

PUBLIC MEETING AGENDA

MUNICIPALITY OF WOODSTOCK, VERMONT
WOODSTOCK CONSERVATION COMMISSION
31 The Green
Woodstock, VT 05091

The Conservation Commission will meet at **6:30 PM** on **Tuesday, February 3rd, 2026**.

The Meeting will be held via Zoom [CLICK HERE TO JOIN](#).
The login information is at the bottom of this agenda.

1. Call to Order: 6:30 PM
2. Public Hearing:

A. T-0033-26 – Ana Cristina Arumi

Location: 5274 West Woodstock Road

Parcel ID: 06.01.10.002

Review Type: Conditional Use

Proposed Development: To replace 8' x 13' deck on rear of house with 16' x 37' deck.

B. T-0035-26 – Green Mountain Horse Association

Location: 5491 South Road

Parcel ID: 33.02.22

Review Type: Conditional Use

Proposed Development: To reconstruct the Upwey Arena and undertake regrading and floodplain benching at 5 locations along the Kedron Brook.

3. Other Business:
4. Approval of Minutes: 11/24/25
5. Adjournment

To join the Conservation Commission Meeting via Zoom, [CLICK HERE](#) then enter the following:

Meeting ID: 886 4885 1165
Passcode: 345452



Woodstock, Vermont

The Shire Town of Windsor County

TOWN-VILLAGE MANAGER GOVERNMENT

Town Hall • P.O. Box 488 • Woodstock, Vermont 05091 • 802/457-3456

Planning & Zoning Application

Date: 11/26/2025

Applicant / Co-Applicant

Applicant: Cristina Arumi
Name:
Address: 5274 West Woodstock Road
City, State, Zip: Woodstock, Vermont 05091
Phone: 4438272680
Email: farmhouseinnvermont@gmail.com

Co-Applicant:
Address:
City, State, Zip:
Phone:
Email:

Agent

Authorized Agent: Peter Raymond
Address: 30 Main Street, 6th Floor
City, State, Zip: Burlington, VT

Phone: 8028656355
Email: praymond@sheeheyvt.com

Details

Contact Method: email
Mail To: 5274 West Woodstock Road
Parcel ID: 06.01.10.002
Site Address: 5274 West Woodstock Road

Zoning: Inn
Overlay: Flood Hazard
Project Cost: 30000.00
Habitable: .00
Non-Habitable: 592.00

Project Description: Replace existing 8ft x 13ft deck on rear of existing house with 16ft x 37 ft. deck.

I do hereby certify that the information contained herein is true and correct.

Peter Raymond

Name

11/26/2025

Date

Woodstock Planning & Zoning Application

All applicants must be the owner, the owner's attorney, or authorized agent of property described herein. A person holding a binding agreement to purchase property may sign application by providing written proof of such agreement. If an agent or attorney will represent or speak on owner's behalf, owner must complete the agent portion of this application.

Applicant: Cristina Arumi Phone: 443-827-2080 Email: farmhouseinnvermont@gmail.com
Address: 5274 West Woodstock Rd City/Town: WOODSTOCK State: VT Zip Code: 05091

Co-Applicant: _____ Phone: _____ Email: _____
Address: _____ City/Town: _____ State: _____ Zip Code: _____

Signature(s): Cristina Arumi

*What is the best way to contact you? Phone or Email Contact Peter Raymond
*What address would you like your Notice of Hearing/Permit mailed to? 5274 West Woodstock Rd.

Agent Authorization

(a representative speaking on behalf of the owner/applicant)

I, Ana Cristina Arumi, owner of property located at 5274 West Woodstock Rd, Woodstock, Vermont, hereby designate as my agent.

Name of Agent: Peter Raymond Phone: 8028656355 Email: praymond@sheeheyvt.com
Address: 30 Main Street, 6th Floor City/Town: Burlington State: VT Zip Code: 05402

Agent may be accepted as though made by me personally, and I understand that I may be bound by an official decision made based upon such representation

Signature: Cristina Arumi

Parcel ID Number(s): _____ Address: _____ Zoning District: _____ Overlay District: _____

Proposal of project: _____

Planning & Zoning Office Only

Village Design Review Hearing Date: _____ Village Development Review Hearing Date: _____

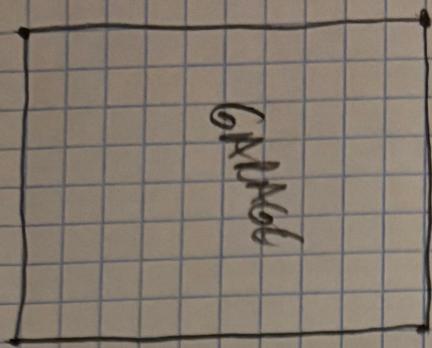
Town Development Review Hearing Date: _____ South Woodstock Review Hearing Date: _____

Planning Commission Hearing Date: _____ Conservation Commission Hearing Date: _____ Administrative: _____

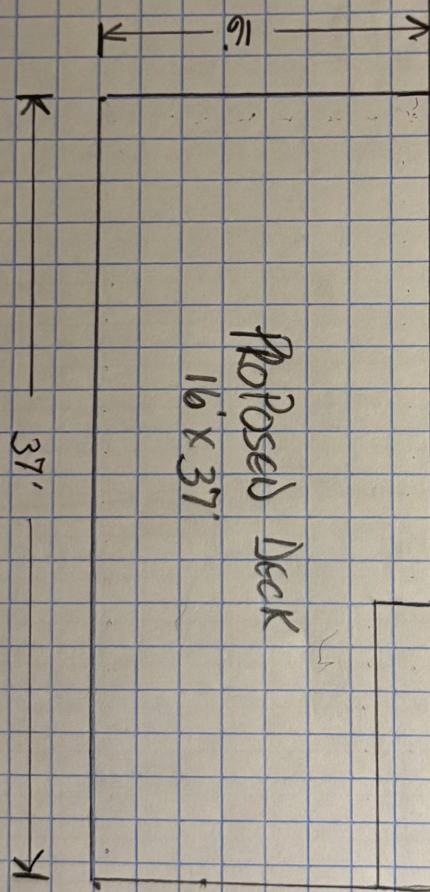
Date Recvd: _____ Date Complete: _____ By: _____ Application #: _____

Review Fee: _____ Itemized Fee: _____ Recording Fee: _____ Total Fee: _____

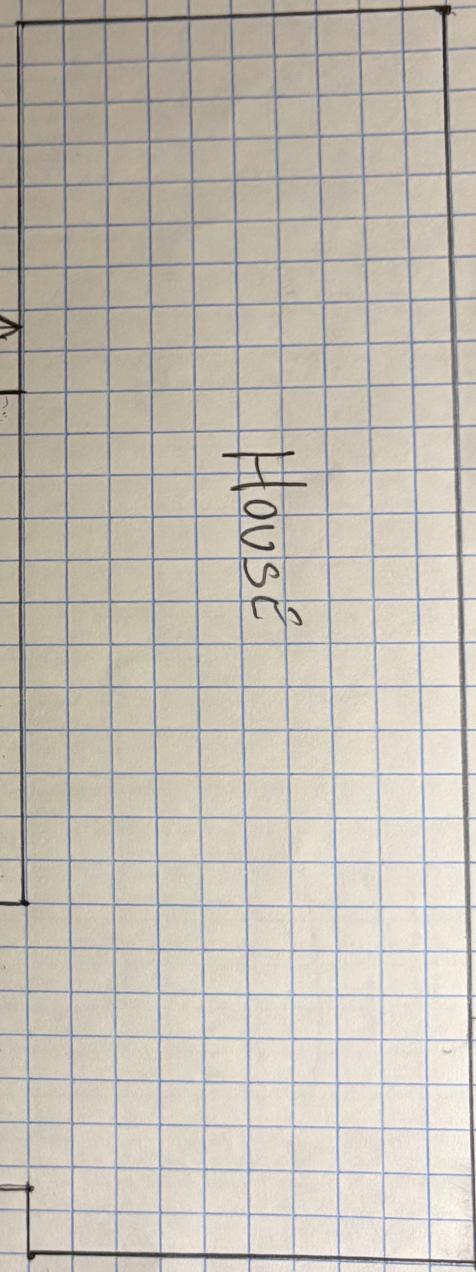
Paid: cash _____ check _____ MuniPay: _____ Payment Date: _____



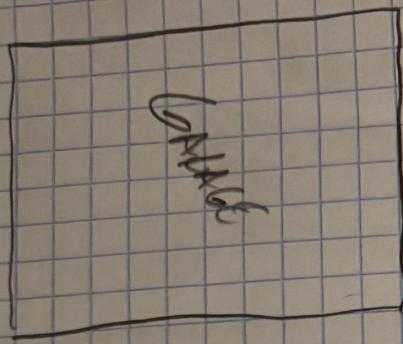
Garden



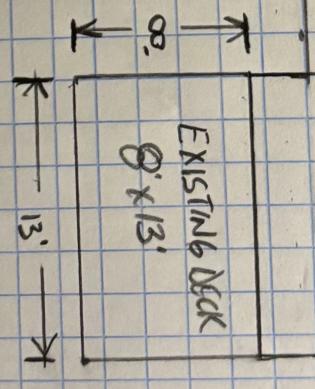
Proposed Deck
16' x 37'

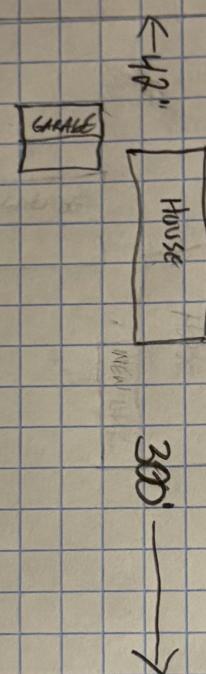


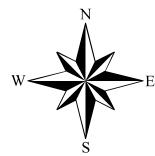
House



House







Town of Woodstock, VT

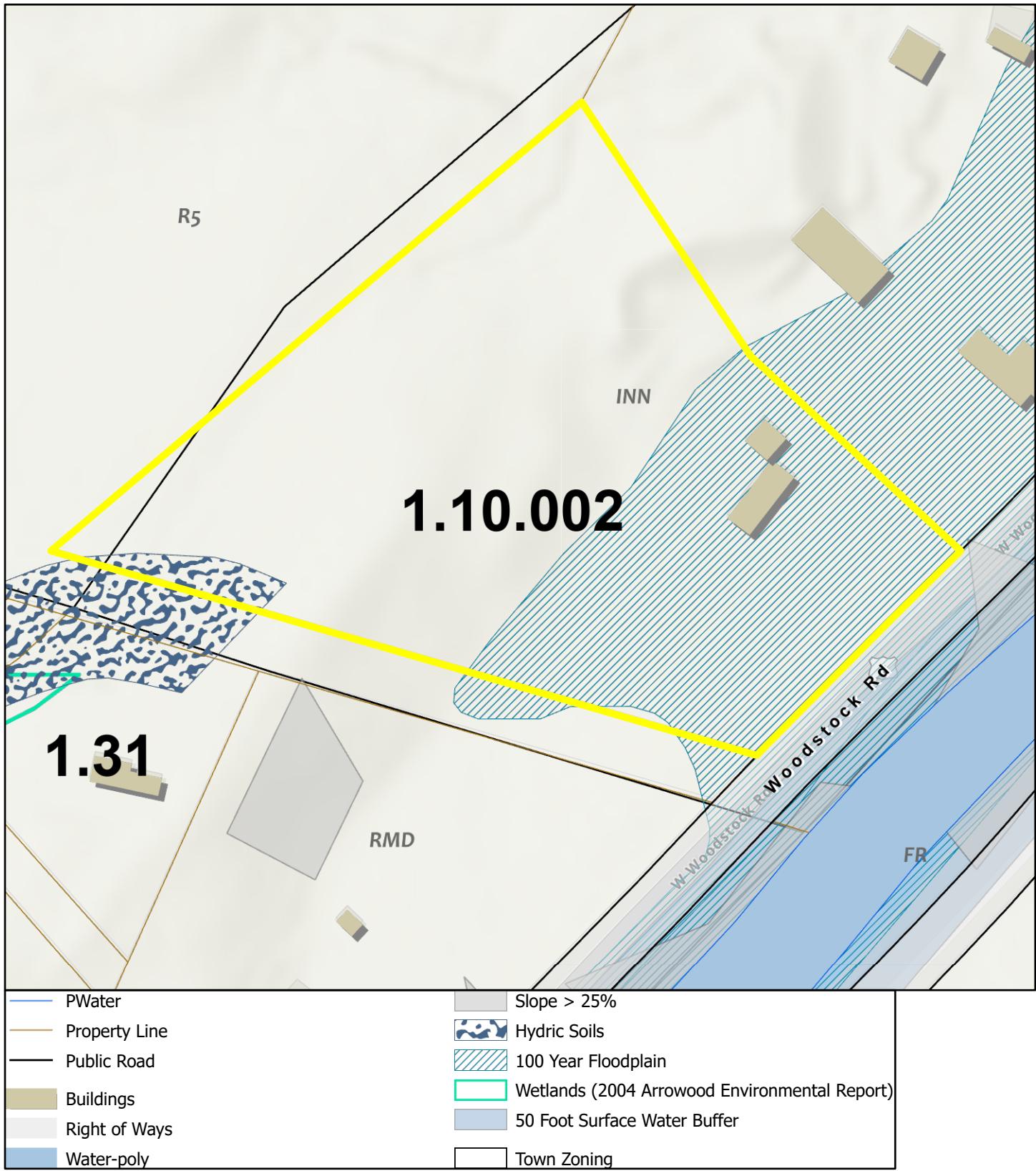
1 inch = 120 Feet

December 2, 2025

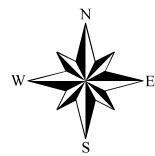
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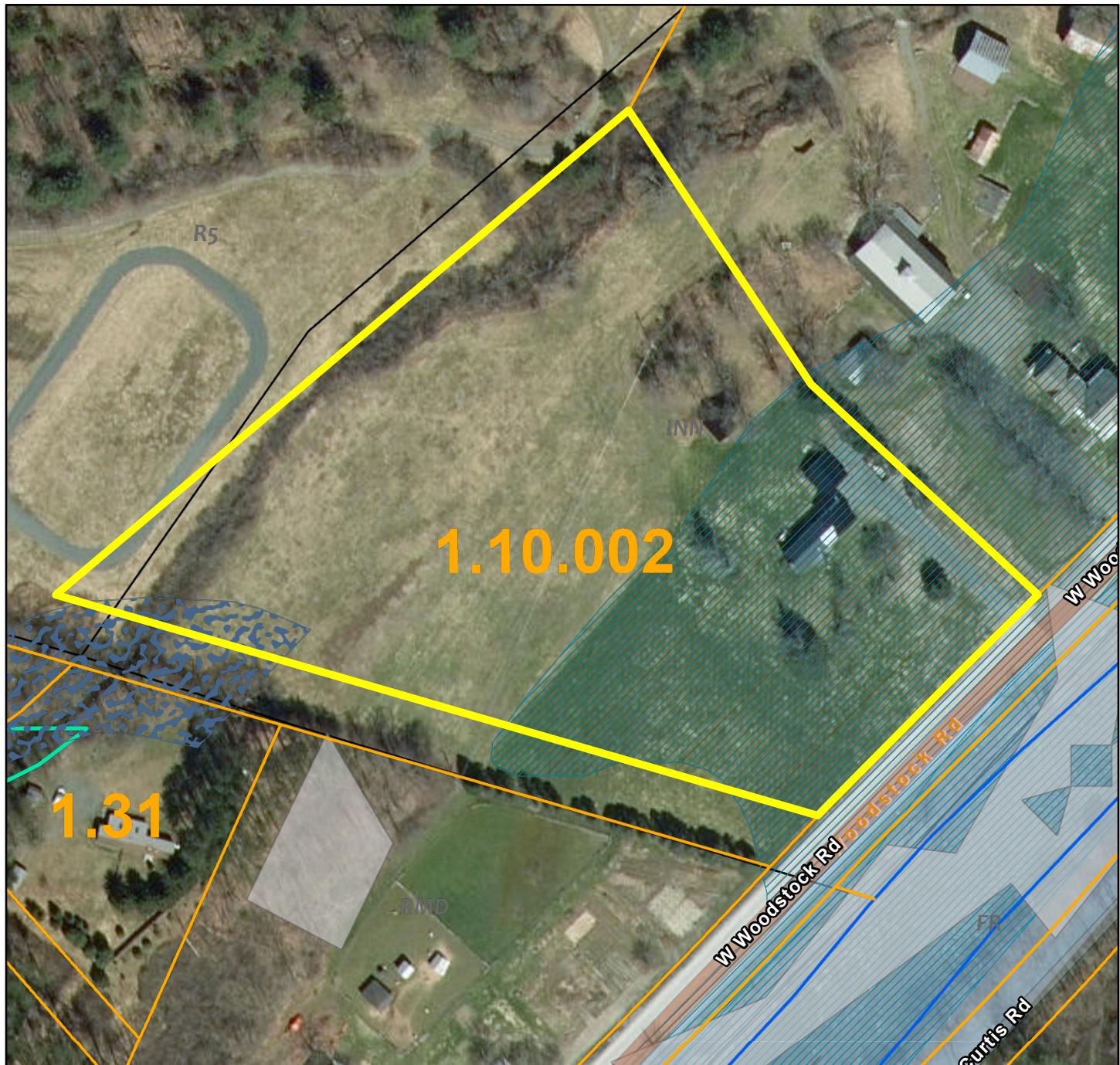
Town of Woodstock, VT

1 inch = 120 Feet

December 2, 2025

0 120 240 360

CAI Technologies
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Water	Hydric Soils
Property Line	100 Year Floodplain
Public Road	Wetlands (2004 Arrowood Environmental Report)
Water-poly	50 Foot Surface Water Buffer
Slope > 25%	Town Zoning

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From: [Barsaleau, Jessica](#)
To: [Planning Department](#)
Subject: RE: New Applications
Date: Thursday, January 22, 2026 7:19:24 PM
Attachments: [image001.png](#)

Hi Molly,

Thank you so much! I have reviewed the application for 5274 West Woodstock Rd and offer the following comments.

