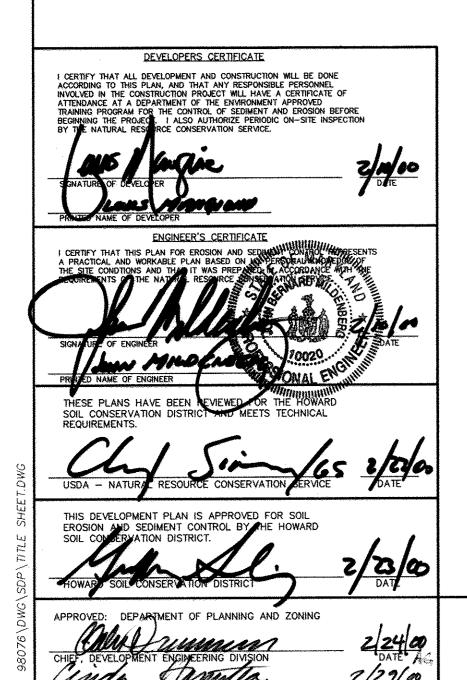
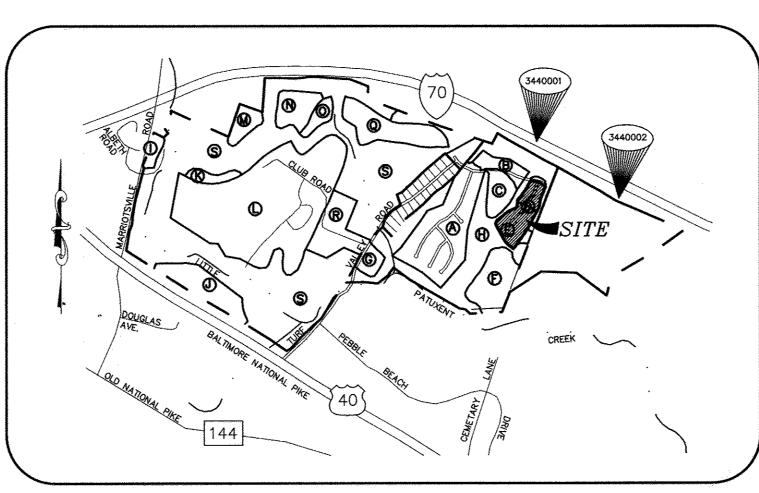
ADDRESS CHART		ADDI	RESS CHART
LOT NO.	STREET ADDRESS	LOT NO.	STREET ADDRESS
60	2602 LEGENDS WAY	93	2640 LEGENDS WAY
61	2604 LEGENDS WAY	94	2642 LEGENDS WAY
62	2606 LEGENDS WAY	95	2644 LEGENDS WAY
63	2608 LEGENDS WAY	96	2646 LEGENDS WAY
64	2610 LEGENDS WAY	97	2648 LEGENDS WAY
65	2614 LEGENDS WAY	98	2650 LEGENDS WAY
66	2616 LEGENDS WAY	<u></u> 99	2654 LEGENDS WAY
67	2618 LEGENDS WAY	100	2656 LEGENDS WAY
68	2622 LEGENDS WAY	101	2658 LEGENDS WAY
69	2624 LEGENDS WAY	102	2660 LEGENDS WAY
70	2626 LEGENDS WAY	103	2662 LEGENDS WAY
71	2628 LEGENDS WAY	104	2677 LEGENDS WAY
72	2630 LEGENDS WAY	105	2675 LEGENDS WAY
73	2632 LEGENDS WAY	106	2673 LEGENDS WAY
74	2635 LEGENDS WAY	107	2671 LEGENDS WAY
75	2633 LEGENDS WAY	108	2669 LEGENDS WAY
76	2631 LEGENDS WAY	109	2667 LEGENDS WAY
<b>7</b> 7	2629 LEGENDS WAY	110	2665 LEGENDS WAY
78	2627 LEGENDS WAY	111	2663 LEGENDS WAY
79	2625 LEGENDS WAY	112	2661 LEGENDS WAY
80	2621 LEGENDS WAY	113	2659 LEGENDS WAY
81	2619 LEGENDS WAY	114	2657 LEGENDS WAY
82	2617 LEGENDS WAY	115	2653 LEGENDS WAY
83	2615 LEGENDS WAY	116	2651 LEGENDS WAY
84	2613 LEGENDS WAY	117	2649 LEGENDS WAY
85	2611 LEGENDS WAY	118	2645 LEGENDS WAY
86	2607 LEGENDS WAY	119	2643 LEGENDS WAY
87	2605 LEGENDS WAY	120	2641 LEGENDS WAY
88	2603 LEGENDS WAY	121	2639 LEGENDS WAY
92	2638 LEGENDS WAY		

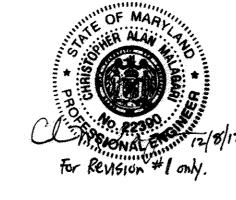
SUBDIVISION NAME THE LEGENDS AT TURF	VALLEY	SECTION/AREA PHASE 1 AM			ARCEL # 8 AND 92-121
PLAT # OR L/F BLOCK # 13963-13966 17	ZONE PGCC	TAX MAP 16	1	DIST.	CENSUS TRACT
WATER CODE HO7		SEWER CODE	599	92000	



# SITE DEVELOPMENT PLAN THE LEGENDS AT TURF VALLEY

2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND





			····
MIN.	SEWER ELI	EVATIC	N CHART
LOT	MIN. BSMT.	LOT	MIN. BSMT.
60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 80 81 82 83 84 85	462.85 462.44 462.18 462.04 461.77 461.50 461.06 460.90 459.60 458.75 458.17 457.27 456.65 454.36 455.75 457.37 457.87 458.87 459.37 460.12 461.20 461.27 461.58 461.72 461.98	93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118	450.14 449.73 448.85 447.95 447.39 446.61 446.07 445.14 446.22 446.25 445.55 445.55 445.56 445.55 445.96 446.58 447.28 447.28 447.21 447.24 446.50 446.60 446.60 446.96 447.09 447.78 447.78 448.35
86 87 88	462.18 462.40 462.79	119 120 121	448.64 448.88 449.16

MIN.	SEWER ELI	EVATIC	N CHART
LOT	MIN. BSMT.	LOT	MIN. BSMT.
60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 80 81 82 83 84 85 86 87 88 89 89 89 89 89 89 89 89 89 89 89 89	462.85 462.44 462.18 462.04 461.77 461.50 461.06 460.90 459.60 458.75 458.17 457.27 456.65 454.36 455.75 457.37 457.87 459.37 461.20 461.27 461.27 461.37 461.58 462.18 462.18 462.18 462.79 451.42	93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121	450.14 449.73 448.85 447.95 447.39 446.61 446.07 445.14 446.22 446.25 445.78 445.55 445.55 445.55 447.29 447.21 447.21 447.21 447.21 447.21 447.21 447.21 446.50 446.60 446.96 447.09 447.77 447.40 447.78 448.35 448.64 448.88 449.16

# GENERAL NOTES:

- 1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY.
- 2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/CONSTRUCTION INSPECTIONS DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR
- 3. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS PRIOR TO ANY EXCAVATION WORK:

1-800-257-7777 C&P TELEPHONE COMPANY HOWARD COUNTY BUREAU OF UTILITIES (410) 313-4900 AT&T CABLE LOCATION DIVISION (410) 393-3533 BALTIMORE GAS & ELECTRIC (410) 685-0123 STATE HIGHWAY ADMINISTRATION (410) 531-5533 (410) 313-1880 HOWARD COUNTY DEPT. OF PUBLIC WORKS/ CONSTRUCTION INSPECTION DIVISION

4. PROJECT BACKGROUND:

LOCATION: 2ND ELECTION DISTRICT, TAX MAP 16, BLOCK 17, P/O PARCEL 8. ZONING: PGCC 13.33 Ac.±

TOTAL TRACT AREA: LIMIT OF DISTURBED AREA: 5.76 Ac.± PROPOSED USE: TOTAL NO. OF UNITS ALLOWED: TOTAL NO. OF UNITS PROPOSED:

DATE PREVIOUS PLANS APPROVED AND DPZ REFERENCE # :

PB-181, AMENDED S-86-13 (P.B. 294), FDP-PGCC, FDP-RESIDENTIAL SUBDISTRICT, PB-6/23/94, F-94-06 (RESORT ROAD), SDP-95-121 (REGIONAL SWM POND), S-94-45, 2ND AMENDED S-86-13 (P.B. 300), SP-95-14, F-96-107, F-96-150, F-96-151, SP-97-12, F-99-107, F-98-91

DEED REFERENCE: L.0920 F.250

- 5. TOPOGRAPHY SHOWN HEREON IS BASED ON AERIAL PHOTOGRAPHIC MAPPING PREPARED BY MAPPING ASSOCIATES DATED OCTOBER 1986. AND FIELD TOPOGRAPHY BY MILDENBERG, BOENDER AND ASSOC., INC. ON NOVEMBER 1997.
- 6. COORDINATES BASED ON NAD '83, MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS No. 18G1 AND 24C2. STA. No. 3440001 N 534,735.478 E 836,286.297 EL. 486.341

