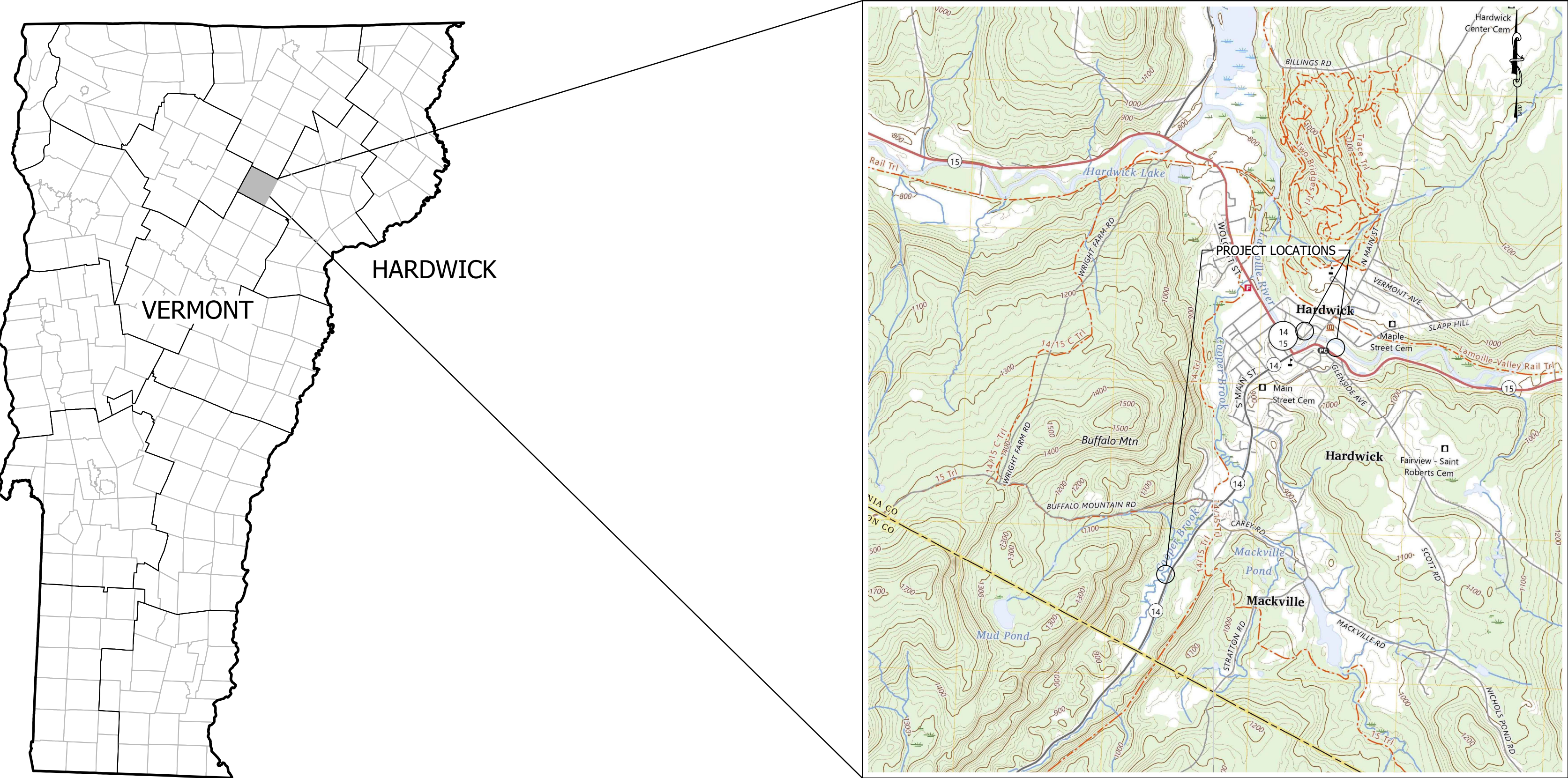


HARDWICK NRCS EWP

STREAM BANK STABILIZATION

HARDWICK, VERMONT
APRIL 2026



SHEET LIST:

C1.1	COVER SHEET
C1.2	OVERVIEW PLAN
C1.3	EXISTING CONDITIONS PLAN - 380 VT ROUTE 14
C1.4	EXISTING CONDITIONS PLAN - 75 MILL STREET
C2.1	EXISTING CONDITIONS PLAN - BRUSH STREET
C2.1	PROPOSED SITE PLAN - 380 VT ROUTE 14
C2.2	PROPOSED SITE PLAN - 75 MILL STREET
C2.3	PROPOSED SITE PLAN - BRUSH STREET
C3.1	EROSION CONTROL NOTES
C3.2	EROSION CONTROL DETAILS
C3.3	CONSTRUCTION DETAILS

LOCATION PLAN

SCALE: 1" = 2000'

PERMIT NOTES
THIS PROJECT SHALL COMPLY WITH ALL CONDITIONS OF ALL PERMITS FOR THE PROJECT. COPIES OF THESE PERMITS MAY BE REQUESTED FROM THE VERDANTAS SHARON OFFICE.

VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION
STREAM ALTERATION PERMIT
U.S. ARMY CORPS OF ENGINEERS
GENERAL PERMIT

NON-REPORTING
PENDING

OWNER:
TOWN OF HARDWICK
DAVID UPSON
PO BOX 523
20 CHURCH STREET
HARDWICK, VT 05843
(802) 472-6120

ENGINEER:
verdantas
34 SCHOOL STREET
LITTLETON, NH 03561
(603) 444-4111

- INVASIVE SPECIES NOTES**
- JAPANESE KNOTWEED, AN INVASIVE PLANT SPECIES, IS EXPECTED TO BE ENCOUNTERED ONSITE. REFER TO THE LAKE WISE MANAGING INVASIVE PLANTS MANUAL FOR BEST MANAGEMENT PRACTICES.
 - JAPANESE KNOTWEED ENCOUNTERED DURING SITE WORK SHALL BE REMOVED TO AN UNSUITABLE HABITAT AND DISPOSED OF BY PILING, DRYING, THEN BURNING.
 - CLEAN EQUIPMENT BEFORE REMOVING FROM EACH SITE TO ENSURE THAT JAPANESE KNOTWEED DOES NOT TRAVEL OFFSITE.

- PERMIT CONDITIONS**
- ALL AREAS OF STREAMBANK DISTURBED DURING CONSTRUCTION SHALL BE SUITABLY RESHAPED AND STABILIZED.
 - PLACEMENT SHALL BE ACCOMPLISHED WITH EQUIPMENT OPERATING FROM ON TOP OF THE BANK.
 - THE CONTRACTOR'S EQUIPMENT SHALL BE CLEAN AND WELL MAINTAINED, FREE OF FUEL, HYDRAULIC AND GEAR OIL LEAKS, ESPECIALLY IF SUCH EQUIPMENT WILL BE OPERATED IN OR ADJACENT TO THE STREAM FLOW. PRESERVE ALL EXISTING STREAMBANK VEGETATION POSSIBLE.
 - WORK IN FLOWING WATER, IF ANY, SHALL BE PERFORMED BETWEEN 06/01-10/01.
 - STREAM FLOW SHALL, AT ALL TIMES, BE DIVERTED FROM THE WORK AREA.

DATE OF PRINT
JULY 16 2026
VERDANTAS

**FOR REVIEW
NOT FOR CONSTRUCTION**

DATE OF PRINT
JULY 14 2026
VERDANTAS

500' 0 500' 1000'

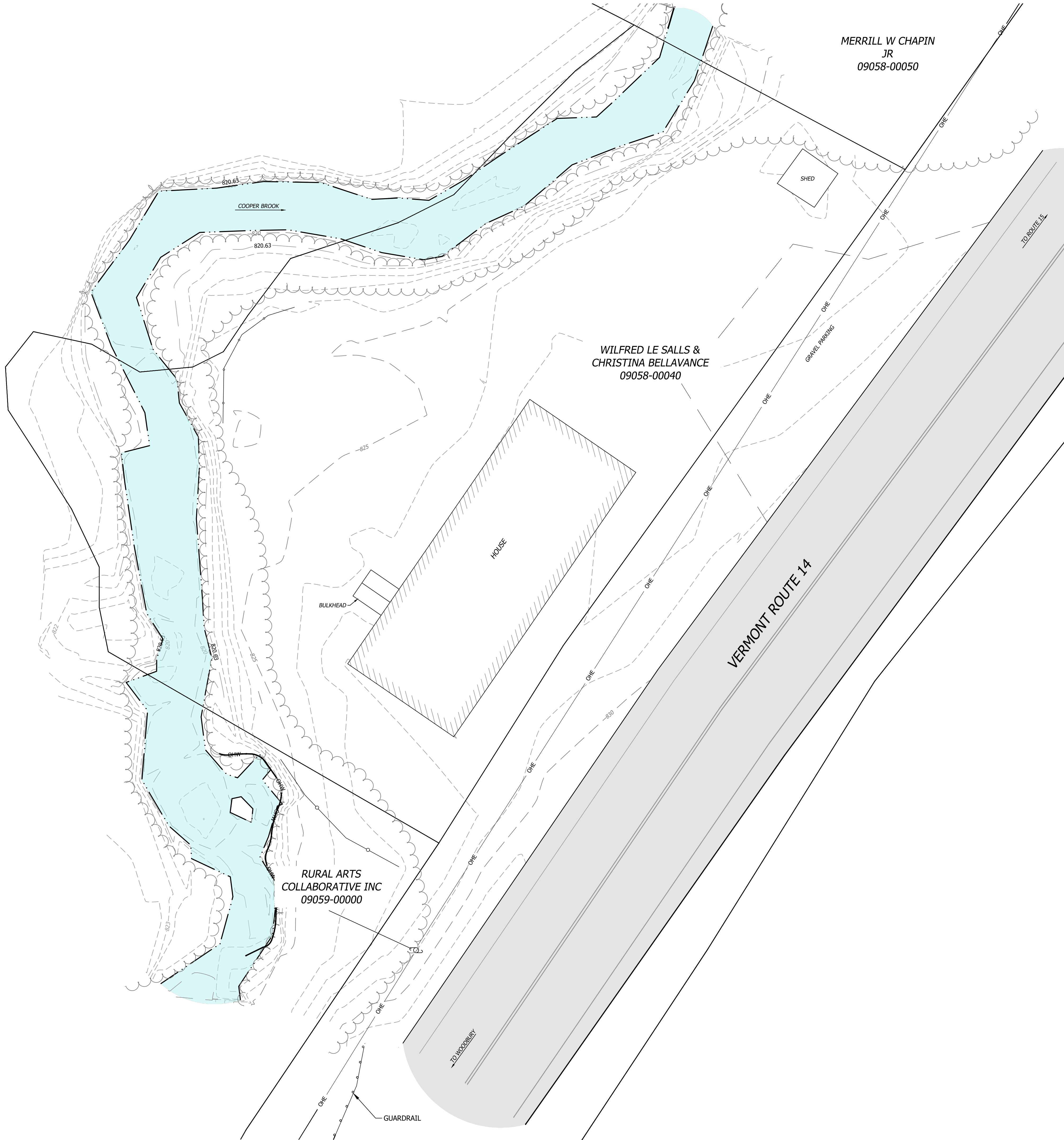
DRAWING SCALE 1" = 500'

DATE	04/02/2026
SCALE	1" = 500'
SHEET	C1.1

ENGINEER'S_NAME

34 SCHOOL STREET
LITTLETON, NH 03561
FAX: 603.444.1343
PHONE: 603.444.4111

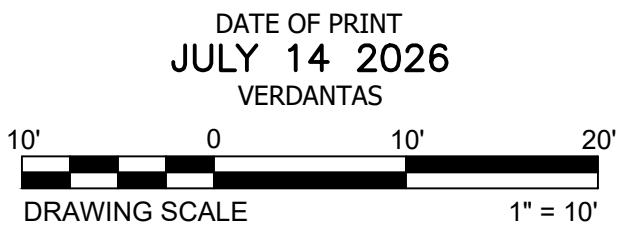
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- NOTES:
- EXISTING CONDITIONS SURVEYED IN AUGUST, 2025.
 - PROPERTY LINES ARE APPROXIMATE BASED ON TOWN OF HARDWICK TAX MAP.
 - CONTOURS BASED ON VERMONT STATE PLANE COORDINATED SYSTEM, VERTICAL DATUM (NAVD 88).

