

## **EPSC PLAN NARRATIVE**

### **1.1 PROJECT DESCRIPTION**

THIS PROJECT INVOLVES THE REMOVAL OF BRIDGE 43N AND 43S ON INTERSTATE 91 OVER US-5 AND LOCATED IN THE TOWN OF HARTFORD, VT. BRIDGES 43N AND 43S WILL BE REPLACED WITH SINGLE SPAN BRIDGES. BOTH BRIDGES WILL BE BUILT ON THE EXISTING ALIGNMENT. BRIDGE 43N AND 43S WILL BOTH BE APPROXIMATELY 136 FEET IN LENGTH.

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 4.63 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 SLOPING OPEN GROUND WITH SOME AREAS THAT ARE GENTLY SLOPING TO NEARLY FLAT. INTERSTATE 91 AND US-5 ARE RELATIVELY FLAT BUT WITH SLOPING AREAS BETWEEN THE TWO CORRIDORS.

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

THERE ARE NUMEROUS EXISTING AND PROPOSED DRAINAGE SYSTEMS WITHIN THE PROJECT LIMITS, INCLUDING CULVERTS, DROP INLETS, STONE LINED DITCHES AND GRASS SWALES. SOME CULVERTS AND DRAINAGE DITCHES WITHIN THE PROJECT LIMITS DRAIN TO AN EXISTING STORM WATER RETENTION POND OUTSIDE OF THE PROJECT LIMITS. FOR DETAILS SEE THE DRAINAGE LAYOUT SHEET.

#### **1.2.3 VEGETATION**

THE VEGETATION IN THE PROJECT AREA CONSISTS OF MOWED GRASSES.

#### **1.2.4 SOILS**

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF WINDSOR, VERMONT.

GLOVER VERSHIRE COMPLEX	15% - 35% SLOPES	"K" FACTOR = 0.32 - 0.28
URBAN LAND WINDSOR-AGAWAM COMPLEX	0% - 8% SLOPES	"K" FACTOR = 0.17 - 0.28

**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: NO

PRIME AGRICULTURAL LAND: NO

THREATENED AND ENDANGERED SPECIES: NO

WATER RESOURCE: NO

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 PERMIT REQUIREMENTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

### **1.4 EROSION PREVENTION AND SEDIMENT CONTROL**

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

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

#### **1.4.1 MARK SITE BOUNDARIES**

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

BARRIER FENCE (BF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES.

#### **1.4.2 LIMIT DISTURBANCE AREA**

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

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

#### **1.4.3 SITE ENTRANCE/EXIT STABILIZATION**

TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTORS 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.

FILTER FABRIC DROP INLET PROTECTION SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLANS.

SILT FENCE WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

#### **1.4.5 DIVERT UPLAND RUNOFF**

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

THE PROJECT AREA IS RELATIVELY FLAT. THEREFORE IT IS NOT ANTICIPATED THAT DIVERSION MEASURES WILL BE NECESSARY.

#### **1.4.6 SLOW DOWN CHANNELIZED RUNOFF**

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

STONE CHECK DAMS WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN, AT A MINIMUM.

#### **1.4.7 CONSTRUCT PERMANENT CONTROLS**

PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH PERMIT CONDITIONS. CULVERTS, DROP INLETS, STONE LINED DITCHES AND GRASS SWALES SHALL BE INSTALLED AS SHOWN ON THE DRAINAGE LAYOUT SHEET.

#### **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 IS NOT ANTICIPATED ON THIS PROJECT SITE.

#### **1.4.12 INSPECT YOUR SITE**

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

### **1.5 SEQUENCE AND STAGING**

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

#### **1.5.1 CONSTRUCTION SEQUENCE**

#### **1.5.2 OFF-SITE ACTIVITIES**

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

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	IM 09I-2(79)

FILE NAME: s12a132ero_narrative.dgn	PLOT DATE: 15-DEC-2014
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