

NOTE: THIS DETAIL IS FROM THE THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK-1992. COMPLY WITH THE DESIGN CRITERIA, THE CONSTRUCTION SPECIFICATION, THE MAINTENANCE REQUIREMENTS AND THE REMOVAL REQUIREMENTS CONTAINED THEREIN FOR THIS ITEM.

**STORM DRAIN INLET PROTECTION** (IP)

**SEDIMENT BASIN**

THE STORMWATER MANAGEMENT POND SHALL SERVE AS THE SEDIMENT BASIN DURING CONSTRUCTION AND THE SIZE OF THE POND IS DICTATED BY THE VOLUME REQUIREMENTS FOR THE SEDIMENT BASIN, AS OPPOSED TO THE SIZE REQUIRED TO DETAIN THE Q25 AND Q10 FLOWS.

THE STAGE-STORAGE RELATIONSHIP OF THE POND/SEDIMENT BASIN IS PROVIDED IN THE ACCOMPANYING STORMWATER CALCULATIONS PACKAGE. BELOW IS A SUMMARY.

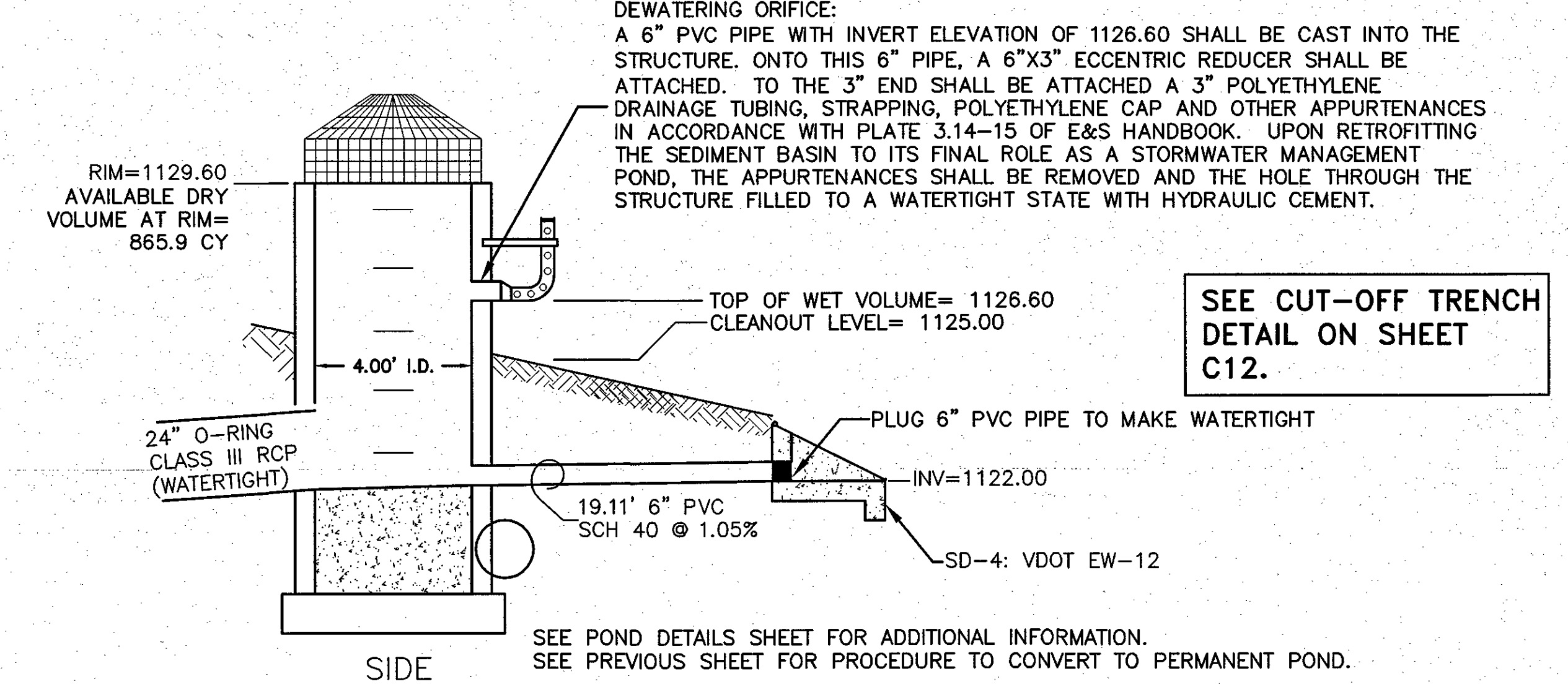
AREA DRAINING TO POND= 5.26 ACRES

WET VOLUME REQUIRED= 5.26 ACRES X 67 CY/AC = 352 CY = 9,515 CUBIC FEET  
WET VOLUME IS ACHIEVED AT ELEVATION= 1126.60

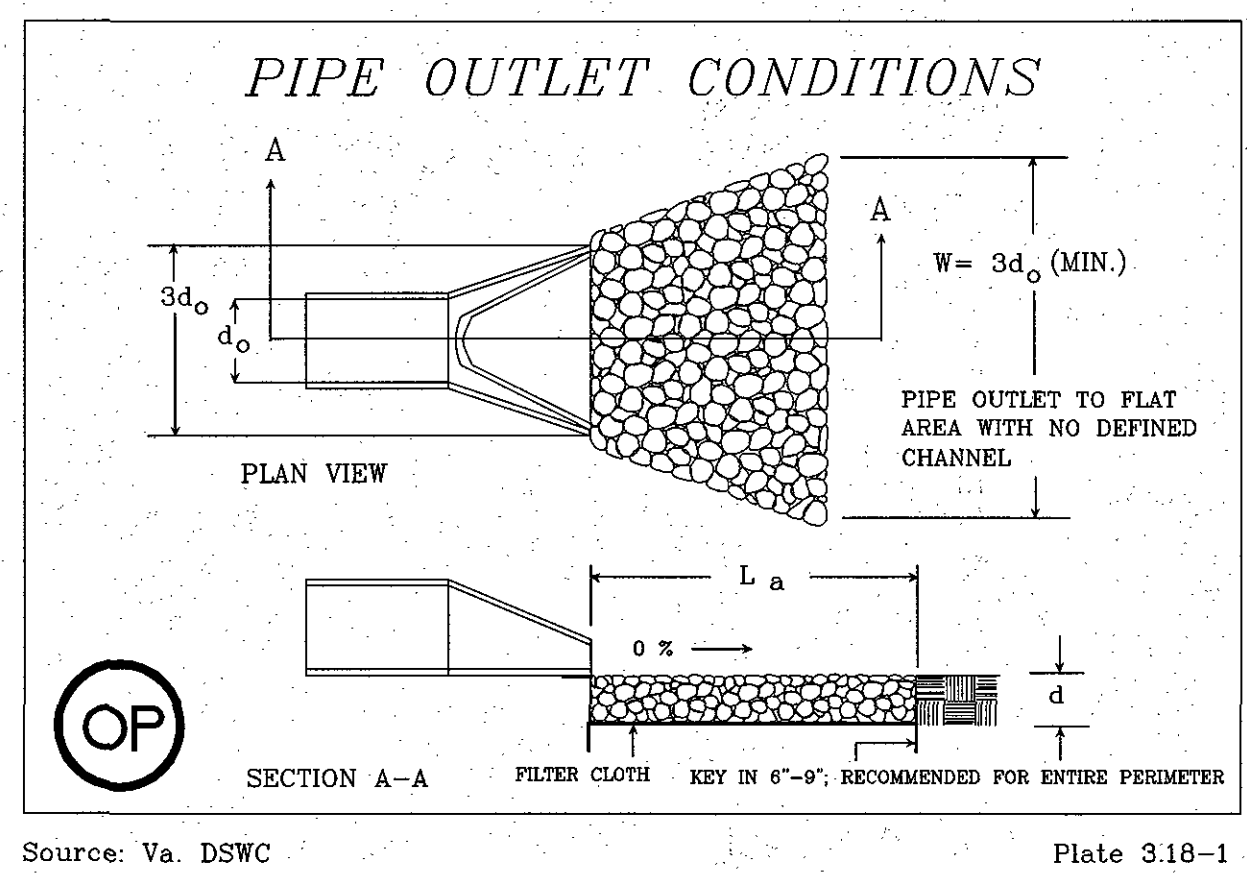
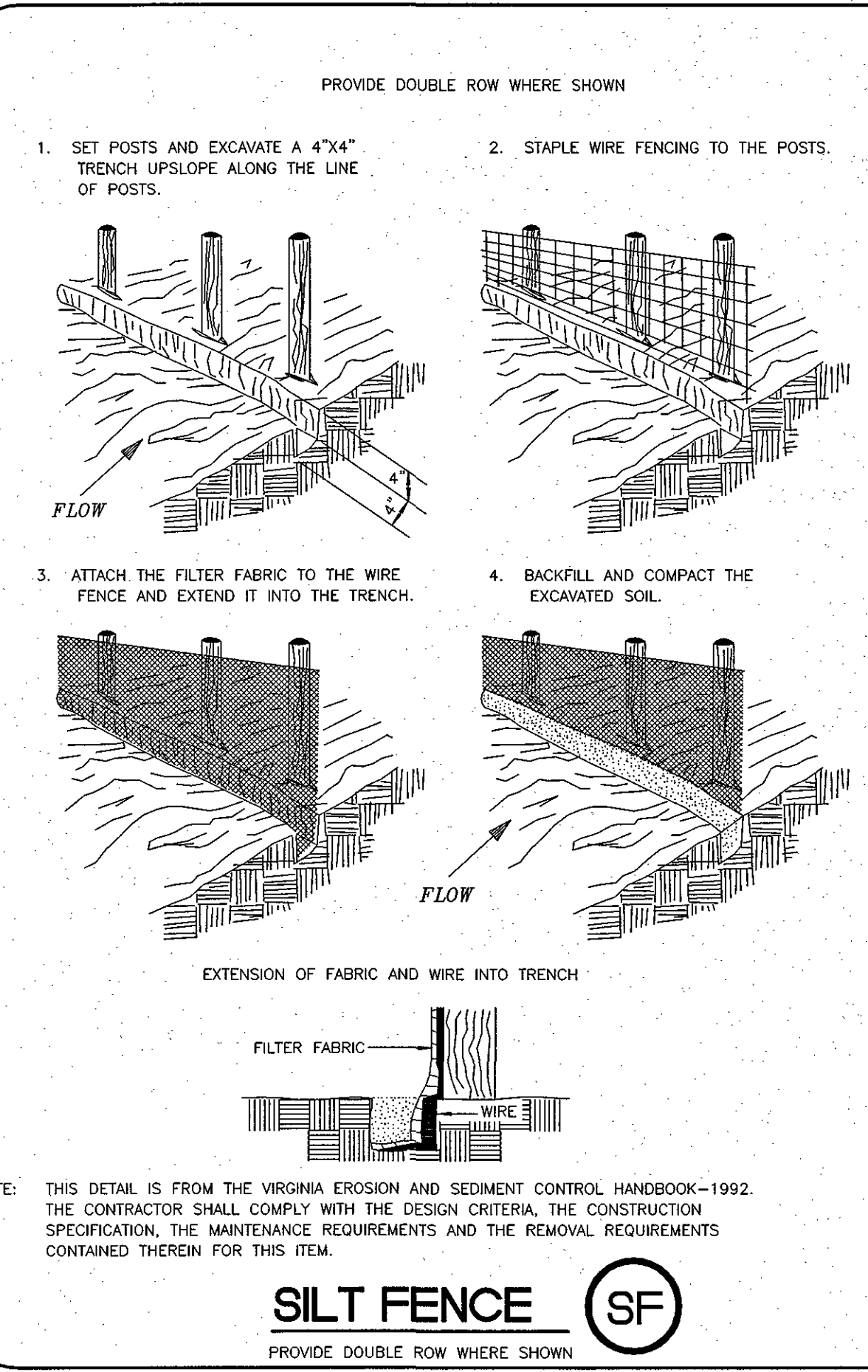
THE CLEANOUT VOLUME IS HALF THE WET VOLUME (176 CY OR 4752 CF)  
AND IS ACHIEVED AT ELEVATION 1125.00

