

DESCRIPTION OF PROJECT

THIS PROJECT INVOLVES RECONSTRUCTION OF BRIDGE #21 OVER THE FIRST BRANCH OF THE WHITE RIVER ON VERMONT ROUTE #14 IN THE TOWN OF ROYALTON. THE FIRST BRANCH OF THE WHITE RIVER IS CHARACTERIZED AS A SMALL (BUT FLASHY) RIVER IN MOUNTAINOUS TERRAIN WITH MEDIUM RELIEF WITH A STREAMBED OF SHALLOW SANDS AND SILTS WITH SOME GRAVEL OVER BEDROCK. IT HAS A DRAINAGE AREA OF 103 SQUARE MILES.

FEATURES OF CONCERN WITH RESPECT TO EROSION CONTROL INCLUDE: STEEP EMBANKMENTS IMMEDIATELY ADJACENT TO THE PROJECT; THE CONFLUENCE OF THE FIRST BRANCH AND THE WHITE RIVER IS APPROXIMATELY 50' FROM THE DOWNSTREAM FACE OF THE PROPOSED STRUCTURE; A NEW SINGLE SPAN BRIDGE WILL BE CONSTRUCTED ON EXISTING ALIGNMENT; TRAFFIC WILL BE MAINTAINED ON A TWO-WAY TEMPORARY BRIDGE TO BE LOCATED DOWNSTREAM OF THE EXISTING BRIDGE. TOTAL ROADWAY APPROACH WORK, INCLUDING BOTH APPROACHES, IS APPROXIMATELY 800 FEET.

THE CONSTRUCTION LIMITS ARE WITHIN 10' OF TWO BUILDINGS AND CALL FOR THE REMOVAL OF TWO CONCRETE FOUNDATIONS / SLABS WITHIN THE PROJECT LIMITS. THE PROJECT DOES NOT IMPACT ANY WETLANDS. NO THREATENED OR ENDANGERED SPECIES, OR HISTORIC RESOURCES HAVE BEEN IDENTIFIED IN THE PROJECT AREA. THE SITE IS LOCATED JUST NORTH OF THE INTERSECTIONS IF VERMONT ROUTES 110 AND 14.

IT IS ANTICIPATED THAT THE PROJECT WILL LAST ONE CONSTRUCTION SEASON.

TOTAL DISTURBED AREA (EXCLUDING WASTE, BORROW AND STAGING AREAS): 1.70 AC.

SITE INVENTORY AND ANALYSIS

OFF SITE DRAINAGE CHARACTERISTICS

THE PROPERTY SURROUNDING THE PROJECT SITE CONSISTS OF WELL ESTABLISHED VEGETATION, WITH MODERATE TO STEEP SLOPES OF LAWN, VARIOUS GRASSES, BRUSH, DECIDUOUS AND CONIFEROUS TREES. THE TOPOGRAPHY RUNS GENERALLY UP TO THE EAST AND DOWN TO THE WEST. RUNOFF GENERALLY LEAVES THE SITE AS OVERLAND FLOW. THE DRAINAGE WAY IN THE NORTHEAST QUADRANT IS WELL DEFINED AND ESTABLISHED. WATER ENTERING THE SITE WILL BE PRIMARILY LIMITED TO THAT WHICH IS CONVEYED ALONG ROADWAY DITCHES AT GRADES BETWEEN 2 % TO 6% ALONG THE EAST SIDE OF THE PROJECT AND IS CONVEYED ALONG ROADWAY DITCHES.

DRAINAGE, WATERWAYS, BODIES OF WATER

THE FIRST BRANCH OF THE WHITE RIVER IS CHARACTERIZED AS A SMALL (BUT FLASHY) RIVER IN MOUNTAINOUS TERRAIN WITH MEDIUM RELIEF WITH A STREAMBED OF SHALLOW SANDS AND SILTS WITH SOME GRAVEL OVER BEDROCK. IT HAS A DRAINAGE AREA OF 103 SQUARE MILES. THE CONFLUENCE OF THE FIRST BRANCH AND THE WHITE RIVER IS APPROXIMATELY 50' FROM THE DOWNSTREAM FACE OF THE PROPOSED STRUCTURE. NO WETLANDS WERE IDENTIFIED WITHIN THE PROJECT AREA.

TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

SOUTHEAST QUADRANT: CHARACTERIZED BY THREE RESIDENCES AND ASSOCIATED LAWN. THE GRADE GENERALLY SLOPES UP FROM THE ROADWAY AT A MODERATE SLOPE.

