

# SHEET INDEX

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THIS AS-BUILT WAS PERFORMED BY BENCHMARK ENGINEERING, INC.

RW PT. NO.	DESCRIPTION	ELEVATION
1	REBAR & CAP	494.46
2	REBAR & CAP	495.66
3	REBAR & CAP	496.96
4	REBAR & CAP	496.54
5	REBAR & CAP	481.45
6	REBAR & CAP	480.83

# ROAD CONSTRUCTION PLANS

## OAKMONT at TURF VALLEY:

### RESORT ROAD STA. 13+66.83 THRU 21+26.90

## THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

#### AS-BUILT NOTES:

- HORIZONTAL DATUM FOR THIS AS-BUILT IS BASED ON THE MARYLAND STATE REFERENCE SYSTEM NAD 83 (AD'S 07 AS PROJECTED FROM H.O. CO. GEODETIC CONTROL STATIONS 16E1 AND 0012. VERTICAL DATUM FOR THIS AS-BUILT IS NORTH AMERICAN VERTICAL DATUM NAVD88 AS PROJECTED FROM THE ABOVE MENTIONED HOWARD COUNTY GEODETIC CONTROL STATIONS.
- THE INSTRUMENTS USED IN PERFORMING THIS AS-BUILT WERE A TOTAL STATION AND PRISM AND RTK GPS.

#### GENERAL NOTES:

- ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE HOWARD COUNTY STANDARDS UNLESS OTHERWISE SHOWN BY WAIVERS INDICATED. NOTE THAT THIS PROJECT IS SUBJECT TO THE 4TH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND TO THE 1993 ZONING REGULATIONS.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/CONSTRUCTION INSPECTIONS DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS PRIOR TO ANY EXCAVATION WORK:

MISS UTILITY	1-800-257-7777
C&P TELEPHONE COMPANY	(410) 725-9976
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
HOWARD COUNTY DEPT. OF PUBLIC WORKS/ CONSTRUCTION INSPECTION DIVISION	(410) 313-1880

#### PROJECT BACKGROUND:

LOCATION : TAX MAP 16 - PARCEL 8 - BLOCK 10.  
 ZONING : PGCC MULTI-USE SUBDISTRICT (FDP)  
 ELECTION DISTRICT : THIRD  
 DPZ REFERENCE : S- 86-13; P-00-021 ; PLAT # 3054-A-1510  
 DEED REFERENCE : LIBER 0920, FOLIO 250  
 AREA OF TRACT : 38.48 ACRES  
 OPEN SPACE REQUIRED (15%): 5.47 ACRES  
 OPEN SPACE PROVIDED: 23.22 ACRES±

MAXIMUM NUMBER OF UNITS ALLOWED: 150  
 POD K  
 TOTAL NUMBER OF UNITS PROPOSED: 150

#### PROPOSED:

POD I BULK PARCEL RECORDED FOR DENSITY  
 150 UNITS  
 POD K OPEN SPACE/BULK PARCEL RECORDED FOR DENSITY  
 POD S PUBLIC ROAD  
 POD L

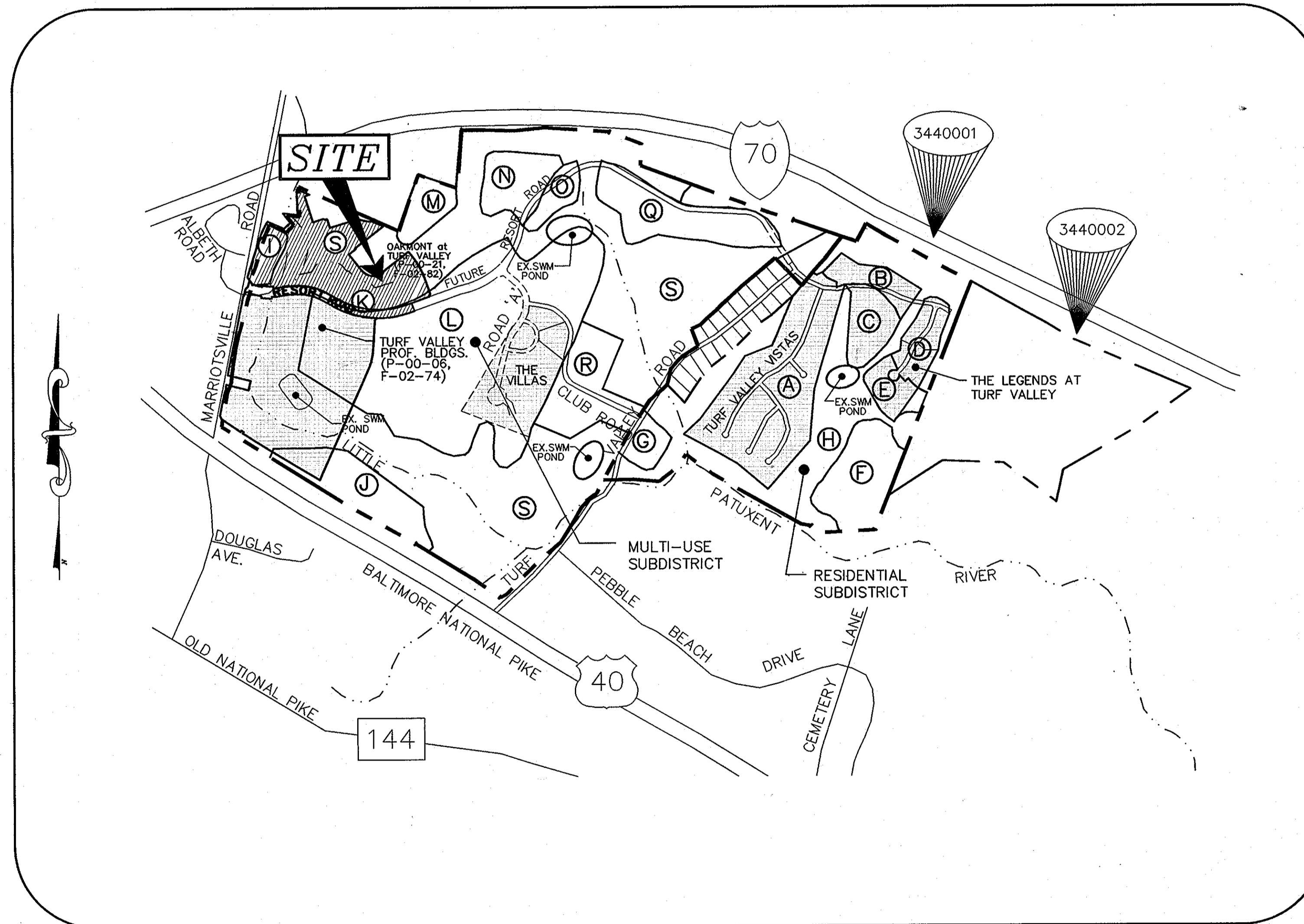
- FLOODPLAIN SHOWN ON THESE PLANS IS FROM FLOODPLAIN STUDY PERFORMED UNDER TURF VALLEY PROFESSIONAL BUILDINGS, F-02-074, AND APPROVED ON JULY 1, 2004
- WETLAND DELINEATIONS PERFORMED BY B.S. ENVIRONMENTAL, INC. DATED: JUNE 2000.
- TOPOGRAPHIC INFORMATION IS BASED ON AERIAL TOPOGRAPHIC SURVEY BY WINGS AERIAL MAPPING CO., INC. DATED FEBRUARY 1999. VERTICAL DATUM IS NAD 27.
- COORDINATES BASED ON NAD 27 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO : 3440001 & 3440002 .

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

- BOUNDARY INFORMATION IS BASED ON FINAL DEVELOPMENT PLAN FOR TURF VALLEY, PGCC DISTRICT, MULTI-USE SUBDISTRICT (PLAT # 3054-A-1510)
- PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT. WATER AND SEWER ARE PUBLIC. CONTRACT NUMBERS ARE 20-3601-D FOR SEWER AND CAPITAL PROJECT W-8195 FOR WATER.
- LANDSCAPING FOR PARCELS R THRU U (OAKMONT OF TURF VALLEY) AND PARCELS V AND W (SWM) WILL BE PROVIDED AT THE SDP STAGE IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- NO CEMETERIES OR HISTORIC STRUCTURES EXIST ON SITE.
- THIS PROJECT IS SUBJECT TO TRAFFIC STUDY PREPARED BY THE TRAFFIC GROUP, INC. UNDER S-86-13. RESORT ROAD IS A GENERAL PLAN ROAD SHOWN ON THE TRANSPORTATION MAP 2000-2020 AS A MAJOR COLLECTOR CONNECTION TO MARRIOTTVILLE ROAD. THE LATTER IS DESIGNED AS AN INTERMEDIATE ARTERIAL BETWEEN US RTE. 40 AND MD RTE 99. THE R/W SECTION OF RESORT ROAD IS DESIGNED TO INTERMEDIATE ARTERIAL STANDARDS BASED ON THE RESULTS OF THE TRAFFIC STUDY PREPARED BY THE TRAFFIC GROUP ON OR ABOUT MARCH 1998.
- THIS PROJECT IS EXEMPT FROM HOWARD COUNTY FOREST CONSERVATION REQUIREMENTS UNDER SECTION 16.120(2) OF THE COUNTY CODE BECAUSE IT IS A PLANNED UNIT DEVELOPMENT WHICH HAS PRELIMINARY DEVELOPMENT PLAN APPROVAL AND 50 % OR MORE OF THE LAND IS RECORDED AND SUBSTANTIALLY DEVELOPED BEFORE DECEMBER 31, 1992.
- SITE DEVELOPMENT PLANS ARE REQUIRED FOR DEVELOPMENT OF PARCELS R THRU U SHOWN ON THESE PLANS. STORMWATER MANAGEMENT FACILITIES WILL BE REQUIRED AT THE SITE DEVELOPMENT PLAN STAGE. THE DESIGN SHALL BE IN ACCORDANCE WITH HOWARD COUNTY REGULATIONS.
- WAIVER TO DESIGN MANUAL, VOLUME III, SECTION 2.4.1, FIGURE 2.13, TO MODIFY THE TYPICAL SECTION OF A DIVIDED INTERMEDIATE ARTERIAL ROADWAY TO REDUCE THE WIDTH OF PAVING TO 24 FEET APPROVED ON APRIL 1, 2002.
- ALL STORM DRAIN PIPES TO BE HOPE PIPES UNLESS OTHERWISE NOTED.
- COMPACTION IN FILL AREAS TO BE 95% AS DETERMINED PER AASHTO T-180.
- USE HO. CO. STD. R-3.01 STANDARD 7" COMBINATION CURB AND GUTTER, UNLESS OTHERWISE NOTED.
- STREETLIGHTS WILL BE REQUIRED IN THIS DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SELECTED SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)." THE JUNE 1993 POLICY INCLUDES GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- THE TERM 'POD' USED HEREIN REFERS TO LAND USE AREAS ESTABLISHED IN THE FINAL DEVELOPMENT PLAN FOR TURF VALLEY. A SUMMARY OF THE APPLICABLE LAND USE AREAS IS SHOWN BELOW:

POD NO.	PROJECTED LAND USE
I	All permitted uses in the PGCC Multi-use Subdistrict
K	All permitted residential uses in the PGCC Multi-use Subdistrict
L	All permitted uses in the PGCC Multi-use Subdistrict
S	Golf and/or Open Space

- AN AMENDMENT TO THE TURF VALLEY FDP MULTI-USE SUBDISTRICT PLAT (PLAT NO. 17359-17360) WAS RECORDED ON APRIL 14, 2005, AND INCREASES THE PROJECTED RESIDENTIAL UNITS FOR POD K TO 150 AND MODIFIES THE POD K BOUNDARY.
- WAIVER TO GRADING WITHOUT AN APPROVED SITE PLAN OR F-PLAN APPROVED UNDER WP-02-96 ON NOVEMBER 1, 2002, APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS: (1) THE PETITIONER SHALL OBTAIN ALL NECESSARY PERMITS FOR THE PROPOSED WORK, FROM THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS AND (2) ON ALL APPLICABLE SUBSEQUENT PLAN SUBMISSIONS, INDICATE THESE PROPOSED GRADE LINES AS THE EXISTING CONDITION. GRADING PLAN GP-02-90 APPROVED IN CONNECTION WITH WP-02-96.
- ALL SIGNS SHALL BE MOUNTED ON A 2" GALVANIZED SQUARE METAL TUBE POST (14 GAUGE) INSERTED INTO A 2 1/2" GALVANIZED SQUARE METAL TUBE SLEEVE (3' LONG). THERE SHALL ALSO BE A GALVANIZED STEEL POLE CAP ON TOP.



VICINITY MAP  
 SCALE : 1" = 1000'

#### OWNER

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

AS-BUILT CERTIFICATION  
 I hereby certify by my seal, that the facilities shown on this plan were constructed as shown on this AS-BUILT plan. Date 10-7-13  
 Donald Mason, P.E. No. 21443



Professional Certification. I hereby certify that these documents 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. 21443 Expiration Date: 12-21-14

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 Nicholas B. Mangione 7/14/06  
 DEVELOPER'S SIGNATURE DATE  
 NICHOLAS B. MANGIONE  
 DEVELOPER'S NAME

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 [Signature] 7/14/06  
 ENGINEER'S SIGNATURE DATE  
 [Name]  
 ENGINEER'S NAME

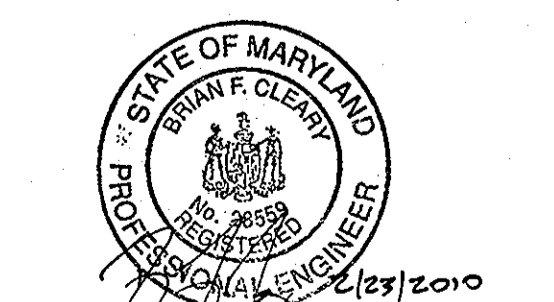
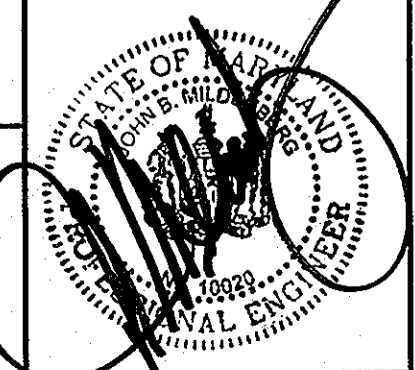
REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.  
 [Signature] 8/14/06  
 LISA-NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE SOIL CONSERVATION DISTRICT.  
 [Signature] 8/14/06  
 HOWARD SCD DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS  
 [Signature] 8-18-06  
 CHIEF BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 9/7/06  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 9/7/06  
 CHIEF DEVELOPMENT ENGINEERING DIVISION MK DATE



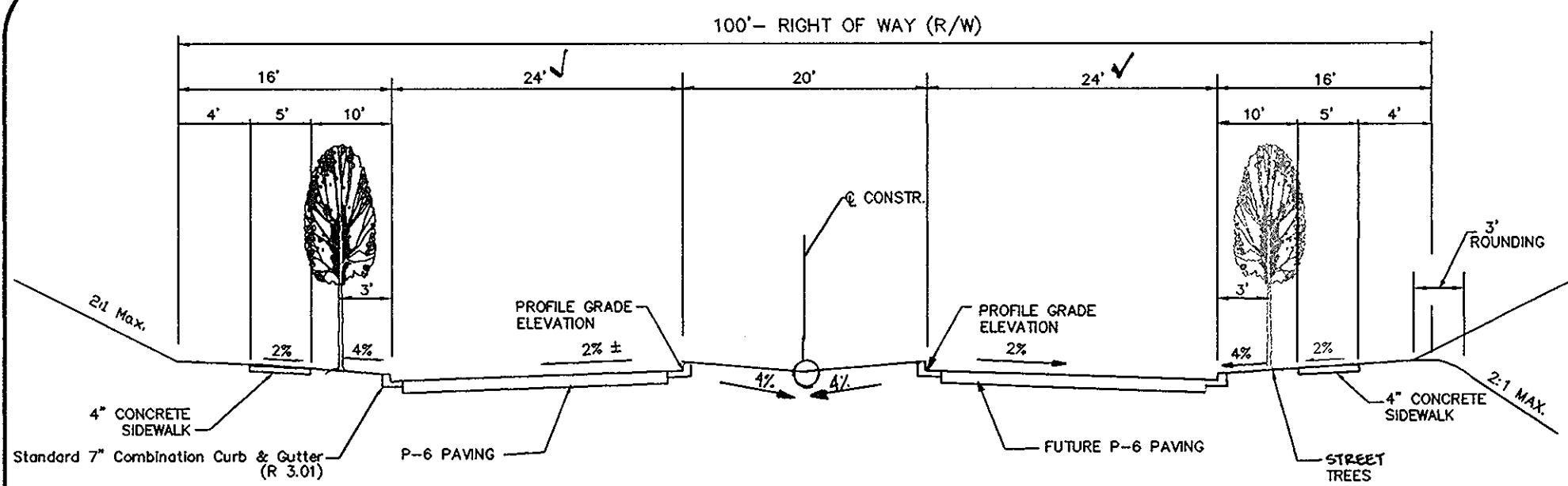
FOR 2nd REV. 2/22/2010 CHIEF BENCHMARK ENG. INC. 6480 BALTIMORE NATIONAL PIKE, SUITE 418 ELLICOTT CITY, MD 21043 (410) 465 6105

