



SITE DEVELOPMENT, EXCAVATION, DEMOLITION
 WATER AND SEWER SYSTEMS
 AGGREGATE OPERATIONS

**Solid Waste Management
 Landfill Sitework and Closures**
 8 U.S. ROUTE 4 EAST, MENDON, VERMONT 05701 802/773-0052
 FAX 802/747-7992

Submittal

To: State of Vermont Agency of Transportation
 Southwest Regional Construction Office
 61 Valley View
 Mendon, VT 05701

Date: February 9, 2015
 Project: Shrewsbury STP 1443 (44)

Contract: Shrewsbury STP 1443 (44)

Attention: Tim Pockette (RE), Bill Farley (Asst CEE)

From: Jacob Robinson

Copies	CCI Submittal Number	Specification Section	Description
Electronic	2	652.10	Erosion Prevention and Sediment Control Plan

Contractors Review and Comments

Reviewed By: Jacob Robinson/Jeff Chase

Comments:

The attached modifications to the Contract EPSC Plan. The intention of the modifications is to uphold the criteria of determined risk, while providing further detail to the sequencing and phasing of construction. There is no intent to alter any of the criteria of the determined risk. We have included an updated Risk Evaluation Checklist to confirm this.

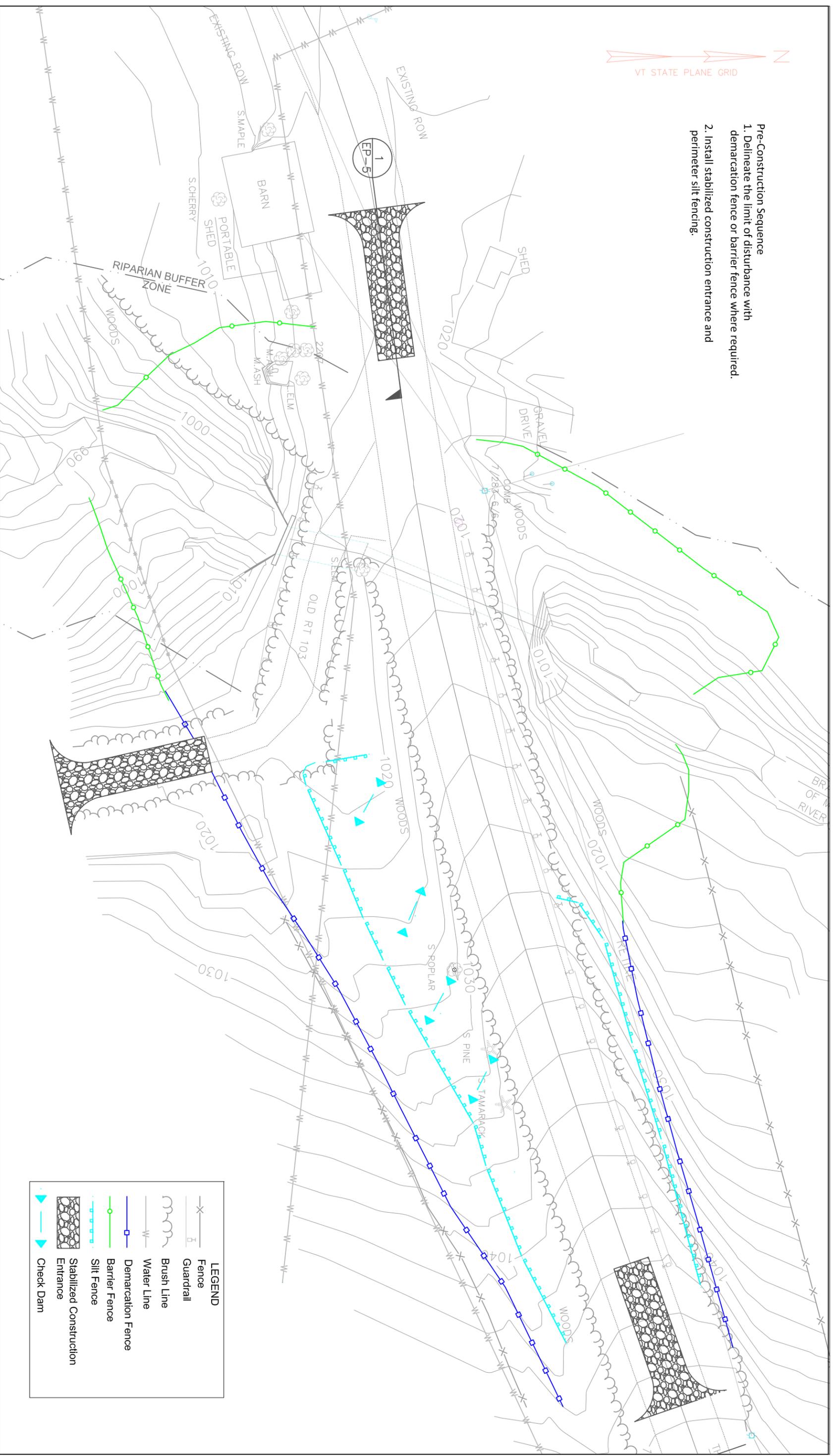
The EPSC plan was prepared by Jeff Chase, EIT and our On-Site EPSC Plan Coordinator will be Jacob Robinson. Jacob's qualifications are attached to the EPSC Plan.

Engineers Review Stamp and Comments

Empty box for Engineers Review Stamp and Comments.



- Pre-Construction Sequence
1. Delineate the limit of disturbance with demarcation fence or barrier fence where required.
 2. Install stabilized construction entrance and perimeter silt fencing.



LEGEND	
	Fence
	Guardrail
	Brush Line
	Water Line
	Demarcation Fence
	Barrier Fence
	Silt Fence
	Stabilized Construction Entrance
	Check Dam



CASELLA CONSTRUCTION, INC.
 25 INDUSTRIAL LANE
 MENDON, VERMONT 05701
 PHONE: 802.773.0052
 FAX: 802.747.7992

**PROJECT: SHREWSBURY STP 1443 (44)
 SHREWSBURY, VERMONT**

**DRAWING: EP-2 Pre-Construction Conditions
 Erosion Control Plan**

VERMONT AGENCY OF TRANSPORTATION
 ONE NATIONAL LIFE DRIVE
 MONTPELIER, VT 05633

DRAWN BY:	JDR
PREPARED BY:	JC, EIT
DATE:	02/10/15
DRAWING NUMBER:	2 OF 8
DRAWING SCALE:	1" = 30'

Construction Sequence

1. Excavate down to the proposed finish grade of box culvert with a 1.5:1 slope. Areas of disturbance shall be minimized when at all possible and stabilized within fourteen days of initial disturbance. After this time, disturbance in this area 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 forecasted for the next 24 hours.
 - b. Stabilization is not required in a self-contained excavation with a depth of two feet or greater.
2. Install seed and mulch disturbed areas to establish vegetation at the completion of work.

-include roadway and channel alignment stationing

-provide details of what your flume will be made of.

-provide a cross-section of stream diversion system and proposed box culvert to show that there is enough clearance for the arch footing.

-due to the depth of excavation for the footings when the stream diversion is removed how will you keep the stream from flowing into the wingwall footing excavation. Perhaps show another layout sheet and x-section representing that sequence.

-what is the capacity of your stream diversion system? Will it have the ability to overtop should flows become too much for the system? Refer to the Stream Relocation special provision.