STA. No. 3440002 N 533,593.800 E 837,983.249 EL. 462.306

- 7. WATER AND SEWER ARE PUBLIC, CONNECTED TO PROJECT # 24-3548 & 24-3549.
- 8. WATER METERS SHALL BE LOCATED INSIDE BUILDINGS. 9. NO FLOODPLAIN EXISTS ON-SITE.
- 10. NO BURIAL GROUNDS OR CEMETERY SITES EXIST ON-SITE.
- 11. THIS SUBDIVISION IS IN THE METROPOLITAN DISTRICT. 12. THIS PROJECT IS EXEMPT FROM HOWARD COUNTY FOREST CONSERVATION
- REQUIREMENTS UNDER SECTION 16.1202(b) OF THE COUNTY CODE.
- 13. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN WETLANDS AND STREAM BUFFERS, EXCEPT AS SHOWN ON APPROVED PLANS.
- 14. FUTURE ADDITIONS MAY BE PROHIBITED ON LOTS 83 AND 84 DUE TO MAXIMUM BUILDING COVERAGE OF 60%.
- 15. NO MORNING ROOM ALLOWED ON LOTS: 72, 73 AND 92-98 AND 101-102.
- 16. SETBACKS, BULK CRITERIA, AND SUPPLEMENTAL REGULATIONS ARE CONTAINED IN FDP-PGCC (RESIDENTIAL SUBDISTRICT) PLAT NO. 3054A-1611
- 17. CONVERSION OF THE GARAGE AREA INTO LIVABLE SPACE IS PROHIBITED FOR ALL UNITS.
- 18. TOTAL PARKING SPACES REQUIRED: 112
- TOTAL PARKING SPACES PROVIDED: 130 19. STORM WATER MANAGEMENT WILL BE MET BY THE REGIONAL POND PREVIOUSLY SUBMITTED
- UNDER SDP-95-121. 20. SURETY FOR REQUIRED PLANTINGS, IN THE AMOUNT OF \$ 8,100.00, WILL BE POSTED
- WITH THE GRADING PERMIT. 21. USE RESIDENTIAL DRIVEWAY ENTRANCE HOWARD COUNTY STD. R-6..03 UNLESS
- 22. NO STRUCTURE SHALL BE CONSTRUCTED WITHIN THE EXISTING 20' DRAINAGE EASEMENT
- BEHIND LOTS 92-103.
- 23. SNOW REMOVAL FOR PRIVATE ROAD (LOTS 115-121) WILL BE THE RESPONSIBILITY OF THE H.O.A.
- 24. USE 2 CLUSTER MAILBOXES ON SLABS FOR ALL LOTS.
- 25. TRASH COLLECTION FOR LOTS 115 THROUGH 121 WILL BE AT RIGHT-OF-WAY OF
- Us. The Howard County Planning Board approved this site development plan on January 13, 2000. The approval included allowing the building length to exceed the 120' maximum up to 180.34' for buildings with 6 units, and to allow the following lots to exceed the 60% maximum lot coverage:

Lot 115 (61.8%), Lot 116 (70.0%), Lot 117 (61.8%), Lot 118 (61.2%), Lot 119 (69.4%), Lot 120 (69.4%), and Lot 121 (61.2%).

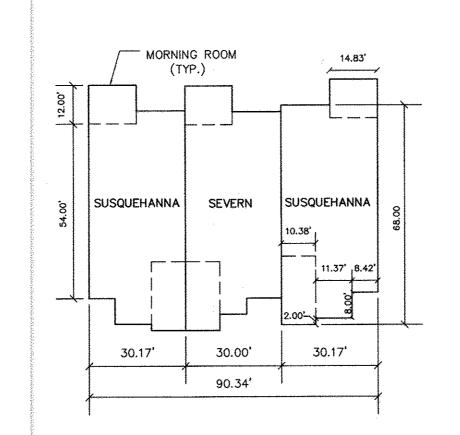
PLANNING BOARD of HOWARD COUNTY

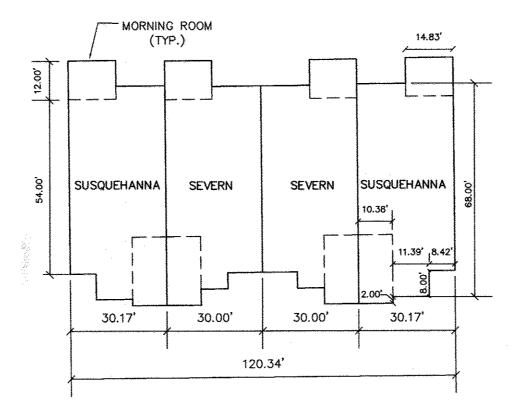
DATE 1/13/2000

27. The driveways in front of Lots 115-121 are resolved solely for the owners of each respective lot, for parking purposes. Refer also to HDA Declaration of Covenants, which are to be recorded in the Land Records of Howard County.

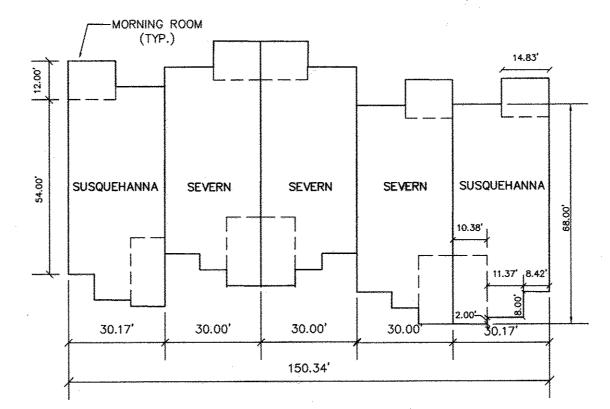
<u>OWNER</u> MANGIONE ENTERPRISES OF TURF VALLEY, L.P. 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093

