

## EROSION CONTROL NARRATIVE

## GENERAL EROSION CONTROL NOTES

### 1.1 DESCRIPTION OF PROJECT

THIS PROJECT CONSISTS OF LENGTHENING THE EXISTING INTERSTATE 89 (I-89) SOUTHBOUND EXIT 13 ON-RAMP (RAMP A) ACCELERATION LANE AND ASSOCIATED SLOPE WORK. THIS PROJECT MAINTAINS THE EXISTING ALIGNMENT OF INTERSTATE 89 (I-89).

LENGTHENING OF THE ACCELERATION LANE BEGINS AT I-89 STATION 4602+34 (MM 87.17), AND CONTINUES 668 FEET SOUTHEASTERLY TO STATION 4595+66 (MM 87.04). PRIOR TO CONSTRUCTION, TRAFFIC CONTROL WILL INCLUDE BLOCKING OFF THE RIGHT TRAVEL LANE OF I-89 SOUTHBOUND PRIOR TO THE PROJECT AREA USING TEMPORARY TRAFFIC BARRIERS. THIS PROJECT IS EXPECTED TO LAST ONE CONSTRUCTION SEASON.

THE MATERIAL TO BE EXCAVATED FROM THE SITE WILL INCLUDE REMOVAL OF EXISTING PAVEMENT AND SUBBASE, TO A DEPTH OF 37.75-INCHES BELOW EXISTING GRADE. STOCKPILING OF ANY EXCAVATED MATERIAL TO BE REUSED IS EXPECTED TO TAKE PLACE WITHIN THE PROJECT LIMITS OF THE MAINLINE PAVEMENT RESURFACING PROJECT. LIKEWISE, STOCKPILING OF ANY NEW MATERIAL TO BE USED IS EXPECTED TO TAKE PLACE WITHIN THE PROJECT LIMITS. THE LIMIT OF CONSTRUCTION AND ASSOCIATED MAXIMUM SOIL DISTURBANCE AREA FOR THE LENGTHENED ACCELERATION LANE IS APPROXIMATELY 0.2 ACRES.

THERE ARE NO ENVIRONMENTAL RESOURCE ELEMENTS IN THE VICINITY OF THE LENGTHENED ACCELERATION LANE.

### 1.2 SITE INVENTORY AND ANALYSIS

#### 1.2.1 OFFSITE DRAINAGE CHARACTERISTICS

THIS PROJECT SITE IS LOCATED IN AN URBAN, HIGHLY TRAVELED AREA IN THE CITY OF SOUTH BURLINGTON. THE AREA TO THE SOUTH OF THE PROJECT AREA IS MODERATELY SLOPED. TO THE NORTH OF THE SOUTHBOUND MAINLINE IS THE NORTHBOUND MAINLINE. RUNOFF FROM THE PROJECT AREA DRAINS INTO A DROP INLET ON THE SOUTH SIDE OF BRIDGE 655 OVER DORSET STREET.

#### 1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER

THERE ARE NO WATERWAYS WITHIN THE PROJECT AREA. DRAINAGE STRUCTURES ARE LOCATED WITHIN THE PROJECT AREA TO COLLECT RUNOFF FROM I-89.

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

THE TOPOGRAPHY OF THE PROJECT AREA CONSISTS OF MODERATE SLOPES. THERE ARE NO BUILDINGS OR KNOWN UTILITIES WITHIN THE PROJECT AREA.

#### 1.2.4 VEGETATION

THE PROJECT AREA OUTSIDE OF I-89 TRAVEL LANES CONSISTS OF GRASSED SIDE-SLOPES. THE DITCH ON THE SOUTH SIDE OF I-89 SOUTHBOUND CONTAINS CATTAILS. IMPACTS TO VEGETATED AREAS WILL BE LIMITED TO THE SIDE SLOPES OF THE ROAD. FOLLOWING THE COMPLETION OF CONSTRUCTION, THE GRASSY VEGETATION WILL BE RE-ESTABLISHED USING STANDARD SEED AND MULCH PRACTICES.

