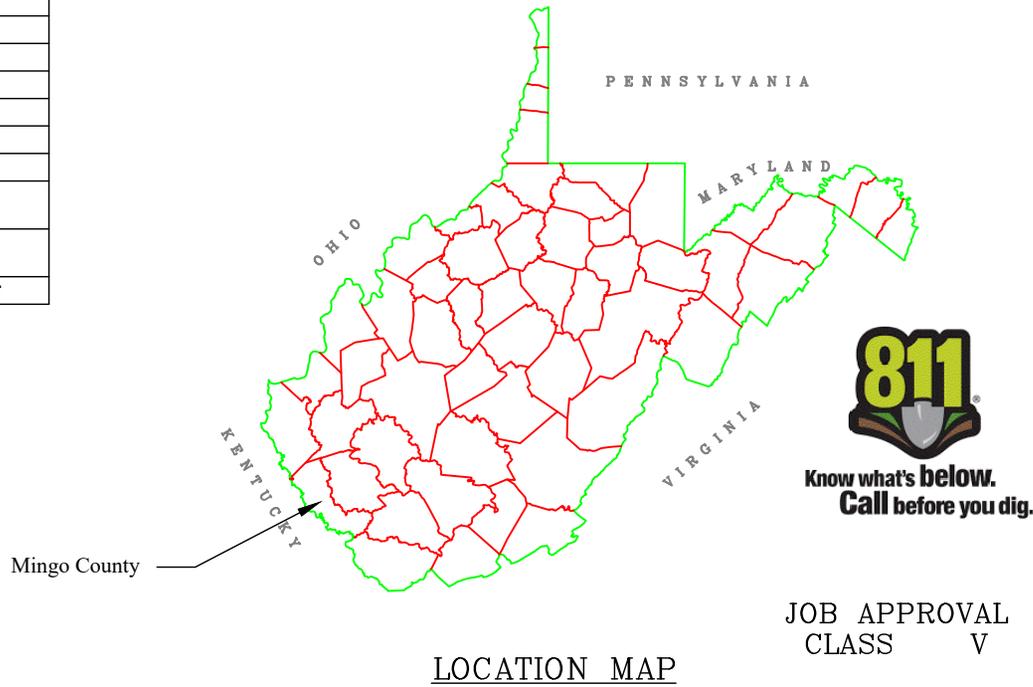


DRAWINGS PREPARED UNDER THE AUTHORITY OF THE  
**EMERGENCY WATERSHED PROTECTION ACT**  
 by the Natural Resources Conservation  
 Service of the United States Department  
 of Agriculture  
**Gilbert Creek EWP**  
**Cline, Blankenship, Lester, and Thompson Sites**  
**Mingo County, West Virginia**

| Index        |   |
|--------------|---|
| Sheet Number | Sheet Title                                 |
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| 2            | Quantities and Construction Notes           |
| 3            | Location Map                                |
| 4            | Alice Blankenship Site 2                    |
| 5            | James Lester Site 3                         |
| 6            | Timothy Thompson Site 4                     |
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| 8            | 7.5' Gabion with Vertical Front Face        |
| 9            | Counterfort                                 |
| 10           | Gabion Details                              |
| 11           | Foundation Preparation on Shallow Bedrock   |
| 12           | Gabion Typical Section with Rock Foundation |
| 13           | Typical Channel Configuration Gabions       |



**UTILITY NOTIFICATION**

"The Natural Resources Conservation Service makes no representation as to the existence or non-existence of any utilities at the construction site. Shown on these construction drawings are those utilities which have been identified. It is the responsibility of the contractor(s) to assure themselves that no hazard exists or damage will occur to utilities."

|   |               |                                 |               |
|---|---------------|---------------------------------|---------------|
| File Name<br><small>Review Combined.dwg</small> | Date<br>01/22 | Drawing Name<br>3/8/23 11:32 AM | Sheet 1 of 13 |
| Designed LS                                     | Date<br>01/22 | Drawing Name                    | Sheet 1 of 13 |
| Drawn LS  | Date<br>01/22 | Drawing Name                    | Sheet 1 of 13 |
| Checked JW                                      | Date<br>01/22 | Drawing Name                    | Sheet 1 of 13 |
| Approved PM                                     | Date<br>01/22 | Drawing Name                    | Sheet 1 of 13 |

**2021 EWP STREAMBANK STABILIZATION**  
**MINGO County, West Virginia**  
**BLANKENSHIP, LESTER, AND THOMPSON**  
**SITES**  
**COVER SHEET**

