

# EROSION CONTROL NARRATIVE

## PROJECT DESCRIPTION

THIS PROJECT IS LOCATED ON VT ROUTE 9 BEGINNING AT A POINT APPROXIMATELY 1.163 MILES EAST OF THE BENNINGTON - WOODFORD TOWN LINE, AND EXTENDING EASTERLY ALONG VT ROUTE 9 FOR 0.166 MILES. THE PURPOSE OF THE PROJECT IS TO REPLACE AND WIDEN BRIDGE #10 OVER THE ROARING BRANCH OF THE WALLOOMSAC RIVER. A TWO-WAY TEMPORARY BRIDGE WILL BE UTILIZED TO CARRY TRAFFIC DURING CONSTRUCTION.

THIS PROJECT INCLUDES THE REMOVAL OF THE OLD BRIDGE AND RAILING, GRADING, DRAINAGE, SUB-BASE, PAVEMENT, INSTALLATION OF GUARDRAILS, LANDSCAPING, SIGNAGE, STRIPING AND NECESSARY APPROACH WORK. THE TOTAL DISTURBED AREA EXCLUDING WASTE, BORROW AND STAGING AREAS, IS 2.4 ACRES.

## SITE INVENTORY AND ANALYSIS

### OFF SITE DRAINAGE CHARACTERISTICS

THERE EXIST UNLINED DRAINAGE DITCHES ALONG THE SIDES OF VT ROUTE 9. THE BANKS SLOPE STEEPLY IN THE VICINITY OF THE BRIDGE AND SOUTH WEST OF THE BRIDGE. THE VEGETATION IN THE IMMEDIATE VICINITY OF THE BRIDGE, AND A SHORT DISTANCE EAST AND WEST OF THE BRIDGE, IS PRIMARILY DENSE WOODED COVER.

### DRAINAGE, WATERWAYS, BODIES OF WATER

THE ROARING BRANCH OF THE WALLOOMSAC RIVER FLOWS UNDER THE EXISTING THREE SPAN ROLLED-BEAM BRIDGE. THERE ARE SEVERAL DRAINAGE WAYS IN THE PROJECT AREA THAT CARRY RUNOFF FROM THE ROAD TO THE RIVER, BUT THERE ARE NO KNOWN EPHEMERAL STREAMS OR PONDS WITHIN THE PROJECT SITE.

### TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

THE TERRAIN HAS MODERATE TO STEEP SLOPES IN THE VICINITY OF THE PROJECT SITE. VT ROUTE 9 IS A PAVED STATE HIGHWAY. DEVELOPMENT ALONG VT ROUTE 9 CONSISTS OF A MIX OF PERMANENT RESIDENCES AND MUNICIPAL BUILDINGS LYING ON THE OUTSKIRTS OF THE PROJECT LIMITS. THE EXISTING CABLE, TELEPHONE, AND ELECTRICAL UTILITIES EXIST WITHIN THE PROJECT SITE AND WILL BE RELOCATED AERIALLY BY THEIR RESPECTIVE OWNERS. A MUNICIPAL WATER MAIN CURRENTLY TRAVELS ACROSS THE NORTH SIDE OF THE EXISTING BRIDGE AND WILL BE RELOCATED TO THE TEMPORARY BRIDGE DURING CONSTRUCTION AND THEN FINALLY ONTO THE NEW BRIDGE.

### VEGETATION

THE PROJECT SITE CONTAINS A MIXTURE OF RESIDENTIAL AND FORESTED LANDS. IN THE RESIDENTIAL AREAS, THERE ARE SCATTERED TREES CONSISTING OF SOME ASH, CHERRY, MAPLE, POPLAR, APPLE, BIRCH AND PINE. THERE ARE ALSO SOME SHRUBS AND GRASSY LAWNS IN THE RESIDENTIAL AREA.

IN ORDER TO PLACE THE TEMPORARY BRIDGE ON THE UPSTREAM SIDE OF THE EXISTING BRIDGE, A NUMBER OF TREES, SHRUBS AND OTHER MISCELLANEOUS GROUND COVER WILL NEED TO BE REMOVED. DETAILED LANDSCAPE PLANS WERE DEVELOPED AND ARE INCLUDED IN THE EROSION AND SEDIMENT CONTROL FINAL CONDITIONS SITE PLAN TO DETERMINE HOW TO REPLACE THIS REMOVED VEGETATION ONCE THE TEMPORARY DETOUR AND ASSOCIATED TEMPORARY FILLS ARE REMOVED.

