

EROSION CONTROL NARRATIVE

BRIDGE EROSION

THERE WILL BE TWO TEMPORARY CAUSEWAYS REQUIRED FOR THIS PROJECT. ONE FOR THE PROPOSED STRUCTURE AND ONE FOR THE EXISTING. THE DOWNSTREAM CAUSEWAY WILL BE REQUIRED TO ACCESS THE CENTER PIER LOCATION OF THE PROPOSED STRUCTURE FOR POURING CONCRETE AND MAY ALSO BE USED TO HELP FACILITATE IN THE PLACEMENT OF THE STEEL. THE UPSTREAM CAUSEWAY WILL BE BUILT AFTER THE DOWNSTREAM CAUSEWAY HAS BEEN REMOVED. IT WILL ALLOW ACCESS TO THE CENTER PIER OF THE EXISTING STRUCTURE FOR REMOVAL. ONLY ONE CAUSEWAY MAY BE IN PLACE AT A GIVEN TIME.

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 A DEWATERING DEVICE AS ACCEPTED BY THE RESIDENT ENGINEER. 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. (SEE TABLE THIS SHEET)

AFTER COMPLETION OF THE SUBSTRUCTURES, ALL COLLECTED SEDIMENTS SHOULD BE REMOVED FROM ANY DEWATERING MEASURES 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.

FINAL EROSION AND SEDIMENT CONTROL

ROADWAY DITCHES ARE TO BE LINED WITH CLEAN, ANGULAR STONE FILL, TYPE I TO PREVENT EROSION DURING STORM EVENTS. (SEE DETAILS SHEETS)

STREAM BANKS WILL BE LINED WITH STONE FILL, TYPE IV AS SPECIFIED IN THE PLANS.

CULVERT OUTLETS WILL BE PROTECTED WITH TYPE I STONE.

GRASS OR OTHER SUITABLE GROUND COVER WILL BE ESTABLISHED OUTSIDE OF THE ROADWAY LIMITS WHERE STONE LINING HAS NOT BEEN SPECIFIED.

TREE SPECIES WILL BE PLANTED IN APPROPRIATE LOCATIONS AS SHOWN IN PLANS.

GENERAL EROSION AND SEDIMENT CONTROL GUIDELINES

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE WORK OUTLINED IN THIS NARRATIVE CONSISTS OF APPLYING MEASURES THROUGHOUT THE LIFE OF THE PROJECT TO CONTROL EROSION AND MINIMIZE THE SEDIMENTATION OF RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION CONTROLS.

THE INSTALLATION, USE, AND REMOVAL OF EROSION AND SEDIMENT CONTROL MEASURES WITH CONSTRUCTION ACTIVITIES TO ENSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS EROSION AND SEDIMENT CONTROL SHALL BE COORDINATED. TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES AS CONSTRUCTION PROCEEDS SHALL BE EMPLOYED. THE CONTRACTOR WILL USE ADDITIONAL EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION AND AS ACCEPTED BY THE RESIDENT ENGINEER.

PREVENTING INITIAL SOIL EROSION IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. THEREFORE, STABILIZE ALL DISTURBED AREAS PROMPTLY AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED. INSTALL TEMPORARY CONTROLS IN INCREMENTAL STAGES AS CONSTRUCTION PROCEEDS.

MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE. IN GENERAL, PRESERVE EXISTING GRASSES, SHRUBS, AND TREES WHEREVER POSSIBLE.

DIVERT OFF-SITE RUNOFF AS NECESSARY TO PREVENT ON-SITE EROSION.

DOT NOT ALLOW CONSTRUCTION EQUIPMENT TO OPERATE ON THE DOWN SLOPE SIDE OF PERIMETER CONTROL MEASURES.

ALL IN-STREAM CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH PROJECT PERMIT REQUIREMENTS.

THIS WILL BE A MULTISEASON PROJECT AND WILL REQUIRE SEASONAL EROSION PREVENTION AND SEDIMENT CONTROL MEASURES. IT IS RECOMMENDED THAT THOSE EROSION CONTROL MEASURES TO ESTABLISH VEGETATION TAKE PLACE BY SEPTEMBER 15TH OF EACH SEASON. INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN IN THE EROSION CONTROL PLAN OR AS ACCEPTED BY THE RESIDENT ENGINEER. DO NOT MODIFY THE TYPE, SIZE OR LOCATION OF ANY CONTROL OR PRACTICE WITHOUT APPROVAL OF THE RESIDENT ENGINEER. ANY CHANGES SHALL BE NOTED ON THE PLANS, IN THE WEEKLY INSPECTION REPORT, AND REPORTED TO THE APPROPRIATE AUTHORITY IN A TIMELY MANNER. INSPECT ALL CONTROL MEASURES WEEKLY AND AFTER EACH RAINFALL EVENT. REPAIR OR REPLACE ANY DAMAGED MEASURES.

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

EROSION CONTROL NARRATIVE #2

PROJECT NAME: MORETOWN-MIDDLESEX
PROJECT NUMBER: BRS 0284(I4)

FILE NAME: s78f219/str/s78f219erobdr.dgn PLOT DATE: 15-JUN-2009
PROJECT LEADER: M.EVANS-MONGEON DRAWN BY: W.FARLEY
DESIGNED BY: L.RUSSELL CHECKED BY: W. FARLEY
IPARM: s78f219er-onarr2.1 SHEET 22 OF 103