GENERAL NOTES

- . ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- BOUNDARY IS BASED ON A FIELD RUN MONUMENTED SUBURBAN BOUNDARY SURVEY PERFORMED BY JOHN
- 3. THE EXISTING TOPOGRAPHY SHOWN ONSITE IS BASED ON AN AERIAL TOPOGRAPHIC SURVEY PERFORMED BY WINGS AERIAL MAPPING CO., INC. FLOWN ON OR ABOUT JANUARY, 2006. CONTOUR INTERVAL IS 2'.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 16E1 AND 0012 WERE USED FOR THIS PROJECT.
- WATER IS PUBLIC. THE CONTRACT NUMBER IS 24-4549-D. THE DRAINAGE AREA IS LITTLE PATUXENT
- 6. SEWER IS PUBLIC. THE CONTRACT NUMBER IS 24-4549-D. THE DRAINAGE AREA IS LITTLE PATUXENT.
- STORMWATER MANAGEMENT QUALITY AND QUANTITY CONTROL IS PROVIDED WITHIN EXISTING SWMF #4 (P-1 MICRO-POOL ED POND) AND EXISTING SWMF#6 (F-1 SURFACE SAND FILTER WITH DRY DETENTION POND) BOTH CONSTRUCTED UNDER F-08-084 AND BY THE STC 4501 STORMCEPTOR LOCATED ONSITE. PONDS AND STORMCEPTOR SHALL BE PRIVATELY OWNED AND MAINTAINED.
- 8. EXISTING UTILITIES SHOWN ARE BASED ON CONTRACT DRAWINGS, AERIAL AND FIELD SURVEYED LOCATIONS.
- 9. THERE ARE NO WETLANDS, STREAMS, STREAM BUFFERS OR 100-YEAR FLOODPLAINS ON THE SITE. 10. A NOISE STUDY IS NOT REQUIRED FOR COMMERCIAL PROJECTS OR FOR ACCESSORY APARTMENTS LOCATED
- 11. THE SUBJECT PROPERTY IS ZONED PGCC PER THE 2-2-2004 COMPREHENSIVE ZONING PLAN AND THE
- "COMP LITE" ZONING AMENDMENTS EFFECTIVE 7-28-2006.
- 12. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO BURIAL GROUNDS, CEMETERIES OR HISTORIC STRUCTURES
- 13. THIS PROJECT IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- 14. THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
- 15. LANDSCAPING FOR THIS PARCEL IS PROVIDED IN ACCORDANCE WITH A CERTIFIED LANDSCAPE PLAN INCLUDED WITH THIS SITE DEVELOPMENT PLAN SET IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING WILL BE POSTED AS PART OF THE GRADING PERMIT IN THE AMOUNT OF \$14,670.00 (\$6,300.00 FOR 21 SHADE TREES, \$8,250.00 FOR 55 EVERGREENS AND \$120.00 FOR 4 SHRUBS. STREET TREES WERE PROVIDED WITH THE
- 16. THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION AS THE FOREST CONSERVATION OBLIGATION WAS CALCULATED AND MET UNDER
- 17. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- 18. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- 19. THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE ZONING REGULATIONS EFFECTIVE APRIL 13, 2004. PER SECTION 126(H)(1), PLANNING BOARD APPROVAL IS REQUIRED FOR THE SITE DEVELOPMENT PLAN FOR THIS PROJECT.
- 20. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP, INC. AND APPROVED UNDER S-86-13. IT WAS UPDATED IN MARCH 2004.
- 21. PREVIOUS PLANNING AND ZONING FILES: S-86-13, P-06-13, S-03-01, SP-05-074, WP-08-009, F-08-060, F-08-084, WP-05-074, WP-09-211, WP-10-159, WP-11-168, WP-12-129
- 23. ALL EXTERIOR LIGHTING SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME III (1993), ZONING SECTION 134 AND AS SHOWN ON THESE PLANS. ALL EXTERIOR LIGHT FIXTURES SHALL BE ORIENTED TO DIRECT LIGHT INWARDS AND DOWNWARDS ON-SITE AWAY FROM ALL ADJOINING RESIDENTIAL
- 24. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.

PROPERTIES AND PUBLIC ROADS IN ACCORDANCE WITH SECTION 134 OF THE HOWARD COUNTY ZONING

- 25. ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- 26. PRIOR TO GRADING PERMIT APPLICATION. THIS PROJECT SHALL COMPLY WITH THE REQUIREMENTS OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SECTION 16.129
- 27. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)." A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY
- 28. ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- 29. TRASH COLLECTION SHALL BE THE RESPONSIBILITY OF THE OWNER THROUGH A PRIVATE TRASH COLLECTOR. 30. THE FRONT AND REAR BUILDING RESTRICTION LINES SHOWN ON THIS SITE DEVELOPMENT PLAN WERE APPROVED BY THE HOWARD COUNTY PLANNING BOARD ON APRIL 15, 2010 IN ACCORDANCE WITH SUBSECTION 126.H.3. OF THE ZONING REGULATIONS. THE SIDE BUILDING RESTRICTION LINES SHOWN ON THIS SITE

DEVELOPMENT PLAN ARE IN ACCORDANCE WITH THE THIRD AMENDMENT TO THE TURF VALLEY MULTI-USE

31. A LETTER FROM THE COLUMBIA GAS TRANSMISSION COMPANY ACKNOWLEDGING THE PROPOSED DEVELOPMENT SHALL BE OBTAINED BY THE DEVELOPER PRIOR TO GRADING PERMIT APPROVAL.

PESTICIDE BEST MANAGEMENT PRACTICES (TAKEN FROM MDA PESTICIDE INFORMATION SHEET)

KNOW THE APPLICATION SITE - SCOUT THE AREA TO EVALUATE THE EXTENT OF THE PEST PROBLEM IN ORDER TO SELECT THE APPROPRIATE CONTROL METHOD. IDENTIFY ENVIRONMENTALLY SENSITIVE AREAS AND LEARN HOW THE SOIL TYPES AND THE LAYOUT OF EACH APPLICATION SITE AFFECT THE MOVEMENT OF WATER, BOTH THROUGH AND ACROSS SOIL.

