STATE OF VERMONT **AGENCY OF NATURAL RESOURCES**

Department of Environmental Conservation
Water Quality Division
5 Perry Street, Suite 80
Barre, VT 05641

Department of Fish and Wildlife
Department of Forests, Parks & Recreation
Department of Environmental Conservation

FAX 802-476-0131
TEL 802-476-2679

April 22, 2013

Town of Waitsfield
9 Bridge Street
Waitsfield, Vermont 05673

DeWolfe Engineering Assoc.
81 River Street
PO Box 1576
Montpelier, VT 05601

Permit #: GP-4_Waitsfield

Re: Bank Stabilization Project, Mad River, Left bank stabilization just upstream of the Village Covered Bridge.

The project appears to satisfy the terms and conditions of the Vermont General Permit GP Section C.2.1. and the VT Water Quality Standards; provided the following conditions are met:

1. This project shall be accomplished according to the town plans completed by DeWolfe Engineering. No changes shall be made to the approved permit information and or plans without prior approval from this office.

2. All construction equipment shall be clean and well maintained, free of fuel, hydraulic and gear oil leaks, especially if such equipment is to be used to work in or adjacent to the water.

3. Any areas of streambank disturbed during construction shall be suitably reshaped and stabilized with stone fill or a vegetative planting prior to completion of the project. Strictly limit extent of streambank disturbance. Maintain all established vegetation possible. Any stone fill stabilization shall not encroach on the watercourse beyond existing conditions; no new encroachment work is permitted.

4. In-stream construction dates for this project are from **July 1st to October 1st**. Contractor proposals for construction activities in or adjacent to flowing water must be isolated from stream flow and must receive prior approval from the River Management Engineer.

5. The contractor is responsible for compiling and following an erosion and sediment control construction plan that will be carefully adhered to in order to maintain water quality.

6. Permittee shall contact Patrick Ross @ 802-279-1143 prior to construction to discuss permit details and conditions.

7. This permit expires on October 1, 2013 and it can be revoked at any time inspection reveals that non-compliance with the above conditions.

Please be aware that if the proposed project is located in a town that participates in the National Flood Insurance Program and involves any development (includes construction of structures, the placement of fill, storage of equipment, as well as grading, excavating, dredging) in the Special Flood Hazard Area as delineated on the National Flood Insurance Program Maps, a permit will be required from the town or city.

This approval does not relieve you of the responsibility of obtaining other necessary Local, State, or Federal permits.

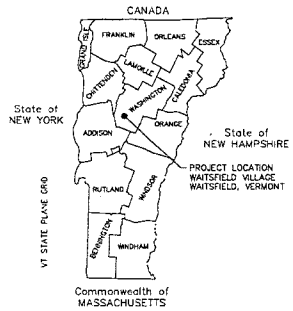
If the project is constructed as you have described and according to the above conditions, there is no reason to expect any violation of Vermont Water Quality Standards.

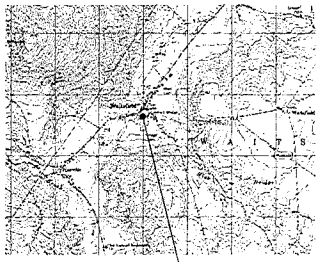
Sincerely,

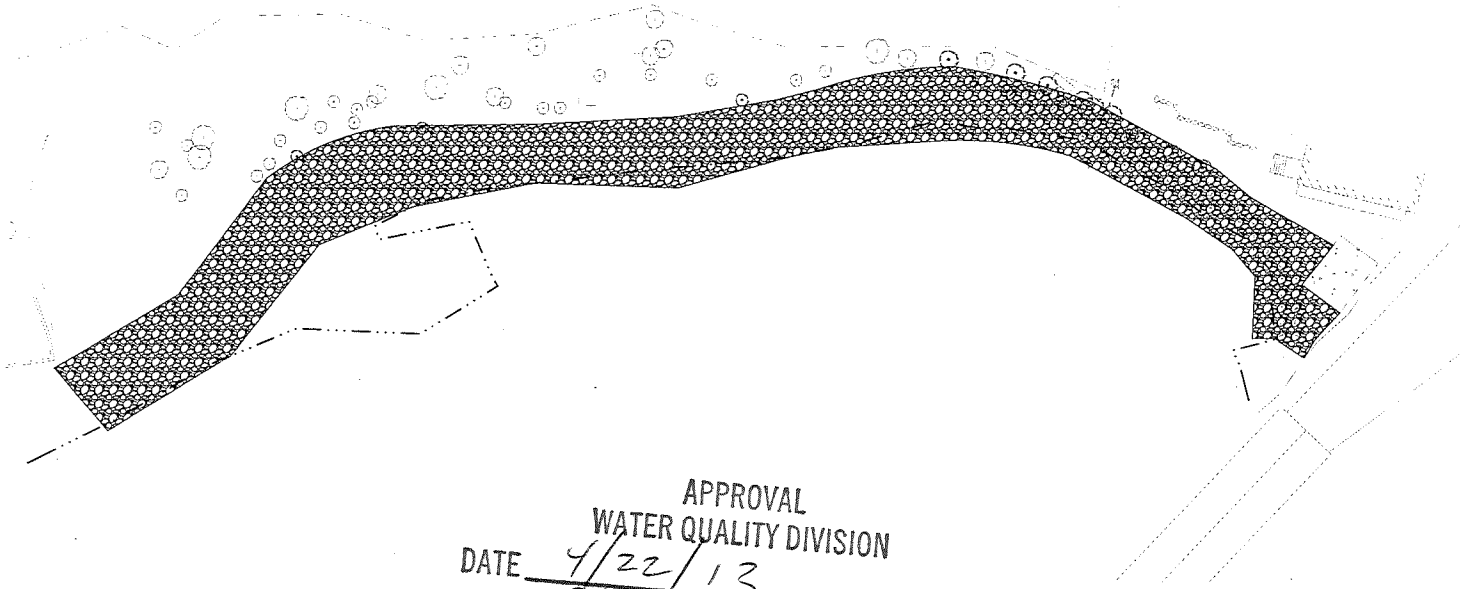
Patrick Ross, P.E.
Field Engineer
River Management Program

