

PROJECT DESCRIPTION

THIS PROJECT INVOLVES RECONSTRUCTION OF BRIDGE 41 CARRYING A CLASS 3 TOWN HIGHWAY OVER THE HOOSIC RIVER, IN A RESIDENTIAL NEIGHBORHOOD IN THE TOWN OF POWNAL. A NEW, TWO-SPAN SUPERSTRUCTURE WILL BE CONSTRUCTED ON THE EXISTING ALIGNMENT AND SUBSTRUCTURES WITH TRAFFIC MAINTAINED ON A TEMPORARY BRIDGE LOCATED DOWNSTREAM OF THE EXISTING BRIDGE.

THE STREAMBED NATURE CONSISTS OF SAND, GRAVEL, AND COBBLES WITH A DRAINAGE AREA OF 218.5 SQUARE MILES. FEATURES OF CONCERN WITH RESPECT TO EROSION CONTROL INCLUDE:

- ML STA 9+71 LT TO 9+82 RT: REMOVE 18" CMP AND ACCGMP
- ML STA 8+75 LT TO SL TH 25 STA 1+66.6 LT: CONSTRUCT STONE LINED DITCH
- ML STA 11+25 RT: 4'X4' RCDI W/ TYPE E GRATE AT INLET WITH 18" X 26' PIPE OPTION W/ STONE FILL, TYPE I AT OUTLET
- SL TH 25 STA 1+67.6 LT TO SL TH 25 STA 1+68.6 RT: 42" X 34' PIPE OPTION (NO CPEP(SL)) WITH CONC. HEADWALL AT INLET; 4' X 6' DI WITH TYPE E GRATE AT OUTLET
- SL TH 25 STA 1+68.6 RT - SL THE 25 STA 1+69.0 RT: 42" X 26' PIPE OPTION (NO CPEP(SL)) W/ 4'X6' RCDI W/ TYPE B GRATE AT OUTLET
- SL TH 26 STA 7+23 RT TO SL TH 26 STA 7+22.2 LT: REMOVE 15" CMP
- SL TH 26 STA 7+28.7 RT TO SL TH 26 STA 7+24.10 LT: 18" X 48' PIPE OPTION
- ML STA 10+50 RT TO ML STA 11+55 RT: CONSTRUCT SPECIAL DITCH
- SL TH 25 STA 1+68.2 LT TO SL TH 25 STA 1+64.4 RT: REMOVE 36" ACCGMP
- SL TH 26 STA 8+55 LT TO SL TH 26 STA 7+19 LT: CONSTRUCT STONE LINED DITCH
- SL TH 26 STA 8+55 RT TO SL TH 26 STA 7+23.2 RT: CONSTRUCT STONE LINED DITCH
- SL TH 25 STA 2+75LT TO SL TH 25 STA 2+14.5 LT: CONSTRUCT STONE LINED DITCH

VEGETATION IN THE IMMEDIATE VICINITY OF THE BRIDGE CONSISTS OF A MIXTURE OF TREES AND SHRUBS INCLUDING RED MAPLES, ASH, WILLOW, SPECKLED ALDER, BLUE BEECH AND RED OSIER DOGWOOD. THE SOILS WITHIN THE PROJECT AREA ARE POORLY DRAINED FLOODPLAIN SOILS.

OVERHEAD UTILITY LINES WILL BE RELOCATED AS INDICATED ON THE PROJECT PLANS.

TOTAL DISTURBED AREA (INCLUDING ON-SITE WASTE, BORROW AND STAGING AREAS): 1.80 ACRES.

NAME OF RECEIVING WATERS: HOOSIC RIVER

SITE INVENTORY AND ANALYSIS

OFF SITE DRAINAGE CHARACTERISTICS

THE BOSTON & MAINE CORPORATION RAIL LINE RUNS THROUGH THE EASTERN PORTION OF THE PROJECT AREA, WITH THE EASTERN SIDE OF THE HOOSIC RIVER LIGHT INDUSTRIAL. THE WESTERN SIDE OF THE HOOSIC RIVER IS RURAL RESIDENTIAL. VEGETATION CONSISTS OF WOODED AREAS AND GRASS WITHIN THE SMALL RESIDENTIAL LAWNS. THE EXISTING TRAVELED WAYS AND PARKING AREAS UTILIZE ROADSIDE DITCHES AND SUBSURFACE PIPES TO CONVEY RUNOFF TO THE HOOSIC RIVER. THE SURROUNDING AREA IS CLASSIFIED AS HILLY TO MOUNTAINOUS.