#### 1.2.5 SOILS

THE NATURAL RESOURCES CONSERVATION SERVICE (NRCS) HAS MAPPED THE SOILS THROUGHOUT CHITTENDEN COUNTY. SOIL TYPES IDENTIFIED FOR THIS PROJECT INCLUDE TERRACE ESCARPMENTS, SILTY AND CLAYEY, HINESBURG FINE SANDY LOAM 8 TO 15 PERCENT SLOPES (POTENTIALLY HIGHLY ERODIBLE) AND HINESBURG FINE SANDY LOAM, 15 TO 25 PERCENT SLOPES (HIGHLY ERODIBLE). SOILS HAVE BEEN PREVIOUSLY DISTURBED WITH THE CONSTRUCTION OF THE INTERSTATE.

#### 1.2.6 SENSITIVE RESOURCE AREAS

THERE ARE NO KNOWN ARCHEOLOGICAL OR HISTORICAL AREAS, THREATENED AND ENDANGERED SPECIES, OR OTHER CRITICAL HABITATS WITHIN THE PROJECT AREA FOR LENGTHENING OF THE ACCELERATION LANE. THERE IS A STATEWIDE PRIME SOIL IN THE PROJECT AREA (HINESBURG FINE SANDY LOAM 8 TO 15 PERCENT SLOPES). SOILS IN THE PROJECT AREA HAVE BEEN PREVIOUSLY DISTURBED WITH THE CONSTRUCTION OF I-89.

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

THE ONLY WATER FEATURES WITHIN THE PROJECT AREA INCLUDE DITCHES ALONG THE TOES OF SLOPE TO CARRY RUNOFF FROM I-89. THESE DITCHES CARRY WATER TO AN EXISTING DROP INLET SOUTH OF THE BRIDGE OVER DORSET STREET. THIS EROSION PREVENTION AND SEDIMENT CONTROL PLAN CONTAINS MEASURES TO PREVENT THE MOBILIZATION AND TRANSPORT OF SEDIMENT INTO DITCHES AND CATCH BASINS WITHIN THE PROJECT AREA.

#### 1.3 TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL

PROJECT DEMARCATION FENCE SHALL BE INSTALLED TO DELINEATE THE LIMITS THE CONTRACTOR CAN ACCESS WITH CONSTRUCTION EQUIPMENT. THIS MEASURE LIMITS THE AREA THAT CAN BE DISTURBED AND EXPOSED TO EROSION.

TO MINIMIZE THE POTENTIAL FOR STORM WATER RUNOFF TO TRANSPORT SEDIMENT, SEVERAL KEY EROSION CONTROL DEVICES AND GENERAL PRACTICES WILL BE USED. DETAILS OF THE DEVICES AND THE LOCATION OF THEIR PLACEMENT CAN BE FOUND IN THE EROSION CONTROL PLANS AND DETAILS.

SILT FENCE, AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN, SHALL BE PLACED PARALLEL TO, OR ALONG, THE CONTOUR, SO THE STORM WATER WILL RUN PERPENDICULAR TO THE SILT FENCE. THE ENDS SHALL BE "J" HOOKED UP GRADIENT TO CREATE A PONDING EFFECT FOR WATER TRYING TO RUN ALONG THE FENCE AND AROUND THE ENDS.

THE CATCH BASIN WITHIN THE PROJECT AREA SHALL RECEIVE TEMPORARY SILT FENCE PROTECTION (UNPAVED AREAS). THE DROP INLET SHALL RECEIVE TEMPORARY ROCK BARRIER PROTECTION. THESE TEMPORARY MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS IN THESE PLANS.

TEMPORARY STONE CHECK DAMS WILL BE PLACED ALONG THE DITCH TO THE SOUTH OF THE MAINLINE. THE TEMPORARY STONE CHECK DAMS WILL REDUCE THE VELOCITIES OF THE WATER, ALLOWING SEDIMENT TO SETTLE AND REDUCE THE POTENTIAL FOR EROSION.