date	JUNE 2006	approval	JBM
project	03-029	MAP	NTS
illustration	MAP	scale	NTS

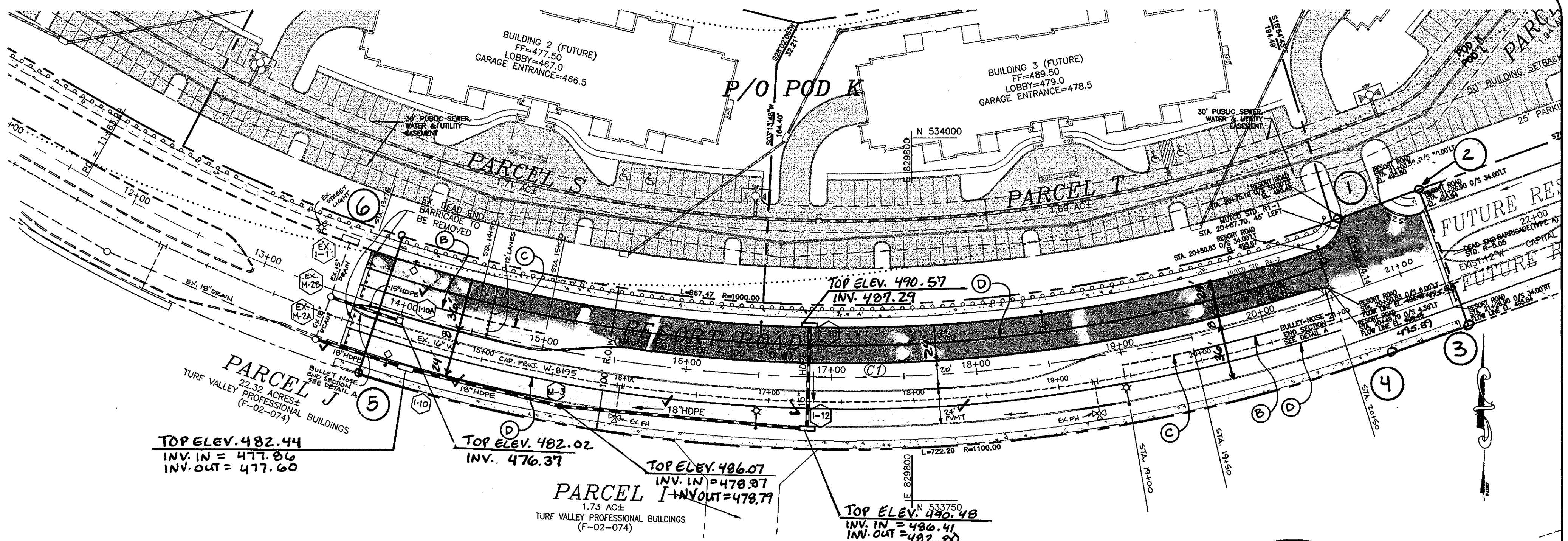
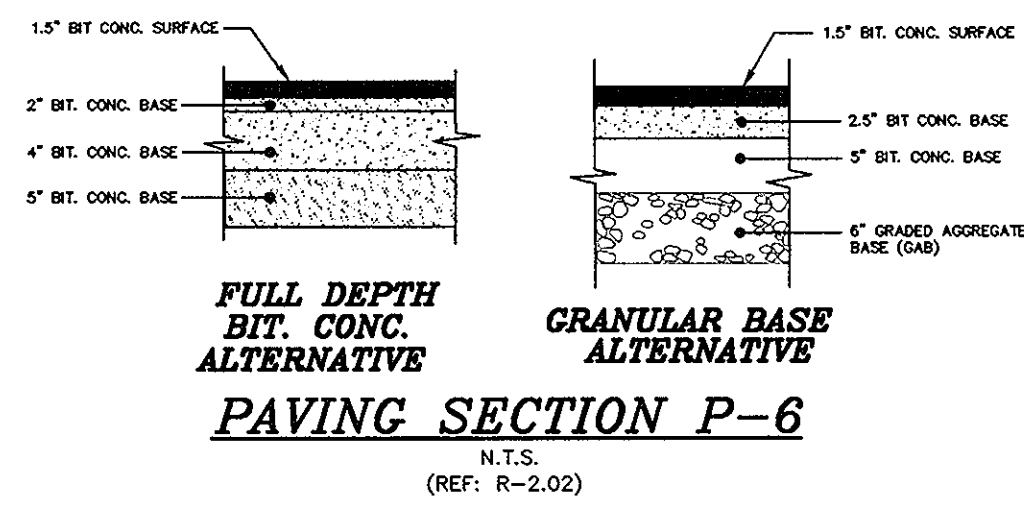
date	2-22-2010	description	revisions
no.	2	DATE-ENG GENERAL NOTE 21. CHANGE NOTES	

OAKMONT at TURF VALLEY: RESORT RD STA. 13+66.83 - 21+26.90  
 PODS I & P/O K, L AND S, PARCELS Q THRU Y  
 TAX MAP 16 - P/O PARCEL 8 - BLOCK 10  
 THIRD ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 COVER SHEET

MILDENBERG, BOENDER & ASSOC., INC.  
 Engineers Planners Surveyors  
 5072 Dorsy Hall Drive, Suite 202, Ellicott City, Maryland 21042  
 (410) 997-0296 Fax: (301) 681-5521 Wash. (410) 997-0288 Fax



**TYPICAL INITIAL STAGE ROADWAY SECTION**  
 CLASSIFICATION: MAJOR COLLECTOR  
 (designed to Intermediate Arterial Stds)  
 DESIGN SPEED: 50 MPH  
 ROAD: "RESORT ROAD" STA 13+66.83 TO STA. 21+26.90  
 SECTION NOT TO SCALE  
 15+60 18+11



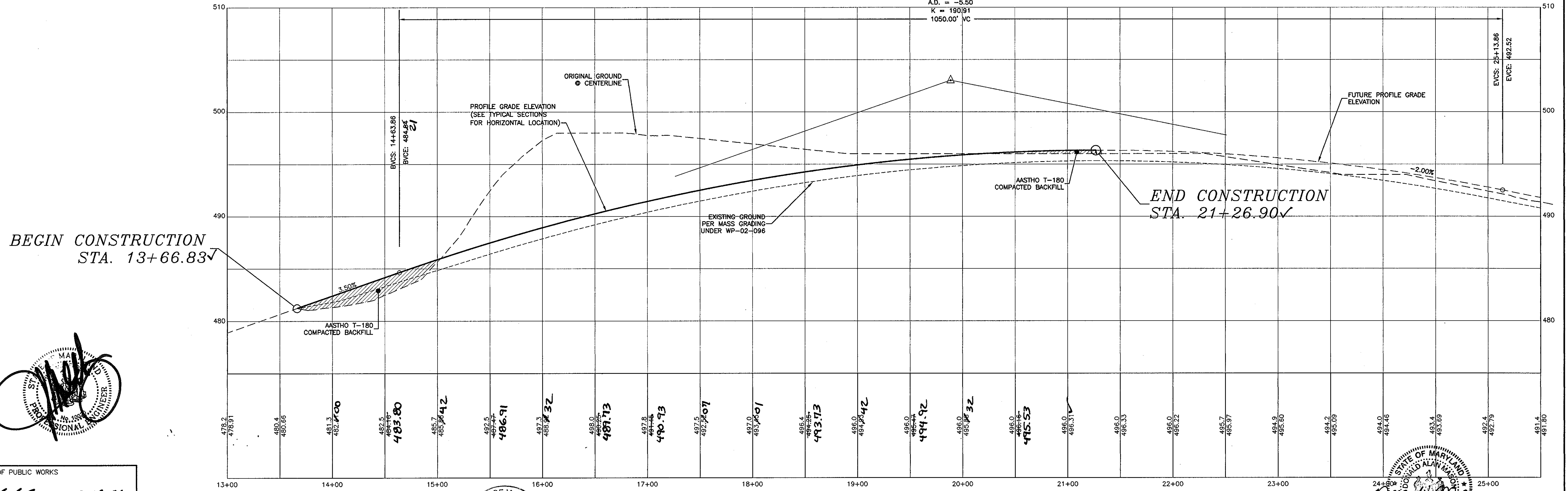
**CURVE TABLE**

CURVE	RADIUS	LENGTH	TANGENT	BEARING	DELTA
C1	1050.00'	910.85'	486.31'	S85°02'41"E	49°42'10"

**STREET LIGHT TABLE**

STATION (RESORT RD)	OFFSET	DESCRIPTION
14+00	36.67' LEFT	250 WATT HPS VAPOR TUBE DROP FIXTURE MOUNTED AT 25' ON A BRASS FIBERGLASS POLE (12' SHROUD)
14+00	36.67' RIGHT	250 WATT HPS VAPOR TUBE DROP FIXTURE MOUNTED AT 25' ON A BRASS FIBERGLASS POLE (12' SHROUD)
16+50	36.67' LEFT	250 WATT HPS VAPOR PENDANT FIXTURE (CUT-OFF) MOUNTED AT 30' ON A BRASS FIBERGLASS POLE USING A 12' ADA
16+50	36.67' RIGHT	250 WATT HPS VAPOR PENDANT FIXTURE (CUT-OFF) MOUNTED AT 30' ON A BRASS FIBERGLASS POLE USING A 12' ADA
18+50	36.67' LEFT	250 WATT HPS VAPOR PENDANT FIXTURE (CUT-OFF) MOUNTED AT 30' ON A BRASS FIBERGLASS POLE USING A 12' ADA
18+50	36.67' RIGHT	250 WATT HPS VAPOR PENDANT FIXTURE (CUT-OFF) MOUNTED AT 30' ON A BRASS FIBERGLASS POLE USING A 12' ADA
19+00	36.67' LEFT	250 WATT HPS VAPOR PENDANT FIXTURE (CUT-OFF) MOUNTED AT 30' ON A BRASS FIBERGLASS POLE USING A 12' ADA
19+00	36.67' RIGHT	250 WATT HPS VAPOR PENDANT FIXTURE (CUT-OFF) MOUNTED AT 30' ON A BRASS FIBERGLASS POLE USING A 12' ADA
20+50	36.67' LEFT	250 WATT HPS VAPOR PENDANT FIXTURE (CUT-OFF) MOUNTED AT 30' ON A BRASS FIBERGLASS POLE USING A 12' ADA
20+50	36.67' RIGHT	250 WATT HPS VAPOR PENDANT FIXTURE (CUT-OFF) MOUNTED AT 30' ON A BRASS FIBERGLASS POLE USING A 12' ADA

HIGH POINT ELEV = 496.34  
 HIGH POINT STA = 21+32.05  
 PVI STA = 19+88.86  
 PVI ELEV = 503.02  
 A.D. = -5.50  
 K = 19091  
 1050.00' VC



APPROVED: DEPARTMENT OF PUBLIC WORKS  
 [Signature] 8-18-04  
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 9/7/06  
 CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: [Signature] 9/7/06  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK

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

STATE OF MARYLAND  
 PROFESSIONAL ENGINEER  
 [Signature] 2/23/2010

STATE OF MARYLAND  
 PROFESSIONAL ENGINEER  
 [Signature] 10-7-13

Project 03-029  
 Illustration MAP  
 Scale 1"=50'  
 Date JUN 2006  
 Engineering JBM  
 Approval JBM

4/22/2010  
 1. REVISED TYPICAL SECTION  
 description  
 revisions

**OAKMONT at TURF VALLEY: RESORT RD STA. 13+66.83 - 21+26.90**  
 PODS 1 AND P/O K, L AND S, PARCELS Q THRU Y  
 TAX MAP 16 - P/O PARCEL 8 - BLOCK 10  
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 ROAD PLAN, PROFILE & TYPICAL SECTIONS

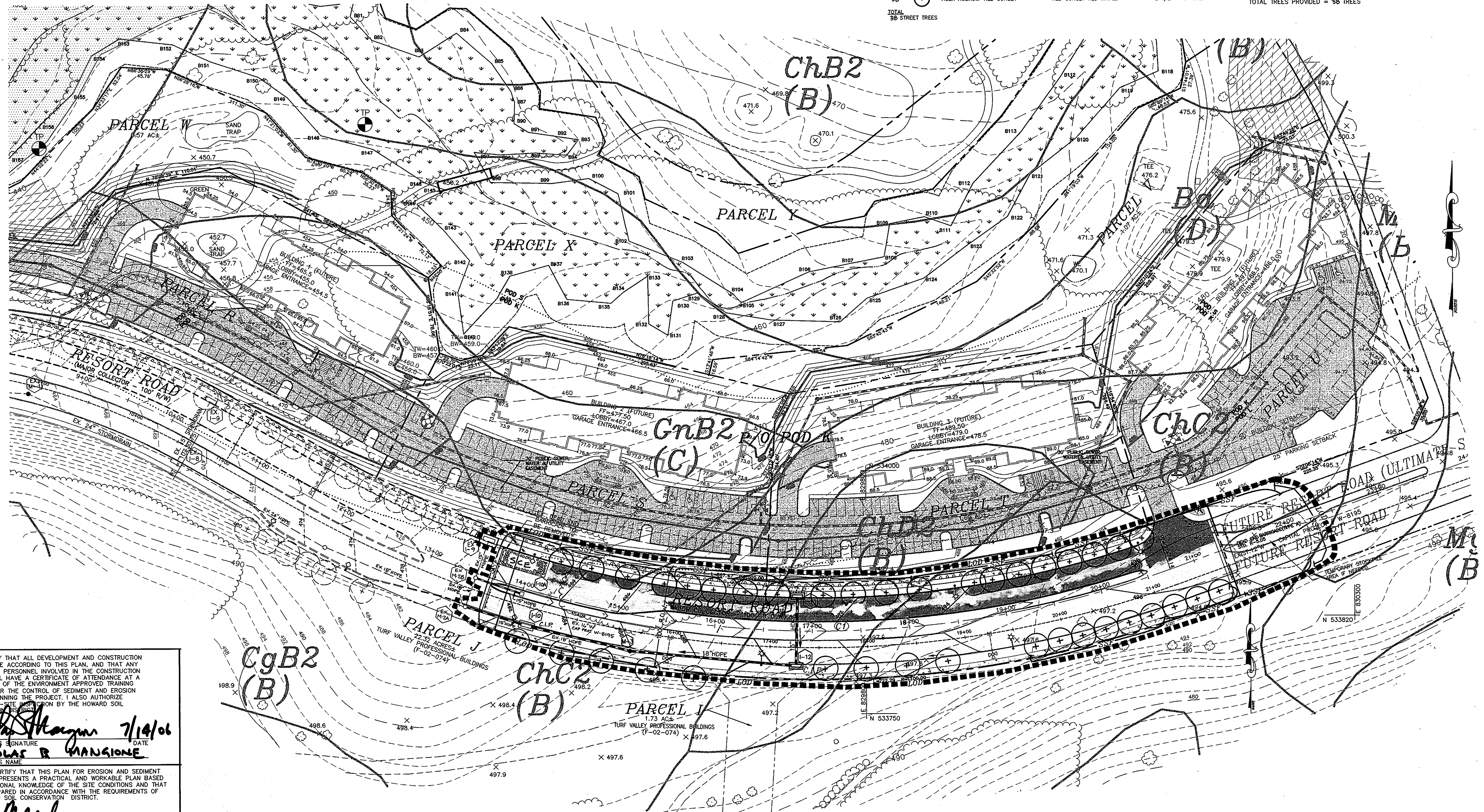
**MILDENBERG, BOENDER & ASSOC., INC.**  
 Engineers Planners Surveyors  
 5072 Drexel Hill Drive, Suite 202, Ellicott City, Maryland 21042  
 (410) 997-0296 Fax: (301) 621-5521 Wash. (410) 997-0298 Fax

**STREET TREE PLANTING SCHEDULE**

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
36	(Symbol: Circle with cross)	ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2 1/2" - 3" CAL.
TOTAL				36 STREET TREES

**STREET TREE CALCULATIONS**

RESORT ROAD (EDGE OF ROAD) = 1520 LF / 40 = 38 LARGE TREES  
 TOTAL TREES REQUIRED = 38 TREES  
 TOTAL TREES PROVIDED = 36 TREES



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

*Nicholas R Mangione* 7/19/06  
 DEVELOPER'S SIGNATURE DATE  
**NICHOLAS R MANGIONE**  
 DEVELOPER'S NAME

*John Miltenberg* 7/19/06  
 ENGINEER'S SIGNATURE DATE  
**JOHN MILTENBERG**  
 ENGINEER'S NAME

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

*Jim Mahr* 8/18/06  
 REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.  
 SUPERVISOR

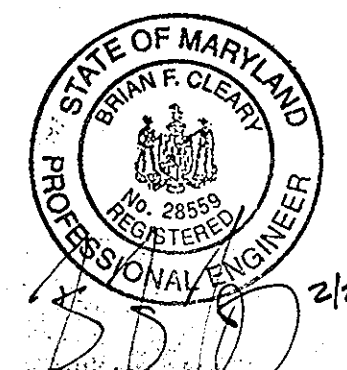
*John Mahr* 8/18/06  
 USFS NATURAL RESOURCES CONSERVATION SERVICE  
 SUPERVISOR

*John Mahr* 8/18/06  
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE SOIL CONSERVATION DISTRICT.  
 HOWARD SCD SUPERVISOR

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Michelle Z. White* 8-18-06  
 CHIEF BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Conita Hancock* 9/5/06  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*John Mahr* 9/5/06  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



BEI  
 FOR ROW 2 (2122.000) ONLY  
 2/23/2010

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

NOTE: ALL DISTURBANCE SHOWN HERE OUTSIDE OF THE LIMIT OF DISTURBANCE (L.O.D.) REPRESENTS FUTURE WORK, SUBJECT TO REVIEW AND APPROVAL OF REGULATORY AGENCIES AND IS PROVIDED HERE FOR INFORMATION PURPOSES ONLY.

No As-Built information is required on this sheet

**LEGEND**

- L.O.D. LIMIT OF DISTURBANCE
- SSF SUPER SILT FENCE
- 470 CONCEPTUAL GRADING FOR OAKMONT SDP (FUTURE)
- CURB INLET PROTECTION
- ▨ STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED PAVING
- ⊕ STREET LIGHTS



Professional Certification. I hereby certify that these documents 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. 21443 Expiration Date: 12-21-14

AS-BUILT

date	JUNE 2006
project	03029
illustration	MAP
scale	1"=50'
approval	MAP
approval	IBM

date	2/23/2010
description	REVISED GRADING
revisions	

**OAKMONT at TURF VALLEY RESORT RD STA 13+66.83-21+26.90**  
 PODS I AND P/O K, L AND S, PARCELS Q THRU Y  
 TAX MAP 16 - P/O PARCEL 8 - BLOCK 10  
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 GRADING & SEDIMENT CONTROL

**MILDENBERG, BOENDER & ASSOC., INC.**  
 Surveyors  
 Engineers Planners  
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042  
 (410) 997-0296 Fax (301) 621-5521 Wash. (410) 397-0298 Fax

**HOWARD SOIL CONSERVATION DISTRICT**

**PERMANENT SEEDING NOTES**

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LEIVED 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 ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ.FT.) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREA FORM 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 LBS. PER ACRE (.05 LBS./1000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 15 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 TONS/ACRE WELL ANCHORED STRAW.

MULCHING - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED SMALL GRAIN 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, IF 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 IN THE SPRING, OR USE SOD.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED WHEAT 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**

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION. (313-1855).
- 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 PERMETER 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 MANUAL, STORM DRAINAGE.
- 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-5), SOD (SEC. 5A), TEMPORARY SEEDING (SEC. 5B) AND MULCHING (SEC. 5C) AND TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.

- 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.
- SITE ANALYSIS:  
TOTAL AREA OF SITE: 2.25 ACRES  
AREA DISTURBED: 2.25 ACRES  
AREA TO BE ROOFED OR PAVED: 0.6 ACRES  
AREA TO BE VEGETATIVELY STABILIZED: 1.65 ACRES  
TOTAL CUT: 2,500 CU. YDS.  
TOTAL FILL: 2,500 CU. YDS.  
TOTAL WASTE/BORROW AREA LOCATION: (NOT REQUIRED)
- THESE QUANTITIES ARE FOR PERMIT PURPOSES ONLY. CONTRACTOR IS REQUIRED TO PROVIDE HIS OWN QUANTITY MEASUREMENTS.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERMETER 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.
- 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.