READ AND FOLLOW LABEL DIRECTIONS - PESTICIDE LABELS CONTAIN IMPORTANT INFORMATION ABOUT APPLICATOR AND ENVIRONMENTAL SAFETY, INCLUDING WATER QUALITY PROTECTION. ALWAYS FOLLOW LABEL DIRECTIONS. MATCH APPLICATION RATES TO THE PEST PROBLEM - EVERY PESTICIDE LABEL SPECIFIES APPLICATION RATES. CAREFULLY CONSIDER ALL ASPECTS OF THE PEST PROBLEM, SUCH AS THE PEST OR PESTS, LEVEL OF INFESTATION, LOCATION, AND ENVIRONMENTAL CONSIDERATIONS (i.e., SOIL TYPE, ORGANIC MATTER)

DO NOT MIX AND LOAD NEAR WATER - PESTICIDES CAN REACH GROUNDWATER AND SURFACE WATER AS A RESULT OF DISCHARGES OR SPILLS THAT OCCUR DURING MIXING AND LOADING OPERATIONS. MIXING AND LOADING SHOULD BE DONE AS FAR AS POSSIBLE (AT LEAST 50 FEET) FROM WELLS, LAKES, STREAMS, RIVERS AND STORM DRAINS. WHEN POSSIBLE, MIX AND LOAD THE PESTICIDES AT THE SITE OF APPLICATION. APPLICATORS SHOULD ALSO CONSIDER THE USE OF A LIQUID-TIGHT MIXING AND LOADING PAD. BE SURE ALL CONTAINERS BEING TRANSPORTED ARE SECURED.

PREVENT BACKSIPHONING - WHEN FILLING ANY PESTICIDE SPRAY TANK FROM A WELL OR OTHER WATER SOURCE, BE SURE THE END OF THE HOSE STAYS ABOVE THE SPRA SOLUTION IN THE TANK, BACKSIPHONING CAN OCCUR WHEN THE END OF THE FILL HOSE OR PIPE FALLS BELOW THE LEVEL OF THE SOLUTION IN THE TANK AND THERE IS A DROP IN WATER PRESSURE. USE AN APPROVED ANTI-BACKSIPHONING DEVICE OR AN AIR BREAK

CALIBRATE APPLICATION EQUIPMENT PROPERLY - FREQUENTLY CHECK AND MAINTAIN SPRAY NOZZLES, HOSES, GAUGES AND TANKS. PROPER CALIBRATION IS THE KEY TO APPLYING ACCURATE RATES OF PESTICIDES. IMPROPER CALIBRATION CAN RESULT IN TOO MUCH OR TOO LITTLE PRODUCT APPLIED, IRREGULAR DISTRIBUTION AND POOR PEST CONTROL. INACCURATE TANK VOLUMES AND PRESSURE GAUGES OR WORN NOZZLES ALSO MAY CAUSE IMPROPER APPLICATION. INSPECT APPLICATION EQUIPMENT BEFORE EVERY USE.

DELAY PESTICIDE APPLICATIONS IF HEAVY RAIN IS FORECAST - PESTICIDES ARE MOST SUSCEPTIBLE TO RUNOFF FROM HEAVY RAINS DURING THE FIRST SEVERAL HOURS AFTER APPLICATION. AVOID OVERSPRAY AND DRIFT - CHECK THE PESTICIDE LABEL FOR APPLICATION PRECAUTIONS OR RESTRICTIONS DURING WINDY CONDITIONS. WIND SPEED, TEMPERATURE AND HUMIDITY ALL AFFECT PESTICIDE SPRAY DRIFT.

DRIFT CAN BE REDUCED BY LOWERING BOOM HEIGHTS AND USING NOZZLES THAT PRODUCE LARGE DROPLET STORE PESTICIDES IN A SAFE PLACE - PESTICIDES NEED TO BE STORED IN A SECURE PLACE AND SHOULD BE

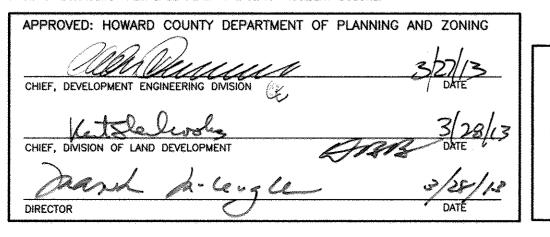
STORED IN THIER ORIGINAL CONTAINERS WITH THE LABELS CLEARLY VISIBLE. PESTICIDES MUST BE STORED AT

LEAST 50 FEET FROM ANY WELLS UNLESS THEY ARE STORED IN SECONDARY CONTAINMENT.

NEXT TANK MIX. BE SURE LABEL RATES ARE NOT EXCEEDED.

PROPERLY DISPOSE OF PESTICIDE CONTAINERS - INFORMATION ABOUT CONTAINER DISPOSAL IS ON THE PESTICIDE LABEL. CONTAINERS SHOULD BE TRIPLE OR PRESSURED-RINSE THOROUGHLY AFTER USE, PUNCTURED AND DISPOSED OF IN ACCORDANCE WITH LABEL DIRECTIONS OR OFFERED FOR RECYCLING AS PART OF THE MARYLAND DEPARTMENT OF AGRICULTURE'S PROGRAM. SPRAYERS SHOULD BE CLEANED AT THE APPLICATION SITE WHENEVER POSSIBLE AND AT A SAFE DISTANCE FROM WELLS, LAKES, STREAMS AND STORM DRAINS. THE RINSATE SHOULD BE SPRAYED ON A SITE THAT IS LISTED ON THE PESTICIDE LABEL OR USED AS MAKEUP WATER IN THE

DEVELOP AN EMERGENCY RESPONSE PLAN - ANYONE WHO STORES, HANDLES OR USES PESTICIDES SHOULD HAVE AN EMERGENCY RESPONSE PLAN IN CASE AN ACCIDENT OCCURS.

