EROSION CONTROL NARRATIVE

ESIDENTIAL SUBDIVISION LOCATED ON BEAVER CASTLE ROAD. APPROXIMATELY 25.70 AC. OF LAND STURBANCE WILL OCCUR DURING THE CONSTRUCTION OF THIS SUBDIVISION. THE LAND DISTURBANCE WILL INCLUDE CUT AND FILL GRADING ACTIVITIES, AND SOME CLEARING. POST-DEVELOPED, THE SITE WILL CONSIST OF APPROXIMATELY 14% IMPERVIOUS SURFACES.

S MOSTLY WOODED. THE SLOPES RANGE FROM 0.80% TO APPROXIMATELY 50%. CRITICAL SLOPES ARE OUTLINED ON SHEETS C2.0-C2.2 FOR THE BENEFIT OF THE CONTRACTORS AND MACHINE OPERATORS. LIMITS OF CLEARING WILL BE STAKED BY A SURVEY TEAM TO PROTECT AREAS THAT ARE NOT TO BE DISTURBED.

CREEK THE EAST, SINGLE FAMILY RESIDENCES TO THE SOUTH, AND A VACANT LOT TO THE NORTH ROAD AND OFFSITE SANITARY SEWER. ALL OFFISITE CONSTRUCTION WILL BE WITHIN EXISTING RIGH PERMITS FROM THE PROPOER REGULATORY AUTHORITIES. PROVIDE VOOT PERMITS TO THE COUNTY FOR VERIFICATION BEFORE BEGINNING CONSTRUCTION ON BEAVER CASTLE ROAD.

THE EROSION FACTORS ARE LISTED THERE AS WELL. STEEPLY SLOPED AREAS NEAR WATERS OF THE U.S. AND WETLANDS CONSIST OF HIGHLY ERODIBLE SOILS.

CRITICAL AREAS: RPA, WETLANDS AND WATERS OF THE US ARE LABELED ON SHEETS C2.1, C2 C4.0 AND C4.1. AREAS OF STEEP SLOPES HAVE BEEN OUTLINED ON SHEETS C2.0—C2.2 FOR THE BENEFIT OF THE CONTRACTORS AND MACHINE OPERATORS.

ACCORDANCE WITH TABLE 3.32-D OFF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK A OUTLET PROTECTION AND PLUNGE POOLS AT CRITICAL OUTFALLS WILL ALSO SERVE AS PERMANENT STABILIZATION.

THROUGH THE USE OF SEDIMENT BASINS AND SILT TRAPS.

COUNTY AND STATE OFFICIALS FOR REVIEW.

TEMPORARY DIVERSION DITCH

NO SCALE

EROSION CONTROL GENERAL NOTES

1. CONTACT THE PRINCE GEORGE DEPT. OF INSPECTIONS & CODE COMPLIANC

2. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSIO ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE PRINCE GEORGE COUNTY ORDINANCE INCLUDING THE VIRGINIA EROSION AND SEDIMEN CONTROL HANDBOOK AND VIRGINIA REGULATIONS 4VAC50-30 EROSION AND SEDIMENT CONTROL REGULATIONS.

THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRECONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION. 4. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR

TO OR AS THE FIRST STEP IN CLEARING.

5. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE

MAINTAINED ON THE SITE AT ALL TIMES. INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BOR-EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE

PLAN APPROVING AUTHORITY. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMEN-

TATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY. SURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.

9. DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CON-TROL DEVICES SHALL BE MADE IMMEDIATELY.

TO DENUDED AREAS THA MAY NOT BE AT FINAL GRADE BUT WILL REMAIN

BEEN TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE.

MOVEMENT OF DUST FROM EXPOSED SOILS WHICH MAY PRESENT A HEALTH HAZARD

TRAFFIC SAFETY PROBLEM, OR HARM ANIMAL OR PLANT LIFE

BLOCK AND GRAVEL CURB INLET

SEDIMENT FILTER

TRAPS, AND PERIMETER SILT FENCE AS PER PLAN. FOR TEMPORARY SEDIMENT BASIN

NOTIFY THE PRINCE GEORGE COUNTY DEPT. OF INSPECTIONS. AT (804) 722-8659 FOR A

PRECONSTRUCTION MEETING AND ON-SITE VISIT ONE WEEK PRIOR TO BEGINNING CONSTRUCTION.

EROSION CONTROL SEQUENCE OF EVENTS

UPSTREAM OF SEDIMENT BASIN 3 ARE STABALIZED, SILT FENCE WILL SERVE AS THE EROSION CONTROL FOR THE REMAINING FILL. BEGIN CLEARING AND GRUBBING OPERATIONS. STABILIZE THE SITE WITH VEGETATION AND STRAW MULCH ACCORDING TO STATE REGULATIONS. DO NOT CONSTRUCT TO OUTFALL POINTS BELOW TRAPS AND BASINS AT THIS TIME. INSTALL

STRUCTURE 30 AND FIRST 24 L.F. OF STRUCTURE 66. INSTALL TEMPORARY PIPES T1 AND INSTEAD OF DOWNSTREAM PERMANENT STRUCTURES. IMMEDIATELY AFTER PLACING BASE STONE AND INSTALLATION OF CURB & GUTTER, INSTALL INLET PROTECTION AS PER PLAN.

6. FINISH ROAD CONSTRUCTION AS SHOWN ON PLANS. SEED DENUDED AREAS AS SOON AS

FIRST 124 L.F. OF STRUCTURE 2, FIRST 24 L.F. OF STRUCTURE 10, FIRST 48 L.F.

