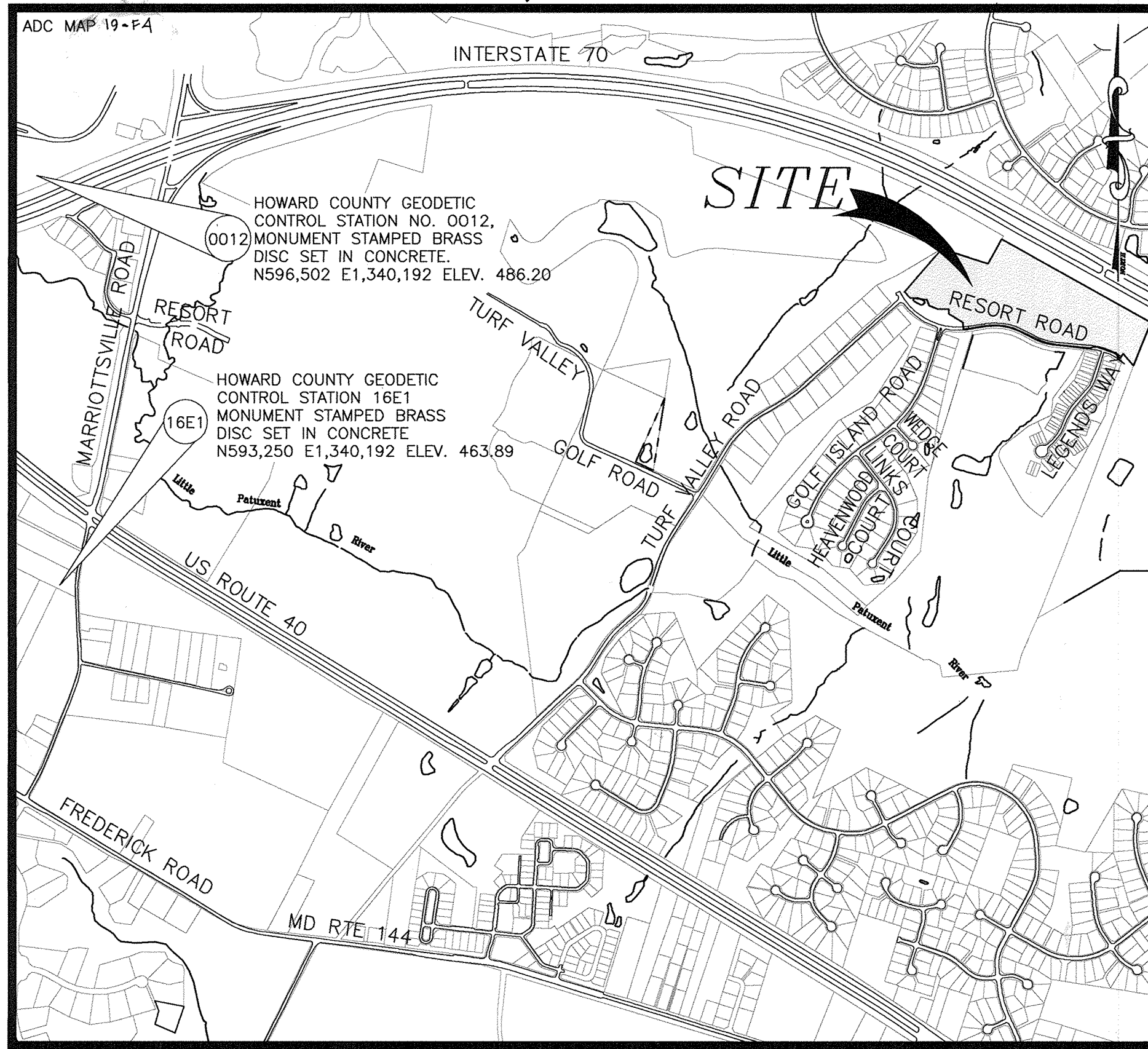


GENERAL NOTES:

- 1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
2. 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.
3. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES(UMTCOD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO PLACEMENT OF ANY ASPHALT.
4. PROJECT BACKGROUND: LOCATION: GRID 16-12 & 16-18. - P/O PARCEL B-TAX MAP 16 & 17
ZONING: PGCC RESIDENTIAL SUBDISTRICT
ELECTION DISTRICT: SECOND
DPZ REFERENCE: S-86-13 (PB 181, PB 294, PB 300); F-94-06; SDP-95-121; S-94-45; SP-95-14; F-96-107; F-96-150; F-96-151; SP-97-12; S-04-12; S-06-09; F-06-010; F-08-057; PB 351 & B 368; PLAT #20268-20267; WP-11-166; WP-11-168; WP-12-128
DEED REFERENCE: LIBER 0920, FOLIO 250
REFER TO DENSITY TABULATION FOR DENSITY REQUIRED TO SUPPORT THIS DEVELOPMENT
AREA OF TRACT: 24.0 ACRES (POD B = 7.3 AC., POD H = 16.7 AC.)
LIMIT OF SUBMISSION: 3.46 ACRES.
OPEN SPACE REQUIRED (15%): 3.6 ACRES
OPEN SPACE/LOT SPACE PROVIDED: 19.98 ACRES, RIGHT OF WAY DEDICATION: 0 ACRES.
AFT PARCELS: 4.88 ACRES
MAXIMUM NUMBER OF UNITS ALLOWED: POD B: 70, POD H: 0
TOTAL ALLOWED: 70
TOTAL NUMBER OF UNITS PROPOSED FOR VANTAGE CONDOMINIUMS: 60
LIMIT OF DISTURBANCE: 9.46 ACRES
PROPOSED USE: RESIDENTIAL-CONDOMINIUMS (MULTI-FAMILY APARTMENTS)
5. THE FLOODPLAIN STUDY FOR THIS PROJECT WAS PREPARED BY R.M. MOCHI GROUP, P.C., DATED & APPROVED ON OCTOBER 23, 1995.
6. TOPOGRAPHIC INFORMATION IS BASED ON AERIAL TOPOGRAPHIC SURVEY BY WINGS AERIAL MAPPING CO., INC. DATED APRIL 23, 1992. CERTICAL DATUM IS NAD 83 AND HORIZONTAL COORDINATE SYSTEM IS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS.
7. COORDINATES BASED ON NAD NO. 0012 & 16E1: STA. NO. 0012 N 596,502 E 1,340,864 ELEV.=486.20 STA. NO. 16E1 N 593,250 E 1,340,192 ELEV.=493.89
8. BOUNDARY INFORMATION IS BASED ON A FIELD RUN SURVEY BY JOHN E. HARMIS, JR. & ASSOCIATES, INC. AUGUST 2007.
9. PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT. WATER AND SEWER ARE PUBLIC. EXTENSIONS OF SEWER CONTRACT #24-3549-D, #24-4358-D AND CONTRACT #44-3550-D FOR WATER WILL BE PROVIDED. 2009 MARYLAND STORMWATER DESIGN MANUAL VOLUMES I AND II AS APPLICABLE TO THIS PROJECT.
10. STORMWATER MANAGEMENT FOR THIS PROJECT IS PROVIDED IN ACCORDANCE WITH THE DESIGN AND CONSTRUCTION STANDARDS FOR STORMWATER MANAGEMENT FACTOR OF 0.007 BY THE DEPARTMENT OF PUBLIC WORKS/CONSTRUCTION INSPECTION DIVISION. SHEET FROM TO CONSERVATION AREAS WILL BE PRIVATELY OWNED AND MAINTAINED BY THE VANTAGE CONDOMINIUMS AT TURF VALLEY CONDOMINIUM ASSOC.
11. NO CEMETERIES, HISTORIC STRUCTURES OR EXISTING STRUCTURES ARE ON LOCATED WITHIN THE PROJECT BOUNDARIES.
12. THIS PROJECT IS EXEMPT FROM HOWARD COUNTY FOREST CONSERVATION REQUIREMENTS UNDER SECTION 16.1202(b)(1)(v) OF THE HOWARD COUNTY CODE SINCE IT IS A PLANNED UNIT DEVELOPMENT WHICH HAD PRELIMINARY DEVELOPMENT PLAN APPROVAL AND 50% OR MORE OF THE LAND WAS RECORDED AND SUBSEQUENTLY DEVELOPED BEFORE DECEMBER 31, 1992.
13. PROPERTY IS NOT ADJACENT TO ANY SCENIC ROUTES.
14. 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 (410)723-9976 C&P TELEPHONE CO. (410)313-4900 HOWARD COUNTY BUREAU OF UTILITIES (410)313-5533 AT&T CABLE LOCATION DIVISION (410)885-0123 BALTIMORE GAS & ELECTRIC (410)531-5535 STATE HIGHWAY ADMINISTRATION (410) 313-1880 MD. CO. DEPT. OF PUBLIC WORKS/CONSTRUCTION INSPECTION DIVISION (410) 313-1880
15. CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES ON SITE PRIOR TO COMMENCING CONSTRUCTION.
16. THE LANDSCAPE PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING (#2 SHADE TREES; 6 EVERGREENS, AND 22 SHRUBS) WILL BE POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$10,260.00.
17. BULK REGULATIONS: PERMITTED USES: ALL USES AS PER TURF VALLEY PGCC DISTRICT, RESIDENTIAL SUBDISTRICT FINAL DEVELOPMENT PLAN, PLAT #20268-20267.
PROPOSED USE: CONDOMINIUM/APARTMENT UNITS
PERMITTED HEIGHT: APARTMENT BUILDINGS - 40 FEET OTHER - 34 FEET ACCESSORY STRUCTURES - 15 FEET
PROPOSED HEIGHT: CONDOMINIUM/APARTMENT BUILDINGS - 40 FEET MEAN HEIGHT (LOWER LEVEL SINGLE GARAGES, 1ST, 2ND & 3RD FLOOR LIVING AREAS)
MAXIMUM DENSITY FOR TOTAL PGCC RESIDENTIAL SUBDISTRICT IS 1.75 DWELLING UNITS PER ACRE. EXISTING DENSITY FOR TOTAL PGCC RESIDENTIAL SUBDISTRICT IS 0.75 DWELLING UNITS PER ACRE. (EXCLUDES THIS PROJECT). PROPOSED DENSITY FOR TOTAL PGCC RESIDENTIAL SUBDISTRICT IS 1.75 DWELLING UNITS PER ACRE. (INCLUDES THIS PROJECT).
MAXIMUM UNITS PER STRUCTURE: 1. SINGLE FAMILY ATTACHED- 8 UNITS PER STRUCTURE 2. APARTMENTS LESS THAN 40 FEET IN HEIGHT- 24 UNITS PER STRUCTURE 3. APARTMENTS 40 FEET OR GREATER IN HEIGHT- 120 UNITS PER STRUCTURE
MAXIMUM BUILDING LENGTH FOR RESIDENTIAL STRUCTURE = 120 FEET, UNLESS APPROVED BY ARCHITECT TO A MAXIMUM OF 300 FEET.
PROPOSED BUILDING LENGTH FOR CONDOMINIUM STRUCTURE = 159 FEET.
PERMITTED SETBACKS: FROM INTERNAL ROADS RESIDENTIAL STRUCTURES (FRONT OR SIDE) - 20 FEET ACCESSORY STRUCTURES (REAR) - 10 FEET OTHER - 20 FEET FROM LOT LINES WITHIN PGCC RESIDENTIAL SUBDISTRICT PRINCIPAL STRUCTURE - RESIDENTIAL CODE: 7.5 FEET ZERO LOT LINE AND ALL OTHER USES - SIDE - 0 FEET A MINIMUM OF 15 FEET MUST BE PROVIDED BETWEEN STRUCTURES RESIDENTIAL - REAR - 25 FEET DETACHED ACCESSORY GARAGES OR SHEDS - RESIDENTIAL SIDE OR REAR - 0 FEET OTHER ACCESSORY STRUCTURES TO RESIDENTIAL USES (SIDE) - 7.5 FEET OTHER ACCESSORY STRUCTURES TO RESIDENTIAL USES (REAR) - 5 FEET
THERE IS A 60% MAXIMUM LOT COVERAGE REQUIREMENT FOR SFA LOTS AND NO SPECIFIED COVERAGE REQUIREMENT FOR APARTMENTS.
18. PARKING REQUIREMENTS AS PER ZONING SECTION 133.0(3): 2 SPACES PER DWELLING UNIT BUILDING #1 - 30 UNITS X 2 = 60 PARKING SPACES (INCLUDING 2 HANDICAPP SPACES) BUILDING #2 - 30 UNITS X 2 = 60 PARKING SPACES (INCLUDING 2 HANDICAPP SPACES) TOTAL = 120 PARKING SPACES (INCLUDING 4 HANDICAPP SPACES)
19. PARKING PROVIDED: BUILDING #1 - IN GARAGES: 30 SPACES + SURFACE PARKING: 29 SPACES = 59 SPACES (INCLUDING 2 HANDICAPP SPACES) BUILDING #2 - IN GARAGES: 30 SPACES + SURFACE PARKING: 31 SPACES = 61 SPACES (INCLUDING 2 HANDICAPP SPACES) TOTAL PARKING PROVIDED = 120 SPACES (INCLUDING 4 HANDICAPP SPACES)
20. SLOPES GREATER THAN 15% HAVE BEEN SHOWN ON-SITE.
21. THIS PROJECT CONSTITUTES 60 CONDOMINIUM UNITS, 45 OF WHICH MEET THE MILESTONE DATE OF 1/1/04 THROUGH 6/30/05 FOR PHASE IV AS ESTABLISHED BY THE REVISED PLAN DATED 6/29/04, 3 OF WHICH MEET THE SDP MILESTONE DATE OF 2/1/07 THROUGH 7/31/08 FOR PHASE IV AS ESTABLISHED BY THE REVISED PLAN DATED 6/29/04, AND 12 OF WHICH MEET THE MILESTONE DATE OF 12/1/09 THROUGH 5/31/11 FOR PHASE IV AS ESTABLISHED BY THE REVISED PLAN DATED 7/12/08.
22. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURES AND POLES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME III (2006), SECTION 5.5.A. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
23. THIS PROJECT IS SUBJECT TO THE 2004 ZONING REGULATIONS, EFFECTIVE JULY 28, 2006.
24. A KNOX BOX (FIRE DEPARTMENT ACCESS BOX) WILL BE REQUIRED TO BE PLACED ON THE FRONT OF EACH BUILDING. IT SHALL BE PLACED TO THE RIGHT OF THE MAIN ENTRANCE TO THE BUILDINGS AT A RANGE OF 4' TO 5' IN HEIGHT AND NO MORE THAN 6' LATERSL FROM THE CURB. IT SHALL BE ELECTRICALLY SUPERVISED TO NOTIFY THE OWNER THAT IT IS BEING ACCESSSED (INTEGRATED WITH THE FIRE ALARM SYSTEM) PER NFPA - 10.12.1.
25. A SECOND MEANS OF ACCESS WILL BE PROVIDED FOR FIRE AND RESCUE ALONG RESORT ROAD BY WIDENING A PORTION OF THE EXISTING CART PATH TO 14' IN WIDTH AND CREATING A NEW 14' WIDE PATH THAT WILL SUPPORT A 60,000 LB VEHICLE. THE WESTERN ACCESS POINT WILL BE CONSIDERED UNDER VILLAGE AT TURF VALLEY, PHASE 2, (F-08-084), THE FIRE LANE WILL BE MAINTAINED BY THE MANOR, MANGIONE ENTERPRISES OF TURF VALLEY, LP.
26. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP, DATED JANUARY 7, 2005, AND WAS APPROVED MARCH 3, 2007.
27. THE SOILS INFORMATION IS BASED ON THE NRCS WEBSITEL SURVEY 2.0 FOR HOWARD COUNTY, MARYLAND.
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). ALONG A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
29. ALL PLAN DIMENSIONS ARE TO FACE OF CURB, UNLESS OTHERWISE NOTED.
30. THE SUBJECT PROPERTY IS ZONED PGCC PER THE 2/2/04 COMPREHENSIVE ZONING PLAN AND PER THE "COMP LITE" ZONING REGULATION AMENDMENTS EFFECTIVE 7/28/06.
31. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAMS OR THEIR REQUIRED BUFFERS, FLOODPLAIN OR FOREST CONSERVATION EASEMENT AREAS.
32. DEVELOPER RESERVES THE RIGHT TO ASSIGN, SUCCEEDORS AND ASSIGNS ALL EASEMENTS SHOWN ON THIS PLAN FOR WATER, SEWER, STORM DRAINAGE, OTHER PUBLIC UTILITIES AND FOREST CONSERVATION (DESIGNATED AS "FOREST CONSERVATION AREA"), LOCATED IN, ON, OVER AND THROUGH PARCELS, ANY CONVEYANCES EXPRESSLY STATED IN THE DEED(S) CONVEYING SAID PARCELS. DEVELOPER SHALL ESCUTE AND DELIVER DEEDS FOR THE EASEMENTS HEREBY RESERVED TO HOWARD COUNTY WITH A METES AND BOUNDS DESCRIPTION OF THE FOREST CONSERVATION AREA. UPON COMPLETION OF THE PUBLIC UTILITIES AND THEIR ACCEPTANCE BY HOWARD COUNTY, AND IN THE CASE OF THE FOREST CONSERVATION INSTALLATION AND MAINTENANCE AGREEMENT EXECUTED BY THE DEVELOPER AND THE COUNTY, AND THE RELEASE OF DEVELOPER'S SURETY POSTED WITH SAID AGREEMENT, THE COUNTY SHALL ACCEPT THE EASEMENTS AND RECORD THE DEED(S) OF EASEMENT INTO THE LAND RECORDS OF HOWARD COUNTY.
33. THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
34. ALL AREAS ARE MORE OR LESS.
35. THE WETLAND STUDY FOR THIS PROJECT WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED JULY 2004 AND WAS APPROVED ON MARCH 3, 2007.
36. EACH BUILDING WILL BE PROVIDED WITH AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM.
37. THE 65 DBA NOISE CONTOUR LINE DRAWN ON THIS DEVELOPMENT PLAN IS ADVISORY AS REQUIRED BY THE HOWARD COUNTY DESIGN MANUAL, CHAPTER 5, REVISED FEBRUARY, 1992, AND CANNOT BE CONSIDERED TO EXACTLY LOCATE THE 65 DBA NOISE EXPOSURE. THE 65 DBA NOISE LINE WAS ESTABLISHED BY HOWARD COUNTY TO ALERT DEVELOPERS, BUILDERS, AND FUTURE RESIDENTS THAT AREAS BEYOND THIS THRESHOLD MAY EXCEED GENERALLY ACCEPTED NOISE LEVELS ESTABLISHED BY THE US DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.
38. IN ACCORDANCE WITH THE NOISE STUDY PREPARED BY POLYSOMIC DATED AUGUST 13, 2008, ALL OF THE PROPOSED OUTSIDE RECREATION ACTIVITIES WILL BE OUTSIDE THE 65 DBA NOISE EXPOSURE. NOISE MITIGATION MEASURES SUCH AS BARRIERS, BERTS OR A COMBINATION OF BARRIERS AND BERTS WILL NOT BE NEEDED. SOME PLACES OF BUILDINGS #1 AND #2 WILL BE AFFECTED BY THE 65 DBA NOISE LEVELS HIGHER THAN 65 DBA IN INTERIOR NOISE LEVEL REQUIREMENTS OF 45 DBA IN LEVELS ARE ACHIEVED WITH MODIFIED CONSTRUCTION MATERIALS.
39. THIS PLAN IS SUBJECT TO A DESIGN MANUAL, W/AVR FOR A 85 PERCENTILE SPEED STUDY APPROVED ON FEBRUARY 2008.
40. ALL WATER METERS ARE TO BE LOCATED INSIDE PROPOSED UNITS.
41. THESE CONDOMINIUM UNITS ARE TO RECEIVE COUNTY REFUSE COLLECTION SERVICES.
42. PRIVATE RANGE OF ADDRESS SIGNS AND/OR PRIVATE ROAD STREET NAME SIGNS (SNS) SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE.

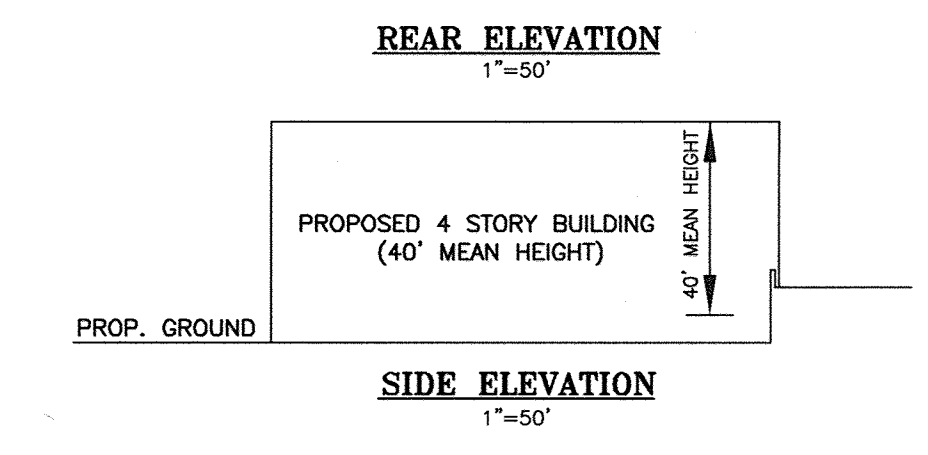
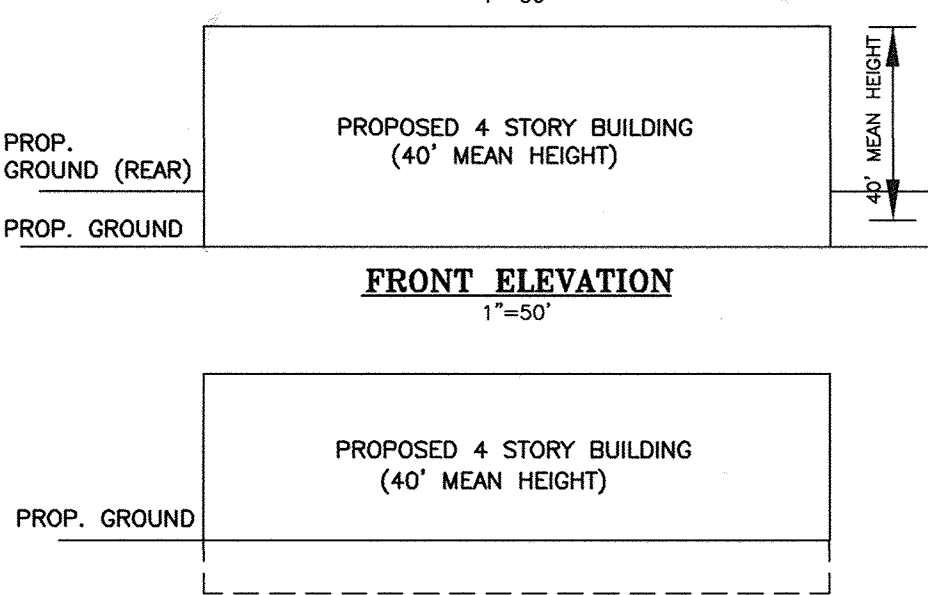
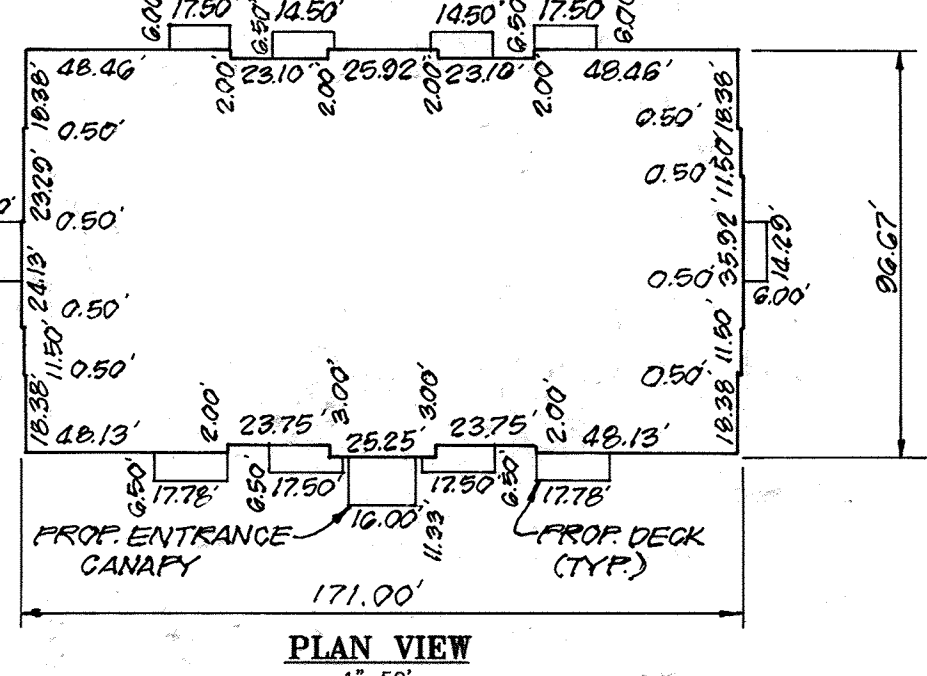
SITE DEVELOPMENT PLAN
VANTAGE CONDOMINIUMS AT TURF VALLEY
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

PARCELS B-1, B-2, B-3 & NON-BUILDABLE BULK PARCEL C-1



VICINITY MAP

SCALE: 1" = 1,000

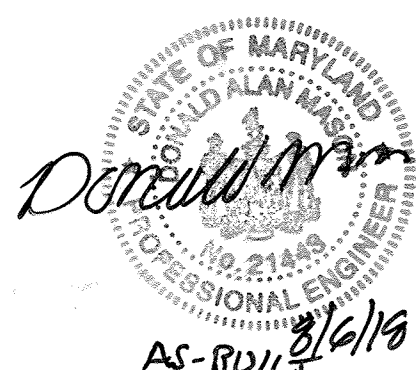


NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

ADDRESS CHART table with columns for PARCEL and STREET ADDRESS. Shows parcels B-1 and B-2 on 10530 and 10520 Resort Road.

PERMIT INFORMATION CHART table with columns for PROJECT NAME, SECTION/AREA, LOT/PARCEL#, PLAT#, GRID#, ZONE, TAX MAP, ELEC. DIST., CENSUS TRACT, WATER CODE, and SEWER CODE.

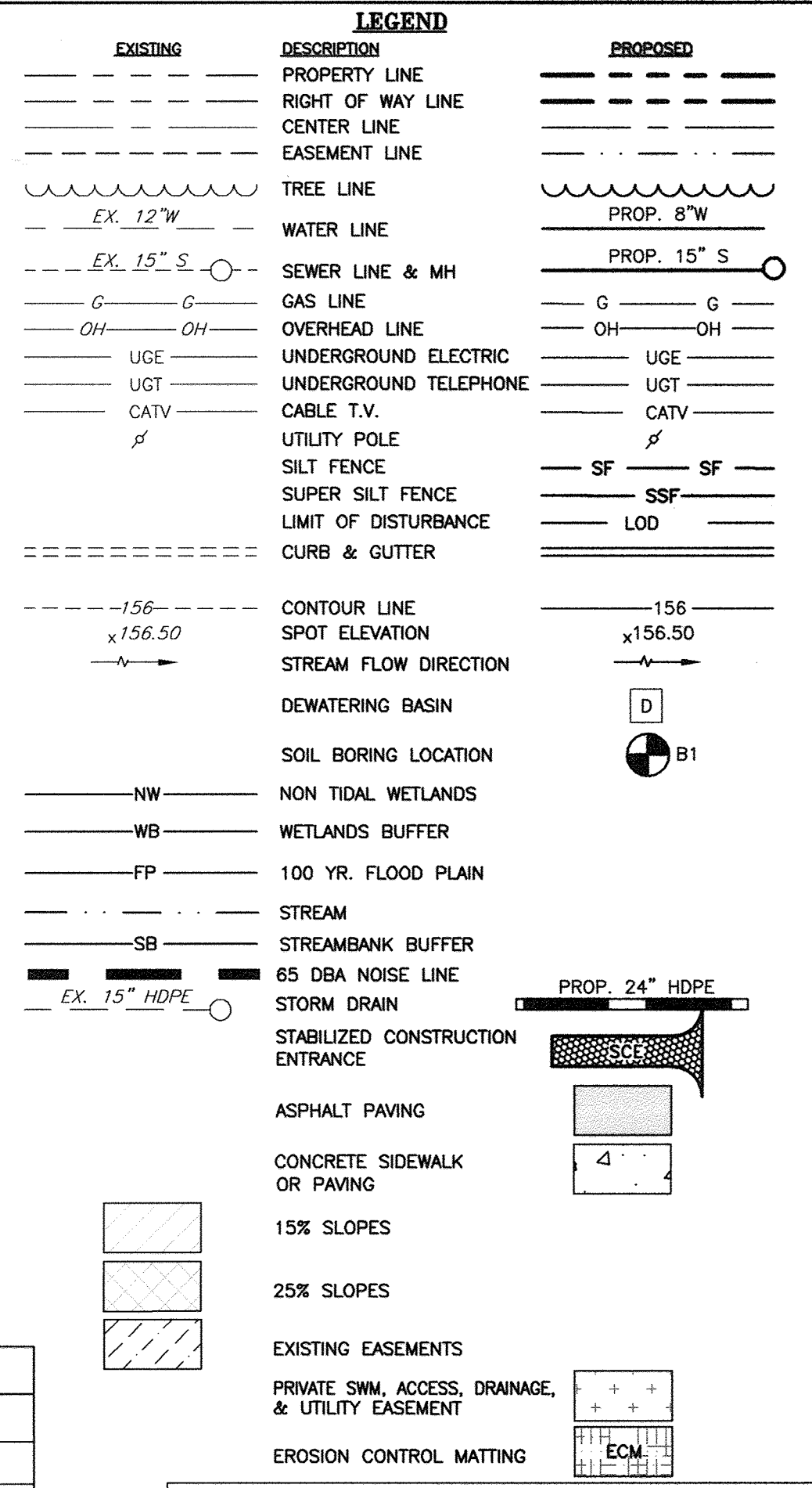
SOILS CHART table with columns for TYPE and DESCRIPTION. Lists soil types like GbA, GbB, GbC, GmB, GnB, and MaD with their respective descriptions.



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.

INDEX TO SHEETS table listing sheet numbers and descriptions: 1 COVER SHEET, 2-4 SITE DEVELOPMENT PLAN, 5-7 GRADING & SEDIMENT CONTROL PLAN, 8 SEDIMENT CONTROL NOTES & DETAILS, 9 INLET DRAINAGE AREA MAP, 10 STORM DRAIN, WATER & SEWER PROFILES, 11-13 SWM DETAILS, 14 BORINGS & SITE DETAILS, 15-16 LANDSCAPE PLAN, 17 SITE LIGHTING PLAN, 18-19 FIRE LANE PLAN & PROFILE, 20 WALL ELEVATIONS & DETAILS, 21 WALL ELEVATIONS.

REVISIONS table with columns for NO., DESCRIPTION, and DATE. Shows two revisions to the building footprint and notes per new layout.



APPROVED PLANNING BOARD OF HOWARD COUNTY

DATE: 04/01/2010. Signature of Paul Mangione.

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPERS CERTIFICATE: I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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.

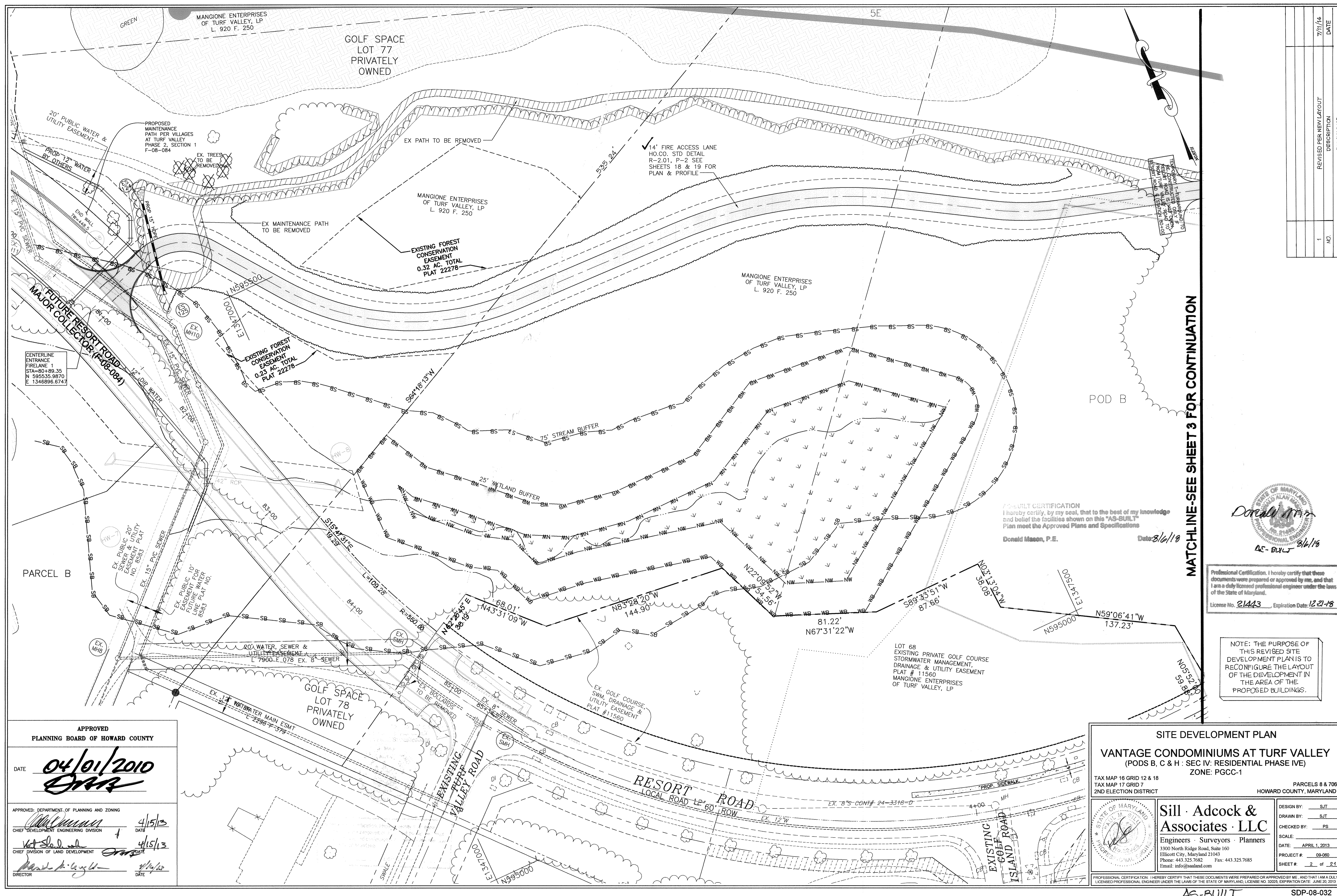
ENGINEER'S CERTIFICATE: I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL, REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS.

APPROVED: DEPARTMENT OF PLANNING AND ZONING. Chief Development Engineering Division: Paul Mangione. Chief Division of Land Development: Mark Mangione.

COVER SHEET

VANTAGE CONDOMINIUMS AT TURF VALLEY (PODS B, C & H: SEC IV: RESIDENTIAL PHASE IV) ZONE: PGCC-1. TAX MAP 16 GRID 12 & 18, TAX MAP 17 GRID 7, 2ND ELECTION DISTRICT. PARCELS 8 & 706 HOWARD COUNTY, MARYLAND.

Sill · Adcock & Associates · LLC. Engineers · Surveyors · Planners. 3300 North Ridge Road, Suite 160, Elkton City, Maryland 21043. Phone: 443.325.7682 Fax: 443.325.7685. Email: info@saaland.com.



NO.	DESCRIPTION	DATE
1	REVISED PER NEW LAYOUT	7/11/14

MATCHLINE-SEE SHEET 3 FOR CONTINUATION

*Donald Mason*  
 DONALD MASON  
 P.E. 3/6/18

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: 12-21-18

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

**SITE DEVELOPMENT PLAN**  
**VANTAGE CONDOMINIUMS AT TURF VALLEY**  
 (PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)  
 ZONE: PGCC-1

TAX MAP 16 GRID 12 & 18  
 TAX MAP 17 GRID 7  
 2ND ELECTION DISTRICT

PARCELS 8 & 706  
 HOWARD COUNTY, MARYLAND

**Sill · Adcock & Associates · LLC**  
 Engineers · Surveyors · Planners  
 3300 North Ridge Road, Suite 160  
 Ellicott City, Maryland 21043  
 Phone: 443.325.7682 Fax: 443.325.7685  
 Email: info@silladcock.com

DESIGN BY: SJT  
 DRAWN BY: SJT  
 CHECKED BY: PS  
 SCALE:  
 DATE: APRIL 1, 2013  
 PROJECT #: 09-080  
 SHEET #: 2 of 24

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. 32025, EXPIRATION DATE: JUNE 20, 2013.

