



**Vermont Department of Environmental Conservation**

Agency of Natural Resources

Watershed Management Division  
1 National Life Drive, Main 2  
Montpelier VT 05620-3522  
www.watershedmanagement.vt.gov

[phone] 802-828-1535  
[fax] 802-828-1544

**AUTHORIZATION TO CONDUCT STREAM ALTERATION ACTIVITIES**

Pursuant to Section C.2.2 of the VT Stream Alteration General Permit (Reporting activities not requiring an application)

Project Number: SA-06- 48 -2015

Applicant Name: Town of Hinesburg

Mailing Address: 10632, VT, Route 116, Hinesburg, VT 05461 Phone: (802) 482-2281 X 229

Project Location Shelburne Falls Rd Hinesburg (44.3403 -73.1193) Email: hinesburgpw@gmail.com  
rmavin@aeengineers.com

The Secretary of the Vermont Agency of Natural Resources (VT ANR) has determined that:

1. This project authorizes Forest Main Crossing of an unnamed tributary of the La Platte River
2. The proposed activity is eligible for coverage under the VT ANR Stream Alteration General Permit.
3. The proposed activity will meet the terms and conditions of the General Permit provided:
  - a) The project will be completed and approved as shown on the plan dated 08/2015, prepared by Aldrich & Elliott Water Resource Engineers, and approved by the Vermont Agency of Natural Resources.
  - b) The project will not adversely affect the public safety by increasing flood hazards.
  - c) The project will not significantly damage fish life or wildlife.
  - d) The project will not significantly damage the rights of riparian owners.
  - e) The project will not obstruct the movement of aquatic life indigenous to the waterbody beyond the actual duration of construction.
  - f) The project is conducted in a manner which minimizes or avoids any discharge of sediment or other pollutants to surface waters in violation of the VT Water Quality Standards.
  - g) The ANR River Management Engineer is notified by phone or email when construction begins and when the project is complete.
  - h) In-stream working dates for all GP activities are from July 1<sup>st</sup> through October 1<sup>st</sup>; any in-stream work outside these dates will require an Individual Stream Alteration Permit authorization by the River Management Engineer.
  - i) This authorization has been posted for three days public comment. This authorization constitutes final approval.

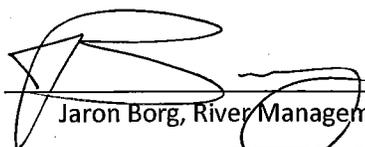
If there are any changes in the project plan or deviation in construction from the plan, the Permittee must notify the River Management Engineer immediately.

