

EROSION CONTROL NARRATIVE

1. PROJECT DESCRIPTION

THIS PROJECT IS LOCATED APPROXIMATELY AT THE FERRISBURGH/CHARLOTTE TOWN LINE AND EXTENDS NORTHERLY 2.9 MI.

THIS PROJECT INVOLVES THE REMOVAL AND DISPOSAL OF EXISTING CONCRETE ROAD, WIDENING AND FULL DEPTH RECONSTRUCTION OF U.S. ROUTE 7, GRADING, DRAINAGE, SIGNS, PAVING, PAVEMENT MARKING AND OTHER RELATED ITEMS. THE EXISTING ROADWAY IS APPROXIMATELY 28' WIDE (2'-12"-12'-2" TYPICAL). THE PROJECT WILL BE CONSTRUCTING A 40' WIDE ROADWAY (8'-12'-12'-8' TYPICAL).

2. AREA OF DISTURBANCE

THE TOTAL DISTURBANCE ASSOCIATED WITH THIS PROJECT IS APPROXIMATELY 42.17 ACRES; OF THIS 42.17 ACRES APPROXIMATELY 11.3 ACRES IS EXISTING IMPERVIOUS AND THE PROJECT IS ADDING APPROXIMATELY 3.35 ACRES OF IMPERVIOUS.

AREA OF DISTURBANCE SHALL INCLUDE LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, INCLUDING ANY WASTE, STAGING AND BORROW AREAS WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS. SEE BREAKDOWN OF DISTURBANCE PER DRAINAGE AREA.

3. CONSTRUCTION SEQUENCE

THE CONTRACTOR SHALL SEQUENCE CONSTRUCTION ACTIVITIES TO MINIMIZE THE EXTENT OF DISTURBED SOILS LEFT OPEN TO A MAXIMUM OF 5 TOTAL DISTURBED ACRES WITHIN THE PROJECT LIMITS AT ANY GIVEN TIME. THE CONTRACTOR SHALL COMPLETE EACH PROPOSED SEQUENCE OF CONSTRUCTION BEFORE COMMENCING THE FOLLOWING SEQUENCE. RELOCATION OF UTILITIES SHALL OCCUR PRIOR TO COMMENCING CONSTRUCTION IN AN AFFECTED AREA. SEE CONTRACTORS RESPONSIBILITIES, LIMITATIONS & PROHIBITIONS. THE PROPOSED GENERAL SEQUENCE FOR THIS PROJECT IS AS FOLLOWS:

• SEQUENCE 1

- 1) ESTABLISH PERIMETER CONTROLS AND MARK BOUNDARIES FOR SENSITIVE RESOURCE AREAS, INCLUDING WETLANDS AND RIPARIAN BUFFER ZONES.
- 2) INSTALL SEDIMENT CONTROL MEASURES.
- 3) CLEAR AND GRUB.
- 4) CONSTRUCT TEMPORARY DETOUR ONE AND INSTALL TEMPORARY STABILIZATION & EPSC MEASURES AS WORK PROGRESSES WHILE LIMITING DISTURBANCE AREA TO FIVE ACRES. SUBBASE OF CRUSHED GRAVEL WILL BE CONSIDERED TEMPORARY STABILIZATION.
- 5) PAVE, ADD TEMPORARY PAVEMENT MARKINGS AND MOVE TRAFFIC TO TEMPORARY DETOUR ONE.

• SEQUENCE 2

- 1) BEGIN CONSTRUCTION FOR PERMANENT ROADWAY AND TEMPORARY DETOUR TWO. INSTALL TEMPORARY STABILIZATION & EPSC MEASURES AS WORK PROGRESSES WHILE LIMITING DISTURBANCE AREA TO FIVE ACRES. SUBBASE OF CRUSHED GRAVEL WILL BE CONSIDERED TEMPORARY STABILIZATION.
- 2) PAVE, ADD TEMPORARY PAVEMENT MARKINGS AND MOVE TRAFFIC TO TEMPORARY DETOUR TWO.

• SEQUENCE 3

- 1) BEGIN REMOVAL OF TEMPORARY DETOUR ONE AND CONSTRUCT PERMANENT ROADWAY. INSTALL TEMPORARY/PERMANENT STABILIZATION & EPSC MEASURES AS WORK PROGRESSES WHILE LIMITING DISTURBANCE AREA TO FIVE ACRES.
- 2) PAVE AND ADD TEMPORARY PAVEMENT MARKINGS.

• SEQUENCE 4

- 1) BEGIN REMOVAL OF TEMPORARY DETOUR TWO AND CONSTRUCT PERMANENT ROADWAY. INSTALL TEMPORARY/PERMANENT STABILIZATION AND EPSC MEASURES AS WORK PROGRESSES WHILE LIMITING DISTURBANCE TO FIVE ACRES.
- 2) PAVE AND ADD TEMPORARY PAVEMENT MARKINGS.

