March 10, 2022

Mr. Leigh Yates, Environmental Consultant Knoxville Environmental Field Office TDEC Division of Water Resources 3711 Middlebrook Pike Knoxville, TN 37921

Dear Mr. Yates:

Subject: Corrective Action Plan (CAP)

Smoky Mountain Outdoors Unlimited, Inc. – Jennette Property Driveway

Sevier County, Tennessee NPDES Permit #TNR136379

CEC Project 303-786

Smoky Mountain Outdoors Unlimited (Owner) contracted Civil & Environmental Consultants, Inc. (CEC) to assist with addressing the Corrective Action Plan (CAP) requirement. The on-site visit by a TDEC representative on March 2, 2022, determined the scope of the CAP requirements.

In September 2021, CEC provided grading plans to the contractor, but the drawings did not include fill dirt material to be placed adjacent to the stream in question. See Exhibit A for reference to the original grading plan.

On March 2, 2022, Rodney McCarter, CEC Principal, and Andrew Atchley, CEC Staff Consultant, conducted a field visit to review potential violations of the NPDES Permit. Based on the existing topography, approximately 0.48 acres of fill dirt was placed in two different locations (see Exhibit B for location references) along the stream. The fill dirt rerouted the existing stream for approximately 250 feet at Location 2. Erosion prevention efforts such as silt fence was installed prior to this visit at the problematic locations. At Location 1, the fill dirt did not alter the existing stream, but the fill dirt encroached on the existing stream buffer.

With regards to Location 1, removal of all soil fill within 15 feet of stream bank and revegetation with an approved seed mixture is recommended to stabilize the disturbed area to a condition similar to the natural and undisturbed conditions on the property. Soil fill slope must not exceed 2:1 (see Exhibit C). At Location 2, a graded bench is recommended (see Exhibit C) to slow the runoff before it enters the stream in addition to the revegetation seeding and erosion stabilization efforts.

Leigh Yates – Knoxville Environmental Field Office CEC Project 303-786 Page 2 March 10, 2022

The proposed CAP outlined below is based on assessment of field observations and the data available to date. The proposed CAP is submitted on behalf of the Owner in order to comply with the requirements given by TDEC.

### **Proposed Corrective Action Plan**

- 1. All appropriate permit coverage must be verified and obtained from appropriate Regulatory Agencies prior to beginning work.
- 2. At Location 1, all fill material must be removed within 15 feet of the stream bank to the depth of the pre-disturbance ground elevation.
- 3. At Location 2, a bench must be added in accordance to Exhibit C.
- 4. Disturbed areas must be permanently stabilized with an approved seed mix and straw mulch.
- 5. Work will be completed within 60 days of CAP approval and after required permit coverage (if any) is obtained.

Feel free to contact either of us with any questions or concerns regarding this submittal. We can be reached at 1-865-774-7771 or by email at jpuckett@cecinc.com or rjmccarter@cecinc.com.