**PURPOSE**

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**

- THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
  - THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
  - 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.
- 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 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 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 CONTAMINATED TEXTURES OR CONTAIN LESS THAN 5% BY VOLUME OF GINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.
  - TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSON-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 PROCEDURES.
- FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
  - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION 1 - 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:
    - 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 PRESCRIBED TO RAISE THE pH TO 6.5 OR HIGHER.
    - ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
    - TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.
    - 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 TOPSOIL.

- PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS.

**TOPSOIL APPLICATION**

- 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.
- GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBERT 4" - 8" HIGHER IN ELEVATION.
- 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.
- 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:
    - 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.
    - COMPOSTED SLUDGE SHALL CONTAIN AT LEAST 1 PERCENT NITROGEN, 1.5 PERCENT PHOSPHOROUS, 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.
    - COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SQUARE FEET.
    - COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILIZER APPLIED AT THE RATE OF 4 LB/1,000 SQUARE FEET, AND 1/3 THE NORMAL LIME APPLICATION RATE.

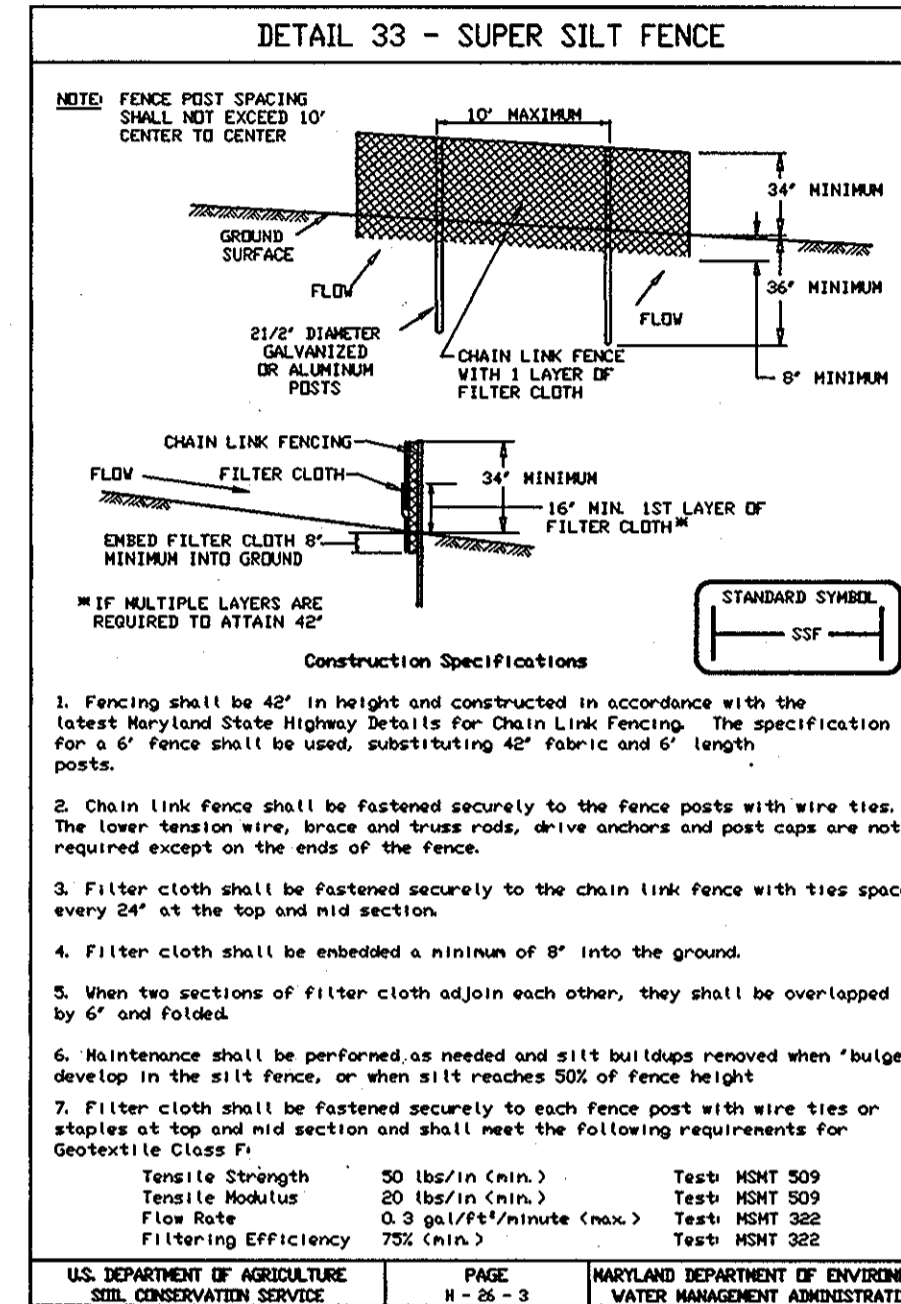
REFERENCES: GUIDELINE SPECIFICATIONS, SOIL PREPARATION AND SODDING. MD-VA, PUB. #1, COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTES. REVISED 1973.

**OWNER**

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

**SEQUENCE OF CONSTRUCTION**

- OBTAIN GRADING PERMIT
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE, WITH MOUNTABLE BERM (1 DAY)
- CONSTRUCT SUPER SILT FENCES AND REQUEST PERMISSION TO PROCEED FROM THE SEDIMENT CONTROL INSPECTOR (2 DAYS)
- BRING RESORT ROAD TO GRADE (15 DAYS)
- CONSTRUCT STORM DRAIN AND INSTALL INLET PROTECTION AT ALL INLETS AS SHOWN ON SHEET 3 OF THESE PLANS. (10 DAYS)
- CONSTRUCT CURB AND GUTTER, SIDEWALK AND PAVEMENT PER TYPICAL SECTION FOR INITIAL PHASE OF RESORT ROAD CONSTRUCTION (20 DAYS)
- STABILIZE REMAINING DISTURBED AREAS (10 DAYS)
- WHEN ALL CONTRIBUTING DRAINAGE AREAS TO SEDIMENT CONTROL DEVICES HAVE BEEN STABILIZED, AND WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE REMAINING DISTURBED AREAS. (5 DAYS)
- CONTRACTOR SHALL REMOVE SEDIMENT AND FLUSH STORM DRAIN SYSTEM AT END OF CONSTRUCTION PERIOD.



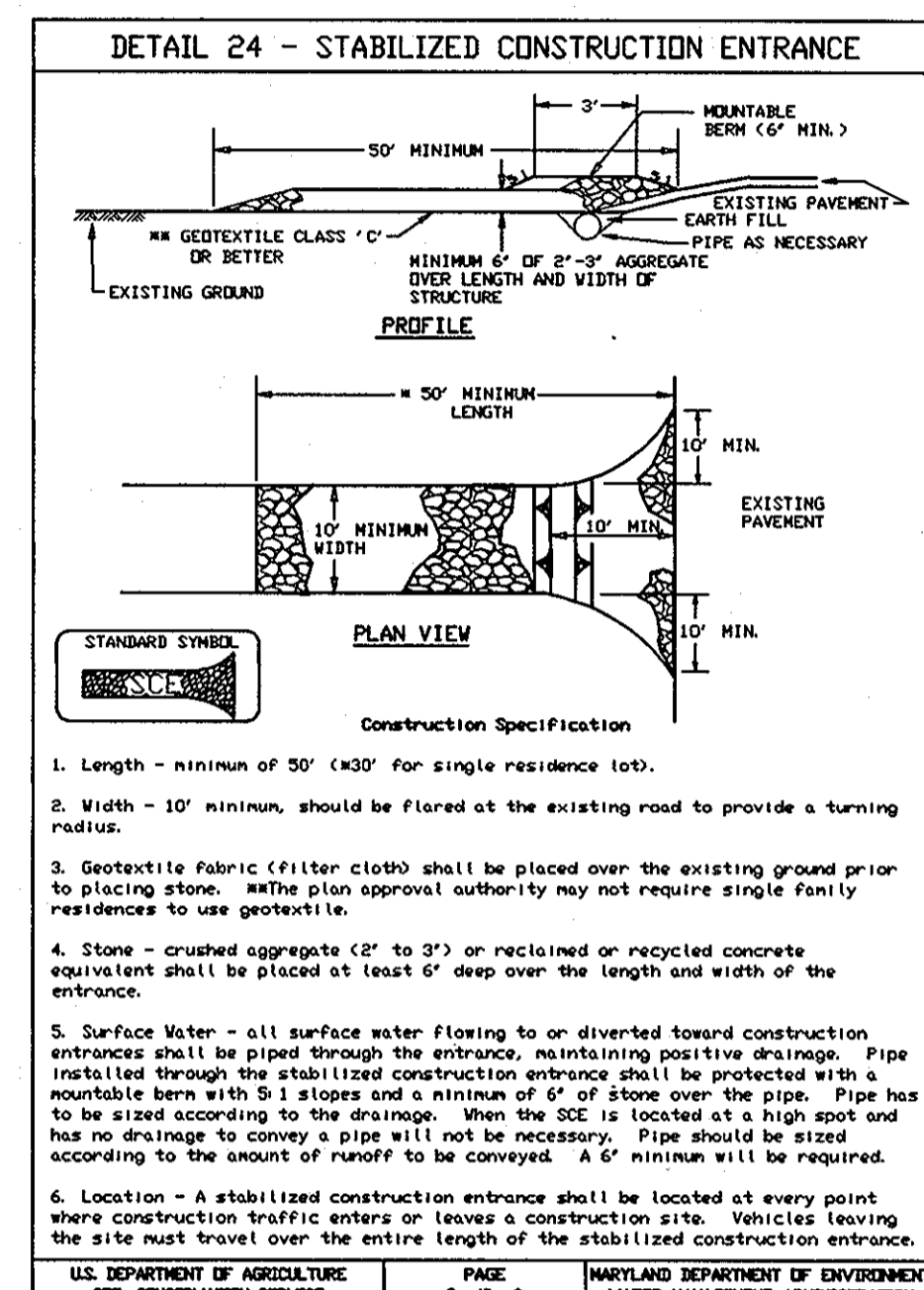
**SUPER SILT FENCE**

**Design Criteria**

Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 feet	1,500 feet
20 - 33%	5:1 - 3:1	100 feet	1,000 feet
33 - 50%	3:1 - 2:1	100 feet	500 feet
50% +	2:1 +	50 feet	250 feet

