

EXISTING SITE CONDITIONS: THE SITE IS LOCATED ON THE NORTH SIDE OF LAUREL SPRING ROAD, AND IS PARTIALLY WOODED. THE SITE HAS ROLLING TOPOGRAPHY WITH SLOPES VARYING FROM 2.0% TO 8.0%. ADJACENT AREAS: THE SITE IS BORDERED BY LAUREL SPRING ROAD (S.R. 616) TO THE WEST AND COURTHOUSE ROAD (S.R. 106) TO THE NORTH. ADJACENT TO THIS PROJECT IS THE EXISTING SECTION 1 TO THE NORTH AND WEST, AND

OFFSITE AREAS: NO OFFSITE AREAS WILL BE EFFECTED BY THIS DEVELOPMENT. THERE WILL BE A SLIGHT DISTURBANCE TO THE EXISTING SECTION 1 OF THE SITE WITH THE INSTALLATION OF A DRAINAGE SWALE AND SEDIMENT BASIN. SOILS: THE SOIL ON THIS SITE CONSISTS MAINLY OF MONTROSS SILT LOAM AND ACKWATER SILTY CLAY LOAM. SEE SHEET 5 FOR LIMITS OF SOIL TYPES.

CRITICAL AREAS: THERE ARE NO CRITICAL AREAS OF EROSION OR WATER QUALITY PROBLEMS ON THIS SITE. EROSION AND SEDIMENT CONTROL MEASURES: PERIMETER SILT FENCE, SILT TRAP, AND INLET PROTECTION INSTALLED ON THE PROPOSED STRUCTURES WILL SERVE AS THE PRIMARY EROSION CONTROL MEASURES THROUGHOUT THE CONSTRUCTION

PERMANENT STABILIZATION: ALL DENUDED AND UNPAVED AREAS SHALL BE SEEDED IN ACCORDANCE WITH STATE REGULATIONS. SEE CHARTS ON THIS SHEET FOR DETAILS.

STORMWATER RUNOFF CONSIDERATIONS: ALL OF THE STORMWATER FROM THIS SECTION WILL DRAIN INTO EXISTING DITCH NORTHWEST OF THIS SECTION AND THEN INTO THE EXISTING STORMWATER MANAGEMENT BASIN AS DESIGNED. A SILT TRAP WILL BE USED DURING CONSTRUCTION TO CONTROL SEDIMENT RUNOFF. SEE SHEET 5 FOR EROSION CONTROL DURING

CALCULATIONS: ALL STORM SEWER CALCULATIONS HAVE BEEN SUBMITTED TO COUNTY AND STATE OFFICIALS FOR REVIEW.

EROSION CONTROL SEQUENCE OF EVENTS

(SECTION 3, UNDER CONSTRUCTION, TO THE EAST.

- 1. NOTIFY THE PRINCE GEORGE COUNTY PLANNING DEPT. AT (804) 733-2608 AND VDQT FOR 1 A PRECONSTRUCTION MEETING AND ON-SITE VISIT ONE WEEK PRIOR TO BEGINNING
- 2. INSTALL CONSTRUCTION ENTRANCE, SILT TRAP, AND PERIMETER SILT FENCE AS PER PLAN. 13. COMPLETE CLEARING AND GRUBBING OPERATIONS. STABILIZE THE SITE WITH VEGETATION AND STRAW MULCH ACCORDING TO STATE REGULATIONS.
- 4. BEGIN ROAD CONTRUCTION, AND INSTALL STORM SEWER AND UTILITIES AS PER PLAN. ر. IMMEDIATELY AFTER PLACING BASE STONE AND INSTALATION OF CURB & GUTTER, INSTALL
- INLET PROTECTION AS PER PLAN. 6. FINISH ROAD CONSTRUCTION AS SHOWN ON PLANS. SEED DENUDED AREAS AS SOON AS
- POSSIBLE AND MULCH ALL DISTURBED AREAS. INSTALL PAVEMENT. 1. ONCE ROAD CONSTRUCTION IS COMPLETE, AND SITE IS STABILIZED, COMPLETELY FLUSH
- STORM SEWER STRUCTURES TO REMOVE ANY ACCUMULATED SEDIMENT. CONVERT 8. CONTINUING MAINTENANCE PRACTICES SHALL BE PERFORMED TO ENSURE PROTECTION OF DOWNSTREAM PROPERTIES.
- 9. NO EROSION CONTROL DEVICE SHALL BE REMOVED UNTIL AN ADEQUATE STAND OF GRASS HAS BEEN OBTAINED. NOTE: ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL
- MEASURES SHOWN ON THE PLAN ARE TO BE CONSTRUCTED, MAINTAINED. AND REMOVED IN ACCORDANCE WITH THE CURRENT EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATION 4VAC50-30 EROSION AND SEDIMENT CONTROL REGULATIONS

