

EROSION CONTROL NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT IS LOCATED IN THE VILLAGE OF RICHFORD, ON MAIN STREET (T.H. #2) OVER THE MISSISQUOI RIVER, APPROXIMATELY 0.25 MILES NORTH OF THE INTERSECTION OF VT ROUTE 105 AND MAIN STREET (T.H. #2).

THIS PROJECT INVOLVES THE REMOVAL AND REPLACEMENT OF; THE BRIDGE DECK, THE TRUSS' BOTTOM CHORD AND THE TRUSS' FLOOR BEAMS AND STRINGERS. THE REPAIR AND PAINTING OF THE TRUSS' EXISTING STEEL, MINOR REPAIR OF THE EXISTING ABUTMENTS AND MINOR APPROACH RECONSTRUCTION. A DETOUR WITH A TEMPORARY BRIDGE WILL BE CONSTRUCTED TO THE SOUTHEAST OF THE EXISTING BRIDGE. THE ROADWAY ALIGNMENT WILL REMAIN THE SAME EXCEPT FOR A SLIGHT INCREASE (2.5') IN THE VERTICAL ALIGNMENT DUE TO THE INCREASE OF THE CROSS SLOPE ON THE BRIDGE TO 2% OR NORMAL CROWN.

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 0.5 ACRES.

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

1.2 SITE INVENTORY AND ANALYSIS

1.2.1 OFF SITE DRAINAGE CHARACTERISTICS (UP AND DOWN -GRADIENT)

THE AREA SURROUNDING THE PROJECT IS LOCATED IN AN URBAN AREA WITH MINIMAL GRASSY AREAS, AND SEVERAL ADJOINING GRAVEL OR PAVED PARKING LOTS. CONCRETE SIDEWALKS AND CURBS ARE LOCATED ON BOTH SIDES OF MAIN, RIVER AND PROVIDENCE STREETS WHICH ARE PAVED. THE APPROACHES ARE RELATIVELY FLAT WITH AN INCREASE IN GRADE AS YOU TRAVEL FURTHER NORTH OR SOUTH OF THE PROJECT, BEFORE FLATTENING OUT AGAIN. DIS ARE LOCATED ALONG THE CURB LINES OF ALL THE STREETS ON EACH SIDE OF THE RIVER. STORMWATER IS COLLECTED IN THESE DIS AND DISCHARGED INTO THE MISSISQUOI RIVER ON EITHER SIDE OF THE RIVER.

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

THE MISSISQUOIRIVER GOES DIRECTLY THROUGH THE PROJECT SITE AND IS THE ONLY WATER SOURCE ON THE PROJECT SITE. THE MISSISQUOIRIVER IS FLANKED BY BRICK OR STONE BUILDINGS CONSTRUCTED ON STONE RETAINING WALLS WHICH ALSO FORM THE BRIDGE'S ABUTMENTS. THESE RETAINING WALLS AND ABUTMENTS FORM THE RIVER'S BANKS. WHERE THERE ARE NO BUILDINGS OR RETAINING WALLS THE RIVER'S BANKS CONSIST OF STEEP LEDGE OR STEEP SLOPES COVERED WITH FLAT STONES FOR STABILIZATION. TREES ARE LOCATED AT THE TOP OF THE RIVER BANKS WHERE THERE ARE NO BUILDINGS.

1.2.3 TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

THE TOPOGRAPHY OF THE AREA IS A SMALL RIVER VALLEY WITH GRADUAL SLOPES DESCENDING TOWARDS THE RIVER, WITH STEEP SLOPES AT THE RIVERS EDGE. PAVED VILLAGE STREETS (MAIN, RIVER AND PROVIDENCE) WITH CONCRETE CURBS AND SIDEWALKS ARE LOCATED ABOVE THE RIVER IN THE VALLEY AREA. BRICK AND WOODEN BUILDINGS ARE LOCATED ALONG THE STREETS WITH SEVERAL GRAVEL OR PAVED PARKING LOTS NEXT TO THE BUILDINGS AND THE RIVER. THERE ARE SEWER AND WATERLINES BURIED UNDER THE STREETS (THE WATERLINE CROSSES THE RIVER UNDER THE BRIDGE). THERE ARE OVERHEAD UTILITIES ALONG ALL THE ROADS AND THEY CROSS THE RIVER TO THE EAST OF THE BRIDGE.

1.2.4 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF GRASS LAWNS AND HARDWOOD TREES AND UNDERGROWTH ON THE TOPS OF THE RIVER BANKS, WHERE NO BUILDINGS ARE LOCATED. THE IMPACT TO THE VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY THE CONSTRUCTION OF THE DETOUR AND THE REPLACEMENT OF THE SIDEWALKS. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.5 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF FRANKLIN, VERMONT. SOILS ON THE PROJECT SITE VARY BY LOCATION.