Environmental Enforcement Office (e-copy)
Rich Kirn, District Fisheries Biologist (e-copy)
Marty Abair, Corps of Engineers (e-copy)
Patrick Ross, Project File

MAD RIVER BANK STABILIZATION
WAITSFIELD VILLAGE, VERMONT







APPROVAL
WATER QUALITY DIVISION
DATE 4/22/13
BY

THIS APPROVAL IS SUBJECT TO THE TERMS AND CONDITIONS OF STREAM ALTERATION PERMIT #2-1 ISSUED HEREWITH.

PROJECT DESCRIPTION:

THE PROJECT GOAL IS TO STABILIZE APPROXIMATELY 520 LINEAR FEET OF THE NORTH BANK OF THE MAD RIVER IN THE VILLAGE OF WAITSFIELD. THE PROJECT COMMENCES AT THE REMAINS OF THE DAM APPROXIMATELY SOUTH OF THE COVERED BRIDGE, CONTINUES ALONG THE NORTH BANK OF THE RIVER IN AN NORTHERLY DIRECTION (TOWARDS THE COVERED BRIDGE) TO A POINT WHERE THE EXISTING STONE FILL IS IN GOOD CONDITION. THE CONTRACTOR IS TO REMOVE EXISTING TREES AND OVERBURDEN AS INDICATED BY THE PLANS AND PLACE VERMONT AGENCY OF TRANSPORTATION SPEC TYPE IV STONE FILL AS SHOWN ON THE ENCLOSED CROSS SECTIONS.

SHEET INDEX

Sheet	Number	Title	Date Issued	Latest Revision
1	C0.01	COVER SHEET	01 MAR 2013	–
2	C0.02	GENERAL NOTES AND LEGEND	01 MAR 2013	–
3	C1.01	EXISTING CONDITIONS	01 MAR 2013	–
4	C1.02	SITE PLAN	01 MAR 2013	–
5	L1.01	LANDSCAPING PLAN	–	–
6	C3.01	CROSS SECTIONS	01 MAR 2013	–
7	C5.01	CONSTRUCTION DETAILS	01 MAR 2013	–

Civil & Structural Engineers
DeWolfe ENGINEERING ASSOCIATES

NO.	DATE	SUBMISSION	NO.	DATE	REVISION
1			1		
2			2		
3			3		
4			4		
5			5		
6			6		

PROJECT NO. 12158
DATE 01 MAR 13

C0.01

SHEET 1 OF 7

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE	
	ABUTTER'S PROPERTY LINE	
	EASEMENT LINE	
	RIGHT OF WAY LINE	
	ZONING SETBACK LINE	
	ZONING BOUNDARY	
	TOWN LINE	
	SOIL TYPE BOUNDARY	
500	MAJOR CONTOUR	500
501	MINOR CONTOUR	501
	BUILDINGS	
	BUILDING OVERHANG	
	ROADWAY CENTERLINE	
	EDGE OF PAVEMENT	
	CURB	
	EDGE OF GRAVEL	
	TRAIL	
	STONE WALL	
	TREE LINE	
	EDGE OF WETLANDS	
	WETLAND/ SHORELINE BUFFER	
	EDGE OF WATER	
	FLOOD PLAIN BOUNDARY	
	DITCH LINE	
	CONCRETE PAD	
X X	BARBED WIRE FENCE	X X
O O	CHAIN LINK FENCE	O O
	WOOD RAIL	
	GUARDRAIL	
D_x	STORM DRAIN LINE	D D
S_x	SEWER LINE	S S
FM_x	FORCE MAIN LINE	FM FM
W_x	WATER LINE	W W
G_x	GAS LINE	G G
ST_x	STEAM LINE	ST ST
FW_x	FIRE WATER LINE	FW FW
UGE_x	UNDERGROUND ELECTRIC	UGE UGE
OHE_x	OVERHEAD ELECTRIC	OHE OHE
UGU_x	UNDERGROUND UTILITY	UGU UGU
OHU_x	OVERHEAD UTILITY	OHU OHU
$UGU-E_x$	UNDERGROUND UTILITY & ELECTRIC	UGU-E
$OHU-E_x$	OVERHEAD UTILITY & ELECTRIC	OHU-E
	CONSTRUCTION FENCE/ LIMIT OF DISTURBANCE	CF CF CF CF
	SILT FENCE	SF SF SF SF
	SILT CURTAIN	SC SC SC SC
	COFFER DAM	
	SIGN	
	LIGHTS	
MW	MONITORING WELLS	
B-#	BORING LOCATIONS	
TP	TEST PITS	
496.88 x	SPOT GRADES	496.88
	CATCH BASINS	
C.O.	CLEAN OUTS	C.O.
	DRAINAGE MANHOLES	
	ELECTRIC PADS/ HANDHOLDS	
	GATES VALVES	
	HYDRANTS	
	SEWER MANHOLES	
	TELEPHONE/ UTILITY PADS & VAULTS	
	UTILITY POLES	
	POTABLE WATER WELLS	
	WATER SHUT OFFS	
	GUY POLES	
	GUY WIRES	
	CATCH BASIN SEDIMENT TRAPS	
	HAY BALES	
	STONE CHECK DAM	
	STONE INLET PROTECTION	
	DECIDUOUS TREES	
	EVERGREEN TREES	
	CONCRETE BOUNDARY MONUMENT	
	IRON ROD/ PIPE BOUNDARY MONUMENT	
	MAILBOX	
	STONE LINING	
	EROSION CONTROL MATTING	
	SNOW STORAGE AREAS	

GENERAL NOTES

1 GENERAL:

1.1 ALL WORK SHALL BE PERFORMED IN A FIRST CLASS MANNER, AND IN ACCORDANCE WITH STATE CODE (BBC 2012 WITH LATEST SUPPLEMENTS), AND LOCAL CODES AND ORDINANCES.