EXISTING GROUND

CONTRACTOR SHALL KEEP EXISTING

ROADS FREE OF SOIL BUILD-UP AT

* MUST EXTEND FULL WIDTH

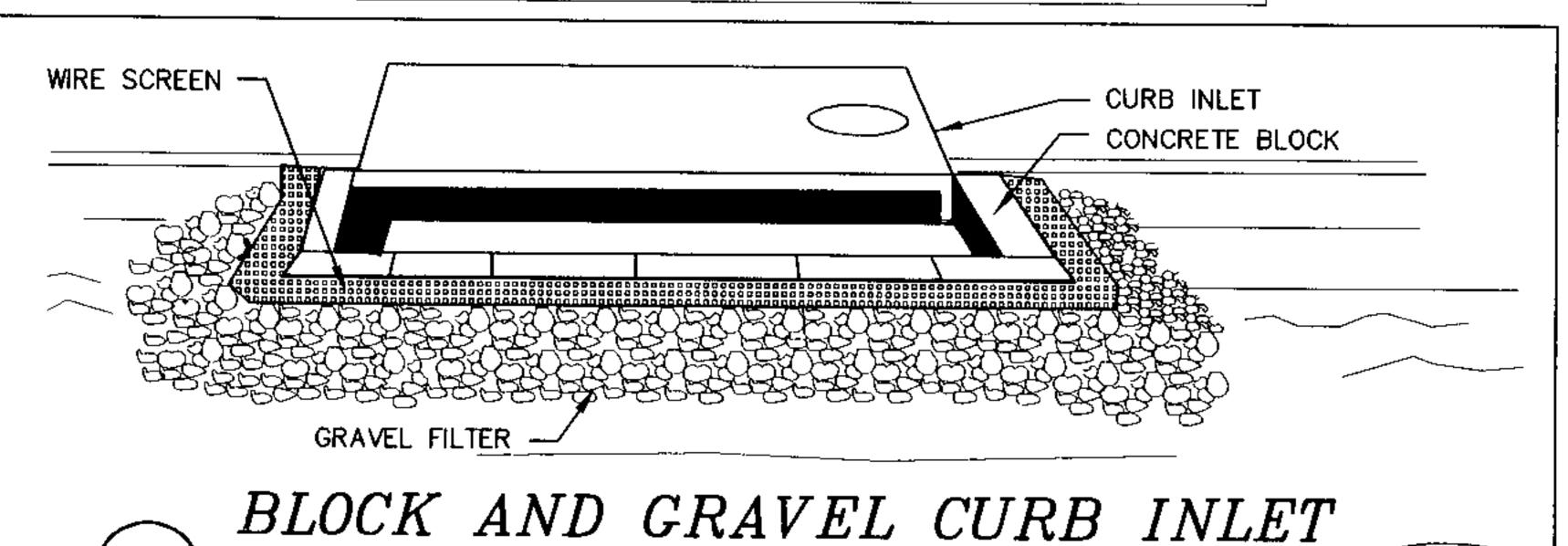
OF INGRESS AND EGRESS

ALL TIMES.

