

GENERAL NOTES :

- ALL WATER LINES SHALL BE CONSTRUCTED A MINIMUM OF 42" COVER BELOW FINISHED GRADE
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME IV, i.e. STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FROM BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS TO VERIFY THEIR LOCATION AND ELEVATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF LOCATION OF UTILITIES IS OTHER THAN SHOWN.
- CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS:
 - MISS UTILITY 800-257-7777
 - CFP TELEPHONE 410-725-9976
 - HOWARD COUNTY BUREAU OF UTILITIES 410-992-2566
 - AT&T CABLE LOCATION DIVISION 410-393-3553
 - BALTIMORE GAS & ELECTRIC CO. 410-665-0123
 - STATE HIGHWAY ADMINISTRATION 410-531-5533
 - HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION (24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK) 410-313-1660
- ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- EXISTING STRUCTURES TO REMAIN.
- PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
- NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT TO SUBGRADE.
- TRASH PICKUP IS PRIVATE FOR THIS SITE.
- ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- ALL STORM DRAIN PIPE BEDDING SHALL BE AS SHOWN IN DETAIL 62.01 (TRENCH IN ROCK OR TRENCH IN EARTH AS DETERMINED BY FIELD CONDITIONS) IN VOL. IV OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR AS SHOWN ON THE DRAWINGS.
- THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR THE SEDIMENT AND EROSION CONTROL PRACTICES, STORM WATER MANAGEMENT PRACTICES AND THE DISCHARGE OF STORM WATER ONTO OR ACROSS ADJACENT OR DOWNSTREAM PROPERTIES INCLUDED IN THIS PLAN. HE IS ALSO RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHT AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR GRADING AND/OR WORK ON ADJACENT PROPERTIES INCLUDED IN THIS PLAN.
- FOR THE EXACT LOCATION AND DEPTH OF THE EXISTING WATER AND SEWER MAINS, THE CONTRACTOR SHALL DIG TEST PITS AT THE CONTRACTOR'S EXPENSE.
- THERE ARE NO FLOOD PLAINS OR WETLANDS ON THIS SITE.
- PARKING APPROVED IN ACCORDANCE WITH ZONING SECTION 133.D.8.
- STORMWATER MANAGEMENT IS NOT REQUIRED FOR THIS PROJECT SINCE THE DISTURBED AREA IS LESS THAN 5,000 SF.
- THE FOREST CONSERVATION OBLIGATION WAS FULFILLED BY THE PAYMENT OF A FEE-IN-LIEU OF 0.3 ACRES OF AFFORESTATION IN THE AMOUNT OF \$6,534.00.
- THIS SITE PLAN CONFORMS TO THE FIFTH EDITION OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HO. CO. MONUMENTS 48AA & 43HA
- WATER IS PUBLIC (CONTRACT 454-1) SEWER IS PUBLIC (CONTRACT 612-5)
- FIELD RUN TOPO TAKEN FROM SURVEY BY BRIAN DIETZ, DATED MAY 27, 2003

BY THE DEVELOPER
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Robert W. Surrette 2-3-04
DEVELOPER DATE

BY THE ENGINEER:
I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Richardson Engineering, LLC 2/24/04
ENGINEER DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
USDA - NATURAL RESOURCE CONSERVATION SERVICES 2/25/04
DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Robert W. Surrette 2/25/04
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED DEPARTMENT OF PLANNING AND ZONING

Richardson Engineering, LLC 2/27/04
DATE

Chris Hammond 2/2/04
DATE

Mark D. Leagle 2/5/04
DATE

SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO ADJACENT PROPERTIES	ADJACENT PROPERTIES
LANDSCAPE TYPE	E	A	C ***
LINEAR FEET OF ROADWAY/FRONTAGE/PERIMETER	242	1023	31
CREDIT FOR EXISTING VEGETATION (YES NO. LINEAR FEET)	0	110	0
CREDIT FOR WALL FENCE OR BERRY (YES NO. LINEAR FEET)	0	0	0
NUMBER OF PLANTS REQUIRED	1/40'=6	1/60'=15	1/40'=1
SHADE TREES	0	0	1/20'=2
EVERGREEN TREES	0	0	0
SHRUBS	1/4'=60	0	0
NUMBER OF PLANTS PROVIDED	5*	13***	2
SHADE TREES	6	0	0
EVERGREEN TREES	0	0	0
OTHER TREES (2:1 SUBSTITUTION)	0	0	0
SHRUBS (10:1 SUBSTITUTION)	0	0	0

* CREDIT FOR 1 EXIST. SHADE TREE
*** CREDIT FOR 2 EXISTING TREES
* Surrounding dumpster

DEVELOPER'S/BUILDERS CERTIFICATE
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE INSTALLATION ACCOMPANIED BY AND EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Robert W. Surrette 3-3-04
NAME DATE

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.

FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEV. AGREEMENT IN THE AMOUNT OF \$6,500.00. THIS SURETY IS BASED ON 18 SHADE TREES AT \$800.00 EACH, 10 EVERGREEN TREES AT \$150.00 EACH AND 0 SHRUBS @ \$50.00

THE OWNER, TENTANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERRIES, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION AND WHEN NECESSARY, REPAIRED OR REPLACED.

SITE ANALYSIS DATA :