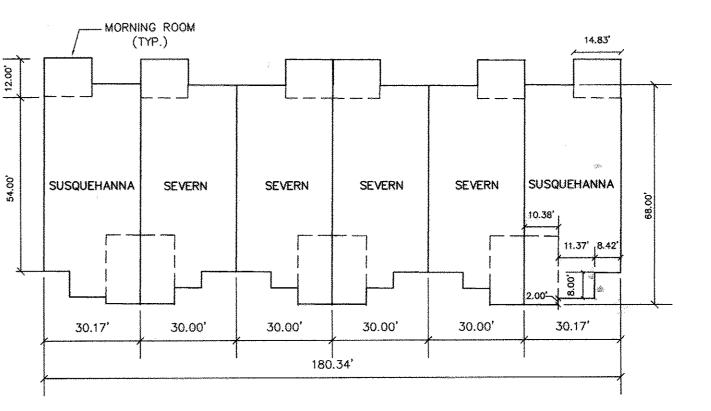
(410) 825-8400





**ELEVATIONS** 





OF 🍪

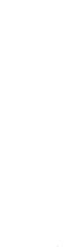
MILDENBERG BOENDER &

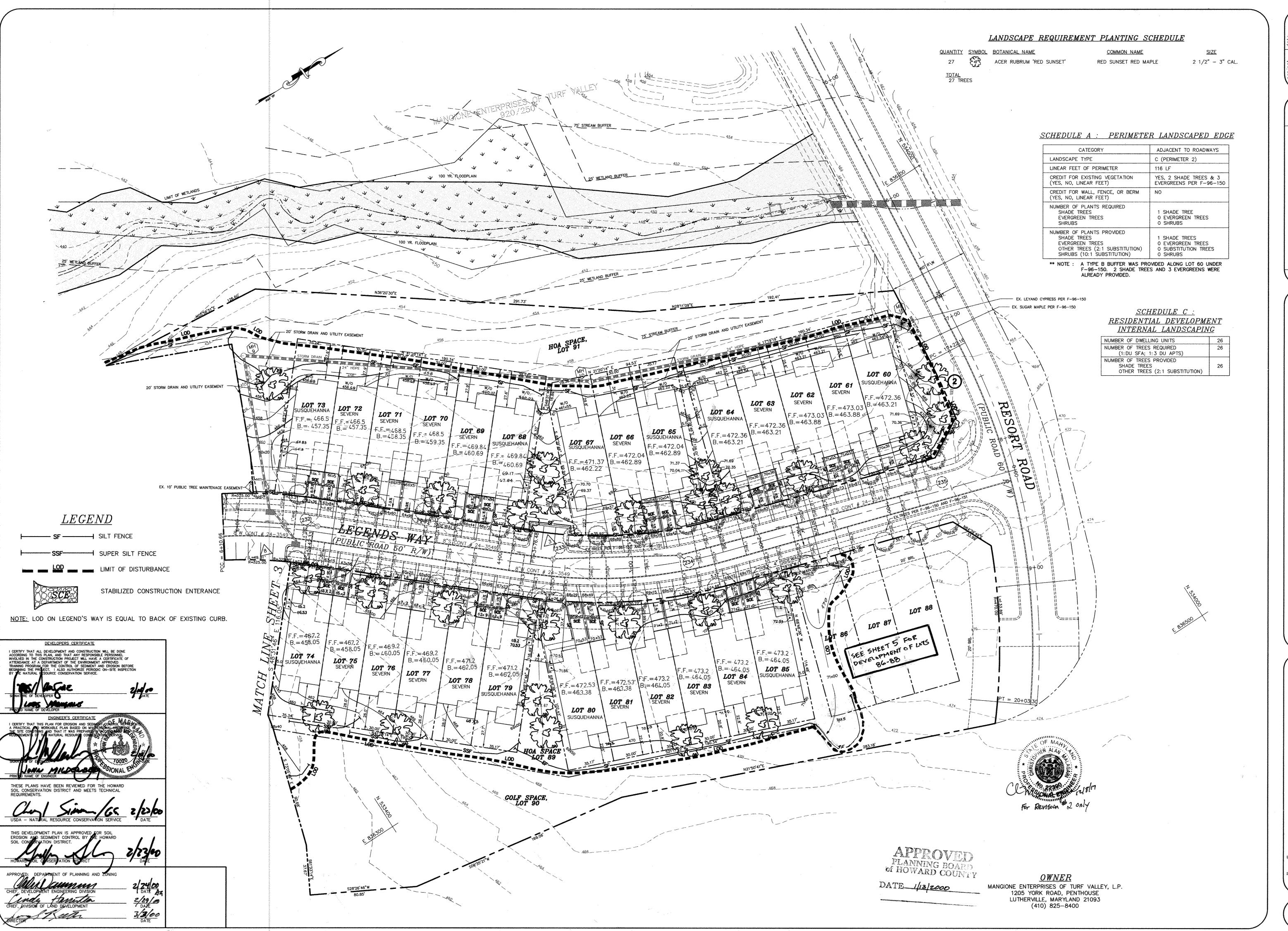
SDP-00-63

VICINITY MAP



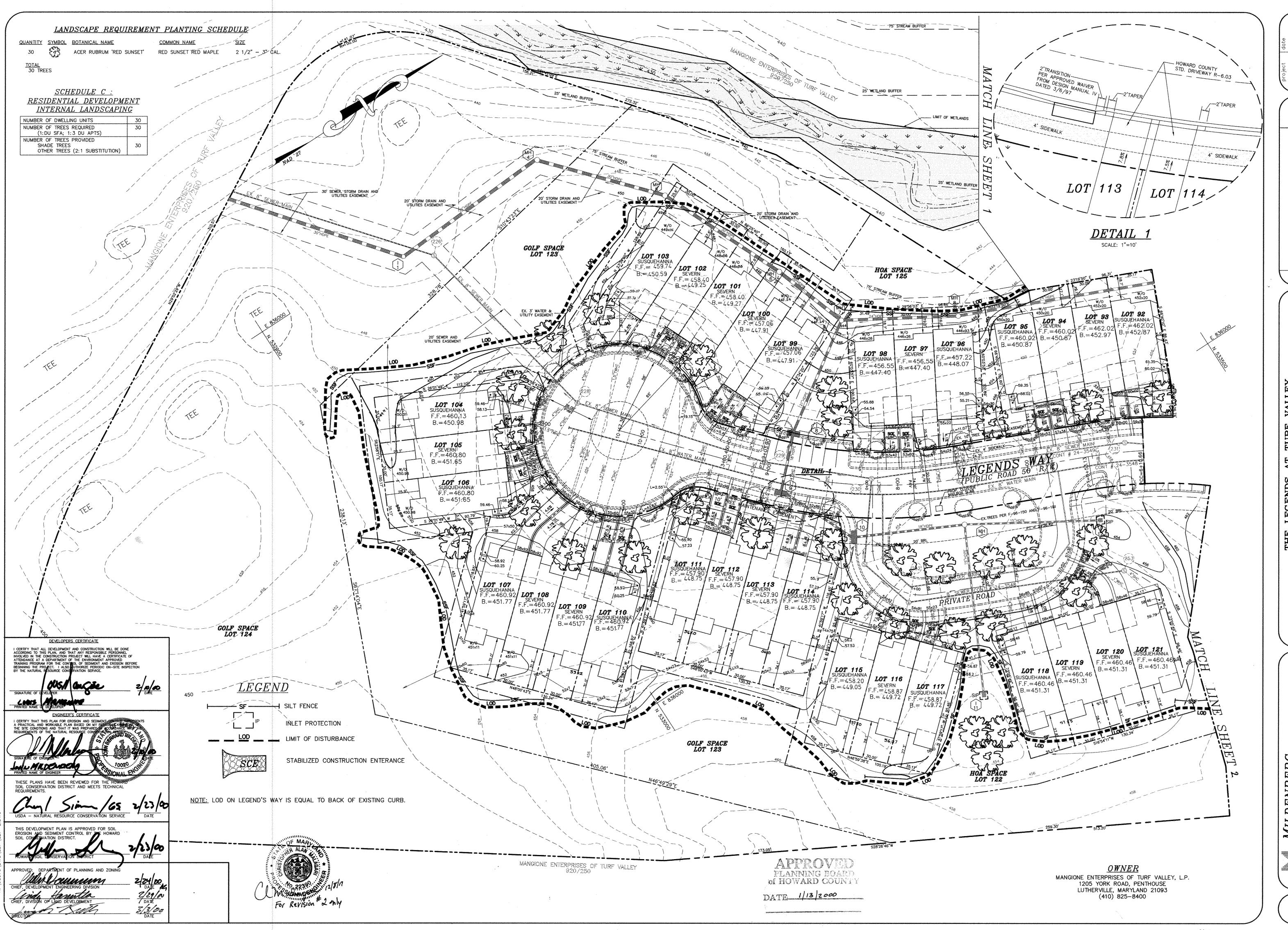
MODEL TYPE	AREA OF BUILDING (SQ.FT.)	MIN. LOT SIZE (AREA/0.6)
SUSQUEHANNA WITHOUT OPTIONAL MORNING ROOM	1898	3164
SUSQUEHANNA WITH OPTIONAL MORNING ROOM	2076	3460
SEVERN WITHOUT OPTIONAL MORNING ROOM	1830	3050
SEVERN WITH OPTIONAL MORNING ROOM	2007	3345





MILDENBERG, BOENDER &

SDP-00-53



SDP-00-53

MILDENBERG, BOENDER & A

3 of 6

# HOWARD SOIL CONSERVATION DISTRICT PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED. SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS

BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED. SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES: PREFERRED - APPLY 2 TONS PER ACRES DOLOMITIC LIMESTONE (92 LBS/1000 SQ.FT.) AND 600 LBS, PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SO.FT.) BEFORE SEEDING HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS, PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS./1000 SQ.FT.).

ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.

SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE 1.4 LBS/1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LOBS. PER ACRE (.05 LBS./1000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) - 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) - USE SOD. OPTION (3) -SEED WITH 60 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONE/ACRE WELL ANCHORED STRAW.

MULCHING - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT) OF UNROTTED SMALL GRÅIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

MAINTENANCE - INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

# TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED. SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, FOR NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.)

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU OCTOBER 15, SEED WITH 2-1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SQ.FT.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (.07 LBS./1000 SQ.FT.). FOR THE PERIOD NOVEMBER 16 THRU NOVEMBER 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED WEED FREE SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GAL PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING

REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR ADDITIONAL RATES AND METHODS NOT COVERED.

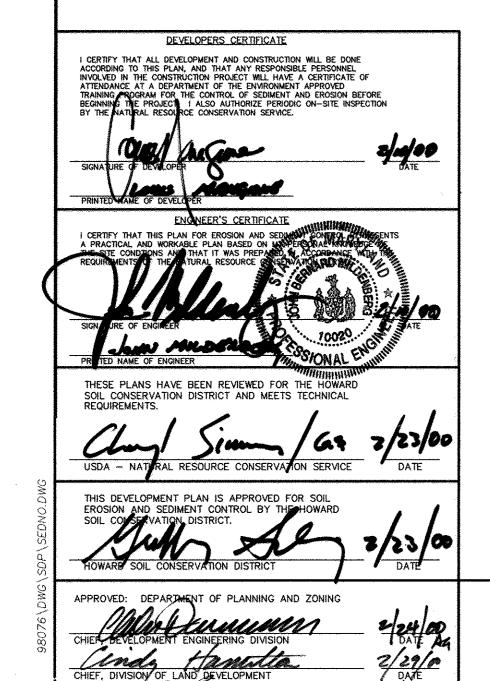
### STANDARD SEDIMENT CONTROL NOTES

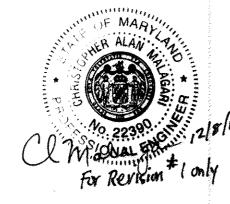
- 1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF NAY CONSTRUCTION, (313-1855)
- 2) ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT "MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL". AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN
- 5) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC.51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC.52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- 6) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR

and desire a management of a desired and the second and a second a second and a second and a second and a second and a second a second and a second a second and a second and a second and		
7) SITE ANALYSIS:	A my ymg wy	
TOTAL AREA OF SITE:	13.33	ACRES
AREA DISTURBED:	5.76	ACRES
AREA TO BE ROOFED OR PAVED:	3.03	_ ACRES
AREA TO BE VEGITATIVELY STABILIZED	): 2.73	ACRES
TOTAL CUT:	12,500	CU. YDS.
TOTAL FILL:	12,500	CU. YDS.

THESE QUANTITIES ARE FOR PERMIT PURPOSES ONLY. CONTRACTOR IS REQUIRED TO PROVIDE HIS OWN QUANTITY MEASUREMENTS.