VDOT #1 COURSE

AGGREGATE

EXISTING GROUND



SEDIMENT FILTER COMPACTED SOIL-10% SETTLEMENT---0.3' FREE BOARD-----

—— 70' MIN. ———

— 12' MIN. -----

- FILTER CLOTH

STONE CONSTRUCTION ENTRANCE

NO SCALE

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

<u>SECTION A-A</u>

CONTRACTOR SHALL KEEP EXISTING ROADS

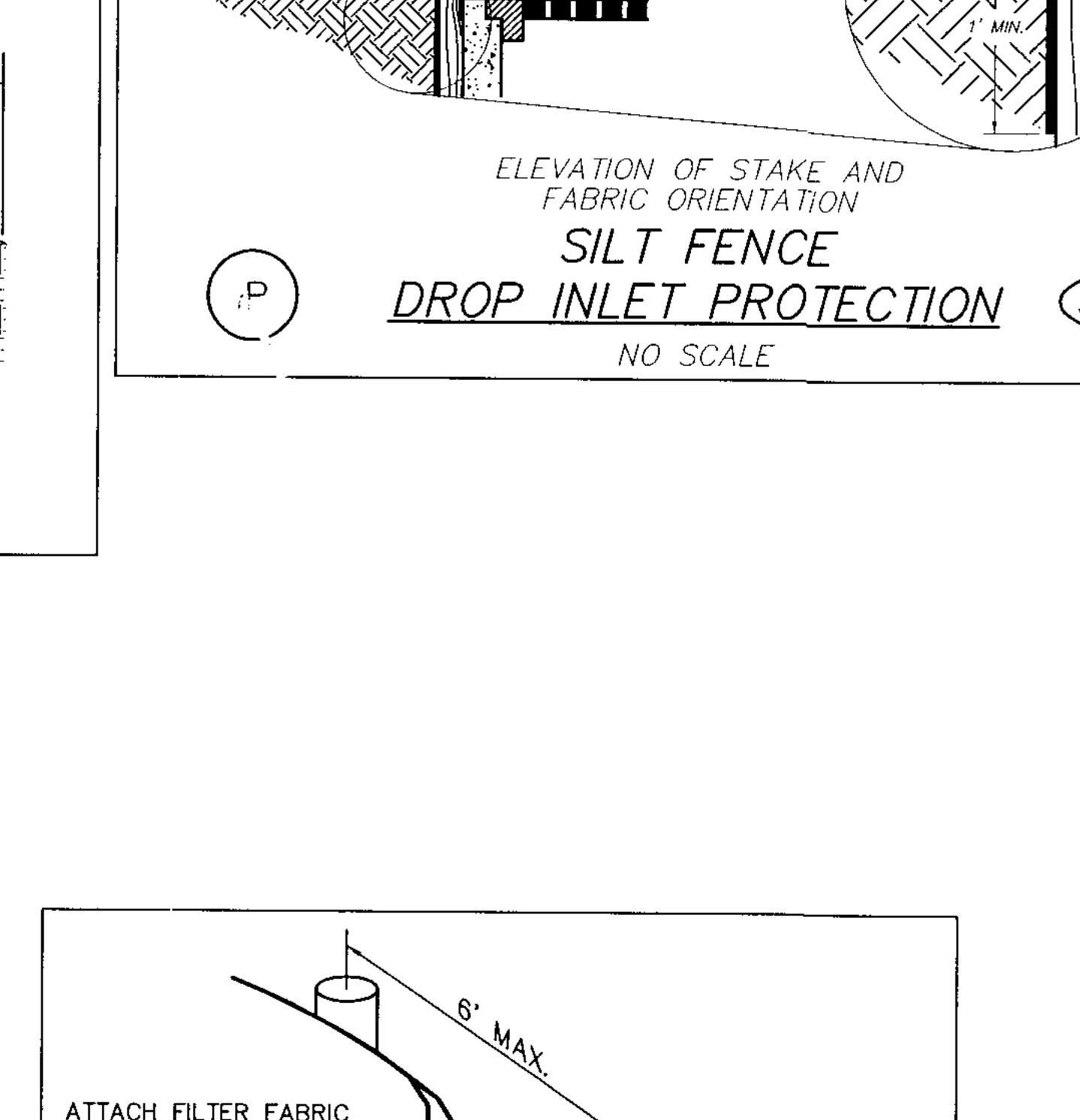
FREE OF SOIL BUILD-UP AT ALL TIMES.

- FILTER CLOTH

TYPICAL VEE-SHAPED TEMPORARY DIVERSION DITCH

PAVEMENT

PAVEMENT



TO STAKES OR POSTS &

EXTEND IT INTO TRENCH-

EXCAVATED SOIL

BACKFILLED AND

4"×4" TRENCH

(WITHOUT WIRE SUPPORT)

VIRGIN: 1 EROSION AND SEDIMENT CONTROL HANDBOOK, 1993, 3RD ED.