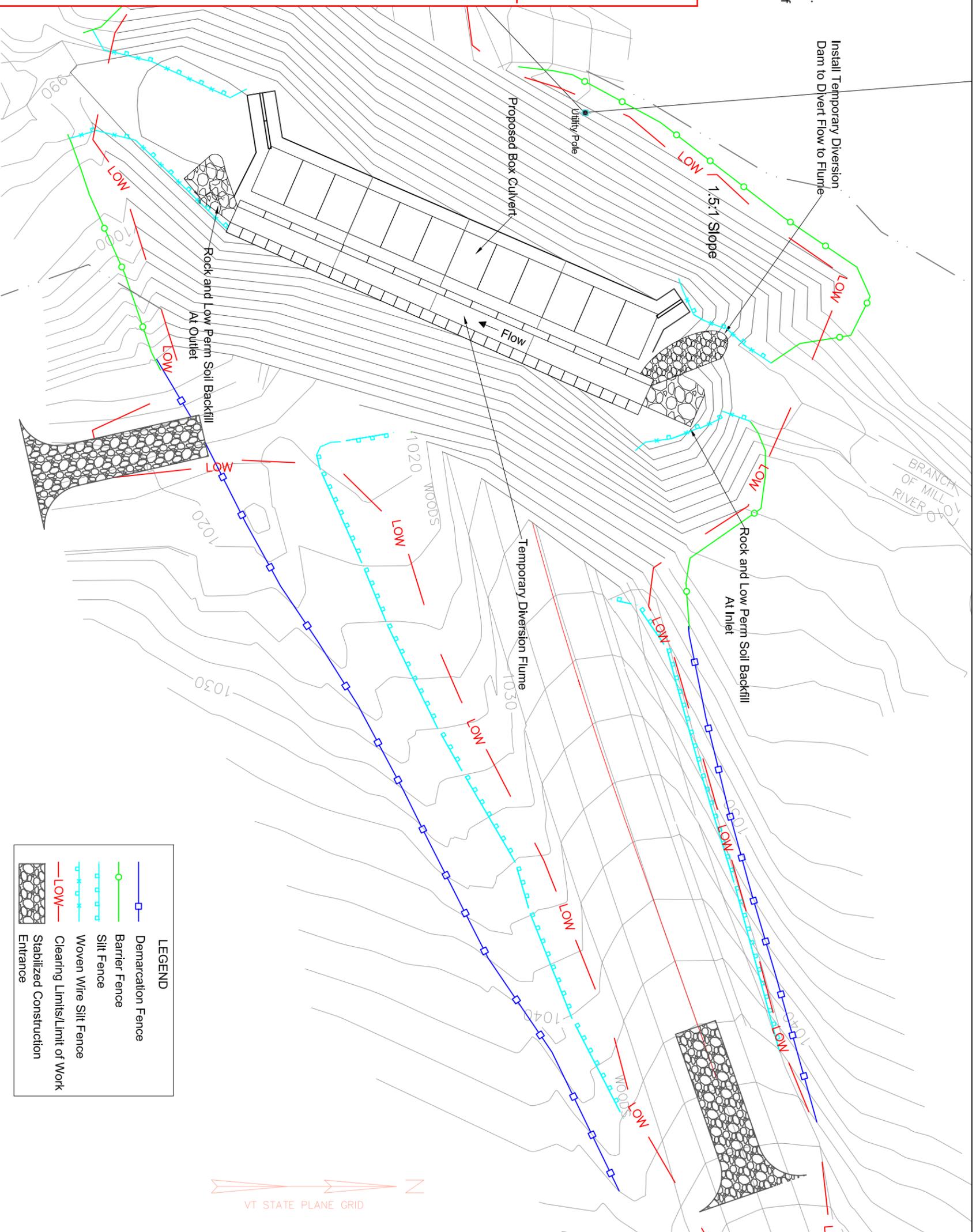
-You may need to dewater. You will be 8' below OHW to bottom of footing. If so where will you pump to and how will you treat the water?

-The outlet of the stream diversion will either need to be far enough away from the winnwall excavation as to not back flow into the excavation or there will need to be additional measures detailed in the plan to keep water out of the excavation.

-the silt fence shouldn't cross contours

-the silt fence should be drawn to show which side to install posts. downhill side

-Barrier Fence and Woven Wire Silt Fence are to be used when within 100 feet of waters of the state.



ASSELLA CONSTRUCTION, INC.
 25 INDUSTRIAL LANE
 MENDON, VERMONT 05701
 PHONE: 802.773.0052
 FAX: 802.747.7992

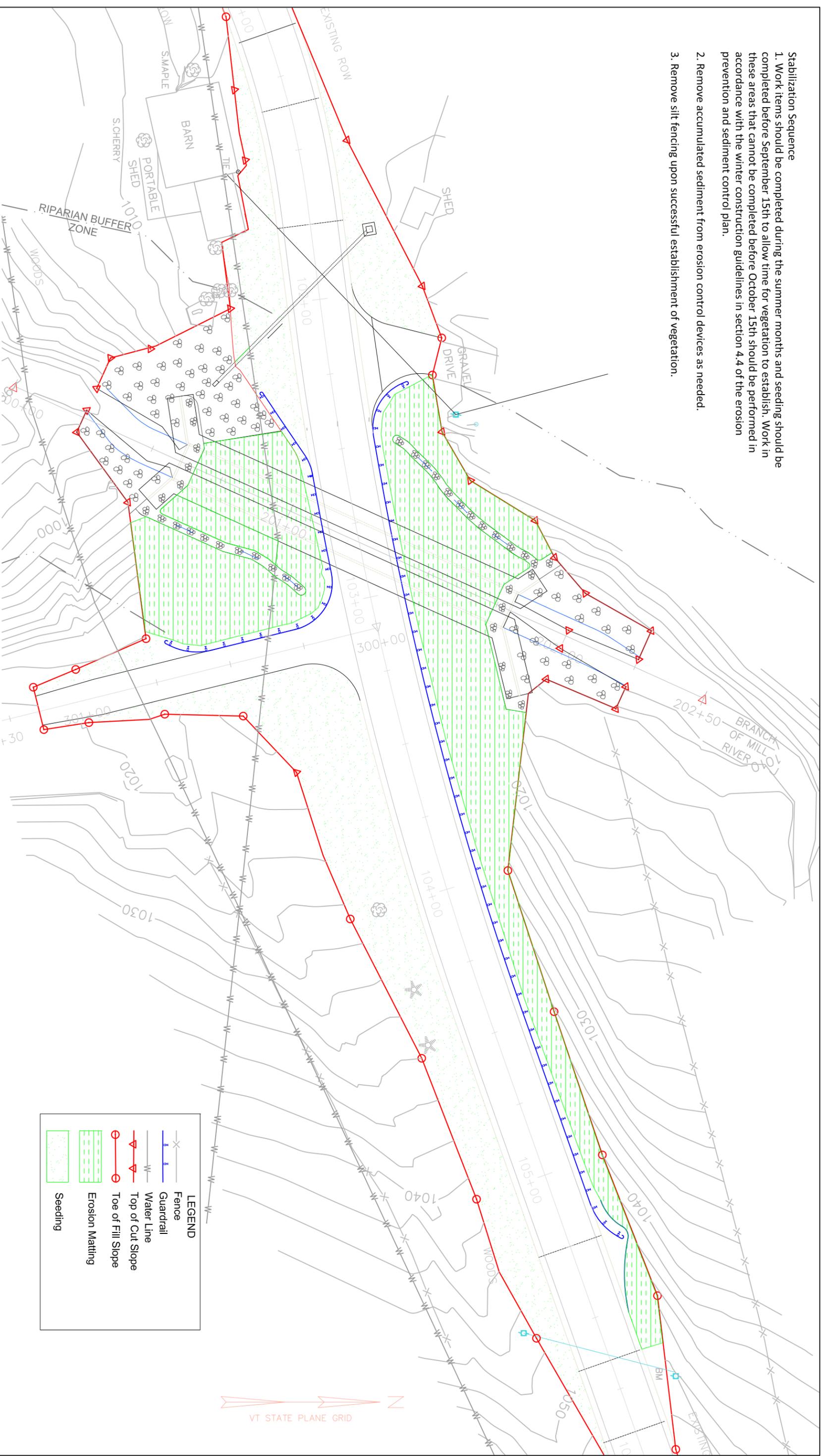
PROJECT: SHREWSBURY STP 1443 (44)
 SHREWSBURY, VERMONT