LEGEND	
	PROPERTY LINE
	CONTOUR INDEX
	CONTOUR
	TREE LINE
	GRAVEL
	PAVEMENT
	FENCE WIRE
	GUARD RAIL
	OVERHEAD UTILITY
	BROOK
	UTILITY POLE

FOR REVIEW
NOT FOR CONSTRUCTION



HARDWICK~CALENDONIA COUNTY~VERMONT
EXISTING CONDITONS PLAN
HARDWICK NRCS EWP
584 VT ROUTE 14
HARDWICK, VT

DATE
04/29/2026

SCALE
1" = 10'

SHEET
C1.2

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			xxx
			250575 H####

ENGINEER'S NAME
STATE_XXXXXX
P.E. #####



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LITTLETON, NH 03561
FAX: 603.444.1343
PHONE: 603.444.4111



GEORGE W HAY JR
& MELISSA HAY
24051-00060

TO ROUTE 14

TO WALDEN

PAVED PARKING

CONCRETE PAD HVAC

6" CULVERT
INVERT ELEV. 827.9'

STONE WALL—

LAMOILLE RIVER

Diagram illustrating the vertical arrangement of map lines:

- PROPERTY LINE
- CONTOUR INDEX
- CONTOUR
- TREE LINE
- PAVEMENT
- RIVER

NOTES:

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DATE OF PRINT
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20' 0 20' 40'

DRAWING SCALE 1" = 20'

SHEET

C1.3

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LITTLETON, NH 03561
FAX: 603.444.1343
PHONE: 603.444.4111

STATE: XXXXXX P.E. #####

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LEGEND

- | | |
|--|-----------------------|
| | PROPERTY LINE |
| | CONTOUR INDEX |
| | CONTOUR |
| | OVERHEAD UTILITY LINE |
| | GRAVEL |
| | PAVEMENT |
| | RIVER |
| | MANHOLE |
| | TELEPHONE POLE |
| | HARDWOOD TREE |

DATE OF PRINT
JULY 14 2026
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DRAWING SCALE

1" = 10'

HARDWICK~CALENDONIA COUNTY~VERMONT
EXISTING CONDITIONS PLAN
HARDWICK NRCS EWP
BRUSH STREET
HARDWICK, VT

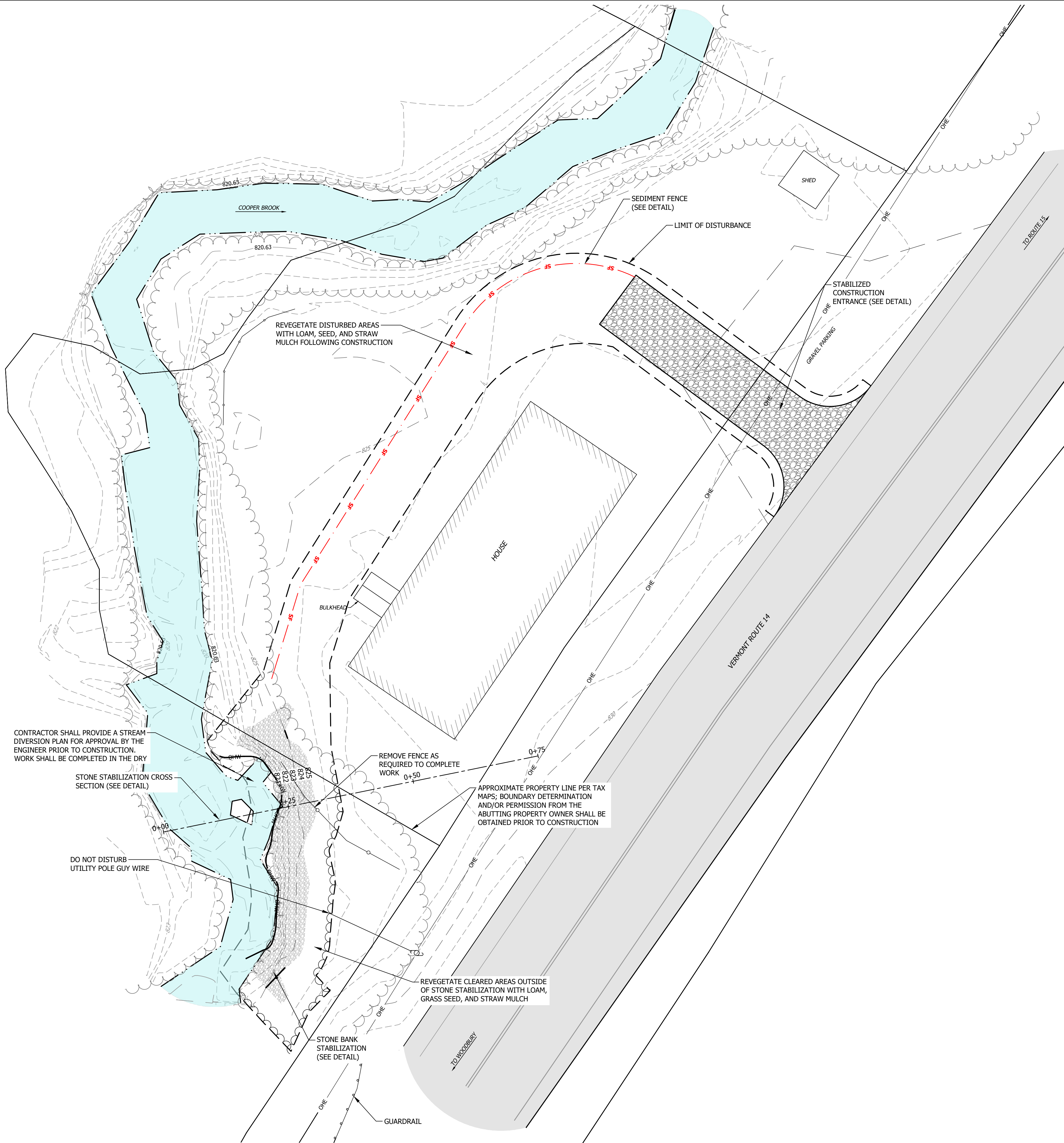
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SCALE 1" = 10'
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 4. OHW INTERPRETED FROM SURVEY DATA, BUT NOT DIRECTLY SURVEYED

LEGEND	
	PROPERTY LINE
	CONTOUR INDEX
	CONTOUR
	TREE LINE
	GRAVEL
	PAVEMENT
	FENCE WIRE
	GUARD RAIL
	OVERHEAD UTILITY
	BROOK
	UTILITY POLE

- NOTES:
1. BANK LENGTH: 56LF
 2. RIPRAP VOLUME: 34.54 CY = 0.61+ CY/LF
 3. THE SEPTIC SYSTEM AND LEACH FIELD SHALL BE CLEARLY MARKED PRIOR TO CONSTRUCTION AS THE LEACH FIELD IS ADJACENT TO THE WORK AREA.

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DATE OF PRINT
JULY 16 2026
VERDANTAS

DRAWING SCALE

10' 0 10' 20'

1" = 10'

HARDWICK~CALENDONIA COUNTY~VERMONT
PROPOSED SITE PLAN
HARDWICK NRCS EWP
584 VT ROUTE 14
HARDWICK, VT

DATE
05/01/2026

SCALE
1" = 10'

SHEET
C2.1

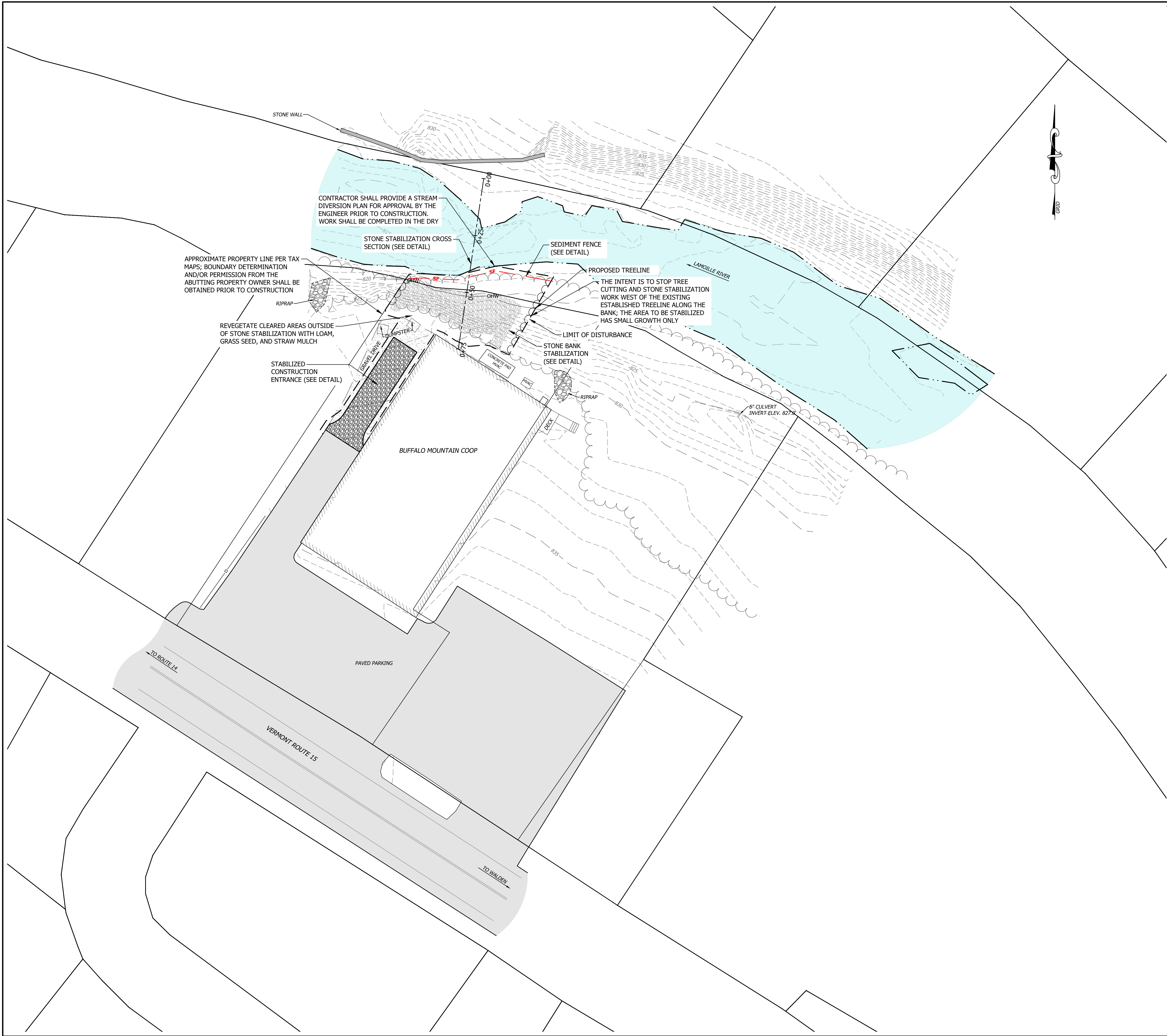
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	xxx	
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VERDANTAS

DRAWING SCALE

20' 0 20' 40'

1" = 20'

HARDWICK~CALENDONIA COUNTY~VERMONT
PROPOSED SITE PLAN
HARDWICK NRCS EWP
75 MILL STREET
HARDWICK, VT

DATE
05/01/2026

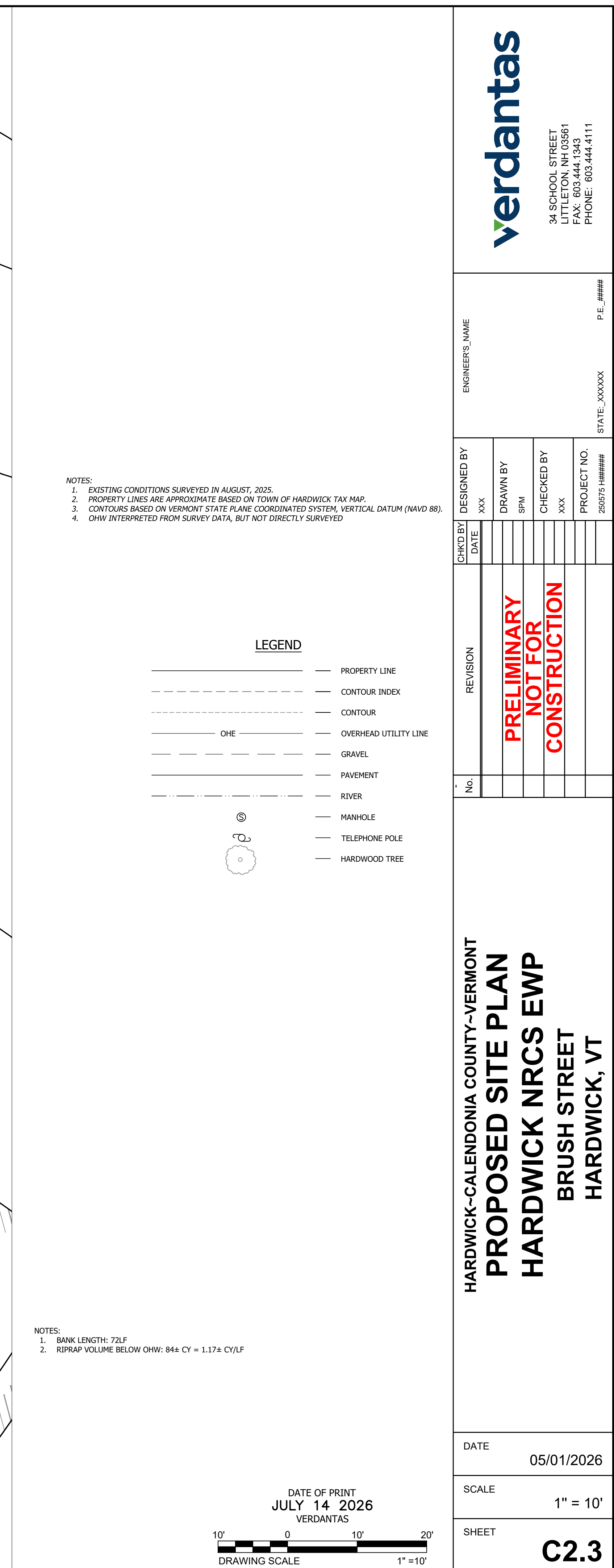
SCALE
1" = 20'

SHEET
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1. GRADING AND SHAPING

A. SLOPES SHALL NOT BE STEEPER THAN 2:1; 3:1 SLOPES OR FLATTER ARE PREFERRED. WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED.
2. SEEDBED PREPARATION

A. SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.

B. STONES LARGER THAN 4 INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE AMENDED WITH ORGANIC MATTER AND TILLED TO A DEPTH OF ABOUT 4 INCHES TO PREPARE A SEEDBED AND MIX FERTILIZER AND LIME THOROUGHLY INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN A REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.

