

## EPSC PLAN NARRATIVE

### 1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REHABILITATION OF THE SCOTT COVERED BRIDGE (BRIDGE NO. 45) OVER THE WEST RIVER. THE PROJECT IS LOCATED IN THE TOWN OF TOWNSHEND, AND SPANS BETWEEN VT ROUTE 30 AND THE INTERSECTION OF TH 4 AND TH 38. THE BRIDGE IS CURRENTLY CLOSED TO ALL TRAFFIC AND WILL REMAIN CLOSED DURING CONSTRUCTION. UPON COMPLETION OF THE REHABILITATION, THE BRIDGE WILL BE OPEN TO PEDESTRIAN TRAFFIC ONLY. THE PROJECT CONSISTS OF REPLACING DETERIORATED BRIDGE MEMBERS, INSTALLATION OF NEW SIDING, AND INSTALLATION OF A NEW STANDING SEAM METAL ROOF, CONSTRUCTION OF A NEW BACKWALL AND WINGWALLS AT ABUTMENT NO. 1, INSTALLATION OF TIMBER APPROACH RAILING AT THE WEST APPROACH, REGRADING OF THE WEST APPROACH AND REPAVING OF THE EAST APPROACH.

THE AREA OF DISTURBANCE SHOWN IN THESE PLANS WITHIN THE PROJECT VICINITY IS APPROXIMATELY 0.1 ACRES. EARTH DISTURBANCE FOR ANY WASTE, STAGING AND BORROW AREAS WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS IS ESTIMATED TO BE 0.4 ACRES. TOTAL AREA OF DISTURBANCE AS SHOWN ON THE EPSC PLAN IS APPROXIMATELY 0.5 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 VALLEY SOUTH OF THE TOWNSHEND DAM THAT IS WELL ESTABLISHED FOREST WITH BUSHES, SOFTWOODS AND HARDWOODS. VT ROUTE 30, STATE FOREST ROAD (TH 4) AND STONE ARCH WAY ARE ADJACENT TO THE PROJECT SITE. THERE ARE RESIDENCES TO THE WEST SIDE OF THE PROJECT WITH GRASS BUFFERS.

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

THE WEST RIVER IS THE ONLY WATER SOURCE ON THE PROJECT SITE. WEST RIVER IS A TRIBUTARY OF THE CONNECTICUT RIVER. THE PROJECT IS LOCATED APPROXIMATELY 0.4 MILES SOUTH OF THE TOWNSHEND DAM. THE TRIBUTARY AREA AT THE BRIDGE CROSSING IS 282 SQUARE MILES. THE BANKS ARE HEAVILY VEGETATED OR EXPOSED LEDGE IN THE PROJECT VICINITY. THE STREAMBED CONSISTS OF SAND, GRAVEL, COBBLES AND LEDGE. THE WIDTH OF THE WEST RIVER IS HIGHLY VARIABLE AND IS APPROXIMATELY 150 FEET IN THE SPRING AND 100 FEET IN THE DRYER MONTHS. DUE TO THE NATURE OF THE SURROUNDING TERRAIN THE PROJECT SITE COULD RECEIVE RUNOFF WATER FROM NEARBY SLOPES.

#### 1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF HARDWOOD AND SOFTWOODS TREES AS WELL AS UNDERGROWTH. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY TEMPORARY CONSTRUCTION ACCESS, TREE TRIMMING AND SUBSTRUCTURE WORK. 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 WINDHAM, VERMONT. SOILS ON THE PROJECT SITE ARE ONDAWA FINE SANDY LOAM, 0% TO 3% SLOPES, K = 0.14 TO 14.17 ON/HR, OCCASIONALLY FLOODED TO THE WEST AND RAWSONVILLE-HOGBACK FINE SAND LOAMS, 25% TO 50% SLOPES, K = 0.01 TO 6.00 IN/HR, ROCKY TO THE EAST.

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: YES

PRIME AGRICULTURAL LAND: NO

THREATENED AND ENDANGERED SPECIES: NO

WATER RESOURCE: WEST RIVER

WETLANDS: NO

HISTORIC DISTRICT AREA IS LIMITED TO THE DIRECT FOOTPRINT OF THE SCOTT COVERED BRIDGE. THERE ARE NO OTHER KNOWN HISTORICAL OR ARCHEOLOGICAL AREAS IDENTIFIED WITHIN THE PROJECT LIMITS. ENDANGERED SPECIES ARE KNOWN TO OCCUR IN THE VICINITY OF THE PROJECT AND WITHIN THE LIMITS OF THE WEST RIVER. IN-STREAM WORK IS NOT PROPOSED IN THE RIVER AND NO IMPACT TO THE KNOWN STATE THREATENED SPECIES ARE EXPECTED.