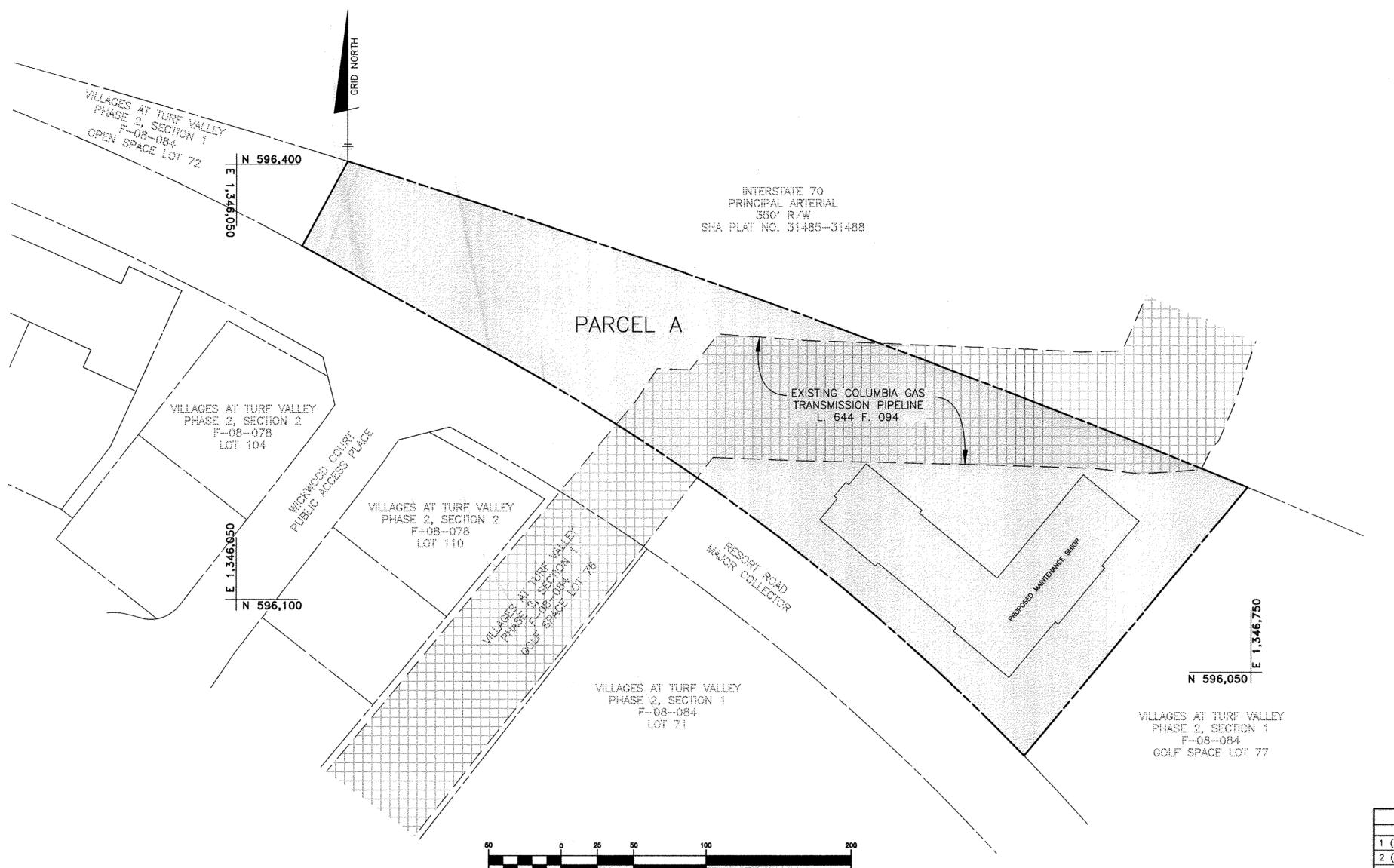


PLANNING BOARD OF HOWARD COUNTY

COMMERCIAL SITE DEVELOPMENT PLAN VILLAGES AT TURF VALLEY

PARCEL 'A'

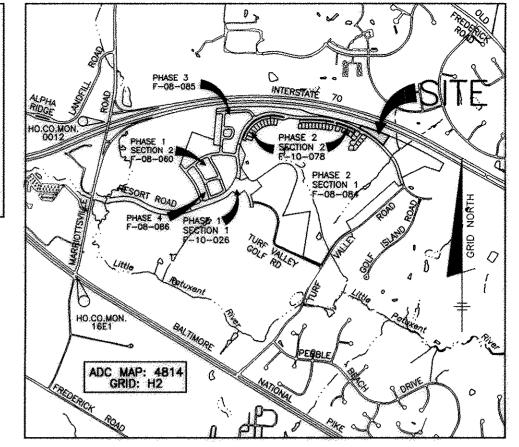
GOLF COURSE MAINTENANCE SHOP



1 inch = 50 ft.

BENCHMARKS NAD'83 HORIZONTAL HO. CO. #16E1 (AKA: 3438001) STAMPED BRASS DISK SET ON TOP OF A 3 DEEP COLUMN OF CONCRETE. N 593250.960' E 1340192.70' **ELEVATION: 463.981'** HO. CO. #0012 (AKA: 3439001) STAMPED BRASS DISK SET ON TOP OF A DEEP COLUMN OF CONCRETE.

ELEVATION: 486.298'

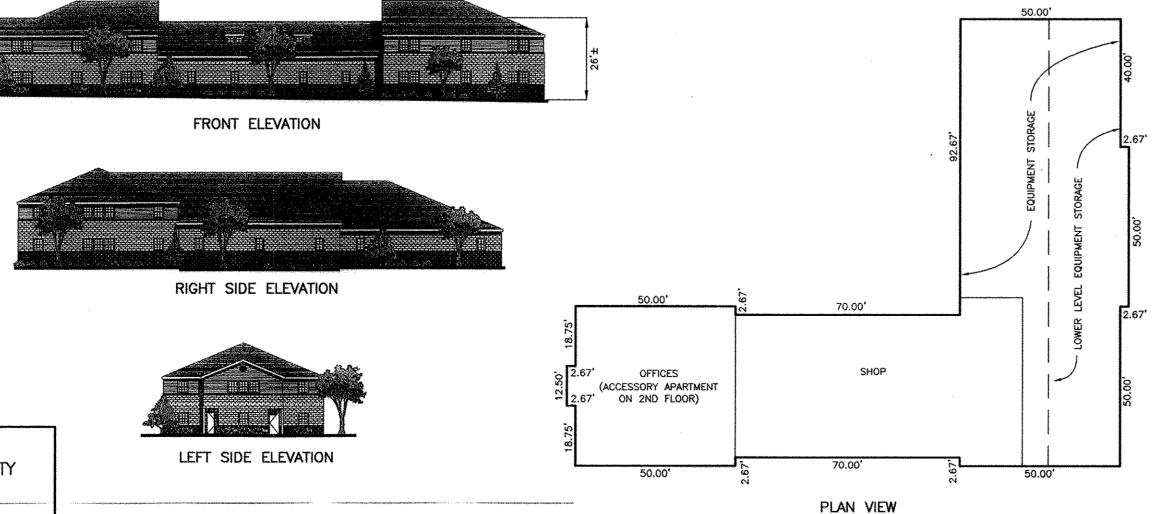


SITE ANALYSIS DATA CHART

A.) TOTAL PROJECT AREA _______ 2.01 AC.