**Construction Specifications**

- Fencing shall be 48" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 48" fabric and 6' length posts.
- Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and brace rods, drive anchors and post caps are not required except on the ends of the fence.
- Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
- Filter cloth shall be embedded a minimum of 8" into the ground.
- When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
- Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
- Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:  
Tensile Strength: 50 lb/in (min.) Test: HMT 509  
Tensile Modulus: 20 lb/in (min.) Test: HMT 509  
Flow Rate: 0.3 gal/(ft²)/minute (max.) Test: HMT 382  
Filtering Efficiency: 75% (min.) Test: HMT 382



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

*Nicholas B. Mangione* 7/14/06  
DEVELOPER'S SIGNATURE DATE  
NICHOLAS B. MANGIONE  
DEVELOPER'S NAME

*John R. Palmer* 7/14/06  
ENGINEER'S SIGNATURE DATE  
JOHN R. PALMER  
ENGINEER'S NAME

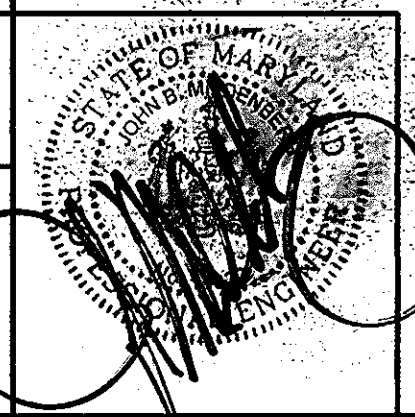
REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.  
*John M. ...* 8/10/06  
DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE SOIL CONSERVATION DISTRICT.  
*John R. Palmer* 8/10/06  
DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*William J. ...* 8-18-06  
DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Conrad ...* 9/2/06  
DATE

*John M. ...* 9/7/06  
DATE



No As-Built information is required on this sheet

*David ...*  
STATE OF MARYLAND  
PROFESSIONAL ENGINEER  
10-7-13

Professional Certification. I hereby certify that these documents 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. 21443 Expiration Date: 12-21-14

AS-BUILT

project: 03-029  
illustration: MAP  
scale: 1"=50'  
date: JUN 2006  
engineer: JRM  
checked: JRM

description: EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

revisions:

OAKMONT at TURF VALLEY RESORT RD STA. 13+66.83-21+26.90  
PODS I AND P/O K, L AND S, PARCELS Q THRU Y  
TAX MAP 16 - P/O PARCEL 8 - BLOCK 10  
THIRD ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

MILDENBERG, BOENDER & ASSOC., INC.  
Engineers Planners Surveyors  
5072 Dorsey Hall Drive, Suite 202, Pikesville, Maryland 21042  
(410) 997-0286 Fax: (301) 621-5521 Wash. (410) 997-0288 Fax.

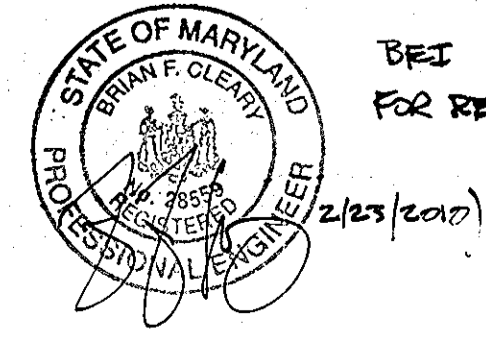
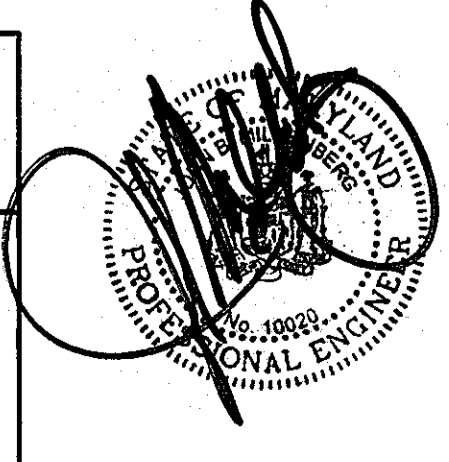
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F-02-B2

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APPROVED: DEPARTMENT OF PUBLIC WORKS  
*William F. Mahoney* 8-18-06  
 CHIEF, BUREAU OF HIGHWAYS

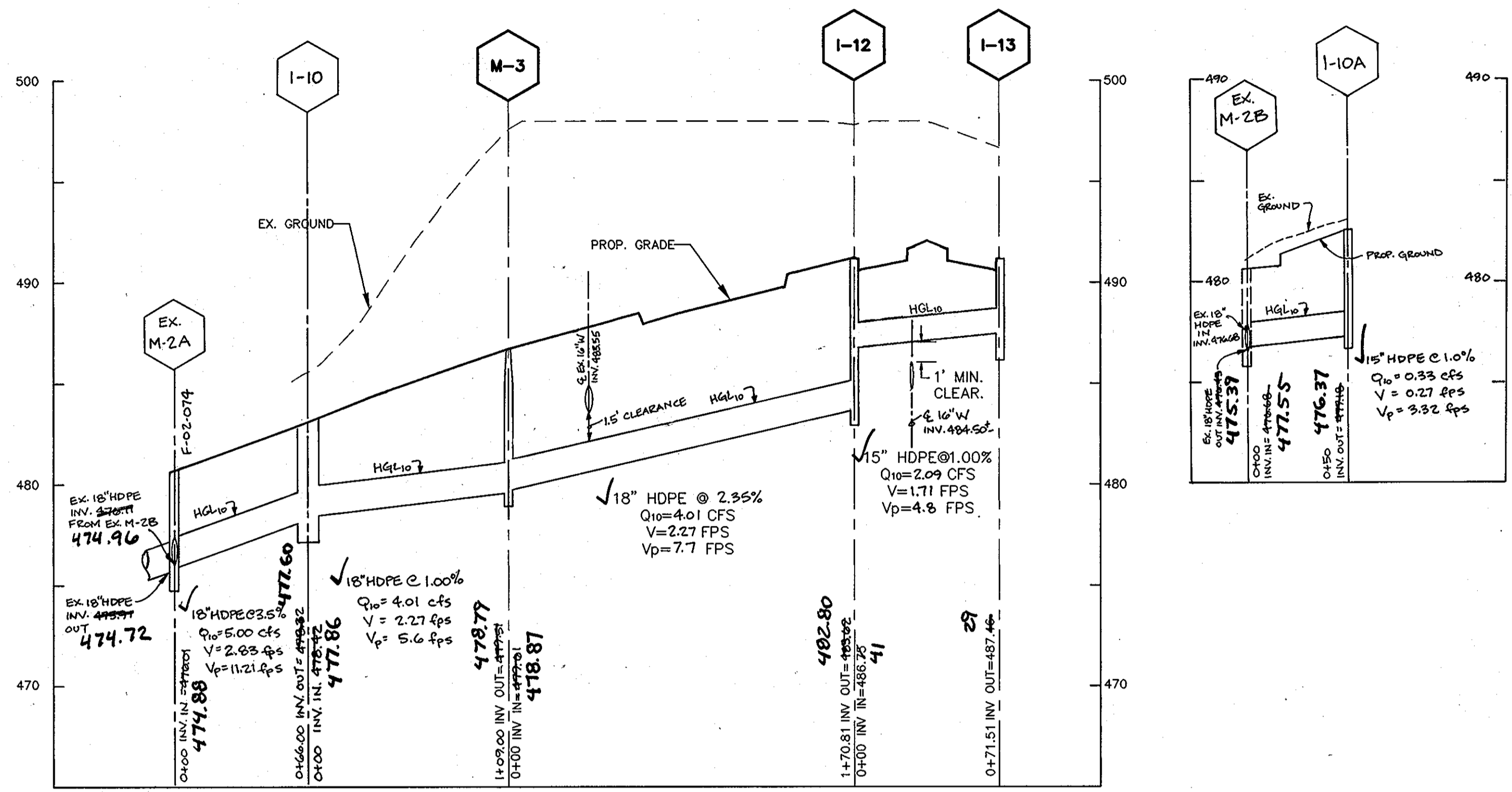
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Cindy Hanna* 9/7/06  
 CHIEF, DIVISION OF LAND DEVELOPMENT

*Michael J. ...* 9/7/06  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION



BEI  
 FOR REV. 2 (2/22/2010) ONLY

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



**STORM DRAIN PROFILE**  
 EX. I-10 TO I-13  
 SCALE  
 HORIZONTAL 1"=50'  
 VERTICAL 1"=5'

**STRUCTURE SCHEDULE**

NOTE  
 WIDTH OF ALL "A" TYPE INLETS IS 2'6" UNLESS OTHERWISE NOTED.