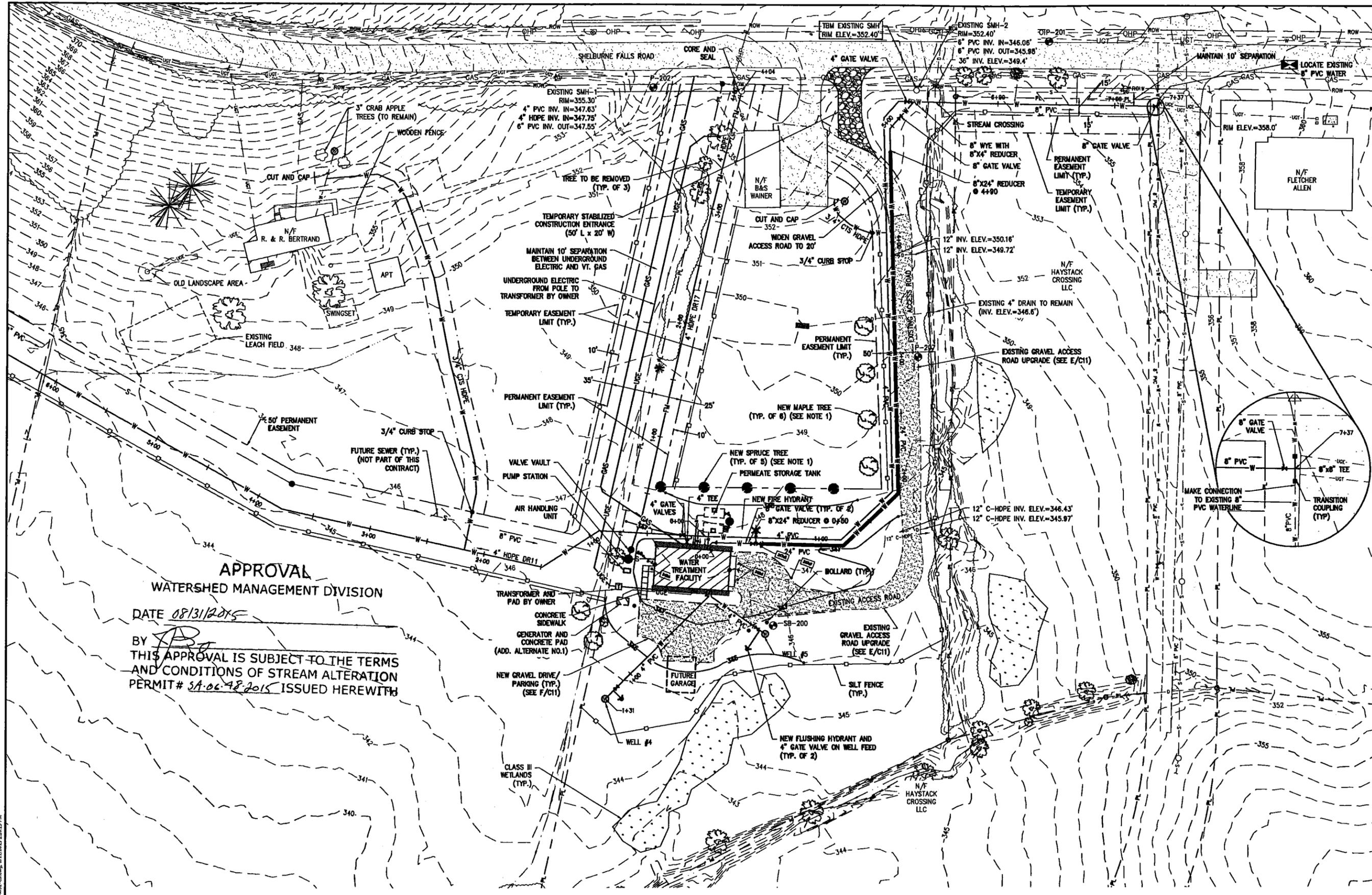
If the project is constructed as you have described, as shown on the above referenced approved plans and according to the above conditions, there is no reason to expect any violation of Vermont Water Quality Standards.

Signed this 31<sup>st</sup> day of August, 2015

This permit expires October 1, 2015.

David K. Mears, Commissioner  
Department of Environmental Conservation

by:   
Jaron Borg, River Management Engineer



APPROVAL  
WATERSHED MANAGEMENT DIVISION  
DATE 08/31/2015  
BY *AB*  
THIS APPROVAL IS SUBJECT TO THE TERMS  
AND CONDITIONS OF STREAM ALTERATION  
PERMIT # SA-06-48-2015 ISSUED HEREWITH



NOTES:  
1. NEW MAPLE AND SPRUCE TREES TO BE INSTALLED BY OWNER  
AND ARE NOT PART OF CONTRACTOR'S SCOPE OF WORK.

**AE**  
Aldrich + Elliott  
WATER RESOURCE ENGINEERS  
6 Market Place, Suite 2  
Essex Jct., VT 05452  
P: 802.879.7733  
AEEngineers.com

