

EROSION AND SEDIMENT CONTROL PLAN NARRATIVE

DESIGNER NARRATIVE

Project Description and Background
 This project is a continuation of two prior projects involving the downtown street lighting program in the Town of Middlebury, VT. One portion included the Cannon Park, Main Street and Park Street areas. This project includes the completion of bases for light fixtures, installation of underground power and placement of historic light fixtures, plus related sidewalk and other surface restoration and reconstruction. We understand there are existing light fixture bases within this project area that do not include fixtures and may have some portions of conduit already installed. This project will extend the street lighting program to the Town Green and Court Square. We understand this project is funded through the Agency of Transportation Enhancement Program, the Vermont Downtown Program Transportation Fund and local funding.

Soil Description
 The native soil type on site is Vergennes Clay (VgB), soil class "D". Previously disturbed areas, such as roadways and sidewalks, will likely have some non-native soil materials such as bank-run and crushed gravel.

Drainage Characteristics
 The project drainage area characteristics are from northeast to southwest. Existing catch basins and storm drains collect and transport stormwater from the drainage area to Otter Creek where it discharges.

Existing Conditions
 The majority of the project area is bituminous concrete pavement in the roadways or concrete sidewalk and curbing within the walkways. The Village Green and Court Square are comprised mainly of vegetative grasses, shrubs and trees. The site has existing roads, buildings or utilities associated with downtown Middlebury. This area is not considered a sensitive resource area. This project is in close proximity to Otter Creek.

Erosion and Sediment Control Devices
 The erosion and sediment control devices shall include, but not be limited to:

1. Silt Fencing
2. Seed and Mulch
3. Grate Inlet Protection

A. Silt fencing shall be used around designated stockpiles to prevent sediment runoff. Silt fencing is a temporary sediment control device that will be utilized during construction. Proposed silt fence locations are indicated on the plans. Details and installation instructions are provided on the detail sheet. A properly installed silt fence will help provide sediment control. Construction review and on-site inspections will ensure proper installation.

B. Disturbed areas with a slope less than 3:1 (3 horizontal to 1 vertical) shall be seeded and mulched. Seeding and mulching encourages vegetative cover on disturbed soils, and shall be done within 48 hours of work completion in that area. Areas that have been disturbed, and where construction is not complete, will be seeded and mulched every seven days. In areas where the seed and mulch do not take root, erosion control blankets shall be utilized.

C. Catch basins which collect stormwater from the project's disturbed areas will receive grate inlet protection. Sandbags filled with clean washed crushed stone shall be used along the perimeter of catch basin grates. The sandbags will reduce water velocities and the amount of sediment entering the catch basin. The Dandy Bag II a Mirafi product or a Silt Sack from SI Geosolutions shall be used to catch silt and sediment that enters the catch basin. These catch basin sediment capture devices shall be inspected and maintained, by the contractor, as per the manufacturer's recommendations.

Final Erosion Control Measures
 All disturbed areas will be restored to preconstruction conditions. The vegetative areas shall have a strong vegetative growth that will provide a permanent erosion control. The remaining areas of disturbed pavement and concrete sidewalk will be restored to their original condition, which will provide permanent erosion control of these areas.

BS:kw
 March 10, 2004

CONTRACTOR NARRATIVE

Earth Disturbing Activities
 This project will include disturbed area resulting from:

1. Soil auger of proposed light pole bases (24" diameter auger)
2. Trench machine to cut a 6" wide trench for electrical conduit
3. Exploratory excavation to locate existing services, which will include an excavator and hand shoveling

In an effort to reduce disturbed areas, Kingsbury Construction Co., Inc. will use a soil auger and trencher. This method will greatly reduce the disturbed area compared to traditional methods of earth excavation. The disturbed areas outlined on plan sheet 4 of 6 are conservative.

Waste, Borrow and Staging Areas
 The waste is to be hauled off site at the end of each workday. Kingsbury Construction owns a pit to dispose of clean construction debris such as removed concrete, asphalt and excess soils. Material will not be stockpiled on site. The Middlebury Police Department, located on Lucius Shaw Lane, will be the staging area for this project. Kingsbury Construction will store construction equipment and project building materials at this facility.

Strategy of ESC Plan
 The reduction of disturbed areas by methods of construction discussed in the above section shall prevent sediment from leaving the construction site. Disturbed areas within the Village Green will be temporarily mulched within 48 hours of activity. Conduit trenches within paved or concrete surfaces shall be covered until which time the surface can be restored. Identified catch basin inlets shall receive sediment control devices, detail on sheet 6, prior to earthwork on an on-site coordinator and a well-developed plan, this project shall be effective in protecting water resources.