- 8) 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
- 10) ON ALL SITES 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 BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- 11) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.





# STANDARD AND SPECIFICATIONS FOR TOPSOIL

# DEFINITION

PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT. LOW NUTRIENT LEVELS, LOW pH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

#### CONDITIONS WHERE PRACTICE APPLIES

- I. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
- a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE
- b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
- c. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
- d. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE
- FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS.

#### CONSTRUCTION AND MATERIAL SPECIFICATIONS

- TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATION. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.
- TOPSOIL SPECIFICATIONS SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
  - TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CON-TRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2" IN
  - ii. TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSON-SON GRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
  - WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING
- III. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
- PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
- FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
- ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
  - a. pH FOR TOPSOILS SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A pH OF
  - LESS THAN 6.0, SUFFICIENT LIME SHALL BE PERSCRIBED TO RAISE THE pH TO 6.5 OR HIGHER.
- b. ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
- c. TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.
- d. NO SOD OR SEED SHALL BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

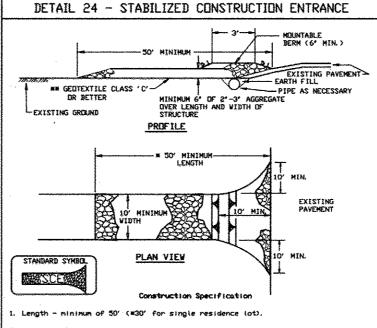
NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL

- ii. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
- V. TOPSOIL APPLLICATION
  - i. WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS
  - II. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4" - 8" HIGHER IN ELEVATION.
  - III. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" TO 8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
  - IV. TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.
- ALTERNATIVE FOR PERMANENT SEEDING INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZER, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW:
- COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES SHALL BE TESTED TO PRESCRIBE AMENDMENTS AND FOR SITES HAVING AREAS UNDER 5 ACRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
- a. COMPOSTED SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATE FROM, A PERSON OR PERSONS WHO ARE PERMITTED (AT THE TIME OF ACQUISITION OF THE COMPOST) BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UNDER COMAR 26.04.06.
- b. COMPOSTED SLUDGE SHALL CONTAIN AT LEASE 1 PERCENT NITROGEN, 1.5 PERCENT PHOSPHOURUS, AND 0.2 PERCENT POTASSIUM AND HAVE A Ph OF 7.0 TO 8.0. IF COMPOST DOES NOT MEET THESE REQUIREMENTS, THE APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS PRIOR TO USE. c. COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SQUARE FEET.
- iv. COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILLIZER APPLIED AT THE RATE OF 4 LB/1,000 SQUARE FEET, AND 1/3 THE NORMAL LIME APPLICATION RATE.

REFERENCES: GUIDELINE SPECIFICATIONS, SOIL PREPARATION AND SODDING. MD-VA, PUB. #1, COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTES. REVISED 1973.

# SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT
- 2. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCES, WITH MOUNTABLE BERMS, AT LOCATIONS SHOWN. (1 DAY)
- 3. CONSTRUCT SUPER SILT FENCES AND SILT FENCES.
- 4. CONSTRUCT INLET PROTECTION.
- 5. BRING SITE TO GRADE. (90 DAYS)
- 6. STABILIZE ALL DISTURBED AREAS. BUILDER SHALL CLEAN THE RECEIVING SWM POND OF ANY SEDIMENT ATTRIBUTED TO DISTURBANCE UNDER THIS PLAN. (5 DAYS)
- 7. WHEN ALL CONTRIBUTING DRAINAGE AREAS TO SEDIMENT CONTROL DEVICES HAVE BEEN STABILIZED AND WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE REMAINING DISTURBED AREAS. (3 DAYS)
- 8. BUILDER SHALL CLEAN THE RECEIVING SWM POND OF ANY SEDIMENT ATTRIBUTED TO DISTURBANCE UNDER THIS PLAN.



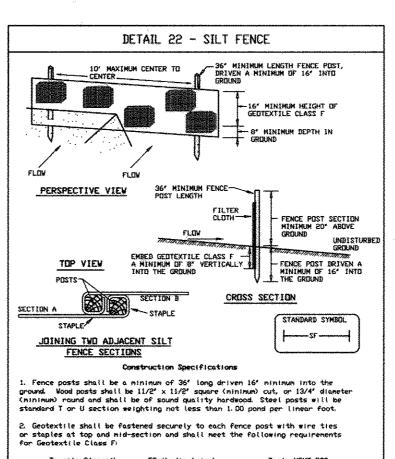
2. Vidth - 10' minimum, should be flored at the existing road to provide a turning to placing stone. \*\*The plan approval authority may not require single family residences to use geotextile.

4. Stone - crushed aggregate (2' to 3') or reclaimed or recycled concret

equivalent shall be placed at least 6' deep over the length and width of the

5. 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 nountable bern with 5:1 slopes and a minimum of 6' of stone over the pine. Pine has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6' minimum will be required. 6. Location - A stabilized construction entrance shall be located at every point

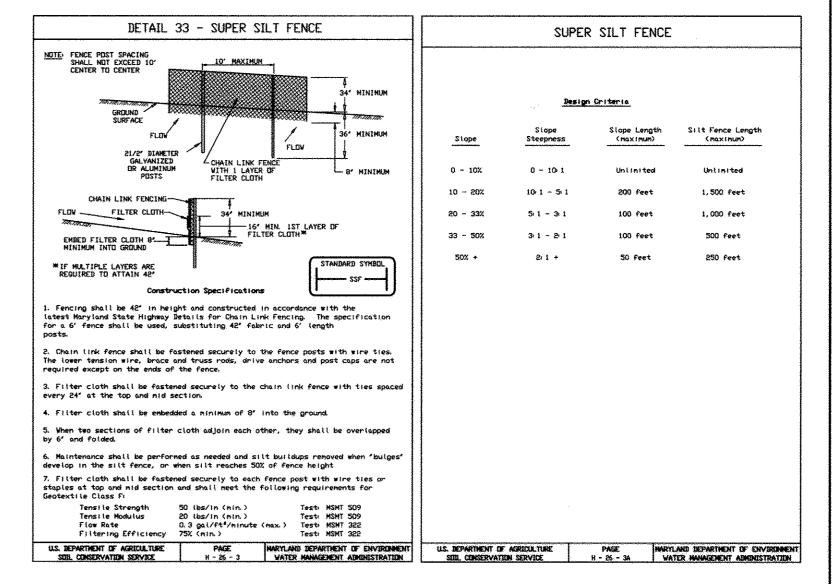
where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

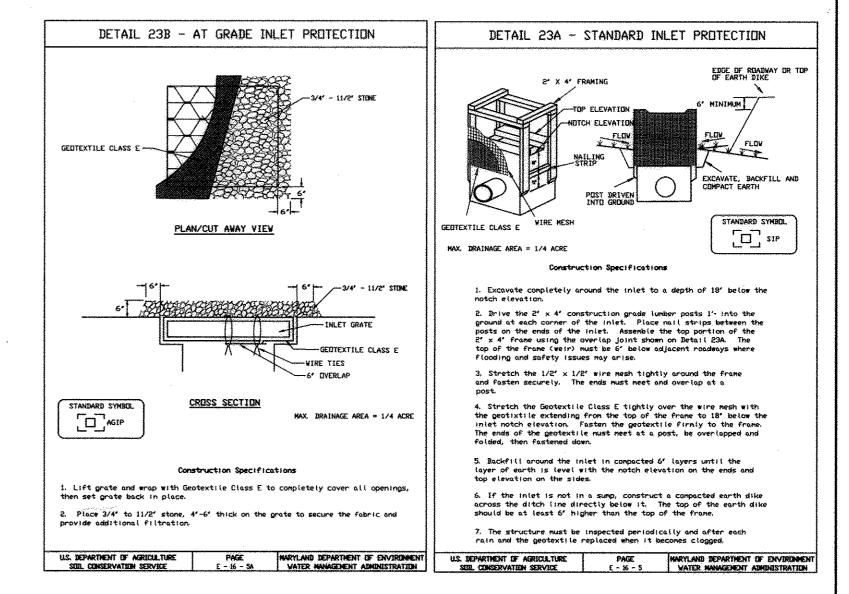


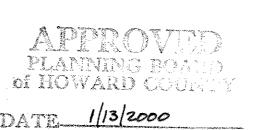
50 lbs/in (min.)