The property is in the Special Flood Hazard Area (SFHA), Zone AE, of the Ottauquechee River. The regulatory Base Flood Elevation (BFE) at the parcel location is ~795-ft.

Per Section 405 D. 2. in the Town of Woodstock [Zoning Regulations](#), the applicable standards state that all development within the SFHA shall be:

1. reasonably safe from flooding,
2. designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure during the occurrence of the base flood,
3. constructed with materials resistant to flood damage, and
4. constructed by methods and practices that minimize flood damage.

In support of these requirements, it is recommended that the proposed deck be designed to allow floodwaters to pass freely beneath it, avoiding solid skirting or enclosures to minimize obstruction to flood flows. The deck should be supported on anchored posts or piers embedded below the frostline or to adequate depth to resist lateral movement, rotational forces, and collapse during the base flood. Additionally, the deck should be constructed using flood-resistant materials such as pressure-treated lumber. Any stairs or railings should be designed to withstand flood forces or fail without causing damage to the primary structure.

If the above criteria are satisfied, it appears based on the submitted application that the development would meet Section 405 D. 2. of the Town of Woodstock Zoning Regulations. This email is provided to the applicant and the Town as the ANR notification and review/comment in accordance with Section 405 C. and with 24 V.S.A. § 4424. Additional local, State or Federal permits may be required. Where the community has additional, or more stringent standards, those standards apply.

Additionally, I will also send the comments for the Green Mountain Horse Association application shortly. We've submitted comments on that project for the Act 250 permit, so the comments I pass along will be nearly the same as those.

Please let me know if you have any other questions or concerns.

Thank you,
Jessica

Jessica Barsaleau | River Corridor & Floodplain Manager
Vermont Agency of Natural Resources | Department of Environmental Conservation
Watershed Management Division, Rivers Program
100 Mineral St | Springfield, VT 05156
802-522-8752 cell | jessica.barsaleau@vermont.gov

From: Planning Department <pz@townofwoodstock.org>
Sent: Monday, December 29, 2025 8:51 AM
To: Barsaleau, Jessica <Jessica.Barsaleau@vermont.gov>
Subject: RE: New Applications

EXTERNAL SENDER: Do not open attachments or click on links unless you recognize and trust the sender.

Hi Jessica,

Thank you, and congratulations on the new position! I look forward to working with you going forward. Please let me know if you have any questions or concerns about either application.

Best Wishes,

Molly Maxham
Town Zoning Administrator
Town of Woodstock
802-457-7515
[Click here to book an appointment](#)

From: Barsaleau, Jessica <Jessica.Barsaleau@vermont.gov>
Sent: Friday, December 26, 2025 1:43 PM
To: Planning Department <pz@townofwoodstock.org>
Subject: RE: New Applications

Hi Molly,

I am the new River Corridor and Floodplain Manager for Windham, Windsor, and Bennington counties. Asa forwarded your email to me.

Thank you for sending these applications. I'll look them over and follow up once I've completed my review.

Best,
Jessica

Jessica Barsaleau | River Corridor & Floodplain Manager
Vermont Agency of Natural Resources | Department of Environmental Conservation
Watershed Management Division, Rivers Program
100 Mineral St | Springfield, VT 05156
802-522-8752 cell | jessica.barsaleau@vermont.gov

From: Planning Department <pz@townofwoodstock.org>
Sent: Tuesday, December 23, 2025 3:52 PM
To: Brayton, Asa <Asa.Brayton@vermont.gov>
Subject: New Applications

EXTERNAL SENDER: Do not open attachments or click on links unless you recognize and trust the sender.

Hi Asa,

I hope you are having a wonderful holiday season. I currently have two applications for projects in the floodplain that will go before our Town Development Review Board on January 27th. I have attached the applications  [here](#) and [here](#). Please let me know if you have any difficulty accessing the materials. The first application is for a deck, and the second is for a floodplain benching project, which I believe you have already been involved in. If you have any comments or concerns that you would like passed on to the board, please let me know. Otherwise, I am happy to answer any questions. Thank you!

Best Wishes,

Molly Maxham
Town Zoning Administrator
Town of Woodstock
802-457-7515
[Click here to book an appointment](#)

Woodstock Planning & Zoning Application

All applicants must be the owner, the owner's attorney, or authorized agent of property described herein. A person holding a binding agreement to purchase property may sign application by providing written proof of such agreement. If an agent or attorney will represent or speak on owner's behalf, owner must complete the agent portion of this application.

Applicant: _____ Phone: _____ Email: _____

Address: _____ City/Town: _____ State: _____ Zip Code: _____

Co-Applicant: _____ Phone: _____ Email: _____

Address: _____ City/Town: _____ State: _____ Zip Code: _____

Signature(s): _____

*What is the best way to contact you? Phone or Email _____

*What address would you like your Notice of Hearing/Permit mailed to? _____

Agent Authorization

(a representative speaking on behalf of the owner/applicant)

I, _____ owner of property located at _____ Woodstock, Vermont, hereby designate as my agent.

Name of Agent: _____ Phone: _____ Email: _____

Address: _____ City/Town: _____ State: _____ Zip Code: _____

Agent may be accepted as though made by me personally, and I understand that I may be bound by an official decision made based upon such representation

Signature: _____

Parcel ID Number(s): _____ Address: _____ Zoning District: _____ Overlay District: _____

Proposal of project: The project consists of regrading and floodplain benching to reconnect the floodplain at 5 locations along the Kedron Brook. In addition, the application includes reconstructing Upwey Arena, in a slightly smaller footprint, but in the same location. The arena will have a slightly shallower grade resulting in some additional fill within the floodplain. Our Hydrologic and Hydraulic shows there is no net increase in the 100-year flood water elevation as a result of the proposed changes.
----- Planning & Zoning Office Only -----

Village Design Review Hearing Date: _____ Village Development Review Hearing Date: _____

Town Development Review Hearing Date: _____ South Woodstock Review Hearing Date: _____

Planning Commission Hearing Date: _____ Conservation Commission Hearing Date: _____ Administrative: _____

Date Recvd: _____ Date Complete: _____ By: _____ Application #: _____

Review Fee: _____ Itemized Fee: _____ Recording Fee: _____ Total Fee: _____

Paid: cash _____ check _____ MuniPay: _____ Payment Date: _____

GREEN MOUNTAIN HORSE ASSOCIATION

FLOODPLAIN MITIGATION & MANAGEMENT PROJECT

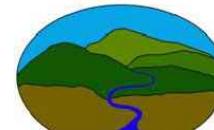
5491 SOUTH ROAD (ROUTE 106)
SOUTH WOODSTOCK, VERMONT

PREPARED BY:



ENVIRONMENTAL SERVICES
Bristol, Vermont • 802-453-5100

IN COLLABORATION WITH:

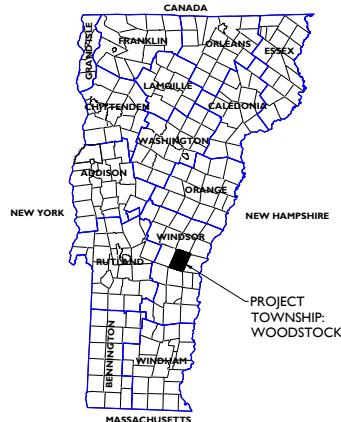


FITZGERALD ENVIRONMENTAL
ASSOCIATES, LLC

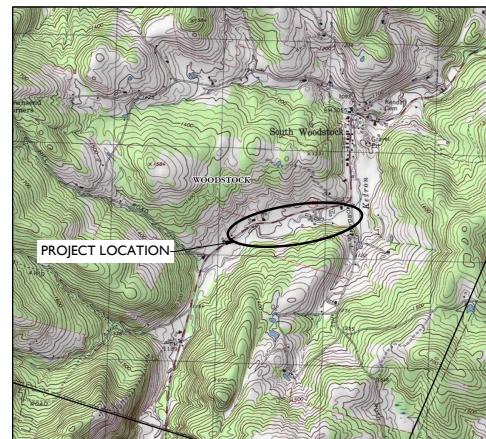
PREPARED FOR



STATE MAP



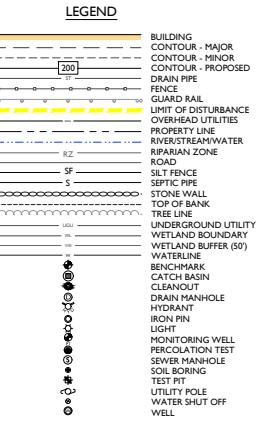
VICINITY MAP



INDEX OF SHEETS

SHEET NO.	SHEET TITLE
C-1.0	OVERALL EXISTING CONDITIONS SITE PLAN
C-1.1	OVERALL FLOOD HAZARD SITE PLAN
C-1.2	KEDRON BROOK THALWEG PROFILE
C-2.0	OVERALL EPSC SITE PLAN
C-2.1	PHASE 2 EPSC SITE PLAN
C-3.10	PHASE 1A UPWEY ARENA MITIGATION SITE PLAN
C-3.11	PHASE 1A UPWEY ARENA CROSS SECTIONS
C-3.20	PHASE 1B D-BARN MITIGATION SITE PLAN
C-3.21	PHASE 1B D-BARN CROSS SECTIONS
C-3.30	PHASE 1C WALKER ARENA MITIGATION SITE PLAN
C-3.31	PHASE 1C WALKER ARENA CROSS SECTIONS
C-3.40	PHASE 1D LOWER HAY FIELD MITIGATION SITE PLAN
C-3.41	PHASE 1D LOWER HAY FIELD CROSS SECTIONS
C-3.50	PHASE 1D UPPER HAY FIELD MITIGATION SITE PLAN
C-3.51	PHASE 1D UPPER HAY FIELD CROSS SECTIONS
C-4.0	PHASE 2 UPWEY EXISTING CONDITIONS SITE PLAN
C-4.1	PHASE 2 PROPOSED UPWEY ARENA SITE PLAN
C-4.2	PHASE 2 UPWEY ARENA CROSS SECTIONS & CONSTRUCTION DETAILS

GENERAL NOTES



PROJECT NOTES

1. The owner/contractor is responsible for coordinating the site as per the "approved" plans. Any deviations from the "approved" plans must be reported to and authorized by Murray & Masterson Environmental Services, LLC (MMES).
2. All elevation and dimensions shall be verified by the contractor prior to construction. Any discrepancy in elevations or dimensions shown on the plans shall be immediately reported to MMES.
3. The owner/contractor is responsible for coordinating with MMES the schedule of construction inspections and certifications in accordance with the "approved" plans and state permit requirements.
4. All existing features shown on this plan are approximate and should be verified by the contractor prior to excavation and construction. The contractor is to be aware of utilities not shown that may exist. No attempt has been made to locate underground utilities.
5. The contractor is responsible for contacting dig safe (811 or 1-888-344-7213) prior to construction.
6. All excavation work shall be performed in general accordance with the applicable state of Vermont Occupational Safety and Health Administrator (VOSHA) guidelines.
7. All equipment must be installed according to manufacturer's specifications unless otherwise directed by MMES.
8. MMES is not responsible for the conformance of this plan or any attached documents to local and/or town regulations. The property lines, easements, and other real estate property descriptions are property of the town. Requirements are for VT ANR.
9. Any changes to plans, drawings or specifications without authorization by MMES shall render these documents null and void.
10. MMES is not responsible for any actions by the owner outside of the permits or the permits obtained for this project.

RESIDENTIAL 5-ACRE ZONING REGULATIONS

1. Minimum Lot Area: 5 acres
2. Minimum Lot Frontage: 200 feet (along Route 106)
3. Front Setback: Minimum: 80 feet from C.E. of Road
4. Rear Setback: Minimum: 25 feet
5. Side Setback: Minimum: 25 feet
6. Building Height Maximum: 35 feet
7. Maximum Bldg. Footprint: 15,000 s.f.
8. Buffer Strip Requirements: § 522
9. Parking Requirements: § 522
10. Aquatic Buffer Requirements: § 403

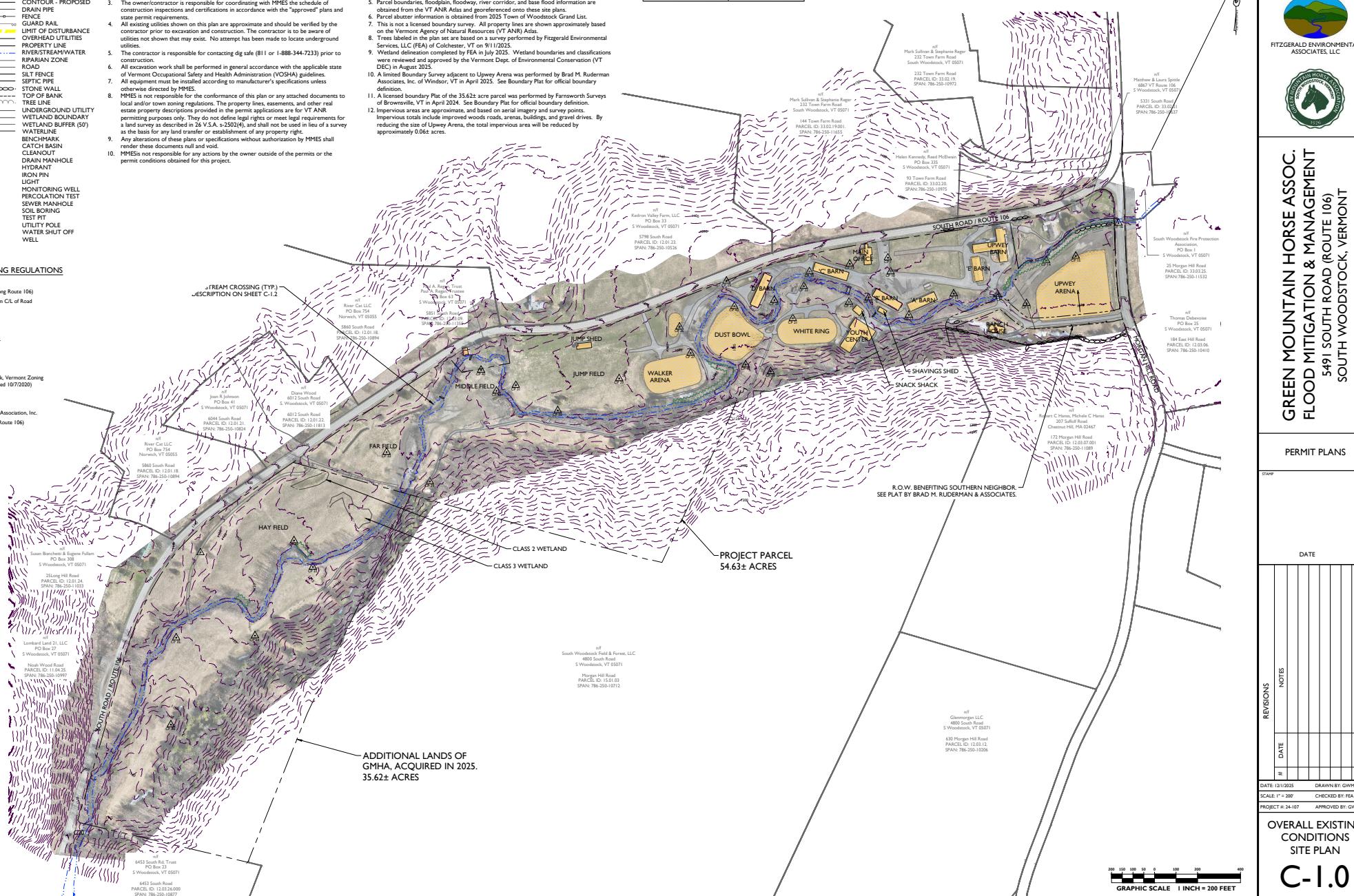
See Section 303 in the Town of Woodstock, Vermont Zoning Regulations, (effective 8/8/2017, last amended 10/7/2020)

