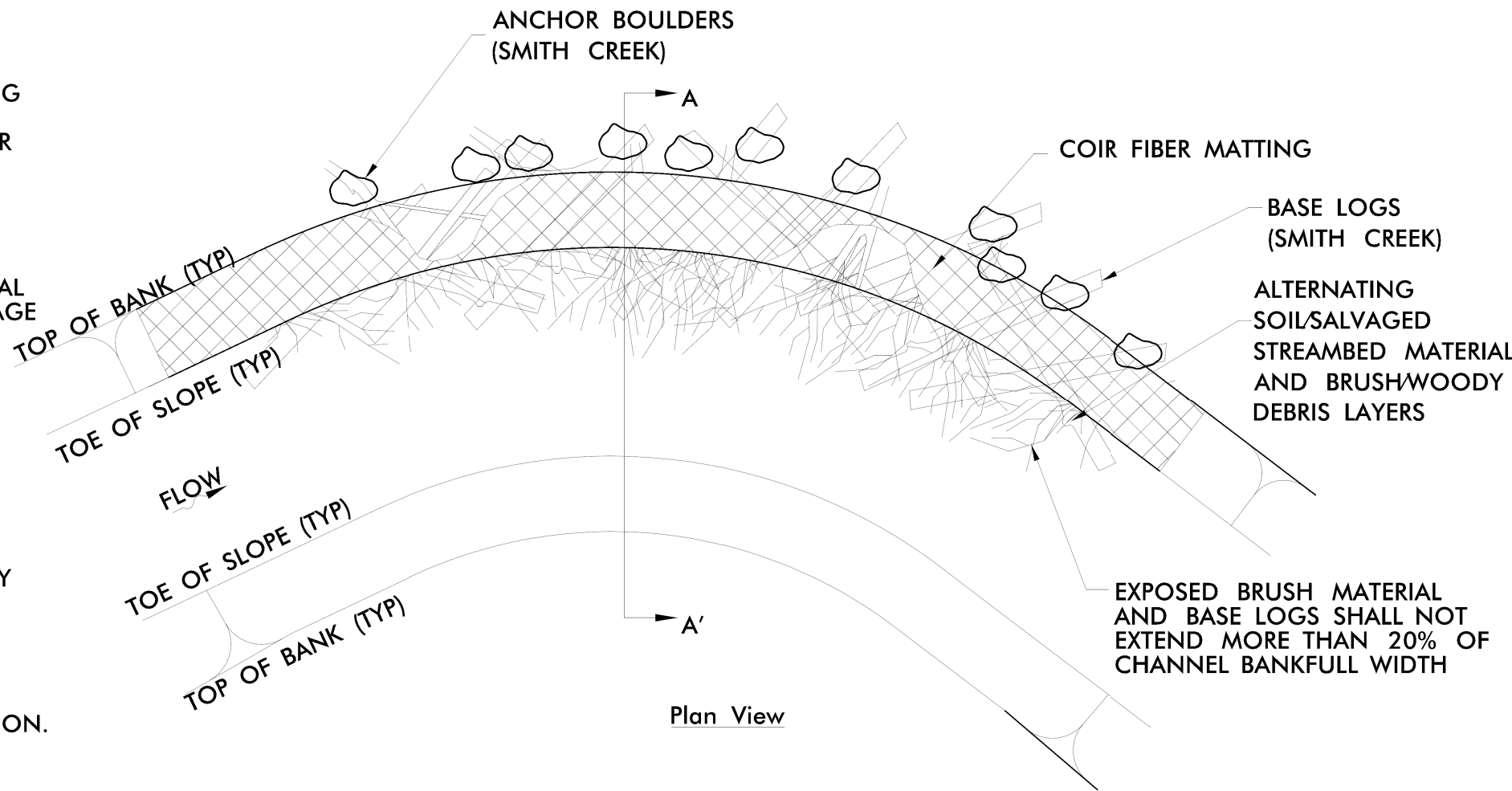


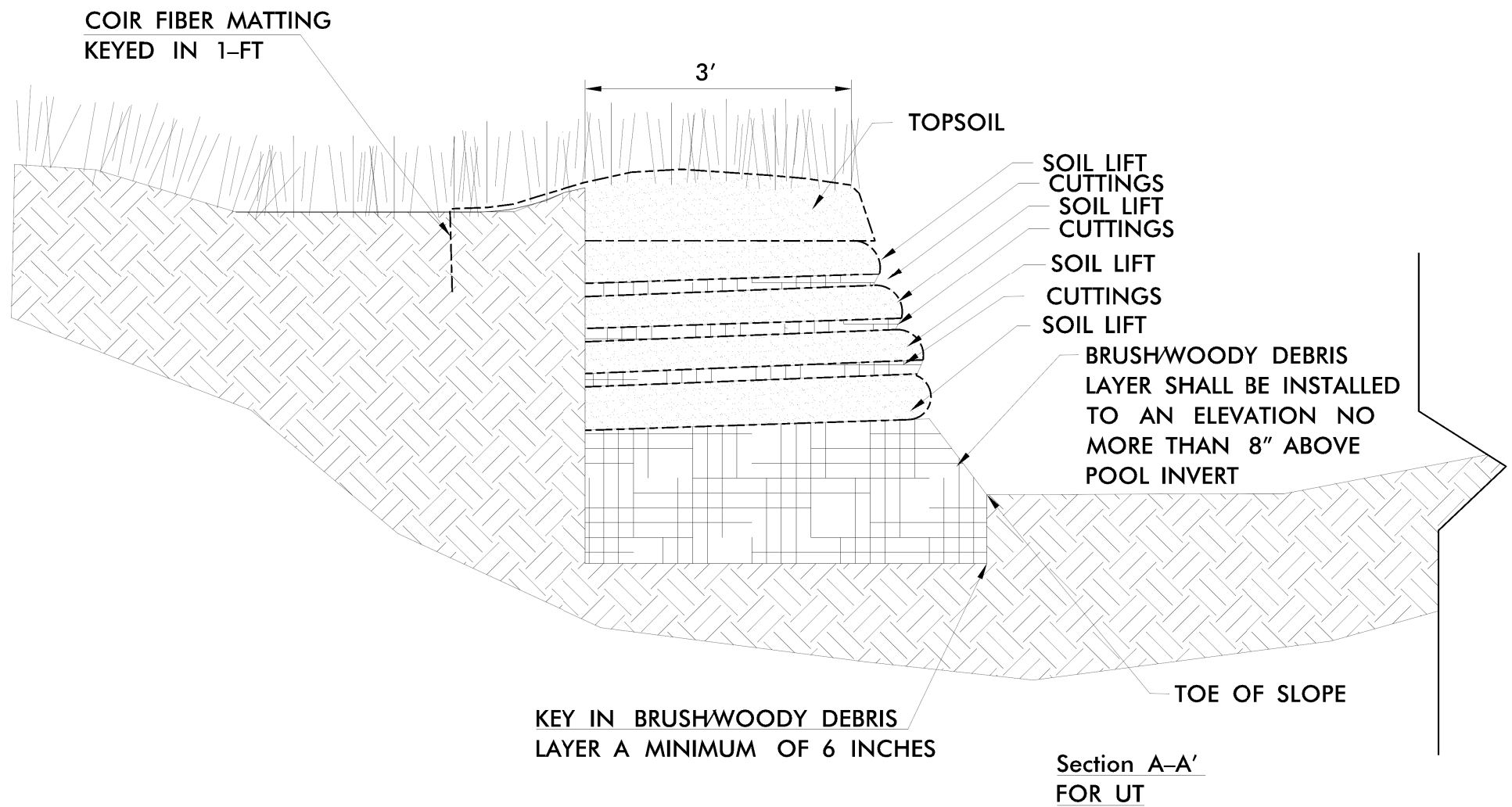