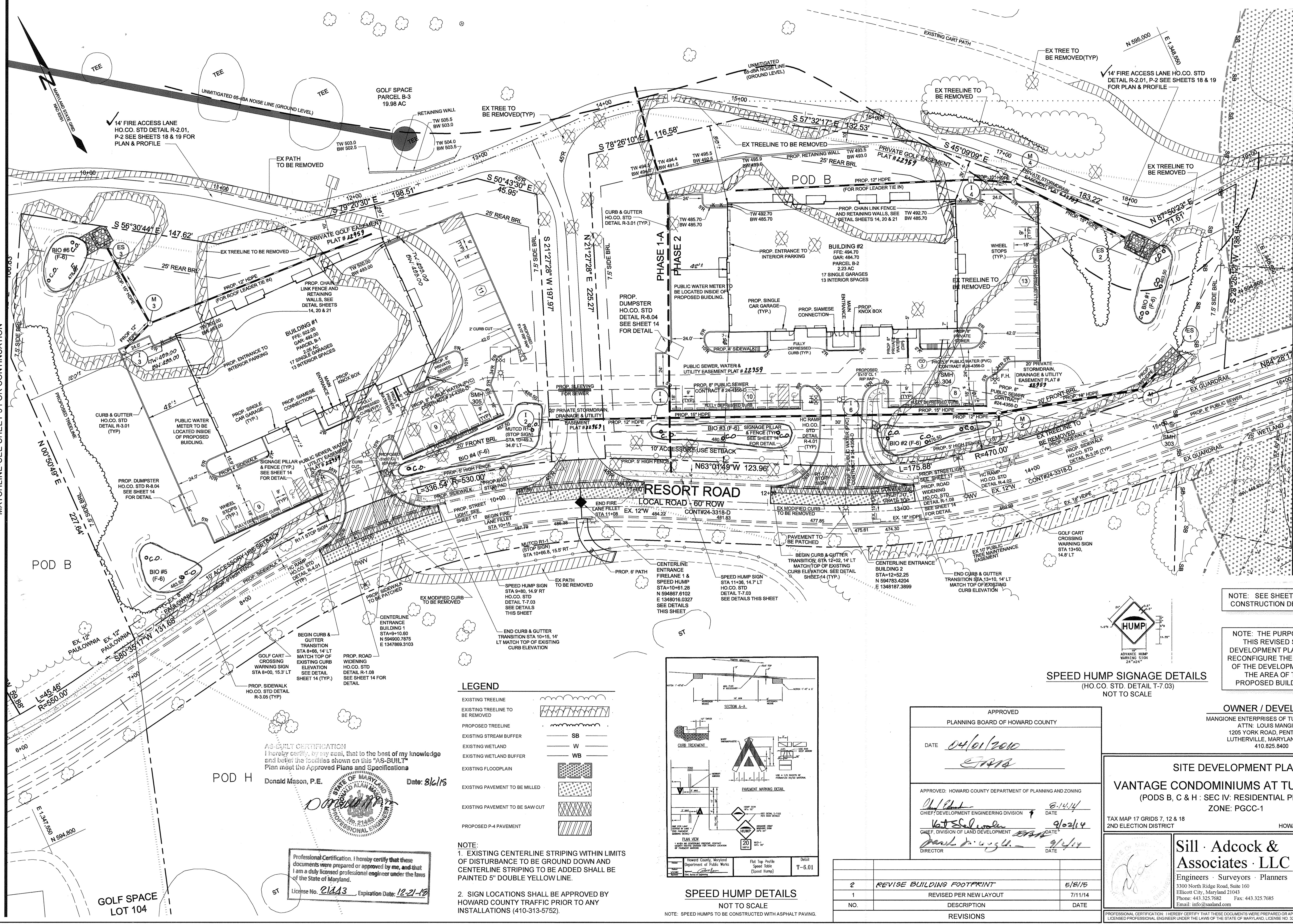
APPROVED  
 PLANNING BOARD OF HOWARD COUNTY

DATE: **04/01/2010**  
*[Signature]*

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 CHIEF DEVELOPMENT ENGINEERING DIVISION: *[Signature]* 4/15/13  
 CHIEF DIVISION OF LAND DEVELOPMENT: *[Signature]* 4/15/13  
 DIRECTOR: *[Signature]* 4/14/10

MATCHLINE-SEE SHEET 5 FOR CONTINUATION

MATCHLINE-SEE SHEET 7 FOR CONTINUATION



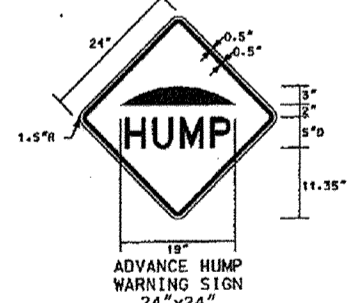
✓ 14' FIRE ACCESS LANE  
 HO.CO. STD DETAIL R-2.01,  
 P-2 SEE SHEETS 18 & 19 FOR  
 PLAN & PROFILE

✓ 14' FIRE ACCESS LANE HO.CO. STD  
 DETAIL R-2.01, P-2 SEE SHEETS 18 & 19  
 FOR PLAN & PROFILE

NOTE: SEE SHEET 14 FOR  
 CONSTRUCTION DETAILS.

NOTE: THE PURPOSE OF  
 THIS REVISED SITE  
 DEVELOPMENT PLAN IS TO  
 RECONFIGURE THE LAYOUT  
 OF THE DEVELOPMENT IN  
 THE AREA OF THE  
 PROPOSED BUILDINGS.

**SPEED HUMP SIGNAGE DETAILS**  
 (HO.CO. STD. DETAIL T-7.03)  
 NOT TO SCALE

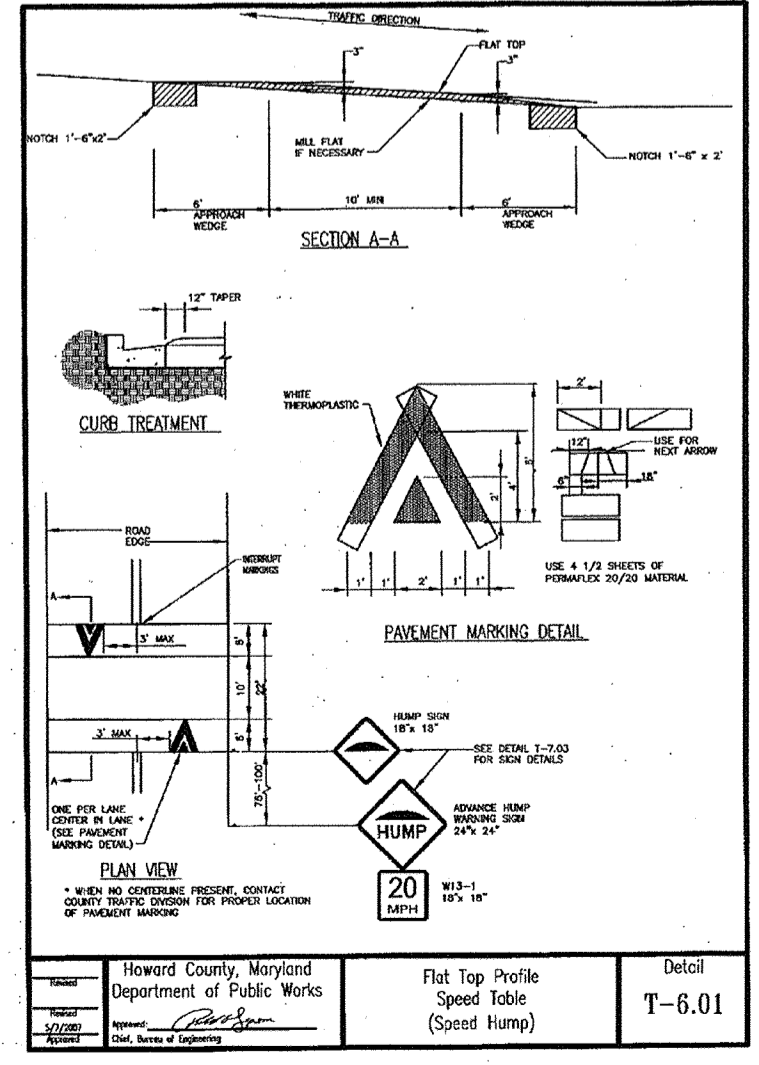


**LEGEND**

- EXISTING TREELINE
- EXISTING TREELINE TO BE REMOVED
- PROPOSED TREELINE
- EXISTING STREAM BUFFER
- EXISTING WETLAND
- EXISTING WETLAND BUFFER
- EXISTING FLOODPLAIN
- EXISTING PAVEMENT TO BE MILLED
- EXISTING PAVEMENT TO BE SAW CUT
- PROPOSED P-4 PAVEMENT

NOTE:  
 1. EXISTING CENTERLINE STRIPING WITHIN LIMITS  
 OF DISTURBANCE TO BE GROUND DOWN AND  
 CENTERLINE STRIPING TO BE ADDED SHALL BE  
 PAINTED 5" DOUBLE YELLOW LINE.

2. SIGN LOCATIONS SHALL BE APPROVED BY  
 HOWARD COUNTY TRAFFIC PRIOR TO ANY  
 INSTALLATIONS (410-313-5752).



**SPEED HUMP DETAILS**  
 NOT TO SCALE

NOTE: SPEED HUMPS TO BE CONSTRUCTED WITH ASPHALT PAVING.

APPROVED  
 PLANNING BOARD OF HOWARD COUNTY

DATE: 04/01/2010

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION: 8/14/14

CHIEF, DIVISION OF LAND DEVELOPMENT: 9/02/14

DIRECTOR: 9/14/14

**OWNER / DEVELOPER**  
 MANGIONE ENTERPRISES OF TURF VALLEY, LP  
 ATTN: LOUIS MANGIONE  
 1205 YORK ROAD, PENTHOUSE  
 LUTHERVILLE, MARYLAND 21093  
 410.825.8400

**SITE DEVELOPMENT PLAN**  
**VANTAGE CONDOMINIUMS AT TURF VALLEY**  
 (PODS B, C & H : SEC IV: RESIDENTIAL PHASE IV)  
 ZONE: PGCC-1

TAX MAP 17 GRIDS 7, 12 & 18  
 2ND ELECTION DISTRICT

PARCELS 8 & 706  
 HOWARD COUNTY, MARYLAND

**Sill · Adcock & Associates · LLC**  
 Engineers · Surveyors · Planners  
 3300 North Ridge Road, Suite 160  
 Ellicott City, Maryland 21043  
 Phone: 443.325.7682 Fax: 443.325.7685  
 Email: info@silladcock.com

DESIGN BY: PS, BK  
 DRAWN BY: JT, BK  
 CHECKED BY: PS  
 SCALE: 1" = 30'  
 DATE: JULY 11, 2014  
 PROJECT #: 09-060  
 SHEET #: 3 of 21

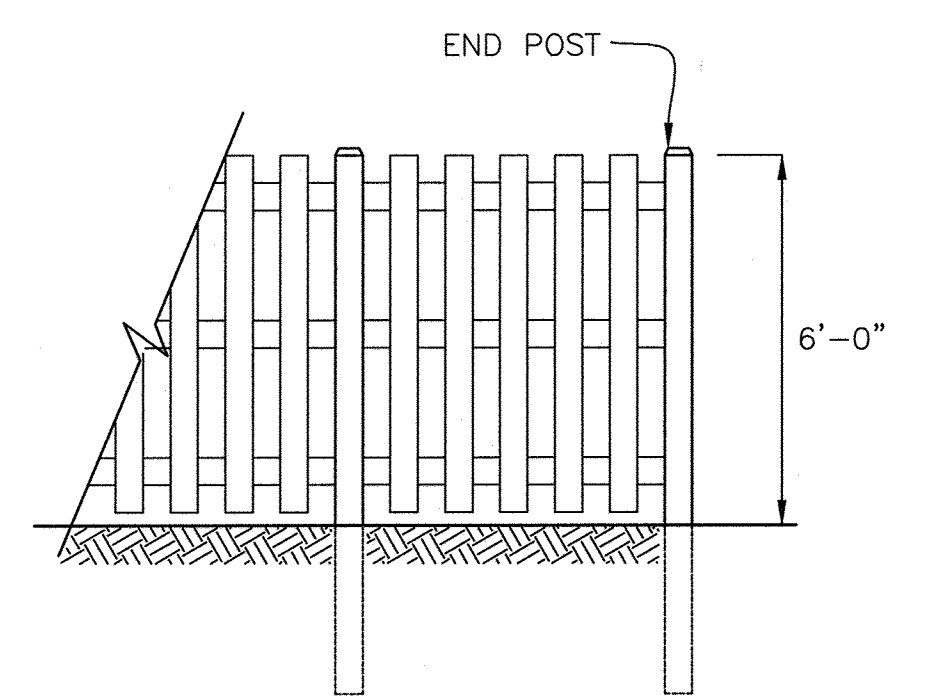
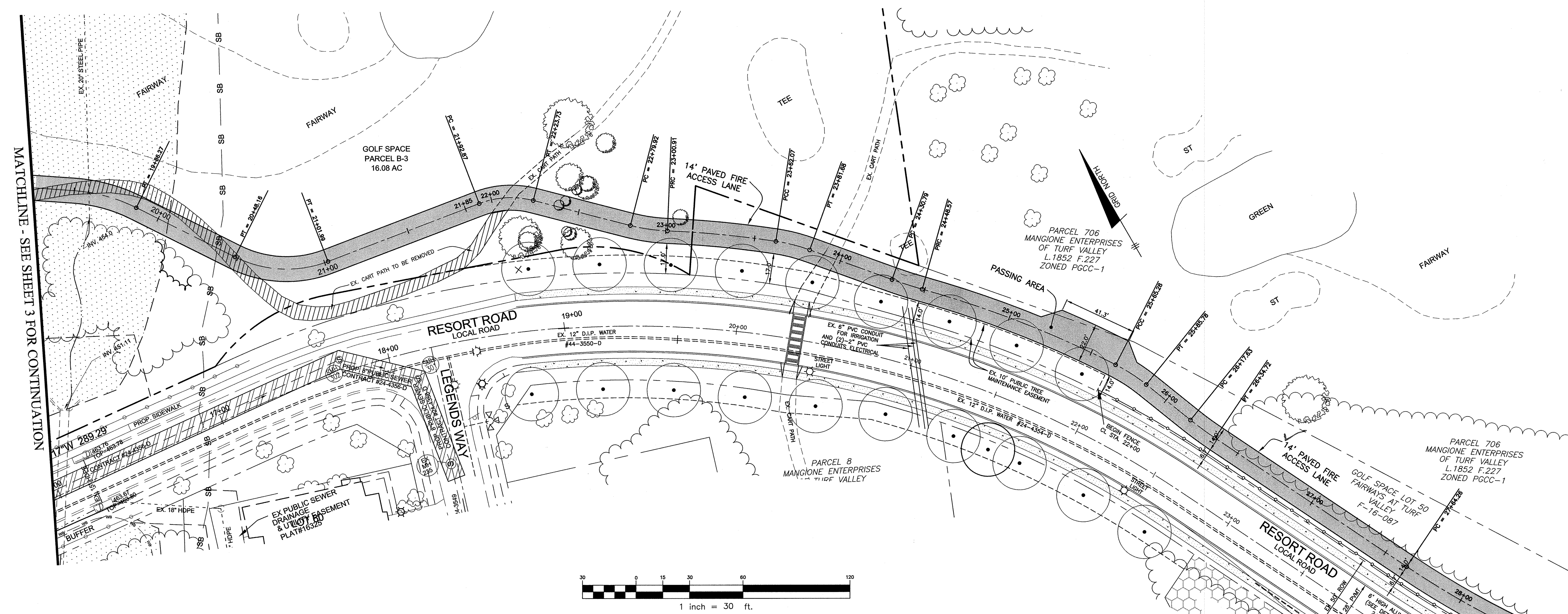
NO.	DESCRIPTION	DATE
2	REVISE BUILDING FOOTPRINT	5/8/15
1	REVISED PER NEW LAYOUT	7/11/14

AS-BUILT CERTIFICATION  
 I hereby certify, by my seal, that to the best of my knowledge  
 and belief the facilities shown on this "AS-BUILT"  
 Plan meet the Approved Plans and Specifications

Donald Mason, P.E.  
 Date: 8/6/15

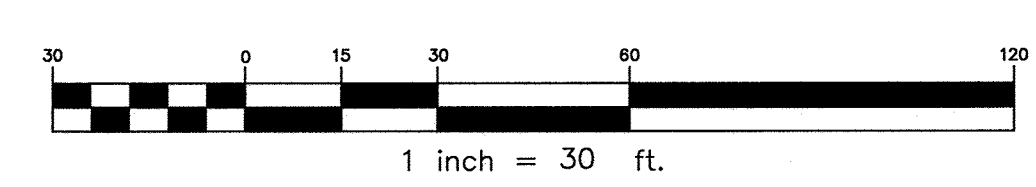
Professional Certification. I hereby certify that these  
 documents were prepared or approved by me, and that  
 I am a duly licensed professional engineer under the laws  
 of the State of Maryland.  
 License No. 21213 Expiration Date: 12-21-19

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. 32025, EXPIRATION DATE: JUNE 20, 2015



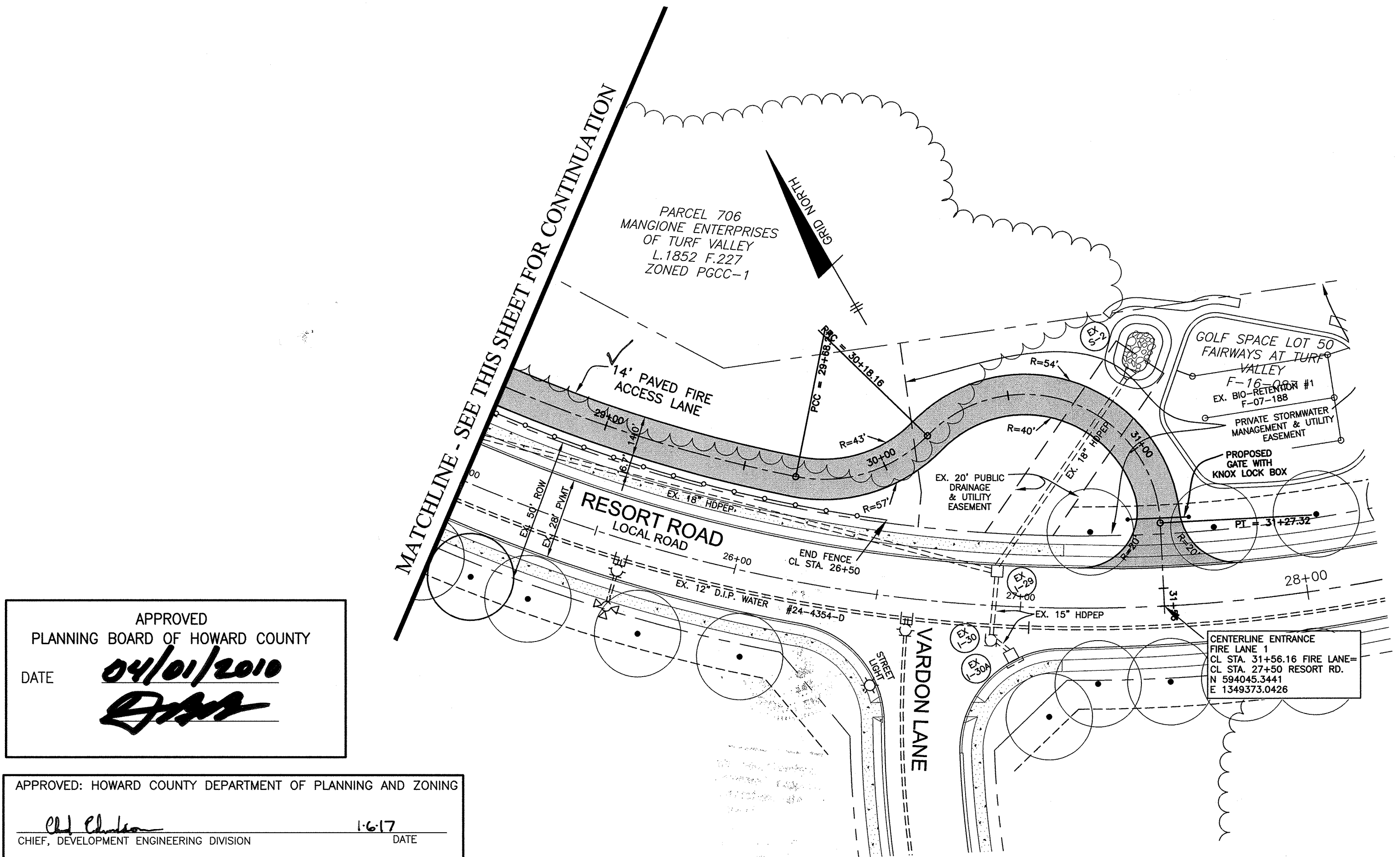
NOTE:  
 1. FENCE TO BE BLACK ALUMINUM 1"x1" PICKETS SPACED 6" APART.  
 2. 6"x6" ALUMINUM POSTS TO BE PLACED AT EACH END AND EVERY 50 FEET ON CENTER.

**FENCE DETAIL**  
 NOT TO SCALE



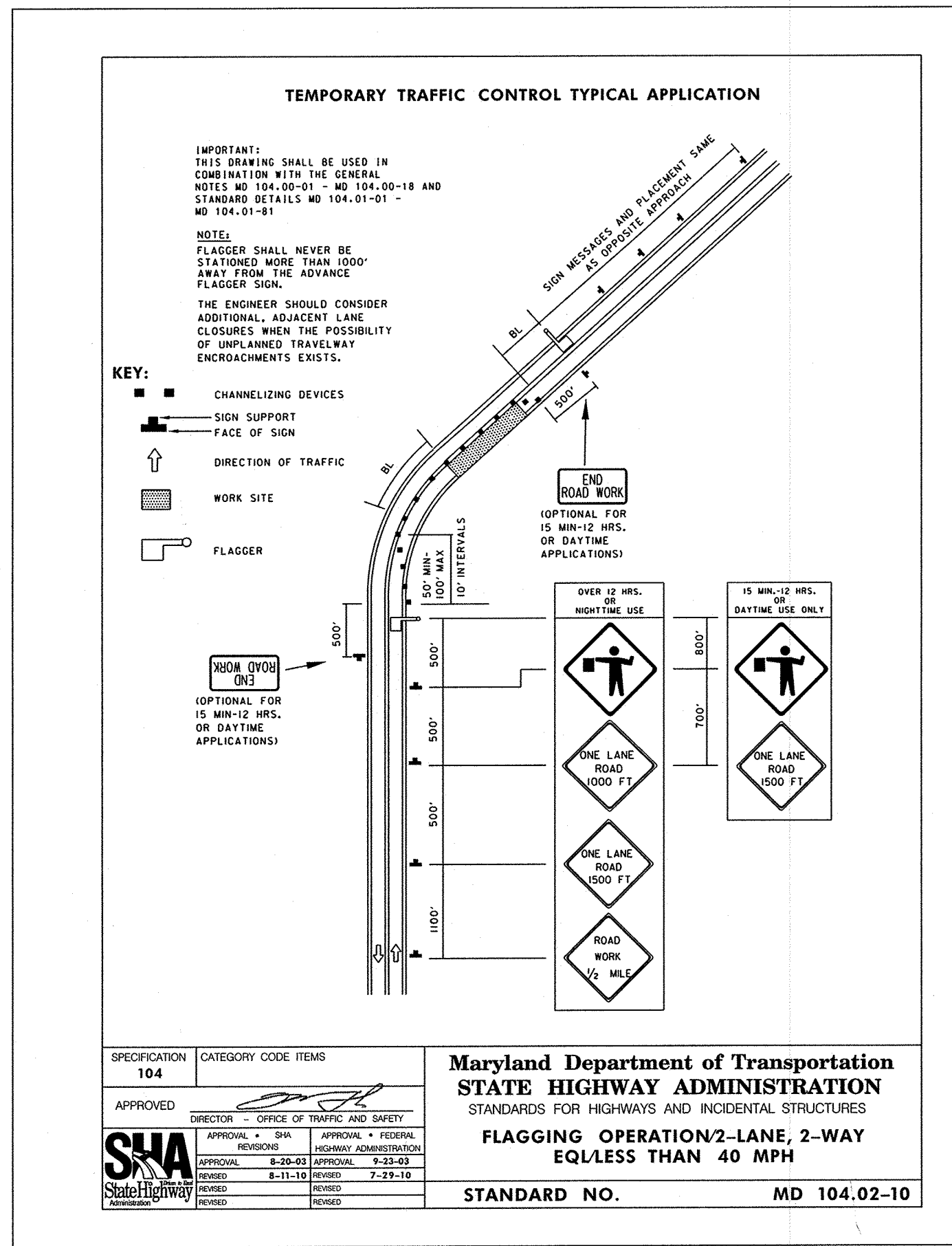
MATCHLINE - SEE SHEET 3 FOR CONTINUATION

MATCHLINE - SEE THIS SHEET FOR CONTINUATION



APPROVED  
 PLANNING BOARD OF HOWARD COUNTY  
 DATE **04/01/2010**  
*[Signature]*

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*[Signature]* 1-6-17 DATE  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
*[Signature]* 11/1/17 DATE  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
*[Signature]* 1-12-18 DATE  
 DIRECTOR



FOR REVISION #1 BY OTHERS  
 NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

THIS SHEET REPLACES THE PREVIOUS SHEET 4 SIGNED ON 4-15-2013

AS-BUILT CERTIFICATION  
 I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on this "AS-BUILT" Plan meet the Approved Plans and Specifications

Donald Mason, P.E. Date: 8-6-16



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: 12-21-16

NO.	DATE	REVISION
2	12-14-2016	REVISE FIRE ACCESS LANE ALIGNMENT, UPDATE STREET TREES, EASEMENTS, EX. BIO-RETENTION FACILITY, EX STORM DRAIN PER F-07-15B.
1	7-11-2014	REVISED PER NEW LAYOUT

**BENCHMARK ENGINEERING, INC.**  
 8400 BALTIMORE NATIONAL PIKE SUITE 315 A ELICOTT CITY, MARYLAND 21043  
 (P) 410-465-6105 (F) 410-465-8844  
 WWW.BE-ENGINEERING.COM

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. 22390 Expiration Date: 6-30-2017.

*[Signature]* 12/14/16  
 REV #2

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

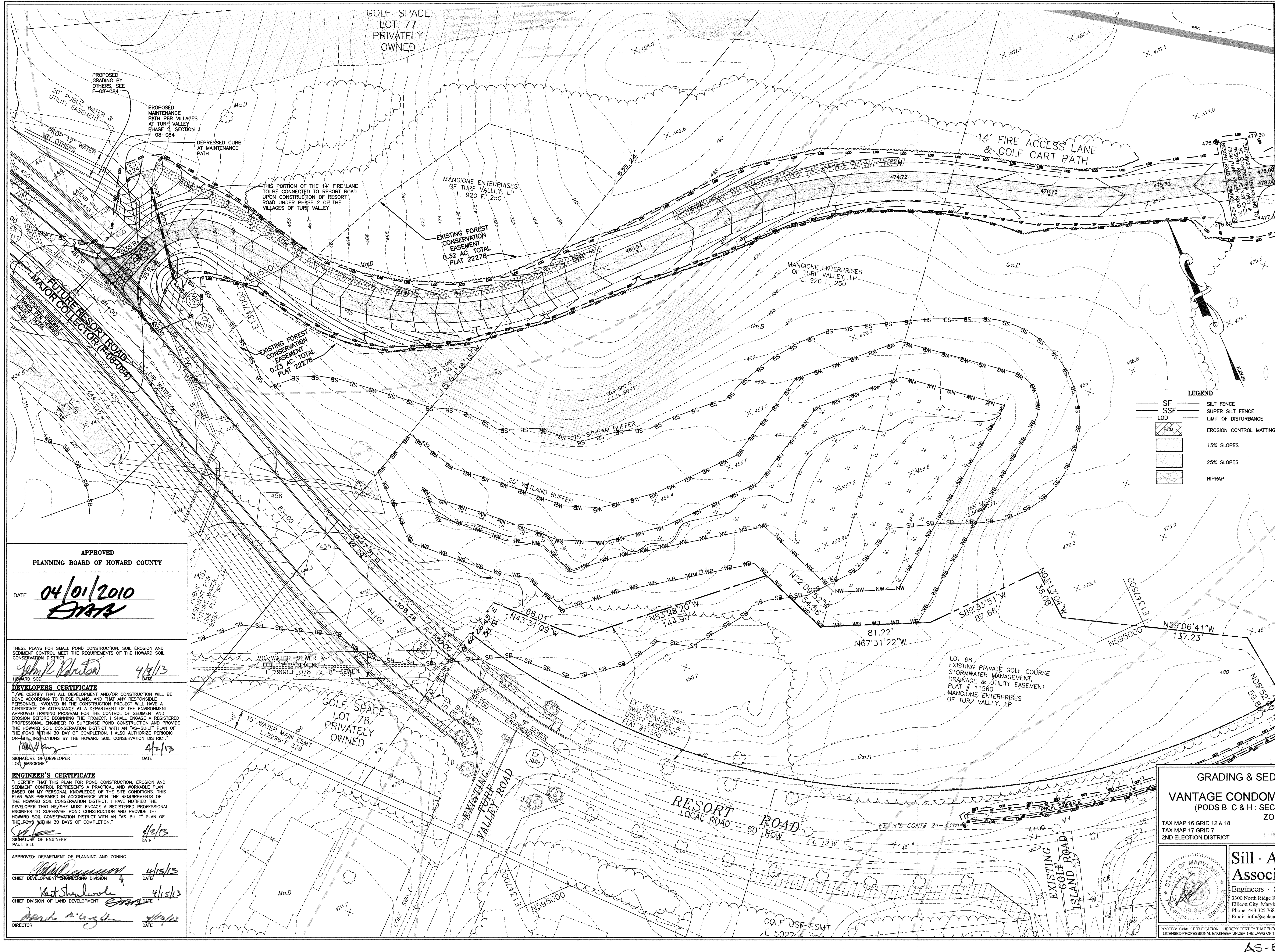
DEVELOPER: MANGIONE ENTERPRISES OF TURF VALLEY LIMITED PARTNERSHIP  
 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093 410-825-8400

**VANTAGE CONDOMINIUMS AT TURF VALLEY**

TAX MAP: 16 - GRID: 10 - PARCEL: P/O 8  
 ZONED: PGCC (MULTI-USE SUBDISTRICT)  
 ELECTION DISTRICT NO. 3 - HOWARD COUNTY, MARYLAND

**REVISED SITE DEVELOPMENT PLAN**

DATE: DECEMBER 14, 2016 SHEET PROJECT NO. 2726  
 SCALE: AS SHOWN SHEET 4 OF 21



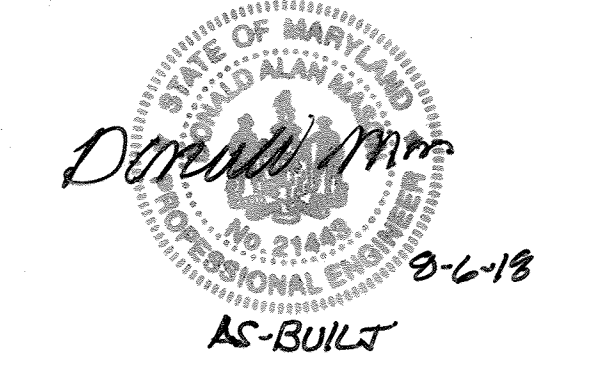
MATCHLINE-SEE SHEET 6 FOR CONTINUATION

NO.	DESCRIPTION	DATE
1	REVISED PER NEW LAYOUT	7/11/14

**LEGEND**

	SILT FENCE
	SUPER SILT FENCE
	LIMIT OF DISTURBANCE
	EROSION CONTROL MATTING
	15% SLOPES
	25% SLOPES
	RIPRAP

NO AS-BUILT INFORMATION IS PROVIDED 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: 12-31-18

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

**OWNER / DEVELOPER**  
 MANGIONE ENTERPRISES OF TURF VALLEY, LP  
 ATTN: LOUIS MANGIONE  
 1205 YORK ROAD, PENTHOUSE  
 LUTHERVILLE, MARYLAND 21093  
 410.825.8400

**GRADING & SEDIMENT CONTROL PLAN**  
**VANTAGE CONDOMINIUMS AT TURF VALLEY**  
 (PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)  
 ZONE: PGCC-1  
 TAX MAP 16 GRID 12 & 18  
 TAX MAP 17 GRID 7  
 2ND ELECTION DISTRICT  
 PARCELS 8 & 708  
 HOWARD COUNTY, MARYLAND

**Sill · Adcock & Associates · LLC**  
 Engineers · Surveyors · Planners  
 3300 North Ridge Road, Suite 160  
 Ellensburg, Maryland 21043  
 Phone: 443.325.7682 Fax: 443.325.7685  
 Email: info@silladcock.com

DESIGN BY: SJT  
 DRAWN BY: SJT  
 CHECKED BY: PS  
 SCALE: 1" = 30'  
 DATE: APRIL 1, 2013  
 PROJECT #: 09-060  
 SHEET #: 5 of 21

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. 32025, EXPIRATION DATE: JUNE 20, 2013

**APPROVED**  
**PLANNING BOARD OF HOWARD COUNTY**

DATE: 04/01/2010  
*Erica*

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*John R. Pickett* 4/1/13  
 HOWARD SCD DATE

**DEVELOPER'S CERTIFICATE**  
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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 SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAY OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

*Lou Mangione* 4/2/13  
 SIGNATURE OF DEVELOPER DATE  
 LOU MANGIONE

**ENGINEER'S CERTIFICATE**  
 I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

*Paul Sill* 4/1/13  
 SIGNATURE OF ENGINEER DATE  
 PAUL SILL

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Paul Sill* 4/15/13  
 CHIEF DEVELOPMENT ENGINEERING DIVISION DATE

*Mark A. Taylor* 4/15/13  
 CHIEF DIVISION OF LAND DEVELOPMENT DATE

*Mark A. Taylor* 4/15/13  
 DIRECTOR DATE

PRIOR TO BIORETENTION CONSTRUCTION, TEMPORARILY EXTEND RIP-RAP TO UNDISTURBED GROUND. SEE SEQUENCE OF CONSTRUCTION AND STORM DRAIN PROFILES.

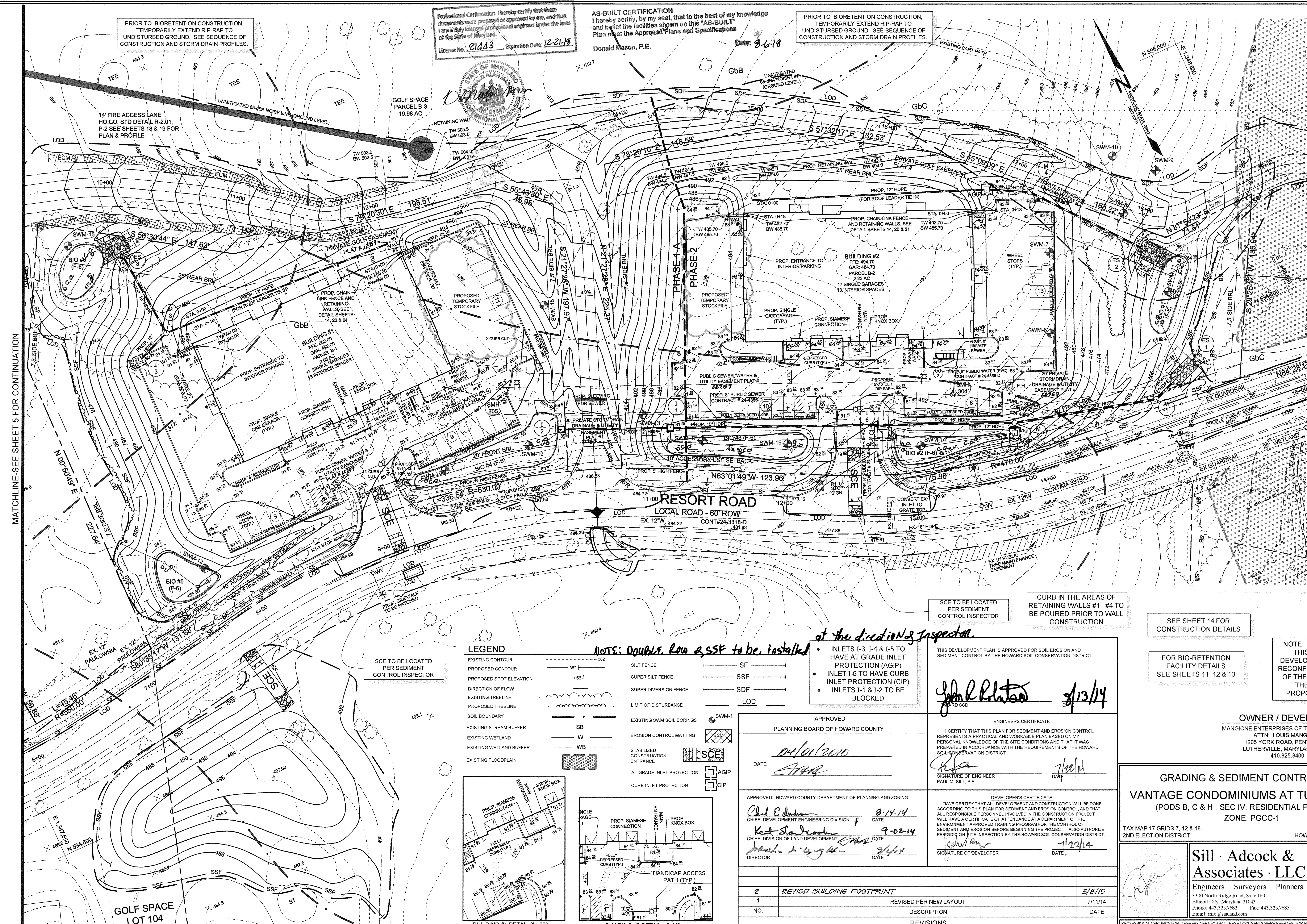
Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
 License No. 21443 Expiration Date: 12-21-18

AS-BUILT CERTIFICATION  
 I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on this "AS-BUILT" Plan meet the Approved Plans and Specifications.  
 Donald Mason, P.E. Date: 8-6-18

PRIOR TO BIORETENTION CONSTRUCTION, TEMPORARILY EXTEND RIP-RAP TO UNDISTURBED GROUND. SEE SEQUENCE OF CONSTRUCTION AND STORM DRAIN PROFILES.

