EROSION CONTROL NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REPLACEMENT OF A BRIDGE OVER AN UNNAMED BROOK. THE PROJECT IS ON VT ROUTE 64, A PAVED, STATE NUMBERED ROUTE, IN THE TOWN OF WILLIAMSTOWN. A NEW, TWO-LANE, CAST-IN-PLACE, CONCRETE SLAB, BRIDGE WILL BECONSTRUCTED ON THE EXSISTING ALIGNEMENT. TRAFFIC WILL BE MAINTAINED ON A TEMPORARY DETOUR DURING CONSTRUCTION. FOLLOWING COMPLETION OF THE NEW BRIDGE, THE TEMPORARY DETOUR WILL BE REMOVED. TOTAL ROADWAY APPROACH WORK, INCLUDING BOTH APPROACHES, IS APPROXIMATELY 313 FEET.

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 0.95 ACRES.

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

1.2 SITE INVENTORY

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

THE PROPERTY SURROUNDING THE PROJECT SITE CONSISTS OF WELL ESTABLISHED VEGETATION, MODERATE TO STEEPLY SLOPING, MIXED SOFTWOOD AND HARDWOOD FOREST WITH WELL DEFINED DRAINAGE WAYS. DUE TO THE NATURE OF THE SURROUNDING TERRAIN, RUNOFF WATER ENTERING THE PROJECT SITE WILL BE PRIMARILY LIMITED TO THAT WHICH IS CONVEYED ALONG ROADWAY DITCHES, AND THAT WHICH FOLLOWS ROUTE 64 ALONG THE 14% GRADE AT THE END OF THE PROJECT LIMITS. THE CURRENT ROADWAY DITCHES ARE NOT WELL DEFINED AND ARE NOT LINED WITH STONE.

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

UNNAMED BROOK IS LOCATED IN THE PROJECT AREA. THERE ARE NO OTHER WATER BODIES OR WETLANDS WITHIN THE PROJECT AREA. THE UNNAMED BROOK IS CLASSIFIED AS HILLY WITH A MIXTURE OF OPEN AND FORESTED COVER CONTAINING A STREAMBED OF MOSTLY LEDGE WITH COBBLE UPSTREAM, COBBLES AND GRAVEL DOWNSTREAM. THE CONTRIBUTING DRAINAGE AREA AT THE BRIDGE CROSSING IS 3.8 SQ. MI. DISTURBANCE OF SOILS NEAR NATURAL OR MAN-MADE WATERWAYS CONSISTS OF THAT WHICH IS NECESSARY TO CONSTRUCT TWO NEW CONCRETE BRIDGE ABUTMENTS AND APPLICABLE ROADWAY APPROACHES AS WELL AS THE REMOVAL OF THE EXISTING CROSSING. STABILIZATION OF DISTURBANCES TO STREAM BANKS WILL BE ACCOMPLISHED WITH STONE FILL, TYPE II.

1.2.3 TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

THE TOPOGRAPHY OF THE PROJECT SITE IS HILLY AND WOODED WITH ROUTE 64 FOLLOWING PARALLEL TO UNNAMED BROOK WHICH IS CONTAINED BY STEEP STREAM BANKS ALONG EACH SIDE. DEVELOPMENT ALONG ROUTE 64 CONSISTS OF PERMANENT RESIDENCES, TWO OF WHICH EXIST NEAR THE PROJECT LIMITS. OVERHEAD UTILITY SERVICE FOLLOWS ALONG ROUTE 64 WITH THE NEED FOR TEMPORARY RELOCATION DURING CONSTRUCTION.

1.2.4 VEGETATION

A MIX OF HARDWOOD AND SOFTWOOD TREES OF ALL SIZES EXIST ALONG ROUTE 64 THE TWO RESIDENCES NEAR THE BRIDGE SITE HAVE SMALL AREAS OF LAWN AND LANDSCAPE PLANTINGS. NO FIELDS OR OTHER AGRICULTURAL CROPS EXIST NEAR THE PROJECT. IMPACTS TO VEGETATION WILL BE LIMITED TO THAT WHICH ARE EFFECTED BY THE CONSTRUCTION OF THE NEW BRIDGE ALONG A NEW ALIGNMENT. SOME TREES WILL BE REMOVED.

FOLLOWING CONSTRUCTION OF THE NEW BRIDGE, THE STREAM BANKS WILL BE STABILIZED WITH STONE FILL AND VEGETATION REESTABLISHED WITH STANDARD SEED & MULCH PRACTICES.