NO.	DATE	DESCRIPTION	CHECKED

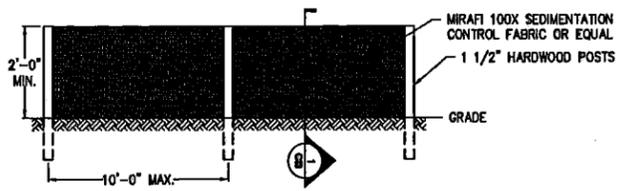
TOWN OF  
HINESBURG,  
VERMONT

NEW WATER  
TREATMENT FACILITY  
AND SYSTEM  
IMPROVEMENTS  
CONTRACT NO.2

WATER TREATMENT  
FACILITY  
PROPOSED  
SITE PLAN

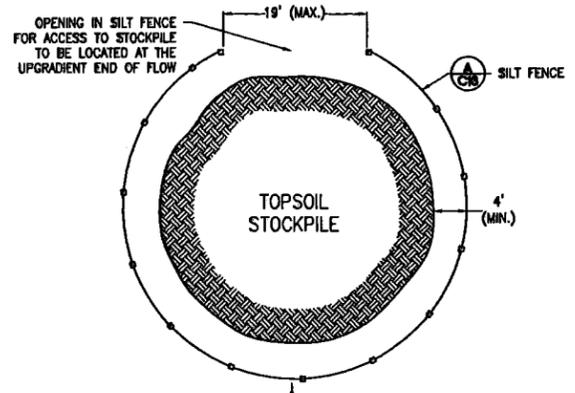
DESIGNED JJD	PROJECT NO. 14092
DRAWN PH/JEB	DRAWING
CHECKED BFA	<b>C3</b>
DATE AUGUST, 2015	

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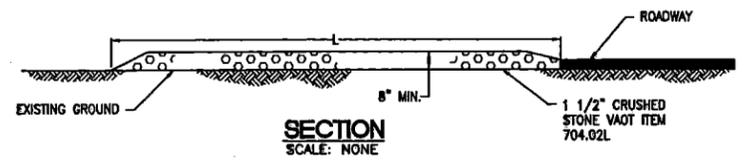


**A**  
C13  
TYPICAL TEMPORARY SILT FENCE DETAIL  
SCALE: NONE

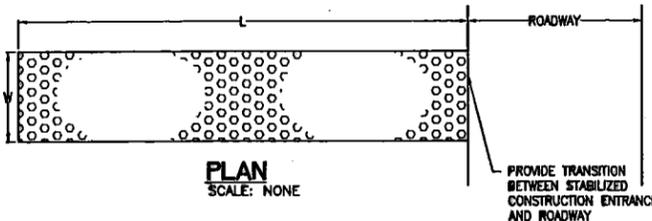
- NOTES:**
- SILT FENCE SHALL BE PRE-FABRICATED EROSION CONTROL FENCE BY MIRAFI OR APPROVED EQUAL.
  - INSTALL WHERE SHOWN ON PLANS. THE FENCE SHALL BE INSTALLED PARALLEL TO CONTOURS WHERE POSSIBLE. THE ENDS OF THE FENCE SHOULD BE CURVED UPHILL TO PREVENT FLOW AROUND THE ENDS.
  - SECTIONS OF THE SILT FENCE SHALL BE JOINED TO OVERLAP BY FOLDING FABRIC AROUND EACH POST ONE FULL TURN. DRIVE POSTS TIGHTLY TOGETHER AND SECURE TOPS OF POSTS BY TYING OFF WITH CORD OR WIRE TO PREVENT FLOW-THROUGH OR BUILT-UP SEDIMENT AT JOINT.
  - INSPECT ALL SILT FENCE AT LEAST ONCE A WEEK AND WITHIN 24 HOURS AFTER EACH RAINFALL. MAINTENANCE SHALL BE PERFORMED AS NEEDED, AND SEDIMENT REMOVED WHEN SEDIMENT REACHES 1/3 HEIGHT OF THE SILT FENCE.
  - UPON FINAL STABILIZATION OF THE AREA UPHILL OF THE FABRIC, THE FABRIC SHALL BE REMOVED WITH THE APPROVAL OF THE ENGINEER.