MATCHLINE-SEE SHEET 5 FOR CONTINUATION

MATCHLINE-SEE SHEET 7 FOR CONTINUATION



**LEGEND**

- EXISTING CONTOUR ———— 382 ————
- PROPOSED CONTOUR ———— +56.4 ————
- PROPOSED SPOT ELEVATION +56.4
- DIRECTION OF FLOW
- EXISTING TREELINE
- PROPOSED TREELINE
- SOIL BOUNDARY
- EXISTING STREAM BUFFER
- EXISTING WETLAND
- EXISTING WETLAND BUFFER
- EXISTING FLOODPLAIN
- EXISTING SWM SOIL BORINGS SWM-1
- EROSION CONTROL MATTING
- STABILIZED CONSTRUCTION ENTRANCE
- AT GRADE INLET PROTECTION
- CURB INLET PROTECTION
- SILT FENCE ———— SF ————
- SUPER SILT FENCE ———— SSF ————
- SUPER DIVERSION FENCE ———— SDF ————
- LIMIT OF DISTURBANCE ———— LOD ————

NOTES: Double Row SSF to be installed at the direction of Inspector

- INLETS 1-3, 1-4 & 1-5 TO HAVE AT GRADE INLET PROTECTION (AGIP)
- INLET 1-6 TO HAVE CURB INLET PROTECTION (CIP)
- INLETS 1-1 & 1-2 TO BE BLOCKED

SCE TO BE LOCATED PER SEDIMENT CONTROL INSPECTOR

CURB IN THE AREAS OF RETAINING WALLS #1 - #4 TO BE POURED PRIOR TO WALL CONSTRUCTION

SEE SHEET 14 FOR CONSTRUCTION DETAILS

FOR BIO-RETENTION FACILITY DETAILS SEE SHEETS 11, 12 & 13

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT  
 John R. Platon 8/13/14  
 HOWARD SCD

APPROVED PLANNING BOARD OF HOWARD COUNTY		ENGINEERS CERTIFICATE	
DATE 04/01/2010		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 THE HOWARD SOIL CONSERVATION DISTRICT.	
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	DATE 8-14-14	DATE 7/20/14	
Chief, Division of Land Development	DATE 9-02-14	DATE 1-22-14	
DIRECTOR	DATE 2/6/18	DATE	
2 REVISE BUILDING FOOTPRINT		5/8/15	
1 REVISED PER NEW LAYOUT		7/11/14	
NO.	DESCRIPTION	DATE	

**OWNER / DEVELOPER**  
 MANGIONE ENTERPRISES OF TURF VALLEY, LP  
 ATTN: LOUIS MANGIONE  
 1205 YORK ROAD, PENTHOUSE  
 LUTHERVILLE, MARYLAND 21093  
 410.825.8400

**GRADING & SEDIMENT CONTROL PLAN**  
**VANTAGE CONDOMINIUMS AT TURF VALLEY**  
 (PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)  
 ZONE: PGCC-1

TAX MAP 17 GRIDS 7, 12 & 18 PARCELS 8 & 705  
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

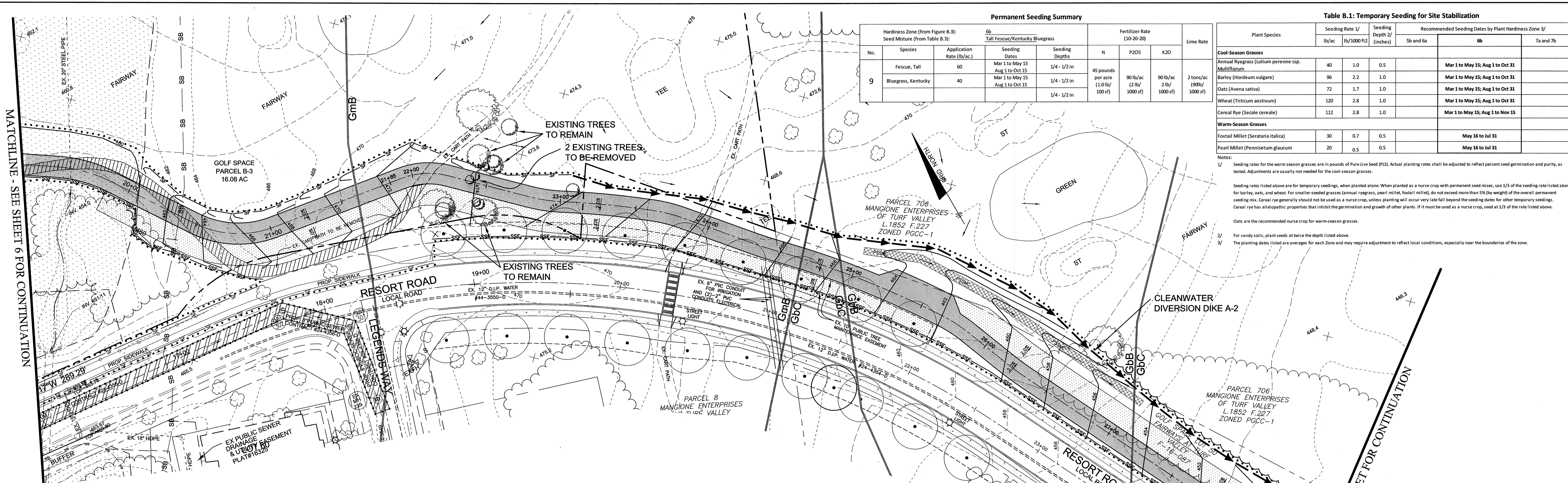
**Sill · Adcock & Associates · LLC**  
 Engineers · Surveyors · Planners  
 3300 North Ridge Road, Suite 160  
 Ellicott City, Maryland 21043  
 Phone: 443.325.7682 Fax: 443.325.7685  
 Email: info@silladcock.com

DESIGN BY: PS, BK  
 DRAWN BY: JT, BK  
 CHECKED BY: PS  
 SCALE: 1" = 30'  
 DATE: JULY 11, 2014  
 PROJECT #: 09-060  
 SHEET #: 6 OF 21

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. 32023. EXPIRATION DATE: JUNE 20, 2015

AS-BUILT

SDP-08-032

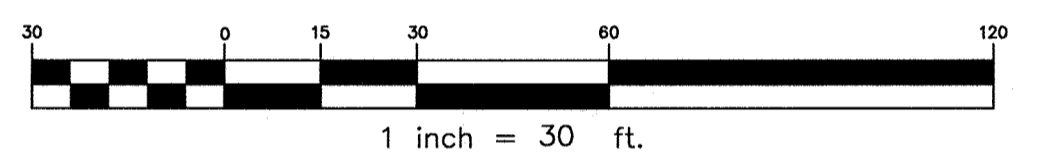


**Permanent Seeding Summary**

No.	Species	Application Rate (lb/ac)	Seeding		Fertilizer Rate (10-20-20)			Lime Rate
			Dates	Depth	N	P205	K20	
9	Tall Fescue	60	Mar 1 to May 15	1/4 - 1/2 in	45 pounds per acre (1.0 lb/100 sf)	90 lb/ac (2 lb/1000 sf)	90 lb/ac (2 lb/1000 sf)	2 tons/ac (90 lb/1000 sf)
	Kentucky Bluegrass		Aug 1 to Oct 15					
	Bluegrass, Kentucky		Aug 1 to Oct 15					

**Table B.1: Temporary Seeding for Site Stabilization**

Plant Species	Seeding Rate 1/		Seeding Depth 2/ (inches)	Recommended Seeding Dates by Plant Hardiness Zone 3/		
	lb/ac	lb/1000 ft <sup>2</sup>		5b and 6a	6b	7a and 7b
<b>Cool-Season Grasses</b>						
Annual Ryegrass ( <i>Lolium perenne</i> ssp. Multiflorum)	40	1.0	0.5	Mar 1 to May 15; Aug 1 to Oct 31		
Barley ( <i>Hordeum vulgare</i> )	96	2.2	1.0	Mar 1 to May 15; Aug 1 to Oct 31		
Oats ( <i>Avena sativa</i> )	72	1.7	1.0	Mar 1 to May 15; Aug 1 to Oct 31		
Wheat ( <i>Triticum aestivum</i> )	120	2.8	1.0	Mar 1 to May 15; Aug 1 to Oct 31		
Cereal Rye ( <i>Secale cereale</i> )	112	2.8	1.0	Mar 1 to May 15; Aug 1 to Nov 15		
<b>Warm-Season Grasses</b>						
Foxtail Millet ( <i>Serataria italica</i> )	30	0.7	0.5	May 16 to Jul 31		
Pearl Millet ( <i>Pennisetum glaucum</i> )	20	0.5	0.5	May 16 to Jul 31		



MATCHLINE - SEE SHEET 6 FOR CONTINUATION

MATCHLINE - SEE THIS SHEET FOR CONTINUATION

APPROVED  
PLANNING BOARD OF HOWARD COUNTY  
DATE 04/01/2010  
*[Signature]*

**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 THE HOWARD SOIL CONSERVATION DISTRICT.  
*[Signature]* 12-19-16  
ENGINEER

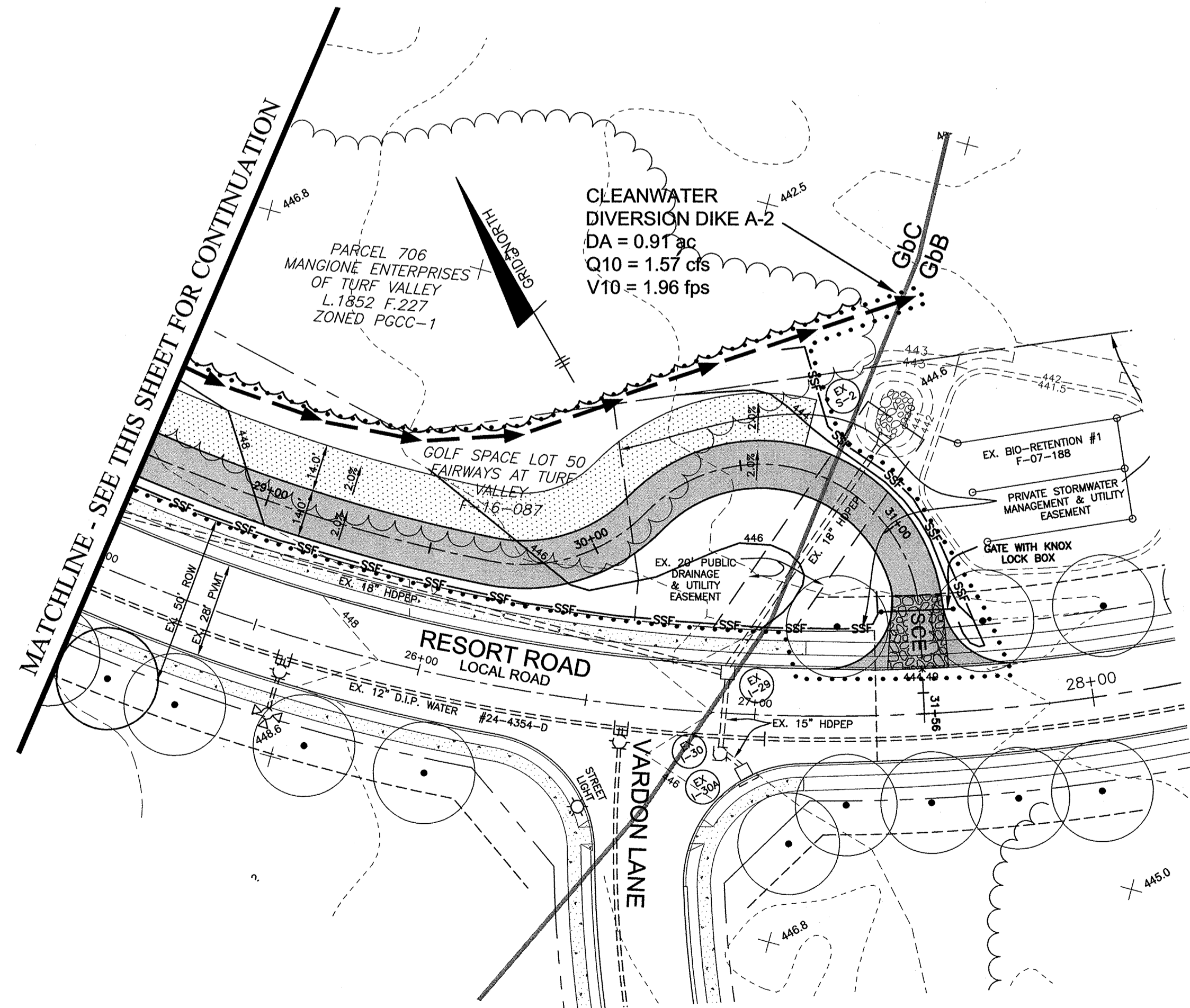
**DEVELOPER'S CERTIFICATE**  
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED 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.  
*[Signature]* 12-14-16  
DEVELOPER

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
*[Signature]* 1/3/17  
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*[Signature]* 1-6-17  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

*[Signature]* 4/2/17  
CHIEF, DIVISION OF LAND DEVELOPMENT

*[Signature]* 1-12-17  
DIRECTOR



- LEGEND**
- FIRE ACCESS LANE
  - NON-ROOFTOP DISCONNECTION CREDIT AREA
  - STREET TREES
  - SOILS DELINEATION LINE
  - SOILS TYPE
  - SILT FENCE
  - SUPER SILT FENCE
  - CLEANWATER DIVERSION DIKE
  - LIMIT OF DISTURBANCE
  - STABILIZED CONSTRUCTION ENTRANCE
  - PERMANENT EROSION CONTROL MATTING

FOR REVISION #1 BY OTHERS  
NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

NO AS-BUILT INFORMATION IS PROVIDED 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: 12-21-16

NO.	DATE	REVISION
2	12-14-2016	REVISE FIRE ACCESS LANE ALIGNMENT. REVISE GRADING AND SEDIMENT CONTROL. UPDATE STREET TREES, EX. BIO-RETENTION #1, AND EX. STORM DRAIN PER F-07-15B. ADD SEEDING CHARTS.
1	7-11-2014	REVISED PER NEW LAYOUT

**BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS**  
**ENGINEERING, INC.**  
8480 BALTIMORE NATIONAL PIKE & SUITE 315 & ELLIOTT CITY, MARYLAND 21043  
(P) 410-485-6105 (F) 410-485-6844  
WWW.BE-CIVIL-ENGINEERING.COM

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

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

**VANTAGE CONDOMINIUMS AT TURF VALLEY**

TAX MAP: 16 - GRID: 10 - PARCEL: P/O 8  
ZONED: PGCC (MULTI-USE SUBDISTRICT)  
ELECTION DISTRICT NO. 3 - HOWARD COUNTY, MARYLAND

**REVISED GRADING & SEDIMENT CONTROL PLAN**

DATE: DECEMBER 14, 2016 BEI PROJECT NO. 2726  
DESIGN: DBT DRAFT: DBT SCALE: AS SHOWN SHEET 7 OF 21

THIS SHEET REPLACES THE PREVIOUS SHEET 7 SIGNED ON 4-15-2013

J:\2726 Fairways at Turf Valley\dwg\access\refline - Vantage SDP08032 sheet 07 and 19.dwg, 12/13/2016 4:01:18 PM







A=0.06 Ac  
C=85  
Z=PGCC  
P=100%  
'B' SOIL

A=0.34 Ac  
C=35  
Z=PGCC  
P=21%  
'B' SOIL

A=1.00 Ac  
C=55  
Z=PGCC  
P=53%  
'B' SOIL

A=0.82 Ac  
C=49  
Z=PGCC  
P=43%  
'B' SOIL

A=0.04 Ac  
C=85  
Z=PGCC  
P=100%  
'B' SOIL

A=0.32 Ac  
C=73  
Z=PGCC  
P=82%  
'B' SOIL

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

OWNER / DEVELOPER  
MANGIONE ENTERPRISES OF TURF VALLEY, LP  
ATTN: LOUIS MANGIONE  
1205 YORK ROAD, PENTHOUSE  
LUTHERVILLE, MARYLAND 21093  
410.825.8400

"NO AS-BUILT INFORMATION IS PROVIDED ON THIS SHEET"

APPROVED  
PLANNING BOARD OF HOWARD COUNTY

DATE 04/01/2010  
[Signature]

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
[Signature] 8.14.14  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
[Signature] 9/22/14  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
[Signature] 9/1/14  
DIRECTOR DATE



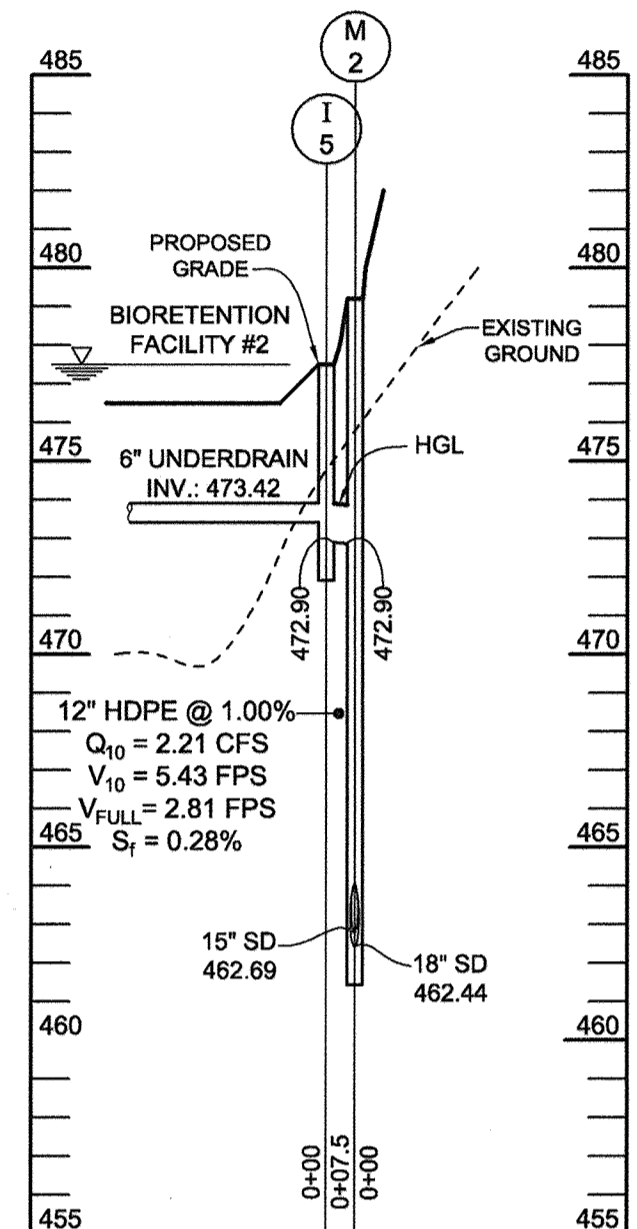
Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 21443 Expiration Date: 12-21-15

NO.	DESCRIPTION	DATE
1	REVISED PER NEW LAYOUT	7/11/14
REVISIONS		

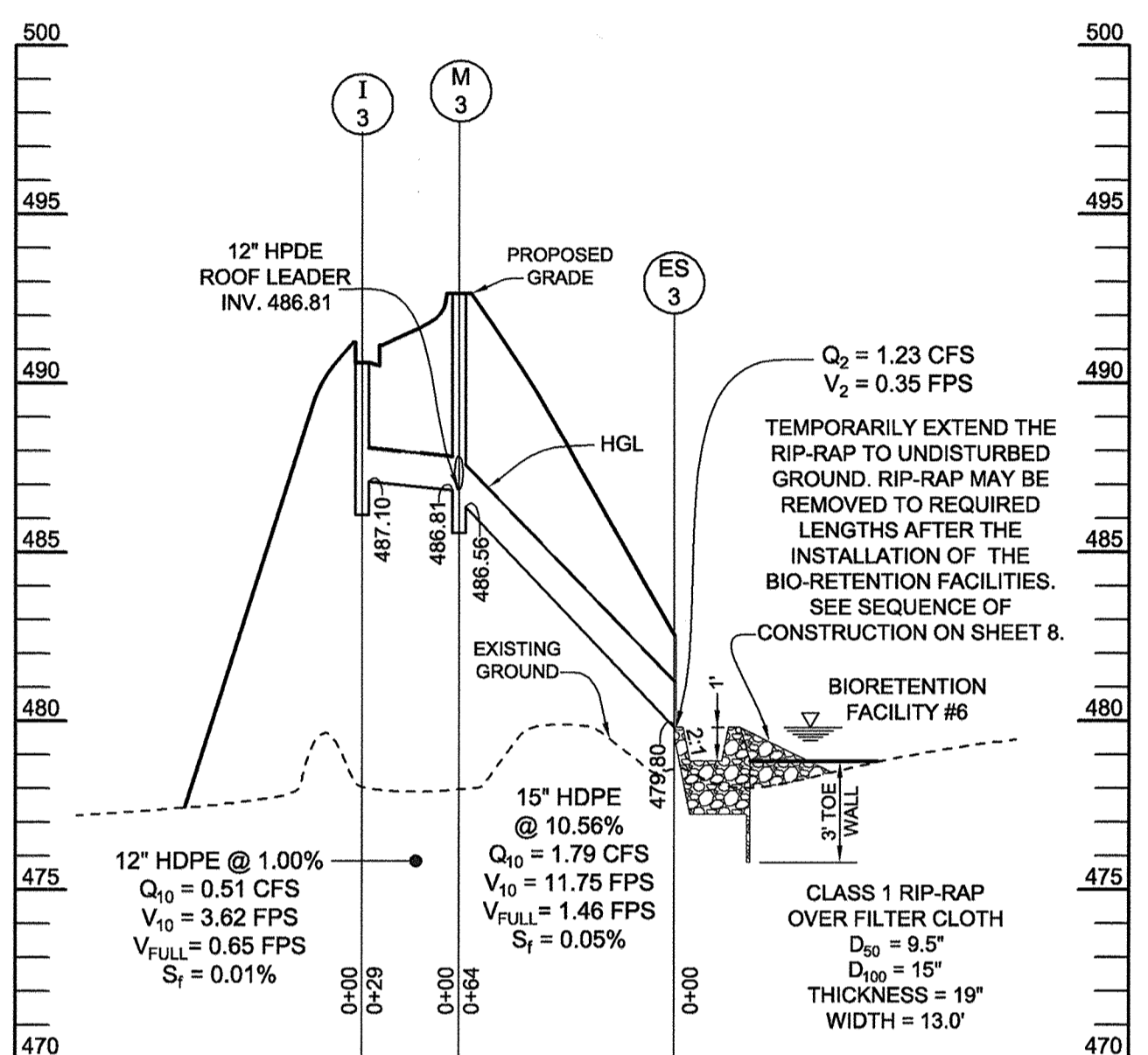
INLET DRAINAGE AREA MAP  
VANTAGE CONDOMINIUMS AT TURF VALLEY  
(PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)  
ZONE: PGCC-1  
TAX MAP 17 GRIDS 7, 12 & 18  
2ND ELECTION DISTRICT  
PARCELS 8 & 706  
HOWARD COUNTY, MARYLAND

**Sill · Adcock & Associates · LLC**  
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3300 North Ridge Road, Suite 160  
Baltimore City, Maryland 21043  
Phone: 443.325.7682 Fax: 443.325.7685  
Email: info@saaland.com

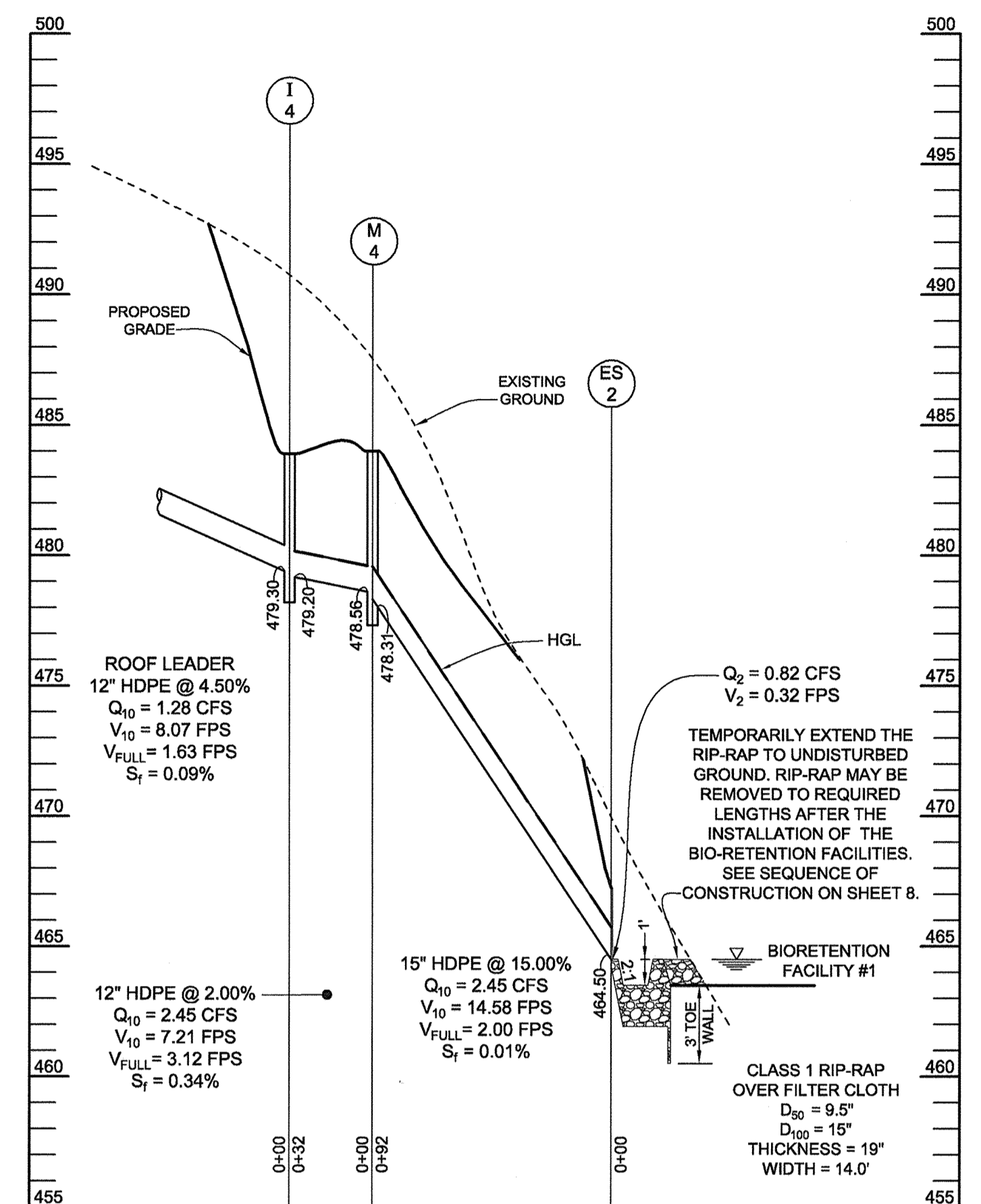
DESIGN BY: PS, BK  
DRAWN BY: JT, BK  
CHECKED BY: PS  
SCALE: 1" = 50'  
DATE: JULY 11, 2014  
PROJECT #: 09-060  
SHEET #: 9 of 21



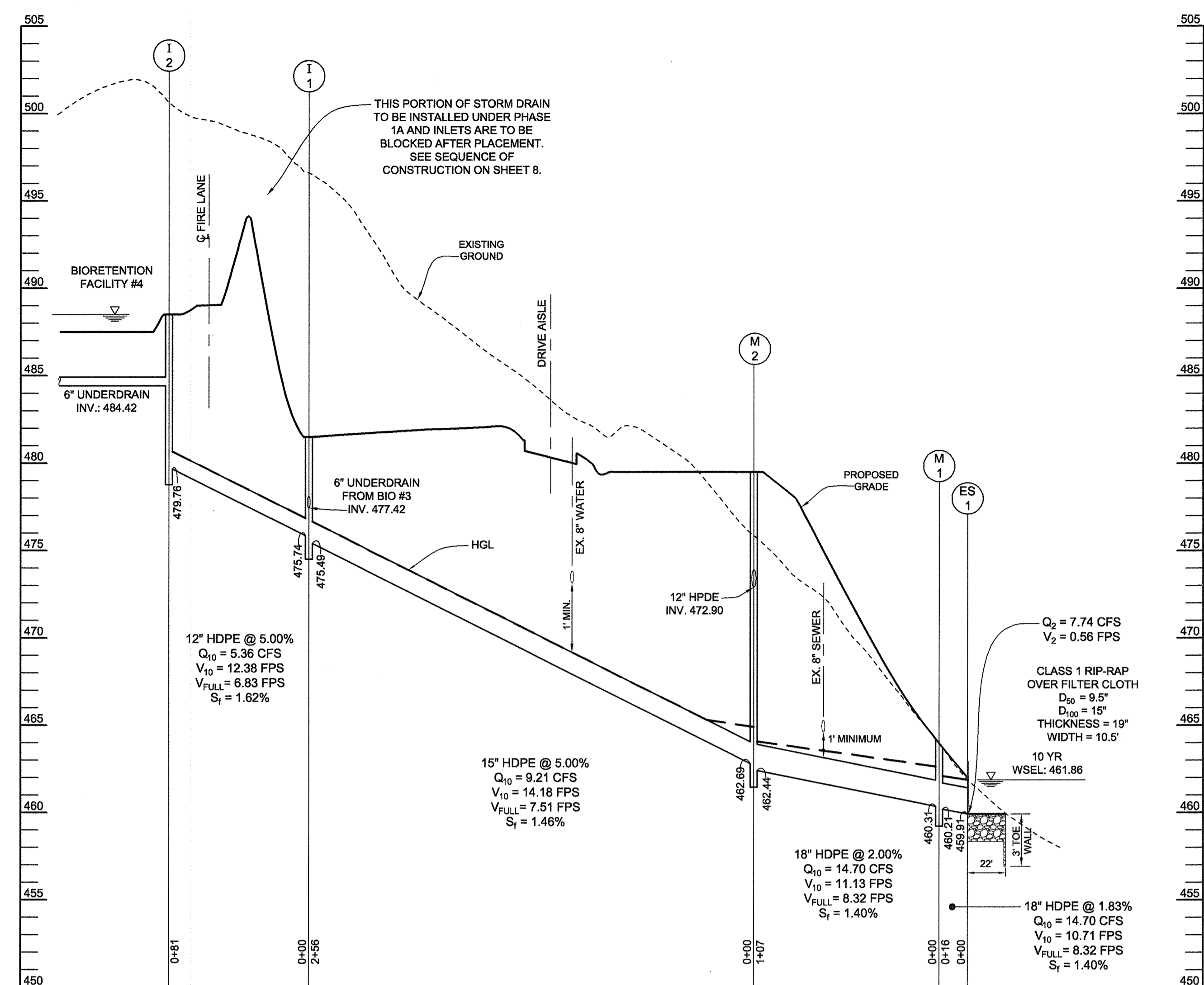
STORMDRAIN PROFILE I-5 TO M-2  
HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 5'



STORMDRAIN PROFILE I-3 TO ES-3  
HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 5'



STORMDRAIN PROFILE I-4 TO ES-2  
HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 5'



STORMDRAIN PROFILE I-2 TO ES-1  
HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 5'

"NO AS-BUILT INFORMATION IS PROVIDED 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: 12-21-15



STR #	COORDINATES	TOP ELEV.	TYPE	INV. IN	INV. OUT
ES-1	N 594773.36 E 1348442.34	462.91	TYPE "A" HEADWALL HO CO STD. D-5.11	-	459.91
ES-2	N 594874.21 E 1348463.59	467.25	TYPE "A" HEADWALL HO CO STD. D-5.11	-	464.50
ES-3	N 595183.54 E 1347774.08	482.55	TYPE "A" HEADWALL HO CO STD. D-5.11	-	479.80
I-1	N 594899.29 E 1348090.46	481.50	TYPE "S" INLET STD. D-4.22	477.42 475.74	475.49
I-2	N 594931.92 E 1348016.72	488.50	TYPE "S" INLET STD. D-4.22	484.42	479.76
I-3	N 595109.34 E 1347752.81	490.60	TYPE "S" INLET STD. D-4.22	-	487.10
I-4	N 594945.96 E 1348405.78	483.90	TYPE "S" INLET STD. D-4.22	479.30	479.20
I-5	N 594788.84 E 1348321.30	477.50	TYPE "S" INLET STD. D-4.22	473.42	472.90
I-6	N 594829.55 E 1348231.92	478.38*	CHUTE INLET STD. SHA MD-374.65	478.53	478.38
M-1	N 594767.54 E 1348427.06	464.00	48" DIA. MH HO CO STD. G-5.12	460.31	460.21
M-2	N 594795.66 E 1348324.33	479.20	48" DIA. MH HO CO STD. G-5.12	472.90 462.69	462.44
M-3	N 595119.67 E 1347779.61	492.64	48" DIA. MH HO CO STD. G-5.12	486.81 486.81	486.56
M-4	N 594945.96 E 1348405.78	484.00	48" DIA. MH HO CO STD. G-5.12	478.56	478.31

SIZE	TYPE	LENGTH
6"	PVC (SOLID)	131 L.F.
6"	PVC (PERFORATED)	372 L.F.
12"	HDPE	150 L.F. *
15"	HDPE	412 L.F.
18"	HDPE	123 L.F.

\* EXCLUDING ROOF LEADERS  
NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

OWNER / DEVELOPER  
MANGIONE ENTERPRISES OF TURF VALLEY, LP  
ATTN: LOUIS MANGIONE  
1205 YORK ROAD, PENTHOUSE  
LUTHERVILLE, MARYLAND 21093  
410.825.8400

STORM DRAIN, WATER & SEWER PROFILES  
VANTAGE CONDOMINIUMS AT TURF VALLEY  
(PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)  
ZONE: PGCC-1

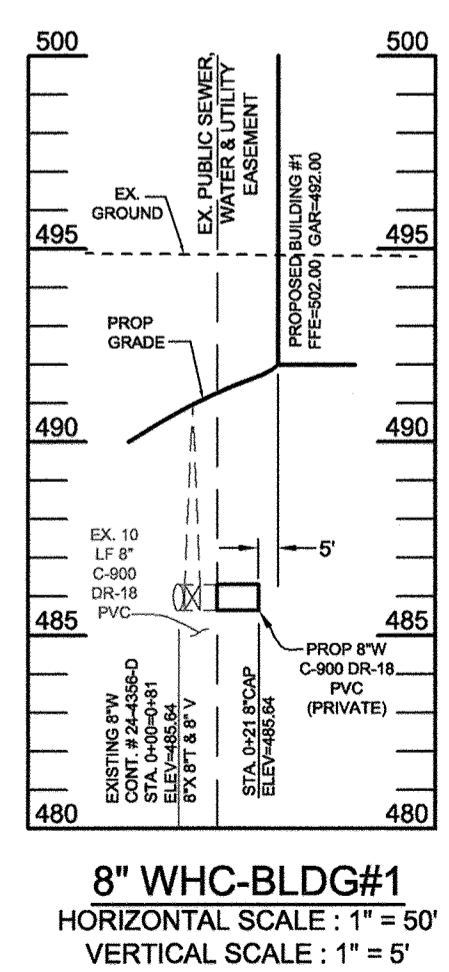
TAX MAP 17 GRIDS 7, 12 & 18 PARCELS 8 & 706  
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

Sill · Adcock & Associates · LLC  
Engineers · Surveyors · Planners  
3300 North Ridge Road, Suite 160  
Ellicott City, Maryland 21043  
Phone: 443.325.7682 Fax: 443.325.7685  
Email: info@sasland.com

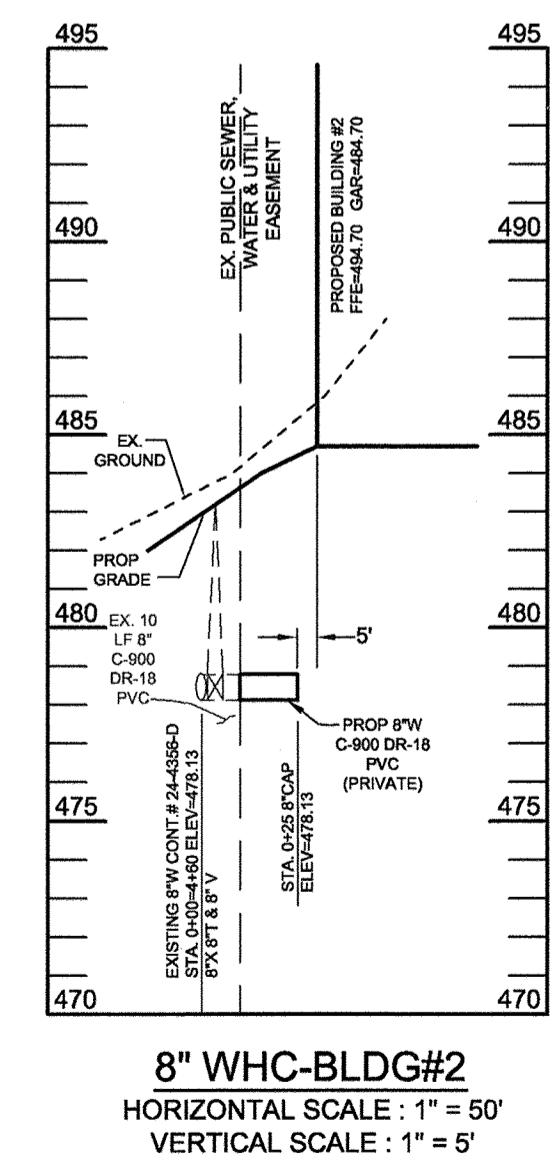
DESIGN BY: PS, BK  
DRAWN BY: JT, BK  
CHECKED BY: PS  
SCALE: AS SHOWN  
DATE: JULY 11, 2014  
PROJECT #: 09-060  
SHEET #: 10 of 21

NOTE: COORDINATES FOR CURB INLETS ARE AT CENTER FACE OF CURB, FOR MANHOLES AND GRATE INLETS, COORDINATES ARE AT CENTER OF STRUCTURE, FOR END SECTIONS, COORDINATES ARE AT CONNECTION WITH STORM DRAIN PIPE.  
\*ELEVATION IS TAKEN FROM THE TOP OF CURB AT THE LOW SIDE OF THE FLOWLINE.