SOUTHWEST QUADRANT: CHARACTERIZED BY GRASS AND BRUSH SLOPING DOWN TO THE WHITE RIVER.

NORTHEAST QUADRANT: REV. 128+50 ~ 129+75 IS CHARACTERIZED BY GRASS AND BRUSH BISECTED BY A PAVED DRIVE LEADING TO AN AUTOMOBILE DEALERSHIP WHICH IS SET WELL BACK FROM ROUTE 14. THE TERRAIN BETWEEN REV. 129+75 ~ 132+50 SLOPES STEEPLY UPWARD AND IS VEGETATED WITH A PINE FOREST. A CEMETERY EXISTS AT THE TOP OF THE SLOPE.

NORTHWEST QUADRANT: THE LAND SLOPES DOWN AWAY FROM THE ROADWAY AT MODERATE TO STEEP SLOPES TOWARD A LAWN, A MOBILE HOME AND EVENTUALLY TO THE WHITE RIVER. TWO FOUNDATIONS / CONCRETE SLABS WILL BE REMOVED AS PART OF THE PROJECT. BETWEEN REV. 130+50 ~ 132+50 THE VEGETATION TRANSITIONS FROM LAWN TO BRUSH AND FIELD.

OVERHEAD UTILITIES FOLLOW ALONG ROUTE 14, ACROSS THE NORTHWEST QUADRANT AND THE WHITE RIVER. THE UTILITY POLES WILL NEED TO BE RELOCATED PRIOR TO THE CONSTRUCTION OF THE PROJECT.

VEGETATION

THE VEGETATION SURROUNDING THE PROJECT SITE CONSISTS OF A COMBINATION OF LAWN, GRASS, FIELD, BRUSH AND PINE FORESTED AREAS. THERE ARE NO AGRICULTURAL FIELDS NEAR THE PROJECT LIMITS. IMPACTS TO VEGETATION WILL BE LIMITED TO THAT WHICH ARE EFFECTED BY THE CONSTRUCTION OF THE NEW BRIDGE ON THE EXISTING ALIGNMENT AND CONSTRUCTION OF THE DETOUR. FOLLOWING THE CONSTRUCTION OF THE NEW BRIDGE, THE SLOPES WILL BE STABILIZED WITH SEED, EROSION MATTING AND STONE FILL (WITH AND WITHOUT GRUBBING MATERIAL). VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

SOILS

A DETAILED DESCRIPTION OF THE SOIL TYPES EXPECTED TO BE ENCOUNTERED IN THE PROJECT AREA IS INCLUDED IN THE PROJECT PLAN SHEET TITLED "EXISTING CONDITIONS SITE PLAN".

SOIL NAME	DEPTH	ERODIBILITY
URBAN LAND-WINDSOR-AGAWAM	0"-60"	NOT HIGHLY ERODIBLE
PODUNK FINE SANDY LOAM	0"-60"	NOT HIGHLY ERODIBLE
AGAWAM FINE SANDY LOAM	0"-60"	NOT HIGHLY ERODIBLE

MUCH OF THE PROJECT IS CONSIDERED TO BE "IN A FILL TYPICAL." MEANING THE ROADWAY IS HIGHER THAN THE SURROUNDING MEAN GROUND ELEVATION. DUE TO ENGINEERING REQUIREMENTS FOR SELECTIVE FILL MATERIAL DEPTHS, MUCH OF THIS FILL MATERIAL WILL NEED TO BE BROUGHT IN FROM AN OUTSIDE SOURCE. SINCE WE DO NOT KNOW WHERE THIS SOURCE PIT WILL BE, WE CANNOT PROVIDE ITS ERODABILITY PROPERTIES.

SENSITIVE RESOURCE AREAS

NO "THREATENED & ENDANGERED SPECIES", HISTORIC, ARCHAEOLOGICAL OR WETLAND HAVE BEEN IDENTIFIED WITHIN THE PROJECT LIMITS. THE FIRST BRANCH OF THE WHITE RIVER AND THE WHITE RIVER ARE THE ONLY IDENTIFIED RESOURCES.

PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

DISTURBANCE OF SOILS NEAR NATURAL OR MAN-MADE WATERWAYS CONSISTS OF THAT WHICH IS NECESSARY TO CONSTRUCT TWO NEW CONCRETE ABUTMENTS AND A TEMPORARY DETOUR. STABILIZATION OF DISTURBANCES TO STREAM BANKS WILL BE ACCOMPLISHED WITH STONE FILL. GRUBBING MATERIAL OR EARTH FILL WILL BE PLACED ON MOST STONE FILL SLOPES TO HELP REESTABLISH VEGETATION ON THE SLOPES.

DESCRIPTION OF SLOPES

THE EXISTING AND PROPOSED SHAPE OF THE PROJECT AREA CAN BE SEEN BY LOOKING AT THE EXISTING AND FINAL CONDITIONS SITE PLANS WHERE THE SLOPE INDICATORS ARE SHOWN. THE ARROWS ASSOCIATED WITH THE SLOPE INDICATORS POINT DOWN THE SLOPE.

EXISTING SLOPES

THE PROJECT IS LOCATED ON AN AREA WITH VARIABLE SLOPES. GENERALLY SPEAKING, THE PROJECT IMPACTS SLOPES RANGING FROM FLAT TO STEEP CUT TO FILL SLOPES.

SOUTHEAST QUADRANT: THE GRADE GENERALLY SLOPES GRADUALLY UP FROM THE ROADWAY.

SOUTHWEST QUADRANT: SLOPES DOWN TO THE WHITE RIVER, STEEPLY IMMEDIATELY ADJACENT TO THE RIVER.

NORTHEAST QUADRANT: REV. 128+50 ~ 129+75 IS CHARACTERIZED BY A GENTLY UPWARD SLOPING AREA BISECTED BY A PAVED DRIVE LEADING TO AN AUTOMOBILE DEALERSHIP WHICH IS SET WELL BACK FROM ROUTE 14. THE TERRAIN BETWEEN REV. 129+75 ~ 132+50 SLOPES STEEPLY UPWARD. THERE IS A SMALL DITCH AT THE BASE OF THE SLOPE.

NORTHWEST QUADRANT: THE LAND SLOPES DOWN AWAY FROM THE ROADWAY AT MODERATE TO STEEP SLOPES TOWARD A LAWN AND EVENTUALLY TO THE WHITE RIVER. THE SLOPE BECOMES STEEP IMMEDIATELY ADJACENT TO THE WHITE RIVER.

PROPOSED SLOPES

THE GRADE OF ROUTE 14 WILL BE RAISED APPROXIMATELY TWO FEET IN THE VICINITY OF THE BRIDGE. A SIDEWALK WILL BE CONSTRUCTED ALONG THE WEST SIDE FROM THE BEGINNING OF THE PROJECT TO A POINT JUST NORTH OF THE BRIDGE. AS A RESULT, THE PROPOSED SLOPES WILL BE STEEPER OR SPILL BEYOND THE TOE OF THE EXISTING SLOPES.

SOUTHEAST QUADRANT: THE SLOPES IN THIS AREA WILL BE SIMILAR TO THOSE THAT EXIST TODAY. A SIDEWALK WILL BE RECONSTRUCTED FROM THE BEGINNING OF THE PROJECT TO REV. 125+50. FILL SLOPES WILL BE CONSTRUCTED TO REV. 126+75. A SHALLOW DITCH WILL BE CONSTRUCTED WITH A DROP INLET WILL BE CONSTRUCTED TO REV. 127+25. A SHORT RUN OF ALUMINUM RAIL WILL BE PLACED PRIOR TO THE BRIDGE.

SOUTHWEST QUADRANT: THE EXISTING SIDEWALK WILL BE EXTENDED ACROSS THE BRIDGE. 1-4 SLOPES WILL BE CONSTRUCTED TO REV. 126+00. TO REV. 127+00, THE SLOPES WILL TRANSITION TO 1-2 WITH STONE FILL, TYPE IV TO PROTECT AGAINST EROSION FROM THE WHITE RIVER AND WILL REQUIRE GUARDRAIL. GUARDRAIL WILL BE PLACED FROM REV. 125+75 TO THE BRIDGE.

NORTHEAST QUADRANT: THE SLOPES IN THIS AREA ARE GENERALLY FLAT AND RESEMBLE THOSE THAT EXIST TODAY. NO SIGNIFICANT FILL OR CUT IS PROPOSED. THE PROPOSED DITCH WILL BE LINED WITH STONE FILL, TYPE I TO GUARD AGAINST EROSION.