**D**  
C13  
TYPICAL TOPSOIL STOCKPILE DETAIL  
SCALE: NONE



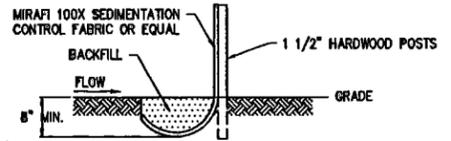
**SECTION**  
SCALE: NONE



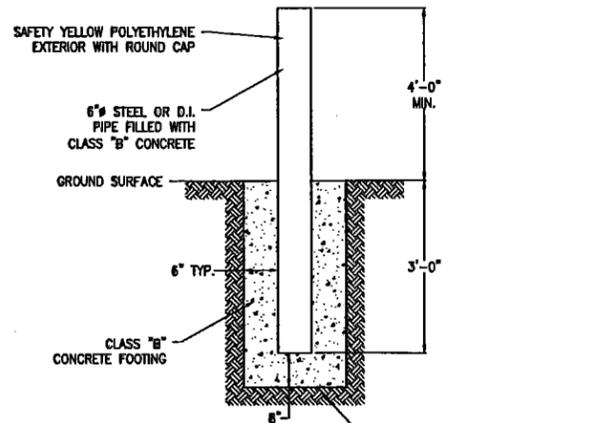
**PLAN**  
SCALE: NONE

- NOTES:**
- LENGTH (L) SHALL BE 50' MINIMUM WHERE SUFFICIENT SPACE IS AVAILABLE.
  - WIDTH (W) SHALL NOT BE LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS AND EGRESS.
  - WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE, WHICH DRAINS INTO APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATERCOURSE THROUGH USE OF METHODS AS APPROVED BY THE ENGINEER.
  - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, OR WASHED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
  - REMOVE CONSTRUCTION ENTRANCE AND RESTORE SITE UPON COMPLETION OF CONSTRUCTION.

**E**  
C13  
TYPICAL STABILIZED CONSTRUCTION ENTRANCE DETAIL  
SCALE: NONE



**1**  
C13  
SECTION  
SCALE: NONE

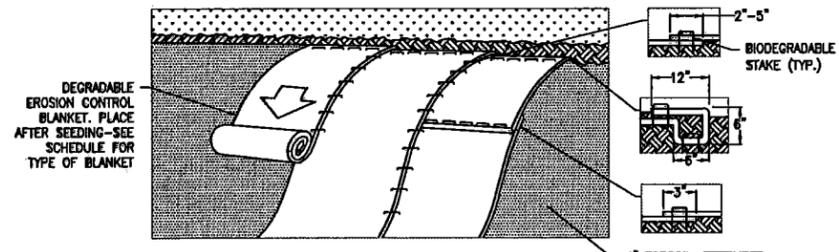


- NOTES:**
- PRECAST BOLLARDS WITH INTEGRAL FOUNDATION ARE ACCEPTABLE.

**B**  
C13  
TYPICAL BOLLARD DETAIL  
SCALE: NONE

**APPROVAL**  
WATERSHED MANAGEMENT DIVISION

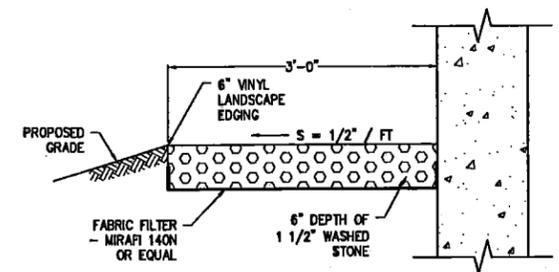
DATE 08/31/2015  
BY [Signature]  
THIS APPROVAL IS SUBJECT TO THE TERMS AND CONDITIONS OF STREAM ALTERATION PERMIT # SA-06-48-2015 ISSUED HERewith