COMPACTED

PERSPECTIVE VIEWS

---WOODEN STAKE

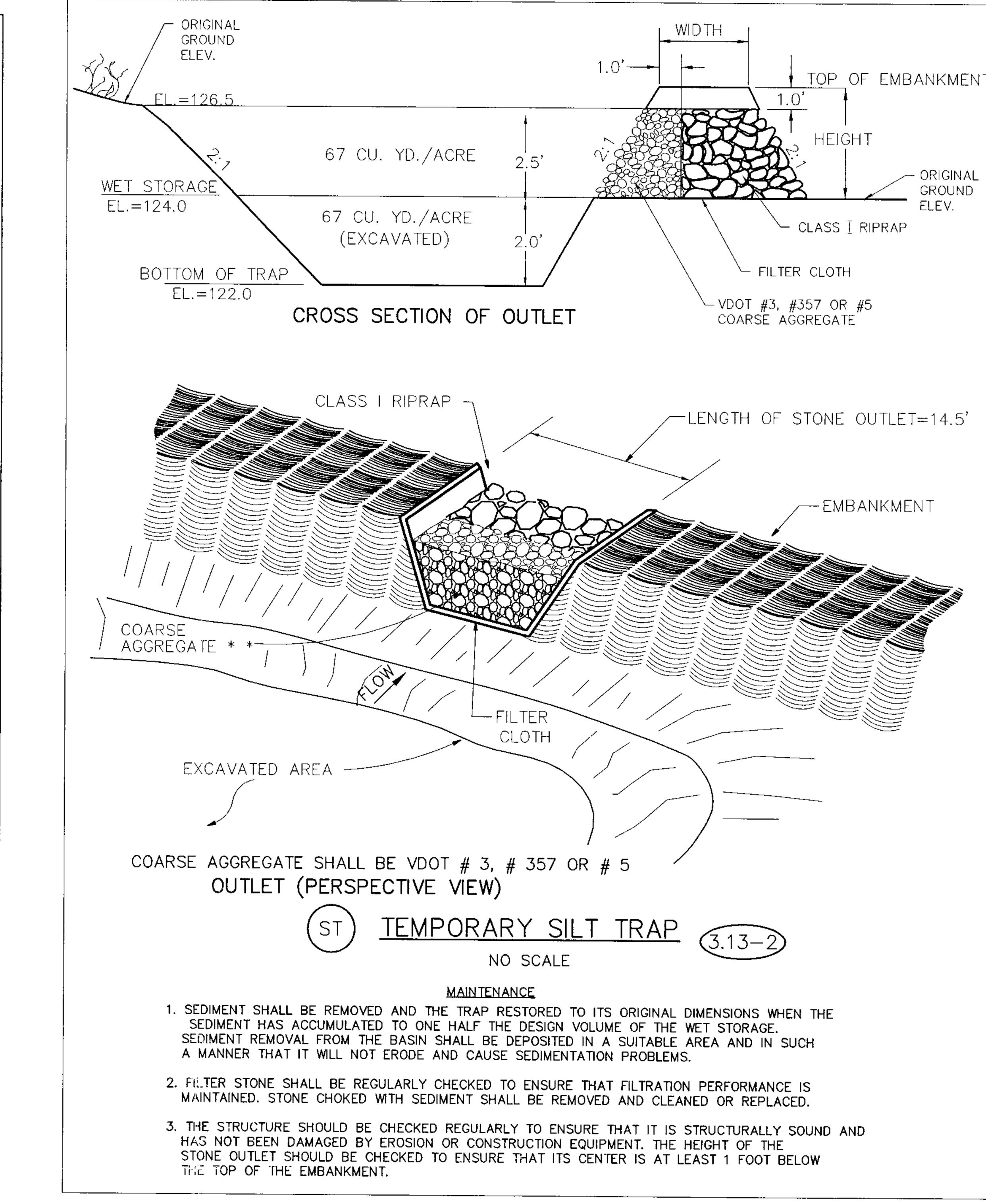
LENGTH = 5' MIN.

