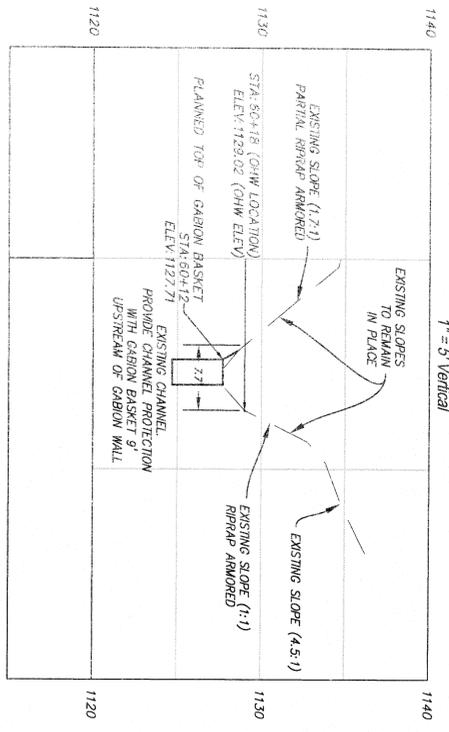
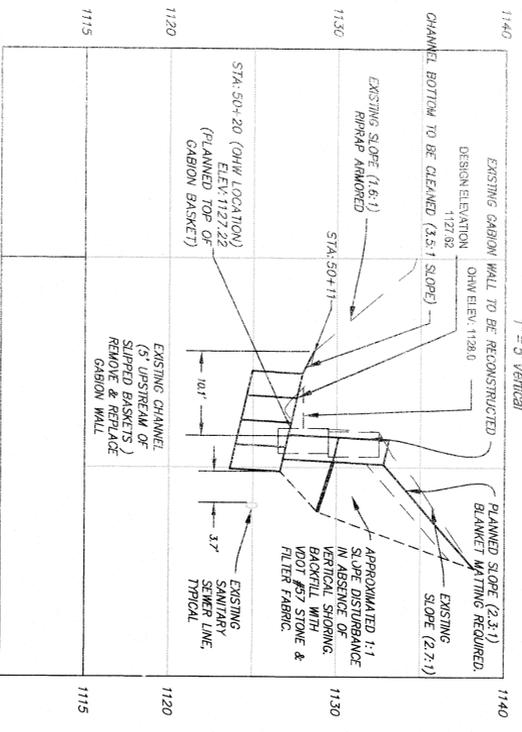


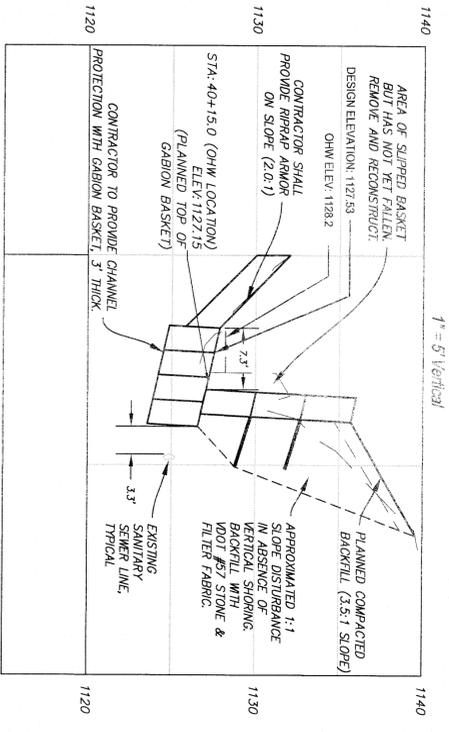
SECTION F PROFILE
1" = 10' Horizontal
1" = 5' Vertical



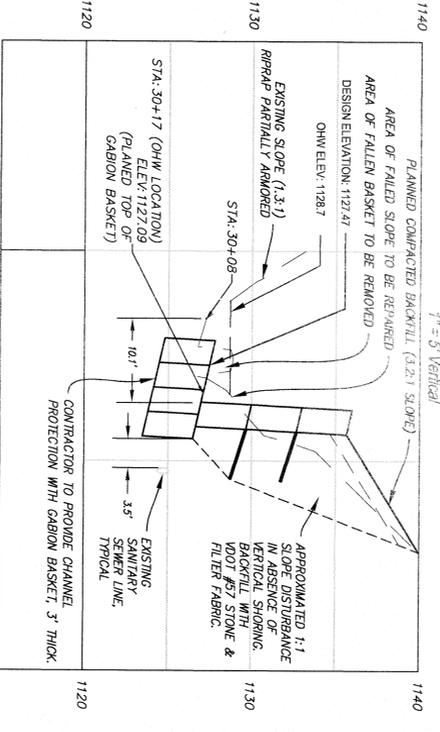
SECTION E PROFILE
1" = 10' Horizontal
1" = 5' Vertical