EROSION MATTING IS NOT ANTICIPATED FOR THIS PROJECT. IF REQUIRED BY THE RESIDENT ENGINEER, THE CONTRACTOR SHALL USE SUCH MATTING ON SLOPES STEEPER THAN 3H:1V. MATTING WILL REDUCE SEDIMENT TRANSPORT FROM THE SIDE SLOPES, AS IT WILL SLOW DOWN THE RAIN PARTICLES AND ALLOW FOR RAIN TO DISSIPATE INTO THE SOIL, RATHER THAN FLOWING INTO THE CONSTRUCTION AREA. THESE TEMPORARY MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS IN THESE PLANS. IF MATTING IS NEEDED, IT SHALL BE PAID FOR UNDER ITEM 652.10, "EROSION AND SEDIMENT CONTROL PLAN".

THE EROSION CONTROL MEASURES SHALL BE PERIODICALLY INSPECTED AND MAINTAINED ON A REGULAR BASIS. INSPECTION OF THE EROSION CONTROL MEASURES SHALL TAKE PLACE BEFORE AND AFTER MAJOR STORM EVENTS TO INSURE THEY ARE IN GOOD CONDITION AND TO REMOVE EXCESSIVE BUILDUP OF SILT AND DEBRIS AFTER THE STORM EVENTS. A REPORT ON THE EFFECTIVENESS OF THE EROSION CONTROL MEASURES SHALL BE PRESENTED TO THE RESIDENT ENGINEER AND ONSITE COORDINATOR UPON THE COMPLETION OF EACH INSPECTION. MODIFICATIONS OR IMPROVEMENTS TO THE EROSION CONTROL PLAN SHOULD BE COORDINATED WITH THE RESIDENT ENGINEER AND ON-SITE COORDINATOR.

ALL EROSION CONTROL MEASURES SHALL BE PLACED IN ACCORDANCE WITH THE EROSION CONTROL DETAILS IN THESE PLANS.

STAGING AND STOCKPILING AREAS WILL BE LOCATED ALONG THE I-89 MAINLINE RESURFACING PROJECT. THESE AREAS WILL BE COMPLETELY WITHIN THE PROJECT LIMITS AND WILL UTILIZE THE AFOREMENTIONED TEMPORARY EROSION CONTROL MEASURES. NO ADDITIONAL TEMPORARY EROSION CONTROL MEASURES WILL BE NEEDED.

IN THE EVENT THAT A SEPARATE OR TEMPORARY STOCKPILE AREA IS USED OUTSIDE THE LIMITS OF CONSTRUCTION, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THESE PLANS. THE CONSTRUCTION ENTRANCE SHALL BE APPROVED BY THE RESIDENT ENGINEER AND ONSITE COORDINATOR.

#### 1.4 FINAL EROSION CONTROL MEASURES

ALL DISTURBED AREA OUTSIDE OF THE ROADWAY SHALL RECEIVE TOPSOIL, SEED AND MULCH TO REESTABLISH GRASS AND VEGETATION. TOPSOILING, SEEDING AND MULCHING SHALL BE IN ACCORDANCE WITH THE SEEDING FORMULA FOR RURAL AREAS AND ASSOCIATED NOTES AS SHOWN IN THE CONTRACT PLANS. THIS SHALL BE COMPLETED IMMEDIATELY FOLLOWING FINAL GRADING.