DRY VOLUME REQUIRED= 5.26 ACRES X 67 CY/AC = 352 CY = 9,515 CUBIC FEET.  
THIS IS ON TOP OF THE WET VOLUME, BRINGING THE TOTAL REQUIRED POND VOLUME TO 2 X 352 CY = 704 CY (19,008 CF).  
THE ACTUAL AVAILABLE VOLUME AT THE TOP OF THE RISER STRUCTURE IS 23,379 CF.  
THE PRINCIPAL SPILLWAY HAS ITS CREST SET AT 1129.60.

THE STORMDRAIN COMPUTATIONS PACKAGE ROUTES THE 10, 25, AND 100 YEAR STORMS THROUGH THE PRINCIPAL SPILLWAY. AN EMERGENCY SPILLWAY IS ALSO PROVIDED AND IT HAS THE CAPACITY TO PASS THE 100 YEAR PEAK FLOW WHILE STILL ALLOWING 1' OF FREEBOARD BETWEEN THE 100 YEAR WATER SURFACE AND THE TOP OF THE DAM. ADDITIONAL INFORMATION ON THE POND'S THE STAGE-STORAGE-DISCHARGE RELATIONSHIP IS PROVIDED IN THE ACCOMPANYING STORMWATER CALCULATIONS PACKAGE.