DRAINAGE, WATERWAYS, BODIES OF WATER

THE HOOSIC RIVER FLOWS UNDER THE EXISTING BRIDGE. THE RIVER IS CHARACTERIZED AS A STRAIGHT, LOCALLY ANABRANCHED, PROBABLY INCISED, AND SEMI-ALLUVIAL, WITH A DRAINAGE AREA OF 218.5 SQUARE MILES AT THE BRIDGE. THERE ARE SEVERAL CULVERTS IN THE PROJECT AREA THAT CARRY RUNOFF FROM ROADSIDE DITCHES TO THE RIVER, BUT THERE ARE NO KNOWN WETLANDS, EPHEMERAL STREAMS OR PONDS WITHIN THE PROJECT SITE.

TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

THE TERRAIN IS HILLY TO MOUNTAINOUS SURROUNDING THE PROJECT SITE. VT RT 346, FURLONG ROAD, DEAN ROAD, SNAKE HILL ROAD, AND WOOD ROAD ARE LOCATED WITHIN THE PROJECT AREA; ALL ARE PAVED. A RAIL BED IS LOCATED WITHIN THE EASTERN SIDE OF THE BRIDGE PROJECT AREA. A PAVED ACCESS ROAD, A PORTION OF WHICH WILL BE REMOVED AND SEEDED, RUNS ALONG THE WESTERN SIDE OF THE RAIL BED. COMMERCIAL DRIVES ARE LOCATED ALONG THE EASTERN APPROACH OF THE PROJECT AREA. THERE ARE PAVED ACCESS DRIVES ALONG THE EASTERN PORTION OF FURLONG ROAD. AN EXISTING GARAGE LOCATED

AT STA. 10+00.00 LT. WILL BE REMOVED. THE UTILITIES WITHIN THE PROJECT CONSIST OF OVERHEAD LINES WHICH WILL BE RELOCATED BY THEIR RESPECTIVE OWNERS.

VEGETATION

VEGETATION IN THE IMMEDIATE VICINITY OF THE BRIDGE CONSISTS OF A MIXTURE OF TREES AND SHRUBS INCLUDING RED MAPLES, ASH, WILLOW, SPECKLED ALDER, BLUE BEECH AND RED OSIER DOGWOOD.

THE RECONSTRUCTION OF ROADSIDE DITCHES WILL NECESSITATE THE REMOVAL OF SOME GRASS AND SHRUBS PRIMARILY ALONG THE EASTERN SIDE OF DEAN ROAD AND THE WESTERN APPROACH OF FURLONG ROAD.

SOILS

SOILS AT THE SITE CONSIST OF THE FOLLOWING UNITS:
COPAKE GRAVELLY FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES. THIS MAP UNIT IS WELL SUITED TO CULTIVATED CROPS, HAY AND PASTURE. WATER EROSION IS A HAZARD. THIS MAP UNIT IS COMPOSED OF COARSE TEXTURED, SANDY AND/OR GRAVELLY GLACIAL OUTWASH SOILS WITH RAPID TO VERY RAPID PERMEABILITY IN THE SUBSTRATUM. THEY ARE VERY DEEP TO BEDROCK AND WELL DRAINED. THE EROSION K FACTOR IS 0.32.

POOTATUCK FINE SANDY LOAM, 0 TO 3 PERCENT SLOPES. THIS MAP UNIT IS WELL SUITED TO CULTIVATED CROPS, HAY AND PASTURE. THE MAJOR MANAGEMENT CONCERN IS A SEASONAL HIGH WATER TABLE. POOTATUCK SOILS FORMED IN LOAMY OVER SANDY ALLUVIAL DEPOSITS ON FLOOD PLAINS THAT ARE FREQUENTLY FLOODED FOR BRIEF DURATION FROM LATE FALL THROUGH EARLY SPRING. THEY ARE VERY DEEP TO BEDROCK AND MODERATELY WELL DRAINED. THESE SOILS HAVE A WATER TABLE AT DEPTHS OF 1.5 TO 2.5 FEET BELOW THE SURFACE FROM LATE FALL THROUGH EARLY SPRING. PERMEABILITY IS MODERATE OR MODERATELY RAPID IN THE SOLUM AND RAPID OR VERY RAPID IN THE SUBSTRATUM. THE EROSION K FACTOR IS 0.20.