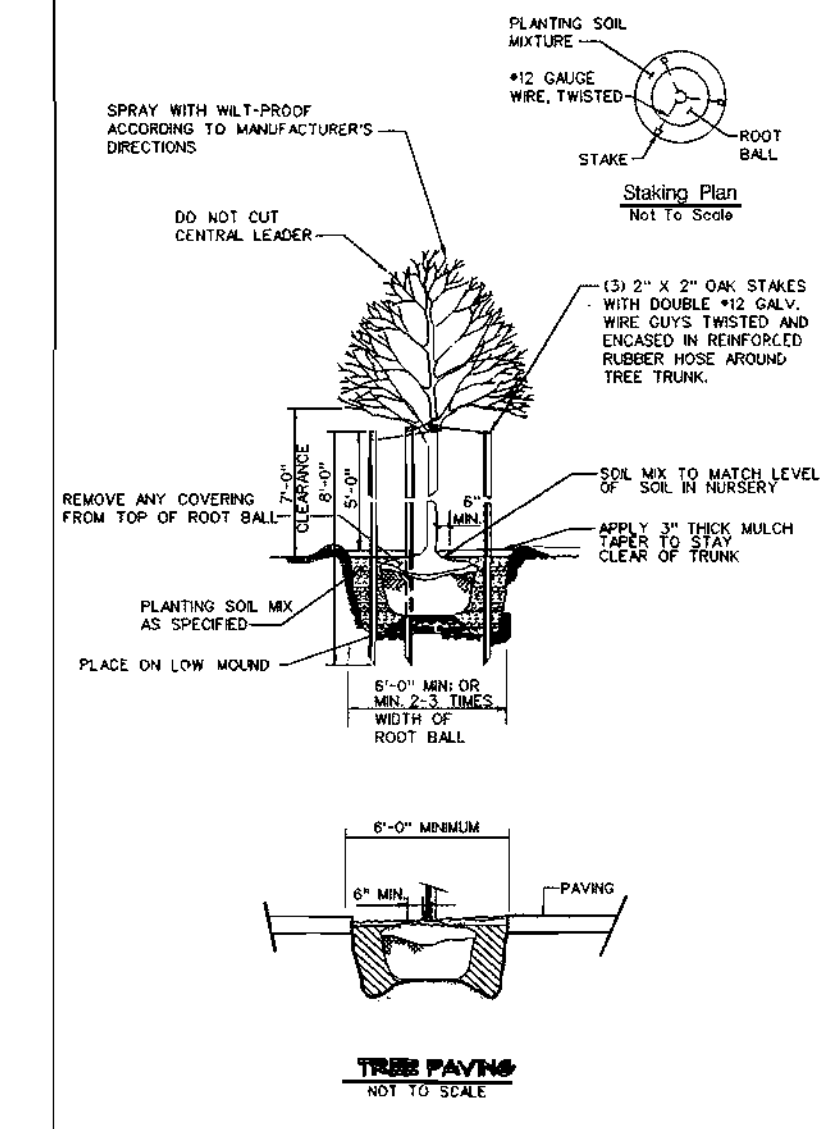
- BASIC SITE DATA**
1. Total Area of Lot : Parcel 576: 22,099 SF or 0.507 AC +/- Parcel 254: 70,428 SF or 1.617 AC +/- TOTAL: 92,527 SF or 2.124 AC +/-
Limit of Disturbance: 11,838 SF or 0.27 AC +/-
2. Purpose of this SDP: Construct new Storage Building for Contractor Storage Facility
Existing Use: Contractors Office and Storage Facility
Proposed Use: Contractors Office and Storage Facility
3. Owner: SURRETTE FAMILY, LLC
P.O. BOX 48
ANNAPOLIS, MD 21404-00480794
- Developer: AYERS CORPORATION
7941 DORSEY RUN ROAD
JESSUP, MD 20794
4. Existing Zoning: M-2
5. Existing Building: 1,248 SF
Proposed Building: 4,000 SF
6. Required Setbacks: Street Front: 50'
Use Other Than Structure: 30'
7. Parking Computations:
Number of Parking Spaces Required: Office 1248 @ 33/1000 SF = 5 SPACES
Number of Parking Spaces Provided: 15 Spaces (Inc. 3 HC Spaces).
Maximum employees on site: 6
8. Open Space: 9,398 SF / 92,527 SF = 10%
9. Floor Area Ratio: 5,248 SF / 92,527 SF = 0.06
10. Applicable DPZ Ref.: SDP 61-104 (for 7951 Dorsey Run Rd, voided)
WP-98-18, & WP-99-30 were submitted for a waiver of SDP requirement
WP-98-18 DENIED 11/5/97, WP-99-30 DENIED 11/4/98
ZY-99-19, ZV-99-20, SDP-01-96 (for both parcels, voided)
11. No site lighting is proposed. Any new lighting is to conform with Section 134 of the Howard County Zoning Regulations.
12. Existing Gravel/ Macadam area in Contractor's Yard Area To Remain Undisturbed
13. Water and Sewer connections for the proposed building are not being provided.
14. Stabilize any unvegetated or exposed earth throughout the entire Parcels 274 and 576 using seeding and mulching as specified on sheet 2.
15. No construction, paving or storage of materials is permitted within the Stream Buffer.

APPENDIX E FOREST CONSERVATION WORKSHEET

- INFORMATION FOR CALCULATIONS**
- A. Net Tract Area
B. Reforestation Threshold (15% x A)
C. Aforestation Minimum (15% x A)
D. Existing Forest on Net Tract Area
E. Forest Areas to be Cleared
F. Forest Areas to be Retained
- Total Reforestation required: $19 \times 1/41 = (H \times 2)$
- Since clearing occurs below the threshold, no forest retention credit is possible.
- AFFORESTATION CALCULATIONS**
- A. Net Tract Area
B. Aforestation Minimum (15% x A)
C. Existing Forest on Net Tract Area
D. Forest Areas to be Cleared
E. Forest Areas to be Retained
- SELECT THE ALTERNATIVE THAT APPLIES:
1. No Clearing below the Minimum
If existing forests are less than the aforestation minimum (if D is less than C) and no clearing is proposed, the following calculations apply:
Total aforestation required
Aforestation must make total forest area equal the minimum required.
Fee in lieu paid for the aforestation = \$6,534.00

