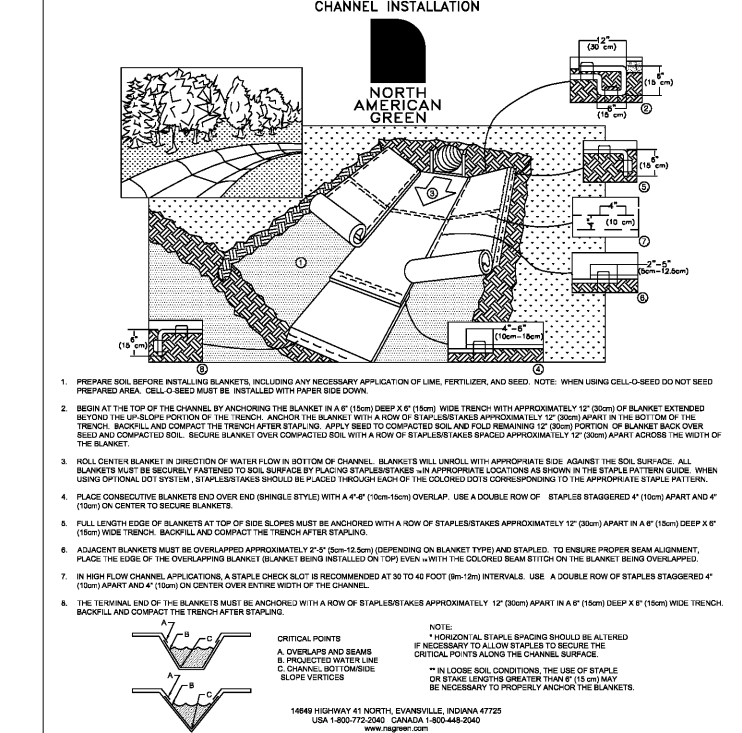


**TAILWATER < 0.5 Hc AND ASSUMING FULL CULVERT FLOW (LOW TAILWATER CONDITIONS)**

- Hc = HEIGHT OF CULVERT
- Wc = WIDTH OF CULVERT
- LA = LENGTH OF RIP-RAP APRON
- WA = WIDTH OF RIP-RAP APRON AT END
- Dm = MEDIAN RIP-RAP SIZE
- Dmax = MAXIMUM SIZE OF RIP-RAP = 1.5 Dm
- Dn = DEPTH OF RIP-RAP APRON = 1.5 Dm
- SEPARATOR = GEOTEXTILE UNDERLAYMENT OR GRAVEL FILTER BLANKET

**OUTLET PROTECTION**

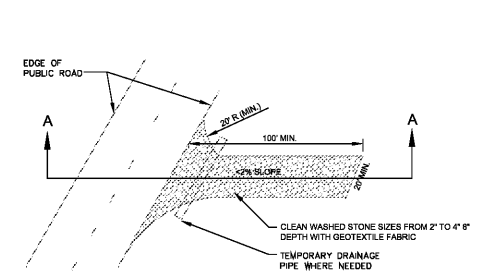


**CHANNEL LINER INSTALLATION DETAIL**

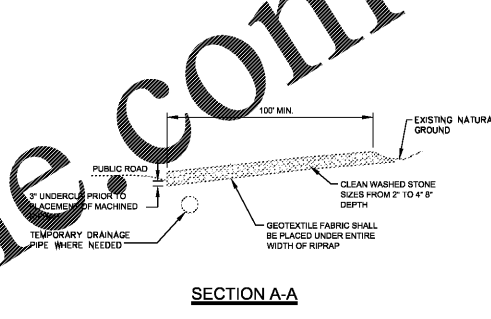
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-G-SEED DO NOT SEED PREPARED AREA. CELL-G SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" (150mm) DEEP X 6" (150mm) WIDE TRENCH WITH APPROXIMATELY 12" (300mm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (300mm) APART IN THE 6" (150mm) DEEP X 6" (150mm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (300mm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (300mm) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW IN 30" (7.6m) OF CHANNEL. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. PLACE CONSECUTIVE BLANKETS END OVER END (SHINGLE STYLE) WITH A 4"-6" (100mm-150mm) OVERLAP. USE A DOUBLE ROW OF STAPLES/STAGGERED 4" (100mm) APART AND 4" (100mm) ON CENTER TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (300mm) APART IN A 6" (150mm) DEEP X 6" (150mm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT BLANKETS MUST BE OVERLAPPED APPROXIMATELY 2'-0" (500-12.50m) (DEPENDING ON BLANKET TYPE) AND STAPLED. TO ENSURE PROPER BEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED BEAM STITCH ON THE BLANKET BEING OVERLAPPED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9m-12m) INTERVALS. USE A DOUBLE ROW OF STAPLES/STAGGERED 4" (100mm) APART AND 4" (100mm) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (300mm) APART IN A 6" (150mm) DEEP X 6" (150mm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.



