

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REMOVAL OF BRIDGE #9 ALONG WITH ITS PIERS AND ABUTMENTS. BRIDGE #9 WILL THEN BE RELOCATED AND REPLACED BY A NEW STEEL GIRDER WITH CONCRETE SLAB BRIDGE ON NEW ABUTMENTS AND A NEW ALIGNMENT. THE NEW BRIDGE WILL BE RELOCATED APPROXIMATELY 14.5 METERS DOWNSTREAM FROM ITS CURRENT LOCATION. BRIDGE #9 IS LOCATED IN THE TOWN OF STOCK BRIDGE ON VT ROUTE 107 AT THE INTERSECTION OF ROUTE 107 AND STONY BROOK ROAD. THE NEW BRIDGE WILL BE 50.4 METERS LONG, SPANNING STONY BROOK. THIS PROJECT WILL ALSO INVOLVE THE CONSTRUCTION OF 267 METERS OF NEW APPROACHES. THERE ARE A NUMBER OF OVERHEAD UTILITIES THAT WILL BE RELOCATED AS A RESULT OF THIS PROJECT. THERE ARE ALSO A NUMBER OF DROP INLETS THAT WILL BE REMOVED WITH SEVERAL NEW DROP INLETS BEING INSTALLED.

TOTAL AREA OF EARTH DISTURBANCE IS APPROXIMATELY 0.997 HECTARES (2.46 ACRES).

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

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE PROPERTY SURROUNDING THE PROJECT SITE CONSISTS OF STEEP SLOPES COVERED WITH TREES. THE ROAD SIDES ARE STEEP, WITH GRASS AND A FEW TREES. DUE TO THE NATURE OF THE SURROUNDING TERRAIN THE PROJECT SITE WILL SEE VERY LITTLE RUNOFF ONTO IT. THE SLOPES IN THE PROJECT VICINITY RANGE FROM 0-18%.

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

STONY BROOK IS THE ONLY WATER SOURCE ON THE PROJECT SITE. THE BROOK IS CLASSIFIED AS SLIGHTLY MEANDERING WITH A STREAMBED MADE UP OF GRAVEL, COBBLES, AND BOULDERS. THE TRIBUTARY AREA AT THE BRIDGE CROSSING IS 59.41 SQUARE KILOMETERS. THERE ARE A NUMBER OF DROP INLETS ON SITE TO HELP DRAIN WATER FROM THE ROADWAY.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF TREES AND SOME GRASS. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY REMOVAL OF BRIDGE #9 ALONG WITH ITS PIERS AND ABUTMENTS AND THE BLENDING OF THE OLD APPROACHES TO MATCH INTO THE SURROUNDING TERRAIN, ALONG WITH THE CONSTRUCTION OF THE NEW BRIDGE, ABUTMENTS, AND APPROACHES. AFTER PROJECT COMPLETION, 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 ON THE PROJECT SITE ARE CROGHAN LOAMY FINE SAND AND SHEEPSOFT FINE SANDY LOAM, 0 TO 18% SLOPES, "K FACTOR" = 0.17.

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: STONY BROOK
WETLANDS: YES. IT IS ANTICIPATED THAT 104.1 SQUARE METERS OF CLASS III WETLANDS WILL BE AFFECTED BY THIS PROJECT. THESE AREAS ARE DELINEATED ON THE PLANS.

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.

PROJECT DEMARCATION FENCING (PDF) 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 (STREAM, BROOK, LAKE, POND, WETLAND, ETC).

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 PER DETAIL SHEET INCLUDED WITH PLANS. CONTRACTOR TO PROPOSE LOCATION.

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 UP SLOPE OF RECEIVING WATERS.

FILTER CURTAIN WILL BE INSTALLED AND MAINTAINED AS PROPOSED ON THE EPSC PLAN AND DETAIL SHEET.

DROP INLET PROTECTION WILL BE UTILIZED AS SHOWN ON THE EPSC PLAN AND DETAIL SHEET.

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.

IT IS ANTICIPATED THAT 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.

STONE CHECK DAMS WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN AND DETAIL SHEET.

1.4.7 CONSTRUCT PERMANENT CONTROLS

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

STREAM BANKS WILL BE ARMORED WITH STONE FILL TYPE IV AS SPECIFIED BY VTRANS ON THE PROJECT PLANS.

STONE FILL TYPE II WILL BE UTILIZED AT CULVERT OUTLETS TO DISSIPATE WATER VELOCITIES AND REDUCE EROSION POTENTIAL.

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

THE USE OF COFFERDAMS IS NOT ANTICIPATED.

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 SUBSECTIONS 105.25- 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

1.5.3 UPDATES

THE OPERATIONAL STORMWATER DISCHARGE PERMIT NO. 4233-INDS WILL EXPIRE ON 11/14/2011

THE CGP 3-9020 NOI WILL EXPIRE ON 4/22/2011

PROJECT NAME: STOCKBRIDGE
PROJECT NUMBER: BR 022-1(20)

FILE NAME: 85e039/Str/epsnarr.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: R.S.YOUNG
EPSC NARRATIVE

PLOT DATE: 09-APR-2010
DRAWN BY: M.FESSEL
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