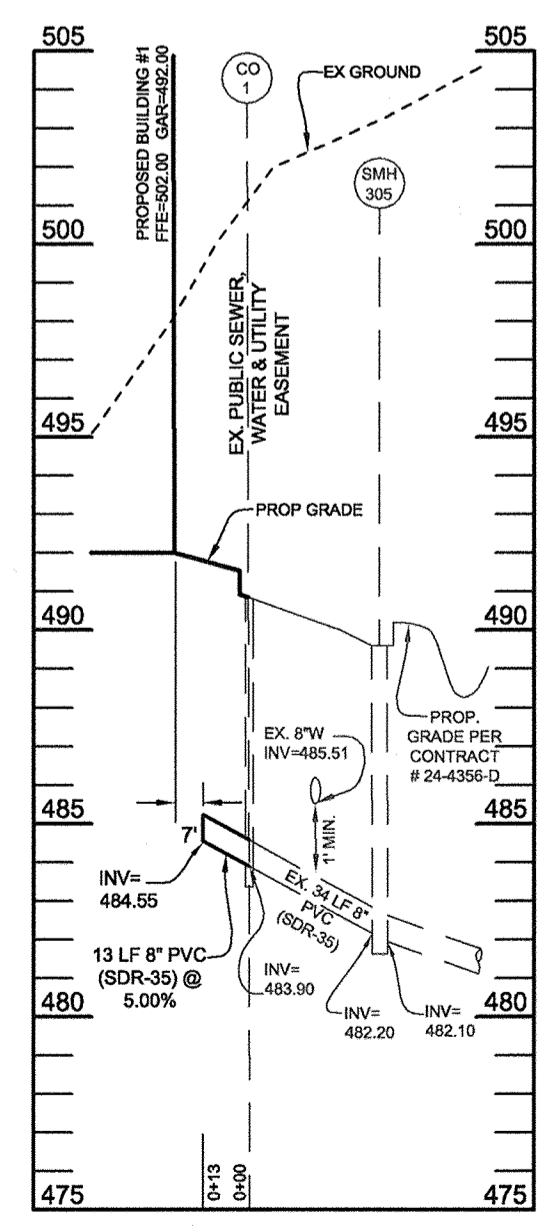
NO.	DESCRIPTION	DATE
1	REVISED PER NEW LAYOUT	7/11/14



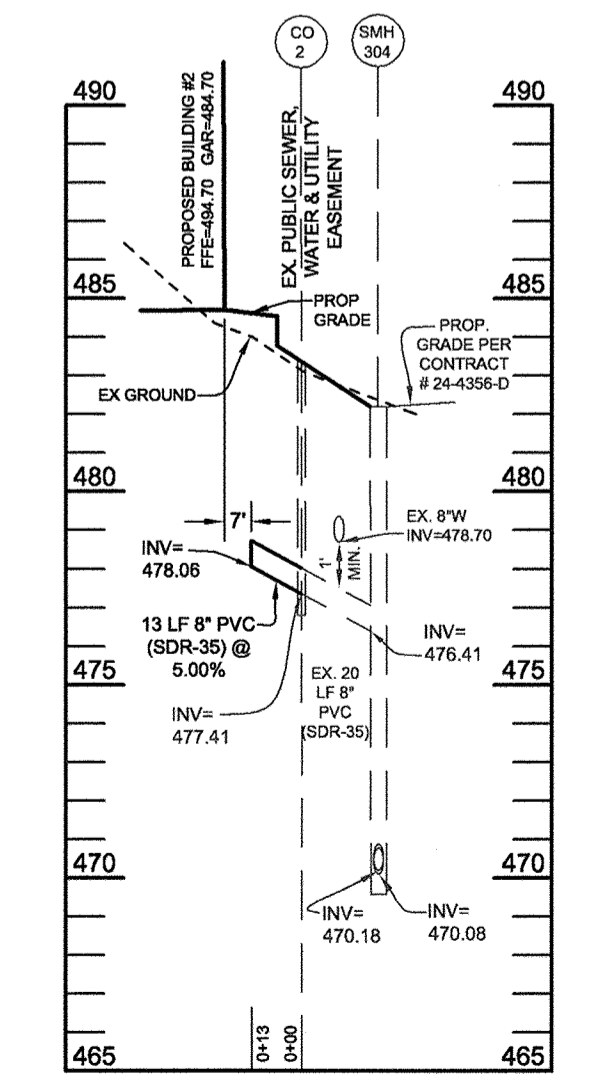
8" WHC-BLDG#1  
HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 5'



8" WHC-BLDG#2  
HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 5'



8" PRIVATE SEWER -BLDG 3  
HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 5'

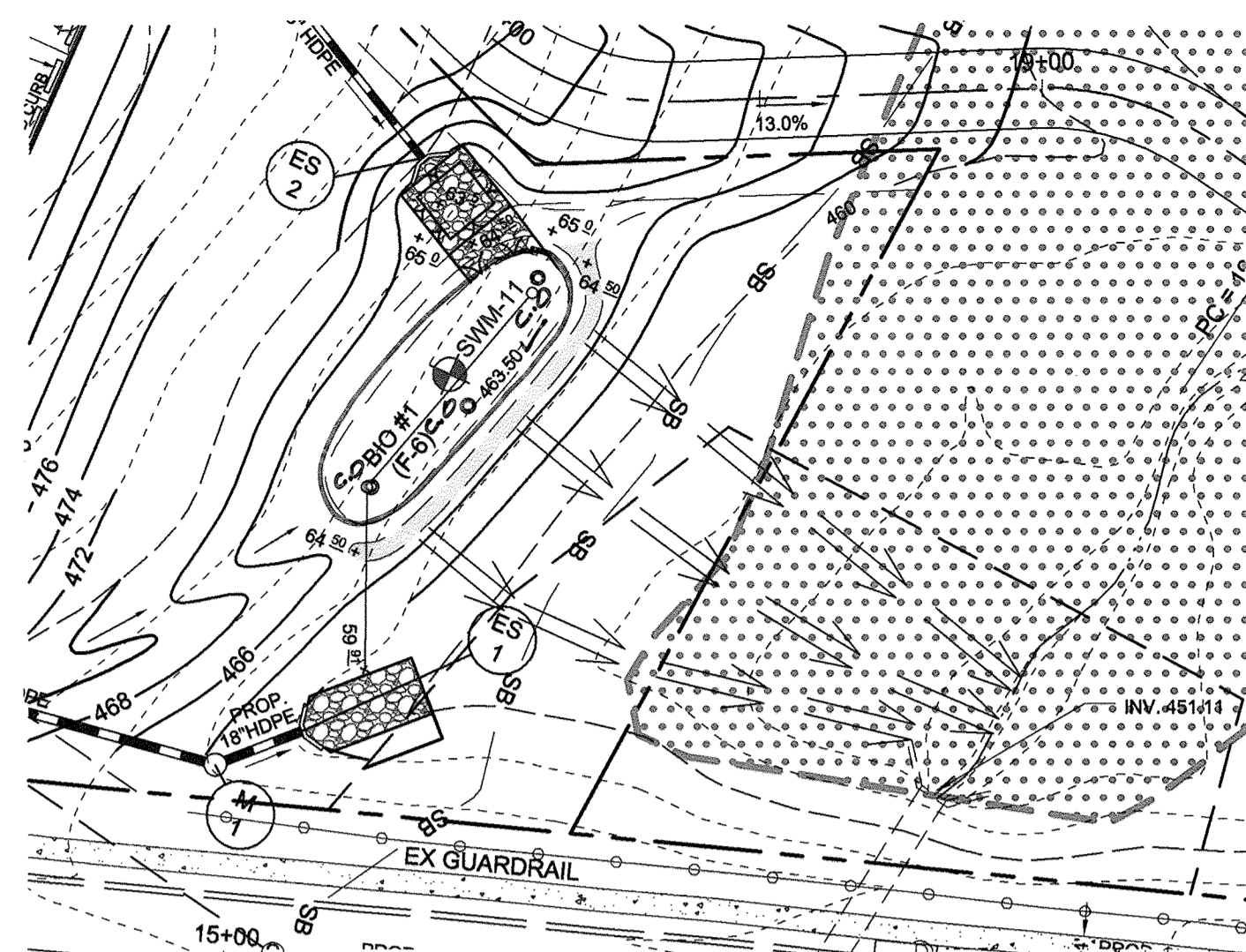


8" PRIVATE SEWER -BLDG 4  
HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 5'

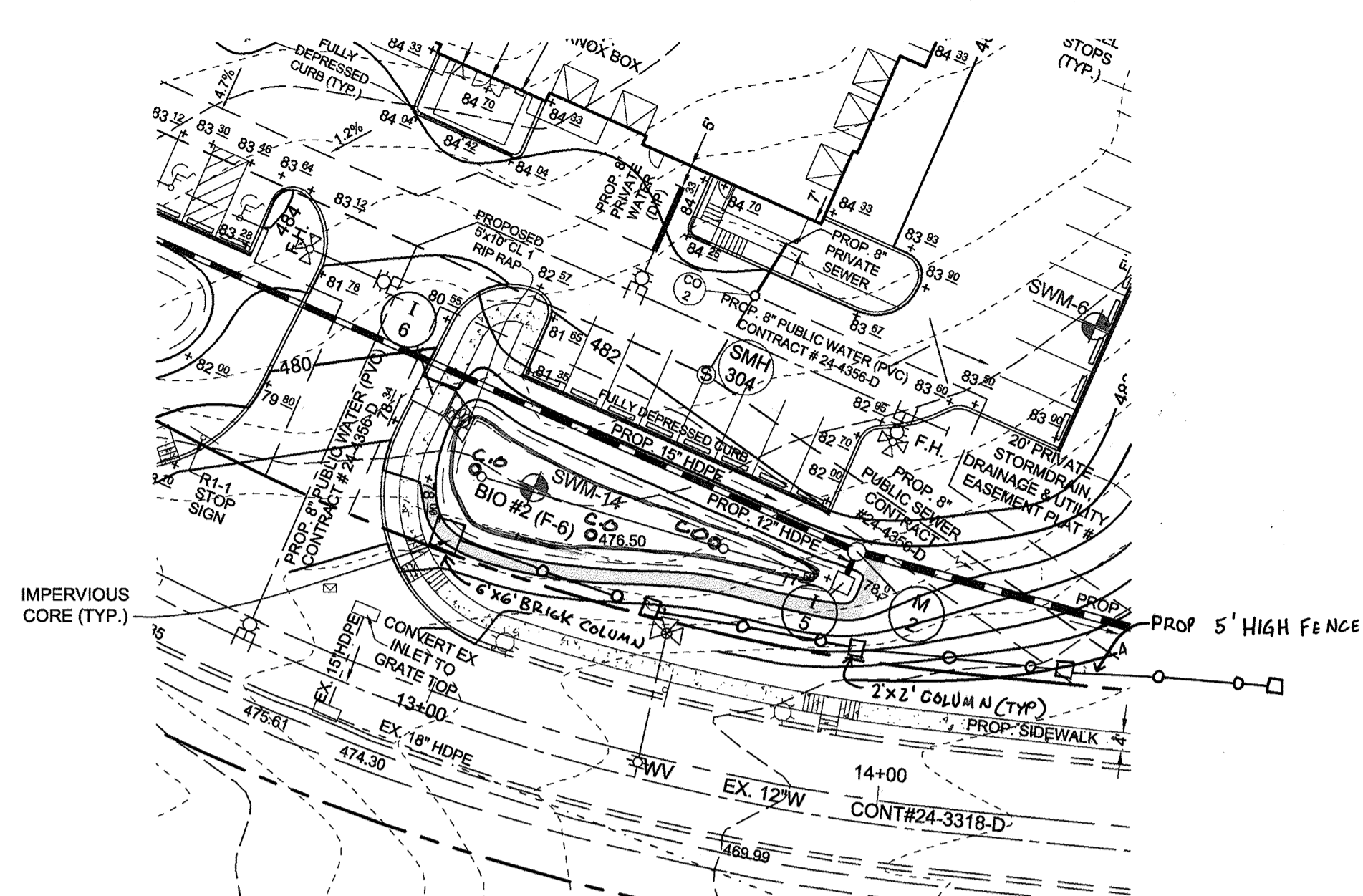
APPROVED  
PLANNING BOARD OF HOWARD COUNTY  
DATE: 04/01/2010

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DIRECTOR

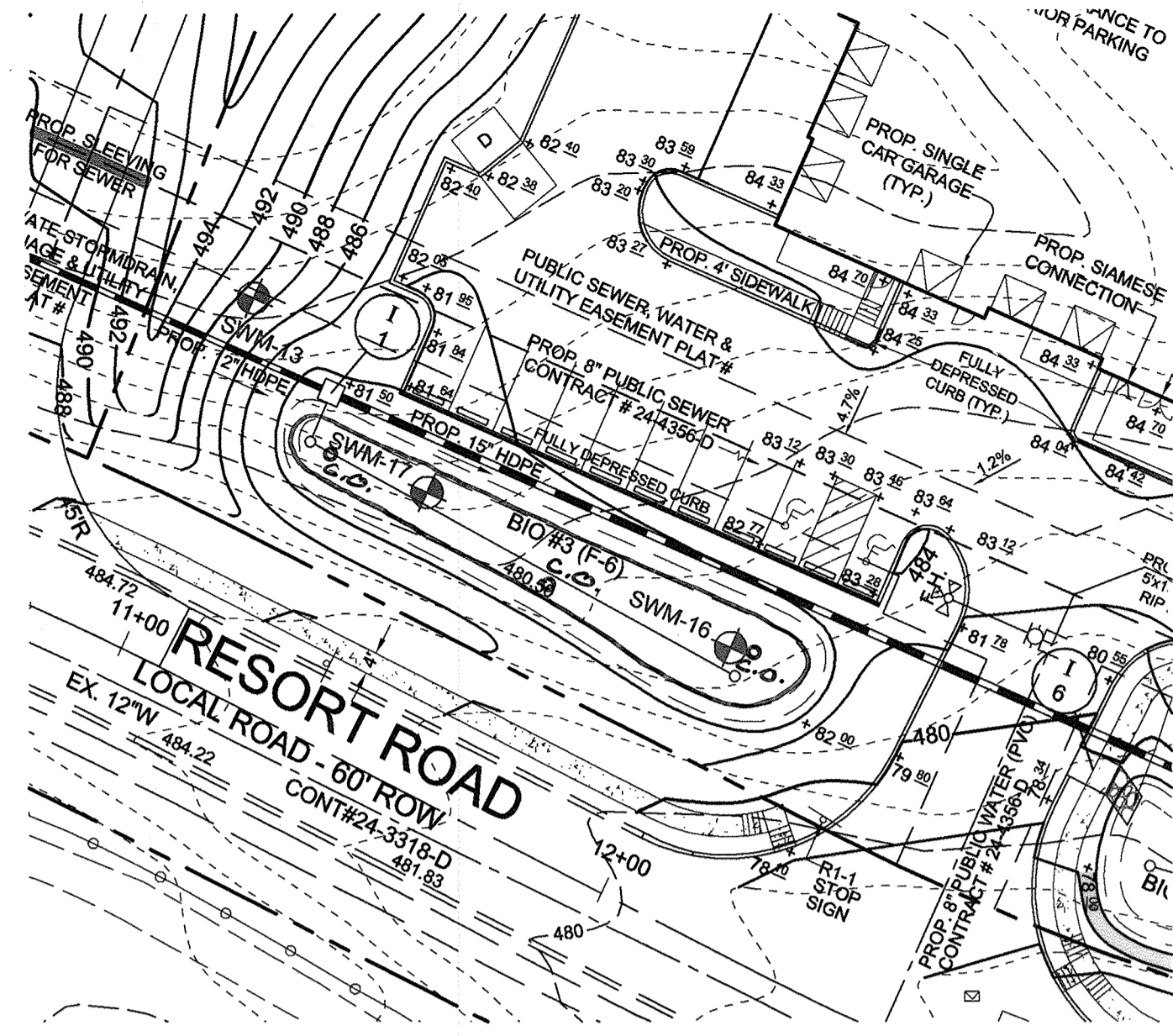
8-14-14  
9/2/14  
9/2/14



PLAN VIEW  
SCALE: 1"=30'



PLAN VIEW  
SCALE: 1"=30'



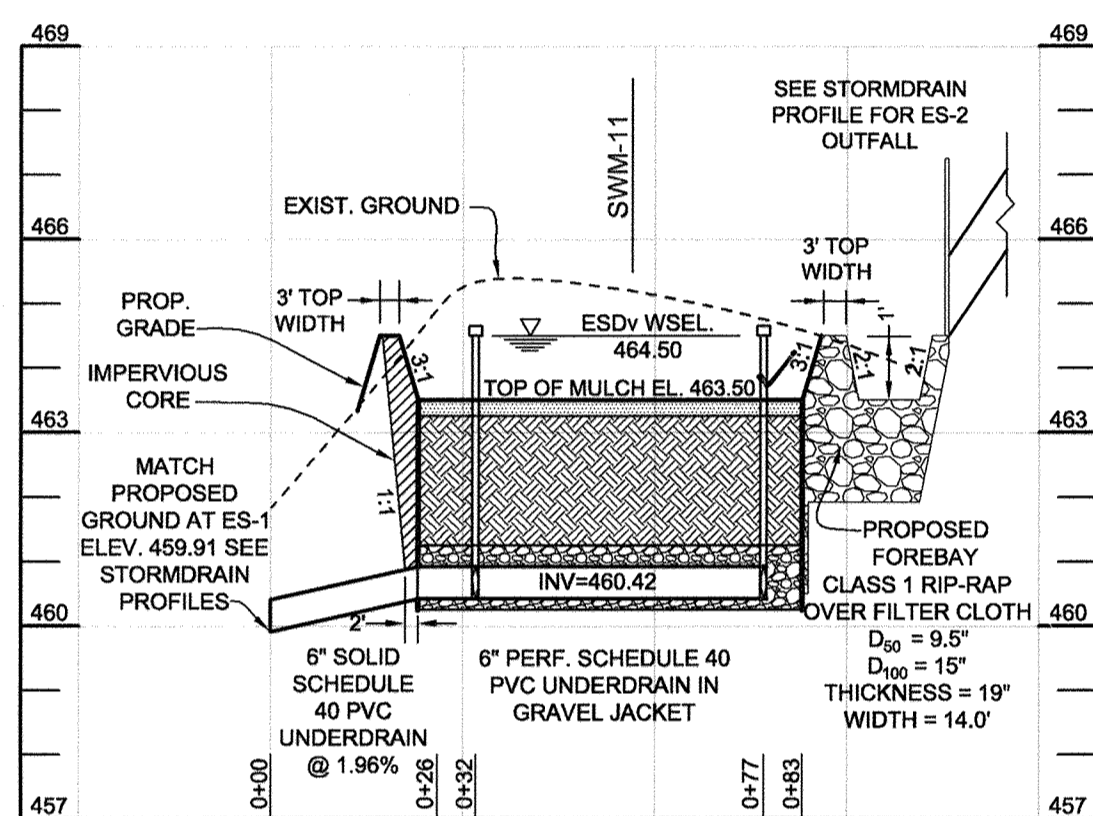
PLAN VIEW  
SCALE: 1"=30'

**LEGEND**

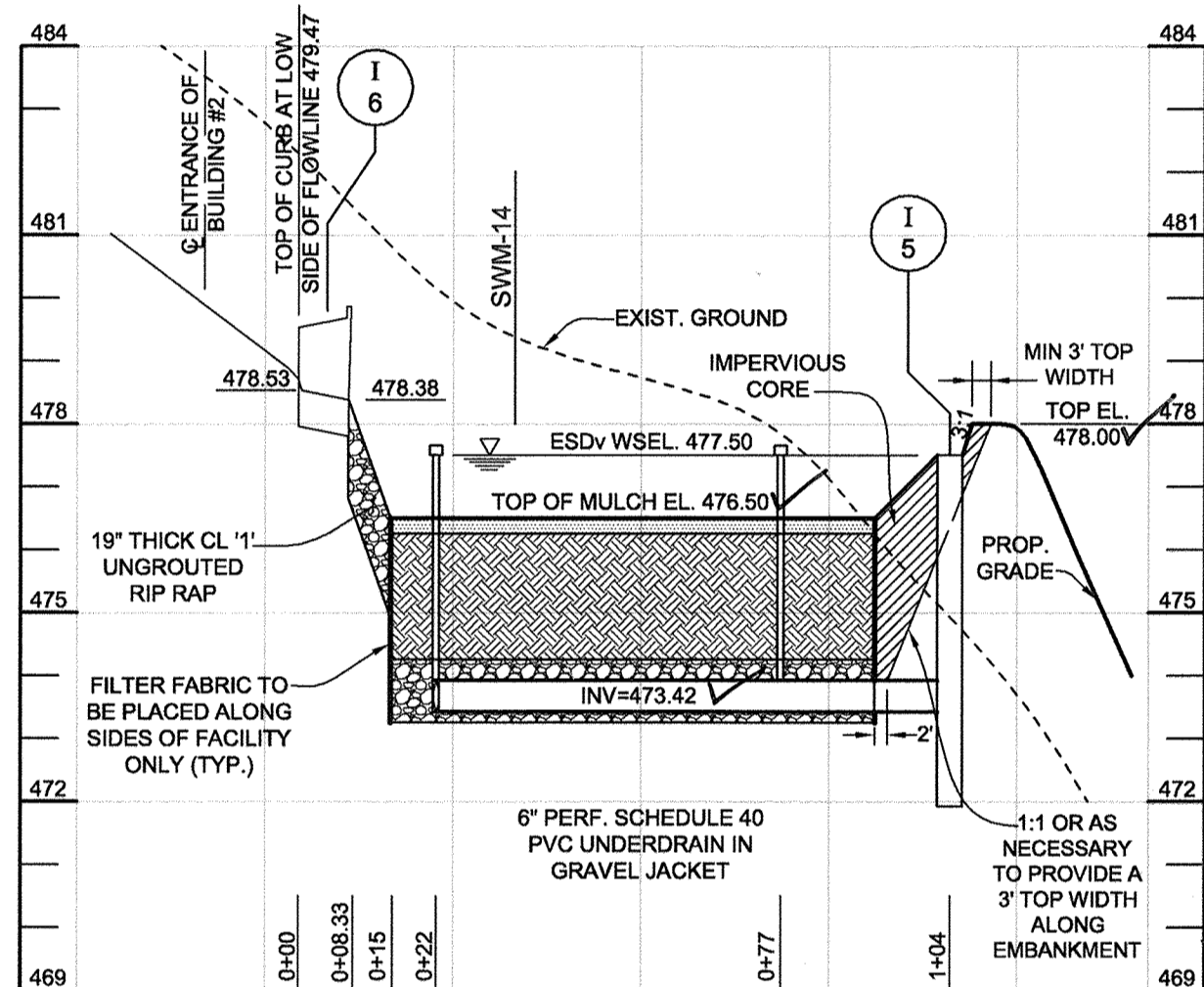
EXISTING CONTOUR	---
PROPOSED CONTOUR	---
EXISTING SPOT ELEVATION	---
PROPOSED SPOT ELEVATION	---
DIRECTION OF FLOW	---
EXISTING TREELINE	---
PROPOSED TREELINE	---
SOIL BOUNDARY	---
EXISTING SWM SOIL BORINGS	SWM-1
EXISTING STREAM BUFFER	SB
EXISTING FLOODPLAIN	---
PROPOSED BIORETENTION FACILITY (F-6)	BIO 2
SHEETFLOW TO CONSERVATION AREAS (N-3)	---

NOTE: FOR STORMDRAIN PROFILES SEE SHEET 10.

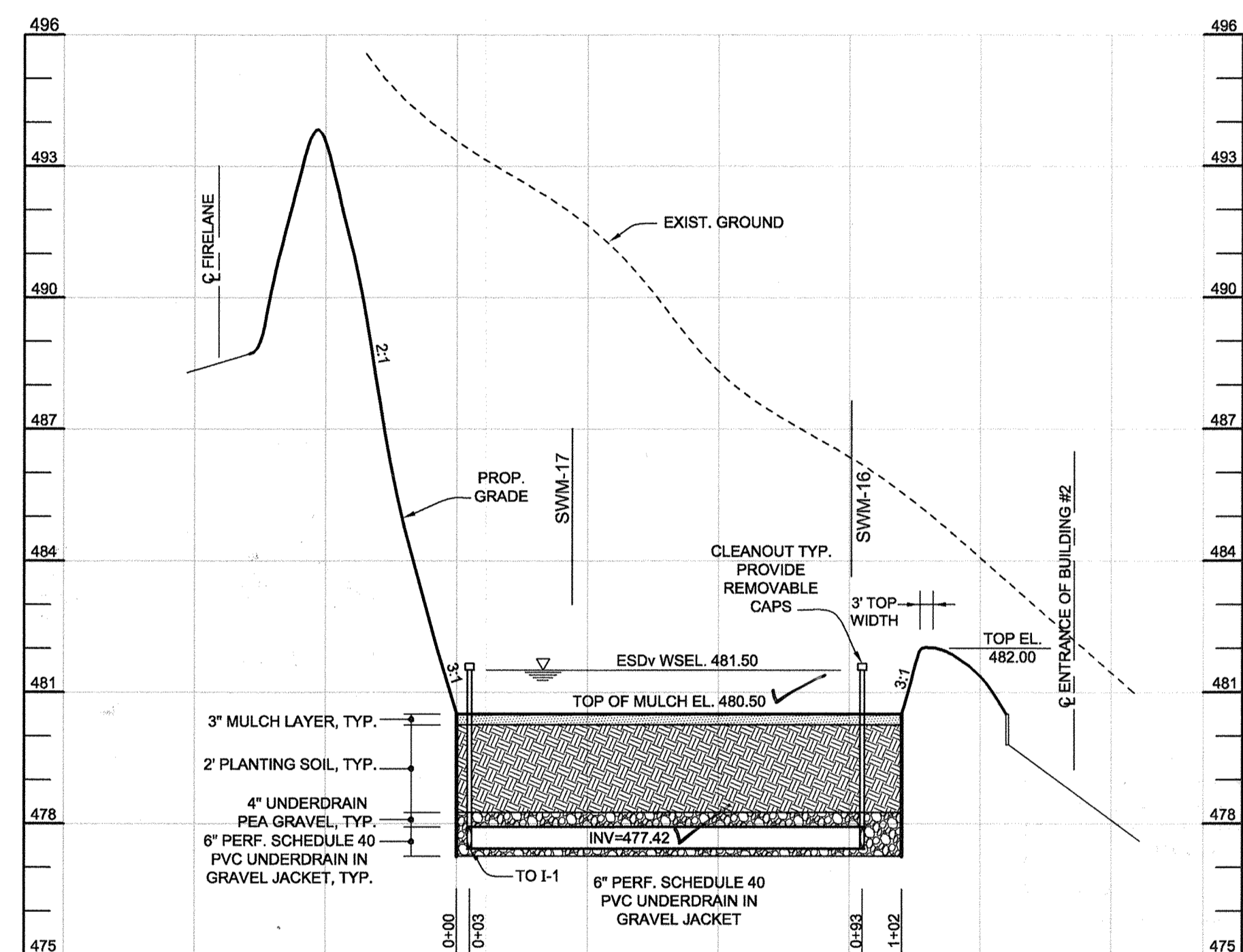
NOTE: FOR BIORETENTION SPECIFICATIONS AND SWM BORING LOGS SEE SHEET 13.



BIORETENTION (F-6) FACILITY 1 PROFILE  
HORIZONTAL SCALE: 1" = 30'  
VERTICAL SCALE: 1" = 3'



BIORETENTION (F-6) FACILITY 2 PROFILE  
HORIZONTAL SCALE: 1" = 30'  
VERTICAL SCALE: 1" = 3'



BIORETENTION (F-6) FACILITY 3 PROFILE  
HORIZONTAL SCALE: 1" = 30'  
VERTICAL SCALE: 1" = 3'

**STORMWATER MANAGEMENT SUMMARY TABLE**

D.A.	Pe		ESDV	
	REQUIRED	PROVIDED	REQUIRED	PROVIDED
1	1.7"	1.7"	2,923 CF	2,923 CF
2	1.7"	1.7"	1,503 CF	1,503 CF
3	1.7"	1.7"	2,226 CF	2,226 CF
4	1.7"	1.7"	3,271 CF	3,271 CF
5	1.7"	1.7"	1,655 CF	1,655 CF
6	1.7"	1.7"	1,424 CF	1,424 CF

- NOTES:
- TREATMENT FOR THE ENVIRONMENTAL SITE DESIGN VOLUMES (ESDV) WILL BE PROVIDED FOR AS FOLLOWS:  
- DRAINAGE AREA 1: BIORETENTION FACILITY (F-6) & SHEETFLOW TO CONSERVATION AREA (N-3)  
- DRAINAGE AREAS 2-6: BIORETENTION FACILITIES (F-6)  
- FIRE LANE: NON-ROOF TOP DISCONNECTS (N-2)  
- CHANNEL PROTECTION IS NOT REQUIRED SINCE ALL ESDV HAVE BEEN TREATED FULLY.
  - OVERBANK FLOOD PROTECTION VOLUME, QP, IS NOT REQUIRED FOR THIS SITE.
  - EXTREME FLOOD VOLUME, QF, IS NOT REQUIRED FOR THIS SITE.

AS-BUILT CERTIFICATION  
I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on this "AS-BUILT" Plan meet the Approved Plans and Specifications.

Donald Mason, P.E.

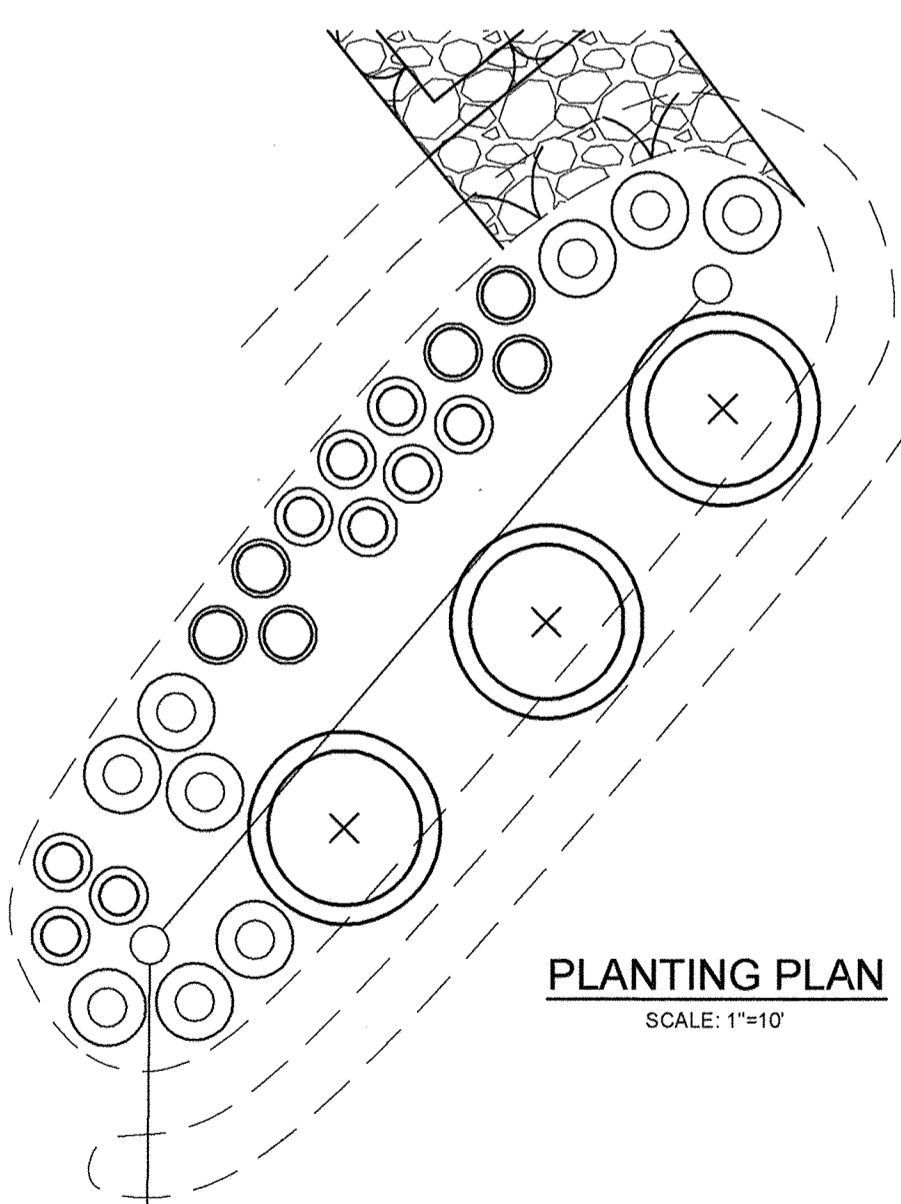
Date: 8-6-18

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. 21A23 Expiration Date: 12/21/16

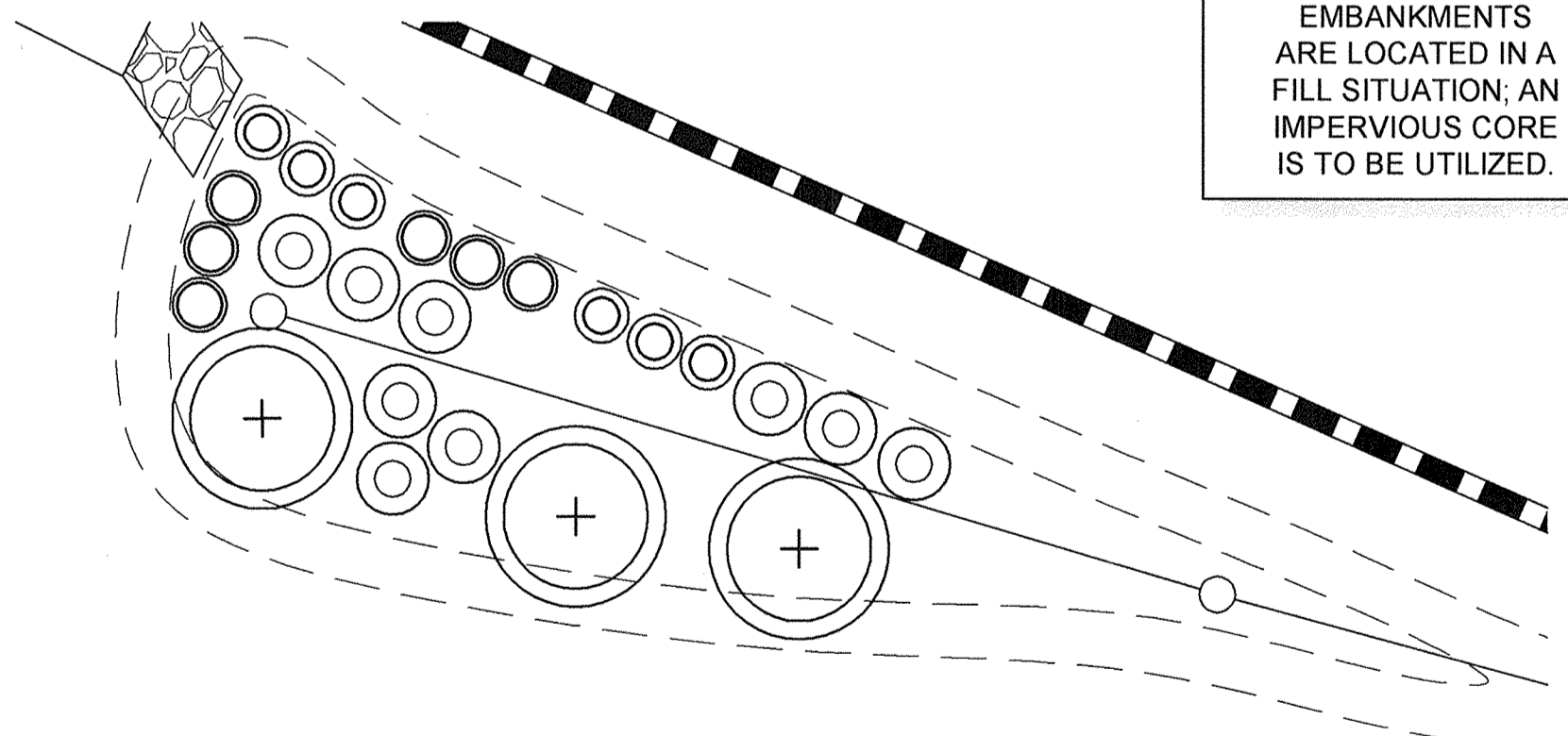
FOR REVISIONS BY O.E.T. ONLY  
DONALD MASON  
8-6-18 AS-BUILT

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

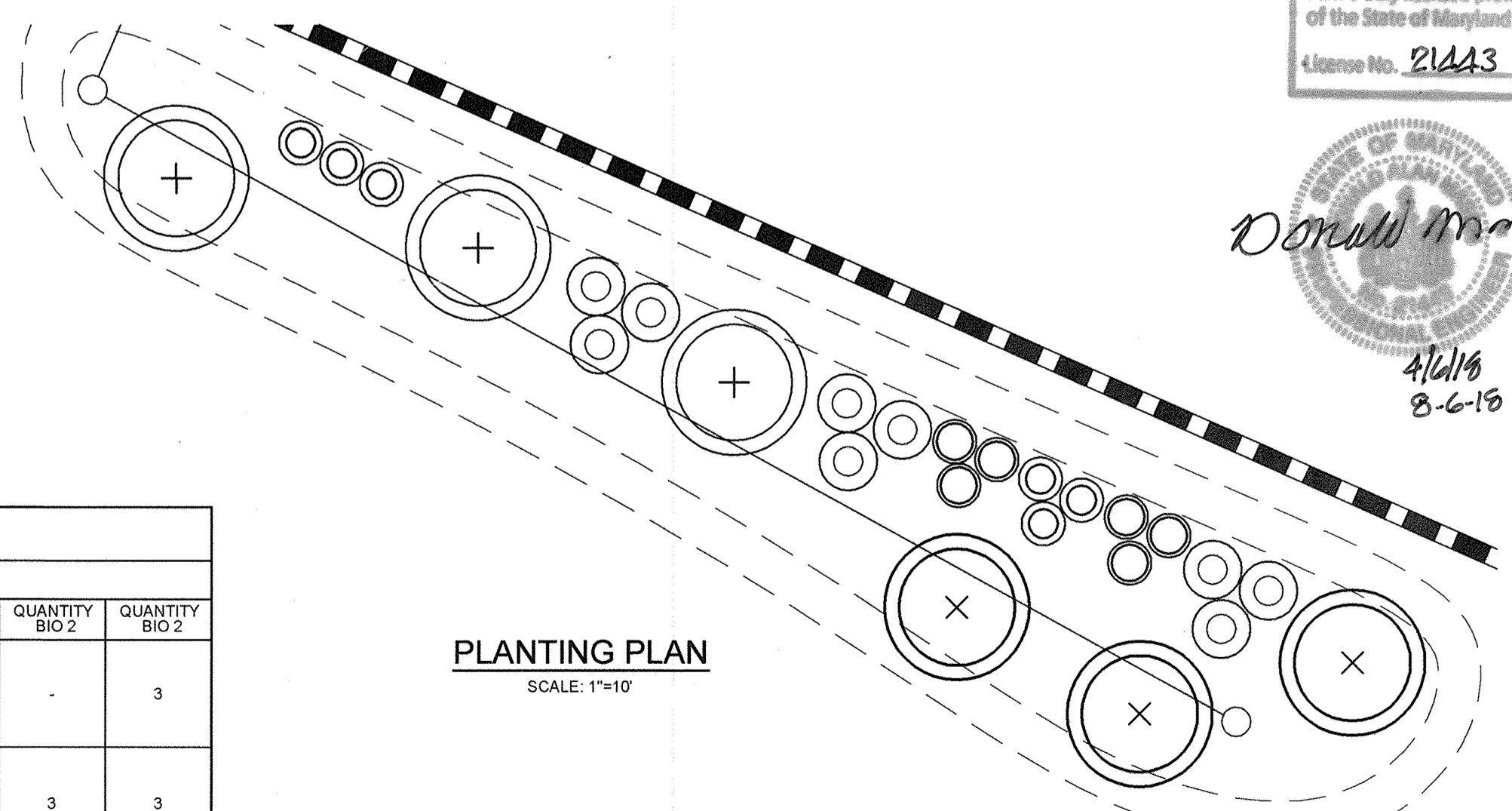
OWNER / DEVELOPER  
MANGIONE ENTERPRISES OF TURF VALLEY, LP  
ATTN: LOUIS MANGIONE  
1205 YORK ROAD, PENTHOUSE  
LUTHERVILLE, MARYLAND 21093  
410.825.8400



PLANTING PLAN  
SCALE: 1"=10'



PLANTING PLAN  
SCALE: 1"=10'



PLANTING PLAN  
SCALE: 1"=10'

**BIORETENTION PLANT LIST**

LEGEND	SHRUBS	KEY	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	REMARKS	QUANTITY BIO 1	QUANTITY BIO 2	QUANTITY BIO 2
(X)	CAM	CORNUS AMOMUM	SILKY DOGWOOD	AS SHOWN (MIN. 10' O.C.)	18"-24" HT.	CONT.		3	-	3
(+)	VDE	VIBURNUM DENTATUM	ARROWWOOD	AS SHOWN (MIN. 10' O.C.)	18"-24" HT.	CONT.		-	3	3
(O)	HERBACEOUS SPECIES	EFM	EUPATORIUM FISTULOSUM	JOE-PYE WEED	AS SHOWN (MIN. 4' O.C.)	1 QT./12" HT.	CONT. (3' O.C.)	9	9	9
(O)	MDI	MONARDA DIDYMA	BEEBALM	AS SHOWN (MIN. 3' O.C.)	1 QT.	CONT.		9	6	6
(O)	RLA	RUDEBECKIA LACINIATA	TALL CONEFLOWER	AS SHOWN (MIN. 3' O.C.)	1 QT.	CONT.		6	6	6

NOTE: PLANT MATERIAL MUST COVER 50% OF THE MULCH AREA AT MATURE GROWTH.  
\*INTERSPERSE PLANTINGS THROUGHOUT BIORETENTION FILTER/MULCH AREA

APPROVED  
PLANNING BOARD OF HOWARD COUNTY

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division: *Chad Edwards* 8-14-18  
 Chief, Division of Land Development: *Keith Henderson* 9/26/18  
 Director: *Donald Mason* 9/18/18

