

## BENNINGTON AC NH 019-1(53) STAGE ONE SITES NARRATIVE

### 1. PROJECT DESCRIPTION

THIS PORTION OF THE BENNINGTON NH FO19-1(5) VT. ROUTE 279 PROJECT CONSISTS OF THE PLACEMENT OF EXCESS EARTH MATERIAL CREATED FROM THE CONSTRUCTION OF THE PROPOSED VT. ROUTE 279 ALIGNMENT AND RELOCATING IT TO THE PROPOSED STAGE ONE SITES LOCATED IN THE SOUTHERN PART OF BENNINGTON. THE EXCESS MATERIAL WILL BE HAULED PRIMARILY OVER EXISTING ROUTES ON THE NATIONAL HIGHWAY SYSTEM WITHIN THE TOWN OF BENNINGTON TO AN ACCESS POINT OFF FULLER ROAD.

### 2. SITE INVENTORY AND ANALYSIS

#### A. SITE DRAINAGE CHARACTERISTICS:

THE PROPOSED STAGE ONE SITES ARE LOCATED WITHIN A PRIMARILY UNDISTURBED VALLEY KNOWN AS THE VERMONT VALLEY WHICH IS SITUATED BETWEEN MOUNT ANTHONY AND CARPENTER HILL TO THE WEST AND THE GREEN MOUNTAINS TO THE EAST. THIS AREA IS ALSO KNOWN AS THE WALLOOMSAC - HOOSIC RIVER DRAINAGE BASIN OF SOUTHWESTERN VERMONT. EXISTING SIDE SLOPES ALONG THE PROJECT CORRIDOR ARE PRIMARILY FLAT TO 25%. THE MAJORITY OF THE SURFACE RUNOFF ASSOCIATED WITH THIS WATERSHED IS CONVEYED BY OVERLAND FLOW TO THE JEWETT BROOK WHICH RUNS PARALLEL TO OUR PROJECT AREA. THE JEWETT BROOK IS A TRIBUTARY OF THE WALLOOMSAC RIVER THAT FLOWS FROM THE SOUTH ALONG U.S. ROUTE 7 TO ITS OUTFALL POINT IN SOUTH STREAM WHICH THEN OUTFALLS INTO THE WALLOOMSAC RIVER. THERE ARE ALSO SEVERAL CLASS II WETLANDS SITUATED ADJACENT TO THE PROJECT CORRIDOR THAT COLLECT OVERLAND RUNOFF WATERS AND DRAIN INTO JEWETT BROOK. ALL EROSION PREVENTION AND SEDIMENT CONTROL MEASURES HAVE BEEN DESIGNED TO MINIMIZE EROSION AND CONTROL SEDIMENT WITHIN THE PROJECT CORRIDOR BY SEPARATING AND TREATING ON-SITE RUNOFF WATERS PRIOR TO BE RELEASED INTO THE EXISTING WATERWAYS.

#### B. DRAINAGE, WATERWAYS, BODIES OF WATER:

LOCATED WITHIN THE PROJECT CORRIDOR IS JEWETT BROOK WHICH IS A TRIBUTARY OF THE WALLOOMSAC RIVER AND AN UNNAMED STREAM THAT FLOWS FROM THE WEST OFF CARPENTER HILL TO ITS OUTFALL POINT IN JEWETT BROOK. IN ADDITION, THERE ARE SEVERAL CLASS II WETLANDS LOCATED ALONG THE PROJECT CORRIDOR. ALL EROSION PREVENTION AND SEDIMENT CONTROL MEASURES HAVE BEEN DESIGNED TO MINIMIZE EROSION AND CONTROL SEDIMENT WITHIN THE PROJECT CORRIDOR BY FILTERING THE ON-SITE RUNOFF WATERS PRIOR TO ENTERING THE EXISTING WATERWAYS AND BODIES OF WATER.