Tensile Strength Tensile Modulus Flow Rate Filtering Efficiency l. Where ends of geotextile fabric come tagether, they shall be overlapped Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

SILT FENCE Silt Fence Design Criteria Silt Fence Length Slope Length Slope Steepness Flatter than 50:1 unlinited unlinited 50-1 to 10-1 125 Feet 1,000 feet 10:1 to 5:1 100 feet 750 feet 54 to 34 60 feet 3:1 to 2:1 40 feet 250 feet lote: In areas of less than 2% slope and sandy soils (USDA peneral 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 contro





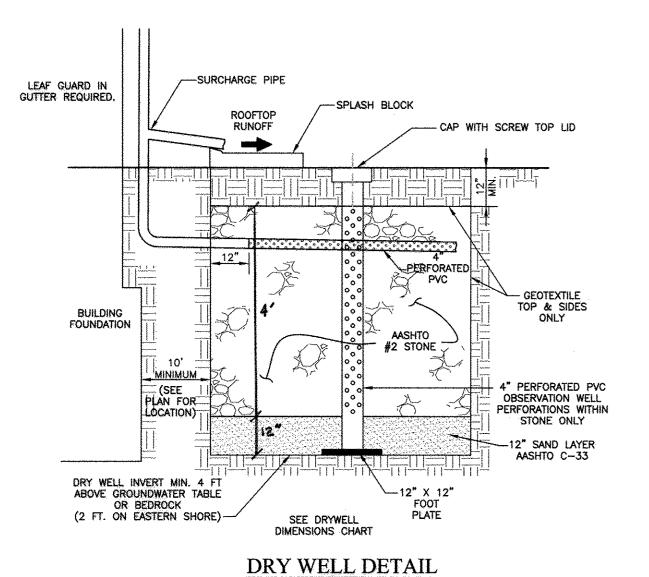


**OWNER** MANGIONE ENTERPRISES OF TURF VALLEY, L.P. 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093 (410) 825-8400

 $\geq$ 

0 S (ILDENBERC SOENDER &

M	ATERIALS & SPECIF	ICATIONS FO	OR DRY WELLS
MATERIAL	SPECIFICATION	SIZE	NOTES:
GEOTEXTILE (CLASS "C")		N/A	PE TYPE 1 NONWOVEN
GRAVEL	AASHTO M 43	1 1/2" TO 2 1/2"	
UNDERDRAIN PIPING	F758, TYPE PS28 OR AASHTO M-278	4" TO 6" RIGID SCH.40 PVC, SDR35 OR HDPE	3/8" PERF. @ 6" O/C, 4 HOLES PER ROW; MINIMUM OF 2" OF GRAVEL OVER PIPES.
SAND	AASHTO M-6 OR ASTM-C-33	.02" TO .04"	SAND SUBSTITUTIONS SUCH AS DIABASE AND GRAYSTONE (AASHTO) #10 ARE NOT ACCEPTABLE. NO CALCIUM CARBONATED OR DOLOMITIC SAND SUBSTITUTIONS ARE ACCEPTABLE. NT ROCK DUST CAN BE USED FOR SAND.



	Dry Well Dimension Chart							
Dry Well Lot		Length (ft)	Width (ft)	Depth of Stone (Ft)	Bottom of Stone Elevation	Bottom of Sand Elevation		
#1	Lot 86	6.3	6.3	4.0	466.80	465.80		
#2	Lot 86	6.3	6.3	4.0	466.25	465.25		
#3	Lot 87	6.3	6.3	4.0	467.00	466.00		
#4	Lot 87	6.3	6.3	4.0	466.25	465.25		
#5	Lot 88	6.3	6.3	4.0	467.20	466.20		
#6	Lot 88	6.3	6.3	4.0	466.50	465.50		

NOT TO SCALE

#### OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED (M-5) DRY WELLS

1. The monitoring wells and structures shall be inspected on a quarterly basis and after every large storm event.

2. Water levels and sediment build up in the monitoring wells shall be recorded over a period of several days to insure trench drainage.

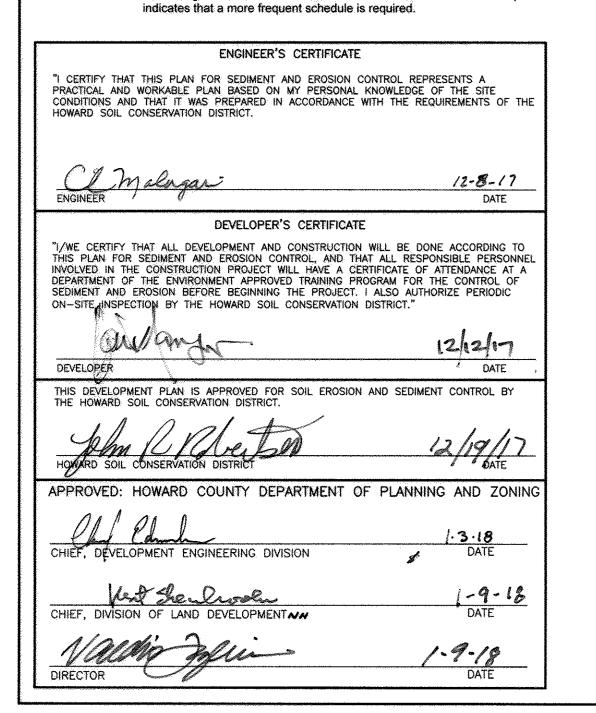
3. A log book shall be maintained to determine the rate at which the facility drains

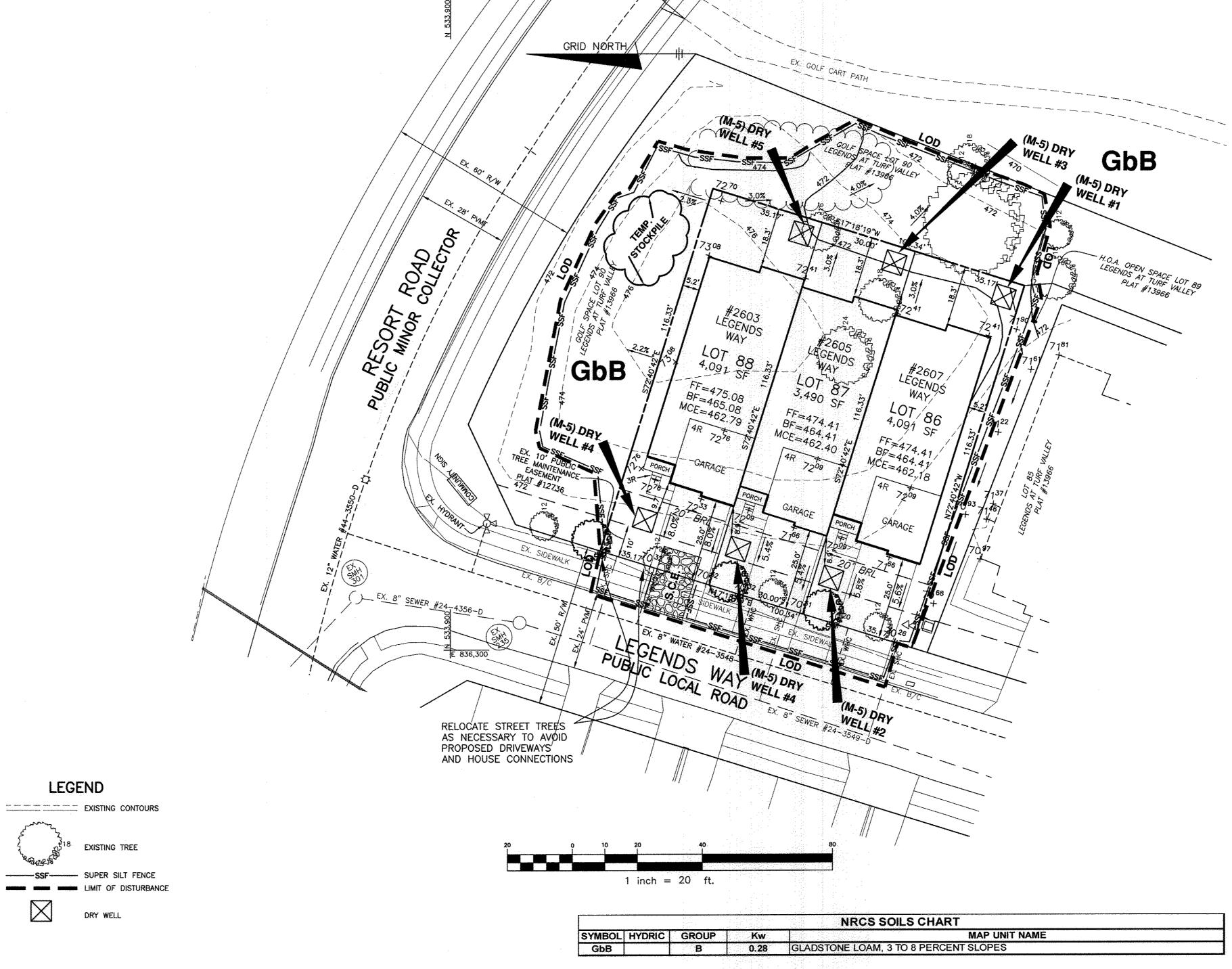
4. When the facility becomes clogged so that it does not drain down within the 72 hour time period, corrective action shall be taken.

5. The maintenance log book shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.

6. Once the performance characteristics of the infiltration facility have been verified, the monitoring schedule can be reduced to an annual basis unless the performance data

**LEGEND** 





**ESD STORMWATER MANAGEMENT SUMMARY TABLE** 

1.0

1.0

1.0

1.0

1.0

Width

6.3

6.3

6.3

6.3

6.3

6.3

6.3

6.3

6.3

6.3

6.3

6.3

Depth

5.0

5.0

5.0

5.0

5.0

5.0

79

79

79

79

79

475

1277 ①

79

Imp Area to

practice (s

1,000

1,000

1,000

1,000

1,000

1,000

6,000

1. ESD is designed based on a Pe of 1.0" since these lots are already treated via regional facility constructed under SDP-95-121.