1.2 ALL EXISTING UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL CONTACT DIG-SAFE (1-888-DIG-SAFE) PRIOR TO STARTING CONSTRUCTION AND VERIFY ALL UTILITY LOCATIONS IN THE FIELD.

1.3 THE LIMITS OF SITE WATER AND SEWER WORK SHALL TERMINATE 2'-0" INSIDE THE BUILDING. THE SITE CONTRACTOR SHALL PROVIDE PIPING. GENERAL CONTRACTOR SHALL PROVIDE SLEEVES AS NECESSARY.

1.4 GAS AND ELECTRIC LINES SHALL BE EXCAVATED AND BACKFILLED BY THE SITE CONTRACTOR. PIPING SHALL BE PROVIDED AND INSTALLED BY THE APPROPRIATE SUBCONTRACTOR.

1.5 USE THESE CIVIL DRAWINGS IN CONJUNCTION WITH THE ARCHITECTURAL, STRUCTURAL, ELECTRICAL, LANDSCAPING & MECHANICAL DRAWINGS. SHOULD A CONFLICT DEVELOP, NOTIFY THE ENGINEER BEFORE PROCEEDING.

1.6 ALL DIMENSIONS AND ELEVATIONS SHOWN MUST BE VERIFIED BY THE CONTRACTOR DURING CONSTRUCTION BY THE AID OF DRAWINGS, FIELD CHECKS, AND SUBCONTRACTORS SHOP DRAWINGS.

1.7 CONTRACTOR SHALL PROTECT EXISTING FACILITIES, STRUCTURES, AND UTILITY LINES FROM ALL DAMAGE.

1.8 CONTRACTOR IS RESPONSIBLE FOR ADEQUATE BRACING OF WALLS AND/OR SHORING OF EXCAVATIONS DURING CONSTRUCTION.

1.9 THE CONTRACTOR SHALL REVIEW AND STAMP ALL SHOP DRAWINGS AND SUBMITTALS BEFORE SUBMISSION TO THE ENGINEER. THIS, PROVIDING ANY INFORMATION REQUIRED OF THE FABRICATOR SUCH AS FIELD DIMENSIONS, ELEVATIONS, ETC. OTHERWISE THE SHOP DRAWINGS OR SUBMITTALS WILL BE REJECTED UNTIL SUCH INFORMATION IS FURNISHED BY THE CONTRACTOR.

1.10 BACKFILL INSIDE OF FOUNDATION WALLS, UNDER CONCRETE SURFACES, AND UNDER PAVED SURFACES WITH IMPORTED BANK RUN GRAVEL, OR SELECT ON-SITE MATERIAL THAT WILL MEET COMPACTION CRITERIA, AS DETERMINED BY THE TESTING LABORATORY, IN 8" LIFTS TO 95% OF THE MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT, ASTM D1557.

1.11 GENERAL BACKFILL SHALL BE COMPACTED TO 90% OF THE MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT, ASTM D1557.

2 MATERIAL SPECIFICATIONS

2.1 MATERIALS NOT SPECIFIED HEREIN SHALL MEET OR EXCEED VERMONT AGENCY OF TRANSPORTATION (VAOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION.

2.2 GENERAL FILL SHALL BE A COMPATIBLE SAND OR GRAVEL REASONABLY FREE FROM LOAM, SILT, CLAY AND ORGANIC MATERIALS AND SHALL HAVE 0-30 PERCENT PASSING THE NO. 100 SIEVE AND 40-100 PERCENT PASSING THE NO. 4 SIEVE.

2.3 BANK RUN GRAVEL SHALL BE FREE FROM LOAM, SILT, CLAY AND ORGANIC MATERIALS AND SHALL HAVE 100 PERCENT PASSING A 3 INCH SIEVE, 20-75 PERCENT PASSING A NO. 4 SIEVE, 0-12 PERCENT PASSING A NO. 100 SIEVE AND 0-6 PERCENT PASSING A NO. 200 SIEVE.

2.4 CRUSHED BANK RUN GRAVEL SHALL BE FREE FROM LOAM, SILT, CLAY AND ORGANIC MATERIALS AND SHALL HAVE 100 PERCENT PASSING A 2 INCH SIEVE, 50-100 PERCENT PASSING A 1½ INCH SIEVE, 30-60 PERCENT PASSING A NO. 4 SIEVE, 0-12 PERCENT PASSING A NO. 100 SIEVE AND 0-6 PERCENT PASSING A NO. 200 SIEVE.

2.5 STONE FILL SHALL BE TYPE IV AS SPECIFIED BY THE VAOT UNLESS OTHERWISE NOTED.

STANDARD ABBREVIATIONS

BCC – BITUMINOUS CONCRETE CURB
VGC – VERTICAL GRANITE CURB
SGC – SLOPED GRANITE CURB
CCC – CAST-IN-PLACE CONCRETE CURB
PCC – PRECAST CONCRETE CURB
ICC – INTEGRAL CONCRETE CURB
RCC – REINFORCED CONCRETE CURB
BCP – BITUMINOUS CONCRETE PAVEMENT
GPA – GRAVEL DRIVE SURFACE
PCS – PORTLAND CEMENT CONCRETE SIDEWALK
BCS – BITUMINOUS CONCRETE SIDEWALK
CB – CATCH BASIN
DMH – DRAINAGE MANHOLE
SMH – SEWER MANHOLE

EROSION CONTROL DURING CONSTRUCTION

1. BEFORE ANY CLEARING, GRUBBING, OR DEMOLITION OF THE SITE IS INITIATED, AND DURING ALL EARTHWORK PHASES, EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED AT THE INLET OF ANY STORM DRAINS, SWALES, AND DITCHES RECEIVING WATER FROM THE PROJECT. SEE TYPICAL DETAILS AND PLANS FOR TYPES AND LOCATIONS.