No.	LOCATION	TOP OF STRUCTURE	INVERT IN	INVERT OUT	COMMENTS
MH-3	RESORT ROAD STA. 15+18.97 RT. 37.67'	486.22 07	478.87	478.87	BRICK MANHOLE, STD. G 5.01
I-12	RESORT ROAD STA. 16+84.17, RT. 34.0'	491.18 490.49	486.25 41	488.62 482.80	TYPE "A-10" INLET STANDARD SD 4.02
I-13	RESORT ROAD STA. 16+84.14, LT. 34.0'	491.18 490.57	---	487.46 29	TYPE "A-10" INLET STANDARD SD 4.02
I-10	RESORT ROAD STA. 14+13.74, RT. 34.1'	482.89 44	478.87 477.86	478.87 477.60	TYPE "A-10" INLET STANDARD SD 4.02
I-10A	RESORT ROAD STA. 14+00.00, RT. 6.00'	482.86 02	---	477.18 476.37	YARD INLET STD. SD 4.14

NOTES:  
 1. HORIZONTAL LOCATION OF INLETS IS CENTER OF STRUCTURE AT FLOW LINE.  
 2. HGL IS EQUAL TO TOP OF PIPE UNLESS OTHERWISE NOTED.  
 3. TOP OF STRUCTURE IS SHOWN AT TOP OF SLAB, CENTER OF INLET AT FLOW LINE.

**PIPE SCHEDULE**

PIPE SIZE	LENGTH
15" HDPE	122 L.F.
18" HDPE	346 L.F.

AS-BUILT CERTIFICATION  
 I hereby certify, by my seal, that the facilities shown on this plan were constructed as shown on this AS-BUILT plan.  
 Donald Mason, P.E. No. 21443 Date 10-7-13



Professional Certification. I hereby certify that these documents 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. 21443, Expiration Date: 12-21-14

AS-BUILT

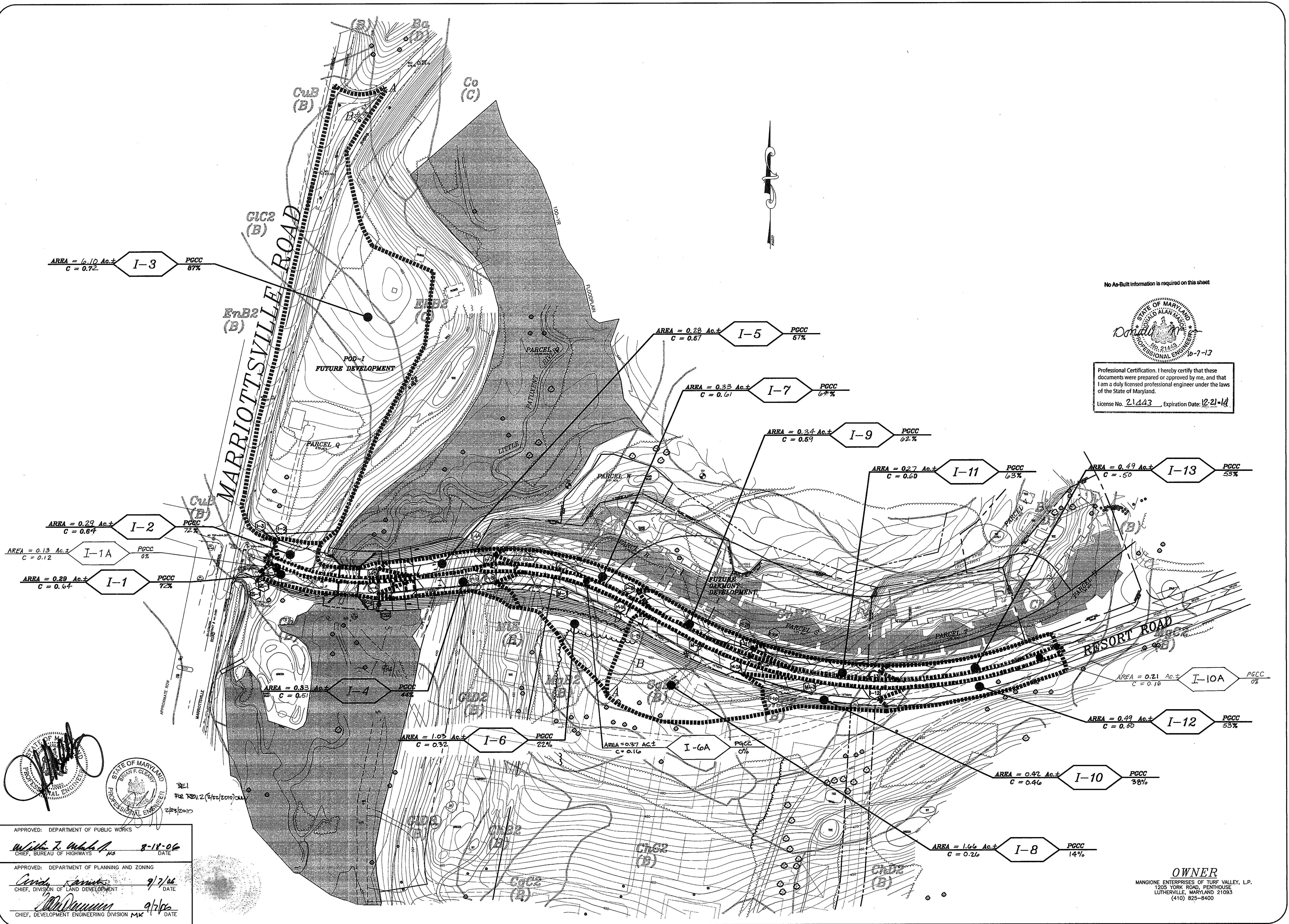
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illustration	MAP	engineering	MAP
scale	1"=50'	approval	JBM

no.	2	description	REVISED STRUCTURE SCHEDULE	date	2-22-2010
revisions					

**OAKMONT at TURF VALLEY: RESORT RD STA 13+66.83-21+26.90**  
 PODS I AND P/O K, L AND S, PARCELS Q THRU Y  
 TAX MAP 16 - P/O PARCEL 8 - BLOCK 10  
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 STORM DRAIN PROFILES

**MILDENBERG, BOENDER & ASSOC., INC.**  
 Engineers Planners Surveyors  
 5072 Dorsay Hall Drive, Suite 202, Ellicott City, Maryland 21042  
 (410) 387-0236 Fax: (301) 627-6521 Wash. (410) 387-0236 Fax

11: 03-029 DWG Oakmont - Plans 03-029 - oakmont - SD - DAM.dwg



AREA = 6.10 Ac.±  
C = 0.72 I-3 PCCC 87%

AREA = 0.28 Ac.±  
C = 0.57 I-5 PCCC 57%

AREA = 0.33 Ac.±  
C = 0.61 I-7 PCCC 64%

AREA = 0.34 Ac.±  
C = 0.59 I-9 PCCC 62%

AREA = 0.27 Ac.±  
C = 0.60 I-11 PCCC 63%

AREA = 0.49 Ac.±  
C = .50 I-13 PCCC 53%

AREA = 0.29 Ac.±  
C = 0.64 I-2 PCCC 72%

AREA = 0.13 Ac.±  
C = 0.12 I-1A PCCC 0%

AREA = 0.29 Ac.±  
C = 0.64 I-1 PCCC 72%

AREA = 0.33 Ac.±  
C = 0.51 I-4 PCCC 44%

AREA = 1.03 Ac.±  
C = 0.32 I-6 PCCC 72%

AREA = 0.37 Ac.±  
C = 0.16 I-6A PCCC 0%

AREA = 0.21 Ac.±  
C = 0.16 I-10A PCCC 0%

AREA = 0.49 Ac.±  
C = 0.50 I-12 PCCC 53%

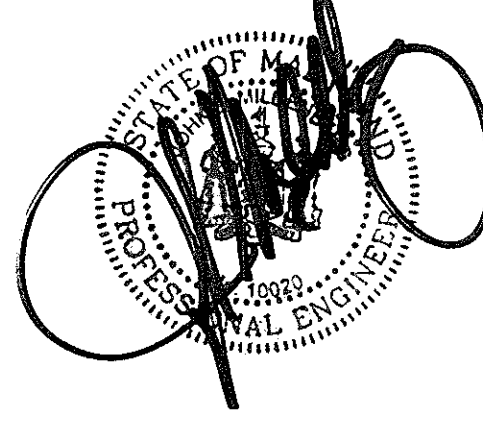
AREA = 0.42 Ac.±  
C = 0.46 I-10 PCCC 38%

AREA = 1.66 Ac.±  
C = 0.26 I-8 PCCC 14%

No As-Built information is required on this sheet



Professional Certification. I hereby certify that these documents 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. 21443, Expiration Date: 12-21-14



APPROVED: DEPARTMENT OF PUBLIC WORKS  
 [Signature] 8-18-06  
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 9/7/06  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 9/7/06  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

