

# EROSION CONTROL NARRATIVE



## TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL

TEMPORARY EROSION PREVENTION MEASURES TO BE UTILIZED INCLUDE THE FOLLOWING. REFER TO THE EROSION AND SEDIMENT CONTROL PLANS AND DETAILS FOR LOCATIONS.

THE AREA OF DISTURBED SOIL SHALL BE LESS THAN FIVE ACRES AT ALL TIMES. THIS WILL BE ACHIEVED BY THE CONSTRUCTION PHASING DISCUSSED EARLIER. THE LENGTH OF TIME THAT SOIL IS LEFT DISTURBED WILL ALSO BE MINIMIZED

MULCHING WILL BE UTILIZED ON A REGULAR BASIS. ANY SOIL EXPOSED FOR SEVEN DAYS PRIOR TO FINAL GRADING SHALL BE MULCHED. SOIL SHALL BE STABILIZED WITHIN 48 HOURS OF FORECASTED RAIN.

SEEDING AND MULCHING SHALL BE UTILIZED TO STABILIZE SOIL. SOIL SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE AND/OR DURING INTERMITTENT PHASES OF CONSTRUCTION. SEE THE EROSION CONTROL DETAILS FOR SEED TYPES AND ASSOCIATED APPLICATION RATES.

SILT FENCE WILL BE INSTALLED NEAR THE TOE OF THE FILL SLOPES TO PREVENT SEDIMENT TRANSPORT TO DOWN GRADIENT AREAS. EACH LINE OF SILT FENCE WILL BE PLACED ALONG THE CONTOUR WITH THE LOWER EDGE BURIED 150mm TO PREVENT UNDERFLOW AND ENDS TURNED SLIGHTLY UPGRADE TO CREATE A PONDING EFFECT. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY UPSLOPE EARTHWORK. SILT FENCE SHALL BE PLACED AS SHOWN ON THE EROSION PREVENTION AND SEDIMENT CONTROL PLANS.

PROJECT DEMARCATION FENCING, DENOTED -PDF-PDF- ON THE PLANS, SHALL DELINEATE THE LIMITS THE CONTRACTOR CAN ACCESS WITH CONSTRUCTION EQUIPMENT. THIS MEASURE LIMITS THE AREA THAT CAN BE DISTURBED AND EXPOSED TO EROSION. PDF MAY BE LOCATED IN CLOSE PROXIMITY TO THE PROPOSED SLOPE LINE IN ORDER TO KEEP CONSTRUCTION ACTIVITY OUT OF SENSITIVE AREAS. PDF SHALL BE INSTALLED PRIOR TO THE BEGINNING OF ANY EARTHWORK IN EACH PHASE. PDF SHALL BE PLACED AS SHOWN ON THE EROSION PREVENTION AND SEDIMENT CONTROL PLANS.

INLETS SHALL BE SURROUNDED BY STONE CHECK DAMS OR SILT FENCE TO LIMIT THE AMOUNT OF SEDIMENT THAT ENTERS THE INLET. INLET PROTECTION SHALL BE PLACED AS SHOWN ON THE EROSION PREVENTION AND SEDIMENT CONTROL PLANS AND PER THE EROSION CONTROL DETAILS. THIS MEASURE SHALL BE INSTALLED ONCE THE GRADE ADJACENT TO THE INLET IS WITHIN 150mm OF FINAL GRADE. INLETS SHALL BE CLEANED WHEN THE SUMP BECOMES FILLED WITH SEDIMENT AND AT THE COMPLETION OF CONSTRUCTION.

STONE CHECK DAMS WILL BE INSTALLED IN DITCH LINES TO FORCE STORMWATER TO POND AND LIMIT SEDIMENT TRANSPORT. STONE CHECK DAMS SHALL BE PLACED AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLANS AND PER THE EROSION CONTROL DETAILS. PERMANENT DITCH BERMS ARE EARTHEN CHECK DAMS THAT WILL REMAIN AFTER CONSTRUCTION IS COMPLETED. THESE BERMS WILL ALSO CONTROL EROSION DURING CONSTRUCTION.