2. SILT FENCE SHALL BE PLACED DOWN GRADIENT OF ALL DISTURBED AREAS. IF THE DISTURBED AREA IS 100' OR LESS FROM THE WATERS OF THE STATE THE SILT FENCE SHALL BE WIRE MESH REINFORCED.

3. ALL STOCKPILED SOIL SHALL BE ENCIRCLED WITH SILT FENCE, UNLESS AN EXISTING BARRIER WILL EXTRAP ALL EROSION FROM SUCH A STOCKPILE OR THE STOCKPILE IS COMPLETELY COVERED WITH VEGETATION THAT PREVENTS EROSION.

4. NO MORE THAN 500 FEET OF TRENCH SHALL BE OPEN AT ONE TIME AND EXCAVATED MATERIAL TO USED FOR BACKFILL SHALL BE PLACED ON THE UPHILL SIDE OF THE TRENCH. ALL OTHER EXCAVATED MATERIAL SHALL BE DISPOSED OF OFF-SITE AT AN APPROVED LOCATION.

5. BEFORE AND AFTER EVERY STORM ALL STRUCTURAL EROSION CONTROL MEASURES SHALL BE INSPECTED FOR FAILURES OR CLOGGING, AND ANY FAILURE OR CLOGGING SHALL BE RECTIFIED. DURING THE WINTER CONSTRUCTION SEASON SPECIAL ATTENTION SHALL BE PAID THE CHANGES IN WEATHER THAT COULD CAUSE SIGNIFICANT SNOW MELT AND RUNOFF.

6. STONE CHECK DAMS SHALL ALSO BE PLACED IN NEWLY CONSTRUCTED SWALES, DITCHES, OR OTHER WATERWAYS DURING THE CONSTRUCTION PERIOD. STONE INLET PROTECTION OR SEDIMENT CATCH BASIN INSERTS SHALL BE PLACED IN ALL NEW AND EXISTING CATCHBASIN WHICH RECEIVED RUNOFF FROM DISTURBED AREAS. THE PLACING OF THESE TRAPS AND DAMS SHALL BE AS SHOWN ON THE PLANS. MAINTENANCE SHALL BE AS IN #4 ABOVE.

7. EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM NUMBER REQUIRED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO USE ADDITIONAL BARRIERS AS FIELD CONDITIONS DICTATE AND TO INSURE THAT ANY EROSION CREATED BY THIS PROJECT DOES NOT REACH THE STATE'S WATERWAYS OR LEAVE THE SITE.

8. NEW SWALES AND DITCHES (AND ANY OTHER AREA SUBJECT TO CONCENTRATED STORM RUNOFF) SHALL BE FERTILIZED AND SEEDED WITH THE FOLLOWING MIXTURE TO AT LEAST TWO (2) FEET ABOVE THE CHANNEL BOTTOM:

SEED	LBS/ACRE
CREEPING RED FESCUE	20
REDTOP	2
SMOOTH BROMEGRASS	20

AND SHALL HAVE MULCH APPLIED AT THE RATE OF 2 TONS PER ACRE.

9. IN ALL NEW SWALES AND DITCHES, AND WHERE SLOPE GRADE EXCEEDS 25 PERCENT (1 ON 4 SLOPE), JUTE MATTING SECURELY ATTACHED TO THE GROUND SHALL BE PLACED OVER MULCH AND MAINTAINED UNTIL A PERMANENT GRASS COVER IS ESTABLISHED.

10. ALL DISTURBED TERRAIN AT FINAL GRADE SHALL BE SEEDED AND MULCHED WITHIN 48 HOURS OF COMPLETION, AND BY SEPTEMBER 15TH AT THE LATEST. BEFORE APPLYING FINAL SEEDING FOUR (4) INCH AVERAGE DEPTH OF TOPSOIL SHALL BE PLACED IN ALL DISTURBED AREAS TO BE SEEDED. FERTILIZER SHALL BE APPLIED TO THE TOP 2-INCHES OF TOPSOIL AT A RATE OF 500 LBS/ACRE. SEED MIXTURES SHALL BE ONE AS SPECIFIED ON LANDSCAPING PLAN. IF NO SEED MIXTURE IS SPECIFIED IT SHALL BE ONE OF THE FOLLOWING, AS APPROPRIATE:

EMBANKMENT/SLOPING GROUND	LBS/ACRE
MIXTURE#1 CREEPING RED FESCUE	20
REDTOP	2
BIRDSFOOT TREFOIL	8
OR CROWNVETCH	15
MIXTURE#2 TALL FESCUE	10
REDTOP	2
FLAT PEA (LATHCO)	30
MIXTURE#3 CREEPING RED FESCUE	15
FLAT PEA (LATHCO)	30

FLAT/LEVEL GROUND	LBS/ACRE
MIXTURE#1 KENTUCKY BLUE GRASS	20
CREEPING RED FESCUE	20
RYE (PERENNIAL) OR	
REDTOP	5
MIXTURE#2 CREEPING RED FESCUE	20
REDTOP	2
TALL FESCUE	20