Sincerely,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

Jeremy Puckett, PE

Project Manager

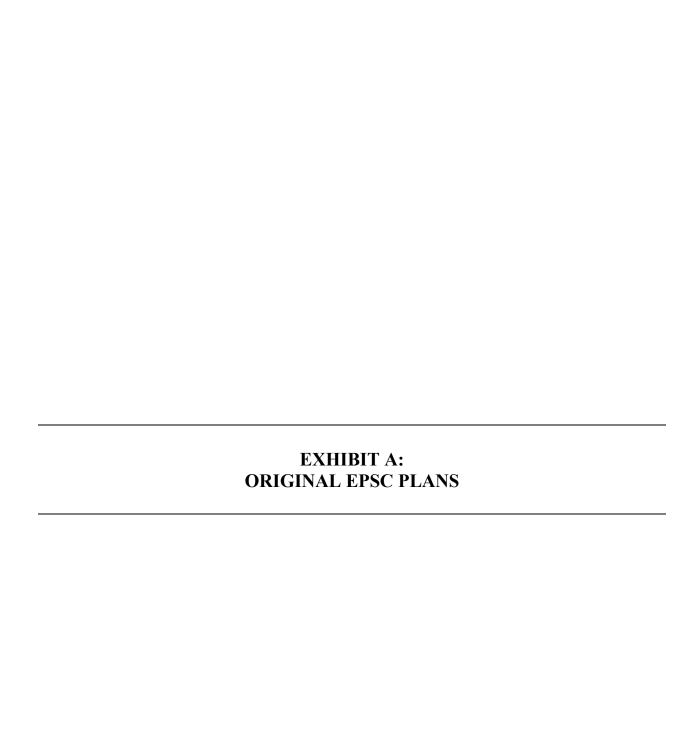
Rod McCarter, RLS

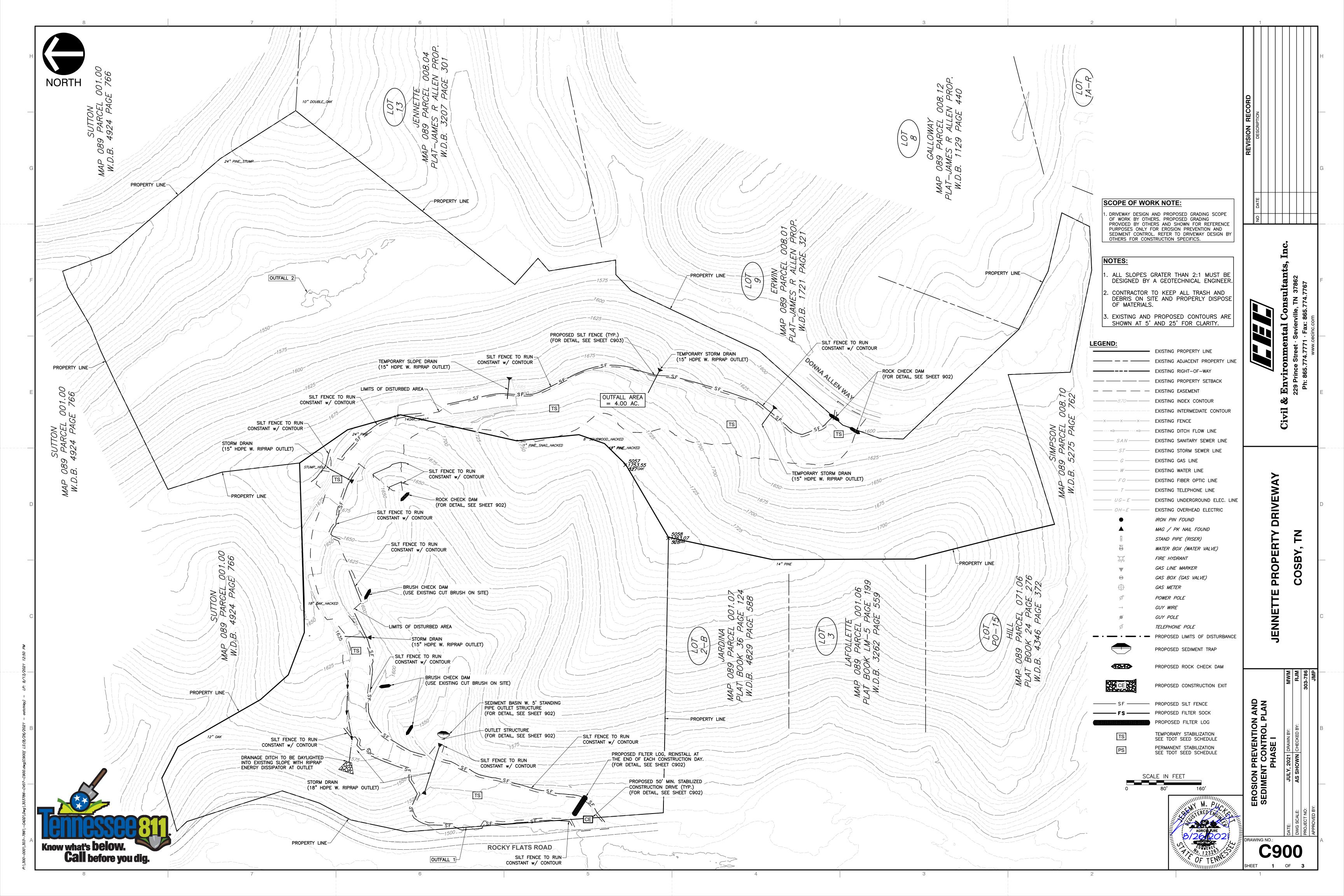
Principal

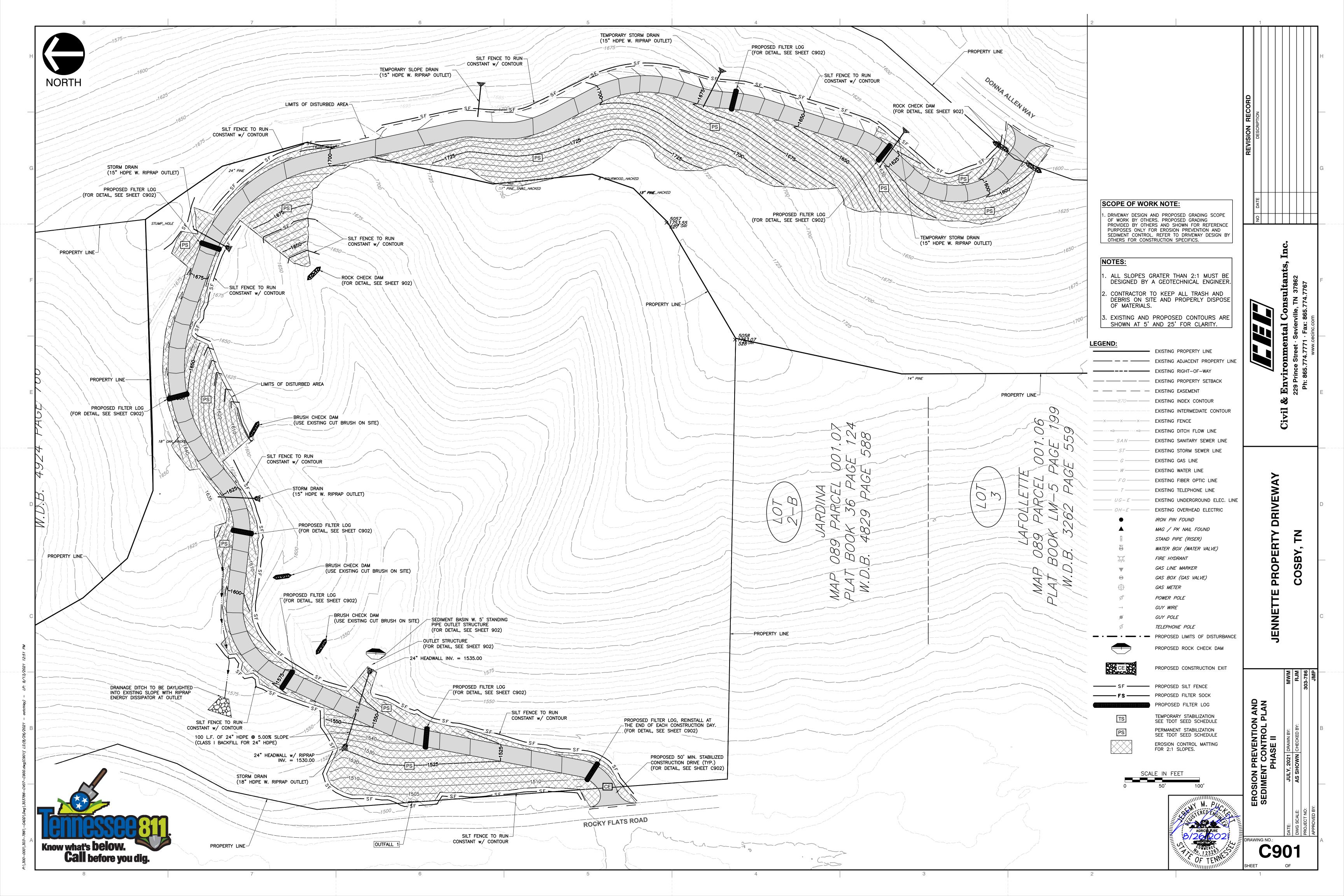
Attachments

Mr. Daniel Jennette, Smoky Mountain Outdoors Unlimited, Inc. cc:

File







# **EROSION AND SEDIMENT CONTROL NOTES:** A SPECIFIC INDIVIDUAL SHALL BE DESIGNATED TO BE RESPONSIBLE FOR EROSION AND SEDIMENT CONTROLS ON PROJECT SITE. THIS INDIVIDUAL MUST HAVE COMPLETED THE "FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL" COURSE OR AN EQUIVALENT COURSE. . CLEARING AND GRUBBING MUST BE HELD TO THE MINIMUM NECESSARY FOR GRADING AND EQUIPMENT OPERATION.

