

# 1. NARRATIVE

## 1.1 PROJECT DESCRIPTION

NH 2108(I)S IS LOCATED IN THE TOWN OF WALLINGFORD, RUTLAND COUNTY, VERMONT. THE STP EH04(6) SIDEWALK RECONSTRUCTION PROJECT BEGINS AT THE NORTHWESTERN CORNER OF FLORENCE AVENUE AND EXTENDS NORTHERLY ALONG U.S. ROUTE 7 FOR APPROXIMATELY 577 m ENDING AT THE SOUTHWESTERN CORNER OF FRANKLIN STREET. WORK TO BE PERFORMED IN THIS AREA OF THE NH 2108(I)S PROJECT INCLUDES COLD PLANING AND RESURFACING OF THE EXISTING HIGHWAY WITH A SHIM/LEVELING COURSE AND WEARING COURSE, NEW SIDEWALK AND CURB, NEW PAVEMENT MARKINGS, NEW SIGNS, DRAINAGE IMPROVEMENTS AND INCIDENTAL ITEMS. THE TOTAL AREA OF DISTURBANCE FOR THIS PROJECT IS APPROXIMATELY 3000 m<sup>2</sup> (0.30 ha)

## 1.2 SITE INVENTORY AND ANALYSIS

### 1.2.1 OFF-SITE DRAINAGE CHARACTERISTICS (UP AND DOWN-GRADIENT)

THE PROJECT AREA LIES WITHIN A VALLEY LOCATED BETWEEN THE GREEN MOUNTAIN NATIONAL FOREST TO THE EAST AND SEVERAL SMALL NAMED MOUNTAINS TO THE WEST. THE PROJECT RUNS PARALLEL TO THE EASTERN SIDE OF OTTER CREEK. THERE IS ALSO A STREAM THAT FLOWS FROM THE GREEN MOUNTAIN NATIONAL FOREST ON THE EAST KNOWN AS THE ROARING BROOK THAT CROSSES UNDER U.S. ROUTE 7 JUST NORTH OF FLORENCE AVENUE. THE MAJORITY OF ALL SURFACE RUNOFF WITHIN IN THE PROJECT AREA IS COLLECTED IN THE NUMEROUS EXISTING CLOSED DRAINAGE SYSTEMS ALONG THE ROUTE AND OUTLET INTO SOME SMALLER CHANNELS OR DIRECTLY INTO EITHER THE OTTER CREEK OR ROARING BROOK.

### 1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER

THERE ARE SEVERAL DRAINAGE SYSTEMS THAT ARE LOCATED WITHIN THE LIMITS OF SIDEWALK RECONSTRUCTION THAT OUTLET INTO SOME SMALLER CHANNELS OR DIRECTLY INTO THE ROARING BROOK OR INTO THE OTTER CREEK. THE OTTER CREEK FLOWS NORTH FROM THE GREEN MOUNTAIN NATIONAL FOREST TO ITS END POINT AT LAKE CHAMPLAIN IN THE TOWN OF FERRISBURGH. THIS PLAN HAS BEEN PREPARED ASSUMING THAT ONLY INLET GRATE ELEVATION CHANGES AND MINOR DRAINAGE STRUCTURE REHABILITATION WORK WILL BE PERFORMED UNDER THIS CONTRACT. IT IS ANTICIPATED THAT NO EXISTING DRAINAGE SYSTEM WILL BE MODIFIED DURING THE CONSTRUCTION OF THIS PROJECT.

### 1.2.3 TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

THE MAJORITY OF THE EXISTING SITE TOPOGRAPHY CONSISTS OF AN RURAL ARTERIAL ROUTE SITUATED IN A RESIDENTIAL AREA. SANITARY SEWER AND WATER FACILITIES ARE PRESENT WITHIN THE PROJECT AREA, BUT THE IMPACTS ASSOCIATED WITH THE SIDEWALK RECONSTRUCTION ARE ANTICIPATED TO BE MINOR. AERIAL FACILITIES ARE ALSO PRESENT WITHIN THE PROJECT LIMITS.

### 1.2.4 VEGETATION

THE VEGETATION LOCATED WITHIN THE PROJECT LIMITS PRIMARILY CONSISTS OF GRASSED/LAWN AREAS WITH SMALL AREAS OF TREES AND SHRUBS. IT IS ANTICIPATED THAT THERE WILL BE LIMITED IMPACTS TO THE WOODED OR SHRUB AREAS DURING THE RECONSTRUCTION OF THE SIDEWALK. DUE TO THE RECONSTRUCTION OF THE EXISTING SIDEWALK, MOST LAWN AREAS WILL ALSO NEED TO BE REGRADED AND RESEED TO ESTABLISH TURF AND TO STABILIZE THE SOIL.