7,743①

1,000

1,000

1.000

1,000

1,000

1,000

6,000

#1

#2

#3

#4

#5

2. The 1,743 sf of new impervious not treated is the area of the driveways.

3. These lots can be considered treated to the Maximum Extent Practical.

Total Treated ----

Total per LOD -

**Practice** 

(M-5) Drywell

(M-5) Drywell

(M-5) Drywell

(M-5) Drywell

(M-5) Drywell

(M-5) Drywell

Street Address

2607 Legends Way

2607 Legends Way

2605 Legends Way

2605 Legends Way

2603 Legends Way

2603 Legends Way

Lot 86

Lot 87

Lot 87

Lot 88

Lot 88

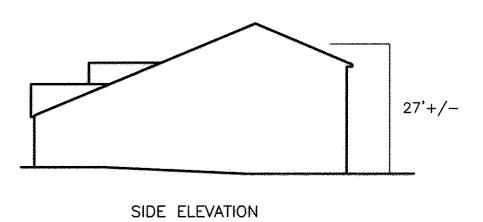
# GENERAL NOTES

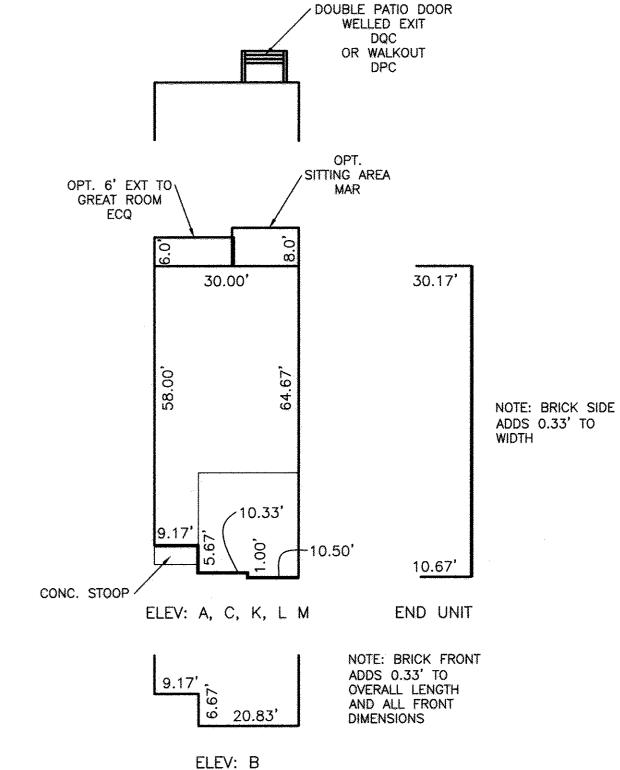
1. TOPOGRAPHY SHOWN IN BASED ON FIELD RUN SURVEY PERFORMED BY BENCHMARK ENGINEERING, INC. ON AUGUST 16, 2017. 2. THERE ARE NO WETLANDS, WETLANDS BUFFER, STREAMS, 100-YR FLOODPLAIN OR 25% OR

GREATER STEEP SLOPES WITH MORE THAN 20,000 SF OF CONTIGUOUS AREA LOCATED ON THESE 3. THIS PROJECT IS EXEMPT FROM FOREST CONSERVATION REQUIREMENTS UNDER SECTION

16.1202(b) OF THE COUNTY CODE.

4. THE DRY WELLS LOCATED IN THE FRONT OF THE LOTS SHALL BE LINED WITH A PLASTIC LINER SINCE THEY ARE LOCATED CLOSER THAN 10 FEET TO THE HOUSE FOUNDATION.





MONOCACY SCALE: 1'' = 30'

NO. DATE REVISION Professional Certification. I hereby certify that these document were prepared or approved by me, and that I am a duly licenses professional engineer under the laws of the State of Maryland, License No. 22,399, Engineering Date: 6-30-2019. **BENCHMARK** ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS

ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE A SUITE 315 A ELLICOTT CITY, MARYLAND 21043

(P) 410-465-6105 (F) 410-465-6644

WWW.BEI-CIVILENGINEERING.COM

OWNER: NIGIONE ENTERPRISES OF TURF VALLEY LIMITED PARTNERSHIP 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093 410-825-8400

DEVELOPER:

Required | Provided | Pe Provided

79

79

79

79

79

79

476

1.0

1.0

1.0

1.0

1.0

1.0

Private

Private

Private

Private

Private

NV HOMES, INC. 9720 PATUXENT WOODS DRIVE COLUMBIA, MARYLAND 21046 410-825-8400

DESIGN: DBT DRAFT: DBT

THE LEGENDS AT TURF VALLEY

TAX MAP: 16 - GRID: 17 - PARCEL: P/O 8
ZONED: PGCC (RESIDENTIAL SUBDISTRICT) ELECTION DISTRICT NO. 2 - HOWARD COUNTY, MARYLAND SITE DEVELOPMENT PLAN

LOTS 86-88 DATE: DECEMBER 7, 2017 BEI PROJECT NO. 2853 SCALE: AS SHOWN SHEET 5 of 6

SDP-00-053

#### **B-4 STANDARDS AND SPECIFICATIONS VEGETATIVE STABILIZATION**

Conditions Where Practice Applies

Using vegetation as cover to protect exposed soil from erosion. To promote the establishment of vegetation on exposed soil.

On all disturbed areas not stabilized by other methods. This specification is divided into sections on incremental stabilization; soil preparation, soil amendments and topsoiling; seeding and mulching; temporary

and permanent stabilization Effects on Water Quality and Quantity Stabilization practices are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall,

reducing sediment loads and runoff to downstream areas. Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Over time, vegetation 2.

increase organic matter content and improve the water holding capacity of the soil and subsequent plant Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances

Sediment control practices must remain in place during grading, seedbed preparation, seeding, mulching, and vegetative establishment Adequate Vegetative Establishment

Inspect seeded areas for vegetative establishment and make necessary repairs, replacements, and reseedings within the planting season.

1. Adequate vegetative stabilization requires 95 percent groundcover.

2. If an area has less than 40 percent groundcover, restabilize following the original recommendations for lime, fertilizer, seedbed preparation, and seeding. 3. If an area has between 40 and 94 percent groundcover, over-seed and fertilize using half of the rates originally specified.

4. Maintenance fertilizer rates for permanent seeding are shown in Table B.6.

#### **B-4-1 STANDARDS AND SPECIFICATIONS** INCREMENTAL STABILIZATION

Establishment of vegetative cover on cut and fill slopes.

To provide timely vegetative cover on cut and fill slopes as work progresses. **Conditions Where Practice Applies** 

Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles. A. Incremental Stabilization - Cut Slopes

1. Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all cut slopes as the work progresses. 2. Construction sequence example (Refer to Figure B.1):

a. Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation. b. Perform Phase 1 excavation, prepare seedbed, and stabilize.

c. Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as d. Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously

seeded areas as necessary. Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

B. Incremental Stabilization - Fill Slopes 1. Construct and stabilize fill slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all slopes as the work progresses.

2. Stabilize slopes immediately when the vertical height of a lift reaches 15 feet, or when the grading operation ceases as prescribed in the plans. 3. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept

surface runoff and convey it down the slope in a non-erosive manner 4. Construction sequence example (Refer to Figure B.2): a. Construct and stabilize all temporary swales or dikes that will be used to divert runoff around

the fill. Construct silt fence on low side of fill unless other methods shown on the plans address this area. b. At the end of each day, install temporary water conveyance practice(s), as necessary, to

intercept surface runoff and convey it down the slope in a non-erosive manner. c. Place Phase 1 fill, prepare seedbed, and stabilize.

d. Place Phase 2 fill, prepare seedbed, and stabilize

Figure B.

e. Place final phase fill, prepare seedbed, and stabilize. Overseed previously seeded areas as

necessary. Note: Once the placement of fill has begun the operation should be continuous from grubbing through the C. completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any nterruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

#### **B-4-2 STANDARDS AND SPECIFICATIONS** SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

The process of preparing the soils to sustain adequate vegetative stabilization To provide a suitable soil medium for vegetative growth. Conditions Where Practice Applies Where vegetative stabilization is to be established.

Soil Preparation Temporary Stabilization

a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges 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 to 5 inches of soil by disking or other suitable means.

Permanent Stabilization a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:

<u>Criteria</u>

i. Soil pH between 6.0 and 7.0. ii. Soluble saits less than 500 parts per million (ppm). iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt

plus clay) would be acceptable. iv. Soil contains 1.5 percent minimum organic matter by weight. v. Soil contains sufficient pore space to permit adequate root penetration.

Application of amendments or topsoil is required if on-site soils do not meet the above Graded areas must be maintained in a true and even grade as specified on the

approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches. d. Apply soil amendments as specified on the approved plan or as indicated by the results

of a soil test. e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not

permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas. B. Topsoiling Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The

moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by

purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low

USDA-NRCS. 3. Topsoiling is limited to areas having 2:1 or flatter slopes where: a. The texture of the exposed subsoil/parent material is not adequate to produce

vegetative growth. b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients. The original soil to be vegetated contains material toxic to plant growth.