United States  
Department of  
Agriculture

**811**  
Know what's below.  
Call before you dig.

**JOB APPROVAL**  
CLASS V

Natural Resources  
Conservation Service

## CONSTRUCTION NOTES

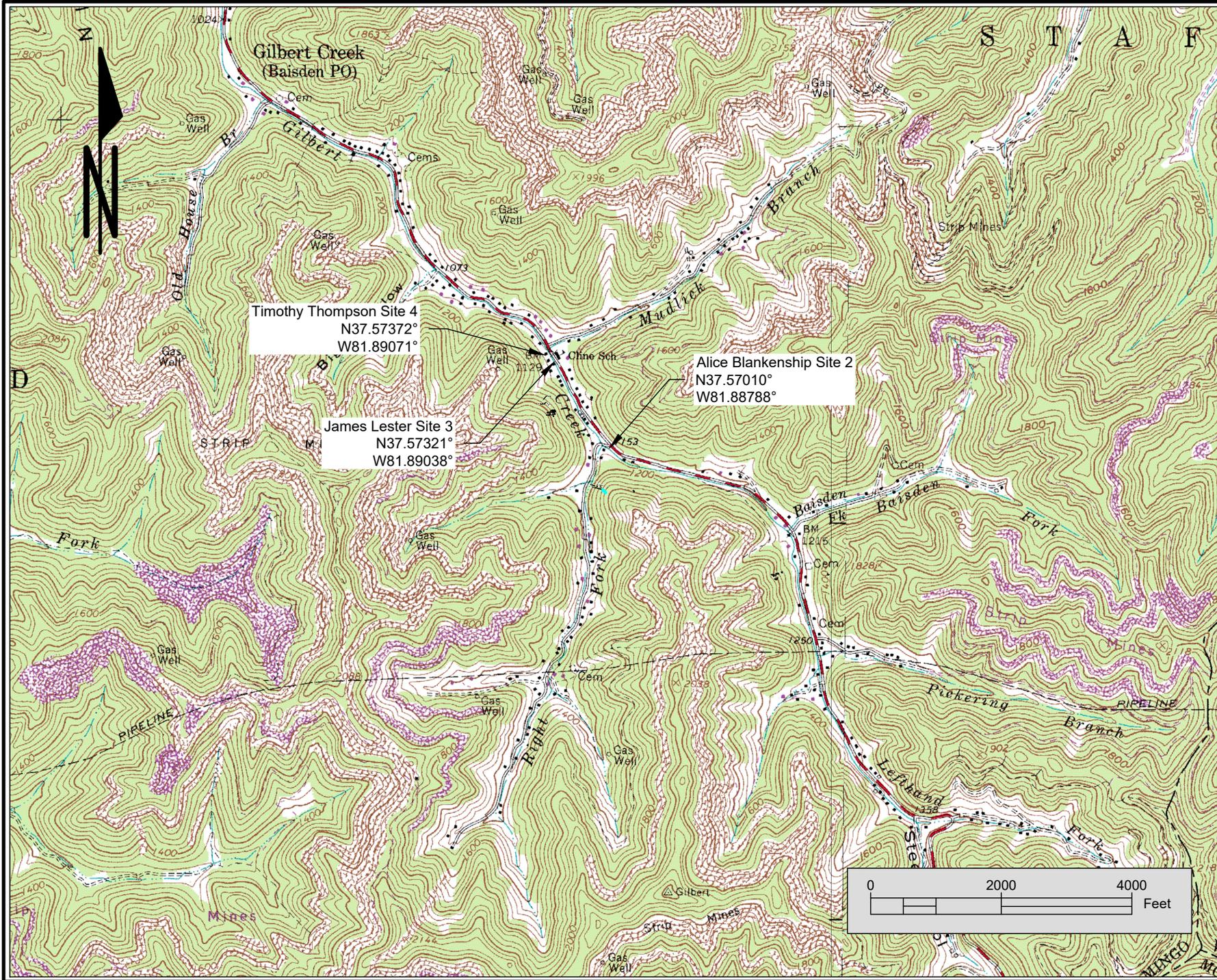
1. Call 811 to locate utilities prior to mobilization and excavation.
2. Access roads shall be restored to pre-construction condition or better.
3. All fences removed and/or damaged as a result of the contractor's operations shall be restored to a condition equal to or better than they existed before the start of work.
4. Soil compacted as a result of construction operations shall be loosened for a depth of 6-inches below the compacted soil layer and re-graded to blend with existing ground.
5. Provide sub-channel as shown on Typical Channel Bottom Configuration drawings.
6. While working in the stream all efforts will be made to reduce downstream impacts including keeping the excavator tracks elevated above flowing water. A diversion berm shall be established at the top of each stream access point to minimize surface water from flowing toward the stream.
7. Required pollution control measures shall be installed as needed in accordance with Pollution Control Specification 5.
8. Site access shall be off the main road and shall be in accordance with all West Virginia Department of Highways rules and guidelines. The contractor shall provide signage and flagmen for traffic control as required.
9. Excess material from the excavation & obstruction removal shall be wasted off-site in accordance with all local, state, & federal regulations and as approved by the NRCS representative in the field. Floodplains will not be allowed as waste areas under any circumstances. Waste areas shall be seeded according to construction specification 6, Seeding, Sprigging and Mulching.
10. The contractor shall provide approved fill as required to complete the work.
11. Trash, tires, & woody debris within the work limits shall be disposed of off-site in an approved landfill. The contractor shall be responsible for the landfill tipping fees.
12. All pipes encountered in the embankment shall be extended through the riprap and/or gabions with the same pipe material or better to the face of the slope or baskets.
13. Pipes 12" diameter and larger shall be encased in a minimum of 6" of concrete when passing through rock riprap. Concrete shall have a minimum compressive strength of 2500 psi.
14. The contractor shall maintain the cleanliness of public and private roads impacted by hauling operations during the duration of the work.
15. Starting location of baskets will be marked in the field.
16. Reshape stream banks at the upstream and downstream ends of gabion walls to transition to baskets.

Table of Estimated Quantities

| Site                     | Geotextile<br>SY* | Riprap<br>Tons | Gabions<br>CY | Earth Fill<br>CY | Foundation Prep<br>Shallow Bedrock<br>SF | Foundation Prep<br>Rock Riprap<br>Tns | Foundation Prep<br>Geotextile<br>SY |
|--------------------------|-------------------|----------------|---------------|------------------|--|---------------------------------------|-------------------------------------|
| <i>Alice Blankenship</i> | 162               | -              | 153           | <i>As Needed</i> | 630                                      | 210                                   | 259                                 |
| <i>James Lester</i>      | 108               | -              | 101           | <i>As Needed</i> | 396                                      | 132                                   | 168                                 |
| <i>Timothy Thompson</i>  | 133               | -              | 125           | <i>As Needed</i> | 504                                      | 168                                   | 210                                 |
| <i>Total</i>             | 403               | -              | 379           | <i>As Needed</i> | 1530                                     | 510                                   | 637                                 |

\* The area required for overlaps is not included in the quantity for geotextile.

|   |  |
|---|--|
| <p>United States<br/>Department of<br/>Agriculture</p>  <p>Natural Resources<br/>Conservation Service</p>                                | <p>2021 EWP STREAMBANK STABILIZATION<br/>MINGO County, West Virginia<br/>BLANKENSHIP, LESTER, AND THOMPSON<br/>SITES<br/>QUANTITIES AND CONSTRUCTION NOTES</p> |
| <p>File Name<br/><i>Review Combined.dwg</i></p> <p>Drawing Name</p> <p>Date<br/>01/22</p> <p>Designed<br/>LS</p> <p>Drawn<br/>LS</p> <p>Checked<br/>JW</p> <p>Approved<br/>PM</p> <p>3/8/23 11:32 AM</p> <p>Sheet 2 of 13</p> | <p>Date<br/>01/22</p> <p>01/22</p> <p>01/22</p> <p>01/22</p>   |



|  |   |                |                |
|--|---|----------------|----------------|
| <br>United States Department of Agriculture<br>Natural Resources Conservation Service | <b>2021 EWP STREAMBANK STABILIZATION</b><br>MINGO County, West Virginia<br><b>BLANKENSHIP, LESTER, AND THOMPSON SITES</b><br>LOCATION MAP |                |                |
|  | File Name<br><i>Review-Combined.dwg</i>   | Date<br>01/22  | Designed<br>LS |
|  | Drawing Name  | Drawn<br>LS    | Checked<br>JW  |
|  | 3/8/23 11:32 AM   | Approved<br>PM | Sheet 3 of 13  |



Gilbert Creek Road  
Route 13

Install Counterfort at Upstream  
and Downstream Ends  
Location to be Determined in the  
Field by Engineer

Extend All Pipes Through Wall

Do Not Disturb Existing Structure(s)  
See 7.5' Gabion Typical Section for Excavation Limits

Asphalt to be Removed  
Shall be Saw Cut

105' Gabion Wall 7.5'  
High

Access

Remove Concrete Slabs from Creek  
See Note 11 on Sheet 2

16' Stream Width Min.