DRAWING: EP-3 Construction Conditions
 Erosion Control Plan

VERMONT AGENCY OF TRANSPORTATION
 ONE NATIONAL LIFE DRIVE
 MONTPELIER, VT 05633

DRAWN BY: JDR
 PREPARED BY: J.C. EIT
 DATE: 02/10/15
 DRAWING NUMBER: 3 OF 8
 DRAWING SCALE: 1" = 30'

- Stabilization Sequence
1. Work items should be completed during the summer months and seeding should be completed before September 15th to allow time for vegetation to establish. Work in these areas that cannot be completed before October 15th should be performed in accordance with the winter construction guidelines in section 4.4 of the erosion prevention and sediment control plan.
 2. Remove accumulated sediment from erosion control devices as needed.
 3. Remove silt fencing upon successful establishment of vegetation.



LEGEND	
	Fence
	Guardrail
	Water Line
	Top of Cut Slope
	Toe of Fill Slope
	Erosion Matting
	Seeding

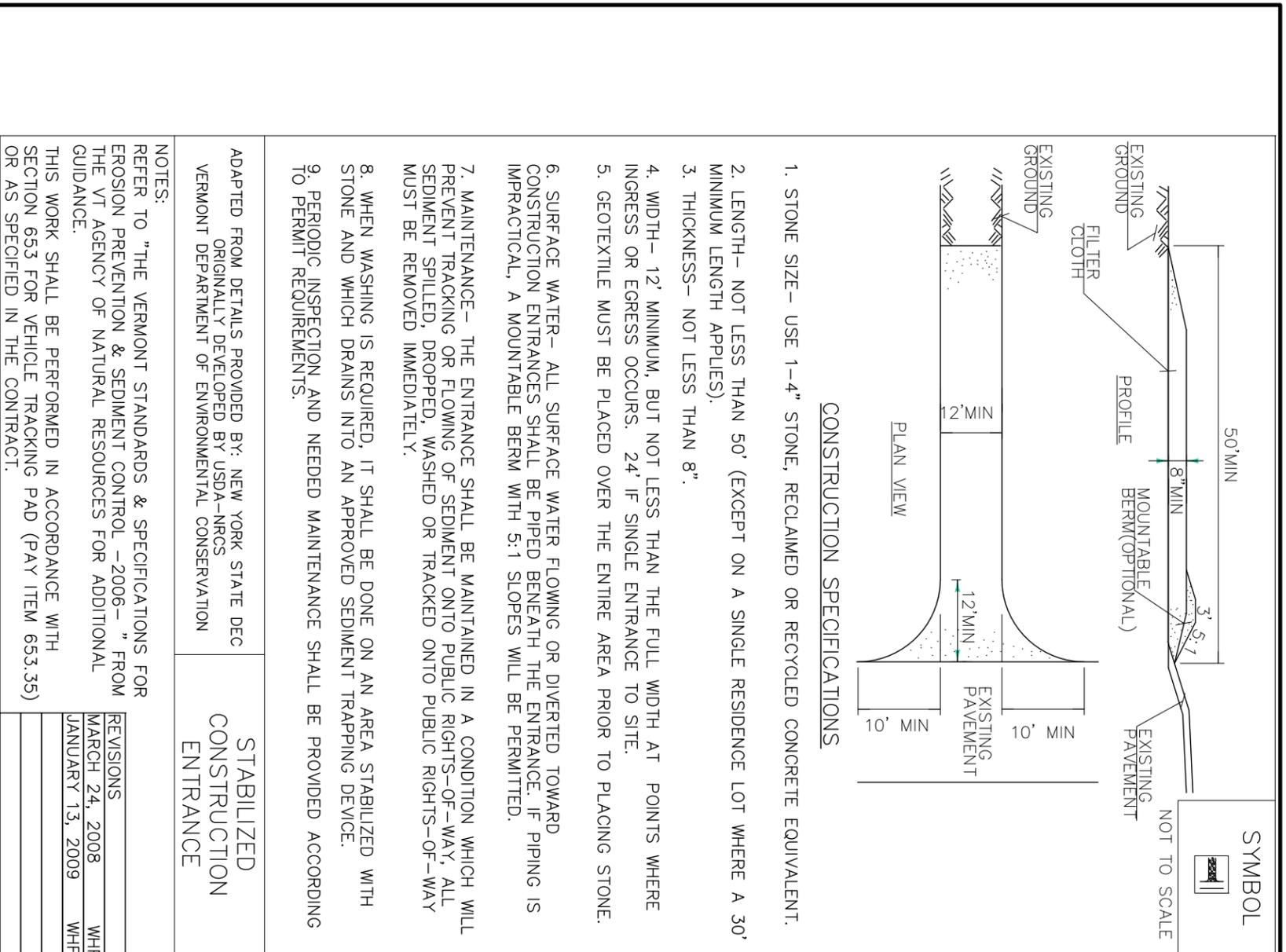


CASELLA CONSTRUCTION, INC.
 25 INDUSTRIAL LANE
 MENDON, VERMONT 05701
 PHONE: 802.773.0052
 FAX: 802.747.7992

PROJECT: SHREWSBURY STP 1443 (44)
 SHREWSBURY, VERMONT
DRAWING: EP-4 Final Conditions
 Erosion Control Plan