### SOILS

THE SOIL TYPE IDENTIFIED FOR THIS PROJECT SITE IS COLTON GRAVELLY LOAMY SAND. THIS SOIL TYPE IS DESCRIBED AS VERY DEEP, EXCESSIVELY DRAINED SOIL FORMED IN GLACIOFLUVIAL DEPOSITS. THEY ARE ON TERRACES, KAMES, ESKERS, AND OUTWASH PLAINS. PERMEABILITY IS MODERATELY RAPID TO VERY RAPID IN THE SOLUM AND VERY RAPID IN THE SUBSTRATUM. SLOPES RANGE FROM 0 TO 50 PERCENT. THE "K" VALUE FOR THIS SOIL IS 0.17, WHICH HAS LOW ERODABILITY.

### SENSITIVE RESOURCE AREAS

CLASS III WETLANDS WERE IDENTIFIED IN THE PROJECT AREA. THERE WILL BE SOME IMPACT TO THE WETLANDS ALTHOUGH EVERY ATTEMPT SHOULD BE MADE TO MINIMIZE OR ELIMINATE ANY IMPACT WITH THIS SITE.

NO THREATENED AND ENDANGERED SPECIES, PRIME AGRICULTURAL LAND, OR CRITICAL HABITATS HAVE BEEN IDENTIFIED WITHIN THE PROJECT AREA.

### PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

THE REMOVAL OF THE EXISTING STRUCTURE, CONSTRUCTION AND REMOVAL OF THE TEMPORARY BRIDGE AND CONSTRUCTION OF THE NEW BRIDGE WILL TAKE PLACE ON THE BANKS AND OVER THE ROARING BRANCH OF THE WALLOOMSAC RIVER.

### GENERAL EROSION AND SEDIMENT CONTROL GUIDELINES

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 TO CONTROL EROSION AND MINIMIZE THE SEDIMENTATION OF RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION CONTROLS.

THE INSTALLATION, USE, AND REMOVAL OF EROSION AND SEDIMENT CONTROL MEASURES WITH CONSTRUCTION ACTIVITIES TO ENSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS EROSION AND SEDIMENT CONTROL SHALL BE COORDINATED. TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES AS CONSTRUCTION PROCEEDS SHALL BE EMPLOYED. THE CONTRACTOR WILL USE ADDITIONAL EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION AND AS DIRECTED BY THE RESIDENT ENGINEER. SEE SECTION 105.23 OF THE VERMONT AOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2001.

THE RESIDENT ENGINEER MAY DIRECT THE INSTALLATION OF CERTAIN EROSION CONTROL MEASURES IN ORDER TO AVOID POTENTIAL EROSION PROBLEMS, OR TO RESPOND TO STORM EVENTS OR DAMAGE BY CONSTRUCTION OPERATIONS.

INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN IN THE EROSION CONTROL PLAN OR AS DIRECTED BY THE RESIDENT ENGINEER. DO NOT MODIFY THE TYPE, SIZE OR LOCATION OF ANY CONTROL OR PRACTICE WITHOUT APPROVAL OF THE RESIDENT ENGINEER. ANY CHANGES SHALL BE NOTED ON THE PLANS, IN THE WEEKLY INSPECTION REPORT, AND REPORTED TO THE APPROPRIATE AUTHORITY IN A TIMELY MANNER. INSPECT ALL CONTROL MEASURES WEEKLY AND AFTER EACH RAINFALL EVENT. REPAIR OR REPLACE ANY DAMAGED MEASURES.

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. PERIMETER CONTROL MEASURES SHALL BE INSTALLED FOLLOWING CLEARING, BUT PRIOR TO THE START OF ANY GRUBBING OR GRADING ACTIVITY, INSTALL OTHER TEMPORARY CONTROLS IN INCREMENTAL STAGES AS CONSTRUCTION PROCEEDS.

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. IN GENERAL, PRESERVE EXISTING GRASSES, SHRUBS, AND TREES WHEREVER POSSIBLE.

CONTROL ONLY SEDIMENT-LADEN RUNOFF GENERATED BY THE PROJECT SITE. COLLECT AND ROUTE CLEAN OFFSITE RUNOFF AROUND OR THROUGH THE PROJECT SITE USING DIVERSION BERMS, DIVERSION CHANNELS, CULVERTS AND/OR TEMPORARY PIPES.

DO NOT ALLOW CONSTRUCTION EQUIPMENT TO OPERATE ON THE DOWN SLOPE SIDE OF PERIMETER CONTROL MEASURES.

ALL IN-STREAM CONSTRUCTION SHALL TAKE PLACE IN A DRY CHANNEL BETWEEN JUNE 1 AND OCTOBER 1.

THIS WILL BE A MULTI-SEASON PROJECT AND WILL REQUIRE SEASONAL EROSION CONTROL MEASURES. IT IS RECOMMENDED THAT THOSE EROSION CONTROL MEASURES TO ESTABLISH VEGETATION TAKE PLACE BY SEPTEMBER 15TH OF EACH SEASON.

