND/OR PRIOR TO ANY STORM EVENTS WHEN THERE IS POTENTIAL FOR STREAM FLOWS TO OVERTOP CATCHMENT. ALL IMPACTS TO STREAM SHALL BE WITHIN APPROVED LIMITS.

RELOCATE TURBIDITY BARRIERS INSTALLED DURING PHASE 1 TO SURROUND ADDITIONAL AREAS IMPACTED DURING PHASE 2.

64B  
LIMITS OF PROJECT DURING PHASE 2 (TYP.)  
MAINTAIN SILT FENCE ON DOWNGRADIENT SIDE OF DISTURBANCES DURING PHASE 2 (TYP.)

ON-SITE CONSTRUCTION STAGING AREA: STAGING FOR BRIDGE REMOVAL AND REPLACEMENT ANTICIPATED WITHIN EXISTING ROADWAY AND SHOULDER AREAS. WITH THE EXCEPTION OF APPROVED OFF-SITE AREAS, RELATED WORK WILL TAKE PLACE DURING LIMITED DURATION ROAD CLOSURE. TRAFFIC CONTROL PER APPROVED TRAFFIC CONTROL PLAN. AREA SHALL HAVE PERIMETER EROSION CONTROLS (SILT FENCE AND/OR TURBIDITY BARRIERS), CRUSHED STONE ON SURFACE WHERE PAVEMENT IS REMOVED (AS NEEDED), AND SEPARATE PERIMETER EROSION CONTROLS FOR ANY EARTHEN MATERIAL STORAGE/STOCKPILING THAT WILL OCCUR WITHIN THIS AREA.

INSTALL STABILIZED CONSTRUCTION ENTRANCE ONLY IF PAVEMENT REMOVED. SHORT TRACKING PAD MAY STILL BE NEEDED EVEN IF PAVEMENT LEFT IN PLACE.

APPROVED OFF-SITE TEMPORARY STAGING AREA TO BE USED DURING ALL PHASES OF CONSTRUCTION. AT A MINIMUM, PERIMETER CONSTRUCTION FENCE AND EROSION CONTROLS SHALL BE INSTALLED AROUND THIS AREA. INSTALL ADDITIONAL STORMWATER AND SEDIMENT CONTROLS AND CRUSHED STONE SURFACE STABILIZATION, AS NEEDED.

MAINTAIN STABILIZED CONSTRUCTION ENTRANCE DURING PHASE 2 TO CONTAIN SEDIMENT TRACKING DURING CONSTRUCTION.

RELOCATE TURBIDITY BARRIERS INSTALLED DURING PHASE 1 TO SURROUND ADDITIONAL AREAS IMPACTED DURING PHASE 2.

PROPOSED TEMPORARY IMPACTS (4 AREAS) BELOW CHW WITHIN STREAM FOR STAGING DURING BRIDGE REMOVAL AND CONSTRUCTION (APPROVED BY USAGE) = 200 SF