POSSIBLE AND MULCH ALL DISTURBED AREAS. INSTALL PAVEMENT. ONCE ROAD CONSTRUCTION IS COMPLETE, AND SITE IS STABILIZED, COMPLETELY FLUSH

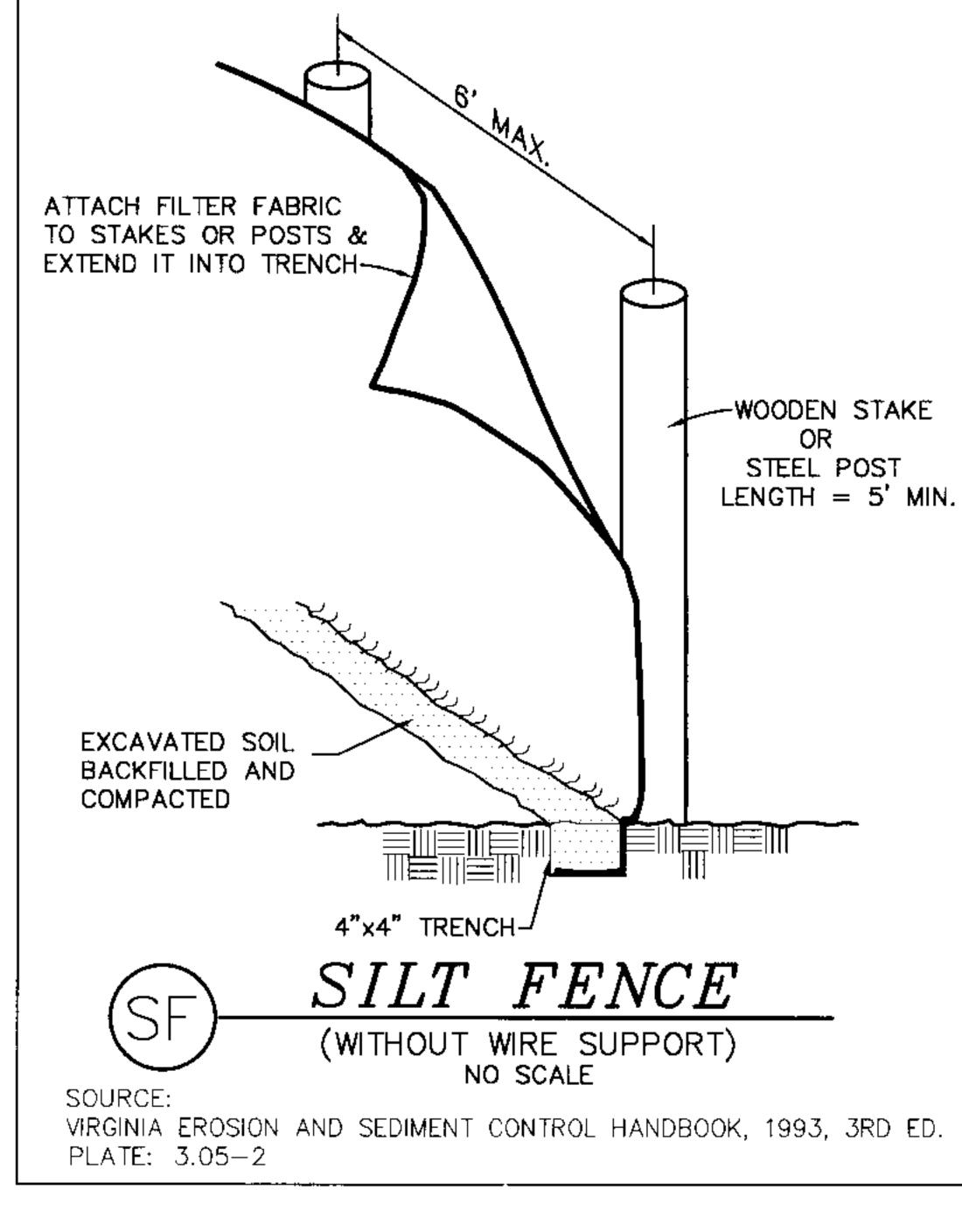
. CONTINUING MAINTENANCE PRACTICES SHALL BE PERFORMED TO ENSURE PROTECTION OF NO EROSION CONTROL DEVICE SHALL BE REMOVED UNTIL AN ADEQUATE STAND OF GRASS

