

## TEMPORARY SEEDING MIXTURE:

THE SEEDING INFORMATION PROVIDED BELOW IS FOR GENERAL COMPLIANCE WITH EROSION & SEDIMENT CONTROL REQUIREMENTS. REFER TO V&S&C STD. SPEC. 3.31 FOR ADDITIONAL TECHNICAL REQUIREMENTS.

**FERTILIZER:** SHALL MEET REQUIREMENTS OF FEDERAL SPECIFICATION OF 241. PROVIDE FERTILIZER THAT IS COMPLETE, INORGANIC, UNIFORM IN COMPOSITION, AND SUITABLE FOR APPLICATION WITH APPROVED EQUIPMENT. NEVER APPLY MORE THAN 1 POUND OF WATER SOLUBLE NITROGEN PER 1,000 SQUARE FEET WITHIN A 30 DAY PERIOD. APPLY 450 LBS/ACRE (10 LBS/1,000 SQUARE FEET). PROPORTIONS OF FERTILIZER NUTRIENTS SHALL BE THE FOLLOWING:

10 LBS. OF ACTUAL NITROGEN  
10 LBS. OF ACTUAL PHOSPHATE  
10 LBS. OF ACTUAL POTASH

TEMPORARY SEED MIXTURE: SHALL HAVE THE FOLLOWING CHARACTERISTICS:

SEED		
APPLICATION DATES	SPECIES	APPLICATION RATES
SEPT. 1 - FEB. 15	50/50 MIX OF ANNUAL RYEGRASS (LOLIUM MULTIFLORUM) & CEREAL (WINTER) RYE (SECALE CEREALE)	50-100 (LBS/ACRE)
FEB. 16 - APR. 30	ANNUAL RYEGRASS (LOLIUM MULTI-FLOSUM)	60-100 (LBS/ACRE)
MAY 1 - AUG. 31	GERMAN MILLET	50 (LBS/ACRE)

**LIME:** SHALL BE GROUND AGRICULTURAL GRADE LIMESTONE CONTAINING NOT LESS THAN 85 PERCENT CALCIUM AND MAGNESIUM CARBONATES. FINENESS SHALL BE SUCH THAT 100 PERCENT WILL PASS A NO. 20 SIEVE, AND NOT LESS THAN 50 PERCENT WILL PASS A NO. 100 SIEVE. BURNED LIME OR HYDRATED LIME MAY BE SUBSTITUTED IN EQUIVALENT CARBONATES, IF REQUESTED. APPLY 2 TONS/ACRE (90 POUNDS PER 1,000 SQUARE FEET) OR AS REQUIRED TO ADJUST SOIL pH TO 6.25-6.5.

**MULCH:** TYPE I MULCH SHALL BE CURLEX BLANKET EROSION CONTROL FABRIC BLANKET. THE FABRIC SHALL BE MANUFACTURED OF MATERIALS WHICH DEGRADE IN 6 TO 8 MONTHS UNDER OUTDOOR EXPOSURE. TYPE II MULCH COMPOSED OF THRESHED STRAW OF CEREAL GRAIN, PINE NEEDLES, OR WOOD FIBER SHALL BE FREE OF OBJECTIONABLE WEED SEEDS OR OTHER HARMFUL MATERIAL.

**BINDER:** SYNTHETIC MULCH BINDER FOR USE WITH TYPE II MULCH: CURASOL, DCA 70, PETROSET, OR TERRA TACK.

## TEMPORARY SEEDING MIXTURE

(STD. & SPEC. 3.31-B)

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## PERMANENT SEEDING MIXTURE:

THE SEEDING INFORMATION PROVIDED BELOW IS FOR GENERAL COMPLIANCE WITH EROSION & SEDIMENT CONTROL REQUIREMENTS. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL TECHNICAL REQUIREMENTS.

**LIME:** AS REQUIRED BY SOIL TEST TO ADJUST THE pH TO BETWEEN 6.25 AND 6.5. AGRICULTURAL LIMESTONE CONTAINING MINIMUM OF 85 PERCENT CARBONATES. MINIMUM GRADATION: 100 PERCENT PASSING A 10 MESH SIEVE; 98 PERCENT A 20 MESH SIEVE; 55 PERCENT A 60 MESH SIEVE; AND 40 PERCENT A 100 MESH SIEVE.

