

**MODIFICATIONS TO
CONTRACT EROSION PREVENTION
AND
SEDIMENT CONTROL (EPSC) PLAN**

FOR

ENOSBURG BRO 1448(40)

FOR

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



APRIL, 2014



RUGGLES ENGINEERING SERVICES INC.

Ruggles Engineering Services, 1667 Shadow Lake Road, Glover, VT 05839

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EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REPLACEMENT OF BRIDGE #48, RELATED CHANNEL WORK AND INCIDENTALS. BRIDGE #48 WILL BE REPLACED WITH A PRECAST CONCRETE BRIDGE OVER TYLER BRANCH, ON NEW FOOTINGS ALONG THE SAME ALIGNMENT. BRIDGE #48 IS LOCATED IN THE TOWN OF ENOSBURG, BOSTON POST ROAD, AT THE INTERSECTION WITH TYLER BRANCH ROAD. THE LENGTH OF THE BRIDGE WILL BE INCREASED TO 73.5 FEET.

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 0.25 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 IS A SADDLE THAT IS MOSTLY OPEN GRASSED AREAS WITH SOME MEDIUM-SIZED TREES. BOSTON POST ROAD AND TYLER BRANCH ROAD ARE WITHIN THE PROJECT SITE. THERE ARE THREE ADJACENT HOUSES TO THE SITE, AND A FEW HOUSES UP SLOPE TO THE SOUTHWEST WITH GRASS AND TREE BUFFERS.

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

THE TYLER BRANCH IS THE ONLY WATER SOURCE ON THE PROJECT SITE. THE TYLER BRANCH IS CLASSIFIED AS STRAIGHT AND NARROW, WITH A CONFINED AND PARTIALLY ARMORED CHANNEL AT THE SITE. THE STREAM BED CONSISTS OF FINES, GRAVEL, COBBLES AND BOULDERS. 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 OPEN GRASSED AREAS, HARDWOOD TREES AND UNDERGROWTH. THE IMPACT TO VEGETATION WILL BE LIMITED TO THE PROPOSED TOE OF SLOPE SHOWN ON THE PLANS. UPON PROJECT COMPLETION, THE CHANNEL WILL BE ARMORED WITH STONE FILL TYPE III 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. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF FRANKLIN, VERMONT. SOILS ON THE PROJECT SITE ARE PODUNK VARIANT SILT LOAM, "K FACTOR" = 0.32. THE SOIL IS CONSIDERED MODERATELY ERODIBLE DUE TO K-VALUE.

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: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: ARCHEOLOGICALLY SENSITIVE AREA IN SOUTHWEST QUADRANT AS SHOWN ON THE PLANS
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: TYLER BRANCH
WETLANDS: YES

1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES. SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN ONE OR MORE ACRES OF EARTH DISTURBANCE OR SHOULD THE PROJECT BECOME PART OF A LARGER PLAN OF DEVELOPMENT, 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. BARRIER FENCE SHALL BE USED IN THE LOCATIONS SHOWN ON THE EPSC PLAN.

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.

WOVEN WIRE REINFORCED SILT FENCE AND FILTER CURTAINS OR OTHER APPROVED IN-STREAM SEDIMENT BARRIER SHALL BE USED IN THE LOCATIONS SHOWN 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 CONSTRUCTION SITE.

THE PROJECT AREA IS RELATIVELY FLAT WITH MINIMAL OFF-SITE RUNOFF FLOWING THROUGH THE SITE. THEREFORE DIVERSION MEASURES WILL NOT BE NECESSARY.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

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

THERE ARE NO DITCHES WITHIN THE PROJECT LIMITS SO IT IS NOT ANTICIPATED THAT CHECK DAMS WILL BE USED.

1.4.7 CONSTRUCT PERMANENT CONTROLS

THERE ARE NO PERMANENT STORMWATER TREATMENT DEVICES TO BE INSTALLED FOR 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. DEWATERING SITE TO BE REVIEWED AND APPROVED BY THE RESIDENT ENGINEER.

1.4.12 INSPECT YOUR SITE

INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS.

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.

1.5.3 UPDATES

PROJECT NAME: ENOSBURG
PROJECT NUMBER: BRO 1448(40)

FILE NAME: ...\\08.A EPSC NARRATIVE.dgn PLOT DATE: 10/4/2013
PROJECT LEADER: G. BOGUE DRAWN BY: E. ALLING
DESIGNED BY: G. GOYETTE CHECKED BY: G. GOYETTE
EPSC NARRATIVE - ECN 1 SHEET 42 OF 46

EPSC NARRATIVE AMENDED

Section 1.1 through 1.4 are available as part of the Contract Plans (Sheet 42 of 46, dated 10/04/2013). The following amendments are to be considered with the Project Narrative. The project narrative is in the appendix.

1.1 Project Description (ADD FOR, WASTE AREA)

Add. – 1.1.1: The Project will also include a field office site, waste and borrow.

Site staging will be located approximately 0.5 miles south of the project on the Boston Post Road. The site will be an old barn site and will be used for temporary storage. Gravel will be added to stabilize the area. Disturbance will include approximately 0.25 acres. The field office site is located approximately 0.5 miles east of the project on Tyler Branch Road. The trailer will be located on the concrete pad for a former mobile home.

The waste area will be approximately 0.2 mile north of the site located on a private drive off of Boston Post Road. The waste area will be approximately 0.2 miles up the driveway adjacent to an existing sugar house. Site disturbance is proposed to be less than 0.1 acres. Site information has been provided in the appendix.

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

1.2 Site inventory (ADD WASTE AREA)

1.2.1 Topography of waste area:

Add – 1.2.1.1: The waste area includes slopes approximately 8 to 15%.

1.2.4 Soils:

Add - 1.2.4.1: Waste Area. The USDA NRCS Soil Map indicates that the soils at the waste area are Woodstock-Rock outcrop complex. The soil is shallow to bedrock and is not known to be frequently flooded. K factors for soil erosion is 0.24 is moderately erodible. These soils are not being disturbed other than fill being places over the top of the site. Erosion protection and sediment control concerns will come from the soils being removed from the project site.

1.4 Erosion Prevention and Sediment Control

1.4.4. Installation of Sediment Barriers

Filter Curtains are proposed to be replaced with Erosion Control Stone (704.17A) and Sand bags. Erosion stone will be used to stabilize soils around the excavations below the 2.33 year water elevation. Sand bags will be used to divert stream channel flow away from the work areas. Filter curtains are proposed to be eliminated because of the shallow natural of ordinary low water and the velocities greater than 2 feet per second anticipated during ordinary high water and during the two year storm event. Work in the channel will be minimal and will be stabilized immediately after excavation.

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 project area. Silt Fence with wire will be installed in areas within 100' of the stream and along the limits of disturbance shown on the EPSC Plan. The stabilized construction entrances will not be installed since the first phase of the site will only include footing and pile excavation. The self-contained excavation will not have equipment tracking out of the site and all excavated material will be moved out of the work area to the waste area by trucking.

Silt Fence will also be installed at the toe of the filling at the waste area site.

1.5.1.2. Bridge Construction (Piles / Footings)

The first phase of construction will include removal of the old bridge and excavation for the new abutments. Limits of disturbance will be approximately 0.1 acres.

Each abutment will be excavated to the bottom of the footing elevation. Once excavation depths area established, any exposed soil along the perimeter of the self-contained excavation located below elevation 550' (Q2.33) will be stabilized with aggregate for erosion prevention and sediment control (704.17A). Stabilizing the work area will reduce the risk of sediment transport if a two year storm event occurs during the 10 day period that each footing is excavated prior to backfill.

During the construction of abutment #1, the work may occur when the stream elevation is above ordinary low water. Seepage back from the river may occur and the site will

need to be dewatered. Seepage water will be pumped to a 10'x 10' hay bale sediment pond (located south of abutment #1) and allowed to sheet flow off the road through natural drainage and toward the stream.

1.5.1.3. Roadway Approach Excavation

Roadway approaches will be box cut and stabilized as work progresses approach construction will be in a self-contained excavation.

1.5.1.4 Final Stabilization

Final stabilization on all slopes will occur after the bridge and roadway are reconstructed. Stone riprap, topsoil and erosion matting will be installed as shown on the plans. Areas of stone fill located within the stream channel will be installed during ordinary low water in August. Sand bags will be used in the stream channel at approximately station 50+50. The sand bags will be used to divert the current toward the northern side of the channel and reduce the velocity around the work area.

1.5.1.6. Final Stabilization

All temporary EPSC measures will be removed. The project is slated for stabilization prior to September 1.