NO SCALE

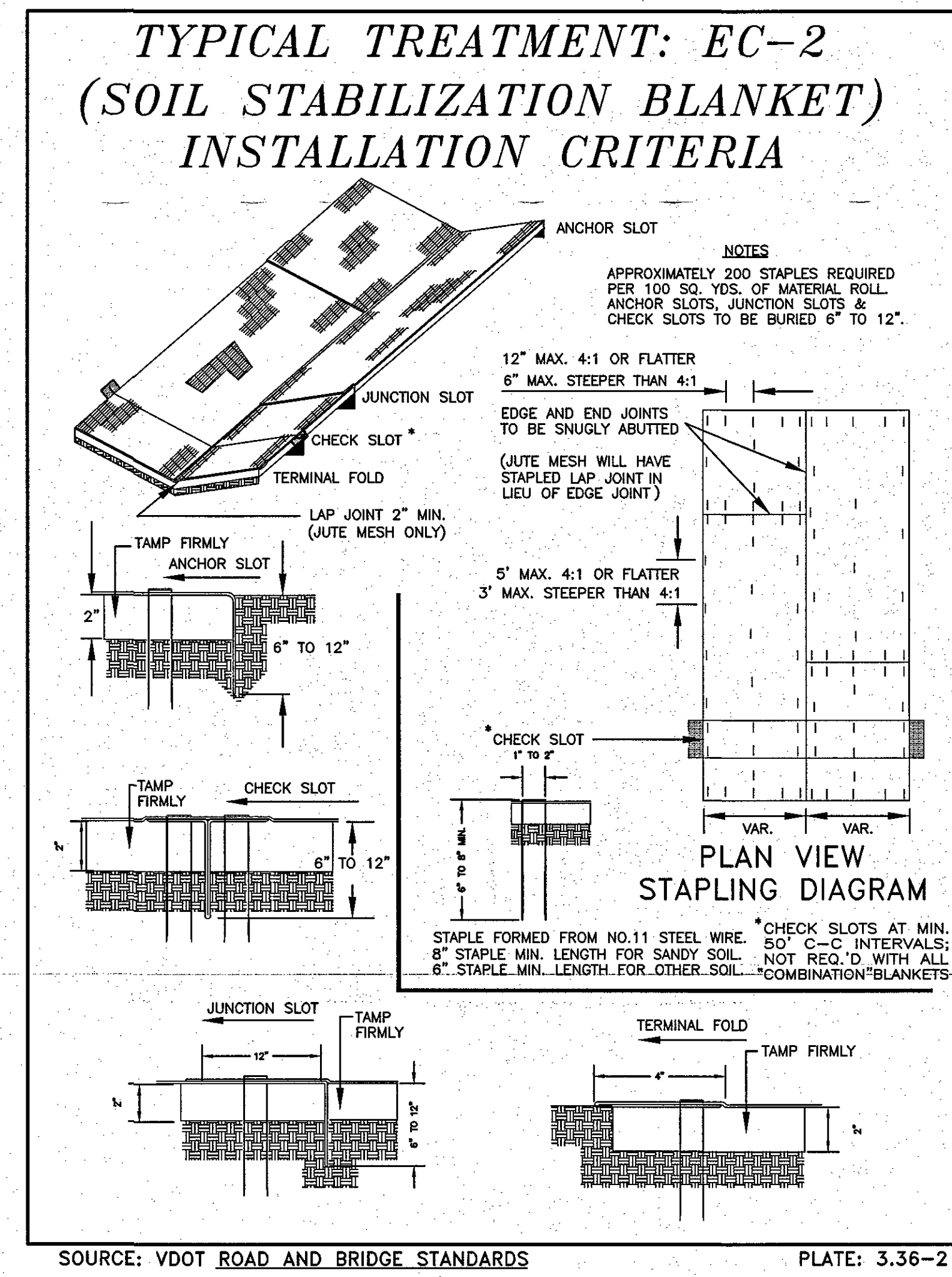


Source: Va. DSWC

**OUTLET PROTECTION**

MINIMUM OUTLET PROTECTION SIZES WERE DETERMINED USING PLATE 3.18-3 OF THE E&S HANDBOOK.

SD-2 Q10= 12 CFS Do= 24" Lg=15' W= 6' d50= 6" d=12"  
(NOTE THAT THE MINIMUM SIZE WAS EXPANDED TO ACCOMMODATE THE TRANSITION TO THE EXISTING CHANNEL)



SOURCE: VDOT ROAD AND BRIDGE STANDARDS

THIS SHEET IS FOR EROSION AND SEDIMENT CONTROL ONLY

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REVISIONS  
11/16/2015  
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SITE PLAN FOR  
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PRESBYTERIAN CHURCH  
COUNTY OF ROANOKE, VIRGINIA

**EROSION & SEDIMENT CONTROL DETAILS**

07/12/2016  
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APPROVED