

**INVITATION TO BID**

FOR  
**Veterans Memorial Stream Restoration**

FOR  
Borough of Kulpmont

BID PACKAGE TO BE SUBMITTED

TO:  
Borough of Kulpmont  
9 North Eighth Street  
Kulpmont, PA 17834

**BY 10:00 AM February 23, 2024 (IN OFFICE)**  
**Bid Opening will be 10:05 AM February 23, 2024 (IN OFFICE)**

BIDDER'S COMPANY NAME \_\_\_\_\_

COMPANY ADDRESS \_\_\_\_\_

TELEPHONE NUMBER \_\_\_\_\_

CONTACT PERSON \_\_\_\_\_

EMAIL \_\_\_\_\_

TOTAL BID \_\_\_\_\_

**ALL BIDS MUST INCLUDE THE FOLLOWING:**

- Completed bid form (this page) in its entirety;
- Detailed budget in the form of bidder's choosing;
- Documented evidence of three successful\* streambank stabilization projects that have maintained their construction integrity for a period of three years or more (with dated photos, project location, and references for each project);
- Consent of Surety accompanied by a Power of Attorney (attesting to the signer's authority to commit the bonding company to a Performance and Payment Bond 100% of project cost if the bid is successful)

## Kulpmont Borough

Dear Contractor:

Thank you for your interest in the opportunity to bid on the Veterans Memorial Stream Restoration Project.

Kulpmont Borough is accepting bids for the **stream restoration project along a section of Quaker Run in Mt. Carmel Township, Northumberland County, PA**. Bidders are requested to bid on the total project and are to provide an itemized budget.

Contractors must have and include in the package a demonstrated experience in knowledge and construction of successful\* streambank stabilization projects. Contractors are required to address all conditions of the Pennsylvania Department of Environmental Protection (PADEP)/ United States Army Corps of Engineers (USACE) stream encroachment approvals and erosion and sediment control measures required by the Northumberland County Conservation District and PADEP Chapter 102 regulations.

Please note the following:

- **THIS BID ONLY INCLUDES THE STREAM RESTORATION WORK IN THE PROJECT PLANS. (THE RAIN GARDEN WORK IS ALREADY COMPLETE.)**
- **SUBMISSION OF A BID CONSTITUTES AGREEMENT BY THE PERSON OR ENTITY SUBMITTING A BID TO COMPLY WITH ALL REQUIREMENTS, TERMS AND CONDITIONS SET FORTH IN THIS REQUEST FOR BIDS.**

The bid package can be obtained starting on January 10, 2024 and is available at:  
<https://boroughofkulpmont.org>

- If you are a person with a disability and wish to attend the bid opening and require an auxiliary aid, service or accommodation to observe or participate in the proceedings, please contact the Borough of Kulpmont to discuss how we may accommodate your needs.
- Kulpmont Borough reserves the right to waive technicalities and to reject any or all bids or items therein, in the best interest of Kulpmont Borough.

Steve Motyka  
Councilman  
Borough of Kulpmont

*\* Successful is defined as intact, structural stability for at least 3 years without degradation due to typical, natural events (1-2" inch rainfall as an example).*

Kulpmont Borough

**GENERAL TERMS AND CONDITIONS:**

**SUBMISSION OF A BID CONSTITUTES AGREEMENT BY THE PERSON OR ENTITY SUBMITTING A BID TO COMPLY WITH ALL REQUIREMENTS, TERMS AND CONDITIONS SET FORTH IN THIS REQUEST FOR BIDS.**

All Bidders must adhere to the loan/grant requirements of the Kulpmont Borough.

All Bidders must be prepared to present suitable evidence of their financial standing and to furnish a list of similar work recently completed.

The Bidder is requested to carefully examine the site where the services are requested, the work proposed, this Invitation to Bid package, and to compute the quantities of labor or materials and supplies entering therein, and to determine for oneself the difficulties incidental to the prosecution of the work. The presentation of a Bid shall be considered as conclusive evidence of such examination.

No verbal instructions or information to Bidders will be binding. This Invitation to Bid will be considered clear and complete unless written attention is called to any apparent discrepancies or incompleteness thereof, before the opening of bids. Should any written inquiries be received by the Kulpmont Borough contact, these inquiries will be answered in the form of Addenda to this Invitation to Bid and all such Addenda will be sent via email to the email addresses provided by the contractors at the site showing. These Addenda shall then be considered a part of this Invitation to Bid.

Bids will be considered as conclusive evidence of complete examination of this Invitation to Bid.

Each bid must be enclosed in a sealed envelope, clearly marked on the outside: "Bid on Veterans Memorial Stream Restoration Project", and delivered to Kulpmont Borough, 9 North Eighth Street, Kulpmont, PA 17834.

Kulpmont Borough reserves the right to reject any or all bids or parts thereof or to waive technicalities, as deemed to be in the best interest of Kulpmont Borough.

Any Bidder who has demonstrated unsatisfactory performance during any agreement with Kulpmont Borough and/or is under enforcement through the PA Department of Environmental Protection (PADEP) may be considered as unqualified and their bid may be rejected. Kulpmont Borough reserves the right to exercise this option as Kulpmont Borough deems proper and/or necessary in its best interest.

It is understood that parties making bids accept the terms and conditions expressed and contained in this Invitation to Bid. The failure to comply with any of the conditions may result in the rejection of the bid or the immediate termination of any agreement which may have been awarded.

The successful Bidder will be required to execute a written agreement with Kulpmont Borough within ten (10) work days after notice of acceptance of the bid.

## Kulpmont Borough

This Invitation to Bid is intended to cover the furnishing of all materials and the performance of all work that may be required or necessary for the complete performance of the contract, and the Contractor will be required to do all things that may be necessary to fully complete the work within the purview of this Invitation to Bid.

Should the Contractor discover discrepancies in this Invitation to Bid, the matter shall be at once brought to the attention of the Kulpmont Borough office, and the discrepancies corrected by written agreement before proceeding further.

Items to be furnished shall be new, recycled, first-class, and shall meet with the approval of Kulpmont Borough's designated representative. Contractor shall have competent and efficient workmen, qualified for the type of work to be done, and all workmanship shall be first class. Where there is no detailed description of the material to be furnished or of the work to be done it is understood that this Invitation to Bid contemplates the use of first-class materials throughout, placed or used in such a manner as to produce a completed job that is first class and workmanlike.

No change orders, extras, or additional work will be allowed or paid for unless such extras or additional work are ordered in writing by Kulpmont Borough

The Contractor shall indemnify, defend, and hold harmless Kulpmont Borough, its officers, or consultants and employees from all suits, actions or claims of any character, name and description, including attorney's fees and costs, brought for or on account of any injuries or damages received or sustained, including wrongful death by any person or persons including but not limited to employees and other person on the site or off the site if related to their work and/or this Agreement; or for injury or damage to property or other living things in which property rights by law exist, by or from the said Contractor, or by or in consequence of any neglect in safeguarding the work, or through defective workmanship or the use of defective materials or by, or on account of any act, omission, neglect, or misconduct of the said materials or by, or on account of any act, omission, neglect, or misconduct of the said Contractor; or for any claims or amounts arising for recovered under the Workmen's Compensation Law or any other law, by-law, ordinance, order or decree. So much of the due Contractor under or by virtue of his agreement as shall be considered necessary by Kulpmont Borough may be retained for the use of Kulpmont Borough, or in case insufficient money is due, his surety shall be held until each suit or suits, action or actions, claim or claims, for injuries or damages, as aforesaid, shall have been settled and suitable evidence to that effect furnished to Kulpmont Borough Contractor hereby expressly waives any immunity under the Worker's Compensation Act, either as an employer or statutory employer, for any claim brought by Kulpmont Borough This waiver is intended to comply with the provisions of Section 303(b) [77 P.S.@481 (b)] of said Act.

The Contractor accepts, in so far as the work covered by any such contract is concerned, the provisions of the Workers' Compensation Act and any reenactments, supplements or amendments thereto.

The Contractor shall be responsible for any injury or damage to the property of the landowner or to the property of any Public Utility Company included in this contract by or on account of any act, omission, neglect or misconduct of the Contractor in the prosecution of the work or in the storage of materials and equipment.

## Kulpmont Borough

The Contractor shall take all necessary precautions to properly safeguard the properties under this Agreement and avoid injury or damage to buildings, structures, natural features, and persons, etc., and shall, unless otherwise specified, restore such structures, property, materials, etc., at his own cost and expense to a condition equal to that existing before such damage was done, by repairing, rebuilding, or otherwise, as may be required by Kulpmont Borough, or shall make good such injury or damage in a satisfactory manner before completion of services, and their final acceptance.

The Contractor shall not transfer, sublet, or subcontract any portion of the work covered by these specifications without prior written consent of Kulpmont Borough

The Contractor shall direct work personally or be represented by a competent foreman with the authority to follow the instructions of the authorized representative of Kulpmont Borough.

The Contractor shall prosecute the work with sufficient workmen and equipment to ensure the completion within the time stipulated.

In general, deliveries shall be at such times as may be fixed by Kulpmont Borough and shall not be made except upon definite instructions by Kulpmont Borough

Workmanship and materials shall at all times be subject to inspection by Kulpmont Borough's authorized representative. In order to maintain proper control over the work as it progresses and to secure flexibility in adapting means to ends, Kulpmont Borough shall appoint a Kulpmont Borough contact, so designated in writing, who shall decide all questions as may arise as to the acceptability of services rendered and/or materials furnished, and as to the rate of progress of the work provided. However, the authority of the Kulpmont Borough contact shall not constitute a waiver of the legal rights of Kulpmont Borough or of the Contractor. The Kulpmont Borough contact shall not be authorized to revoke, alter, enlarge, relax, or release any of the requirements of the specifications.

Omission or failure on the part of the Kulpmont Borough contact to disapprove or reject any defective material or work shall not be construed to be acceptance of any defective material or work.

Bidders shall understand that when materials or supplies have been delivered to the job premises, which materials or supplies do not comply with this Invitation to Bid and have not been approved, upon notification, the Contractor shall immediately remove from the premises any such condemned material or supplies, and replace them with material or supplies in full accordance with this Invitation to Bid at no additional expense to Kulpmont Borough.

Payments shall be made to the Contractor as soon as possible after inspection and acceptance of the material or supplies and/or work by an authorized representative of Kulpmont Borough, after receipt of invoice, and approval of the invoice. In the case of supply agreements, where partial delivery is made, invoice for such part may be made upon delivery, and payment made as soon as possible under conditions as above. In the case of agreements for services rather than simply supply deliveries, payment will be made after satisfactory completion of the agreement, unless otherwise provided in this Invitation to Bid.

## Kulpmont Borough

It shall be the sole obligation of the Contractor to determine the liability for and pay all sales, use, excise or similar taxes which may become due pursuant to this project. Kulpmont Borough makes no representation with respect to any such taxes or the Contractor's obligation for the payment of such taxes.

Bidders shall state the brand name and/or catalog number of the items upon which their bid is based. It shall be the Bidder's responsibility, if bidding on items other than those specified, to prove to Kulpmont Borough that said items are equal to or better than those indicated.

When required herein, samples of equivalent items bid upon shall be provided to Kulpmont Borough for examination simultaneously with the submission of the written bid to Kulpmont Borough or within such time as required herein. Failure to comply herewith may be cause for rejection of bid.

Kulpmont Borough shall be the sole judge as to whether any equivalent item offered is considered equal.

Kulpmont Borough shall have the right without invalidating the Agreement to order extra work or to make changes by altering, adding to, or deducting from the work as specified in the Agreement. Should such alterations or changes in the quantity or character of the work result in increased or in decreased cost to the Contractor, a fair and equitable sum therefore, to be agreed upon in writing in advance by the Contractor. All change orders must be pre-approved by Kulpmont Borough. The difference shall be added or deducted from the bid price, as the case may be. No allowance will be made for anticipated profits on deducted work.

An Agreement may be awarded to the most qualified responsible Bidder, meeting the requirements of the Invitation to Bid. Bidder agrees to accept an award for all services bid at the prices quoted.

Qualifications, conditions or restrictions, such as "all or none", may result in rejection of bid.

Where an error is made in computing unit price to total price, the unit price quoted shall govern.

A bid which is incomplete, illegible, obscure, conditioned, or which contains additions not called for, or irregularities of any kind, including alterations or erasures, may be rejected. A bid which is not accompanied by the required security or is unsigned shall be rejected.

A Bid Bond is not required; however, a Payment and Performance bond (100%) is required for the bid.