**INLET PROTECTION**

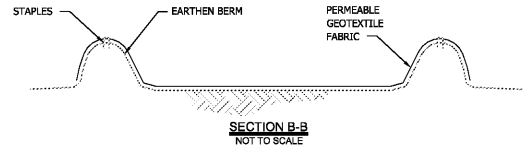


**PLAN VIEW OF TEMPORARY CONSTRUCTION ROAD**

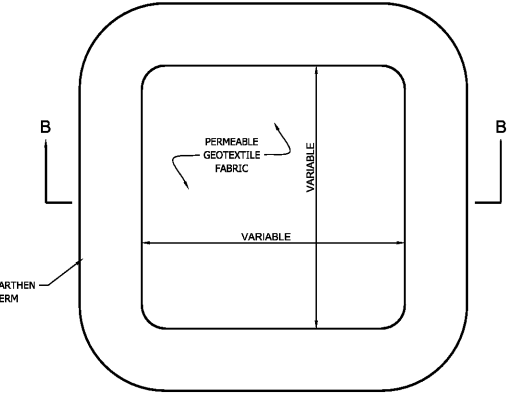


**SECTION A-A**

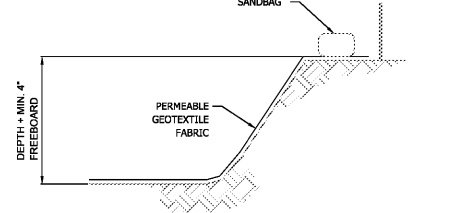
**CONSTRUCTION ENTRANCE/EXIT**



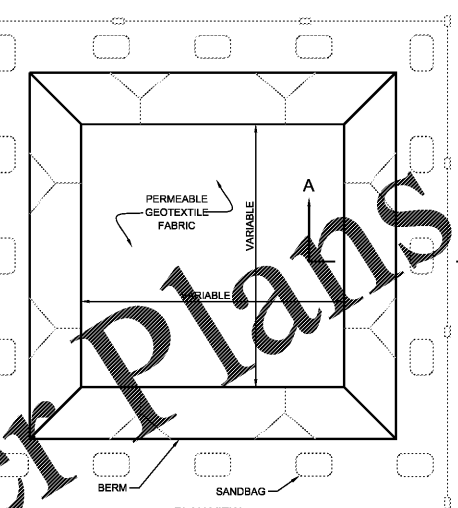
**SECTION B-B**



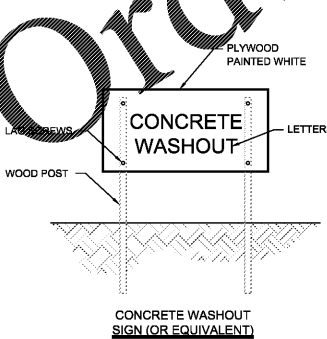
**PLAN VIEW**  
NOT TO SCALE  
**TYPE "ABOVE GRADE" WITH EARTHEN BERMS**



**SECTION A-A**

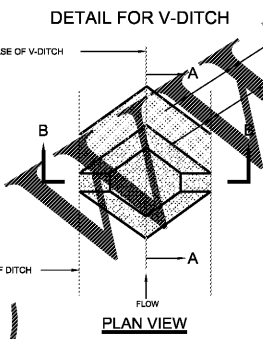


**PLAN VIEW**  
NOT TO SCALE  
**TYPE "BELOW GRADE"**

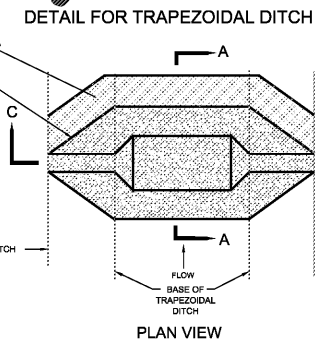


**CONCRETE WASHOUT**

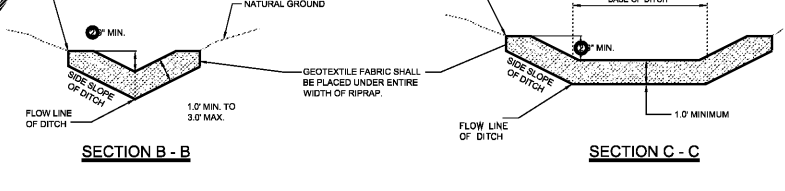
- NOTES**
1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
  2. SIGNAGE IDENTIFYING THE CONCRETE WASHOUT AREA SHALL BE INSTALLED WITHIN 5 FT OF THE WASHOUT FACILITY.