1.2.5 SOILS

THE SOIL CONSERVATION SERVICE HAS MAPPED THE SOILS THROUGHOUT ORANGE COUNTY. THE SOIL TYPE IDENTIFIED FOR THIS PROJECT SITE IS MEC (MERRIMAC FINE SANDY LOAM). THIS SOIL TYPE IS DESCRIBED AS '...LEVEL TO STEEP, DEEP, SOMEWHAT EXCESSIVELY DRAINED SOILS ON TERRACES. IN REPRESENTATIVE PROFILE IN A HAYFIELD...THEY HAVE SURFACE LAYER OF VERY DARK GRAYISH BROWN FINE SANDY LOAM 6 INCHES THICK. THE UPPER 10 INCHES OF SUBSOIL IS BROWN TO DARK BROWN GRADING TO YELLOWISH BROWN FINE SANDY LOAM. THE LOWER 7 INCHES IS BROWN SANDY LOAM. THE UNDERLYING MATERIAL TO A DEPTH OF 60 INCHES IS OLIVE GRAY GRAVELLY SAND...PERMEABILITY IS RAPID...THE HAZARD OF EROSION IS MODERATE. RUNOFF IS MEDIUM.

THE LISTED SOIL ERODIBILITY COEFFICIENT (K-VALUE) FOR THIS SOIL TYPE IS 0.17. GENERALLY, K-VALUES INDICATE THE FOLLOWING: 0.0 - 0.23 = LOW ERODIBILITY; 0.24 - 0.36 = MODERATE ERODIBILITY; 0.37 AND HIGHER = HIGHER ERODIBILITY.

1.2.6 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: NO
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: UNNAMED BROOK
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 POLLLUTION PREVENTION CONTROLS.

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.

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.

(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 FENCE IS NOT BEING USED BECAUSE OF THE RESIDENTIAL NATURE OF THE PROJECT SITE.

1.4.2 LIMIT DISTURBANCE AREA
SMALL CONSTRUCTION SITE

1.4.3 STABILIZE CONSTRUCTION EXIT
STABILIZED CONSTRUCTION ENTRANCE

1.4.4 INSTALL SILT FENCE
SILT FENCE

1.4.5 DIVERT UPLAND RUNOFF
MINIMAL AMOUNT OF OFF-SITE RUNOFF ANTICIAPATED

1.4.6 SLOW DOWN CHANNELIZED RUNOFF
CHECK DAM

1.4.7 CONSTRUCT PERMANENT CONTROLS
TYPE II STONE FOR CHANNEL PROTECTION
SEED AND MULCH
DRAINAGE INLETS AND PIPING
SOIL RETENTION WALLS

1.4.8 STABILIZE EXPOSED SOILS
SEED AND MULCH
EROSION MATTING

1.4.9 WINTER STABILIZATION
VARIOUS MEASURES SPECIFIC TO WINTER (SEE LOW RISK HANDBOOK), NOT NECESSARY ON A ONE-CONSTRUCTION SEASON PROJECT

1.4.10 STABILIZE SOIL AT FINAL GRADE
SEED AND MULCH
EROSION MATTTING

1.4.11 DE-WATERING ACTIVITIES
SEDIMENT BASINS FOR ABUTMENT WORK

1.4.12 INSPECT YOUR SITE
INSPECT SITE BASED ON PERMIT AUTHORIZATION REQUIREMENTS

TEMPORARY EROSION PREVENTION MEASURES TO BE UTILIZED INCLUDE:

TRACKING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, WILL ALSO BE UTILIZED ON A REGULAR BASIS. ANY SLOPES TO BE EXPOSED FOR SEVERAL DAYS PRIOR TO FINAL GRADING SHALL BE TRACKED AND MULCHED. 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 FINAL GRADE OR DURING INTERMITTENT PHASES OF CONSTRUCTION.

SILT FENCE SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK. INSTALLATION SHALL BE PERFORMED PER INCLUDED DETAIL SHEET.

MEASURES SUCH AS SILT FENCE SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT BUILD-UP SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT REACHES ONE-HALF THE HEIGHT OF THE CONTROL MEASURE. SEDIMENT SHALL BE DISPOSED AT AN APPPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

PERMANENT EROSION CONTROL

SEVERAL PERMANENT EROSION CONTROL MEASURES WILL BE UTILIZED

STREAM BANKS WILL BE ARMORED WITH STONE FILL TYPE II AS SPECIFIED BY VTRANS ON THE PROJECT PLANS. THE STONE FILL WILL STABILIZE THE EXISTING BANK IN ORDER TO PROTECT FROM EROSION DURING STORM AND HIGH WATER EVENTS.

ALL DISTURBED AREAS WILL BE SEEDED AND MULCHED. AREAS WITH SLOPES STEEPER THAN 1:3 SHALL UTILIZE BIODEGRADABLE EROSION CONTROL MATTING.

STREAM BANK VEGETATION WILL BE INTRODUCED IN THE GRUBBING MATERIAL THAT IS TO BE PLACED OVER THE STREAM BANK STONE FILL.

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PROJECT NUMBER: BRS 0204 (4)

FILE NAME: S83EIIIERONARR.DGN
PROJECT LEADER: M.EVANS-MONGEON
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PLOT DATE: 15-MAY-2007
DRAWN BY: U. STANLEY
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ROW SHEET (11) OF 20