VERMONT AGENCY OF TRANSPORTATION
 ONE NATIONAL LIFE DRIVE
 MONTPELIER, VT 05633

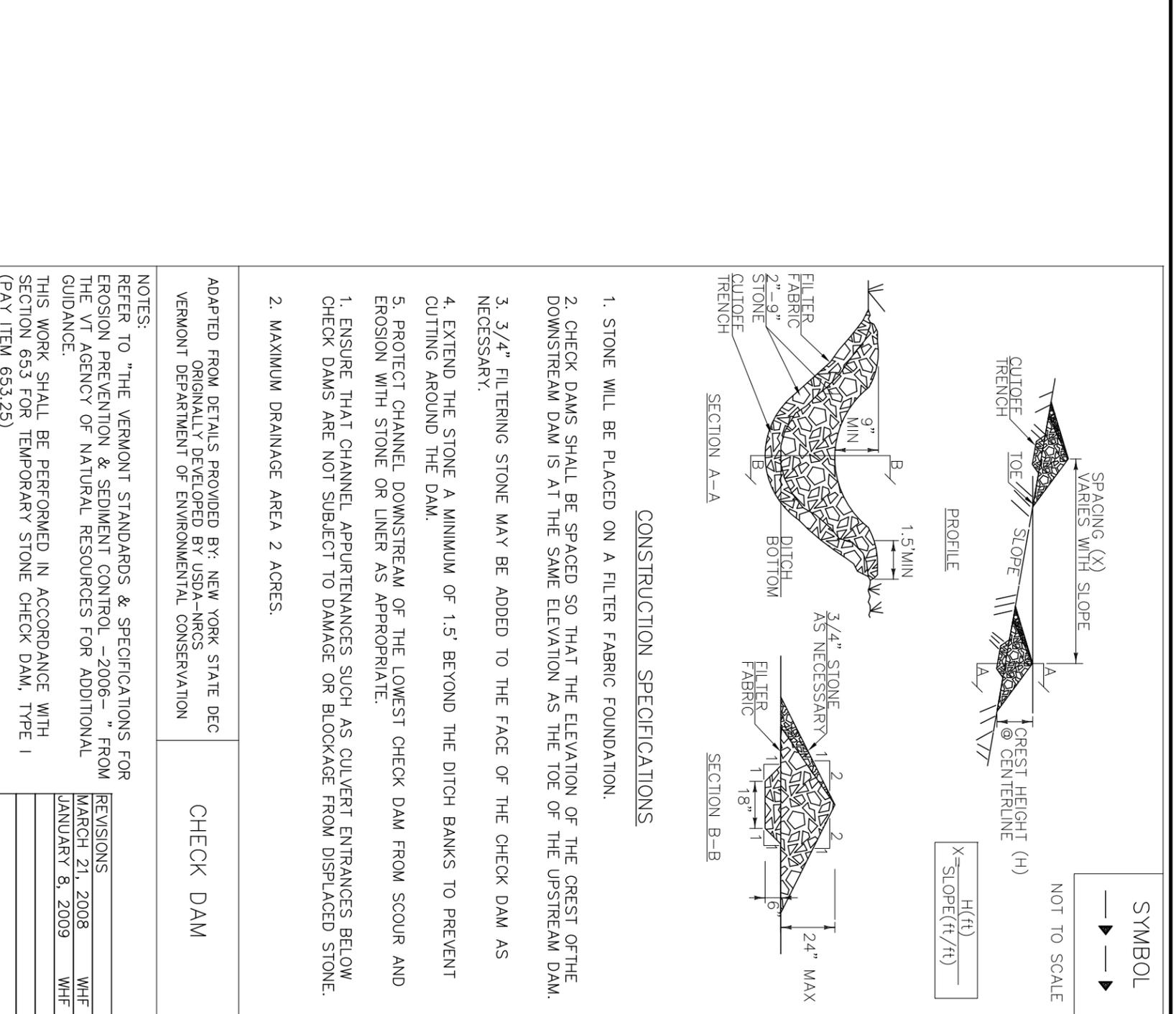
DRAWN BY:	JDR
PREPARED BY:	J.C. EIT
DATE:	02/10/15
DRAWING NUMBER:	4 OF 8
DRAWING SCALE:	1" = 30'



VT Standard Details taken from <http://vtranscaddhelp.vermont.gov>



CASELLA CONSTRUCTION, INC.
25 INDUSTRIAL LANE
MENDON, VERMONT 05701
PHONE: 802.773.0052
FAX: 802.747.7992



PROJECT: SHREWSBURY STP 1443 (44)
SHREWSBURY, VERMONT

DRAWING: EP-5 Details Sheet 1

VERMONT AGENCY OF TRANSPORTATION
ONE NATIONAL LIFE DRIVE
MONTPELIER, VT 05633

DRAWN BY: JDR
PREPARED BY: JC, EIT
DATE: 02/10/15
DRAWING NUMBER: 5 OF 8
DRAWING SCALE:

VAOT RURAL AREA MIX						
WEIGHT	BROADCAST	HYDROSEED	NAME	LATIN NAME	GERM	PURITY
37.5%	22.5	45	CREeping RED FESCUE	FESTUCA RUBRA VAR. RUBRA	85%	98%
37.5%	22.5	45	TALL FESCUE	FESTUCA ARUNDINACEA	90%	95%
5.0%	3	6	RED TOP	AGROSTIS GIGANTEA	90%	95%
15.0%	9	18	WHITE FIELD CLOVER	TRIFOLIUM REPENS	85%	98%
5.0%	3	6	ANNUAL RYE GRASS	LOLIUM MULTIFLORUM	85%	95%
100%	60	120				

VAOT URBAN LAWN MIX						
WEIGHT	BROADCAST	HYDROSEED	NAME	LATIN NAME	GERM	PURITY
42.5%	34	68	CREeping RED FESCUE	FESTUCA RUBRA X RUBRA	85%	98%
20.0%	16	32	PERENNIAL RYE GRASS	LOLIUM PERENNE	90%	95%
32.5%	26	52	KENTUCKY BLUE GRASS	POA PRATENSIS	85%	85%
5.0%	4	8	ANNUAL RYE GRASS	LOLIUM MULTIFLORUM	85%	95%
100%	80	160				

GENERAL AMENDMENT GUIDANCE		
FERTILIZER	LIME	
10/20/10	AG LIME	PELLITIZED
500 LBS/AC	2 TONS/AC	1 TONS/AC

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 PROPOSED FOR USE 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 FOR SEED (PAY ITEM 651.15)		REVISIONS	
		JANUARY 12, 2015	WHF