PARCEL INFORMATION

1. Owner Name: Green Mountain Horse Association, Inc.
2. Parcel Address: 5491 South Road (VT Route 106)
3. Project Town: Woodstock
4. Zoning District: RA 5
5. Acreage: 54.63± and 35.62±
6. Parcel ID: 33.02.22.
7. SPAN #: 786-250-0658

PROJECT NOTES

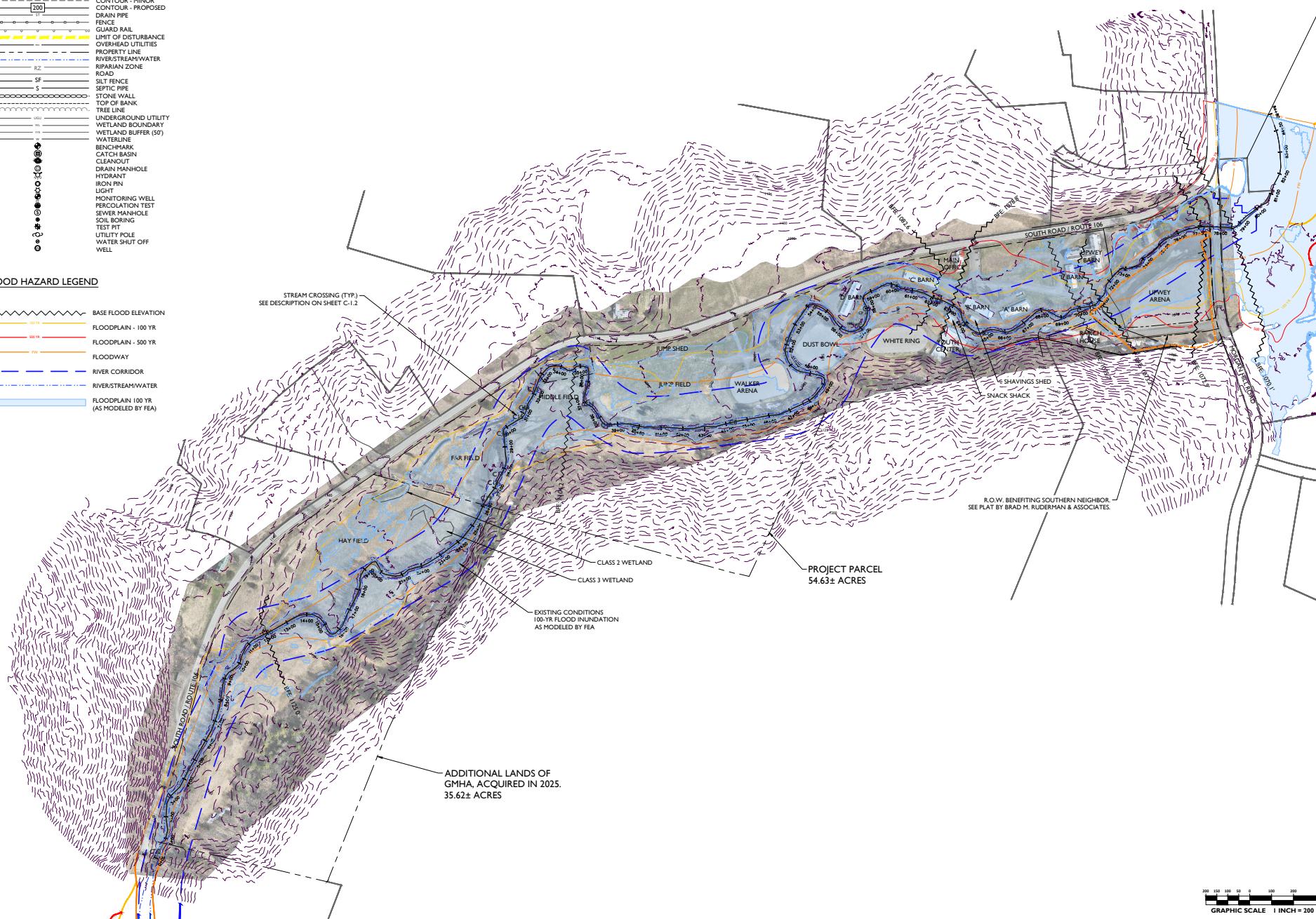
IMPERVIOUS AREAS	
DESCRIPTION	IMPERVIOUS AREA (ACRES)
Gravel Drive & Parking Lots	5.32±
Exotic Buildings	1.39±
Impervious Roads	4.44±
TOTAL	11.15± Acres





LEGEND

FLOOD HAZARD LEGEND



OVERALL FLOOD HAZARD SITE PLAN

OVERALL FLOOD

HAZARD SITE PLAN

611

C-1.1

Page 1 of 1

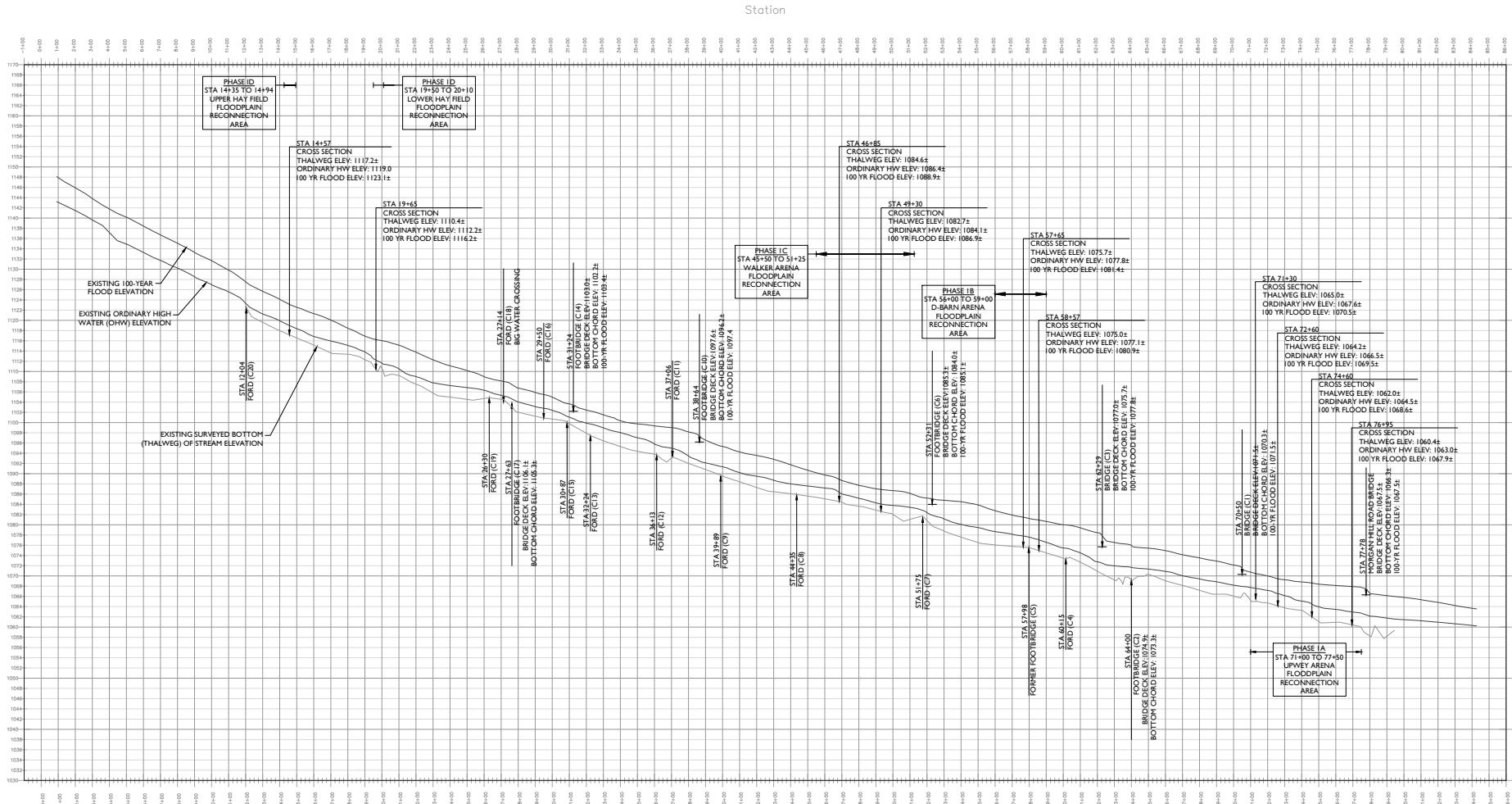
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11. *What is the primary purpose of the following statement?*

OVERALL FLOOD HAZARD SITE PLAN

C-I.I



KEDRON BROOK THALWEG PROFILE

HORIZONTAL SCALE: 1" = 200'
VERTICAL SCALE: 1" = 10'

GREEN MOUNTAIN HORSE ASSOC.
FLOOD MITIGATION & MANAGEMENT
5491 SOUTH ROAD (ROUTE 106)
SOUTH WOODSTOCK, VERMONT

PERMIT PLAN

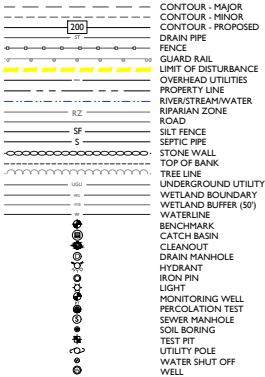
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VISIONS