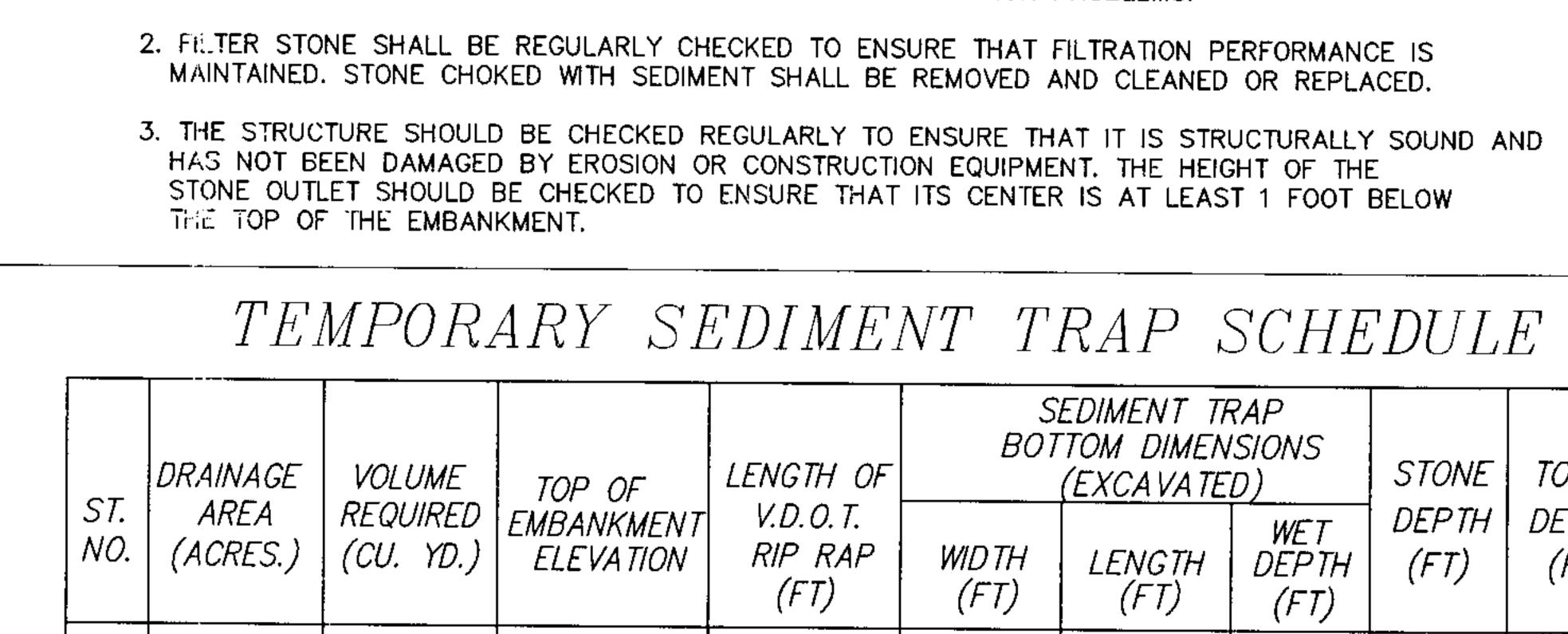
2"x4" WOODEN FRAME

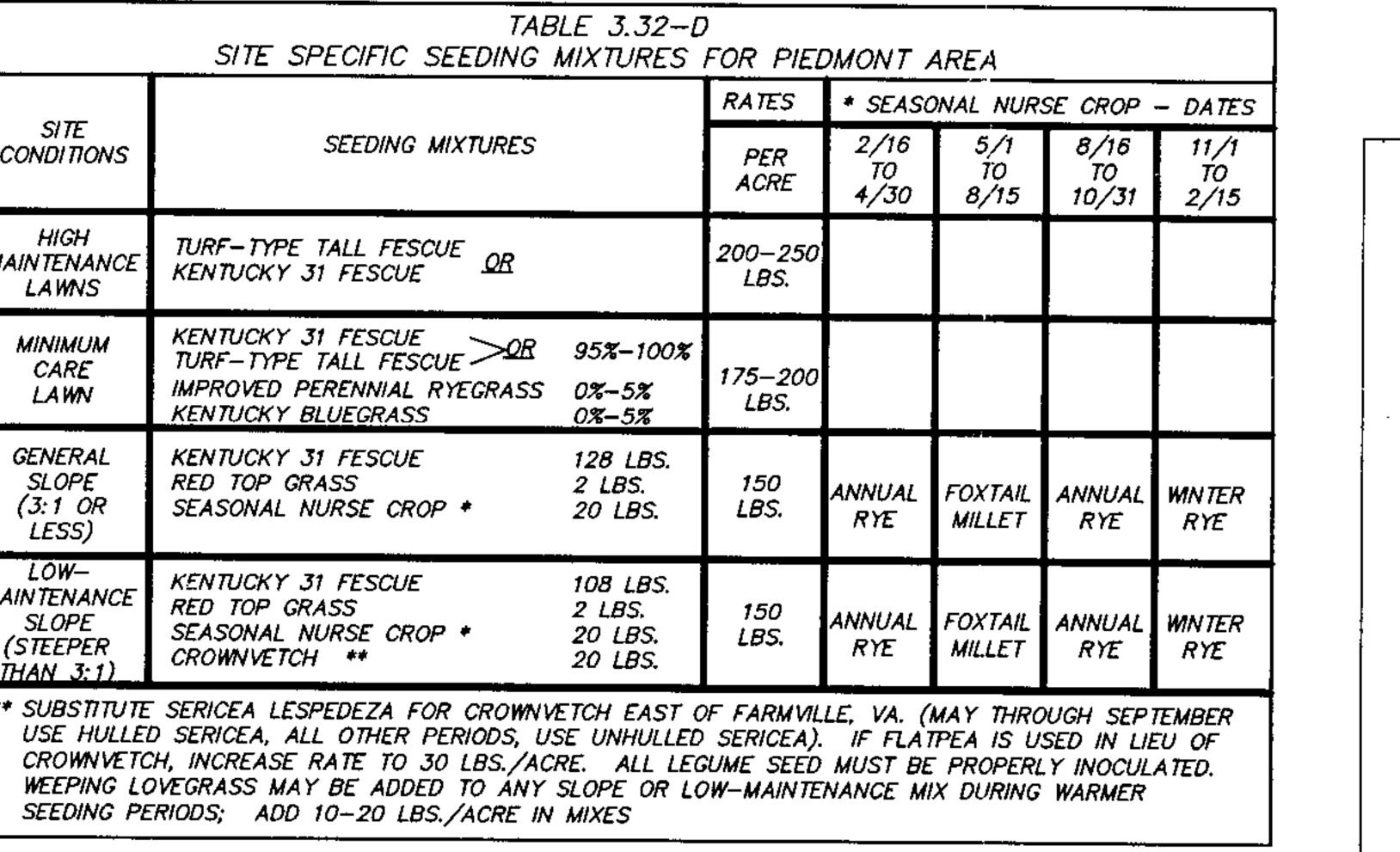
EROSION CONTROL GENERAL NOTES

- . CONTACT THE PRINCE GEORGE PLANNING DEPARTMENT AT (804) 733-2608 PRIOR TO COMMENCING ANY LAND DISTURBANCE ACTIVITIES ON THE SITE. 2. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS
- 4VAC50-30 EROSION AND SEDIMENT CONTROL REGULATIONS. 3. 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.
- 6. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BOR-ROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.
- 7. 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.
- 8. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEA-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.
- 10. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODI-CALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CON-TROL DEVICES SHALL BE MADE IMMEDIATELY.
- 11. 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 12. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF SEDIMENT THAT HAS BEEN
- TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE. 13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING SURFACE AND AIR MOVEMENT OF DUST FROM EXPOSED SOILS WHICH MAY PRESENT HEALTH HAZARDS, TRAFFIC SAFETY PROBLEMS, OR HARM ANIMALS OR PLANT LIFE.