VT Standard Details taken from <http://vtranscaddhelp.vermont.gov>

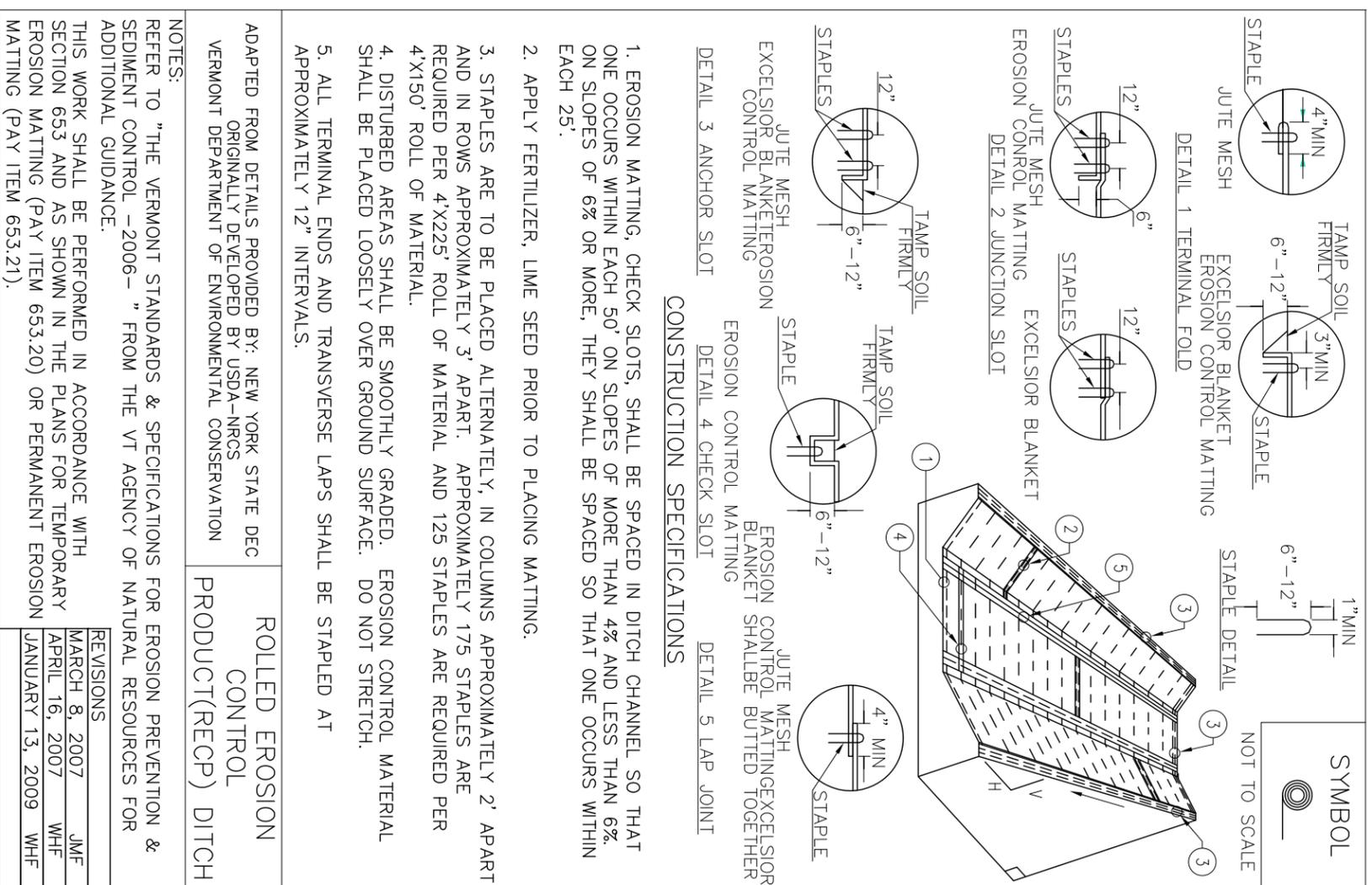


CASELLA CONSTRUCTION, INC.
25 INDUSTRIAL LANE
MENDON, VERMONT 05701
PHONE: 802.773.0052
FAX: 802.747.7992

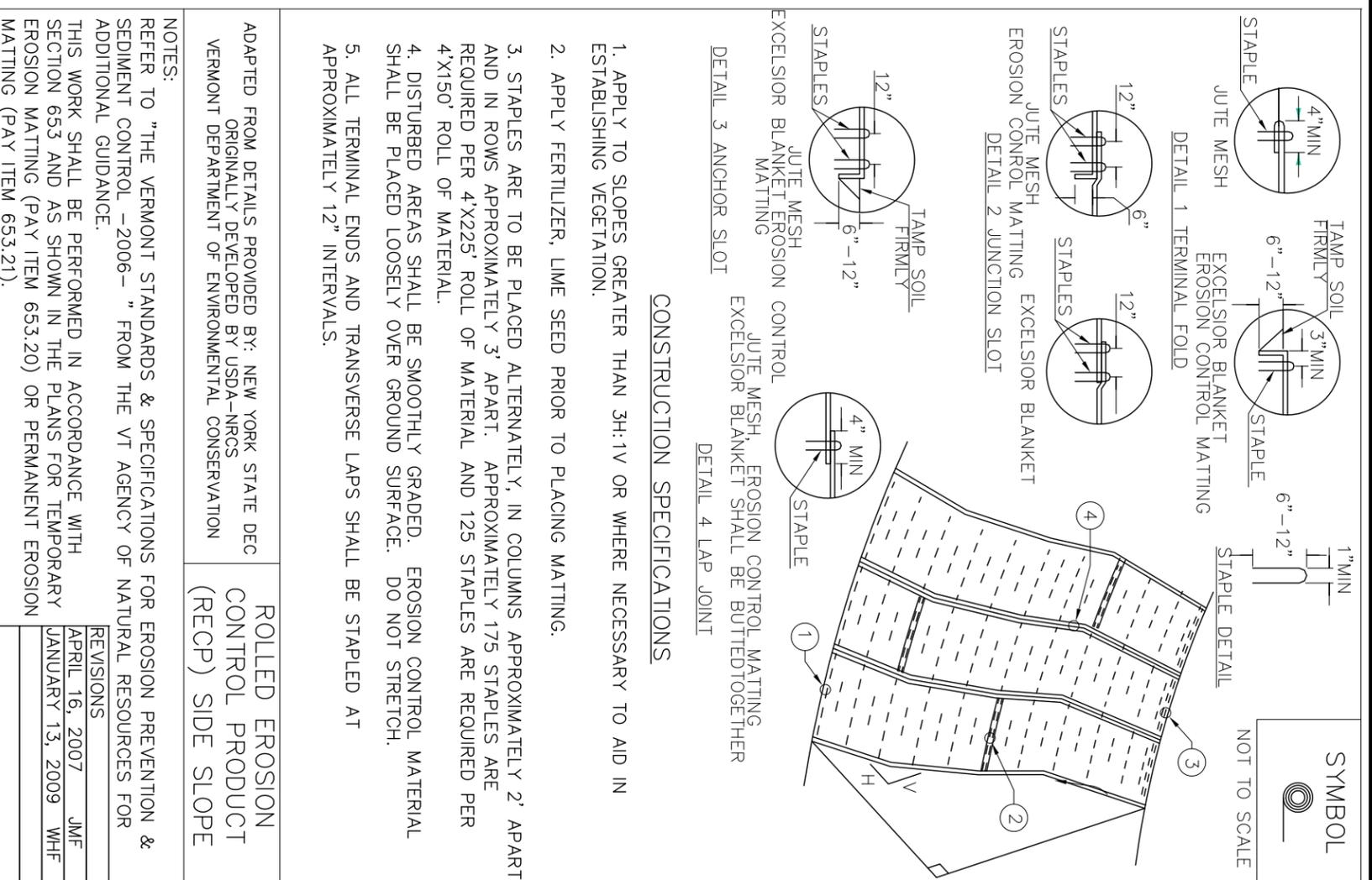
PROJECT: SHREWSBURY STP 1443 (44)
SHREWSBURY, VERMONT

VERMONT AGENCY OF TRANSPORTATION
ONE NATIONAL LIFE DRIVE
MONTPELIER, VT 05633

DRAWN BY: JDR
PREPARED BY: JC, EIT
DATE: 02/10/15
DRAWING NUMBER: 6 OF 8
DRAWING SCALE:



DRAWING: EP-6 Details Sheet 2



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

VT Standard Details taken from <http://vtranscaddhelp.vermont.gov>



CASELLA CONSTRUCTION, INC.