In the event that there is a tie between two or more qualified responsible Bidders, and the place of business of one is located in the state of Pennsylvania and the other(s) is (are) located outside of Pennsylvania, Kulpmont Borough may in its discretion opt to award the bid to the Pennsylvania Bidder, all other relevant factors being equal.

## Kulpmont Borough

Responsibility under the Immigration Control and Reform Act of 1986 for verification of identity and employment eligibility in connection with Bidder's own agents/servants, workers and employees, is assumed and continues to be assumed by the Bidder.

Non-Discrimination: The Contractor agrees to comply with all applicable State and Federal laws, regulations, procedures and orders which protect the civil rights of employees, job applicants and recipients of service.

The Contractor expressly agrees to comply with Title VI of the Civil Rights Act of 1964, as amended, the Americans with Disabilities Act of 1990, and all other applicable Federal, State and/or Local Laws, ordinances, rules and regulations and orders prohibiting discrimination in hiring or employment opportunities. It shall not be an excuse for non-compliance that the Contractor has or intends to delegate any of its responsibilities to any union, training program, other source of recruitment or other entity, but Contractor shall remain primarily responsible for compliance hereunder.

In the employment of persons for the performance of public work, no contractor or subcontractor nor any person acting on behalf of such contractor or subcontractor shall by reason of race, color, religious creed, sexual orientation, ancestry, age, national origin, sex or disability discriminate against any individual who is qualified and available to perform the work to which the employment relates.

The Contractor shall observe and comply with all laws, ordinances, and regulations in any way affecting the equipment or materials used, those engaged on the work or the conduct of the work.

The Contractor shall procure and pay for any permits and licenses required, unless otherwise stated herein, and shall give all notices necessary or incident to the due and lawful prosecution of work.

This Agreement shall be governed by the laws of the Commonwealth of Pennsylvania. The Bidder (contractor) has the responsibility and obligation to become aware of and comply with all applicable statutes, rules and regulations which affect this transaction in any regard.

The Contractor, its employees, agents, servants and any subcontractors of Contractor are independent contractors under this Agreement and are not deemed to be employees, agents or servants of Kulpmont Borough in any manner or for any purpose whatsoever.

Kulpmont Borough may, by written notification to the Contractor, terminate in whole or any part of this Contract if Kulpmont Borough determines that the Contractor has failed to perform the services or to provide the materials or supplies required by this Invitation to Bid in the manner and quality as specified herein.

If the contractor fails or refuses to begin work within the time required in this Invitation to Bid or to perform the work with sufficient workmen, equipment, or materials to insure the completion of said work in accordance with the terms of the Agreement, or shall discontinue the prosecution of the work without the approval of Kulpmont Borough or shall neglect or refuse to perform anew such work as has been rejected as defective and unsuitable, or shall become insolvent or be declared bankrupt, or for any cause shall not carry on the work in an acceptable manner and conformity with contract, Kulpmont

## Kulpmont Borough

Borough after ten (10) days written notice served personally on the Contractor or mailed to him at the address given on his bid, and on his failure to remedy the condition or conditions complained of, shall have the right to annul their Agreement without process or action at law, and to turn over to the surety for completion or, at their option, to enter upon and take possession of the work, using the materials and equipment of the Contractor assembled for the project, and to complete the performance of the Agreement in accordance with the terms thereof, with or without advertising or re-letting, and should the total cost of the work contracted for be in excess of the original bid price, the Contractor and his surety shall be held responsible for such excess cost.

Neither by the taking over of the work by Kulpmont Borough nor by the annulment of the Agreement shall Kulpmont Borough forfeit the right to recover damages from the Contractor or his surety for failure to complete this Agreement.

Bidder or Contractor, as the case may be, certifies that to the best of his knowledge, no Authority official or employee has a vested interest, financial or otherwise, in this Agreement. Bidder or Contractor agrees to comply in all respects with the Public Official and Employee Ethics Act (65 P.S. Section 1101 et seq.). Bidder or Contractor will inform Authority in writing immediately if any potential conflict of interest arises during the course of bidding or during the performance of any Agreement entered into with Kulpmont Borough. Conflict of interest may constitute grounds for disqualification of Bidder or termination of any Agreement with the Contractor following notification by Kulpmont Borough to Bidder or Contractor where same is not corrected by Bidder or Contractor within the time period established by Kulpmont Borough in such notice.

The Contractor shall pay for all royalties, claims, and fees for any patented invention, article, or arrangements, which may be used in the work under Agreement.

The Contractor shall accept the compensation as provided in the Agreement in full payment for furnishing all bonds, materials, labor, tools, equipment, transportation, etc., and for performing all work under the Agreement, and for all loss or damage arising from the work, until its final acceptance by Kulpmont Borough

No extra or additional work will be allowed or paid for unless ordered in writing by Kulpmont Borough

Contractor agrees to replace any individual on its project team upon reasonable request of Kulpmont Borough contact. Kulpmont Borough has the sole right to accept or reject any assignment by the Contractor of individuals to perform services under this Contract.

The terms "Bidder" and "Contractor" are, from time to time, used interchangeably, as the context requires.

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## **SPECIAL CONDITIONS:**

**Description:** The Borough of Kulpmont will be accepting bids for the Veterans Memorial Stream Restoration Project. The project includes stream restoration along a section of Quaker Run. The project area is located at the Veterans Memorial Sports Complex in Kulpmont, Northumberland County, Pennsylvania. Work will involve placing rock structures and a clay lining within the stream channel, earthwork, erosion and sediment control plan implementation, and planting the site with native vegetation. All fill materials will be disposed of out of the floodplain and out of any wetlands. Contractors must demonstrate within the bid package successful streambank stabilization projects that have maintained their construction integrity for a period of three years or more (dated photos).

- a) Bid Award: The Borough of Kulpmont intends to award this bid to the responsible and responsive Bidder with demonstrated knowledge and construction of streambank stabilization projects in accordance with a Pennsylvania Department of Environmental Protection (PADEP) and United States Army Corps of Engineers (USACE) stream encroachment approvals and erosion and sediment control measures of the Northumberland County Conservation District and PADEP Chapter 102 regulations. The successful Contractor will be required to execute a contract hereto within ten (10) days of bid award date. Failure of the Contractor to do so could result in Kulpmont Borough awarding the contract to the next responsible and responsive Bidder. Kulpmont Borough reserves the right to exercise this option as Kulpmont Borough deems proper and/or necessary.
- b) The firm, or corporation to whom, or to which the Contract has been awarded shall sign and return one copy of same together with properly executed bonds within the number of days set by Kulpmont Borough after written notice of award of contract. Kulpmont Borough shall then execute this Agreement promptly, after approval of same and upon receipt of such Bonds, additional certificates, information or samples as may be required, provided, however, that no award shall be considered binding upon Kulpmont Borough unless and until the Agreement documents are properly executed by both parties.
- c) The Contractor must be ready and able to start construction on or about March 11, 2024. All construction work must be completed by October 31, 2024.
- d) PA Prevailing Wage Rates: PA Prevailing wages apply.  
The project serial number is: 23-09766  
Please go to:  
<https://www.dlisureweb.pa.gov/PrevWage/Pages/Project.aspx?ID=178164&PageType>  
≡  
to view the report, and produce a hard copy for your records.
- e) Contract Term and Extension: The contract term will begin upon receipt of a signed contract by both the Kulpmont Borough and Contractor and continue for at least one year or as dictated by the PADEP/USACE stream encroachment permits.
- f) Consent of Surety: Consent of Surety must be submitted by all Bidders with their bid packages. "Consent of Surety" shall consist of a statement from the Bidder's bonding company certifying if the Bidder is awarded the bid the bonding company will provide a Performance Bond and Payment Bond for Labor and Materials on the form that is provided herein in the amount of one hundred percent (100%) of the total bid award for each bond, or if the bonding company is willing to combine bonds, then one (1) Performance and Payment Bond in the amount of one hundred percent (100%) of the

total bid award. The Performance and Payment Bond may cover the contract award amount for a single year, in which case they shall be renewed or extended and as such resubmitted for each year of the contract in the amount of 100 percent (100%) of the ensuing year's contract amount. The Consent of Surety must be accompanied by a Power of Attorney attesting to the signer's authority to commit the bonding company. The Consent of Surety must not contain any conditions that contradict the terms and conditions of these Specifications and/or the Performance Bond or Payment Bond.

- g) Performance Bond and Payment Bond: The selected Contractor will be required to submit a Performance and Payment Bond in the amount of 100 percent (100%) of the contract award amount within ten (10) days of the award date, the condition of which shall be the full and complete execution and performance of each and all of the terms contained in the Agreement and Invitation to Bid package. The Bonds shall be executed by the same surety, and may be combined, if permitted by the surety. If Bonds are not combined, then two separate Performance and Payment Bonds, each in the amount of 100 percent (100%) of the contract award, will be required. The Performance and Payment Bond(s) may cover the contract award amount for a single year, in which case they shall be renewed or extended and as such resubmitted for each year of the contract in the amount of 100 percent (100%) of the ensuing year's contract amount.
- h) The condition of the Payment Bond shall be the prompt payment for all materials and labor supplied or performed in the prosecution of the work. It shall be a condition of said bond that persons furnishing labor and materials in and for the prosecution of said work shall have the right, according to law, to sue in an action of assumpsit, in the name of the obligee, for his or their use upon said bond, for such sum or sums as may be justly due.
- i) Insurance: The Contractor shall purchase and maintain such policy or policies of insurance as will protect from claims, as hereinafter set forth, which may arise out of or result from the Contractor's operation under this Agreement, whether such operations be by himself or by any subcontractor, or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. Such insurance shall name the agents, employees, and officers of Kulpmont Borough Certificates of Insurance, made out to "Kulpmont Borough" must be provided to Kulpmont Borough prior to execution of the Agreement by Kulpmont Borough. The kinds of claims to be insured against are as follows:
- Claims for damages because of bodily injury, occupational disease, sickness, disease or death of Contractor's employees.
  - Claims for damages because of bodily injury, sickness, disease or death of any person other than Contractor's employees.
  - Claims for damages insured by usual personal injury liability coverage which are sustained by any person as a result of any injury directly or indirectly related to the employment of such person by the Contractor or by any other person.
  - Claims for damages other than to the work itself because of injury to and destruction of tangible property, including loss of use resulting therefrom. Any care, custody, and control exclusion shall be removed.
  - Claims for damages because of bodily injury or death of any persons or property damage arising out of the ownership, maintenance, or use of any motor vehicle.
  - Claims for false arrest or imprisonment, assault and battery, errors and omissions, invasion of civil rights, and like claims.
  - The insurance required by Special Condition h), first paragraph above, shall be for not less than the limits as set forth hereafter or as may be required by law, whichever is greater.

- j) Commercial General Liability and Commercial Automobile Liability shall include:
  - Bodily Injury (including owned and non-owned vehicles); Personal Injury; Property Damage Liability (including owned and non-owned vehicles); and Contractual Liability with limit not less than \$1,000,000 per occurrence.
  - Commercial General Liability insurance shall include coverage for products/completed operations coverage with limit not less than \$1,000,000 per occurrence.
  - Coverage is to be carried on an occurrence basis and limits are to apply to a “per project” basis.
- k) The Contractor must carry Employer’s Liability insurance coverage and Worker’s Compensation coverage as required by statute. The Contractor shall furnish suitable evidence that he has insured his liability under the Workmen’s Compensation Act and any supplements or amendments thereto, or file with the Authority an acceptable certificate of exemption therefrom.
- l) Original Certificates of Insurance made out to “Kulpmont Borough”, “in the form above designated shall be provided by the successful Bidder to be reviewed and approved along with the signed Agreement and any required Bonds. Original Certificates of Insurance must be submitted within ten (10) days of bid award date or with the signed agreement, whichever is earlier, and prior to commencing any work on this project. The Agreement will not be executed by Kulpmont Borough in the absence of Certificate(s) of Insurance. Special coverage may be required in addition to any of the foregoing as may be specifically set forth in any special conditions of the contract. Policies shall be effective commencing by the first day of work and remain in effect during the life of the project.
- m) The Contractor must submit the certificates to Kulpmont Borough, prior to commencement of the Contract and annually thereafter, or otherwise as insurance coverage is changed. Insurance certificates shall provide for thirty days notice to Kulpmont Borough of expiration of insurance. The insurance coverage required under this paragraph must be maintained by the Contractor throughout the terms of this Agreement and any extensions, if applicable. If the Contractor’s insurance expires during the term, Kulpmont Borough may at its sole option withhold payments and/or stop the work until insurance coverage is renewed.
- n) Kulpmont Borough Representation: Kulpmont Borough’s contact(s) designated at the pre-bid meeting will represent Kulpmont Borough for this project.
- o) Safety: Safety of persons maintaining and using the property is paramount to the Contractor’s maintenance operations. The Contractor shall be responsible for providing all necessary safety equipment, procedures and employee training and instruction in the use of the safety equipment. Safe operation includes, for example, halting the equipment operation to allow safe passage of nearby persons or vehicles, safe operation of equipment on steep slopes, etc.
- p) The Contractor shall be in compliance with all Occupational Safety and Health Administration (O.S.H.A.) regulations and all safety related State and Federal regulations regarding the use of any of the equipment that is used on the work site. Any employee observed operating equipment in an unsafe manner or failing to use necessary safety equipment as determined by the Authority will be requested to leave the property. The Contractor shall fulfill such requests and immediately vacate the property.

