

EROSION CONTROL NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REPLACEMENT OF THE BRIDGE ON STATE ROUTE 121 SPANNING OVER THE BODY OF WATER KNOWN AS SAXTONS RIVER IN THE TOWN OF ROCKINGHAM. WORK WILL INVOLVE REPLACEMENT OF BOTH ABUTMENTS AND THE BRIDGE SUPERSTRUCTURE ON THE EXISTING ALIGNMENT. EXISTING ABUTMENTS WILL BE PARTIALLY REMOVED TO THE LIMITS SHOWN ON THE EARTHWORK TYPICAL SECTION SHEET. ALSO INCLUDED WILL BE RELATED CHANNEL AND APPROACH WORK. THE LENGTH OF THE PROJECT IS APPROXIMATELY 243 FEET ALONG VT ROUTE 121. THE SITE IS LOCATED, BASED ON NAD 83/92 AT 233073.66 N, 1639680.82 E (POINT HVCTRL #2- SEE TIE SHEET).

NOTE: AREA OF DISTURBANCE INCLUDES LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA AS SHOWN ON THE ATTACHED EPSC PLAN. THE AREA OF DISTURBANCE DOES NOT INCLUDE WASTE, BORROW AND STAGING AREAS. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING TO VTRANS ENVIRONMENTAL SECTION FOR APPROVAL, THE LOCATION OF THE WASTE, BORROW AND STAGING AREAS, AS WELL AS THE MATERIAL STOCKPILE, REFUELING AND MAINTENANCE AREAS. A MAP SHALL BE ATTACHED IF NECESSARY.

TOTAL AREA OF DISTURBANCE IS APPROXIMATELY 17,067 SF (0.39 ACRES).

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

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY, EXISTING ROADS, UTILITIES

THE TOPOGRAPHY SURROUNDING THE PROJECT SITE CONSISTS MOSTLY OF LIGHTLY WOODED AREAS AND RESIDENTIAL PROPERTIES WITH WELL ESTABLISHED LAWNS. PORTIONS NEAR THE WATER BODY INCLUDE LIGHTLY WOODED AREAS WITH MODERATE SLOPES. THE GENERAL TOPOGRAPHY OF THE AREA SLOPES FROM THE SOUTH TO THE NORTH. ALL ROAD SURFACES IN THE PROJECT AREA ARE BITUMINOUS CONCRETE PAVEMENT. THERE IS ONE COMMERCIAL BUILDING AND ONE RESIDENTIAL BUILDING ON THE SOUTH AND NORTH SIDES OF THE EAST APPROACH ROADWAY RESPECTIVELY. THERE IS ONE RESIDENTIAL BUILDING ON EACH SIDE OF THE WEST APPROACH ROADWAY.

THERE ARE OVERHEAD ELECTRICAL AND TELEPHONE LINES ON THE EAST AND WEST ENDS OF THE PROJECT THAT SPAN THE FULL LENGTH OF THE BRIDGE ON THE NORTH SIDE. OVERHEAD LINES ALSO CROSS ROUTE 121 ON THE EAST AND WEST ENDS OF THE PROJECT.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

THE BRIDGE SPANS THE BODY OF WATER KNOWN AS SAXTONS RIVER. THE STREAM IS CHARACTERIZED AS STRAIGHT TO SINUOUS, ALLUVIAL, PROBABLY INCISED AND STABLE WITH A GRAVEL AND COBBLE STREAMBED. THERE IS ALSO AN UNNAMED STREAM NEAR THE NORTHWEST CORNER OF THE BRIDGE.

THE FOLLOWING DESCRIPTIONS ARE FOR THE EXISTING SITE PLANS: SURFACE DRAINAGE FROM STATE ROUTE 121 FLOWS DOWN EXISTING VEGETATED AND WOODED SIDESLOPES AND INTO SAXTONS RIVER.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS MOSTLY OF LIGHTLY WOODED AREAS. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS REQUIRED FOR REPLACEMENT OF THE EXISTING BRIDGE. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES OR REPLACED WITH STONE FILL.

1.2.4 SOILS

SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE FOR THE COUNTY OF WINDHAM, VERMONT. SOILS ON THE PROJECT SITE ARE:

THROUGHOUT THE PROJECT THE SOIL TYPE IS QUONSET AND WARWICK, 2 TO 8 PERCENT SLOPE, "K FACTOR" = 0.16. THE EROSION HAZARD IS "LOW" DUE TO ITS K FACTOR.

1.2.4 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: SAXTONS RIVER IS DEFINED AS ESSENTIAL FISH HABITAT.
HISTORICAL OR ARCHAEOLOGICAL AREAS: THERE ARE SEVERAL AREAS OF ARCHAEOLOGICAL SIGNIFICANCE ON BOTH THE EAST AND WEST ENDS OF THE PROJECT. THE WEST BANK OF THE RIVER IS A NATIONAL REGISTERED LANDMARK DESIGNATED HISTORIC VILLAGE DISTRICT.
PRIME AGRICULTURE LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: SAXTONS RIVER AND UNNAMED BROOK
WETLANDS: NO

1.3 RISK EVALUATION

THE PROJECT DOES NOT FALL UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES FOR LOW RISK PROJECTS. ANY MODIFICATIONS TO THE PROJECT THAT INCREASE THE RISK TO ENVIRONMENTAL RESOURCES SHALL BE EVALUATED IN ACCORDANCE WITH THE PERMIT REQUIREMENTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSISTS OF APPLYING MEASURES THROUGHOUT THE LIFE OF THE PROJECT TO AVOID SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION PRACTICES. THEY HAVE BEEN PROPOSED BY THE DESIGNER AS A BASIS FOR PROTECTING RESOURCES AND WILL NEED TO BE BUILT UPON BASED ON THE SPECIFIC MEANS AND METHODS OF THE CONTRACTOR. REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR SPECIFIC GUIDANCE AND CONSTRUCTION DETAILING.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

1.4.1 MARK SITE BOUNDARIES

SITE BOUNDARIES AND AREAS CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED.