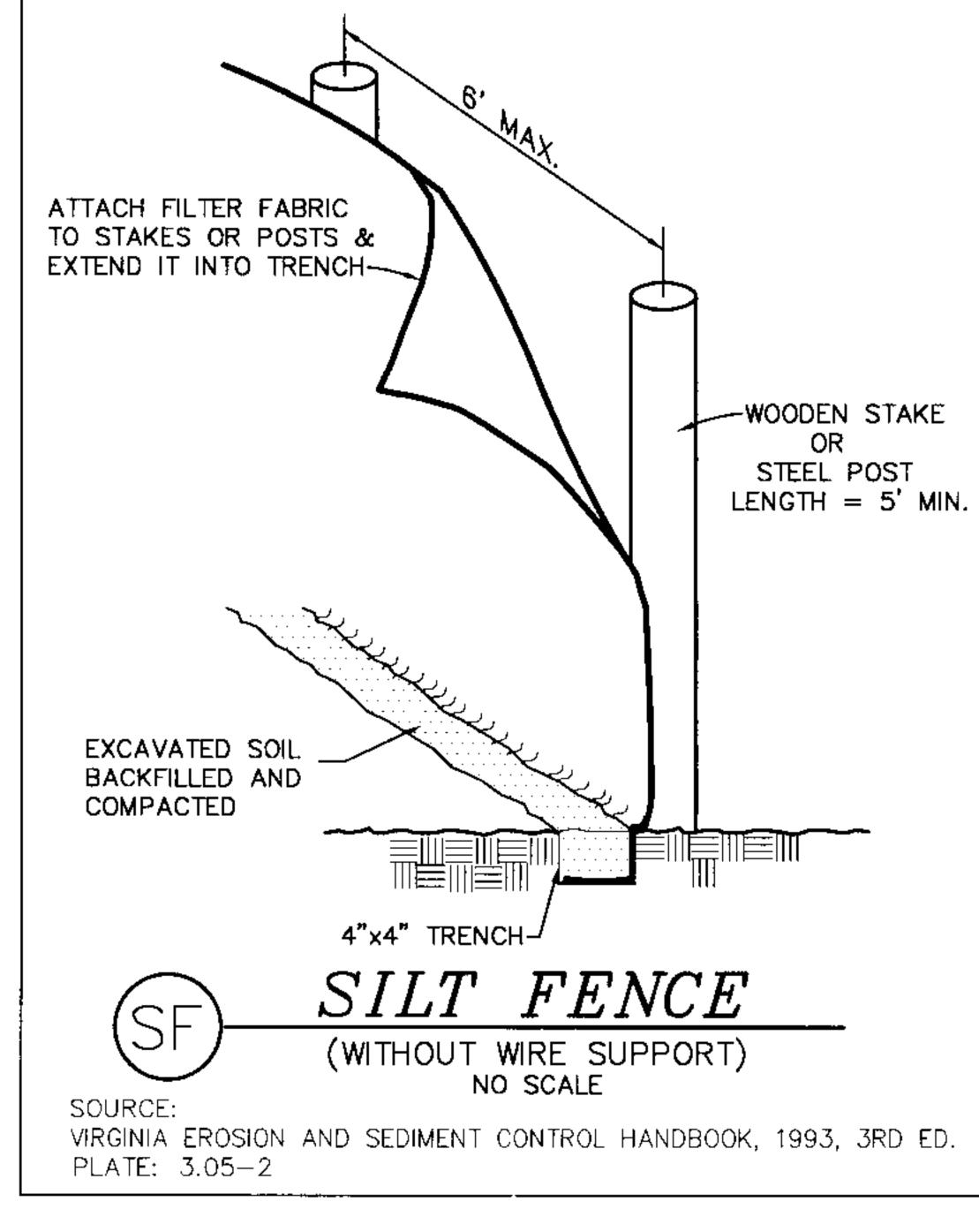
STRUCTURE 10 AND ALL DOWNSTREAM STRUCTURES PRIOR TO REMOVING SEDIMENT TRAPS

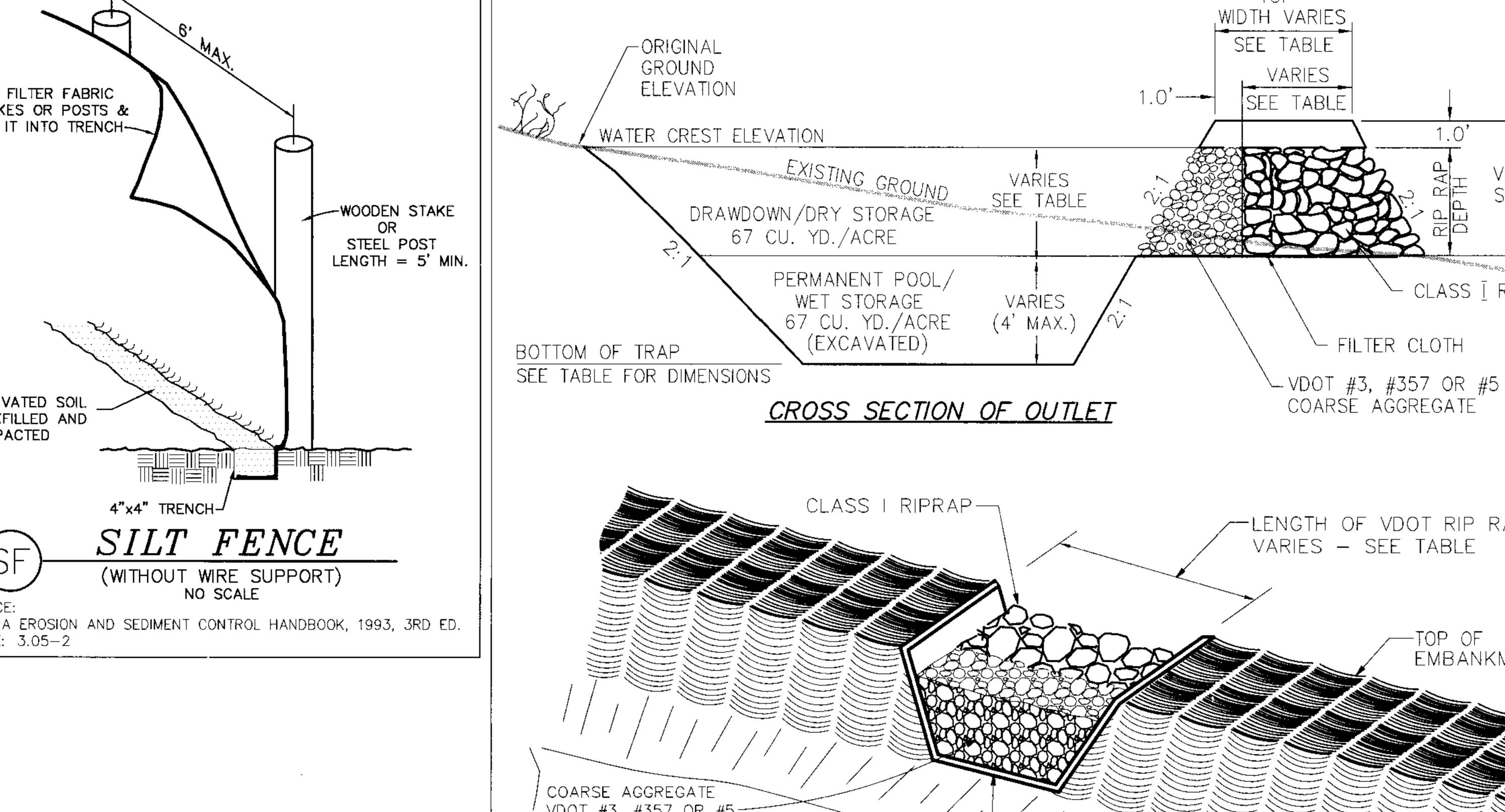
pe agged to mixes.