The soil is so acidic that treatment with limestone is not feasible. Areas having slopes steeper than 2:1 require special consideration and design, Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:

a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½ inches in diameter.

b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.

c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil. Topsoil Application

Erosion and sediment control practices must be maintained when applying topsoil. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or

seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition. when the subsoil is excessively wet or in a condition that may otherwise be detrimental

to proper grading and seedbed preparation. 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 of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for

engineering purposes may also be used for chemical analyses. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.

Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of

soil by disking or other suitable means. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of

#### **B-4-3 STANDARDS AND SPECIFICATIONS** SEEDING AND MULCHING Definition

The application of seed and mulch to establish vegetative cover. To protect disturbed soils from erosion during and at the end of construction Conditions Where Practice Applies

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

A. Seeding 1. Specifications

> a. All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate. b. Mulch alone may be applied between the fall and spring seeding dates only if the ground is

frozen. The appropriate seeding mixture must be applied when the ground thaws c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the 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 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less

d. Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

2. Application a. Dry Seeding: This includes use of conventional drop or broadcast spreaders. . Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries. ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with a weighted roller to provide good

seed to soil contact. b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil. i. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after

ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and

i. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P2O5 (phosphorous), 200 pounds per acre; K2O (potassium), 200 pounds per acre.

ii. 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 at any one time. Do not use burnt or hydrated lime when iii. Mix seed and fertilizer on site and seed immediately and without interruption.

iv. When hydroseeding do not incorporate seed into the soil. B. Mulching

1. Mulch Materials (in order of preference) a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired.

b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state. i. WCFM is to 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. ii. WCFM, including dye, must contain no germination or growth inhibiting

iii. WCFM materials are to 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 blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.

iv. WCFM material must not contain elements or compounds at concentration levels that will be phyto-toxic. v. WCFM must conform to the following physical requirements; fiber length of approximately 10 millimeters, diameter approximately 1 millimeter pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and

water holding capacity of 90 percent minimum. 2. Application

a. Apply mulch to all seeded areas immediately after seeding. b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.

 Wood cellulose fiber used as mulch must be applied at a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.

3.000 feet long.

a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard: I. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 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 follow the contour. ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.

iii. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is strictly prohibited iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer

recommendations. Netting is usually available in rolls 4 to 15 feet wide and 300 to

#### **B-4-5 STANDARDS AND SPECIFICATIONS** PERMANENT STABILIZATION

To stabilize disturbed soils with permanent vegetation.

Exposed soils where ground cover is needed for 6 months or more.

<u>Purpose</u> To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils. Conditions Where Practice Applies

A. Seed Mixtures 1. General Use

a Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.

b Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guild, Section 342 - Critical Area Planting. c For sites having disturbed areas over 5 acres, use and show the rates recommended by the soil

testing agency. d For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 ½ pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.

2. Turfgrass Mixtures a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance. b. Select one or more of the species or mixtures listed below based on the site conditions or purpose,

Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan. i. Kentucky Bluegrass: Full sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky Bluegrass Cultivars with each ranging from 10 to 35 percent of the total

mixture by weight. ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky Bluegrass Cultivars with each ranging from

10 to 35 percent of the total mixture by weight. iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes; Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended. iv.Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate:

1 1/2 to 3 pounds per 1000 square feet. Notes:Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turforass Cultivar Recommendations for Maryland" Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line.

c. Ideal Times of Seeding for Turf Grass Mixtures Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b. 6a) Central MD:March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b) Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)

d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1 ½ inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.

e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (½ to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is not especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites

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

a. Class of turfgrass must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector. b. Sod must be machine cut at a uniform soil thickness of % inch, plus or minus % inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pads and torn or uneven ends will not be acceptable

c. Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section. d. Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.

e. Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period must be approved by an agronomist or soil scientist prior to its installation. 2. Sod Installation a. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the

subsoil immediately prior to laying the sod. b. Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints 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.

c. Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface. d. Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.

a. In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting. After the first week, sod watering is required as necessary to maintain adequate moisture content. c. Do not mow until the sod is firmly rooted. No more than 1/3 of the grass leaf must be removed by

**DETAIL E-3** 

the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless

#### **B-4-4 STANDARDS AND SPECIFICATIONS TEMPORARY STABLIZATION**

To stabilize disturbed soils with vegetation for up to 6 months. Purpose

To use fast growing vegetation that provides cover on disturbed soils. Conditions Where Practice Applies

Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required. . Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant

Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan . For sites having soil tests performed, use and show the recommended rates by the testing agency.

Soil tests are not required for Temporary Seeding. 3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3.A.1.b and maintain until the next seeding season.

# **B-4-8 STANDARDS AND SPECIFICATIONS**

STOCKPILE AREA Definition

A mound or pile of soil protected by appropriately designed erosion and sediment control measures Purpose

To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns. Conditions Where Practice Applies

Stockpile areas are utilized when it is necessary to salvage and store soil for later use. Criteria

1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan. 2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.

Runoff from the stockpile area must drain to a suitable sediment control practice 4. Access the stockpile area from the upgrade side. 5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as

an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner 6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment

control practice must be used to intercept the discharge. 7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.

8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

Maintenance The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Grading.

# H-5 STANDARDS AND SPECIFICATIONS

DUST CONTROL Controlling the suspension of dust particles from construction activities.

SSF----

To prevent blowing and movement of dust from exposed soil surfaces to reduce on and off-site damage including health and traffic hazards.

Conditions Where Practice Applies Areas subject to dust blowing and movement where on and off-site damage is likely without treatment <u>Specifications</u>

<u>Mulches:</u> See Section B-4-2 Soil Preparation, Topsolling, and Soil Amendments, Section B-4-3

Seeding and Mulching, and Section B-4-4 Temporary Stabilization. Mulch must be anchored to prevent blowing. Vegetative Cover: See Section B-4-4 Temporary Stabilization.

Tillage: Till to roughen surface and bring clods to the surface. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment that may produce the desired effect. Irrigation: Sprinkle site with water until the surface is moist. Repeat as needed. The site must

not be irrigated to the point that runoff occurs. Barriers: Solid board fences, silt fences, snow fences, burlap fences, straw bales, and similar material can be used to control air currents and soil blowing.

Chemical Treatment: Use of chemical treatment requires approval by the appropriate plan

# **SEQUENCE OF CONSTRUCTION**

NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF WORK

1. OBTAIN BUILDING/GRADING PERMIT. (DAY 1)

2. HOLD ON-SITE PRECONSTRUCTION MEETING, (DAY 2)

3. INSTALL PERIMETER CONTROLS AROUND THE LOT STICK. (I.E. SUPER SILT FENCES AND STABILIZED CONSTRUCTION ENTRANCE). (DAY 3)

4. EXCAVATE FOR FOUNDATION. (DAY 4-6)

5. POUR FOUNDATION AND BACKFILL. (DAY 7-10) 6. CONSTRUCT HOUSE STICK, INSTALL THE UTILITY CONNECTIONS UP TO EACH HOUSE WITHIN THE STICK (I.E. WATER AND SEWER HOUSE CONNECTIONS, ELECTRIC, ETC.). CONSTRUCT DRIVEWAYS, ONCE ROOFS OF THE HOUSES ARE COMPLETED, INSTALL THE ROOF DRAIN MANIFOLD SYSTEM,

IF NECESSARY, (DAY 11-90) 16. CONSTRUCT SIDEWALK IN FRONT OF EACH LOT STICK AND FINAL GRADE LOT STICK AND STABILIZE IN ACCORDANCE WITH THE PERMANENT SEEDBED NOTES. (DAY 91-95)

OWNER:

410-825-8400

. UPON APPROVAL FROM THE HOWARD COUNTY SEDIMENT CONTROL

INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE ANY

 Evidence of sediment discharges Identification of plan deficiencies Identification of sediment controls that require maintenance • Identification of missing or improperly installed sediment controls • Compliance status regarding the sequence of construction and stabilization requirements

Construction Activities (NPDES, MDE). 9. Trenches for the construction of utilities is limited to three pipe lengths or that which can and shall be back filled and stabilized by the end of each work day, whichever is shorter. 10. Any major changes or revisions to the plan or sequence of construction must be

reviewed and approved by the HSCD prior to proceeding with construction. Minor revisions

•Other inspection items as required by the General Permit for Stormwater Associated with

HOWARD SOIL CONSERVATION DISTRICT (HSCD)
STANDARD SEDIMENT CONTROL NOTES

1. A pre-construction meeting must occur with the Howard County Department of Public

protected areas are marked clearly in the field. A minimum of 48 hours notice to CID must

b. Upon completion of the installation of perimeter erosion and sediment controls, but

before proceeding with any other earth disturbance or grading, c. Prior to the start of another phase of construction or opening of another grading

2. All vegetative and structural practices are to be installed according to the provisions of

3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization is

swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1);

4. All disturbed areas must be stabilized within the time period specified above in accordance

(Sec. B-4-4) and mulching (Sec. B-4-3). Temporary stabilization with mulch alone can only

0.27

0.18

0.26

2,307\*

2,307 \*

7. Any sediment control practice which is disturbed by grading activity for placement of

8. Additional sediment control must be provided, if deemed necessary by the CID. The site

rain event. A written report by the contractor, made available upon request, is part of every

and all controls shall be inspected by the contractor weekly; and the next day after each

. Weather information (current conditions as well as time and an=mount of last recorded

• Brief description of project's status (e.g. percent complete) and/or current activities

0.44 \_ Acres

Acres

\_ Cu Yds

\_ Cu Yds

SITE WITH AN ACTIVE GRADING PERMIT

with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT

CONTROL for topsoil (Sec. B-4-2), permanent seeding (Sec. B-4-5), temporary seeding

be applied between the fall and spring seeding dates if the ground is frozen. Incremental

fill. Stockoiles (Sec. B-4-8) in excess of 20 feet must be benched with stable outlet. All

concentrated flow, steep slope, and highly erodible areas shall receive soil stabilization

5. All sediment control structures are to remain in place, and are to be maintained in

operative condition until permission for their removal has been obtained from the CID.

stabilization (Sec. B-4-1) specifications shall be enforced in greas with >15' of cut and/or

and seven (7) calendar days as to all other disturbed areas on the project site except for

required within three (3) calendar days as to the surface of all perimeter controls, dikes,

Works, Construction Inspection Division (CID), 410-3133-1855 after the future LOD and

d. Prior to the removal or modification of sediment control practices.

this plan and are to be in conformance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto.

a. Prior to the start of earth disturbance,

those areas under active grading.

matting (Sec. B-4-6).