- REFER TO THE TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOK FOR DESIGN CRITERIA AND GUIDELINES FOR EROSION CONTROL MEASURES.
- 4. CONSTRUCTION MUST BE SEQUENCED TO MINIMIZE THE EXPOSURE TIME OF CLEARED SURFACE
- 5. CONSTRUCTION STAGING AND PHASING IS CRITICAL TO REDUCING SEDIMENT RUNOFF FROM SITE.
- 6. EROSION CONTROL MEASURES MUST BE IN PLACE AND FUNCTIONAL BEFORE EARTH MOVING OPERATIONS BEGIN, AND MUST BE PROPERLY CONSTRUCTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
- . ALL EROSION CONTROL MEASURES SHALL BE CHECKED TWICE WEEKLY AND AFTER EACH RAINFALL. CHECK DAILY DURING PROLONGED RAINFALL.
- B. CONSTRUCTION DEBRIS MUST BE KEPT FROM ENTERING THE STORM MANAGEMENT SYSTEM.
- 9. STOCKPILED SOIL SHALL BE PROTECTED AND LOCATED FAR ENOUGH FROM STREAMS AND DRAINAGEWAYS SO THAT RUNOFF CANNOT CARRY SEDIMENT DOWNSTREAM.
- 10. VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 10 CALENDAR DAYS PRIOR TO GRADING.
- 11. TEMPORARY SOIL STABILIZATION WITH APPROPRIATE ANNUAL VEGETATION SHALL BE APPLIED ON AREAS THAT WILL REMAIN UNFINISHED FOR MORE THAN 14 CALENDAR DAYS.
- 12. PERMANENT SOIL STABILIZATION WITH PERENNIAL VEGETATION SHALL BE APPLIED AS SOON AS PRACTICAL AFTER FINAL GRADING. CONTRACTOR SHALL INSPECT THE SITE PERIODICALLY TO REPAIR AND RE-ESTABLISH VEGETATION TO DAMAGED AREAS.
- 13. STAKED AND ENTRENCHED SILT FENCE MUST BE INSTALLED ALONG THE BASE OF ALL FILLS AND CUTS, ON THE DOWNHILL SIDES OF STOCKPILED SOIL, AND ALONG STREAM BANKS IN CLEARED AREAS TO PREVENT EROSION INTO STREAMS. SILT FENCE MAY BE REMOVED AT THE BEGINNING OF THE WORK DAY, BUT MUST BE REPLACED AT THE END OF THE WORK DAY OR PRIOR TO
- 14. WHERE APPROPRIATE, SURFACE WATER FLOWING TOWARD CONSTRUCTION AREA SHALL BE
- DIVERTED AROUND THE CONSTRUCTION AREA USING DIKES, TO REDUCE EROSION POTENTIAL 15. PLACEMENT AND MAINTENANCE OF CHECK DAMS SHALL BE AS SPECIFIED ON PLANS AND AS REQUIRED IN THE TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOK.
- 16. ALL ROCK SHALL BE CLEAN, HARD ROCK CONTAINING NO SAND, DUST, OR ORGANIC MATERIAL. 17. REFER TO THE TENNESSEE EROSION CONTROL HANDBOOK FOR MAINTENANCE REQUIREMENTS OF
- EROSION AND SEDIMENT CONTROL MEASURES 18. CONTRACTOR SHALL MAINTAIN SILT FENCES AND OTHER EROSION CONTROL DEVICES FOR THE DURATION OF THE PROJECT, TO ENSURE EFFECTIVENESS, UNTIL ACCEPTED BY THE OWNER, AT NO ADDITIONAL EXPENSE TO THE OWNER. IF CONSTRUCTION ACTIVITIES CEASE DUE TO WEATHER
- AND ALL EROSION CONTROL DEVICES ARE MAINTAINED AND FUNCTIONAL DURING THOSE PERIODS 19. CONSTRUCTION EXIT - CONTRACTOR SHALL INSTALL TEMPORARY CONSTRUCTION EXIT PRIOR TO ANY EARTHWORK OPERATIONS, CONSTRUCTION EXIT SHALL BE LOCATED AS SHOWN. CONSTRUCTION EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD TO PUBLIC RIGHTS-OF-WAYS. ALL MATERIAL SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES OR SITE ONTO ADJACENT ROADWAYS SHALL BE REMOVED IMMEDIATELY