DATE: 12/1/2025	DRAWN BY: GWM
SCALE AS SHOWN	CHECKED BY: FEA

KEDRON BROOK THALWEG PROFILE

C-1.2

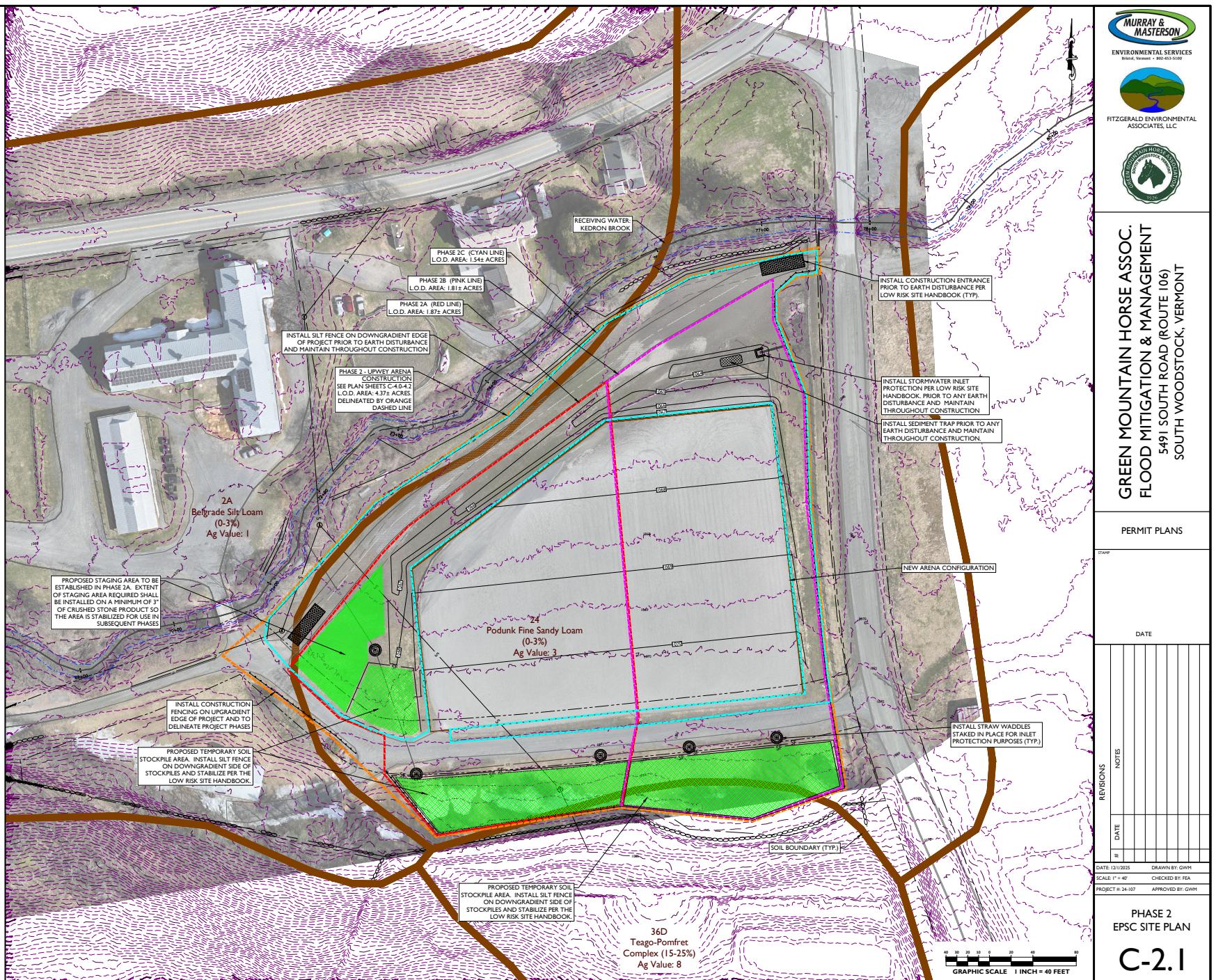


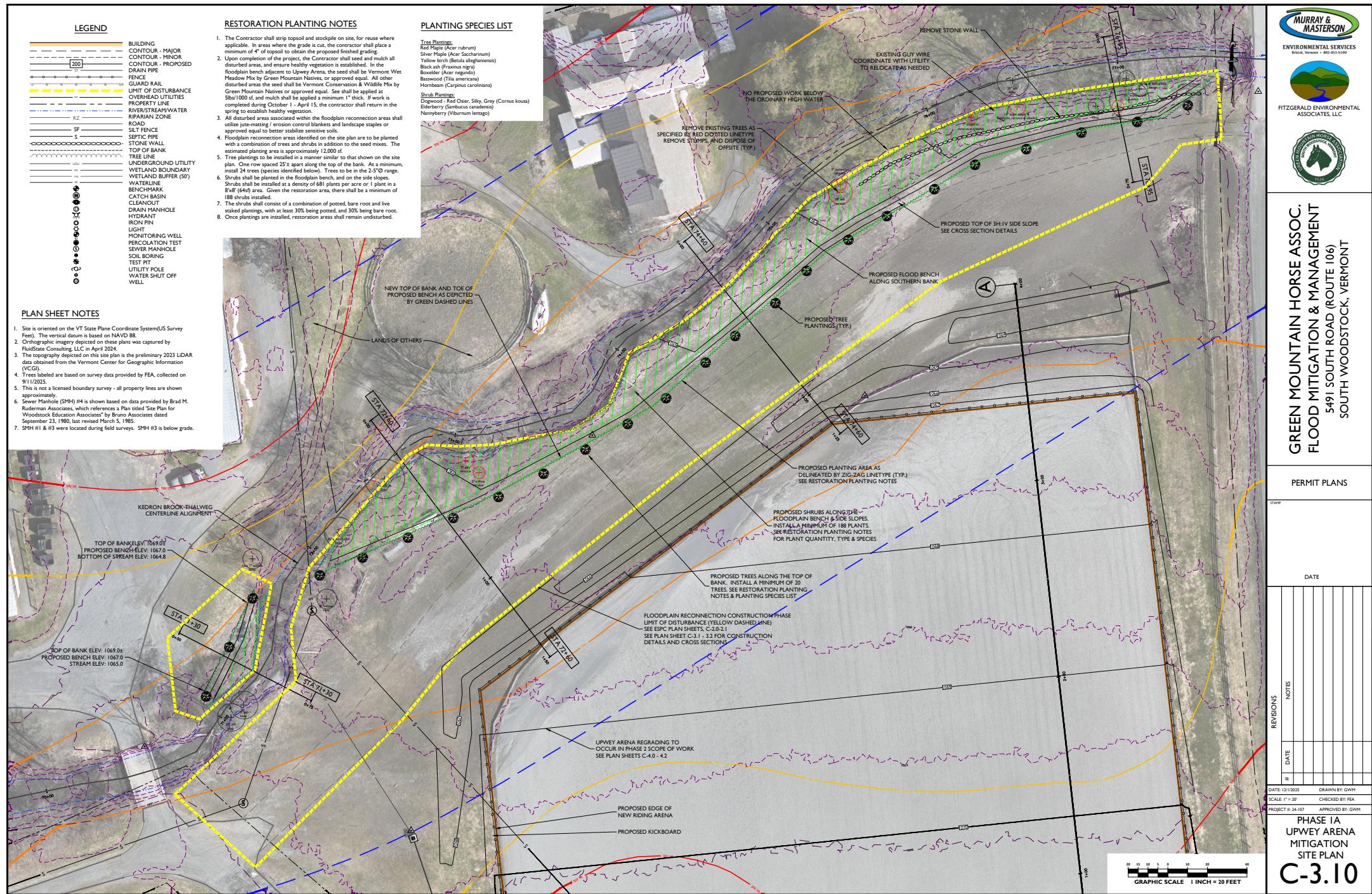
PHASE 2 - CONSTRUCTION NOTES

- Phase 2 is an independent project from Phase 1. The construction sequence is not yet known at this time of this plan development, however one phase must be completed prior to commencing the other.
- A pre-construction meeting with the Contractor, Engineer and Owner/Owners Representative shall be held prior to the commencement of Phase 2 of the Project.
- The Contractor shall furnish all materials, and provide submittals to the Engineer for review.
- Contractor shall be required to complete all work to be completed independently to limit the concurrent earth disturbance to a maximum of 2 acres.
- The Contractor shall establish the Limits of Disturbance with construction snow or fence. Next the Contractor shall install all earthworks on all downgradient areas of the project. Once the earthworks are completed, the EPC shall review and sign off on any earthworks. Once EPC Best Management Practices are installed, the contractor shall complete the work in phases.
- The Contractor shall schedule work and perform the work in a manner that minimizes the potential for soil erosion and sedimentation during construction activities.
- The Contractor shall strip topsoil and stockpile on site, for reuse. In areas where the grade is cut, the contractor shall place a minimum of 4" of topsoil to obtain the proposed finished grade.
- Upon completion of the project, the Contractor shall seed and mulch all disturbed areas and ensure that the seed is a mix of native grasses and wildflowers, including the species listed by Green Mountain Native, or approved equal. Seed to be applied at 5 lbs/1000 sf, and mulch shall be applied a minimum 1" thick. If work is completed during October 1 – April 15, the contractor shall return in the spring to apply a second application of mulch.
- Contractor shall warranty work for a 1 year period.

EROSION PROTECTION & SEDIMENT CONTROL NOTES

1. The Contractor is responsible for installing and maintaining the erosion prevention and sediment control (EPC) measures throughout the entirety of the project.
2. EPC measures are to be installed prior to any earth disturbance, and shall be done so in conformance to the VTP and the *Verizon Low Risk Site Handbook for Erosion Prevention and Sediment Control*.
3. Phase 1 of the *Verizon Low Risk Site Handbook for Erosion Prevention and Sediment Control* shall adhere to the practices outlined in the *Verizon Low Risk Site Handbook for Erosion Prevention and Sediment Control*.
4. Phase 2 of the *Verizon Low Risk Site Handbook for Erosion Prevention and Sediment Control*, and shall adhere to the practices outlined in the *Verizon Low Risk Site Handbook for Erosion Prevention and Sediment Control*.
5. There shall be no more than 2 acres of concurrent earth disturbance. The plan shows the proposed project plans that shall be adhered to during construction. The contractor shall implement phase 2A of the *Verizon Low Risk Site Handbook for Erosion Prevention and Sediment Control* to the construction area.
6. To the extent any earth disturbance is occurring in the construction area, Phase 2C shall be the minimum standard of protection that shall be maintained until the earth disturbance has been fully stabilized by all EPC Measures outlined on the site plan. The contractor shall install construction riprap or snow fencing to delineate the Phased areas that they are working in. Once that phase is stabilized the contractor shall then move to the next phase. Areas that are not stabilized shall be considered stabilized when any disturbed soil susceptible to sediment deposition has a temporary or permanent stable material such as stone or gravel placed on it, or is being used and mulched, or mulched and tracked in with heavy equipment. Areas that are stabilized (soil) and will remain so throughout the duration of the project are outlined in the site plan.
7. Any stockpiled soils shall be surrounded by Silt Fence. Stockpiled soils shall be removed and mulched within 48 hours to prevent sediment runoff.
8. All areas of earth disturbance shall have temporary or permanent stabilization measures within 14 days of disturbance occurring. After this time disturbed areas must be temporarily or permanently stabilized in advance of any runoff producing events.
9. Follow winter construction requirements for projects that have not achieved final stabilization by October 15.
10. The Contractor is responsible for maintaining dust control at the site in a manner that is satisfactory to the municipality, VTP DEC, and the Engineer.
11. The Contractor is responsible for implementing EPC measures to limit sediment deposition and build up along the public roadway/highways/ridgeways. Any sediment deposition within public roadway/highways/ridgeways shall be cleaned on a daily basis and managed in a manner that is satisfactory to the municipality, VTP DEC, and the Engineer.
12. Any dewatering effluent shall be directed through a sediment trap or filter bag, and runoff shall be routed through a stormwater management device, discharged into the waters of the State.
13. General site inspections shall be conducted in accordance with subpart 2.2.1 of the general permits for all areas that have been disturbed and are not yet finally stabilized at least once every seven (7) calendar days, and shall include any stormwater prevention, event, and daily and winter construction controls (October 15 through April 15). Upon completion of the erosion prevention and sediment control measure that is not installed properly, in need of maintenance, or not effectively preventing sediment laden discharge shall be corrected before the next runoff producing event, in addition.
- 13.1. In accordance with subpart 2.2.3 or the general permit, if dewatering activities are occurring, the permittee shall daily during dewatering activities inspect the dewatering device to ensure proper sediment control. The permittee shall complete daily sampling requirements, using a turbidity meter at all points of earth disturbance.
- 13.2. If visibly disturbed stormwater runs off the construction site or discharges to waters of the State, the permittee shall take immediate corrective action to inspect and maintain existing best management practices (BMPs), and to install supplemental BMPs necessary to minimize and prevent the discharge.
- 13.3. After completion of the corrective action, there continues to be a discharge of discolored stormwater from the construction site to waters of the State, the permittee shall notify DEC by submitting a *Stormwater Discharge Report* in accordance with Subpart 2.2.2 of the CGP within 24 hours of discovering the discharge.
14. The permittee is required to continue to perform all general and discharge inspections until coverage under this permit is terminated in accordance with subpart 5.5 or expired.







**GREEN MOUNTAIN HORSE ASSOC.
FLOOD MITIGATION & MANAGEMENT
5491 SOUTH ROAD (ROUTE 106)
SOUTH WOODSTOCK, VERMONT**

PERMIT PLANS

[REDACTED]

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NOTI

111 of 111

THEORY OF THE STATE

DATE

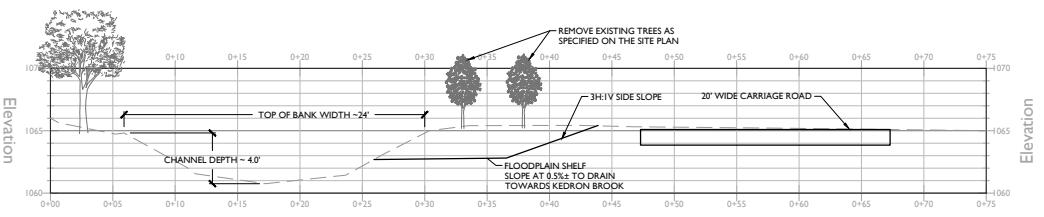
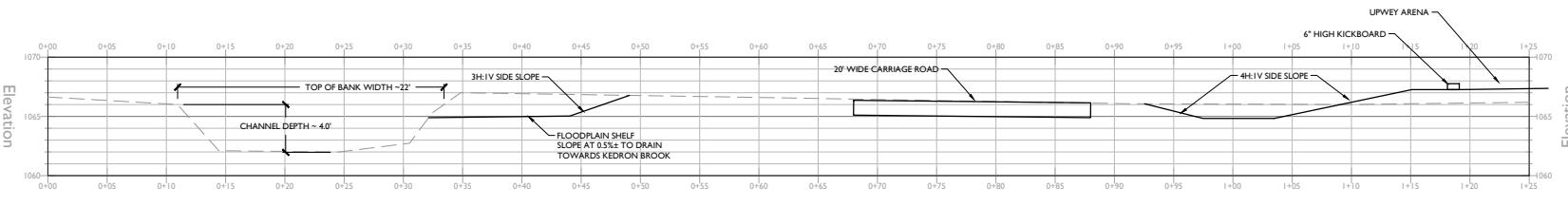
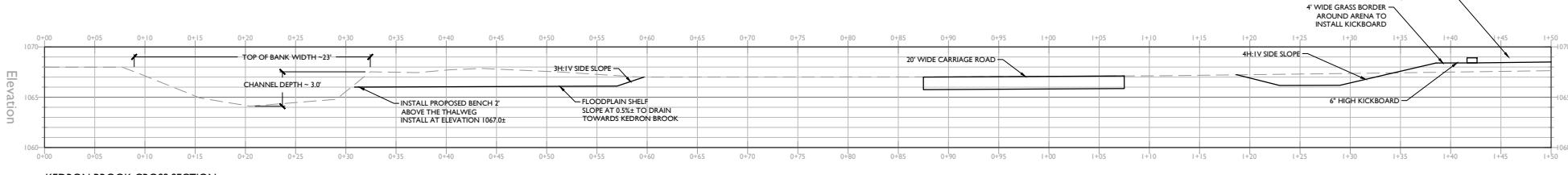
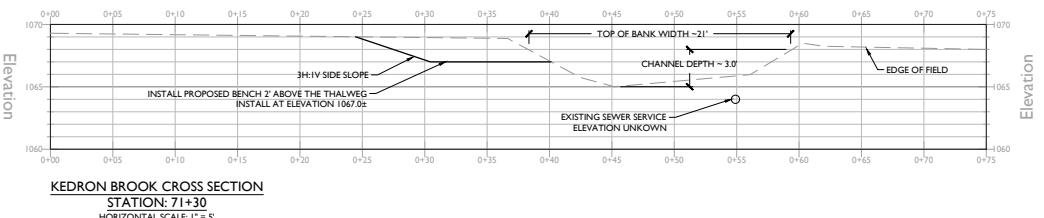
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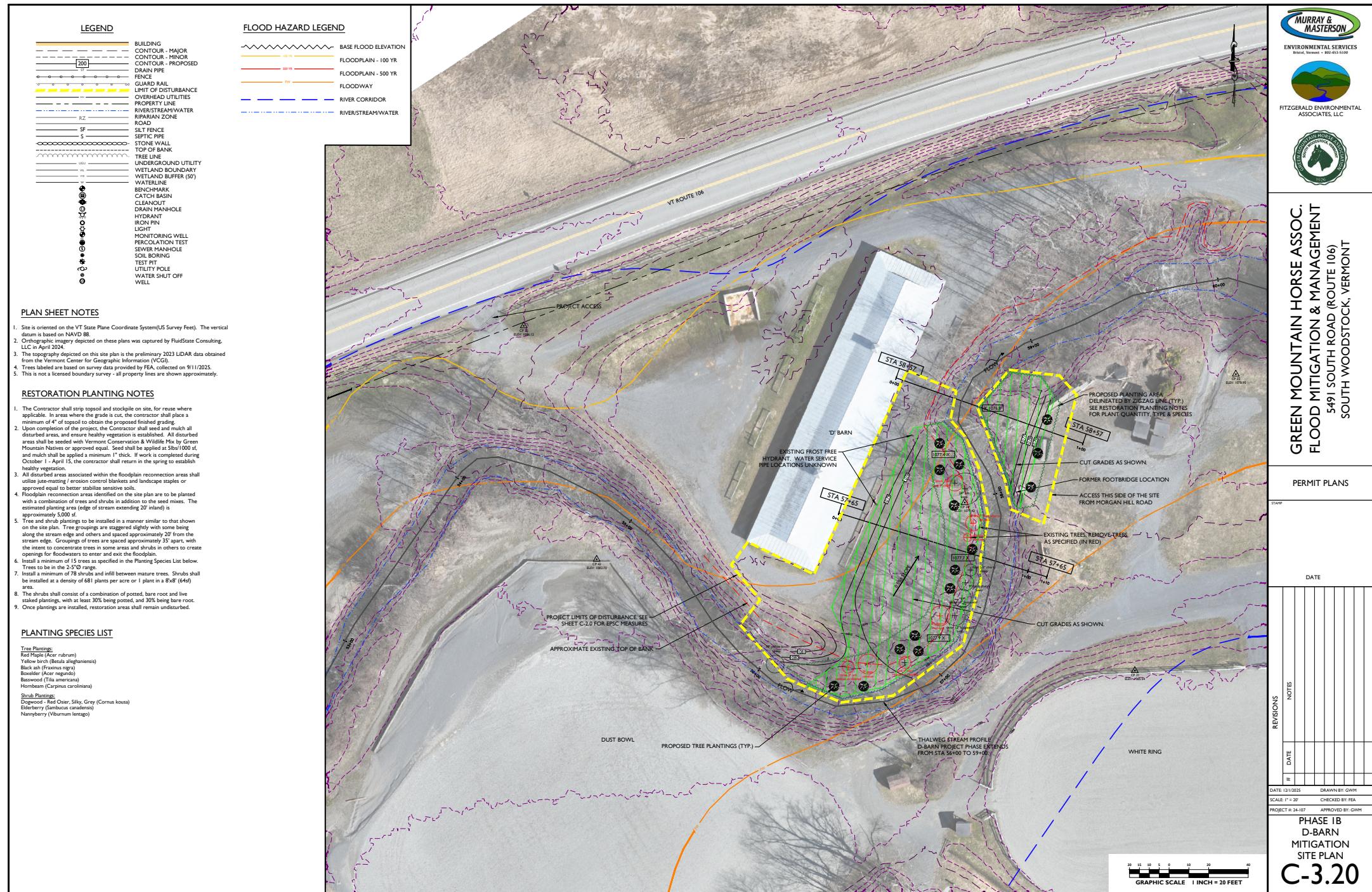
: 1" = 5'