3. ESTABLISHING VEGETATION

A. NO FERTILIZER SHALL BE USED ON THIS PROJECT DUE TO PROXIMITY TO THE RIVER WATERS.

B. SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS INCLUDE BROADCASTING, DRILLING, AND HYDROSEEDING. WHERE BROADCASTING IS USED, COVER SEED WITH .25 INCH OF SOIL OR LESS, BY CULTIPACKING OR RAKING.

C. SEEDING GUIDE:

USE	SEEDING MIXTURE (SEE 3D)	SOIL TYPE			
		DROUGHTY	WELL DRAINED	MOD. WELL DRAINED	POORLY DRAINED
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	A B C	FAIR POOR FAIR	GOOD GOOD EXCELLENT	GOOD FAIR EXCELLENT	FAIR FAIR POOR
WATERWAYS, EMERGENCY SPILL-WAYS, AND OTHER CHANNELS WITH FLOWING WATER	A	GOOD	GOOD	GOOD	FAIR
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY USE RECREATION SITES	A B	GOOD GOOD	GOOD	GOOD	FAIR POOR

D. SEEDING RATES:			
MIXTURE	POUNDS PER ACRE	POUNDS PER 1,000 SQ. FT.	
A TALL FESCUE	20	0.45	
CREeping RED FESCUE	20	0.45	
REDTOP	2	0.05	
TOTAL:	42	0.95	
B TALL FESCUE	15	0.35	
CREeping RED FESCUE	10	0.25	
CROWN VETCH OR FLATPEA	15 OR 30	0.35 OR 0.75	
TOTAL:	40 OR 55	0.95 OR 1.35	
C TALL FESCUE	20	0.45	
FLATPEA	30	0.75	
TOTAL:	50	1.20	

- E. WHEN SEEDDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO SEPTEMBER 15. WHEN SEEDDED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20 OR FROM AUGUST 10 TO SEPTEMBER 1.

F. TEMPORARY SEEDING RATES:			
SPECIES	POUNDS PER ACRE	POUNDS PER 1,000 SQ. FT.	REMARKS
WINTER RYE	112	2.5	BEST FOR FALL SEEDING. SEED FROM AUGUST TO SEPTEMBER 5TH FOR BEST COVER. SEED TO A DEPTH OF 1 INCH.
OATS	80	2.0	BEST FOR SPRING SEEDING. SEED NO LATER THAN MAY 15TH FOR SUMMER PROTECTION. SEED TO A DEPTH OF 1 INCH.
ANNUAL RYEGRASS	40	1.0	GROWS QUICKLY, BUT IS OF SHORT DURATION. USE WHERE APPEARANCES ARE NOT IMPORTANT. SEED EARLY SPRING AND/OR BETWEEN AUGUST 15TH AND SEPTEMBER 15TH. COVER SEED WITH NO MORE THAN 0.25 INCH OF SOIL.
PERENNIAL RYEGRASS	30	0.7	GOOD COVER WHICH IS LONGER LASTING THAN ANNUAL RYEGRASS. SEED BETWEEN APRIL 1ST AND JUNE 1ST AND/OR BETWEEN AUGUST 15TH AND SEPTEMBER 15TH. MULCHING WILL ALLOW SEEDING THROUGHOUT THE GROWING SEASON. SEED TO A DEPTH OF APPROXIMATELY 0.5 INCH.

4. MULCH

A. HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING.

B. MULCH WILL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE BEST MANAGEMENT PRACTICE FOR MULCHING.

C. REFER TO LANDSCAPE ARCHITECTURAL DRAWINGS FOR ADDITIONAL SEEDING AND MULCH REQUIREMENTS.
5. MAINTENANCE TO ESTABLISH A STAND

A. PLANTED AREAS SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH.

B. IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED, OCCASIONAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.

REFERENCE: THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL, LAST REVISED 2025

1. ENLARGE AND STABILIZE ACCESS POINTS TO PROVIDE FOR SNOW STOCKPILING.
2. DEVELOP A SNOW MANAGEMENT PLAN TO INCLUDE PROVISIONS FOR ADEQUATE SNOW STORAGE AND CONTROL OF SNOWMELT. CLEARED SNOW SHALL BE STORED DOWN GRADIENT OF ALL AREAS OF DISTURBANCE.
3. IN AREAS WITH DISTURBANCE WITHIN 100 FEET OF A RECEIVING WATER, SILT FENCE SHALL BE REINFORCED OR ELSE REPLACED WITH PERIMETER DIKES, SWALES, OR OTHER PRACTICES RESISTANT TO THE FORCES OF SNOW LOADS.
4. DRAINAGE STRUCTURES WITHIN CONSTRUCTION AREA SHALL BE KEPT FREE OF SNOW AND ICE DAMS.
5. TO ENSURE COVER OF DISTURBED SOIL IN ADVANCE OF A MELT EVENT, AREAS OF DISTURBED SOIL MUST BE STABILIZED AT THE END OF EACH WORK DAY, WITH THE FOLLOWING EXCEPTIONS:

a. IF NO PRECIPITATION WITHIN 24 HOURS IS FORECASTED AND WORK WILL RESUME IN THE SAME DISTURBED AREA WITHIN 24 HOURS, DAILY STABILIZATION IS NOT NECESSARY.

b. DISTURBED AREAS THAT COLLECT AND RETAIN RUNOFF, SUCH AS HOUSE FOUNDATIONS OR OPEN UTILITY TRENCHES.
7. SNOW AND ICE SHALL BE REMOVED TO LESS THAN 1 INCH THICKNESS PRIOR TO STABILIZATION.
8. STONE STABILIZATION - 10 TO 20 FEET WIDE IN AREAS WHERE CONSTRUCTION VEHICLE TRAFFIC IS ANTICIPATED.

WINTER CONSTRUCTION NOTES

WINTER CONSTRUCTION IS ANTICIPATED AT THIS TIME. WINTER CONSTRUCTION FOR SPECIFIC AREAS MUST RECEIVE PRIOR APPROVAL BEFORE PROCEEDING AFTER OCTOBER 15TH, AND BEFORE MAY 1ST, WITH ANY TYPE OF EARTHWORK. SEVERE WASHOUT AND EROSION CAN OCCUR DURING THE WINTER MONTHS, IF THE GROUND IS NOT FROZEN. HEAVY DELUGES OF RAIN, AND/OR SNOW MELT DOWN WILL WASH ANY UNFROZEN MATERIAL AWAY FROM THE SITE. FOR THIS REASON, KEEP SOIL DISTURBANCE TO A MINIMUM ON ALL AREAS THAT COULD NOT BE STABILIZED BY VEGETATION AT THE END OF THE GROWING SEASON, WHICH IS EARLY OCTOBER, AND AN ABSOLUTE MINIMUM AFTER THE 15TH OF OCTOBER. ANY SOIL DISTURBANCE WHICH OCCURS BETWEEN OCTOBER 15TH AND MAY 1ST WILL BE TREATED AS "WINTER CONSTRUCTION."

- a. ALL OF THE EROSION CONTROL MEASURES DESCRIBED ELSEWHERE IN THE PLANS CAN BE USED EFFECTIVELY TO PREVENT EROSION AND SEDIMENT PROBLEMS DURING RUNOFF PERIODS THAT OCCUR IN THE WINTER MONTHS. HOWEVER, THEY MUST BE MAINTAINED AT THEIR UTMOST AND CHECKED PRIOR TO ANY ANTICIPATED MELT DOWN OR PEAK RUNOFF EVENT.
- b. SPECIFIC CONSIDERATION FOR ESTABLISHING EROSION CONTROL MEASURES DURING THE WINTER MONTHS MUST BE GIVEN TO THE FOLLOWING:
- c. EROSION CONTROL MEASURES MUST BE ESTABLISHED PRIOR TO THE GROUND FREEZING. THE GROUND NORMALLY FREEZES DURING THE MONTH OF NOVEMBER. THEREFORE, THE EROSION CONTROL MEASURES SHOULD BE IN PLACE PRIOR TO THE FIRST OF NOVEMBER BEFORE ANY ANTICIPATED EARTH DISTURBANCE THAT IS TO OCCUR.
- d. REMOVE ALL SNOW COVER FROM ANY AREA THAT IS TO BE GRADED, FERTILIZED, SEEDDED AND MULCHED AND/OR STABILIZED IN ANYWAY.
- e. PLAN FOR DOUBLE MANPOWER IN YOUR SCHEDULING DURING WINTER MONTHS AS ESTABLISHMENT OF EROSION CONTROLS IS MUCH MORE TIME CONSUMING.
- f. WHEN SEEDING, MIX SCS MIX WITH THE SAME AMOUNT OF WINTER RYE (50-50 MIXTURE). APPLY TWICE AS MUCH SEED TO THE DISTURBED AREAS, AS SPECIFIED DURING NORMAL CONSTRUCTION IN NON-WINTER CONDITIONS (TWICE THE POUNDS PER ACRE AS ABOVE). PLAN ON RE-SEEDING IN EARLY SPRING WITH PERMANENT SEED MIXTURE.
- g. INSTALL EROSION CONTROL FABRIC (WOVEN JUTE ONLY) ON ALL EARTH DISTURBED DURING WINTER CONSTRUCTION UNLESS MULCHING IS OTHERWISE APPROVED BY ONSITE ENGINEER. EROSION CONTROL FABRIC SHALL BE ANCHORED SECURELY TO UNFROZEN GROUND. WHEN MULCHING, APPLY AT LEAST 6 INCHES OF HAY, AND BE SURE TO COVER THE ENTIRE DISTURBED GROUND AREA. DO NOT CONSIDER MULCHING ALONE TO BE EFFECTIVE EROSION CONTROL. MULCHING MUST BE COUPLED WITH INTERCEPTOR DITCHES, SEDIMENT PONDS, PERIMETER DITCHES, AND STONE CHECK DAMS. INSTALL MATTING OVER ALL MULCH AND ANCHOR AS DESCRIBED ABOVE.
- h. INSTALL ALL EROSION MEASURES PRIOR TO FREEZING OF THE GROUND, AS IT IS NON-EFFECTIVE WITHOUT PROPER INTERFACING WITH THE SOIL AT THE BASE. INSPECT FREQUENTLY AND REMOVE ANY COLLECTED SEDIMENT BEFORE ANY PREDICTED THAW OR RAINY PERIODS.
- i. INSTALL SEDIMENT TRAPS, STONE CHECK DAMS, AND SEDIMENTATION BASINS PRIOR TO THE GROUND FREEZING (1 NOVEMBER). INSPECT THESE TRAPS AT LEAST WEEKLY AND MORE FREQUENTLY IF NECESSARY. INSPECT PRIOR TO ANY ANTICIPATED MELT DOWN OR RAINY PERIODS AND REMOVE ANY EXCESS SEDIMENT.
- j. LEAVE ALL WINTER EROSION CONTROL MEASURES IN EFFECT THROUGH THE SPRING MONTHS, UNTIL STABILIZATION OF ALL AREAS HAS BEEN COMPLETED. ENSURE WEEKLY CHECKS AND PROPER MAINTENANCE OF ALL WINTER EROSION CONTROL MEASURES THAT HAVE BEEN ESTABLISHED.
- k. ALL DISTURBED AREAS STILL OPEN OR NEWLY DISTURBED AFTER OCTOBER 15TH SHALL BE EITHER HYDROSEEDDED OR SEEDDED, FERTILIZED, LIMED, AND COVERED WITH AN EROSION CONTROL BLANKET (GEO-TEXTILE FABRIC, JUTE MATTING OR STRAW BLANKET).