Construction Phasing
 The earthwork for this project will take place in two phases. Phase 1 will include work within the Town streets, see plan sheet 4 of 6. Phase 2 includes work inside of the Village Green. The construction schedule identifies the work performed in the streets with an "S1" and in the park with a "P1" after the activity description. Earthwork activities include auger and install light pole bases, trench and install conduit and locate existing utilities. (See construction schedule for date and phase.)

Seeding and Mulching
 Previously grassed disturbed areas within the Village Green shall be seeded and mulched. Location of seeded areas is shown on plan sheet 4 of 6. Seed and mulch mixtures and application rates can be found in the technical specification section 02318 of the contract documents.

On-Site Coordinator
 The on-site coordinator for this project is Bob Burbank of Kingsbury Construction. Bob Burbank (802-279-3412) is qualified for this position based on 10 years of construction experience and has had 20 hours training in erosion control as part of the Air National Guard. Bob has the authority to halt construction if deemed necessary. The on-site coordinator shall fill out the erosion prevention and sediment control weekly plan coordinator will also fill out the storm event monitoring report after each storm event with measures shall be maintained throughout construction and deficiencies shall be rectified.

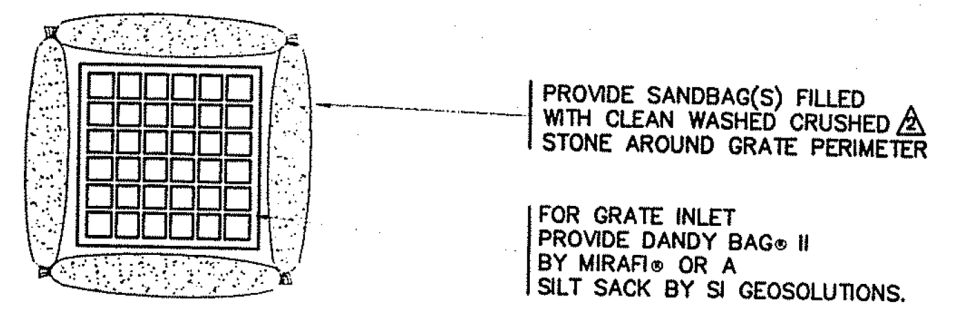
Erosion and Sediment Control Plan Preparer
 Phelps Engineering, Inc. of Middlebury, Vermont has developed the contractor's portion of the erosion and sediment control plan in conjunction with Kingsbury Construction Co., Inc.

Phelps Engineering, Inc. phone (802) 388-7829
 P.O. Box 367 Fax (802) 388-9642
 Middlebury, VT 05753

Contacts
 John Kierman, P.E., Project Manager
 Brandon Streicher, Project Engineer
 BS:kw
 May 06, 2004

