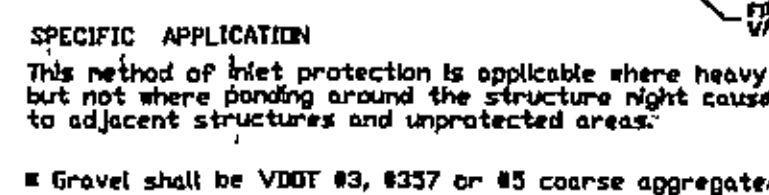
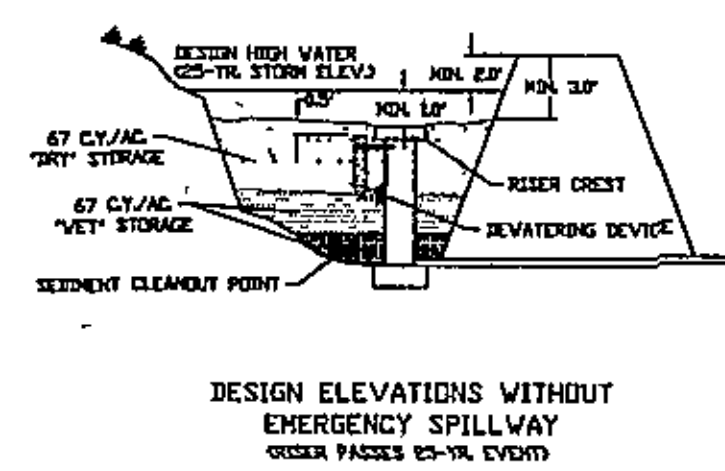


ALL COSTS GIVEN ARE COMPLETE IN PLACE

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SEDIMENT BASIN SCHEMATIC ELEVATIONS



(IP) GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER



1. DESIGN OF DETENTION BASINS SHALL CONFORM TO THE REQUIREMENTS OF THE COUNTY OF ROANOKE DRAINAGE STANDARDS (REF. SECTIONS 503.02, 503.03, AND 505.02). THE DESIGN OF THE FACILITY AND PREPARATION OF AS-BUILT PLANS SHALL BE BY A CERTIFIED PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE COMMONWEALTH OF VIRGINIA.