- q) Limits of Work: The physical Contract Limits of Work are to be considered the property defined in the Scope of Work and Technical Specifications.
- r) Schedule: Upon receipt of Notice to Proceed, the Contractor shall schedule a preconstruction meeting with designated Kulpmont Borough staff and contact to discuss the procedures for all work activities, acceptance, and payment. The Contractor shall schedule with the Kulpmont Borough contact for regular inspection meetings throughout the life of the project. These meetings are to review the work completed and discuss when and what work is scheduled to take place for the coming period and obtain any necessary approvals. All meetings must be scheduled during the hours of 8 AM and 4 PM (Monday through Friday, except holidays). For the purposes of this work, business hours is defined as 8 AM to 4 PM on Monday through Friday. The Contractor is free to work during the non-business hours if approval is obtained from the Kulpmont Borough contact and landowner.
- s) Payments: Upon notification of project completion, Kulpmont Borough has 10 working days to certify construction meets contract standards and design specifications. The Contractor shall invoice for the approved completed work. Upon receipt and approval, Kulpmont Borough has 10 working days to administer and process the invoice for payment to contractor.
- t) Contract Termination: Kulpmont Borough, at its sole discretion, reserves the right to terminate this Contract or portions thereof at any time with fifteen (15) days written notice of termination.
- u) Subcontracted Work: In the event that a Contractor subcontracts any part of this project, the Contractor must submit this information with proof of any required licensing and/or certifications in writing to the Kulpmont Borough for approval prior to entering into the subcontract. Kulpmont Borough reserves the sole right to accept or not accept any subcontractor, as it deems proper and/or necessary. The Contractor shall retain total responsibility for the performance of all work performed under this contract.
- v) The contractor must comply with any and all Pennsylvania Department of Transportation permits and requirements concerning road access.
- w) Shamokin Creek Restoration Alliance as the permit holder must and will have final inspection of the site for contract administration and completion.
- x) Notification of the start of construction must be given to the landowner. The Kulpmont Borough representative will do this when notified by the contractor.
- y) Any change order to the Scope of Work or design, construction, and/or construction materials must be approved by the Kulpmont Borough contact.
- z) Any and all administrative questions on the project should be directed to the Kulpmont Borough contact. Any and all erosion, sedimentation, sequence/scope of work, plan, PADEP Chapter 102 and similar site questions should be directed to the designated E&S Technician within Northumberland County Conservation District.
- aa) Bidder and Contractor may be used interchangeably and referred to as one and the same within this document.

# # #

## **Veterans Memorial Stream Restoration**

### **Important Dates**

Bid Packages Available: January 10, 2024

Mandatory Site Showing: 10:00AM on January 31, 2024 (Meet at the Veterans Memorial Sports Complex located on South 6<sup>th</sup> Street, Kulpmont, PA (40.791809, -76.466610))

All questions must be submitted in writing to [aclauser@verizon.net](mailto:aclauser@verizon.net) and are due: 5:00PM on February 14, 2024

Submission of bids: Due by 10:00AM on February 23, 2024 (Kulpmont Borough Office)

Bid Opening: 10:05 AM on February 23, 2024 (Kulpmont Borough Office)

Notification of Successful bidder: March 1, 2024

Start Work on: March 11, 2024 (place one-call and agency notifications before starting work)

All Construction Completed: October 31, 2024



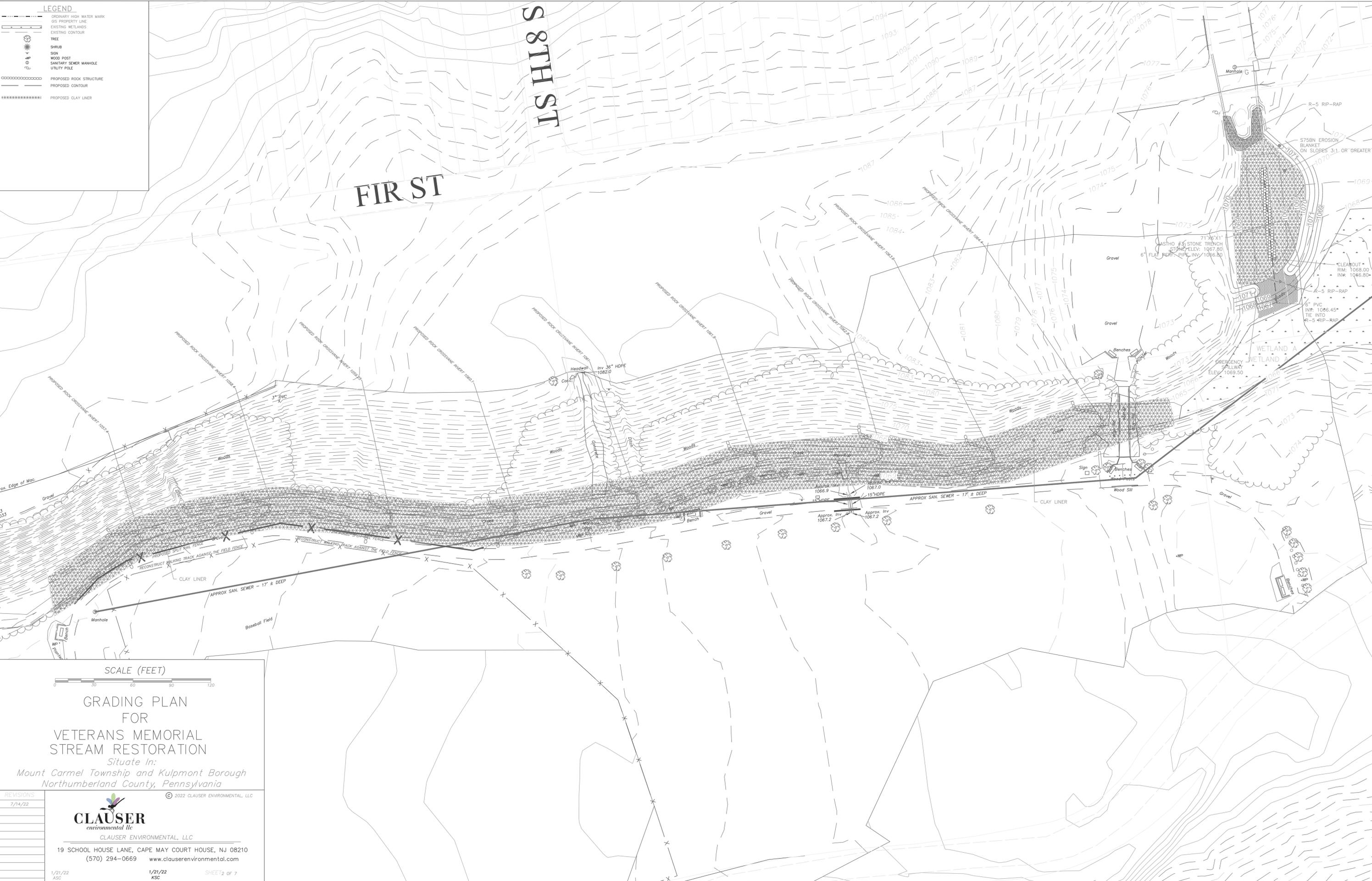


LEGEND

- O R D I N A R Y H I G H W A T E R M A R K
- O I S P R O P E R T Y L I N E
- - - E X I S T I N G W E T L A N D S
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- \*\*\*\*\* P R O P O S E D C L A Y L I N E R

FIR ST

S 8TH ST



SCALE (FEET)



GRADING PLAN  
FOR  
VETERANS MEMORIAL  
STREAM RESTORATION

Situate In:  
Mount Carmel Township and Kulpmont Borough  
Northumberland County, Pennsylvania

REVISIONS
7/14/22



CLAUSER ENVIRONMENTAL, LLC  
19 SCHOOL HOUSE LANE, CAPE MAY COURT HOUSE, NJ 08210  
(570) 294-0669 www.clouserenvironmental.com

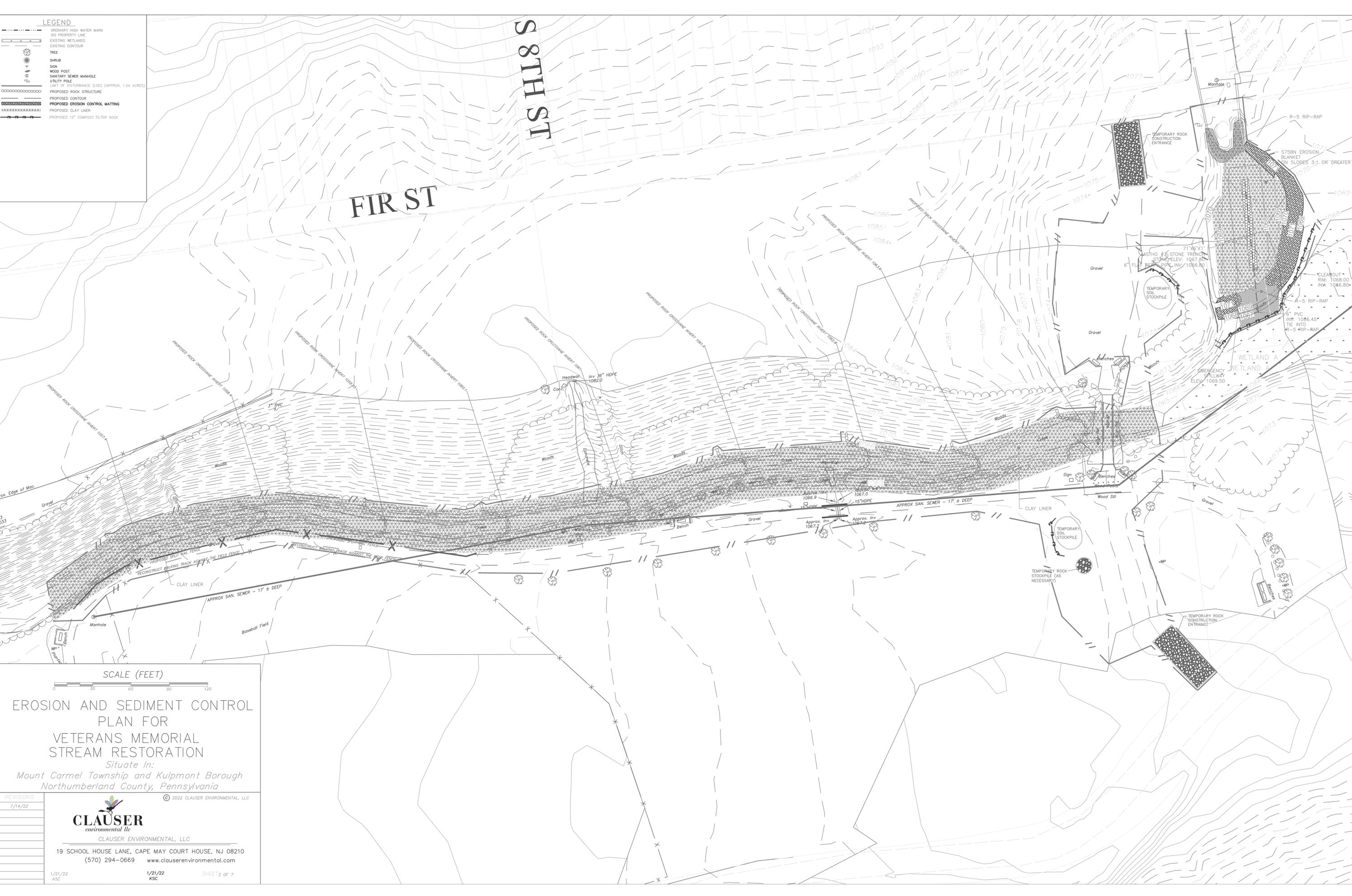
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**LEGEND**