Counterfort

Gilbert Creek

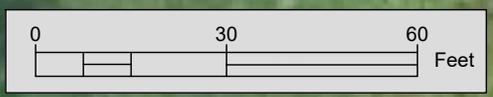
**LEGEND**

- Construction Limits    - - - - -
- Toe of Stream Bank    -○-○-○-
- Water Line                -W-W-W-
- Sewer Line                -S-S-S-
- Gas Line                    -G-G-G-
- Electric Line                -E-E-E-

*\*Features in this legend may or may not be present in the drawing.*

**Site 2 Plan View**

N37.57010°  
W81.88788°



|   |               |
|---|---------------|
| File Name<br><i>Review Combined.dwg</i> | Date<br>01/22 |
| Drawing Name                            | 01/22         |
| Checked<br>JW                           | 01/22         |
| Approved<br>PM                          | 01/22         |

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| Designed<br>LS | Date<br>01/22 |
| Drawn<br>LS    | 01/22         |
| Checked<br>JW  | 01/22         |
| Approved<br>PM | 01/22         |

2021 EWP STREAMBANK STABILIZATION  
MINGO County, West Virginia  
BLANKENSHIP, LESTER, AND THOMPSON  
SITES  
ALICE BLANKENSHIP SITE 2



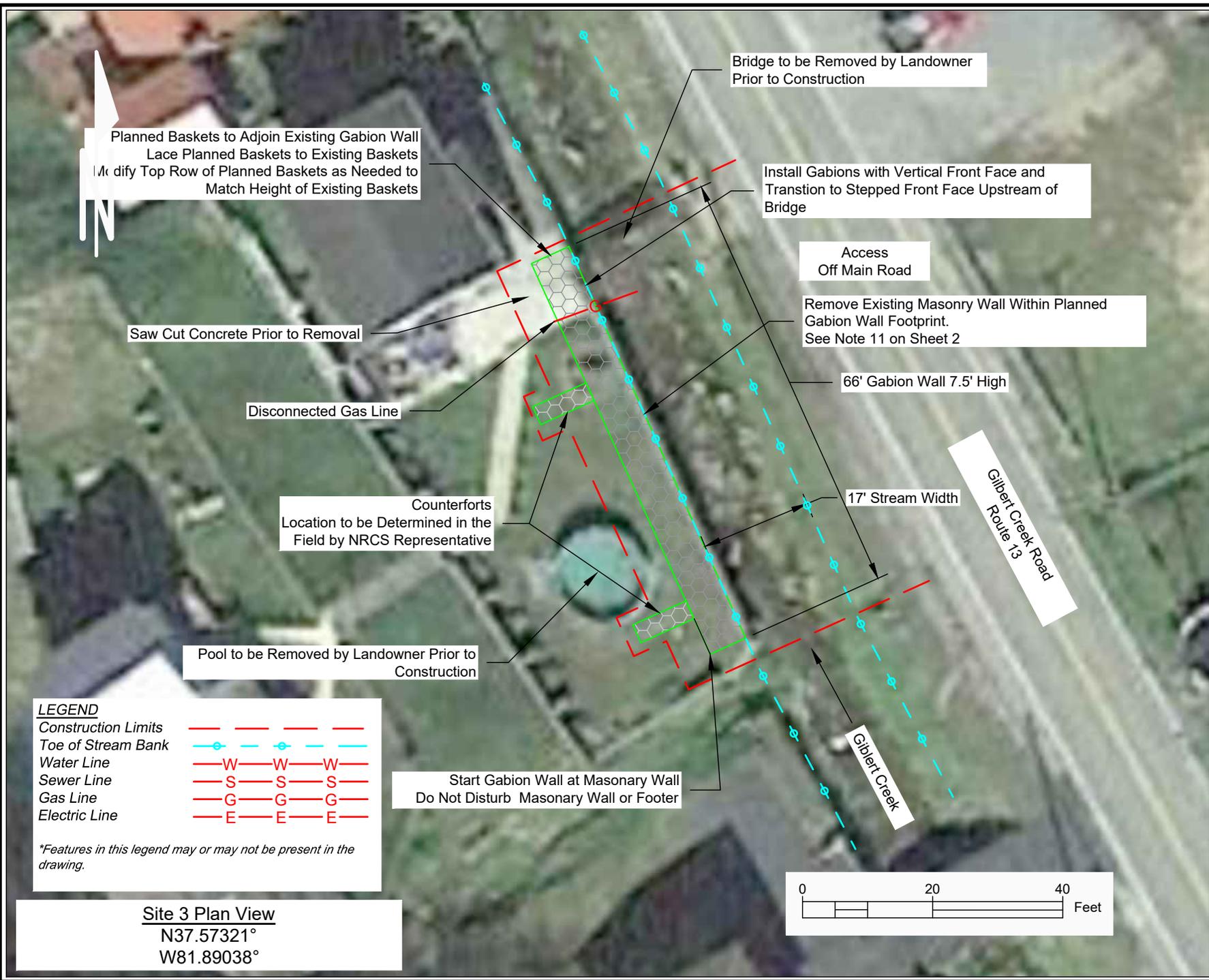
United States  
Department of  
Agriculture



Natural Resources  
Conservation Service

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| Date     | 01/22 |
| Designed | LS    |
| Drawn    | LS    |
| Checked  | JW    |
| Approved | PM    |

**2021 EWP STREAMBANK STABILIZATION**  
 MINGO County, West Virginia  
 BLANKENSHIP, LESTER, AND THOMPSON SITES  
 JAMES LESTER SITE 3

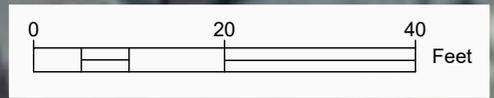


**LEGEND**

|                     |         |
|---------------------|---------|
| Construction Limits | ---     |
| Toe of Stream Bank  | ---o--- |
| Water Line          | -W-W-W- |
| Sewer Line          | -S-S-S- |
| Gas Line            | -G-G-G- |
| Electric Line       | -E-E-E- |

*\*Features in this legend may or may not be present in the drawing.*

**Site 3 Plan View**  
 N37.57321°  
 W81.89038°





Install Counterfort at Upstream and Downstream Ends Location to be Determined in the Field by Engineer

Install Gabion Wall with a Vertical Front Face

Bridge to be Removed by Landowner Prior to the Start of Construction

84' Gabion Wall 7.5' High

Access Off Main Road

Landowner to Remove Porch Prior to the Start of Construction

19' Stream Width

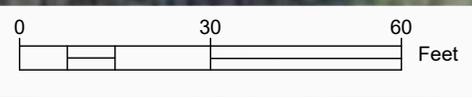
Remove Existing Wall and Properly Dispose of Materials Landowner Does Not Want See Note 11 on Sheet 2

Remove Concrete Sidewalk as Needed for Installation Saw Cut Concrete Prior to Removal

Start Gabion Wall at Existing Masonary Wall Do not Disturb Existing Wall or Footer. Modify End of Gabion as Needed.

Gilbert Creek Road  
Route 13

Gilbert Creek



**LEGEND**

|                     |                 |
|---------------------|-----------------|
| Construction Limits | ---             |
| Toe of Stream Bank  | ---o---         |
| Water Line          | ---W---W---W--- |
| Sewer Line          | ---S---S---S--- |
| Gas Line            | ---G---G---G--- |
| Electric Line       | ---E---E---E--- |

\*Features in this legend may or may not be present in the drawing.