1. DESIGN OF DETENTION BASINS SHALL CONFORM TO THE REQUIREMENTS OF THE COUNTY OF RANCHO SERRANO STANDARDS REF. SECTIONS 5002, 5003, 5004, 5005, 5006, 5007, 5008, 5009, 5010, 5011, 5012, 5013, 5014, 5015, 5016, 5017, 5018, 5019, 5020, 5021, 5022, 5023, 5024, 5025, 5026, 5027, 5028, 5029, 5030, 5031, 5032, 5033, 5034, 5035, 5036, 5037, 5038, 5039, 5040, 5041, 5042, 5043, 5044, 5045, 5046, 5047, 5048, 5049, 5050, 5051, 5052, 5053, 5054, 5055, 5056, 5057, 5058, 5059, 5060, 5061, 5062, 5063, 5064, 5065, 5066, 5067, 5068, 5069, 5070, 5071, 5072, 5073, 5074, 5075, 5076, 5077, 5078, 5079, 5080, 5081, 5082, 5083, 5084, 5085, 5086, 5087, 5088, 5089, 5090, 5091, 5092, 5093, 5094, 5095, 5096, 5097, 5098, 5099, 5100, 5101, 5102, 5103, 5104, 5105, 5106, 5107, 5108, 5109, 5110, 5111, 5112, 5113, 5114, 5115, 5116, 5117, 5118, 5119, 5120, 5121, 5122, 5123, 5124, 5125, 5126, 5127, 5128, 5129, 5130, 5131, 5132, 5133, 5134, 5135, 5136, 5137, 5138, 5139, 5140, 5141, 5142, 5143, 5144, 5145, 5146, 5147, 5148, 5149, 5150, 5151, 5152, 5153, 5154, 5155, 5156, 5157, 5158, 5159, 5160, 5161, 5162, 5163, 5164, 5165, 5166, 5167, 5168, 5169, 5170, 5171, 5172, 5173, 5174, 5175, 5176, 5177, 5178, 5179, 5180, 5181, 5182, 5183, 5184, 5185, 5186, 5187, 5188, 5189, 5190, 5191, 5192, 5193, 5194, 5195, 5196, 5197, 5198, 5199, 5200, 5201, 5202, 5203, 5204, 5205, 5206, 5207, 5208, 5209, 5210, 5211, 5212, 5213, 5214, 5215, 5216, 5217, 5218, 5219, 5220, 5221, 5222, 5223, 5224, 5225, 5226, 5227, 5228, 5229, 5230, 5231, 5232, 5233, 5234, 5235, 5236, 5237, 5238, 5239, 5240, 5241, 5242, 5243, 5244, 5245, 5246, 5247, 5248, 5249, 5250, 5251, 5252, 5253, 5254, 5255, 5256, 5257, 5258, 5259, 5260, 5261, 5262, 5263, 5264, 5265, 5266, 5267, 5268, 5269, 5270, 5271, 5272, 5273, 5274, 5275, 5276, 5277, 5278, 5279, 5280, 5281, 5282, 5283, 5284, 5285, 5286, 5287, 5288, 5289, 5290, 5291, 5292, 5293, 5294, 5295, 5296, 5297, 5298, 5299, 5300, 5301, 5302, 5303, 5304, 5305, 5306, 5307, 5308, 5309, 5310, 5311, 5312, 5313, 5314, 5315, 5316, 5317, 5318, 5319, 5320, 5321, 5322, 5323, 5324, 5325, 5326, 5327, 5328, 5329, 5330, 5331, 5332, 5333, 5334, 5335, 5336, 5337, 5338, 5339, 5340, 5341, 5342, 5343, 5344, 5345, 5346, 5347, 5348, 5349, 5350, 5351, 5352, 5353, 5354, 5355, 5356, 5357, 5358, 5359, 5360, 5361, 5362, 5363, 5364, 5365, 5366, 5367, 5368, 5369, 5370, 5371, 5372, 5373, 5374, 5375, 5376, 5377, 5378, 5379, 5380, 5381, 5382, 5383, 5384, 5385, 5386, 5387, 5388, 5389, 5390, 5391, 5392, 5393, 5394, 5395, 5396, 5397, 5398, 5399, 5400, 5401, 5402, 5403, 5404, 5405, 5406, 5407, 5408, 5409, 5410, 5411, 5412, 5413, 5414, 5415, 5416, 5417, 5418, 5419, 5420, 5421, 5422, 5423, 5424, 5425, 5426, 5427, 5428, 5429, 5430, 5431, 5432, 5433, 5434, 5435, 5436, 5437, 5438, 5439, 5440, 5441, 5442, 5443, 5444, 5445, 5446, 5447, 5448, 5449, 5450, 5451, 5452, 5453, 5454, 5455, 5456, 5457, 5458, 5459, 5460, 5461, 5462, 5463, 5464, 5465, 5466, 5467, 5468, 5469, 5470, 5471, 5472, 5473, 5474, 5475, 5476, 5477, 5478, 5479, 5480, 5481, 5482, 5483, 5484, 5485, 5486, 5487, 5488, 5489, 5490, 5491, 5492, 5493, 5494, 5495, 5496, 5497, 5498, 5499, 5500, 5501, 5502, 5503, 5504, 5505, 5506, 5507, 5508, 5509, 5510, 5511, 5512, 5513, 5514, 5515, 5516, 5517, 5518, 5519, 5520, 5521, 5522, 5523, 5524, 5525, 5526, 5527, 5528, 5529, 5530, 5531, 5532, 5533, 5534, 5535, 5536, 5537, 5538, 5539, 5540, 5541, 5542, 5543, 5544, 5545, 5546, 5547, 5548, 5549, 5550, 5551, 5552, 5553, 5554, 5555, 5556, 5557, 5558, 5559, 5560, 5561, 5562, 5563, 5564, 5565, 5566, 5567, 5568, 5569, 5570, 5571, 5572, 5573, 5574, 5575, 5576, 5577, 5578, 5579, 5580, 5581, 5582, 5583, 5584, 5585, 5586, 5587, 5588, 5589, 5590, 5591, 5592, 5593, 5594, 5595, 5596, 5597, 5598, 5599, 5600, 5601, 5602, 5603, 5604, 5605, 5606, 5607, 5608, 5609, 5610, 5611, 5612, 5613, 5614, 5615, 5616, 5617, 5618, 5619, 5620, 5621, 5622, 5623, 5624, 5625, 5626, 5627, 5628, 5629, 5630, 5631, 5632, 5633, 5634, 5635, 5636, 5637, 5638, 5639, 5640, 5641, 5642, 5643, 5644, 5645, 5646, 5647, 5648, 5649, 5650, 5651, 5652, 5653, 5654, 5655, 5656, 5657, 5658, 5659, 5660, 5661, 5662, 5663, 5664, 5665, 5666, 5667, 5668, 5669, 5670, 5671, 5672, 5673, 5674, 5675, 5676, 56

1. SITE PREPARATION SHALL BE IN ACCORDANCE WITH THE COUNTY OF
REINFORCE DESIGN AND CONSTRUCTION STANDARDS FOR DETENTION PONDS;
LATEST EDITION.