DATE: 04/01/2010

REVISIONS

NO.	DESCRIPTION	DATE
1	ADD FENCE TO PLAN VIEW BIO # 2	
1	REVISED PER NEW LAYOUT	7/11/14

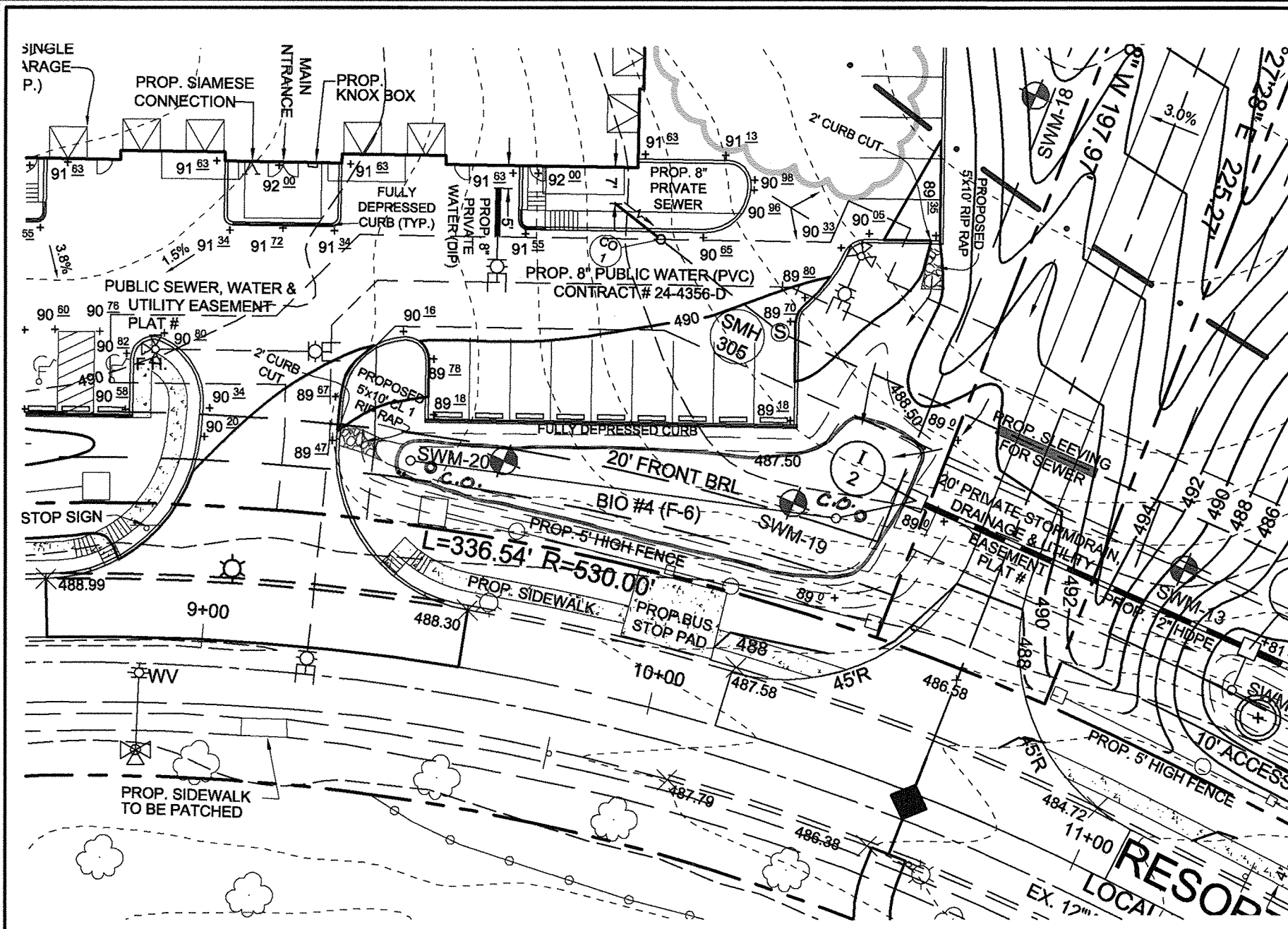
**STORMWATER MANAGEMENT DETAILS**  
**VANTAGE CONDOMINIUMS AT TURF VALLEY**  
 (PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)  
 ZONE: PGCC-1

TAX MAP 17 GRIDS 7, 12 & 18 PARCELS 8 & 706  
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

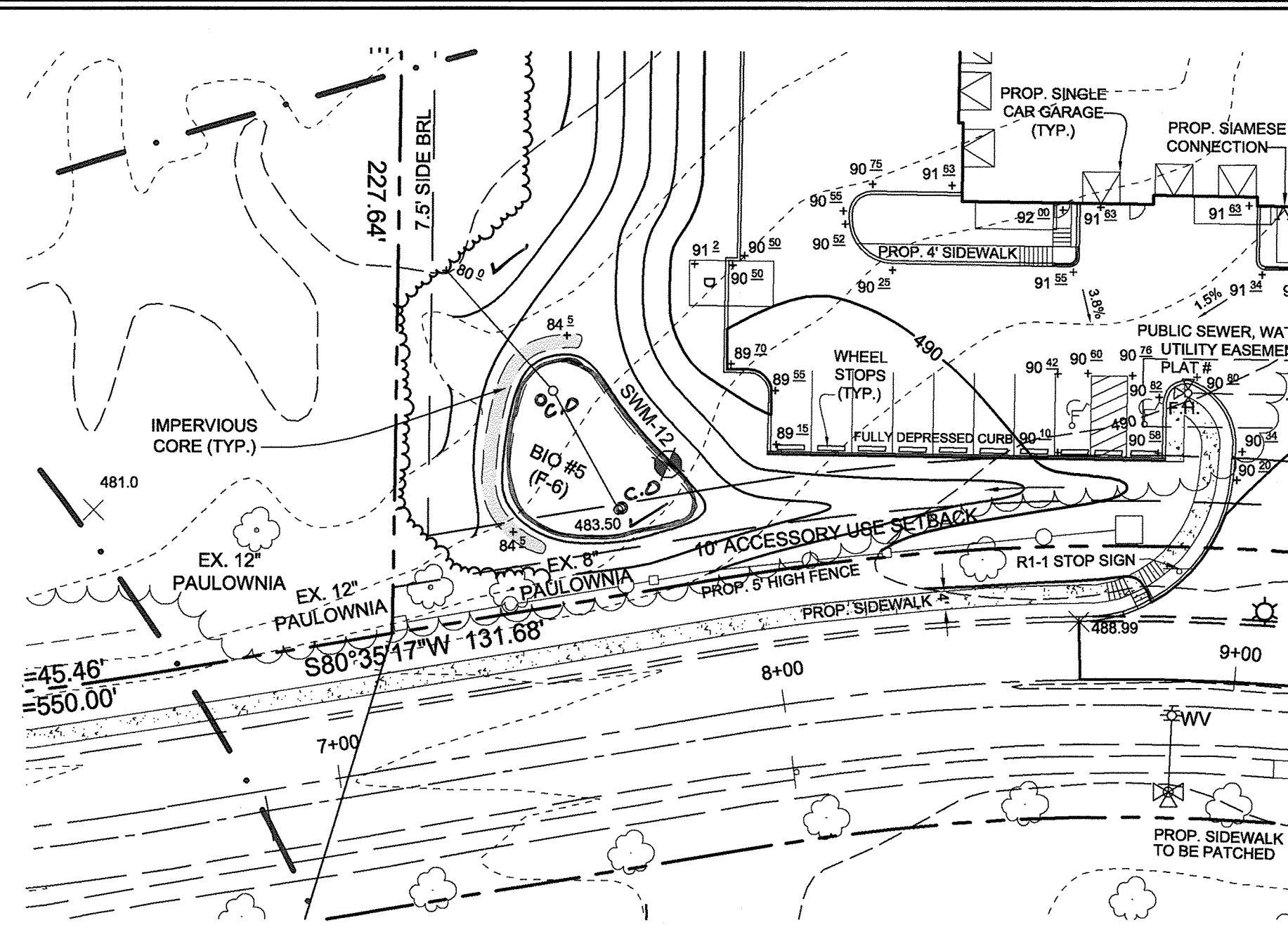
**Sill · Adcock & Associates · LLC**  
 Engineers · Surveyors · Planners  
 3300 North Ridge Road, Suite 160  
 Ellicott City, Maryland 21043  
 Phone: 443.325.7682 Fax: 443.325.7685  
 Email: info@sadland.com

DESIGN BY: PS, BK  
 DRAWN BY: JT, BK  
 CHECKED BY: PS  
 SCALE: AS SHOWN  
 DATE: JULY 11, 2014  
 PROJECT #: 09-060  
 SHEET #: 11 of 21

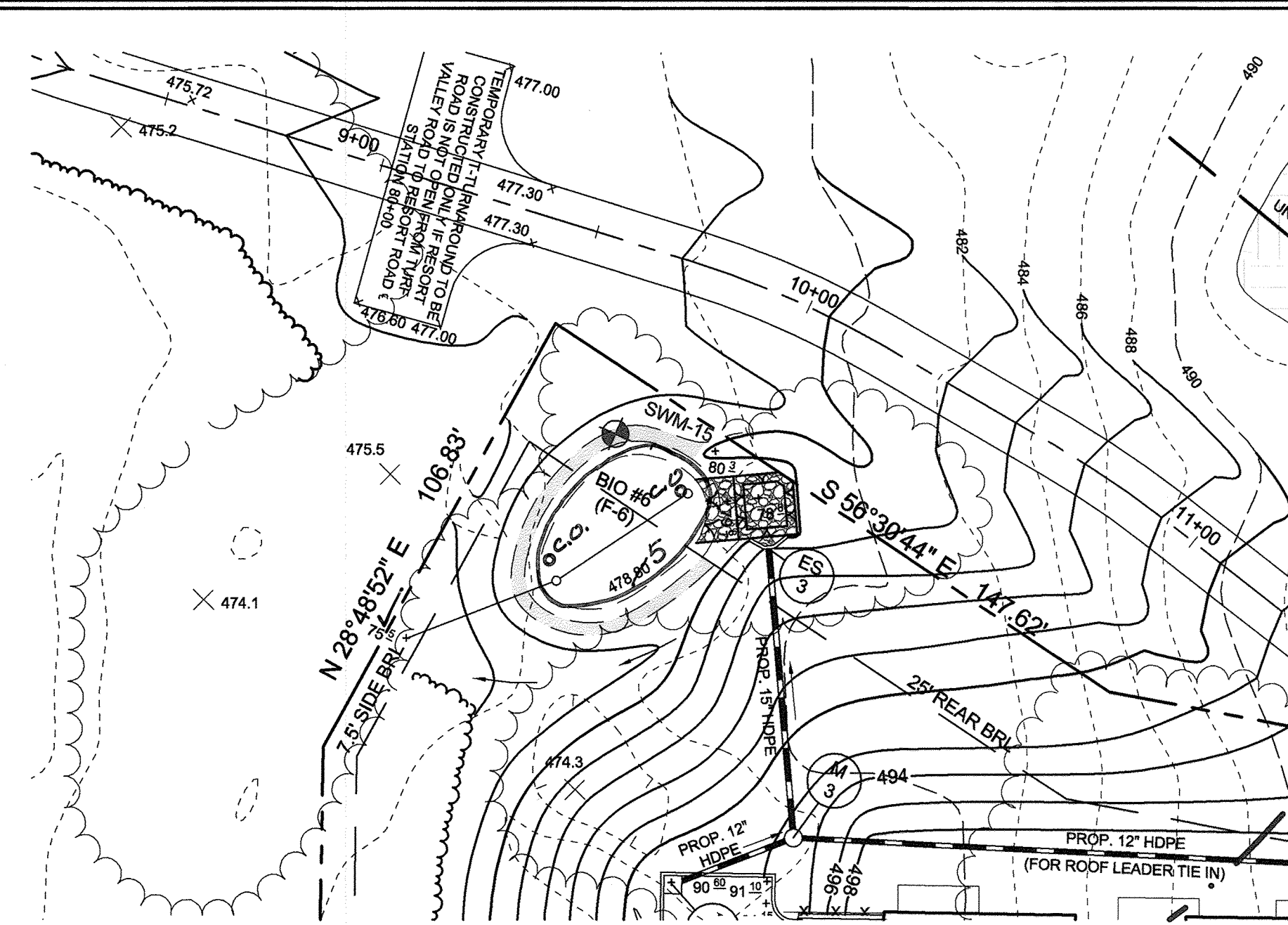
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 30225, EXPIRATION DATE: JUNE 20, 2015.



PLAN VIEW  
SCALE: 1"=30'



PLAN VIEW  
SCALE: 1"=30'



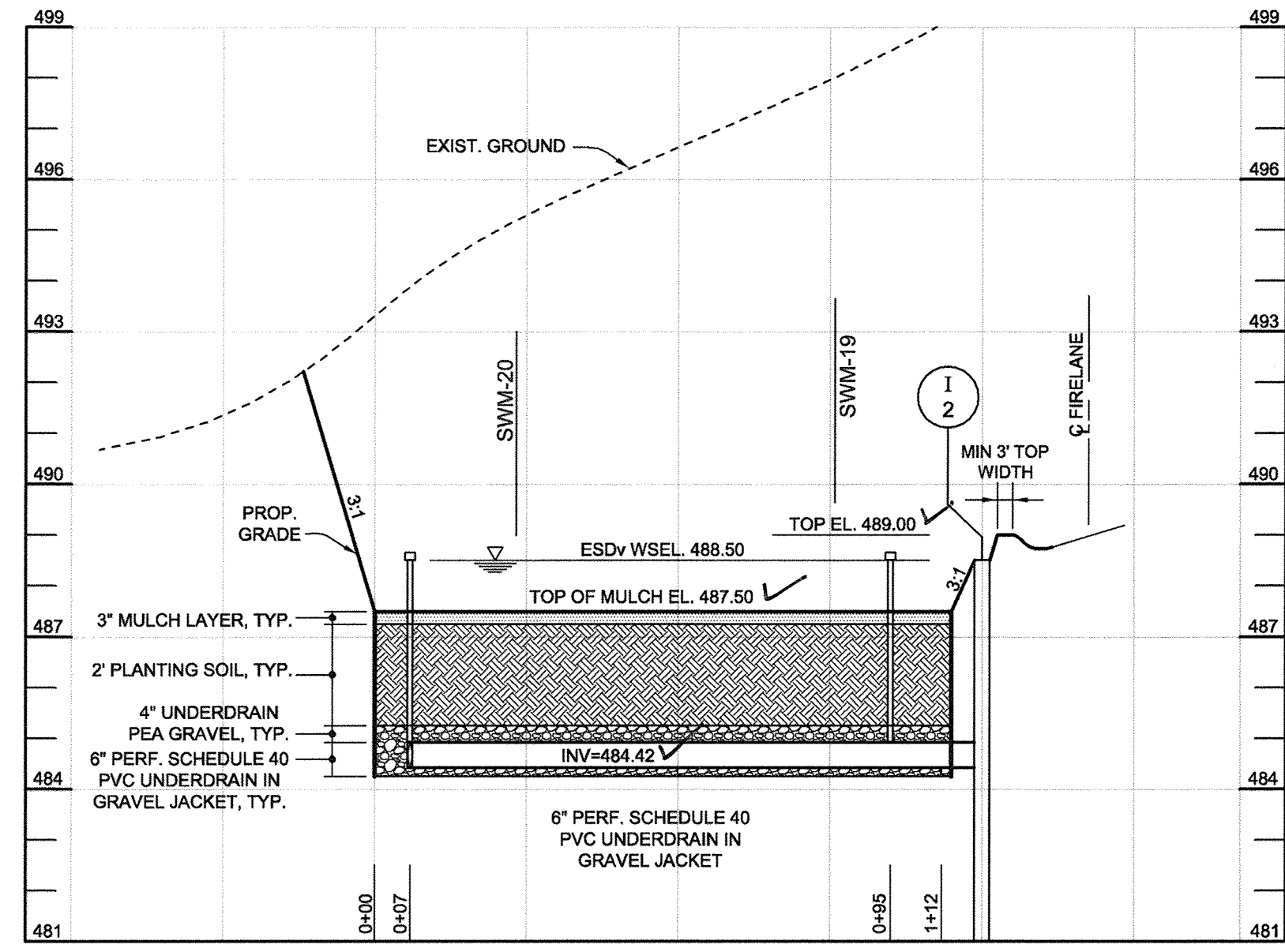
PLAN VIEW  
SCALE: 1"=30'

**LEGEND**

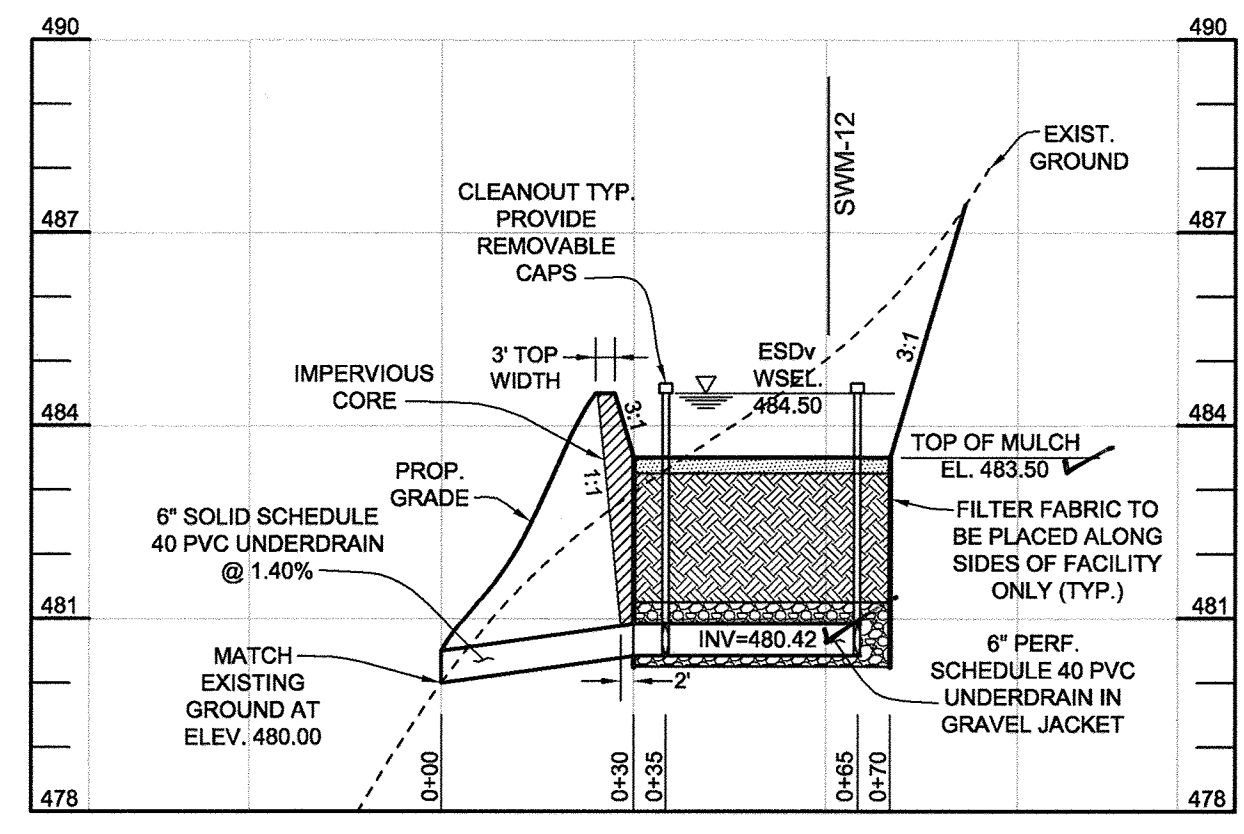
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- DIRECTION OF FLOW
- EXISTING TREETLINE
- PROPOSED TREETLINE
- SOIL BOUNDARY
- EXISTING SWM SOIL BORINGS
- PROPOSED BIORETENTION FACILITY (F-6)

NOTE: FOR STORMDRAIN PROFILES SEE SHEET 10.

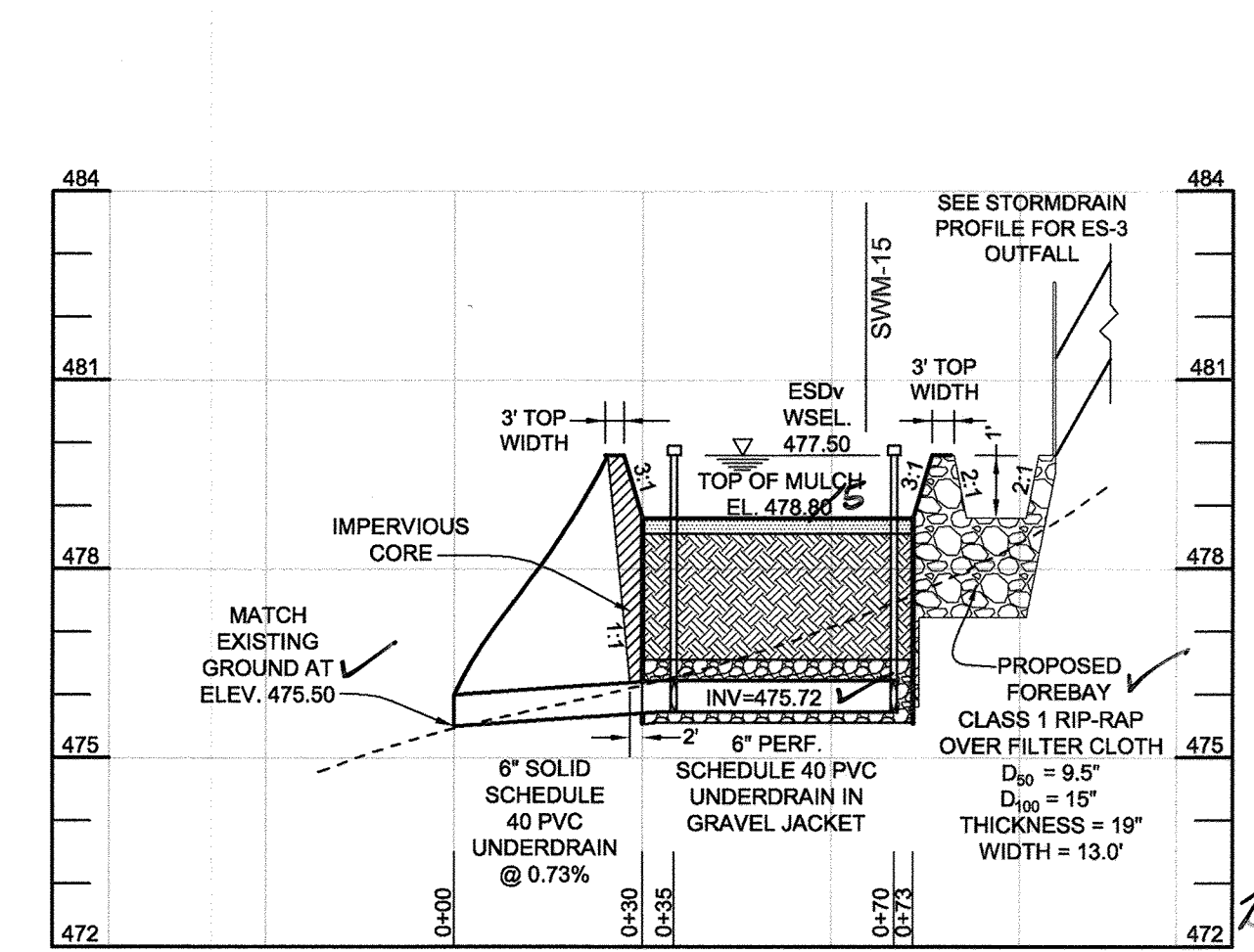
NOTE: FOR BIORETENTION SPECIFICATIONS AND SWM BORING LOGS SEE SHEET 13.



BIORETENTION (F-6) FACILITY 4 PROFILE  
HORIZONTAL SCALE: 1" = 30'  
VERTICAL SCALE: 1" = 3'



BIORETENTION (F-6) FACILITY 5 PROFILE  
HORIZONTAL SCALE: 1" = 30'  
VERTICAL SCALE: 1" = 3'



BIORETENTION (F-6) FACILITY 6 PROFILE  
HORIZONTAL SCALE: 1" = 30'  
VERTICAL SCALE: 1" = 3'

**STORMWATER MANAGEMENT SUMMARY TABLE**

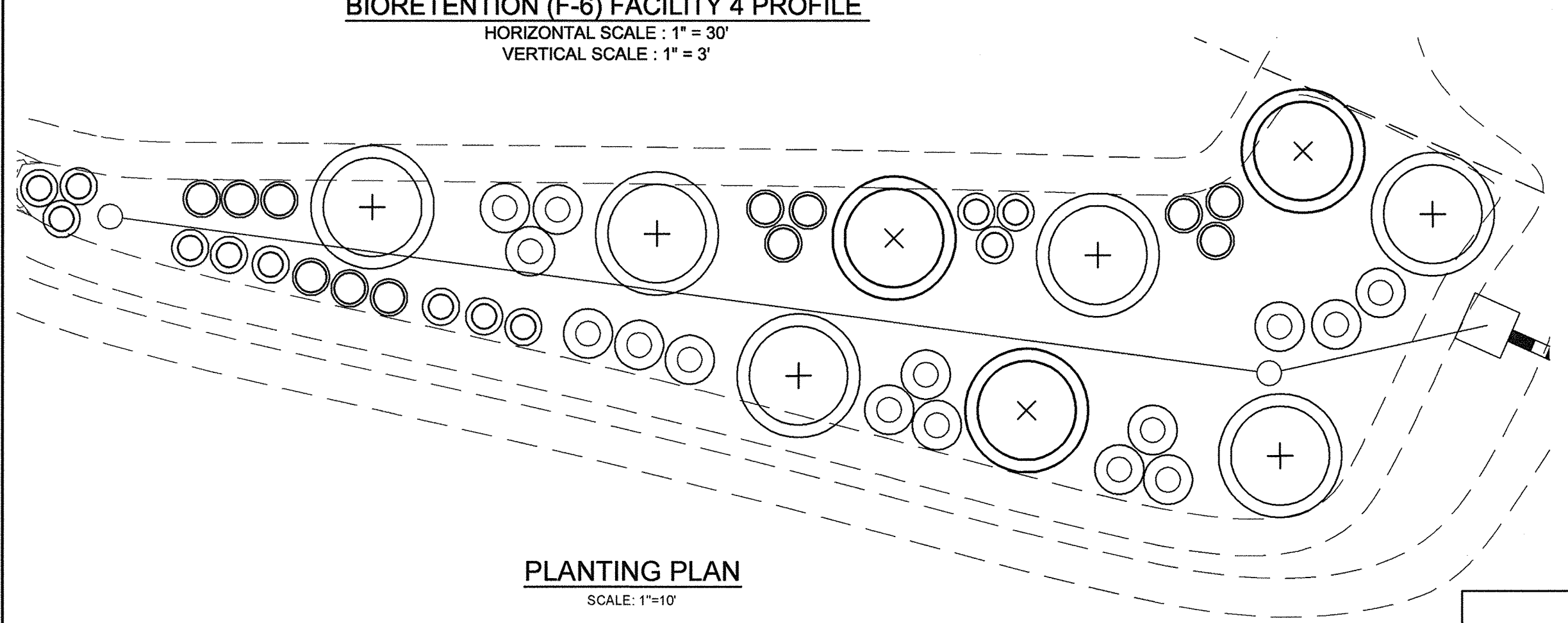
D.A.	P <sub>0</sub>		ESDV	
	REQUIRED	PROVIDED	REQUIRED	PROVIDED
1	1.7'	1.7'	2,923 CF	2,923 CF
2	1.7'	1.7'	1,503 CF	1,503 CF
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5	1.7'	1.7'	1,655 CF	1,655 CF
6	1.7'	1.7'	1,424 CF	1,424 CF

- NOTES:
- TREATMENT FOR THE ENVIRONMENTAL SITE DESIGN VOLUMES (ESDV) WILL BE PROVIDED FOR AS FOLLOWS:
    - DRAINAGE AREA 1: BIORETENTION FACILITY (F-6) & SHEETFLOW TO CONSERVATION AREA (N-3)
    - DRAINAGE AREAS 2-6: BIORETENTION FACILITIES (F-6)
    - FIRE LANE: NON-ROOF TOP DISCONNECTS (N-2)
    - CHANNEL PROTECTION IS NOT REQUIRED SINCE ALL ESDV HAVE BEEN TREATED FULLY.
    - OVERBANK FLOOD PROTECTION VOLUME, QP, IS NOT REQUIRED FOR THIS SITE.
    - EXTREME FLOOD VOLUME, OF, IS NOT REQUIRED FOR THIS SITE.

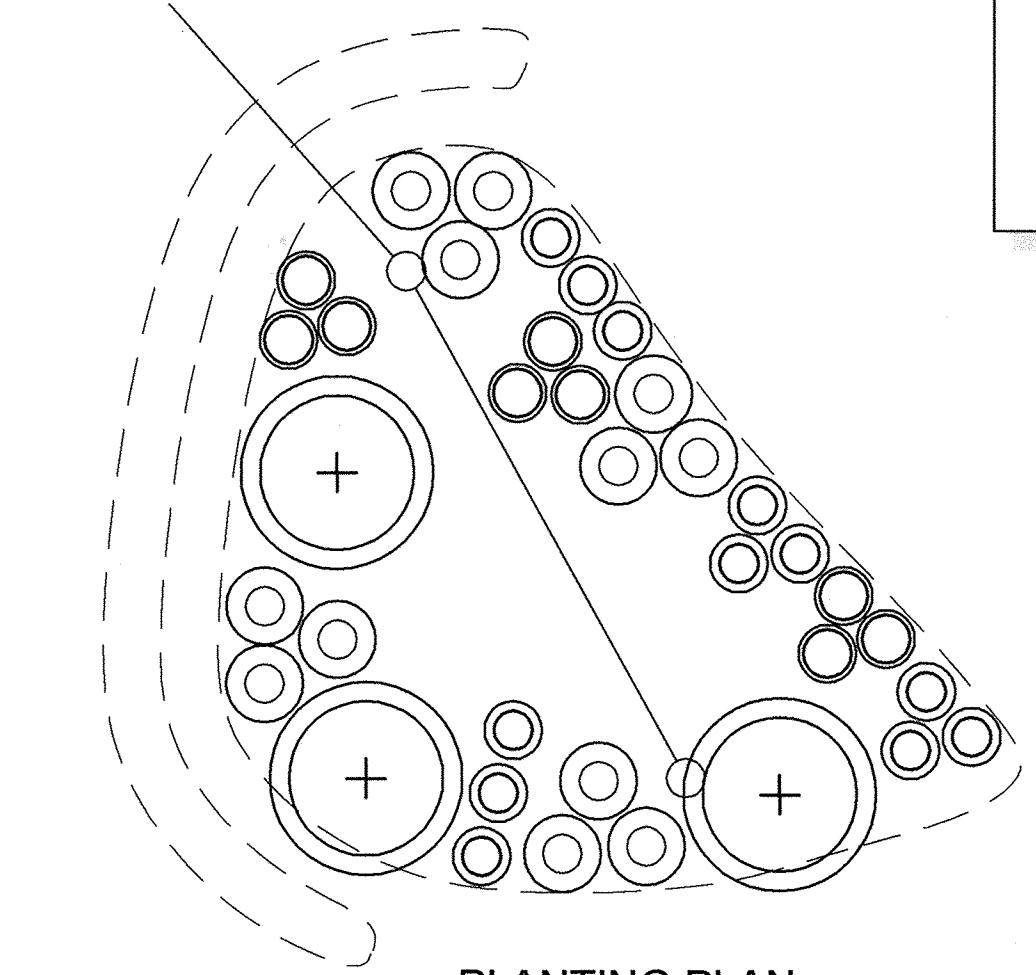


**AS-BUILT CERTIFICATION**  
I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on this "AS-BUILT" Plan meet the Approved Plans and Specifications.  
Donald Mason, P.E. Date: 8-6-18

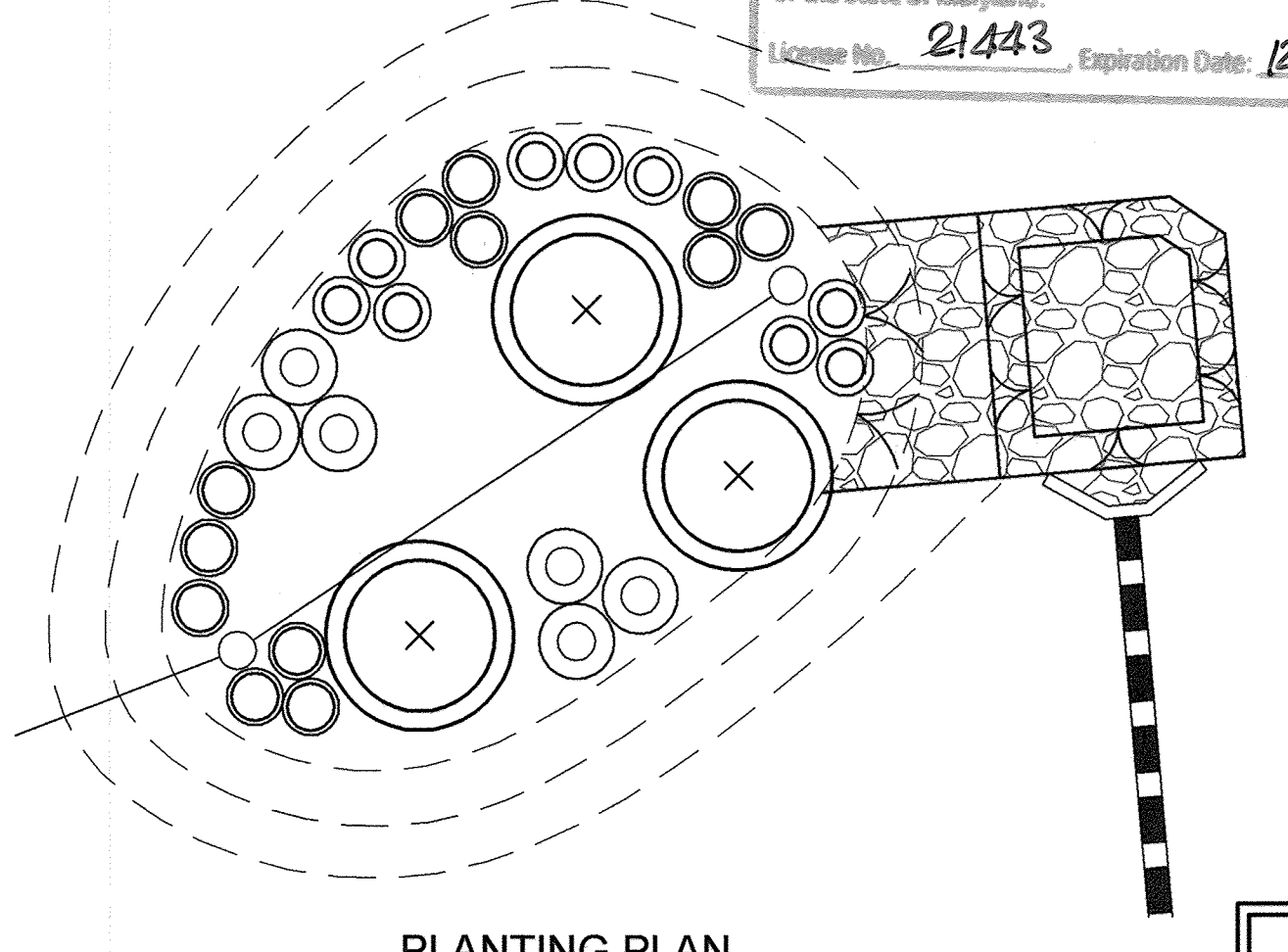
NOTE: WHERE EMBANKMENTS ARE LOCATED IN A FILL SITUATION; AN IMPERVIOUS CORE IS TO BE UTILIZED.