25 INDUSTRIAL LANE
MENDON, VERMONT 05701
PHONE: 802.773.0052
FAX: 802.747.7992

PROJECT:

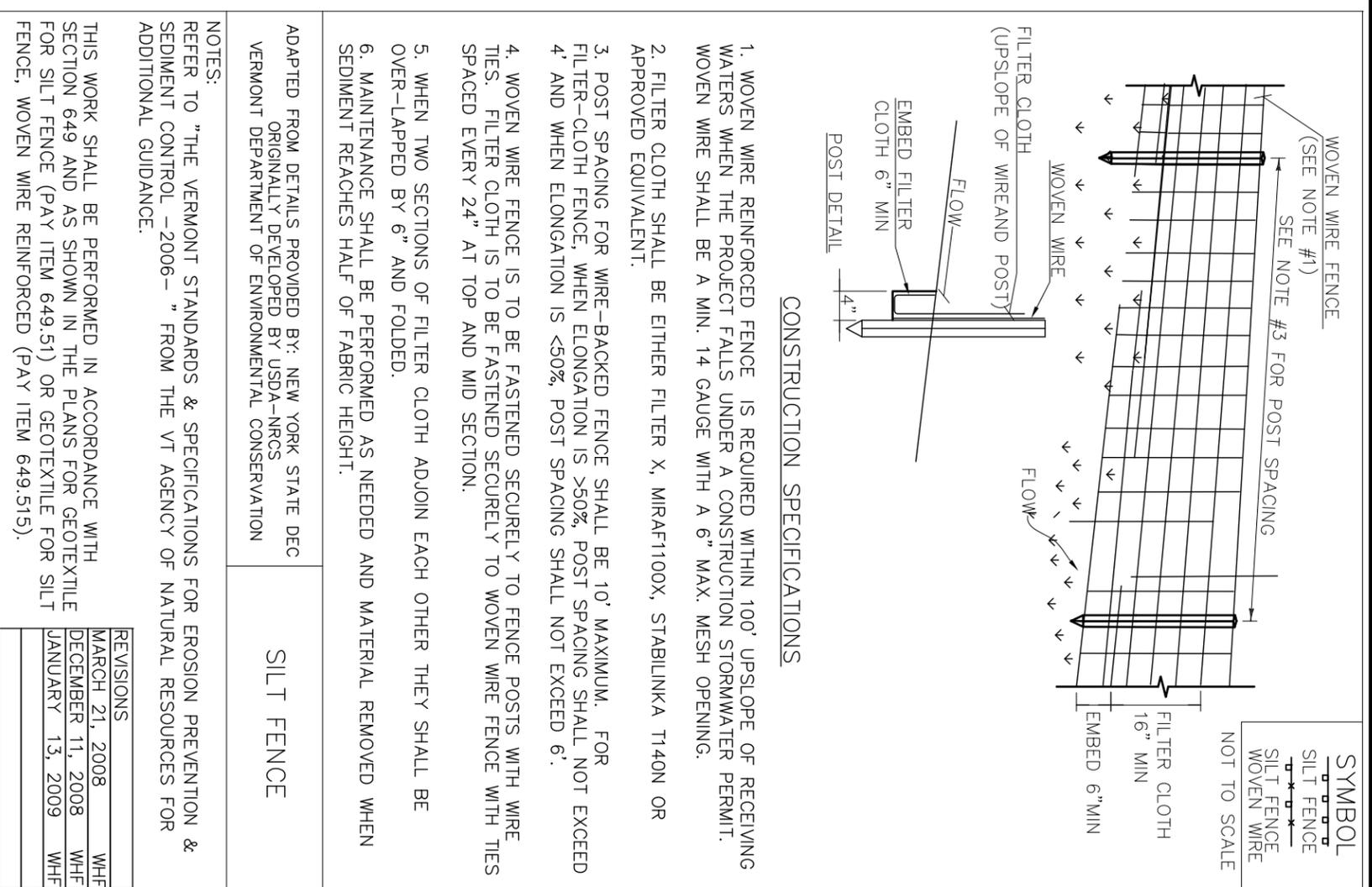
**SHREWSBURY STP 1443 (44)
SHREWSBURY, VERMONT**

DRAWING:

EP-7 Details Sheet 3

VERMONT AGENCY OF TRANSPORTATION

**ONE NATIONAL LIFE DRIVE
MONTPELIER, VT 05633**



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, MIRA F1100X, 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

DRAWN BY:

JDR

PREPARED BY:

JC, EIT

DATE:

02/10/15

DRAWING NUMBER:

7 OF 8

DRAWING SCALE:

EPSC PLAN NARRATIVE

1.1 Project Description

This project involves the removal of culvert and concrete arch BR37 and its headwalls. The culvert and concrete arch will be replaced with a precast arch with a 6 foot rise, spanning 12 feet over a branch of the Mill River, on new footings along the same alignment. BR37 is located in the town of Shrewsbury, on TH 4, approximately 0.25 miles easterly of the intersection of TH 4 and VT Route 103. The length of the culvert will be increased to 120 feet.

Note: Area of disturbance includes limits of earth disturbance within the project limit of work as shown on the EPSC plans, excluding any waste, borrow or staging areas.

Total area of disturbance as shown on the EPSC Plans is approximately 1.328 acres.

It is anticipated that this project will last one construction season.

1.2 Site Inventory

1.2.1 Topography

The topography of the area can be described as hilly to mountainous, mostly forested with some open areas. Lincoln Hill Rd (TH 4), the old VT Route 103, and a gravel driveway are within the project site. There is a residence on the west side of the project with a house on the north side of the road and a barn on the southern side of the road.

1.2.2 Drainage, Waterways, Bodies of water, and proximity to natural or man-made water features

A branch of the Mill River is the only water source on the project site. The brook is classified as perennial, steep, sinuous, narrow, with a confined and armored channel at the site. The stream bed consists of gravel, cobbles and boulders. The tributary area a the culvert crossing is 1.2 Square Miles. 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 culvert and arch, upon project completion, the channel will be armored with stone fill type IV as specified on the plans. Disturbed vegetation will be reestablished with standard seed and mulch practices.

1.2.4 Soils

All soil data came from the U-S-S> Department of Agricultural Soil Conservation Service for the county of Rutland, Vermont. Soils on the project site are berkshire gravelly fine sandy loam, 8% to 15% slopes, K-Factor = 0.24; Paxton fine sandy loam, 15% to 25% slopes, K-Factor = 0.24; and sunapee fine sandy loam, very stony, 15% to 35% slopes, K-Factor 0.28.

Note: K-Factors generally indicate the following:

0.0-0.23 = Low Erosion Potential
0.23-0.36 = Moderate Erosion Potential
0.37 and higher = High Erosion Potential

1.2.5 Sensitive Resource Areas

Critical Habitats: No
Historical or Archeological Areas: Historical House, Barn and Shed, Archeologically Sensitive Areas on the northwest section of the project.
Prime Agricultural Land: No
Threatened and Endangered Species: No
Water Resource: Branch of the Mill River
Wetlands: No

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 permits 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. 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 shall be used to physically mark site boundaries. Because this project falls under the CGP 3-9020, Barrier Fence shall be used instead of Project Demarcation Fence within 100 feet of a water resource.

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 will be established wherever possible.

1.4.3 Site Entrance/Exit Stabilization

Tracking of sediment onto public highways will be minimized to reduce the potential for runoff entering receiving waters. Stabilized construction entrances shall be installed as needed 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 will be installed as proposed on the EPSC Plan. Because this project falls under the CGP 3-9020, woven wire reinforced silt fence shall be used instead of silt fence within 100 feet of upslope of receiving waters.

1.4.5 Divert Upland Runoff

Diversiionary measures will be used if needed 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 construction site.

The steep slopes of the project may require diversioinary measures to be installed on the eastern end of the project.

1.4.6 Slow Down Channelized Runoff
Check structures will be utilized, if needed, to reduce the velocity, and thus the erosive potential, of concentrated flow in channels.

1.4.7 Construct Permanent Controls
Permanent stormwater treatment devices will be installed as shown on the plans and in accordance with permit conditions.

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, will be utilized on a regular basis. Biodegradable erosion control matting or an equivalent will 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.

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 and equivalent shall be used instead of mulch.

1.4.11 De-Watering Activities

Discharge from dewatering activities that flows off the construction site must not cause or contribute to a violation of the Vermont Water Quality Standards.