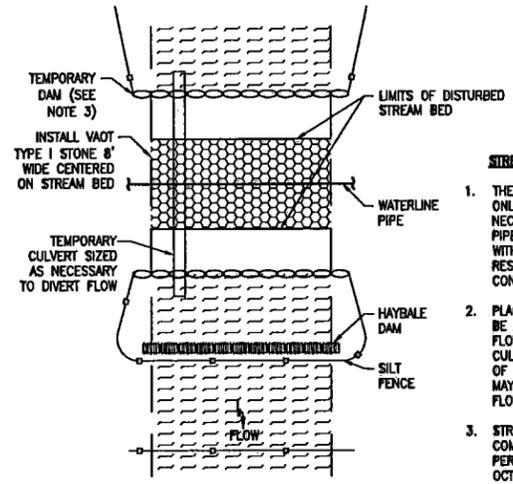
- NOTES:**
- INSTALL WHERE SHOWN ON PLANS.
  - CONTRACTOR SHALL USE BIODEGRADABLE STAKES FOR FASTENERS. WIRE STAPLES ARE NOT ACCEPTABLE.
  - PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
  - BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF BIODEGRADABLE STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAKING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF BIODEGRADABLE STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
  - BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING BIODEGRADABLE STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAKE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, BIODEGRADABLE STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
  - THE EDGES OF PARALLEL BLANKETS MUST BE STAKED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
  - CONSECUTIVE BLANKETS SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAKE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.
  - IN LOOSE SOIL CONDITIONS, THE USE OF STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

DEGRADABLE EROSION CONTROL BLANKET SCHEDULE			
TYPE	SLOPE (X)	BLANKET DESCRIPTION	MODEL No.
A	3:1-2:1	SINGLE NET STRAW BLANKET	NORTH AMERICAN GREEN S75 OR EQUAL
B	2:1-1:1	DOUBLE NET STRAW BLANKET	NORTH AMERICAN GREEN S150 OR EQUAL

**F**  
C13  
TYPICAL DEGRADABLE EROSION CONTROL BLANKET DETAIL  
SCALE: NONE



**C**  
C13  
STONE DRIP EDGE DETAIL  
SCALE: NONE



**G**  
C13  
TYPICAL STREAM CROSSING DETAIL  
SCALE: NONE

- STREAM CROSSING NOTES:**
- THE CONTRACTOR SHALL EXCAVATE ONLY THE VOLUME OF MATERIAL NECESSARY TO INSTALL THE WATER PIPE, BEDDING AND STONE FILL, WITH BOTTOM AND BANK CONTOURS RESTORED TO PREWORK CONDITIONS.
  - PLACEMENT OF WATER PIPE SHALL BE ACCOMPLISHED BY DIVERTING FLOW THROUGH A TEMPORARY CULVERT TO THE OTHER PORTION OF THE STREAM. BYPASS PUMPING MAY BE REQUIRED DEPENDING ON FLOW CONDITIONS.
  - STREAM CROSSING WORK TO BE COMPLETED DURING LOW FLOW PERIODS BETWEEN JULY 1 AND OCTOBER 1 WHEN AVAILABLE.