PLANTING PLAN  
SCALE: 1"=10'



PLANTING PLAN  
SCALE: 1"=10'



PLANTING PLAN  
SCALE: 1"=10'

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

**OWNER / DEVELOPER**  
MANGIONE ENTERPRISES OF TURF VALLEY, LP  
ATTN: LOUIS MANGIONE  
1205 YORK ROAD, FENTHOUSE  
LUTHERVILLE, MARYLAND 21093  
410.825.8400

**BIORETENTION PLANT LIST**

LEGEND	SHRUBS					HERBACEOUS SPECIES		
KEY	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	REMARKS	QUANTITY BIO 3	QUANTITY BIO 4	QUANTITY BIO 5
(X)	CAM CORNUS AMOMUM	SILKY DOGWOOD	AS SHOWN (MIN. 10' O.C.)	18'-24" HT.	CONT.	3	3	3
(+)	VDE VIBURNUM DENTATUM	ARROWWOOD	AS SHOWN (MIN. 10' O.C.)	18'-24" HT.	CONT.	6	3	3
(O)	EFM EUPATORIUM FISTULOSUM	JOE-PYE WEED	AS SHOWN (MIN. 4' O.C.)	1 QT./12" HT.	CONT. (3' O.C.)	15	12	6
(O)	MDI MONARDA DIDYMA	BEEBALM	AS SHOWN (MIN. 3' O.C.)	1 QT.	CONT.	12	9	6
(O)	RLA RUDIBECKIA LACINIATA	TALL CONEFLOWER	AS SHOWN (MIN. 3' O.C.)	1 QT.	CONT.	12	9	6

NOTE: PLANT MATERIAL MUST COVER 50% OF THE MULCH AREA AT MATURE GROWTH.  
\*INTERPERSE PLANTINGS THROUGHOUT BIORETENTION FILTER/MULCH AREA

**REVISIONS**

NO.	DESCRIPTION	DATE
1	REVISED PER NEW LAYOUT	7/11/14

**STORMWATER MANAGEMENT DETAILS**  
**VANTAGE CONDOMINIUMS AT TURF VALLEY**  
(PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)  
ZONE: PGCC-1

TAX MAP 17 GRIDS 7, 12 & 18 PARCELS 8 & 706  
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**Sill · Adcock & Associates · LLC**  
Engineers · Surveyors · Planners  
3300 North Ridge Road, Suite 160  
Ellicott City, Maryland 21043  
Phone: 443.325.7682 Fax: 443.325.7685  
Email: info@silladcock.com

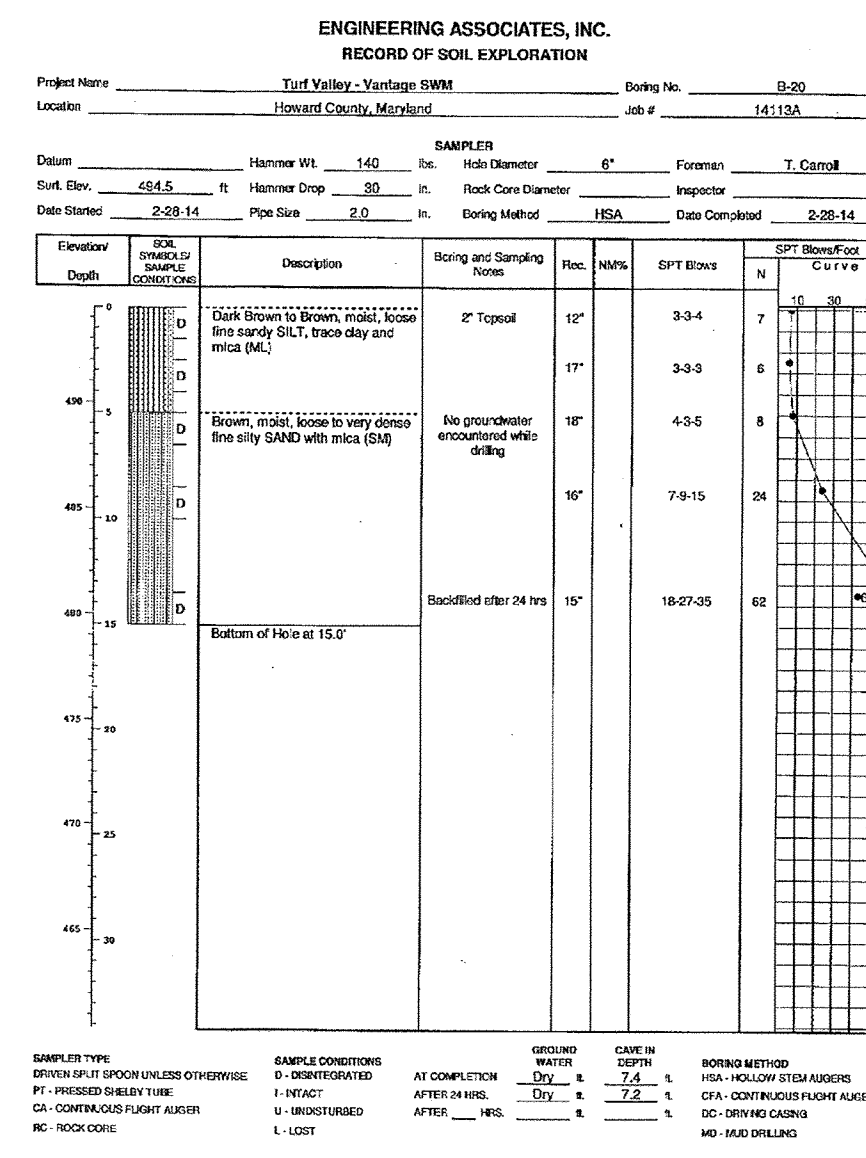
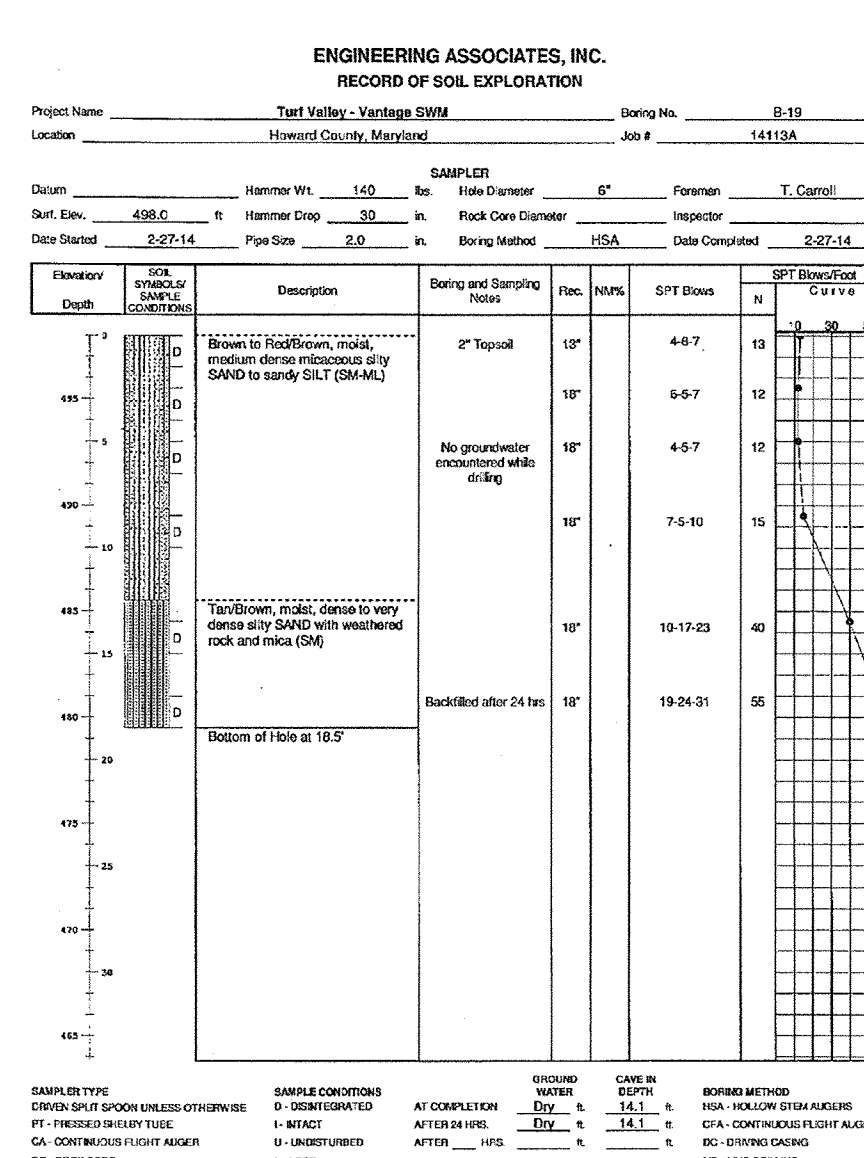
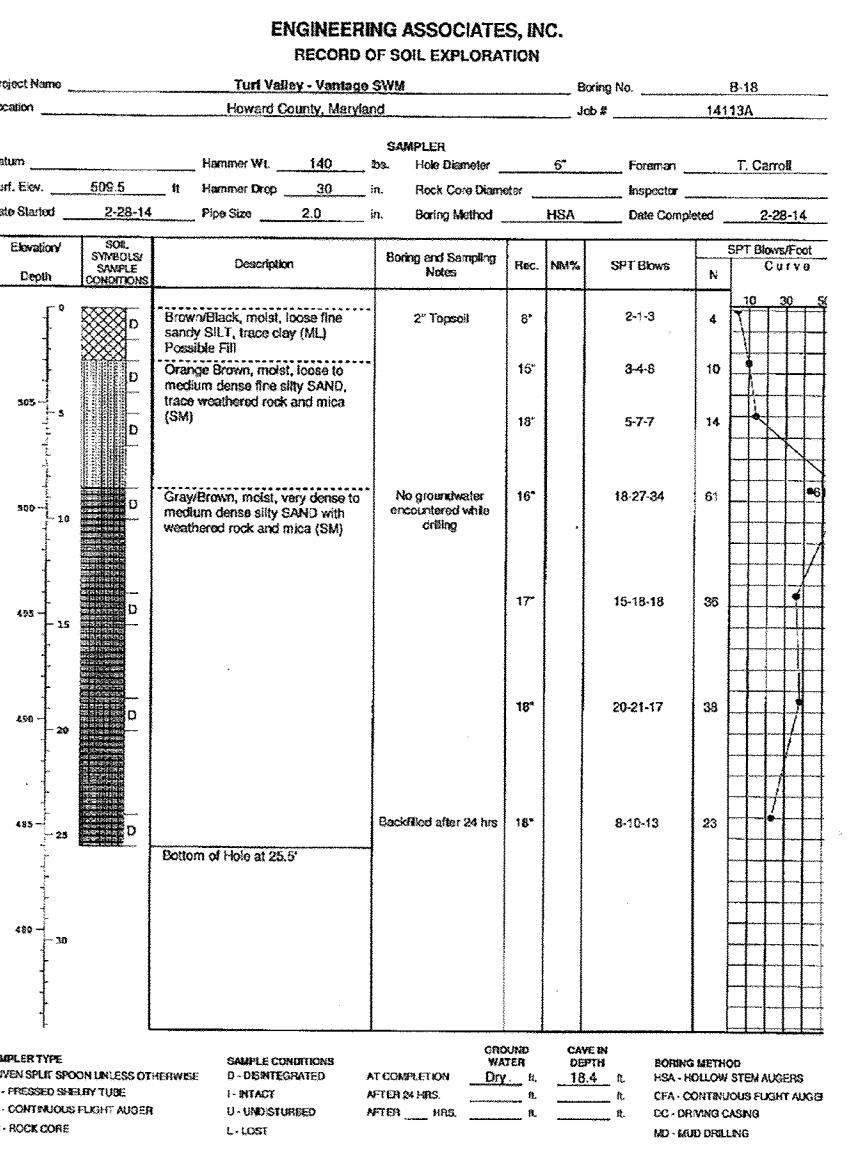
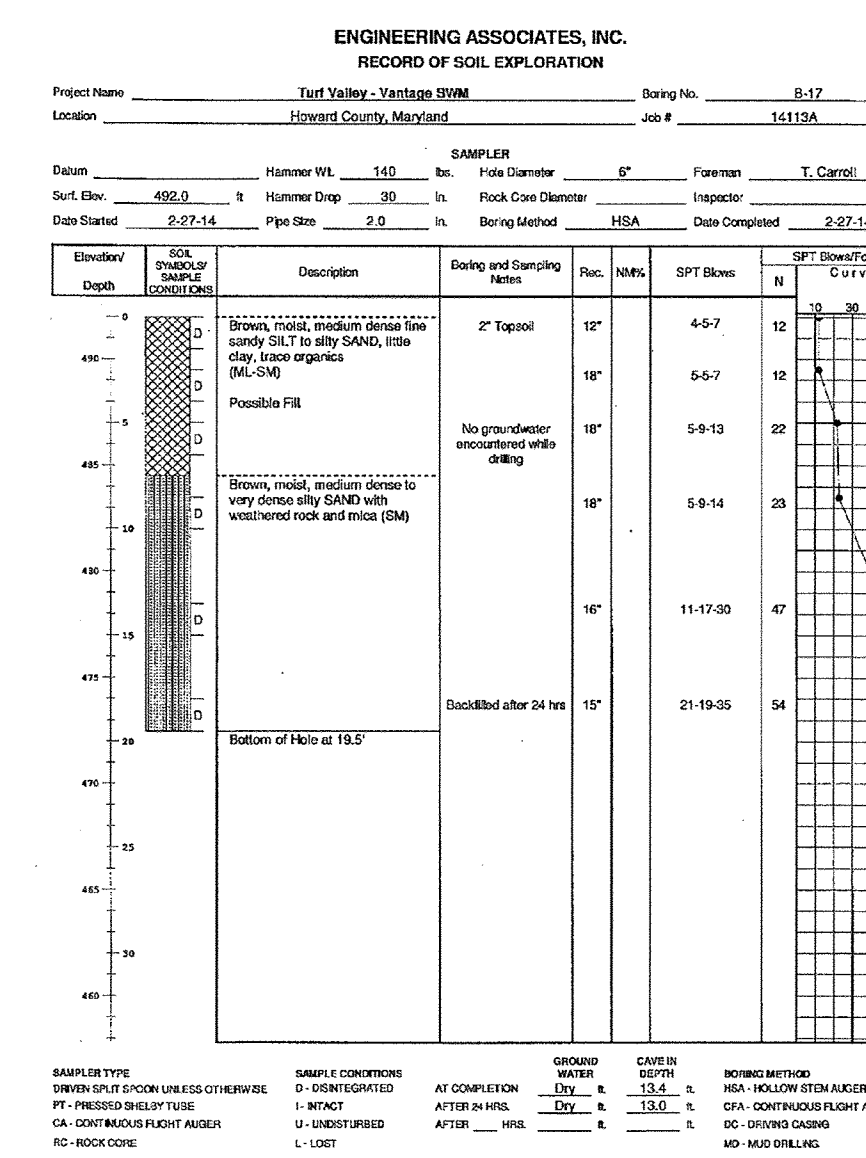
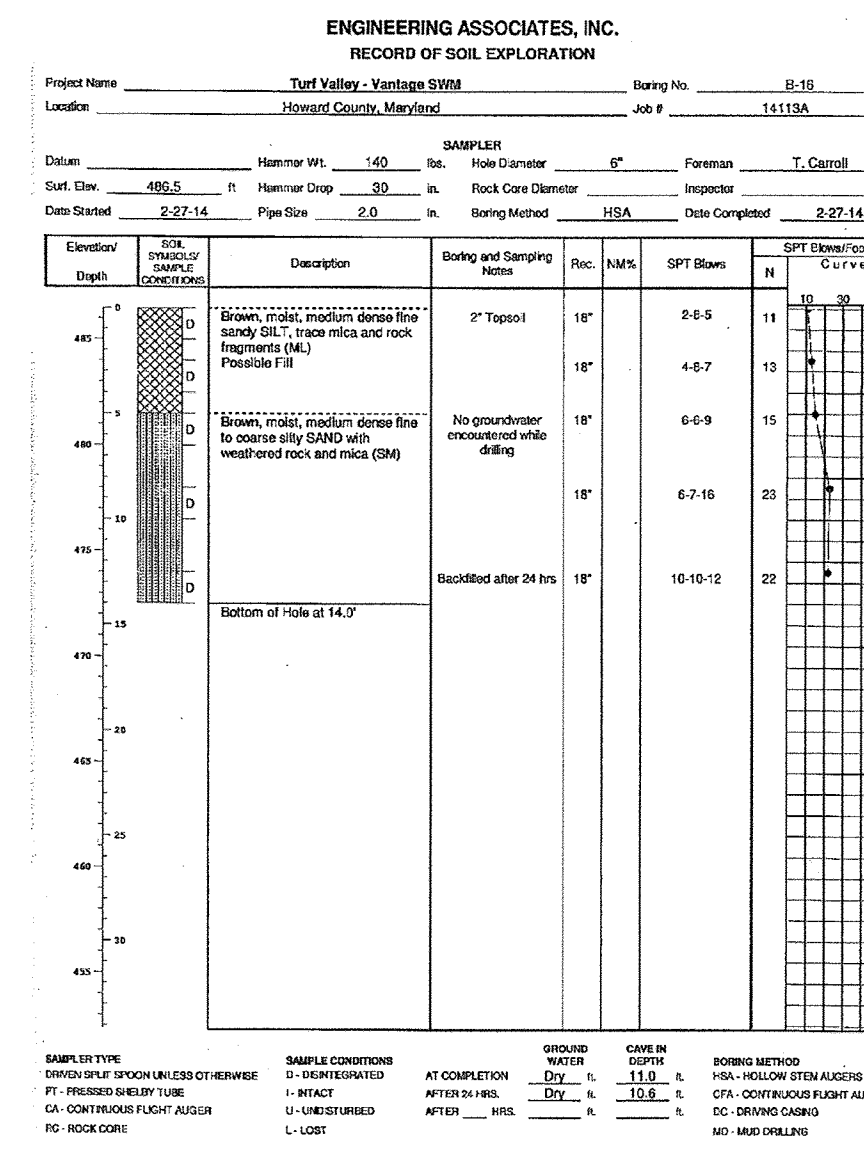
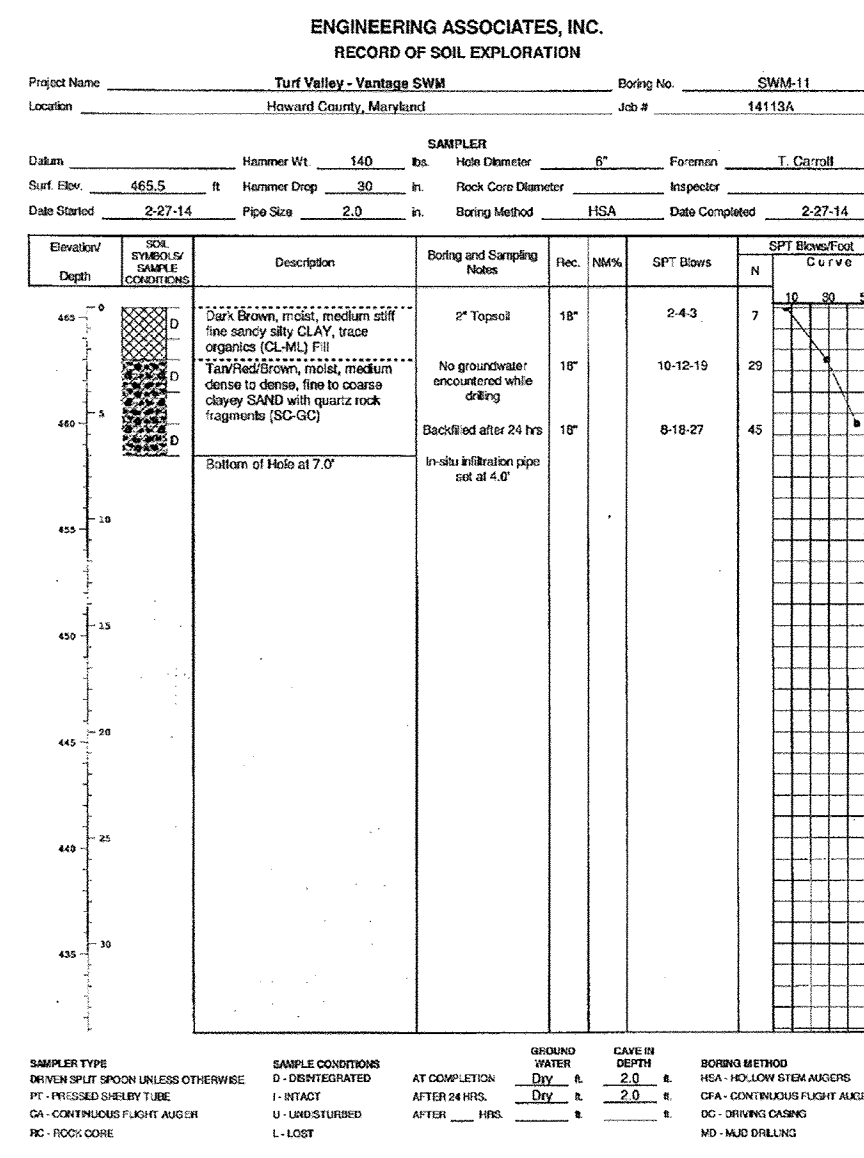
DESIGN BY: PS, BK  
DRAWN BY: JT, BK  
CHECKED BY: PS  
SCALE: AS SHOWN  
DATE: JULY 11, 2014  
PROJECT #: 09-080  
SHEET #: 12 of 21

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. 33025, EXPIRATION DATE: JUNE 20, 2015

APPROVED  
PLANNING BOARD OF HOWARD COUNTY

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
DATE: 8-14-14  
DATE: 8/21/14  
DATE: 8/21/14

DATE: 8/10/2010



**BORING B-12:**  
 0.0' - 0.17' TOPSOIL  
 0.17' - 8.0' TRACES OF CLAY AND MICA  
 8.0' NO ROCK OR WATER ENCOUNTERED

**BORING B-13:**  
 0.0' - 0.17' TOPSOIL  
 0.17' - 14.0' DENSE SILTY SAND AND MICA  
 14.0' NO ROCK OR WATER ENCOUNTERED

**BORING B-14:**  
 0.0' - 0.17' TOPSOIL  
 0.17' - 8.0' DENSE SILTY SAND AND MICA  
 8.0' NO ROCK OR WATER ENCOUNTERED

**BORING B-15:**  
 0.0' - 0.17' TOPSOIL  
 0.17' - 8.0' TRACES OF CLAY AND MICA  
 8.0' NO ROCK OR WATER ENCOUNTERED

ON NOVEMBER 21, 2013, SOIL TEST BORINGS WERE PERFORMED AT FOUR LOCATIONS (BORINGS B-12 THRU B-15) AS SHOWN ON THE PLANS. THESE TESTS WERE PERFORMED BY JFC UTILIZING A BACKHOE. TEST PITS WERE DUG TO A DEPTH RANGING FROM EIGHT FEET TO FOURTEEN FEET. THE RESULTS ARE BASED ON THE UNITED STATES DEPARTMENT OF AGRICULTURE (USDA) SOIL TEXTURAL CLASSIFICATION (THESE RESULTS ARE BASED ON FIELD OBSERVATIONS).

OUR CONCLUSION FROM THESE SOIL TEST BORINGS IS THAT ALL AREAS SHOWN ON THE ATTACHED PLANS ARE SUITABLE FOR BIORETENTION FACILITIES AS LONG AS UNDERDRAINS ARE PROVIDED.

APPROVED  
 PLANNING BOARD OF HOWARD COUNTY

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division  
 Chief, Division of Land Development  
 Director

DATE: 04/01/2010

DATE: 8/14/14  
 DATE: 9/2/14  
 DATE: 9/4/14

"NO AS-BUILT INFORMATION IS PROVIDED 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: 12-21-19  
 AS-BUILT 8-6-18

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: 12-21-19

NO.	DESCRIPTION	DATE

NOTES:

- TREATMENT FOR THE ENVIRONMENTAL SITE DESIGN VOLUMES (ESDV) WILL BE PROVIDED FOR AS FOLLOWS:  
 - DRAINAGE AREA 1: BIORETENTION FACILITY (F-6) & SHEETFLOW TO CONSERVATION AREA (N-3)  
 - DRAINAGE AREAS 2-6: BIORETENTION FACILITIES (F-6)  
 - FIRE LANE: NON-ROOFTOP DISCONNECTS (N-2)
- CHANNEL PROTECTION IS NOT REQUIRED SINCE ALL ESDV HAVE BEEN TREATED FULLY.
- OVERBANK FLOOD PROTECTION VOLUME, QP, IS NOT REQUIRED FOR THIS SITE.
- EXTREME FLOOD VOLUME, QF, IS NOT REQUIRED FOR THIS SITE.

D.A.	Pe		ESDV	
	REQUIRED	PROVIDED	REQUIRED	PROVIDED
1	1.7"	1.7"	2,923 CF	2,923 CF
2	1.7"	1.7"	1,503 CF	1,503 CF
3	1.7"	1.7"	2,228 CF	2,228 CF
4	1.7"	1.7"	3,271 CF	3,271 CF
5	1.7"	1.7"	1,655 CF	1,655 CF
6	1.7"	1.7"	1,424 CF	1,424 CF

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED BIORETENTION FACILITIES (F-6)

- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUME II, TABLE 4.1 AND 2.
- THE OWNER SHALL PERFORM A PLANT INSPECTION IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD OR DISEASED VEGETATION CONSIDERED BEYOND TREATMENT. REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL. TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND WIRES.
- THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
- THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

OWNER / DEVELOPER  
 MANGIONE ENTERPRISES OF TURF VALLEY, LP  
 ATTN: LOUIS MANGIONE  
 1205 YORK ROAD, PENTHOUSE  
 LUTHERVILLE, MARYLAND 21093  
 410.825.8400

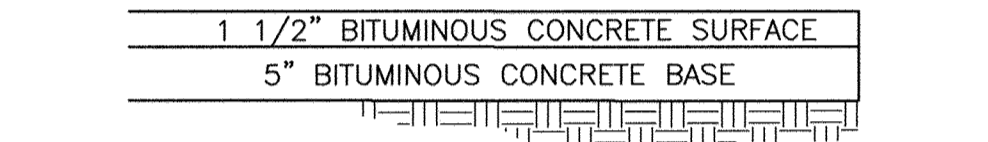
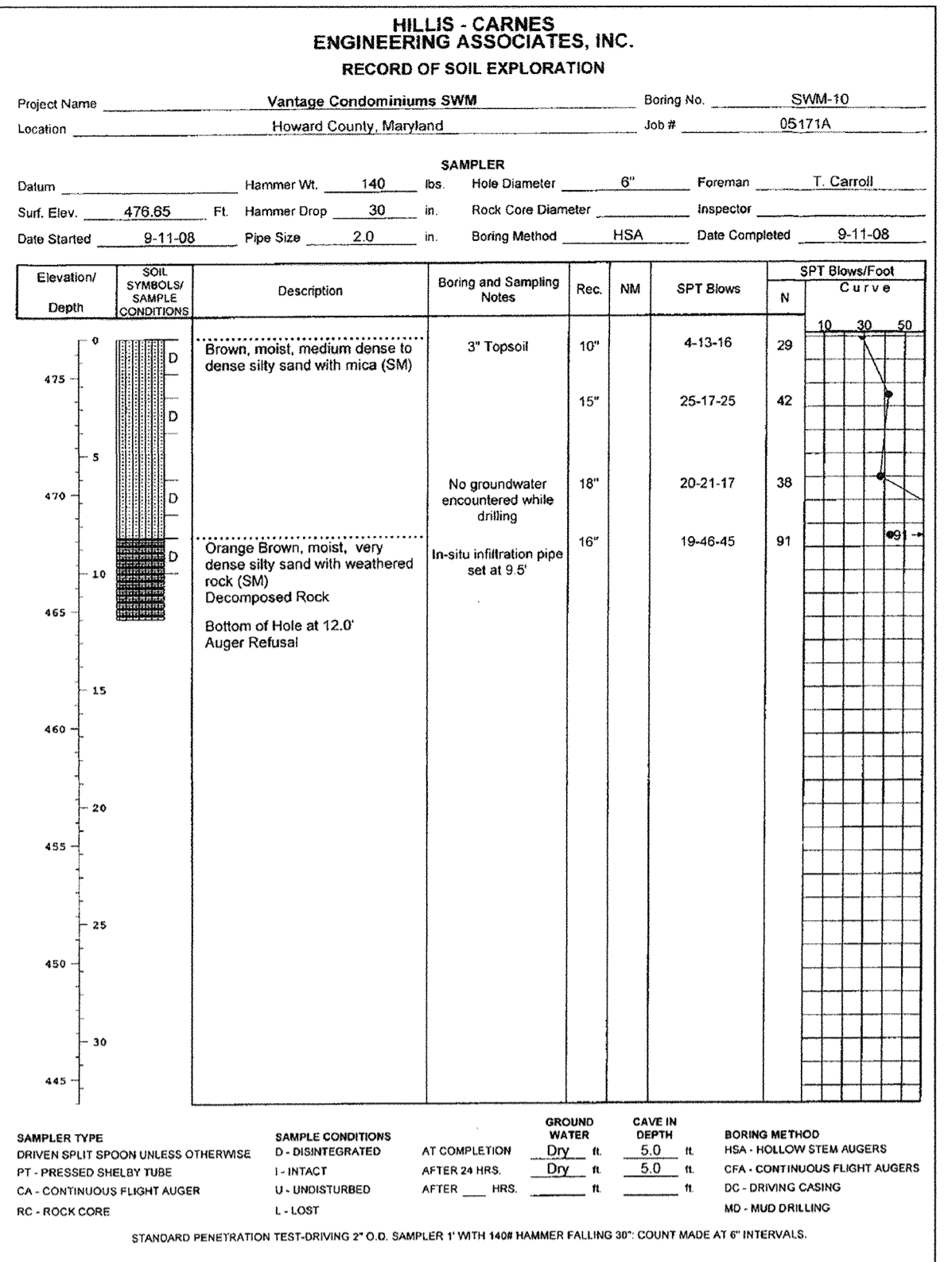
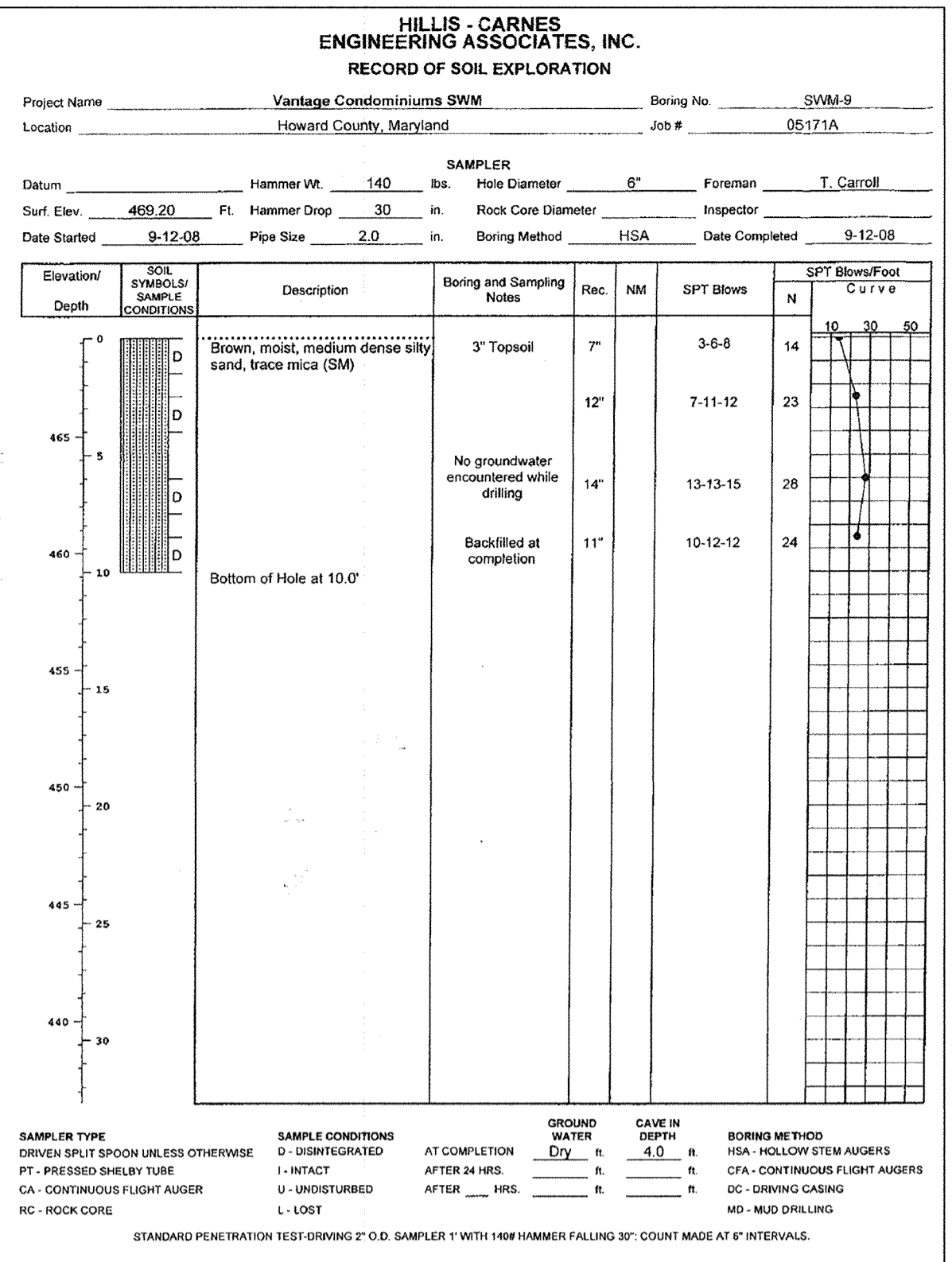
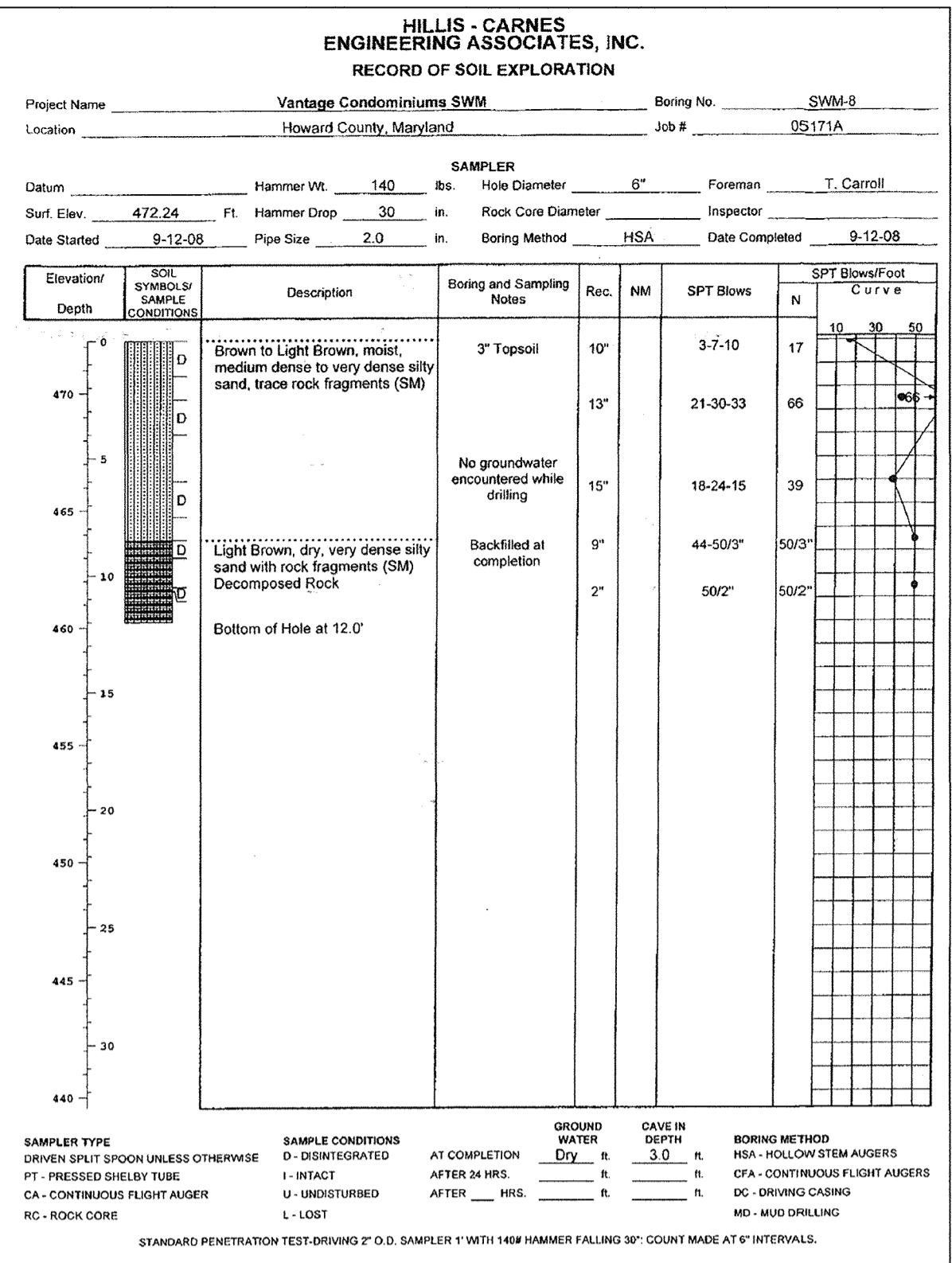
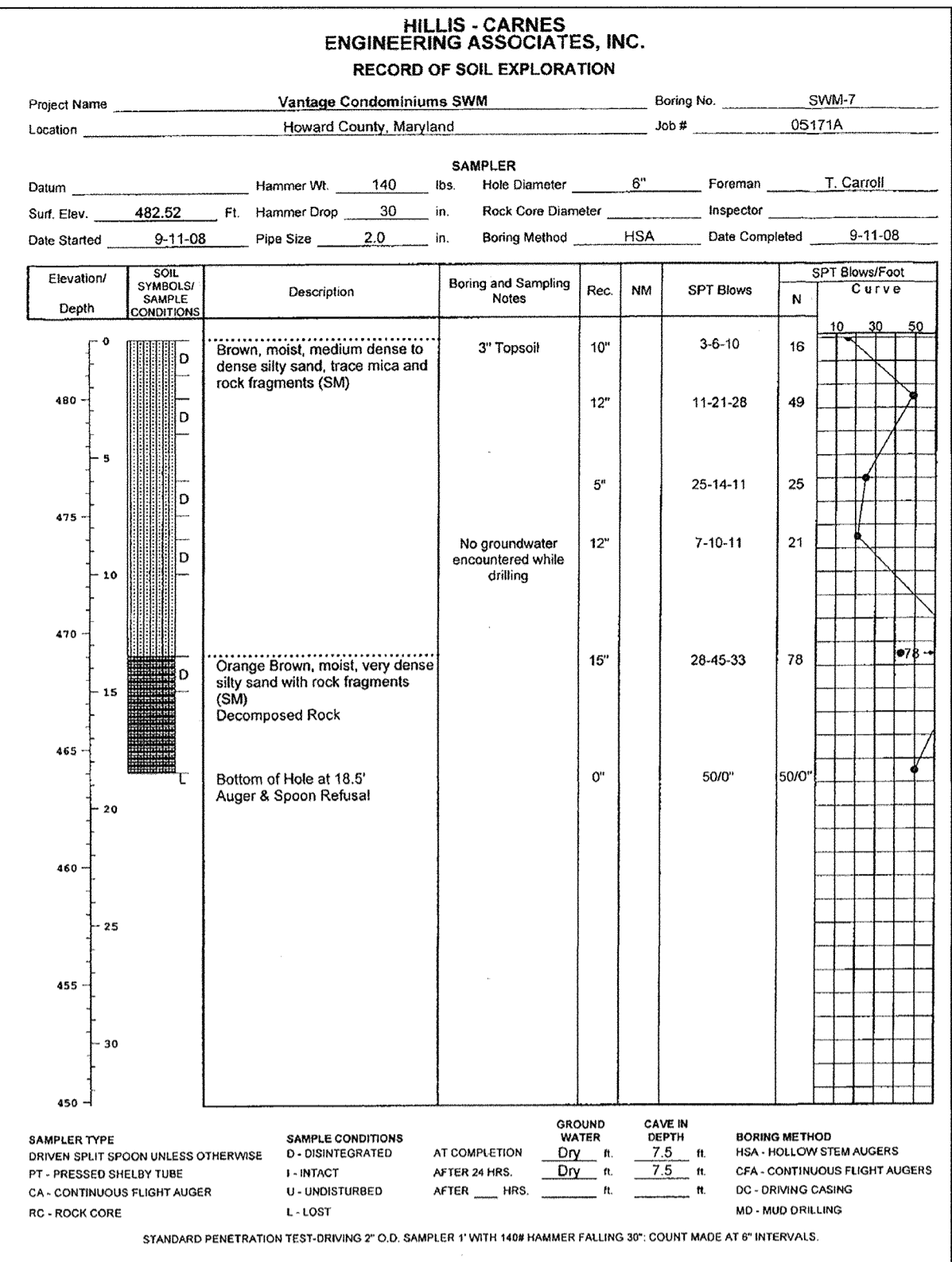
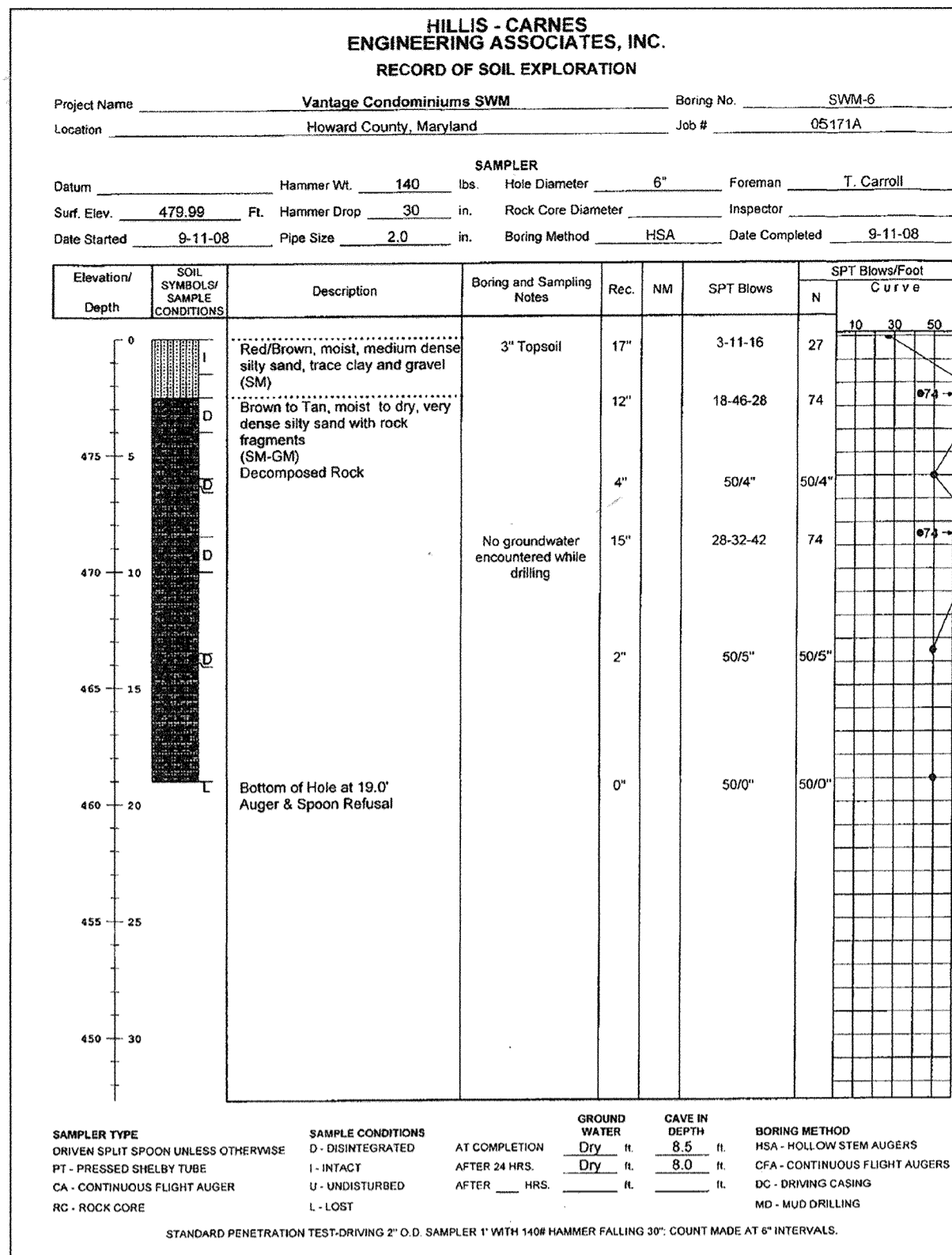
STORMWATER MANAGEMENT DETAILS  
 VANTAGE CONDOMINIUMS AT TURF VALLEY  
 (PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)  
 ZONE: PGCC-1

TAX MAP 17 GRIDS 7, 12 & 18 PARCELS 8 & 706  
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

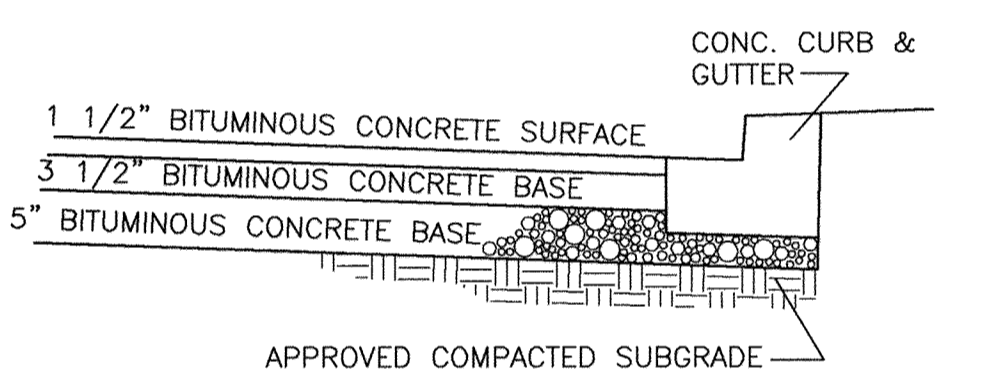
Sill · Adcock & Associates · LLC  
 Engineers · Surveyors · Planners  
 3300 North Ridge Road, Suite 160  
 Ellicott City, Maryland 21043  
 Phone: 443.325.7682 Fax: 443.325.7685  
 Email: info@sandaland.com

DESIGN BY: PS\_BK  
 DRAWN BY: JT\_BK  
 CHECKED BY: PS  
 SCALE: AS SHOWN  
 DATE: JULY 11, 2014  
 PROJECT #: 09-090  
 SHEET #: 13 of 21

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. 32025, EXPIRATION DATE: JUNE 20, 2015.



