

## 1.1 PROJECT DESCRIPTION

THIS PROJECT IS LOCATED ON US ROUTE 5 AND VERMONT ROUTE 25A IN FAIRLEE. BEGINNING AT A POINT APPROXIMATELY 100 FEET NORTH OF THE INTERSECTION OF US ROUTE 5 AND VERMONT ROUTE 25A AND EXTENDING EASTERLY ALONG VT ROUTE 25A FOR 275 FEET. THE PURPOSE OF THE PROJECT IS TO CONSTRUCT A NEW CONCRETE SIDEWALK FROM A POINT ON US ROUTE 5, TO MEET AN EXISTING SIDEWALK ON THE RECENTLY REHABILITATED TRUSS BRIDGE WHICH CROSSES THE CONNECTICUT RIVER TO ORFORD, NH.

THIS PROJECT INCLUDES A NEW CONCRETE SIDEWALK, A NEW RAILROAD CROSSING (RAIL, TIES, BALLAST AND CROSSING SIGNALS), NEW SUBSURFACE DRAINAGE AND NEW SIGNS AND TRAFFIC MARKINGS.

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

TOTAL DISTURBED AREA (EXCLUDING WASTE, BORROW AND STAGING AREAS): 0.17 ACRES. THE ESTIMATED AREA OF WASTE, BORROW AND STAGING AREAS IS LESS THAN 0.83 ACRES.

## 1.2 SITE INVENTORY

### 1.2.1 OFF SITE DRAINAGE CHARACTERISTICS:

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

THE CONNECTICUT RIVER IS APPROXIMATELY 100 FEET EASTERLY OF THE EASTERNMOST PORTION OF THE SITE.

### 1.2.3 TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES:

THE TERRAIN IS FLAT TO HILLY SURROUNDING THE PROJECT SITE. THERE ARE NUMEROUS COMMERCIAL AND RESIDENTIAL BUILDINGS WITH DRIVES ALONG US ROUTE 5.

THERE WILL BE NO UTILITY RELOCATION, BUT AN UNDERGROUND CONDUIT FOR SERVICE TO THE PROPOSED NEW RAILROAD CROSSING SIGNALS WILL BE INSTALLED DURING CONSTRUCTION OF THIS PROJECT.

### 1.2.4. VEGETATION

THE VEGETATION ON THE PROJECT SITE IS PRIMARILY LIMITED TO RESIDENTIAL LAWNS AND LANDSCAPED TOWN AND COMMERCIAL PROPERTY. THERE ARE SCATTERED TREES WHICH WILL NOT BE AFFECTED BY THE PROJECT. THERE ARE ALSO SOME HEDGES, SHRUBS AND GRASSY LAWNS.

### 1.2.5 SOILS

DUE TO THE MINIMAL IMPACT OF THE PROJECT, THE SOILS IN THE IMMEDIATE AREA OF DISTURBANCE WERE NOT INVESTIGATED. IT IS ASSUMED THAT ANY SOILS ENCOUNTERED DURING THE PROJECT CONSTRUCTION HAVE PREVIOUSLY BEEN DISTURBED, AND ARE LIKELY ENGINEERED MATERIALS TRUCKED IN FROM OFF-SITE LOCATIONS.

### 1.2.6 SENSITIVE RESOURCE AREAS:

NO "THREATENED & ENDANGERED SPECIES", PRIME AGRICULTURAL LAND, WETLANDS, OR CRITICAL HABITATS HAVE BEEN IDENTIFIED WITHIN THE PROJECT AREA. THE ONLY SENSITIVE AREA WITHIN THE PROJECT SITE IS THE CONNECTICUT RIVER.

## 1.3 RISK EVALUATION

THIS PROJECT IS DETERMINED TO BE NON-JURISDICTIONAL (I.E. < 1.0 ACRE). THEREFORE, 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 VT-ANR VIA FILING OF THE APPROPRIATE NOTICE OF INTENT UNDER THE CONSTRUCTION GENERAL PERMIT PROCESS".

## 1.4 EROSION PREVENTION AND SEDIMENT CONTROL (EPSC)

### 1.4.1 MARK SITE BOUNDARIES

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 SITE PLAN (SHEET 10 OF 28). THE INSTALLATION OF THE PDF WILL BE PERFORMED SUCH THAT NO VEGETATION ON THE OUTSIDE OF THE FENCING IS DISTURBED.

### 1.4.2 LIMIT DISTURBANCE AREA

PRESERVE EXISTING VEGETATION, SHRUBS, AND TREES WHENEVER POSSIBLE.

### 1.4.3 STABILIZE CONSTRUCTION EXIT

### 1.4.4 INSTALL SILT FENCE

### 1.4.5 DIVERT UPLAND RUNOFF

### 1.4.6 SLOW DOWN CHANNELIZED RUNOFF

INLET PROTECTION SHALL BE PLACED AT LOCATIONS ILLUSTRATED ON THE EROSION CONTROL SITE PLAN (SHEET 10 OF 28) AND AS DESCRIBED ON EROSION CONTROL DETAIL SHEET (SHEET 11 OF 28).