**EROSION CONTROL NOTES:**

- EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED PRIOR TO PERFORMING ANY EARTHWORK DOWNSTREAM OF THE DISTURBED AREA AND AS DIRECTED BY THE ENGINEER. CONTRACTOR SHALL FOLLOW THE STATE OF VERMONT LOW-RISK SITE HANDBOOK FOR ALL EROSION CONTROL MEASURES. THE MEASURES SHALL BE MAINTAINED UNTIL THE UPSTREAM DISTURBED AREA HAS BEEN PERMANENTLY STABILIZED AND AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL INSTALL ALL TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL PROVIDE ANY ADDITIONAL MEASURES DETERMINED NECESSARY IN THE FIELD.
- SILT FENCE SHALL BE INSTALLED, AS SHOWN ON THE CONTRACT DRAWINGS PRIOR TO ANY EARTHWORK DOWNSTREAM OF THE DISTURBED AREA AND AS DIRECTED BY THE ENGINEER. THE SILT FENCE SHALL BE MAINTAINED AND CLEANED UNTIL THE UPSTREAM DISTURBED AREA HAS BEEN PERMANENTLY STABILIZED AND AS DIRECTED BY THE ENGINEER. WHERE POSSIBLE NATURAL DRAINAGE WAYS SHALL BE UTILIZED AND LEFT OPEN TO REMOVE EXCESS SURFACE WATER.
- PROPER EROSION CONTROLS SHALL BE PROVIDED AROUND STOCKPILED EXCAVATED MATERIALS. THESE CONTROLS MAY INCLUDE THE FOLLOWING METHODS OF EROSION PREVENTION AND SEDIMENT CONTROL: PERIMETER SILT FENCE; INTERCEPTOR DRAINAGE DITCHES; VELOCITY REDUCTION DAMS IN DRAINAGE DITCHES; TEMPORARY BANK PROTECTION SUCH AS RIPRAP, MATING, OR ARTIFICIAL COVERING; STONE CHECK DAM CONTROL SYSTEMS; SPECIAL STOCKPILING METHODS; AND WATER BARS.
- THE CONTRACTOR SHALL PROVIDE A MECHANICAL SWEEPER AND SHALL SWEEP CLEAN PAVED ROADS IN THE CONSTRUCTION AREAS AS REQUIRED TO REMOVE ACCUMULATED SEDIMENT AND PREVENT SEDIMENT RUNOFF INTO RECEIVING WATERS AND AS DIRECTED BY THE ENGINEER. CONTRACTOR SHALL APPLY CALCIUM CHLORIDE TO ALL GRAVEL ROADS AS NEEDED TO CONTROL DUST AND STABILIZE WEARING SURFACE TO MINIMIZE RUNOFF.
- TEMPORARY EROSION CONTROL MEASURES SHALL BE UTILIZED BY THE CONTRACTOR AS REQUIRED TO PREVENT ANY SEDIMENTATION FROM RUNNING INTO RECEIVING WATERS. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE ANY IMPACT OF THE ON-SITE SURFACE RUNOFF ON THE QUALITY OF THE RECEIVING WATERS.
- THE SMALLEST PRACTICAL AREA OF LAND SHALL BE DISTURBED AT ANY ONE TIME DURING CONSTRUCTION. WHEN LAND IS DISTURBED, THE DISTURBANCE SHALL BE KEPT TO THE SHORTEST PRACTICAL DURATION AS APPROVED BY THE ENGINEER. LAND SHALL NOT BE LEFT DISTURBED DURING THE WINTER MONTHS AND OVERWINTER STABILIZATION MEASURES SHALL BE INSTALLED PRIOR TO OCTOBER 15TH AND MAINTAINED UNTIL MAY 1ST.
- ALL DISTURBED AREAS AND SIDE SLOPES WHICH ARE FINISH GRADED WITH NO FURTHER CONSTRUCTION TO TAKE PLACE SHALL BE LOADED, LIMED, FERTILIZED, SEED, AND MULCHED WITHIN 48 HOURS OF FINAL GRADING. A MINIMUM OF 4 INCHES OF LOAM SHALL BE PLACED. SEED, LIME, FERTILIZER, AND MULCH SHALL CONFORM TO SPECIFICATION SECTION 02930.
- NO DISTURBED AREAS SHALL BE LEFT UNSEED, UNMULCHED FOR MORE THAN SEVEN (7) DAYS. DISTURBED AREAS WHICH WILL BE REGRADED LATER DURING CONSTRUCTION SHALL BE MULCHED AND SEED WITH RYE GRASS TO PREVENT EROSION. HAY OR STRAW MULCH SHALL BE APPLIED TO ALL FRESHLY SEED, SEED, AND MULCH AREAS AT THE RATE OF 2 TONS PER ACRE. BALES SHALL BE UNPOOLED, AIR DRIED, AND FREE FROM WEED, SEEDS, AND ANY COARSE MATERIAL. CONTRACTOR MAY ALSO USE EROSION MATING OR OTHER APPROVED METHODS OF TEMPORARY COVER.
- ALL EROSION PREVENTION AND SEDIMENT CONTROL STRUCTURES AND MEASURES SHALL BE INSPECTED BY OR UNDER THE DIRECTION OF THE ON-SITE COORDINATOR AT LEAST EVERY SEVEN (7) CALENDAR DAYS AND AS SOON AS POSSIBLE BUT NO LATER THAN 24 HOURS AFTER ANY STORM EVENT WHICH GENERATES A DISCHARGE OF STORMWATER RUNOFF FROM THE CONSTRUCTION SITE.
- AFTER ALL UPSTREAM DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED AND AS DIRECTED BY THE ENGINEER, THE DOWNSTREAM TEMPORARY EROSION CONTROL MEASURES ARE TO BE REMOVED AND THE ACCUMULATED SEDIMENT PROPERLY DISPOSED OF. THE AREA DISTURBED BY THE REMOVAL OF TEMPORARY MEASURES SHALL BE PREPARED, SEED, AND MULCHED.