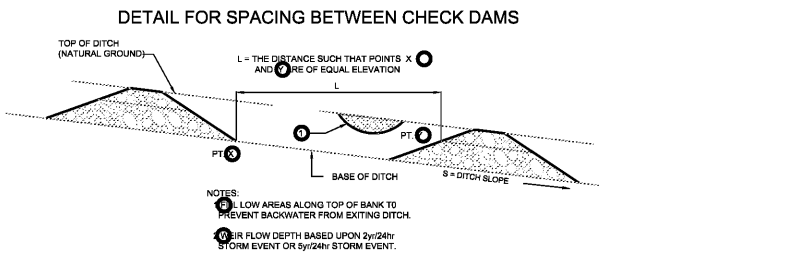
**SECTION B-B**



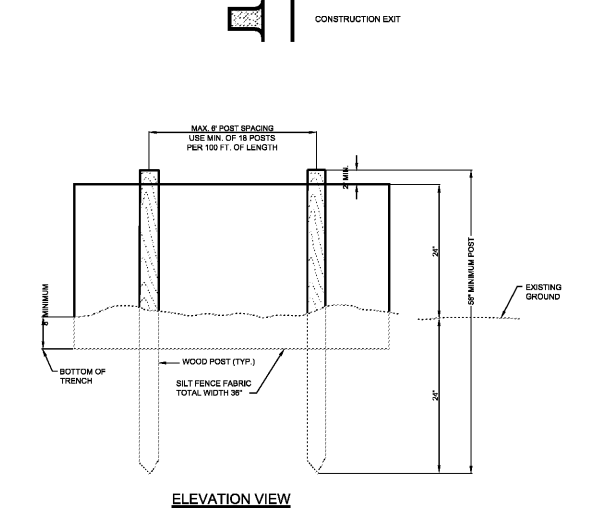
**SECTION C-C**



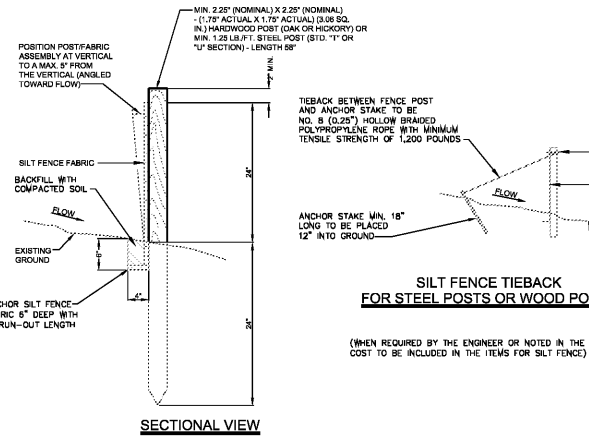
**SECTION A-A**



**ROCK CHECK DAM**



**ELEVATION VIEW**



**SECTIONAL VIEW**

**SILT FENCE TIEBACK FOR STEEL POSTS OR WOOD POSTS**

(WHEN REQUIRED BY THE ENGINEER OR NOTED IN THE PLANS. COST TO BE INCLUDED IN THE ITEMS FOR SILT FENCE)

**SILT FENCE**

**W&A**  
**WAMBLE & ASSOCIATES**  
Civil Engineering  
Land Surveying  
Land Planning  
40 Middleton Street  
Nashville, TN 37210  
615.251.9535

**SWPP DETAILS**  
**MIDSOUTH CARPENTERS' TRAINING TRUST**  
LA VERGNE, BUTLER COUNTY, TENNESSEE  
OWNER AND DEVELOPER  
MID-SOUTH CARPENTERS REGIONAL COUNCIL TRAINING TRUST  
6136 ARWAYS BLVD.  
CHATTANOOGA, TN 37421  
CONTACT: GREG H. WILLIAMS, PH. (256) 348-0849. EMAIL: gwilliams@mscrtf.org

**JAMES D. WAMBLE**  
REGISTERED PROFESSIONAL ENGINEER  
NO. 11426  
STATE OF TENNESSEE

**REVISIONS:**  
06-22-20 Addressed City Workshop Review Comments  
07-01-20 Addressed City of La Vergne Comments  
09-15-20 Addressed Comments from Architect  
10-21-20 Design Coordination Review

DATE: March 30th, 2020  
W&A NO.: 992-0119  
SHEET NUMBER:

**C-4.3**