PAVEMENT SECTION-FIRE LANE  
(HO.CO. STD. DETAIL R-2.01, P-2)  
NOT TO SCALE



PAVEMENT SECTION  
(HO.CO. STD. DETAIL R-2.01, P-4)  
NOT TO SCALE

APPROVED  
PLANNING BOARD OF HOWARD COUNTY

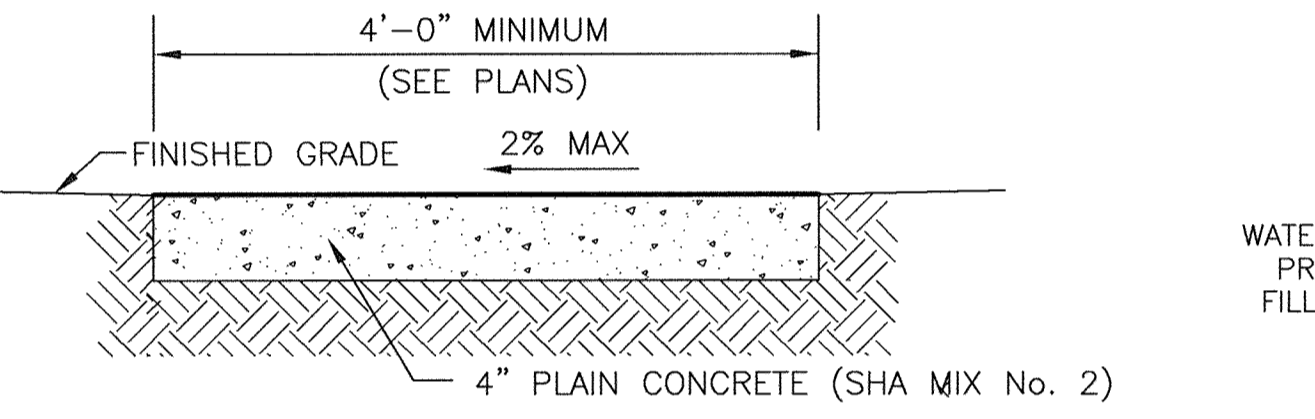
DATE: 04/10/2010  
[Signature]

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL, MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
[Signature] DATE: 4/14/13

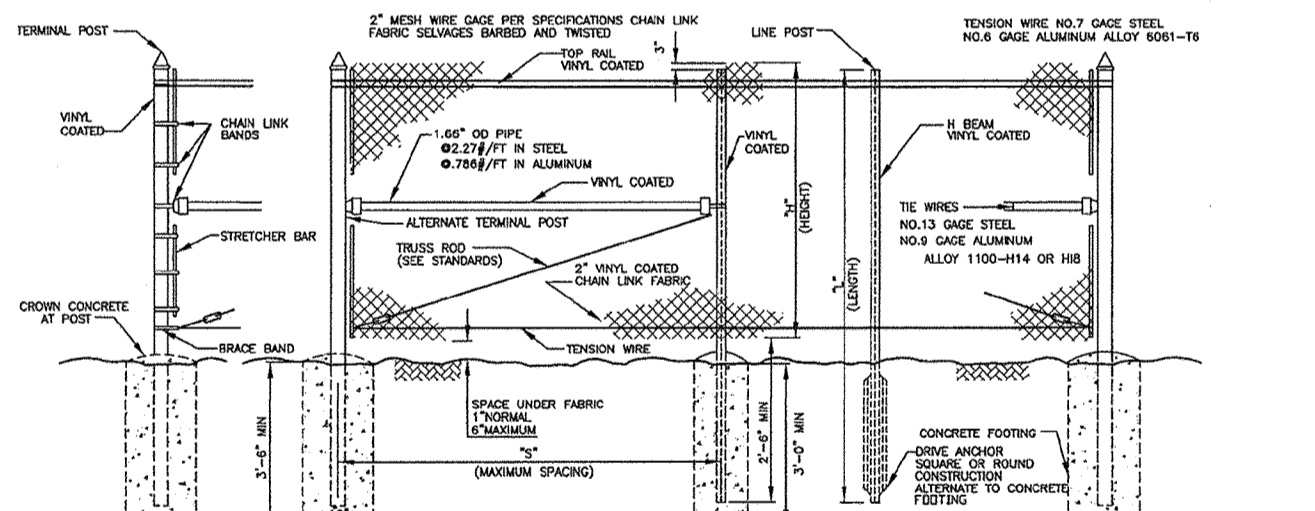
DEVELOPERS CERTIFICATE  
I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.  
[Signature] DATE: 4/13/13

ENGINEER'S CERTIFICATE  
I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTICED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.  
[Signature] DATE: 4/13/13

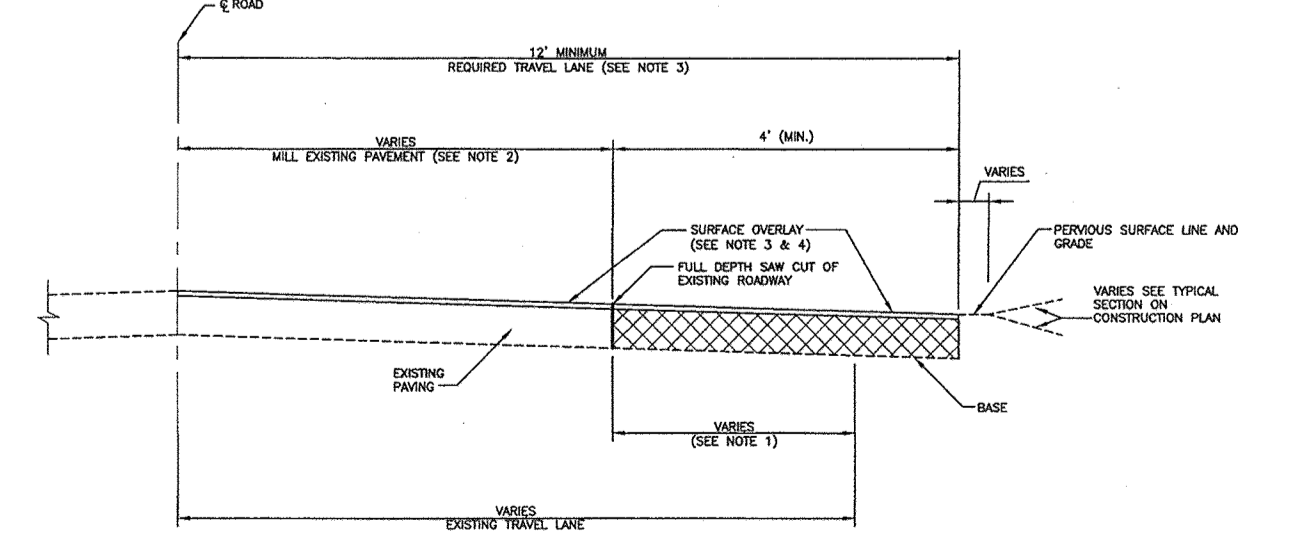
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
[Signature] DATE: 4/15/13  
[Signature] DATE: 4/15/13  
[Signature] DATE: 4/15/13



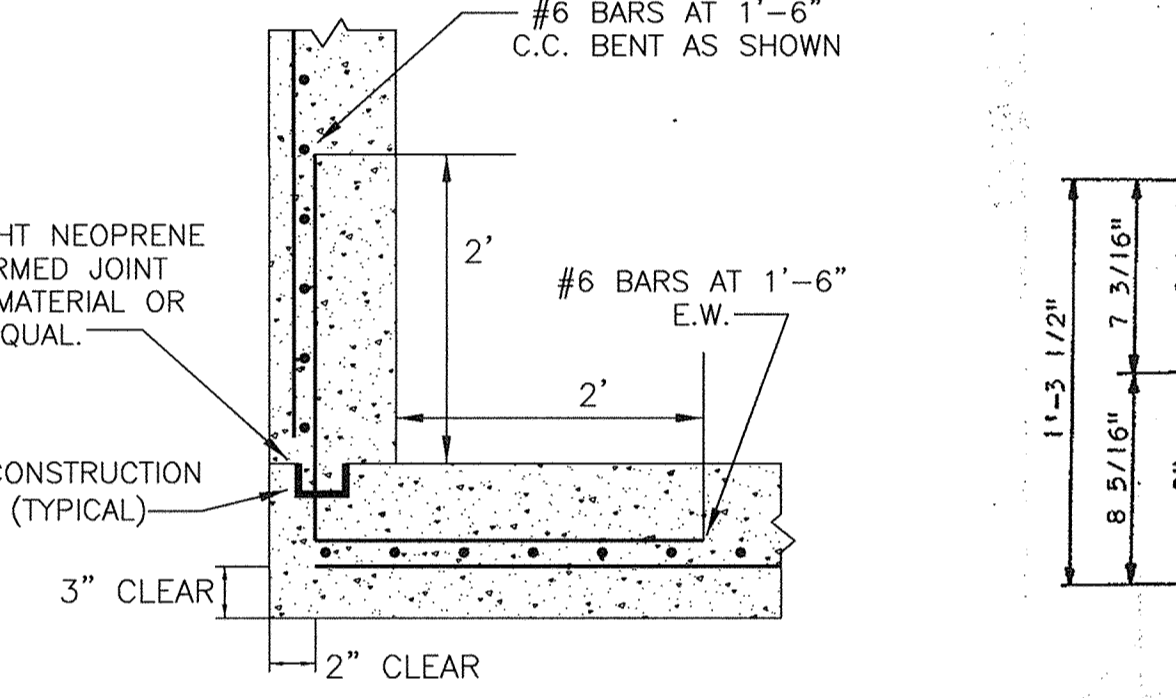
CONCRETE SIDEWALK DETAIL  
NOT TO SCALE



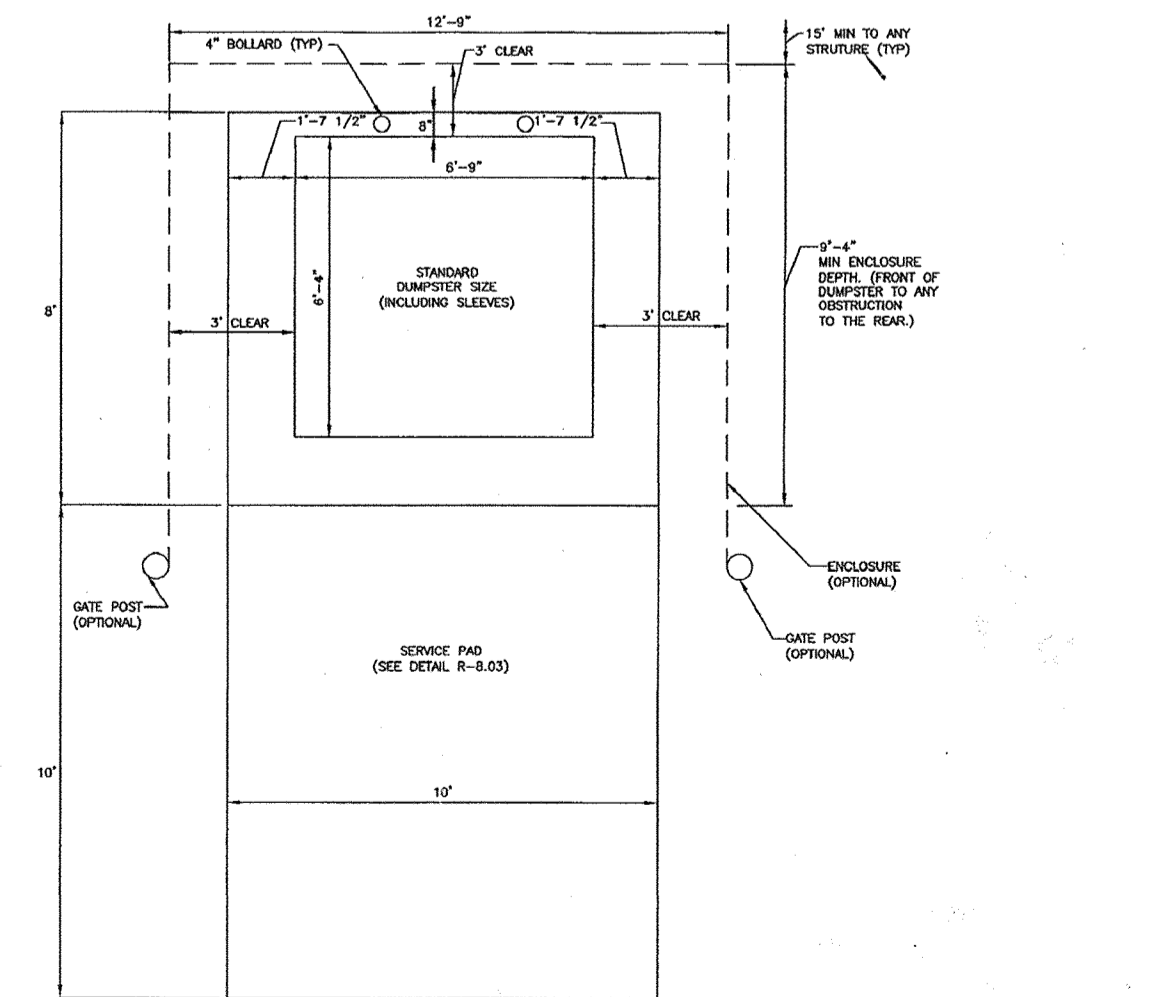
CHAIN LINK FENCE DETAIL  
(HO.CO. STD. DETAIL R-G-7.21)  
NOT TO SCALE



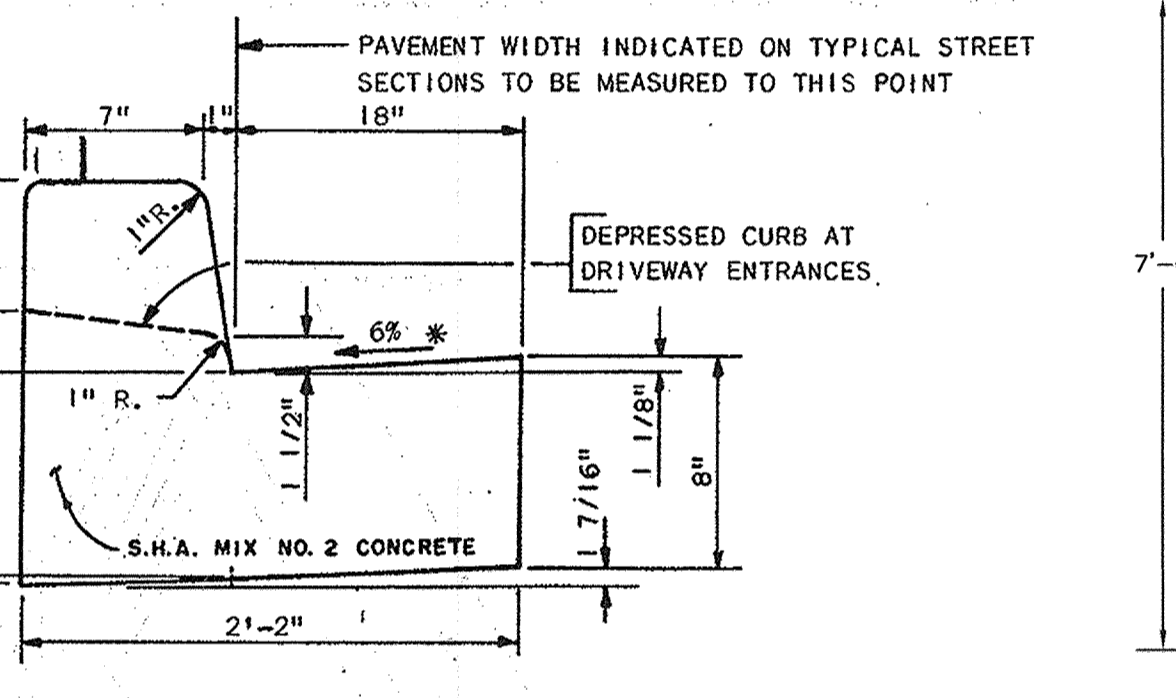
EXISTING ROADWAY WIDENING STRIP  
(HO.CO. STD. DETAIL R-1.08)  
NOT TO SCALE



STRUCTURE WALL TO BOTTOM SLAB CONNECTION DETAIL  
NOT TO SCALE

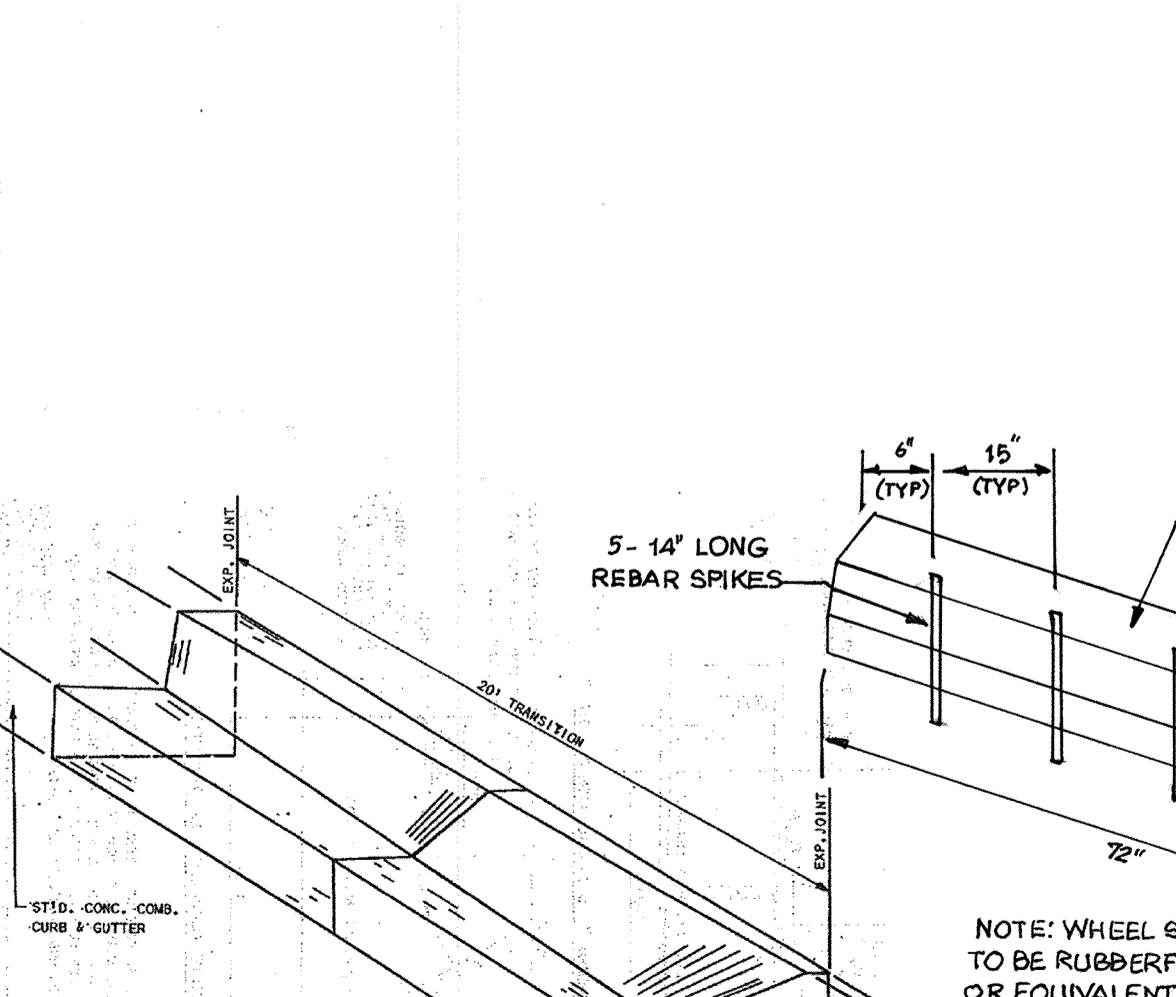


SINGLE CONTAINER ENCLOSURE  
(HO.CO. STD. DETAIL R-8.04)  
NOT TO SCALE

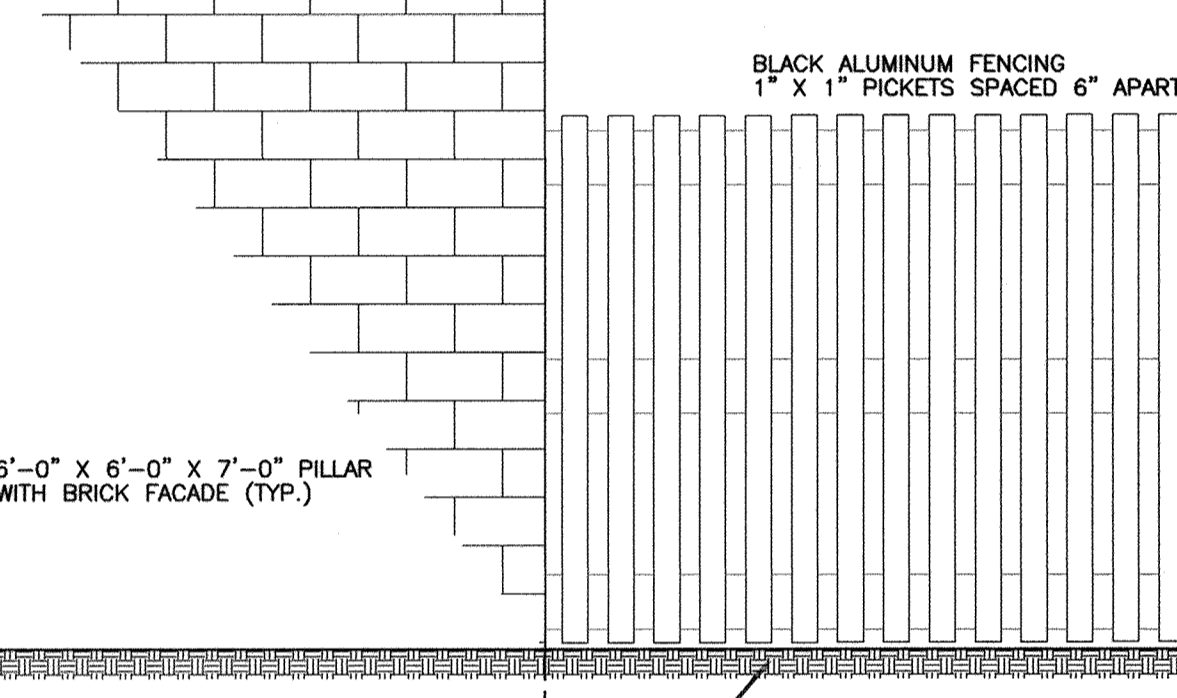


STANDARD 7" COMBINATION CURB AND GUTTER  
(HO.CO. STD. DETAIL R-3.01)  
NOT TO SCALE

GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT. MATCH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 3% FOR MODIFIED CURB AND GUTTER.  
CURB IN THE AREAS OF RETAINING WALLS #1-#4 TO BE POURED PRIOR TO WALL CONSTRUCTION



CONCRETE CURB & GUTTER TRANSITION  
(HO.CO. STD. DETAIL R-3.02)  
NOT TO SCALE



SIGNAGE PILLAR & FENCE DETAIL  
NOT TO SCALE  
(FENCE FACING RESORT ROAD)

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.  
NO AS-BUILT INFORMATION IS PROVIDED 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: 12-31-18

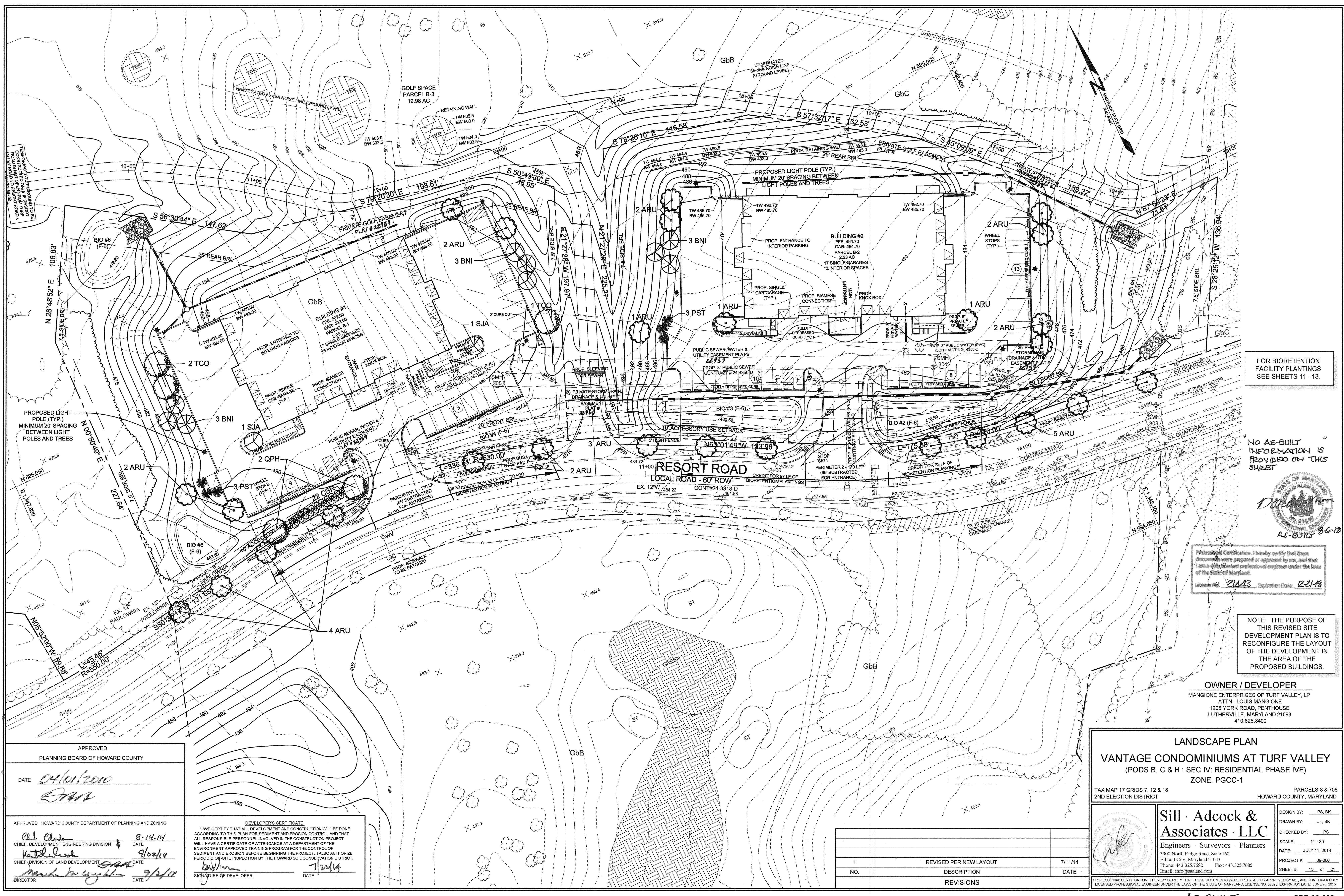
OWNER / DEVELOPER  
MANGIONE ENTERPRISES OF TURF VALLEY, LP  
ATTN: LOUIS MANGIONE  
1205 YORK ROAD, PENTHOUSE  
LUTHERVILLE, MARYLAND 21093  
410.825.8400

BORINGS & SITE DETAILS  
VANTAGE CONDOMINIUMS AT TURF VALLEY  
(PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)  
ZONE: PGCC-1  
TAX MAP 16 GRID 12 & 18  
TAX MAP 17 GRID 7  
2ND ELECTION DISTRICT  
PARCELS 8 & 706  
HOWARD COUNTY, MARYLAND

NO.	DESCRIPTION	DATE
1	REVISE NOTES PER NEW LAYOUT	07/11/14

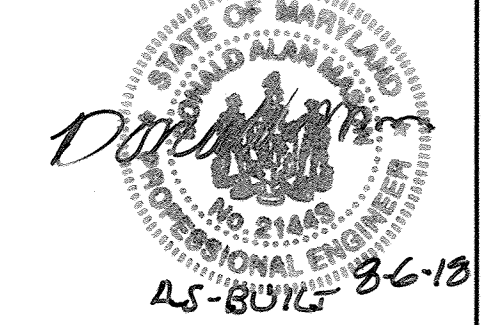
Sill Adcock & Associates · LLC  
Engineers · Surveyors · Planners  
3300 North Ridge Road, Suite 160  
Fellsmere, Maryland 21043  
Phone: 443.325.7682 Fax: 443.325.7685  
Email: info@silladcock.com

DESIGN BY: SJT  
DRAWN BY: SJT  
CHECKED BY: PS  
SCALE: AS SHOWN  
DATE: APRIL 1, 2013  
PROJECT #: 09-060  
SHEET #: 14 of 21



FOR BIORETENTION FACILITY PLANTINGS SEE SHEETS 11 - 13.

NO AS-BUILT INFORMATION IS PROVIDED 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. 21143 Expiration Date: 05-30-18

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

OWNER / DEVELOPER  
 MANGIONE ENTERPRISES OF TURF VALLEY, LP  
 ATTN: LOUIS MANGIONE  
 1205 YORK ROAD, PENTHOUSE  
 LUTHERVILLE, MARYLAND 21093  
 410.825.8400

LANDSCAPE PLAN  
**VANTAGE CONDOMINIUMS AT TURF VALLEY**  
 (PODS B, C & H - SEC IV: RESIDENTIAL PHASE IVE)  
 ZONE: PGCC-1  
 TAX MAP 17 GRIDS 7, 12 & 18 PARCELS 8 & 706  
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**Sill · Adcock & Associates · LLC**  
 Engineers · Surveyors · Planners  
 3300 North Ridge Road, Suite 160  
 Ellicott City, Maryland 21043  
 Phone: 443.325.7682 Fax: 443.325.7685  
 Email: info@silladcock.com

DESIGN BY: PS, BK  
 DRAWN BY: JT, BK  
 CHECKED BY: PS  
 SCALE: 1" = 30'  
 DATE: JULY 11, 2014  
 PROJECT #: 09-060  
 SHEET #: 15 of 21

APPROVED  
 PLANNING BOARD OF HOWARD COUNTY  
 DATE 04/01/2010  
 [Signature]

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 8-14-14  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] 9/02/14  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature] 9/2/14  
 DIRECTOR

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 PERFORMING ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 [Signature] 7/22/14  
 SIGNATURE OF DEVELOPER DATE

NO.	DESCRIPTION	DATE
1	REVISED PER NEW LAYOUT	7/11/14
REVISIONS		

**LANDSCAPING GENERAL NOTES**

THE LANDSCAPE CONTRACTOR WILL BE RESPONSIBLE FOR AND REQUIRED TO COMPLETE THE FOLLOWING CONDITIONS.

