

## PROJECT DESCRIPTION

THIS PROJECT IS LOCATED ON TH-41 BEGINNING AT A POINT APPROXIMATELY 1958 METERS WEST OF TH-1 (HUDSON RD.) AND 1383 METERS EAST OF THE WESTMORE-CHARLESTON TOWN LINE. THE PROJECT LENGTH IS 60 METERS. THE PURPOSE OF THE PROJECT IS TO REPLACE AND WIDEN BRIDGE 16 OVER THE MAD BROOK. A ONE-WAY TEMPORARY BRIDGE WILL BE UTILIZED TO CARRY TRAFFIC DURING CONSTRUCTION.

THIS PROJECT INCLUDES THE REMOVAL OF THE OLD BRIDGE AND RAILING, GRADING, DRAINAGE, SUB-BASE, INSTALLATION OF GUARDRAILS, LANDSCAPING, SIGNAGE, AND NECESSARY APPROACH WORK. THE TOTAL DISTURBED AREA EXCLUDING WASTE, BORROW AND STAGING AREAS, IS 0.3253 HECTARES.

## SITE INVENTORY AND ANALYSIS

### OFF SITE DRAINAGE CHARACTERISTICS

THERE CURRENTLY EXISTS A GRASS DRAINAGE DITCH ALONG THE SOUTHWEST SIDE OF TH-41 IN THE AREA OF THE BRIDGE. THE BANKS OF THE BROOK, SLOPE MODERATE TO STEEP, IN THE VICINITY OF THE BRIDGE. THE TERRAIN AROUND THE BRIDGE SLIGHTLY SLOPES FROM THE SOUTHWEST TO THE NORTH EAST OF THE BRIDGE. THE VEGETATION IN THE IMMEDIATE VICINITY OF THE BRIDGE, IS PRIMARILY BRUSH AND TALL GRASS COVER.

### DRAINAGE, WATERWAYS, BODIES OF WATER

THE MAD BROOK FLOWS UNDER THE EXISTING BRIDGE. THERE ARE NO MAJOR DRAINAGE WAYS IN THE PROJECT AREA THAT CARRY RUNOFF FROM THE ROAD TO THE RIVER, AND THERE ARE NO KNOWN EPHEMERAL STREAMS OR PONDS WITHIN THE PROJECT SITE.

### TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

THE TERRAIN IS SLIGHTLY SLOPED FROM THE SOUTHWEST TO THE NORTHEAST. IN THE VICINITY OF THE BROOK; THE SLOPES TO THE BROOK ARE MODERATE TO STEEP IN THE VICINITY OF THE PROJECT SITE. THE SURROUNDING AREA IS A RURAL SITE WITH TH-41 BEING A GRAVEL ROAD AND LOW TRAFFIC VOLUME WITH NO OUTLET. THERE ARE NO BUILDINGS IN THE IMMEDIATE PROJECT AREA. THE EXISTING CABLE, TELEPHONE, AND ELECTRICAL UTILITIES WITHIN THE PROJECT SITE WILL NOT BE MOVED BY THEIR RESPECTIVE OWNERS. THERE ARE NO MUNICIPAL WATER OR SEWER LINES CURRENTLY ON THE EXISTING BRIDGE AND ARE NONE IN THE VICINITY OF THE PROJECT.

### VEGETATION

THE PROJECT SITE CONSISTS OF BRUSH AND VARIED GROWTH FOREST ON THE SOUTHWEST AND NORTHWEST OF THE PROJECT. ON THE SOUTHEAST AND NORTHEAST OF THE PROJECT CONSISTS OF TALL OR CUT GRASS FIELDS WITH BRUSH GROWING ALONG THE MAD BROOK CHANNEL.

IN ORDER TO PLACE THE TEMPORARY BRIDGE ON THE DOWN STREAM SIDE OF THE EXISTING BRIDGE, BRUSH WILL NEED TO BE REMOVED AROUND THE MAD BROOK CHANNEL AND REPLACED WITH SIMILAR PLANTINGS UPON THE DETOUR'S REMOVAL.

### SOILS

THE SOIL TYPE IDENTIFIED FOR THIS PROJECT SITE IS MONADNOCK FINE SANDY LOAM 3% TO 8%. THIS SOIL TYPE IS DESCRIBED AS SHALLOW TO MODERATE IN DEPTH, BEDROCK COULD BE ENCOUNTERED 1.5 TO 2 METERS IN DEPTH. THIS SOIL GROUP HAS A "K" VALUE OF 0.24 THE POTENTIAL FOR HIGH EROSION, WITH A HYDRAULIC SOIL GROUP B.

### OTHER SOILS ON THIS PROJECT ARE AS FOLLOWS:

MONADNOCK FINE SANDY LOAM 8% TO 15%. THIS SOIL TYPE IS DESCRIBED AS SHALLOW TO MODERATE IN DEPTH, BEDROCK COULD BE ENCOUNTERED 1.5 TO 2 METERS IN DEPTH. THIS SOIL GROUP HAS A "K" VALUE OF 0.22 THE POTENTIAL FOR HIGH EROSION, WITH A HYDRAULIC SOIL GROUP C.