AT THE LOCATIONS WHERE CONSTRUCTION VEHICLES WILL BE ENTERING OR LEAVING THE CONSTRUCTION SITE/STAGING AREAS, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED TO LIMIT THE AMOUNT OF SEDIMENT THAT IS TRANSPORTED OFF OF THE SITE BY CONSTRUCTION VEHICLES. STONE SHALL BE USED TO REMOVE SEDIMENT FROM THE TIRES OF CONSTRUCTION VEHICLES. IF SEDIMENT IS STILL BEING TRACKED ONTO PUBLIC ROADS, THE LENGTH OF THE PAD SHALL BE EXTENDED OR VEHICLES SHALL BE RINSED WITH A HOSE PRIOR TO LEAVING THE SITE. SINCE THE PROJECT CROSSES DIFFERENT ROADWAYS AND IS BEING PHASED, THESE LOCATIONS MAY MOVE DURING CONSTRUCTION AND THERE MAY BE MORE THAN ONE CONSTRUCTION ENTRANCE PRESENT ALONG THE PROJECT.

EROSION CONTROL MATTING SHALL BE PLACED ON ANY SLOPES STEEPER THAN 1:3 (V:H). EROSION CONTROL MATTING SHALL BE PLACED WITHIN 48 HOURS OF ATTAINING FINAL GRADE. EROSION CONTROL MATTING SHALL BE PLACED AS SHOWN ON THE EROSION PREVENTION AND SEDIMENT CONTROL PLANS. SEE THE EROSION CONTROL DETAILS FOR DETAILS ON EROSION MATTING FOR DITCHES AND EROSION MATTING FOR SLOPES STEEPER THAN 1:3.

THE PROPOSED DETENTION BASIN MAY BE USED AS SEDIMENT TRAP DURING THE CONSTRUCTION PHASE OF THE PROJECT. THIS TRAP WILL HELP RETAIN SEDIMENT ON THE PROJECT SITE. IN ACCORDANCE WITH THE VERMONT STORMWATER MANAGEMENT MANUAL, IF THE PROPOSED INFILTRATION BASIN SOUTH OF BRIDGE STREET IS TO BE USED AS SEDIMENT TRAPS, IT MUST FIRST BE LINED WITH GEOTEXTILE FABRIC DURING CONSTRUCTION TO PREVENT THE BOTTOM OF THE BASINS FROM CLOGGING WITH FINE SEDIMENTS. THE BASIN SHALL BE EMPTIED AND RE-VEGETATED AT THE END OF CONSTRUCTION. IF THE CONTRACTOR REQUIRES ADDITIONAL SEDIMENT TRAPS/BASINS, THE CONTRACTOR SHALL SUBMIT THE LOCATION, SIZE, AND CALCULATIONS TO THE RESIDENT ENGINEER FOR APPROVAL. TEMPORARY SEDIMENT TRAPS/BASINS SHALL BE SIZED TO PROVIDE A MINIMUM OF 3600 CF PER ACRE ACCORDING TO THE VERMONT HANDBOOK FOR SOIL EROSION AND SEDIMENT CONTROL ON CONSTRUCTION SITES.

AT LOCATIONS WHERE CONSTRUCTION IS IN OR NEAR WATERCOURSES OF THE STATE OF VERMONT, GEOTEXTILE FILTER CURTAIN SHALL BE USED TO MINIMIZE SEDIMENT FROM ENTERING THESE WATERCOURSES. THE FILTER CURTAIN SHALL EXTEND FROM THE BOTTOM OF THE WATERCOURSE TO THE TOP OF THE WATER SURFACE. GEOTEXTILE SHALL ALSO BE PLACED ALONG THE BOTTOM OF THE WATERCOURSE WITHIN THE LIMITS OF THE FILTER CURTAIN TO FACILITATE THE REMOVAL OF SEDIMENT AND PROTECT THE EXISTING WATERCOURSE BOTTOM. IF THE CONTRACTOR WISHES TO USE A DIFFERENT METHOD FOR CONTAINING SEDIMENT IN THESE WATERCOURSES, THE CONTRACTOR MUST SUBMIT THE ALTERNATE METHOD TO THE RESIDENT ENGINEER PRIOR TO THE PRE-CONSTRUCTION MEETING FOR APPROVAL. FILTER CURTAIN SHALL BE INSTALLED AS SHOWN ON THE EROSION PREVENTION AND SEDIMENT CONTROL PLANS PRIOR TO ANY CONSTRUCTION WITHIN 15 METERS (50 FEET) OF WATERS OF THE STATE.