PHASE 1A

UPWEY ARENA CLASS SECTION

C₃ II







**GREEN MOUNTAIN HORSE ASSOC.
FLOOD MITIGATION & MANAGEMENT
5491 SOUTH ROAD (ROUTE 106)
SOUTH WOODSTOCK, VERMONT**

PERMIT PLANS

STAMP

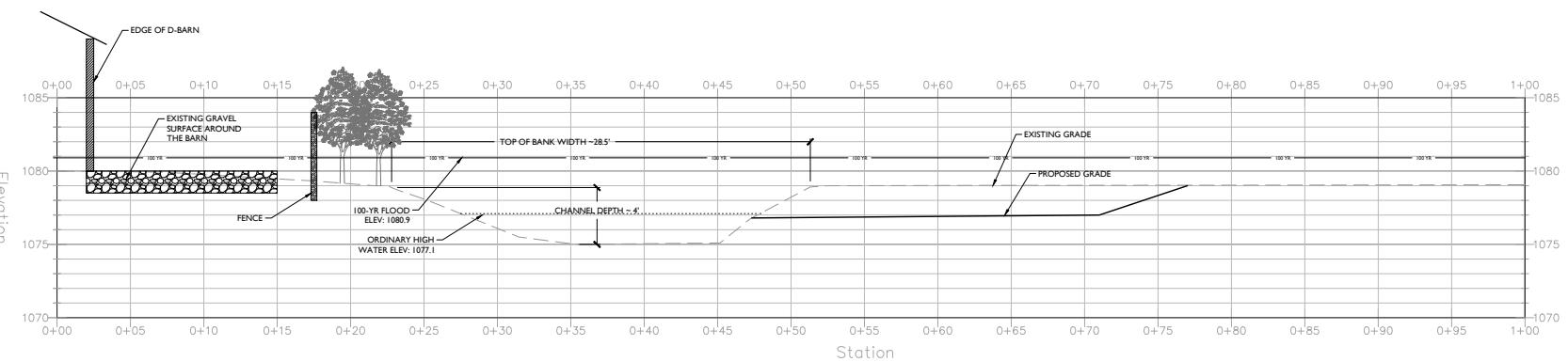
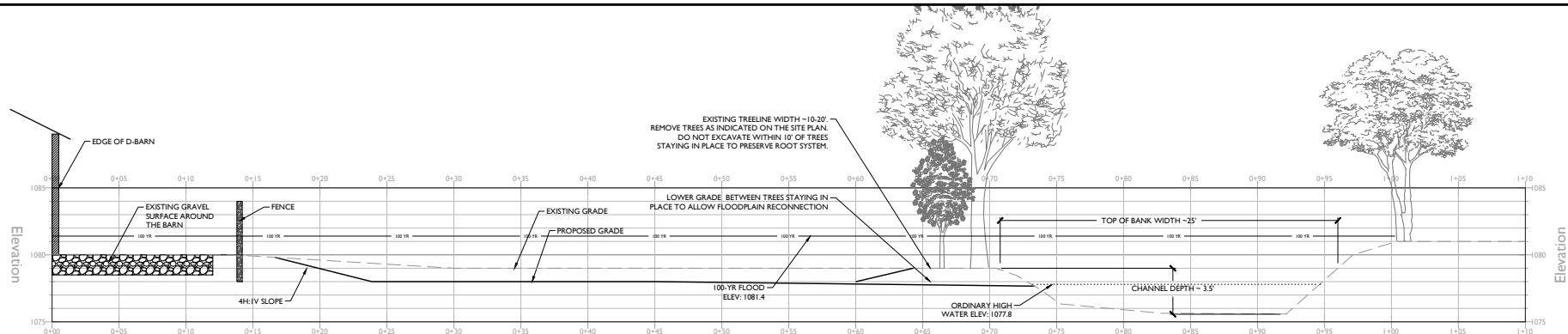
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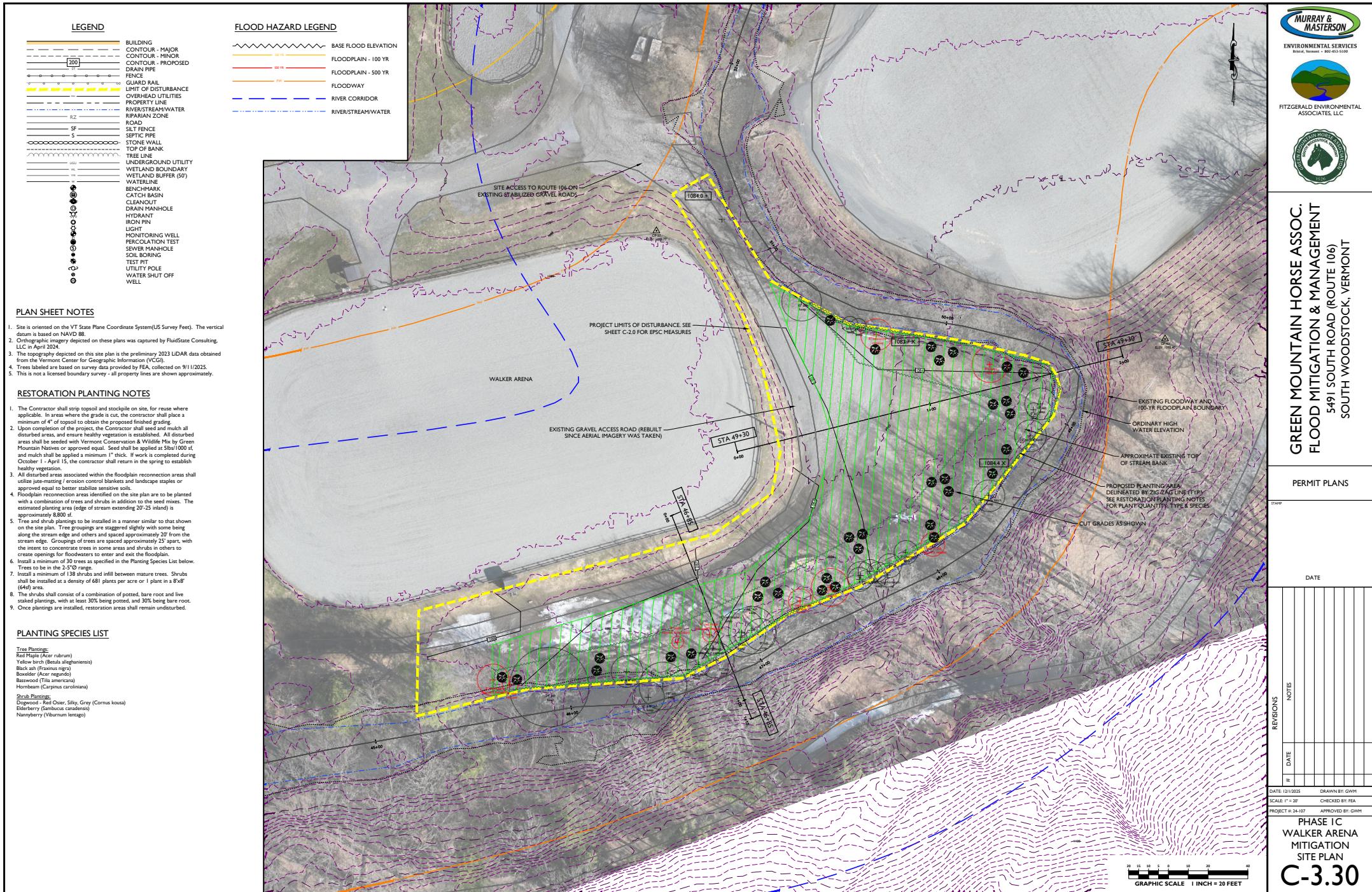
REVISIONS	DATE	NOTES

DATE: 12/1/2025 DRAWN BY: GWM
SCALE: 1" = 4' CHECKED BY: FEA
PROJECT #: 24-107 APPROVED BY: GWM

PHASE 1B
D BARN
CROSS SECTIONS

C-3.21







**GREEN MOUNTAIN HORSE ASSOC.
FLOOD MITIGATION & MANAGEMENT
5491 SOUTH ROAD (ROUTE 106)
SOUTH WOODSTOCK, VERMONT**

PERMIT PLANS

STAMP

DATE

REVISIONS

DATE

NOTES

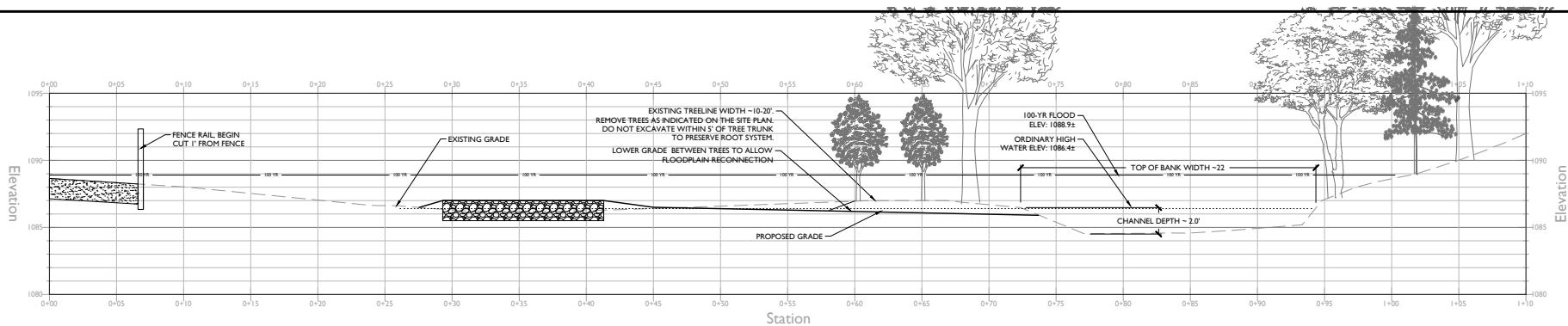
DATE: 12/1/2025 DRAWN BY: GWM

SCALE: 1" = 4' CHECKED BY: FEA

PROJECT #: 24-I07 APPROVED BY: GWM

PHASE 1C
WALKER ARENA
CROSS SECTIONS

C-3.31

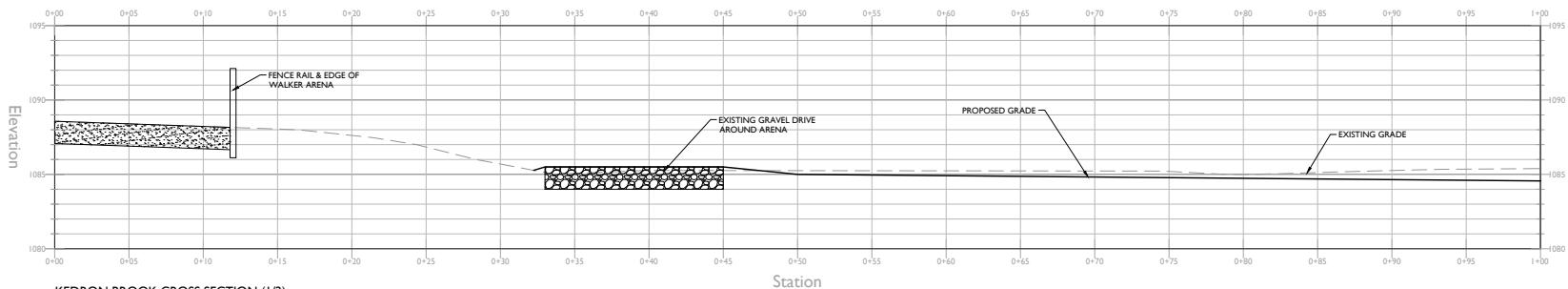


KEDRON BROOK CROSS SECTION

STATION: 46+85

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VERTICAL SCALE: 1" = 4'

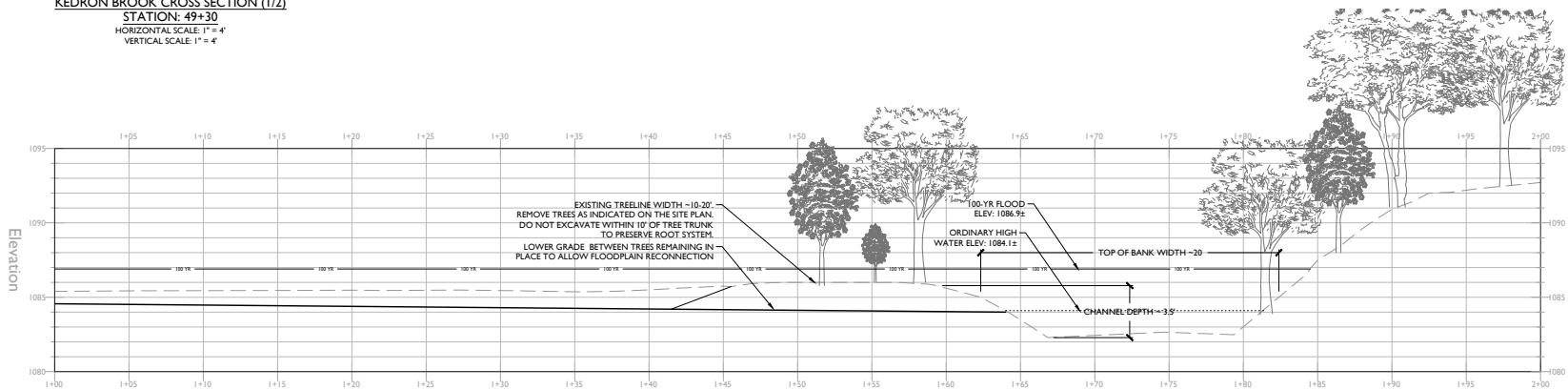


KEDRON BROOK CROSS SECTION (1/2)

STATION: 49+30

HORIZONTAL SCALE: 1" = 4'

VERTICAL SCALE: 1" = 4'

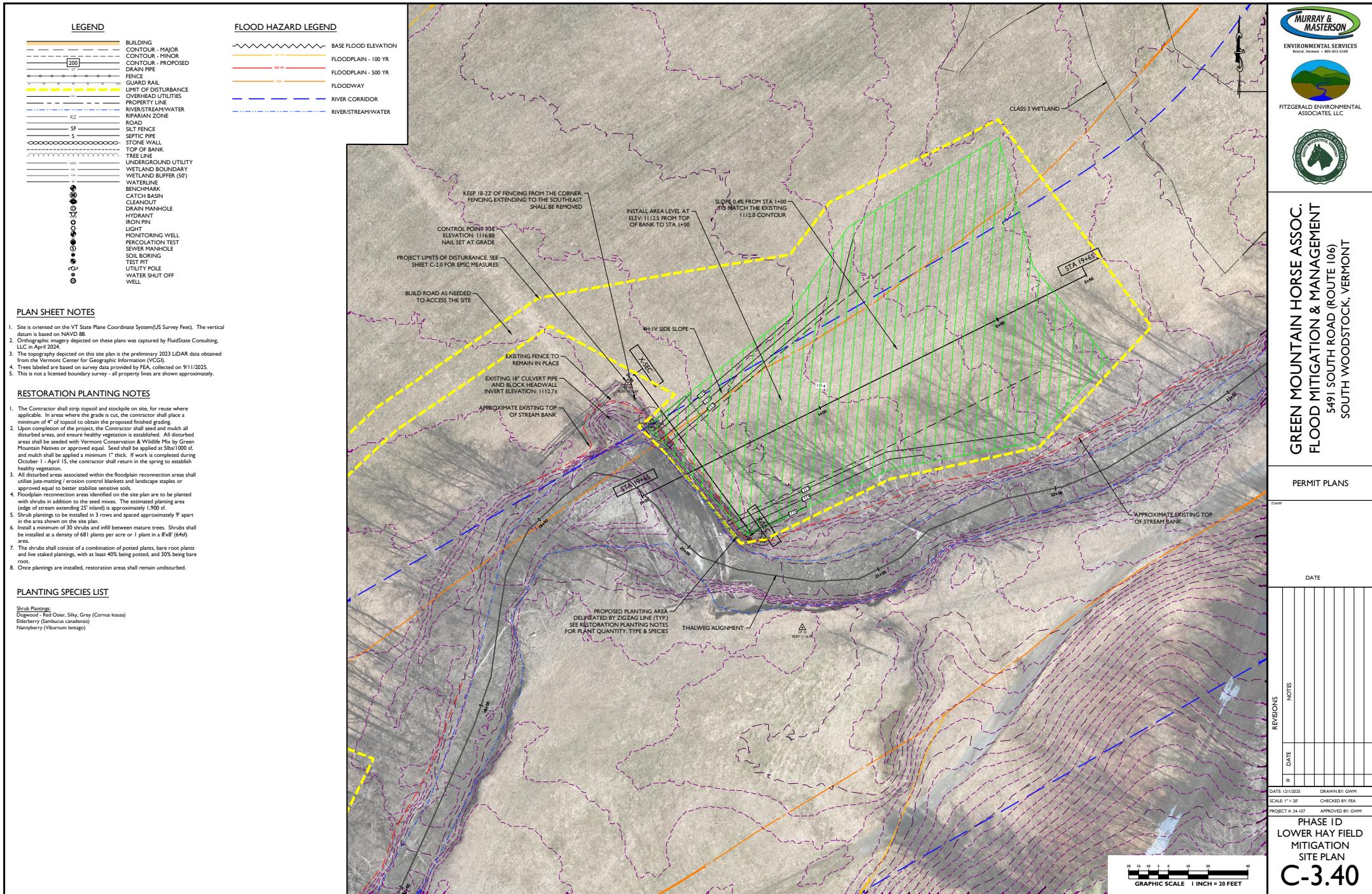


KEDRON BROOK CROSS SECTION (2/2)

STATION: 49+30

HORIZONTAL SCALE: 1" = 4'

VERTICAL SCALE: 1" = 4'