RELATED CAUSES, THEN THE CONTRACTOR WILL ENSURE THAT THE SITE IS PROPERLY STABILIZED

20. CONTRACTOR IS RESPONSIBLE FOR CLEANING OUT AND PROPER DISPOSAL OF ALL DEBRIS WITHIN THE STORM DRAINAGE STRUCTURES, INCLUDING SILT FROM FLUMES, PIPES, ETC., PRIOR TO

FROM THE ROADWAY.

- 21. ADDITIONAL PROTECTION IN ADDITION TO THE ABOVE, SHALL BE PROVIDED THAT WILL PREVENT SILT FROM LEAVING THE SITE DUE TO UNFORESEEN CONDITIONS OR ACCIDENTS.
- 22. STREAMS SHALL NOT BE USED AS TRANSPORTATION ROUTES FOR EQUIPMENT CROSSINGS MUST BE LIMITED TO ONE POINT. A STABILIZED PAD OF CLEAN AND PROPERTY SIZED SHOT ROCK MUST BE USED AT THE CROSSING POINT.
- 23. MEASURES SHOWN FOR SEDIMENT AND EROSION CONTROL REPRESENT THE MINIMUM ANTICIPATED ADDITIONAL PROTECTION SHALL BE PROVIDED AS NECESSARY THAT WILL PREVENT SEDIMENT FROM LEAVING THE SITE DUE TO UNFORESEEN CONDITIONS OR ACCIDENTS.
- 24. THE GRADING CONTRACTOR AND BUILDING CONTRACTOR WILL REFRAIN FROM DOING ANY WORK OUTSIDE OF THE DELINEATED LIMITS OF DISTURBANCE.
- 25. ROADS SHALL BE STABILIZED BY APPLYING STONE ONCE SUBGRADE ELEVATION IS ACHIEVED.
- 26. ALL SILT FENCE IS TO BE TYPE A EXCEPT WHERE SPECIFIED DIFFERENTLY.
- 27. EROSION CONTROL MATTING TO BE JUTE MESH(OR APPROVED EQUAL) AND INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- 28. THE EROSION PREVENTION AND SEDIMENT CONTROLS FOR THIS SITE HAVE BEEN DESIGNED FOR THE 5-YEAR 24 HOUR STORM IN ACCORDANCE WITH THE TENNESSEE GENERAL PERMIT FOR STORMWATER DISCHARGES FOR CONSTRUCTION ACTIVITIES (5.4.1.A)

6' MAX. O.C. (TYPE "A") & 4' MAX O.C. (TYPE "C")

OR AS PER T.D.E.C. STANDARDS

### PREVENT BACKWATER FROM EXITING DITCH. - D (1.0' MINIMUM) WEIR FLOW DEPTH BASED UPON 2yr/24hr STORM EVENT OR 5yr/24hr STORM EVENT. SECTION B - B **CHECK DAM** EDGE OF PUBLIC ROAD-50' (MIN.) <2% SLOPE ASTM D 448, SIZE NO. 1 STONE 6" DEPTH WITH GEOTEXTILE FABRIC TEMPORARY DRAINAGE PIPE WHERE NEEDED PLAN VIEW OF TEMPORARY CONSTRUCTION ROAD EXISTING NATURAL -GROUND 50' (MIN.) PUBLIC ROAD -ASTM D 448, SIZE NO. 1 STONE 3" UNDERCUT PRIOR $\overline{\ \ }$ 6" DEPTH WITH GEOTEXTILE FABRIC TO PLACEMENT OF MACHINED RIPRAP GEOTEXTILE FABRIC SHALL BE PLACED UNDER ENTIRE WIDTH OF RIPRAP TEMPORARY DRAINAGE -PIPE WHERE NEEDED