**FERTILIZER:** SHALL BE GRANULAR, OR PELLETED; COMPLETE COMMERCIAL TYPE WITH 50 PERCENT OF THE NITROGEN IN SLOWLY AVAILABLE FORM. ALL FERTILIZER SHALL BE A COMMERCIAL BALANCED FORMULA WITH AT BEST 25 PERCENT ORGANIC MATERIAL, AND SHALL CONFORM TO APPLICABLE STATE FERTILIZER LAWS. IT SHALL BE UNIFORM IN COMPOSITION, IN GRANULAR FORM DRY AND FREE-FLOWING. NEVER APPLY MORE THAN 1 POUND OF WATER SOLUBLE NITROGEN PER 1,000 SQUARE FEET WITHIN A 30 DAY PERIOD.

**SEED:** ALL PERMANENT GRASS SEED SHALL BE MANUFACTURED BY A SEED COMPANY THAT CAN GUARANTEE ALL SEED SHALL BE FREE OF NOXIOUS WEED SEEDS, CLEANED GRADE A RECENT CROP SEED. SEED COMPANY SHALL PROVIDE GUARANTEED GERMINATION OF 80 PERCENT.

**MULCH:** SHALL BE CLEAN WHEAT OR BARLEY STRAW, FREE FROM NOXIOUS WEED SEED AND OTHER HARMFUL MATERIAL. COMMERCIAL PRODUCTS MAY BE USED WITH APPROVAL.

**BINDER:** SHALL BE FIBER MULCH BASED TACK BINDER SUCH AS "ENVIRO-BLEND" BY CONWED OR EQUAL. APPLY AT 25 LBS. PER THOUSAND SQUARE FEET ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

REFER TO EROSION & SEDIMENT CONTROL TECHNICAL BULLETIN NO. 4- "NUTRIENT MANAGEMENT FOR DEVELOPED SITES" FOR ADDITIONAL INFORMATION AND REQUIREMENTS

## PERMANENT SEEDING MIXTURE

(STD. & SPEC. 3.32)

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TABLE 3.32-C  
(Revised June 2003)  
PERMANENT SEEDING SPECIFICATIONS FOR APPALACHIAN/MOUNTAIN AREA

LAND USE	SEED <sup>1</sup>	APPLICATION RATES
Minimum Care Lawn (Commercial or Residential)	Tall Fescue <sup>1</sup> Perennial Ryegrass <sup>2</sup> Kentucky Bluegrass <sup>1</sup>	90-100% 0-10% 0-10% TOTAL: 200-250 lbs.
High-Maintenance Lawn	Minimum of three (3) up to five (5) varieties of Kentucky Bluegrass from approved list for use in Virginia <sup>1</sup>	TOTAL: 125 lbs.
General Slope (3:1 or less)	Tall Fescue <sup>1</sup> Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop <sup>3</sup>	128 lbs. 2 lbs. 20 lbs. TOTAL: 150 lbs.
Low-Maintenance Slope (Steeper than 3:1)	Tall Fescue <sup>1</sup> Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop <sup>3</sup> Crownvetch <sup>4</sup>	108 lbs. 2 lbs. 20 lbs. 20 lbs. TOTAL: 150 lbs.

1- When selecting varieties of turfgrass, use the Virginia Crop Improvement Association (VCIA) recommended turfgrass variety list. Quality seed will bear a label indicating that they are approved by VCIA. A current turfgrass variety list is available at the local County Extension office or through VCIA at 804-746-4884 or at <http://sudan.ces.vt.edu/html/Turf/turfpublications/publications2.html>

2- Perennial Ryegrass will germinate faster and at lower soil temperatures than Tall Fescues, thereby providing cover and erosion resistance for seedbed.

3- Use seasonal nurse crop in accordance with seeding dates as stated below:

March, April - May 15<sup>th</sup> ..... Annual Rye  
May 16<sup>th</sup> - August 15<sup>th</sup> ..... Foxtail Millet  
August 16<sup>th</sup> - September, October ..... Annual Rye  
November - February ..... Winter Rye

4- All legume seed must be properly inoculated. If Flatpea is used, increase to 30 lbs/acre. If Weeping Lovegrass is used, include in any slope or low maintenance mixture during warmer seeding periods, increase to 30-40 lbs/acre.