#### C. TOPOGRAPHY:

THE PROPOSED PROJECT CORRIDOR IS LOCATED BETWEEN A GRAVEL ROAD KNOWN AS FULLER ROAD ON THE SOUTH AND A POINT JUST NORTH OF A PAVED ROAD KNOWN AS MIDDLE POWNAL ROAD AT THE NORTHERN LIMIT. THE EXISTING SITE TOPOGRAPHY ALONG THIS CORRIDOR PRIMARILY CONSISTS OF UNDISTURBED WOODED LANDS SITUATED ALONG ROLLING TERRAIN NEAR THE GREEN MOUNTAIN NATIONAL FOREST. THERE ARE NO BUILDINGS LOCATED WITHIN THE PROJECT CORRIDOR.

#### D. VEGETATION:

THE EXISTING VEGETATION LOCATED WITHIN THE PROJECT CORRIDOR MAINLY CONSISTS OF WOODED AREAS WITH SOME SCATTERED FIELDS AND WETLANDS.

#### E. SOILS:

THE MAJORITY OF THE SOILS LOCATED WITHIN THE PROPOSED STAGE ONE SITES HAVE BEEN PRIMARILY CLASSIFIED AS POTENTIALLY HIGHLY ERODIBLE AND HIGHLY ERODIBLE BY THE UNITED STATES DEPARTMENT OF AGRICULTURE'S NATIONAL RESOURCES CONSERVATION SERVICE (NRCS). THERE IS ALSO ONE ISOLATED AREA THAT CONTAINS SOILS CLASSIFIED AS NOT HIGHLY ERODIBLE BY THE NRCS. SEE DWGS. SM-1 & SM-2 FOR A MAP AND TABLE DEPICTING ALL OF THE NRCS MAPPED SOILS LOCATED ALONG THE PROJECT CORRIDOR. DUE TO THE AMOUNT OF EARTHWORK THAT WILL TAKE PLACE ALONG THE PROJECT CORRIDOR, TEMPORARY EROSION PREVENTION MEASURES WILL BE INSTALLED TO HELP STABILIZE ALL EXPOSED SLOPES UNTIL THEY CAN BE PERMANENTLY STABILIZED WITH A NATURAL VEGETATIVE COVER.

#### F. PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES:

THE PROJECT CORRIDOR IS LOCATED A MINIMUM OF 25 m EAST OF THE JEWETT BROOK WHICH IS A TRIBUTARY OF THE WALLOOMSAC RIVER. THERE ARE ALSO SEVERAL CLASS II WETLANDS LOCATED WITHIN THE PROJECT CORRIDOR. THE MINIMUM SEPARATION BETWEEN THE PROPOSED WORK AND THE CLASS II WETLAND IS 15 m. TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED TO HELP STABILIZE ALL EXPOSED SLOPES AND TO TRAP SEDIMENT FROM ON-SITE RUNOFF WATERS UNTIL ALL SLOPES HAVE BEEN COMPLETED AND CAN BE PERMANENTLY STABILIZED.

### 3. GRADING PLAN AND TIMETABLE

#### A. DESCRIPTION OF PROPOSED GRADING AND SEASONAL LIMITATIONS:

THIS PROJECT CONSISTS OF PLACING APPROXIMATELY 200,000 m<sup>3</sup> OF EARTHEN MATERIAL. ALL PROPOSED GRADING WITHIN THE PROJECT CORRIDOR SHALL BE PERFORMED AS SPECIFIED IN THE CONTRACT PLANS. IT IS ANTICIPATED THE WORK BEING PERFORMED SHALL BE COMPLETED WITHIN 3 YEARS AND ALL EARTH WORK SHALL BE PERFORMED BETWEEN MAY 1 AND OCTOBER 15 FOR ANY GIVEN CALENDAR YEAR DUE TO SLOPE STABILIZATION LIMITATIONS AND THERE SHALL BE NO NEED FOR WINTER CONSTRUCTION. IF WINTER CONSTRUCTION IS REQUIRED THE CONTRACTOR IS RESPONSIBLE TO OBTAIN A WINTER CONSTRUCTION PERMIT FROM THE VERMONT AGENCY OF NATIONAL RESOURCES.