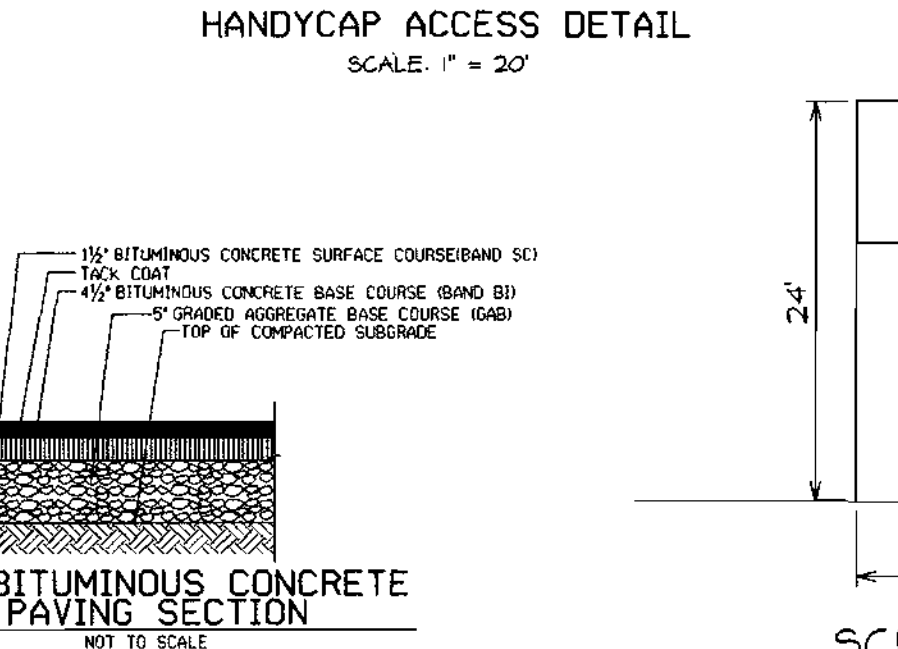
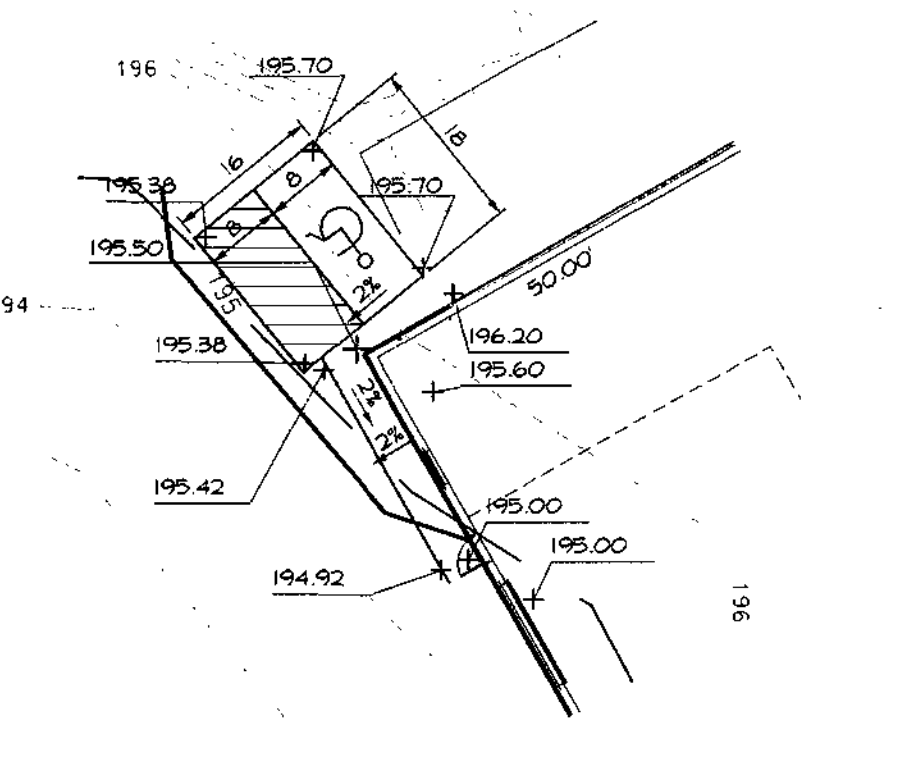
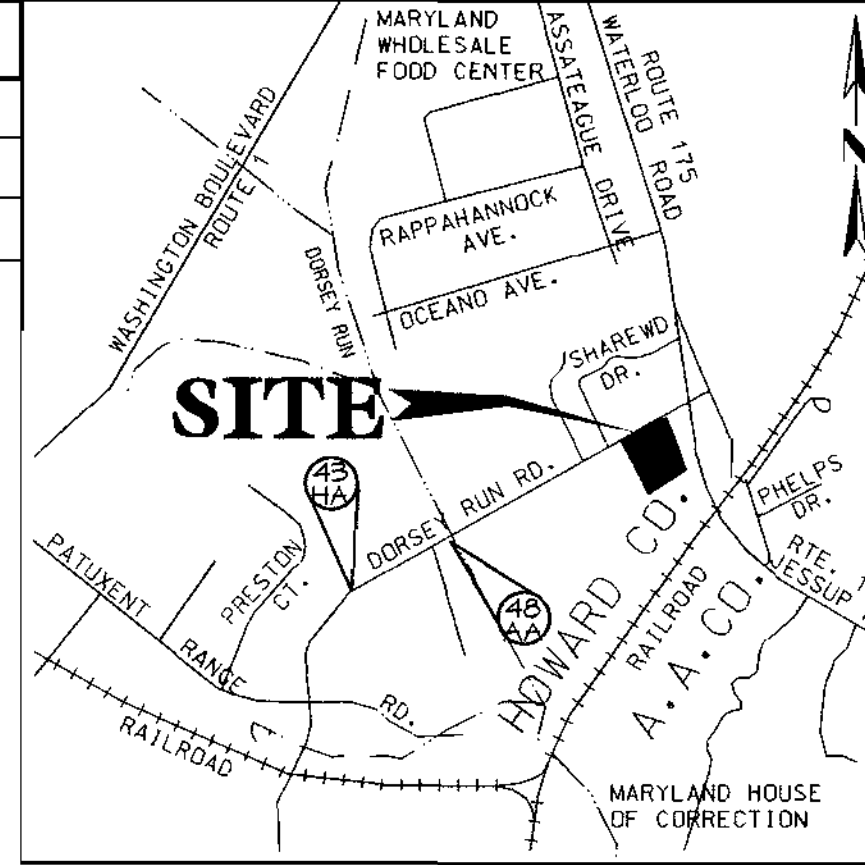
ACRE (1/10 acre)
0.1
0.2
0.3