1.5.2 Off-site Activities.

Off-site activities will include mobilization and demobilization of the office trailer and use of the farmer's waste site. The waste site activities have been included in the amended section 1.1 and 1.2. EPSC measures at the waste site will include silt fence, mulch and seed. Final stabilization will need to be assessed onsite based on the farmers activities.

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 halt 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
1667 Shadow Lake Road
Glover, VT 05839
(802)-525-9130
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	Predecessors	March				April	
							3/2	3/9	3/16	3/23	3/30	4/6
1		Precast Design Review	11.73 days	Tue 3/11/14	Wed 4/9/14							
2		Bearing Design Accepted/ waste Site Approved	1 day	Tue 3/11/14	Wed 3/12/14	1SS						
3		Bridge Rail Design Accepted	1 day	Tue 3/11/14	Wed 3/12/14	1SS						
4		Bridge Approach Rail Design Accepted	1 day	Tue 3/11/14	Wed 3/12/14	1SS						
5		Traffic Control Plan Accepted	1 day	Tue 3/11/14	Wed 3/12/14	1SS						
6		Micro Pile Installation Plan Review	20 days	Tue 3/11/14	Wed 4/23/14	1SS						
7		Pre Construction Meeting	0 days	Thu 3/20/14	Thu 3/20/14							
8		EPSC Plan Re- Submission	21 days	Mon 4/21/14	Mon 5/19/14	7FS+14 days						
9		CPM Schedule, resubmitt for review	10 days	Tue 4/15/14	Mon 4/28/14	7FS+10 days						
10		Mobilizaton	26 days	Mon 6/2/14	Wed 7/9/14	6,1,2,3,4,5,8						
11		Field Office Set Up	2 days	Mon 6/2/14	Wed 6/4/14	9,5						
12		Rapid Set Mix Design Submittal	14 days	Wed 6/4/14	Mon 6/23/14	11						
13		Submit Erection Plan	21 days	Wed 6/4/14	Wed 7/2/14	11						
14		Install Traffic Control	1 day	Wed 6/4/14	Thu 6/5/14	11						

Project: Enosburg BRO 1448 (40) 4
Date: Tue 4/15/14

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	Predecessors	March				April	
							3/2	3/9	3/16	3/23	3/30	4/6
15		Establish EPSC measures	3 days	Thu 6/5/14	Tue 6/10/14	14,8						
16		Building Inspection	1 day	Tue 6/10/14	Wed 6/11/14	15						
17		Equipment	10 days	Wed 6/11/14	Tue 6/24/14	16						
18		Paving Mix Designs Submittal	21 days	Wed 6/4/14	Wed 7/2/14	11						
19		Rapid Set Concrete Test Batch	1 day	Tue 6/24/14	Wed 6/25/14	17						
20		Existing Temp Bridge Prep For Removal	8 days	Wed 6/25/14	Wed 7/9/14	19						
21		Begin BCP	0 days	Wed 7/9/14	Wed 7/9/14	20						
22		SP Remove Temp Bridge/Removal Of Structure	15 hrs	Wed 7/9/14	Thu 7/10/14	21						
23		Excavate Abutment 2	15 hrs	Thu 7/10/14	Fri 7/11/14	22						
24		Abut 2 Micro Piless 1,2	15 hrs	Fri 7/11/14	Sat 7/12/14	23,6						
25		Abut 2 Micro Piless 6,7	15 hrs	Sat 7/12/14	Sun 7/13/14	24						
26		Abut 2 Micro Piles 3,4	15 hrs	Sun 7/13/14	Mon 7/14/14	25						
27		Abut 2 Micro Piles 8,9	15 hrs	Mon 7/14/14	Tue 7/15/14	26						
28		Abut 2 Micro Piles 5,10	15 hrs	Tue 7/15/14	Wed 7/16/14	27						
29		Abut 2 Micro Piles Grout	15 hrs	Wed 7/16/14	Thu 7/17/14	28						
30		Set Precast Abut 2 Footing	15 hrs	Thu 7/17/14	Fri 7/18/14	29,1						

Project: Enosburg BRO 1448 (40) 4
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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	Predecessors	March				April	
							3/2	3/9	3/16	3/23	3/30	4/6
31		Sp Remove Temp Bridge/Removal Of Structure	75 hrs	Thu 7/10/14	Tue 7/15/14	22						
32		Excavate Abutment 1	15 hrs	Tue 7/15/14	Wed 7/16/14	31						
33		Mobilize Micro Piles to Abut1/Piles 1,2	15 hrs	Wed 7/16/14	Thu 7/17/14	32,28						
34		Abut 1 Micro Piles 6,7	15 hrs	Thu 7/17/14	Fri 7/18/14	33						
35		Abut 1 Micro Piles 3,4	15 hrs	Fri 7/18/14	Sat 7/19/14	34						
36		Abut 1 Micro Piles 8,9	15 hrs	Sat 7/19/14	Sun 7/20/14	35						
37		Abut 1 Micro Piles 5,10	15 hrs	Sun 7/20/14	Mon 7/21/14	36						
38		Abut 1 Micro Piles Grout	15 hrs	Mon 7/21/14	Tue 7/22/14	37						
39		Set Precast Abut 1 Footing	15 hrs	Tue 7/22/14	Wed 7/23/14	38,13						
40		Rapid Set Pile Cavities Abut 2 Footing	15 hrs	Fri 7/18/14	Sat 7/19/14	30,12,19						
41		Set Precast Abut 2 Stem	6 hrs	Sat 7/19/14	Sat 7/19/14	40						
42		Set Precast Abut 2 WWs 3,4	9 hrs	Sat 7/19/14	Sun 7/20/14	41						
43		Backfill Abut 2 to seats	15 hrs	Sun 7/20/14	Mon 7/21/14	42						
44		Rapid Set Pile Cavities Abut 1 Footing	15 hrs	Wed 7/23/14	Thu 7/24/14	39						
45		Set Precast Abut 1 Stem	6 hrs	Thu 7/24/14	Thu 7/24/14	44						
46		Set Precast Abut 1 WWs 1,2	9 hrs	Thu 7/24/14	Fri 7/25/14	45						
47		Backfill Abut 1 to seats	15 hrs	Fri 7/25/14	Sat 7/26/14	46						