CONTRACTORS PLEASE READ CAREFULLY

1. LIMITS OF SOIL DISTURBANCE ARE SHOWN ON THE GRADING PLAN AS BEING THE AREA WITH FINAL CONTOURS AND THE ENDS BEING WHERE THE FINAL CONTOURS MEET WITH THE EXISTING CONTOURS.
2. ALL DISTURBED EARTH SHALL BE STABILIZED WITHIN 14 DAYS OF INITIAL DISTURBANCE AND PRIOR TO ANY SIGNIFICANT FORECASTED RAIN EVENT.
3. LARGER BOULDERS AS FOUND ON SITE SHALL BE USED AS PERMANENT DEMARCATION, PLACED AT MOST 20 FEET APART ALONG BUFFER LIMITS AND JUST OUTSIDE THE ORANGE SNOW FENCE IN AREAS WHERE STREAMS OR WETLANDS ARE TO BE PERMANENTLY PROTECTED AFTER CONSTRUCTION. ORANGE CONSTRUCTION TAPE SHALL BE PLACED ALONG THE BUFFER LIMITS PRIOR TO ANY CLEARING AND BE MAINTAINED THROUGHOUT THE PROJECT TO PREVENT ANY EQUIPMENT OR WORKERS FROM ENTERING THE BUFFER AREAS.
4. LOCATION OF ALL EROSION AND SEDIMENT CONTROL MEASURES: REFER TO THIS PLAN PLUS THE TYPICAL DETAIL FOR BUILDING CONSTRUCTION AND FOR LOCATIONS OF ALL EROSION CONTROL MEASURES. THESE MEASURES MUST BE PUT IN PLACE PRIOR TO ANY OTHER EARTH DISTURBANCE.
5. AREAS TO BE SEEDDED AND MULCHED SHALL INCLUDE ALL AREAS OF EARTH DISTURBANCE AND SHALL COINCIDE WITH ITEM #1 ABOVE WHICH ADDRESSES LIMITS OF SOIL DISTURBANCE. STOCKPILES OF SOIL SHALL ALSO BE MULCHED, AND IF THEY ARE TO REMAIN FOR MORE THAN 7 CONSECUTIVE DAYS, SHALL BE SEEDDED AS WELL. REFER TO SEEDING AND MULCHING SPECIFICATIONS FOR SCHEDULE, MATERIALS SPECIFICATIONS, AND METHODS OF SEEDING AND MULCHING IN SUMMER, AND DURING WINTER MONTHS. THE SAME SPECIFICATIONS AND DETAILS APPLY TO "EXCESS TEMPORARY FILL STOCKPILES" AS TO "TOPSOIL STOCKPILES".
6. PRECAUTION SHALL BE TAKEN TO MAINTAIN A MINIMUM OF 50 FEET FROM ALL WETLANDS. PRECAUTIONS WILL BE TAKEN TO PROTECT WETLANDS AT ALL TIMES FROM ANY SEDIMENTATION.
7. EROSION MATTING SHALL BE USED ON ALL SLOPES GREATER THAN 1V:3H SLOPE, WHICH INCLUDE THOSE AREAS SHOWN ON THE PLAN. EROSION CONTROL MATTING SHALL BE LOOSE WEAVE, NATURAL JUTE MESH OR NET-LESS EXCELSIOR STYLE NATURAL WOOD FIBER EROSION BLANKET SUCH AS FUTERRA F4 BY PROFILE. EROSION MATTING SHALL BE DESIGNED SPECIFICALLY TO AVOID ENTRAPMENT OF SNAKES AND SMALL ANIMALS.
8. THE CONTRACTOR SHALL NOT RELY ON SILT FENCE RUNNING ACROSS CONTOURS (UP AND DOWN SLOPE) OR IN AREAS OF CONCENTRATED FLOW TO PREVENT SILTATION FROM LEAVING THE SITE OR CONTROL EROSION. SILT FENCE MAY ONLY BE USED IN AREAS RUNNING WITH THE CONTOUR (AT SAME ELEVATION) WHERE SHEET FLOW MIGHT OCCUR (EXAMPLE IS ALONG BASE OF SLOPE ON FILL SECTION). STONE CHECK DAMS, STONE LINED DITCHES AND SEDIMENTATION PONDS, COUPLED WITH PERIMETER AND INTERCEPTOR SWALES SHALL BE USED TO COLLECT, TREAT AND DISPERSE ANY STORMWATER ON SITE.

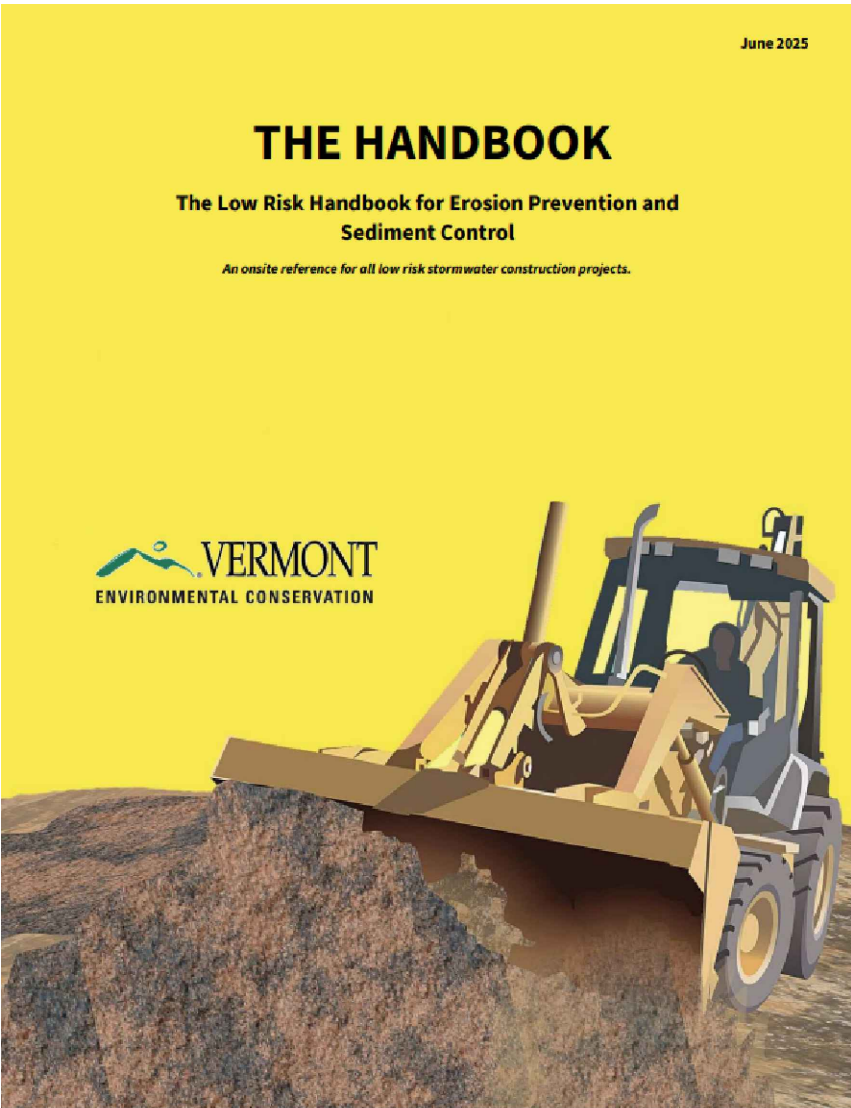
THE SITE SHALL BE INSPECTED AT LEAST ONCE PER WEEK WITH THE CONTRACTOR PRESENT. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSPECTED. SITE INSPECTIONS MUST CONTINUE UNTIL 70% SITE STABILIZATION HAS BEEN ACCOMPLISHED. IN THE EVENT OF A VISIBLY TURBID DISCHARGE FORM THE CONSTRUCTION SITE, IMMEDIATE ACTION SHALL BE TAKEN TO INSPECT AND MAINTAIN EROSION AND SEDIMENTATION CONTROLS AND IMPLEMENT ANY ADDITIONAL PRACTICES AS NEEDED. IF DEWATERING IS TO OCCUR, REFER TO THE *LOW RISK SITE HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL* FOR INSTRUCTIONS REGARDING DEWATERING INSPECTIONS.

ANY DEFICIENCIES SHALL BE IMMEDIATELY CORRECTED BY THE CONTRACTOR AND RE-INSPECTED THE FOLLOWING WEEK.

9. CONSTRUCTION ENTRANCES TO CONSTRUCTION AREA SHALL REMAIN UNTIL THE PROJECT IS COMPLETE. NO OTHER ENTRANCE SHALL BE USED. THE CONSTRUCTION ENTRANCE SHALL BE PREPARED BY PLACING APPROXIMATE 18 INCH X 40 FOOT ADS, BANK RUN GRAVEL, AND 3 TO 1 1/2 INCH STONE TO BE EXTENDED AT LEAST 50 FEET OFF THE EDGE OF THE TRAVELED WAY. THIS IS TO PREVENT MUD FROM LEAVING THE SITE ON EQUIPMENT AND PROVIDE A STABILIZED ENTRANCE OVER ROADSIDE DITCH LINES AND POTENTIAL STORMWATER COLLECTION CHANNELS IN ORDER TO PREVENT SILTATION OF SURFACE WATERS.

GENERAL NOTES

1. LIMITS OF DISTURBANCE (-LOD-) SHALL BE THE MAXIMUM LIMITS OF CLEARING AND DISTURBED EARTH FOR EACH PHASE OF CONSTRUCTION, INTENDED TO COINCIDE WITH EACH CONSTRUCTION SEASON.
2. MAXIMUM SOIL DISTURBANCE WITH NO TEMPORARY OR PERMANENT MULCH/FABRIC SHALL BE 7 DAYS.
3. REFERENCE *THE HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL* FOR ADDITIONAL GUIDANCE ON EROSION AND SEDIMENT CONTROL (COVER PICTURED BELOW)



1. PREPARE AN EROSION CONTROL PLAN OR A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS.
2. INSTALL CONSTRUCTION ENTRANCE, SEE DETAIL.
3. CUT AND CLEAR TREES WITHIN THE CLEARING LIMITS.
4. INSTALL SEDIMENT FENCES, ROCK CHECK DAMS, AND OTHER APPROPRIATE EROSION CONTROL MEASURES AT LOCATIONS SHOWN ON THE PLANS AND AS NEEDED.
5. GRUB SITE WITHIN GRADING LIMITS.
6. STRIP AND STOCKPILE TOPSOIL AND INSTALL EROSION CONTROL MEASURES.
7. INSTALL/ADJUST SEDIMENT FENCE, CHECK DAMS, AND HAYBALES, AS REQUIRED.
8. CONSTRUCT PERMANENT STORMWATER CONTROLS AS SOON AS PRACTICAL. DO NOT DIRECT STORMWATER TOWARD TREATMENT BASINS, PONDS, SWALES, DITCHES AND LEVEL SPREADERS UNTIL THEY HAVE BEEN STABILIZED.
9. PROCEED WITH WORK, LIMITING THE DURATION OF DISTURBANCE. THE MAXIMUM OF UNCOVERED DISTURBED EARTH AT ANY ONE TIME IS FIVE ACRES. THE MAXIMUM LENGTH OF TIME THAT DISTURBED EARTH MAY BE LEFT UNSTABILIZED IS 45 DAYS.
10. BEGIN SEEDING AND MULCHING IMMEDIATELY AFTER GRADING. ALL DISTURBED AREAS SHALL BE STABILIZED WITH APPROVED METHODS WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:

A) BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;

B) A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;

C) A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED; OR

D) EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
11. INSPECT ALL EROSION CONTROL MEASURES ON A DAILY BASIS AND AFTER EVERY 0.5 INCHES OF PRECIPITATION. MAINTAIN SEDIMENT FENCE, SEDIMENT TRAPS, HAY BALES, ETC., AS NECESSARY.
12. PAVE ROADWAYS AND/OR PARKING AREAS.
13. PLACE TOPSOIL, SEED AND MULCH.
14. COMPLETE ALL REMAINING PERMANENT EROSION CONTROL STRUCTURES.
15. MONITOR THE SITE AND MAINTAIN STRUCTURES AS NEEDED UNTIL FULL VEGETATION IS ESTABLISHED.

