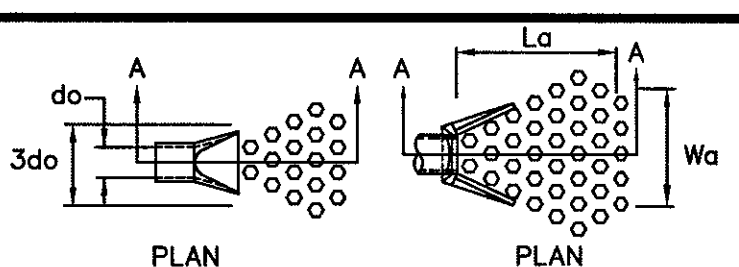


E&SC CONSTRUCTION SEQUENCE:

1. A CONSTRUCTION ENTRANCE IS NOT PROPOSED AS PART OF THIS DEVELOPMENT. CONSTRUCTION VEHICLES WILL ACCESS THE SITE AT THE END OF RUSTON STREET. THE G.C. SHALL PAY SPECIAL ATTENTION TO CONSTRUCTION VEHICLES EXITING THE SITE TO ENSURE THAT NO SEDIMENT IS TRANSPORTED ON THE EXISTING RUSTON STREET PAVEMENT.
2. SILT FENCE AND ANY PERIMETER CONSTRUCTION FENCING SHALL BE INSTALLED AT THIS TIME TO PREVENT SEDIMENT LADEN RUNOFF FROM EXITING THE SITE.
3. THE PROPOSED CULVERT SHALL BE INSTALLED AT THIS TIME. CULVERT INLET PROTECTION AND OUTLET PROTECTION SHALL BE PROVIDED WHEN THE CULVERT IS INSTALLED.
4. GRADING OPERATIONS AND UTILITY CONSTRUCTION SHALL TAKE PLACE AT THIS TIME. BLANKET MATTING SHALL BE PROVIDED AS SHOWN FOR ANY SLOPES STEEPER THAN 3:1.
5. PERMANENT SEEDING OR MULCHING SHALL BE APPLIED TO ALL LANDSCAPE AREAS AND AREAS NOT RECEIVING HARDSCAPE ELEMENTS WHEN THEY REACH FINAL GRADE. PAVEMENT SHALL ALSO BE INSTALLED AS SHOWN TO EXTEND RUSTON STREET WHEN FINAL GRADE IS ACHIEVED.
6. AFTER STABILIZATION OF ALL UPSTREAM AREAS, THE CULVERT INLET PROTECTION AND SILT FENCE MAY BE REMOVED WITH CITY OF ROANOKE INSPECTOR APPROVAL.
7. CITY OF ROANOKE SHALL INSPECT/APPROVE REMOVAL OF REQUIRED MEASURES PRIOR TO ESC MEASURE REMOVAL.

E&SC MEASURES

3.05	SILT FENCE	SF
3.08	CULVERT INLET PROTECTION	CIP
3.18	OUTLET PROTECTION	OP
3.31	TEMPORARY SEEDING	TS
3.32	PERMANENT SEEDING	PS
3.35	MULCHING	MU
3.36	SOIL STABILIZATION BLANKETS & MATTING	B/M

