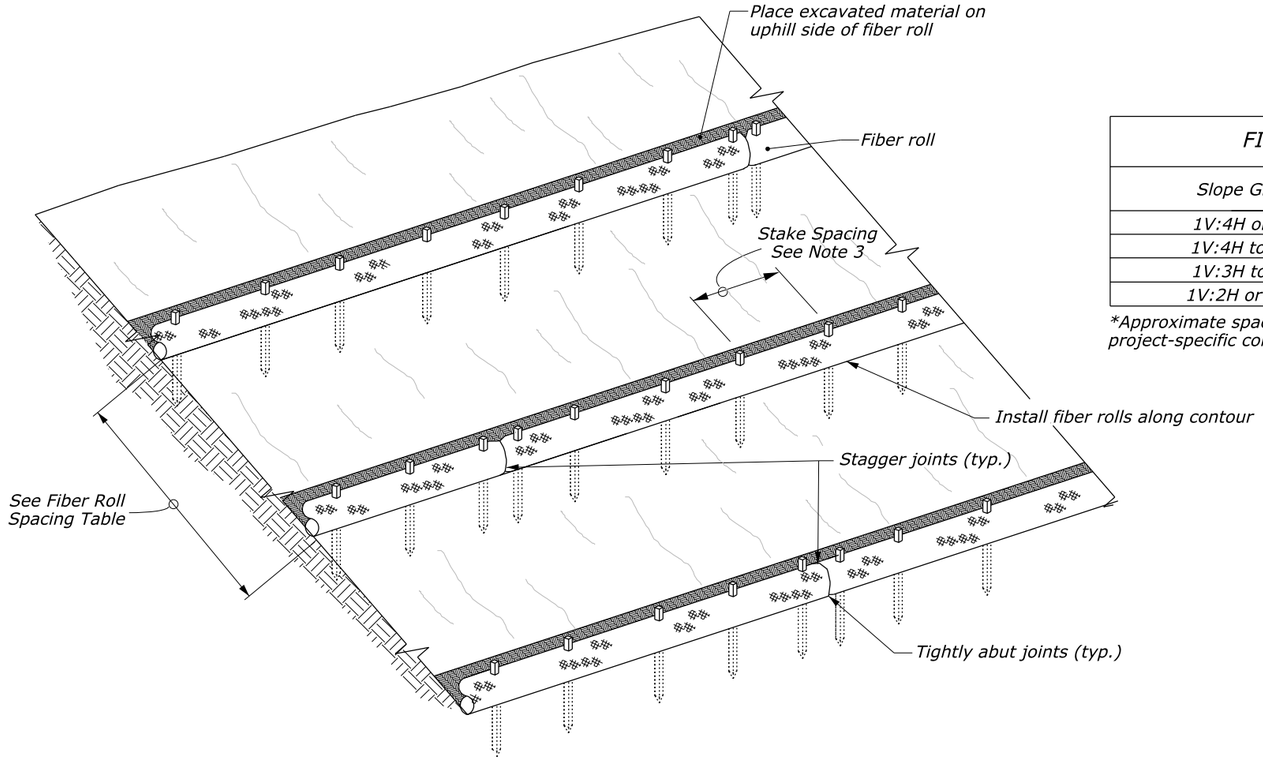
STATE	PROJECT	SHEET NUMBER



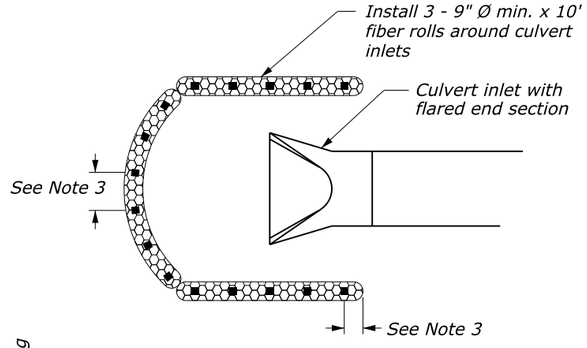
FIBER ROLL SLOPE LAYOUT

FIBER ROLL SPACING TABLE*	
Slope Gradient	9" Ø Fiber Roll Maximum spacing (ft)
1V:4H or flatter	60
1V:4H to 1V:3H	45
1V:3H to 1V:2H	30
1V:2H or steeper	15

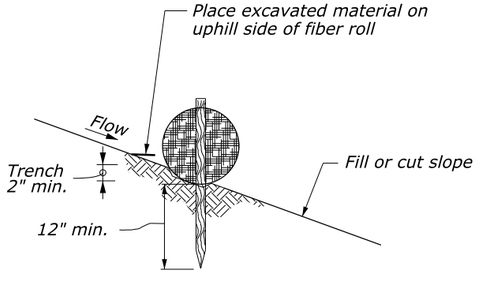
**Approximate spacing shown. Adjust spacing as needed due to project-specific conditions.*