B.) AREA OF PLAN SUBMISSION	2.01 AC.
C.) LIMIT OF DISTURBED AREA	1.65 AC.
D.) PRESENT ZONING:	PGCC MULTI-USE SUBDISTRICT
E.) PROPOSED USE OF SITE:	2-STORY MAINTENANCE SHOP, OFFICES, ACCESSORY APARTMENT, EQUIPMENT STORAGE
F.) FLOOR SPACE ON EACH LEVEL OF BLDG PER USE 1st FLOOR (OFFICE) 1st FLOOR (SHOP) 1st FLOOR (STORAGE) 2nd FLOOR (ACCESSORY APARTMENT) LOWER LEVEL (STORAGE)	
G.) TOTAL NUMBER OF UNITS ALLOWED AS SHOWN ON FINAL PLAT(S)	1
H.) TOTAL NUMBER OF UNITS PROPOSED	1
I.) MAXIMUM NUMBER OF EMPLOYEES, TENANTS ON SITE PER USE	25 (in season)
J.) NUMBER OF PARKING SPACES REQUIRED BY HO. CO. ZONING REGS AND/OR FDP CRITERIA OFFICE: 2,502 SF (@ 3.3 SPACES PER 1000 SF) SHOP: 4,149 SF (@ 0.5 SPACES PER 1000 SF) STORAGE: 9,402 SF (@ 0.5 SPACES PER 1000 SF) ACCESSORY APARTMENT (1 SPACE PER APT.)	3 5
TOTAL REQUIRED:	18
K.) NUMBER OF PARKING SPACES PROVIDED ONSITE (INCLUDES 2 HANDICAPPED SPACES)	18
L.) OPEN SPACE ON-SITE	N/A N/A
M.) AREA OF RECREATIONAL OPEN SPACE REQUIRED	
N.) BUILDING COVERAGE OF SITE	
O.) APPLICABLE DPZ FILE REFERENCES:	S-86-13

VILLAGES AT TURF VALLEY PHASING CHART				
PHASE	S.F.A.	S.F.D.	CONDOMINIUM	TOTAL
1 (F-10-026/F-08-060)	41	21	0	62
2 (F-08-084/F-10-078)	0	32	43	75
3 (F-08-085)	59	0	0	59
4 (F-08-086)	23	0	0	23
MAINT SHOP (SDP-08-096)	0	0	1 (Access. Apt.)	1
TOTAL	123	53	44	220



MAINTENANCE SHOP PLAN AND ELEVATION VIEWS

SHEET INDEX SHEET TITI F TITLE SHEET SITE DEVELOPMENT & GRADING PLAN SEDIMENT & EROSION CONTROL PLAN, NOTES & DETAILS SEDIMENT & EROSION CONTROL NOTES AND STORMCEPTOR DETAILS STORM DRAIN PROFILES, DETAILS AND MAP LANDSCAPE PLAN AND MISCELLANEOUS DETAILS

> ADDRESS CHART STREET ADDRESS 10790 RESORT ROAD

PERMIT INFORMATION CHART SUBDIVISION NAME: LOT/PARCEL SECTION/AREA: VILLAGES AT TURF VALLEY PHASE 2 PARCEL SECTION 1 PLAT No. OR L/F GRID No. ZONE TAX MAP NO ELECTION DISTRICT TRACT 22270-PGCC 6030.00 16 3rd 22285

DATE REVISION Professional Certification, I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed **BENCHMARK** professional engineer under the laws of the State of Maryland.

ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE A SUITE 418 A ELLICOTT CITY, MARYLAND 21043

(P) 410-465-6105 (F) 410-465-6644 60 THOMAS JOHNSON DRIVE ▲ FREDERICK, MARYLAND 21702 (P) 301-371-3505 (F) 301-371-3506 WWW.BEI-CIVILENGINEERING.COM

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

DRAWN: DBT

Design: **Db**t

VILLAGES AT TURF VALLEY PARCEL 'A' GOLF COURSE MAINTENANCE SHOP

GRID: 17 PARCEL: A ZONED: PGCC 10790 RESORT ROAD **ELECTION DISTRICT NO. 3** HOWARD COUNTY, MARYLAND MANGIONE ENTERPRISES OF TURF VALLEY
LIMITED PARTNERSHIP
125 YORK ROAD, PENTHOUSE
LUTHERVILLE, MARYLAND 21093
410-825-8400