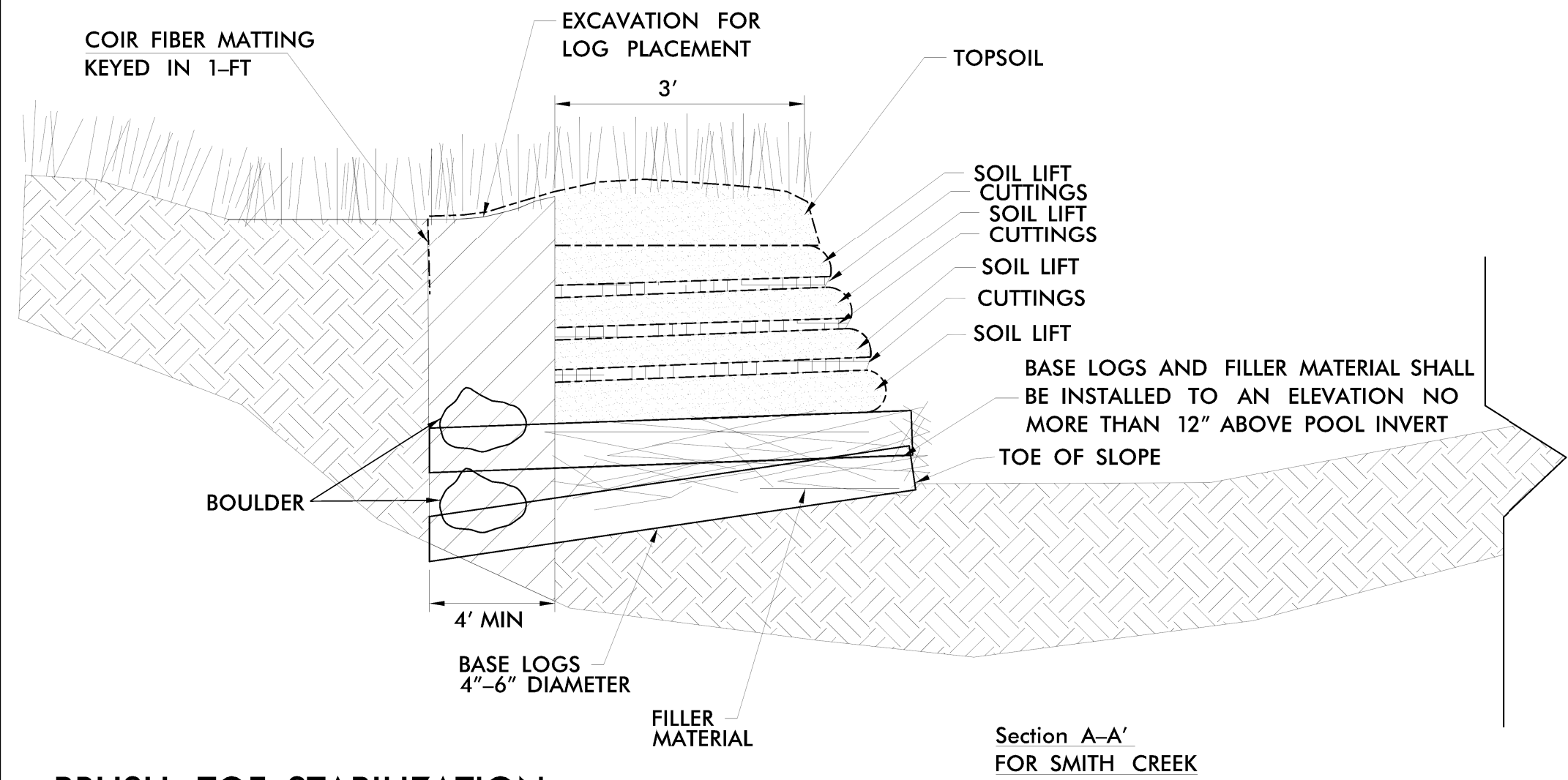
NOTES FOR SMITH CREEK:

- OVEREXCAVATE 7' OUTSIDE OF TOP OF BANK(BANKFULL).
- INSTALL BASE LOGS (DIAMETER OF 4"-6") IN A CRISS CROSS PATTERN. LOGS SHALL BE INSTALLED WITH AN ANGLE OF 15-25 DEGREES BETWEEN THE BANK AND INSIDE OF THE PROTRUDING LOG MEASURED FROM THE CONVERGENCE OF BANK TANGENT TO THE INSIDE OF LOG TANGENT. UTILIZE ANCHOR BOULDERS TO HOLD BASE LOGS IN PLACE. BACKFILL AND COMPACT SOIL OVER LOGS AND BOULDERS OUTSIDE OF THE TOP OF BANK (BANKFULL).
- INSTALL FILLER MATERIAL WHICH CONSISTS OF SMALL LOGS, LIMBS, TREE TOPS AND BRUSH PERPENDICULAR TO BANK ON TOP OF THE BASE LOGS.
- TOP FILLER MATERIAL WITH COIR FIBER MATTING AND 12-16 INCHES OF SOIL. TAMP SOIL MATERIAL AND USE A FORM TO DEVELOP THE SOIL LIFT. AVOID HEAVY COMPACTION TO PREVENT DAMAGE TO THE BASE LOGS. THE FIRST FINISHED SOIL LIFT SHALL BE A MINIMUM OF 8 INCHES THICK. USE U SHAPED WIRE TO ANCHOR MATTING.
- INSTALL A LAYER OF LIVE CUTTINGS WHICH CONSISTS OF FACINES BUNDLES/LIVE CUTTINGS THAT INCLUDE EASY TO ROOT SPECIES SUCH AS WILLOW, DOGWOOD, AND POPLAR. THIS LAYER SHOULD BE A MINIMUM OF 3 INCHES THICK.
- INSTALL SOIL LIFT A MINIMUM OF 6" THICK AFTER COMPACTION.
- ALTERNATE LIFTS OF LIVE CUTTINGS, 3 INCHES MINIMUM, AND SOIL LIFTS, 6 INCHES MINIMUM, TO WITHIN 6" OF INVERT ELEVATION OF THE DOWNSTREAM RIFFLE. THE NUMBER OF LIFTS WILL VARY BASED ON SITE CONDITIONS.
- INSTALL COIR FIBER MATTING OVER THE FINAL SOIL LIFT WITH AN AMPLE AMOUNT OF MATTING OVERHANGING TO WRAP OVER THE TOPSOIL LAYER ONCE IT IS PLACED.
- INSTALL TOPSOIL OVER FINAL SOIL LIFT LAYER TO ACHIEVE FINISHED GRADE AT BANKFULL ELEVATION.
- PREPARE SEEDBED, APPLY SEED, AND WRAP COIR FIBER MATTING OVER THE FINISHED TOPSOIL, ANCHOR MATTING WITH 2" WOODEN STAKES AND KEY INTO EXISTING BANK.