Project: Enosburg BRO 1448 (40) 4
Date: Tue 4/15/14

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			

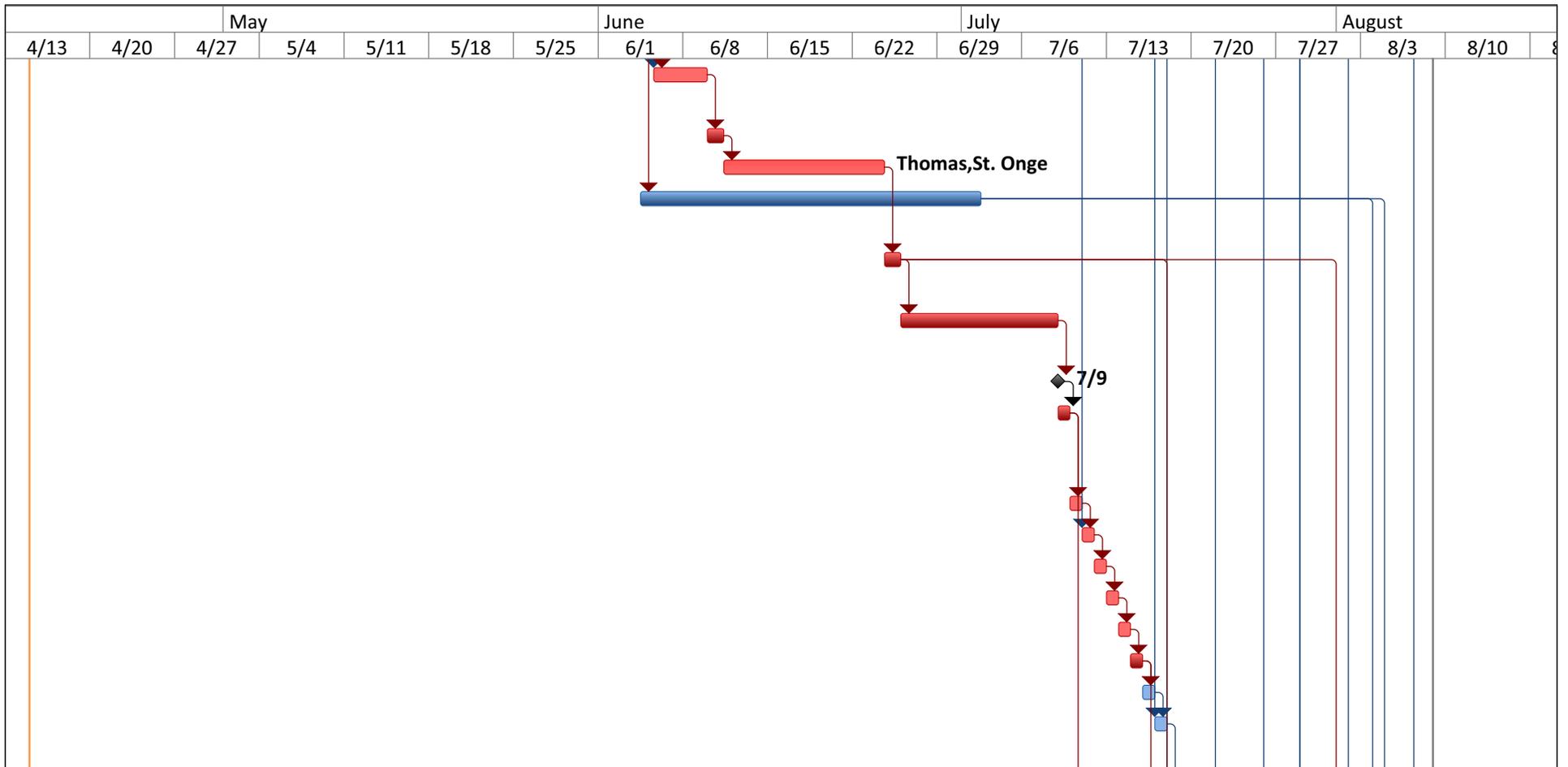
ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	March				April	
							3/2	3/9	3/16	3/23	3/30	4/6
48		Set Next Beam LT	15 hrs	Sat 7/26/14	Sun 7/27/14	43,47,2						
49		Set Next Beam CT	15 hrs	Sun 7/27/14	Mon 7/28/14	48						
50		Set Next Beam RT	15 hrs	Mon 7/28/14	Tue 7/29/14	49						
51		Set Abut 1,2 Precast Curtain Wall	15 hrs	Tue 7/29/14	Wed 7/30/14	50,49,48,13						
52		Tie-in Beams w/SP Rapid Set	3 days	Tue 7/29/14	Fri 8/1/14	50						
53		Backfill Abut 1,2	15 hrs	Wed 7/30/14	Thu 7/31/14	51						
54		Set Precast Approach Slabs	15 hrs	Thu 7/31/14	Fri 8/1/14	53						
55		Tie-in Approach Slabs with Rapid Set	24 hrs	Fri 8/1/14	Sat 8/2/14	52,19						
56		Install Bridge Rail	15 hrs	Tue 7/29/14	Wed 7/30/14	50,3						
57		Construct Approaches	15 hrs	Fri 8/1/14	Sat 8/2/14	54						
58		Install Approach Rail	15 hrs	Sat 8/2/14	Sun 8/3/14	52,57,56,4						
59		Apply Spray On Membrane	15 hrs	Fri 8/1/14	Sat 8/2/14	52						
60		Cold Plane 2" @ Tyler Branch Intersection	15 hrs	Sat 8/2/14	Sun 8/3/14	57						
61		Install Box Beam Rail	15 hrs	Sun 8/3/14	Mon 8/4/14	58						
62		Pave Approaches and Bridge	15 hrs	Mon 8/4/14	Tue 8/5/14	61,18						
63		End BCP	0 days	Tue 8/5/14	Tue 8/5/14	62						
64		Pave Top and Intersection	15 hrs	Tue 8/5/14	Wed 8/6/14	62,60,18						

Project: Enosburg BRO 1448 (40) 4 Date: Tue 4/15/14	Task		Inactive Task		Start-only	
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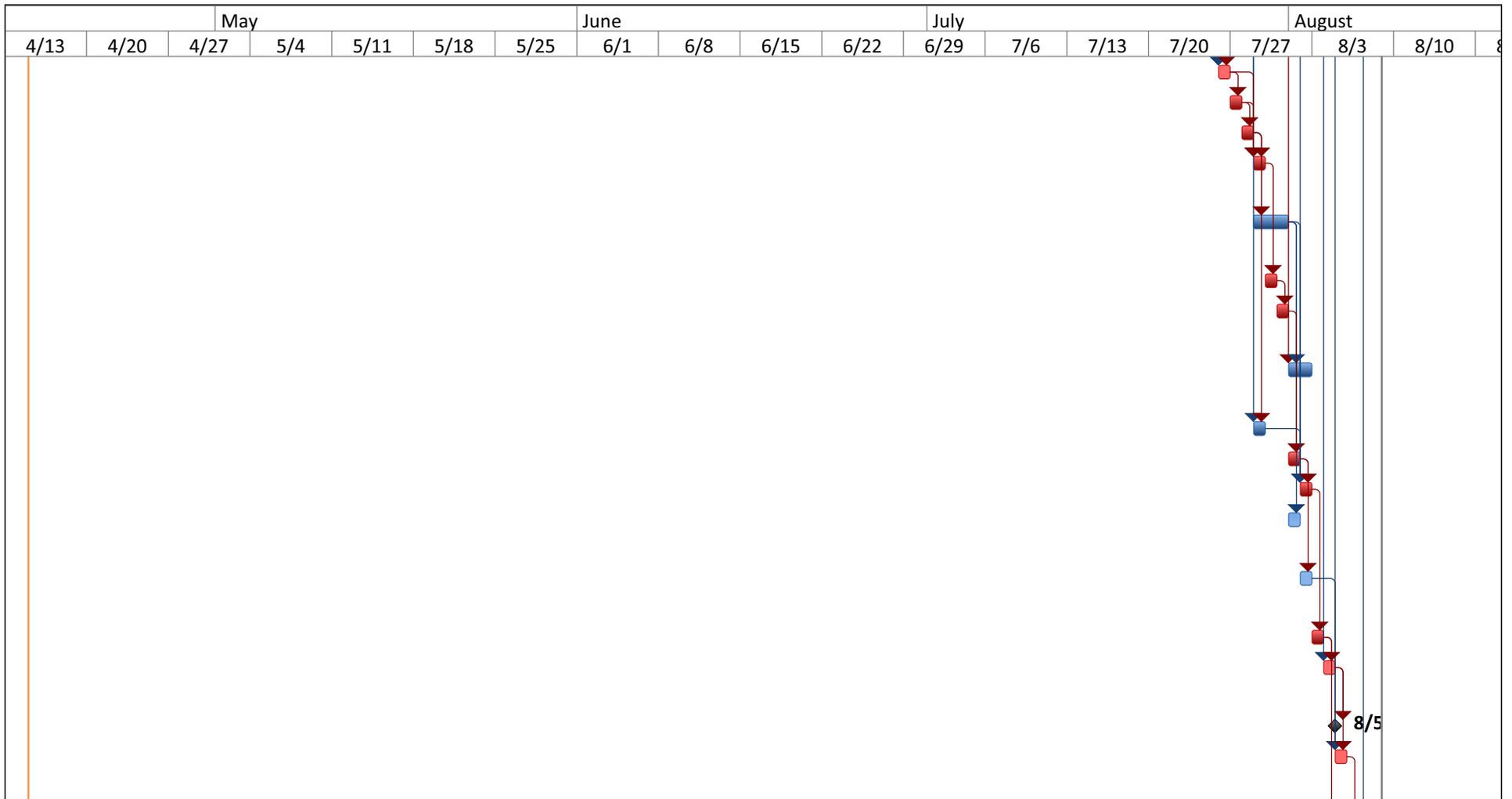
ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	March				April	
							3/2	3/9	3/16	3/23	3/30	4/6
65		Line Striping	1 day	Wed 8/6/14	Thu 8/7/14	64						
66		Install Traffic Signs and Woven Wire Fence	1 day	Mon 8/4/14	Tue 8/5/14	61						
67		Install EPSC Measures	1 day	Thu 8/7/14	Fri 8/8/14	65,66,8						

Project: Enosburg BRO 1448 (40) 4
Date: Tue 4/15/14

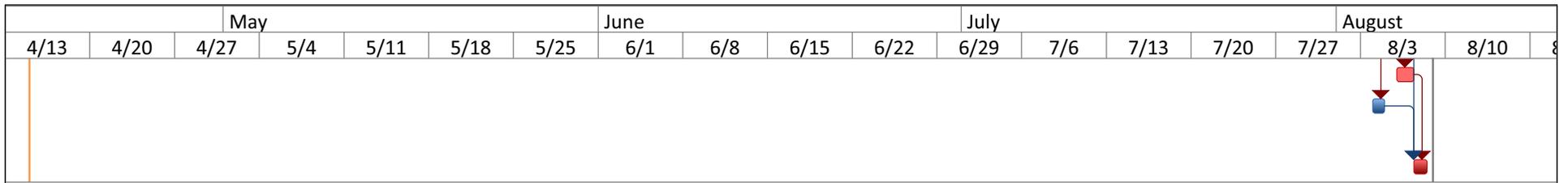
Task		Inactive Task		Start-only	
Split		Inactive Milestone		Finish-only	
Milestone		Inactive Summary		Deadline	
Summary		Manual Task		Critical	
Project Summary		Duration-only		Critical Split	
External Tasks		Manual Summary Rollup		Progress	
External Milestone		Manual Summary			



Project: Enosburg BRO 1448 (40) 4 Date: Tue 4/15/14	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			



Project: Enosburg BRO 1448 (40) 4 Date: Tue 4/15/14	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			



Project: Enosburg BRO 1448 (40) 4
Date: Tue 4/15/14

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			

APPENDIX B – FORMS

1. Off-Site Activities Form.
2. Inspection Form.

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, VTTrans 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 VTTrans Standard Specifications For Construction) for review once the application is administratively complete.