Total Area of Site:

inspection and should include:

Name and title of inspector

Inspection date

precipitation

Photographs

Monitoring/sampling

Area to be roofed or paved:

Area to be vegetatively stabilized:

utilities must be repaired on the same day of disturbance

• inspection type (routine, pre-storm event, during rain event)

Maintenance and/or corrective action performed

Area Disturbed:

Site Analysis:

may be allowed by the CID per the list of HSCD-approved field changes. 11. Disturbance shall not occur outside the L.O.D. A project is to be sequenced so that grading activities begin on one grading unit (maximum acreage of 20 ac. per grading unit) at a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized and approved by the CID. Unless otherwise specified and approved by the HSCD, no more than 20 acres cumulatively

12. Wash water from any equipment, vehicles, wheels, pavement, and other sources must be treated in a sediment basin or other approved washout structure.

13. Topsoil shall be stockpiled and preserved on-site for redistribution onto final grade. 14. All silt fence and super silt fence shall be placed on—the—contour, and be imbricated at

25' minimum intervals, with lower ends curled uphill by 2' in elevation. 15. Stream channels must not be disturbed during the following restricted time periods

• Use I and IP March 1 - June 15 • Use III and IIIP October 1 - April 30 • Use IV March 1 - May 31

may be disturbed at a given time.

16. A copy of this plan, the <u>2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL</u>, and associated permits shall be on-site and available when the site is active.

\*CUT/FILL NUMBERS ARE FOR SEDIMEN CONTROL PURPOSES ONLY, CONTRACTOR TO VERIFY.

# ENGINEER'S CERTIFICATE I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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 HOWARD SOIL CONSERVATION DISTRICT. 12-8-17 DATE DEVELOPER'S CERTIFICATE "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL 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 INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT." 12/12/17 DEVELOPER DATE THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY HE HOWARD SOIL CONSERVATION DISTRICT. SOIL CONSERVATION DISTRICT APPROVED: DEPARTMENT OF PLANNING AND ZONING -9-1

#### Permanent Seeding Summary Hardiness Zone (from Figure B.3) Fertilizer Rat Seed Misture (from Table 8.3): Tall Fescue/Kentucky Bluegrass (10-20-20) ime Rate Application Seeding P205 Rate (lb/ac.) Mar 1 to May 15 Fescue, Tall 1/4 - 1/2 in Aug 1 to Oct 15 Mar 1 to May 1 90 lb/ac 90 lb/ac per acre 2 tons/ac Bluegrass, Kentucky 1/4 - 1/2 in 40 (1.0 lb/ (2 lb/ 21b/ (90lb/ 100 sf) 1000 sf) 1000 sf) 1000 sf) 1/4 - 1/2 in

Oland Canadan	Seeding Rate 1/		Seeding Depth 2/	Recommended Seeding Dates by Plant Hardiness Zone 3/		
Plant Species	lb/ac	lb/ac lb/1000 ft2		5b and 6a	5b and 6a 6b	
Cool-Season Grasses						
Annual Ryegrass (Lolium perenne ssp. Multiflorum	40	1.0	0.5		Mar 1 to May 15; Aug 1 to Oct 31	·
Barley (Hordeum vulgare)	96	2.2	1.0		Mar 1 to May 15; Aug 1 to Oct 31	
Oats (Avena sativa)	72	1.7	1.0		Mar 1 to May 15; Aug 1 to Oct 31	
Wheat (Triticum aestivum)	120	2.8	1.0		Mar 1 to May 15; Aug 1 to Oct 31	
Cereal Rye (Secale cereale)	112	2.8	1,0	-	Mar 1 to May 15; Aug 1 to Nov 15	
Warm-Season Grasses						
Foxtail Millet (Serataria italica)	30	0.7	0.5		May 16 to Jul 31	
Pearl Millet (Pennisetum glaucum	20	0.5	0.5	· ··	May 16 to Jul 31	:

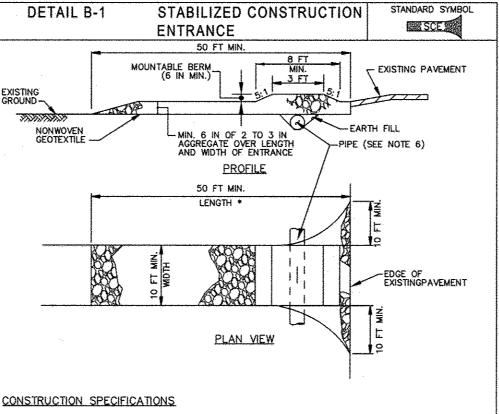
Seeding rates for the warm season grasses are in pounds of Pure Live Seed (PLS). Actual planting rates shall be adjusted to reflect percent seed germination and purity, as tested. Adjustments are usually not needed for the cool-season grasses.

for barley, oats, and wheat. For smaller-seeded grasses (annual ryegrass, pearl millet, foxtall millet), do not exceed more than 5% (by weight) of the overall permanent seeding mix. Cereal rye generally should not be used as a nurse crop, unless planting will occur very late fall beyond the seeding dates for other temporary seedings. Cereal rye has allelopathic properties that inhibit the germination and growth of other plants, if it must be used as a nurse crop, seed at 1/3 of the rate listed above. Dats are the recommended nurse crop for warm-season grasse

The planting dates listed are averages for each Zone and may require adjustment to reflect local conditions, especially near the boundaries of the zone

For sandy soils, plant seeds at twice the depth listed above

Seeding rates listed above are for temporary seedings, when planted alone. When planted as a nurse crop with permanent seed mixes, use 1/3 of the seeding rate listed above



PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (\*30 FEET

U.S. DEPARTMENT OF AGRICULTURE

FOR SINGLE RESIDENCE LOT), USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS, PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE, PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE, PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS

PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.

(WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE

REMAINING DISTURBED AREAS. (DAY 96-100) GALVANIZED CHAIN LINK FENCE WITH WOVEN SLIT FILM GEOTEXTILE **ELEVATION** CHAIN LINK FENCING-WOVEN SLIT FILM GEOTEXTILE-CROSS SECTION CONSTRUCTION SPECIFICATIONS INSTALL 2% INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (21/4 INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.

SUPER SILT

10 FT MAX

FENCE

EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE A 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING

THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.

REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE. MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL MARYLAND DEPARTMENT OF ENVIRONMEN U.S. DEPARTMENT OF AGRICULTURE
ATURAL RESOURCES CONSERVATION SERVICE MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

NO. DATE REVISION **BENCHMARK** ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS ENGINEERING, INC 8480 BALTIMORE NATIONAL PIKE & SUITE 315 & ELLICOTT CITY, MARYLAND 21043 (P) 410-465-6105 (F) 410-465-6644 WWW.BEI-CIVILENGINEERING.COM

ANGIONE ENTERPRISES OF TURF VALLEY THE LEGENDS AT TURF VALLEY LIMITED PARTNERSHIP 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093 410-825-8400 TAX MAP: 16 - GRID: 17 - PARCEL: P/O 8 DEVELOPER: NV HOMES, INC. 9720 PATUXENT WOODS DRIVE COLUMBIA, MARYLAND 21046

ZONED: PGCC (RESIDENTIAL SUBDISTRICT) ELECTION DISTRICT NO. 2 - HOWARD COUNTY, MARYLAND SEDIMENT AND EROSION CONTROL NOTES AND DETAILS

LOTS 86-88 BEI PROJECT NO. 2853 DATE: DECEMBER 7, 2017 DESIGN: DBT | DRAFT: DBT SCALE: AS SHOWN SHEET 6 OF 6

SDP-00-053

Professional Certification. I hereby certify that these documen

were prepared or approved by me, and that I am a duly licensed

professional engineer under the laws of the State of Maryland

.Date: 6-30-2019.

License No. 22390 Ex

Ja2753 Fe Life of York ValleyAd 10000 dwo. 12/7/2017 1:19:00 PM

CHIEF, DEVELOPMENT ENGINEERING DIVISION