BASE OF

TRAPEZOIDAL DITCH

PLAN VIEW

BASE OF DITCH

# **CONSTRUCTION EXIT DETAIL**

## NOTES:

GEOTEXTILE FABRIC

TO EXTEND 3' BEYOND LIMITS OF RIPRAP ----

MACHINED RIPRAP (CLASS A-1) ----

TOP OF DITCH —

TOP OF CHECK DAM

AT EDGE OF DITCH —

FLOW LINE

SHALL BE PLACED UNDER

ENTIRE WIDTH OF RIPRAP.-

1. FILTER CLOTH SHALL MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATION FOR GEOTEXTILES AASHTO DESIGNATION: M288, SEDIMENT CONTROL, SELF SUPPORTED.

SECTION A-A

- 2. THE FILTER MATERIAL SHALL BE STAPLED TO THE STAKES. HEAVY DUTY WIRE STAPLES WITH 1/2 INCH WIDTH SHALL BE USED AND EVENLY SPACED WITH AT LEAST FOUR PER POST FOR SILT FENCES AND THREE PER POST FOR FILTER BARRIERS. FILTER MATERIAL SHALL NOT BE STAPLED TO EXISTING TREES.
- 3. MINIMUM 2"X 2" (NOMINAL) (1.5"X 1.5" ACTUAL) (2.25 SQ. IN.) HARDWOOD POST (OAK OR HICKORY) - LENGTH AS INDICATED MINIMUM 1.33 LB./FT. STEEL POST (STD. OR U SECTION.
- 4. WHEN STEEL POSTS ARE USED THEY SHALL HAVE A PROTECTION FOR FASTENING WIRE TO THEM. THE WIRE FASTENERS SHOULD BE EVENLY SPACED WITH AT LEAST FIVE PER POST.
- 5. BINDING WIRE OR TWINE SHALL REMAIN ON STRAW BALES.
- PLACE STRAW BALES ON DOWNSTREAM SIDE OF SILT FENCE AS REQUIRED.
- 7. STRAW BALES TO BE PLACED END TO END UP AGAINST THE SILT FENCE.

TYPE A SILT FENCE - THIS 36-INCH WIDE FILTER FABRIC SHOULD BE USED ON DEVELOPMENTS WHERE THE LIFE OF THE PROJECT IS SIX MONTHS

TYPE C SILT FENCE - TYPE C SILT FENCE IS 36-INCHES WIDE WITH WIRE REINFORCEMENT. THE WIRE REINFORCEMENT IS NECESSARY BECAUSE THIS FABRIC ALLOWS FOR ALMOST THREE TIMES THE FLOW RATE AS TYPE A SILT FENCE. TYPE C SILT FENCE SHOULD BE USED WHERE RUNOFF FLOWS OR VELOCITIES ARE PARTICULARLY HIGH OR WHERE SLOPES EXCEED A VERTICAL HEIGHT OF 10 FEET.

2:1 OR FLATTER -

S = DITCH SLOPE

TOE OF DITCH

L = THE DISTANCE SUCH THAT POINTS X

- BASE OF DITCH

BETWEEN CHECK DAMS

AND YARE OF EQUAL ELEVATION

FLOW LINE OF WEIR-

FLOW LINE OF

TOP OF DITCH

(NATURAL GROUND) -

FILL LOW AREAS ALONG TOP OF BANK TO

PROPOSED DITCH-

TOP OF CHECK DAM

D (DEPTH) | S (SLOPE) |L (LENGTH)|

1'-0" 4 % 25'

1'-0" 5 % 20'

1'-0" 6 % 17'

2'-0" 2 % 100'

2'-0" | 5 % | 40'

2'-0" | 6 % | 34'

2'-0" | 7 % | 28'

2'-0" 8 % 26'

2'-0" 9 % 22'

LEDGE OF WET STORAGE

PLAN VIEW

SMALLER CLEAN STONE-

FLOW LINE

- WET SEDIMENT STORAGE

(MIN. 67cy/acre)

LENGTH OF SEDIMENT TRAP = L

LENGTH OF SEDIMENT TRAP

PROFILE VIEW

SEDIMENT TRAP DETAIL (TDEC)

L = 3 X W (MINIMUM)

DRY SEDIMENT STORAGE-

3 % 33'

7 % 14'

8 % 13' 9 % 11'

1 % 200'

3 % | 66'

4 % 50'

AT EDGE OF DITCH

MACHINED RIPRAP

- GEOTEXTILE FABRIC SHALL

MACHINED RIPRAP SLOPE 3'.

