DESCRIPTION OF PROJECT

This project involves reconstruction of a bridge over Lesure Brook near its confluence with Roaring Brook, on a class III town highway, in the town of Stamford. Lesure Brook is characterized as a steep, flashy, sinuous watercourse with a streambed of cobbles to large boulders and a drainage area of 4.9 square kilometers. A new single span concrete slab bridge will be constructed on the existing alignment. Traffic will be maintained on a temporary bridge to be located upstream of the existing bridge. The construction limits do not approach any buildings or other structures outside of the project limits. Overhead utility lines will be relocated as indicated on the project plans. Features of concern with respect to erosion control include a steep embankment immediately adjacent to the project, two streams and a roadside ditch involving a pipe replacement. Vegetation in the immediate vicinity of the bridge consists of a mixture of trees and shrubs including Maple, Ash, Yellow Birch, and Fir. The soils within the project area consist of dense mixtures of gravel, sand and silt classified with a high potential for erosion. No 'Threatened & Endangered Species' have been identified within the project limits and there will be no adverse effect to Historic or Archaelogical features on to wetlands, floodplains or agricultural soils.
Total disturbed construction area (excluding waste, borrow & staging): 0.11 ha. (0.3 acre)
Name of receiving waters: Roaring Brook

GENERAL EROSION & SEDIMENT CONTROL GUIDELINES

The Erosion Control Plans are intended as a guide for preventing erosion and controlling sediment. The work outlined in this narrative consists of applying measures throughout the life of the project to control erosion and minimizes the sedimentation of receiving waters. The measures consist of stabilization and structural practices, stormwater controls and other pollution prevention controls.

Coordinate the installation, use, and removal of erosion and sediment control measures with contruction activities to assure economical, effective and continuous erosion and sediment control. Employ temporary stabilization practices in incremental stages as construction proceeds.

Install all erosion and sediment control measures as sequenced on the 'Erosion & Sediment Control Plan' sheet or as directed by the Engineer. Do not modify the type, size or location of any control or measure without approval of the Engineer. Any changes shall be noted on the plans and discussed in the weekly report. Inspect all control measures daily and after each rainfall event. Repair measures daily once damage is discovered.

Preventing initial soil erosion is much more effective than treating eroded sediment. Therefore, stabilize all disturbed areas as soon as is practicable, but no more than 48 hours after construction activity has temporarily or permanently ceased. Except for perimeter control measures which shall be installed prior to the start of any, grubbing or grading activity, install temporary controls in incremental stages as construction proceeds.

Control only sediment-laden runoff generated by the project site. Separate and route clean offsite runoff through the project site using diversion berms diversion channels, culverts and temporary pipes.

Provide stabilized construction entrances to prevent tracking of sediment off the project site.

Do not allow any construction equipment to operate or access on the downslope side of perimeter control measures.

Do not allow any crossing of a flowing stream or disturbance of the existing stream bank by construction equipment, except as authorized by the Engineer.

In general, preserve existing vegetation, trees, and shrubs when possible.

SPECIFIC GUIDELINES

Sequence of Construction

Phase I (Establish Perimeter Controls):

Prior to any construction or staging, construct stabilized construction entrances to staging areas and to the project site to prevent tracking of sediment offsite. Coarse stone over filter fabric should be utilized where an established, stable, entrance does not exist. The stone used for construction entrances shall be monitored for sediment accumulation and replaced as necessary. Stabilized entrances shall also be established and maintained at off site waste or borrow areas. The minimum size of a constructed entrance shall be 3700 x 15 000.

After clearing, but prior to grubbing, and excavation, construct perimeter controls to ensure that disturbed sediment does not leave the site. Outlet sediment traps/basins (where water has been adequately treated) to nearby undisturbed streams or swales.

Use diversion swales or temporary pipes to divert clean offsite runoff through the project site where appropriate. Do not line with plastic those portions of the diversion channels that run along natural streambeds.

During grubbing operations, stone check dam barriers shall be installed at any evident concentrated flow discharge points.

Phase II (Intermediate Controls/Stabilization):

Apply intermediate controls (inlet protection and check dams) before rough grading and culvert installation operations. Obtain the Engineer's approval before installing any controls not specied in the 'Erosion Control Plan' (this provision does not apply to emergency situations where the Engineer may not be immediately available). The Engineer may direct the installation of certain controls in order to forestall or mitigate potential or existing erosion problems or to respond to storm events or damage by construction operations.

After perimeter controls are in place and prior to grading, construct temporary onsite sediment traps where necessary. Grade disturbed areas to drain toward sediment traps where possible.

Clean erosion control measures (sediment traps, silt fence etc.) when ½ full of sediment.

Install inlet protection prior to diverting water through inlets.

Provide double silt fence around stockpiled excavated roadway material. Apply temporary mulch or temporary turf establishment to stockpiles remaining in place longer than 14 days or when directed by the Engineer.

Upon completion of temporary detour fill slopes, seed and mulch slopes to establish vegetation. Maintain silt fence at toe of slopes for added protection from sediments being transported to the Lesure and Roaring Brooks.

Phase III (Final Controls/Stabilization):

After completion of bridge and/or roadway construction, do the following as directed by the Engineer.

Finish grading, riprap and apply permanent turf establishment to channels if required.

Where necessary, replace damaged matting and reapply permanent turf establishment to disturbed areas where vegetation has not established.

Remove silt fence only after all upslope areas are stabilized and vegetation is well established.

Remove all perimeter silt fence and sediment traps only after toe-of-fill ditches have stabilized and vegetation is well established.

Remove all other perimeter controls when directed by the Engineer. Backfill, regrade and apply permanent turf establishment.

See 'Erosion Control Details' sheet for seed mixtures for turf establishment.

ADDITIONAL NOTES

An alternate temporary erosion control plan may be submitted by the contractor for approval by the Resident Engineer.

Special consideration must be given to the first pump-down of a cofferdam as it will contain the greatest volume of water with a high sediment load. The contractor may provide additional sediment traps within the right-of-way, if necessary, to control the rate of draw-down. Additional sediment traps must be approved by the Resident Engineer.

After completion of the substructure, the sediment in the trap shall be removed and used within the project limits or hauled to an approved waste area and the ground restored to its original slopes or graded as shown on the construction drawings.

The contractor will use other temporary or permanent erosion control measures as necessitated by the sequence of construction and as directed by the Resident Engineer. See section 105.23 of the Vermont AOT Standard Specifications for Construction, dated 2001.

Use the Erosion Control Plans in conjunction with Standard Sheets T1M & T2M.

See General Note #21 on sheet 21 and sheet 8 (Plan Sheet) for notes concerning the steep slopes at the edge of the temporary detour.

Metric

SHEET NAME:	EROSION CONTROL NARRATIVE		
PROJECT NAME:	STAMFORD	HIGHWAY NO.:	TH 12
PROJECT NUMBER:	TH3 9411	BRIDGE NO.:	14
		OVER:	LESURE BROOK
FILE NAME:	/str1/94j072/sj072ec.dgn	PLOT DATE:	16-OCT-2003
PROJECT MANAGER:	G.S. ROGERS	DRAWN BY:	STR1
DESIGNED BY:	C. MEUNIER	IPARM NAME:	sj072ec3.1
BRIDGE SHEET NUMBER:		SHEET	14 OF 38