TEMPORARY EROSION CONTROL MEASURES SHALL BE REGULARLY INSPECTED AND MAINTAINED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT REACHES ONE-HALF THE HEIGHT OF THE CONTROL MEASURE. SEDIMENT SHALL BE DISPOSED OF AT A SITE APPROVED BY THE ENGINEER. THE SITE SHALL BE LEVEL AND BE AT LEAST 30 METERS (100 FT) FROM WETLANDS OR WATERS OF THE STATE.

POTENTIAL STAGING AREA LOCATIONS ARE SHOWN ON THE EROSION PREVENTION AND SEDIMENT CONTROL PLANS. THE STAGING AREAS HAVE BEEN LOCATED IN RELATIVELY FLAT AREAS WITHIN THE PROJECT LIMITS OF DISTURBANCE. ANY CHANGES TO THESE LOCATIONS MUST BE APPROVED BY THE ENGINEER.

THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROCURING SITES FOR THE DEPOSITION OF WASTE MATERIAL FROM THE PROJECT. A PROPERTY OWNED BY ERNEST KROSCHEK ON NORTH CAMBRIDGE ROAD IN CAMBRIDGE, VT HAS BEEN IDENTIFIED AS A REASONABLE LOCATION FOR THE DEPOSITION OF THIS MATERIAL.

## PERMANENT EROSION CONTROL MEASURES

PERMANENT EROSION CONTROL MEASURES TO BE UTILIZED INCLUDE:

ALL DISTURBED SOIL SHALL BE PERMANENTLY STABILIZED WITH SEED AND MULCH. STEEPER SLOPES WITH A HIGHER EROSION POTENTIAL SHALL BE STABILIZED WITH STONE. SEE LAYOUT PLANS AND CROSS SECTIONS FOR LOCATIONS OF STONE ON SIDE SLOPES.

## GENERAL EROSION AND SEDIMENT CONTROL GUIDELINES

THE CONSTRUCTION SEASON SHALL BE FROM APRIL 15 TO OCTOBER 15. IF ANY EARTHWORK IS TO BE PERFORMED OUTSIDE THE CONSTRUCTION SEASON, A STAND-ALONE WINTER EROSION AND SEDIMENT CONTROL PLAN AND A NARRATIVE DESCRIBING ALTERNATIVE STABILIZATION METHODS SHALL BE SUBMITTED THROUGH THE ENGINEER TO THE VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION FOR APPROVAL. THE STAND-ALONE EROSION AND SEDIMENT CONTROL PLANS SHALL BE DESIGNED ACCORDING TO THE VERMONT STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION AND SEDIMENT CONTROL.

THE CONTRACTOR SHALL STOCKPILE MATERIAL WITHIN THE STAGING AREAS ONLY. STOCKPILES SHALL BE STABILIZED WITHIN 48 HOURS PRIOR TO FORECASTED RAIN.

FUELING AND MAINTENANCE OF CONSTRUCTION VEHICLES SHALL BE LIMITED TO THE STAGING AREAS AND SHALL BE DONE BY QUALIFIED PERSONNEL.

THE EROSION CONTROL PLANS ARE MEANT TO BE 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 IMPACTS TO RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORMWATER CONTROLS, AND OTHER POLLUTION PREVENTION CONTROLS.

COORDINATE THE INSTALLATION, USE, AND REMOVAL OF EROSION AND SEDIMENT CONTROL MEASURES WITH CONSTRUCTION ACTIVITIES TO ENSURE EFFECTIVE AND CONTINUOUS EROSION AND SEDIMENT CONTROL. EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES AS CONSTRUCTION PROCEEDS. THE CONTRACTOR SHALL USE ADDITIONAL EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION, FIELD CONDITIONS, AND AS DIRECTED BY THE ENGINEER OR ON-SITE COORDINATOR. SEE SECTION 105.23 OF THE VERMONT AOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006.

INSTALL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN IN THE EROSION PREVENTION AND SEDIMENT CONTROL PLANS OR AS DIRECTED BY THE ENGINEER OR ON-SITE COORDINATOR. DO NOT MODIFY THE TYPE, SIZE, OR LOCATION OF ANY CONTROL OR PRACTICE WITHOUT THE APPROVAL OF THE ENGINEER OR ON-SITE COORDINATOR. ANY CHANGES SHOULD 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 THAT PRODUCES RUNOFF FROM THE PROJECT SITE. REPAIR MEASURES PROMPTLY ONCE DAMAGE IS DISCOVERED.