1. THE CONTRACTOR SHALL SUBMIT AN EROSION PREVENTION & SEDIMENT CONTROL PLAN AT THE PRE-CONSTRUCTION CONFERENCE WITH A SCHEDULE OF EVENTS. THIS PLAN WILL BE SITE SPECIFIC.
2. THE CONTRACTOR SHALL DESIGNATE THE RESPONSIBILITIES FOR IMPLEMENTING THE EROSION PREVENTION & SEDIMENT CONTROL PLAN TO ONE INDIVIDUAL. THE CONTRACTOR SHALL ENSURE THAT ALL WORKERS UNDERSTAND THE MAJOR PROVISIONS OF THE EROSION PREVENTION & SEDIMENT CONTROL PLAN. PHYSICALLY MARK OFF LIMITS OF NECESSARY ON-SITE LAND DISTURBANCE WITH CONSTRUCTION BARRIER FENCING AND REVIEW WITH WORKERS AND SUBCONTRACTORS SO THAT ALL WORKERS CAN SEE THE AREAS TO BE PROTECTED.
3. TEMPORARY EROSION CONTROL MEASURES ARE REQUIRED THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL THE PROJECT HAS BEEN COMPLETED. INSTALL PERIMETER SILT FENCE PRIOR TO CLEARING AND GRUBBING AND INSTALL NECESSARY EROSION AND SEDIMENT CONTROL PRACTICES AS WORK TAKES PLACE.
4. EROSION CONTROL MEASURES SHALL BE PERIODICALLY INSPECTED TO ENSURE THEY ARE IN GOOD CONDITION AND THAT AN EXCESSIVE BUILDUP OF SILT AND DEBRIS HAS NOT OCCURRED.
5. THE CONTRACTOR SHALL MINIMIZE THE AMOUNT OF DISTURBED SOIL EXPOSED TO EROSION FROM WIND AND WATER BY USING VEGETATIVE AND STRUCTURAL CONTROLS AND PROPER TIMING AND SEQUENCING OF CONSTRUCTION ACTIVITIES.
6. IF NEEDED, DIVERT OFF-SITE STORMWATER RUNOFF FROM HIGHLY ERODIBLE AREAS AND STEEP SLOPES AND CONVEY OFF-SITE STORMWATER RUNOFF TO STABLE AREAS.
7. APPLY TEMPORARY OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS WHERE WORK IS DELAYED OR COMPLETED.
8. ANY EARTH STOCKPILES SHALL BE PROTECTED BY A SILT FENCE AT THE PERIMETER AND COVERED WITH A BLANKET OF MULCH.
9. EROSION CHECKS SHALL BE INSTALLED AS INDICATED AND WHERE DESIGNATED ON THE DRAWINGS AND AS NECESSARY TO PREVENT EROSION DAMAGE FROM ANY CONSTRUCTION ACTIVITY.
10. TEMPORARY EROSION CONTROL MEASURES SHALL BE IMMEDIATELY INSPECTED BEFORE AND AFTER RAINFALL EVENTS TO INSURE THEY ARE IN GOOD CONDITION BEFORE RAINFALL AND TO REMOVE EXCESSIVE BUILDUP OF SILT AND DEBRIS AFTER THE STORM EVENT.
11. ALL EROSION CONTROL MEASURES SHALL COMPLY WITH STANDARD VERMONT AGENCY OF NATURAL RESOURCES PERMIT. THE "VERMONT HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL" DATED 2003, SHALL BE UTILIZED AS A GUIDE FOR THE CONTROL OF EROSION ON THE SITE. THE CONTRACTOR SHALL BE FAMILIAR WITH THE STANDARDS AND SPECIFICATIONS IN THIS PUBLICATION.
12. EROSION MATTING SHALL BE INSTALLED IN PLACE OF MULCH FOR ANY AREAS NOT SEEDED AND MULCHED BY OCTOBER 1 OF THE CONSTRUCTION YEAR.
13. ANY EROSION CONTROL MEASURES THAT WILL BE NECESSARY DURING THE WINTER CONSTRUCTION PERIOD (OCTOBER 15 TO MAY 10) SHALL BE INSTALLED BEFORE THE GROUND FREEZES AND FREQUENTLY INSPECTED AND MAINTAINED THROUGHOUT THE WINTER.
14. EROSION MEASURES SHALL REMAIN IN PLACE UNTIL PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED AND APPROVED BY THE RESIDENT ENGINEER.
15. UNLESS OTHERWISE NOTED IN THE PLANS, ALL MATERIALS, INSTALLATION, MAINTENANCE AND REMOVAL OF THOSE EROSION CONTROL MEASURES WHICH ARE ITEMS IN THE CONTRACT WILL BE PAID FOR AT THE APPROPRIATE CONTRACT UNIT PRICE BID. ALL MATERIALS, INSTALLATION, MAINTENANCE AND REMOVAL FOR ALL OTHER EROSION CONTROL ITEMS REQUIRED BY THE PLANS AND THE RESIDENT ENGINEER WILL BE PAID FOR UNDER ITEM 652.30.

PROJECT NAME: BOLTON - SO. BURLINGTON  
PROJECT NUMBER: AC IM 089-2(36)

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PROJECT LEADER: EPD DRAWN BY: JDA  
DESIGNED BY: JDA CHECKED BY: EPD  
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