5. SITE PREPARATION SHALL BE IN ACCORDANCE WITH THE COUNTY OF VIRGINIA DESIGN AND CONSTRUCTION STANDARDS FOR DETENTION POND/LATEST EDITION.
6. SLOPES STEEPER THAN 3 TO 1 (HORIZONTAL TO VERTICAL) SHALL BE BENCHED OR STEPPED PRIOR TO PLACING FILL ON THEM.
7. INFILL FILL MATERIAL OR BURNED FILL MATERIAL MAY BE UTILIZED. FILL MATERIAL, SOILS, IN GENERAL:
 - A. SHALL BE COMPACTABLE.
 - B. SHALL BE WITHIN AN ACCEPTABLE RANGE OF MOISTURE CONTENT WHICH IS READILY CONTROLLABLE.
 - C. SHALL NOT BE HIGHLY SUSCEPTIBLE TO VOLUME CHANGE (CHRONICALLY SWELL OR SETTLEMENT).
8. FILL MATERIALS CONTAINING ROCKS LARGER THAN SIX (6) INCHES (15.2 CM) SHALL NOT BE USED. THE UPPERMOST TWO (2) FEET (61 CM) SHOULD HAVE AN ROCK LARGER THAN TWO (2) INCHES (5.1 CM) IN DIAMETER.
9. THE APPROVED FILL SHALL BE PLACED IN LIFTS OR INCHES OR LOOSE LIFTS. EACH LIFT SHALL BE SPREAD IN UNIFORM LAYERS. FILL SOIL SHALL BE UTILIZED ONLY WITHIN A MOISTURE RANGE OF $\pm 2\%$ OF THE OPTIMUM MOISTURE CONTENT. COMPACTION OF THE FILL SHALL BE PERFORMED WITH APPROPRIATE EQUIPMENT. COMPACTION OF THE LAYERS SHALL BE CONTINUOUS AND UNIFORM.
10. EMBANKMENT MATERIAL IN FILL AREAS SHALL BE PLACED IN LIFTS NOT EXCEEDING EIGHT (8) INCHES AND SHALL BE COMPACTED TO A MINIMUM 90% DENSITY IN ACCORDANCE WITH SECTION 303 OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS.
11. FIELD DENSITY TESTS ARE TO BE CONDUCTED BY AN INDEPENDENT SOILS TESTING LABORATORY UNDER THE DIRECTION OF A QUALIFIED GEOTECHNICAL ENGINEER. THE RESULTS OF THE TESTS SHALL BE SUBMITTED TO THE COUNTY OF ROANOKE WITH AS-BUILT PLANS AS A CONDITION OF THE CONTRACT. THE COUNTY WILL BE REQUIRED TO CONDUCT FIELD DENSITY TESTS, AS DIRECTED BY THE ENGINEER SHALL BE PERFORMED PERIODICALLY TO DETERMINE THE DEGREE OF COMPACTION. ANY AREAS THAT DO NOT MEET THE REQUIRED DENSITY SHALL BE REMOVED AND/OR RECOMPACTED UNTIL THE REQUIRED DEGREE OF COMPACTION IS ACHIEVED.
12. ANTI-SLOP COLLARS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE VIRGINIA DESIGN AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
13. ALL DISTURBED AREAS SHALL BE COVERED WITH FOUR (4) INCHES OF TOPSOIL AND SEEDING.
14. THE MINIMUM SLOPE OF THE BASIN FLOOR SHALL BE ONE (1) PERCENT

[illegible]

ALL COSTS GIVEN ARE COMPLETE IN PLACE

SUB-TOTAL	\$ 6,700.00
10% CONTINGENCY	\$ 670.00
TOTAL PROJECT COST	\$ 7,370.00

1. ALL SOIL EROSION & SEDIMENT CONTROL MEASURES SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS CONTAINED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
2. THE APPROVING AUTHORITY MAY ADD, TO, DELETE, RELOCATE, CHANGE, OR OTHERWISE MODIFY CERTAIN EROSION AND SEDIMENT CONTROL MEASURES WHERE NECESSARY AND WHERE SUCH MODIFICATIONS ARE NECESSARY FOR THE PROTECTION OF THE PUBLIC.
3. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE PLAN SHALL BE PLACED IN AVERAGE OF THE WORK BEING PERFORMED, AS FAR AS PRACTICAL.
4. IN NO CASE DURING CONSTRUCTION SHALL WATER RUNOFF BE DIVERTED OR ALLOWED TO FLOW TO LOCATIONS WHERE ADEQUATE PROTECTION HAS NOT BEEN PROVIDED.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LEAVE THE SITE ADEQUATELY PROTECTED AGAINST EROSION, SEDIMENTATION, OR ANY DAMAGE TO ANY ADJACENT PROPERTY AT THE END OF EACH DAY.
6. FORTH EROSION CONTROL, ETC. SYMBOLS SHOWN ON THE PLANS, REFER TO THE VIRGINIA EROSION CONTROL GUIDE SYSTEM FOR EROSION AND SEDIMENT CONTROL PRACTICES CONTAINED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION. THESE SYMBOLS AND DESIGNS ARE TO BE UTILIZED ON ALL EROSION CONTROL PLANS SUBMITTED TO VIRGINIA EROSION CONTROL.