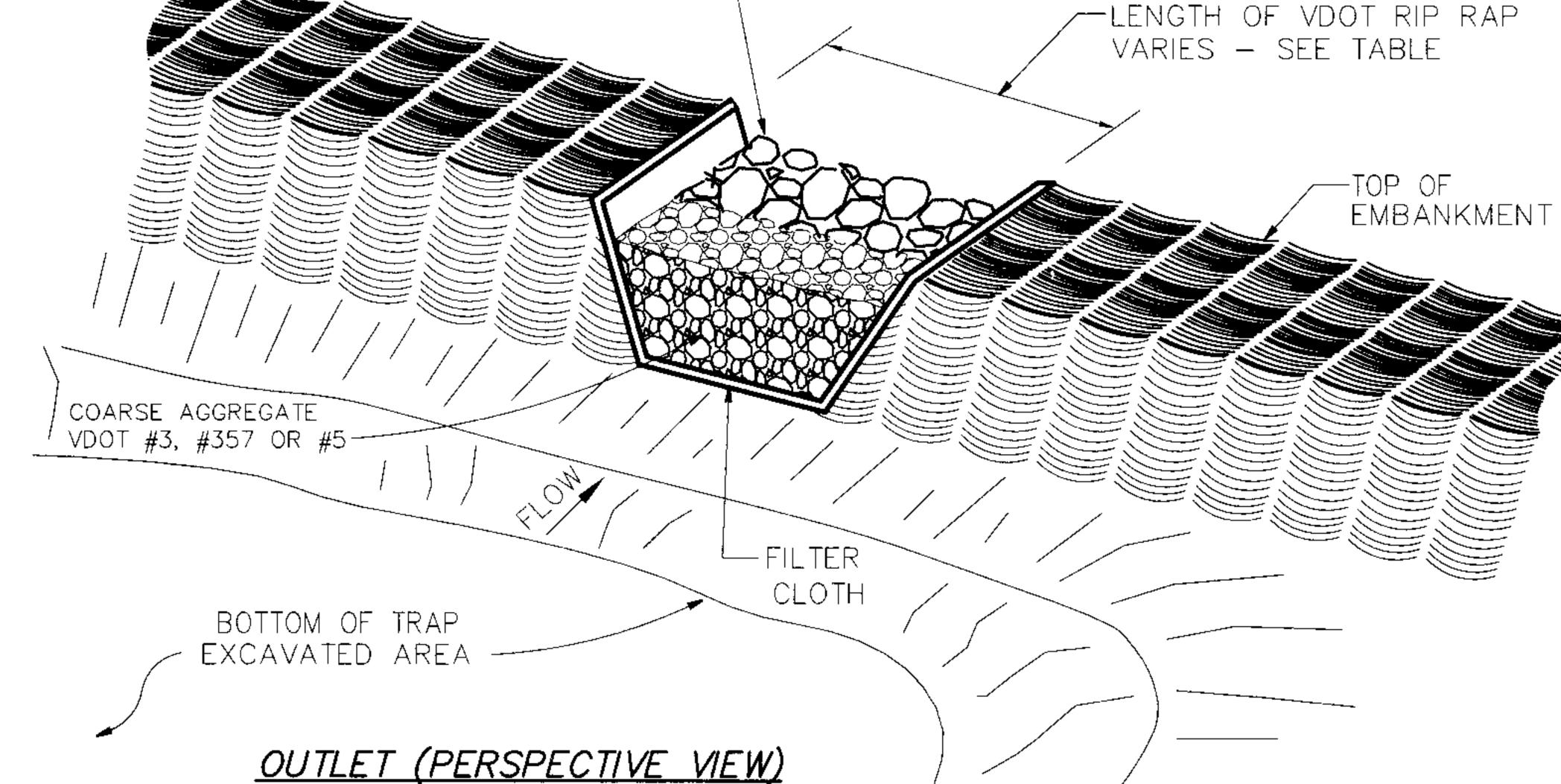
X MAY BE PLANTED BETWEEN THESE DATES.

— MAY <u>NOT</u> BE PLANTED BETWEEN THESE DATES.