CHECK DAMS SHALL BE INSTALLED AS SHOWN ON THE EROSION CONTROL SITE PLAN (SHEET 10 OF 28).

A CHECK DAM IS A SMALL DAM MADE OF CONCRETE, MASONRY, ROCK, METAL, WOOD, STAKED HAY BALES, SANDBAGS, OR OTHER EROSION-RESISTANT MATERIALS PLACED IN SMALL EROSION CONTROL WATERWAYS OR AROUND STORM DRAIN INLETS. THE PURPOSE OF A CHECK DAM IS TO REDUCE OR PREVENT EROSION AND SEDIMENTATION BY REDUCING VELOCITIES, BY PROMOTING DEPOSITION OF SEDIMENT, AND BY STABILIZING CHANNEL GRADES. CHECK DAMS CAN BE DAMAGED BY HEAVY RUNOFF OR HIGH WATER VELOCITIES, SO BE SURE TO INSPECT THEM OFTEN AND REPAIR OR REPLACE THEM WHEN NECESSARY.

### 1.4.7 CONSTRUCT PERMANENT CONTROLS

DRAINAGE INLETS AND UNDERGROUND PIPES WILL BE INSTALLED TO CONVEY THE SURFACE WATER RUNOFF FROM THE ROADWAY SURFACE AND SURROUNDING LIMITED PERMEABILITY GROUND SURFACE TOWARDS THE CONNECTICUT RIVER. THESE STRUCTURES HELP PREVENT UNDERMINED ROADWAY SURFACES AND LIMIT EROSION FROM UNCHANNELED FLOW

### 1.4.8 STABILIZE EXPOSED SOILS

SEEDING, MULCHING AND BIODEGRADABLE EROSION CONTROL MATTING, OR AN EQUIVALENT PRODUCT, WILL BE UTILIZED ON ALL SLOPES STEEPER THAN 3:1 THAT ARE NOT LINED WITH STONE FILL. THE PURPOSE OF EROSION MATTING IS TO HELP BIND SOIL PARTICLES TOGETHER SO THAT THEY CAN BETTER RESIST THE SHEAR STRESSES BUILT UP BY WATER FLOWING DOWN THE SLOPE. THESE SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE OR DURING INTERMITTENT PHASES OF CONSTRUCTION ACTIVITY.

HAY MULCH SHOULD BE APPLIED TO EXPOSED SOIL AT THE END OF EACH WORK DAY. THIS WILL REQUIRE CAREFUL PLANNING OF THE PHASING OF EARTH MOVING. SEED AND HAY MULCH SHOULD BE APPLIED AS SOON AS NO MORE SOIL DISTURBANCE IS EXPECTED TO OCCUR, OF IF THE AREA IS TO BE WITHOUT CONSTRUCTION ACTIVITY FOR A PERIOD OF 14 DAYS. SEED AND HAY MULCH SHOULD BE APPLIED TO TOPSOIL STOCKPILES AS WELL AS TO AREAS OF DISTURBED SOIL. ALL EXPOSED AREAS SHALL BE APPROPRIATELY STABILIZED PRIOR TO A SIGNIFICANT RAIN EVENT.

TRACKING AND MULCHING WILL BE USED TO TEMPORARILY STABILIZE SLOPES. USE TRACKING FOR SHORT TERM (TWO WEEKS) EXPOSED SLOPES. DRIVE EQUIPMENT ON THE SLOPES TO LEAVE TRACK (SMALL CHECK DAMS) THAT WILL CATCH WATER FLOW. STABILIZE SLOPES WITHIN 48 HOURS OR SOONER CONSIDERING WEATHER CONDITIONS.

### 1.4.9 WINTER STABILIZATION

IF THIS PROJECT EXTENDS PAST OCT. 15, THE EPSC PLAN SHALL BE RE-EVALUATED FOR THE PROPER PROCEDURES FOR WINTER CONSTRUCTION.

### 1.4.10 STABILIZE SOIL AT FINAL GRADE

SEEDING AND MULCHING WILL BE USED TO STABILIZE SLOPES. USE SEEDING FOR LONG TERM EXPOSED SLOPES. IT IS ANTICIPATED THAT GRASS TAKES TWO WEEKS TO ESTABLISH ITSELF. STABILIZE SLOPES WITHIN 48 HOURS OR SOONER CONSIDERING WEATHER CONDITIONS.

SEEDING AND MULCHING IS ONE OF THE MOST EFFECTIVE MEANS OF CONTROLLING EROSION. THEREFORE, ALL EXPOSED SURFACES OUTSIDE OF THE ROADWAY LIMITS, WHICH ARE NOT SPECIFIED TO BE COVERED BY STONES OR SOME OTHER SUITABLE COVER, WILL BE SEEDED AND MULCHED.