Treatment of dewatering area is anticipated. A location of treatment has been proposed and is shown on the plans, however, the specific means for treatment of discharge shall be provided by the contractor.

1.4.12 Inspect the Site

Sedimentation structures will be inspected and maintained on a weekly basis and following storm events that create runoff from the site.

CASELLA CONSTRUCTION, INC.

25 INDUSTRIAL LANE
MENDON, VERMONT 05701

PHONE: 802.773.0052
FAX: 802.747.7992

PROJECT:

**SHREWSBURY STP 1443 (44)
SHREWSBURY, VERMONT**

DRAWING:

EPSC Plan Narrative

VERMONT AGENCY OF TRANSPORTATION

**ONE NATIONAL LIFE DRIVE
MONTPELIER, VT 05633**

DRAWN BY:

JDR

PREPARED BY:

JC, EIT

DATE:

02/10/15

DRAWING NUMBER:

8 OF 8

DRAWING SCALE:



Education

Roger Williams University 2012
Bachelor of Science GPA: 3.373
Major – Construction Management
Minor – Business
Core – International Studies

College Experience

ASC Region 1 Student Competition
The competition consists of a team of 6 preparing an estimate, schedule, and presentation of an actual project for a panel of professional judges from the industry.

Heavy Civil Capstone Project
The semester long project consisted of a group of 3 preparing a construction plan, estimate, schedule, and presentation of a \$103 million steel bridge in Tiverton, RI.

OSHA 10 Hour
Completed 10 hour OSHA training in Construction Safety and Health

Computer Skills

- Primavera P6
- Microsoft Excel, Project, Word
- AutoCAD Civil 3D
- Experience with Construction Link

Related Experience

Field Engineer:
April 2014 to Present
Casella Construction, Inc.
25 Industrial Lane
Mendon, VT

Construction Scheduler:
June 2012 to January 2014
Cardi Corporation
400 Lincoln Avenue
Warwick, RI

Work Experience:

Casella Construction, Inc.: **Rutland City Sewer and Drain**

This project consisted of sidewalk replacement, storm and sanitary sewer installation, water valve installation, and box cut widening on Route 7 in Rutland VT.

As a Field Engineer my primary responsibilities were surveying and layout for the proposed sidewalk, sewer manholes, and catch basins. I was on site every day to set line and grade for the proposed pipe and to assist the superintendent in maintaining a safe, efficient, and environmentally conscious worksite.

Rutland Airport Maintenance Road

Construction of the maintenance road included stripping the site of topsoil, hauling in fill, shaping a side slope, and installing a paved road.

Along with layout my responsibilities on this job also included erosion controls. Prior to any work being performed we installed a silt fence along the toe of the proposed slope. The fence was checked daily and maintained as needed throughout the job. Following completion of the road the area was seeded covered with erosion matting.

Cardi Corporation:

As a scheduler for Cardi Corporation I was responsible for building baseline schedules for multiple drainage, utility, roadway, signal, and sidewalk jobs. Throughout each job I attended biweekly meetings and submitted schedule updates showing the status of the job. Part of the update process included identifying and tracking construction delays and their effects on the schedule. I also assisted the head scheduler by cost and resource loading the schedules for Cardi's larger bridge projects.

Aside from scheduling I handled submittals and RFI's for the jobs that I was assigned. I have experience using online sharefiles to transmit documents and shop drawings to the reviewing engineer. I also assisted Cardi's estimators by performing quantity take offs for site and highway projects.

APPENDIX A - RISK EVALUATION

Accurately answering the questions in this appendix will allow you to determine whether a proposed construction project is considered a Low Risk or Moderate Risk project, which defines the application and permit requirements that are applicable to your project.

The risk evaluation procedure consists of two parts. Part I is a Basic Risk Evaluation, which determines if a project is automatically categorized as Low Risk based upon the answers to a few basic questions.

If a project is not automatically categorized as Low Risk based upon the Basic Risk Evaluation, you must complete Part II, Detailed Risk Evaluation, to determine the risk category for your project. This part includes questions on more detailed aspects of the project.

Once the appropriate risk category has been determined, refer to Part III for the application requirements.

You should be aware that each completed Appendix A is incorporated by reference and included in the terms of this general permit, and each permittee shall undertake its construction activities in accordance with the completed Appendix A, as a condition of this permit. Failure to comply with the completed Appendix A shall be deemed a violation of this permit and subject to enforcement action.

APPENDIX A

Part I – Basic Risk Evaluation

A project may automatically be categorized as Low Risk based on a few basic project characteristics. Answer each question below to determine if a project is automatically categorized as Low Risk. For definitions of terms used in the following questions (e.g. disturbance, vegetated buffer) refer to Appendix C.

Basic Risk Evaluation				
	Criteria	Answer	Score Direction	Enter Score
1.	Will the proposed independent project alone disturb more than 2 acres of land?	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	If YES, enter 1, if NO enter 0	0
2.	Is the project within a watershed impaired due to stormwater or sediment as specified on Part A of the Vermont 303(d) list?	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	If YES, enter 1, if NO enter 0	0
	Will the project have any stormwater discharges from the construction site to receiving water(s) that do not first pass through a 50 ft vegetated buffer area?	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	If YES, enter 1, if NO enter 0	0
	Will the project have disturbed earth in any one location for more than 14 consecutive calendar days without temporary or final stabilization?	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	If YES, enter 1, if NO enter 0	0
	Will the project have more than five acres of disturbed earth at any one time?	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	If YES, enter 1, if NO enter 0	0
Total Score for Basic Risk Evaluation (add score from questions 1-5)				0

Basic Risk Evaluation #3 I believe would be scored as yes. The work to be performed is actually in the resource (Branch of Mill River). Runoff will not be passing through 50 feet of vegetated buffer.

If the Total Score for Basic Risk Evaluation is 0, the proposed project is eligible for coverage under this permit as a Low Risk project. Proceed to Part IV of Appendix A for a summary of the application requirements for Low Risk Projects. If not, proceed to Part II.

Criterion 1: Only include the disturbance planned for an independent project. For example, if a lot owner is only building on a single house lot in a residential subdivision, only consider the disturbance associated with that lot, not the entire common plan. Refer to Appendix C for definitions of independent project and disturbance.

Criterion 2: Refer to the following web page for a list of waters in these categories:
http://www.vtwaterquality.org/stormwater/htm/sw_cgpligibility.htm

Criterion 3: Refer to the Appendix C for the definition of vegetated buffer area.

Criterion 4: Refer to Appendix C for definitions of temporary and final stabilization.

Criterion 5: Refer to Appendix C for the definition of disturbed earth.

Part II – Detailed Risk Evaluation

For projects not automatically categorized as Low Risk in Part I, this Detailed Risk Evaluation must be completed to determine if a project is Low Risk, Moderate Risk, or requires an Individual Permit. This evaluation determines the risk category by weighing the balance of factors which contribute to and mitigate against the risk of a discharge of sediment from the construction project. Complete all questions in Part II for the independent project. For definitions of terms used in the evaluation, refer to Appendix C.