\ TEMPORARY SEDIMENT TRAP (3.13-

- THE AREA UNDER THE EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ANY VEGETATION AND ROOT MAT.
- FREE OF ROOTS OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHOULD BE COMPACTED IN 6-INCH LAYERS BY TRAVERSING WITH CONSTRUCTION EQUIPMENT.
- THE EARTHEN EMBANKMENT SHALL BE SEEDED WITH TEMPORARY OR PERMANENT VEGETATION (SEE STD. & SEPC.'S 3.31 AND 3.32) IMMEDIATELY AFTER INSTALLATION.
- CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE MINIMIZED.
- SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL A MANNER THAT IT WILL NOT ERODE AND CAUSE SEDIMENTATION PROBLEMS.
- FILTER STONE SHALL BE REGULARLY CHECKED TO ENSURE THAT FILTRATION PERFORMANCE IS
- STONE OUTLET SHOULD BE CHECKED TO ENSURE THAT ITS CENTER IS AT LEAST 1 FOOT BELOW THE TOP OF THE EMBANKMENT.

TEMPORARY SEDIMENT TRAP SCHEDULE

ST. NO.	DRAINAGE AREA (ACRES.)	VOLUME REQUIRED (CU. YD.)	LENGTH OF VDOT RIP RAP REQUIRED (FT)	SEDIMEN BOTTOM DI (EXCAV LENGTH (FT)	MENSIONS	WET STORAGE DEPTH (4' MAX.) (FT)	RIP RAP & DRY STORAGE DEPTH (FT)	TOTAL WET & DRY STORAGE DEPTH (FT)	TOTAL HEIGHT OF EMBANKMENT (5' MAX.) (FT)	TOP WIDTH OF EMBANKMENT (FT)
1	1.11	149	6.66'	36'	14'	2'	2'	4'	3'	2.5'
2	1.26	169	7.56	50'	22'	1.5'	1.5'	3'	2.5'	2.5'
3	1.06	142	6.36	60'	28'	1'	1'	2'	2'	2.5'

LAND USE APPLICATION RATES Tall Fescue Minimum Care Lawn (Commercial or Residential) High-Maintenance Lawn Tall Fescue¹ 40 lbs. (unhulled) Bermudagrass¹ (seed) Bermudagrass¹ (by other vegetative establishment method, see Std. & Spec. 3.34) Tall Fescue¹ Red Top Grass or Creeping Red Fescue Beneral Slope (3:1 or less) Seasonal Nurse Crop TOTAL: 150 lbs. Tall Fescue Red Top Grass or Creeping Red Fescue (Steeper than 3:1) Seasonal Nurse Crop 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.cses.vt.edu/html/Turf/turf/publications/publications2.htr

PERMANENT SEEDING SPECIFICATIONS FOR COASTAL PLAIN AREA

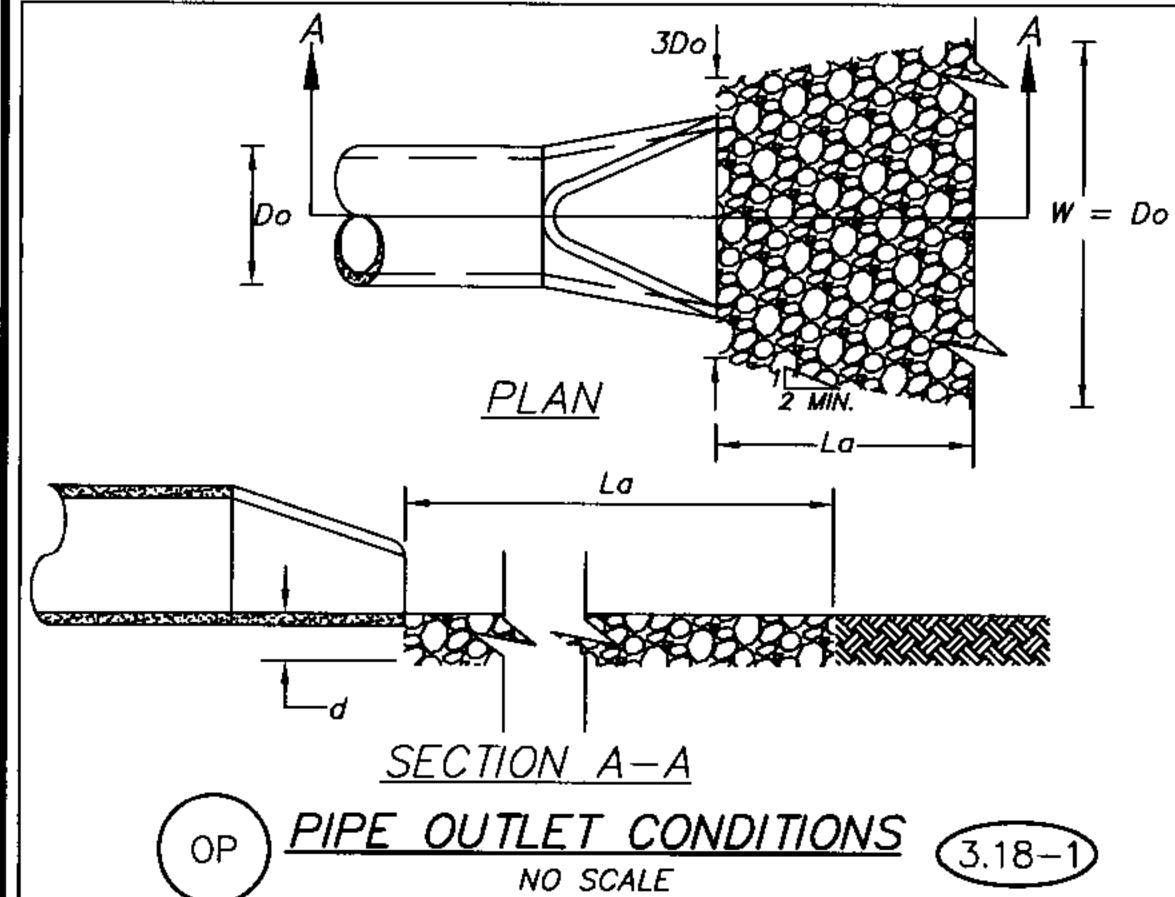
2 - Use seasonal nurse crop in accordance with seeding dates as stated below:

ے - May through October, use hulled seed. All other seeding periods, use unhulled seed. 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.) 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/sw/e&s.htm#pubs



		La	ď	W
	(<u>a</u>	10'	9"	11.25
2	OP2	10'	9"	11.25
	OP3	20'	9"	22'
	OP4	10'	9"	22'
	OP5	10'	9"	22'
•				

. APRON LINING MAY BE RIPRAP, OR GROUTED RIPRAP. 2. La IS THE LENGTH OF THE RIPRAP APRON AS CALCULATED USING PLATES 3.18-3 AND 3.18-4 OF VA F&S HANDROOK

WIRE SCREEN -

OP) PIPE OUTLET CONDITIONS NO SCALE	3. d = 1.5 TIMES THE D50 SIZE. 4. GEOTEXTILE FABRIC UNDERLINER REQUIRED FOR ALL OUTLET PROTECTION A	4 <i>Rl</i>
4VAC50-30-40. MINIMUM STANDARDS An erosion and sediment control program adopted by	17. Where construction version with the transported onto a p	rt

following criteria, techniques and methods: Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of the site. Temporary soil stabilization shall be applied within seven days to denuded areas that may not be at final grade but will remain dormant for longer than 30 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year. During construction of the project, soil stock piles and borrow areas shall be stabilized or protected with sediment trapping measures. The applicant is responsible for the temporary protection and permanent stabilization of all soil stockpiles on site as well as borrow areas and soil intentionally transported from the

Permanent vegetation shall not be considered established until a ground cover is achieved that is uniform, moture enough to survive and will inhibit erosion. Sediment basins and traps, perimeter dikes, sediment barriers and other measures intended to trap sediment shall be constructed as a first step in any land—disturbing activity and shall be made functional

before upslope land disturbance takes place. Stabilization measures shall be applied to earthen structures such as dams, dikes and diversions Sediment traps and sediment basins shall be designed and constructed based upon the total drainage area to be served by the trap or basin.

A) The minimum storage capacity of a sediment trap shall be 134 cubic yards per acre of drainage area and the trap shall only control drainage areas less than three acres. B) Surface runoff from disturbed areas that is comprised of flow from drainage areas greater than or equal to three acres shall be controlled by a sediment basin. The minimum storage capacity of a sediment basin shall be 134 cubic yards per acre of drainage area. The outfall system shall, at a minimum, maintain the structural integrity of the basin during a 25—year storm of 24—hour duration. Runoff coefficients used in runoff calculations shall correspond to a bare earth condition or those conditions expected to exist while

the sediment basin is utilized. Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion. Slopes that are found to be eroding excessively within one year of permanent stabilization shall be provided with additional slope stabilizing measures until the problem is corrected.

Concentrated runoff shall not flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume or slope drain structure. Whenever water seeps from a slope face, adequate drainage or other protection shall be provided. 1. All storm sewer inlets that are made operable during construction shall be protected so that

sediment—laden water cannot enter the conveyance system without first being filtered or otherwise treated to remove sediment. . Before newly constructed stormwater conveyance channels or pipes are made operational, adequate outlet

protection and any required temporary or permanent channel lining shall be installed in both the conveyance channel and receiving channel. . When work in a live watercourse is performed, precautions shall be taken to minimize encroachment, control sediment transport and stabilize the work area to the greatest extent possible during construction Nonerodible material shall be used for the construction of causeways and cofferdams. Earthen fill may be used for these structures if armored by nonerodible cover materials.

3. When a live watercourse must be crossed by construction vehicles more than twice in any six—month period, a temporary vehicular stream crossing constructed of nonerodible material shall be provided. 🖊 14. All applicable federal, state and local chapters pertaining to working in or crossing live watercourses shall

15. The bed and banks of a watercourse shall be stabilized immediately after work in the watercourse is 16. Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:

A) No more than 500 linear feet of trench may be opened at one time. B) Excavated material shall be placed on the uphill side of trenches. C) Effluent from dewatering operations shall be filtered or passed through an approved sediment trapping device, or both, and discharged in a manner that does not adversely affect flowing streams or off—site

D) Material used for backfilling trenches shall be properly compacted in order to minimize erosion and) Restabilization shall be accomplished in accordance with this chapter.

F) Applicable safety chapters shall be complied with.

ehicle access routes intersect paved or public roads, provisions shall be made to t of sediment by vehicular tracking onto the paved surface. Where sediment is paved or public road surface, the road surface shall be cleaned thoroughly at the end of each day. Sediment shall be removed from the roads by shoveling or sweeping and transported to a sediment control disposal area. Street washing shall be allowed only after sediment is removed in this manner. This provision shall apply to individual development lots as well as to larger 18. All temporary erosion and sediment control measures shall be removed within 30 days after final site

G MAY BE USED AS A COVER CROP WITH SPRING SEEDING.

SOUTHERN PIEDMONT AND COASTAL PLAIN.