### FERTILIZER & LIME

- Apply 10-20-10 fertilizer at a rate of 500 lbs. / acre (or 12 lbs. / 1,000 sq. ft.)
- Apply Pulverized Agricultural Limestone at a rate of 2 tons/acre (or 90 lbs. / 1,000 sq. ft.)

### NOTE:

- A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.
- Incorporate the lime and fertilizer into the top 4 - 6 inches of the soil by disking or by other means.
- When applying Slowly Available Nitrogen, use rates available in Erosion & Sediment Control Technical Bulletin #4, 2003 Nutrient Management for Developed Sites at <http://www.dcr.state.va.us/sw/e&s.htm#pubs>

## PERMANENT SEEDING MIXTURE

(STD. & SPEC. 3.32C)

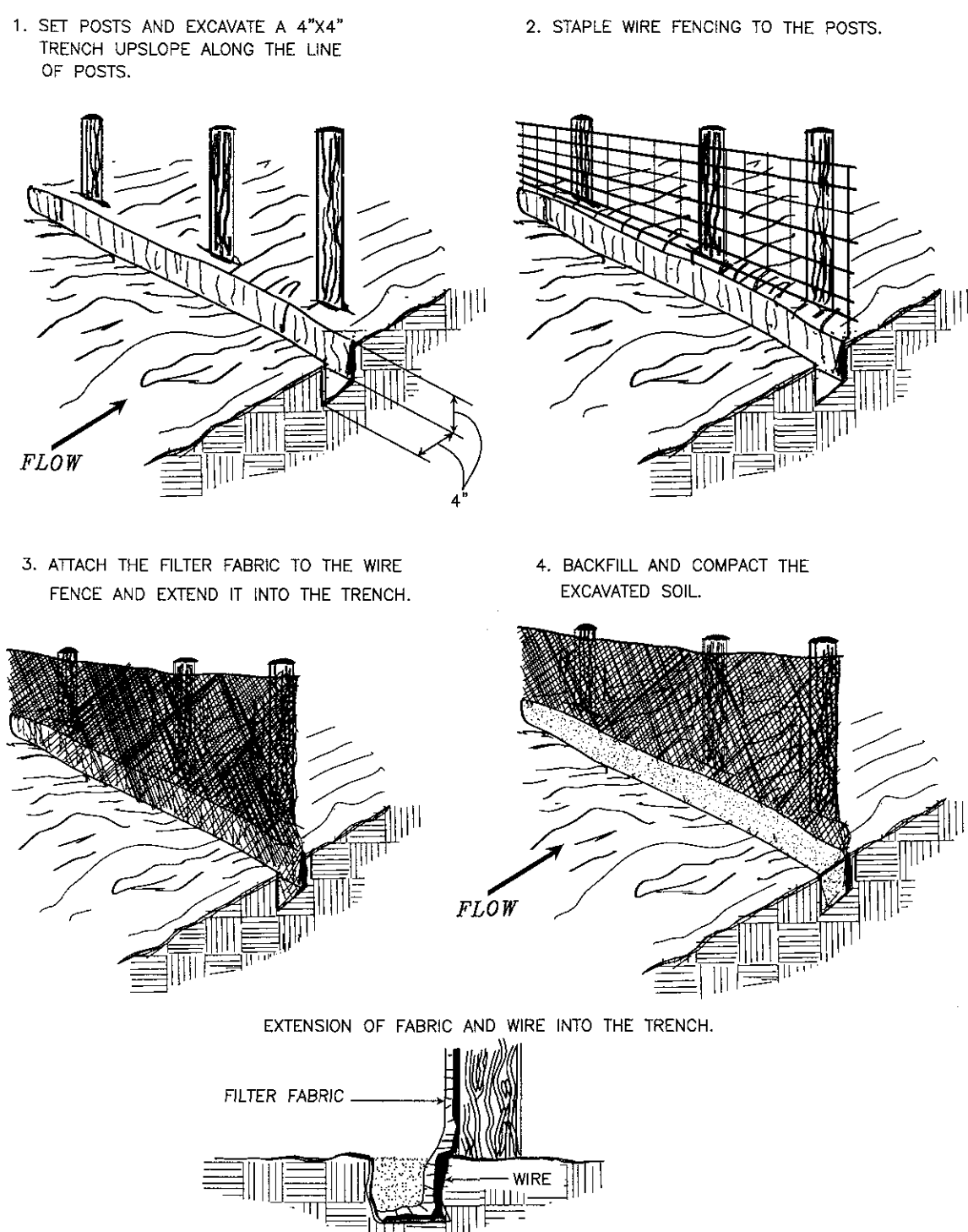
PS

M&C FORM #107

## EROSION & SEDIMENT CONTROL BOND COST ESTIMATE

PROJECT:	THE VILLAGE AT TINKER CREEK - PHASE IIIB	UNIT	COMM #	1966-P4	
	T.M. #: 027.20-01-39.02-0000				
LOCATION:	ROANOKE COUNTY, VA		DATE:	10/10/2017	
BY:	MATTHEW & CRAIG		CHKD BY:	WTA	
ITEM NO.	DESCRIPTION		QTY	UNIT	TOTAL (1)
3.02	CONSTRUCTION ENTRANCE (CE)	EA	1	\$1,200.00	\$1,200
3.03	CONSTRUCTION ROAD STABILIZATION (CRS)	SF		\$0.35	
3.05	SILT FENCE (SF)	LF	408	\$4.00	\$1,632
3.05	SUPER SILT FENCE (SSF)	LF		\$6.00	
3.07	INLET PROTECTION (IP)	EA	4	\$150.00	\$600