4. STABILIZATION OF EXPOSED SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF CHITTENDEN, VERMONT. SOILS ON THE PROJECT SITE ARE;

- BELGRADE AND ELDRIDGE, 3-8% SLOPES, K = 0.49.
- BELGRADE AND ELDRIDGE, 25-60% SLOPES, K = 0.49
- COVINGTON SILTY CLAY, 0-2% SLOPES, K = 0.49.
- DUANE AND DEERFIELD, 5-12% SLOPES, K = 0.17.
- ENOSBURG AND WHATELY, 0-3% SLOPES. K = 0.24.
- FARMINGTON EXTREMELY ROCKY LOAM, 20-60% SLOPES, K = 0.32
- FARMINGTON AND STOCKBRIDGE ROCKY LOAM, 5-12%, K = 0.32
- HINESBURG FINE TO SANDY LOAM, 3-8% SLOPES, K = 0.24.
- LIVINGSTON CLAY, 0-2%, K = 0.49.
- LIVINGSTON SILTY CLAY, OCCASIONALLY FLOODED, 0-2%, K = 0.49.
- STOCKBRIDGE AND NELLIS STONEY LOAMS, 3-8% SLOPES, K = 0.28.
- STOCKBRIDGE AND NELLIS STONEY LOAMS, 3-15% SLOPES, K = 0.28.
- STOCKBRIDGE AND NELLIS STONEY LOAMS, 8-15% SLOPES, K = 0.28.
- STOCKBRIDGE AND NELLIS EXTREMELY STONEY LOAMS, 3-15% SLOPES, K = 0.28.
- STOCKBRIDGE AND NELLIS EXTREMELY STONEY LOAMS, 8-15% SLOPES, K = 0.28.
- STOCKBRIDGE AND NELLIS EXTREMELY STONEY LOAMS, 15-25% SLOPES, K = 0.28
- STOCKBRIDGE AND NELLIS EXTREMELY STONEY LOAMS, 15-60% SLOPES, K = 0.28.
- VERGENNES CLAY 0-2% SLOPES, K = 0.49
- VERGENNES CLAY, 2-6% SLOPES, K = 0.49
- VERGENNES CLAY, 12-15% SLOPES, K = 0.49
- VERGENNES CLAY, 25-60% SLOPES, K = 0.49

NOTE: K-VALUES PER VTANR ARE AS FOLLOWS:

0.0-0.18 = LOW EROSION POTENTIAL
0.18-0.36 = MODERATE EROSION POTENTIAL
> 0.36 = HIGH EROSION POTENTIAL

- SEED AND HAY MULCH WILL BE USED FOR BOTH TEMPORARY AND PERMANENT STABILIZATION MEASURES. TEMPORARY EROSION MATTING WILL BE USED IN PLACE OF MULCH FOR SLOPES GREATER THAN 1V:3H (SEE 2006 VERMONT STANDARDS AND SPECIFICATIONS FOR CONSTRUCTION SECTION 755.11A FOR PROPER APPLICATION). MULCH IS TO BE APPLIED AT A MINIMUM APPLICATION RATE SHOWN ON THE EPSC DETAILS, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.

- DISTURBED AREAS AND SOIL STOCKPILES THAT WILL NOT BE WORKED FOR MORE THAN 7 DAYS SHALL BE TEMPORARILY STABILIZED WITH HAY MULCH/ROLLED EROSION CONTROL PRODUCT (RECP) WITHIN 48 HOURS.

- SEE THE 2011 VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL SUBSECTION 4.2 FOR ADDITIONAL MULCHING OPTIONS.

- ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY OR PERMANENT STABILIZATION WITHIN 7 DAYS OF THE INITIAL DISTURBANCE. AFTER THIS TIME, ANY DISTURBANCE IN THE AREA MUST BE STABILIZED AT THE END OF EACH WORK DAY UNLESS WORK IS TO CONTINUE WITHIN THE NEXT 24 HOURS AND THERE IS NO PRECIPITATION FORECAST. SOIL STOCKPILES THAT WILL NOT BE WORKED FOR MORE THAN 7 DAYS SHALL BE TEMPORARILY STABILIZED WITH HAY MULCH/TEMPORARY EROSION MATTING WITHIN 48 HOURS.

- EXPOSED AREAS THAT HAVE ACHIEVED FINAL GRADE SHALL BE PERMANENTLY STABILIZED WITHIN 48 HOURS.

- IN AREAS WHERE VEGETATIVE COVER WILL PROVIDE PERMANENT STABILIZATION, SEEDING SHALL BE COMPLETED BETWEEN APRIL 15 AND SEPTEMBER 15.

- BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND THE RECEIVING CHANNEL.

5. DRAINAGE AREAS AND DISCHARGE POINTS

THIS PROJECT WILL BE CONSTRUCTED ALONG US ROUTE 7 IN CHARLOTTE. THE AREA SURROUNDING THIS PROJECT IS CLASSIFIED AS RURAL AND RESIDENTIAL WITH ROLLING TERRAIN THAT HAS EQUAL WOODED AND OPEN AREAS. THE VEGETATION CONSISTS OF WELL ESTABLISHED FOREST, INDIVIDUAL TREES, GRASS SLOPES AND LAWNS. DUE TO THE NATURE OF THE SURROUNDING TERRAIN THE PROJECT SITE WILL RECEIVE RUNOFF WATER FROM A FEW NEARBY SLOPES.