**Site 4 Plan View**  
N37.57372°  
W81.89071°

|   |                |
|---|----------------|
| File Name<br><i>Review Sites Combined.dwg</i> | Date<br>01/22  |
| Drawing Name                                  | Designed<br>LS |
| 3/8/23 11:32 AM                               | Drawn<br>LS    |
| Sheet 6 of 13                                 | Checked<br>JW  |
|   | Approved<br>PM |

**2021 EWP STREAMBANK STABILIZATION**  
MINGO County, West Virginia  
BLANKENSHIP, LESTER, AND THOMPSON SITES  
TIMOTHY THOMPSON SITE 4

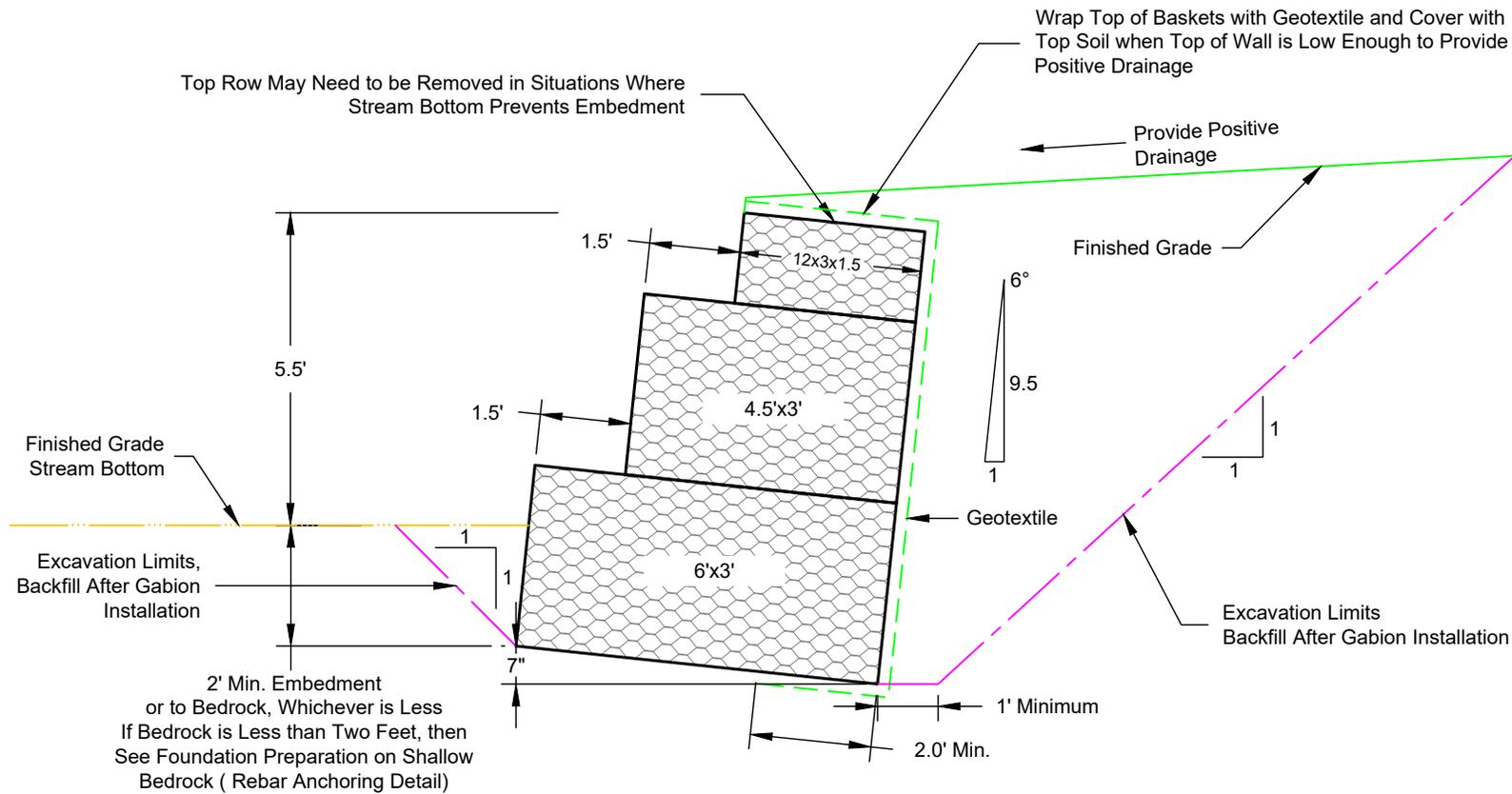


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Agriculture



Natural Resources  
Conservation Service

1. See typical channel bottom configuration sheet
2. Refer to sheet 2 for estimated quantities
3. After the foundation is excavated, NRCS representative will determine required foundation treatment. See foundation details on other sheets.



TYPICAL GABION WALL 7.5 FEET HIGH  
(Not to Scale)

|   |               |
|---|---------------|
| File Name<br><i>Review Sites Combined.dwg</i>           | Date<br>01/22 |
| Drawing Name<br>BLANKENSHIP, LESTER, AND THOMPSON SITES | Date<br>01/22 |
| Designed<br>LS  | Date<br>01/22 |
| Drawn<br>LS   | Date<br>01/22 |
| Checked<br>JW   | Date<br>01/22 |
| Approved<br>PM  | Date<br>01/22 |

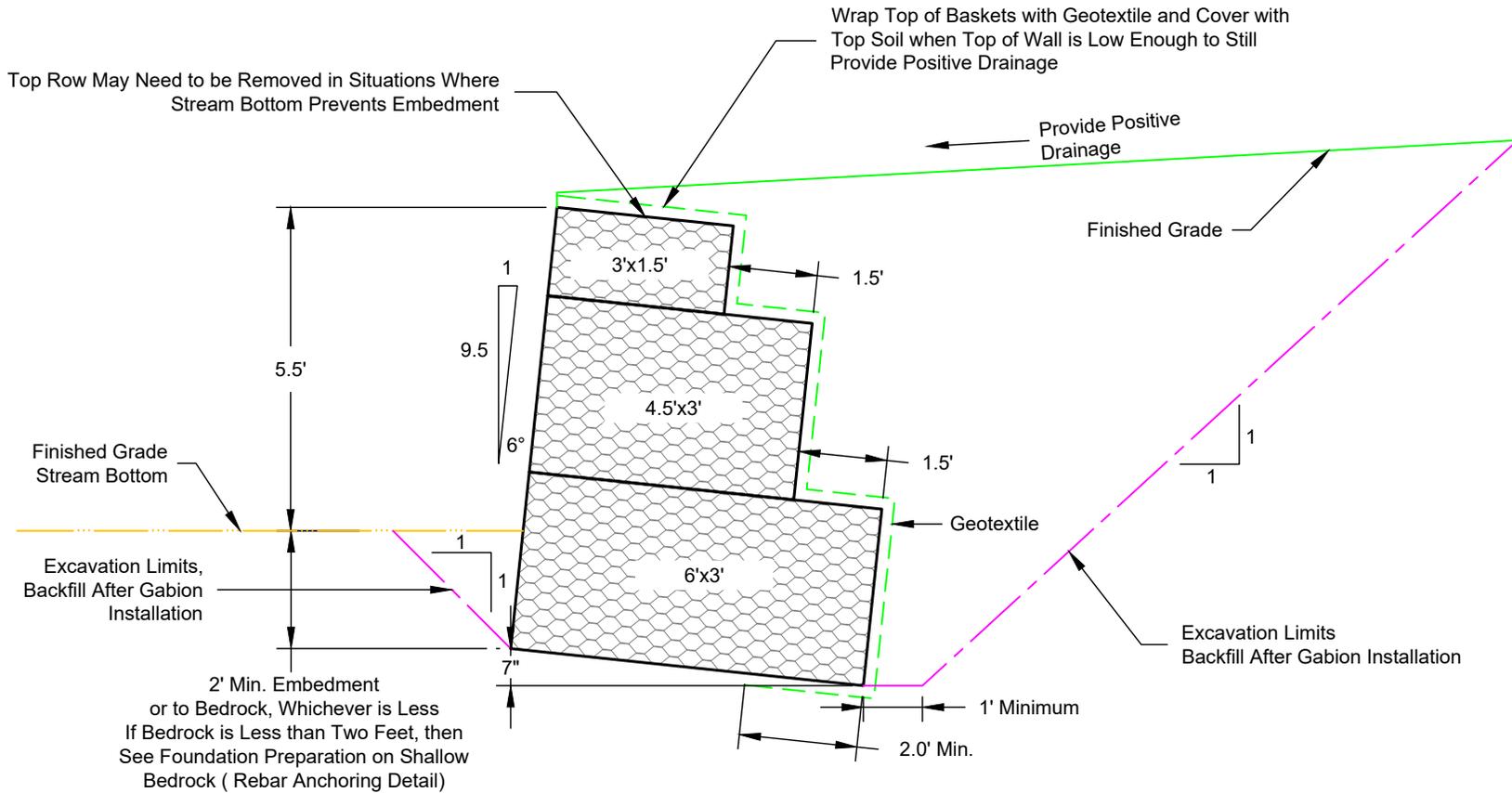
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| 2021 EWP STREAMBANK STABILIZATION       | Designed<br>LS |
| MINGO County, West Virginia             | Drawn<br>LS    |
| BLANKENSHIP, LESTER, AND THOMPSON SITES | Checked<br>JW  |
| 7.5' GABION TYPICAL SECTION             | Approved<br>PM |