11. ALL NEWLY SEEDED AREAS SHALL BE MULCHED AT A RATE OF TWO (2) TONS PER ACRE OF HAY, STRAW OR WOODCHIPS. DURING WINTER CONSTRUCTION MULCH SHALL BE APPLIED AT A RATE OF 4 TONS PER ACRE. JUTE OR OTHER EQUAL NETTING SHALL BE USED WHERE WIND OR WATER MAY ERODE NEWLY-PLACED SEED OR MULCH OR WHERE GRADE EXCEEDS 25% (1:4). ALL NETTING, WHERE USED, SHALL BE STAKED TO THE GROUND IN COMPLIANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

12. ALL AREAS THAT REACH FINISHED GRADE DURING THE WINTER CONSTRUCTION SEASON SHALL BE MULCHED AT A RATE OF 4 TONS/ACRE AND TACKED DOWN TO PREVENT WINDTHROW WITHIN 24 HOURS OF REACHING FINAL GRADE. THESE AREAS SHALL BE SEEDED AS SPECIFIED IN NOTE 9 IN THE SPRING AS SOON AS WEATHER ALLOWS.

13. ALL HAY MULCH SHALL BE TACKED DOWN TO PREVENT WINDTHROW. JUTE MATTING OR EQUIVALENT SHALL BE USED WHERE INDICATED ON PLANS. IN ALL OTHER AREAS MULCHED SHALL BE TRACKED WITH A BULLDOZER. THE CLEATS OF THE BULLDOZER SHALL BE PARALLEL TO THE CONTOURS. DURING THE WINTER CONSTRUCTION SEASON NETTING OR JUTE MATTING SHALL BE USED TO TACK DOWN ALL MULCH.

14. ALL DISTURBED AREAS NOT AT FINAL GRADE THAT WILL NOT BE DISTURBED AGAIN FOR A PERIOD OF GREATER THAN THIRTY (30) DAYS, SHALL BE SEEDED WITH A TEMPORARY, RAPID-GROWING COVER CROP, SUCH AS RYE GRASS AND MILLET, AND SHALL BE MULCHED. NETTING SHALL ALSO BE APPLIED, AS SPECIFIED IN ITEM 13, TO STABILIZE THE MULCH AND SEED.

15. ALL DISTURBED AREAS MUST HAVE TEMPORARY OR FINAL STABILIZATION WITHIN 14 DAYS OF THE INITIAL DISTURBANCE. AFTER THIS TIME, ANY DISTURBANCE IN THE AREA MUST BE STABILIZED AT THE END OF EACH WORK DAY. THE FOLLOWING EXCEPTIONS APPLY: i) STABILIZATION IS NOT REQUIRED IF WORK IS TO CONTINUE IN THE AREA IN THE NEXT 24 HOURS AND THERE IS NO PRECIPITATION FORECAST FOR THE NEXT 24 HOURS. ii) STABILIZATION IS NOT REQUIRED IF THE WORK IS OCCURRING IN A SELF-CONTAINED EXCAVATION (I.E. NO OUTLET) WITH A DEPTH OF 2-FEET OR GREATER (E.G. FOUNDATION EXCAVATION, UTILITY TRENCHES)

16. DURING WINTER CONSTRUCTION ALL DISTURBED AREAS MUST HAVE TEMPORARY OR FINAL STABILIZATION AT THE END OF EACH WORK DAY. THE FOLLOWING EXCEPTIONS APPLY: i) STABILIZATION IS NOT REQUIRED IF WORK IS TO CONTINUE IN THE AREA IN THE NEXT 24 HOURS AND THERE IS NO PRECIPITATION FORECAST FOR THE NEXT 24 HOURS. ii) STABILIZATION IS NOT REQUIRED IF THE WORK IS OCCURRING IN A SELF-CONTAINED EXCAVATION (I.E. NO OUTLET) WITH A DEPTH OF 2-FEET OR GREATER (E.G. FOUNDATION EXCAVATION, UTILITY TRENCHES)

17. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS OF PERMANENT STABILIZATION OF THE SITE.

18. EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER ANY RAIN EVENT WHICH PRODUCES RUNOFF BY THE ON-SITE COORDINATOR, WHO WILL BE RESPONSIBLE FOR RECTIFYING ANY PROBLEMS FOUND. ALL INSPECTION FORMS SHALL BE KEPT ON-SITE AS RECORDS OF THE CONDITION OF THE EROSION CONTROL MEASURES. TEMPORARY EROSION CONTROL MEASURE SHALL BE REMOVE WITH 30 DAYS OF PERMANENT SITE STABILIZATION.

19. NO MORE THAN 3 ACRES SHALL BE DISTURBED (WITHOUT TEMPORARY OR FINAL STABILIZATION) AT ANY ONE TIME.

20. SEEDING MUST BE COMPLETED BY SEPTEMBER 15.

21. CONTRACTOR SHALL APPLY DUST CONTROL MEASURES AS NECESSARY OR AS DIRECTED BY THE ENGINEER TO PREVENT THE AIR MOVEMENT OF DUST. ACCEPTABLE METHODS OF DUST CONTROL ARE VEGETATIVE COVER, MULCHING, SPRINKLING OF WATER, OR THE USE OF CALCIUM CHLORIDE.

LANDSCAPING NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH SUBCONTRACTORS AS REQUIRED TO ACCOMPLISH PLANTING OPERATIONS.