HARTLAND SILT LOAM, 0 TO 5 PERCENT SLOPES. THIS MAP UNIT IS WELL SUITED TO CULTIVATED CROPS, HAY AND PASTURE. WATER EROSION IS A HAZARD. THIS MAP UNIT IS COMPOSED OF VERY DEEP SOILS WITH MODERATELY SLOW TO VERY SLOW PERMEABILITY IN THE SUBSTRATUM AND SEASONAL HIGH WATER TABLES AT DEPTHS GREATER THAN TWO FEET. HARTLAND SOILS FORMED IN LOAMY AEOLIAN OR GLACIOLACUSTRINE DEPOSITS ON TERRACES AND GLACIAL LAKE PLAINS. THEY ARE VERY DEEP TO BEDROCK AND WELL DRAINED. PERMEABILITY IS MODERATE IN THE SOLUM AND MODERATELY SLOW OR MODERATE IN THE SUBSTRATUM. THE EROSION K FACTOR IS 0.49 (USDA SOIL CONSERVATION SERVICE, 1992)

SENSITIVE RESOURCE AREAS

NO 'THREATENED & ENDANGERED SPECIES', PRIME AGRICULTURAL LAND, WETLANDS, OR CRITICAL HABITATS HAVE BEEN IDENTIFIED WITHIN THE PROJECT AREA. THE ONLY SENSITIVE AREA WITHIN THE PROJECT SITE IS THE THIRD BRANCH OF THE WHITE RIVER.

RISK EVALUATION

RISK DETERMINATION

THIS PROJECT HAS BEEN DETERMINED TO BE LOW RISK. PLEASE REFER TO THE CONSTRUCTION GENERAL PERMIT 3-9020(2006), NOI #5524-9020 FOR CONDITIONS RELATED TO THIS DETERMINATION.

RISK RE-EVALUATION

SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN A POTENTIAL CHANGE IN THE RISK THEN THE SELECTED CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL PERMITTING WITH VANR VIA FILING OF THE APPROPRIATE NOTICE OF INTENT UNDER THE CONSTRUCTION PERMIT PROCESS.

EROSION PREVENTION AND SEDIMENT CONTROL

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 MINIMIZING SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION CONTROLS.

EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES (PHASING) AS CONSTRUCTION PROCEEDS. ADDITIONAL MEASURES MAY BE NEEDED DUE TO THE PHASING OF PROJECT AND AS DIRECTED BY THE ENGINEER.

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. 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.

(REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR EACH PRACTICE REQUIRED ON THE PROJECT TO INCLUDE BUT NOT LIMITED TO THE FOLLOWING.)

MARK SITE BOUNDARIES

PROJECT DEMARCATION FENCE

LIMIT DISTURBANCE AREA

PHASING PLAN

STABILIZE CONSTRUCTION ENTRANCE

STABILIZED CONSTRUCTION ENTRANCE

INSTALL SILT FENCE

SILT FENCE

SLOW DOWN CHANNELIZED RUNOFF

CHECK DAM

CONSTRUCT PERMANENT CONTROLS

TYPE I AND II STONE FOR SLOPE LINING AND CHANNEL PROTECTION
SEED AND MULCH
DRAINAGE INLETS AND PIPING

STABILIZE EXPOSED SOILS

SEED AND MULCH
EROSION MATTING

WINTER STABILIZATION

VARIOUS MEASURES SPECIFIC TO WINTER (SEE LOW RISK HANDBOOK)

STABILIZE SOIL AT FINAL GRADE

SEED AND MULCH
EROSION MATTING

INSPECT YOUR SITE

INSPECT SITE BASED ON PERMIT AUTHORIZATION REQUIREMENTS

EROSION CONTROL NARRATIVE

PROJECT NAME: POWNAL
PROJECT NUMBER: BRZ 144(I9) C/2

FILE NAME: 87e045/str/se045ec.dgn PLOT DATE: 08-FEB-2008
PROJECT LEADER: R. WHITCOMB DRAWN BY: STR3
DESIGNED BY: C. CARLSON CHECKED BY: C. CARLSON
SHEET 27 OF 108