BUCKLAND, VERY FINE SANDY LOAM 8% TO 15%. THIS SOIL TYPE IS DESCRIBED AS SHALLOW TO MODERATE IN DEPTH, BEDROCK COULD BE ENCOUNTERED 1.5 TO 2 METERS IN DEPTH. THIS SOIL GROUP HAS A "K" VALUE OF 0.20 THE POTENTIAL FOR HIGH EROSION, WITH A HYDRAULIC SOIL GROUP C.

### SENSITIVE RESOURCE AREAS

THERE ARE NO IDENTIFIED WETLANDS IN THE PROJECT AREA.

NO THREATENED AND ENDANGERED SPECIES, PRIME AGRICULTURAL LAND, OR CRITICAL HABITATS HAVE BEEN IDENTIFIED WITHIN THE PROJECT AREA.

### PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

THE REMOVAL OF THE EXISTING STRUCTURE, CONSTRUCTION AND REMOVAL OF THE TEMPORARY BRIDGE AND CONSTRUCTION OF THE NEW BRIDGE WILL TAKE PLACE ON THE BANKS AND OVER THE MAD BROOK.

### GENERAL EROSION AND 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.

THE INSTALLATION, USE, AND REMOVAL OF EROSION AND SEDIMENT CONTROL MEASURES WITH CONSTRUCTION ACTIVITIES TO ENSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS EROSION AND SEDIMENT CONTROL SHALL BE COORDINATED. TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES AS CONSTRUCTION PROCEEDS SHALL BE EMPLOYED. THE CONTRACTOR WILL USE ADDITIONAL 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.

THE RESIDENT ENGINEER MAY DIRECT THE INSTALLATION OF CERTAIN EROSION CONTROL MEASURES IN ORDER TO AVOID POTENTIAL EROSION PROBLEMS, OR TO RESPOND TO STORM EVENTS OR DAMAGE BY CONSTRUCTION OPERATIONS.

INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN IN THE EROSION CONTROL PLAN OR AS DIRECTED BY THE RESIDENT ENGINEER. DO NOT MODIFY THE TYPE, SIZE OR LOCATION OF ANY CONTROL OR PRACTICE WITHOUT APPROVAL OF THE RESIDENT 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. 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. IN GENERAL, PRESERVE EXISTING GRASSES, SHRUBS, AND TREES 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.

ALL IN-STREAM CONSTRUCTION SHALL TAKE PLACE IN A LOW WATER CHANNEL BETWEEN JUNE 1 AND OCTOBER 1.

## SPECIFIC GUIDELINES

### PERIMETER EROSION CONTROLS

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 PLANS. THE INSTALLATION OF THE PDF WILL BE PERFORMED SUCH THAT NO VEGETATION ON THE OUTSIDE OF THE FENCING IS DISTURBED.

CONSTRUCT PERIMETER CONTROLS TO ENSURE THAT ANY DISTURBED SEDIMENT DOES NOT LEAVE THE SITE AFTER THE CLEARING OF TREES AND SHRUBS, BUT PRIOR TO ANY GRUBBING AND EXCAVATION. SEDIMENT TRAPS/BASINS, WHERE WATER HAS BEEN ADEQUATELY TREATED, MAY BE DIRECTED TO NEARBY UNDISTURBED STREAMS OR SWALES.

INSTALL PERIMETER SILT FENCE IN AREAS OF PROPOSED WORK AS SHOWN ON THE PLANS PRIOR TO GRUBBING AND ADDITIONAL SILT FENCING.

AFTER PERIMETER CONTROLS ARE IN PLACE, AND PRIOR TO GRADING OPERATIONS, CONSTRUCT TEMPORARY ONSITE SEDIMENT TRAPS WHERE NECESSARY. GRADE DISTURBED AREAS TO DRAIN TOWARDS THE SEDIMENT TRAPS WHERE POSSIBLE.

### TEMPORARY DETOUR EROSION CONTROLS

ON PARTIALLY COMPLETED FILL AND CUT SLOPES, ALL EXPOSED SLOPES WILL BE STABILIZED WITH EROSION MATTING AT THE END OF EACH WORKING DAY. ONCE THE DETOUR FILL SLOPES ARE COMPLETED, THE ENTIRE DETOUR, INCLUDING ALL FILL AND CUT SLOPES SHALL BE ENTIRELY COVERED WITH EROSION MATTING AND SEEDED.

## **EROSION CONTROL NARRATIVE**

PROJECT NAME: Charleston  
PROJECT NUMBER: BR0 1449 (22)

FILE NAME: 93J051/STR/sj051erobdr.dgn PLOT DATE: 13-APR-2006  
PROJECT MANAGER: M. EVANS-MONGEON DRAWN BY: G. ROKES  
DESIGNED BY: G. COLGROVE CHECKED BY: K. VIANI  
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