- ORDINARY HIGH WATER MARK
- GIS PROPERTY LINE
- - - EXISTING WETLANDS
- - - EXISTING CONTOUR
- TREE
- SHRUB
- SIGN
- WOOD POST
- SANITARY SEWER MANHOLE
- UTILITY POLE
- LIMIT OF DISTURBANCE (LOD) (APPROX. 1.04 ACRES)
- PROPOSED ROCK STRUCTURE
- PROPOSED CONTOUR
- PROPOSED EROSION CONTROL MATTING
- PROPOSED CLAY LINER
- PROPOSED 12" COMPOST FILTER SOCK

**FIR ST**

**S 8TH ST**



SCALE (FEET)



**EROSION AND SEDIMENT CONTROL  
PLAN FOR  
VETERANS MEMORIAL  
STREAM RESTORATION**  
*Situate In:*  
Mount Carmel Township and Kulpmont Borough  
Northumberland County, Pennsylvania

REVISIONS
7/14/22



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- PROPOSED ROCK STRUCTURE
- PROPOSED CONTOUR
- \*\*\*\*\* PROPOSED CLAY LINER
- PROPOSED 12" COMPOST FILTER SOCK
- PERMANENT STREAM IMPACT

FIR ST

S 8TH ST



SCALE (FEET)



IMPACT PLAN  
FOR  
VETERANS MEMORIAL  
STREAM RESTORATION  
Situating In:  
Mount Carmel Township and Kulpmont Borough  
Northumberland County, Pennsylvania

REVISIONS
7/14/22

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**CLAUSER**  
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1/21/22 ASC 1/21/22 KSC SHEET 4 OF 7

**CONSTRUCTION SEQUENCE NOTES**

THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.  
 THE OPERATOR SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED BY THE APPLICANT, SUBMITTED TO AND APPROVED BY THE COUNTY CONSERVATION DISTRICT, AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOIL AND/OR ROCK SPOIL AND BORROW AREAS, REGARDLESS OF THEIR LOCATIONS.

BEFORE INITIATING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE COUNTY CONSERVATION DISTRICT.  
 ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE.

EROSION AND SEDIMENT BMPs MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPs.

AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENT CONTROL PLAN PREPARER, AND THE COUNTY CONSERVATION DISTRICT TO AN ON-SITE MEETING. ALSO, AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR BURIED UTILITIES LOCATIONS.

**CONSTRUCTION SEQUENCE**

- INSTALL ROCK CONSTRUCTION ENTRANCE AND SILT FENCE OR COMPOST FILTER SOCK AT ALL LOCATIONS PROPOSED ON THE SITE.
- STAKE/FLAG ALL LIMIT OF DISTURBANCE (LOD) LINES FOR THE PROJECT.
- WHEN WORKING WITHIN THE STREAM CHANNEL, WORK IN THE DEWATERED CHANNEL THROUGH THE USE OF TEMPORARY COFFERDAMS AND PUMP BYPASS AND IN ACCORDANCE WITH THE SEQUENCE FOR WORKING WITHIN THE CHANNEL. LOCATIONS OF TEMPORARY COFFERDAMS AND PUMP BY-PASS SETUPS CAN BE DETERMINED BY THE CONTRACTOR IN THE FIELD. USE SEDIMENT FILTER BAGS AS NEEDED TO MINIMIZE SEDIMENTATION FROM THE DEWATERED ZONE.
- PRE-POSITION MATERIALS ON-SITE FOR EACH WORKZONE SO THAT STABILIZATION MAY OCCUR IMMEDIATELY FOLLOWING DISTURBANCE OF EACH WORKZONE. CONSTRUCT THE BIORETENTION AND CHANNEL RESTORATION.
- WHEN THE TEMPORARY COFFERDAMS AND PUMP BYPASS IS REMOVED, INSPECT ALL STRUCTURES FOR FUNCTION. REPAIR ANY DEFICIENCIES.
- AS WORK PROCEEDS, PROGRESSIVELY SEED AND MULCH FRESHLY GRADED AREAS AND REMOVE ANY CONSTRUCTION DEBRIS. ALL CHANNEL AREAS, BANKS AND SLOPES SHOULD BE COMPACTED SO THAT THE SOIL IS NOT LOOSE. MAT ALL STREAMBANKS AND REFER TO THE SEEDING SPECIFICATIONS NOTE ON THIS PAGE.
- REMOVE THE ROCK CONSTRUCTION ENTRANCE.
- STABILIZE ALL DISTURBED AREAS WITH SEED, FERTILIZE, LIME, AND MULCH AS REQUIRED.
- WHEN VEGETATION REACHES AT LEAST 70% UNIFORM, PERENNIAL COVER, REMOVE THE SILT FENCE OR CUT OPEN AND SPREAD THE COMPOST FILTER SOCK. STABILIZE ANY AREAS DISTURBED DURING REMOVAL OF THE TEMPORARY BMPs.

**SOILS**

- Du - DUMPS, MINE
- HuD - HAZLETON AND CLYMER EXTREMELY STONY SANDY LOAMS, 8 TO 15 PERCENT SLOPES
- UF - UDFULFENTNS, COAL OVERWASH
- Uh - UDORTHTENTS, SANDSTONE AND SHALE

**SURVEY INFORMATION**

- THE TOPOGRAPHIC SURVEY IS BASED ON A SURVEY EXECUTED BY BRINKKASH AND ASSOCIATES IN JULY 2021. A BOUNDARY SURVEY AND TITLE SEARCH WERE NOT COMPLETED.
- UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE AND WERE DETERMINED FROM VISIBLE LOCATION. PA ONE CALL UTILITY MARKINGS AND THE BEST AVAILABLE PLAN INFORMATION. THE LOCATIONS ARE APPROXIMATE AND MUST BE VERIFIED PRIOR TO ANY CONSTRUCTION, EXCAVATION OR BLASTING. CLAUSER ENVIRONMENTAL, LLC AND BRINKKASH AND ASSOCIATES, INC ASSUME NO RESPONSIBILITY FOR ANY DAMAGES INCURRED AS A RESULT OF THE UTILITIES OMITTED OR INACCURATELY SHOWN.
- WETLAND AND STREAM BOUNDARIES WERE GPS LOCATED BY CLAUSER ENVIRONMENTAL, LLC ON APRIL 13, 2021.

**ENVIRONMENTAL DUE DILLIGENCE**

ENVIRONMENTAL DUE DILLIGENCE: THE APPLICANT MUST PERFORM ENVIRONMENTAL DUE DILLIGENCE TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL. ENVIRONMENTAL DUE DILLIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILLIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF A REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING IS TO BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".

**LIABILITY NOTE**

FAILURE TO CORRECTLY INSTALL SEDIMENT CONTROL FACILITIES OR FAILURE TO PREVENT SEDIMENT LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE OR FAILURE TO TAKE CORRECTIVE ACTIONS TO IMMEDIATELY RESOLVE FAILURES OF SEDIMENT CONTROL FACILITIES MAY RESULT IN ADMINISTRATIVE, CIVIL AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION AS DEFINED IN SECTION 602 OF THE CLEAN STREAMS LAW OF PENNSYLVANIA. THE CLEAN STREAMS LAW PROVIDES FOR UP TO \$10,000 IN CIVIL PENALTIES, UP TO \$10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO \$25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.

THIS PLAN IS NOT TO BE CONSTRUED AS AN ENVIRONMENTAL AUDIT/ASSESSMENT PLAN. THIS SURVEY MAKES NO WARRANTY OR GUARANTEE EITHER EXPRESSED OR IMPLIED AS TO THE ENVIRONMENTAL CONDITIONS OF THE PREMISES HERON DESCRIBED I.E., THE DETECTION OF SUBSURFACE CONTAMINANTS AS DEFINED IN D.E.P. TITLE 25-PA CODES.

**DEFINITION OF CLEAN FILL**

CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREGGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE, FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESS FOR RE-USE).

CLEAN FILL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE: FILL MATERIALS AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE STILL QUALIFIES AS CLEAN FILL PROVIDED THE TESTING REVEALS THAT THE FILL MATERIAL CONTAINS CONCENTRATIONS OF REGULATED SUBSTANCES THAT ARE BELOW THE RESIDENTIAL LIMITS IN TABLES FP-1A AND FP-1B FOUND IN THE DEPARTMENTS' POLICY "MANAGEMENT OF FILL".

ANY PERSON PLACING CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE FORM FP-001 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL. A COPY OF FORM FP-001 CAN BE FOUND AT THE END OF THESE INSTRUCTIONS.

**INVASIVE AND NOXIOUS PLANTS:**

- CLEAN BOOT TREADS, CONSTRUCTION EQUIPMENT, AND VEHICLES THOROUGHLY (ESPECIALLY THE UNDERCARRIAGE AND WHEELS) BEFORE THEY ARE BROUGHT ON SITE AND WHEN LEAVING THIS SITE. THIS WILL REMOVE INVASIVE PLANT SEEDS AND INVASIVE EARTHWORMS/COCCONS THAT MAY HAVE BEEN PICKED UP.
- DO NOT TRANSPORT UNSTERILIZED LEAVES, MULCH, COMPOST, OR SOIL TO THE SITE FROM ANOTHER LOCATION.
- REVEGETATE OR COVER DISTURBED SOIL AND SOIL STOCKPILES AS SOON AS POSSIBLE TO DISCOURAGE THE GERMINATION OF INVASIVE PLANTS. IMPLEMENT PROPER EROSION CONTROL PRACTICES TO STABILIZE SOIL AND REDUCE RUNOFF.
- DO NOT USE SEED MIXES THAT INCLUDE INVASIVE SPECIES. USE WEED-FREE STRAW OR HAY MIXES. MORE INFORMATION ABOUT INVASIVE SPECIES IN PENNSYLVANIA CAN BE FOUND AT THE FOLLOWING LINK: [HTTP://WWW.DCNR.PA.GOV/CONSERVATION/WILDPLANTS/INVASIVEPLANTS/PAGES/DEFAULT.ASPX](http://www.dcnr.pa.gov/conservation/wildplants/invasiveplants/pages/default.aspx)
- REMOVE INVASIVE SPECIES WITH AN INTEGRATED PEST MANAGEMENT APPROACH BEFORE CONSTRUCTION AND ON AN ON-GOING BASIS AFTER CONSTRUCTION.
- ALL SOILS KNOWN TO CONTAIN INVASIVE SPECIES ROOTSTOCK OR SEEDS SHOULD BE DISPOSED OF IN A MANNER TO PREVENT GERMINATION AND SPREAD OF THE INVASIVE SPECIES.

**PLAN NOTES**

**A. GENERAL EROSION AND SEDIMENT CONTROL GUIDELINES:**

- SPOIL MATERIALS ARE NOT TO BE DISPOSED OF IN FLOODPLAINS, FLOODWAYS, OR REGULATED WATERS OF THE COMMONWEALTH AND UNITED STATES INCLUDING RIVERS, LAKES AND WETLANDS.
- ALL DISTURBED SOILS SHOULD BE SEEDED AND/OR PLANTED WITH RIPARIAN VEGETATION IMMEDIATELY AFTER ACHIEVING FINAL GRADE.
- UPON PROJECT COMMENCEMENT, ALL EARTHWORK ASSOCIATED WITH THIS PROJECT, WITH THE EXCEPTION OF ADDITIONAL TREE AND SHRUB PLANTING, SHOULD BE COMPLETED IMMEDIATELY.
- A COPY OF THIS E&S CONTROL PLAN SHALL BE KEPT AVAILABLE FOR INSPECTION ON THE CONSTRUCTION SITE AT ALL TIMES THROUGHOUT THE TERMS OF THE PROJECT.
- THE INTENT OF THIS PLAN/NARRATIVE IS TO INDICATE GENERAL MEANS OF COMPLIANCE WITH THE REQUIREMENTS OF THE RULES AND REGULATIONS OF CHAPTER 102 OF THE PENNSYLVANIA CLEAN STREAMS LAW. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO IMPLEMENT THESE METHODS PLUS ADDITIONAL METHODS AS MAY BE NECESSARY BECAUSE OF THE CONDITIONS CREATED BY LOCALIZED SITE CONDITIONS, AND/OR CONSTRUCTION PROCEDURES IN ORDER TO ASSURE COMPLIANCE WITH APPLICABLE LAW. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL SEDIMENT AND EROSION CONTROL FACILITIES SO THAT THEY PERFORM AS REQUIRED BY LAW.