Detailed Risk Evaluation – Identify Risk Factors				
Criteria		Answer	Score Direction	Enter Score
A.	Will the proposed project have earth disturbance within 100 ft (horizontal) upslope of any lake or pond or 50 feet (horizontal) upslope of any rivers or stream (perennial or seasonal)?	YES <input type="checkbox"/> NO <input type="checkbox"/>	If YES, enter 1, if NO enter 0	0
B.	Will the project have stormwater discharges by direct conveyance (tributary, channel, ditch, storm sewer, etc.) to a water of the state listed on the 303 (d) Part A list as being impaired by stormwater or sediment; a Class A Water; or an Outstanding Resource Water?	YES <input type="checkbox"/> NO <input type="checkbox"/>	If YES, enter 1, if NO enter 0	0
C.	Will the project have more than five acres of disturbed earth at any one time?	YES <input type="checkbox"/> NO <input type="checkbox"/>	If YES, enter 1, if NO enter 0	0
D.	Will the project have disturbed earth in any one location for more than 14 consecutive calendar days without temporary or final stabilization?	YES <input type="checkbox"/> NO <input type="checkbox"/>	If YES, enter 1, if NO enter 0	0
E.	Will the project include more than one acre of disturbance on soil that is greater than 15% slope?	YES <input type="checkbox"/> NO <input type="checkbox"/>	If YES, enter 1, if NO enter 0	0
F.	Will the project include more than one acre of disturbance of soils with a high ($K > 0.36$) erodibility rating?	YES <input type="checkbox"/> NO <input type="checkbox"/>	If YES, enter 1, if NO enter 0	0
G.	Total Score for Risk Factors (add A through F)			0

Criterion A: Measure lake distance from mean water level, and stream or river distance from top of bank. Do not include disturbance for the installation of stormwater treatment facilities or road stream crossings if there are no reasonable alternative locations.

Criterion B: Refer to http://www.vtwaterquality.org/stormwater/htm/sw_cgpeligibility.htm for the listing.

Criterion C: The maximum allowable for Low Risk Projects is 7 acres. **Moderate risk projects over 5 acres may be required to file an Individual Discharge Permit application if determined necessary by the Secretary.**

Criterion D: The maximum allowable for Low Risk Projects is 21 days. **Moderate risk projects over 21 days may be required to file an Individual Discharge Permit application if determined necessary by the Secretary.**

Criterion E: Include disturbance for the duration of the project, not at any one point in time. Slope determinations should be based on a site survey of the future disturbance area.

Criterion F: Include disturbance for the entire individual project, not at any one point in time. The Erosion Factor K, is a measure of the inherent erodibility of a soil type. Refer to NRCS soil maps for your county. If soils data is not available (e.g. if the site is built on assorted fill material), contact ANR for directions on evaluating soil erodibility.

Part II Continued – Detailed Risk Mitigation Factor Evaluation

Detailed Risk Evaluation – Identify Risk Mitigation Factors				
Criteria		Answer	Score Direction	Enter Score
H.	Will stormwater leaving the construction site pass through at least 50 feet of established vegetated buffer before entering a receiving water?	YES <input type="checkbox"/> NO <input type="checkbox"/>	If YES, enter 1, if NO enter 0	0
I.	Will the project be limited to two acres or less of disturbed earth at any one time?	YES <input type="checkbox"/> NO <input type="checkbox"/>	If YES, enter 1, if NO enter 0	0
J.	Will the project have a maximum of 7 consecutive days of disturbed earth exposure in any location before temporary or final stabilization is implemented?	YES <input type="checkbox"/> NO <input type="checkbox"/>	If YES, enter 1, if NO enter 0	0
K.	Will the project disturb less than two acres of soil with an erodibility higher than K=0.17?	YES <input type="checkbox"/> NO <input type="checkbox"/>	If YES, enter 1, if NO enter 0	0
L.	Will the project include less than two acres of disturbance on soil that is greater than 5% slope?	YES <input type="checkbox"/> NO <input type="checkbox"/>	If YES, enter 1, if NO enter 0	0
M.	Total Score for Risk Mitigation Factors (add H through L.)			0

Criterion H: Refer to Appendix C for a definition of vegetated buffer.

Criterion I: Refer to Appendix C for a definition of earth disturbance.

Criterion J: Refer to Appendix C for definitions of temporary and final stabilization.

Criterion K: Include disturbance for the duration of the project, not at any one point in time. The Erosion Factor K, is a measure of the inherent erodibility of a soil type. Refer to NRCS soil maps available at USDA-NRCS District Offices. If soils data are not available (e.g. if the site is built on assorted fill material), contact DEC for directions on evaluating soil erodibility.

Criterion L: Include disturbance for the duration of the project, not at any one point in time. Slope determinations should be based on a site survey of the proposed disturbance area.

Total Risk Score		
N.	Moderate Risk Base Score	2
O.	Enter Score from Line G above (Risk Factor Total)	0
P.	Add lines N and O	2
Q.	Enter Score from Line M above (Risk Mitigation Factor Total)	0
R.	<u>OVERALL RISK SCORE:</u> Subtract line Q from line P	2

Part III– Interpreting the Detailed Risk Evaluation

OVERALL SCORE	Risk Category	Directions for Filing for Permits
<1	Low Risk	<p>The proposed project is eligible for the Construction General Permit as a Low Risk project provided that the requirements of Subpart 2 are met. If these requirements cannot be met, contact DEC to determine if the project should seek coverage as a Moderate Risk project or under an Individual Discharge Permit.</p> <p>Refer to Part IV of Appendix A for a summary of the application requirements for Low Risk projects.</p>
1-2	Moderate Risk	<p>The proposed project is eligible for the Construction General Permit as a Moderate Risk project provided that the requirements of Subpart 3 are met. If these requirements cannot be met, contact DEC to determine if the project should seek coverage as a Moderate Risk project or under an Individual Discharge Permit.</p> <p>Refer to Part IV of Appendix A for a summary of the application requirements for Moderate Risk projects.</p>
>2	Requires Individual Permit	<p>The proposed project is not eligible for coverage under the Construction General Permit, and therefore requires coverage under an Individual Discharge Permit. Please refer to Stormwater Section on the Water Quality Division website for more information: www.vtwaterquality.org/stormwater.htm.</p>

Part IV – Filing Directions

1. Low Risk Projects

Projects that qualify as Low Risk are required to implement the applicable practices detailed in the *Low Risk Site Handbook for Erosion Prevention and Sediment Control*. To obtain coverage under General Permit 3-9020 as a Low Risk project, applicants must submit the following to DEC:

1. A completed Notice of Intent form for General Permit 3-9020;
2. A completed Appendix A;
3. The required processing fee.

To satisfy the public comment requirement, **applicants must file a copy of the completed Notice of Intent form, including a copy of Appendix A, with the municipal clerk in the municipalities where the project will occur prior to submitting this information to ANR. Details of the public notice process are in Part 2 of the general permit.**

2. Moderate Risk Projects

Projects that qualify as Moderate Risk are required to implement a site-specific Erosion Prevention and Sediment Control (EPSC) Plan that conforms to *The Vermont Standards and Specifications for Erosion Prevention and Sediment Control*. To obtain coverage under General Permit 3-9020 as a Moderate Risk project, applicants must submit the following to DEC:

1. A completed Notice of Intent form for General Permit 3-9020;
2. A completed Appendix A;
3. A site-specific EPSC Plan;
4. A certification by the plan preparer that the EPSC Plan conforms to *The Vermont Standards and Specifications for Erosion Prevention and Sediment Control*;
5. The required processing fee.

To satisfy the public comment requirement, **applicants must file a copy of the completed Notice of Intent form, including a copy of Appendix A, with the municipal clerk in the municipalities where the project will occur prior to submitting this information to ANR. Details of the public notice process are in Part 3 of the general permit.**