PREVENTING SOIL EROSION IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. THEREFORE, STABILIZE ALL DISTURBED AREAS PROMPTLY AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY VEGETATION SHALL BE ESTABLISHED IF THE AREA IS TO BE WITHOUT CONSTRUCTION ACTIVITY FOR A PERIOD OF 7 DAYS. PERIMETER CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITY. INSTALL OTHER TEMPORARY CONTROLS IN INCREMENTAL STAGES AS CONSTRUCTION PROCEEDS. CONSTRUCT SEDIMENTATION BASINS AS SOON AS PRACTICAL WITHIN EACH PHASE OF CONSTRUCTION.

MAINTAINING VEGETATED BUFFERS ALONG THE STREAM BANKS AND OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE EMPLOYED WHENEVER POSSIBLE.

CONTROL ONLY SEDIMENT LADEN STORMWATER RUNOFF GENERATED BY THE PROJECT SITE. COLLECT AND ROUTE CLEAN STORMWATER AROUND THE PROJECT SITE WHENEVER POSSIBLE USING DIVERSION BERMS, CHANNELS, CULVERTS, OR TEMPORARY PIPES.

DO NOT ALLOW CONSTRUCTION EQUIPMENT TO OPERATE OUTSIDE OF PERIMETER CONTROL MEASURES.

THIS PROJECT CROSSES A WATERCOURSE OF THE STATE OF VERMONT, THE LAMOILLE RIVER. ANY CONSTRUCTION IN OR NEAR THIS WATERCOURSE WILL BE REQUIRED TO CONFORM TO THE VERMONT WATER QUALITY STANDARDS. THESE STANDARDS REQUIRE THAT A CRITICAL LEVEL OF TURBIDITY IN THE WATER NOT BE EXCEEDED. THE CONTRACTOR WILL NEED TO TEST FOR TURBIDITY LEVELS AT THIS CROSSING TO ENSURE THAT IT IS IN COMPLIANCE WITH THE STANDARDS. IT IS EXPECTED THAT THE EROSION AND SEDIMENT CONTROL MEASURES PROPOSED IN THIS PLAN WILL BE SUFFICIENT. HOWEVER, IF THE AMOUNT OF TURBIDITY BECOMES OUT OF COMPLIANCE WITH THE STANDARDS, THE CONTRACTOR WILL BE REQUIRED TO CONSTRUCT ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES AS DIRECTED BY THE ENGINEER.

## PRE-CONSTRUCTION MEETING REQUIREMENTS

AFTER THE CONTRACT HAS BEEN AWARDED, THE CONTRACTOR SHALL SUBMIT INFORMATION TO THE ENGINEER PRIOR TO THE PRE-CONSTRUCTION MEETING AS PER SECTION 652 - EROSION AND SEDIMENT CONTROL PLAN. THIS INFORMATION MAY INCLUDE BUT IS NOT LIMITED TO THE FOLLOWING.

1. THE NAME AND CONTACT INFORMATION OF THE ON-SITE COORDINATOR AND ANY OTHER CO-PERMITTEES.
2. A DESCRIPTION OF THE INSPECTION, MAINTENANCE, AND RECORDS PROGRAM FOR ALL OF THE EROSION CONTROL MEASURES.
3. THE LOCATION OF TOPSOIL STOCKPILES, STAGING AREAS, EQUIPMENT STORAGE, REFUELING/MAINTENANCE AREAS, AND STUMP DISPOSAL AREAS IF DIFFERENT THAN SHOWN IN THIS PLAN.
4. LOCATION OF WASTE/BORROW AREAS FOR EXCESS SOIL, INCLUDING MAP IF OFF-SITE IF DIFFERENT THAN THE LOCATION SPECIFIED IN THIS PLAN. THIS PLAN SHALL INCLUDE ANY EROSION CONTROL MEASURES NECESSARY TO STABILIZE THESE AREAS TO PREVENT EROSION.
5. ANY OTHER INFORMATION THAT DIFFERS FROM THIS APPROVED EROSION PREVENTION AND SEDIMENT CONTROL PLAN.
6. SPECIFIC DEWATERING PLANS AT ANY LOCATION WHERE DEWATERING WILL OCCUR.

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