

1. NARRATIVE

1.1. PROJECT DESCRIPTION

STP 1400(5) MONUMENT AVENUE IS LOCATED IN THE VILLAGE OF OLD BENNINGTON, BENNINGTON COUNTY, VERMONT. THIS PROJECT BEGINS AT THE INTERSECTION OF MONUMENT AVENUE WITH ELM STREET AND EXTENDS NORTHERLY ALONG MONUMENT AVENUE FOR APPROXIMATELY 337 m. WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES THE RECONSTRUCTION OF AN URBAN ROADWAY WITHIN THE EXISTING ROADBED INCLUDING GRADING, PAVEMENT, AND SUBBASE. IN ADDITION, THE PROJECT WILL INCORPORATE THE CONSTRUCTION OF A CONCRETE SIDEWALK ALONG THE WESTERN EDGE OF PAVEMENT, MISCELLANEOUS DRAINAGE IMPROVEMENTS AND LIMITED STREET LIGHTING IMPROVEMENTS.

1.2. SITE INVENTORY AND ANALYSIS

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

THE PROJECT AREA LIES WITHIN THE VICINITY OF A GRASSED/LAWN RESIDENTIAL AREA DOWN GRADIENT FROM MOUNT ANTHONY. THE MAJORITY OF THE SURFACE RUNOFF ASSOCIATED WITH THIS WATERSHED IS CONVEYED THROUGH AN UNNAMED STREAM FLOWING UNDER THE EXISTING ROADWAY THROUGH AN ELLIPTICAL CULVERT PIPE. THIS PIPE IS LOCATED NEAR THE CENTER OF THE PROJECT AREA AND THE FLOW THROUGH THIS PIPE EVENTUALLY REACHES THE WALLOOMSAC RIVER. ADDITIONAL SURFACE RUNOFF FLOWS THROUGH A CLASS TWO WETLAND LOCATED ON THE WESTERN SIDE OF THE PROJECT AREA THAT OUTLETS THROUGH A DRAINAGE SWALE THAT FLOWS THROUGH A CULVERT PIPE ON THE SOUTHERN END OF THE PROJECT AREA. THE EXISTING ROADWAY ALSO HAS SEVERAL SECTIONS OF CLOSED STORM WATER DRAINAGE SYSTEMS THAT OUTLET EITHER INTO THE UNNAMED STREAM OR THE CULVERT PIPE ON THE SOUTHERN END OF THE PROJECT.

1.2.2. DRAINAGE, WATERWAYS, BODIES OF WATER

THE EXISTING CLOSED DRAINAGE SYSTEMS ON THIS PROJECT ARE COMPRISED OF THREE SECTIONS. THE SOUTHERNMOST SECTION IS LOCATED IMMEDIATELY NORTH OF ELM STREET AND OUTLETS INTO A DRAINAGE SWALE THAT FLOWS FROM A CLASS TWO WETLAND. THE OTHER TWO SECTIONS RUN FROM THE NORTHERN RECONSTRUCTION LIMIT TO APPROXIMATELY STA. 1+230 AND OUTLET INTO THE UNNAMED STREAM THAT FLOWS INTO THE WALLOOMSAC RIVER. THERE ARE NO OTHER WATERWAYS OR BODIES OF WATER LOCATED WITHIN THE PROJECT ENVIRONS.

1.2.3. TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

THE EXISTING SITE TOPOGRAPHY CONSISTS OF AN URBAN ROADWAY LOCATED WITHIN A RESIDENTIAL NEIGHBORHOOD. RESIDENTIAL STRUCTURES ARE LOCATED ALONG BOTH SIDES OF MONUMENT AVENUE. NO COMMERCIAL ESTABLISHMENTS EXIST WITHIN THE PROJECT LIMITS. SANITARY SEWER AND WATER FACILITIES ARE PRESENT WITHIN THE PROJECT LIMITS, BUT THE IMPACTS ASSOCIATED WITH THIS CONTRACT ARE ANTICIPATED TO BE MINOR. AERIAL FACILITIES ARE ALSO LOCATED WITHIN THE PROJECT LIMITS ALONG BOTH SIDES OF MONUMENT AVENUE AND BEHIND THE HOUSES ON THE WESTERN SIDE OF THE PROJECT AREA.