Tree Planting Detail Not To Scale



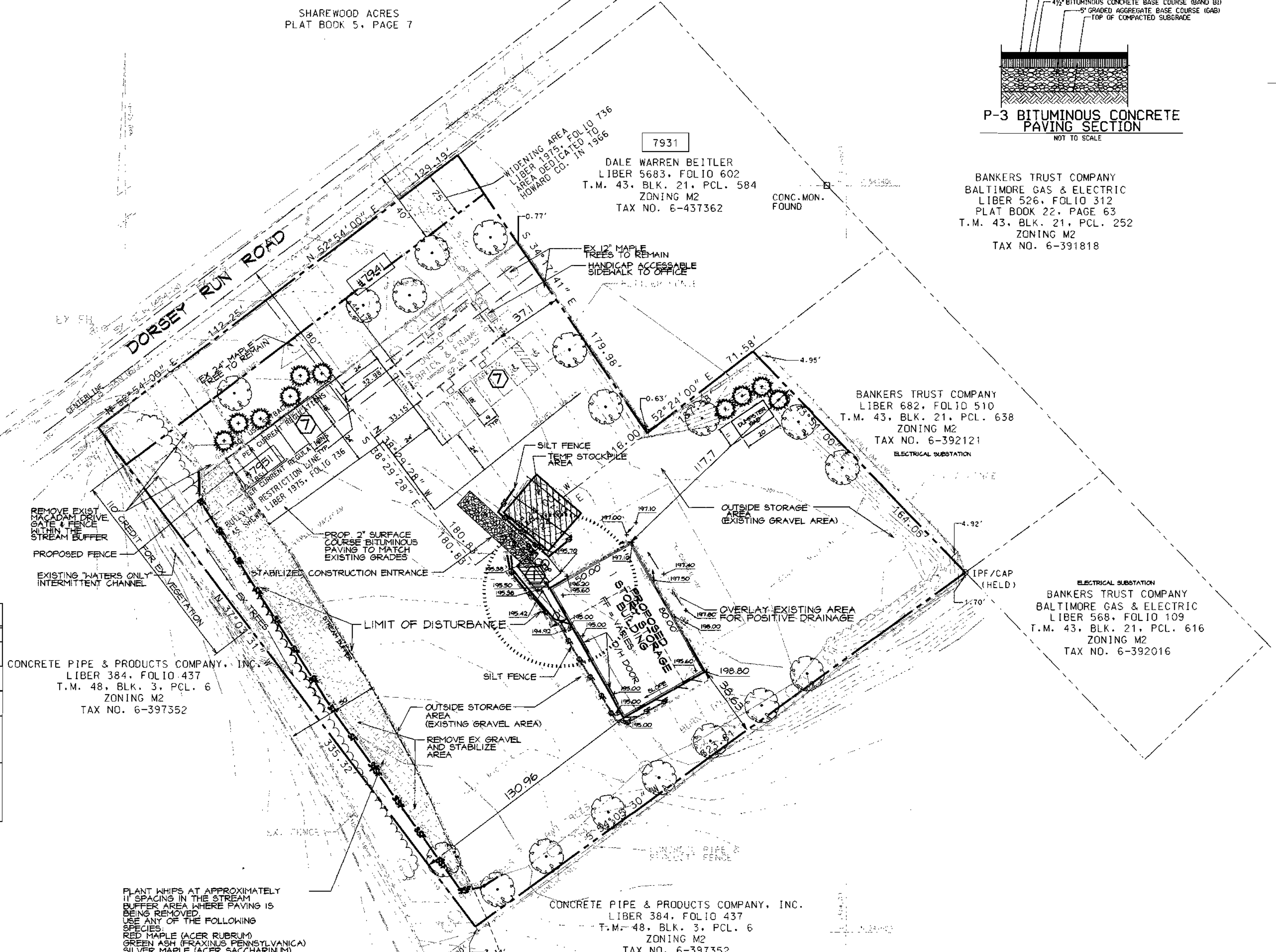
HOWARD COUNTY CONTROL POINTS

NO.	NORTHING	EASTING	ELEV.
48AA	539,314.900	1,371,539.251	240.809
43HA	540,761.716	1,373,837.265	224.907



LEGEND

- SILT FENCE
- EXISTING EASEMENT
- PROPERTY LINE
- ADJOINING PROPERTY LINE
- OLD LOT LINE
- BRL - BUILDING RESTRICTION LINE
- OVERLAY EXISTING PAVING
- 7931 - STREET ADDRESS
- IPFO - IRON PIPE FOUND
- CHAIN LINK FENCE
- EXISTING TREE
- CONC. MON. FOUND - CONCRETE MONUMENT FOUND
- TELEPHONE LINE
- REMOVE EX. MACADAM AND PLANT WHIPS IN THIS AREA
- LIMIT OF DISTURBANCE
- TEMPORARY STOCKPILE AREA



PLANT LIST

QTY.	SYM.	BOTANICAL NAME	COMMON NAME	REMARKS
18	QP	QUERCUS PHellos	WILLOW OAK	2 1/2" - 3" CAL.
10	LC	CUPRESSOCYPRIS LEYLANDI	LEYLAND CYPRUS	6-8' HT.

SHEET INDEX :

SHEET 1 SITE PLAN & DETAILS
SHEET 2 SEDIMENT CONTROL & SITE DETAILS

DATE NO. REVISION

OWNER SURRETTE FAMILY, LLC DEVELOPER AYERS CORPORATION
P.O. BOX 48 7941 DORSEY RUN ROAD
ANNAPOLIS, MD 21404 JESSUP, MD 20794
Attn: ROBERT W. SURRETTE, 301-725-0422

PROJECT: **AYER CORPORATION PROPOSED STORAGE BUILDING**

TITLE: **SITE DEVELOPMENT PLAN**
Liber/Folio 6960/043 2ND ELECTION DIST TAX MAP 43 GRID 21 PARCEL 576 & 254

Richardson Engineering, LLC

730 W. Podonia Road
Cockeysville, Maryland 21030
Phone: 410-560-1502 Fax: 410-560-0827

CHECKED BY: PCR
DESIGNED BY: PCR
DRAWN BY: PCR
PROJECT NO.: 03034
DATE: 9/20/2003
SCALE: 1" = 40'
DRAWING NO. 1 OF 2
FILE NO. SDP- 04-016

Table 25 Permanent Seeding for Low Maintenance Areas

MIX	SEED MIX (USE CERTIFIED MATERIAL IF AVAILABLE)	PLANTING LBS./AC.	SITE CONDITIONS	PLANT HARDINESS ZONE 6b									
				USDA HARDINESS ZONES	3/1-5/15	3/15-6/1	6/1-8/14	8/14-10/15	10/15-12/1	12/1-2/1	2/1-4/1		
1	TALL FESCUE (75%), CANADA BLUEGRASS (10%), KENTUCKY BLUEGRASS (10%), REDTOP (5%)	150	3.4	MOIST TO DRY	5b	X	X	X	X	X	X	X	X
2	KENTUCKY BLUEGRASS (50%), CREEPING RED FESCUE OR A HARD FESCUE (40%), REDTOP (10%)	150	3.4	MOIST TO MODERATELY DRY TO DRY	5b	X	X	X	X	X	X	X	X
3	TALL FESCUE (85%), PERENNIAL RYEGRASS (10%), KENTUCKY BLUEGRASS (5%)	125	2.9	MOIST TO DRY	5b	X	X	X	X	X	X	X	X
4	RED FESCUE OR CHEWINGS FESCUE (80%), PERENNIAL RYEGRASS (20%)	60	.92	MOIST TO DRY	5b	X	X	X	X	X	X	X	X
5	TALL FESCUE (85%) OR PERENNIAL RYEGRASS (50%) PLUS CROWNVEGET OR FLAIPKA	110	2.5	MOIST TO DRY	5b	X	X	X	X	X	X	X	X
6	WEeping LOVEGRASS (75%), SERICIA LESPEDEZA (25%)	4	.09	DRY TO VERY DRY	6a	X	X	X	X	X	X	X	X
7	TALL FESCUE (85%) OR WEeping LOVEGRASS (20) PLUS SERICIA LESPEDEZA (15%)	110	2.5	DRY TO VERY DRY	5b	X	X	X	X	X	X	X	X
8	REED CANARYGRASS (75%), WEeping LOVEGRASS (15%), BIRDFOOT TREFOIL (10%)	40	.92	WET TO MODERATELY DRY	5b	X	X	X	X	X	X	X	X
9	TALL FESCUE (85%) OR PRAIRIE TRIFOLIUM (15%), BIRDFOOT TREFOIL (7%)	125	2.9	WET TO MODERATELY DRY	5b	X	X	X	X	X	X	X	X
10	TALL FESCUE (80%), HARD FESCUE (20%)	120	3.4	WET TO DRY	5b	X	X	X	X	X	X	X	X
11	HARD FESCUE (100%)	75	1.7	WET TO DRY	5b	X	X	X	X	X	X	X	X

