

EROSION CONTROL NARRATIVE

TEMPORARY DETOUR EROSION CONTROLS

ON PARTIALLY COMPLETED FILL AND CUT SLOPES, ALL EXPOSED SLOPES WILL BE STABILIZED WITH STRAW MATTING AT THE END OF EACH WORKING DAY. IN ANY AREA ON THE DETOUR ROADWAY WHERE CONCENTRATED FLOWS MAY TEND TO COLLECT, TEMPORARY FLEXIBLE SLOPE PIPES WILL BE USED TO CHANNEL THE ANTICIPATED RUNOFF INTO SETTLING BASINS OR DETENTION PONDS, NO ROADWAY RUNOFF WILL BE ALLOWED TO BE CHanneled DIRECTLY INTO THE ROARING BRANCH OF THE WALLOOMSAC RIVER WITHOUT BEING TREATED FOR SEDIMENT. ONCE THE DETOUR FILL SLOPES ARE COMPLETED, THE ENTIRE DETOUR, INCLUDING ALL FILL AND CUT SLOPES (EXCEPT THE PAVED SURFACES), SHALL BE ENTIRELY COVERED WITH STRAW MATTING.

BRIDGE EROSION

THE NEW PIER SUBSTRUCTURES WILL BE CONSTRUCTED IN THE DRY, AND WILL REQUIRE THE USE OF COFFERDAMS. THE COFFERDAMS WILL BE USED AS A BARRIER TO PREVENT SEDIMENTS FROM THE SUBSTRUCTURE EXCAVATION FROM ENTERING THE STREAM. CONSTRUCTION OF THE SUBSTRUCTURES MAY REQUIRE DEWATERING OF THE COFFERDAMS. ALL WATER PUMPED FROM THE SUBSTRUCTURE AND OTHER EXCAVATION AREAS WILL BE PUMPED TO EITHER A DIRT BAG SILT CONTAINMENT DEVICE, OR AN EXCAVATED SEDIMENT BASIN. THE FIRST PUMPING OF THE EXCAVATIONS WILL CONTAIN THE GREATEST VOLUME OF WATER WITH THE HIGHEST SEDIMENT LOAD. IT MAY BE NECESSARY TO CONSTRUCT ADDITIONAL SETTLING STRUCTURES, OR TO CONTROL THE RATE OF DRAWDOWN OF THE EXCAVATIONS.

AFTER COMPLETION OF THE SUBSTRUCTURES, ALL COLLECTED SEDIMENTS SHOULD BE REMOVED FROM THE SETTLING STRUCTURES AND THE GROUND SHAPED TO ITS FINAL GRADE AND SLOPE. DISPOSE OF THE COLLECTED SEDIMENTS IN AN UPLAND PORTION OF THE PROJECT, OR IN A MANNER APPROVED BY THE RESIDENT ENGINEER THAT WILL NOT RESULT IN SEDIMENTS OR POLLUTANTS ENTERING THE STREAM.

ROADWAY EROSION CONTROLS

ANY NEW FILL SLOPES THAT ARE DESIGNED WITH STONE FILL BLANKETS FOR SLOPE STABILIZATION SHALL BE CONSTRUCTED WITH THE STONE FILL BEING PLACED AS THE FILL SLOPE EMBANKMENT CONSTRUCTION PROGRESSES.

ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED FOLLOWING FINAL GRADING ACTIVITIES. ALL AREAS THAT ARE GRADED OUTSIDE OF THE GROWING SEASON SHALL BE TREATED WITH SLOPE STABILIZATION UNTIL SEEDING AND MULCHING CAN BE PERFORMED.

DETOUR REMOVAL AND FINAL EROSION CONTROLS

REMOVE TEMPORARY DETOUR FILL MATERIAL TO ORIGINAL GROUND.

AS THE TEMPORARY DETOUR FILLS ARE REMOVED, ALL EXPOSED SOIL SURFACES WILL BE STABILIZED WITH STRAW MATTING AND/OR SEED AND MULCH. ON PARTIALLY REMOVED TEMPORARY FILL SLOPES, ALL EXPOSED WILL BE STABILIZED AT THE END OF EACH WORK DAY.