2. LANDSCAPING CONTRACTOR SHALL RECEIVE SITE GRADE TO +/- 0.10 FOOT.

3. ALL TREES OF THE SAME SPECIES AND SIZE SHALL HAVE MATCHING HEIGHT AND FORM UNLESS OTHERWISE NOTED ON THE PLANS.

4. ALL PLANT MATERIALS AND FINAL LOCATION OF ALL PLANT MATERIALS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.

5. IF CONFLICTS ARISE BETWEEN SIZE OF AREAS AND PLANS, CONTRACTOR SHALL CONTACT OWNERS REPRESENTATIVE FOR IMMEDIATE RESOLUTION. FAILURE TO MAKE SUCH CONFLICTS KNOWN TO THE OWNER'S REPRESENTATIVE WILL RESULT IN CONTRACTORS LIABILITY TO RELOCATE THE MATERIALS.

6. CONTRACTOR SHALL FURNISH PLANT MATERIALS FREE OF PESTS OR PLANT DISEASES. PRE-SELECTED OR "TAGGED" MATERIAL MUST BE INSPECTED BY THE CONTRACTOR AND CERTIFIED AS PEST AND DISEASE FREE. IT IS THE CONTRACTORS OBLIGATION TO WARRANTY ALL PLANT MATERIALS.

7. ALL GROUND COVERS SHALL BE TRIANGULARLY SPACED UNLESS OTHERWISE NOTED.

8. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF ANY EXISTING MATERIALS DAMAGED DURING PLANTING OPERATIONS.

9. ALL LANDSCAPE AREAS SHALL BE COVERED WITH 2-INCHES OF ORGANIC BARK MULCH UNLESS OTHERWISE NOTED.

10. AREAS SHOWN AS GROUND COVER AT THE BASE OF TREE AND SHRUB MATERIALS MUST CONFORM TO THE FOLLOWING CRITERIA. THERE SHALL BE NO GROUND COVER PLANT MATERIAL AT THE BASE OF THE TREE OR SHRUB AS FOLLOWS: A) 4-FOOT RADIUS AROUND EVERGREEN TREES; B) 3-FOOT RADIUS AROUND DECIDUOUS TREES; AND C) 2-FOOT RADIUS AROUND LARGE SHRUBS.

11. FINAL PLACEMENT OF ALL PLANT MATERIALS SHALL BE SUBJECT TO APPROVAL OF OWNER'S REPRESENTATIVE PRIOR TO FINAL PLACEMENT AND BACKFILL. CONTACT OWNER'S REPRESENTATIVE 24-HOURS PRIOR TO PLACEMENT FOR APPROVAL.

12. ALL DISTURBED AREAS, UNLESS OTHERWISE NOTED, TO BE LOAM, SEEDED, AND MULCHED.

NO.	DATE	REVISION
1		
2		
3		
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5		
6		
7		

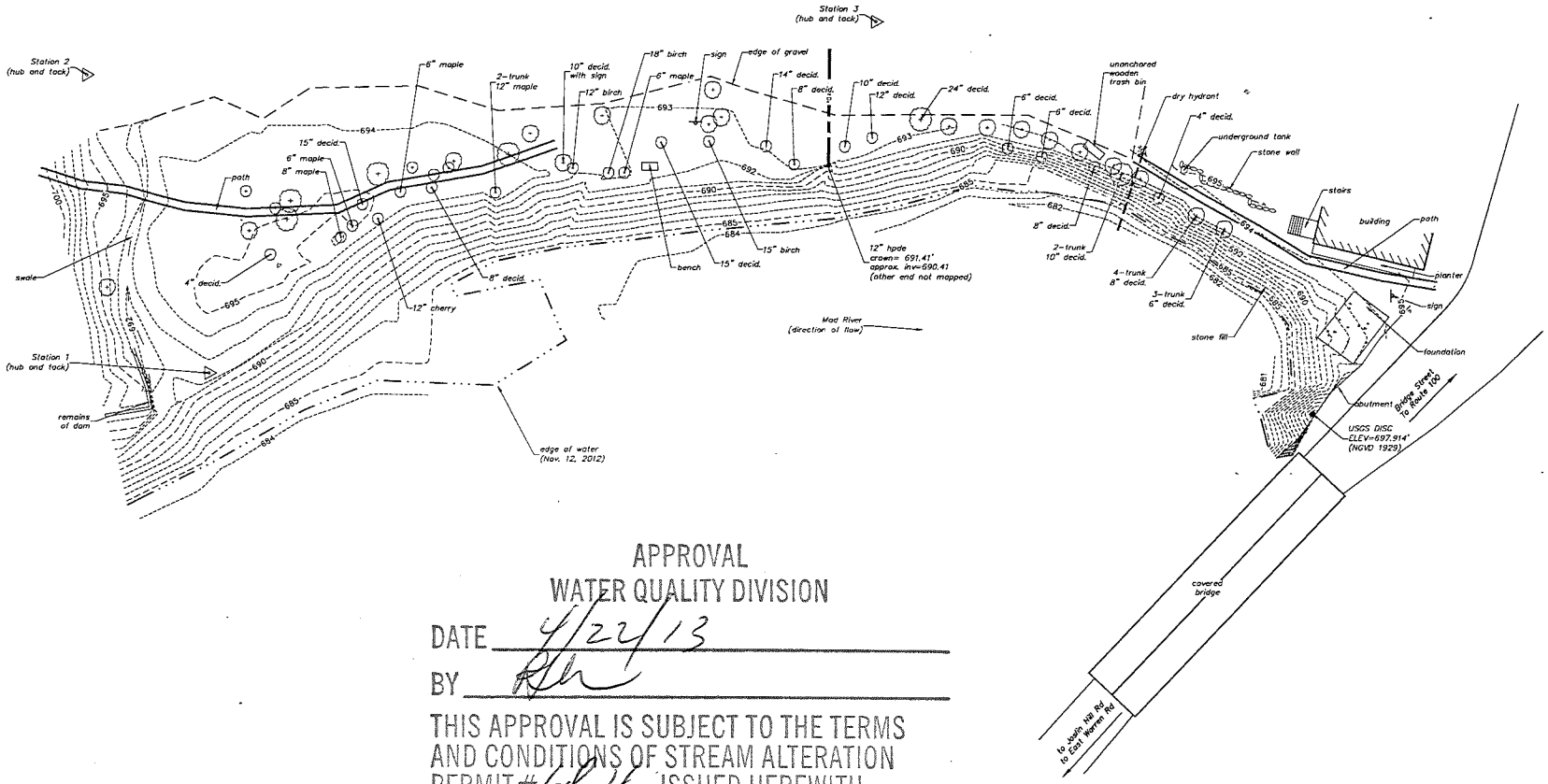
Civil & Structural Engineers
DAMOND ENGINEERING ASSOCIATES