#### B. TIMETABLE OF ALL MAJOR CONSTRUCTION OPERATIONS:

SEE DWG. ECN-3 FOR DETAILED DESCRIPTIONS OF THE VARIOUS PHASES OF CONSTRUCTION. ALL DISTURBED AREAS SHALL BE STABILIZED AS SOON AS PRACTICAL, BUT NO MORE THAN TWO DAYS AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED. ALL PERMANENT SLOPES THAT CAN NOT BE STABILIZED PRIOR TO SEPTEMBER 15 SHALL BE TEMPORARILY STABILIZED PRIOR TO OCTOBER 15 PER THE DETAILS SHOWN ON THE PLANS UNTIL THE FOLLOWING YEAR'S CONSTRUCTION SEASON.

### 4. EROSION PREVENTION AND SEDIMENT CONTROL PLAN AND TIMETABLE

#### A. DESCRIPTION OF THE STRATEGIES OF THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN AND WHY IT WILL BE EFFECTIVE IN PROTECTING WATER RESOURCES:

THE CONCEPT BEHIND THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN IS TO MINIMIZE THE AMOUNT OF SOIL EROSION THAT OCCURS DURING THE VARIOUS PHASES OF CONSTRUCTION BY LIMITING THE AMOUNT OF DISTURBED SOIL THROUGH CONSTRUCTION SEQUENCING AND TREATING ALL ON-SITE SEDIMENT LADEN STORMWATER RUNOFF PRIOR TO RELEASING INTO THE EXISTING WATERWAYS. THE VARIOUS METHODS OF TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL MEASURES BEING EMPLOYED ON THIS PROJECT ARE SILT FENCE, EROSION MATTING AND CHECK DAMS. IN ADDITION TO THE TEMPORARY MEASURES ALL PERMANENT SLOPES SHALL BE STABILIZED WITH SEED AND MULCH PRIOR TO THE COMPLETION OF THE PROJECT WITHIN THE SEASONAL LIMITATIONS STATED IN SECTION 3. BY CORRECTLY INSTALLING ALL OF THE TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL MEASURES PER THIS PLAN DURING THE VARIOUS PHASES OF CONSTRUCTION, THE CONTRACTOR SHALL BE ABLE TO TREAT AND CONTROL ALL ON-SITE STORMWATER RUNOFF PRIOR TO RELEASING WATERS INTO THE EXISTING WATERWAYS.

#### B. DESCRIPTION OF SEEDING AND MULCHING PLAN:

ALL EXPOSED SLOPES SHALL BE SEEDED AND MULCHED AS SOON AS PRACTICAL BUT NO MORE THAN 48 HOURS AFTER CONSTRUCTION HAS PERMANENTLY CEASED IN THE GIVEN AREA(S). THE LIMITS OF SEEDING AND MULCHING SHALL BE TO THE TOP AND TOE OF ALL SLOPES AS DEPICTED IN THE PLANS. TO ENSURE STABILIZATION AND SEED GROWTH NO SEEDING SHALL TAKE PLACE BEFORE APRIL 15 OR AFTER SEPTEMBER 15 DURING ANY CONSTRUCTION SEASON UNLESS DIRECTED OTHERWISE BY THE CONTRACTOR'S ON-SITE PLAN COORDINATOR. SEE DWG. SM-2 FOR ALL SEED, FERTILIZER AND MULCH APPLICATION RATES. THE CONTRACTOR SHALL TEMPORARILY STABILIZE ALL SLOPES NO LATER THAN OCTOBER 15 WITH NON-VEGETATIVE PROTECTION MEASURES PRIOR TO SHUTTING DOWN FOR WINTER OR AS DIRECTED BY THE CONTRACTOR'S ON-SITE PLAN COORDINATOR.

#### C. DESCRIPTION OF TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL MEASURES:

BARRIER FENCE & PROJECT DEMARCATION FENCE (PDF) - INSTALLED ALONG THE PERIMETER OF THE ENTIRE PROJECT DURING THE DIFFERENT PHASES OF CONSTRUCTION TO KEEP THE CONTRACTOR'S WORKERS AND EQUIPMENT FROM ENTERING PROTECTED AREAS.