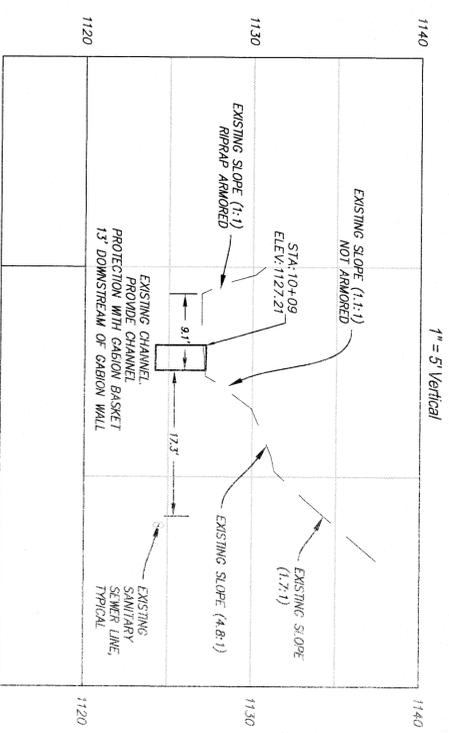
SECTION D PROFILE
1" = 10' Horizontal
1" = 5' Vertical



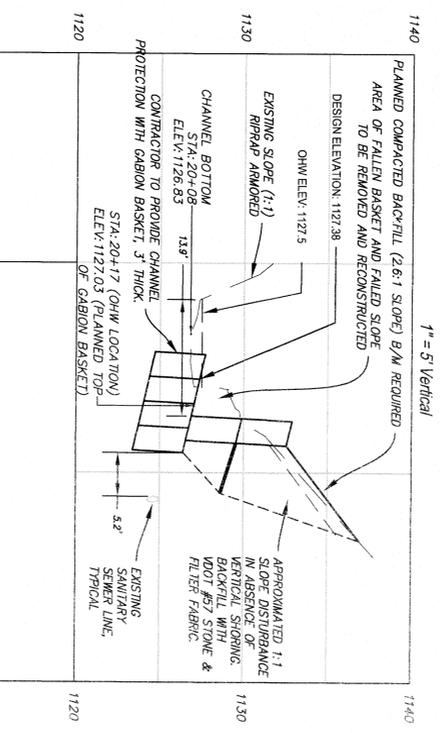
SECTION C PROFILE
1" = 10' Horizontal
1" = 5' Vertical



SECTION A PROFILE
1" = 10' Horizontal
1" = 5' Vertical

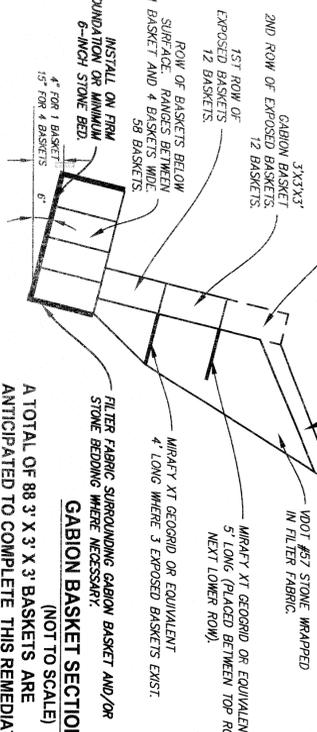


SECTION B PROFILE
1" = 10' Horizontal
1" = 5' Vertical



GABION BASKET DESIGN / CRITERIA / SPECIFICATIONS:

- THIS DESIGN UTILIZES THE STANDARD 3' X 3' X 3' GABION BASKET. THE CONTRACTOR MAY CHOOSE TO UTILIZE OTHER DIMENSIONS SUCH AS 6' X 3' X 3' OR 9' X 3' X 3' REALIZING THAT SOME VERTICAL AND HORIZONTAL ADJUSTMENTS MAY BE REQUIRED.
- THE GABION BASKETS MAY BE WELDED WIRE (4 GAUGE MINIMUM) OR DOUBLE TWIST STEEL WIRE MESH (11 GAUGE MINIMUM) BASKETS.
- THE MINIMUM SIZED STONE WITHIN THE BASKET SHALL BE 1.25 X MESH OPENING. (IE 3 1/4 INCH MESH REQUIRES 4 INCH STONE)
- THE 3' GABION BASKET DEPTH WITHIN THE CHANNEL IS INTENDED TO PROVIDE SCOUR RESISTANCE FOR THE GABION WALL.
- CONTRACTOR SHALL INTERCONNECT BASKETS WITH WIRE TO CREATE A UNIFORM CONNECTION BETWEEN BASKETS.
- CONTRACTOR SHALL HORIZONTALLY STAGGER BASKETS WHEN STACKING TO PROVIDE STABILITY BETWEEN BASKETS.
- THE CONTRACTOR SHALL INSTALL THE BASKETS WITH A 6" SLOPE OVER A 3' WIDE BASKET. THE ELEVATION DIFFERENCE IS 4 INCHES. WITH FOUR BASKETS CONNECTED, THE ELEVATION DIFFERENCE IS 15 INCHES. THE CONTRACTOR SHALL UTILIZE MARIYAT GEOROD OR EQUIVALENT TO PROVIDE STABILIZATION BEHIND THE GABION BASKET. WITH TWO EXPOSED LAYERS, THE GEOROD LENGTH IS 5 FEET. WITH THREE EXPOSED LAYERS, THE GEOROD IS 4 FEET BETWEEN THE BOTTOM BASKET LAYERS AND 5 FEET BETWEEN THE AND 3RD LAYER BASKET.
- 3RD ROW OF EXPOSED BASKETS 8 BASKETS.
- 1 FOOT DEPTH OF TOPSOIL AS AVAILABLE ON-SITE.



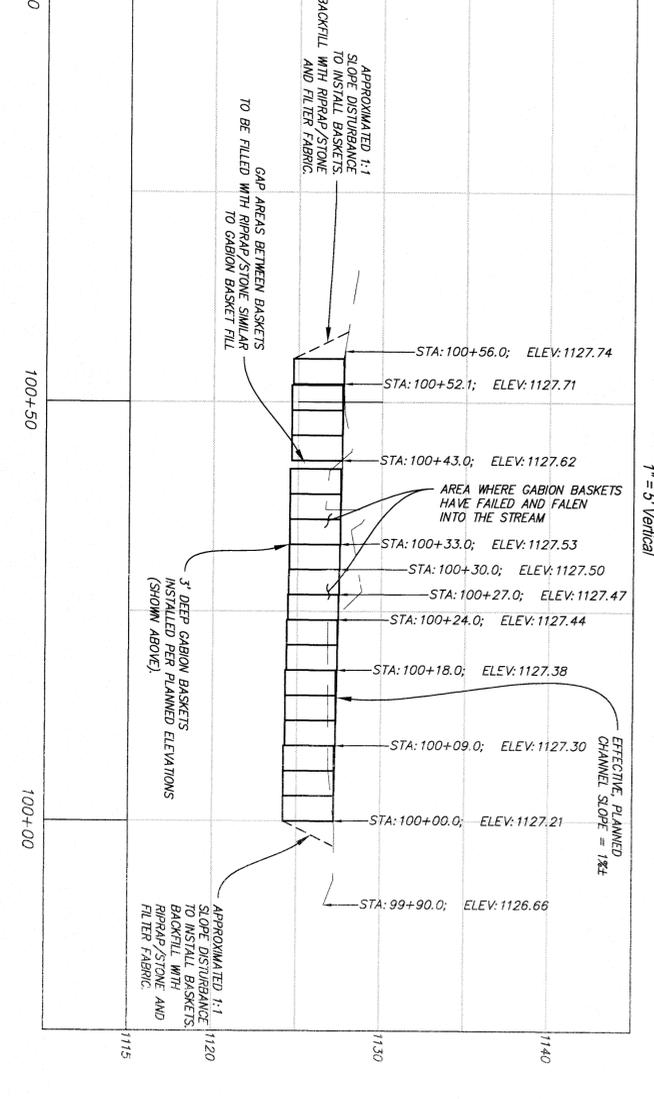
GENERAL INSTALLATION INSTRUCTIONS:

- CONTRACTOR SHALL INSTALL GABION BASKETS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND SHALL INCLUDE AT LEAST THE FOLLOWING ITEMS IF NOT SPECIFIED BY THE MANUFACTURER.
- CONTRACTOR SHALL EXCAVATE SOIL TO BOTTOM OF BASKET ELEVATION IN ACCORDANCE WITH OSHA REGULATIONS AND VERIFY THAT A FIRM FOUNDATION EXISTS. IF FIRM FOUNDATION DOES NOT EXIST, CONTRACTOR SHALL OVEREXCAVATE IN PREPARATION OF A MINIMUM OF 6-INCH LAYER OF VDOT #4 STONE OR AS NECESSARY TO PROVIDE FIRM FOUNDATION.
- CONTRACTOR SHALL INSTALL FILTER FABRIC MEETING VDOT SUPPLEMENTAL SECTION 245 - GEOSYNTHETICS. GEOTEXTILE FABRIC SHALL BE NONWOVEN AND CLOG RESISTANT, SUITABLE FOR SUBSURFACE APPLICATION, AND THERMALLY AND BIOLOGICALLY STABLE.
- THE GEOTEXTILE SHALL RETAIN AT LEAST 75 PERCENT OF ITS ULTIMATE STRENGTH WHEN SUBJECTED TO SUBSTANCES HAVING A PH OF A MINIMUM OF 3 AND A MAXIMUM OF 12 FOR A PERIOD OF 24 HOURS.
- PERMITTING AGENCY TEST METHOD REQUIREMENTS.
- IN ADDITION TO THESE REQUIREMENTS, THE GEOTEXTILE SHALL COMPLY WITH THE REQUIREMENTS OF ASHTO M288 FOR STRENGTH REQUIREMENTS, TABLE 1, CLASS 3, FOR GRAB STRENGTH.
- CONTRACTOR SHALL INSTALL BASKETS AND FILL WITH STONE. THE CONTRACTOR SHALL INSTALL AN ADEQUATE NUMBER OF BOTTOM LAYER OF BASKETS AND BACKFILL TO PROVIDE A STABLE FOUNDATION FOR THE NEXT LAYER OF BASKETS.
- BACKFILL WITHIN THE VOID GAPS OF BASKETS IN RADIAL SITUATIONS SHALL UTILIZE SIMILAR STONE SIZE FOR UNIFORM SUPPORT.
- THE TOP 1 FOOT OF BACKFILL SHALL UTILIZE AVAILABLE SOIL WITHIN THE SITE TO PROMOTE PERMANENT VEGETATION CONSISTENT WITH THE EXISTING CONDITIONS.

DESIGN CONSIDERATION NOTES:

- THE RECTOR DEPTH PROTECTION OF 3' IS BASED ON A 100-YEAR VELOCITY RANGING BETWEEN 1.5 AND 1.8 FEET.
- THE TOTAL LINEAR FOOTAGE OF DISTURBANCE WITHIN THE STREAM IS 66 FEET. A MINIMUM OF 9' OF SCOUR PROTECTION IS PROVIDED UPSTREAM OF THE CHANNEL BEND. THE GABION WALL LENGTH IS APPROXIMATELY 98 LF. THE WATERSIDE PERMIT NO. 13 (NWP-13) PRE-CONSTRUCTION NOTIFICATION (PCN) THRESHOLD IS 500 LINEAR FEET.
- THE TOTAL DISCHARGE (DISTURBANCE TO EXISTING) TO BE CONDUCTED AS PART OF THE REPAIR AND STABILIZATION WITHIN THE HORIZONTAL DELINEATION OF THE ORDINARY HIGH WATER MARKS IS 32 CY, BASED ON 30.5 CY OF GABION BASKETS AND 1.5 CY OF RIPRAP. THIS RESULT IS IN A DRY CIVIL DISCHARGE WITHIN THE OHW, WHICH IS BELOW THE NWP-13 PCN THRESHOLD OF ONE CIVIL.
- THE REPAIR WORK HAS BEEN SCHEDULED TO THE DATE DATED OCTOBER 9, 2013 PROVIDING NEARLY 10 MONTHS OF LEAD TIME. ANY STARTING TIME LONGER THAN THE PROJECT IS BELOW PCN THRESHOLDS. NO ADDITIONAL DOCUMENTATION IS REQUIRED.

REMEDIATION LONGITUDINAL PROFILE
1" = 10' Horizontal
1" = 5' Vertical



C04
04 OF 06
PROJECT NUMBER:
13-0108-04

Profiles

SHEET TITLE:
DESIGNED BY: REC/PJB
DRAWN BY: REC/PJB
CHECKED BY: SRB
SCALE: 1"=10'
DATE: 14 November 2013

Gabion Wall Remediation for FFV Homeowners' Assoc., Inc at 6534 Fairway Estates Drive Windsor Hills Magisterial District Roanoke County, Virginia

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11/14/2013
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