MAD RIVER BANK STABILIZATION
NORTH BANK OF MAD RIVER, WAITSFIELD VILLAGE
WAITSFIELD, VERMONT

TOWN OF WAITSFIELD, VERMONT

SHEET DESCRIPTION: LEGEND AND NOTES

PROJECT NO. 12158	DATE 01 MAR 13
SCALE N.T.S	C0.02
DRAWN DLF	
CHECKED	SHEET SHEET 2 OF 7



APPROVAL
WATER QUALITY DIVISION

DATE 4/22/13

BY

THIS APPROVAL IS SUBJECT TO THE TERMS AND CONDITIONS OF STREAM ALTERATION PERMIT# 01-4 ISSUED HEREWITH.

Notes:

1. Topographic survey by DeWalle Engineering on November 12, 2012.
2. Vertical Datum is NGVD 29, based on the USGS disc located in the bedrock at the northwest corner of the covered bridge.

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

NO.	DATE	REVISION
1		
2		
3		
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7		

Civil & Structural Engineers
DeWalle ENGINEERING ASSOCIATES

MAD RIVER BANK STABILIZATION

NORTH BANK OF MAD RIVER, WAITSFIELD VILLAGE
WAITSFIELD, VERMONT

TOWN OF WAITSFIELD, VERMONT

SHEET DESCRIPTION
EXISTING CONDITIONS

PROJECT NO. 12158	DATE 01 MAR 13
SCALE 1"=20'	C1.01
DRAWN AAM	
CHECKED DLF	SHEET SHEET 3 OF 7

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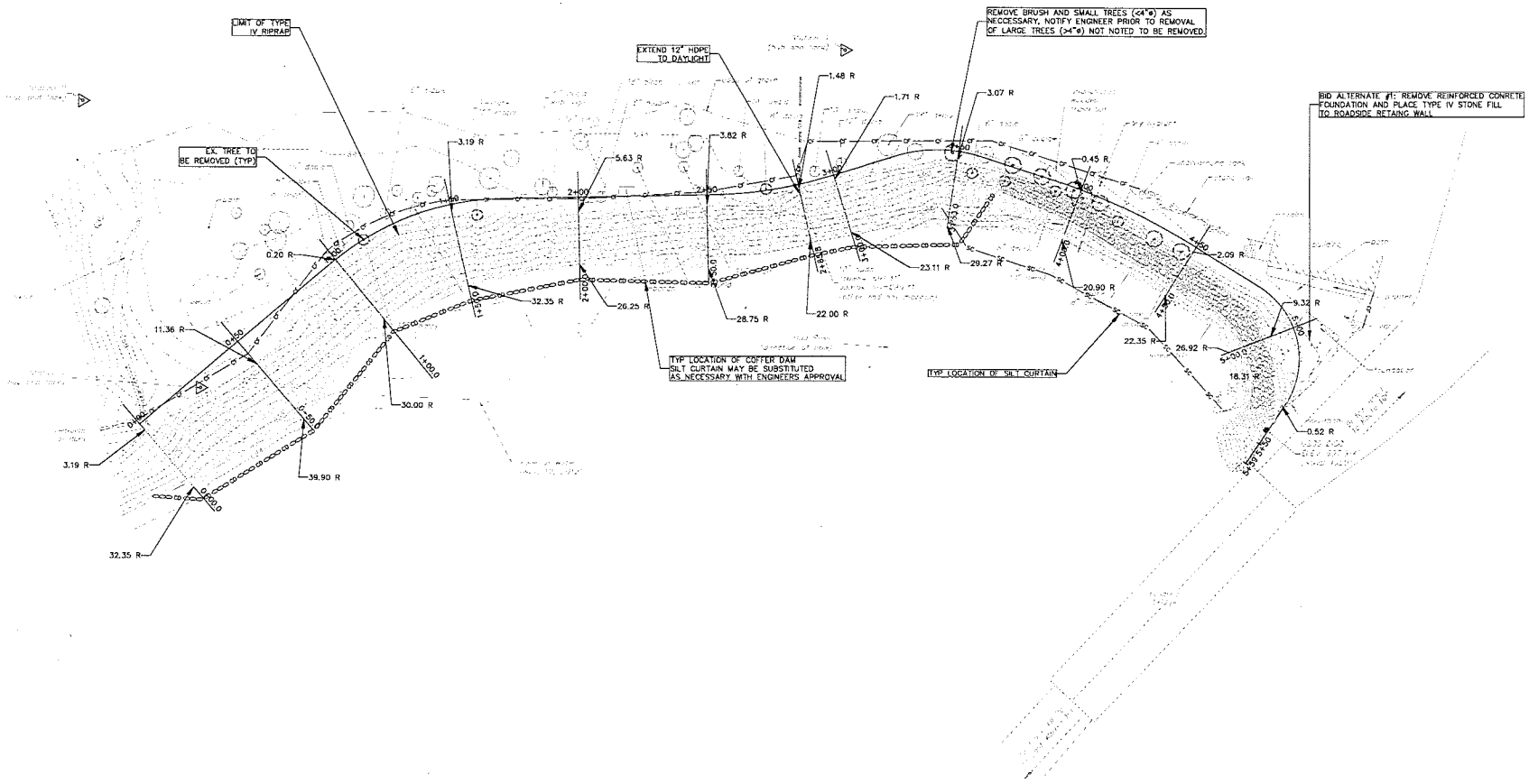

