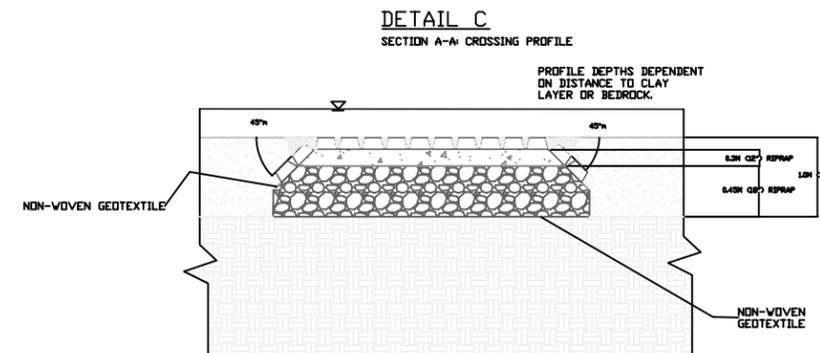
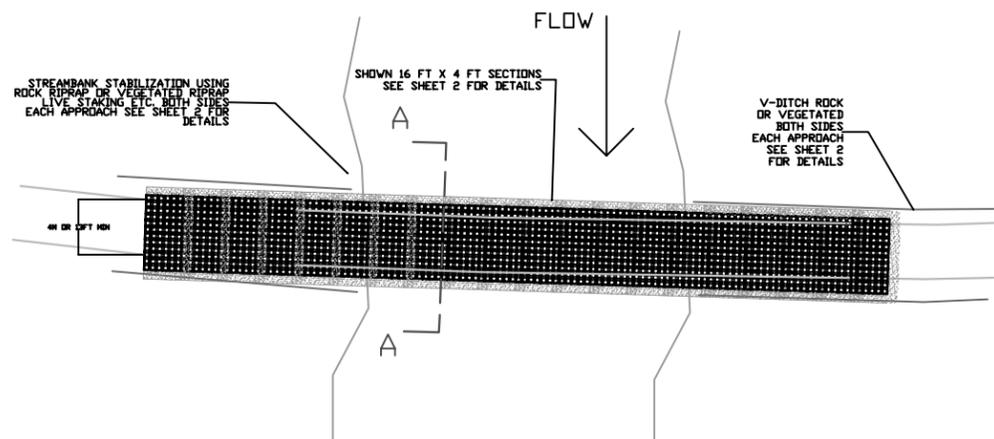


NOTES:

1. THE BOTTOM OF THE STREAM CROSSING WILL BE EXCAVATED TO A DEPTH OF (3 FT) 1.0 METERS OR UNTIL A ROCK LEDGE OR HARD CLAY PAN IS ENCOUNTERED. THE MINIMUM WIDTH OF THE EXCAVATION WILL BE (20 FT) 6.1 METERS. THE LENGTH OF THE EXCAVATION WILL EQUAL THE WIDTH OF THE STREAM CHANNEL PLUS (10 FT) 3 METERS ON EITHER SIDE WITH EXCAVATION DEPTH TAPERING TO (1.5 FT) 0.5 METERS FOR THE REMAINING APPROACH DISTANCE.
2. APPROACHES ON EACH SIDE WILL BE CUT WHERE NECESSARY SUCH THAT A MAXIMUM GRADE OF 25% IS NOT EXCEEDED (16% RECOMMENDED). THE APPROACH ROAD WILL BE A MINIMUM OF (16.3 FT) 5.0 METERS IN WIDTH AND EXTEND EITHER SIDE OF THE CROSSING FOR A MINIMUM OF (82 FT) 25 METERS.
3. UPON COMPLETION OF EXCAVATION, GEOTEXTILE FABRIC (NON-WOVEN) SHALL BE LAID IN A MANNER TO COVER THE SURFACE OF THE EXCAVATED AREA. THE EXCAVATED AREA SHALL BE FILLED (18 INCHES) 0.45 METERS WITH (6 INCH) 15 CM ROCK RIPRAP AND COMPACTED. A SECOND LAYER OF (2 INCH-3 INCH) 5-7 CM ROCK SHALL FILL (12 INCH) 0.3 METERS WITH COMPACTION OCCURRING EVERY (6 INCHES) 0.15 METERS.
4. ONCE THE ROCK ROAD BED HAS BEEN CONSTRUCTED AND COMPACTED ACROSS THE STREAM CHANNEL, ARTICULATED CONCRETE WITH GEOTEXTILE BACKING (OR PLACED NON-WOVEN GEOTEXTILE) (16 FEET) 4.9 METER IN WIDTH SHALL BE PLACED ON THE AGGREGATE BASE. THE ARTICULATING CONCRETE TREAD SHALL BE ANCHORED UPSTREAM, DOWNSTREAM AND THROUGHOUT WITH EDGES PLACED AT AN ANGLE AS DESCRIBED IN DETAIL C.
5. A LAYER OF (3/4 INCH) 19 MM AGGREGATE SHALL BE PLACED ON THE ARTICULATING CONCRETE BASE TO FILL VOIDS. STREAMBED MATERIAL MAY BE USED AS WELL.
6. DIMENSIONS DESCRIBED ABOVE MAY CHANGE DUE TO SUITABLE STREAMBED EXCAVATION LEVELS.



REFERENCE ORIGINAL DESIGN SUPPLIED BY:



US ARMY CONSTRUCTION ENGINEERING RESEARCH LABORATORY CHAMPAIGN, IL

REVISIONS		
DATE	APPROVED	TITLE

Date	Designed	Drawn	Checked	Approved
11/2006	CERL/NGS	NGS	C.E.J./G.M.G.	G.M. GRIMM
11/2006				
11/2006				
11/2006				



ENVIRONMENTAL QUALITY TECHNOLOGY PROGRAM, A(2.5.E) SUSTAINABLE ARMY LIVE-FIRE RANGE DESIGN AND MAINTENANCE
 LOW WATER STREAM CROSSING
 CABLE CONCRETE LOW WATER STREAM CROSSING FULL CHANNEL WIDTH



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11/2006
Sheet 9 of 24

9C0520000001K2-009-0	
STANDARD DWG. NO.	
DATE: 11/2006	SHEET 9 OF 24