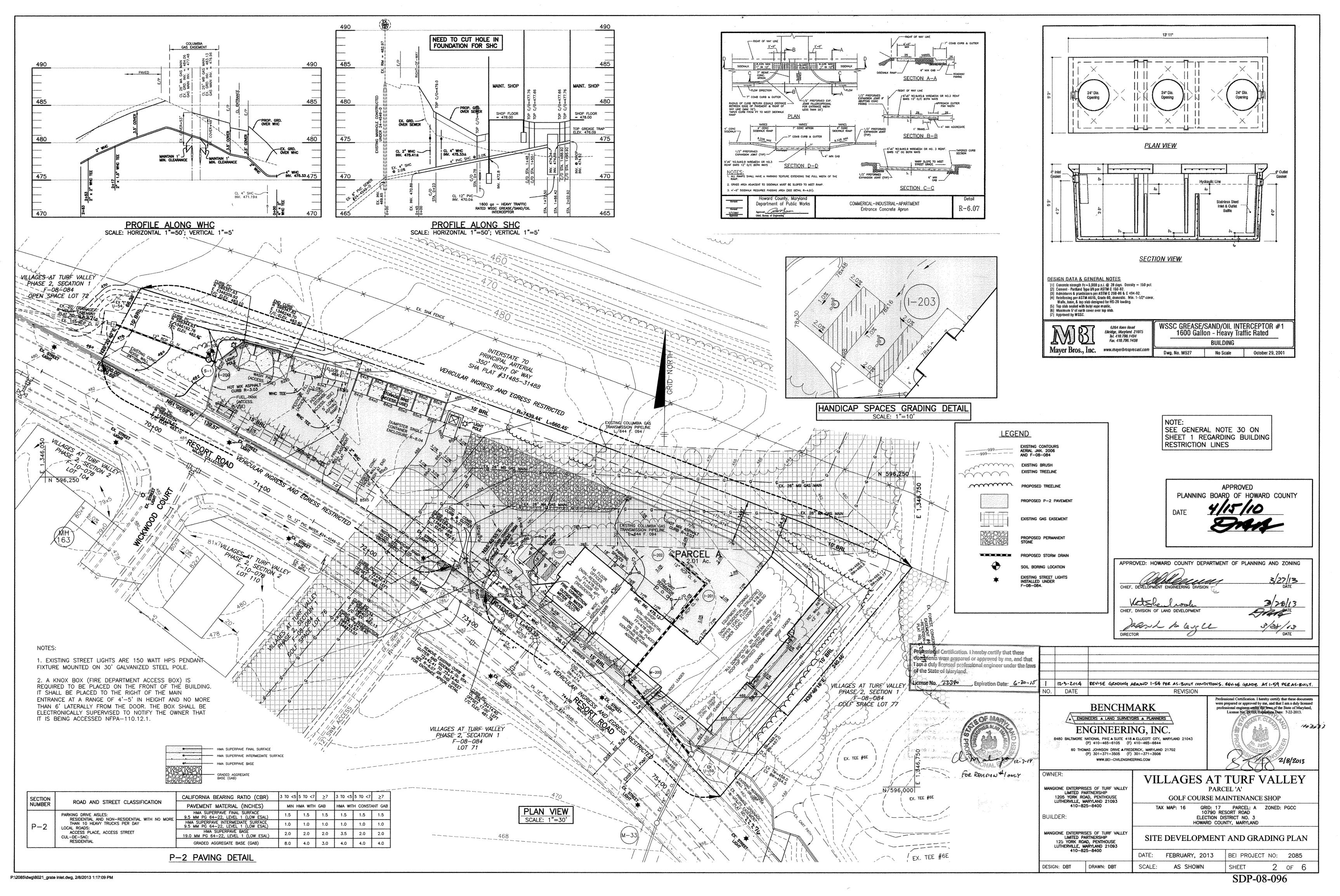
AS SHOWN

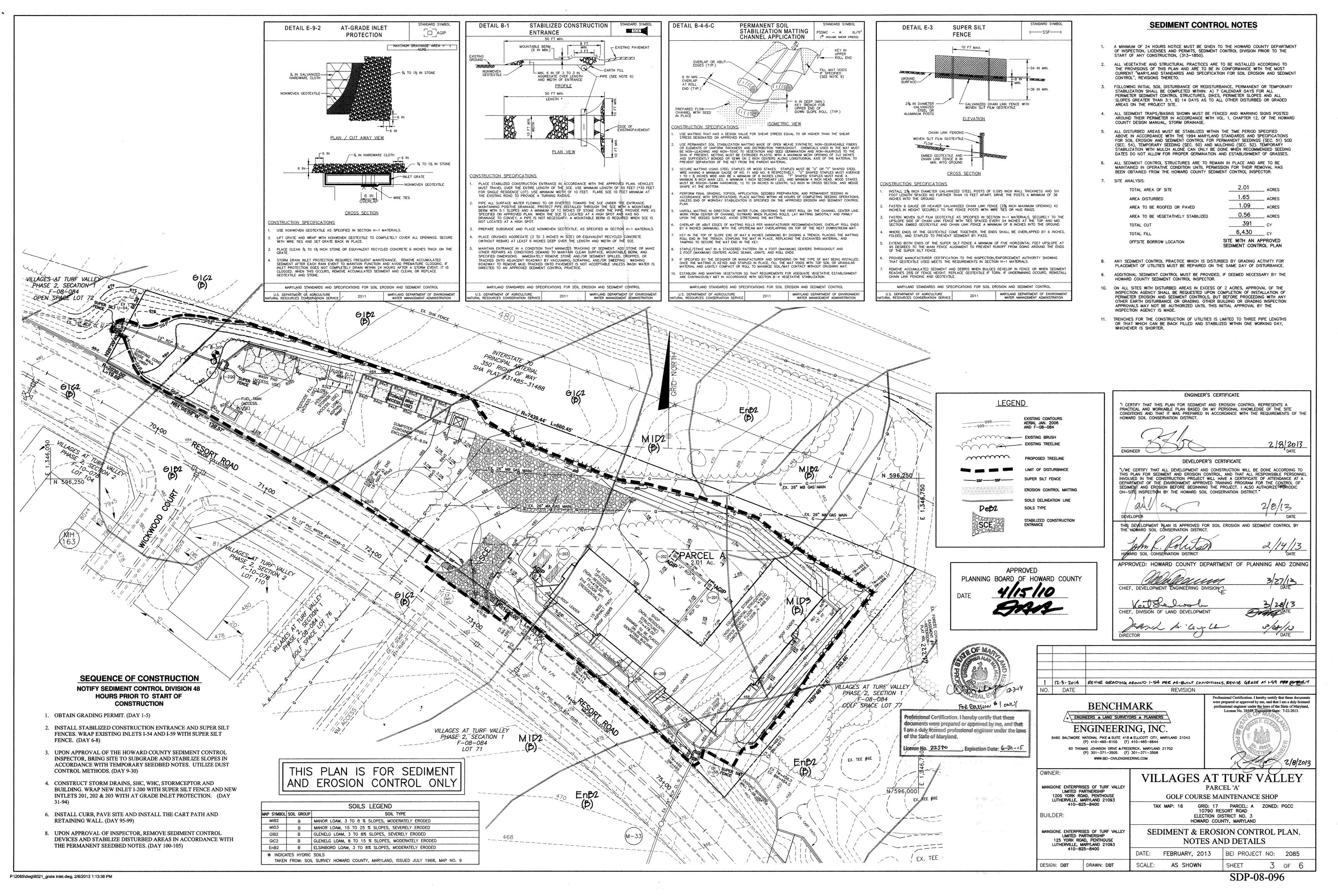
SCALE:

TITLE SHEET

DATE: FEBRUARY, 2013 BEI PROJECT NO: 2085

1 of 6





TOPSOIL SPECIFIC ATIONS

- Topsoil salvaged from the existing site may be used provided that it meets that standards as set forth in these specifications. Typically, the depth of topsoil to be solvaged 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.
- II. 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 contrasting texture subsoils and shall contain less than 5% by
- Topsoil must be free of plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nutsedge, poison ivy, thistle, or others as specified.

valume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1-1/2" in diameter.