WITH GRATI

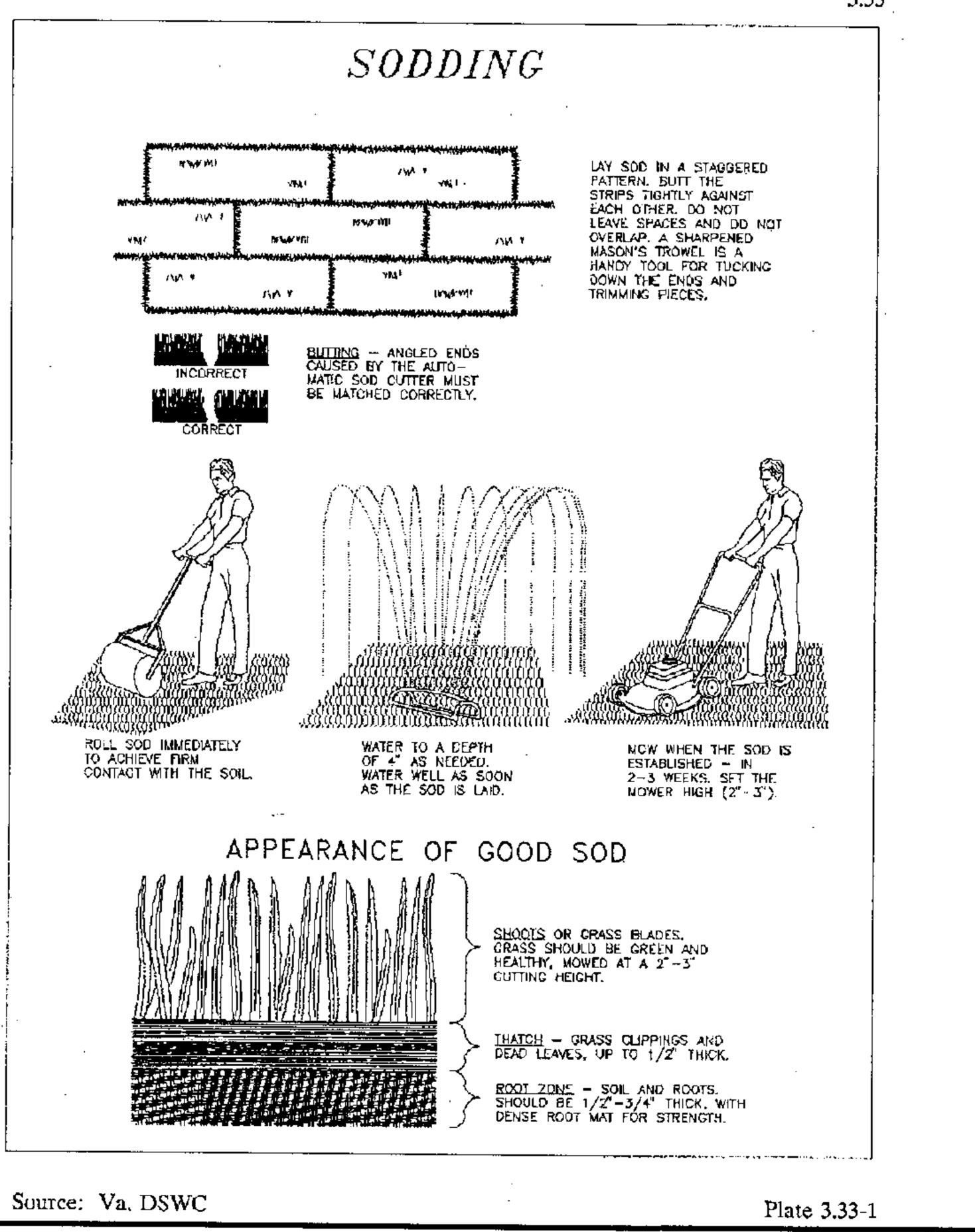






PERMANENT SEEDING

SPECIES	PORARY SEEDING PLANT MATERIALS, SEEDING RATES			NORTH ^a SOUTH ^b					
	ACRE	1000 SQ. FT.	3/1 to 4/30	5/1 to 8/15	8/15 to 11/1	2/15 to 4/30	5/1 to 9/1	9/1 to 11/15	PLANT CHARACTERISTICS
OATS Avena sativa)	3 bu. (UP TO 100 lbs., NOT LESS THAN 50 lbs.)	2 lbs.	Х			Х	_		Use spring varieties (e.g., Noble)
RYE ^d Secale cereale)	2 bu. (UP TO 110 lbs., NOT LESS THAN 50 lbs.)	2.5 lbs.	X		Χ	X		Х	Use for late fall seedings, winter cover. Tolerates cold and low moisture.
SERMAN MILLET Seteria italica)	50 lbs.	approx. 1 lb.	ŀ	X	-	-	Х		Warm—season annual. Dies at first frost. May be added to summer mixes.
ANNUAL RYEGRASS ^C (Lolium nulti-florum)	60 lbs.	1.5 lbs.	X	-	X	Χ		X	May be added in mixes. Will mow out of most stands.
WEEPING LOVEGRASS (Eragrostis curvula)	15 lbs.	5.5 ozs.	-	X	_	_	X	-	Warm—season perrennial. May bunch. Tolerates hot, dry slopes and acid, infertile soils. May be added to mixes.
KOREAN LESPEDEZA (Lespedeza stipulacea)	25 lbs.	approx. 1.5 lbs.	X	X	_	Χ	X	-	Warm—season annual legume. Tolerates acid soils. May be added to mixes.



EROSION AND SEDIMENT CONTROL MININUM STANDARDS 1. Permanent or temporary seeding 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

(undisturbed) for longer than 30 days. Permanent stabilization shall be applied to areas that are to

be left dormant for more than one year. 2. During construction of the project, soil stockpiles 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 soil intentionally transported from the project site.

3. A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved that, in the opinion of the local program administrator or his designated agent, is uniform, mature enough to survive and will inhibit erosion.

4. 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.

5. Stabilization measures shall be applied to earthen structures such as dams, dikes and diversions immediately after installation.

6. 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 sediment basin shall be designed and constructed to accommodate the anticipated sediment loading from the land-disturbing activity The outfall device or system design shall take into account the total drainage area flowing through the disturbed area to be served by the basin.

7. 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.

8. Concentrated runoff shall not flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume or slope drain structure.

9. Whenever water seeps from a slope face, adequate drainage or other protection shall be provided. 10. 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.

11. Before newly constructed stormwater conveyance channels 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.

12. 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 material. 13. When construction vehicles must cross a live watercourse more than twice in any six-month period, a temporary stream crossing constructed of nonerodible material shall be provided. 14. All applicable federal, state and local regulations pertaining to working in or crossing live watercourses shall be met.

15. The bed and banks of a watercourse shall be stabilized immediately after work in the watercourse

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 approved sediment trapping device, or both, and discharged in a manner that does not adversely affect flowing streams or off-site property.

d. Restabilization shall be accomplished in accordance with these regulations. e. Applicable safety regulations shall be complied with.

7. Where construction vehicle access routes intersect paved public roads, provisions shall be made to minimize the transport of sediment by vehicular tracking onto the paved surface. Where sediment is transported onto a public road surface, the road 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 subdivision lots as well as to larger

18. All temporary erosion and sediment control measures shall be removed within 30 days after final site stabilization or after the temporary measures are no longer needed, unless otherwise authorized by the local program administrator. Trapped sediment and the disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and 19. 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

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 pips or pipe system shall be performed.

b. 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

stormwater will not overtop channel banks nor cause erosion of channel bed or banks: and 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:

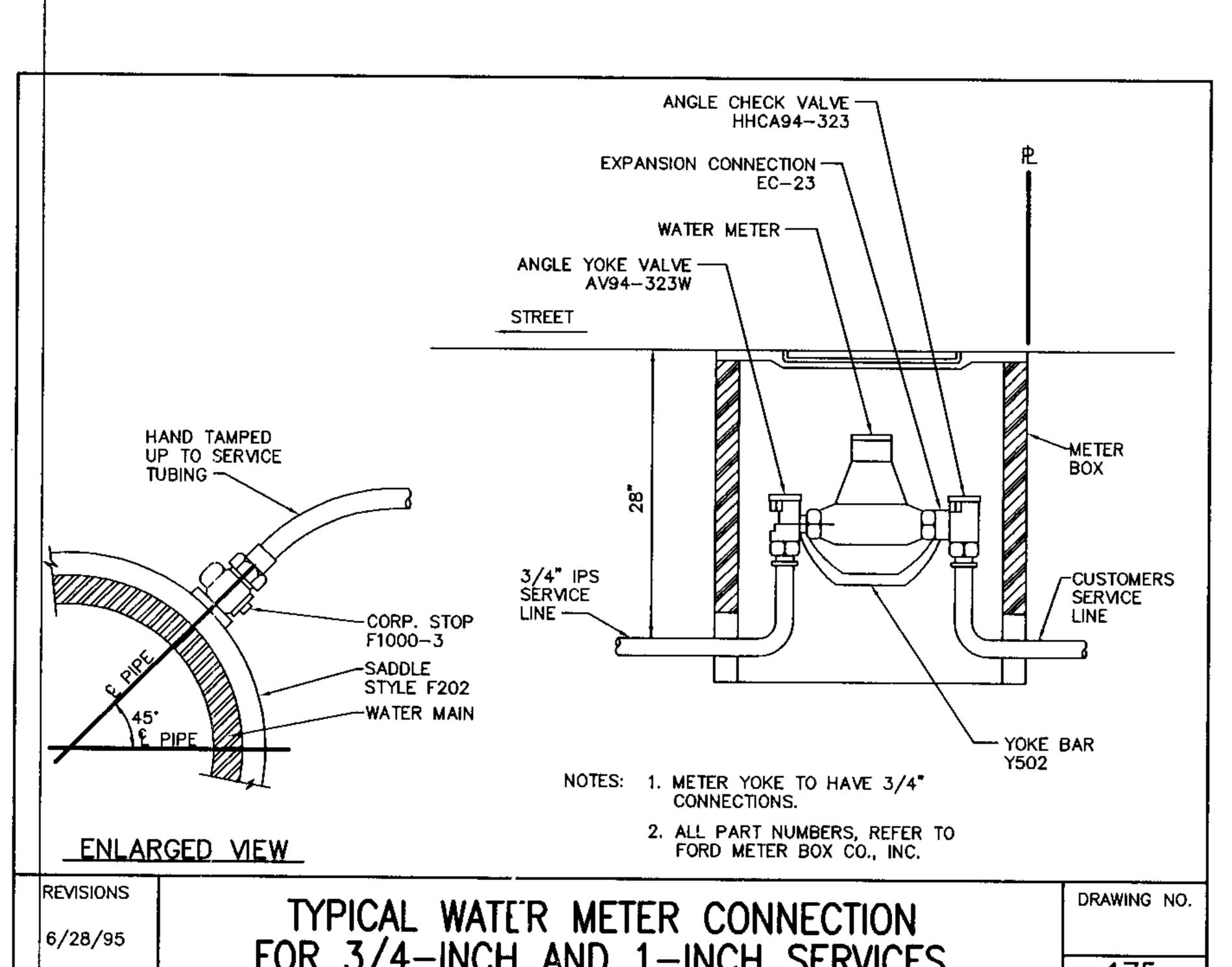
Improve the channel to a condition where a ten-year storm will not overtop the banks and a two-year storm will not cause erosion to the channel bed or banks; or Improve the pipe or pipe system to a condition where the ten—year storm is contained within . Develop a site design that will not cause the 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

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 of the subject project. f. If the applicant chooses an option that includes stormwater detention, he shall obtain 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 g. Outfall from a detention facility shall be discharged to a receiving channel, and energy dissipators Ishall be placed at the outfall of all detention facilities as necessary to provide a stabilized transition (from the facility to the receiving channel. . All on-site channels must be verified to be adequate.

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 to a detention facility. i. In applying these stormwater runoff criteria, individual lots or parcels in a residentiol, commercia 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

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.



H CAROLINA |

WING PREPARED /

KE GEORGE OFFI

SE GEORGE OFFI

DRAWN BY R. ROBBINS DESIGNED BY R. ROBBINS CHECKED BY

D. JOHNSON SCALE NONE

22658 SHEET NO.