### 1.2.5 SOILS

THE SOILS LOCATED WITHIN THE PROJECT LIMITS HAVE BEEN PRIMARILY CLASSIFIED AS POTENTIALLY HIGHLY ERODIBLE OR HIGHLY ERODIBLE BY THE UNITED STATES DEPARTMENT OF AGRICULTURE'S NATIONAL RESOURCE CONSERVATION SERVICE (NRCS). THE FOLLOWING IS A LIST OF SOIL TYPES THAT ARE LOCATED WITHIN THE SIDEWALK RECONSTRUCTION AREA.

MAP UNIT TYPE*	DESCRIPTION	SLOPES (%)	ERODIBILITY	ERODIBILITY FACTOR (K)
13B	HINCKLEY GRAVELY LOAMY FINE SAND	0-8	POTENTIALLY HIGHLY ERODIBLE	0.17
41C	FARMINGTON - GALWAY -GALOO COMPLEX	5-2	POTENTIALLY HIGHLY ERODIBLE	0.32

\* MAP UNIT TYPE IS FROM THE NRCS SOIL SURVEY MAP FOR RUTLAND COUNTY, VERMONT. SEE SHEETS 99 THROUGH 102 OF 110 FOR MAP UNIT BOUNDARY LINES.

### 1.2.6 SENSITIVE RESOURCE AREAS

THE STP EH04(6) SIDEWALK RECONSTRUCTION PROJECT AREA IS LISTED WITHIN THE NATIONAL REGISTER OF HISTORIC PLACES AND IS KNOWN AS THE WALLINGFORD VILLAGE HISTORIC DISTRICT. THERE ARE ALSO A NUMBER OF HISTORIC STRUCTURES SCATTERED ABOUT THE PROJECT AREA. ALSO THE OTTER CREEK RUNS PARALLEL ALONG THE WESTERN SIDE AND THE ROARING BRANCH WHICH RUNS THROUGH THE PROJECT AREA JUST NORTH OF FLORENCE AVENUE. THERE IS A 15 m (50 FT) BUFFER ASSOCIATED WITH THESE WATER COURSES. THE CONTRACTOR SHALL PROTECT ALL FEATURES BEYOND THE CONSTRUCTION LIMITS FROM IMPACTS THROUGHOUT THE DURATION OF THE PROJECT.

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (1996)

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

LOCATED AT THE SOUTHERN LIMIT OF THE SIDEWALK RECONSTRUCTION AREA IS THE ROARING BROOK WHICH FLOWS FROM THE GREEN MOUNTAIN NATIONAL FOREST TO THE EAST INTO THE OTTER CREEK. ALONG THE WESTERN SIDE OF THE PROJECT CORRIDOR IS OTTER CREEK WHICH ALSO FLOWS FROM THE GREEN MOUNTAIN NATIONAL FOREST TO ITS OUTFALL POINT IN LAKE CHAMPLAIN IN THE TOWN OF FERRISBURGH.

## 1.3 TEMPORARY EROSION SEDIMENT CONTROL

### 1.3.1 DESCRIPTION OF ALL TEMPORARY STRUCTURAL EROSION AND SEDIMENT CONTROL MEASURES

TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED THROUGH BEST MANAGEMENT PRACTICES AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ON-SITE PLAN COORDINATOR. THE FOLLOWING IS A LIST OF TEMPORARY EROSION CONTROL MEASURES THAT SHALL BE IMPLEMENTED DURING THIS CONSTRUCTION OF THIS PROJECT AS SHOWN IN THE PLAN OR AS DIRECTED BY THE ON-SITE PLAN COORDINATOR:

- PROJECT DEMARCATION FENCE
- SILT FENCE
- INLET PROTECTION

### 1.3.2 DESIGN CALCULATIONS FOR ALL TEMPORARY STRUCTURAL CONTROL MEASURES

DUE TO THE TOPOGRAPHY ASSOCIATED WITH THE PROJECT ENVIRONS AND THE EXTENT OF THE PROPOSED WORK ANTICIPATED, NO TEMPORARY STRUCTURAL EROSION CONTROL MEASURE DESIGN CALCULATIONS WERE PERFORMED AT THIS TIME.

## 1.4 FINAL EROSION CONTROL MEASURES

### 1.4.1. DESCRIPTION OF PERMANENT EROSION AND SEDIMENT CONTROL MEASURES

DUE TO THE TOPOGRAPHY ASSOCIATED WITH THE PROJECT ENVIRONS AND THE EXTENT OF THE PROPOSED WORK ANTICIPATED, NO PERMANENT STRUCTURAL EROSION CONTROL MEASURES WILL BE REQUIRED TO REMAIN IN PLACE.