- iii. 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
- Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization Section 1 Vegetative Stabilization Methods and Materials.

V. For sites having disturbed areas over 5 acres:

- I. 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 topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
- b. Organic content or topsoil shall be not less than 1.5 percent by weight
- c. Topsoil having soluble salt content greater than 500 parts per million shall d. No sod or seed shall be placed on soil which has been treated with soil

elapsed (14 days min.) to permit dissipation of phyto-toxic materials. 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

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 Application
- When topsoiling, maintain needed erosion and sediment control practices such as diversions, grade stabilization structures, earth dikes, slope silt fence and sediment
- 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" 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sadding or seeding can proceed with a minimum of additional soil preparation and illage. Any irregularities in the surface resulting from topsciling or other perations shall be corrected in order to prevent the formation of depressions or
- 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.
- VI. Alternative for Permanent Seeding Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified

I. Composted Sludge Material for use as a soil conditioner for sites having distributed areas over 5 acres shall be tested to prescribe amendments and for sites having

- disturbed areas under 5 acres shall conform to the following requirements: Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
- Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, 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 fertilizer applied at the rate References: Guidelines Specifications, Soil Preparation and Sodding. MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes, Revised 1973.

30.0 DUST CONTROL

Controlling dust blowing and movement on construction sites and roads.

To prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage, health hazards, and improve traffic safety. Conditions Where Practice Applies

This practice is applicable to areas subject to dust blowing and movement where on and off-site damage is likely without treatment.

Temporary Methods

1. Mulches - See standards for vegetative stabilization with mulches only. Mulch should

- be crimped or tracked to prevent blowing 2. Vegetative Cover - See standards for temporary vegetative cover.
- 3. Tillage To roughen surface and bring clods to the surface. This is an emergency measure which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel—type plows spaced about 12 apart, spring—toothed harrows, and
- 4. Irrigation This is generally done as an emergency treatment. Site is sprinkled with water until the surface is moist. Repeat as needed. At no time should the site be irrigated to the point that runoff begins to flow.
- Barriers Solid board fences, silt fences, snow fences, burlap fences, straw bales, and similiar material can be used to control air currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 10 times their height are effective in controlling soil blowing.
- 6. Calcium Chloride Apply at rates that will keep surface moist. May need retreatment. Permanent Methods

 1. Permanent Vegetation — See standards for permanent vegetative cover, and permanent stabilization with sod. Existing trees or large shrubs may afford valuable protection if
- 2. Topsoiling Covering with less erosive soil materials. See standards for topsoiling.

3. Stone - Cover surface with crushed stone or coarse gravel.

Agriculture Handbook 346. Wind Erosion Forces in the United States and Their Use

AS-BUILT CERTIFICATION

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2. Agriculture Information Bulletin 354. How to Control Wind Erosion, USDA-ARS.

B-4-4 STANDARDS AND SPECIFICATIONS

<u>FOR</u> TEMPORARY STABLIZATION

Definition

To stabilize disturbed soils with vegetation for up to 6 months

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

- Selectione 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 lan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.
- 2. 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-4-5 STANDARDS AND SPECIFICATIONS

<u>FOR</u>

PERMANENT STABILIZATION

To stabilize disturbed soils with permanent vegetation.

To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils.

Conditions Where Practice Applies Exposed soils where ground cover is needed for 6 months or more

A. Seed Mixtures

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.
- 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. Kentucky Bluegrass: Full sun Mixture: For use in areas that receive intensive management, Irrigation required in the areas of central Maryland and Eastern Shore nmended 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 eeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of thre Kentucky Bluegrass Cultivars with each ranging from 10 to 35 percent of the total mixture
- 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 ncludes Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine

Select turfgrass varieties from those listed in the most current University of Maryland

Fescue and 60 to 70 percent. Seeding Rate: 1 1/2 to 3 pounds per 1000 square feet

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)
- 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.

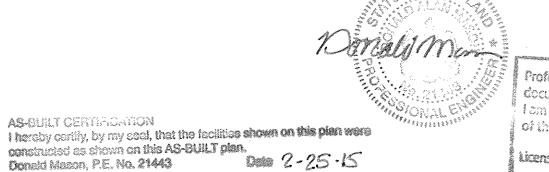
(Hardiness Zones: 7a, 7b)

Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15

- 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

- b. Sod must be machine cut at a uniform soil thickness of ¾ inch, plus or minus ¼ 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 heir size and shape when suspended vertically with a firm grasp on the upper 10 percent of
- 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
- 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 willing. b. After the first week, sod watering is required as necessary to maintain adequate moisture
- c. Do not mow until the sod is firmly rooted. No more than 1/3 of the grass leaf must be removed. by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless



Professional Cartification. I hereby cartify that these cocuments were propared or approved by real and that I am a duly licensed professional engineer under the laws | of the State of Maryland.

License No. 21443 Expiration Date: 12-21-16

B-4-3 STANDARDS AND SPECIFICATIONS

SEEDING AND MULCHING

The application of seed and mulch to establish vegetative cove

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

- 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 8.4 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 indication on the container. Add fresh inoculants as direct 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 effective.
- 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

- a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
- i. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1 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
- Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil. . 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 planting. ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in
- c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer). i. If fertilizer is being applied at the time of seeding, the application rates should not exceed he following: nitrogen, 100 pounds per acre total of soluble nitrogen; P2O5 (phosphorous),
- ii. Lime: Use only ground agricultural limestone (up to 3 tons per agree 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 hydroseeding
- iii. Mix seed and fertilizer on site and seed immediately and without interruption iv. When hydroseeding do not incorporate seed into the soil

200 pounds per acre; K₂O (potassium), 200 pounds per acre.

Mulch Materials (in order of preference)

- Straw consisting of thoroughly threshed wheat, rve, 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 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 factors. 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 sturry. The mulch material must form a blotter-like ground 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

WCFM must conform to the following physical requirements: fiver 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.

- 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.
- c. 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.