20.0 STANDARD AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS

- A. Site Preparation**
- Initial erosion and sediment control structures (either temporary or permanent) such as diversion, grade stabilization structures, berms, waterways, or sediment control basins.
 - Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
 - Schedule required soil tests to determine soil amendment composition and application rates for soils having disturbed area over 5 acres.
- B. Soil Amendments (Fertilizer and Lime Specifications)**
- Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for fertilizer purposes.
 - Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall be delivered to the site fully labeled according to the applicable State fertilizer laws and shall bear the name, trade name or trademark and warranties of the producer.
 - Lime materials shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall grade to such fineness that at least 50% will pass through a #100 mesh sieve and 98-100% will pass through a #20 mesh sieve.
 - Incorporate lime and fertilizer into the top 3" - 5" of soil by disking or other suitable means.
- C. Seeded Preparation**
- Temporary Seeding**
 - Seeded preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disk harrows or chiselplows or rippers mounted on construction equipment. After the soil loosening, the soil shall be mixed with water, and the mixture shall be applied to the surface in an irregular condition with rakes running parallel to the contour of the slope.
 - Apply fertilizer and lime as prescribed on the plans.
 - Incorporate lime and fertilizer into the top 3" - 5" of soil by disking or other suitable means.
 - Permanent Seeding**
 - Minimum soil conditions required for permanent vegetative establishment:
 - Soil pH shall be between 6.0 and 7.0.
 - Soil shall contain less than 200 parts per million (ppm).
 - The soil shall contain less than 40% clay but enough fine grained material (200' silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if loess or silt loess is to be planted, then a sandy soil (30% silt plus clay) will be acceptable.
 - Soil shall contain 1.5% minimum organic matter by weight.
 - Soil must contain sufficient pore space to permit adequate root penetration.
 - If these conditions cannot be met, amend soils on site, adding topsoil as required in accordance with Section 21 Standard and Specification for Topsoil.
 - Areas previously graded in conformance with the drawings shall be monitored in a true and even grade, then scarified or otherwise loosened to a depth of 3" - 5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.
 - Apply soil amendments as per soil test or as included on the plans.
 - Soil amendments into the top 3" - 5" of topsoil disking or other suitable means. Loam areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Where site conditions will not permit normal seeded preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with rakes running parallel to the contour of the slope. The top 1" - 2" of soil should be loose and friable. Seeded loosening may not be necessary on newly disturbed areas.
- D. Seed Specifications**
- All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to retesting by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material in this job.
 - Note: Seed tags shall be made available to the inspector to verify type and rate of seed used.
 - Inoculation - The inoculant for treating legume seed in the seed mixture shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculant should not be used other than the one indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75-80°F can weaken bacteria and make the inoculant less effective.
- E. Methods of Seeding**
- Hydroseeding** - Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeder, or a cutspreader seeder.
 - If fertilizer is being applied at the time of seeding, the application rate amounts will not exceed the following nitrogen maximum of 100 lbs. per acre total of soluble nitrogen: P205 (phosphorus) 200 lbs./ac.; K20 (potassium) 200 lbs./ac.
 - Lime - Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding of any one time. Do not use burnt or hydrated lime when hydroseeding.
 - Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.
 - Drop Seeding** - This includes use of conventional drop or broadcast seeders.
 - Seed spread dry shall be incorporated into the subsurface by the methods prescribed on the Temporary or Permanent Seeding Summaries or Tables 25 or 26. The seeded area shall then be rolled with a weighted roller to compact the seed to soil contact.
 - Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
 - Drill or Cutspreader Seeding** - Mechanized seeders that apply and cover seed with soil.
 - Cutspreader seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seeded shall be firm after planting.
 - Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
- F. Mulch Specifications (in order of preference)**
- Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonably bright in color, and shall not be rusty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.

- Wood Cellulose Fiber Mulch (WCFM)
 - WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.
 - WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
 - WCFM, including dye, shall contain no germination or growth inhibiting factors.
 - WCFM material shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will bind with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a barrier-like ground cover, on application, having moisture absorption and retention properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
 - WCFM material shall contain no elements or compounds of concentration levels that will be phytotoxic.
 - WCFM must conform to the following physical requirements: fiber length to approximately 10 mm, diameter approximately 1mm, pH range of 4.0 to 8.5, ash content of 18% maximum and water holding capacity of 90% minimum.
- Note: Only sterile straw mulch should be used in areas where one species of grass is desired.
- Mulching Seeded Areas** - Mulch shall be applied to seeded areas immediately after seeding.
 - If grading is completed outside for the seeding season, mulch should be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.
 - When straw mulch is used, it shall be spread over seeded areas at the rate of 2 tons/acre. Mulch applied to a uniform loose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.
 - Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
- Securing Straw Mulch (Mulch Anchoring)** - Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon size of area and erosion hazard:
 - A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a maximum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should be used in the most possible.
 - Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
 - Application of liquid binders should be heavier at the edges where wind catches much, such as in valleys and on crests of banks. The remainder of area should appear uniform after binder application. Synthetic binders such as Acrylic GUM (GUM-100), DCA-10, FAL-10, etc. are not allowed. Use Tack It, Terra Tack AB, or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.
 - Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4 to 10 feet wide and 500 to 3,000 feet long.

SECTION IV - SOD

Sod to provide quick cover on disturbed areas (2:1 grade or flatter)

- A. General Specifications**
- Class of turfgrass sod shall be Maryland or Virginia State Certified or Approved. Sod labels shall be made available to the job foreman and inspector.
 - Sod shall be machine cut to a uniform soil thickness of 3/4" plus or minus 1/4", at the time of cutting. Measurement for thickness shall exclude top growth and thatch. Individual pieces of sod shall be cut to the same length and width. Maximum allowable deviation from standard widths and lengths shall be 5 percent. Broken sods and torn or uneven ends will not be acceptable.
 - Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 1/3 portion of the section.
 - Sod shall not be harvested or transported when moisture content (excessively dry or wet) may adversely affect its survival.
 - Sod shall be harvested, delivered, and installed within a period of 36 hours. Sod not transported within this period shall be approved by an agronomist or soil scientist prior to its installation.
- B. Sod Installation**
- During periods of excessively high temperature or in areas having dry subsoil, the subsoil shall be lightly irrigated immediately prior to laying the sod.
 - The first row of sod shall be laid in a straight line with subsequent rows placed parallel and tightly fitted against each other. Lateral joints shall be staggered to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
 - Wherever possible, sod shall be laid with the long edges parallel to the contour and with staggering joints. Sod shall be rolled and tamped, pressed or otherwise secured to prevent slippage on slopes and to ensure solid contact between sod roots and the underlying subsoil.
 - Sod shall be watered immediately following rolling or tamping until the underside of the new sod sod and subsoil below the sod are thoroughly wet. The operations of laying, tamping and irrigating for any piece of sod shall be completed within eight hours.
- C. Sod Maintenance**
- In the absence of adequate rainfall, watering shall be performed daily or as often as necessary during the first week and in sufficient quantities to maintain moist soil to a depth of 4". Watering should be done during the heat of the day to prevent wilting.
 - After the first week, sod watering is required as necessary to maintain adequate moisture content.
 - The first mowing of sod should not be attempted until the sod is firmly rooted. No more than 1/3 of the grass leaf shall be removed by the initial mowing or subsequent cuttings. Grass height shall be maintained between 2" and 3" unless otherwise specified.