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GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

NO.	DATE	REVISION

Civil & Structural Engineers
DeWolfe ENGINEERING ASSOCIATES

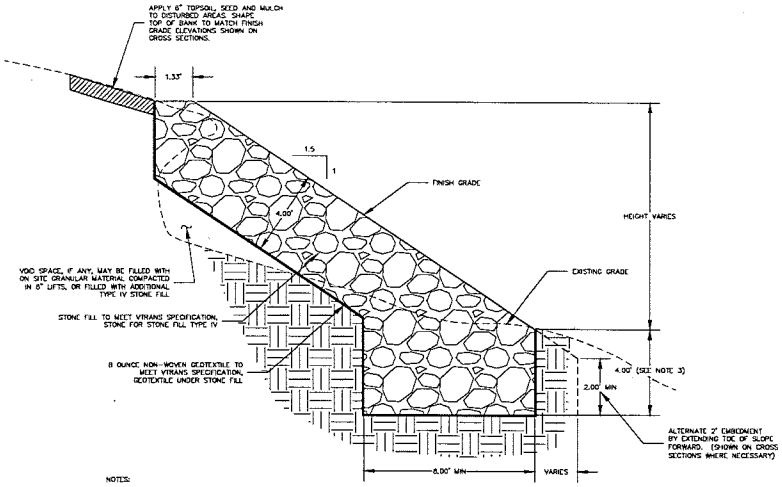
MAD RIVER BANK STABILIZATION

NORTH BANK OF MAD RIVER, WAITSFIELD VILLAGE
WAITSFIELD, VERMONT

TOWN OF WAITSFIELD, VERMONT

SHEET DESCRIPTION: SITE PLAN

PROJECT NO. 12158	DATE 01 MAR 13
SCALE 1"=20'	C1.02
DRAWN JJS	
CHECKED DLF	SHEET SHEET 4 OF 7

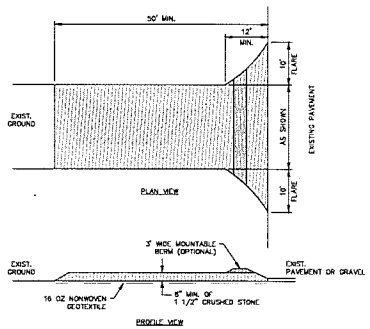


NOTES:

1. TYPE IV STONE FILL TO BE PLACED PER VTRANS STANDARD SPECIFICATION SECTION 613.
2. STONE FILL MUST MEET VTRANS STANDARD MATERIAL SPECIFICATION 706.04(D), TYPE IV STONE FILL.
3. THE TYPICAL EMBEDMENT AT TOE OF FILL IS 4'. THIS IS REDUCED IN SOME SECTIONS BY EXTENDING THE 1.5:1 SLOPE OUT TO MEET EXISTING GRADE. THE EMBEDMENT MUST BE A MINIMUM OF 2 FEET BELOW EXISTING GRADE.

TYPICAL SECTION: TYPE IV STONE FILL BANK STABILIZATION

NOT TO SCALE



NOTES:

1. THE PURPOSE IS TO REMOVE MUD FROM TIRES OF CONSTRUCTION VEHICLES.
2. WHEN STONE BECOMES CLOGGED AND INEFFECTIVE, TOPDRESS WITH 3" OF NEW STONE OR REPLACE ENTIRE PAD.
3. IF TIRE WASHING IS REQUIRED, WASH WATER SHALL DRAIN INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
4. STONE SIZE- USE 1-4 INCH STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
5. SURFACE WATER- ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
6. MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
7. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS

STABILIZED CONSTRUCTION ENTRANCE

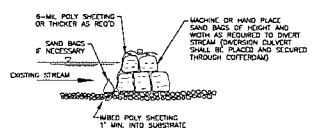
NOT TO SCALE

APPROVAL
WATER QUALITY DIVISION

DATE 4/22/13

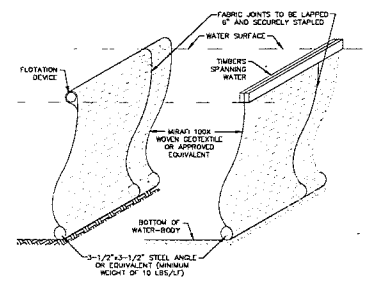
BY

THIS APPROVAL IS SUBJECT TO THE TERMS AND CONDITIONS OF STREAM ALTERATION PERMIT# GP-4 ISSUED HEREWITH.



TEMPORARY SANDBAG COFFERDAM

NOT TO SCALE



NOTES:

1. THESE ARE SUGGESTED CONSTRUCTION METHODS. ACTUAL METHOD TO BE APPROVED BY THE ENGINEER.

SILT CURTAIN

NOT TO SCALE

NO.	DATE	REVISION

Civil & Structural Engineers
DUBOIS & KING ENGINEERING ASSOCIATES

MAD RIVER BANK STABILIZATION
NORTH BANK OF MAD RIVER, WAITSFIELD VILLAGE
WAITSFIELD, VERMONT

TOWN OF WAITSFIELD, VERMONT

SHEET DESCRIPTION: CONSTRUCTION DETAILS

PROJECT NO. 12158	DATE 01 MAR 2012
SCALE AS SHOWN	C5.01
DRAWN JJS	
CHECKED DLF	SHEET SHEET 7 OF 7