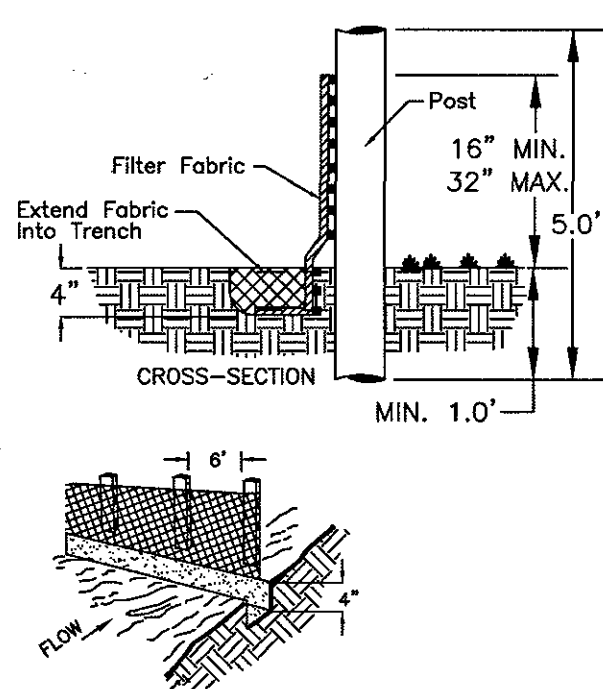


PIPE OUTLET TO FLAT AREA WITH NO DEFINED CHANNEL
PIPE OUTLET TO WELL-DRAINED CHANNEL

- NOTES:
1. APRON LINING MAY BE RIP-RAP, GROUTED RIP-RAP, OR CONCRETE.
 2. L_0 IS THE LENGTH OF THE RIP-RAP APRON AS CALCULATED USING PLATES 1.36d AND 1.36e.
 3. $d = 1.5$ TIMES THE MAXIMUM STONE DIAMETER, BUT NOT LESS THAN 6".

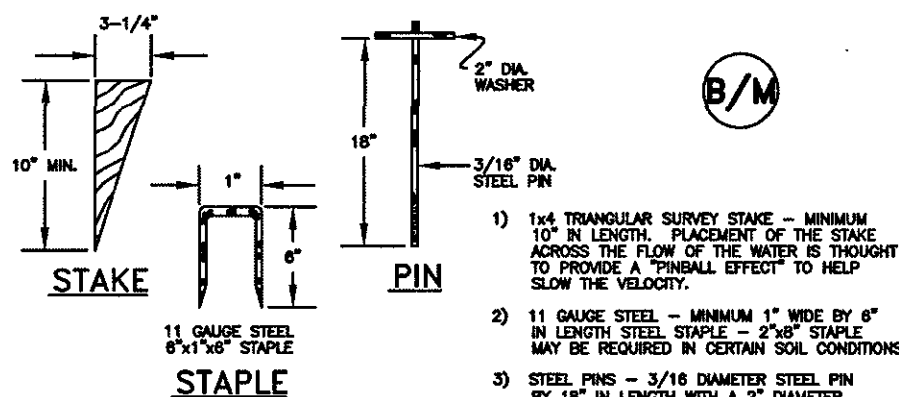
DRIVEWAY PIPE:
 $L=9'$
 $W=10.25'$
 $3D=3.75'$
CLASS A1 RIPRAP (MIN. 6" DIA.)

