EROSION CONTROL NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REHABILATATION AND WIDENING OF BRIDGE 14, LOCATED IN THE TOWN OF BRIDGEWATER, ALONG VT ROUTE 100A. THE EXISTING STEEL TRUSS BRIDGE SPANS 114 FEET OVER THE OTTAUQUECHEE RIVER. IT WILL BE REHABILITATED, WIDENED AND PLACED ON NEW ABUTMENTS ALONG THE SAME ALIGNMENT. THE PROJECT ALSO ENTAILS NECESSARY ROADWAY, CHANNEL AND GUARDRAIL APPROACH WORK AND REMOVAL OF TEMPORARY BRIDGE. THE BRIDGE IS APPROXIMATELY 650 SOUTH OF THE INTERSECTIONS OF VT ROUTE 100A AND US ROUTE 4.

NOTE: AREA OF DISTURBANCE SHALL INCLUDE LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, INCLUDING ANY WASTE, STAGING AND BORROW AREAS WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS.

TOTAL AREA OF DISTURBANCE IS APPROXIMATELY 0.75 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST TWO CONSTRUCTION SEASONS.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE AREA IS RELATIVELY FLAT, WITH STEEP SLOPES OCCURING ONLY AT STREAM BANKS AND SIDE SLOPES OF EXISTING ROAD BED.

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

THE OTTAUQUECHEE RIVER IS THE ONLY WATER SOURCE ON THE PROJECT SITE. THE RIVER IS CLASSIFIED AS STEEP, SINUOUS, NARROW, WITH A CONFINED AND ARMORED CHANNEL AT THE SITE. THE STREAM BED CONSISTS OF COBBLES, GRAVEL, SAND AND SILT.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF MOSTLY OPEN FIELDS WITH PATCHES OF WOODS ALONG THE RIVER. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY REHABILITATION OF THE EXISTING BRIDGE. 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. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF WINDSOR, VERMONT. SOILS IN THE PROJECT SITE ARE AS FOLLOWS:

8A AGAWAM, FINE SANDY LOAM, 0 - 3% SLOPES, VERY DEEP, WELL DRAINED SOILS FORMED IN SANDY WATER DEPOSITED MATERIALS, "K FACTOR" = 0.28

23 ONDAWA, FINE SANDY LOAM, 0 - 3% SLOPES, VERY DEEP, WELL DRAINED SOILS FORMED IN RECENT ALLUVIUM OF FLOODPLAINS, OCCASIONALLY FLOODED, "K FACTOR" = 0.24

29A GRANGE, VERY FINE SANDY LOAM, 0 - 3% SLOPES, CONSISTS OF VERY DEEP, POORLY AND SOMEWHAT POORLY DRAINED SOILS, "K FACTOR" = 0.49

64B COLTAN, FINE SANDY LOAM, 3 - 8% SLOPES, EXCESSIVELY DRAINED SOILS FORMED IN GLACIO-FLUVIAL DEPOSITS, "K FACTOR" = 0.24

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

1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: OUTSIDE PROJECT LIMITS
PRIME AGRICULTURAL LAND: UNDER TEMPORARY DETOUR
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: OTTAUQUECHEE RIVER
WETLANDS: NO

1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF CONSTRUCTION GENERAL PERMIT 3-9020 BASED ON THE PROJECT IMPACT AREA. 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, THEN THE SELECTED 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 WORK OUTLINED IN THIS NARRATIVE CONSISTS OF APPLYING MEASURES THROUGHOUT THE LIFE 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.

PREVENTING INITIAL SOIL EROSION BY MINIMIZING THE EXPOSED AREA IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. 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.

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

REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR SPECIFIC GUIDANCE AND CONSTRUCTION DETAILING.

1.4.1 MARK SITE BOUNDARIES

DELINEATE THE LIMITS CONSTRUCTION EQUIPMENT CAN ACCESS. PROJECT DEMARCATION FENCING (PDF) SHALL BE USED TO MARK SITE BOUNDARIES.

1.4.2 LIMIT DISTURBANCE AREA

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.

1.4.3 STABILIZE CONSTRUCTION ENTRANCE

STABILIZED CONSTRUCTION ENTRANCES SHALL BE UTILIZED TO MINIMIZE TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS AND REDUCE THE POTENTIAL FOR RUNOFF INTO RECEIVING WATERS. THEY SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION.

1.4.4 INSTALL SEDIMENT BARRIERS

SEDIMENT BARRIERS SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK AND AS NECESSARY. PROJECTS WHICH FALL UNDER THE CONSTRUCTION GENERAL PERMIT SHALL USE SILT FENCE WOVEN WIRE WITHIN 100 FEET UPSLOPE OF RECEIVING WATERS.

1.4.5 SLOW DOWN CHANNELIZED RUNOFF

CHECK DAMS SHALL BE UTILIZED TO CONTROL CONCENTRATED FLOW OF STORMWATER WITHIN THE PROJECT LIMITS.

1.4.6 CONSTRUCT PERMANENT CONTROLS

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

1.4.7 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

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

TRACKING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS. SEEDING, MULCHING AND 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.

1.4.8 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.

1.4.9 STABILIZE SOIL AT FINAL GRADE

EXPOSED SOIL MUST BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE. SEEDING, MULCHING AND BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3.

1.4.10 INSPECT YOUR SITE

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

1.5 SEQUENCE AND STAGING

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

1.5.1 CONSTRUCTION SEQUENCE

1.5.2 OFF-SITE ACTIVITIES

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

PROJECT NAME:	BRIDGEWATER
PROJECT NUMBER:	BRS 0149(4)
FILE NAME: s86e062epsc_nar.dgn	PLOT DATE: 31-DEC-2009
PROJECT LEADER: K. HIGGINS	DRAWN BY: J. SALVATORI
DESIGNED BY: J. SALVATORI	CHECKED BY: T. FILLBACH
EPSC NARRATIVE	SHEET 43 OF 58