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Agriculture



Natural Resources  
Conservation Service

1. See typical channel bottom configuration sheet
2. Refer to sheet 2 for estimated quantities
3. After the foundation is excavated, NRCS representative will determine required foundation treatment. See foundation details on other sheets.



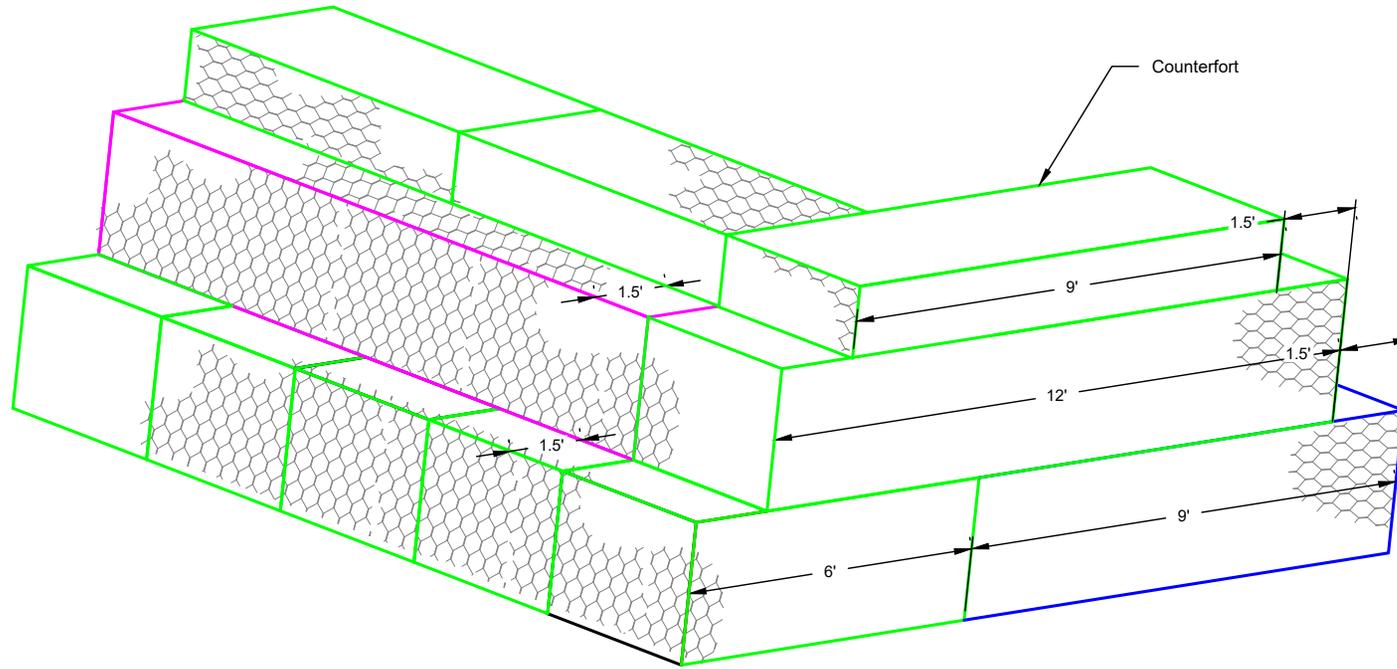
**7.5' GABION WALL WITH VERTICAL FRONT FACE**  
**LESTER AND THOMPSON SITES**  
**SEE PLAN VIEWS**  
**(Not to Scale)**

|   |          |       |
|---|----------|-------|
| File Name<br><i>Review Sites Combined.dwg</i>           | Date     | 01/22 |
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| Drawing Name<br>BLANKENSHIP, LESTER, AND THOMPSON SITES | Drawn    | LS    |
|   | Checked  | JW    |
| 3/8/23 11:32 AM<br>Sheet 8 of 13                        | Approved | PM    |
|   |          | 01/22 |

2021 EWP STREAMBANK STABILIZATION  
 MINGO County, West Virginia  
 BLANKENSHIP, LESTER, AND THOMPSON SITES  
 7.5' GABION WITH VERTICAL FRONT FACE