OP OUTLET PROTECTION



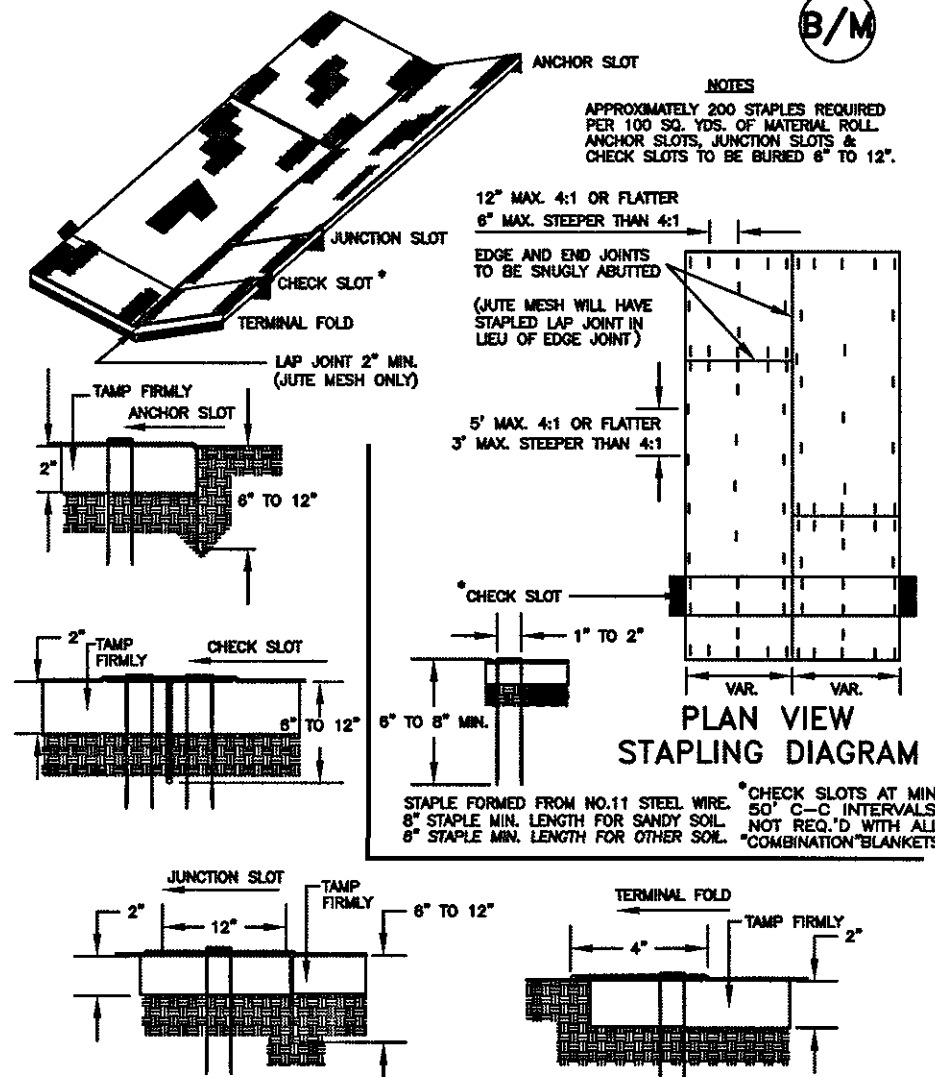
SF CONSTRUCTION OF A SILT FENCE
EROSION AND SEDIMENT CONTROL STANDARD - 3.05

STAKES, STAPLES, & PINS FOR INSTALLATION OF TREATMENT - 2 SOIL STABILIZATION MATTING



SOURCE: PRODUCT LITERATURE FROM GREENSTREAK, INC. PLATE: 3.36-3

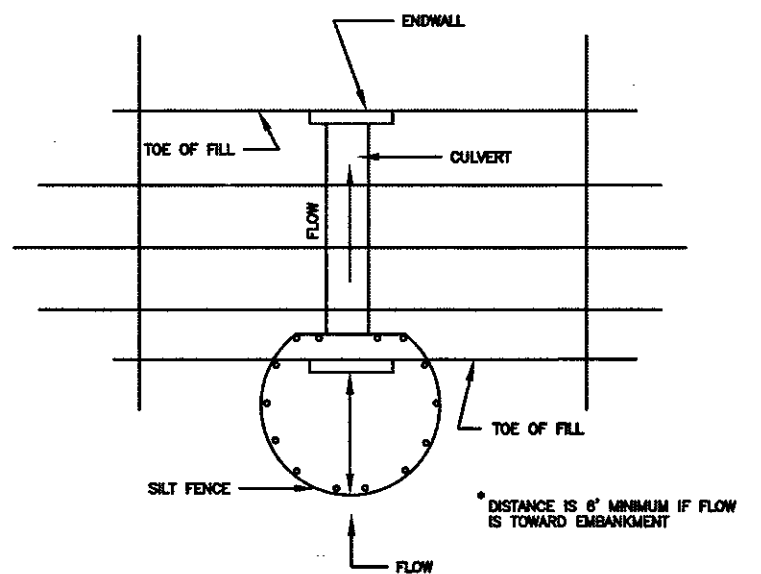
TYPICAL TREATMENT - 1 (SOIL STABILIZATION BLANKET) INSTALLATION CRITERIA



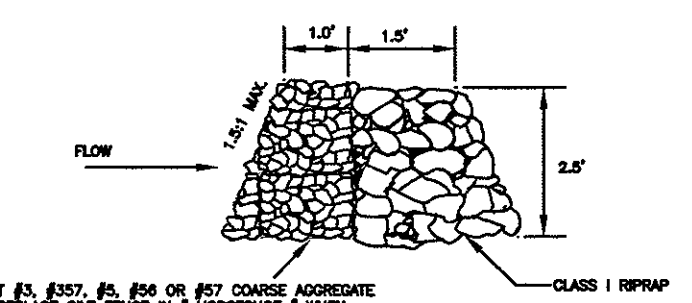
SOURCE: VDOT ROAD AND BRIDGE STANDARDS PLATE: 3.56-2