THE PROJECT IS BROKEN INTO ELEVEN INDIVIDUAL SITES THAT REQUIRE TREATMENT. THE PROJECT WILL DISCHARGE STORMWATER BY UNNAMED STREAM TO LEWIS CREEK, KIMBALL BROOK, UNNAMED TRIBUTARIES TO KIMBALL BROOK AND UNNAMED TRIBUTARIES TO THORPE BROOK.

• DRAINAGE AREA 1

DRAINAGE AREA IS 1200 FEET SOUTH OF THE PROJECT TO STATION 28+30. RUNOFF GENERALLY FLOWS FROM THE HILLS EAST OF U.S. ROUTE 7 TO AN UNNAMED STREAM (CONCRETE BOX RUNS UNDER U.S. ROUTE 7) AT STATION 12+67, WETLAND #1 CLASS II AND EVENTUALLY LEWIS CREEK. THE TOTAL AREA OF DRAINAGE AREA 1 IS 269.0 Ac.

• DRAINAGE AREA 2

DRAINAGE AREA IS FROM STATION 28+30 TO 43+03. RUNOFF GENERALLY FLOWS FROM HILLS EAST OF U.S. ROUTE 7 TO AN UNNAMED STREAM (CULVERT RUNS UNDER U.S. ROUTE 7) AT STATION 40+42, WETLAND #4 CLASS III AND EVENTUALLY KIMBALL BROOK. THE TOTAL AREA OF DRAINAGE AREA 2 IS 84.0 Ac.

• DRAINAGE AREA 3

DRAINAGE AREA IS FROM STATION 41+68 TO 54+96. RUNOFF GENERALLY FLOWS FROM HILLS EAST OF U.S. ROUTE 7 TO KIMBALL BROOK (CONCRETE BOX RUNS UNDER U.S. ROUTE 7) AT STATION 44+27 AND WETLAND #5 CLASS II. THE TOTAL AREA OF DRAINAGE AREA 3 IS 747.0 Ac.

• DRAINAGE AREA 4a

DRAINAGE AREA IS FROM STATION 54+96 TO 71+64. RUNOFF GENERALLY FLOWS FROM THE CENTER LINE OF U.S. ROUTE 7 WEST TO WETLAND #5 CLASS II AND EVENTUALLY THORPE BROOK. THE TOTAL AREA OF DRAINAGE AREA 4a IS 21.7 Ac.

• DRAINAGE AREA 4b

DRAINAGE AREA IS FROM STATION 54+96 TO 86+93. RUNOFF GENERALLY FLOWS FROM HILLS EAST OF U.S. ROUTE 7 TO AN UNNAMED TRIBUTARY (CULVERT THAT RUNS UNDER U.S. ROUTE 7) AT STATION 75+40 AND EVENTUALLY THORP BROOK. THE TOTAL AREA OF DRAINAGE AREA 4b IS 101.4 Ac.

• DRAINAGE AREA 4c

DRAINAGE AREA IS FROM STATION 80+29 TO 86+93. RUNOFF GENERALLY FLOWS FROM THE CENTER LINE OF U.S. ROUTE 7 WEST TO WETLAND #6 CLASS III AND EVENTUALLY THORP BROOK. THE TOTAL AREA OF DRAINAGE AREA 4c IS 17.7 Ac.

• DRAINAGE AREA 5

DRAINAGE AREA IS FROM STATION 86+93 TO 96.67. RUNOFF GENERALLY FLOWS FROM HILLS WEST TO U.S. ROUTE 7 TO AN UNNAMED TRIBUTARY (CULVERT RUNS UNDER U.S. ROUTE 7) AT STATION 93+58, WETLAND #7 CLASS II AND EVENTUALLY THORP BROOK. THE TOTAL AREA OF DRAINAGE AREA 5 IS 51.0 Ac.

• DRAINAGE AREA 6

DRAINAGE AREA IS FROM STATION 96.67 TO 133+98. RUNOFF GENERALLY FLOWS FROM HILLS WEST TO U.S. ROUTE 7 TO TWO LOCATIONS. FIRST LOCATION FLOWS TO AN UNNAMED STREAM (CONCRETE BOX RUNS UNDER US ROUTE 7) AT STATION 104+85 (BR# 142), WETLAND #8 CLASS II AND EVENTUALLY THORPE BROOK. LOCATION TWO AN UNNAMED TRIBUTARY RUNS UNDER US ROUTE 7 AT STATION 118+88 AND EVENTUALLY THORP BROOK. THE TOTAL AREA OF DRAINAGE AREA 6 IS 464.0 Ac.

PROJECT NAME: CHARLOTTE	
PROJECT NUMBER: F EGC 019-4(20)	
FILE NAME: d78d062_frm.dgn	PLOT DATE: 15-MAR-2016
PROJECT LEADER: K. UPMAL	DRAWN BY: N. PAPPAS
DESIGNED BY: N. PAPPAS	CHECKED BY: C. LEACH
EPSC NARRATIVE I	SHEET I13 OF 499