3.09	DIVERSION DIKE (DD)/(BM)	LF	755	\$5.00	\$3,775
3.11	RIGHT-OF-WAY DIVERSION (RWD)	LF		\$10.00	
3.13	SEDIMENT TRAP (ST) :	-	-	-	-
	LESS THAN 1 ACRE DRAINAGE AREA	EA		\$1,500.00	
	1 - 3 ACRE DRAINAGE AREA	EA	1	\$3,000.00	\$3,000
3.14	SEDIMENT BASIN (SB) :	-	-	-	-
	3 - 6 ACRE DRAINAGE AREA	EA		\$5,000.00	
3.15	TEMPORARY CULVERT	LF	20	\$10.00	\$200
3.15	TEMPORARY SLOPE DRAIN (TSD)	LF		\$15.00	
3.17	STORMWATER CONVEYANCE CHANNEL:	-	-	-	-
	- EC-3 / GRASS	SY		\$15.00	
	- RIP-RAP	SY		\$60.00	
3.18	OUTLET PROTECTION (OP)	EA		\$250.00	
3.19	RIP RAP BERM (RR)	SY		\$30.00	
3.20	ROCK CHECK DAM (CD)	EA		\$100.00	
3.21	LEVEL SPREADER (LS)	EA		\$150.00	
3.29	SURFACE RUFFENING (SR)	AC		\$500.00	
3.31	TEMPORARY SEEDING (TS)	SF	118,050	\$0.04	\$4,722
3.32	PERMANENT SEEDING WITH STRAW (PS)	SF	96,365	\$0.05	\$4,818
3.36	SOIL STABILIZATION BLANKETS AND MATTINGS	SF	8,499	\$0.25	\$2,125
3.38	TREE PRESERVATION & PROTECTION (TP)	EA		\$100.00	
-	CONCRETE WASH-OUT FACILITY	LS		\$600.00	
-	MAINTENANCE (10%)	LS	1	\$2,207.20	\$2,207
(1) VALUES IN THE "TOTAL" COLUMN HAVE BEEN ROUNDED TO THE NEAREST DOLLAR.			SUB-TOTAL = \$24,279		
			10% CONTINGENCY = \$2,428		
			GRAND TOTAL = \$26,707		