HARDWICK~CALENDONIA COUNTY~VERMONT

EROSION CONTROL NOTES

HARDWICK NRCS EWP

HARDWICK, VT



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FAX: 603.444.1343
PHONE: 603.444.4111

ENGINEER'S NAME

P.E. ####
STATE_####

DESIGNED BY	CHK'D BY	REVISION	DATE	DATE	DATE	DATE	DATE	DATE	DATE
xxx	xxx	PRELIMINARY							
		NOT FOR							
		CONSTRUCTION							

CHK'D BY	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
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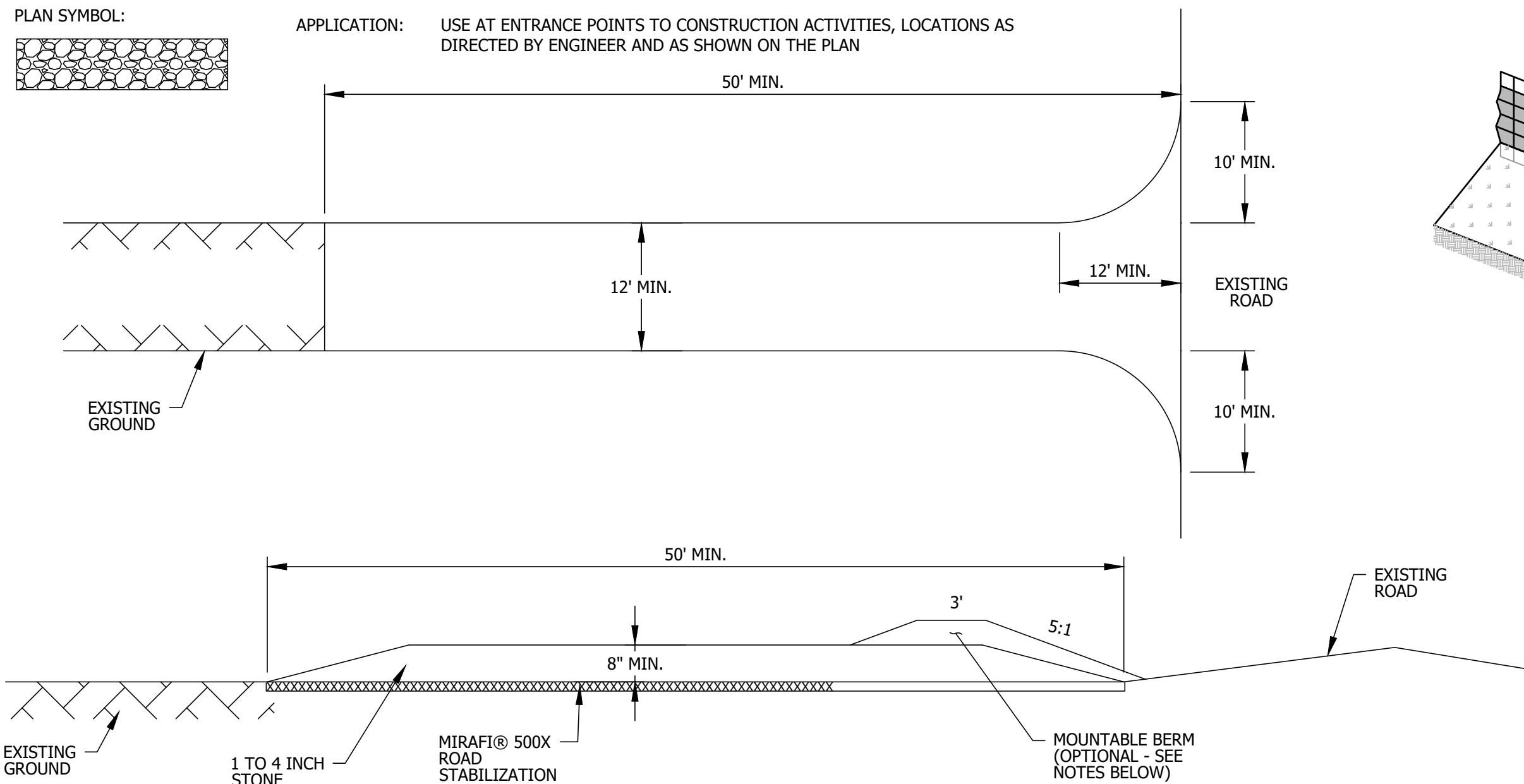
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DATE OF PRINT
JULY 14 2026
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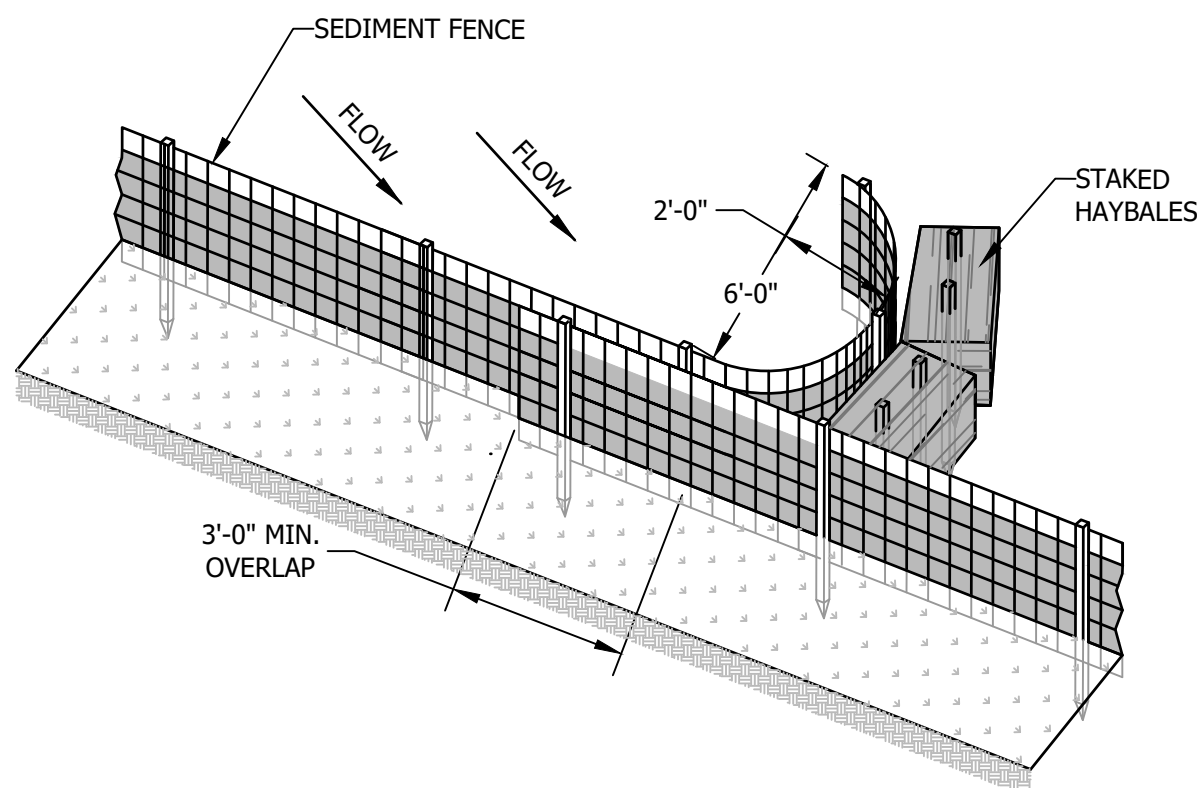


CONSTRUCTION ENTRANCE NOTES

1. USE A MATRIX OF 1 TO 4 INCH STONE OR RECLAIMED OR RECYCLED CONCRETE FOR ENTRANCE/EXIT PADS LEADING TO PUBLIC ROADS.
2. DIMENSIONS FOR PAD ARE AS FOLLOWS: LENGTH OF PAD SHALL NOT BE LESS THAN 50 FEET, THICKNESS SHALL BE NO LESS THAN 8 INCHES, THE WIDTH SHALL BE 12 FEET ABSOLUTE MINIMUM BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
3. GEOTEXTILE AS SPECIFIED ABOVE SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
4. ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS NOT PRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES SHALL BE USED.
5. THE CONTRACTOR SHALL MAINTAIN THE CONSTRUCTION ENTRANCE SO THAT IT IS ALWAYS IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO EXISTING ACCESS ROAD. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO EXISTING ROADS SHALL BE REMOVED IMMEDIATELY.
6. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
7. ALL MAINTENANCE AND INSPECTION WORK SHALL BE PERFORMED IN ACCORDANCE WITH PERMIT REQUIREMENTS.

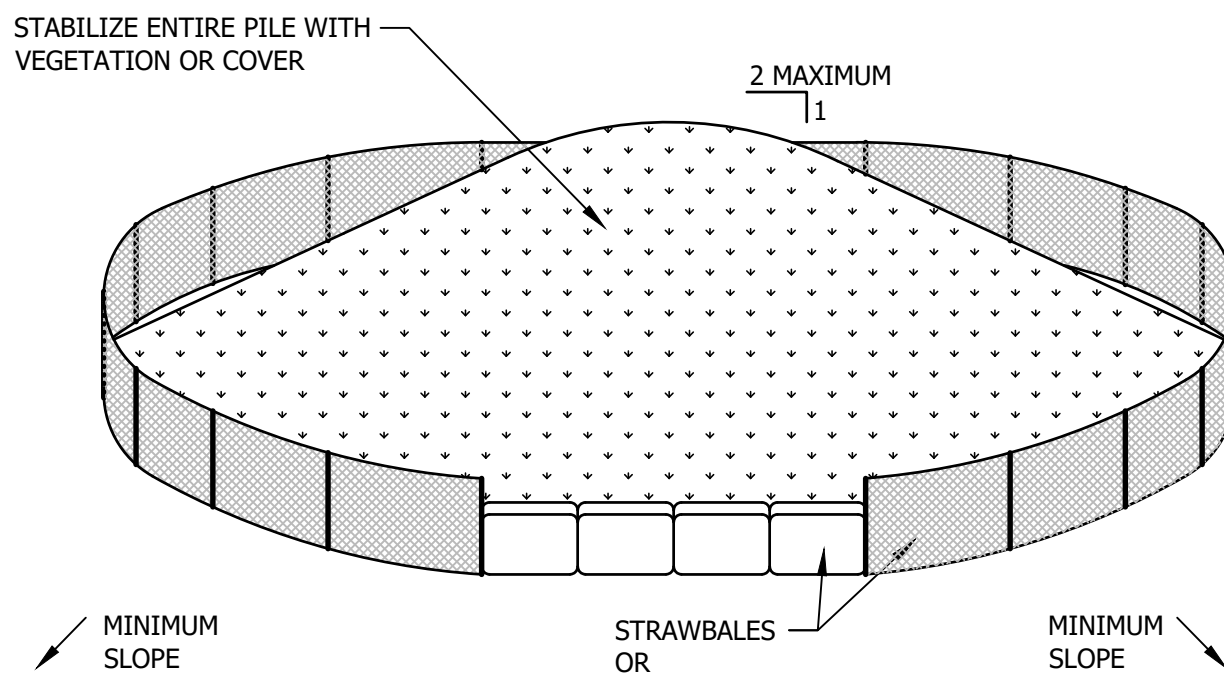
STABILIZED CONSTRUCTION ACCESS DETAIL

NOT TO SCALE



SEDIMENT FENCE POCKET

NO SCALE



SOIL STOCKPILING IS TO BE USED WHERE TOPSOIL IS NECESSARY FOR REGRADING AND VEGETATING DISTURBED AREAS.

TEMPORARY STOCKPILE STABILIZATION MEASURES INCLUDE VEGETATIVE COVERS, MULCH, NON-VEGETATIVE COVERS, AND PERIPHERAL SEDIMENT TRAPPING BARRIERS. THE STABILIZATION MEASURE(S) SELECTED SHOULD BE APPROPRIATE FOR THE TIME OF YEAR, SITE CONDITIONS, AND REQUIRED PERIOD OF USE.

