STATE OF VERMONT
AGENCY OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL NARRATIVE

DESCRIPTION OF PROJECT

This project involves the removal and replacement of a corrugated metal arch that was washed out in the "No Name Brook". on VT 116 south of the town of Bristol.

The existing corrugated metal arch was washed out in a storm event and a temporary detour was constructed down stream of the structure. The traffic is at this time detoured around the arch.

The new culvert will be a pre-cast box and pre-cast wingwalls. The pre-cast sections are to be placed in the same location as the existing corrugated metal arch.
The approaches will have new pavement, subbase, heavy duty steel rail, road side slopes, channel side slopes, and removal of the existing detour.

It is anticipated that this project will last one construction season.

SITE INVENTORY & ANALYSIS

OFF SITE DRAINAGE CHARACTERISTICS:
The property surrounding the project site consists of well established vegetation with moderate to steeply sloping banks to the brook.
The surrounding area consists of grassy flat fields and some tall brush around the downstream side of the detour. There is no defined surface drainage ways.

DRAINAGE, WATERWAYS, BODIES OF WATER:
The "No Name Brook" is located in the project area. The New Haven River is located 175 feet down stream of the project. The No Name Brook is a shallow brook and is also a flood relief for the New Haven River.

TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES:
The topography of the project site is flat grassy fields.
The No Name Brook runs 60 degrees to VT 116 with medium to steep vegetated banks. There is one driveway to a year round residence on the project.
There are overhead utilities that will be maintained and the need for relocation of the utility poles is unlikely.

VEGETATION:

The vegetation around the project is medium to tall grass in a flat field
The erosion controls may be placed once the project proceeds to the approach work and guard rail slopes phase.
During the approach work, slopes grater that 3:1 will require erosion control matting. Slopes will be vegetated/reestablished with standard seed & mulching practices.

SOILS:
The Soil Conservation Service has mapped the soils throughout Addison County. The soil type identified for this project site is as follows:

(Le) Limerick silty loam.

This soil type is described as "... Level to nearly level and in places, with slight depressions." This soil is considered to be highly erodible.
The soil is somewhat poorly drained.

The erodibility coefficient for this soil is rated (k value) is 0.49.

(AdA) Adams loamy fine sand.

This type of soil is described as ".. Nearly level to moderately slopping but, steep to very steep in some places."
This soil is considered to be not highly erodible.
This soil is well drained.

The erodibility coefficient for this soil is rated (k value) of 0.49.

(Hh) Hadley very fine sandy loam.

This soil type is described as "... Level to nearly level and in places, with slight depressions."
This soil is considered to be not highly erodible.
This soil is well drained.

The erodibility coefficient for this soil is rated (k value) of 0.49.

Generally, K-values indicate the following: 0.0 - 0.23 = low erodibility; 0.24 - 0.36 = moderate erodibility; 0.37 and higher = higher erodibility.

SENSITIVE RESOURCE AREAS:
No 'Threatened & Endangered Species' have been identified within the project limits. There are no historically significant structures at this site and no archeologically sensitive areas in the vicinity of the project.
There are no known wetlands in the vicinity of the project.
The only resource within the project limits is the New Haven River.

PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES:
Disturbance of soils near natural or man-made waterways consists of that which is necessary to excavate out the existing culvert and replace it with a larger pre-cast concrete box with wingwalls on each end, all applicable roadway approaches as well as guard rail flares with slopes. Stabilization of stream banks will be included with this project since this project does have channel work associated with it.

TEMPORARY EROSION PREVENTION & SEDIMENT CONTROL

Temporary erosion prevention measures to be utilized include:

Project Demarcation Fencing, denoted -PDF- on the plans, to delineate the limits the contractor can access. This measure limits the area that the contractor may, but not necessarily will, disturb and expose soils to erosion.

Seeding, mulching and biodegradable erosion control matting, or an equivalent product, will be utilized on all slopes steeper than 3:1.

These slopes shall be stabilized within 48 hours of reaching final grade or during intermittent phases of construction activity.

Temporary mulching and or matting ,will be utilized on a regular basis. Any slopes to be exposed for several days prior to final grading shall be mulched and or matted. The forecast of rainfall events shall also trigger protection of exposed slopes and matting of slopes greater than 3:1.

Temporary measures to control sediment transport include:

Silt fence will be installed and maintained as indicated in "erosion & sediment control plan". The contractor may need to adjust locations as indicated on the plans to better suit their construction needs. Proposed and or alternate silt fence locations will prevent sediment transport to down gradient areas. Each line of silt fence will be placed along the contour with ends turned slightly uphill to create a ponding effect should water try to run along the fencing and around the ends. Because of narrow width of the project, short effective runs of silt fencing should be installed. Silt fence shall be installed prior to any upslope earthwork.

Measures, such as temporary silt fence, shall be checked regularly for accumulation of sediment. Sediment build-up shall be removed when the level of sediment reaches one-half the height of the control measure or if sediment renders the erosion control device ineffective for it's intended purpose. Sediments shall be disposed of in an approved area such that they will not be subject to erosion.

Temporary sediment settling basins will not be utilized on this project.

PERMANENT EROSION CONTROL MEASURES

Grass, or other suitable ground cover will be established outside of the roadway limits. Specifically, 3:1 and greater slopes shall be matted and seeded promptly upon achieving final grade.

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, stormwater 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 section 105.23 of the Vermont AOT Standard Specifications for Construction, dated 2006.

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 measures promptly once damage is discovered.

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 utilized 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.

EROSION PREVENTION AND SEDIMENT CONTROL NARRATIVE

PROJECT NAME:	Bristol		
PROJECT NUMBER:	ER ST 021-1 (22)		
FILE NAME:	05b126/Str/s05b126excel.dgn	PLOT DATE:	10/17/2006
PROJECT LEADER:	M. EVANS-MONGEON	DRAWN BY:	G.ROKES
DESIGNED BY:	G.ROKES	CHECKED BY:	M. EVANS-MONG
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