SILT FENCE - INSTALLED ALONG THE TOE AND AT INTERMEDIATE POINTS ALONG FILL SLOPES PER THE DETAILS ON DWG'S. ECD-3.

EROSION MATTING - INSTALLED ON SLOPES 1:3 OR GREATER PER THE DETAIL ON DWG. ECD-2.

CHECK DAMS - INSTALLED IN AREAS OF CONCENTRATED FLOW AT THE TOES OF SLOPE PER THE DETAILS ON DWG. ECD-4.

#### D. DESIGN CALCULATIONS FOR ALL TEMPORARY AND PERMANENT STRUCTURAL CONTROL MEASURES:

TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL MEASURE DESIGN CALCULATIONS

ALL TEMPORARY EROSION PREVENTION MEASURES SHOWN IN THE PLAN SHALL BE INSTALLED PER THE EROSION CONTROL DETAILS SHOWN ON DWG'S. ECD-1 THRU ECD-4.

PERMANENT EROSION PREVENTION AND SEDIMENT CONTROL MEASURE DESIGN CALCULATIONS

PERMANENT EROSION PREVENTION AND SEDIMENT CONTROL MEASURES SHALL BE LIMITED TO THE ESTABLISHMENT OF A VEGETATIVE COVER PER THE SEEDING FORMULA FOUND ON DWG. SM-2.

#### E. DESCRIPTION OF THE INSPECTION, MAINTENANCE, AND RECORDS PROGRAM FOR ALL CONTROL MEASURES:

THE CONTRACTOR SHALL DESIGNATE SOMEONE WHO WILL BE DIRECTLY RESPONSIBLE FOR THE INSPECTION, MAINTENANCE AND RECORD KEEPING FOR EROSION PREVENTION AND SEDIMENT CONTROL MEASURES PER ITEM 652.20 MONITORING EROSION PREVENTION AND SEDIMENT CONTROL PLAN. INSPECTION OF SOIL EROSION AND POLLUTION CONTROL MEASURES SHALL BE DONE ON A DAILY BASIS AND AFTER EVERY STORM GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE OR AS DIRECTED BY THE CONTRACTOR'S ON-SITE PLAN COORDINATOR THROUGHOUT THE DURATION OF THE CONTRACT. REPAIRS SHALL BE MADE AS NEEDED AND SEDIMENT SHALL BE REMOVED WHEN THE STORAGE VOLUME OF A SEDIMENT CONTROL MEASURE IS APPROACHING ONE HALF OF ITS INTENDED CAPACITY OR AS DIRECTED BY THE CONTRACTOR'S ON-SITE PLAN COORDINATOR. ALL EROSION PREVENTION AND SEDIMENT CONTROL DEVICES SHALL BE MAINTAINED PER ITEM 652.30 FIELD MAINTENANCE OF EROSION PREVENTION AND SEDIMENT CONTROL PLAN.

#### F. IDENTIFICATION, BASIC QUALIFICATIONS, AND CONTACT NUMBER FOR CONTRACTOR'S ON-SITE PLAN COORDINATOR:

THE REQUIRED INFORMATION FOR THE CONTRACTOR'S ON-SITE PLAN COORDINATOR FOR THIS PROJECT SHALL BE PROVIDED TO THE VERMONT AGENCY OF NATURAL RESOURCES PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY.

FILE NAME = I:\9819\mstn\03\c.lough\EROSION\z048escd06.dgn  
DATE/TIME = 5/21/2007  
USER = 1459

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (1992)

## VERMONT AGENCY OF TRANSPORTATION



PROJECT NAME: BENNINGTON  
PROJECT NUMBER: AC NH 019-1(53)

FILE NAME: Z048ECSD06.DGN  
PROJECT LEADER: D.E.G.  
DESIGNED BY: D.W.E.  
GENERAL EROSION NARRATIVE ECN-1

PLOT DATE: 5/21/2007  
DRAWN BY: C.A.K.  
CHECKED BY: D.E.G.  
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