**B. GENERAL EROSION AND SEDIMENT CONTROL METHODS/PROCEDURES**

- IN ALL CASES, THE SMALLEST PRACTICAL AREA OF STABLE LAND SURFACE SHALL BE DISTURBED.
- ALL RELATED SEDIMENT AND EROSION CONTROL FACILITIES SHALL BE IN PLACE AND CAPABLE OF FUNCTIONING AS INTENDED PRIOR TO EARTHMOVING ACTIVITY.
- BACKFILLED EXCAVATIONS SHALL BE RESTORED TO ORIGINAL TYPE OF COVER AND GRADE AS PER SPECIFICATIONS. SEEDING SHALL BE DONE ACCORDING TO SCHEDULE FOR PERMANENT SEEDING. TEMPORARY STABILIZATION IS REQUIRED OF ANY AND ALL ERODIBLE/SOLUBLE AREAS AND MATERIALS IMMEDIATELY.
- CONSTRUCTION ACCESS INTO UNPAVED AREAS FROM PAVED AREAS OR STREETS (PUBLIC OR PRIVATE) SHALL BE VIA A ROCK CONSTRUCTION ENTRANCE.
- SEDIMENT SPILLED, DROPPED OR TRACKED ONTO PAVED SURFACES SHALL BE REMOVED IMMEDIATELY.
- ALL SLOPES 3:1 OR STEEPER WILL UTILIZE EROSION CONTROL MATTING.
- ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE CONSTRUCTION SEQUENCE. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE.
- AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES INCLUDING BUT NOT LIMITED TO: THE LANDOWNER AND ALL APPROPRIATE MUNICIPAL OFFICIALS, A REPRESENTATIVE FROM THE CHESTER COUNTY CONSERVATION DISTRICT FOR AN ON-SITE PRE-CONSTRUCTION MEETING.
- UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION BMP'S MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION BMP'S AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL SITE INSPECTIONS WILL BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THIS PURPOSE. THE COMPLIANCE ACTIONS AND THE DATE, TIME AND NAME OF THE PERSON CONDUCTING THE INSPECTION, THE INSPECTION LOGS WILL BE KEPT ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE DISTRICT UPON REQUEST.

ALL PREVENTIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND REMATTING, MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENTATION BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs OR MODIFICATIONS OF THOSE INSTALLED WILL BE NEEDED.

WHERE BMPs ARE FOUND TO FAIL TO ALLEVIATE EROSION OR SEDIMENT POLLUTION THE PERMITTEE OR CO-PERMITTEE SHALL INCLUDE THE FOLLOWING INFORMATION:  
 A. THE LOCATION AND SEVERITY OF THE BMPs FAILURE AND ANY POLLUTION EVENTS.  
 B. ALL STEPS TAKEN TO, REDUCE, ELIMINATE AND PREVENT THE REOCURENCE OF THE NON-COMPLIANCE.  
 C. THE TIME FRAME TO CORRECT THE NON-COMPLIANCE, INCLUDING THE EXACT DATES WHEN THE ACTIVITY WILL RETURN TO COMPLIANCE.

AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPs MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE BMPs MUST BE STABILIZED IMMEDIATELY.

- BEFORE INITIATING ANY REVISION TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE CHESTER COUNTY CONSERVATION DISTRICT. THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.

- ALL PUMPING OF SEDIMENT LADEN WATER OR POTENTIALLY SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER NON-DISTURBED AREAS.

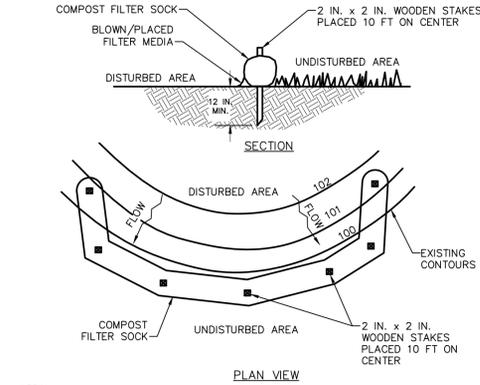
- THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF THE APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART 1, DEPARTMENT OF ENVIRONMENTAL PROTECTION, SUBPART C, PROTECTION OF NATURAL RESOURCES, ARTICLE III, WATER RESOURCES, CHAPTER 102, EROSION CONTROL.

- THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THE SITE.

- STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.

- UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.

- AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITIES. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINISHED GRADE OR WHICH WILL NOT BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.



**NOTES:**

SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.  
 COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 6 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALONG THE MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SOLE OF ITS TRIBUTARY AREA.

TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

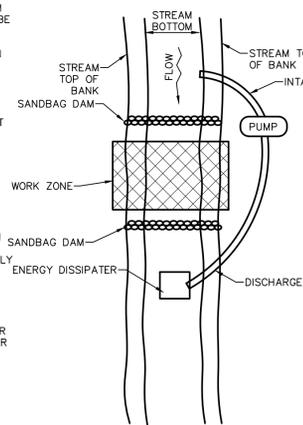
COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

**STANDARD CONSTRUCTION DETAIL #4-1 COMPOST FILTER SOCK**

NOT TO SCALE



**SEQUENCE FOR WORKING WITHIN THE SWALE CHANNEL:**

- INSTALL SANDBAG DAM AT THE UPSTREAM END OF THE WORKZONE.
- PUMP WATER AROUND THE PROPOSED WORKZONE. THE DISCHARGE SHALL BE LOCATED IN A STABLE AREA OF THE SWALE AND AN ENERGY DISSIPATER MUST BE INSTALLED.
- INSTALL THE DOWNSLOPE SANDBAG DAM AS NEEDED TO MINIMIZE BACK FLOW INTO THE WORKZONE.
- DEWATER THE WORKZONE AS NEEDED WITH A PUMPED WATER FILTER BAG PER DETAIL.
- COMPLETE WORK FROM THE TOP OF BANK WHEREVER POSSIBLE. WHERE IT IS NOT POSSIBLE TO WORK FROM THE TOP OF BANK, A TEMPORARY CROSSING OR CAUSEWAY MAY BE USED TO PROVIDE A WORKING PAD FOR ANY EQUIPMENT IN THE CHANNEL.
- ALL EXCAVATED CHANNEL MATERIALS SHALL BE PLACED OUTSIDE OF THE FLOODWAY/FLOODPLAIN OR ANY WETLAND AREAS AND IMMEDIATELY REMOVED TO A DISPOSAL SITE USING AN E&S PLAN.
- AT THE END OF EACH WORKING DAY, THE SWALE AND SURROUNDING AREAS WILL BE STABILIZED AND THE PUMPS WILL BE TURNED OFF. ANY DEFICIENCIES OBSERVED IN THE FUNCTION OF THE INSTALLED STRUCTURES SHALL BE REMEDIED.
- UPON COMPLETION, ALL SANBAG DAMS, CROSSINGS, CAUSEWAYS, AND CHANNEL ENTRANCES SHALL BE REMOVED/RESTORED TO DESIGN CONDITIONS.

**NOTES:**

GRUBBING SHALL NOT TAKE PLACE WITHIN 50 FEET OF TOP-OF-BANK UNTIL ALL MATERIALS REQUIRED TO COMPLETE WORK WITHIN THE SWALE ARE ON SITE AND READY FOR INSTALLATION.

BYPASS PUMP INTAKE SHALL BE MAINTAINED A SUFFICIENT DISTANCE FROM THE BOTTOM TO PREVENT PUMPING OF CHANNEL BOTTOM MATERIALS.

WATER ACCUMULATING WITHIN THE WORK AREA SHALL BE PUMPED TO A PUMPED WATER FILTER BAG OR SEDIMENT TRAP PRIOR TO DISCHARGING INTO ANY SURFACE WATER.

HAZARDOUS OR POLLUTANT MATERIAL STORAGE AREAS SHALL BE LOCATED AT LEAST 100 FEET BACK FROM THE SWALE.

ALL EXCESS EXCAVATED MATERIAL SHALL BE IMMEDIATELY REMOVED FROM THE SWALE AREA.

**WORKING WITHIN THE CHANNEL WITH PUMP BYPASS TYPICAL DETAIL**

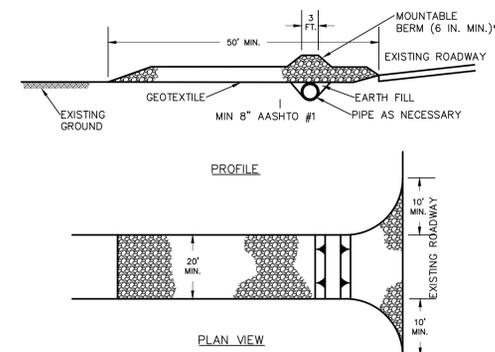
NOT TO SCALE

**STOP-CALL BEFORE YOU DIG!**  
 Pennsylvania One Call System, Inc.  
 1-800-242-1776



Brinkash and Associates, Inc. has notified the Pennsylvania One Call System, Inc.  
 DESIGN ONE CALL ONLY  
 Date: 4/28/2021  
 Serial #20211183847

USERS OF THIS PLAN ARE HEREBY CAUTIONED THAT THIS ONE CALL NOTICE IS FOR DESIGN PURPOSES ONLY AND THAT PRIOR TO ANY EXCAVATION OR EARTHMOVING ACTIVITIES, IT SHALL BE THE CONTRACTOR'S/DEVELOPER'S RESPONSIBILITY TO RECONTACT THE PENNA. ONE CALL SYSTEM FOR UNDERGROUND FACILITY LOCATION AND MARKING.



\* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

**NOTES:**

REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.

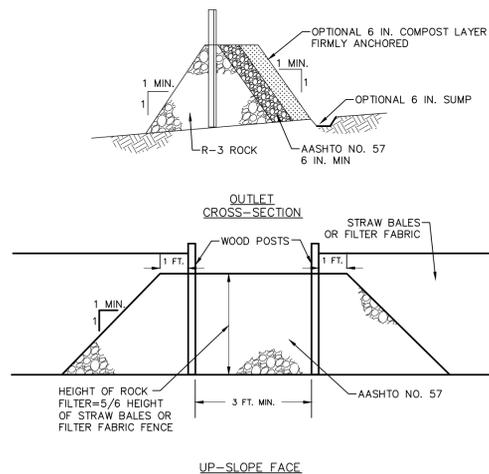
RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL STABILIZATION IS ALLEVIATED OR INSTALL WASH RACK, WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

**STANDARD CONSTRUCTION DETAIL #3-1 ROCK CONSTRUCTION ENTRANCE**

NOT TO SCALE



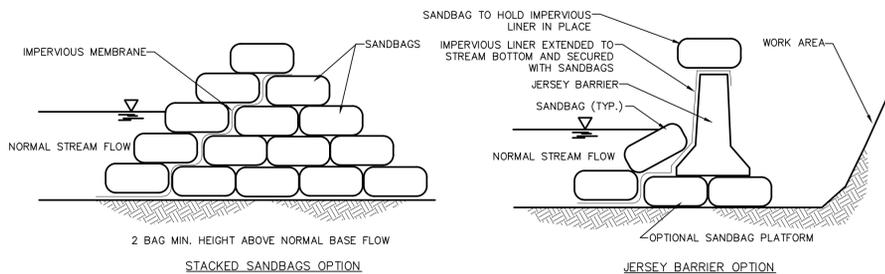
**NOTES:**

A ROCK FILTER OUTLET SHALL BE INSTALLED WHERE FAILURE OF A SILT FENCE OR STRAW BALE BARRIER HAS OCCURRED DUE TO CONCENTRATED FLOW. ANCHORED COMPOST LAYER SHALL BE USED ON UPSLOPE FACE IN HQ AND EV WATERSHEDS.

SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.

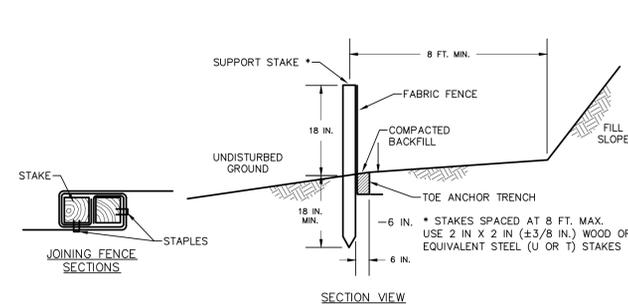
**STANDARD CONSTRUCTION DETAIL #4-6 ROCK FILTER OUTLET**

NOT TO SCALE



**STANDARD CONSTRUCTION DETAIL #3-15 SANDBAG DIVERSION DAM OR COFFERDAM**

NOT TO SCALE



**NOTES:**

FABRIC SHALL HAVE THE MINIMUM PROPERTIES AS SHOWN IN TABLE 4.3 OF THE PA DEP EROSION CONTROL MANUAL.

