

BRISTOL BRIDGE 6: ESPC PLAN “LOW RISK” NARRATIVE

1.1 PROJECT DESCRIPTION

BRISTOL BRIDGE #6 (BRF 021-1(29)) CONSISTS OF THE REPLACEMENT OF BRIDGE 6 ON VT ROUTE 116 OVER THE LITTLE NOTCH CREEK, IN THE TOWN OF BRISTOL IN ADDISON COUNTY, VERMONT. A NEW PRECAST CONCRETE BRIDGE #6 (APPROX. 50 FT SPAN) WILL BE CONSTRUCTED ON NEW ABUTMENTS ON THE EXISTING HORIZONTAL ALIGNMENT. ACCELERATED BRIDGE CONSTRUCTION IS PLANNED FOR THIS BRIDGE; NO DETOUR BRIDGE IS PLANNED.

TOTAL AREA OF DISTURBANCE FOR THE BRIDGE #6 AREA IS 0.70 ACRES. THIS INCLUDES THE 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. IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE LAND ADJOINING THE BRIDGE #6 PROJECT SITE CONSISTS OF RELATIVELY FLAT AGRICULTURAL LAND TO THE SOUTH WEST AND THE LITTLE NOTCH CREEK AND WETLANDS TO THE NORTH AND EAST.

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

BRIDGE 6 SPANS OVER THE LITTLE NOTCH CREEK. THERE ARE WETLANDS TO THE NORTH AND EAST OF THE BRIDGE, WHICH ARE WELL ESTABLISHED WITH SMALL TREES, HIGH GRASSES AND HEAVY BRUSH. NO HOUSES OR OTHER BUILDINGS ARE WITHIN THE PROJECT LIMITS. LITTLE NOTCH CREEK FLOWS INTO THE NEW HAVEN RIVER, APPROX. 220 FT DOWNSTREAM FROM THE PROJECT SITE.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF A COMBINATION OF GRASS/HAY, LIGHT WOODS, BRUSH, UNDERGROWTH, AND WETLANDS. STONE FILL COVERED WITH GRUBBING MATERIAL WILL STABILIZE STEEPER (CHANNEL) SLOPES. SEED AND MULCH (OR BIODEGRADABLE EROSION MATTING WHERE SPECIFIED) WILL STABILIZE FLATTER SLOPES. 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

THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR ADDISON COUNTY, VERMONT IS THE SOURCE OF THE SOILS INFORMATION.

THERE ARE 3 TYPES OF SOILS EXPECTED ON THIS PHASE OF THE PROJECT:

1. WINOOSKI VERY FINE SANDY LOAM, 2. COBBLY ALLUVIAL LAND, 3. HADLEY VERY FINE SANDY LOAM, FREQUENTLY FLOODED. THE TWO LOAMS ARE CONSIDERED HIGHLY ERODIBLE (K=0.49).

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING: 0.00-0.17 = LOW EROSION POTENTIAL
0.18-0.36 = MODERATE EROSION POTENTIAL
0.37 AND HIGHER = HIGH EROSION POTENTIAL

1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO

HISTORICAL OR ARCHEOLOGICAL AREAS: YES, ADJOINS ARCHEOLOGICAL AREA IN PLOWED FIELD, (WEST OF STA.106+00)

PRIME AGRICULTURAL LAND: NO

THREATENED AND ENDANGERED SPECIES: NO

WATER RESOURCE: LITTLE NOTCH CREEK, A TRIBUTARY OF THE NEW HAVEN RIVER
WETLANDS: YES, CLASS II

1.3 RISK EVALUATION

THIS PROJECT FALLS UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020(AMENDED 2008) FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES FOR LOW RISK PROJECTS. ANY MODIFICATIONS TO THE PROJECT THAT INCREASES THE RISK TO ENVIRONMENTAL RESOURCES SHALL BE RE-EVALUATED IN ACCORDANCE WITH THE PERMIT REQUIREMENTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

THIS WORK MAY BE CONSIDERED PART OF A LARGER COMMON PLAN OF DEVELOPMENT. BRISTOL F 021-1(15) REPLACES BRIDGES 7 AND 8 (JUST TO THE NORTH OF BRIDGE 6), IS A MODERATE RISK PROJECT WITH AN OVERALL RISK SCORE OF 2, WHICH WOULD NOT BE INCREASED BY THE ADDITION OF THE BRIDGE 6 WORK. NOTE: THE TWO PROJECTS HAVE A COMBINED INDIVIDUAL STORMWATER DISCHARGE PERMIT #5221-INDS.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL (EPSC)

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 THAT CAN BE ACCESSED BY CONSTRUCTION EQUIPMENT SHALL BE DELINEATED.