THE SITE BOUNDARIES SHALL BE PHYSICALLY MARKED. THE CONTRACTOR MAY CHOOSE PROJECT DEMARCATION FENCING (PDF) AND/OR BARRIER FENCE TO MARK THE SITE BOUNDARIES.

1.4.2 LIMIT DISTURBANCE AREA

PREVENTING INITIAL SOIL EROSION BY MINIMIZING THE EXPOSED AREA IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. EARTH DISTURBANCE CAN BE MINIMIZED THROUGH CONSTRUCTION PHASING BY ONLY OPENING UP EARTH AS NECESSARY. THIS CAN LIMIT THE AREA THAT WILL BE DISTURBED AND EXPOSED TO EROSION. EMPLOY TEMPORARY CONSTRUCTION STABILIZATION PRACTICES IN INCREMENTAL STAGES AS PHASES CHANGE. FOR PROJECTS WHICH FALL UNDER THE CONSTRUCTION GENERAL PERMIT, ONLY THE ACREAGE LISTED ON THE PERMIT AUTHORIZATION MAY BE EXPOSED AT ANY GIVEN TIME.

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.

1.4.3 SITE ENTRANCE/EXIT STABILIZATION

TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTOR'S PROGRESS SCHEDULE. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED ANYWHERE EQUIPMENT WILL BE GOING FROM AREAS OF EXPOSED SOILS TO PAVED SURFACES.

1.4.4 INSTALL SEDIMENT BARRIERS

SEDIMENT BARRIERS SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHOULD BE INSTALLED PRIOR TO ANY UPSLOPE WORK.

SILT FENCE WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN OR AS NECESSARY.

1.4.5 DIVERT UPLAND RUNOFF

DIVERSIONARY MEASURES SHALL BE USED TO INTERCEPT RUNOFF FROM ABOVE THE CONSTRUCTION AND DIRECT IT AROUND THE DISTURBED AREA SO THAT CLEAN WATER DOES NOT BECOME MUDDIED WHILE TRAVELING OVER EXPOSED SOILS ON THE CONSTRUCTION SITE.

DIVERSION OF UPLAND RUNOFF NOT ANTICIPATED.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

CHECK STRUCTURES SHALL BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSION POTENTIAL, OF CONCENTRATED FLOW IN CHANNELS.

THE USE OF STONE CHECK DAMS IS NOT ANTICIPATED FOR THIS PROJECT.

1.4.7 CONSTRUCT PERMANENT CONTROLS

PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLANS.

SEED AND MULCH WILL BE USED AS PERMANENT CONTROLS TO STABILIZE EXPOSED SOIL. STONE FILL WILL BE USED TO STABILIZE THE STREAMBED SLOPES AROUND ABUTMENTS.

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE.

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS. BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3.

THE FORECAST OF RAINFALL EVENTS SHALL TRIGGER IMMEDIATE PROTECTION OF EXPOSED SOILS.

1.4.9 WINTER STABILIZATION

VARIOUS MEASURES SPECIFIC TO WINTER MAY BE NECESSARY SHOULD THE PROJECT EXTEND INTO WINTER (OCTOBER 15 THROUGH APRIL 15). REFER TO THE LOW RISK SITE HANDBOOK FOR GUIDANCE.

1.4.10 STABILIZE SOIL AT FINAL GRADE

EXPOSED SOIL MUST BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

SEED, MULCH, FERTILIZER, AND LIME SHALL BE USED TO ESTABLISH PERMANENT VEGETATION. FOR SLOPES STEEPER THAN 1:3, BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED INSTEAD OF MULCH.

1.4.11 DE-WATERING ACTIVITIES

DISCHARGE FROM DEWATERING ACTIVITIES THAT FLOWS OFF OF THE CONSTRUCTION SITE MUST NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE VERMONT WATER QUALITY STANDARDS.

TREATMENT OF DEWATERING COFFERDAM IS NOT ANTICIPATED.

1.4.12 INSPECT YOUR SITE

INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS OR CONSTRUCTION GENERAL PERMIT AUTHORIZATION STIPULATIONS.

1.5 SEQUENCE AND STAGING

THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR USING THE GUIDANCE OUTLINED IN THE VTRANS EPSC PLAN CONTRACTOR CHECKLIST.

1.5.2 OFF-SITE ACTIVITIES

IN ADDITION TO THE CONTRACTOR CHECKLIST ANY ACTIVITIES OUTSIDE THE CONSTRUCTION LIMITS SHALL FOLLOW SUBSECTIONS 105.25- 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

TYLIN INTERNATIONAL	PROJECT NAME: ROCKINGHAM	FILE NAME: z10J072bdr_epscn.dgn	PLOT DATE: 8/26/2014
	PROJECT NUMBER: BRF 0126(12)	PROJECT LEADER: R. HEBERT	DRAWN BY: S. AMOROSO
		DESIGNED BY: S. AMOROSO	CHECKED BY: D. BRYANT
		EPSC NARRATIVE	SHEET 52 OF 69