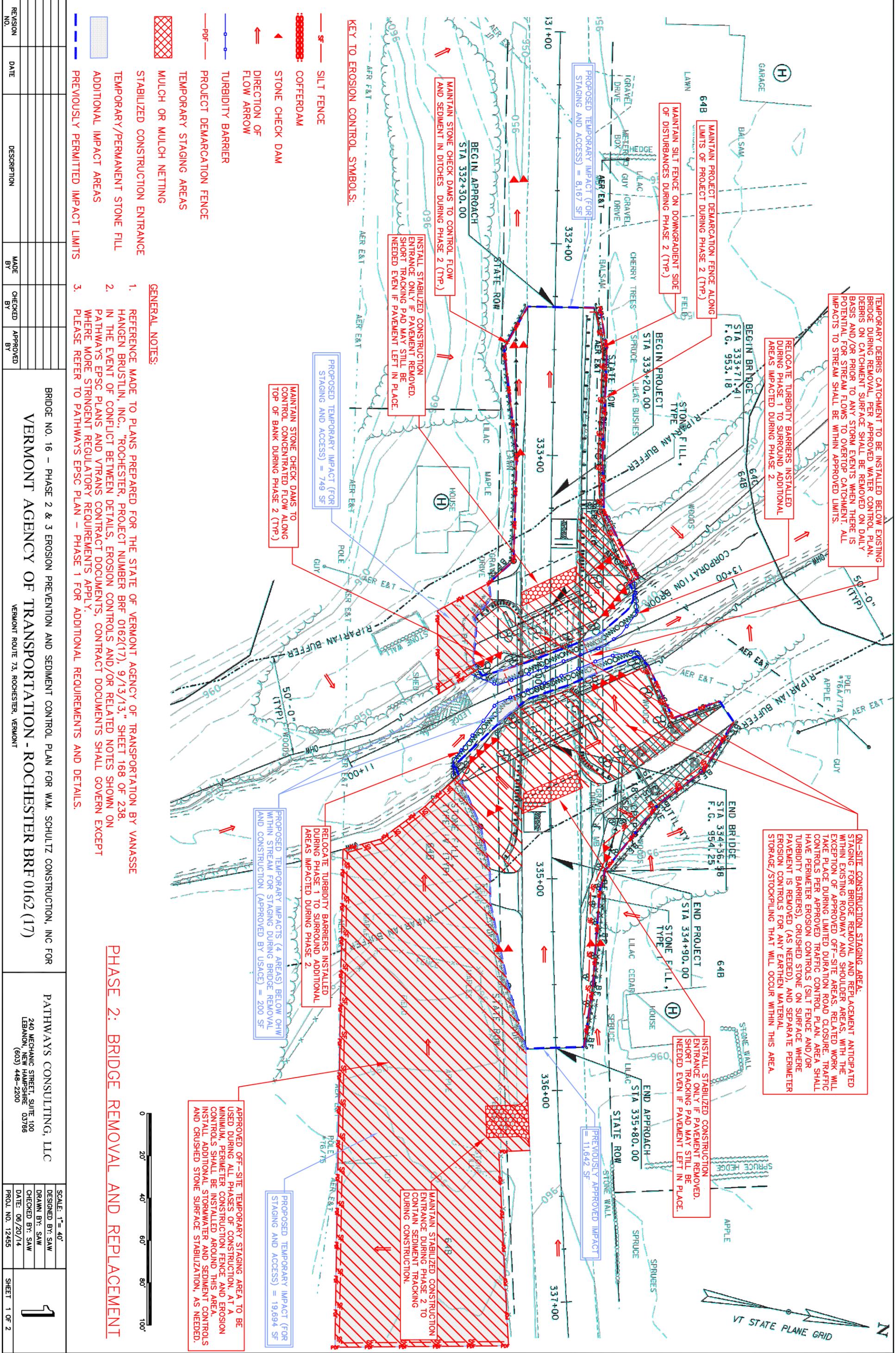
MAINTAIN STONE CHECK DAMS TO CONTROL CONCENTRATED FLOW ALONG TOP OF BANK DURING PHASE 2 (TYP.)

PROPOSED TEMPORARY IMPACT (FOR STAGING AND ACCESS) = 749 SF

INSTALL STABILIZED CONSTRUCTION ENTRANCE ONLY IF PAVEMENT REMOVED. SHORT TRACKING PAD MAY STILL BE NEEDED EVEN IF PAVEMENT LEFT IN PLACE.

MAINTAIN STONE CHECK DAMS TO CONTROL FLOW AND SEDIMENT IN DITCHES DURING PHASE 2 (TYP.)

PROPOSED TEMPORARY IMPACT (FOR STAGING AND ACCESS) = 8,167 SF



KEY TO EROSION CONTROL SYMBOLS:

- SF — SILT FENCE
- COFFERDAM
- ▲ STONE CHECK DAM
- ← DIRECTION OF FLOW ARROW
- TURBIDITY BARRIER
- POF — PROJECT DEMARCATION FENCE
- TEMPORARY STAGING AREAS
- MULCH OR MULCH NETTING
- STABILIZED CONSTRUCTION ENTRANCE
- TEMPORARY/PERMANENT STONE FILL
- ADDITIONAL IMPACT AREAS
- PREVIOUSLY PERMITTED IMPACT LIMITS