B/M BLANKET MATTING

SILT FENCE CULVERT INLET PROTECTION



* OPTIONAL STONE COMBINATION



SOURCE: ADAPTED FROM VDOT Standard Sheets and Va. DSRG PLATE: 3.08-1

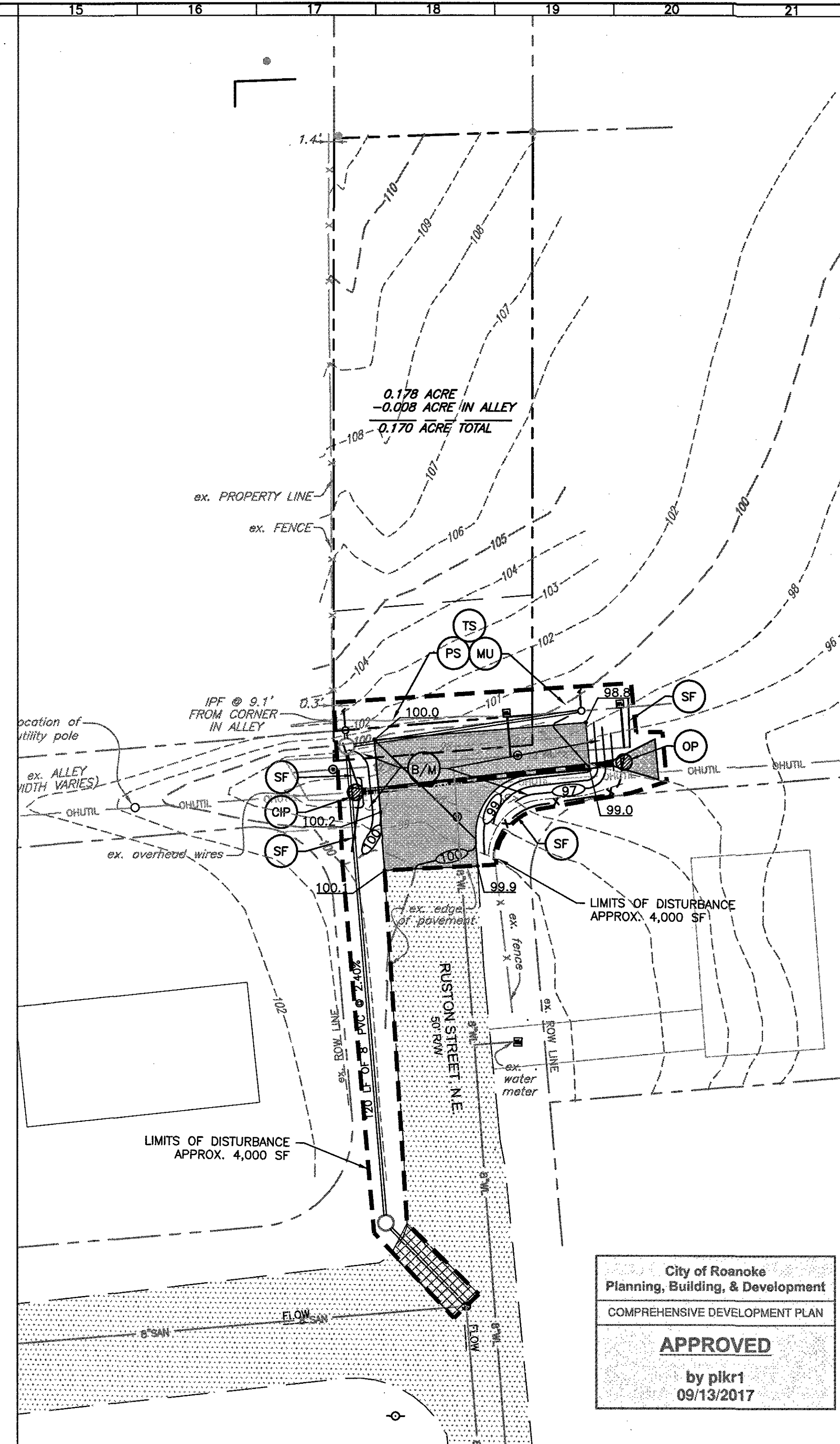
TABLE 3.31-B (Revised June 2003) TEMPORARY SEEDING SPECIFICATIONS QUICK REFERENCE FOR ALL REGIONS		
APPLICATION DATES	SPECIES	APPLICATION RATES
Sept. 1 - Feb. 15	50/50 Mix of Annual Ryegrass (olium multi-florum) and Cereal (Winter) Rye (Secale cereale)	50 -100 (lb/acre)
Feb. 16 - Apr. 30	Annual Ryegrass (olium multi-florum)	50 - 100 (lb/acre)
May 1 - Aug. 31	German Millet	50 (lb/acre)
FERTILIZER & LIME		
• Apply 10-10-10 fertilizer at a rate of 450 lbs./acre (or 10 lbs./1,000 sq. ft.) • Apply Pulverized Agricultural Limestone at a rate of 2 tons/acre (or 90 lbs./1,000 sq. ft.)		
NOTE: 1. A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site. 2. Incorporate the lime and fertilizer into the top 4 - 6 inches of the soil by disking or by other means. 3. When applying Slowly Available Nitrogen, use rates available in Erosion & Sediment Control Technical Bulletin # 4, 2003 Nutrient Management for Development Sites at http://www.dcr.state.va.us/esw/esb.htm#pubs		

