**EROSION CONTROL NARRATIVE**

**1.1 PROJECT DESCRIPTION**

THIS PROJECT INVOLVES THE REDEVELOPMENT OF UNPAVED SHOULDERS INCLUDING THE PLACEMENT OF FILL AND MINOR GRADING, THE REPLACEMENT OF SHALLOW DRAINAGE FEATURES, EXTENSION OF EXISTING CULVERTS, AND OTHER INCIDENTAL ITEMS.

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 2.65 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON. NO CONSTRUCTION ACTIVITIES MAY TAKE PLACE BETWEEN OCTOBER 15 AND MAY 1 WITHOUT APPROVAL FROM THE ENGINEER AND DEPARTMENT OF ENVIRONMENTAL CONSERVATION.

**1.2 SITE INVENTORY**

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

THE PROPERTIES SURROUNDING THE PROJECT SITE CONSIST OF SINGLE FAMILY RESIDENTIAL DWELLINGS WITH GRASS AND TREE BUFFERS, AGRICULTURAL FARMLAND, AND SOME WELL ESTABLISHED FOREST WITH LOW TO MODERATE SLOPES. DUE TO THE NATURE OF THE SURROUNDING TERRAIN, THE PROJECT SITE COULD RECEIVE RUNOFF WATER FROM A FEW NEARBY SLOPES. IF THIS IS THE CASE, IT SHOULD BE MINIMAL.

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

THERE ARE A NUMBER OF CLASS III WETLANDS AND ONE CLASS II WETLAND ALONG THE PROJECT AREA. THERE ARE NO STATE WATER BODIES WITHIN THE PROJECT BOUNDARY. THE NEAREST RECEIVING WATERS INCLUDE BEAVER CREEK, LEDGE CREEK, AND OTTER CREEK, ALL A MINIMUM OF 500' FROM THE PROJECT AREA.

**1.2.3 TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES**

THE TOPOGRAPHY OF THE AREA CAN BE DESCRIBED AS ROLLING FARMLAND CONSISTING OF MOSTLY LOW TO MEDIUM SLOPES. SEVERAL HILLS ALONG THE PROJECT EXCEED 5% SLOPE FOR A SHORT LENGTH. THERE ARE RESIDENCES, BUSINESSES, A SCHOOL, AND FARMS THROUGHOUT THE PROJECT AREA.

THERE ARE OVERHEAD UTILITIES THROUGHOUT, SOME OF WHICH WILL BE RELOCATED PRIOR TO CONSTRUCTION. AN UNDERGROUND TELEPHONE LINE EXISTS ALONG MUCH OF THE PROJECT LENGTH, AND WILL BE AERIALLY RELOCATED IN SEVERAL LOCATIONS PRIOR TO THE CONSTRUCTION OF THIS PROJECT. THE APPROXIMATE LOCATION OF ALL EXISTING UTILITIES ARE SHOWN ON THE PLANS.

**1.2.4 VEGETATION**

THE VEGETATION IN THE PROJECT AREA CONSISTS OF SOME HARDWOOD TREES AND UNDERGROWTH IN THE AREA OF THE PROPOSED RETAINING WALL, BUT MOSTLY IT IS A RURAL AGRICULTURAL LANDSCAPE WITH RESIDENTIAL LAWNS, SOME MATURE TREES AND TYPICAL PLANTINGS. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY THE PLACEMENT OF FILL OR MINOR GRADING OPERATIONS. UPON PROJECT COMPLETION, SLOPES 3:1 OR GREATER WILL BE PROTECTED WITH EROSION CONTROL MATTING. 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 ADDISON, VERMONT. SOILS IN THE PROJECT AREA VARY ALONG THE PROJECT LENGTH.