ON NORTHERN PIEDMONT AND MOUNTAIN REGION. SEE PLATES 3.22-1 AND 3.22-2.

stabilization or after the temporary measures are no longer needed, unless otherwise authorized by the local program authority. Trapped sediment and the disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and

). Properties and waterways downstream from development sites shall be protected from sediment deposition, erosion and damage due to increases in volume, velocity and peak flow rate of stormwater runoff for the stated frequency storm of 24-hour duration in accordance with the following standards A) Concentrated stormwater runoff leaving a development site shall be discharged directly into an adequate natural or man-made receiving channel, pipe or storm sewer system. For those sites where runoff is discharged into a pipe or pipe system, downstream stability analyses at the outfall of the

pipe or pipe system shall be performed. Adequacy of all channels and pipes shall be verified in the following manner: (1) The applicant shall demonstrate that the total drainage area to the point of analysis within the channel is one hundred times greater than the contributing drainage area of the project in question; or

(2) (a) Natural channels shall be analyzed by the use of a two-year storm to verify that stormwater will not overtop channel banks nor cause erosion of channel bed or banks. (b) All previously constructed man-made channels shall be analyzed by the use of a ten—year storm to verify that stormwater will not overtop its banks and by the use of a Two-year storm to demonstrate that stormwater will not cause erosion of channel bed or banks; and

(c) Pipes and storm sewer systems shall be analyzed by the use of a ten-year storm to verify that stormwater will be contained within the pipe or system. C) If existing natural receiving channels or previously constructed man—made channels or pipes are not adequate, the applicant shall: (1) Improve the channels to a condition where a ten—year storm will not overtop the banks

and a two-year storm will not cause erosion to channel the bed or banks; or (2) Improve the pipe or pipe system to a condition where the ten-year storm is contained within the appurtenances; (3) Develop a site design that will not cause the pre-development peak runoff rate from a two—year storm to increase when runoff outfalls into a natural channel or will not cause the pre-development peak runoff rate from a ten-year storm to increase when runoff outfalls into a man-made channel; or

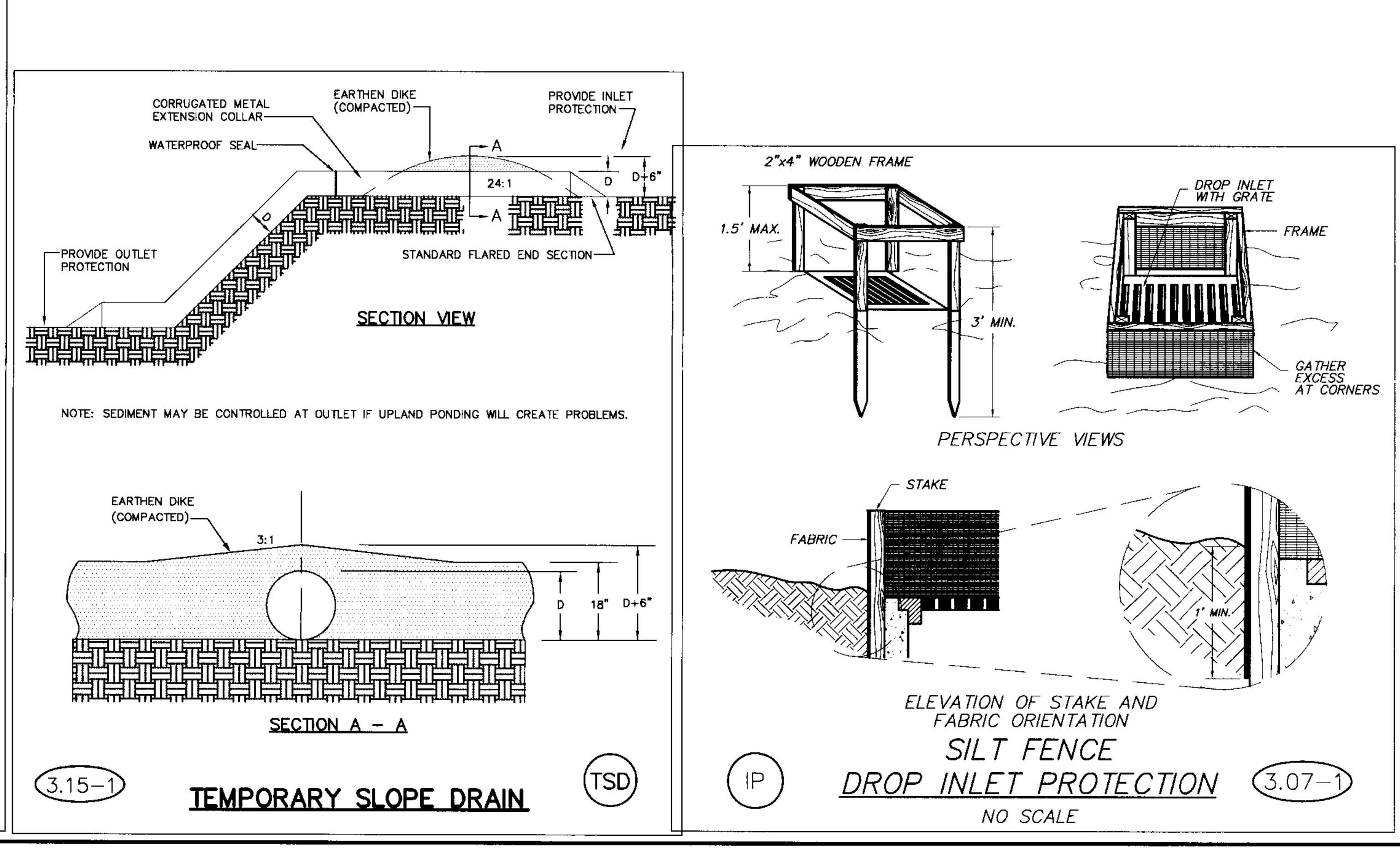
(4) Provide a combination of channel improvement, stormwater detention or other measures which is satisfactory to the plan approving authority to prevent downstream erosion. d. The applicant shall provide evidence of permission to make the improvements. e. All hydrologic analyses shall be based on the existing watershed characteristics and the ultimate development condition of the subject project.