TABLE 3.32-C (Revised June 2003) PERMANENT SEEDING SPECIFICATIONS FOR APPALACHIAN/MOUNTAIN AREA		
LAND USE	SPECIES	APPLICATION RATES
Minimum Care Lawn (Commercial or Residential)	Tall Fescue Perennial Ryegrass Kentucky Bluegrass	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	TOTAL: 125 lbs.
General Slope (3:1 or less)	Tall Fescue Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop	125 lbs. 2 lbs. 20 lbs. TOTAL: 150 lbs.
Low-Maintenance Slope (Steeper than 3:1)	Tall Fescue Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop Crownvetch	105 lbs. 2 lbs. 20 lbs. 20 lbs. TOTAL: 150 lbs.
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 Development Sites at http://www.dcr.state.va.us/esw/esb.htm#pubs		

Erosion & Sediment Control Technical Bulletin No. 4 Nutrient Management for Development Sites

C. When applying maintenance fertilizer on established sod.

Pounds of nitrogen per 1,000 sq. ft. if the fertilizer is less than 50 percent WIN				
Month	Tall Fescue Perennial Rye	Kentucky Bluegrass	Bermudagrass	Zoysiagrass
September	1	1	0	0
October	1	1	0	0
Early November	0	0	0	0
April	0	0	0	0
May	0-0.5	0-0.05	1	1
June	0	0	1	0
July/August	0	0	0	1
Yearly Lbs. N/1000 sq. ft.	2.5	2.5	2	2
Pounds of nitrogen per 1,000 sq. ft. if the fertilizer is more than 50 percent WIN				
Month	Tall Fescue Perennial Rye	Kentucky Bluegrass	Bermudagrass	Zoysiagrass
August 15	1.5	1.5	0	0
October 1	1.5	1.5	0	0
April	0	0	1.5	1.5
May 15	0	0	0	0
June	0	0	1.5	1.5
Yearly Lbs. N/1000 sq. ft.	3	3	3	3



City of Roanoke
Planning, Building, & Development
COMPREHENSIVE DEVELOPMENT PLAN
APPROVED
by pikr1
09/13/2017

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COMMONWEALTH OF VIRGINIA
CHRISTOPHER P. BURNS
Lic. No. 047338
5/5/17
PROFESSIONAL ENGINEER

RUSTON STREET IMPROVEMENTS
3429 RUSTON STREET N.E.
ESC PLAN

DRAWN BY LAR
DESIGNED BY BTC
CHECKED BY CPB
DATE 3/9/2017
SCALE 1"=20'

REVISIONS:
4/18/2017
5/5/2017

SHEET NO.
C3
JOB NO. 04170009.00