THE MOST COMMON SOIL TYPES FOUND IN THE PROJECT AREA ARE AS FOLLOWS:

VERGENNES CLAY, 2-6%, VgB (51%), K-FACTOR = 0.49
VERGENNES CLAY, 12-25%, VgD (5%), K-FACTOR = 0.49
NELLIS STONY LOAM, 3-8%, NeB (24%), K-FACTOR = 0.32
NELLIS STONY LOAM, 8-15%, NeC (8%), K-FACTOR = 0.32
NASSAU EXTREMELY ROCKY SILTY LOAM, 3-25%, NdC (10%), K-FACTOR = 0.32
COVINGTON AND PANTON SILTY CLAYS, 2-6%, Cw (2%), K-FACTOR = 0.49
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.

1.2.6 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: NO
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: BROWNS RIVER
WETLANDS: NO

1.3 RISK EVALUATION

THIS PROJECT FALLS UNDER THE JURISDICTION OF A LOW RISK CONSTRUCTION GENERAL PERMIT 3-9020 BASED ON THE PROJECT IMPACT AREA AND PROJECT CHARACTERISTICS. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING ALL GUIDELINES, TERMS, AND CONDITIONS AS SET FORTH IN THE CONSTRUCTION GENERAL PERMIT AND APPLICABLE SUPPLEMENTARY DOCUMENTS.

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 WHEREVER POSSIBLE.

ALL MEASURES SHALL 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.

DUE TO THE LINEAR PROJECT AREA AND RELATIVELY CONSISTENT DESIGN, THE EPSC PLAN CONTAINS A GENERAL TYPICAL DETAIL OF THE APPLICATION TO BE USED. THIS TYPICAL APPLICATION SHALL BE APPLIED ALONG THE ENTIRE LENGTH OF THE PROJECT. THE LOCATION OF PROJECT DEMARCATION FENCE, EROSION LOG, AND TEMPORARY INLET PROTECTION IS SHOWN ON THE PLANS. ADDITIONAL MEASURES NOT LOCATED ON PLAN MAY BE REQUIRED BASED ON SITE CONDITIONS AS DIRECTED BY THE ENGINEER.

(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 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 INSTALL FIBER ROLL EROSION LOGS
FIBER ROLL (ITEM 653.60) SHALL BE INSTALLED AT THE TOE OF SLOPES AS SHOWN ON THE PLANS, AS SPECIFIED IN THE EPSC DETAILS, OR AS NECESSARY.

1.4.4 DIVERT UPLAND RUNOFF
SWALE (STORM WATER FROM STREET COLLECTIONS DRAINAGE SYSTEM)

1.4.5 SLOW DOWN CHANNELIZED RUNOFF
INSTALL CULVERT INLET PROTECTION DEVICES AS SPECIFIED ON PLANS.

**1.4.6 CONSTRUCT PERMANENT CONTROLS**
EROSION CONTROL MATTING FOR SLOPE PROTECTION
SEED AND MULCH [AS PART OF STP 2629(1)]
CULVERT INLET PROTECTION DEVICES
DRAINAGE INLETS AND PIPING
TYPE I STONE DITCH LININGS
HEADWALLS

**1.4.7 STABILIZE EXPOSED SOILS**
SEED AND MULCH [AS PART OF STP 2629(1)]
EROSION MATTING
TYPE I STONE SLOPE PROTECTION

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.

**1.4.8 WINTER STABILIZATION**
VARIOUS MEASURES SPECIFIC TO WINTER AS PERMITTED (SEE LOW RISK HANDBOOK)

**1.4.9 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.

**1.4.10 DE-WATERING ACTIVITIES**
NO DE-WATERING ACTIVITIES ARE ANTICIPATED.

**1.4.11 INSPECT YOUR SITE**
INSPECT SITE BASED ON PERMIT AUTHORIZATION OR SPECIAL PROVISION REQUIREMENTS.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83

| NO. | DATE | REVISIONS | BY | CK'D |
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Cornwall, Vermont

PROJECT NAME: CORNWALL - MIDDLEBURY
PROJECT NUMBER: STP EH08(13)

FILE NAME: Z08F122BDR EPSC.DGN
PROJECT LEADER: MS
DESIGNED BY: CM
EPSC PLAN - NARRATIVE

PLOT DATE: 06/09/2010
DRAWN BY: CM
CHECKED BY: MS
SHEET 81 OF 133