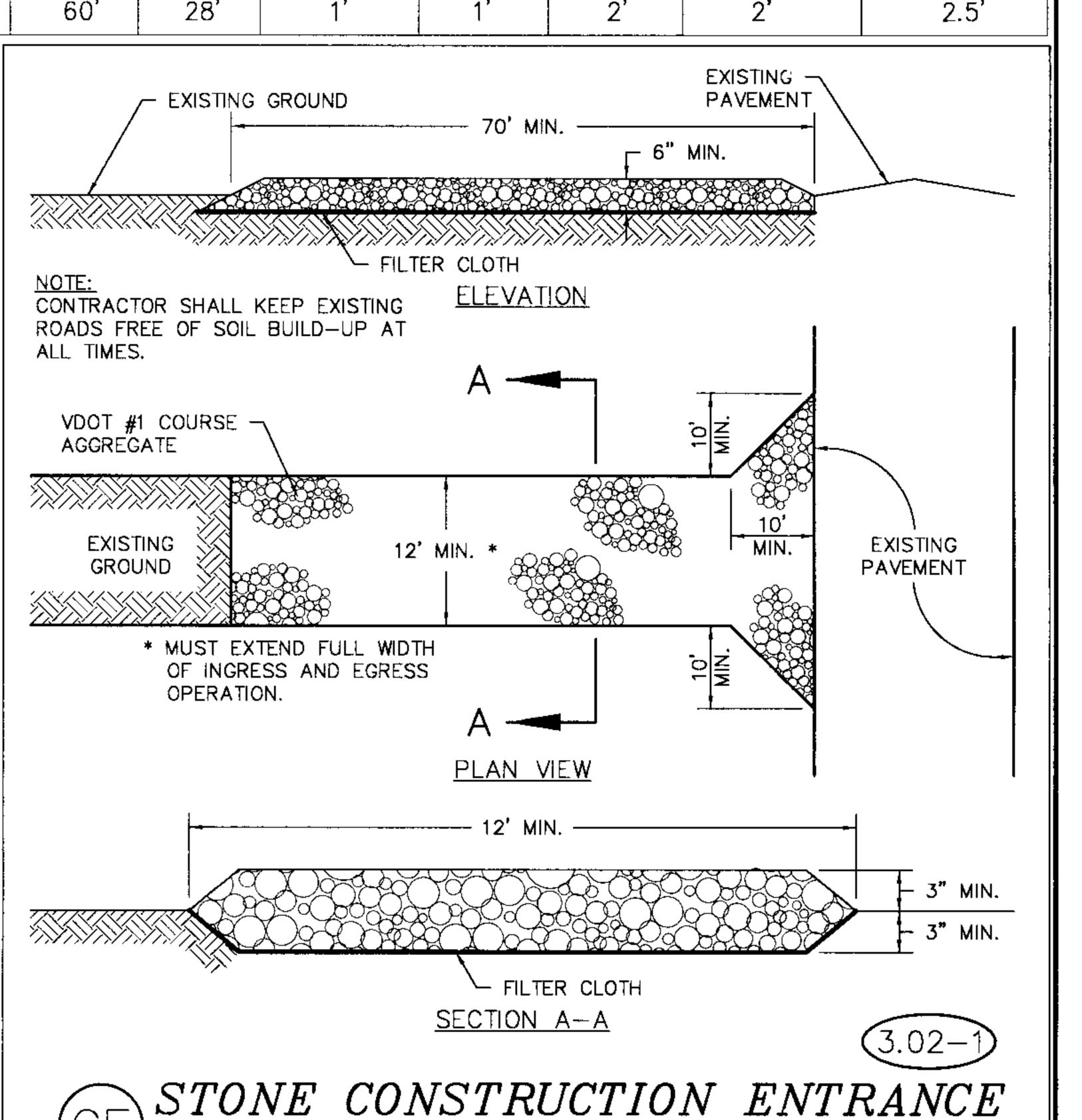
approval from the locality of a plan for maintenance of the detention facilities. The plan shall set forth the maintenance requirements of the facility and the person responsible for performing the maintenance. q. Outfall from a detention facility shall be discharged to a receiving channel, and energy dissipators shall be placed at the outfall of all detention facilities as necessary to provide a stabilized transistion from the facility to the receiving channel. h. All on—site channels must be verified to be adequate.

i. Increased volumes of sheet flows that may cause erosion or sedimentation on adjacent

property shall be diverted to a stable outlet, adequate channel, pipe or pipe system, or

i. In applying these stormwater management criteria, individual lots or parcels in a residential, commercial or industrial development shall not be considered to be separate development projects. Instead, the development, as a whole, shall be considered to be a single development project. Hydrologic parameters that reflect the ultimate development condition shall be used in all engineering calculations. k. All measures used to protect properties and waterways shall be employed in a manner which minimizes impacts on the physical, chemical and biological integrity of rivers, streams and other waters of the state.





VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, 3RD ED., 1993

CONTRACTOR SHALL KEEP EXISTING ROADS

FREE OF SOIL BUILD-UP AT ALL TIMES.

Lic. No. 24761

TOP OF

EMBANKMEN

DRAWN BY

K. HALPAUS DESIGNED BY CHECKED BY

K. HALPAUS D. JOHNSON

22595 SHEET NO. C4.2