INSTALLATION NOTES:

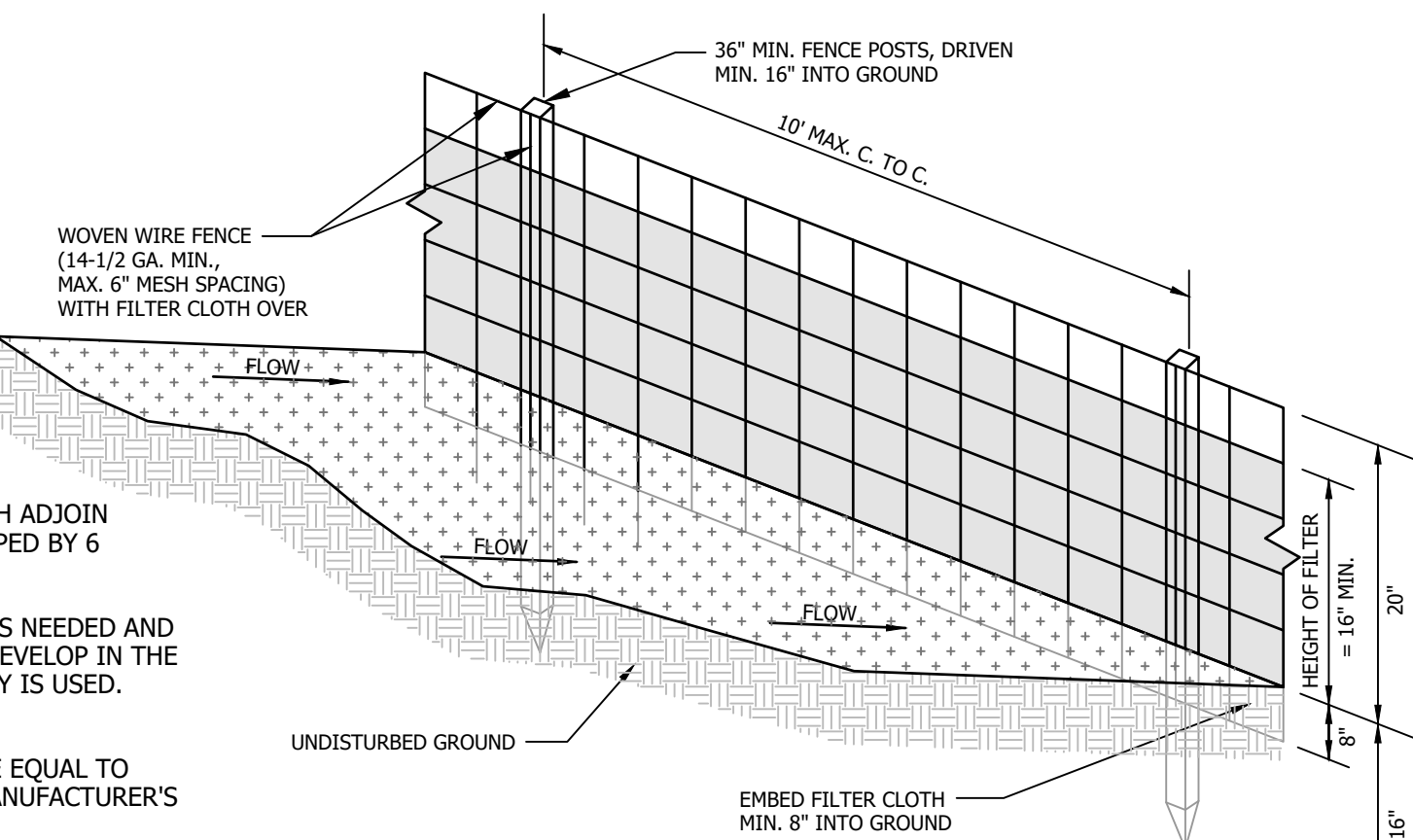
1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2:1.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR STRAWBALES AND THEN STABILIZED WITH VEGETATION OR COVERED.

SOIL STOCKPILING DETAIL

NOT TO SCALE

CONSTRUCTION NOTES FOR SEDIMENT FENCE

1. WOVEN WIRE FENCE, IF REQUIRED, TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP, MID SECTION, AND BOTTOM.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES, FOLDED AND STAPLED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SEDIMENT FENCE, OR 50% OF CAPACITY IS USED.
5. 12" DIAMETER FILTREXX SILT50XX SHALL BE CONSIDERED AN ACCEPTABLE EQUAL TO SEDIMENT FENCE IF INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.



SEDIMENT FENCE

NO SCALE

SEDIMENT RETENTION WATTLES

DESCRIPTION
EROSION CONTROL AND SEDIMENT RETENTION WATTLES (ESW) OR SLOPE INTERRUPTION DEVICES (SID) COMMONLY KNOWN AS WATTLES, ARE ELONGATED TUBES OF COMPACTED STRAW THAT ARE INSTALLED ALONG CONTOURS OR AT THE BASE OF SLOPES TO HELP REDUCE SOIL EROSION AND RETAIN SEDIMENT. THEY FUNCTION BY SHORTENING SLOPE LENGTH, REDUCING RUNOFF WATER VELOCITY, TRAPPING DISLODGED SOIL PARTICLES AND AMELIORATING THE EFFECTS OF SLOPE STEEPNESS.

WATTLES ARE USED AS WATER FLOW DISSIPATERS TRAPPING SEDIMENT WHEN LOCATED PRIOR TO DRAIN INLETS, ETC. WATTLES ARE HIGHLY EFFECTIVE WHEN THEY ARE USED IN COMBINATION WITH OTHER SURFACE SOIL EROSION/RE-VEGETATION PRACTICES SUCH AS SURFACE ROUGHENING, STRAW MULCHING, EROSION CONTROL BLANKETS, HYDRAULIC MULCHING AND APPLICATION OF BONDED FIBER MATRIX OR OTHER HYDRAULIC SOIL STABILIZERS.

PROPERTIES:
MATERIAL: 100% WEED FREE STRAW
LONGEVITY: 24 MONTHS
NETTING: PHOTODEGRADABLE

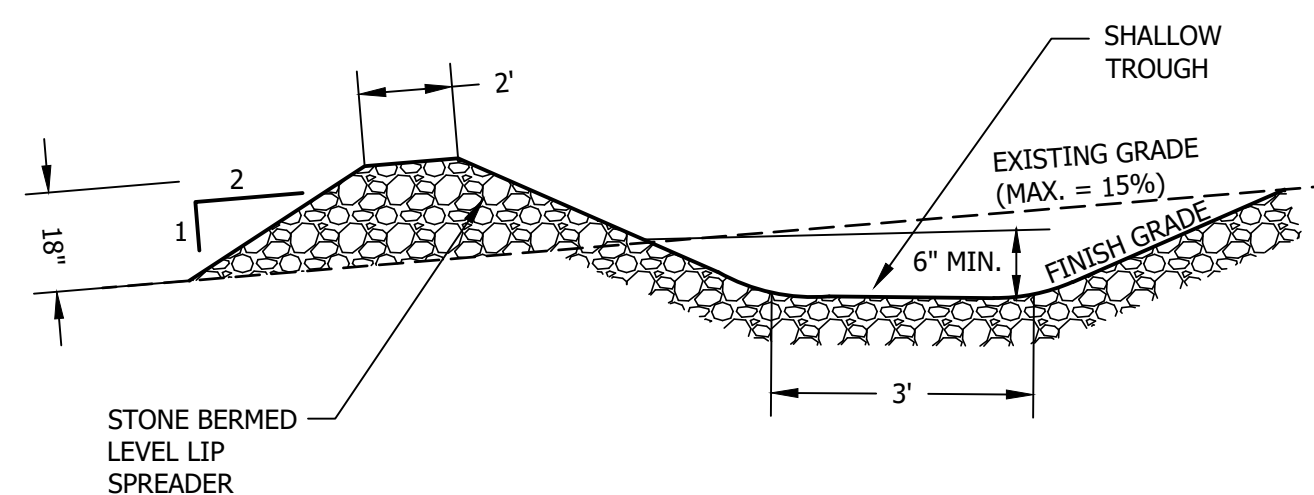
DIAMETER	LENGTH	WEIGHT
9"	8' TO 25'	1.6 LBS/FT
12"	8' TO 20'	2.8 LBS/FT
18"	8' TO 20'	3.2 LBS/FT
20"	8' TO 20'	3.5 LBS/FT

NOTE: WATTLE SIZES, LENGTHS, WEIGHTS, AND LONGEVITY ARE APPROXIMATE.

INFORMATION PROVIDED BY:
ULTRATECH INTERNATIONAL, INC.
11542 DAVIS CREEK COURT, JACKSONVILLE, FL 32256 USA
PHONE: 800.353.1611 FAX: 904.292.1325 WWW.STORMWATER-PRODUCTS.COM

LEVEL LIP SPREADER INSTALLATION

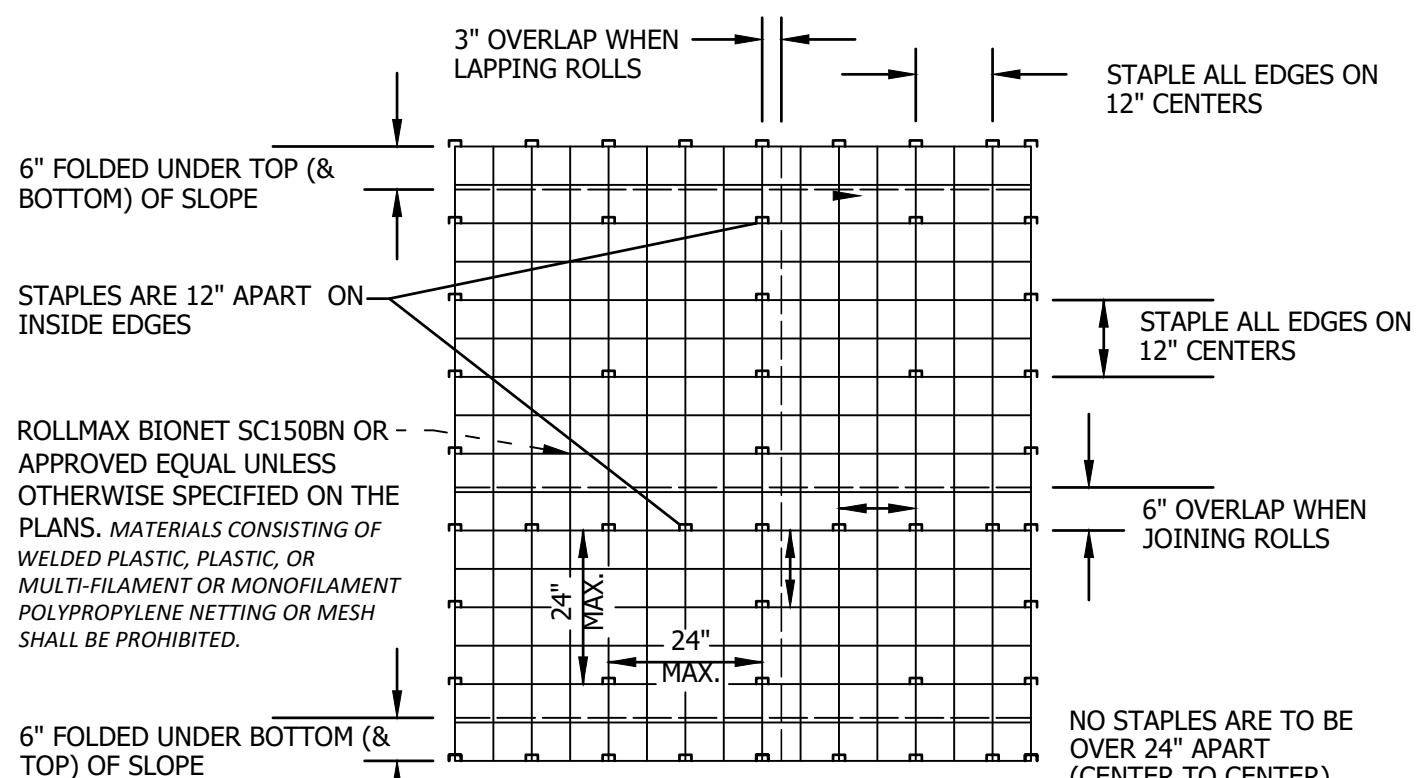
1. CONSTRUCT THE LEVEL SPREADER LIP ON A ZERO PERCENT GRADE TO INSURE UNIFORM SPREADING OF RUNOFF.
2. LEVEL SPREADER SHALL BE CONSTRUCTED ON UNDISTURBED SOIL AND NOT ON FILL NOR ON EXISTING GRADES IN EXCESS OF 15%.
3. STONE BERMED LEVEL SPREADERS SHALL NOT BE INSTALLED IN WETLANDS SOILS OR IN HYDROLIC SOILS GROUP D.
4. THE ENTIRE LEVEL LIP AREA SHALL BE PROTECTED BY PLACING A 3 FOOT WIDE BY 6" DEEP TRAPEZOIDAL TROUGH AND A 2 FOOT WIDE BY 18" HIGH STONE BERM FOR THE LENGTH OF THE IMPERVIOUS AREA OR FOR A MINIMUM OF 10 FEET.
5. THE FLOW FROM THE LEVEL SPREADER SHALL OUTLET ONTO STABILIZED AREAS. WATER SHOULD NOT RE-CONCENTRATE IMMEDIATELY BELOW THE SPREADER.
6. INSPECT ANNUALLY FOR ACCUMULATION OF SEDIMENT AND DEBRIS AND FOR SIGNS OF EROSION WITHIN APPROACH CHANNEL, SPREADER CHANNEL, OR DOWN SLOPE OF THE SPREADER.
7. REMOVE DEBRIS OBSERVED DURING INSPECTION.
8. REMOVE SEDIMENT WHEN ACCUMULATION EXCEEDS 25% OF SPREADER DEPTH.
9. MOW ANNUALLY TO CONTROL WOODY VEGETATION WITHIN THE SPREADER.
10. SNOW SHOULD NOT BE STORED WITHIN OR DOWNSLOPE OF THE LEVEL SPREADER OR ITS APPROACH CHANNEL.
11. REPAIR EROSION AND REPLACE STONE BERM MATERIAL, AS WARRANTED BY INSPECTION.
12. RECONSTRUCT THE SPREADER IF DOWN-SLOPE CHANELIZATION INDICATES THAT THE SPREADER IS NOT LEVEL OR THAT DISCHARGE HAS BECOME CONCENTRATED, AND CORRECTIONS CANNOT BE MADE THROUGH MINOR RE-GRADING.