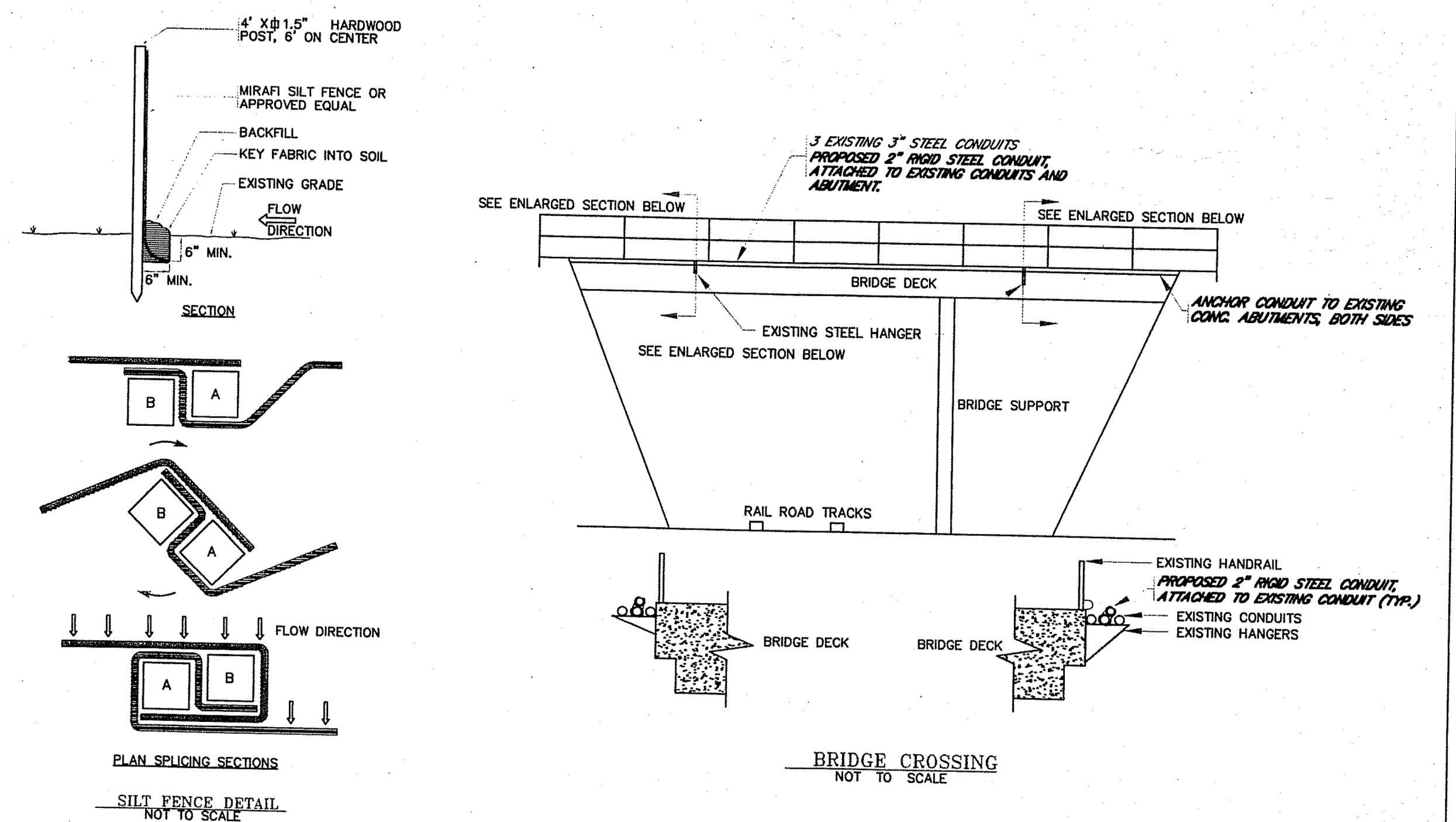
TYPICAL PIPE IN TRENCH DETAIL NOT TO SCALE

NOTE: WHERE ROCK IS ENCOUNTERED PAYMENT LIMIT IS PIPE DIAMETER +2", MIN. LIMIT 3'



CATCH BASIN SEDIMENT CONTROL DETAIL NOT TO SCALE

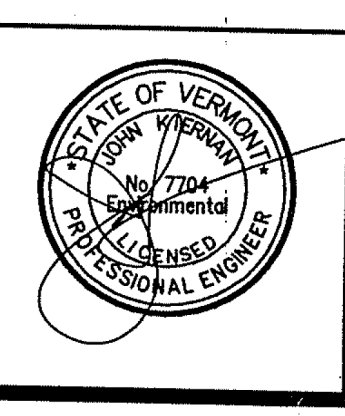
NOTES:
 1. CONTRACTOR SHALL MONITOR SITE CLOSELY DURING WET WEATHER TO ENSURE THIS SEDIMENT CONTROL IS FUNCTIONING AND PROPERTY DAMAGE DOES NOT OCCUR.
 2. THE CATCH BASIN SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AND MAINTAINED AT CATCH BASIN'S DOWNSTREAM OF EARTH DISTURBANCE UNTIL STABILIZATION OCCURS.



RECORD DRAWING

Record drawings have been prepared in part on the basis of information compiled and furnished by others. The engineer will not be responsible for any errors or omissions which have been incorporated into this document as a result. The location of items shown without labeled measurements are to be considered as approximate; do not scale the drawing to determine the actual location. All record drawing information is shown in *italics*.

REVISIONS	DATE	BY
REPLACE SAND WITH CRUSHED STONE	05/06/04	BS
ADD CONTRACTOR SIGNATURE	05/06/04	BS



THE DRAWINGS FOR THIS PROJECT SHALL NOT BE REUSED OR ALTERED IN ANY WAY WITHOUT THE WRITTEN APPROVAL AND AUTHORITY OF THE ENGINEER. ANY REVISIONS SHALL BE MADE BY THE ENGINEER AND NOTED IN BLOCK IN THE REVISION BLOCK.

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TOWN OF MIDDLEBURY
 VILLAGE AREA
 HISTORICAL LIGHTING PLAN
 MIDDLEBURY, VERMONT

DETAILS AND NOTES W/ ESC