FABRIC WIDTH SHALL BE 30 IN. MINIMUM. STAKES SHALL BE HARDWOOD OR EQUIVALENT STEEL (U OR T) STAKES.

SILT FENCE SHALL BE PLACED AT LEVEL EXISTING GRADE. BOTH ENDS OF THE FENCE SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT.

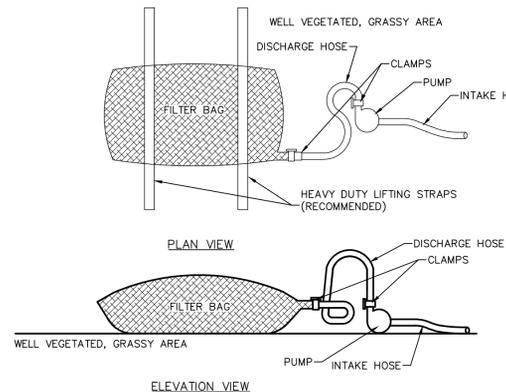
SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH HALF THE ABOVE GROUND HEIGHT OF THE FENCE.

ANY SECTION OF SILT FENCE WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET (STANDARD CONSTRUCTION DETAIL # 4-6).

FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN TRIBUTARY AREA IS PERMANENTLY STABILIZED.

**STANDARD CONSTRUCTION DETAIL #4-7 STANDARD SILT FENCE (18" HIGH)**

NOT TO SCALE



**NOTES:**

LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.

BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5% FOR SLOPES EXCEEDING 5% CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.

NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.

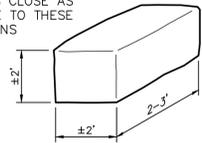
FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

**STANDARD CONSTRUCTION DETAIL #3-16 PUMPED WATER FILTER BAG**

NOT TO SCALE

REVISIONS	7/14/22	<p>VETERANS MEMORIAL STREAM RESTORATION EROSION AND SEDIMENT CONTROL DETAILS</p> <p>CLAUSER ENVIRONMENTAL, LLC</p> <p>19 SCHOOL HOUSE LANE, CAPE MAY COURT HOUSE, NJ 08210                  (570) 294-0669 www.clouserenvironmental.com</p> <p>DRAWN 1/21/22 ASC CHECK 1/21/22 MSC © 2022 CLAUSER ENVIRONMENTAL, LLC SHEET 5 OF 7</p>

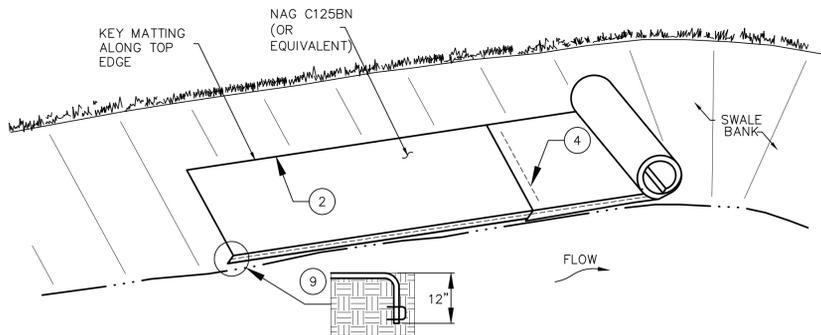
\* SELECT NATURAL ROCK AS CLOSE AS POSSIBLE TO THESE DIMENSIONS



- NOTES:
1. USE THIS SIZE ROCK (R-7; QUARRY SHOT ROCK) FOR IN-STREAM STRUCTURES UNLESS OTHERWISE NOTED.
  2. ROCK SHOULD BE HAND SELECTED BY CONTRACTOR.
  3. ROCK SHOULD BE AS BLOCKY AS POSSIBLE TO ALLOW FOR EASIER CONSTRUCTION OF IN-STREAM STRUCTURES.

**DESIRABLE ROCK SIZES FOR IN-STREAM STRUCTURES**

NOT TO SCALE

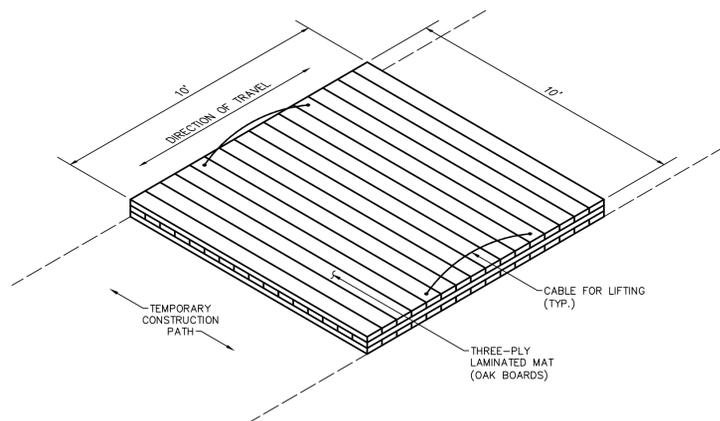


NOTE: THE USE OF EROSION CONTROL MATTING IS REQUIRED ALONG RESTORED BANKS AND ON ALL SLOPES GREATER THAN 3:1 OR WHERE SHOWN ON PLAN

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" DEEP x 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW HORIZONTALLY ACROSS SHORELINE SLOPE.
4. PLACE BLANKET END OVER END (SHINGLE STYLE) WITH A 6" OVERLAP. USE A DOUBLE ROW OF STAGGERED STAPLES 4" APART TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED IN 6" DEEP x 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. BLANKETS ON SIDE SLOPES MUST BE OVERLAPPED 4" OVER THE CENTER BLANKET AND STAPLED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A ROW OF STAPLES 4" APART OVER ENTIRE WIDTH OF CHANNEL. PLACE A SECOND ROW 4" BELOW THE FIRST ROW IN A STAGGERED PATTERN. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED IN A 6" DEEP x 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
8. THE EDGE OF ALL HORIZONTAL BLANKETS AT OR BELOW NORMAL WATER LEVEL MUST BE ANCHORED BY PLACING THE BLANKET IN A 6" DEEP x 6" WIDE ANCHOR TRENCH. ANCHOR BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 4" APART IN TRENCH. BACKFILL AND COMPACT TRENCH. AN ACCEPTABLE ALTERNATE IS TO ANCHOR THE EDGE WITH LIVE STAKES CUT FROM NATIVE VEGETATION AT 3 FOOT INTERVALS.
9. THE EDGE OF ALL HORIZONTAL BLANKETS AT OR BELOW NORMAL WATER LEVEL MUST BE ANCHORED BY PLACING THE BLANKET IN A 6" DEEP x 6" WIDE ANCHOR TRENCH. ANCHOR BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 4" APART IN TRENCH. BACKFILL AND COMPACT TRENCH. AN ACCEPTABLE ALTERNATE IS TO ANCHOR THE EDGE WITH LIVE STAKES CUT FROM NATIVE VEGETATION AT 3 FOOT INTERVALS.

**EROSION CONTROL MATTING DETAIL**

NOT TO SCALE

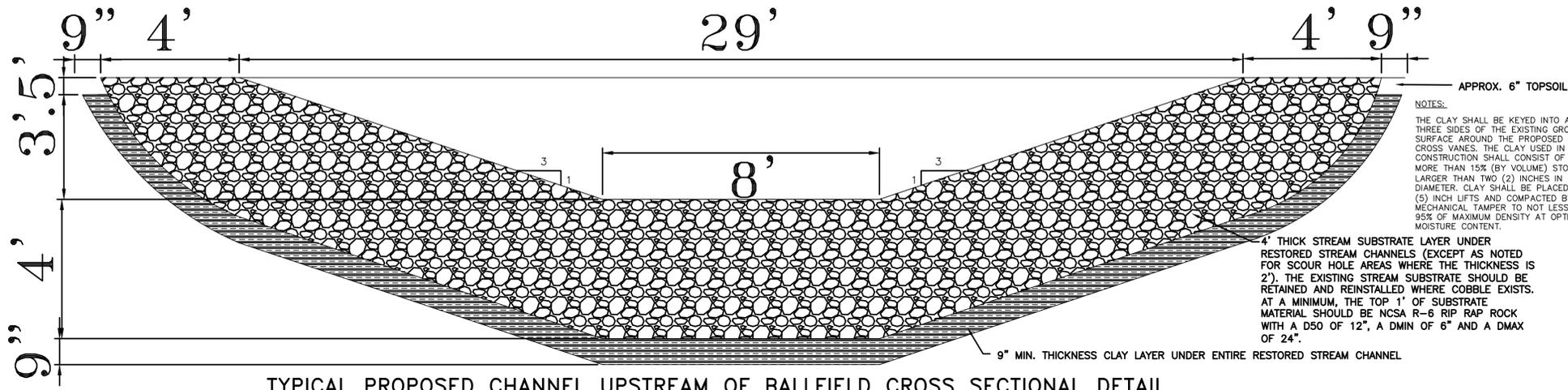


**ISOMETRIC VIEW**

- PROTECTIVE MAT NOTE:
1. USE PROTECTIVE MATS OVER ANY WET AREAS, DRIVEWAYS WHEN METAL TRACKED VEHICLES ARE CROSSING, UTILITY LINES, OR DRAIN PIPES.

**PROTECTIVE MAT DETAIL**

NOT TO SCALE



**TYPICAL PROPOSED CHANNEL UPSTREAM OF BALLFIELD CROSS SECTIONAL DETAIL**

NOT TO SCALE

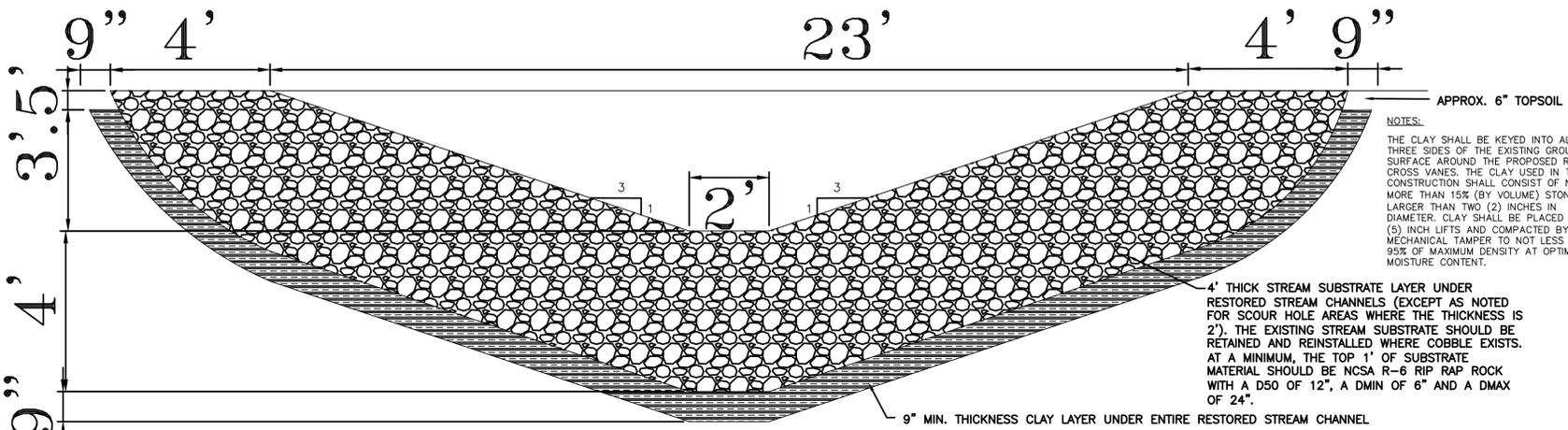
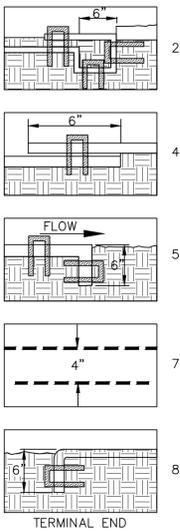
NOTES:

THE CLAY SHALL BE KEYED INTO ALL THREE SIDES OF THE EXISTING GROUND SURFACE AROUND THE PROPOSED ROCK CROSS VANS. THE CLAY USED IN THE CONSTRUCTION SHALL CONSIST OF NO MORE THAN 15% (BY VOLUME) STONE NO LARGER THAN TWO (2) INCHES IN DIAMETER. CLAY SHALL BE PLACED IN FIVE (5) INCH LIFTS AND COMPACTED BY A MECHANICAL TAMPER TO NOT LESS THAN 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT.