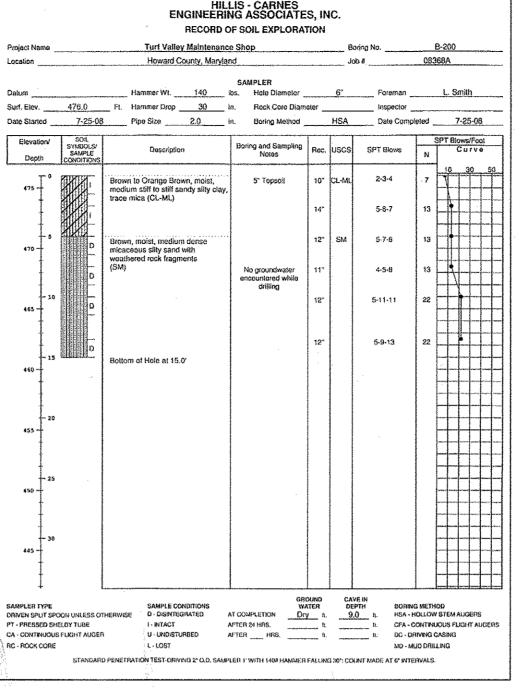
M - 203

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- a. Perform mulch anchoring immediately following application of much 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,
- 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 ack 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
- iv. Lightweight plastic netting may be stapled over mulch according to manufacture ecommendations. Netting is usually available in rolls 4 to 15 feet wide and 300 to 3,000

ROOF LEADER MANIFOLD DETAIL



STORMCEPTOR® SPECIFICATION - STC 4501

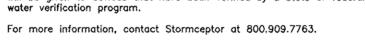
The oil/sediment separator unit must be a "Stormceptor®" model manufactured by Rinker Stormceptor® or other approved unit.

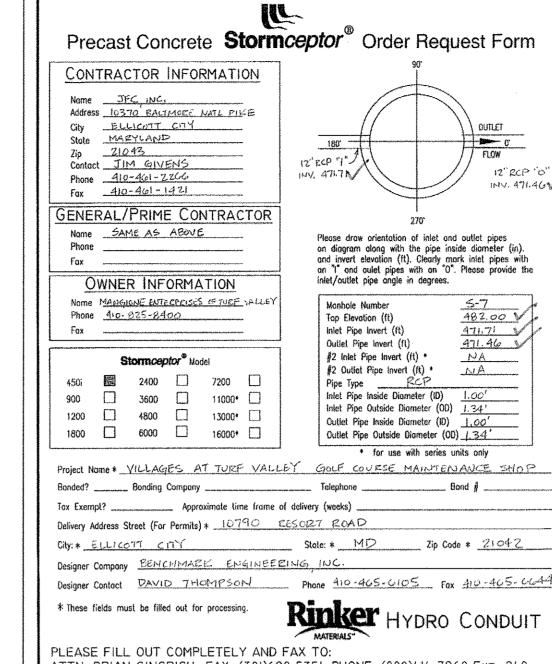
The separator must remove oil and sediment from storm water during frequent wet weather events. It should treat a minimum of 75 to 90 percent of the annual runoff volume and be capable of removing 50 to 80 percent of the total suspended sediment load as well as more than 90 percent of floatable free oil. The separator should be capable of trapping silt and clay size particles, in addition to large particles. It should be installed underground as part of the storm sewer system and be structurally designed for (HS-20 min.) traffic loading at the surface, with the storage in the separator vertically oriented. The separator should be maintained from the surface via one access point

The separator should be equipped with an internal high flow bypass that regulates the flow rate into the treatment chamber and conveys high flows directly to the outlet so the scour and/or re-suspension of material previously collected in the separator does not occur. External bypasses are not acceptable. The bypass area must be physically separated from the separation area to prevent mixing with the separator circular and constructed from either fiberglass or precast concrete risers. The concrete separator is designed and manufactured in accordance with ASTM C-478. The concrete joints are oil resistant, water tight and meet the design criteria according to ASTM C-443. In the concrete Stormceptor®, a fiberglass insert, bolted and sealed watertight to the inside of the bypass chamber, will divert low to normal storm water flows into the treatment chamber. A minimum of 12 inches of oil storage should be lined with fiberglass to provide secondary containment of any hydrocarbon materials.

The difference between the separator inlet pipe elevation and the separator outlet pipe elevation must be 3 inches (75mm). The separator will be able to be used as a bend structure in the storm sewer system. The access cover for all non-inlet type separators should clearly indicate that it is an

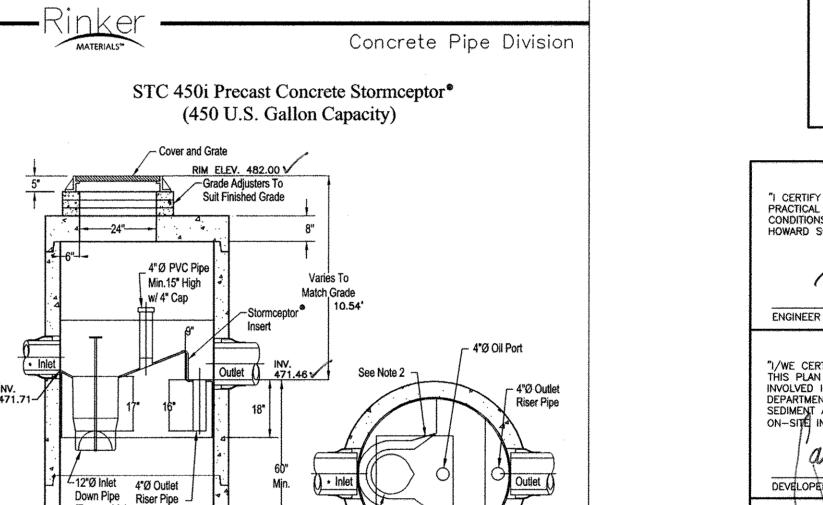
The separator must be capable of floatable substance spills including free oil and must not be compromised by temporary backwater conditions (i.e. trapped pollutants should not be re-suspended and scoured from the separator during backwater conditions). The capabilities of the selected separator must be documented with scientific studies and reports. Preference will be given to devices that have been verified by a state or federal starm