SEQUENCE OF CONSTRUCTION

- Obtain a Grading Permit through the Department of Inspections, Licenses and Permits, Sediment Control Division (410-313-1855) at least 48 hours prior to beginning work.
- Clear and grub for sediment control devices and structures.
- Install all fence posts, install all fence measures of devices, install all fence measures of devices.
- Obtain approval of Howard County Sediment Control Division Inspector, clear and grub remainder of site, 1 day.
- Begin building construction, 30 days.
- Final grading and construction, 3 days.
- Final grading areas for positive drainage away from building, 1 day.
- Final grading and construction, 3 days.
- With the approval of Howard County Sediment Control Division, remove sediment and erosion control devices and permanently stabilize any remaining area.

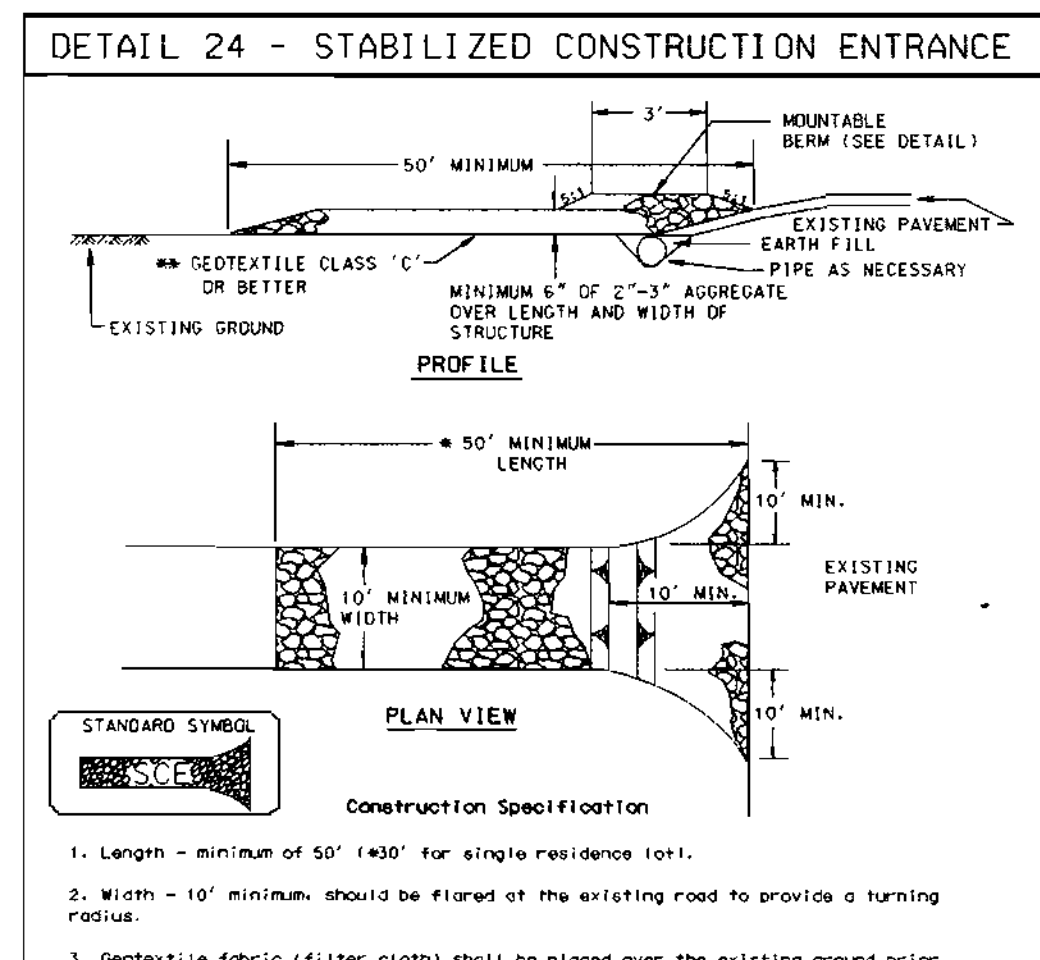
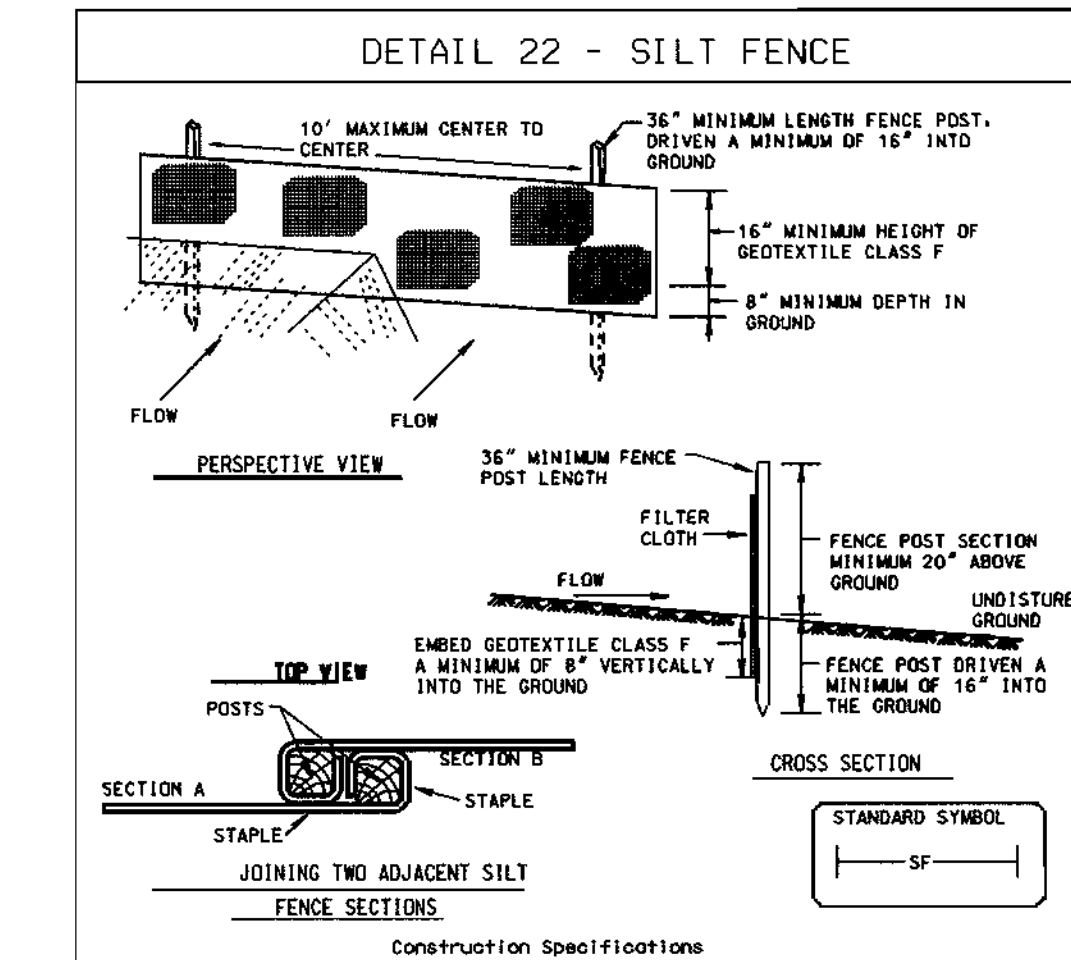
GENERAL NOTES