▪ SUBMITTAL INFORMATION

Project Name/District: <u>Enosburg BRO 1448 (40)</u>		Contractor/District Tech: <u>A.L. St. Onge Contractor, Inc</u>	
Contact: <u>Carl Gleason</u>	Phone: <u>802-782-3978</u>	Fax: _____	E-mail: <u>gleason.carl@gmail.com</u>
Resident Engineer: <u>Scott wheately</u>	Phone: _____	Fax: _____	

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

<input type="checkbox"/> Waste	<input type="checkbox"/> Borrow	<input checked="" type="checkbox"/> Staging	<input type="checkbox"/> Other (ex. dewatering location): _____
Material: Type (asphalt, concrete, earthen, etc.) <u>earthen</u>		Quantity (yds ³) <u>400 cy ±</u>	
Total Area of Land Disturbance (sq ft) <u>16,000 SF</u>		_____	
Additional Info: _____			

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

Name: <u>Garvan's Family</u>	Address: <u>6001 Best Post Rd</u>	Phone: _____
<input type="checkbox"/> Private Residential/Commercial	<input type="checkbox"/> Town/State Owned Facility	<input checked="" type="checkbox"/> Other <u>old Barn site</u>
Additional Info: <u>gravel and level the area for temp storage</u>		
Are there other users of this site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Known past uses: <u>Farm building</u>		
<input type="checkbox"/> Location Map (must be USGS Geological Survey Map (7.5'))		
<input type="checkbox"/> Sketch of Area: <input type="checkbox"/> North arrow	<input type="checkbox"/> Approx scale	<input type="checkbox"/> Recognizable features
Permit Info:		
Act 250 Permit Exists? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, # _____ Copy Enclosed? <input type="checkbox"/> Yes <input type="checkbox"/> No		
List of Other Existing Permits: _____		

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

I, Charles Dewar, warrant that the information in the above permit application is accurate and agree

Landowner/Facility Manager Signature

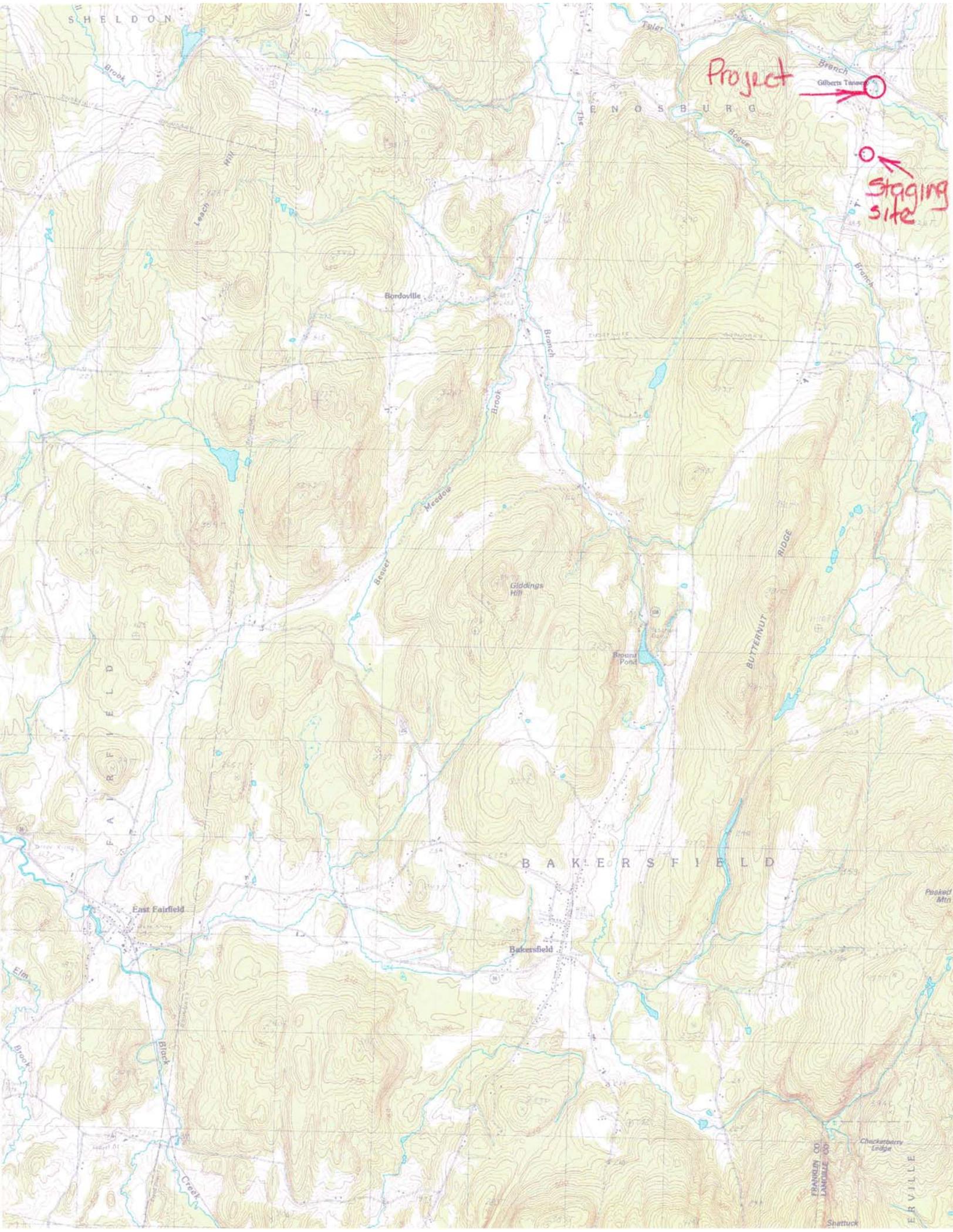
to the use of the proposed area by A.L. St. Onge as shown on the attached sketch. If acting as the agent of

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: 4/16/14

This clearance is for the Natural and Cultural Resources Only.



Project



staging site



SHELTON

ENOSBURG

BAKERSFIELD

FAIRFIELD

ERVILLE

FRANKLIN CO.
LANCASTER CO.

Shattuck



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: Enosburg BRD 144B (40) Contractor/District Tech: A.L. St. Onge
Contact: Carl Gleason Phone: 782-3978 Fax: _____ E-mail: gleason.carl@gmail.com
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.) earthen Quantity (yds³) 1000 cu
Total Area of Land Disturbance (sq ft) 3800 SF ±
Additional Info: _____

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

Name: Charles (Bill) Pattee Address: Tyler Branch Road Phone: 802-933-4976
Print Name Enosburg VT
 Private Residential/Commercial Town/State Owned Facility Other
Additional Info: rural area
Are there other users of this site? Yes No
Known past uses: None
 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)

Charles Pattee, 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 A.L. St. Onge as shown on the attached sketch. If acting as the agent of
Name of Contractor
as 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: 1/8/14
2/7/14

This clearance is for the Natural and Cultural Resources Only.

