

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 PARTIALLY REMOVED. TOTAL ROADWAY APPROACH WORK, INCLUDING BOTH APPROACHES, IS APPROXIMATELY 685 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 0.96 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST TWO CONSTRUCTION SEASONS.

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 BEGINNING 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 AFFECTED 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 TYPE II 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 POLLUTION 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 PREVENTION 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 ENTRANCES WILL BE USED AS NECESSARY AND WILL BE PAID FOR UNDER ITEM 653.35 VEHICLE TRACKING PAD, SEE DETAIL ON EROSION & SEDIMENTATION CONTROL DETAIL SHEET 2.

1.4.4 INSTALL SILT FENCE

SILT FENCE WILL BE INSTALLED PRIOR TO ANY UPSLOPE WORK AS SHOWN IN THE PLANS OR AS NECESSARY. IT WILL BE PAID FOR UNDER ITEM 649.51 GEOTEXTILE FOR SILT FENCE. SEE DETAIL ON EROSION & SEDIMENT CONTROL DETAIL SHEET 1.

1.4.5 DIVERT UPLAND RUNOFF

MINIMAL AMOUNT OF OFF-SITE RUNOFF ANTICIPATED.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

THE INSTALLATION OF CHECK DAMS WILL BE COVERED BY PAY ITEM 653.25 TEMPOARY STONE CHECK DAM, TYPE 1. CHECK DAMS SHALL BE INSTALLED AS SHOWN ON EPSC PLANS OR AS NEEDED. SEE DETAIL ON EROSION & SEDIMENT CONTROL DETAIL SHEET 2.

1.4.7 CONSTRUCT PERMANENT CONTROLS

STONE FILL, TYPE II SHALL BE USED FOR CHANNEL PROTECTION. SEED, PAY ITEM 651.15, HAY MULCH, PAY ITEM 651.25, AND TEMPORARY EROSION MATTING, ITEM 653.20, SHALL BE USED TO STABLIZE SOIL AS INDICATED ON THE EPSC PLANS. DRAINAGE INLETS AND PIPING SHALL BE USED TO CONTROL STORMWATER RUN-OFF. WINGWALLS ARE UTILIZED TO STABILIZE AND RETAIN SOIL.

1.4.8 STABILIZE EXPOSED SOILS

SEED, PAY ITEM 651.15 AND HAY MULCH, PAY ITEM 651.25. SHALL BE INSTALLED TO STABLIZE SOIL AS INDICATED ON THE EPSC PLANS. TEMPORARY EROSION MATTING, PAY ITEM 653.20 SHALL BE INSTALLED TO STABLIZE SOIL AS INDICATED ON THE EPSC PLANS, SEE DETAILS ON EROSION PREVENTION & SEDIMENT CONTROL DETAIL SHEET 1.

1.4.9 STABILIZE SOIL AT FINAL GRADE

SEED AND MULCH, EROSION MATTING , PAY ITEM 653.20 SHALL BE INSTALLED TO STABLIZE SOIL AS INDICATED ON THE EPSC PLANS, SEE DETAILS EROSION PREVENTION & SEDIMENT CONTROL DETAIL SHEET 1.

1.4.10DE-WATERING ACTIVITIES

SEDIMENT BASINS FOR ABUTMENT WORK SHALL BE USED AS NECESSARY AND SHALL BE PLACED AS DETERMINED BY THE CONTRACTOR AND APPROVED BY THE RESIDENT ENGINEER.

1.4.11 INSPECT YOUR SITE

INSPECT SITE BASED ON PERMIT AUTHORIZATION REQUIREMENTS

1.5 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 APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

1.6 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.

EROSION CONTROL NARRATIVE

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| PROJECT NAME: | WILLIAMSTOWN |
| PROJECT NUMBER: | BRS 0204 (4) |
| FILE NAME: | S83EIIIIERONARR.DGN |
| PROJECT LEADER: | M.EVANS-MONGEON |
| DESIGNED BY: | E-MONGEON |
| PLOT DATE: | 07-APR-2008 |
| DRAWN BY: | U. STANLEY |
| CHECKED BY: | E-MONGEON |
| SHEET | 26 OF 108 |