### 1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES 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, 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.

#### 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.

SOIL DISTURBANCE SHALL BE LIMITED TO THE SLOPE LIMITS AT ABUTMENTS NO. 1 AND NO. 2 AS DETAILED ON THE CONSTRUCTION CONDITIONS PLAN.

#### 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 ARE NOT ANTICIPATED FOR THIS PROJECT.

#### 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 CONSTRUCTION CONDITIONS PLAN OR USED AS NECESSARY.

#### 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 DISTURBANCE AREA AT ABUTMENT NO. 1 IS AT A HIGHER ELEVATION THAN THE SURROUNDING LAND. 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 CONSTRUCTION CONDITION 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.

DUE TO THE NATURE OF THE REHABILITATION OF THE SCOTT COVERED BRIDGE, MINIMAL ROADWAY APPROACH WORK IS PROPOSED AND THERE WILL BE NO CHANGES TO THE IMPERVIOUS AREA OR INCREASED STORMWATER RUNOFF. THEREFORE, NO PERMANENT CONTROLS ARE USED.

#### 1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

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.

THE FOLLOWING REQUIREMENTS MUST BE ADHERED TO:

1. ENLARGED ACCESS POINTS STABILIZED TO PROVIDE FOR SNOW STOCKPILING.
2. A MINIMUM 25 FOOT BUFFER SHALL BE MAINTAINED FROM PERIMETER CONTROLS SUCH AS SILT FENCE.
3. IN AREAS OF DISTURBANCE THAT DRAIN TO A WATER BODY WITHIN 100 FEET, TWO ROWS OF SILT FENCE MUST BE INSTALLED ALONG THE CONTOUR.
4. SILT FENCE AND OTHER PRACTICES REQUIRING EARTH DISTURBANCE MUST BE INSTALLED AHEAD OF FROZEN GROUND.
5. MULCH USED FOR TEMPORARY STABILIZATION MUST BE APPLIED AT DOUBLE THE STANDARD RATE, OR A MINIMUM OF 3 INCHES WITH AN 80-90% COVER.
6. TO ENSURE COVER OF DISTURBED SOIL IN ADVANCE OF A MELT EVENT, AREAS OF DISTURBED SOIL MUST BE STABILIZED AT THE END OF EACH WORK DAY, WITH THE FOLLOWING EXCEPTIONS:
  - IF NO PRECIPITATION WITHIN 24 HOURS IS FORECAST AND WORK WILL RESUME IN THE SAME DISTURBED AREA WITHIN 24 HOURS, DAILY STABILIZATION IS NOT NECESSARY.
  - DISTURBED AREAS THAT COLLECT AND RETAIN RUNOFF, SUCH AS HOUSE FOUNDATIONS OR OPEN UTILITY TRENCHES.
7. PRIOR TO STABILIZATION, SNOW OR ICE MUST BE REMOVED TO LESS THAN 1 INCH THICKNESS.
8. USE STONE TO STABILIZE AREAS WHERE CONSTRUCTION VEHICLE TRAFFIC IS ANTICIPATED. STONE PATHS SHOULD BE 10-20 FEET WIDE TO ACCOMMODATE VEHICULAR TRAFFIC.

#### 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.

SEDIMENT BASINS FOR SUBSTRUCTURE AND BACKWALL WORK ARE NOT ANTICIPATED TO BE USED SINCE THE DISTURBANCE AREA AT ABUTMENT NO. 1 IS AT A HIGHER ELEVATION THAN THE SURROUNDING LAND.

#### 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 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.

**Hoyle, Tanner & Associates, Inc.**

HTA PROJECT	MODEL
904225	904225NoteEro4

PROJECT NAME: TOWNSHEND

PROJECT NUMBER: STP SCTT(I)

FILE NAME: 904225NoteEro4.dgn

PROJECT LEADER: M.D.SARGENT

DESIGNED BY: J.C.RIPLEY

**EPSC EROSION CONTROL NARRATIVE**

PLOT DATE: 8/13/2015

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