THE CHANNEL STONE FILL SLOPES WILL BE COMPLETED, AND GRUBBING MATERIAL WILL BE APPLIED TO STONE FILLED AREAS AROUND EACH ABUTMENT. THE GRUBBING MATERIAL SHALL NOT BE PLACED BENEATH THE NEW STRUCTURE OR BELOW THE ORDINARY HIGH WATER ELEVATION. REFER TO THE HYDRAULICS INFORMATION ON THE PRELIMINARY INFORMATION SHEET.

THE NEWLY PLACED GRUBBING MATERIAL SHALL BE STABILIZED WITH STRAW MATTING AND/OR SEED AND MULCH AS DIRECTED BY THE RESIDENT ENGINEER.

REMOVAL OF SILT FENCE SHALL COMMENCE ONLY AFTER ALL UP-SLOPE AREAS ARE STABILIZED AND WELL ESTABLISHED, AND THE RESIDENT ENGINEER HAS APPROVED THE REMOVAL.

REMOVE ALL REMAINING TEMPORARY EROSION CONTROL MEASURES, RE-GRADE ANY AREAS IF NECESSARY, TREAT ALL RE-GRADED AREAS WITH STRAW MATTING AND/OR SEED AND MULCH, AND ESTABLISH ANY FINAL EROSION CONTROL DEVICES AS DEEMED NECESSARY BY THE RESIDENT ENGINEER.

SEDIMENT SETTLING BASIN SIZING CRITERIA

PUMP FLOW RATE		REQUIRED SURFACE AREA		LENGTH / WIDTH = 2:1			
Q(gpm)	Q(m ³ /s)	FT ²	M ²	L(ft)	W(ft)	L(m)	W(m)
50	0.0032	595	55	35.0	17.0	10.6	5.3
100	0.0063	1200	111	49.0	24.5	15.0	7.5
150	0.0095	1776	165	59.6	29.8	18.2	9.1
200	0.0126	2368	220	68.8	34.4	21.0	10.5
250	0.0158	2970	276	77.0	38.5	23.4	11.7
300	0.0189	3560	330	84.4	42.2	25.8	12.9
350	0.0221	4155	386	91.2	45.6	27.8	13.9

LANDSCAPE NOTES

TREE PROTECTION NOTES:

PRIOR TO CONSTRUCTION: SITE WORK MAY NOT COMMENCE UNTIL THE CONTRACTOR MEETS ON-SITE WITH THE RESIDENT ENGINEER TO COMPLETE A PRE-CONSTRUCTION WALK-THROUGH TO REVIEW AND MAP ALL CONSTRUCTION AND WORK PROCEDURES, ACCESS ROUTES, STORAGE AND TREE PROTECTION AREAS RELATING TO THE PROTECTION OF TREES MARKED "TREE PROTECTION ZONE: NO CONSTRUCTION ACTIVITY WITHIN THIS FENCED TREE PROTECTION ZONE (TPZ), EXCEPT FOR THE INSTALLATION OF EROSION CONTROL MEASURES. (AS APPLICABLE)". ALSO AT THIS TIME ALL UNDERGROUND UTILITIES AND DRAIN OR IRRIGATION LINES SHALL BE ROUTED OUTSIDE THE TREE PROTECTION ZONE. IF LINES MUST TRAVERSE THE PROTECTION AREA, THEY SHALL BE TUNNELED OR BORED UNDER THE TREE AT SPECIFIED DEPTHS.

DURING CONSTRUCTION: PROTECT TREES TO BE SAVED BY ERECTING ORANGE SNOW FENCE JUST AT LIMIT OF CONSTRUCTION AS INDICATED (PLEASE SEE EPSC PLANS AND TREE PROTECTION DETAIL). INSTALL SIGNAGE AT EACH PROTECTION ZONE WHICH CLEARLY READS: "TREES ARE BEING PROTECTED. NO UNAUTHORIZED TRESPASS IS ALLOWED".

