

EROSION CONTROL NARRATIVE

DESCRIPTION OF PROJECT

This project involves the reconstruction of a bridge over the Trout River. The project is on VT Route 118, classified as a major collector, in the Town of Montgomery. The scope of work includes replacing the superstructure of a two-lane, three span bridge and minimal approach roadway work, including new guardrail. Phased construction, building one lane at a time, will avoid the need for a temporary bridge. Traffic will be maintained on the existing bridge. Total roadway approach work, including both approaches, is approximately 380 feet. The limits of construction do not approach any buildings or other structures. No 'Threatened & Endangered Species,' Wetlands, or Historic Resources have been identified in the project area. The site is located at: Latitude 44°54'96," Longitude 72°39'07." It is anticipated that this project will last one construction season. Total disturbed area (including estimated staging area): 0.70 acres

SITE INVENTORY & ANALYSIS

OFF SITE DRAINAGE CHARACTERISTICS:

Off site drainage characteristics for this site consists of moderate, grass & shrub covered slopes receiving runoff water primarily from the built-up, paved roadway. High banks and steep slopes generating concentrated runoff is not typical of this site.

DRAINAGE, WATERWAYS, BODIES OF WATER:

Trout River is located in the project area. There are no other water bodies or wetlands within the project area.

TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES:

The surrounding topography of this bridge crossing is primarily low lying, rolling terrain with agricultural uses predominating. A residence and field access drives exist near the project limits and there is a utility service attached to the bridge.

VEGETATION:

Vegetation existing at the site consists of grasses and low shrubs typical of state maintained roadways where roadside mowing takes place in the summer months.

SOILS:

The Soil Conservation Service has mapped the soils throughout Franklin County. The soil type identified for this project site is Od (Ondawa Variant silt loam). This soil type is described as '...level, well drained, deep soil is on the highest position on flood plains...subject to flash floods after heavy, brief rains and prolonged flooding during and after intensive, extended rains...surface layer is dark grayish brown silt loam 7 inches thick. The subsoil is 20 inches thick. It is a friable, dark grayish brown silt loam in the upper 12 inches and friable, dark brown silt loam in the lower 8 inches. The underlying material is dark brown gravelly fine sand to a depth of 60 inches. Permeability is moderate in the surface layer and subsoil and moderately rapid to rapid in the underlying material...'

There is no listed soil erodibility coefficient (K-value) for this soil type.

SENSITIVE RESOURCE AREAS:

There are no identified sensitive resource areas associated with this project.

PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES:

Other than the crossing of the Trout river, no other natural or manmade water features exist on the project site. As the project does not involve any substructure work at the stream level, and no additional stone lining of the river banks is proposed, there is limited exposure potential associated with this project.

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 with construction equipment. This measure limits the area that can be disturbed and exposed to erosion.

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. An area from stations 10+80 LT - 11+22 LT will require this technique. These slopes shall be stabilized within 48 hours of reaching final grade or during intermittent phases of construction activity.

Tracking of all exposed slopes, combined with temporary mulching, will also be utilized on a regular basis. Any slopes to be exposed for several days prior to final grading shall be tracked and mulched. The forecast of rainfall events shall also trigger protection of exposed slopes.

Temporary measures to control sediment transport include:

Silt fence will be installed a distance of 5'-0" to 10'-0" from the toe of slopes to 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. The maximum slope length between separate runs of silt fence is 100'-0". Silt fence shall be installed prior to any upslope earthwork.

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 silt fence. Sediments shall be disposed of in an approved area such that it will not be subject to erosion.

Stabilized construction entrances to the project site, staging areas, as well as to waste and borrow areas shall be established. The minimum size of a stabilized construction entrance is 12'-0" x 50'-0". All surface water flowing to or diverted towards a construction entrance shall be piped under the stone. Pipes shall be appropriately sized for the contributing area, however, no pipes smaller than 150mm diameter shall be used. See typical detail on 'Erosion & Sediment Control Plan' sheet for materials and construction method to be utilized when constructing a stabilized entrance.

PERMANENT EROSION CONTROL MEASURES

Several permanent erosion control measures will be utilized:

Stone lining of roadway drain ditches with clean, angular Stone Fill, Type I, will be used to protect slopes from concentrated runoff exiting the highway.

Stone lining of the stream banks with Stone Fill exists at the site and will remain in place.

Grass, or other suitable ground cover will be established outside of the roadway limits where stone lining has not been specified.

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 section 105.23 of the Vermont AOT Standard Specifications for Construction, dated 2001.

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 upon discovery of any damage.

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.

PROJECT NAME: MONTGOMERY

PROJECT NUMBER: BHF 0283(8)S

FILE NAME: /98c316/sc316ecn.xls

PLOT DATE: 5/25/2004

PROJECT LEADER: R. WHITCOMB

DRAWN BY: J. GILMORE

DESIGNED BY: STRUCTURES

CHECKED BY: C. CARLSON

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