NORTHWEST QUADRANT: 1-2 SLOPES WITH STONE FILL, TO PROTECT AGAINST EROSION FROM THE WHITE RIVER, ARE PROPOSED FROM THE BRIDGE TO REV. 129+50. GUARDRAIL WILL BE PLACED TO REV. 131+70. THE SLOPES WILL TRANSITION FROM 1-2 TO 1-4 BETWEEN REV. 129+50 ~ 130+50. 1-4 SLOPES ARE MAINTAINED TO THE END OF THE PROJECT. THE EXISTING DRIVEWAYS AT REV. 129+50 AND 130+50 ARE PROPOSED TO BE CLOSED DUE TO THE INCREASE IN ROADWAY GRADE, STEEP SLOPES AND THE NEED TO PLACE GUARDRAIL. A NEW DRIVE IS PROPOSED AT REV. 132+00. THE DRIVE WRAPS AROUND TO THE SOUTH TO CONNECT BACK TO THE PROPERTY. THE SLOPES ALONG THE CHANNEL BANKS ARE LINED WITH HEAVY STONE AND ARE AT 1-1.5 (67 %).

GENERAL EROSION & SEDIMENT CONTROL GUIDELINES

THE EROSION CONTROL PLANS ARE INTENDED AS A GUIDE FOR PREVENTING SOIL EROSION AND CONTROLLING SEDIMENT. THE WORK OUTLINED IN THIS NARRATIVE CONSISTS OF APPLYING MEASURES THROUGHOUT THE DURATION OF THE PROJECT TO CONTROL EROSION AND MINIMIZES THE SEDIMENTATION OF THE RECEIVING WATERS.

AN ALTERNATE TEMPORARY EROSION CONTROL PLAN MAY BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BY THE AGENCY OF TRANSPORTATION.

THE CONTRACTOR WILL USE OTHER TEMPORARY OR PERMANENT EROSION CONTROL DEVICES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION AND AS DIRECTED BY THE RESIDENT ENGINEER. SEE SECTION 105.23 OF THE 2001 VERMONT STANDARD SPECIFICATIONS FOR CONSTRUCTION.

THE CONTRACTOR SHALL COORDINATE THE INSTALLATION, USE, AND REMOVAL OF EROSION PREVENTION AND SEDIMENT CONTROL MEASURES WITH CONSTRUCTION ACTIVITIES TO ASSURE ECONOMICAL, EFFECTIVE, AND CONTINUOUS EROSION PREVENTION AND SEDIMENT CONTROL. THE CONTRACTOR SHALL EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES AS CONSTRUCTION ACTIVITIES PROCEED.

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

THE CONTRACTOR SHALL INSTALL EROSION PREVENTION AND SEDIMENT CONTROL MEASURES AS SEQUENCED ON THE EROSION CONTROL PLAN SHEETS, OR AS DIRECTED BY THE RESIDENT ENGINEER. THE TYPE, SIZE, AND LOCATION OF ANY EROSION CONTROL DEVICE SHALL NOT BE CHANGED UNLESS PRIOR APPROVAL IS OBTAINED FROM THE RESIDENT ENGINEER. ANY APPROVED CHANGES SHALL BE NOTED ON THE EROSION CONTROL PLANS AND DISCUSSED IN THE WEEKLY REPORT. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES DAILY AND AFTER EACH RAINFALL EVENT. THE CONTRACTOR SHALL REPAIR ALL DAMAGED EROSION CONTROL MEASURES IMMEDIATELY. ALL EROSION CONTROL MEASURES THAT TRAP SEDIMENT, SUCH AS SEDIMENT BASINS AND SILT FENCES, SHALL BE CLEANED OUT WHEN THEIR CAPACITY REACHES 50 %.

THE RESIDENT ENGINEER'S APPROVAL SHOULD BE OBTAINED PRIOR TO INSTALLING ANY EROSION CONTROLS NOT SPECIFIED IN THE EROSION CONTROL PLANS. HOWEVER, IN EMERGENCY SITUATIONS WHERE THE RESIDENT ENGINEER IN NOT IMMEDIATELY AVAILABLE, THE CONTRACTOR SHOULD REPAIR OR INSTALL THE EROSION CONTROLS AS HE/SHE DEEMS NECESSARY AND REPORT THE INCIDENT TO THE RESIDENT ENGINEER AS SOON AS PRACTICAL.