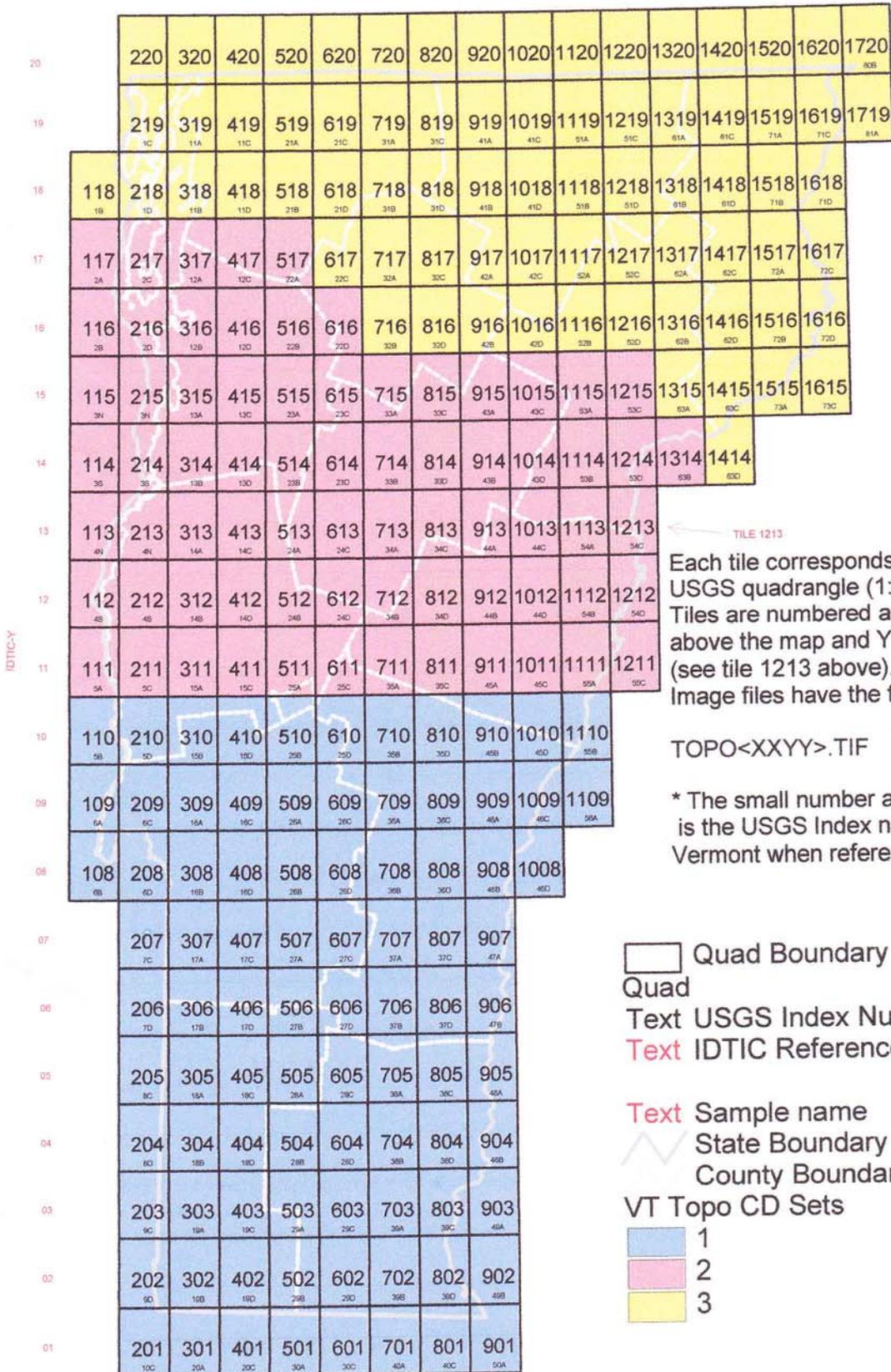


□
site

Quad # 618
USGS Index # 21D

Vermont Topographic Maps

CD Set Index Map

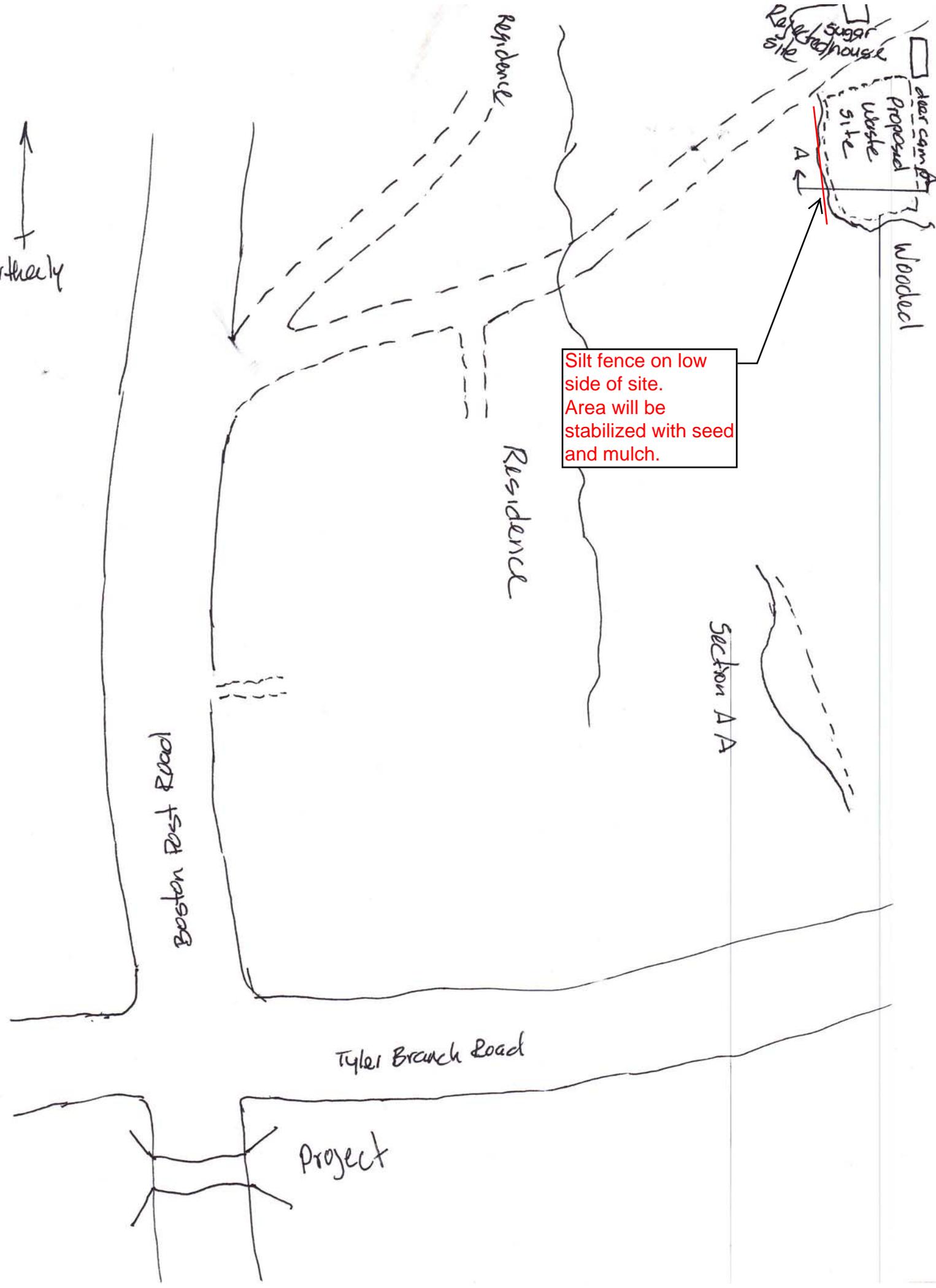


Each tile corresponds to one 7.5-minute USGS quadrangle (1:24000 or 1:25000 scale). Tiles are numbered as XXYY, with XX shown above the map and YY shown to the left (see tile 1213 above). The Vermont Topographic Image files have the following naming convention:

TOPO<XXYY>.TIF

* The small number at the bottom of each QUAD is the USGS Index number used by the State of Vermont when referencing QUAD map sheets.

- Quad Boundary
- Quad
- Text USGS Index Number
- Text IDTIC References
- Text Sample name
- State Boundary
- County Boundaries
- VT Topo CD Sets**
- 1
- 2
- 3



Silt fence on low side of site. Area will be stabilized with seed and mulch.