1.2.4. VEGETATION

THE VEGETATION LOCATED WITHIN THE PROJECT LIMITS PRIMARILY CONSIST OF GRASSED/LAWN AREAS INCLUDING SMALL AREAS OF TREES AND SHRUBS IT IS ANTICIPATED THAT NO TREES OR SHRUBS WILL BE AFFECTED DURING THE CONSTRUCTION OF THIS PROJECT, BUT SOME LAWN AREAS WILL BE REGRADED AND RESEEDED TO ESTABLISH TURF AND TO STABILIZE THE SOIL. APPROXIMATELY 400m²(0.10 ACRES) OF PREVIOUSLY IMPERVIOUS SURFACE WILL BE RETURNED TO GRASSED AREAS AS A RESULT OF NARROWING THE ROADWAY ASSOCIATED WITH THIS PROJECT.

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 RESOURCES CONSERVATION SERVICE (NRCS). THE FOLLOWING IS A LIST OF SOIL TYPES THAT ARE LOCATED WITHIN THE PROJECT AREA.

MAP UNIT TYPE*	DESCRIPTION	SLOPES (%)	ERODIBILITY	ERODIBILITY FACTOR (K)
64B	STOCKBRIDGE LOAM	2-8	POTENTIALLY HIGHLY ERODIBLE	0.24
64C	STOCKBRIDGE LOAM	8-15	HIGHLY ERODIBLE	0.28
66B	GEORGIA LOAM	3-8	POTENTIALLY HIGHLY ERODIBLE	0.28

*MAP UNIT TYPE IS FROM THE NRCS SOIL SURVEY MAP FOR BENNINGTON COUNTY, VERMONT. SEE SHEETS 38 THROUGH 40 OF 46 FOR MAP UNIT BOUNDARY LINES.

1.2.6. SENSITIVE RESOURCE AREAS

THE ENTIRE PROJECT AREA IS LOCATED WITHIN THE NATIONAL REGISTER OF HISTORIC PLACES AND IS LISTED AS THE OLD BENNINGTON HISTORIC DISTRICT. THERE IS A CLASS TWO WETLAND LOCATED ALONG THE WESTERN SIDE OF THE PROJECT AREA ADJACENT TO THE CULVERT CROSSING NORTH OF THE MONUMENT AVENUE AND ELM STREET INTERSECTION. THERE IS ALSO A 15 m (50 FT) BUFFER ASSOCIATED WITH THIS CLASS TWO WETLAND. THE CONTRACTOR SHALL PROTECT ALL FEATURES BEYOND THE CONSTRUCTION LIMITS FROM IMPACTS THROUGHOUT THE DURATION OF THE PROJECT.

1.2.7. PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

LOCATED WITHIN THE PROJECT LIMITS IS AN UNNAMED STREAM THAT FLOWS UNDER THE EXISTING ROADWAY THROUGH AN ELLIPTICAL CULVERT PIPE THAT WILL REMAIN IN PLACE. THIS STREAM EVENTUALLY FLOWS INTO THE WALLOOMSAC RIVER AND IT IS ANTICIPATED THAT TEMPORARY EROSION CONTROLS WILL BE USED TO PROTECT THIS WATER COURSE FROM BECOMING TURBID DURING CONSTRUCTION.

1.3 TEMPORARY EROSION SEDIMENT CONTROL

1.3.1 DESCRIPTION OF ALL TEMPORARY STRUCTURAL EROSION AND SEDIMENT CONTROL MEASURES

TEMPORARY EROSION CONTROLS WILL BE IMPLEMENTED THROUGH BEST MANAGEMENT PRACTICES AS SHOWN ON THE PLANS. THE FOLLOWING IS A LIST OF TEMPORARY EROSION CONTROL MEASURES THAT WILL BE IMPLEMENTED DURING THE CONSTRUCTION OF THIS PROJECT:

- 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 CONTROL MEASURE DESIGN CALCULATIONS WERE PERFORMED AT THIS TIME. GENERALLY, THE EXTENTS OF THE EMBANKMENTS ADJACENT TO THE PROPOSED CONSTRUCTION WERE MINOR AND THE PROPOSED SLOPES WERE 1:4 OR FLATTER.

1.4 FINAL EROSION CONTROL MEASURES

1.4.1. DESCRIPTION OF PERMANENT EROSION AND SEDIMENT CONTROL MEASURES

CULVERT OUTLETS SHALL BE PERMANENTLY PROTECTED WITH STONE APRONS.

GENERAL NOTES FOR TEMPORARY SOIL EROSION 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 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. DO NOT DRIVE CONSTRUCTION EQUIPMENT ACROSS FLOWING WATERWAYS.
12. DO NOT ALLOW CONSTRUCTION VEHICLES TO TRACK SEDIMENT OFFSITE OF THE PROJECT LIMITS.
13. DO NOT ALLOW ANY CONSTRUCTION EQUIPMENT TO OPERATE OR ACCESS ON THE DOWN SLOPE SIDE OF PERIMETER CONTROL MEASURES.
14. DO NOT ALLOW ANY CROSSING OF A FLOWING STREAM OR DISTURBANCE OF THE EXISTING STREAM BANK BY CONSTRUCTION EQUIPMENT, EXCEPT AS AUTHORIZED BY THE COORDINATOR.
15. IN GENERAL, PRESERVE EXISTING VEGETATION, TREES, AND SHRUBS WHEN POSSIBLE, AS DIRECTED BY THE COORDINATOR.