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 Conservation Service

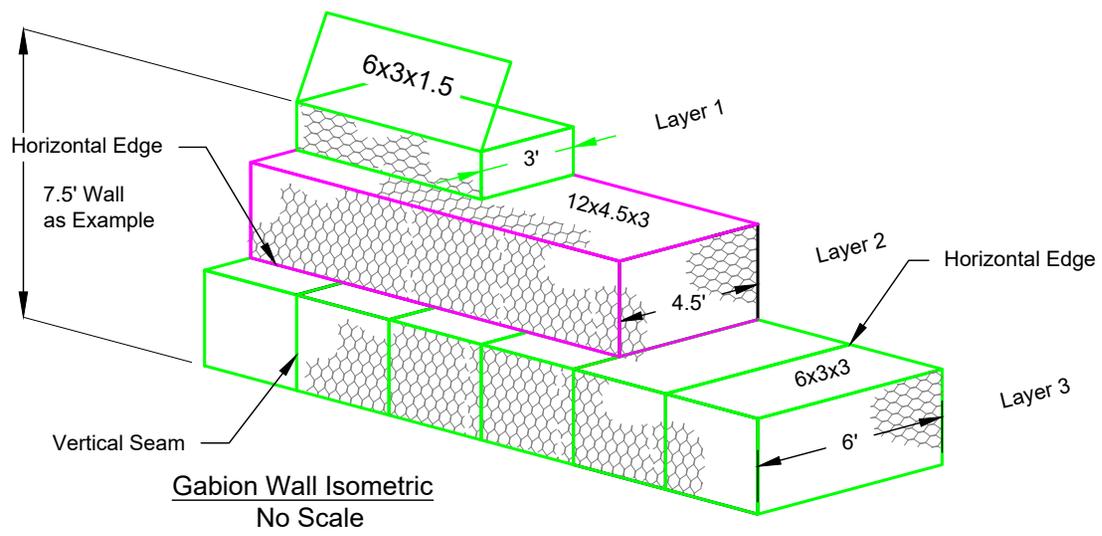
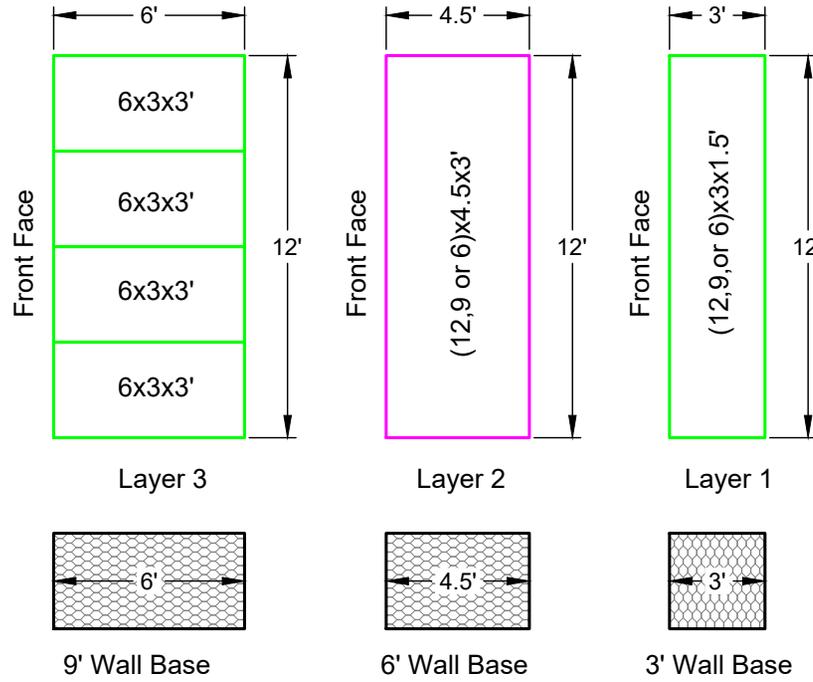
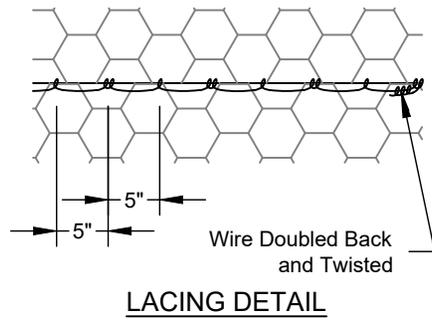
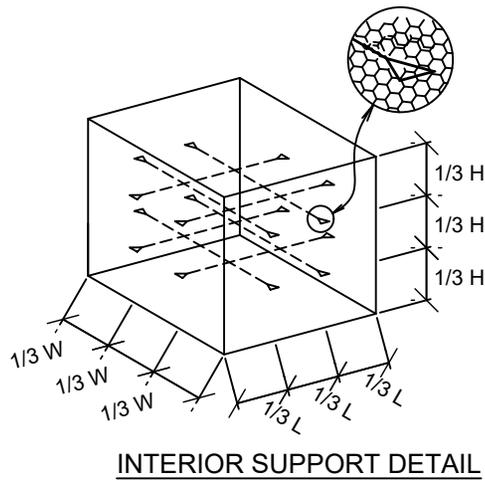
1. Refer to Quantities & Notes Sheet for estimated quantities
2. 8 counterfort(s) required at approximate locations shown on the plan view(s). The final locations of counterforts will be determined in the field by Engineer.
3. See gabion typical section for additional details



TYPICAL COUNTERFORT DETAILS  
7.5 FT. GABION WALL  
 (Not to Scale)

|  |  |                    |   |                                 |                   |
|--|--|--------------------|---|---------------------------------|-------------------|
| United States<br>Department of<br>Agriculture<br><br><br>Natural Resources<br>Conservation Service | <b>2021 EWP STREAMBANK STABILIZATION</b><br>MINGO County, West Virginia<br>BLANKENSHIP, LESTER, AND THOMPSON<br>SITES<br>COUNTERFORT |                    | File Name<br><i>Review Combined.dwg</i> | Drawing Name<br>3/8/23 11:32 AM | Sheet 9 of 13     |
|  | Designed <i>LS</i>   | Date <i>01/22</i>  | Drawn <i>LS</i>                         | Date <i>01/22</i>               | Checked <i>JW</i> |
|  |  | Approved <i>PM</i> |   |                                 |                   |

- Each vertical seam shall be laced prior to setting basket in place and prior to lacing to adjoining baskets.
- Each basket shall be laced to the adjoining basket at all vertical edges and horizontal edges.
- Each diaphragm shall be laced to the lid of the basket after closing. Diaphragm shall be laced along all sides.
- All lacing shall be done with 13.5 gauge wire using the two, one, two, looping procedure as shown in the lacing detail.
- All wire shall be tightly laced and the ends of the lacing wire shall be doubled back and twisted not less than three turns around itself in a length not greater than one inch.
- Welded wire baskets shall be laced with spiral binders according to manufacturers recommendations.
- Install according to manufacturers recommendations.

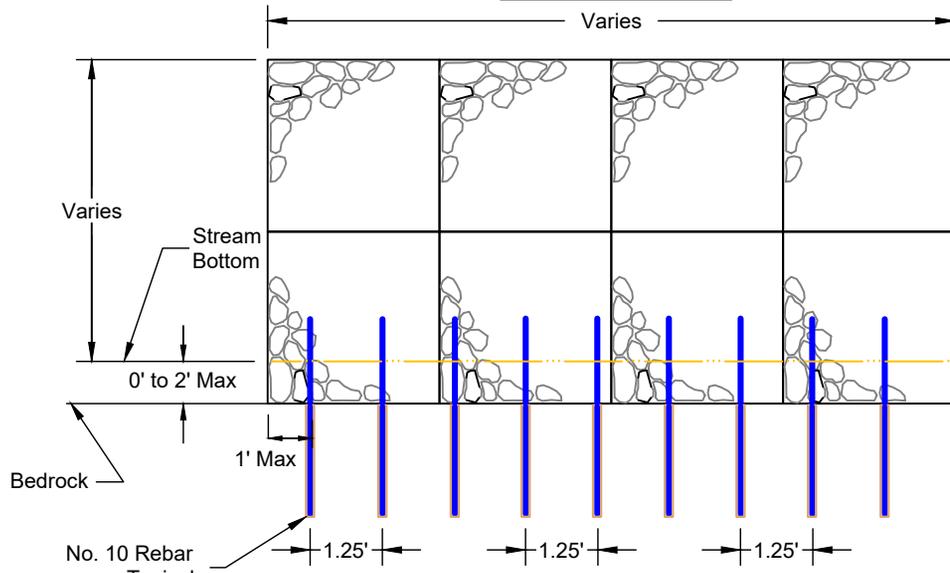


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| <br>United States<br>Department of<br>Agriculture | Natural Resources<br>Conservation Service | <b>2021 EWP STREAMBANK STABILIZATION</b><br>MINGO County, West Virginia<br>BLANKENSHIP, LESTER, AND THOMPSON<br>SITES<br>GABION DETAILS |   |
|  |   | File Name<br><i>Review Combined.dwg</i>   | Drawing Name<br>3/8/23 11:32 AM<br>Sheet 10 of 13 |
| Date<br>01/22  | Designed<br>LS                            | Drawn<br>LS   | Checked<br>JW                                     |
| Approved<br>01/22  | Approved<br>PM                            | Approved<br>01/22   | Approved<br>01/22                                 |