THE CONTRACTOR SHALL CONTROL ALL SEDIMENT-LADEN RUNOFF GENERATED WITHIN THE PROJECT SITE. CLEAN RUNOFF FORM OUTSIDE THE PROJECT SITE SHALL BE ROUTED THROUGH THE PROJECT SITE USING DIVERSION BERMS, DIVERSION CHANNELS, AND TEMPORARY OR PERMANENT CULVERTS.

CONSTRUCTION EQUIPMENT WILL NOT BE ALLOWED TO OPERATE ON THE DOWNHILL SIDE OF THE PERIMETER CONTROL MEASURES.

CONSTRUCTION EQUIPMENT WILL NOT BE ALLOWED TO CROSS A FLOWING STREAM, OR DISTURB THE EXISTING STREAM BANKS, UNLESS AUTHORIZED BY THE RESIDENT ENGINEER.

ALL IN-STREAM CONSTRUCTION MUST TAKE PLACE IN A DRY CHANNEL BETWEEN JUNE 1ST AND OCTOBER 1ST.

IN GENERAL, PRESERVE EXISTING VEGETATION, SHRUBS, AND TREES WHENEVER POSSIBLE.

SILT FENCE SHALL BE PLACED AT THE TOES OF ALL FILL SLOPES AND SHALL BE CONSTRUCTED SO THAT FLOWS CANNOT BYPASS THE ENDS. AREAS DIRECTLY BELOW (DOWNHILL) OF THE SILT FENCES MUST BE UN-DISTURBED AND VEGETATED.

STRAW MATTING WILL BE INSTALLED AS SOON AS PRACTICAL ON ALL TEMPORARY DETOUR CUT & FILL SLOPES AND PERMANENT CUT & FILL SLOPES.

AS CONSTRUCTION PROGRESSES, IMPLEMENTATION OF ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY BY THE ON-SITE COORDINATOR AND AS APPROVED BY THE RESIDENT ENGINEER.

THE PROJECT COMPLETION DATE HAS BEEN SET FOR OCTOBER 15TH TO ENSURE ALL FINAL EROSION CONTROL MEASURES FOR THE ESTABLISHMENT OF PERMANENT VEGETATION WILL TAKE PLACE DURING THE GROWING SEASON. THEREFORE, WINTER STABILIZATION METHODS WILL NOT BE SHOWN ON THE PLANS OR DESCRIBED IN THE NARRATIVE.

INFORMATION REQUIRED BY THE CONTRACTOR

MUCH OF THE INFORMATION CONTROL INFORMATION SHOWN ON THE EROSION CONTROL PLANS AND DESCRIBED IN THIS NARRATIVE IS GENERAL IN NATURE. MORE SITE SPECIFIC INFORMATION IS NOT YET AVAILABLE AS A CONTRACTOR HAS NOT YET BEEN SELECTED. THE FOLLOWING LIST OUTLINES SOME OF THE SPECIFIC INFORMATION THAT IS NOT INCLUDED IN THE EROSION CONTROL PLANS AND DESCRIBED IN THIS NARRATIVE;

LOCATION OF WASTE, BORROW AND STAGING AREAS, MATERIAL STOCKPILES, REFUELING AND MAINTENANCE AREAS AND CONCRETE TRUCK WASHOUT LOCATION (ATTACH MAP IF NECESSARY).

DISCUSSION AND ADDITIONAL DETAILS NEEDED FOR PROTECTION AND STABILIZATION OF ABOVE.

PROPOSED MODIFICATIONS AS / IF REQUIRED TO THESE EROSION PREVENTION AND SEDIMENT CONTROL PLANS.

PROPOSED DATES ASSOCIATED WITH JOB MILESTONES AS INDICATED ON THE SEQUENCE CONSISTENT WITH PROJECT CPM SCHEDULE.

NARRATIVE (RE: TEMPORARY SEEDING AND MULCHING / STABILIZATION)

NAME, ADDRESS, PHONE NUMBER AND BASIC QUALIFICATIONS OF "ON-SITE COORDINATOR".

<h1>EROSION CONTROL NARRATIVE</h1>	SURVEYED BY	N/A	DATE	N/A
	DRAWN BY	TUS	DATE	6/96
	SQUAD LEADER	JAW		
	DESIGN FILE NO.	91298		
	IPARM FILE		DATE PLOTTED	
	PROJ. NAME	ROYALTON		
	PROJ. NO.	BRS 0147(5)S		
	SHEET	28B	OF	76 SHEETS