4" THICK STREAM SUBSTRATE LAYER UNDER RESTORED STREAM CHANNELS (EXCEPT AS NOTED FOR SCOUR HOLE AREAS WHERE THE THICKNESS IS 2"). THE EXISTING STREAM SUBSTRATE SHOULD BE RETAINED AND REINSTALLED WHERE COBBLE EXISTS. AT A MINIMUM, THE TOP 1" OF SUBSTRATE MATERIAL SHOULD BE NCSA R-6 RIP RAP ROCK WITH A D50 OF 12", A DMIN OF 6" AND A DMAX OF 24".

9" MIN. THICKNESS CLAY LAYER UNDER ENTIRE RESTORED STREAM CHANNEL

**STAPLING SPECIFICATIONS:**



**TYPICAL PROPOSED CHANNEL ADJACENT BALLFIELD CROSS SECTIONAL DETAIL**

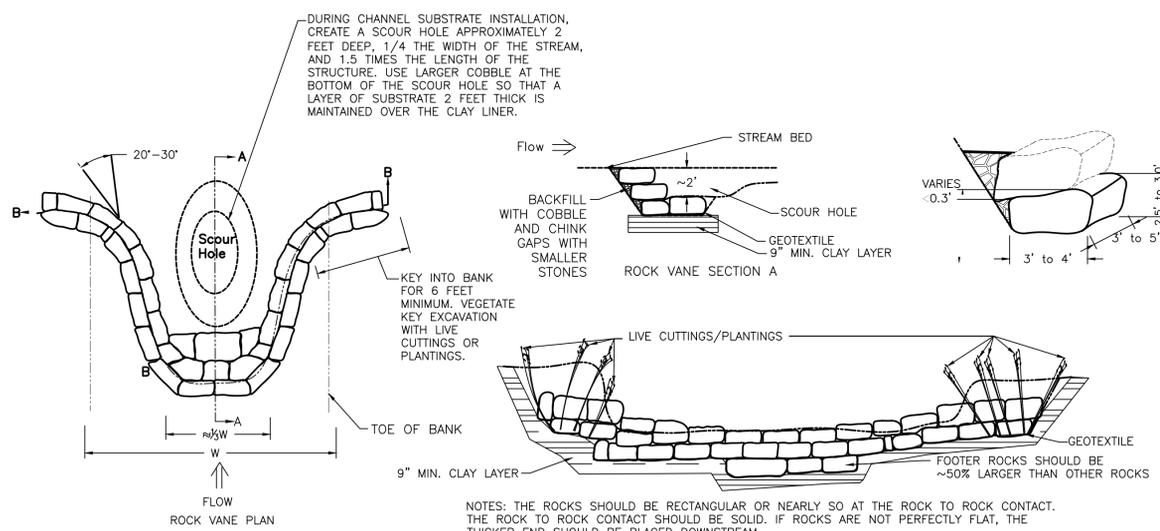
NOT TO SCALE

NOTES:

THE CLAY SHALL BE KEYED INTO ALL THREE SIDES OF THE EXISTING GROUND SURFACE AROUND THE PROPOSED ROCK CROSS VANS. THE CLAY USED IN THE CONSTRUCTION SHALL CONSIST OF NO MORE THAN 15% (BY VOLUME) STONE NO LARGER THAN TWO (2) INCHES IN DIAMETER. CLAY SHALL BE PLACED IN FIVE (5) INCH LIFTS AND COMPACTED BY A MECHANICAL TAMPER TO NOT LESS THAN 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT.

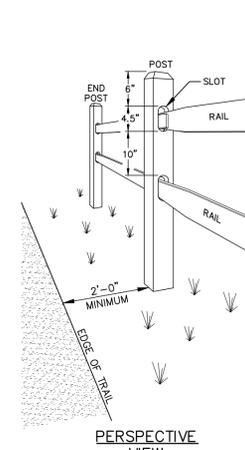
4" THICK STREAM SUBSTRATE LAYER UNDER RESTORED STREAM CHANNELS (EXCEPT AS NOTED FOR SCOUR HOLE AREAS WHERE THE THICKNESS IS 2"). THE EXISTING STREAM SUBSTRATE SHOULD BE RETAINED AND REINSTALLED WHERE COBBLE EXISTS. AT A MINIMUM, THE TOP 1" OF SUBSTRATE MATERIAL SHOULD BE NCSA R-6 RIP RAP ROCK WITH A D50 OF 12", A DMIN OF 6" AND A DMAX OF 24".

9" MIN. THICKNESS CLAY LAYER UNDER ENTIRE RESTORED STREAM CHANNEL

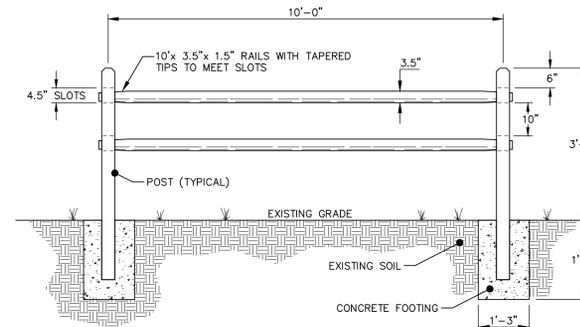


**ROCK CROSS VANE DETAIL**

NOT TO SCALE



- NOTES:
1. ALL WOOD FOR SPLIT RAIL FENCE TO BE PRESSURE TREATED.
  2. END POST SHALL BE TERMINAL POST.
  3. MINIMUM 2 FEET CLEAR BETWEEN FENCE & TRAIL EDGE.



**FRONT VIEW**

**STANDARD SPLIT-RAIL FENCE DETAIL**

NOT TO SCALE

REVISIONS	DATE
7/14/22	

**VETERANS MEMORIAL STREAM RESTORATION STABILIZATION DETAILS**

CLAUSER ENVIRONMENTAL, LLC  
 19 SCHOOL HOUSE LANE, CAPE MAY COURT HOUSE, NJ 08210  
 (570) 294-0669 www.clouserenvironmental.com  
 DRAWN 1/21/22 CHECK 1/21/22  
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**Native Riparian Buffer Seed Mix (Disturbed areas along the stream channel)**

Shrub and Tree Plantings identified below are to be planted in the area of this mix. Plant an even mix of tree and shrub species 20' O.C. in a triangular planting pattern. Tree and shrub plantings may occur September-November or March-May only.

Available from: Ernst Conservation Seeds, Inc. (ERNMX-178)

% PLS	Latin Name	Common Name	Indicator	Cultivar/ Ecotype
10	<i>Carex vulpinoidea</i>	fox sedge	OBL	PA
8	<i>Panicum clandestinum</i>	deertongue	FAC+	'Tioga'
8	<i>Schizachyrium scoparium</i>	little bluestem	FACU	PA
6	<i>Chamaecrista fasciculata</i>	partridge pea	FACU	PA
6	<i>Elymus riparius</i>	riverbank wild rye	FACW	PA
6	<i>Elymus virginicus</i>	Virginia wild rye	FACW-	PA
6	<i>Verbena hastata</i>	blue vervain	FACW+	PA
5	<i>Andropogon gerardii</i>	big bluestem	FAC-	'Niagara'
5	<i>Helianthus helianthoides</i>	ox-eye sunflower	NI	PA
5	<i>Viburnum dentatum</i>	arrowwood viburnum	FAC	PA
4	<i>Cornus amomum</i>	silky dogwood	FACW	PA
4	<i>Panicum virgatum</i>	switchgrass	FAC	'Shelter'
4	<i>Sorghastrum nutans</i>	indiangrass	UPL	PA
2	<i>Asclepias syriaca</i>	common milkweed	FACU-	PA
2	<i>Desmodium canadense</i>	showy tick trefoil	FAC	PA
2	<i>Eupatorium fistulosum</i>	Joe-pye-weed	FACW	PA
2	<i>Eupatorium maculatum</i>	spotted Joe-pye-weed	FACW	PA
2	<i>Eupatorium perfoliatum</i>	boneset	FACW+	PA
2	<i>Juncus effusus</i>	soft rush	FACW+	PA
2	<i>Monarda fistulosa</i>	wild bergamot	UPL	PA
2	<i>Penstemon digitalis</i>	tall white beardtongue	FAC	PA
2	<i>Rhus typhina</i>	staghorn sumac	NI	PA
2	<i>Rudbeckia hirta</i>	black eyed susan	FACU-	Commercial
1	<i>Baptisia australis</i>	blue false indigo	NI	PA
1	<i>Euthamia graminifolia</i>	grass leaf goldenrod	FAC	PA
1	<i>Vernonia gigantea</i>	giant ironweed	FAC	PA
100	Total			

Seed this mix at 15 bulk lbs/acre.

Seed this mix in the first 50' of uplands along all new stream channels and wetlands. Establishes in 2-3 years and develops into a biodiverse cover.

**Shrub Plantings:**

Shrubs (2.5' tall minimum size) will not receive a tree tube or vinyl tree guard.

<i>Ilex verticillata</i>	common winterberry	FACW+
<i>Spiraea alba</i>	meadow-sweet	FACW+
<i>Alnus rugosa</i>	speckled alder	FACW+
<i>Cornus stolonifera</i>	red-osier dogwood	FACW+
<i>Cornus amomum</i>	silky dogwood	FACW
<i>Vaccinium corymbosum</i>	highbush blueberry	FACW-
<i>Lindera benzoin</i>	spicebush	FACW-
<i>Amelanchier canadensis</i>	oblong service-berry	FAC
<i>Viburnum dentatum</i>	southern arrow-wood	FAC
<i>Hamamelis virginiana</i>	American witch-hazel	FAC-

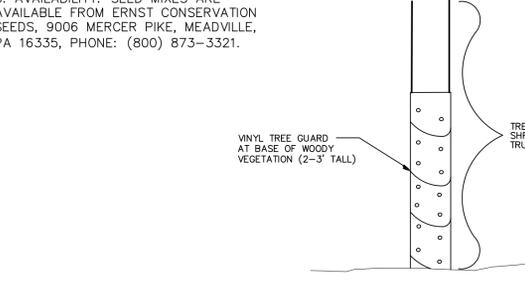
**Tree Plantings:**

Trees (4' tall minimum size) will receive a tree tube or vinyl tree guard.

<i>Quercus bicolor</i>	swamp white oak	FACW+
<i>Salix nigra</i>	black willow	FACW+
<i>Quercus palustris</i>	pin oak	FACW
<i>Betula nigra</i>	river birch	FACW
<i>Betula alleghaniensis</i>	yellow birch	FAC
<i>Nyssa sylvatica</i>	black gum	FAC
<i>Acer rubrum</i>	red maple	FAC
<i>Betula populifolia</i>	gray birch	FAC
<i>Crataegus phaenopyrum</i>	Washington hawthorn	FAC
<i>Pinus strobus</i>	eastern white pine	FACU

**SEEDING SPECIFICATIONS**

A. MULCH APPLICATION: HAY OR STRAW AT 3 TONS PER ACRE OR 140 LBS PER 1,000 SQ.FT.  
 B. AVAILABILITY: SEED MIXES ARE AVAILABLE FROM ERNST CONSERVATION SEEDS, 9006 MERCER PIKE, MEADVILLE, PA 16335, PHONE: (800) 873-3321.



NOTES: TO PROTECT THE TREES FROM RODENT DAMAGE AND DEER RUBBING THE DECIDUOUS TREES AND SHRUBS THAT ARE PLANTED SHOULD HAVE THEIR TRUNKS PROTECTED WITH A TREE GUARD OF VINYL PLASTIC TREE WRAP AT THE BASE OF THE TREE OR SHRUB GOING UP 2 TO 3- FEET.