## GENERAL NOTES FOR TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL

1. THE EROSION PREVENTION & SEDIMENT CONTROL PLANS (EP&SCP) ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT AS REQUIRED BY THE VAOT STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2001. THE WORK OUTLINED IN THIS NARRATIVE CONSISTS OF APPLYING MEASURES THROUGHOUT THE LIFE OF THE PROJECT TO CONTROL EROSION AND MINIMIZE THE SEDIMENTATION OF RIVERS, STREAMS AND/OR IMPOUNDMENTS SUCH AS LAKES AND RESERVOIRS. THE MEASURES CONSIST OF STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER MISCELLANEOUS POLLUTION PREVENTION CONTROLS.
2. COORDINATE THE INSTALLATION, USE, AND REMOVAL OF EROSION AND SEDIMENT CONTROL MEASURES WITH ROADWAY CONSTRUCTION ACTIVITIES TO ASSURE ECOLOGICAL, EFFECTIVE, AND CONTINUOUS EROSION AND SEDIMENT CONTROL. EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES AS CONSTRUCTION PROCEEDS.
3. INSPECTION OF SOIL EROSION AND POLLUTION CONTROL MEASURES SHALL BE DONE ON A DAILY BASIS AND AFTER EVERY STORM EVENT 12 mm OR GREATER OR AS DIRECTED BY THE ON-SITE PLAN COORDINATOR. REPAIRS SHALL BE MADE AS NEEDED WHEN DAMAGE TO MEASURES ARE DISCOVERED AND SEDIMENT SHALL BE REMOVED WHEN THE STORAGE VOLUME OF AN EROSION CONTROL MEASURE IS APPROACHING ONE HALF OF ITS INTENDED CAPACITY OR AS DIRECTED BY THE ON-SITE PLAN COORDINATOR.
4. INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN IN THE EP&SCP OR AS DIRECTED BY THE ON-SITE PLAN COORDINATOR. DO NOT MODIFY THE TYPE, SIZE, OR LOCATION OF ANY CONTROL OR PRACTICE WITHOUT APPROVAL FROM THE COORDINATOR.
5. PREVENTING INITIAL SOIL EROSION IS MUCH MORE EFFECTIVE THAN TRYING TO CONTROL ERODED SEDIMENT. THEREFORE STABILIZE ALL DISTURBED AREAS AS SOON AS IS PRACTICAL BUT NO MORE THAN 2 DAYS AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED EXCEPT FOR PERIMETER CONTROL MEASURES, WHICH SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING, GRUBBING OR GRADING ACTIVITY.
6. THE CONTRACTOR SHALL GRADE AND TRIM ALL SLOPES AS THE EXCAVATION PROGRESSES AND SEED ALL SLOPES AS DIRECTED BY THE ON-SITE PLAN COORDINATOR.
7. THE CONTRACTOR SHALL HAVE A HYDROSEEDER AND/OR A MULCHING MACHINE AVAILABLE ON THE PROJECT SITE OR AVAILABLE AT ONE WEEK'S NOTICE (MAXIMUM) UNTIL THE PERMANENT SEEDING IS COMPLETED.
8. CONTROL ONLY SEDIMENT LADEN RUNOFF GENERATED BY THE PROJECT SITE. SEPARATE AND QUICKLY ROUTE CLEAN OFFSITE RUNOFF THROUGH THE PROJECT BY USING EARTH DIVERSION BERMS, DIVERSION CHANNELS, AND CULVERTS. A TEMPORARY LINING MATERIAL MAY BE REQUIRED WHERE THE CONTRACTOR PROVIDES TEMPORARY CHANNELS TO KEEP CONTRACTOR'S WORK SITES FREE FROM WATER DURING CONSTRUCTION AS DIRECTED BY THE ON-SITE PLAN COORDINATOR.
9. CONSTRUCTION OPERATIONS SHALL BE CONDUCTED IN SUCH A MANNER AS TO PREVENT ANY DAMAGE TO THE WATERS OF THE UNITED STATES FROM POLLUTION BY DEBRIS, SEDIMENT, OR OTHER FOREIGN MATERIAL, OR FROM MANIPULATION OF EQUIPMENT AND/OR MATERIALS IN OR NEAR THE WATERS OF THE UNITED STATES. THE CONTRACTOR SHALL NOT RETURN DIRECTLY TO THE WATERS OF THE UNITED STATES ANY WATER WHICH HAS BEEN USED FOR WASH PURPOSES OR OTHER SIMILAR OPERATIONS WHICH WOULD CAUSE THIS WATER TO BECOME POLLUTED WITH SAND, SILT, CEMENT, OIL OR OTHER IMPURITIES. IF THE CONTRACTOR USES WATER FROM THE WATERS OF THE UNITED STATES, THE CONTRACTOR SHALL CONSTRUCT AN INTAKE OR TEMPORARY DAM TO PROTECT AND MAINTAIN STREAM WATER QUALITY.
10. DURING CONSTRUCTION, NO WET OR FRESH CONCRETE OR LEACHATE SHALL BE ALLOWED TO ESCAPE INTO THE WATERS OF THE UNITED STATES, NOR SHALL WASHING FROM CONCRETE TRUCKS, MIXERS OR OTHER DEVICES BE ALLOWED TO ENTER ANY WETLANDS OR WATERS OF THE UNITED STATES.

