

EROSION CONTROL NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REPLACEMENT OF BRIDGE #31, INCLUDING ALL OF ABUTMENT #1 AND THE REHABILITATION OF ABUTMENT #2, ALONG WITH MINIMAL APPROACH AND CHANNEL WORK. COFFERDAMS WILL NOT BE REQUIRED WITHIN THE WATERWAY. BRIDGE #31 IS LOCATED IN THE TOWN OF READSBORO ON TH 3 AT THE INTERSECTION OF VT RT 100 AND TH 3, AND SPANS THE WEST BRANCH OF THE DEERFIELD RIVER. A ONE-WAY TEMPORARY BRIDGE WILL BE LOCATED DOWNSTREAM FROM THE EXISTING BRIDGE TO MAINTAIN TRAFFIC DURING CONSTRUCTION. THE NEW BRIDGE IS A CONCRETE DECK ON FOUR STEEL BEAMS SPANNING 29.5 METERS, ALL SLOPES AND ALL NON INVASIVE VEGETATION WILL BE RETURNED TO THEIR ORIGINAL CONDITION THROUGH STANDARD SEED AND MULCH PRACTICES. STONE FILL TYPE IV WILL BE USED TO STABILIZE THE RIVER BANKS. EXISTING STONE FILL WILL BE STABILIZED, WITHIN THE STONE FILL LIMITS, WHERE DEEMED NECESSARY BY THE RESIDENT ENGINEER.

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 0.495 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

THE TOPOGRAPHY OF THE PROJECT SITE IS A FAIRLY LEVEL RESIDENTIAL AREA WITH PATCHES OF WOODED AREAS. THE LAND AT THE PROJECT SITE HAS MODERATE SLOPES WITH STEEP RIVER BANKS. THERE ARE A NUMBER OF HOMES AND BUILDINGS NEAR THE PROJECT SITE AND AN OVERHEAD UTILITY LINE THAT IS GOING TO BE RELOCATED. THERE IS ALSO A PIPE HINGING OFF THE SIDE OF THE BRIDGE THAT WILL NEED TO BE RELOCATED ALONG WITH A SEWER AND/OR WATER LINE.

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

THE WEST BRANCH OF THE DEERFIELD RIVER IS THE ONLY WATER SOURCE ON OR NEAR THE PROJECT LOCATION. THE RIVER IS CLASSIFIED AS SINUOUS, NON-ALLUVIAL, WITH A STABLE CHANNEL AND A STREAMBED MADE UP OF COBBLES AND BOULDERS. THERE ARE A NUMBER OF DROP INLETS NEARBY THAT DRAIN FROM THE ROADWAY TO THE RIVER. THE TRIBUTARY AREA AT THE BRIDGE CROSSING IS 79.38 SQ KM. THIS RIVER DOES HAVE A TENDENCY OF RISING RAPIDLY.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA IS MADE UP OF GRASS AND A FEW SMALL TREES AND SHRUBS. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS AFFECTED BY CONSTRUCTION OF THE TEMPORARY BRIDGE AND THE REMOVAL AND REPLACEMENT OF THE SUPERSTRUCTURE AND ABUTMENT 1. UPON PROJECT COMPLETION, THE SLOPES WILL BE STABILIZED WITH STONE FILL AND 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 BENNINGTON, VERMONT. SOIL ON THE PROJECT SITE IS COLTON, GRAVELLY LOAMY SAND, 3% TO 8% SLOPES, THE SOIL IS EXTREMELY STONY WITH A "K FACTOR" = 0.28. THE SOIL IS CONSIDERED MODERATELY ERODIBLE.

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: THE ENTIRE REGION IS AN HISTORICAL DISTRICT. THE LAWN IMPACTED BY THE DETOUR IS DEEMED TO BE AN ARCHEOLOGICAL/HISTORICAL/PREHISTORICAL AREA.
 PRIME AGRICULTURAL LAND: NO
 THREATENED AND ENDANGERED SPECIES: NO
 WATER RESOURCE: WEST BRANCH OF THE DEERFIELD RIVER
 WETLANDS: NO

1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF CONSTRUCTION GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES. 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 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 MINIMIZING SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION CONTROLS.

PREVENTING INITIAL SOIL EROSION IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. THEREFORE, STABILIZE ALL DISTURBED AREAS PROMPTLY AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED. 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 OF AT AN APPROVED 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. BARRIER FENCE (PBF) SHALL BE USED TO MARK THE BOUNDARIES OF SENSITIVE RESOURCE AREAS.

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.

1.4.3 STABILIZE CONSTRUCTION EXIT

STABILIZED CONSTRUCTION ENTRANCE SHALL BE UTILIZED AS SHOWN ON THE PLANS TO MINIMIZE TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS AND REDUCE THE POTENTIAL FOR RUNOFF INTO RECEIVING WATERS. IT SHALL BE INSTALLED PRIOR TO CONSTRUCTION.

1.4.4 INSTALL SEDIMENT BARRIERS

SEDIMENT BARRIERS SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK AS SHOWN ON THE PLANS AND AS NECESSARY. THIS SHALL INCLUDE SILT FENCE.

1.4.7 CONSTRUCT PERMANENT CONTROLS

PERMANENT STORMWATER TREATMENT PRACTICES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH PERMIT CONDITIONS. THESE SHALL INCLUDE OUTLET PROTECTION AND APPROPRIATE CLASS I DROP INLET PROTECTION.

1.4.8 STABILIZE EXPOSED SOILS

ALL AREAS OF DISTURBANCE MUST AT A MINIMUM HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, WILL ALSO 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.

1.4.9 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. SEEDING, MULCHING, AND BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPED STEEPER THAN 1:3.

1.4.12 INSPECT YOUR SITE

INSPECT THE PROJECT SITE IN ACCORDANCE WITH SPECIAL PROVISION REQUIREMENTS.

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 SUBSECTION 105.25-105.29 OF THE STANDARD SPECIFICATIONS.

1.5.3 UPDATES

PROJECT: READSBORO	PROJECT NO. : BRO 1441 (25)
DESIGN FILE NAME: 94J070/Structures/sj070ero.dgn	
IPARM FILE NAME: sj070ecnar.l	PLOT DATE: 07-JAN-2010
SURVEYED BY: L.ORVIS	SURVEY DATE: 01/95
SQUAD LEADER: C. P. WILLIAMS	DRAWN BY: D.D.BEARD
EROSION CONTROL NARRATIVE	SHEET: 41 OF 60