ATTN: BRIAN GINGRICH FAX: (301)698-5351, PHONE: (800)414-7960 Ext. 240

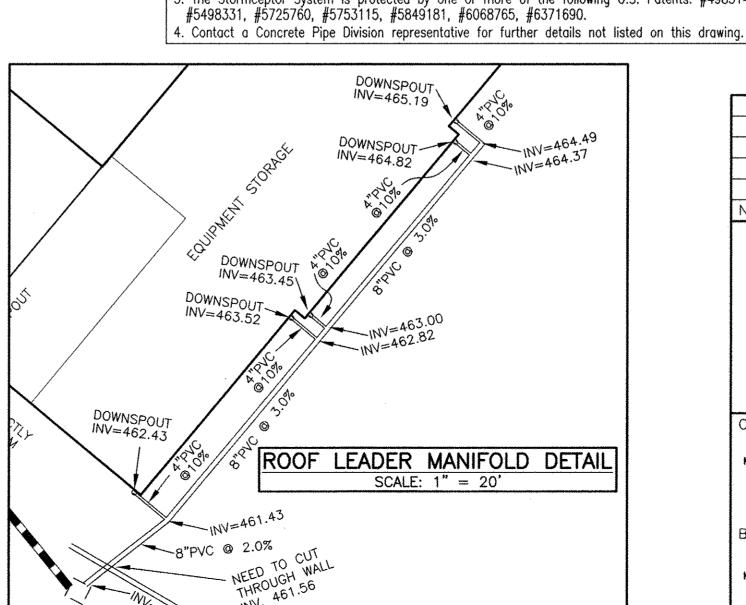
FLOW



(Tee Opening to Face Side Wall)

Plan View

1. The Use Of Flexible Connection is Recommended at The Inlet and Outlet Where Applicable. 2. The Cover Should be Positioned Over The Inlet Drop Pipe and The Oil Port. 3. The Stormceptor System is protected by one or more of the following U.S. Patents: #4985148, #5498331, #5725760, #5753115, #5849181, #6068765, #6371690.



(Removable)

48"Ø

1 4 4

Section Thru Chamber

PRIVATELY OWNED AND MAINTAINED STORMCEPTOR WATER QUALITY DEVICE I. THE STORMCEPTOR WATER QUALITY STRUCTURE SHALL BE PERIODICALLY INSPECTED AND CLEANED TO MAINTAIN OPERATION AND FUNCTION. THE OWNER SHALL INSPECT THE STORMCEPTOR UNIT YEARLY AT A MINIMUM. UTILIZING THE

OPERATION AND MAINTENANCE SCHEDULE FOR

COLUMN SAMPLE. WHEN THE SEDIMENT DEPTHS EXCEED THE LEVEL SPECIFIED I TABLE 6 OF THE STORMCEPTOR TECHNICAL MANUAL, THE UNTI MUST BE CLEANED B. THE STORMCEPTOR WATER QUALITY STRUCTURE SHALL BE CHECKED AND CLEANED IMMEDIATELY AFTER PETROLEUM SPILLS. THE OWNER SHALL CONTACT THE APPROPRIATE REGULATORY AGENCIES. C. THE MAINTENANCE OF THE STORMCEPTOR UNIT SHALL BE DONE USING A VACUUM TRUCK WHICH WILL REMOVE THE WATER, SEDIMENT, DEBRIS, FLOATING

STORMCEPTOR INSPECTION/MONITORING FORM. INSPECTIONS SHALL BE DONE B

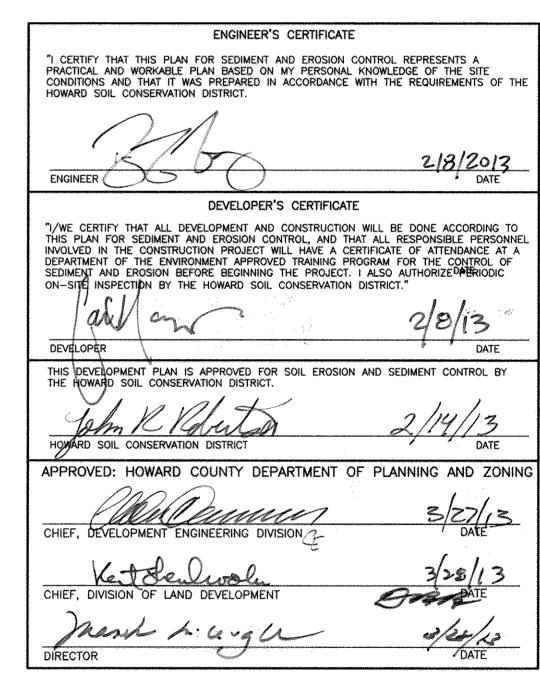
USING A CLEAR PLEXIGLASS TUBE ("SLUDGE JUDGE") TO EXTRACT A WATER

DISPOSAL OF THE REMOVED MATERIALS AND LIQUID MUST BE FOLLOWED BY THE). THE INLET AND OUTLET PIPES SHALL BE CHECKED FOR ANY OBSTRUCTIONS AT LEAST ONCE EVERY SIX MONTHS. IF OBSTRUCTIONS ARE FOUND THE OWNER SHALL HAVE THEM REMOVED. STRUCTURAL PARTS OF THE STORMCEPTOR UNIT SHALL BE REPAIRED AS NEEDED

INSPECTION/MONITORING FORMS AVAILABLE TO THE HOWARD COUNTY OFFICIALS

. THE OWNER SHALL RETAIN AND MAKE THE STORMCEPTOR

APPROVED PLANNING BOARD OF HOWARD COUNTY



NO. DATE REVISION **BENCHMARK** ENGINEERS A LAND SURVEYORS A PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE & SUITE 418 & ELLICOTT CITY, MARYLAND 21043

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

60 THOMAS JOHNSON DRIVE ▲ FREDERICK, MARYLAND 21702 (P) 301-371-3505 (F) 301-371-3506

WWW.BEI-CIVILENGINEERING.COM

Professional Certification. I hereby certify that these document were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland License No. 28559, Expiration Date: 7-22-2013

MANGIONE ENTERPRISES OF TURF VALLEY LIMITED PARTNERSHIP 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093 410-825-8400 **BUILDER:** MANGIONE ENTERPRISES OF TURF VALLEY LIMITED PARTNERSHIP

125 YORK ROAD, PENTHOUSE

DRAWN: DBT

OWNER:

DESIGN: DBT

PARCEL 'A' **GOLF COURSE MAINTENANCE SHOP** GRID: 17 PARCEL: A ZONED: PGCC

VILLAGES AT TURF VALLEY

ELECTION DISTRICT NO. 3 HOWARD COUNTY, MARYLAND SEDIMENT & EROSION CONTROL NOTES AND STORMCEPTOR DETAILS

FEBRUARY, 2013 AS SHOWN SHEET

AS-BUILT

SCALE:

SDP-08-096

10790 RESORT ROAD

BEI PROJECT NO: 2085

4 of 6