## GENERAL NOTES FOR TEMPORARY SOIL EROSION AND SEDIMENT CONTROL (CONT.)

11. THE CONTRACTOR SHALL MINIMIZE THE AMOUNT OF SEDIMENT TRACKED OFFSITE BY CONSTRUCTION VEHICLES WITHIN THE PROJECT LIMITS AS DIRECTED BY THE ON-SITE PLAN COORDINATOR.
12. DO NOT ALLOW ANY CONSTRUCTION EQUIPMENT TO OPERATE OR ACCESS ON THE DOWN SLOPE SIDE OF PERIMETER CONTROL MEASURES.
13. DO NOT ALLOW ANY CROSSING OF A FLOWING STREAM OR DISTURBANCE OF THE EXISTING STREAM BANK BY CONSTRUCTION EQUIPMENT EXCEPT AS AUTHORIZED BY THE ON-SITE PLAN COORDINATOR.
14. IN GENERAL, PRESERVE EXISTING VEGETATION, TREES, AND SHRUBS WHEN POSSIBLE AS DIRECTED BY THE ON-SITE PLAN COORDINATOR.

## CONSTRUCTION SEQUENCING NOTES:

### PHASE 1 - ESTABLISH PERIMETER CONTROLS

1. PRIOR TO BEGINNING ANY WORK WITHIN THE PROJECT LIMITS, PROJECT DEMARCATION FENCE SHALL BE ERECTED AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ON-SITE PLAN COORDINATOR.
2. INSTALL ALL NECESSARY EROSION CONTROL ITEMS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ON-SITE PLAN COORDINATOR.

### PHASE 2 - RECONSTRUCT EXISTING ROADWAY AND SIDEWALK

1. THE CONTRACTOR SHALL RECONSTRUCT THE EXISTING ROADWAY BY UTILIZING TEMPORARY LANE CLOSURES AND MAINTAINING ONE-WAY TRAFFIC ON ONE UNOBSTRUCTED 3.0 m LANE AT ALL TIMES THROUGH THE PROJECT AREA DURING WORKING HOURS. TRAFFIC SHALL BE RESTORED TO NORMAL OPERATIONS DURING NON-WORKING HOURS AND ALL HOLIDAYS PER SECTION 100 OF THE VERMONT AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2001.
2. THE CONTRACTOR SHALL CONSTRUCT THE PROPOSED ROADWAY AND SIDEWALK IN SUCH A MANNER THAT MINIMIZES THE DURATION OF EXPOSED GROUND BY STAGING HIS ACTIVITIES SO THAT ALL DISTURBED AREAS WILL BE EITHER PAVED OR STABILIZED AT THE END OF EACH WORK DAY. NO LONGITUDINAL DROP OFFS SHALL EXIST WITHIN PROJECT AREA DURING NON-WORKING HOURS. IT IS ANTICIPATED THAT THE CONTRACTOR WILL FIRST CONSTRUCT THE PROPOSED SIDEWALK PRIOR TO RESURFACING THE EXISTING ROADWAY. ONCE THE CONTRACTOR HAS INSTALLED ALL INCIDENTAL ITEMS AND THE SIDE SLOPES HAVE BEEN STABILIZED, THE FINAL PAVEMENT COURSES MAY BE PLACED.

### PHASE 3 - REMOVE ALL TEMPORARY EROSION PREVENTION AND PERIMETER CONTROL MEASURES

1. THE CONTRACTOR SHALL ONLY REMOVE ALL TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROLS AND THE PROJECT DEMARCATION FENCE ONCE ALL WORK HAS BEEN COMPLETED AND THE SLOPES HAVE BEEN STABILIZED AS DIRECTED BY THE ON-SITE PLAN COORDINATOR.

<h3>EROSION PREVENTION &amp; SEDIMENT CONTROL NOTES</h3>	SURVEYED BY	<u>L.R.S.C.</u>	DATE	<u>10/04</u>
	DRAWN BY	<u>C.A.K.</u>	DATE	<u>4/05</u>
	SQUAD LEADER	<u>D.E.G.</u>		
	DESIGN FILE NO.	<u>/pave/98b098/pb098.dgn</u>		
	IPARM FILE	<u>pdi04ECNOTES.DGN</u>	DATE PLOTTED	<u>\$DATE\$</u>
	PROJ. NAME	WALLINGFORD		
	PROJ. NO.	NH 2108(I)S & STP EH04(6)		
	SHEET	95 OF 110	SHEETS	