GENERAL NOTES:

1. REFERENCE MADE TO PLANS PREPARED FOR THE STATE OF VERMONT AGENCY OF TRANSPORTATION BY VANASSE HANGEN BRUSTLIN, INC., "ROCHESTER, PROJECT NUMBER BRP 0162(17), 9/13/13," SHEET 168 OF 238.
2. IN THE EVENT OF CONFLICT BETWEEN DETAILS, EROSION CONTROLS AND/OR RELATED NOTES SHOWN ON PATHWAYS EPSC PLANS AND VTRANS CONTRACT DOCUMENTS, CONTRACT DOCUMENTS SHALL GOVERN EXCEPT WHERE MORE STRINGENT REGULATORY REQUIREMENTS APPLY.
3. PLEASE REFER TO PATHWAYS EPSC PLAN - PHASE 1 FOR ADDITIONAL REQUIREMENTS AND DETAILS.

PHASE 2: BRIDGE REMOVAL AND REPLACEMENT

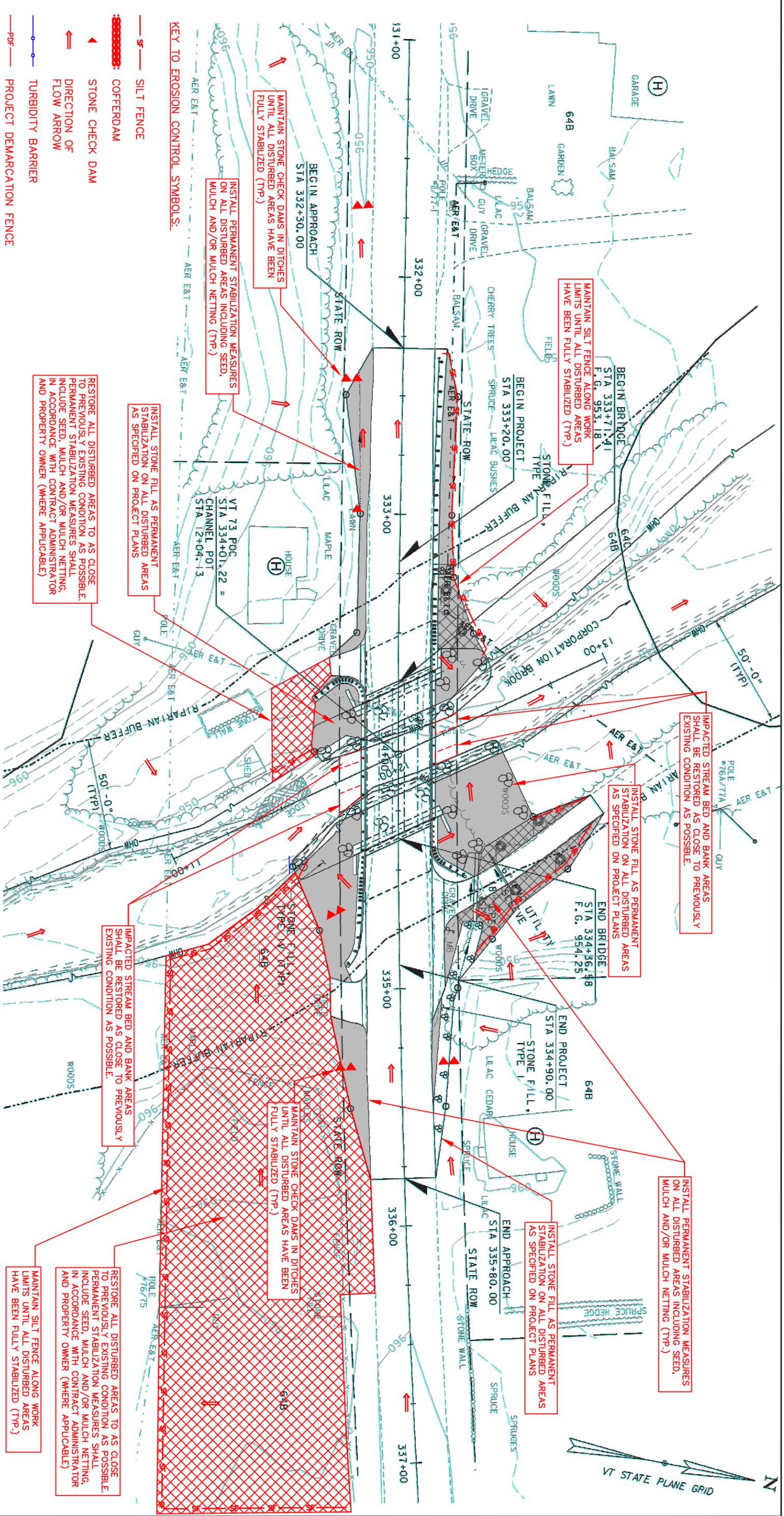


REVISION NO.	DATE	DESCRIPTION	MADE BY	CHECKED BY	APPROVED BY

BRIDGE NO. 16 - PHASE 2 & 3 EROSION PREVENTION AND SEDIMENT CONTROL PLAN FOR W.M. SCHULTZ CONSTRUCTION, INC FOR VERMONT AGENCY OF TRANSPORTATION - ROCHESTER BRP 0162 (17)  
VERMONT ROUTE 73, ROCHESTER, VERMONT

PATHWAYS CONSULTING, LLC  
240 MECHANIC STREET, SUITE 100  
LEBANON, NEW HAMPSHIRE 03786  
(603) 448-2200

SCALE: 1" = 40'  
DESIGNED BY: SAW  
DRAWN BY: SAW  
CHECKED BY: SAW  
DATE: 06/20/14  
PROJ. NO. 12455



KEY TO EROSION CONTROL SYMBOLS:

- S— SILT FENCE
- COFFERDAM
- ▲ STONE CHECK DAM
- ← DIRECTION OF FLOW ARROW
- TURBIDITY BARRIER