Boston Post Road

Tyler Branch Road

Project

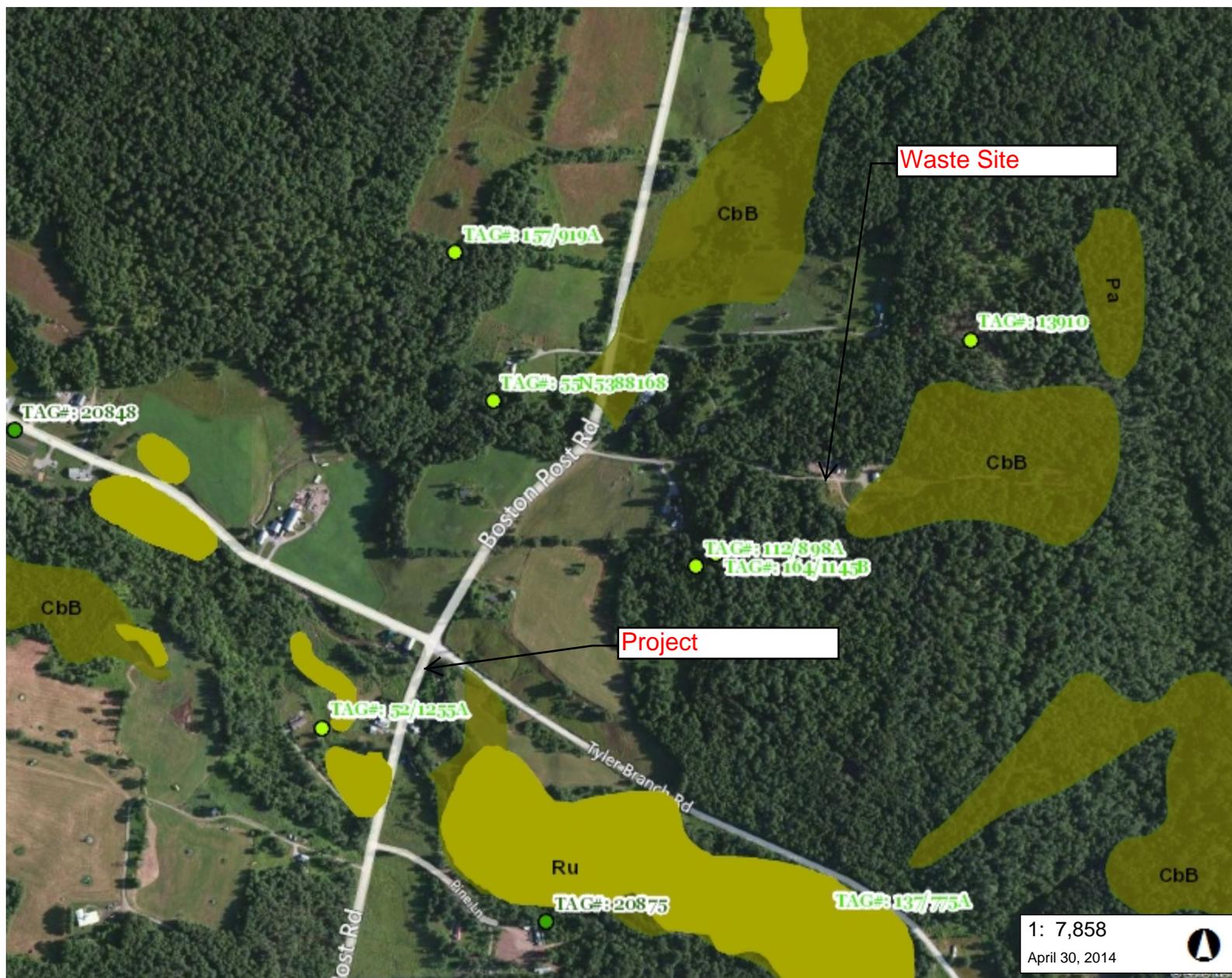
Residence

Residence

Rejected site
sugar house
Proposed Waste site
A
A

Woodshed

Section A A



LEGEND

- Rare Threatened Endangered
 - Threatened or Endangered
 - Rare
- Vernal Pools Confirmed – AE/
- Wetlands - VSWI
 - Class 1 Wetland
 - Class 2 Wetland
- Soils - Hydric
- Private Wells
 - GPS Location; Field Located with C
 - Screen Digitized
 - E911 Address
 - Unknown
 - Welldriller/Clarion
- Public Water Sources
 - Active
 - Proposed
 - Inactive
- SurfaceWaterSPA
- GroundWaterSPA
 - ACTIVE
 - PROPOSED
- Town Boundary

1: 7,858
April 30, 2014

399.0 0 200.00 399.0 Meters
 WGS_1984_Web_Mercator_Auxiliary_Sphere 1" = 655 Ft. 1cm = 79 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.

NOTES

Map created using ANR's Natural Resources Atlas

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

Project Name:			Date:		Time Since Last Storm:	
Inspector:			On-Site Coordinator: <small>(signature required)</small>			
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 <i>Authorization to Discharge</i> 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 < 1/2 height of measure						
Diversions						
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.



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 (Modified Contract Plans).

ITEM 653.55 PROJECT DEMARCATION FENCE

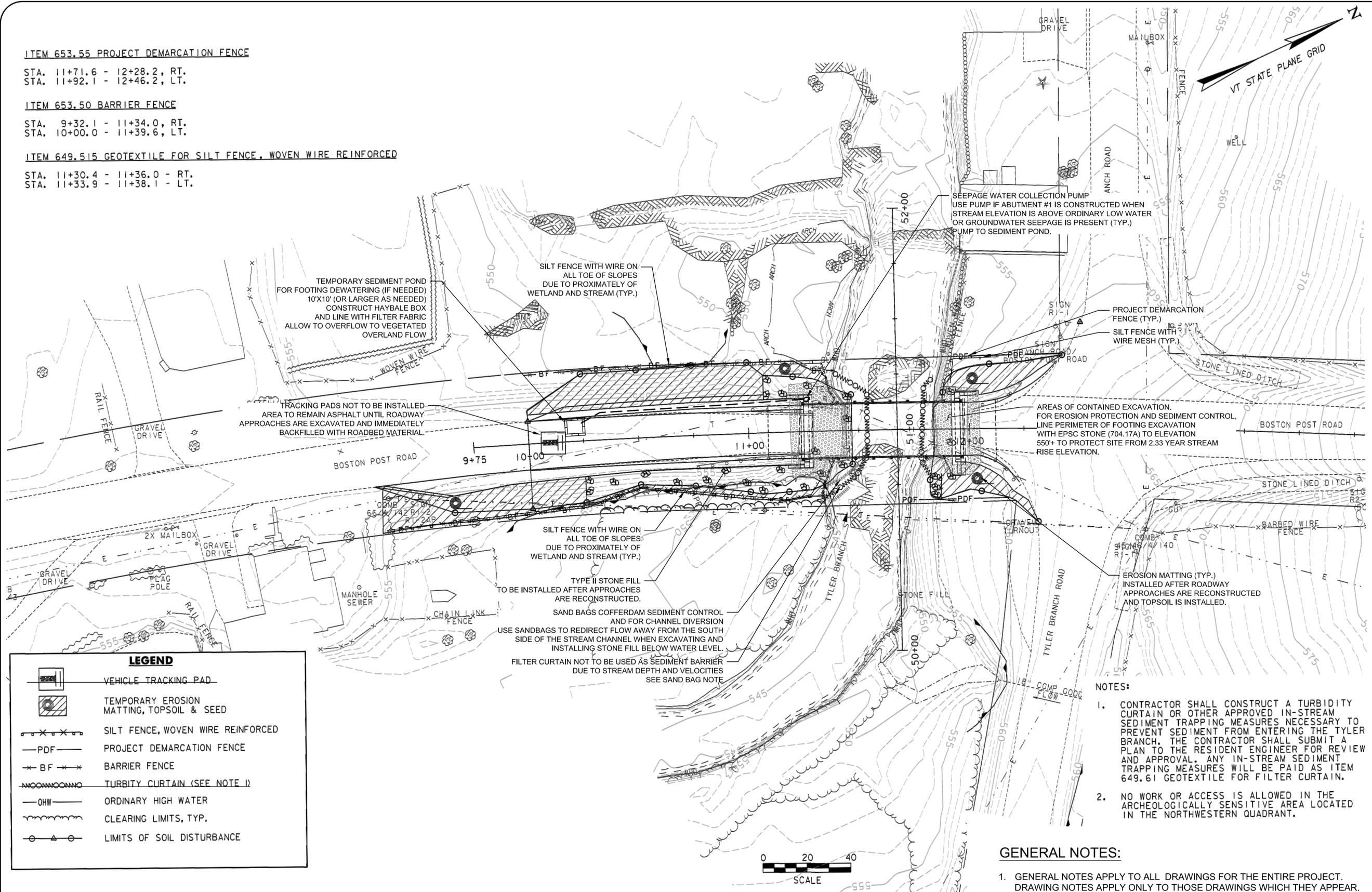
STA. 11+71.6 - 12+28.2, RT.
STA. 11+92.1 - 12+46.2, LT.

ITEM 653.50 BARRIER FENCE

STA. 9+32.1 - 11+34.0, RT.
STA. 10+00.0 - 11+39.6, LT.

ITEM 649.515 GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED

STA. 11+30.4 - 11+36.0 - RT.
STA. 11+33.9 - 11+38.1 - LT.