**GREEN MOUNTAIN HORSE ASSOC.
FLOOD MITIGATION & MANAGEMENT
5491 SOUTH ROAD (ROUTE 106)
SOUTH WOODSTOCK, VERMONT**

PERMIT PLANS

STAMP

DATE

REVISIONS

#

DATE

NOTES

DATE: 12/1/2015 DRAWN BY: GWM

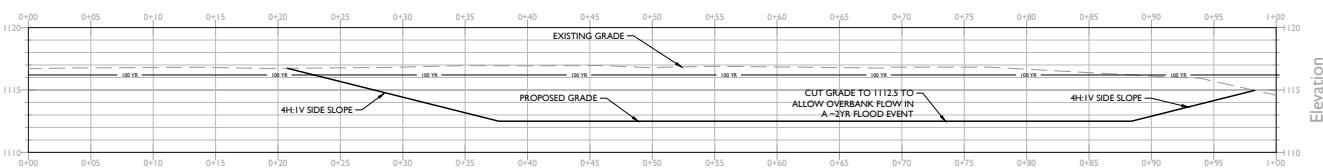
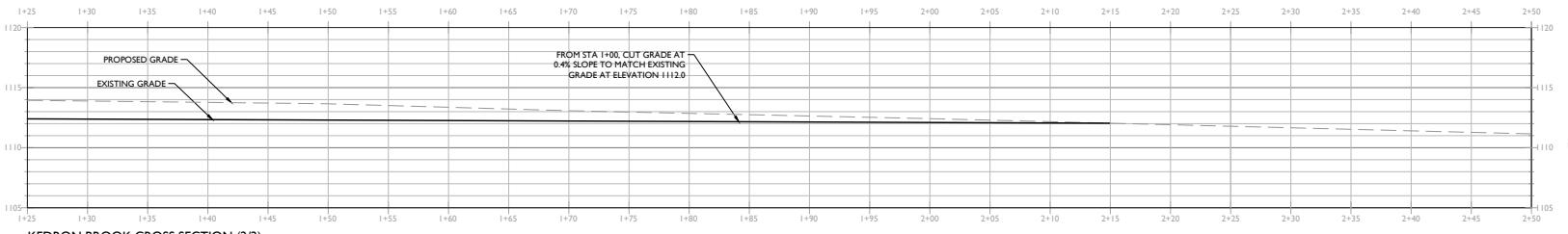
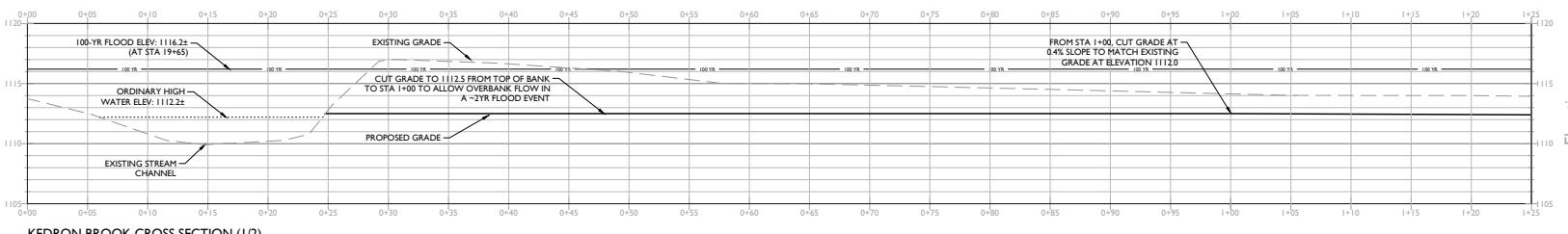
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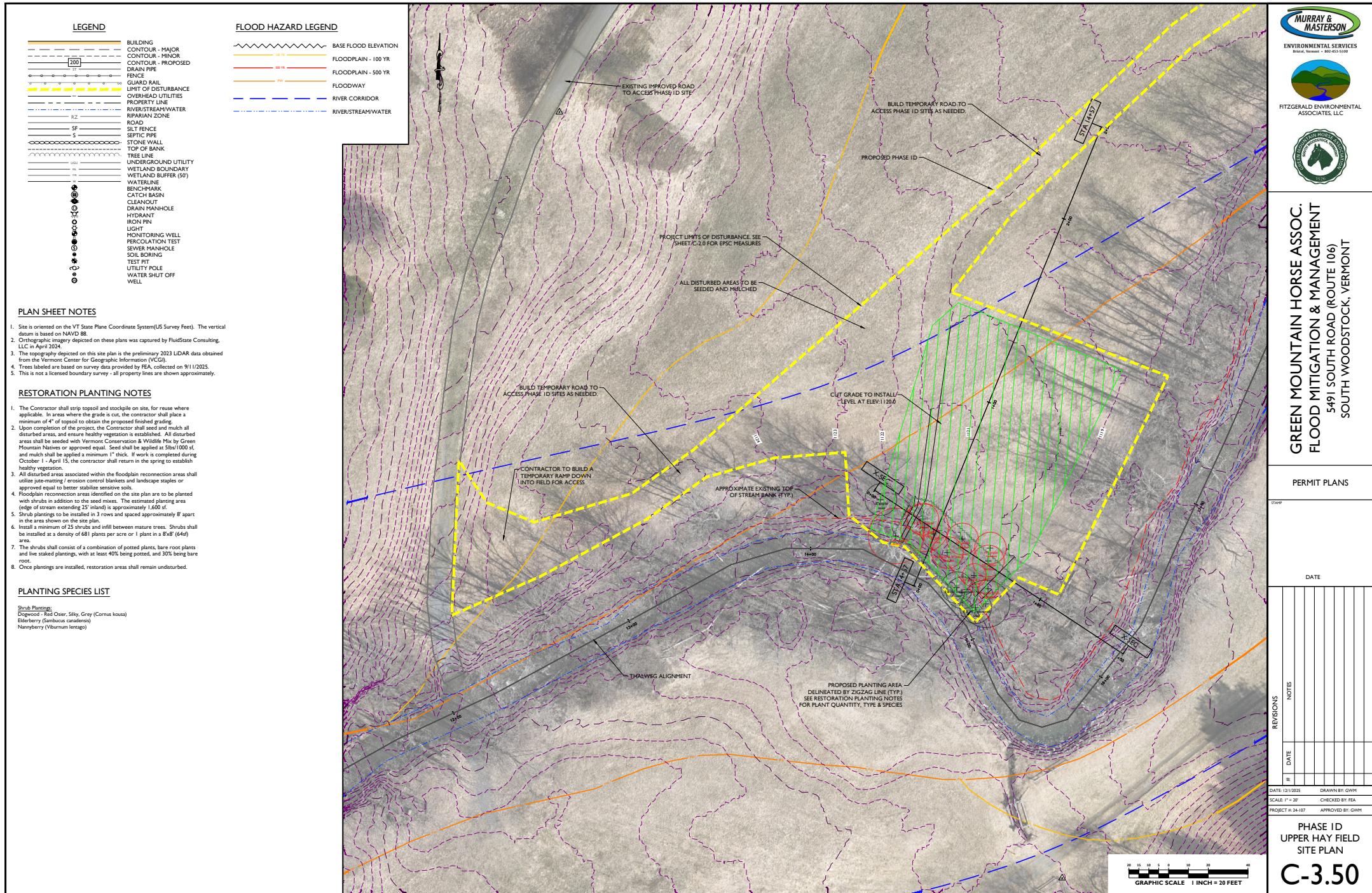
CHECKED BY: FEA

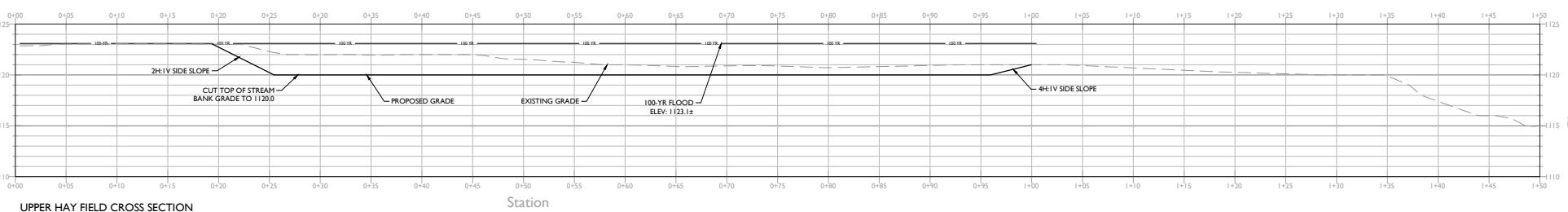
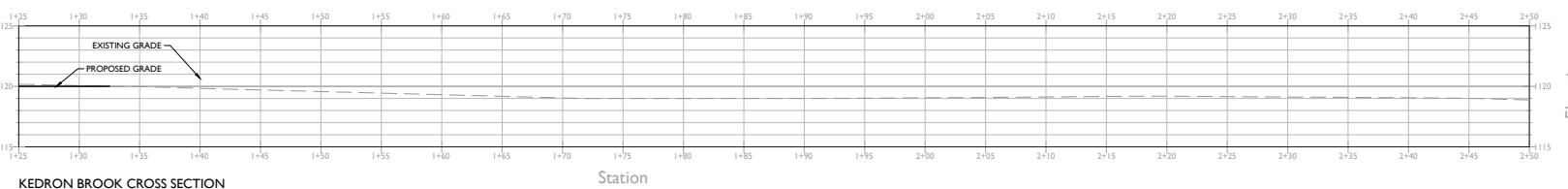
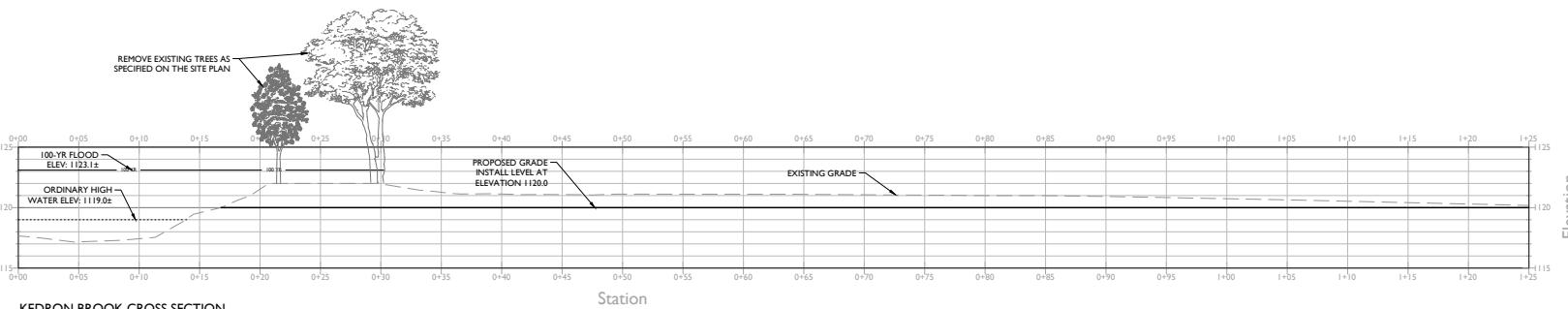
PROJECT #: 24-I07 APPROVED BY: GWM

PHASE 1D
LOWER HAY FIELD
CROSS SECTIONS

C-3.41







**GREEN MOUNTAIN HORSE ASSOC.
 FLOOD MITIGATION & MANAGEMENT
 5491 SOUTH ROAD (ROUTE 106)
 SOUTH WOODSTOCK, VERMONT**

PERMIT PLANS

STAMP

DATE

REVISIONS

DATE

NOTES

DATE: 12/1/2025

DRAWN BY: GWM

SCALE: 1" = 5'