1 SEPTEMBER TO 15 FEBRUARY
50-50 MIX OF ANNUAL RYEGRASS
CEREAL WINTER RYE
@ 50-100 LBS./ACRE

15 FEBRUARY TO 30 APRIL
ANNUAL RYEGRASS @ 60-100 LBS./ACRE

1 MAY TO 31 AUGUST
GERMAN KILLET @ 50 LBS./ACRE

FERTILIZER: 10-20-10 OR EQUIVALENT NUTRIENTS
RATE: 600-4-8% ACRE 1/4 LBS./1000 SQ.

TYPE A	TYPE B (COLPES-3) OR STEEPED
15 OCTOBER TO 1 DECEMBER	15 MARCH TO 1 MAY
K-31 FESQUE 0 1/2 L.B. / 1000 SF	CRIMINAL VETCH 1/2 L.B. / 1000 SF
BORKY WINTER RYE 1/2 L.B. / 1000 SF	PERNIAL RYEGRASS 0 1/2 L.B. / 1000 SF
15 JANUARY TO 1 JUNE	15 AUGUST TO 1 DECEMBER
K-31 FESQUE 0 1/2 L.B. / 1000 SF	CRIMINAL VETCH 1/2 L.B. / 1000 SF
ANNUAL RYE 1/2 L.B. / 1000 SF	PERNIAL RYEGRASS 0 1/2 L.B. / 1000 SF
1 JUNE TO 1 SEPTEMBER	RED TOP 1/2 L.B. / 1000 SF
K-31 FESQUE 0 1/2 L.B. / 1000 SF	RED TOP 1/2 L.B. / 1000 SF
GERMAN RILLET 0 1/2 L.B. / 1000 SF	
1 SEPTEMBER TO 15 OCTOBER	
K-31 FESQUE 0 1/2 L.B. / 1000 SF	
ANNUAL RYE 1/2 L.B. / 1000 SF	

FERTILIZER 5-20-10 @ 25 LB / 1000 SF
38-0-0 @ 7 LB / 1000 SF

MULCH: IF REQUIRED, SHALL BE USED OVER ALL SEEDED AREAS AND SHALL BE APPLIED IN ACCORDANCE WITH SECTION 119 IF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.

SOIL CONDITIONING:
INCORPORATION OF LIME AND FERTILIZER, SELECTION OF CERTIFIED SEED, MULCHING, MAINTENANCE OF NEW SEEDLINGS, AND GRASSING SHALL BE IN ACCORDANCE WITH SPECIFICATIONS CONTAINED WITHIN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION. ADDITIONAL SEEDING TO BE PERFORMED AS REQUIRED BY THE INSPECTOR.

SEED APPLICATION: APPLIED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, COTLIPACKER SEEDER, OR HYDROSEEDER ON A FIRM, FRIABLE, SEDED, MAXIMUM SEEDING DEPTH SHALL BE 1/4" INCH.

TOTAL DISTURBED AREA = 0.46 AC. = 20,000 SQ. FT.

1	ENGR. & INSPEC.	04-10-93
2	ENGR. & INSPEC.	08-05-93
3	ENGR. & INSPEC.	10-27-93
4		
5		
6		

DATE:	11/02/93
SCALE:	NO SCALE
DRAWING BY:	CLN,AF
DESIGNED BY:	G:\CAD\DETAILS\EROSION\EROSION

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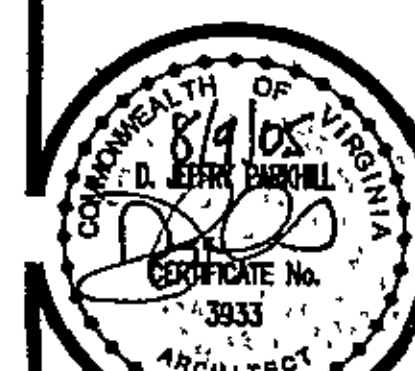
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