TEMPORARY SEDIMENT POND FOR FOOTING DEWATERING (IF NEEDED) 10'X10' (OR LARGER AS NEEDED) CONSTRUCT HAYBALE BOX AND LINE WITH FILTER FABRIC ALLOW TO OVERFLOW TO VEGETATED OVERLAND FLOW

SILT FENCE WITH WIRE ON ALL TOE OF SLOPES DUE TO PROXIMITY OF WETLAND AND STREAM (TYP.)

TRACKING PADS NOT TO BE INSTALLED AREA TO REMAIN ASPHALT UNTIL ROADWAY APPROACHES ARE EXCAVATED AND IMMEDIATELY BACKFILLED WITH ROADBED MATERIAL

SEEPAGE WATER COLLECTION PUMP USE PUMP IF ABUTMENT #1 IS CONSTRUCTED WHEN STREAM ELEVATION IS ABOVE ORDINARY LOW WATER OR GROUNDWATER SEEPAGE IS PRESENT (TYP.) PUMP TO SEDIMENT POND.

PROJECT DEMARCATION FENCE (TYP.)
SILT FENCE WITH WIRE MESH (TYP.)

AREAS OF CONTAINED EXCAVATION, FOR EROSION PROTECTION AND SEDIMENT CONTROL, LINE PERIMETER OF FOOTING EXCAVATION WITH EPSC STONE (704.17A) TO ELEVATION 550'+ TO PROTECT SITE FROM 2.33 YEAR STREAM RISE ELEVATION.

SILT FENCE WITH WIRE ON ALL TOE OF SLOPES DUE TO PROXIMITY OF WETLAND AND STREAM (TYP.)

TYPE II STONE FILL TO BE INSTALLED AFTER APPROACHES ARE RECONSTRUCTED.

SAND BAGS COFFERDAM SEDIMENT CONTROL AND FOR CHANNEL DIVERSION USE SANDBAGS TO REDIRECT FLOW AWAY FROM THE SOUTH SIDE OF THE STREAM CHANNEL WHEN EXCAVATING AND INSTALLING STONE FILL BELOW WATER LEVEL

FILTER CURTAIN NOT TO BE USED AS SEDIMENT BARRIER DUE TO STREAM DEPTH AND VELOCITIES SEE SAND BAG NOTE

EROSION MATTING (TYP.) INSTALLED AFTER ROADWAY APPROACHES ARE RECONSTRUCTED AND TOPSOIL IS INSTALLED.

LEGEND

- VEHICLE TRACKING PAD
- TEMPORARY EROSION MATTING, TOPSOIL & SEED
- SILT FENCE, WOVEN WIRE REINFORCED
- PROJECT DEMARCATION FENCE
- BARRIER FENCE
- TURBIDITY CURTAIN (SEE NOTE 1)
- ORDINARY HIGH WATER
- CLEARING LIMITS, TYP.
- LIMITS OF SOIL DISTURBANCE

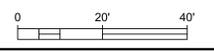
NOTES:

- CONTRACTOR SHALL CONSTRUCT A TURBIDITY CURTAIN OR OTHER APPROVED IN-STREAM SEDIMENT TRAPPING MEASURES NECESSARY TO PREVENT SEDIMENT FROM ENTERING THE TYLER BRANCH. THE CONTRACTOR SHALL SUBMIT A PLAN TO THE RESIDENT ENGINEER FOR REVIEW AND APPROVAL. ANY IN-STREAM SEDIMENT TRAPPING MEASURES WILL BE PAID AS ITEM 649.61 GEOTEXTILE FOR FILTER CURTAIN.
- NO WORK OR ACCESS IS ALLOWED IN THE ARCHEOLOGICALLY SENSITIVE AREA LOCATED IN THE NORTHWESTERN QUADRANT.

GENERAL NOTES:

- GENERAL NOTES APPLY TO ALL DRAWINGS FOR THE ENTIRE PROJECT. DRAWING NOTES APPLY ONLY TO THOSE DRAWINGS WHICH THEY APPEAR.
- THIS PROJECT INCLUDES A SITE SPECIFIC EROSION CONTROL PLAN BASED ON THE CONTRACTORS INFORMATION.
- 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.
- THE WASTE AREA SITE INCLUDES IMAGERY FROM THE VERMONT NATURAL RESOURCES ATLAS. CONDITIONS MAY VARY IN THE FIELD.

EPSC PLAN
SCALE: 1" = 20'

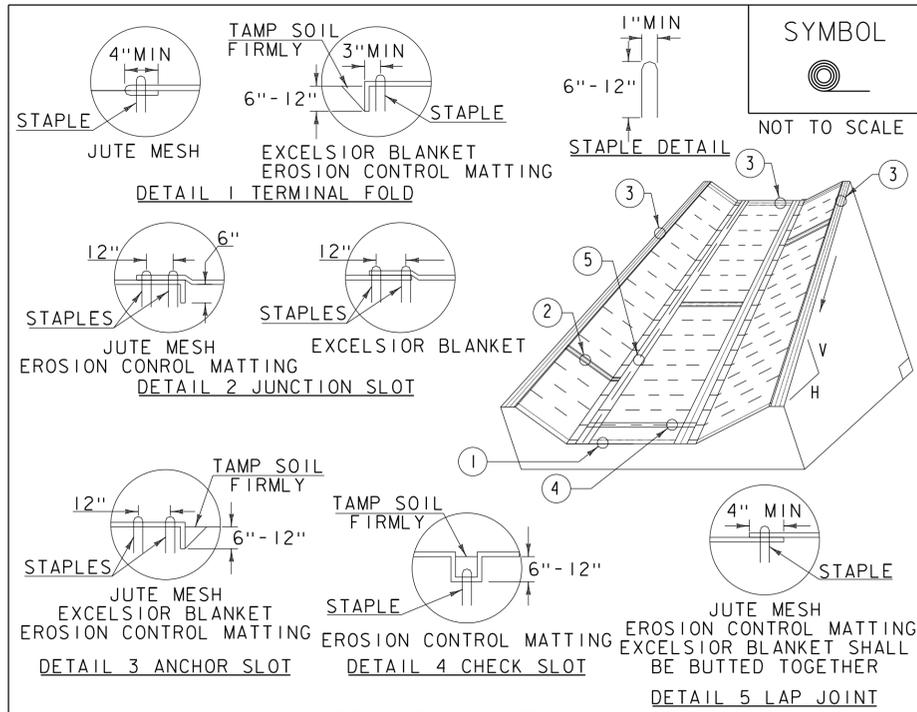


PREPARED FOR: **A.L. ST. ONGE CONTRACTORS, INC.**
P.O. BOX 85, MONTGOMERY, VT 05470
Address

REVISIONS	No.	Date	Description

Designed: NPS
Drawn: NPS
Checked: -
DATE: 4/29/14

C:\Users\stcarad\Desktop\Projects\St. Onge, Al\EPSC Plan, Enosburg\EPSC.dwg - 2013/02/18



CONSTRUCTION SPECIFICATIONS

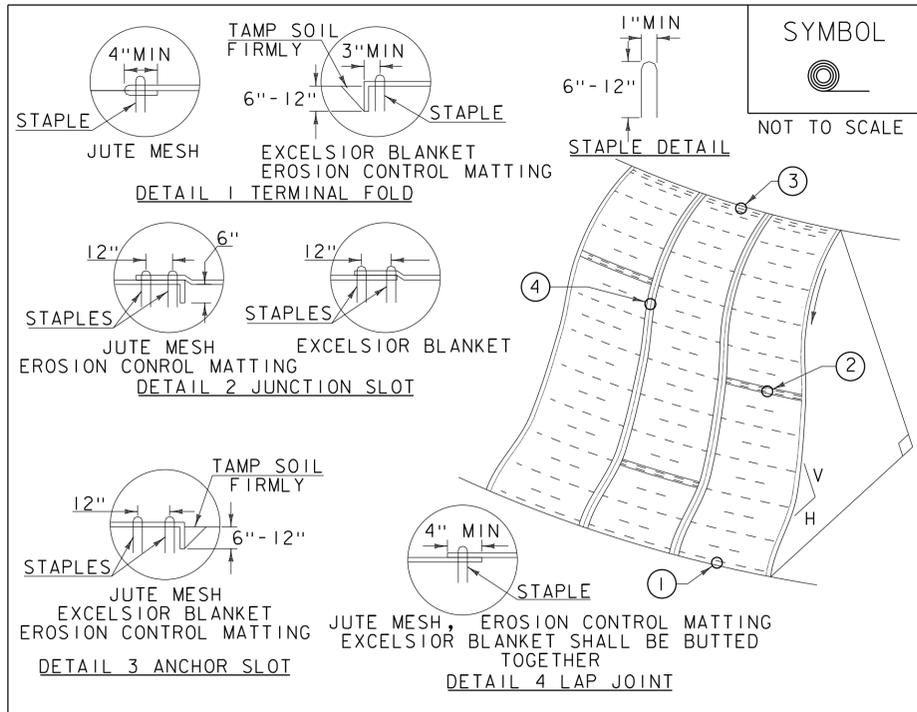
1. EROSION MATTING, CHECK SLOTS, SHALL BE SPACED IN DITCH CHANNEL SO THAT ONE OCCURS WITHIN EACH 50' ON SLOPES OF MORE THAN 4% AND LESS THAN 6%. ON SLOPES OF 6% OR MORE, THEY SHALL BE SPACED SO THAT ONE OCCURS WITHIN EACH 25'.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO 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) DITCH