- A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction 410-313-1855 and to be in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- Following initial soil disturbance or redistribution, and previous to any construction, temporary stabilization shall be completed within 48 calendar days for all permanent sediment control structures, dikes, perimeter slopes and all slopes greater than 2:1 to 4:1 days as to all other disturbed or graded areas on the project site.
- All sediment traps/basins shown shall be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 7, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas over 100 sq. ft. shall be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding and mulching. Sec. 6.
- Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper permanent seeding.
- All sediment control structures are to remain in place until they are to be maintained in operative condition until permanent stabilization has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:
 - Total Area of Site: 92,527 SF / 2,124 Acres
 - Area Disturbed: 17,850 SF / 0.27 Acres
 - Area to be vegetatively stabilized: 6,700 SF / 0.15 Acres
 - Total P.A.C.U. yds: 0 C.U. yds
- Off-site traps/basins shown shall be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 7, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
- All areas with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other grading or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- Procedures for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized within one working day, whichever is shorter.

24.0 MATERIALS SPECIFICATIONS

- THE PROPERTIES SHALL BE DETERMINED IN ACCORDANCE WITH THE FOLLOWING PROCEDURES:
- APPEARANT OPENING SIZE MSMT 323-GRAB TENSILE STRENGTH ASTM D 1682-4X8" SPECIMEN, 1X2 "CLAMPS, 12" /MIN. STRAIN RATE IN BOTH PRINCIPAL DIRECTIONS OF GEOTEXTILE FABRIC.
 - BURST STRENGTH ASTM D 3786
- THE FABRIC SHALL BE INSERT TO COMMONLY ENCOUNTERED CHEMICALS AND HYDROCARBONS, AND WILL BE ROT AND MILDEW RESISTANT. IT SHALL BE MANUFACTURED FROM FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS, AND COMPOSED OF A MINIMUM OF 85% BY WEIGHT OF POLYOLEPHINS, POLYESTERS, OR POLYAMIDES. THE GEOTEXTILE FABRIC SHALL RESIST DETRIORATION FROM ULTRAVIOLET EXPOSURE.
- IN ADDITION, CLASSES A THROUGH E SHALL HAVE A 0.01 CM./SEC. MINIMUM PERMEABILITY WHEN TESTED IN ACCORDANCE WITH MSMT 507, AND AN APPEARANT MINIMUM ELONGATION OF 20 % WHEN TESTED IN ACCORDANCE WITH THE GRAB TENSILE STRENGTH REQUIREMENTS LISTED ABOVE.
- SILT FENCE CLASS F GEOTEXTILE FABRICS FOR SILT FENCE SHALL HAVE A 50LB./IN. MIN. TENSILE STRENGTH AND A 20LB./IN. MIN. TENSILE MODULUS WHEN TEST IN ACCORDANCE WITH MSMT 509. THE MATERIAL SHALL ALSO HAVE A 0.3 GAL./FT. MIN. FLOW RATE AND 75% MIN. FILTERING EFFICIENCY WHEN TESTED IN ACCORDANCE WITH MSMT 322.
- GEOTEXTILE FABRICS USED IN THE CONSTRUCTION OF SILT FENCE SHALL RESIST DETRIORATION FROM ULTRAVIOLET EXPOSURE. THE FABRIC SHALL CONTAIN SUFFICIENT AMOUNTS OF ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 12 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 TO 120 DEGREES F.

PERMIT INFORMATION CHART			
SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL	PARCEL 576 & 254
N/A	N/A		
Liberty/Folio 696B/043	BLOCK # 21	ZONING M-2	TAX/ZONING MAP #2
WATER CODE D04	SEWER CODE S2150561	ELECTION DIST 2ND	CENSUS TRACT 6012.02



- Length - minimum of 50' (40' for single residence lots).
- Width - 10' minimum - must be flared at the existing road to provide a turning radius.
- Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. The plan approval authority may not require single family residences to use geotextile.
- Stone - crushed aggregate 1/2" to 3/4" or retained or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
- Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mounded berm with 3:1 slope and a minimum of 6" of stone over the pipe. Pipe shall be sized according to the drainage. When the site is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe shall be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- Location - a stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