EXTEND BEYOND TOE OF

─ 2:1 OR FLATTER

(CLASS A-1)

- CENTERLINE

L TOP OF DITCH (NATURAL GROUND)

TOP OF DITCH

- ROCK CHECK DAM

REDUCTION

(NATURAL GROUND)

FLOW -

PERMANENT SEEDING MIXTURES		
SEEDING DATES	GRASS SEED	PERCENTAGES
FEBRUARY 1 TO JULY 1	KENTUCKY 31 FESCUE	88%
	ENGLISH RYE	12%
JUNE 1 TO AUGUST 15	KENTUCKY 31 FESCUE	60%
	ENGLISH RYE	25%
	GERMAN MILLET	15%
AUGUST 1 TO DECEMBER 1	KENTUCKY 31 FESCUE	70%
	ENGLISH RYE	20%
	WHITE CLOVER	10%
DECEMBER 1 TO FEBRUARY 1	KENTUCKY 31 FESCUE	83%
	ENGLISH RYE	17%

### SOURCE TDOT STANDARDS SPECIFICATIONS

TEMPORARY SEEDING MIXTURES			
SEEDING DATES	GRASS SEED	PERCENTAGES	
JANUARY 1 TO MAY 1	ITALIAN RYE	50%	
	SUMMER OATS	50%	
MAY 1 TO JULY 15	SUDAN-SORGHURM	100%	
MAY 1 TO JULY 15	STARR MILLET	100%	
JULY 15 TO JANUARY 1	BALBOA RYE	67%	
	ITALIAN RYE	33%	
SOURCE TOOT STANDARDS SPECIFICATIONS			

## -DISTURBED AREA TURN ENDS UPSLOPE TO PREVENT RUNOFF AROUND SOCK. INSTALL FILTER SOCK OVERLAP JOINTS AND ALONG CONTOUR COVER W/ #57 STONE TYPICAL FILTER SOCK INSTALLATION

AT EDGE OF DITCH

SIDESLOPES

- 2:1 MAX EMBANKMENT

WIDTH 1.5' (MIN.)

INSTALL OUTLET DRAINS AT LOCATIONS

DIRECTED BY OWNERS REPRESENTATIVE.

OUTLET BEYOND LIMITS OF NEW FILL.

**OUTLET DRAIN** 

NOT TO SCALE

- TOP OF DITCH

(NATURAL GROUND)

- EDGE OF GEOTEXTILE

SHOWN ON PLAN AND AT WET AREAS AS

-18' VERTICAL HDPE GUYED

—PERFORATED OUTLET HOLES

#57 CRUSHED STONE

MIN. 4" ABOVE AND

BELOW PIPE

-FINAL GROUND SURFACE

**BLANKETS ARE** 

STAKES OR STAPLES

SPACING AND PATTERN -

1. STITCHING BLANKET SEAMS IS PREFERABLE TO

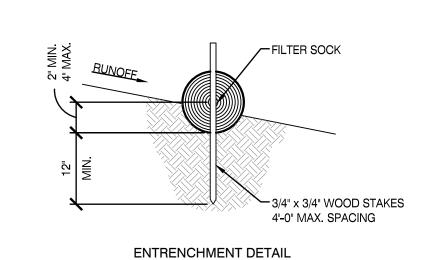
2. STAKING OR STAPLING LAYOUT SHALL CONFORM

OVERLAPPING BLANKET SEAMS.