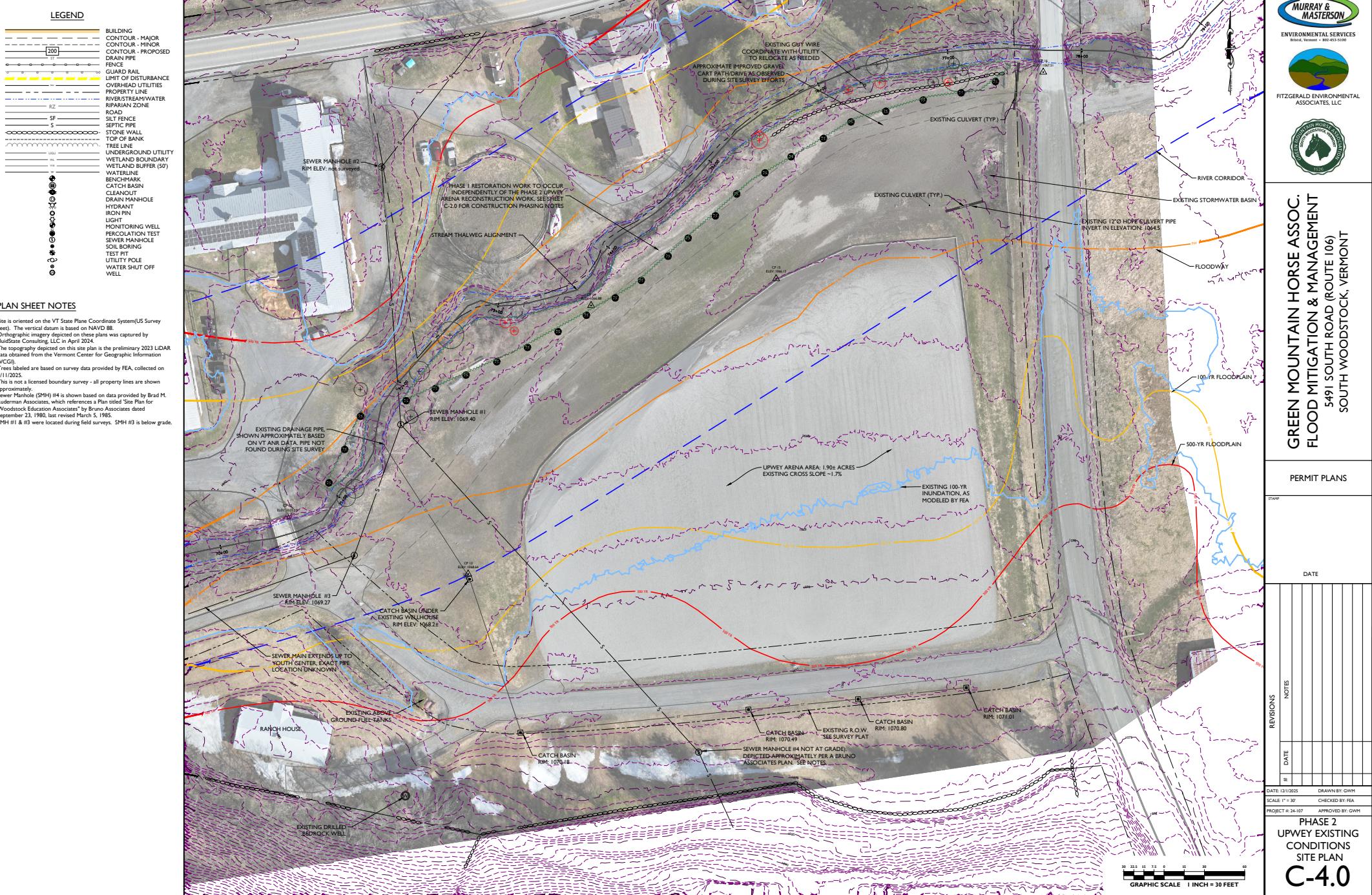
CHECKED BY: FEA

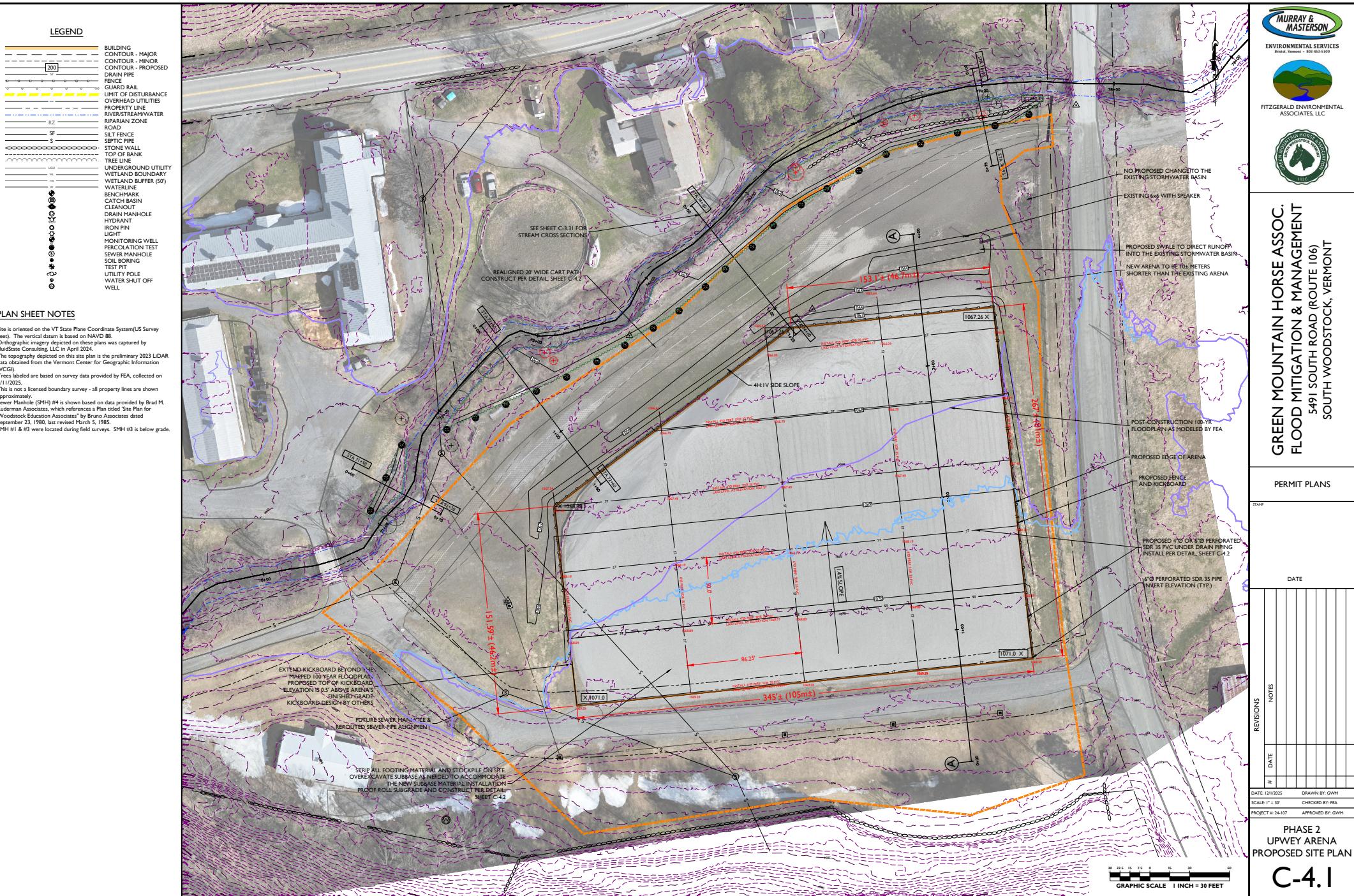
PROJECT #: 24-I07

APPROVED BY: GWM

LOWER HAY FIELD
 CROSS SECTIONS

C-3.51





**GREEN MOUNTAIN HORSE ASSOC.
FLOOD MITIGATION & MANAGEMENT**
5491 SOUTH ROAD (ROUTE 106)
SOUTH WOODSTOCK, VERMONT

PERMIT PLANS

STAMP

DATE

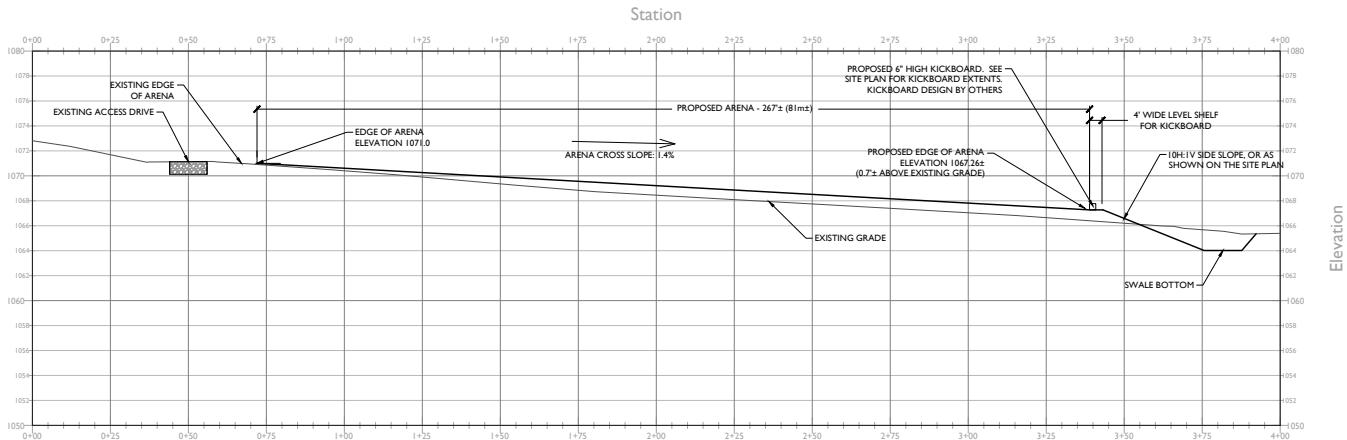
REVISIONS

DATE	NOTES

DATE: 12/1/2025 DRAWN BY: GWM
SCALE AS SHOWN CHECKED BY: FEA

PROJECT #: 24-107 APPROVED BY: GWM

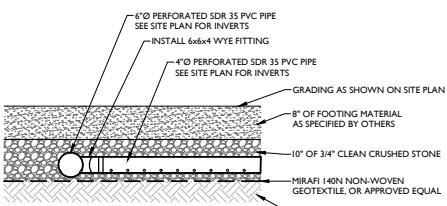
**PH. 2 UPWEY ARENA
CROSS SECTIONS &
CONSTRUCTION
DETAILS**
C-4.2



UPWEY ARENA SECTION A-A

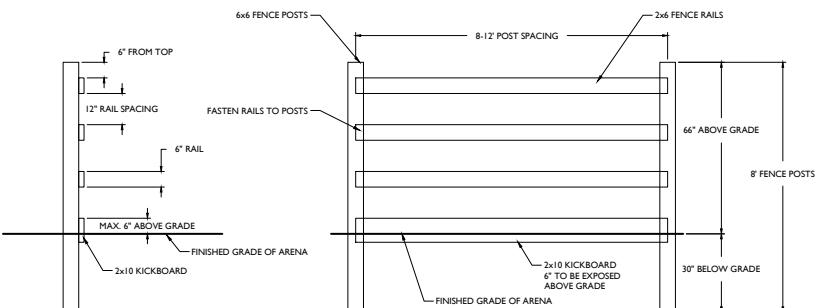
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VERTICAL SCALE: 1" = 5'



UPWEY ARENA CROSS SECTION

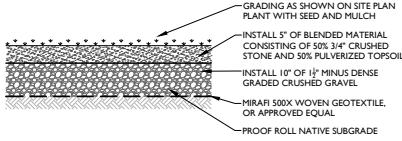
NOT TO SCALE



SPLIT RAIL FENCE DETAIL

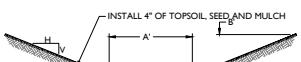
NOT TO SCALE

NOTE: DETAIL IS FOR LIKENESS ONLY AND IS FOR PERMITTING PURPOSES.



CART PATH SECTION DETAIL

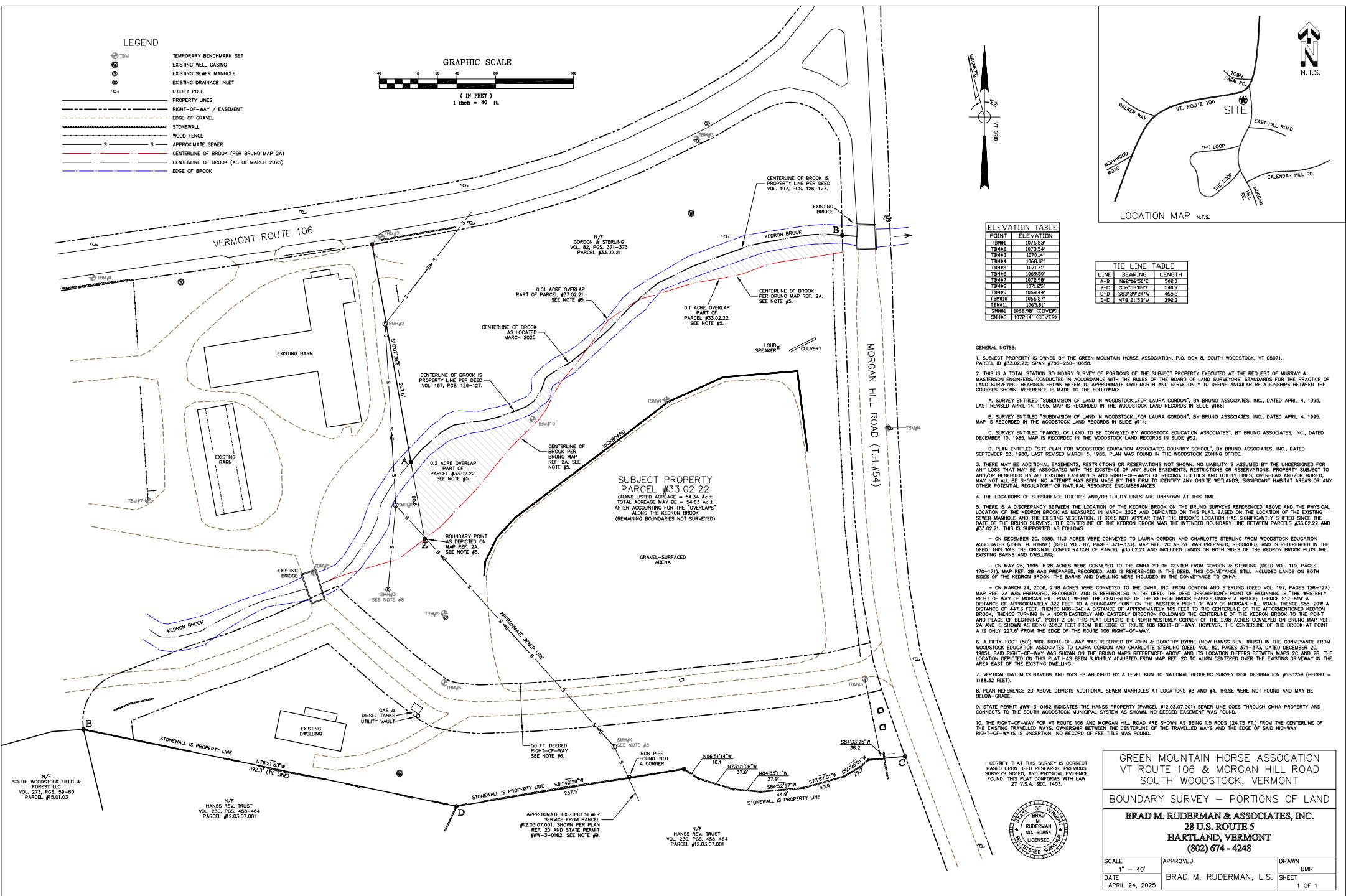
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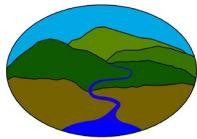


GRASS SWALE SECTION DETAIL

NOT TO SCALE

SWALE #	DIMENSION 'X'	DIMENSION 'Y'	SIDE SLOPE
1	8'	8'	4H:V





Fitzgerald Environmental Associates, LLC.

Applied Watershed Science & Ecology

MEMORANDUM

To: Bruce Perry, Executive Director, Green Mountain Horse Association
From: Rodrigue Spinette, PhD; Evan Fitzgerald, PE, CPESC, CFM
Re: Green Mountain Horse Association Upwey Arena Project – No Rise Certification
Date: November 6, 2025

Background

Fitzgerald Environmental Associates (FEA), in collaboration with Murray & Masterson LLC (M&M), was retained by the Green Mountain Horse Association (GMHA) to develop a flood mitigation and management plan for the GMHA's main facility in South Woodstock. The project is funded through the VOREC (The Vermont Outdoor Recreation Community) grant program.

Kedron Brook flows through the GMHA facility and is prone to severe flooding based on firsthand experiences from the GMHA staff and supported by our hydrologic and hydraulic analysis. In brief, different parts of the GMHA facility flood on a yearly or near yearly basis, which is affecting the GMHA operations, so we are examining several flood mitigation practices to dissipate and facilitate flood flows while protecting the GMHA assets.

Part of the proposed plan consists of creating a flood bench, approximately 500-ft long and 20-ft wide, along Kedron Brook on the approach to Morgan Hill Road and north of a horse arena, Upwey arena, which is very important to the GMHA. In addition to the flood bench creation, Upwey arena will be raised by approximately 1-ft at its downslope (north) end and a small 0.5-ft high kickboard installed at its perimeter to minimize flooding of the arena in storms up to the 25-year flood. The intent is to improve flow conditions in small to medium-sized floods within the inner corridor of Kedron Brook, which is currently incised, and establish conditions further out that create fewer conflicts with the GMHA operations, while not creating an adverse impact to the brook, the GMHA's neighbors and the nearby infrastructures. The proposed improvement to the channel and floodplain will lead to greater stability of the bed and banks and of Kedron Brook, and increase attenuation of sediment and nutrients on the floodplain bench.

To guide the design of several flood mitigation alternatives within the GMHA study area, FEA completed a hydrologic and hydraulic analysis of Kedron Brook at this location. This analysis shows that, in a 100-year flood event, the proposed raising of Upwey arena and cutting of a flood bench on the brook as previously described result in a *de minimis* change in the Base Flood Elevation (BFE) during the 100-year flood event. Peak flood velocities across the floodplain change from -18% to +16% depending on location. Additional details of the analysis are described below.

Hydrology

FEA analyzed a variety of hydrologic regression and sources for the analysis. To best understand Kedron Brook discharge at the project location under different flood scenarios, we examined recurrence interval flows predicted using regional regression equations for Vermont (Olson, 2014; Dunne & Leopold, 1978), and flow predictions in the most recent FEMA Flood Insurance Study for Windsor County, VT (FIS # 50027CV001A from 2007). For our analysis of the 2-year and 5-year flood events, we used the Olson 2014 values (equivalent to USGS Streamstats). For the 10-year flood events and greater, we used values from the FIS which were scaled based on drainage area. The Drainage area at the project location is approximately 5.11 square miles. A summary of the modeled peak discharge rates is provided in table 1.

Table 1. Modeled peak discharge as a function of annual exceedance probability

Flood Return Interval (Years)	AEP (%)	Modeled Peak Discharge (cfs)
2	50%	249
5	20%	396
10	10%	932
50	2%	1,716
100	1%	2,172
500	0.20%	3,557

Hydraulics

FEA used HEC-RAS 6.3.1 software (USACE, 2022) to create a two-dimensional (2D) model of Kedron Brook, its floodplain and areas immediately surrounding the study area.

We created a floodplain digital elevation model (DEM) for the study area using high-resolution (0.7 m) LiDAR elevation surfaces from a 2023 dataset covering Windsor County. We loaded the DEM into RAS Mapper as the base terrain for setting up the HEC-RAS model. Because the LiDAR method does not capture data below the water surface when depth exceeds a few inches, FEA adjusted the terrain in the model using elevation measurements that were field collected by M&M in late 2024 and in July 2025. This type of correction was applied to the Kedron Brook channel. Additional adjustments were made to the terrain where the banks of Kedron Brook were observed to have experienced significant erosion and migration since the 2023 Lidar data was collected.

An existing conditions model was developed utilizing the methodology described above. A proposed conditions model was then created by altering the geometry of the existing conditions model to cut a flood bench along Kedron Brook and raise Upwey arena. See the Final Design Plans, included in Attachment 1, for additional information on the design elevations and proposed geometry.

Figures 1 and 2 below show the inundation results of the existing conditions and proposed conditions models for the 100-year flood event. As shown in the figures, the inundation boundary is nearly identical in most places except for Upwey arena where flooding does not reach nearly as far south into the arena under the proposed conditions compared to the existing conditions. Water surface elevations and water velocities were also examined at three cross sections along this segment of Kedron Brook, at STA 72+13, STA 73+74, and STA 75+56.



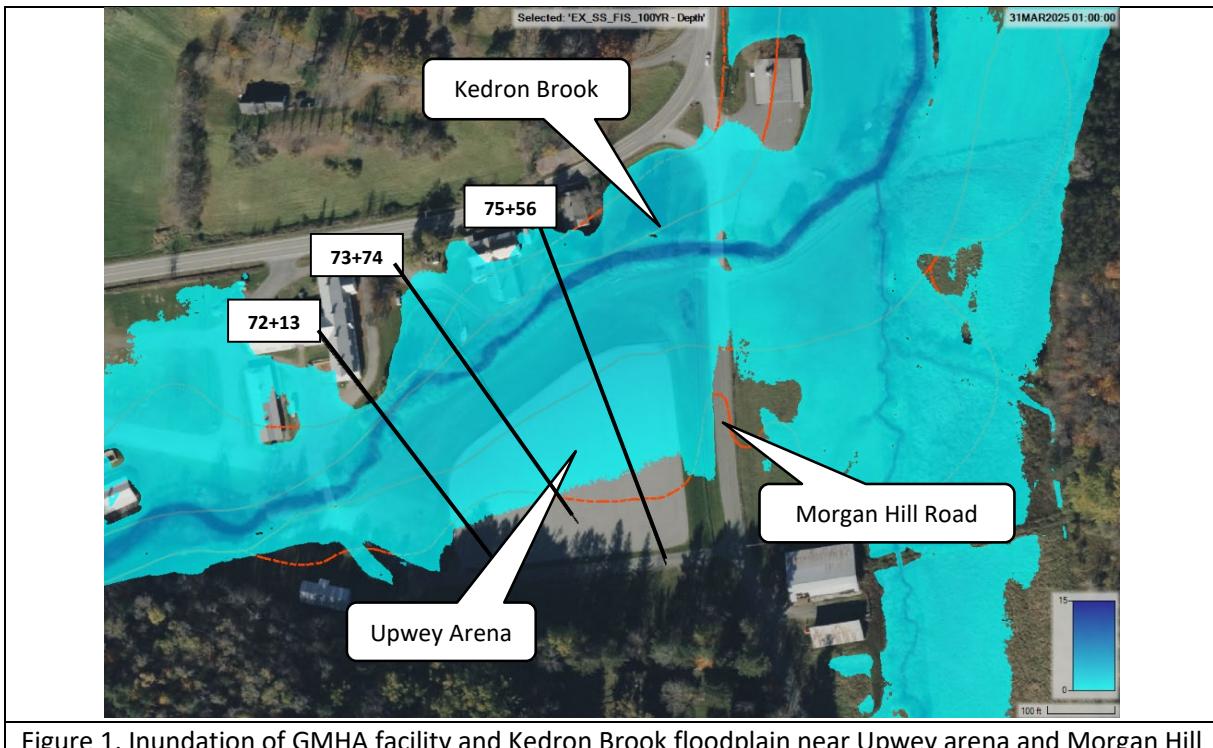


Figure 1. Inundation of GMHA facility and Kedron Brook floodplain near Upwey arena and Morgan Hill Road under existing conditions in 100-year flood event.