CHECKED	DESCRIPTION	DATE	BY

TOWN OF HINESBURG, VERMONT

NEW WATER TREATMENT FACILITY AND SYSTEM IMPROVEMENTS CONTRACT NO.2

EROSION CONTROL AND MISCELLANEOUS DETAILS AND NOTES

DESIGNED JJD	PROJECT NO. 14092
DRAWN PH/JEB	DRAWING C13
CHECKED BFA	DATE AUGUST 2015

August 17, 2015

APPROVAL  
WATERSHED MANAGEMENT DIVISION

Mr. Jaron Borg, River Management Engineer  
ANR DEC – Watershed Management Division – Rivers Program  
1 National Life Drive, Main 2  
Montpelier, VT 05620-3522

DATE 08/31/2015  
BY [Signature]  
THIS APPROVAL IS SUBJECT TO THE TERMS  
AND CONDITIONS OF STREAM ALTERATION  
PERMIT # SA-06-48-2015 ISSUED HEREWITH

RE: Town of Hinesburg, Vermont  
New Water Treatment Facility and System Improvements, Contract No. 2  
**Stream Alteration Permit – Narrative of Stream Crossing Activities**  
A+E Project 14092

Dear Jaron:

This project is anticipated to go out to bid at the end of August and is required by the State of Vermont – ANR Facilities Engineering Division to have a 30 calendar day bid period. Given that bids will not be opened until the end of September, it is not possible for the stream crossing work to be accomplished before the October 1<sup>st</sup> deadline. Based on the project timing, unfortunately this cannot be avoided.

The stream crossing work is anticipated to take one (1) day to construct. There is an existing 36" diameter roadway culvert that conveys the stream under Shelburne Falls Road from the north side of the road to the south side. There is an existing sewerline under this culvert within the roadway and per the State Water Supply Rule, the new watermain needs to have a minimum 10 feet horizontal separation from the sewermain. This means that construction of the watermain stream crossing will take place just south of this roadway culvert discharge. The anticipated sequence of work is as follows:

1. Contractor will temporarily connect a similar sized culvert pipe to the outlet end (south end) of the existing roadway culvert. This new culvert extension pipe will be installed at-grade and will be long enough in length to span the proposed waterline trench width.
2. Contractor will excavate a trench underneath the new culvert extension pipe and install the proposed waterline in the excavated trench, with approximately 6 feet of cover.
3. Contractor will backfill the waterline trench up to existing grade.
4. Contractor will restore the ground surface and reinforce area with filter fabric and VAOT Type I stone to prevent erosion as the ground begins to restabilize with vegetation.
5. Contractor will disconnect the culvert extension pipe from the existing roadway culvert and flow will be restored to the existing stream bed.

Please disregard the Stream Crossing Detail that is currently shown on Drawing No. 13. This will be revised to follow the above method, upon your approval. Aldrich + Elliott will have a full-



time Resident Project Representative (RPR) onsite during this project. All construction activities will be observed by the RPR. If you have any questions or concerns with this method, or if you have a different method you would like us to consider, please do not hesitate to contact me.

Sincerely,

**Aldrich + Elliott, PC**



Joe Duncan, PE  
Project Manager

cc: Rocky Martin, Town of Hinesburg

**APPROVAL**

WATERSHED MANAGEMENT DIVISION

DATE 08/31/2015

BY   
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PERMIT # SA-06482015 ISSUED HEREWITH