## CONSTRUCTION OF A SILT FENCE (WITH WIRE SUPPORT)

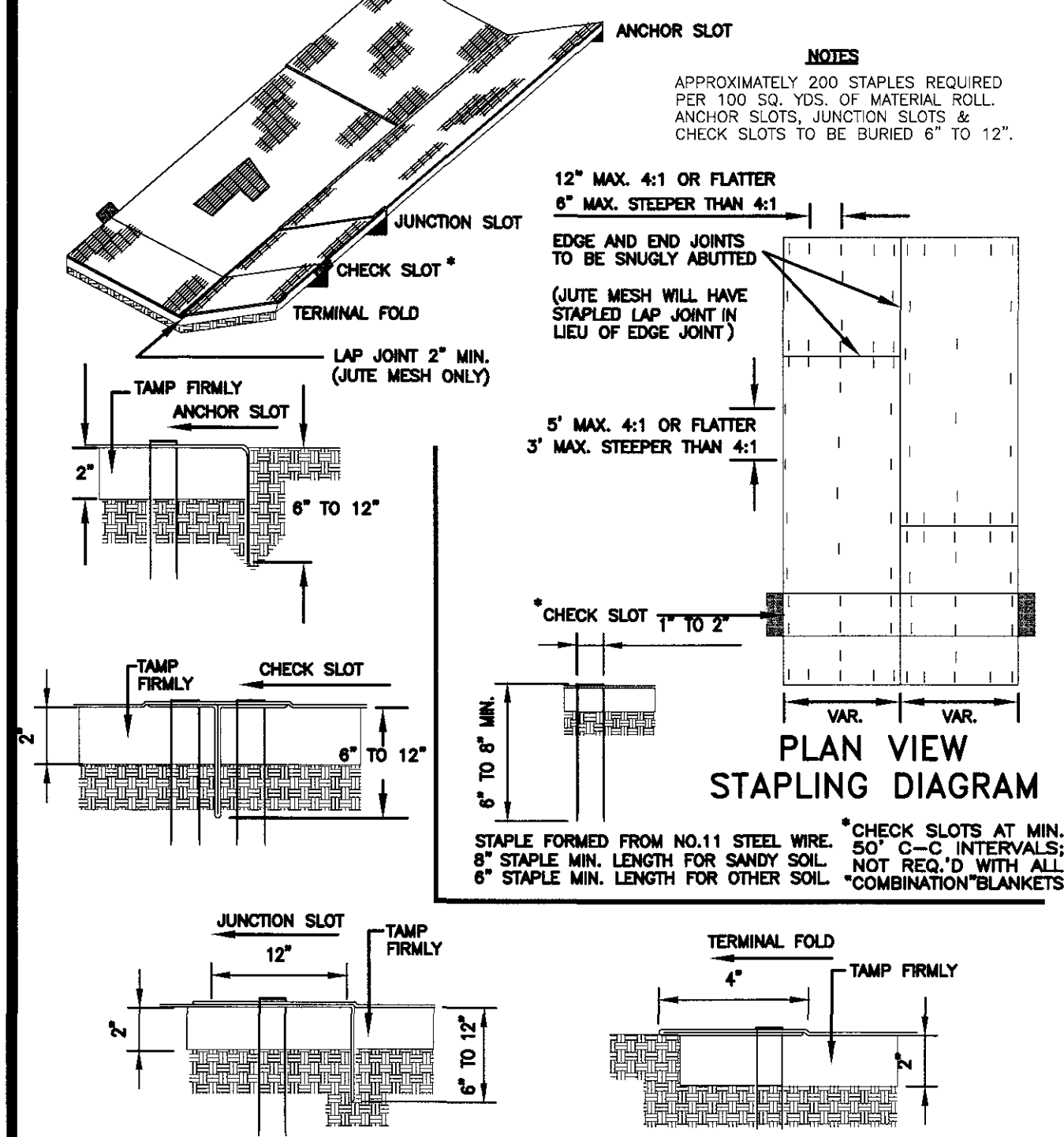


## SUPER SILT FENCE

(STD. & SPEC. 3.05)