## SPECIFIC GUIDELINES

### PERIMETER EROSION CONTROLS

PRIOR TO ANY CONSTRUCTION ACTIVITIES, THE PROJECT DEMARCATION FENCING (PDF) SHALL BE PLACED ALONG THE PERIMETER OF THE PROJECT AS SHOWN ON THE EROSION CONTROL PLANS. THE INSTALLATION OF THE PDF WILL BE PERFORMED SUCH THAT NO VEGETATION ON THE OUTSIDE OF THE FENCING IS DISTURBED.

PRIOR TO ANY CONSTRUCTION OR STAGING, THE CONTRACTOR WILL INSTALL STABILIZED CONSTRUCTION ENTRANCES LEADING TO STAGING AREAS AND THE PROJECT SITE TO PREVENT THE TRACKING OF SILTS AND SEDIMENTS OFFSITE. COARSE STONE FILL OVER FILTER FABRIC SHOULD BE UTILIZED WHERE AN ALREADY ESTABLISHED STABLE ENTRANCE DOES NOT EXIST. THE CRUSHED STONE PRODUCT USED FOR THE CONSTRUCTION OF THE STABILIZED ENTRANCES SHALL BE MONITORED FOR SEDIMENT ACCUMULATION AND REPLACED AS NECESSARY AS DIRECTED BY THE RESIDENT ENGINEER. STABILIZED CONSTRUCTION ENTRANCES SHALL ALSO BE ESTABLISHED AND MAINTAINED AT ALL OFFSITE WASTE AND BORROW AREAS. THE MINIMUM SIZE OF A STABILIZED CONSTRUCTION ENTRANCE SHALL BE 12 FEET WIDE BY 50 FEET LONG.

CONSTRUCT PERIMETER CONTROLS TO ENSURE THAT ANY DISTURBED SEDIMENT DOES NOT LEAVE THE SITE AFTER THE CLEARING OF TREES AND SHRUBS, BUT PRIOR TO ANY GRUBBING AND EXCAVATION, SEDIMENT TRAPS/BASINS, WHERE WATER HAS BEEN ADEQUATELY TREATED, MAY BE DIRECTED TO NEARBY UNDISTURBED STREAMS OR SWALES.

INSTALL PERIMETER SILT FENCE IN AREAS OF PROPOSED WORK AS SHOWN ON THE PLANS PRIOR TO GRUBBING AND ADDITIONAL SILT FENCING. IN AREAS OF EXPOSED LEDGE, STONE CHECK DAMS WILL BE UTILIZED.

AFTER GRUBBING OPERATIONS, ALL AREAS OF EXPOSED SOILS SHALL BE TEMPORARILY STABILIZED WITH SEEDING AND MULCHING, EROSION MATTING, OR STRAW MATTING AS SOON AS PRACTICABLE AND BEFORE ANY PREDICTED RAINFALL EVENT. THESE TEMPORARY EROSION CONTROL MEASURES CAN BE PLACED IN ANY COMBINATION IN AREAS OF POTENTIAL EROSION AS DEEMED NECESSARY BY THE RESIDENT ENGINEER.

AFTER PERIMETER CONTROLS ARE IN PLACE, AND PRIOR TO GRADING OPERATIONS, CONSTRUCT TEMPORARY ONSITE SEDIMENT TRAPS WHERE NECESSARY. GRADE DISTURBED AREAS TO DRAIN TOWARDS THE SEDIMENT TRAPS WHERE POSSIBLE.

ANY MATERIAL STOCKPILES, INCLUDING BUT NOT LIMITED TO, GRUBBING MATERIAL, SAND BORROW, EARTH BORROW, GRANULAR BORROW, TOPSOIL, AND ANY EXCAVATED WASTE PILES SHALL BE MULCHED AND SHALL ALSO HAVE SILT FENCE INSTALLED AROUND THE BASE OF THE STOCKPILE.

ANY OFF-SITE AREAS WHERE BORROW OR EXCAVATED MATERIALS WILL BE STOCKPILED AND ANY WASTE DISPOSAL AREAS WILL HAVE TWO INSTALLATIONS OF SILT FENCE, 2 FEET APART AROUND THE BASE OF EACH STOCKPILE. SEEDING AND MULCHING SHALL BE PERFORMED IMMEDIATELY AFTER FINAL GRADING. REMOVAL OF THE SILT FENCES AROUND THE WASTE AREAS SHALL BE PERFORMED ONLY AFTER APPROVAL FROM THE RESIDENT ENGINEER IS OBTAINED.

## **EROSION CONTROL NARRATIVE #1**

PROJECT NAME: WOODFORD  
PROJECT NUMBER: BHF 010-1(29)

FILE NAME: 84e039/structures/84e039erobdr.dgn PLOT DATE: 03-OCT-2005  
PROJECT LEADER: M EVANS-MONGEON DRAWN BY: W FARLEY  
DESIGNED BY: W FARLEY CHECKED BY:  
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