CONSTRUCTION SEQUENCING NOTES:

PHASE 1 - ESTABLISHING PERIMETER CONTROLS

1. PROJECT DEMARCATION FENCE SHALL BE ERECTED ALONG BOTH SIDES OF THE ENTIRE PROJECT AS SHOWN IN THE PLANS PRIOR TO ANY ACTIVITY THAT WILL ALTER THE SITE SUCH AS PLACING TRAILERS, STOCKPILES, STORAGE, DEMOLITION AND CONSTRUCTION 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 - INSTALL PROPOSED DRAINAGE/REMOVAL OF EXISTING DRAINAGE FACILITIES

1. THE CONTRACTOR SHALL MINIMIZE THE EXPOSURE OF UNSTABILIZED SURFACES BY REMOVING/ABANDONING ALL EXISTING DRAINAGE STRUCTURE AND PIPES AND INSTALLING ALL PROPOSED DRAINAGE STRUCTURES AND PIPES AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL ALSO INSTALL DELINEATION DEVICES SUCH AS CONES OR DRUMS TO PROTECT TRAFFIC FROM THE PROPOSED DRAINAGE STRUCTURES PER VAOT STANDARDS.
2. ALL PIPE INLETS/OUTLETS AND DRAINAGE STRUCTURE INLET GRATES SHALL BE PROTECTED FROM SILT AND OTHER DEBRIS BY INSTALLING FILTRESX FILTERSOX OR EQUIVALENT AS SHOWN ON SHEET 37 OF 46.


PHASE 3 - CONSTRUCT PROPOSED ROADWAY TO BASE COURSE

1. THE CONTRACTOR SHALL CONSTRUCT THE PROPOSED ROADWAY BY UTILIZING TEMPORARY LANE CLOSURES AND MAINTAINING ONE-WAY TRAFFIC ON ONE UNOBSTRUCTED 3.0 m LANE AT ALL TIMES THROUGH THE PROJECT SITE DURING WORKING HOURS. TRAFFIC SHALL BE RESTORED TO NORMAL OPERATIONS DURING NON-WORKING HOURS, WEEKENDS AND ALL HOLIDAYS PER SECTION 100 OF VAOT STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2001.
2. THE CONTRACTOR SHALL CONSTRUCT THE PROPOSED ROADWAY IN SUCH A MANNER THAT MINIMIZES THE DURATION OF EXPOSED GROUND BY STAGING HIS ACTIVITIES SO THAT ALL DISTURBED ROADBED AREAS WILL BE STABILIZED AT THE END OF EACH WORK DAY SUCH THAT NO LONGITUDINAL DROP OFFS EXIST WITH THE PROJECT AREA. IT IS ANTICIPATED THAT THE CONTRACTOR WILL CONSTRUCT THE PROPOSED ROADWAY TO THE BASE COURSE AND THEN INSTALL THE GUTTERS, SIDEWALK AND STREET LIGHTING WHILE STABILIZING THE SIDE SLOPES OUTSIDE OF THESE AREAS. ONCE THE CONTRACTOR HAS INSTALLED ALL INCIDENTAL ITEMS AND THE SIDE SLOPES HAVE BEEN STABILIZED, THE FINAL PROPOSED PAVEMENT COURSES MAY BE PLACED.

PHASE 4 - REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROLS

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

VERMONT AGENCY OF TRANSPORTATION

 CLOUGH, HARBOUR & ASSOCIATES <small>ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS 110 WINDERS CIRCLE ALBANY, NEW YORK 12208</small>	PROJECT NAME: <u>OLD BENNINGTON</u> _____ PROJECT NUMBER: <u>STP 1400(5)</u>	PLOT DATE: 05-MAY-2008 14:
	FILE NAME: /pave/97d228/p97d228.dgn PROJECT LEADER: <u>J.E.K.</u> _____ DESIGNED BY: <u>J.S.P.</u> _____ p97d228escn.i	DRAWN BY: <u>K.A.B.</u> _____ CHECKED BY: <u>D.E.G.</u> _____ SHEET <u>36</u> OF 48

DATUM

VERTICAL N/A _____
 HORIZONTAL NAD_83 (1996) _____