SEE EROSION CONTROL SITE PLAN (SHEET 10 OF 28) FOR LOCATIONS OF AREAS TO BE RE-VEGETATED.

### 1.4.11 DEWATERING ACTIVITIES

ACCUMULATED SEDIMENT IS REMOVED TO ALLOW SUFFICIENT TREATMENT

### 1.4.12 SITE INSPECTION

THE TEMPORARY EPSC MEASURES SHALL BE INSPECTED A MINIMUM OF ONCE A WEEK AND/OR AFTER EACH RAINFALL EVENT.

## FINAL EROSION CONTROLS

REMOVE PERIMETER CONTROLS (PDF) ONLY AFTER ALL CONSTRUCTION ACTIVITIES ARE COMPLETED AND ALL SLOPES ARE STABILIZED AND WELL ESTABLISHED.

REMOVAL OF CHECK DAMS CAN OCCUR AFTER VEGETATED DITCHES HAVE ESTABLISHED GROWTH OR STONE LINED DITCHES ARE COMPLETED.

## GENERAL EROSION & 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.

COORDINATE THE INSTALLATION, USE, AND REMOVAL OF EROSION AND SEDIMENT CONTROL MEASURES WITH CONSTRUCTION ACTIVITIES TO ENSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS EROSION AND SEDIMENT CONTROL. EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES AS CONSTRUCTION PROCEEDS. THE CONTRACTOR WILL USE ADDITIONAL EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION AND AS DIRECTED BY THE ENGINEER. SEE SUB-SECTION 105.23 OF THE VERMONT AOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006.

THE CONTRACTOR WILL USE OTHER TEMPORARY OR PERMANENT EROSION CONTROL DEVICES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION AND AS DIRECTED BY THE RESIDENT ENGINEER. SEE SECTION 105 OF THE 2006 VERMONT STANDARD SPECIFICATIONS FOR CONSTRUCTION.

THE CONTRACTOR SHALL INSTALL EROSION AND SEDIMENT CONTROL MEASURES AS SEQUENCED IN THE "SPECIFIC GUIDELINES", OR AS DIRECTED BY THE RESIDENT ENGINEER. THE TYPE, SIZE, AND LOCATION OF ANY EROSION CONTROL DEVICES SHALL NOT BE CHANGED UNLESS PRIOR APPROVAL IS OBTAINED FROM THE RESIDENT ENGINEER. ANY APPROVED CHANGES SHALL BE NOTED ON THE EROSION CONTROL PLANS AND DISCUSSED ON THE WEEKLY REPORT. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES DAILY AND AFTER EACH RAINFALL EVENT. THE CONTRACTOR SHALL REPAIR ALL DAMAGED EROSION CONTROL MEASURES IMMEDIATELY. ALL EROSION CONTROL MEASURES THAT TRAP SEDIMENT, SUCH AS SEDIMENT BASINS AND SILT FENCES, SHALL BE CLEANED OUT WHEN THEIR CAPACITY REACHES 50%.

ALL SEDIMENTS REMOVED FROM EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DEPOSITED IN AN UPLAND PORTION OF THE PROJECT SITE OR DEPOSITED OFF SITE IN THE DESIGNATED PROJECT WASTESITE.

INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN IN THE EROSION CONTROL PLAN OR AS DIRECTED BY THE ENGINEER. DO NOT MODIFY THE TYPE, SIZE OR LOCATION OF ANY CONTROL OR PRACTICE WITHOUT APPROVAL OF THE 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. TEMPORARY VEGETATION SHALL BE ESTABLISHED IF THE AREA IS TO BE WITHOUT CONSTRUCTION ACTIVITY FOR A PERIOD OF 14 DAYS. 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.

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.

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 A DOUBLE INSTALLATION OF SILT FENCE AROUND THE BASE OF EACH STOCKPILE. REMOVAL OF THE SILT FENCES AROUND THE WASTE AREAS SHALL BE PERFORMED ONLY AFTER THE APPROVAL OF THE ON-SITE COORDINATOR.

COFFERDAMS, SETTLING BASINS, FILTER BAGS, OR OTHER SEDIMENT STRUCTURES ARE NOT EXPECTED TO BE REQUIRED FOR THIS PROJECT.

THE PLAN PREPARER WILL BE AVAILABLE FOR ON-SITE CONSULTATIONS WITH THE RESIDENT ENGINEER WITHIN TWENTY-FOUR HOURS OF THE REQUEST.

## EROSION CONTROL NARRATIVE

PROJECT NAME:	Fairlee
PROJECT NUMBER:	STP 040-I(2)
FILE NAME: 98b118\sb118epsnar.dgn	PLOT DATE: 07-MAY-2008
PROJECT LEADER: J. Kaplan	DRAWN BY: G. Shangraw
DESIGNED BY: G. Shangraw	CHECKED BY: J. Kaplan
sb118epsn.nar.i	SHEET 9 OF 28