SSF

## TYPICAL TREATMENT - 1 (SOIL STABILIZATION BLANKET) INSTALLATION CRITERIA

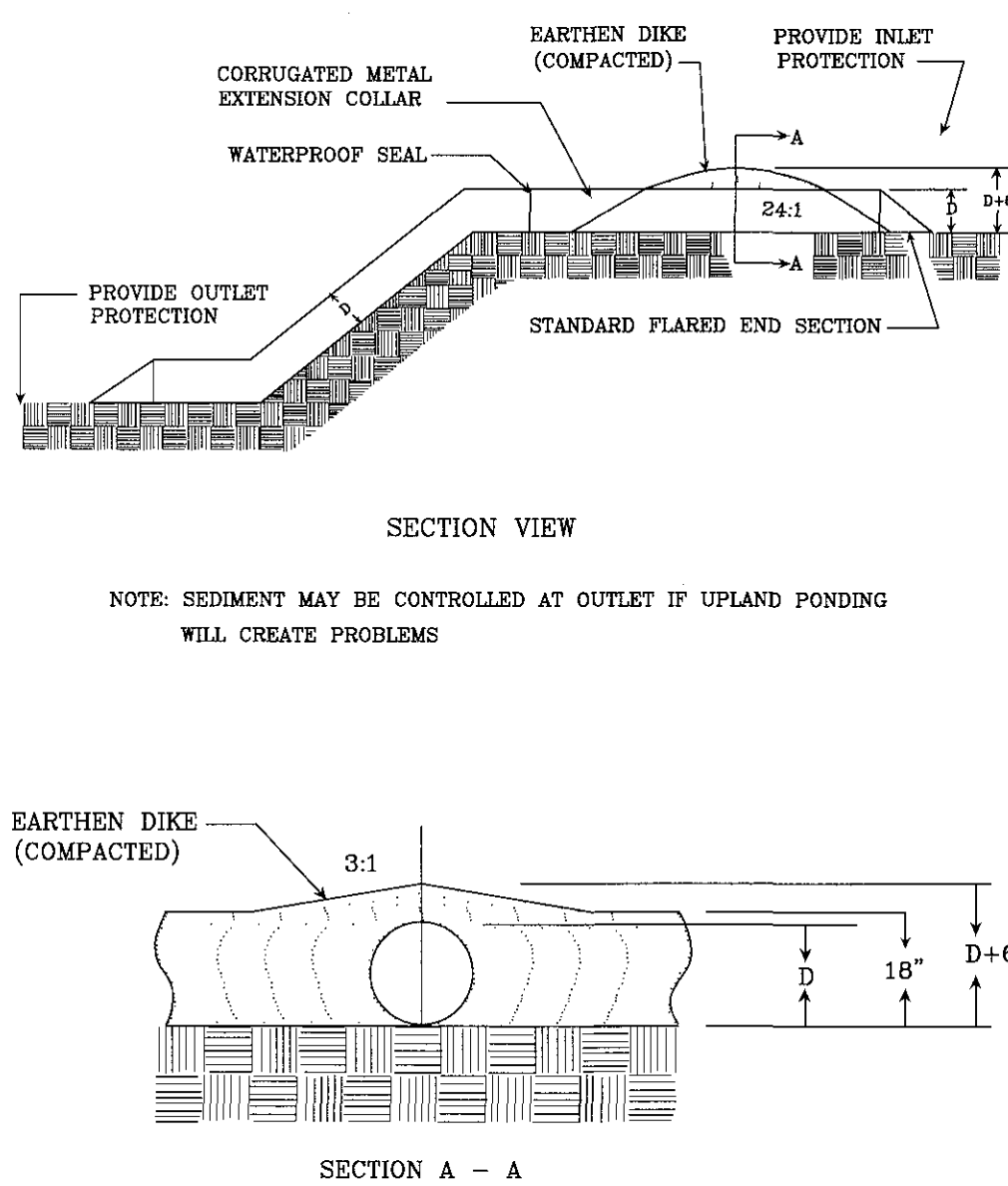


## SOIL STABILIZATION BLANKETS AND MATTING

(STD. & SPEC. 3.36)