NOTE:

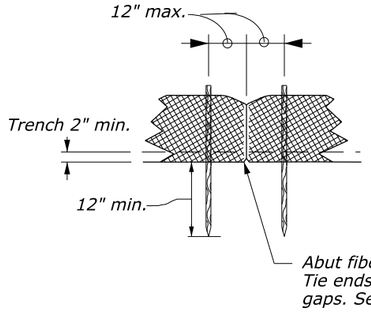
1. Repair all rills or gullies and properly compact prior to installation.
2. Install fiber rolls along slope contours. For any 20' section of fiber roll, do not allow the fiber roll to vary more than 5% from level.
3. Stake fiber rolls in place with 1" x 1" or 1" Ø wood stakes. Space stakes 4' o.c. max. Stake fiber rolls at each end.
4. Drive stakes into undisturbed soil at least 12" deep. Expose stakes 2" above top of fiber roll.
5. For fiber rolls on bare soil, construct trenches parallel to the contour. Place fiber rolls in continuous contact with trench bottom and sides. Tamp soil backfill against upstream side of fiber roll to ensure storm water is forced to flow through fiber roll rather than under it.
6. Fiber rolls may be overlapped according to the manufacturer's recommendations.



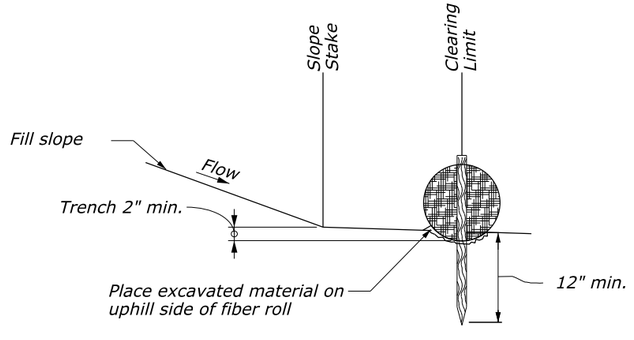
FIBER ROLL AT CULVERT INLET



STAKE DETAIL



FIBER ROLL JOINT DETAIL



FIBER ROLL AS PERIMETER CONTROL INSTALLATION DETAIL

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

U.S. CUSTOMARY DETAIL

FIBER ROLL

DETAIL APPROVED FOR USE 01/2011

REVISED: 08/2014

DETAIL C157-55

Central Federal Lands Highway Division
US Department of Transportation - Federal Highway Administration

NOTES TO THE DESIGNER

Last Updated: August 2014

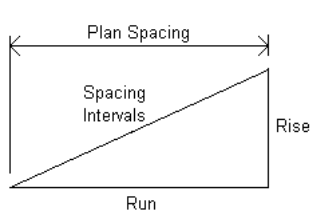
General Information

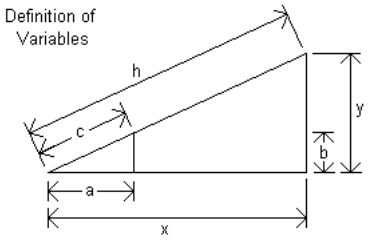
1. ***Appropriate Applications***. Fiber rolls placed on slopes help slow, filter, and spread overland flows. Fiber rolls reduce the effects of long or steep slopes. Fiber rolls are suitable for the following:
   - Along the toe, top, face, and at grade breaks of exposed and erodible soils
   - Can be used with other erosion control devices, including mulch, bonded fiber matrix, etc. Use RECP in the same area as wattles only on rare occasions.

2. ***Limitations***. Fiber rolls are not effective on bare soils unless trenched.

3. ***Layout Guidance.***
   - Fiber rolls are installed along the contour. Estimate proposed contours or generate proposed contours using GEOPAK. To draw the wattles along the contours, use the D&C manager.
   - The fiber roll spacing shown in the drawing is based on a slope distance. Remember to adjust for the horizontal distance when drawing fiber rolls into the plan view. See drawing below.

Plan view spacing of lines on a slope





b	a	h	x
Rise	Run	Spacing Intervals	Plan Spacing
1	1	15	10.607
1	2	30	26.833
1	3	45	42.691
1	4	60	58.209
1	5	60	58.835
1	6	60	59.184

   - Recommended fiber roll spacing is shown in the drawing and can be used for most applications. Consider adjusting spacing based on soil conditions (e.g. for soft loamy soils, place rows closer together. For hard, rocky soils, place the rows farther apart).

Applicable SCRs

None

Typical Pay Item Used

- 15705-1400 Soil erosion control, Fiber roll [LNFT]

Updates

January 2011
- New Detail drawing

August 2014
- Updated for FP-14
- Updated border