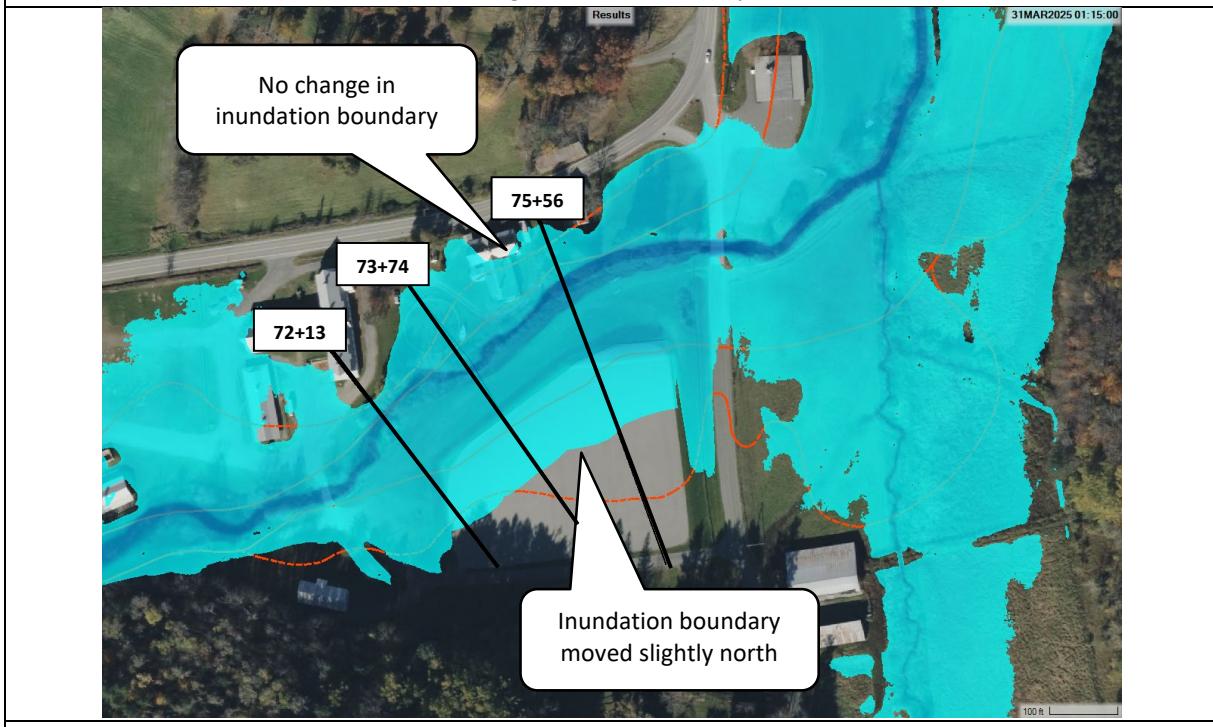


Figure 2. Inundation of GMHA facility and Kedron Brook floodplain near Upwey arena and Morgan Hill Road under proposed conditions in 100-year flood event.



Table 2 summarizes the changes in water surface elevation observed in our models at the Kedron Brook center line under existing and proposed conditions. All WSE are referenced to NAVD88 feet. As shown in table 2, the water surface elevation over Kedron Brook did not change appreciably between the two models. Rises in WSE are less than 0.05 ft, which rounds to less than 0.1ft (the smallest interval in FEMA FIS reporting) making it effectively a “no rise” conclusion.

Table 2 – Kedron Brook Center Line WSE Comparison for the 100-Year Flood (2,172 cfs)			
STA	FEA Existing Conditions WSE (ft)	FEA Proposed Conditions WSE (ft)	WSE Difference (FEA PR - FEA EX)
72+13	1070.06	1070.03	-0.03
73+74	1068.95	1068.97	0.02
75+56	1068.30	1068.27	-0.03

Table 3 summaries the changes in water velocities observed in our models at three cross sections along this segment of Kedron Brook. As shown in table 3, changes in water velocities varied with location. Comparing existing and proposed conditions, water velocities were observed to change between 3% and 16% within the channel, -8% to 11% in the left overbank and -18% to -9% in the right overbank.

Table 3 – Water velocities Comparison for the 100-Year Flood (2,172 cfs)

STA	Channel EX	Channel PR (% change)	LT Overbank EX	LT Overbank PR (% change)	RT Overbank EX	RT Overbank PR (% change)
72+13	8.1	9.1 (+12%)	4.1	4.3 (+5%)	3.9	3.2 (-18%)
73+74	5.4	6.3 (+16%)	1.8	2.0 (+11%)	3.4	2.8 (-18%)
75+56	5.2	5.4 (+3%)	1.1	1.0 (-8%)	2.8	2.5 (-9%)

Conclusion

Based on the hydraulic analysis discussed above, FEA concludes that the proposed bench cut and raising of Upwey arena within the GMHA property will result in **No Rise** of flood levels from Kedron Brook in the vicinity of the proposed work, and no adverse impacts to surrounding properties, facilities, or structures. There were no significant changes to the water surface elevation observed in our models, and the changes observed in the water velocities, although variable, should not present a significant increased risk for erosion over existing conditions. FEA supports the request for approval for this work within the FEMA designated Special Flood Hazard Area of Kedron Brook, under the Town of Woodstock’s Flood Hazard Regulation per section 405.D.2.l.

Attachments

1. Murray & Masterson Plans



Fitzgerald
Environmental

References

FEMA (Federal Emergency Management Agency), 2007. Flood Insurance Study # 50027CV001A, Windsor County, Vermont. Available at: <https://msc.fema.gov/portal/home>

Olson, S. A., 2014, Estimation of Flood Discharges at Selected Annual Exceedance Probabilities for Unregulated, Rural Streams in Vermont, United States Geologic Survey, USGS Scientific Investigations Report 2014-5078.

USACE (US Army Corps of Engineers), 2022. HEC-RAS River Analysis System, Version 5.2. Available at: <https://www.hec.usace.army.mil/software/hec-ras/download.aspx>

VCGI (Vermont Center for Geographic Information), et. al., 2013. 0.7-Meter Bare Earth Digital Elevation Model (DEM). Available at: http://maps.vcgi.vermont.gov/arcgis/services/EGC_services/IMG_VCGI_LIDARDEM_SP_NOCAC_HE_v1/ImageServer



From: [Barsaleau, Jessica](#)
To: [Planning Department](#)
Subject: RE: New Applications
Date: Thursday, January 22, 2026 8:12:15 PM
Attachments: [image001.png](#)

Hi Molly,

We have reviewed the application for the Green Mountain Horse Association at 5491 South Road in S. Woodstock. Portions of the property are located in the Special Flood Hazard Area (SFHA) (Zone AE) and Regulatory Floodway of Kedron Brook, regulatory Base Flood Elevations (BFE's) are published at cross sections throughout the parcel shown on the Flood Insurance Rate Map (FIRM) - Panel #50027C0491E, effective 9/28/2007.

Our office is concurrently reviewing the project under Act 250 (Permit #3W1003-1), which means the project is reviewed for conformance with the Agency of Natural Resource's [Flood Hazard Area and River Corridor Protection Procedure](#) ("Procedure"). The Procedure's No Adverse Impact (NAI) Standard ensures projects do not restrict or divert the flood of floodwaters, or endanger the health, safety, and welfare of the public or of riparian owners during flooding.

As proposed, the project includes changes within the SFHA and the Floodway of Kedron Brook. On Page 22 of the Woodstock Planning and Zoning Application, Table 3 of the 11/6/25 Memorandum from Fitzgerald Environmental identifies increases in flood velocities (+16% max) and water surface elevations (WSE) (+0.02' max) resulting from encroachments related to modification of the Upwey arena. From a regulatory perspective, it's especially important to limit adverse impacts due to the location within the FEMA Regulatory Floodway.

The arena is proposed to be raised slightly in elevation with installation of a kickboard to retain material in the arena. The proposed arena modifications restrict the available floodplain at the base flood discharge (1% annual chance/100 year flood) which causes the increase in WSE and velocities within the stream channel and along the stream bank opposite the arena. The concern is predominantly with the significant increase in velocities along the left bank (adjacent property – Tack Shop) which could cause increased erosion/loss of land and also exacerbate impacts and maintenance needs to the downstream bridge crossing at Morgan Hill Rd.

As a result of our initial Act 250 review, we have requested design changes to reduce the proposed increases in flood velocities so that the project meets the No Adverse Impact standard in the ANR's Procedure, as well as Woodstock's [local floodplain regulations](#). Following submission of the requested design revisions which are expected by 4/1 from the

Act 250 side, the plans will undergo an additional review to confirm compliance with these standards.

Please let me know if you have any other questions or concerns at this time.

Thank you,
Jessica

Jessica Barsaleau | River Corridor & Floodplain Manager
Vermont Agency of Natural Resources | Department of Environmental Conservation
Watershed Management Division, Rivers Program
100 Mineral St | Springfield, VT 05156
802-522-8752 cell | jessica.barsaleau@vermont.gov

From: Planning Department <pz@townofwoodstock.org>
Sent: Monday, December 29, 2025 8:51 AM
To: Barsaleau, Jessica <Jessica.Barsaleau@vermont.gov>
Subject: RE: New Applications

EXTERNAL SENDER: Do not open attachments or click on links unless you recognize and trust the sender.

Hi Jessica,

Thank you, and congratulations on the new position! I look forward to working with you going forward. Please let me know if you have any questions or concerns about either application.

Best Wishes,

Molly Maxham
Town Zoning Administrator
Town of Woodstock
802-457-7515
[Click here to book an appointment](#)

From: Barsaleau, Jessica <Jessica.Barsaleau@vermont.gov>
Sent: Friday, December 26, 2025 1:43 PM
To: Planning Department <pz@townofwoodstock.org>
Subject: RE: New Applications

Hi Molly,

I am the new River Corridor and Floodplain Manager for Windham, Windsor, and Bennington counties. Asa forwarded your email to me.

Thank you for sending these applications. I'll look them over and follow up once I've completed my review.

Best,
Jessica

Jessica Barsaleau | River Corridor & Floodplain Manager
Vermont Agency of Natural Resources | Department of Environmental Conservation
Watershed Management Division, Rivers Program
100 Mineral St | Springfield, VT 05156
802-522-8752 cell | jessica.barsaleau@vermont.gov

From: Planning Department <pz@townofwoodstock.org>
Sent: Tuesday, December 23, 2025 3:52 PM
To: Brayton, Asa <Asa.Brayton@vermont.gov>
Subject: New Applications

EXTERNAL SENDER: Do not open attachments or click on links unless you recognize and trust the sender.

Hi Asa,

I hope you are having a wonderful holiday season. I currently have two applications for projects in the floodplain that will go before our Town Development Review Board on January 27th. I have attached the applications  [here](#) and [here](#). Please let me know if you have any difficulty accessing the materials. The first application is for a deck, and the second is for a floodplain benching project, which I believe you have already been involved in. If you have any comments or concerns that you would like passed on to the board, please let me know. Otherwise, I am happy to answer any questions. Thank you!

Best Wishes,

Molly Maxham
Town Zoning Administrator
Town of Woodstock
802-457-7515
[Click here to book an appointment](#)

PUBLIC MEETING MINUTES
WOODSTOCK, VERMONT
CONSERVATION COMMISSION
31 The Green
Woodstock, VT 05091
(802) 457-7515

The Conservation Commission held a public meeting on Monday, November 24, 2025, at 5:00PM to conduct the following business:

Members present: Justin Quinn (Chair), Al Alessi and Jenny Ahlen

Staff present: Emily Collins and Molly Maxham.

Public present: Mike Dunne and Cole Stever.

Call to Order:

The meeting was called to order at 5:00 PM.

PUBLIC HEARINGS

A. AD-T-0004-26 – Scott Schwartz & Ashley Losier

Location: 2115 East Woodstock Road

Parcel ID: 05.01.18

Review Type: Conditional Use

Proposed Development: To construct a 12'2" x 32'4" deck.

Emily Collins presented the application for construction of a 12'2" x 32'4" deck. Molly Maxham explained that this application was previously approved, but an amendment was added to change the size of the deck. Justin Quinn was concerned about impervious surfaces but confirmed that this deck would be well away from the floodplain. Molly Maxham that this deck would be on steep slopes which could be a cause for concern. Al Alessi suggested that the applicant be sure to control rain flow. Jenny Ahlen stated that the size increase of the deck is not significant and did not have any concerns.

Al Alessi motioned to approve this application as submitted.

Jenny Ahlen seconded this.

Approved 3-0

B. V-0027-26 – El-Kam Realty Co

Location: 47 Central Street

Parcel ID: 20.52.43

Review Type: Conditional Use & Design Review

Proposed Development: To replace stone entryway stairs using bluestone treads.

Emily Collins presented the application to replace stone entryway stairs using bluestone treads. Justin Quinn confirmed that the only aspect of the stairs that is being changed is the type of material being used. Emily Collins explained that this application is coming before the Conservation Commission because the stairs are located on the river. Justin Quinn was concerned about hard surfaces. Jenny Ahlen and Al Alessi had no further concerns.

Al Alessi motioned to approve this application as submitted.

Jenny Ahlen seconded this.

Approved 3-0

C. V-0028-26 – John and Mary Quinn

Location: 4 River Street

Parcel ID: 20.52.07

Review Type: Conditional Use & Design Review

Proposed Development: Addition of 14'x22' to the south of existing structure and 44" to the east of existing deck.

Mike Dunne presented the application of an addition of 14'x22' to the south of existing structure and 44" to the east of existing deck. Justin Quinn asked if there was significant drip edge put in to help with mitigating water runoff. Mike Dunne explained that there would be a drainage system, especially from the roadside. Jenny Ahlen questioned whether the addition would come from the existing structure and porch. Mike Dunne stated that the structure would mostly come from the front section of the house.

Justin Quinn expressed concern about there being enough room for people to pass through the area still. Mike Dunne stated that the addition would not encroach on the driveway or access road and would not impede access.

Jenny Ahlen inquired if the house had experienced flooding that happened in 2023 across Vermont. Michael Dunne was not exactly sure. Al Alessi questioned if there was any way for staff to find out if properties had experienced flooding events in the past. Molly Maxham explained that staff does not keep specific flooding records for each parcel.

Justin Quinn stated that the addition is well away from the river and that the structure should not cause any more issues in the event of a flood.

The board expressed no further concerns.

Al Alessi motioned to approve this application as submitted.

Jenny Ahlen seconded this.

Approved 3-0

D. V-0032-26 – Joe & Carole Kashner

Location: 11 College Hill Road

Parcel ID: 23.52.37

Review Type: Conditional Use

Proposed Development: To construct an 886 sq ft addition.

Cole Stevers presented the application to construction an 886 sq ft addition. Emily Collins explained that this property is on steep slopes. Justin Quinn questioned why the addition could not be added to the other side of the property where no steep slopes were present. Emily Collins explained that only a small portion of the addition would be on the steep slope.

Justin Quinn questioned whether there was a gap between the floor of the addition and the steep slope. Cole Stevers explained that there would be storage underneath the addition. Jenny Ahlen had no concerns. Al Alessi suggested that the maps with applications should have flow lines for more clarity and saw no issue with the application.

Al Alessi motioned to approve this application as submitted.

Jenny Ahlen seconded this.

Approved 3-0

APPROVAL OF CC MINUTES –

There were no minutes approved. The minutes from 09/17/2025 will be approved at the next meeting.

Other Business:

Adjournment:

Meeting adjourned at 5:27 PM.