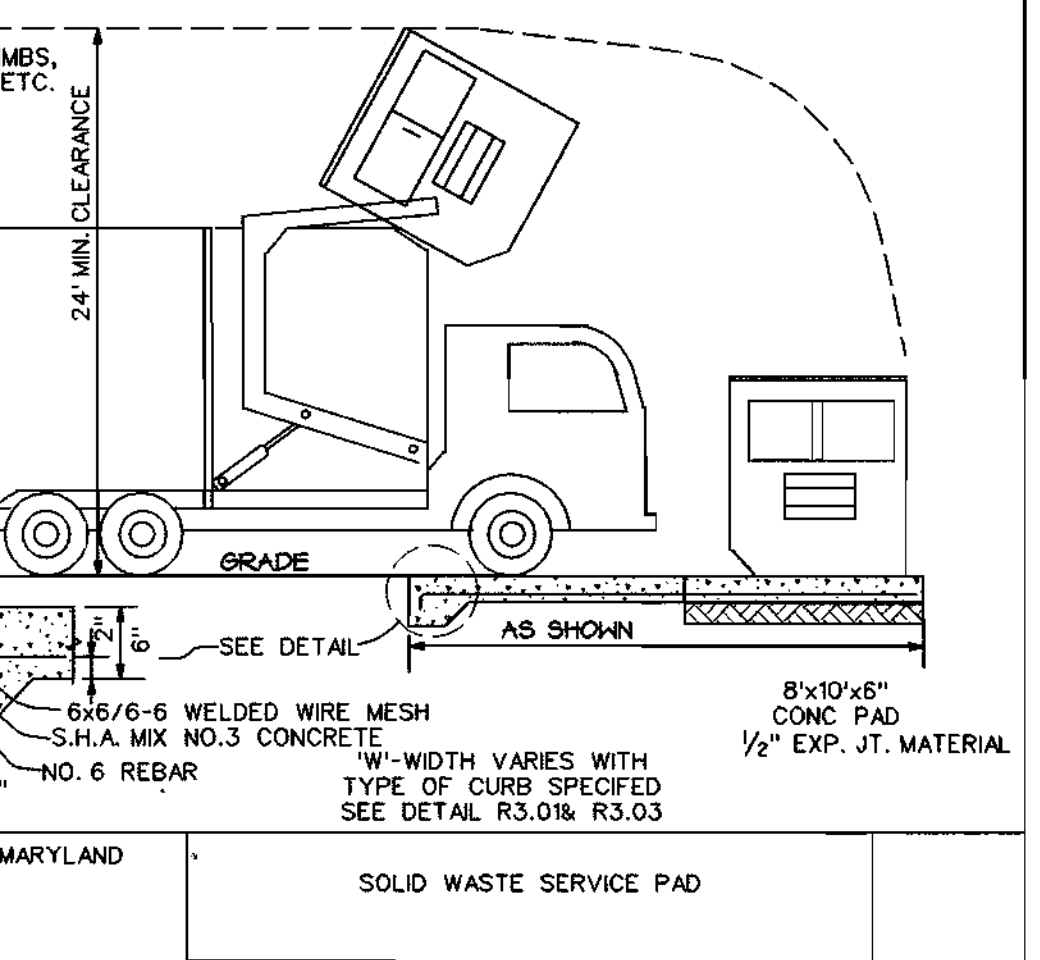


TABLE 26 - TEMPORARY SEEDING RATES, DEPTHS, AND DATES

SPECIES	MINIMUM SEEDING RATES PER ACRE	PLANTING DEPTH*	HARDNESS ZONES** AND SEEDING DATES**										
			7a and 7b				6a and 5b						
			2/1-4/30	5/1-8/14	8/15-11/30	12/1-2/1	3/1-5/15	5/16-8/31	8/15-11/30	12/1-2/1			
CHOOSE ONE:													
BARLEY	2.5 BU. (122lbs)	2.80	1-2	X	X	X	X	X	X	X	X	X	X
RYE	2.5 BU. (140lbs)	3.22	1-2	X	X	X	X	X	X	X	X	X	X
BARLEY OR RYE PLUS FXTAL MILLET**	150 lbs	3.45	1	X	X	X	X	X	X	X	X	X	X
WEeping LOVEGRASS**	4 lbs	.09	1/4-1/2	X	X	X	X	X	X	X	X	X	X
ANNUAL RYEGRASS	50 lbs	1.15	1/4-1/2	X	X	X	X	X	X	X	X	X	X
MILLET**	50 lbs	1.15	1/2	X	X	X	X	X	X	X	X	X	X

- APPLICABLE ON SLOPES OF 3:1 OR FLATTER
- REFER TO FIGURE A - ADAPTED FROM USDA, ARS MISCELLANEOUS PUBLICATION #1475, JANUARY 1990
- BETWEEN FALL AND SPRING SEEDING DATES, USE MULCH ONLY IF GROUND IS FROZED AND RESEED WHEN THAWED
- MAY BE USED AS A NURSE CROP FOR LATE FALL / EARLY WINTER PERMANENT SEEDINGS, ADD 56 LBS./AC. TO THE PERMANENT SEEDING MIXTURE
- MARYLAND STATE HIGHWAY ADMINISTRATION TEMPORARY SEED MIX
- MAY BE USED AS A NURSE CROP FOR MID-SUMMER PERMANENT SEEDINGS, ADD 2 LBS./AC. TO PERMANENT SEED MIX
- MAY BE USED AS A NURSE CROP FOR MID-SUMMER PERMANENT SEEDINGS, ADD 10 LBS./AC. TO THE PERMANENT SEEDING MIX.

Silt Fence Design Criteria

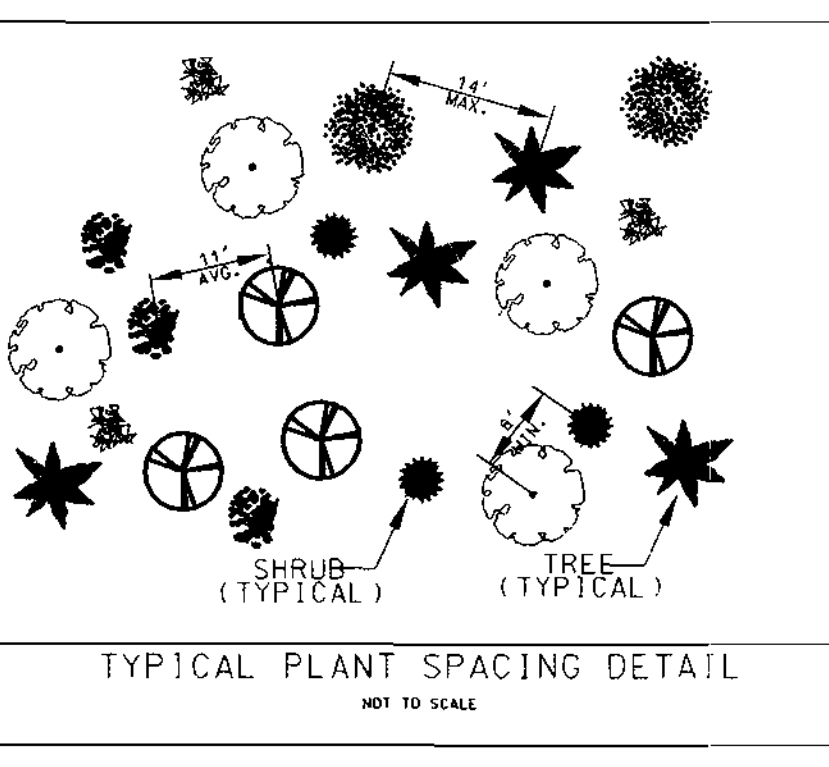
Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 50:1	Unlimited	Unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

TABLE 27 GEOTEXTILE FABRICS

CLASS	APPEARANT OPENING SIZE MM. MAX.	GRAB TENSILE STRENGTH LB. MIN.	BURST STRENGTH PSI. MIN.
A	0.30**	250	500
B	0.60	200	320
C	0.30	200	320
D	0.60	90	145
E	0.30	90	145
F #BILT FENCE*	0.40-0.80*	90	190

* US STD. 518V OR 02215
** 0.50 MAX. FOR SUPER SILT FENCE

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.



BY THE DEVELOPER

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 2/23/04
DEVELOPER DATE

BY THE ENGINEER

I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 2/23/04
ENGINEER DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

[Signature] 2/25/04
USDA - NATIONAL RESOURCE CONSERVATION SERVICES DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 2/25/04
APPROVED: DEPARTMENT OF PLANNING AND ZONING DATE

[Signature] 2/27/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 2/27/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 2/27/04
DIRECTOR DATE

DATE	NO.	REVISION

OWNER / DEVELOPER
SURRETTE FAMILY, LLC / AYERS CORPORATION
P.O. BOX 48 / 7941 DORSEY RUN ROAD
ANNAPOLIS, MD 21404 / JESSUP, MD 20794
Attn: ROBERT W. SURRETTE, 301-725-0422

PROJECT: **AYER CORPORATION PROPOSED STORAGE BUILDING**

TITLE: **SEDIMENT CONTROL DETAILS**

Richardson Engineering, LLC

730 W. Potomac Road
Cockeysville, Maryland 21030
Phone: 410-560-1502 Fax: 410-560-0827

CHECKED BY: PCR
DESIGNED BY: PCR
DRAWN BY: PCR
PROJECT NO.: 03034
DATE: 9/20/2003
SCALE: AS SHOWN
DRAWING NO. 2 OF 2
FILE NO. SDP- 04-016