LEVEL SPREADER DETAIL

NO SCALE

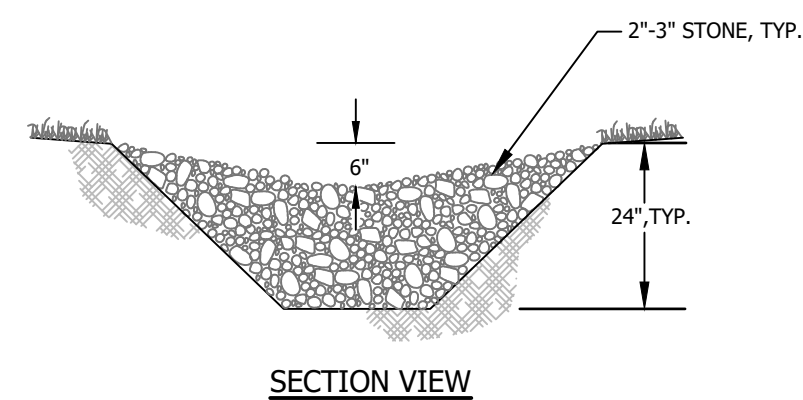
SOURCE: NH STORMWATER MANUAL: VOLUME 2



MULCH NETTING DETAIL

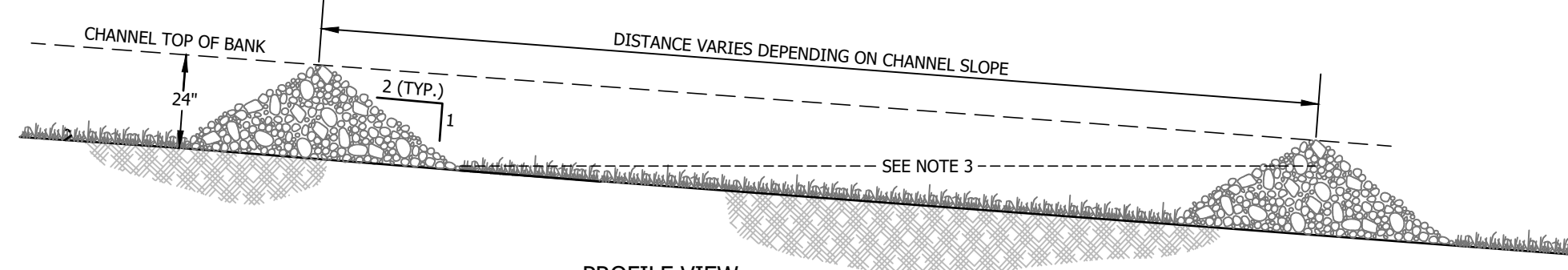
SOURCE: USDA SOIL CONSERVATION SERVICE

NO SCALE



NOTES

1. CONSTRUCT ROCK CHECK DAMS WHERE INDICATED ON THE PLANS OR AS NECESSARY.
2. CONSTRUCT SPILLWAY IN CENTER OF ROCK CHECK DAM 6" BELOW TOP OF CHANNEL.
3. THE MAXIMUM SPACING BETWEEN THE CHECK DAMS SHOULD BE SUCH THAT THE TOE OF THE UPSTREAM CHECK DAM IS AT THE SAME ELEVATION AS THE SPILLWAY ELEVATION OF THE DOWNSTREAM CHECK DAM, THIS WILL VARY DEPENDING ON THE SLOPE OF THE CHANNEL.
4. ROCK CHECK DAMS SHALL CONSIST OF A WELL GRADED MIXTURE OF 2" - 3" STONE.
5. REMOVE ROCK CHECK DAMS AND ANY ACCUMULATED SILT IN CHANNEL ONCE PERMANENT CHANNEL LININGS HAVE BEEN ESTABLISHED AND STABILIZED.



ROCK CHECK DAM DETAIL

NO SCALE

DATE OF PRINT
JULY 14 2026
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HARDWICK~CALENDONIA COUNTY~VERMONT EROSION CONTROL DETAILS HARDWICK NRCS EWP

HARDWICK, VT

verdantas

34 SCHOOL STREET
LITTLETON, NH 03561
FAX: 603.444.1343
PHONE: 603.444.4111

ENGINEER'S NAME

DESIGNED BY
xxx

DRAWN BY
SPM

CHECKED BY
xxx

PROJECT NO.
250575 H#####

STATE_ XXXXXX

P.E. #####

REVISION

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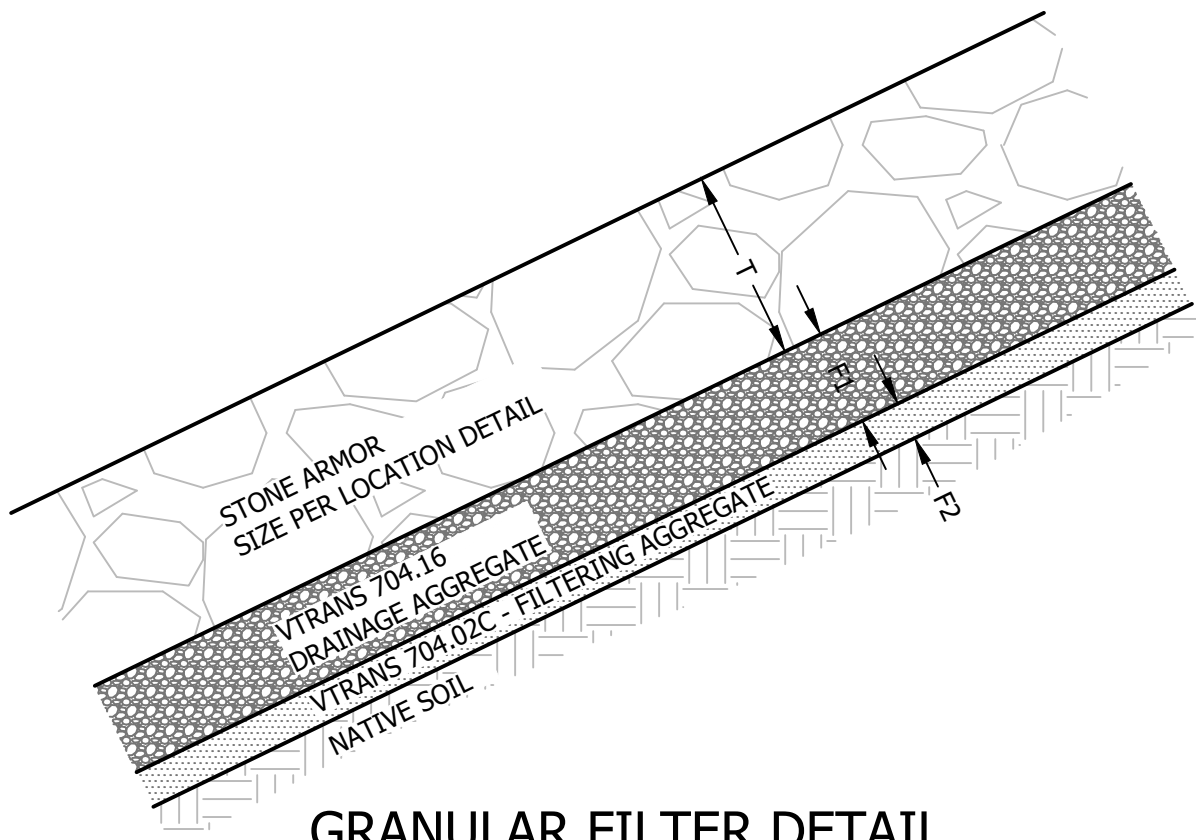
STONE SPECIFICATIONS

PROJECT DEFINED STABILIZATION STONE FILL

PROJECT DEFINED STABILIZATION STONE FILL SHALL BE HARD, BLASTED, ANGULAR ROCK OTHER THAN SERPENTINE ROCK CONTAINING THE FIBROUS VARIETY CHRYSOTILE (ASBESTOS). MATERIAL OF THE TYPE SPECIFIED SHALL BE DEFINED AS FOLLOWS:

- (a) D50-24 INCH. THE LONGEST DIMENSION OF THE STONE SHALL BE AT LEAST 30 INCHES, AND AT LEAST 50% OF THE VOLUME OF THE STONE IN PLACE SHALL HAVE A LEAST DIMENSION OF 24 INCHES, AND BE WELL GRADED MATERIAL.
- (b) D50-36 INCH. THE LONGEST DIMENSION OF THE STONE SHALL BE AT LEAST 48 INCHES, AND AT LEAST 50% OF THE VOLUME OF THE STONE IN PLACE SHALL HAVE A LEAST DIMENSION OF 36 INCHES, AND BE WELL GRADED MATERIAL.
- (c) D50-42 INCH. THE LONGEST DIMENSION OF THE STONE SHALL BE AT LEAST 60 INCHES, AND AT LEAST 50% OF THE VOLUME OF THE STONE IN PLACE SHALL HAVE A LEAST DIMENSION OF 42 INCHES, AND BE WELL GRADED MATERIAL.

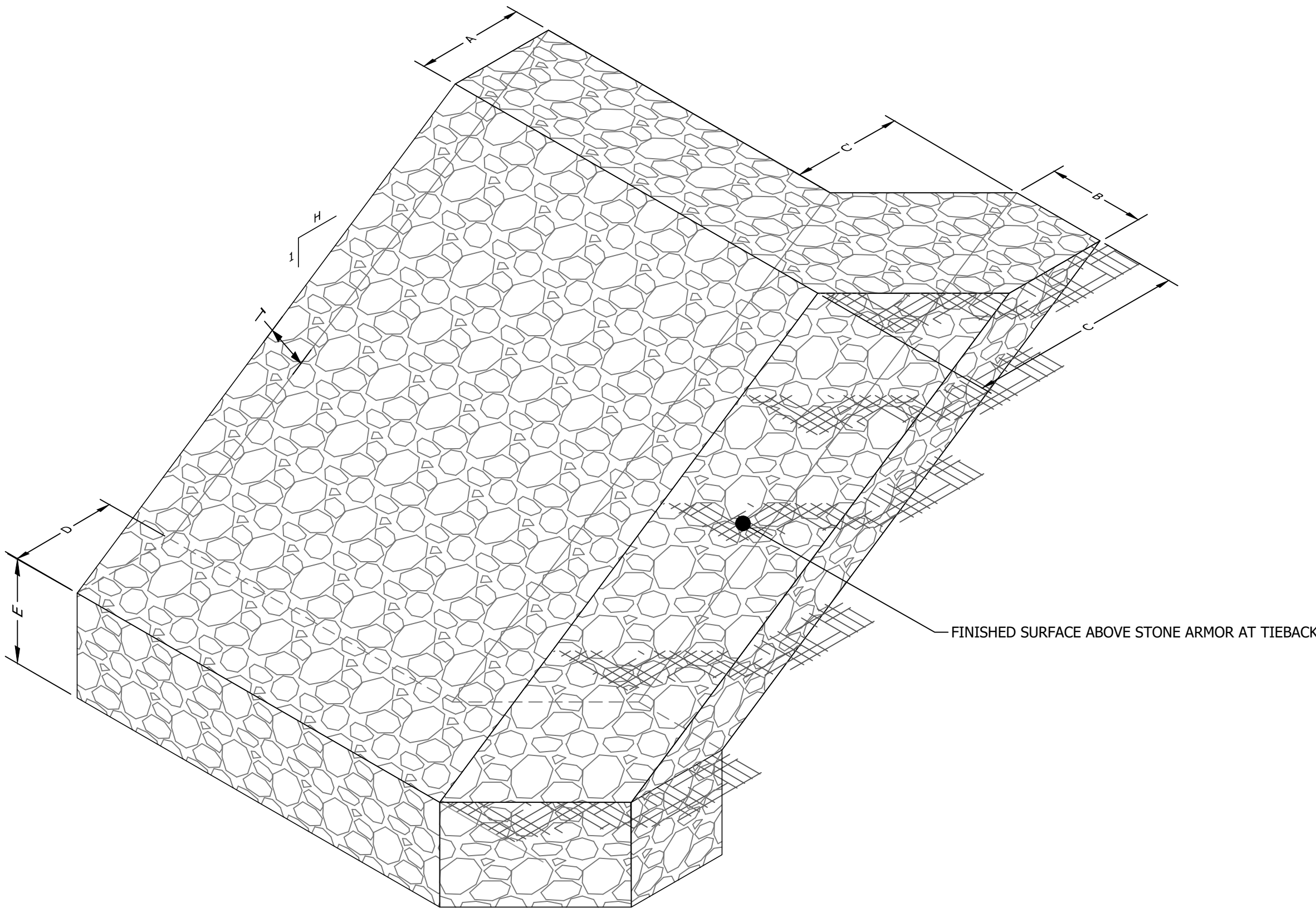
LOCATION	STONE SIZE	D ₅₀ (IN)	STONE THICKNESS "T"	STONE STABILIZATION KEY
380 VT ROUTE 14	PROJECT DEFINED STABILIZATION STONE FILL, D50-24 INCH	24	36"	3' X 3'
25 MILL STREET	PROJECT DEFINED STABILIZATION STONE FILL, D50-36 INCH	36	54"	3' X 3'
BRUSH STREET	PROJECT DEFINED STABILIZATION STONE FILL, D50-42 INCH	42	63"	3' X 3'