- PDR— PROJECT DEMARCATION FENCE
- TEMPORARY STAGING AREAS
- MULCH OR MULCH NETTING
- STABILIZED CONSTRUCTION ENTRANCE
- TEMPORARY/PERMANENT STONE FILL
- ADDITIONAL IMPACT AREAS
- PREVIOUSLY PERMITTED IMPACT LIMITS

GENERAL NOTES:

1. REFERENCE MADE TO PLANS PREPARED FOR THE STATE OF VERMONT AGENCY OF TRANSPORTATION BY VANASSE HANGEN BRUSTLIN, INC., "ROCHESTER, PROJECT NUMBER BRP 0162(17), 9/13/13," SHEET 169 OF 238.
2. IN THE EVENT OF CONFLICT BETWEEN DETAILS, EROSION CONTROLS AND/OR RELATED NOTES SHOWN ON PATHWAYS EPSC PLANS AND VTRANS CONTRACT DOCUMENTS, CONTRACT DOCUMENTS SHALL GOVERN EXCEPT WHERE MORE STRINGENT REGULATORY REQUIREMENTS APPLY.
3. PLEASE REFER TO PATHWAYS EPSC PLAN - PHASE 1 FOR ADDITIONAL REQUIREMENTS AND DETAILS.

PHASE 3: FINAL SITE RESTORATION CONDITIONS

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BRIDGE NO. 16 - PHASE 2 & 3 EROSION PREVENTION AND SEDIMENT CONTROL PLAN FOR W.M. SCHULTZ CONSTRUCTION, INC FOR	PATHWAYS CONSULTING, LLC
VERMONT AGENCY OF TRANSPORTATION - ROCHESTER BRP 0162 (17)	240 MECHANIC STREET, SUITE 100 LEBANON, NEW HAMPSHIRE 03786 (603) 448-2200
VERMONT ROUTE 73, ROCHESTER, VERMONT	SCALE: 1" = 40' DESIGNED BY: SAW DRAWN BY: SAW CHECKED BY: SAW DATE: 06/20/14 PROJ. NO. 12455
	SHEET 2 OF 2