1.2.5 SOILS (CONTINUED)

THE HIGHLY ERODIBLE SOILS ARE ONDWA VARINAT SILT LOAM, SLOPES ARE NOT LISTED, "K FACTOR" = 0.37, EAST SIDE OF THE RIVER, RUMNEY VARIANT SILT LOAM, SLOPES ARE NOT LISTED, "K FACTOR" = 0.37, SOUTHEAST SIDE OF THE RIVER AND MUNSON SILT LOAM, 3% TO 8% SLOPES, "K FACTOR" = 0.49, NORTH SIDE OF THE RIVER. THE LOW ERODIBLE SOILS ARE DEERFIELD LOAMY FINE SAND, 0% TO 8%, "K FACTOR" = 0.17, EAST SIDE OF THE RIVER, WINDSOR LOAMY FINE SAND, 8% TO 15% SLOPES, "K FACTOR" = 0.17, EAST SIDE OF THE RIVER AND EXISTING GRAVEL AND SAND PLACED DURING THE CONSTRUCTION OF THE EXISTING ROADWAY, EXISTING GRAVEL PARKING LOT AND BRIDGE, SLOPES UNKNOWN, "K FACTOR" = 0.23 AND LESS.

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING: 0.0 TO 0.23 = LOW EROSION POTENTIAL, 0.24 TO 0.36 = MODERATE EROSION POTENTIAL, 0.37 AND HIGHER = HIGHER EROSION POTENTIAL.

1.2.6 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS - NO, HISTORICAL - THE EXISTING TRUSS BRIDGE IS A HISTORIC STRUCTURE, ARCHEOLOGICAL - THERE IS A KNOWN ARCHEOLOGICALLY SENSITIVE SITE OFF EASTERN AVENUE, SOUTH OF THE MUNICIPAL PARKING LOT (OUTSIDE OF PROJECT LIMITS), PRIME AGRICULTURAL LAND - NO, THREATENED AND ENDANGERED SPECIES - NO, WATER RESOURCE - MISSISQUOIRIVER - TEMPORARY PIER (APPROXIMATELY 300 SF IMPACT), WETLANDS - NO.

1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF CONSTRUCTION GENERAL PERMIT 3-9020 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 THEN THE SELECTED CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL PERMITTING WITH VANR VIA FILING OF THE APPROPRIATE NOTICE OF INTENT UNDER THE CONSTRUCTION GENERAL PERMIT PROCESS.

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

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

(REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR EACH PRACTICE REQUIRED ON THE PROJECT TO INCLUDE BUT NOT LIMITED TO THE FOLLOWING):

1.4.1 MARK SITE BOUNDARIES

PROJECT DEMARCATION FENCING, DENOTED -PDF- ON THE PLANS, IS USED TO DELINEATE THE LIMITS THE CONTRACTOR CAN ACCESS WITH CONSTRUCTION EQUIPMENT. THIS MEASURE LIMITS THE AREA THAT CAN BE DISTURBED AND EXPOSED TO EROSION.

1.4.2 LIMIT DISTURBANCE AREA

EMPLOY TEMPORARY 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.

1.4.3 STABILIZED CONSTRUCTION ENTRANCE

STABILIZED CONSTRUCTION ENTRANCE SHALL BE UTILIZED AS NECESSARY.

1.4.4 INSTALL SILT FENCE

SILT FENCE SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK AS SHOWN ON THE PLANS OR AS NECESSARY.

1.4.5 DIVERT UPLAND RUNOFF

INSTALL A NEW PERMANENT DI, PRIOR TO THE DETOUR EXITING MAIN STREET, TO COLLECT ALL UPLAND STORMWATER RUNOFF. USE GRAVEL BAGS TO DIRECT AND/OR DIVERT OFF-SITE RUNOFF FROM ENTERING THE DISTURBED AREAS.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

CHECK DAMS SHALL BE UTILIZED AS NECESSARY.

1.4.7 CONSTRUCT PERMANENT CONTROLS

SEED AND MULCH
NEW DRAINAGE INLET AND PIPING

1.4.8 STABILIZE EXPOSED SOILS

SEED AND MULCH
EROSION MATTING

TRACKING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, WILL BE UTILIZED ON A REGULAR BASIS. SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF FORECASTED RAIN. SEEDING, MULCHING AND BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3. THESE SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING INTERMITTENT PHASES OF CONSTRUCTION.

1.4.9 WINTER STABILIZATION

VARIOUS MEASURES SPECIFIC TO WINTER (SEE LOW RISK HANDBOOK)

1.4.10 STABILIZE SOIL AT FINAL GRADE

SEED AND MULCH
EROSION MATTING

SEEDING, MULCHING AND BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3. THESE SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

1.4.11 DE-WATERING ACTIVITIES

A FILTER BAG WILL BE USED IN THE EVENT THAT IT IS NECESSARY TO DEWATER BEHIND THE ABUTMENTS. A SEDIMENT BASIN SHALL BE USED FOR THE TEMPORARY PIER WORK AS NECESSARY.

1.4.12 INSPECT YOUR SITE

INSPECT SITE BASED ON PERMIT AUTHORIZATION OR SPECIAL PROVISION REQUIREMENTS.

EPSC NARRATIVE

PROJECT NAME: RICHFORD
PROJECT NUMBER: BHF 0302 (3) S

FILE NAME: ...Design\rich-eronar.dgn PLOT DATE: 12/18/2007
PROJECT LEADER: MJC DRAWN BY: JTS
DESIGNED BY: SEB CHECKED BY: MJC
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