**VINYL TREE GUARD DETAIL**  
NOT TO SCALE

**Native FACW Meadow Seed Mix (Plant this in the proposed bioentention area)**

Available from: Ernst Conservation Seeds, Inc. (ERNMX-122)

% PLS	Latin Name	Common Name	Indicator	Cultivar/ Ecotype
20.8	<i>Carex vulpinoidea</i>	fox sedge	OBL	PA
16.0	<i>Elymus virginicus</i>	Virginia wild rye	FACW-	NY
11.0	<i>Carex lupulina</i>	hop sedge	OBL	MD or PA
11.0	<i>Carex scoparia</i>	blunt broom sedge	FACW	PA
8.5	<i>Carex lurida</i>	lurid sedge	OBL	PA
5.2	<i>Cinna arundinacea</i>	wood reedgrass	FACW+	PA
4.0	<i>Verbena hastata</i>	blue vervain	FACW+	PA
3.0	<i>Juncus effusus</i>	soft rush	FACW+	PA
2.0	<i>Asclepias incarnata</i>	swamp milkweed	OBL	PA
2.0	<i>Helianthus helianthoides</i>	ox-eye sunflower	NI	PA
1.0	<i>Bidens cernua</i>	nodding bur marigold	OBL	PA
1.0	<i>Onoclea sensibilis</i>	sensitive fern	FACW	PA
0.8	<i>Eupatorium perfoliatum</i>	boneset	FACW+	PA
0.8	<i>Helianthus autumnale</i>	common sneezeweed	FACW	PA
0.8	<i>Iris versicolor</i>	blue flag	OBL	PA
0.7	<i>Zizia aurea</i>	golden alexanders	FAC	PA
0.5	<i>Aster novae-angliae</i>	New England aster	FACW	PA
0.3	<i>Aster prenanthoides</i>	zig zag aster	FAC	PA
0.3	<i>Eupatorium fistulosum</i>	Joe-pye-weed	FACW	PA
0.3	<i>Lobelia siphilitica</i>	blue lobelia	FACW+	PA
0.3	<i>Scirpus cyperinus</i>	woolgrass	FACW+	PA
0.2	<i>Aster puncteus</i>	purple stemmed aster	OBL	PA
0.2	<i>Aster umbellatus</i>	flat topped white aster	FACW	PA
0.2	<i>Penthorum sedoides</i>	ditch stonecrop	OBL	PA
0.2	<i>Solidago rugosa</i>	wrinkleleaf goldenrod	FAC	PA
0.1	<i>Mimulus ringens</i>	monkewflower	OBL	PA
100	Total			

Seed this mix at 20 bulk lbs/acre with a cover crop.  
 For a cover crop use one of the following: grain rye (1 Sep to 30 Apr; 30 lbs/ acre), Japanese millet (1 May to 31 Aug; 10 lbs/acre), or barnyard grass (1 May to 31 Aug; 10 lbs/acre).

**Lawn Area Seed Mix**

Proposed lawn areas  
 Available from: Ernst Conservation Seeds, Inc. (ERNMX-113)

% PLS	Latin Name	Common Name	Indicator	Cultivar/ Ecotype
25	<i>Festuca rubra</i>	creeping red fescue	FACU	'Pennlawn'
25	<i>Lolium multiflorum</i>	annual ryegrass	UPL	Commercial
25	<i>Lolium perenne</i>	perennial ryegrass	FACU	'Nobility'
25	<i>Lolium perenne</i>	perennial ryegrass	FACU	'Amazing'
100	Total			

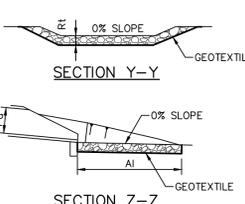
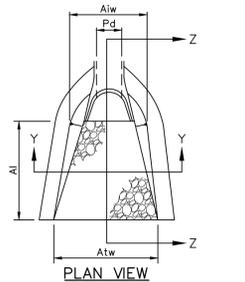
Seed this mix at 75-150 bulk lbs/acre.

**Right-of-Way Native Woods Seed Mix**

Disturbed areas not scheduled for another seed mix.  
 Available from: Ernst Conservation Seeds, Inc. (ERNMX-132-1)

% PLS	Latin Name	Common Name	Indicator	Cultivar/ Ecotype
20	<i>Panicum clandestinum</i>	deertongue	FAC+	'Tioga'
20	<i>Lolium multiflorum</i>	Annual Ryegrass	FACU	Commercial
15	<i>Elymus virginicus</i>	Virginia wild rye	FACW-	PA
15	<i>Panicum virgatum</i>	switchgrass	FAC	'Shelter'
10	<i>Festuca rubra</i>	creeping red fescue	FACU	Commercial
5	<i>Agrostis perennans</i>	Autumn bentgrass	FACU	NY
3	<i>Carex vulpinoidea</i>	fox sedge	OBL	PA
3	<i>Chamaecrista fasciculata</i>	partridge pea	FACU	PA
100	Total			

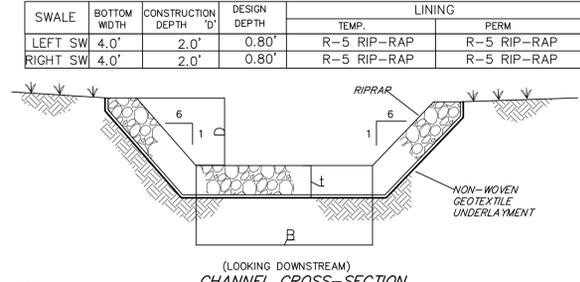
Seed this mix at 30 bulk lbs/acre.



OUTLET NO.	PIPE DIA Pd (IN)	RIPRAP SIZE	THICK. Rt (IN)	LENGTH AI (FT)	INITIAL WIDTH Aiw (FT)	TERMINAL WIDTH Atw (FT)
SWP-9	18	R-5	27	10	5	15

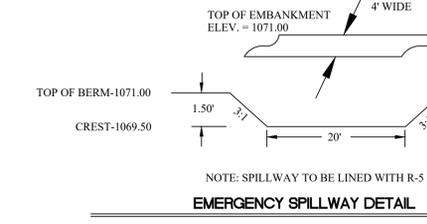
NOTES: ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS. ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

**STANDARD CONSTRUCTION DETAIL #9-1**  
RIPRAP APRON AT PIPE OUTLET WITH FLARED END SECTION OR ENDWALL  
NOT TO SCALE

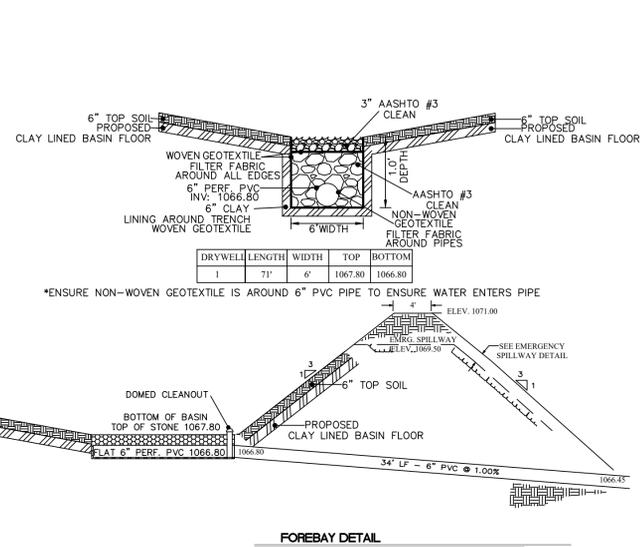


NOTES: FILTER STONE UNDERLAYMENT FOR BED SLOPES  $\geq 0.10$  FT/FT (10 %) SHALL BE USED. CHANNEL DIMENSIONS ARE FOR THE COMPLETED CHANNEL AFTER ROCK PLACEMENT. CHANNEL MUST BE OVER-EXCAVATED A SUFFICIENT AMOUNT TO ALLOW FOR THE VOLUME OF ROCK PLACED WITHIN THE CHANNEL WHILE PROVIDING THE SPECIFIED FINISHED DIMENSIONS. CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25%. CHANNEL SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE AT ANY LOCATION. SEDIMENT DEPOSITS DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY. THE MINIMUM ROCK THICKNESS (t) SHALL BE 1.5 TIMES THE MAX ROCK SIZE.

**STANDARD CONSTRUCTION DETAIL #6-3**  
RIPRAP CHANNEL

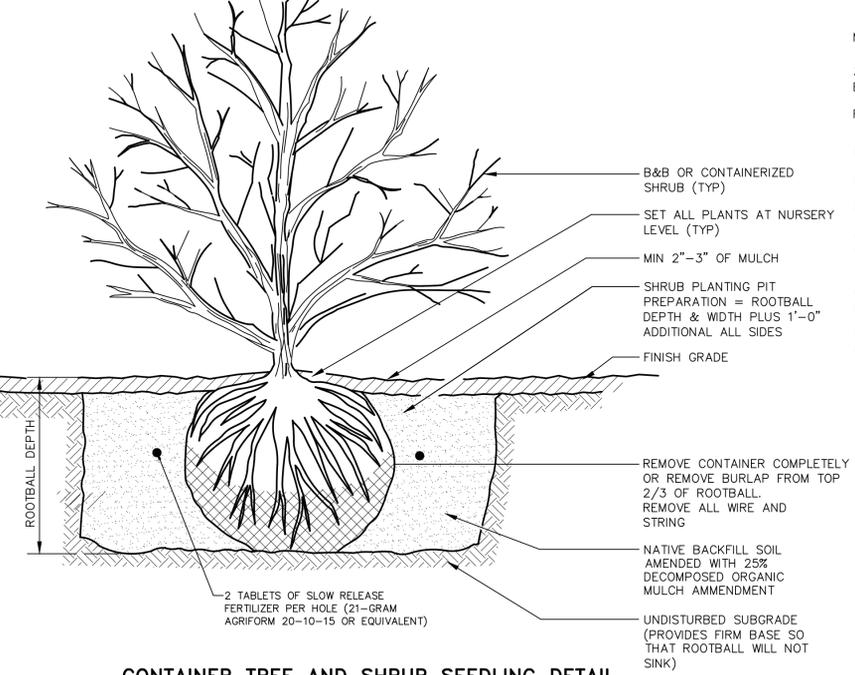


**EMERGENCY SPILLWAY DETAIL**  
NOTES: SPILLWAY TO BE LINED WITH R-5  
NTS

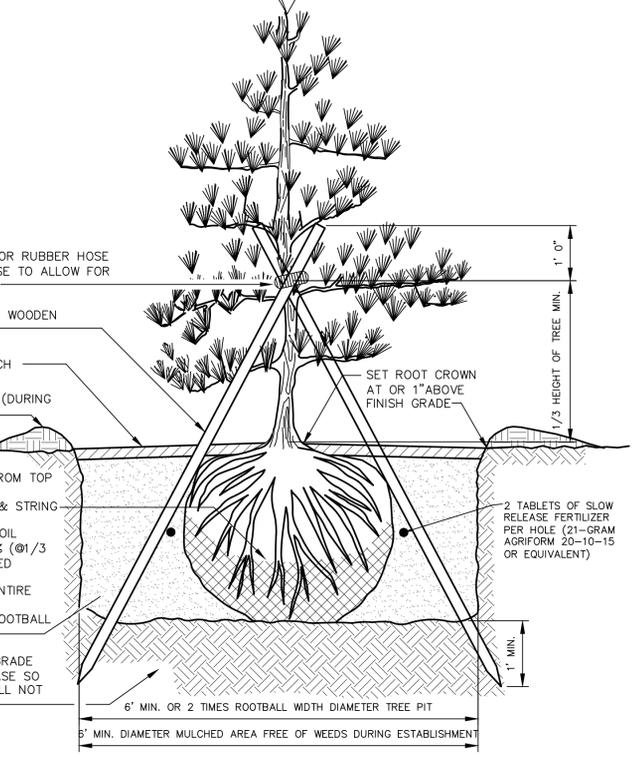


**FOREBAY DETAIL**  
NTS

MAINTENANCE/ INSPECTION  
 1. INSPECT FOREBAY AT LEAST FOUR TIMES A YEAR, AS WELL AS AFTER EVERY STORM EXCEEDING 1 INCH.  
 2. DISPOSE OF SEDIMENT, DEBRIS/TRASH, AND ANY OTHER WASTE MATERIAL REMOVED FROM THE FOREBAY AT SUITABLE DISPOSAL/RECYCLING SITES AND IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL WASTE REGULATIONS.



**CONTAINER TREE AND SHRUB SEEDLING DETAIL**  
NOT TO SCALE



**EVERGREEN TREE PLANTING DETAIL**  
NOT TO SCALE

REVISIONS	DATE	DESCRIPTION

**VETERANS MEMORIAL STREAM RESTORATION DETAILS**

CLAUSER ENVIRONMENTAL, LLC  
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DRAWN: ASC CHECK: KSC  
 1/21/22 1/21/22  
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