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		
MARCH 8, 2007	JMF	
APRIL 16, 2007	WHF	
JANUARY 13, 2009	WHF	



CONSTRUCTION SPECIFICATIONS

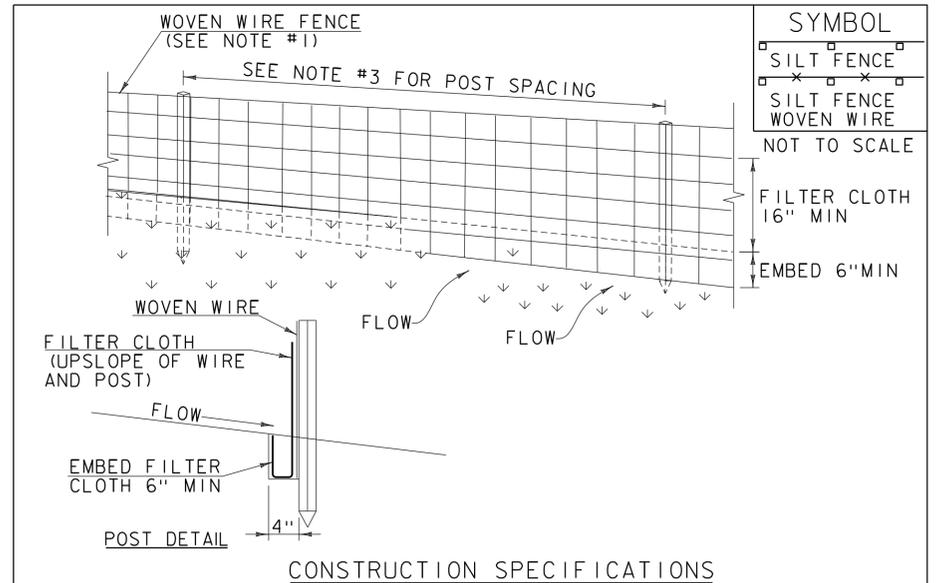
1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 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	



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, MIRAF1100X, 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	

PROJECT NAME: ENOSBURG
PROJECT NUMBER: BRO 1448(40)

FILE NAME: ...\\08.C EPSC Details.dgn PLOT DATE: 10/4/2013
PROJECT LEADER: G. BOGUE DRAWN BY: E. ALLING
DESIGNED BY: G. GOYETTE CHECKED BY: G. GOYETTE
EROSION CONTROL DETAILS - ECD 1 SHEET 44 OF 46

VAOT RURAL AREA MIX					
% WEIGHT	LBS/AC		NAME	GERM %	PURITY %
	BROADCAST	HYDROSEED			
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					
% WEIGHT	LBS/AC		NAME	GERM %	PURITY %
	BROADCAST	HYDROSEED			
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

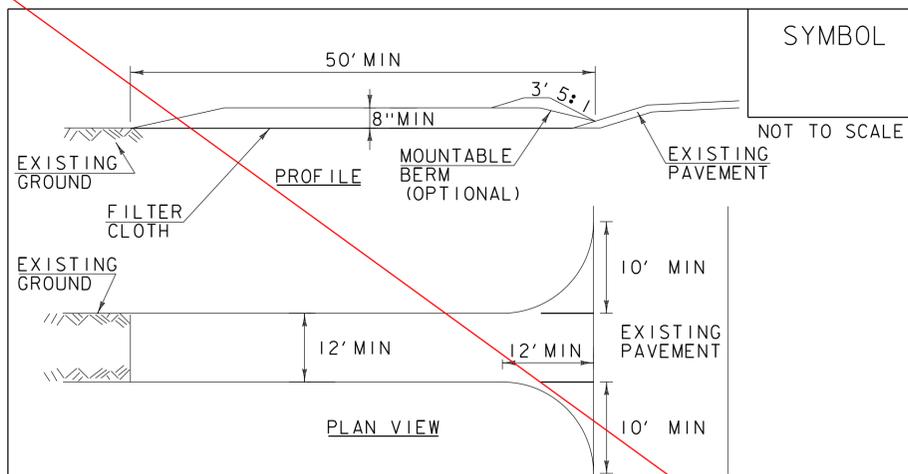
CONSTRUCTION GUIDANCE

- RURAL SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
- URBAN SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED LAWN AREAS DISTURBED BY THE CONTRACTOR.
- ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
- FERTILIZER AND LIMESTONE: SHALL FOLLOW RATES SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER
- 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.
- TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.
- 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
- 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

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



CONSTRUCTION SPECIFICATIONS

- STONE SIZE- USE 1-4" STONE, RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- LENGTH- NOT LESS THAN 50' (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH APPLIES).
- THICKNESS- NOT LESS THAN 8".
- WIDTH- 12' MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24' IF SINGLE ENTRANCE TO SITE.
- GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
- 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.
- 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.
- WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
- PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.

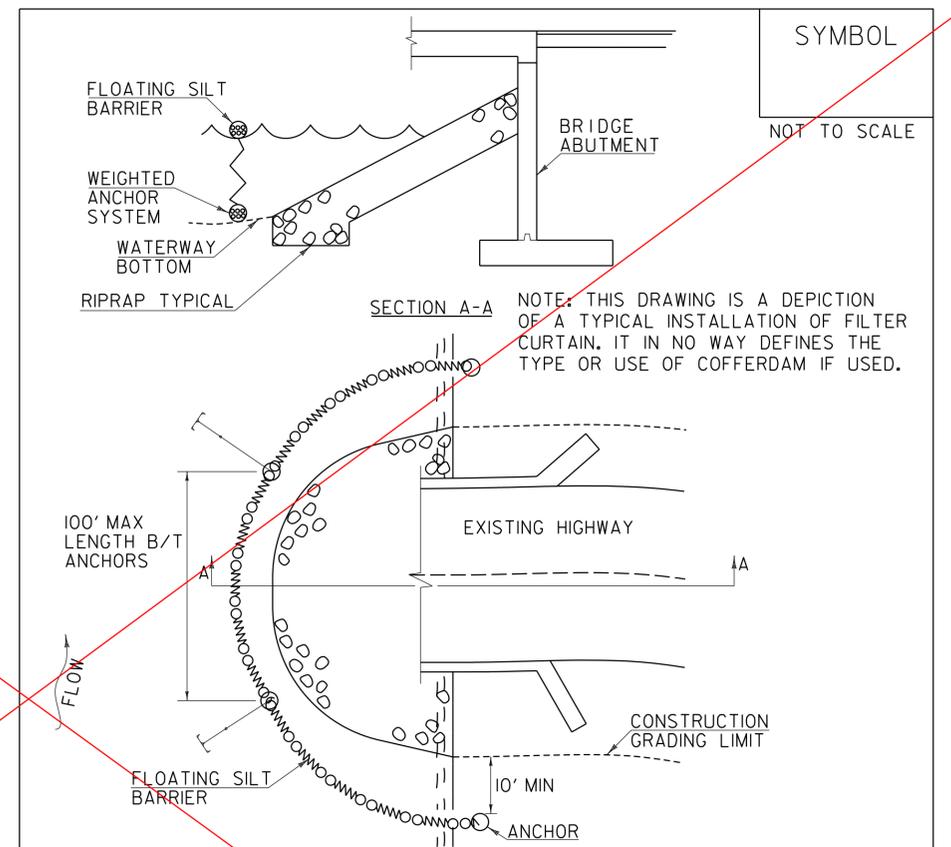
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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



CONSTRUCTION SPECIFICATIONS

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

FILTER CURTAIN

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

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 FOR GEOTEXTILE FOR FILTER CURTAIN (PAY ITEM 649.6I).

PROJECT NAME: ENOSBURG
PROJECT NUMBER: BRO 1448(40)

FILE NAME: ...N08.C EPSC Details.dgn PLOT DATE: 10/4/2013
PROJECT LEADER: G. BOGUE DRAWN BY: E. ALLING
DESIGNED BY: G. GOYETTE CHECKED BY: G. GOYETTE
EROSION CONTROL DETAILS - ECD 2 SHEET 45 OF 46