PROJECT DEMARCATION FENCING, DENOTED -PDF- ON THE PLANS, SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES. BECAUSE THIS PROJECT FALLS UNDER CGP3-9020, BARRIER FENCE, DENOTED -BF- ON THE PLANS, SHALL BE USED INSTEAD OF PROJECT DEMARCATION FENCE WITHIN 100 FT OF A WATER RESOURCE (STREAM, BROOK, LAKE, POND, WETLAND, ETC) AND AT AREAS IDENTIFIED AS ARCHEOLOGICALLY SENSITIVE.

1.4.2 LIMIT DISTURBANCE AREA

PREVENTING INITIAL SOIL EROSION 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 (PHASING) AS CONSTRUCTION PROCEEDS. ADDITIONAL MEASURES MAY BE NEEDED DUE TO THE PHASING OF THE PROJECT AND AS DIRECTED BY THE ENGINEER.

MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS AND OTHER SENSITIVE AREAS IS A CRUCIAL EROSION CONTROL MEASURE THAT SHALL 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.

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.

INSTALL SILT FENCE AS PROPOSED ON THE EPSC PLAN, ACCORDING TO DETAIL PROVIDED. BECAUSE THIS PROJECT FALLS UNDER CGP-3-9020, WOVEN WIRE REINFORCED SILT FENCE SHALL BE USED INSTEAD OF SILT FENCE WITHIN 100 FEET UPSLOPE OF RECEIVING WATERS.

1.4.5 DIVERT UPLAND RUNOFF WITH SWALES

THE PROJECT SITE IS RELATIVELY FLAT SO CONSTRUCTION OF DIVERSIONARY SWALES IS NOT ANTICIPATED.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

THE PROJECT SITE IS RELATIVELY FLAT SO CONSTRUCTION OF STONE CHECK DAMS IS NOT ANTICIPATED.

1.4.7 CONSTRUCT PERMANENT CONTROLS

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

PRIMARY PERMANENT CONTROLS ARE AS FOLLOWS:

1. PEA GRAVEL DIAPHRAGMS (ALONG THE EDGE OF ROADWAY) FOR PRE-TREATMENT OF RUNOFF
2. NON-ROOFTOP DISCONNECTION - FROM STORMWATER PERMIT SITE BALANCING
3. STONE FILL, TYPE III FOR CHANNEL PROTECTION
4. GRUBBING MATERIAL OVER STONE FILL

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 SHALL TRIGGER IMMEDIATE PROTECTION OF EXPOSED SOILS.

1.4.9 WINTER STABILIZATION

ALTHOUGH WINTER WORK IS NOT PLANNED, VARIOUS MEASURES SPECIFIC TO WINTER CONSTRUCTION MAY BE NECESSARY SHOULD THE PROJECT WORK EXTEND INTO WINTER (OCT. 15 - 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, OR SOONER IF RAIN IS FORECAST. 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 VERMONT WATER QUALITY STANDARDS.

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

THE CONTRACTOR SHALL DEVELOP A SEQUENCE AND STAGING PLAN USING THE GUIDANCE OUTLINED IN THE VTRANS EPSC PLAN CONTRACTOR CHECKLIST.

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:	BRISTOL
PROJECT NUMBER:	BRF 021-1(29)
FILE NAME:	si0b094epsc_nar.dgn
PROJECT LEADER:	C. CARLSON
DESIGNED BY:	M. EVANS-MONGEON
EPSC NARRATIVE	
PLOT DATE:	01-DEC-2014
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