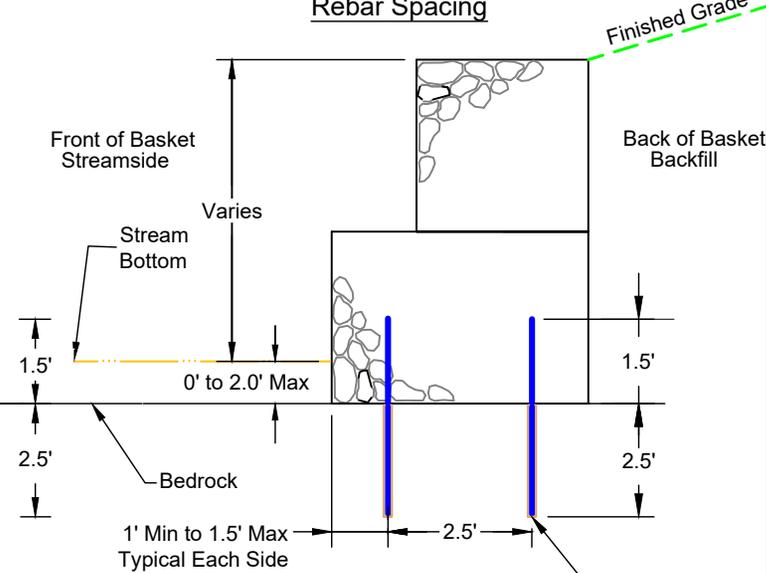
**Notes:**

1. Drill holes for Rebar shall be 1 3/8" diameter. The use of epoxy or non-shrink grout **is not** required. The rebar shall be driven by hammer to the required depth without bending.
2. Care shall be taken by the contractor to prevent damage to the rebar during gabion filling operations.
3. Different gabion bottom basket configurations will require additional rebar by repeating the pattern shown.

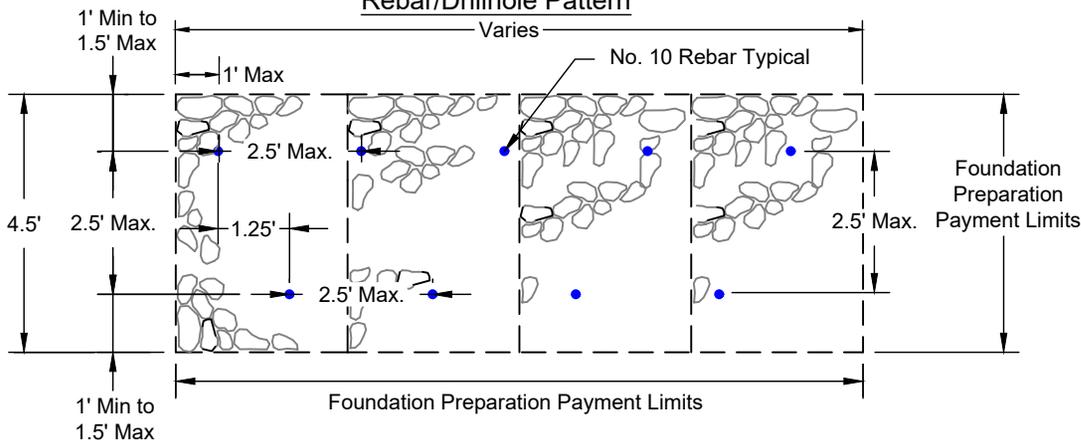
**Front Face of Proposed Gabions with Rebar Spacing**



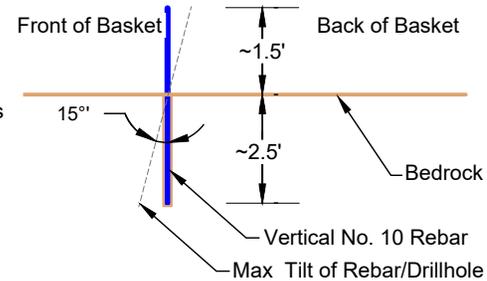
**Side View of Proposed Gabions with Rebar Spacing**



**Foot Print of Planned Gabions & Rebar/Drillhole Pattern**



**Maximum Angle of Rebar/Drillhole Pattern**



**FOUNDATION PREPARATION on SHALLOW BEDROCK  
(Use When Bedrock is Less than Two Feet From Stream Bottom)  
(No Scale)**

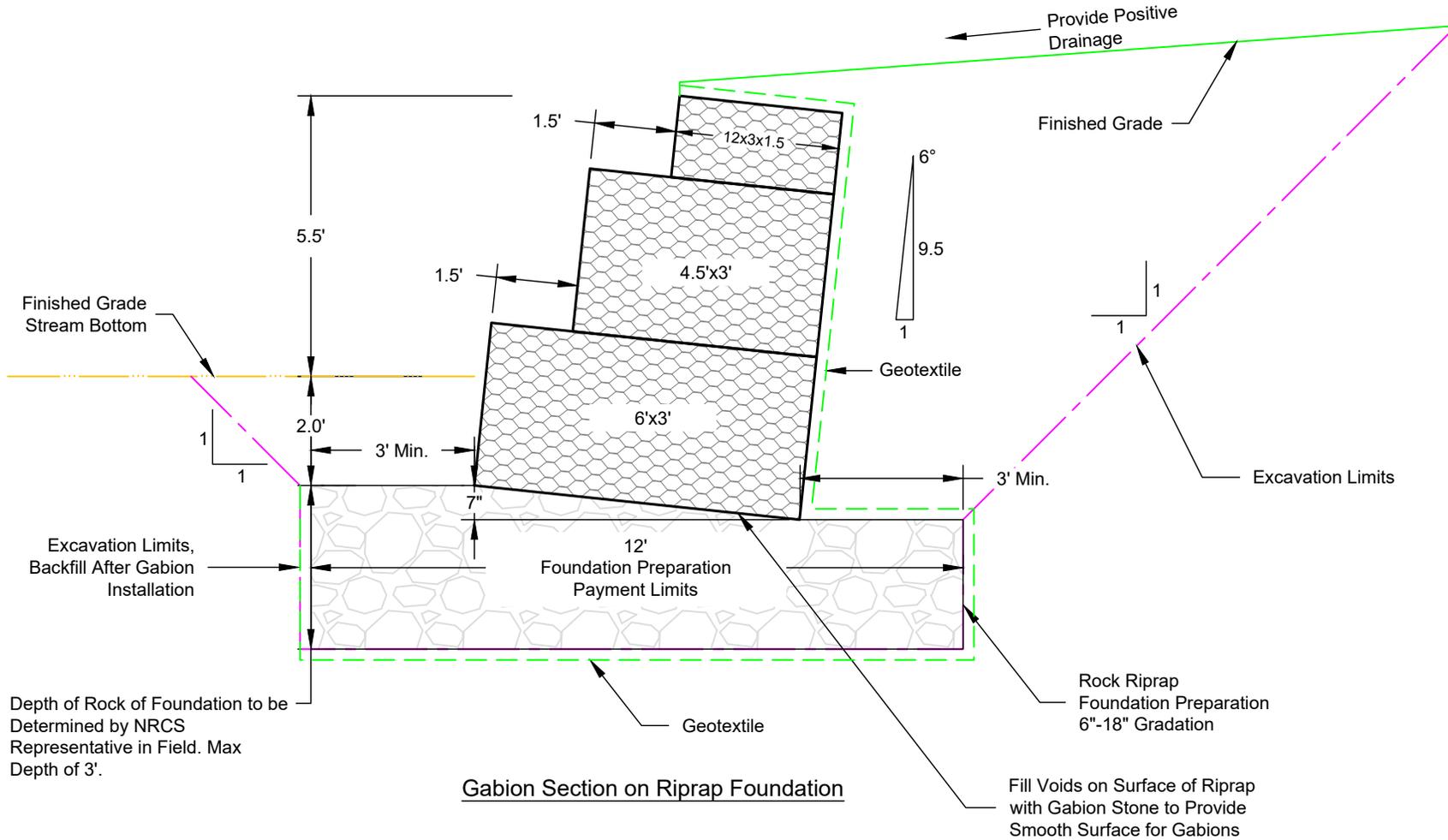
**Note:** Final pattern and spacing to be directed by NRCS technician in the field.