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## TEMPORARY SLOPE DRAIN

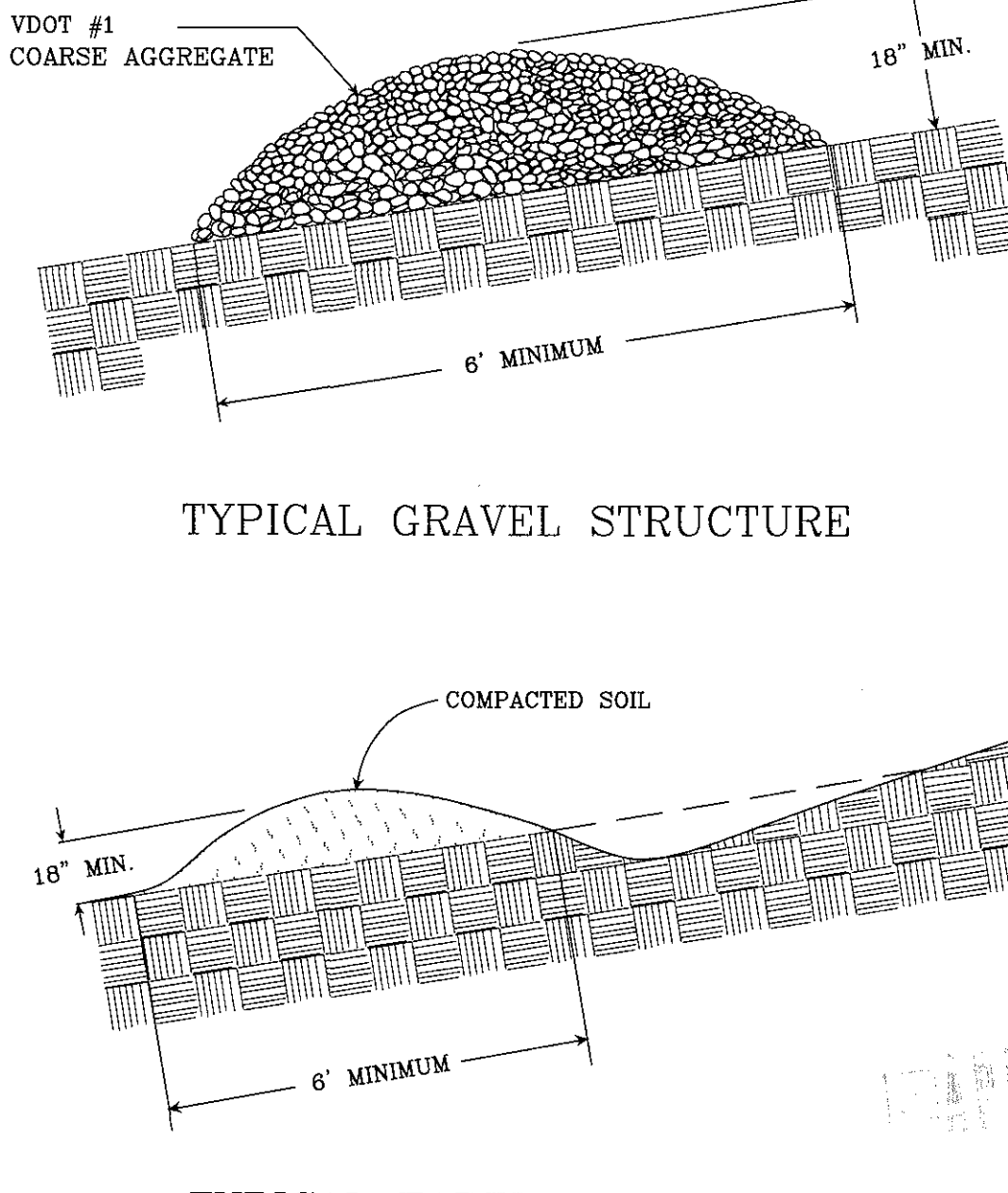


## TEMPORARY SLOPE DRAIN

(STD. & SPEC. 3.15)

TSD

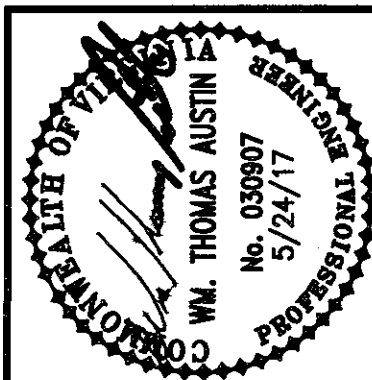
## TEMPORARY RIGHT-OF-WAY DIVERSIONS



## TEMPORARY RIGHT-OF-WAY DIVERSION DIKE

(STD. & SPEC. 3.11)

RWD



Date	10/06/17
Revisions	
0	RESPONSE TO 1ST REVIEW COMMENTS

Issue Date:	MAY 24, 2017
Drawn By:	ARB
Designed By:	ARB
Checked By:	WTA
Date:	5/24/17

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THE VILLAGE AT TINKER CREEK - PHASE IIIB  
EROSION & SEDIMENT CONTROL  
DETAILS  
ROANOKE COUNTY, VIRGINIA

Vertical Scale:  
N/A

Horizontal Scale:  
N/A

Commission Number:  
1966-P4

Sheet No.:

EC-5