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

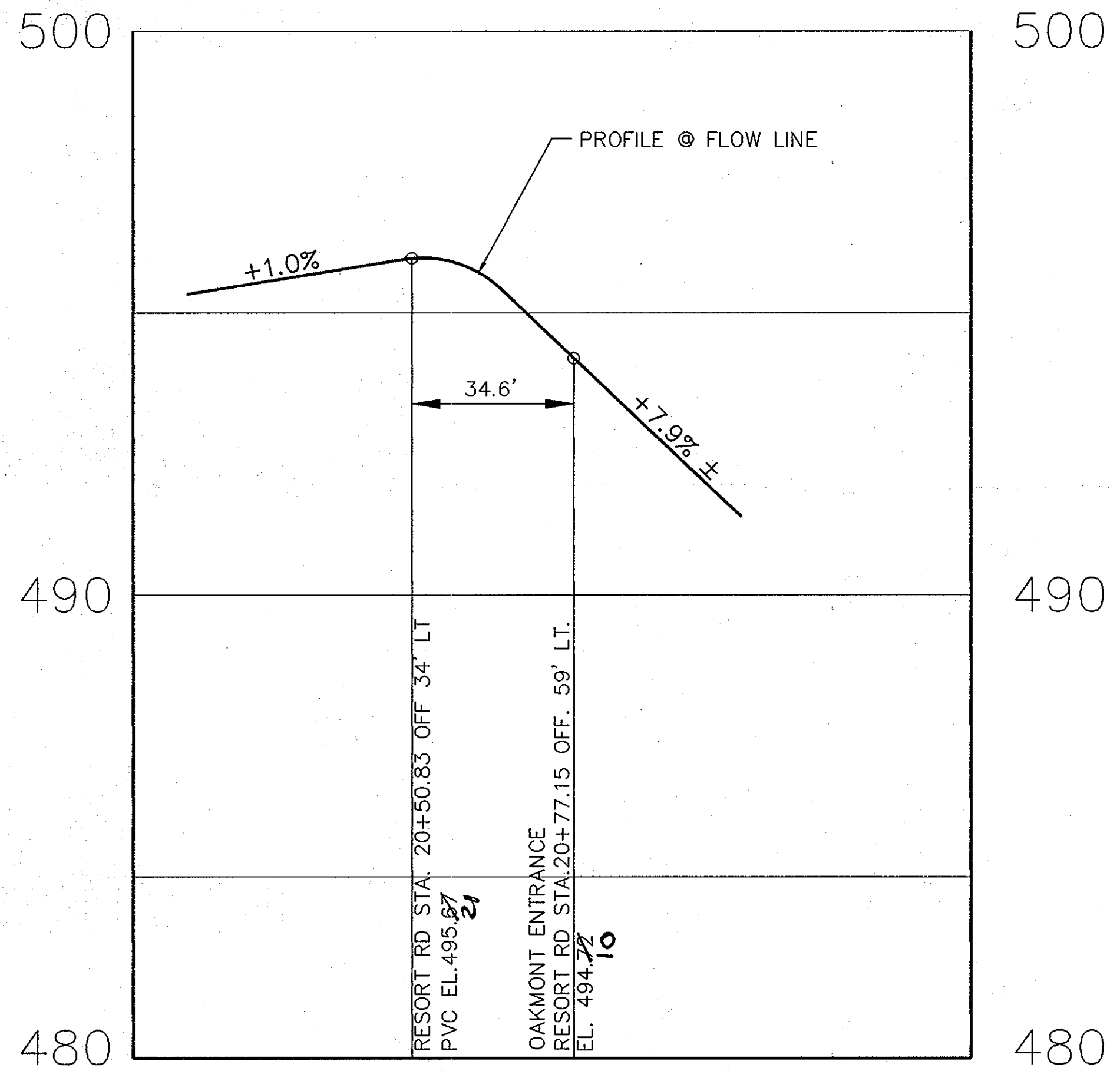
project	030029	date	JUNE 2006
illustration	MAP	engineering	MAP
scale	1" = 100'	approval	IBM

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no.	2	description	REVISED DRAINAGE AREA	date	2-22-2010

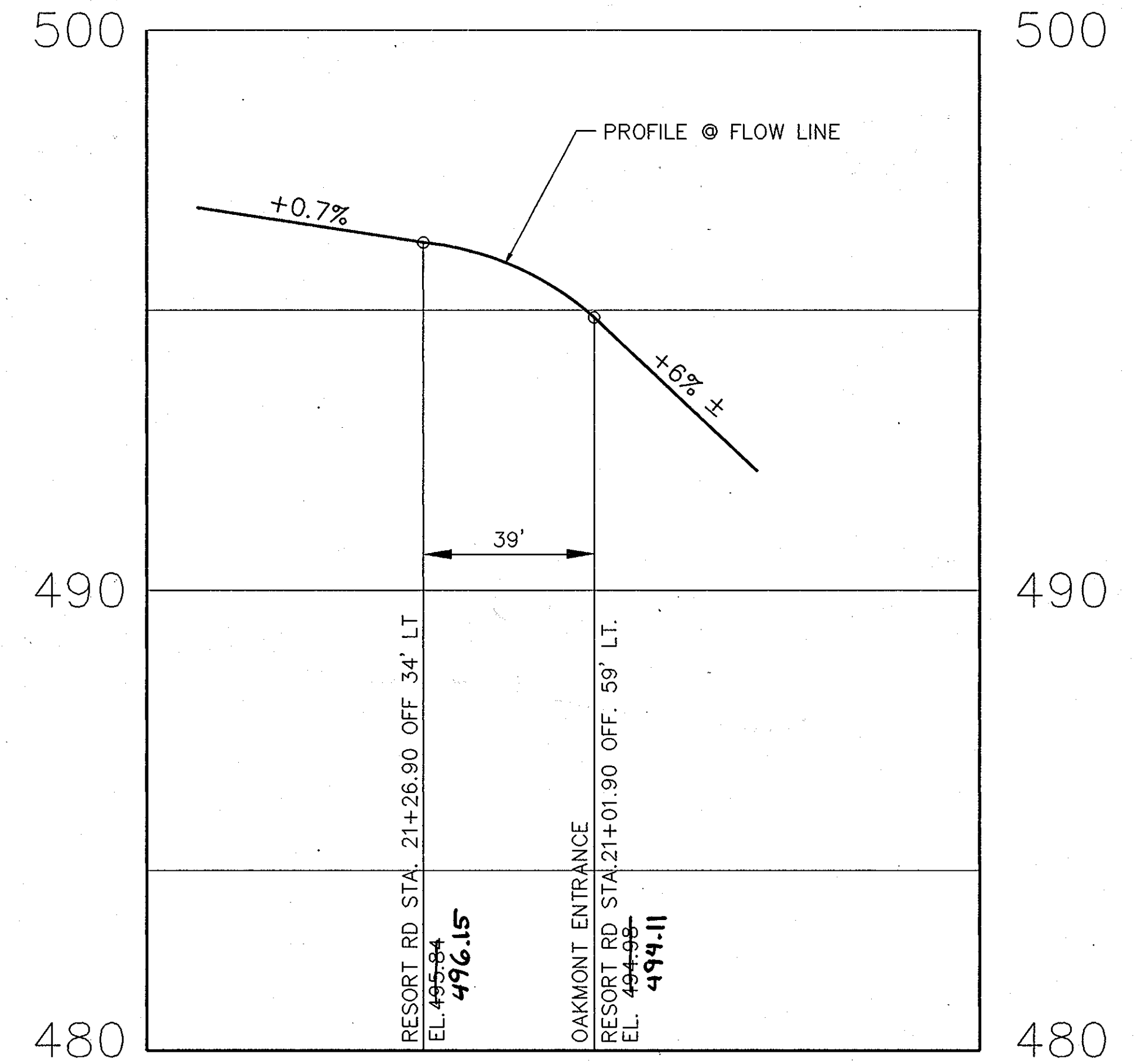
**OAKMONT at TURF VALLEY RESORT RD STA 13+66.83-21+26.90**  
 PODS I AND P/O K, L AND S, PARCELS Q THRU Y  
 TAX MAP 16 - P/O PARCEL 8 & 50 - BLOCKS 10 & 16  
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 STORM DRAIN DRAINAGE AREA MAP

**MILDENBERG, BOENDER & ASSOC., INC.**  
 Engineers Planners Surveyors  
 5079 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042  
 (410) 997-0236 Bldg. (301) 621-5521 Wash. (410) 997-0236 Fax

AS-BUILT



**OAKMONT ENTRANCE RIGHT TURN TO  
RESORT ROAD**  
SCALE: HOR. 1" = 20', VER 1" = 2'



**RESORT ROAD RIGHT TURN TO  
OAKMONT ENTRANCE**  
SCALE: HOR. 1" = 20', VER 1" = 2'

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APPROVED: DEPARTMENT OF PUBLIC WORKS <i>William F. Mahoney, Jr.</i> CHIEF BUREAU OF HIGHWAYS DATE: 8-18-06	
APPROVED: DEPARTMENT OF PLANNING AND ZONING <i>Christy Hamer</i> CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 9/7/06	
<i>Michael D. ...</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 9/26/06	

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

**AS-BUILT CERTIFICATION**  
I hereby certify, by my seal, that the facilities shown on this plan were constructed as shown on this AS-BUILT plan.  
Donald Mason, P.E. No. 21443 Date 10-7-13

**Professional Certification.** I hereby certify that these documents 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. 21443 Expiration Date: 12-21-14

project	03029	date	JUNE 2006
illustration	MAP	engineering	MAP
scale	AS SHOWN	approval	IBK

no.	description	revisions	date

**OAKMONT at TURF VALLEY: RESORT RD STA 13+66.83 - 21+26.90**  
PODS I AND P/O K, L AND S, PARCEL Q THRU Y  
TAX MAP 16 - P/O PARCEL 8 - BLOCK 10  
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
FILLET PROFILES

**MILDENBERG, BOENDER & ASSOC., INC.**  
Engineers Planners Surveyors  
DONALD ALAN MASON  
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