AVOID CUTTING ROOTS OF TREES WHENEVER POSSIBLE. WHEN AVOIDANCE IS NOT POSSIBLE, CUT ROOTS FLUSH (SAW THOSE ROOTS GREATER THAN 1IN WIDE), WHICH WILL ENCOURAGE NEW ROOT GROWTH. DO NOT RIP ROOTS WITH EXCAVATOR OR OTHER HEAVY EQUIPMENT.

BACKFILL AS SOON AS POSSIBLE; KEEP ROOT ENDS MOIST WITH WET BURLAP OR SIMILAR MATERIAL UNTIL ABLE TO BACKFILL. ADD A ROOT STIMULATOR SUCH AS MYCORRHIZAL FUNGIPER MANUFACTURER'S INSTRUCTIONS, AND WATER (PER APPROVED WATERING SPECIFICATIONS) THE ENTIRE BACKFILL AREA WITHIN 24 HOURS.

USE TUNNELING TO PRESERVE TREE ROOTS. IT IS BEST TO TUNNEL 1-2 FT ON EITHER SIDE OF THE TREE'S CENTER SO AS TO MISS THE TAP ROOT IF THERE IS ONE. TREES UNDER 1FT DIAMETER CAN TYPICALLY BE TUNNELED AT A DEPTH OF 3 FT; TREES 1FT DIAMETER OR MORE SHOULD BE TUNNELED AT A DEPTH OF 4 FT OR GREATER. FOR TREES 6 IN DBH IN DIAMETER OR LESS, TRENCHING TO INITIATE TUNNELING SHOULD COME NO CLOSER TO THE TREE THAN THE DRIPLINE.

FOR TREES OVER 150 MM DBH:

6-9 IN DBH -5 FT DISTANCE FROM BOTH SIDES OF TREE
10-14 IN DBH -10 FT DISTANCE FROM BOTH SIDES OF TREE
15-19 IN DBH -12 FT DISTANCE FROM BOTH SIDES OF TREE
OVER 19 IN DBH -15 FT DISTANCE FROM BOTH SIDES OF TREE

NO EXCAVATED OR BACKFILL MATERIAL SHALL BE PILED IN TREE PROTECTION ZONE; NO EQUIPMENT SHALL BE STORED, PILED OR CLEANED IN ANY TREE PROTECTION ZONE.

IF A PROTECTED TREE IS DAMAGED DUE TO THE CONTRACTOR'S NEGLIGENCE AND IS NOT REPAIRABLE (AS DETERMINED BY THE ENGINEER OR VAOT LANDSCAPE ARCHITECT), THEN THE CONTRACTOR SHALL REPLACE THE TREE (AT THE CONTRACTOR'S EXPENSE AND ACCORDING TO APPROVED PLANTING TECHNIQUES) WITH THE SAME TREE OF EQUAL VALUE, OR TWO OR MORE TREES WITH A TOTAL VALUE EQUAL TO THAT OF THE DAMAGED TREE. IN ADDITION, ALL TREE PROTECTION MEASURES, INCLUDING FENCING, SIGNAGE, ROOT PRUNING, ROOT STIMULATORS, WATERING AND OTHER MATERIALS WILL NOT BE PAID SEPARATELY, BUT WILL BE CONSIDERED INCIDENTAL TO ALL OTHER CONTRACT ITEMS.

THE FOLLOWING SIGNIFICANT TREES WITHIN THE R.O.W. ARE INDICATED TO BE SAVED; ABSOLUTELY NO CONSTRUCTION WITHIN THIS FENCED TREE PROTECTION ZONE AS INDICATED:

SHEET NO	STATION	TREE
30	STA 71+82	18" WHITE PINE

EROSION CONTROL NARRATIVE #2

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PROJECT NUMBER: BHF 010-1(29)

FILE NAME: 84e039/structures/84e039erobdr.dgn PLOT DATE: 03-OCT-2005
PROJECT LEADER: M EVANS-MONGEON DRAWN BY: W FARLEY
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