GRANULAR FILTER DETAIL

NOT TO SCALE

LOCATION	STONE ARMOR	STONE THICKNESS "T"	UPPER FILTER MATERIAL	UPPER FILTER THICKNESS "F1"	LOWER FILTER MATERIAL	LOWER FILTER THICKNESS "F2"
380 VT ROUTE 14	D50-24 INCH	36"	VTRANS 704.16	18"	VTRANS 704.02C	6"
25 MILL STREET	D50-36 INCH	54"	VTRANS 704.16	24"	VTRANS 704.02C	9"
BRUSH STREET	D50-42 INCH	63"	VTRANS 704.16	30"	VTRANS 704.02C	9"

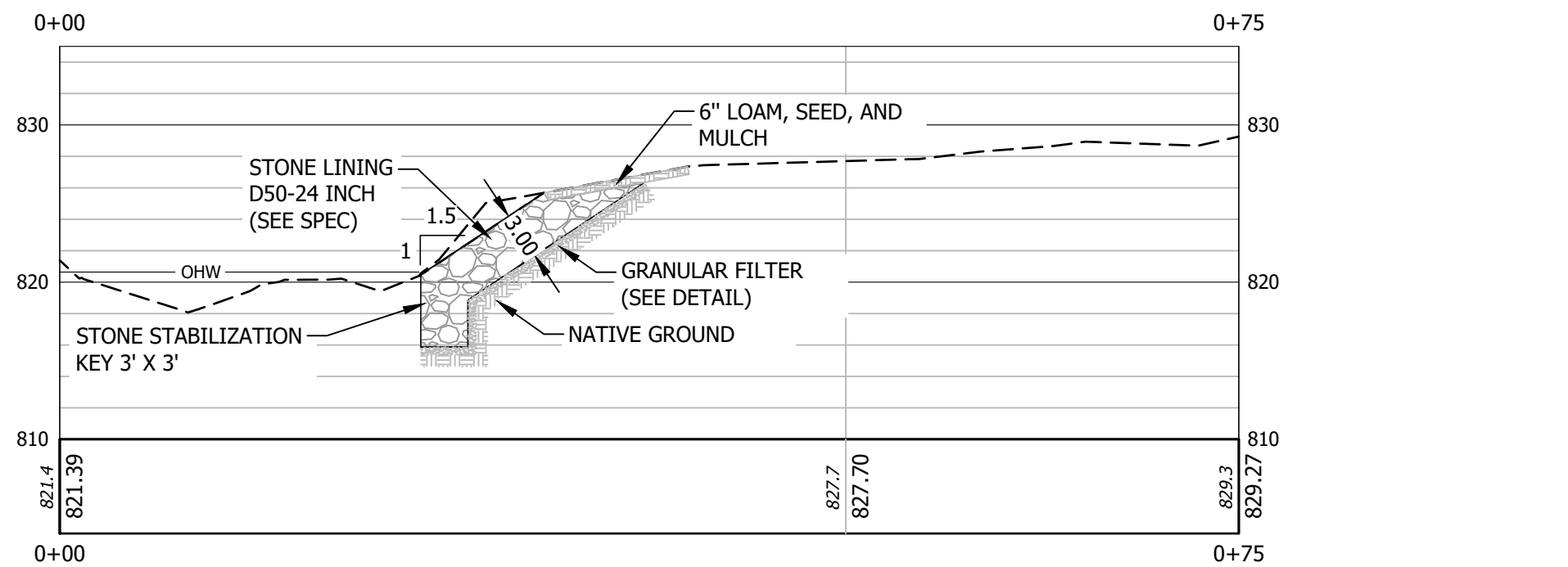


TIEBACK TYPICAL AT UPSTREAM AND DOWNSTREAM END OF STABILIZATION AREAS

VERTICAL KEY TIEBACK DETAIL

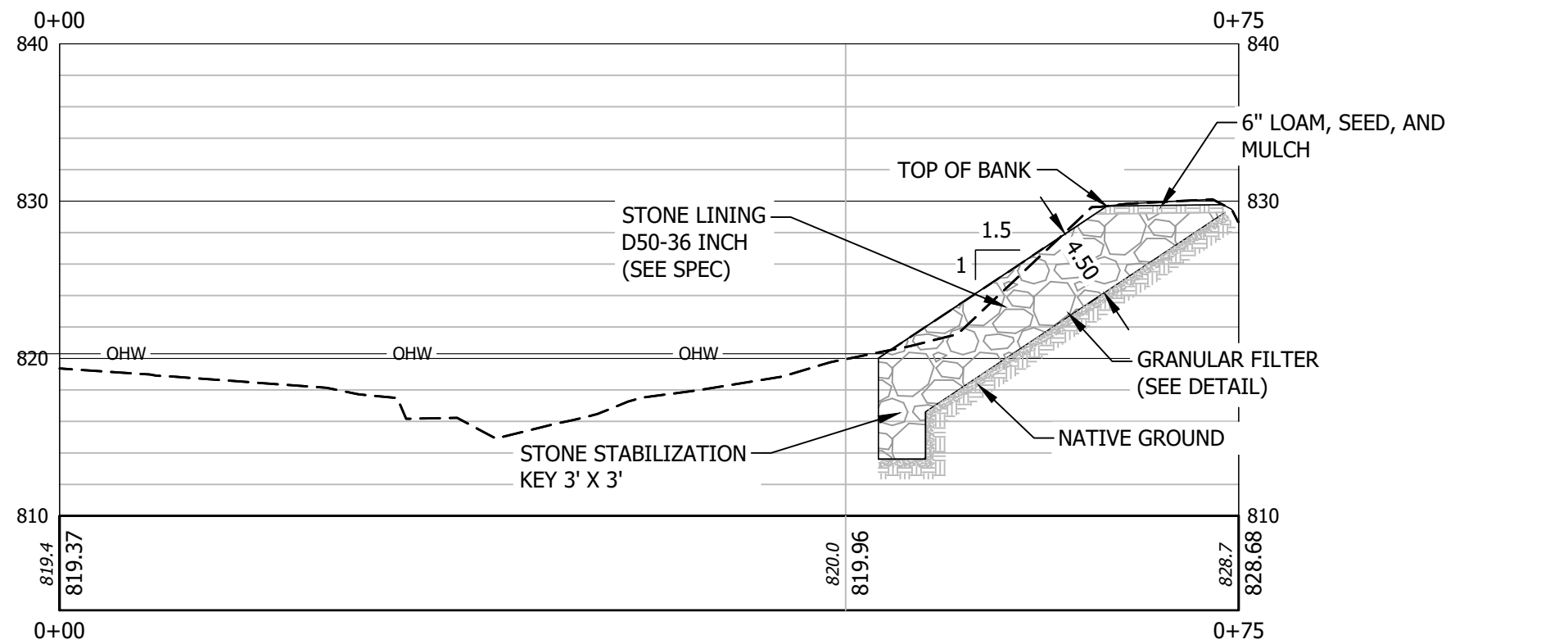
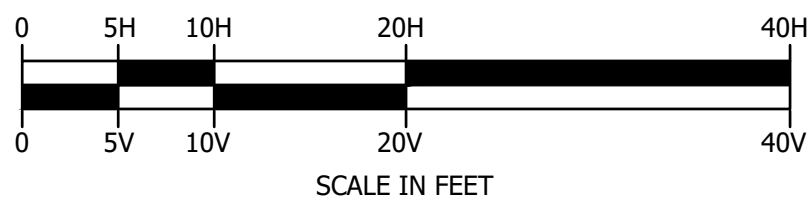
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	"T" DIMENSION	"H" DIMENSION	"A" DIMENSION	"B" DIMENSION	"C" " DIMENSION	"C" DIMENSION	"D" DIMENSION	"E" DIMENSION
LOCATION	STONE DEPTH	SLOPE VS VERTICAL	PROJECTED WIDTH	TIEBACK WIDTH	TIEBACK DEPTH	TIEBACK TOTAL DEPTH	FOOT KEY WIDTH	FOOT KEY DEPTH
380 VT ROUTE 14	36"	1.5	5.4'	3'	5.4'	10.8'	3'	3.4'
25 MILL STREET	54"	1.5	8.1	4.5'	8.1'	16.2'	3'	5.4'
BRUSH STREET	63"	1.8	10.8'	5.25'	10.8'	21.6'	3'	5.9'



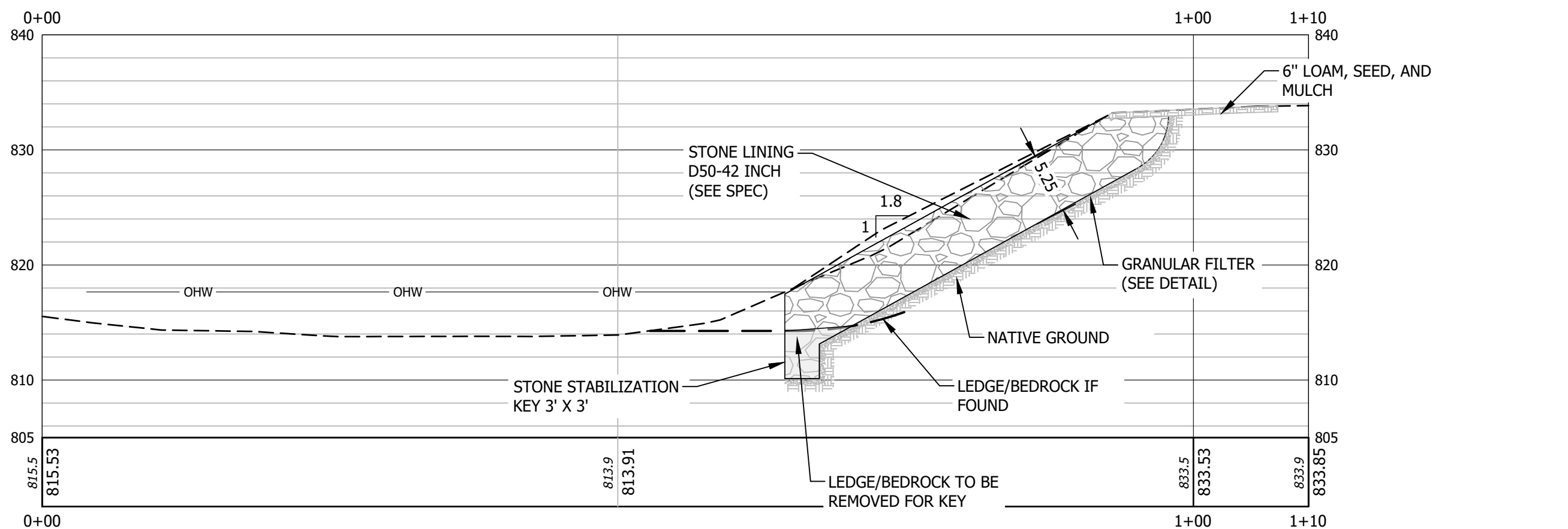
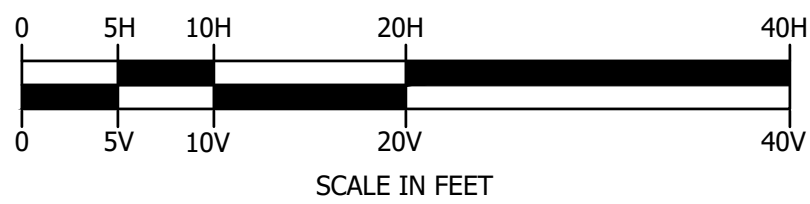
584 VT ROUTE 14 PROFILE

STA: 0+00 to STA: 0+75



25 MILL STREET PROFILE

STA: 0+00 to STA: 0+75



BRUSH STREET PROFILE

STA: 0+00 to STA: 1+10