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| File Name<br><i>Review Sites Combined.dwg</i>  | Date            | 01/22 |
|  | Designed        | LS    |
| Drawing Name<br>2021 EWP STREAMBANK STABILIZATION<br>MINGO County, West Virginia<br>BLANKENSHIP, LESTER, AND THOMPSON<br>SITES | Drawn           | LS    |
|  | Checked         | JW    |
| Foundation Preparation on Shallow<br>Bedrock   | Approved        | PM    |
|  | 3/8/23 11:32 AM | 01/22 |
| Sheet 11 of 13   |                 |       |

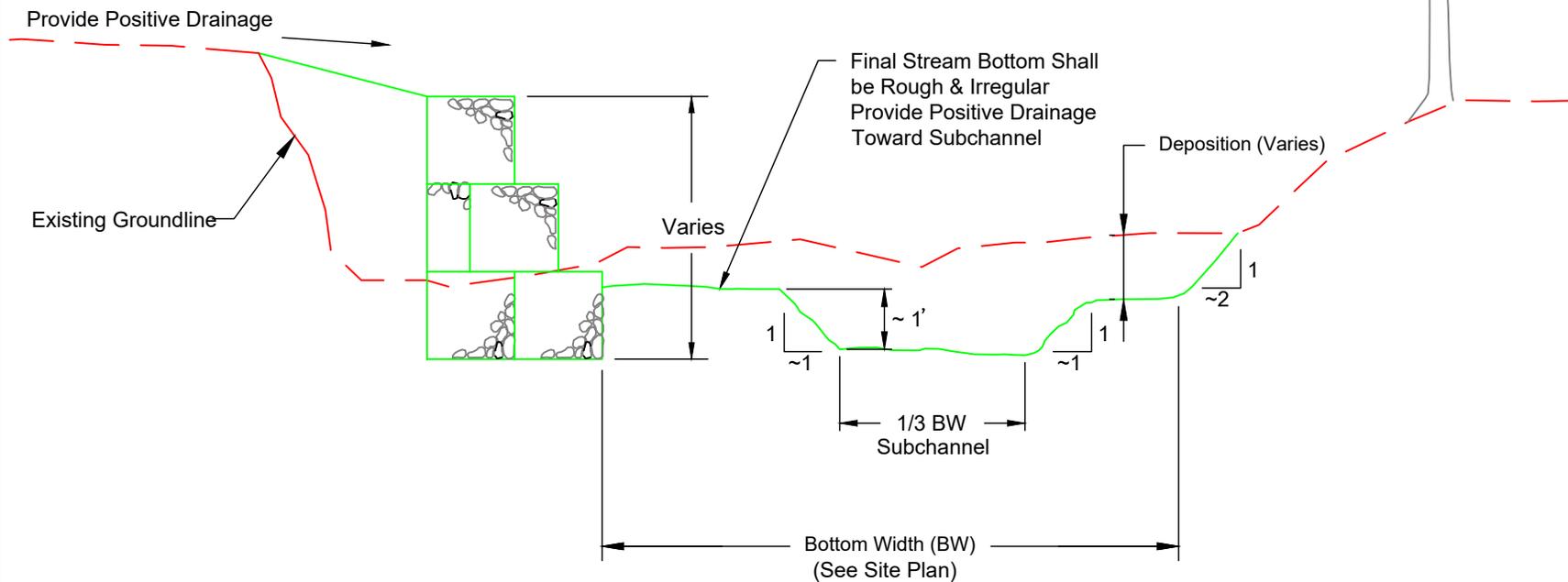

 United States Department of Agriculture  
 Natural Resources Conservation Service

Notes:

1. See typical channel bottom configuration sheet.
2. Refer to Sheet 2 for estimated quantities.
3. Actual gabion configuration may vary.



|  |   |          |
|--|---|----------|
| File Name<br><i>Riprap Sites Combined.dwg</i>  | Date                                      | 01/22    |
|  | Designed                                  | LS       |
| Drawing Name<br>2021 EWP STREAMBANK STABILIZATION<br>MINGO County, West Virginia<br>BLANKENSHIP, LESTER, AND THOMPSON<br>SITES<br>GABION TYPICAL SECTION WITH RIPRAP<br>FOUNDATION | Drawn                                     | LS       |
|  | Checked                                   | JW       |
| Date<br>3/8/23 11:32 AM  | Approved                                  | PM       |
|  | Sheet                                     | 12 of 13 |
| United States<br>Department of<br>Agriculture  | Natural Resources<br>Conservation Service |          |



Notes:

1. Final location of subchannel to be located in the field by the NRCS representative. The subchannel shall be transitioned as necessary to meet existing grades at the upstream and downstream site extents.
2. Subchannels are not required for bedrock streambeds.
3. Use material from the required excavations and/or approved fill from offsite to reconstruct streambanks as necessary. Seed and mulch per construction specification 6, Seeding, Sprigging and Mulching.
4. Actual gabion configuration and height may vary.

|   |                 |
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| File Name<br><i>Review Sites Combined.dwg</i> | Date<br>01/22   |
| Drawing Name                                  | 3/8/23 11:32 AM |
| Designed LS                                   | Sheet 13 of 13  |
| Drawn LS                                      |                 |
| Checked JW                                    |                 |
| Approved PM                                   |                 |

2021 EWP STREAMBANK STABILIZATION  
 MINGO COUNTY, WEST VIRGINIA  
 ALL SITES  
 TYPICAL CHANNEL BOTTOM  
 CONFIGURATION