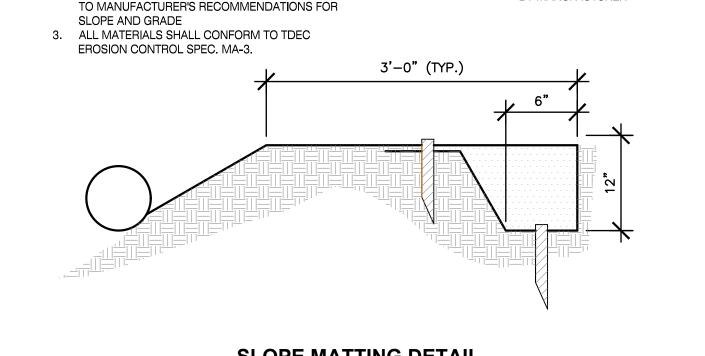
AT RECOMMENDED

USUALLY INSTALLED

VERTICALLY ON THE SLOPE -



# **FILTER SOCK DETAIL**



ANCHOR TRENCH -

3" TO 4" TYPICAL —

LONGITUDINAL A

FOR LONG SLOPE

SPLICE WITH GEOTEXTILE

STITCHING (PERFERABLE) OR BY OVERLAPPING.

GEOTEXTILE MAY BE NECESSARY

TO ALLEVIATE HYDROSTATIC

PRESSURES.

BY MANUFACTURER

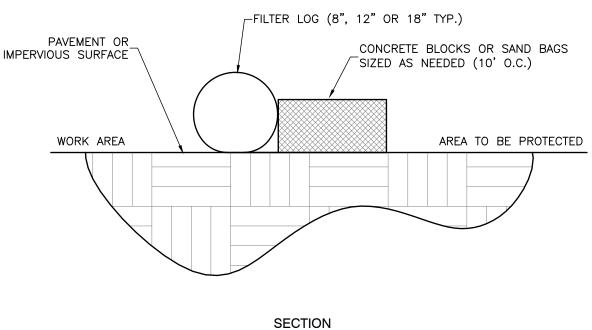
- TERMINAL TREATMENT OR

ANCHORING AS RECOMMENDED

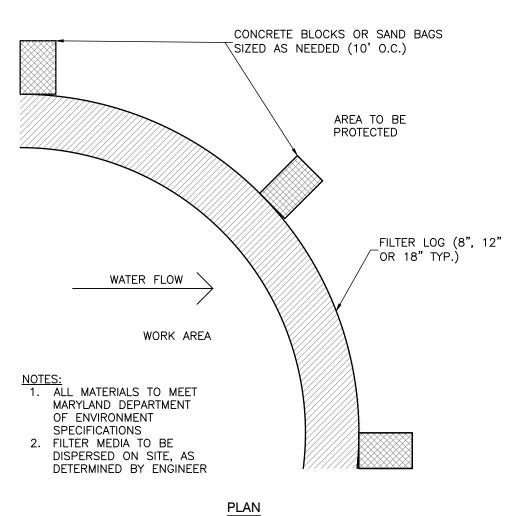
TRENCH MAY BE NEEDED

(MIN. 6" DEEP)

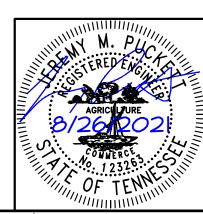
## **SLOPE MATTING DETAIL**

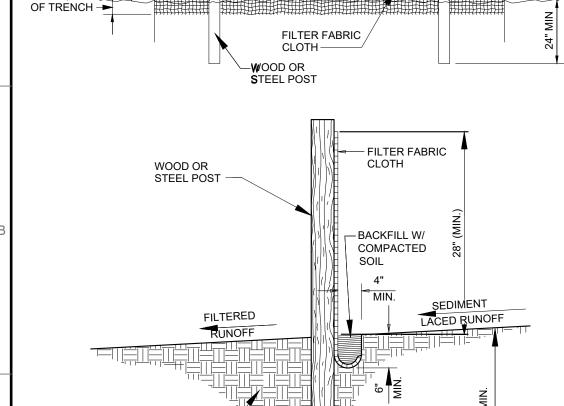


SECTION



FILTER LOG ON PAVEMENT DETAIL 0015





COMPACTED

TYPE "A" & TYPE "C" SILT FENCE

SILT FENCE BARRIER

**SEEDING SCHEDULE** 

**EXISTING** 

GROUNDLINE -

6" MIN., BOT.

En

 $\mathbf{m}$ 

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PREVENTION /