NOTES FOR UT

- OVEREXCAVATE 3' OUTSIDE OF TOP OF BANK(BANKFULL).
- INSTALL A DENSE LAYER OF BRUSHWOODY DEBRIS, WHICH SHALL CONSIST OF SMALL LOGS, LIMBS, TREE TOPS AND BRUSH COLLECTED ON-SITE. HIGHLY COMPACT BRUSHWOODY DEBRIS LAYER. THIS LAYER SHALL BE INSTALLED TO AN ELEVATION NO MORE THAN 8" ABOVE THE POOL INVERT AND A MINIMUM OF 6 INCHES THICK.
- TOP BRUSHWOODY DEBRIS LAYER WITH COIR FIBER MATTING AND 8-12 INCHES OF SOIL. TAMP SOIL MATERIAL AND WRAP WITH MATTING TO DEVELOP SOIL LIFT. AVOID HEAVY COMPACTION TO PREVENT DAMAGE TO THE BRUSHWOODY DEBRIS. FINISHED SOIL LIFT SHALL BE A MINIMUM OF 6 INCHES THICK. USE U SHAPED WIRE TO ANCHOR MATTING.
- INSTALL A LAYER OF LIVE CUTTINGS WHICH CONSISTS OF FACINES BUNDLES/LIVE CUTTINGS THAT INCLUDE EASY TO ROOT SPECIES SUCH AS WILLOW, DOGWOOD, AND POPLAR. THIS LAYER SHOULD BE A MINIMUM OF 3 INCHES THICK.
- INSTALL SOIL LIFT A MINIMUM OF 6" THICK AFTER COMPACTION.
- ALTERNATE LIFTS OF LIVE CUTTINGS, 3 INCHES MINIMUM, AND SOIL LIFTS, 6 INCHES MINIMUM, TO WITHIN 6" OF INVERT ELEVATION OF THE DOWNSTREAM RIFFLE. THE NUMBER OF LIFTS WILL VARY BASED ON SITE CONDITIONS.
- INSTALL COIR FIBER MATTING OVER THE FINAL SOIL LIFT WITH AN AMPLE AMOUNT OF MATTING OVERHANGING TO WRAP OVER THE TOPSOIL LAYER ONCE IT IS PLACED.
- INSTALL TOPSOIL OVER FINAL SOIL LIFT LAYER TO ACHIEVE FINISHED GRADE AT BANKFULL ELEVATION.
- PREPARE SEEDBED, APPLY SEED, AND WRAP COIR FIBER MATTING OVER THE FINISHED TOPSOIL, ANCHOR MATTING WITH 2" WOODEN STAKES AND KEY INTO EXISTING BANK.



BRUSH TOE STABILIZATION


BTS

| Brush Toe Stabilization Stationing | | | |
|------------------------------------|---------------------|--------|------|
| Smith Creek | | | |
| Structure Number | Station (-P Smith-) | Length | Side |
| 1 | 18+05 TO 18+50 | 53.4 | LT |
| 2 | 18+68 TO 19+70 | 114.5 | RT |
| 3 | 20+35 TO 21+21 | 99.2 | RT |
| 4 | 23+37 TO 24+06 | 80.4 | LT |
| 5 | 24+33 TO 24+81 | 57 | RT |
| 6 | 27+49 TO 27+83 | 37.2 | RT |
| UT | | | |
| 7 | 10+76 TO 11+11 | 42.9 | RT |
| 8 | 11+21 TO 11+45 | 28.1 | LT |
| 9 | 11+59 TO 11+88 | 35.5 | RT |

U-6187

OSM-026

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DAVIE COUNTY




ENVIRONMENTAL ANALYSES UNIT

HYDRAULIC DESIGN
ENGINEER

NORTH CAROLINA
PROFESSIONAL
ENGINEER

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