- VERIFY THE NUMBER OF PLANTS ON THE PLANS. IF DIFFERS FROM THE PLANT SCHEDULE, NOTIFY THE LANDSCAPE ARCHITECT BEFORE BID DATE. THE PLAN SHALL GOVERN.
- IF A PLANT OR SPECIES IS FOUND NOT TO BE SUITABLE OR AVAILABLE, NOTIFY THE LANDSCAPE ARCHITECT.
- PROVIDE PROTECTIONS NECESSARY, IF NOT ALREADY IN PLACE, TO PREVENT DAMAGE TO EXISTING IMPROVEMENTS OR ELEMENTS INDICATED TO REMAIN IN PLACE.
- RESTORE DAMAGE TO IMPROVEMENTS OR EXISTING ELEMENTS IDENTIFIED TO REMAIN CAUSED BY THEM OR PERSONS UNDER THEIR DIRECTION TO THEIR ORIGINAL CONDITION, AS ACCEPTABLE TO PARTIES HAVING JURISDICTION.
- PROVIDE ALL LABOR, MATERIALS, EQUIPMENT AND SUPPLIES IN PERFORMING ALL OPERATIONS AS IDENTIFIED HEREON.
- IT SHALL BE DISTINCTLY UNDERSTOOD THAT THE FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NATURALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM SUCH WORK.
- VERIFY ALL UTILITIES, GRADES, DIMENSIONS AND EXISTING CONDITIONS. ALL DISCREPANCIES SHALL BE REPORTED PRIOR TO COMMENCEMENT OF WORK. COORDINATE WITH THE GENERAL CONTRACTOR FOR REPLACEMENT OF SLEEVES AND TIMELY INSTALLATION OF THE LANDSCAPING.
- ENSURE WORK DOES NOT INTERFERE WITH PROPOSED DRAINAGE PATTERNS AND ENSURE POSITIVE DRAINAGE AWAY FROM BUILDING.
- PROVIDE GEO-FABRIC UNDERLAYMENT UNDER ALL AREAS TO RECEIVE MULCH, RIVER ROCK OR GRAVEL TO PREVENT WEEDS, ETC. FROM GROWING IN THESE AREAS.
- PROVIDE MAINTENANCE FOR A PERIOD OF THREE MONTHS AFTER FINAL ACCEPTANCE. THIS WILL INCLUDE BUT NOT BE LIMITED TO MOWING, WATERING, FERTILIZING, WEEDING AND MULCHING TO ENSURE HEALTHY VIGOROUS PLANT GROWTH. PROVIDE CONTINUOUS MAINTENANCE, IF REQUESTED BY THE OWNER. NO CONTRACTOR SHALL BID ON THIS PROJECT UNLESS THEY CAN PROVIDE CONTINUOUS MAINTENANCE. CONTRACTOR SHALL BE RESPONSIBLE FOR WINTERIZATION OF THE IRRIGATION SYSTEM FOR THE FIRST WINTER AFTER FINAL ACCEPTANCE.
- THE CONTRACTOR SHALL WARRANT ALL WORK AND MATERIALS, INCLUDING PLANTS, UNDER THIS CONTRACT FOR A PERIOD OF ONE YEAR FROM FINAL ACCEPTANCE IN ACCORDANCE WITH LANDSCAPE GUIDELINES. CONTRACTOR'S ATTENTION IS DIRECTED TO THE MAINTENANCE REQUIREMENTS FOUND WITHIN THE SPECIFICATIONS INCLUDING WATERING AND REPLACEMENT OF SPECIFIED PLANT MATERIAL. WHEN CONTACTED BY THE OWNER OR REPRESENTATIVE, IMMEDIATELY REPLACE ANY PLANT MATERIAL IN UNSATISFACTORY CONDITION. IN EVERY INSTANCE, ANY OF SUCH WARRANTED WORK AND TO MAKE GOOD ALL DAMAGE TO THE BUILDING AND GROUNDS, ARE WITHOUT COST TO OWNER.
- CONTRACTOR IS SUBJECT TO ALL OTHER GENERAL NOTES, STATED ON THIS SET OF PLANS OF WHICH THIS SHEET IS A PART, AS THEY APPLY TO HIM.
- ALL ON-SITE PLANTINGS AND TREES TO BE OWNED AND MAINTAINED BY PROPERTY OWNER.
- AVOID ALL CONFLICTS. THERE SHALL BE A MINIMUM TEN (10) FOOT SEPARATION MAINTAINED BETWEEN THE CENTER OF ALL TREES AND ANY PRIVATE AND PUBLIC UTILITY LINES AND STRUCTURES (UNDERGROUND AND ABOVE GROUND).
- THE LANDSCAPE PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING (29 SHADE TREES, 6 EVERGREENS, AND 22 SHRUBS) WILL BE POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$10,260.00

**PLANTING NOTES**

- CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UTILITY COMPANIES, UTILITY CONTRACTORS AND "MISS UTILITY" A MINIMUM OF 72 HOURS PRIOR TO BEGINNING WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO UTILITIES DUE TO NON-COORDINATED WORK. CONTRACTOR MAY MAKE MINOR ADJUSTMENTS IN SPACING AND LOCATION OF PLANT MATERIAL TO AVOID CONFLICTS WITH UTILITIES.
- PLANTS, RELATED MATERIAL, AND OPERATIONS SHALL MEET THE DETAILED DESCRIPTION AS GIVEN ON THE PLANS AND AS DESCRIBED HEREIN.
- PLANT MATERIAL, UNLESS OTHERWISE SPECIFIED, SHALL BE NURSERY GROWN, UNIFORMLY BRANCHED AND HAVE A VIGOROUS ROOT SYSTEM. PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS PLANTS FREE FROM DEFECTS, DECAY, DISFIGURING ROOTS, SUNSCALD INJURIES, ABRASIONS OF THE BARK, PLANT DISEASE, INSECT PEST EGGS, BOXERS, INFESTATIONS OR OBJECTIONABLE DISFIGUREMENTS. PLANT MATERIAL THAT IS WEAK OR WHICH HAS BEEN CUT BACK FROM LARGER GRADES TO MEET SPECIFIED REQUIREMENTS WILL BE REJECTED. TREES WITH FORKED LEADERS WILL NOT BE ACCEPTED. PLANTS SHALL BE FRESHLY DUG; NO HEELED-IN PLANTS OR PLANTS FROM COLD STORAGE WILL BE ACCEPTED.
- UNLESS OTHERWISE SPECIFIED, PLANT MATERIAL SHALL CONFORM TO "AMERICAN STANDARD FOR NURSERY STOCK" ANSI Z60.1-1990, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INCLUDING ALL ADDENDA.
- UNLESS OTHERWISE SPECIFIED, GENERAL CONDITIONS, PLANTING OPERATIONS, DETAILS AND PLANTING SPECIFICATIONS SHALL CONFORM TO "LANDSCAPE SPECIFICATION GUIDELINES", (HEREINAFTER "LANDSCAPE GUIDELINES") APPROVED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF METROPOLITAN WASHINGTON AND THE POTOMAC CHAPTER OF THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS, LATEST EDITION, INCLUDING ALL ADDENDA.
- PLANTING BEDS SHALL BE MULCHED AS SPECIFIED TO THE LIMITS OF THE PLANTING BEDS AS SHOWN ON THE PLAN AND TO THE DEPTH AS SHOWN ON THE DETAILS.
- PROTECTION OF EXISTING VEGETATION TO REMAIN SHALL BE ACCOMPLISHED BY THE TEMPORARY INSTALLATION OF 4' STANDARD CONSTRUCTION FENCE OR OTHER APPROVED FENCING SUCH AS TURKEY WIRE MESH FENCE FOR THE AFFORESTATION AREAS, IN LOCATIONS SHOWN ON THE PLAN, AT THE DRIP LINE.
- CONTRACTOR IS RESPONSIBLE FOR INSTALLING PLANT MATERIAL IN THE PROPER PLANTING SEASON FOR EACH PLANT TYPE.
- PLANTING MIX SHALL BE AS FOLLOWS:  
DECIDUOUS PLANTS - TWO PARTS TOPSOIL, ONE PART WELL-ROTTED COW MANURE, ADD 3 LBS. OF STANDARD FERTILIZER PER CUBIC YARD OF PLANTING MIX. EVERGREEN PLANTS - TWO PARTS TOPSOIL, ONE PART HUMUS OR OTHER APPROVED ORGANIC MATERIAL. ADD 3 LBS. OF EVERGREEN (ACIDIC) FERTILIZER PER CUBIC YARD OF PLANTING MIX.  
TOPSOIL SHALL CONFORM TO THE LANDSCAPE GUIDELINES.
- THIS PLAN IS INTENDED FOR LANDSCAPE USE ONLY. SEE OTHER PLAN SHEETS FOR MORE INFORMATION ON GRADING, SEDIMENT CONTROL, UTILITIES, LAYOUT, ETC.

**SCHEDULE A : PERIMETER LANDSCAPED EDGE**

CATEGORY	ADJACENT TO ROADWAY	ADJACENT TO ROADWAY	TOTAL
LANDSCAPE TYPE	PERIMETER 1- TYPE E	PERIMETER 2- TYPE E	
LINEAR FEET OF PERIMETER	170 LF	170 LF	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	NO	NO	
CREDIT FOR BIORETENTION PLANTINGS (YES, NO, LINEAR FEET)	YES, 82 LF (88 LF REMAINING)	YES, 170 LF (0 LF REMAINING)	
NUMBER OF PLANTS REQUIRED	3 SHADE TREES 0 EVERGREEN TREES 22 SHRUBS	0 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	3 SHADE TREES 0 EVERGREEN TREES 22 SHRUBS
NUMBER OF PLANTS PROVIDED	3 SHADE TREES 0 EVERGREEN TREES 0 SUBSTITUTION TREES 22 SHRUBS (10:1 SUBSTITUTION)	0 SHADE TREES 0 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS	3 SHADE TREES 0 EVERGREEN TREES 0 SUBSTITUTION TREES 22 SHRUBS

**SCHEDULE B: PARKING LOT INTERNAL LANDSCAPING**

NUMBER OF PARKING SPACES	60
NUMBER OF TREES REQUIRED	6
NUMBER OF TREES PROVIDED	6 SHADE TREES 0 OTHER TREES

**SCHEDULE C: RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING**

NUMBER OF DWELLING UNITS	60
NUMBER OF TREES REQUIRED (1:DU SFA; 1:3 DU APTS)	20 SHADE TREES
NUMBER OF TREES PROVIDED	20 SHADE TREES 0 OTHER TREES

**SCREEN CALCULATIONS**

SCREEN BUILDING #1 DUMPSTER - 30 LF - TYPE D SCREEN 3 EVERGREENS PROVIDED
SCREEN BUILDING #2 DUMPSTER - 30 LF - TYPE D SCREEN 3 EVERGREENS PROVIDED

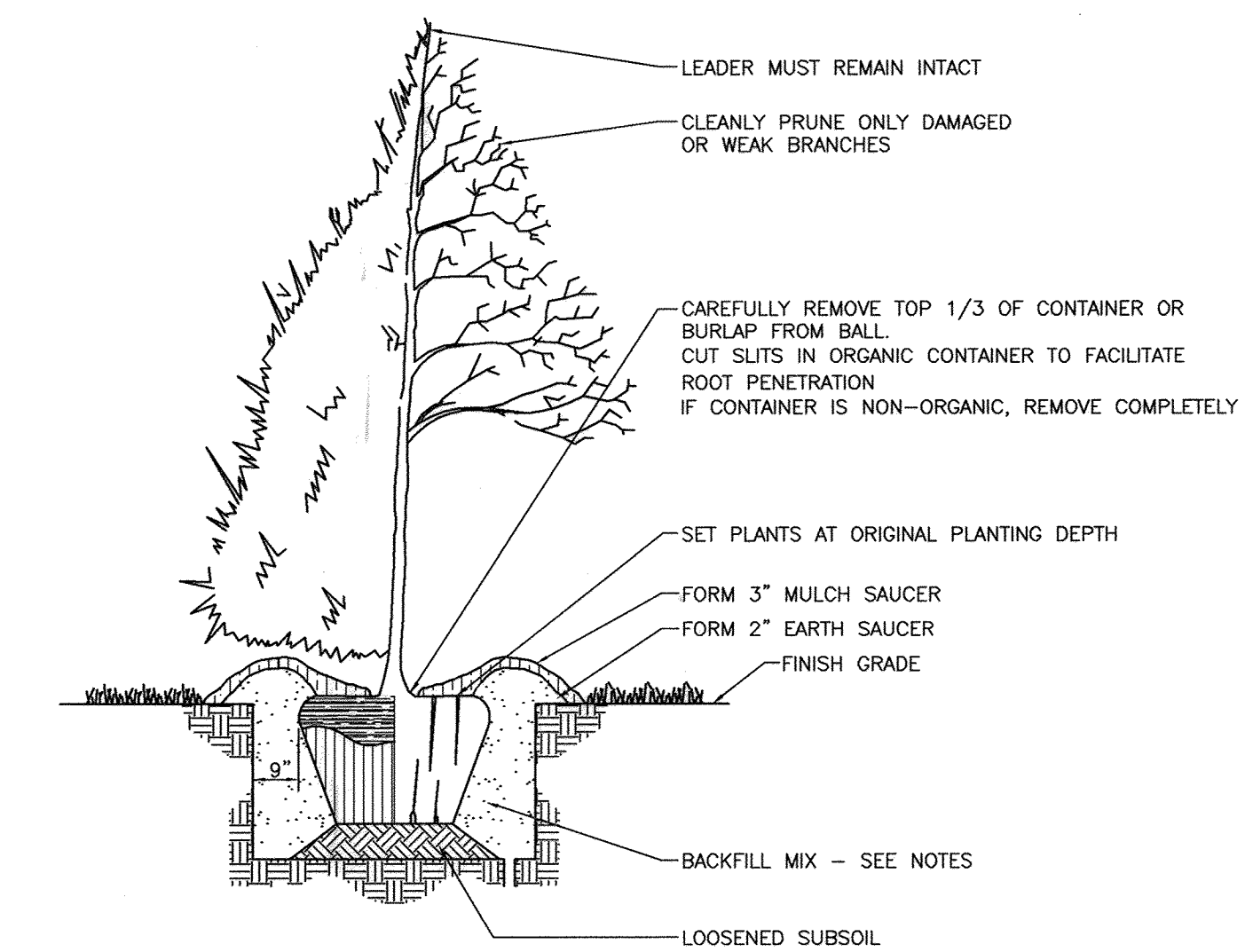
**STREET TREES**

RESORT ROAD 1 TREE PER 40 LF X 547 LF = 14 STREET TREES REQUIRED 14 STREET TREES PROVIDED
---

**PLANT LIST**

KEY	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	REMARKS	QUANTITY	SYMBOL
ARU	ACER RUBRUM "OCTOBER GLORY"	"OCTOBER GLORY" RED MAPLE	AS SHOWN	2.5"-3" CAL.	BB/LOW BRANCHED	27	
BNI	BETULA NIGRA "HERITAGE"	"HERITAGE" RIVER BIRCH	AS SHOWN	10"-12' HT.	MULTI-STEM/BB	9	
CSR	COTONEASTER SALICIFOLIUS 'REPENS'	WILLOWLEAF COTONEASTER	AS SHOWN	18"-24" SP.	CONTAINER	22	
						0	
PST	PINUS STROBUS	EASTERN WHITE PINE	AS SHOWN	6'-8' HT.	BB/UNSHEARED	6	
QPH	QUERCUS PHELLOS	WILLOW OAK	AS SHOWN	2.5"-3" CAL.	BB	2	
SJA	SOPHORA JAPONICA	JAPANESE PAGODA TREE	AS SHOWN	2.5"-3" CAL.	BB	2	
TCO	TILIA CORDATA "GREENSPIRE"	"GREENSPIRE" LINDEN	AS SHOWN	2.5"-3" CAL.	BB/LIMB TO 7'	3	

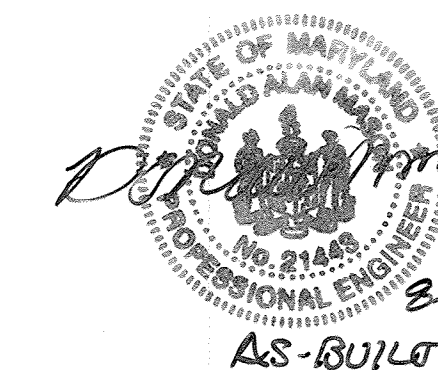
TOTAL 29 SHADE TREES, STREET TREES, 6 EVERGREENS, 22 SHRUBS



**TREE PLANTING DETAIL**  
NOT TO SCALE

FOR BIORETENTION PLANTINGS SEE SHEET 13

"NO AS-BUILT INFORMATION IS PROVIDED 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: 12-21-19

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

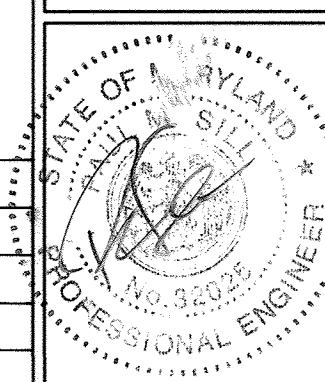
OWNER / DEVELOPER  
MANGIONE ENTERPRISES OF TURF VALLEY, LP  
ATTN: LOUIS MANGIONE  
1205 YORK ROAD, PENTHOUSE  
LUTHERVILLE, MARYLAND 21093  
410.825.8400

**LANDSCAPE PLAN**

VANTAGE CONDOMINIUMS AT TURF VALLEY  
(PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)  
ZONE: PGCC-1

TAX MAP 16 GRID 12 & 18  
TAX MAP 17 GRID 7  
2ND ELECTION DISTRICT

PARCELS 8 & 706  
HOWARD COUNTY, MARYLAND



**Sill Adcock & Associates · LLC**  
Engineers · Surveyors · Planners  
3300 North Ridge Road, Suite 160  
Ellicott City, Maryland 21043  
Phone: 443.325.7682 Fax: 443.325.7685  
Email: info@salland.com

DESIGN BY: SJT  
DRAWN BY: SJT  
CHECKED BY: PS  
SCALE: NOT TO SCALE  
DATE: APRIL 1, 2013  
PROJECT #: 09-050  
SHEET #: 16 of 21

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. 30025, EXPIRATION DATE: JUNE 30, 2015

AS-BUILT

SDP-08-032

**PLANNING BOARD APPROVAL BLOCK**

DATE 04/01/2010  
[Signature]

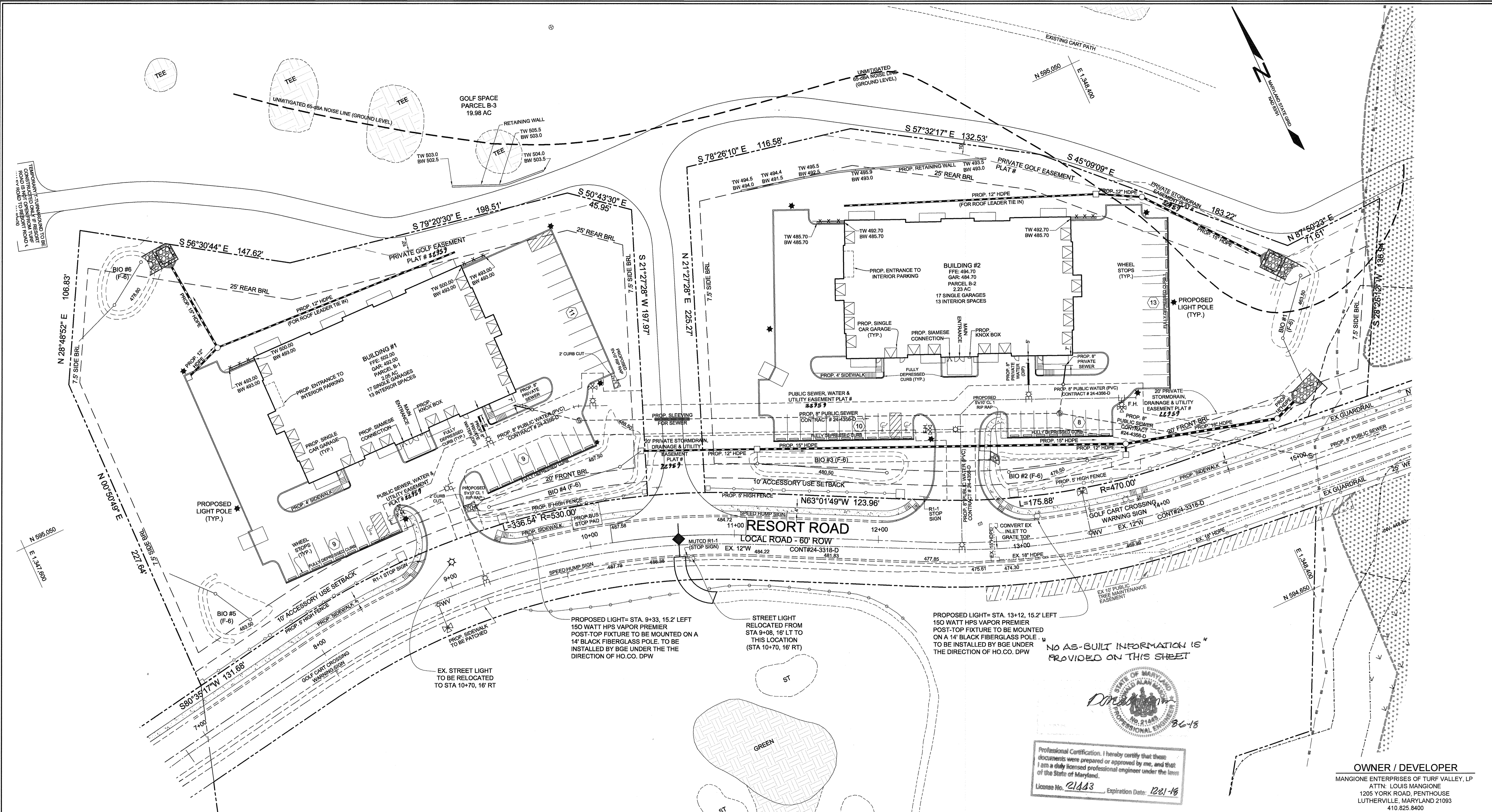
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
CHIEF DEVELOPMENT ENGINEERING DIVISION [Signature] 4/15/13  
CHIEF DIVISION OF LAND DEVELOPMENT [Signature] 4/15/13  
DIRECTOR [Signature] 4/16/13

**DEVELOPER'S CERTIFICATE**

I CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE(1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

DEVELOPER [Signature] 4/2/13





APPROVED  
PLANNING BOARD OF HOWARD COUNTY

DATE 04/01/2010  
*EAB*

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Chad Edwards* 8-14-14  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*Kate St. Louis* 9/02/14  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Paul A. Gagliardi* 9/14/14  
DIRECTOR DATE

PROPOSED LIGHT= STA. 9+33, 15.2' LEFT  
150 WATT HPS VAPOR PREMIER  
POST-TOP FIXTURE TO BE MOUNTED ON A  
14' BLACK FIBERGLASS POLE. TO BE  
INSTALLED BY BGE UNDER THE THE  
DIRECTION OF HO.CO. DPW

STREET LIGHT RELOCATED FROM  
STA 9+08, 16' LT TO  
THIS LOCATION  
(STA 10+70, 16' RT)

PROPOSED LIGHT= STA. 13+12, 15.2' LEFT  
150 WATT HPS VAPOR PREMIER  
POST-TOP FIXTURE TO BE MOUNTED  
ON A 14' BLACK FIBERGLASS POLE  
TO BE INSTALLED BY BGE UNDER  
THE DIRECTION OF HO.CO. DPW

**NO AS-BUILT INFORMATION IS  
PROVIDED ON THIS SHEET**

*Donna M. ...*  
PROFESSIONAL ENGINEER  
36-18

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: 12-1-16

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

NO.	DESCRIPTION	DATE
1	REVISED PER NEW LAYOUT	7/11/14
REVISIONS		

**SITE LIGHTING PLAN**

**VANTAGE CONDOMINIUMS AT TURF VALLEY**  
(PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)  
ZONE: PGCC-1

TAX MAP 17 GRIDS 7, 12 & 18 PARCELS 8 & 706  
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**OWNER / DEVELOPER**  
MANGIONE ENTERPRISES OF TURF VALLEY, LP  
ATTN: LOUIS MANGIONE  
1205 YORK ROAD, PENTHOUSE  
LUTHERVILLE, MARYLAND 21093  
410.825.8400

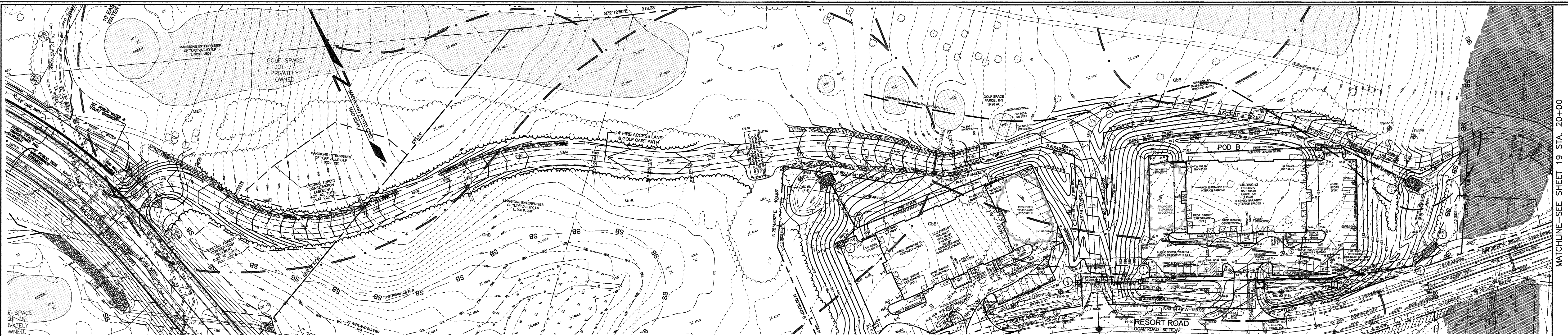
**Sill · Adcock & Associates · LLC**  
Engineers · Surveyors · Planners  
3300 North Ridge Road, Suite 160  
Ellicott City, Maryland 21043  
Phone: 443.325.7682 Fax: 443.325.7685  
Email: info@saaland.com

DESIGN BY: PS, BK  
DRAWN BY: JT, BK  
CHECKED BY: PS  
SCALE: 1" = 30'  
DATE: JULY 11, 2014  
PROJECT #: 09-060  
SHEET #: 17 of 21

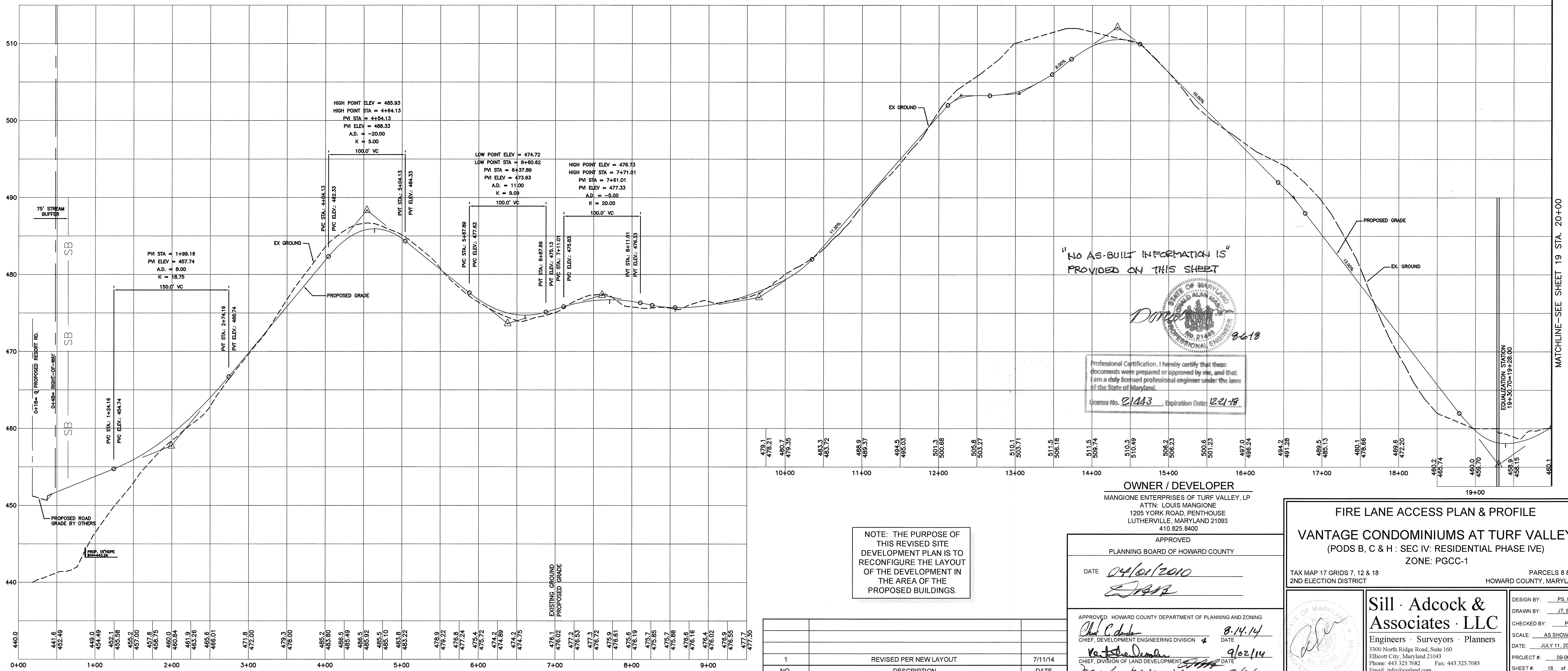
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32025, EXPIRATION DATE: JUNE 30, 2015

**AS-BUILT**

SDP-08-032



PLAN VIEW - FIRE LANE  
SCALE: 1"=60'



NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

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: 12-21-18

OWNER / DEVELOPER  
MANGIONE ENTERPRISES OF TURF VALLEY, LP  
ATTN: LOUIS MANGIONE  
1205 YORK ROAD, PENTHOUSE  
LUTHERVILLE, MARYLAND 21093  
410.825.8400

APPROVED  
PLANNING BOARD OF HOWARD COUNTY  
DATE: 04/01/2010  
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
DATE: 8/14/14  
DATE: 9/02/14  
DATE: 9/2/14

**FIRE LANE ACCESS PLAN & PROFILE**  
**VANTAGE CONDOMINIUMS AT TURF VALLEY**  
(PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)  
ZONE: PGCC-1

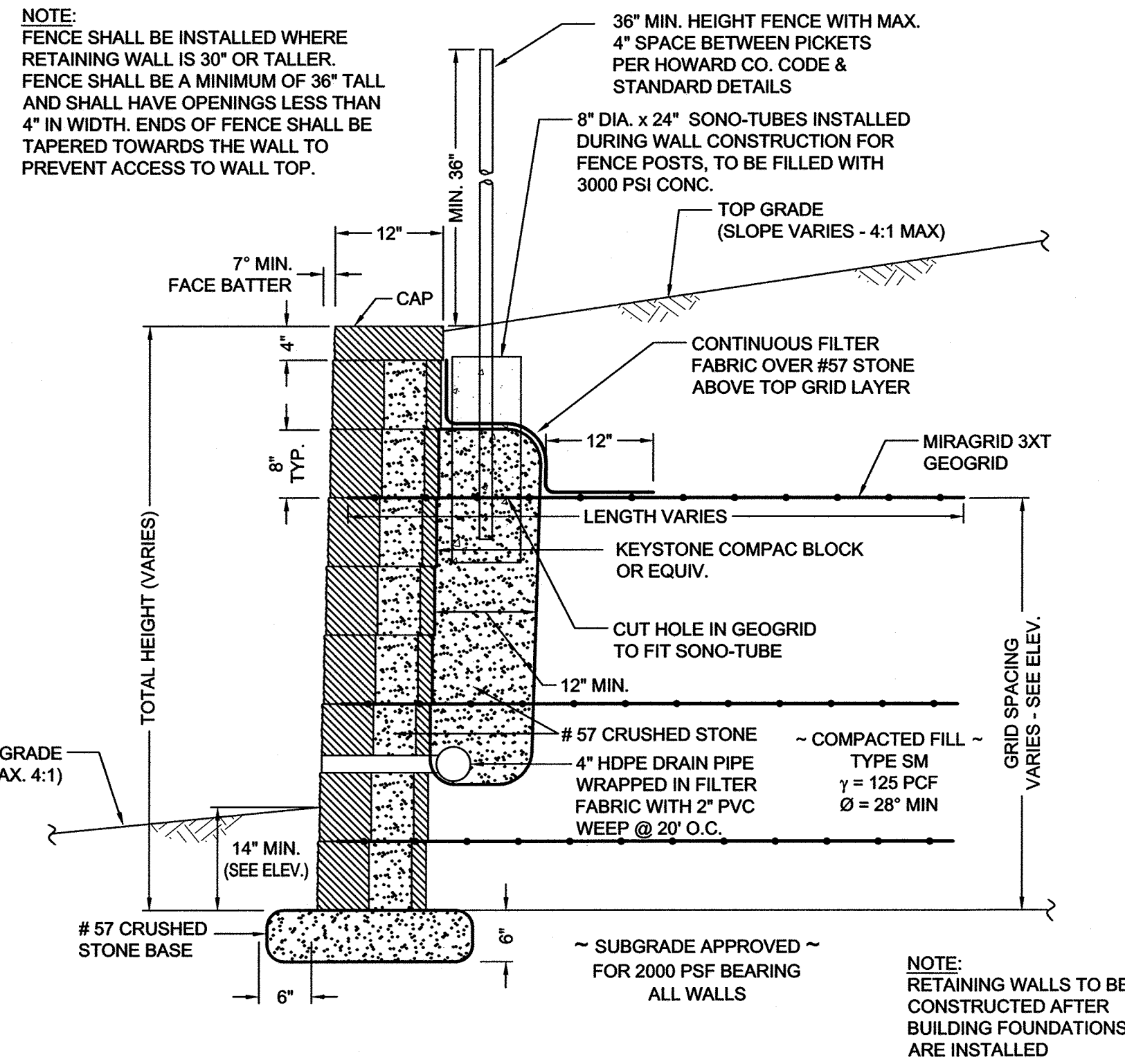
TAX MAP 17 GRIDS 7, 12 & 18  
2ND ELECTION DISTRICT  
PARCELS 8 & 706  
HOWARD COUNTY, MARYLAND

**Sill · Adcock & Associates · LLC**  
Engineers · Surveyors · Planners  
3300 North Ridge Road, Suite 160  
Ellicott City, Maryland 21043  
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Email: info@sadad.com

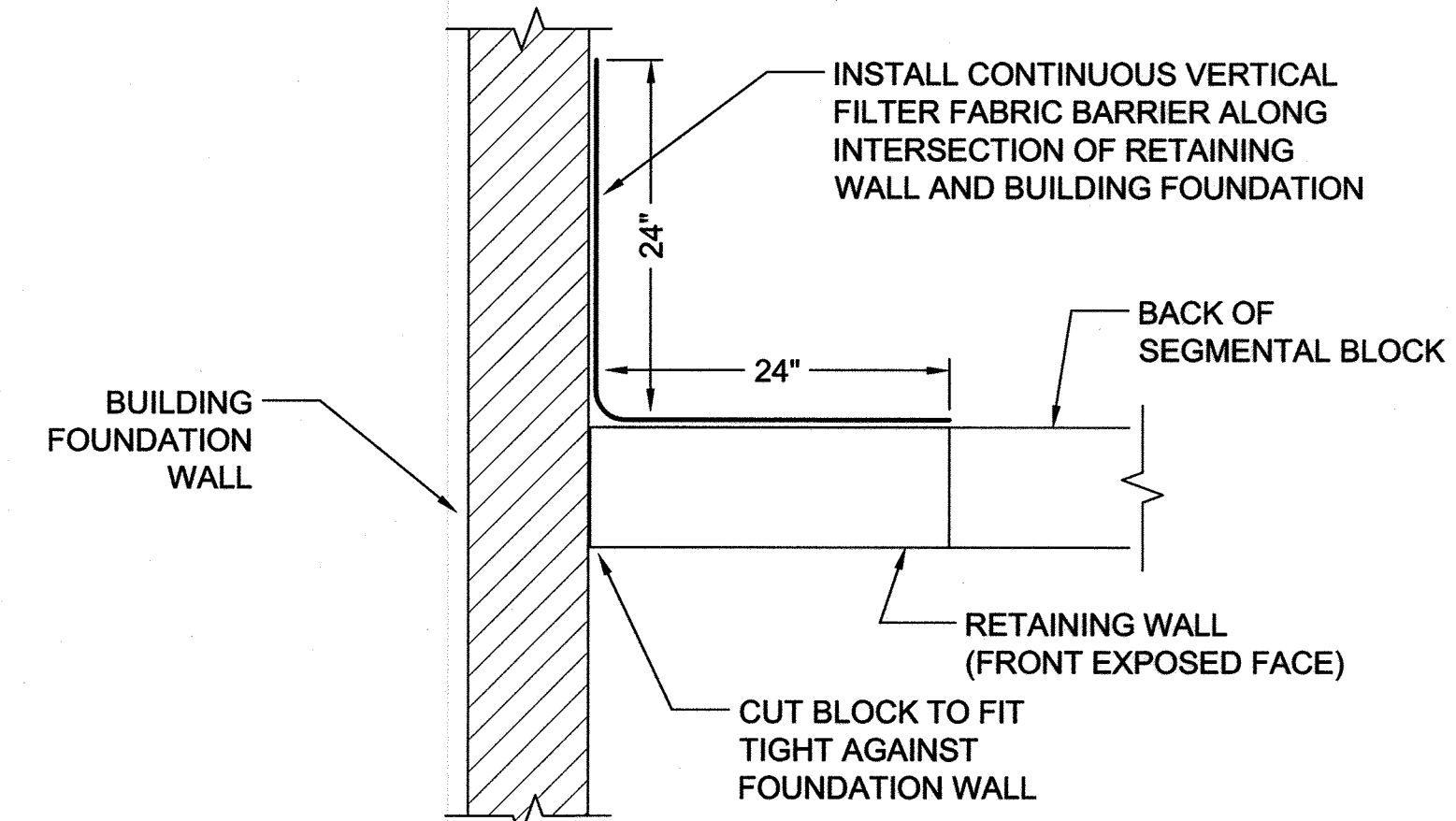
DESIGN BY: PS, BK  
DRAWN BY: JT, BK  
CHECKED BY: PS  
SCALE: AS SHOWN  
DATE: JULY 11, 2014  
PROJECT #: 09-060  
SHEET #: 18 of 21

NO.	DESCRIPTION	DATE
1	REVISED PER NEW LAYOUT	7/11/14
	REVISIONS	





TYPICAL WALL SECTION  
N.T.S



BUILDING / WALL INTERFACE  
PLAN VIEW  
NTS

**SPECIFICATIONS**

**MODULAR CONCRETE BLOCK RETAINING WALL**

**PART 1: GENERAL**

**1.01 Description**  
A. Work shall consist of furnishing and construction of a Modular Retaining Wall System in accordance with these specifications and in reasonably close conformity with the lines, grades, design, and dimensions shown on the plans.  
B. Work includes preparing foundation soil, furnishing and installing leveling pad, unit drainage fill and backfill to the lines and grades shown on the construction drawings.  
C. Work includes furnishing and installing geogrid soil reinforcement of the type, size, location, and lengths designated on the construction drawings.

**1.02 Delivery, Storage and Handling**

A. Contractor shall check all materials upon delivery to assure that the proper type, grade, color, and certification has been received.  
B. Contractor shall protect all materials from damage due to job site conditions and in accordance with manufacturer's recommendations. Damaged materials shall not be incorporated into the work.

**PART 2: PRODUCTS**

**2.01 Modular Concrete Retaining Wall Units**

A. Modular concrete units shall conform to the following architectural requirements:  
face color - tan - standard manufacturers' color may be specified by the Owner.  
face finish - sculptured rock face in angular tri-planer or flat configuration. Other face finishes will not be allowed without written approval of Owner.  
bond configuration - running with bonds nominally located at midpoint vertically adjacent units, in both straight and curved alignments.  
exposed surfaces of units shall be free of chips, cracks or other imperfections when viewed from a distance of 10 feet under diffused lighting.  
B. Modular concrete materials shall conform to the requirements of ASTM C1372 - Standard Specifications for Segmental Retaining Wall Units.  
C. Modular concrete units shall conform to the following structural and geometric requirements measured in accordance with appropriate references:  
compressive strength = 3000 psi minimum;  
absorption = 8 % maximum (6% in northern states) for standard weight aggregates;  
dimensional tolerances =  $\pm 1/8"$  from nominal unit dimensions not including rough split face,  $\pm 1/16"$  unit height - top and bottom planes;  
unit size - 8" (H) x 16" (W) x 12" (D) minimum;  
unit weight - 75 lbs/unit minimum for standard weight

aggregates;  
inter-unit shear strength - 1000 pif minimum at 2 psi normal pressure;  
geogrid/unit peak connection strength - 1000 pif minimum at 2 psi normal force.  
D. Modular concrete units shall conform to the following constructability requirements: (if applicable)  
vertical setback =  $1/8"$  per course (near vertical) or  $1"$  per course per the design;  
alignment and grid positioning mechanism - fiberglass pins, two per unit minimum;  
maximum horizontal gap between erected units shall be - 1/2 inch.

**2.02 Shear Connectors (if applicable)**

A. Shear connectors shall be 1/2 inch diameter thermoset isophthalic polyester resin-protuded fiberglass reinforcement rods or equivalent to provide connection between vertically and horizontally adjacent units.  
Strength of shear connectors between vertical adjacent units shall be applicable over a design temperature of 10 degrees F to +100 degrees F.  
B. Shear connectors shall be capable of holding the geogrid in the proper design position during grid pre-tensioning and backfilling.

**2.03 Base Leveling Pad Material**

A. Material shall consist of a compacted #57 crushed stone base as shown on the construction drawings.

**2.04 Unit Drainage Fill**

A. Unit drainage fill shall consist of #57 crushed stone

**2.05 Reinforced Backfill**

A. Reinforced backfill shall type SM, be free of debris and meet the following gradation tested in accordance with ASTM D-422 and meet other properties shown on the plan:

Sieve Size	Percent Passing
2 inch	100-75
3/4 inch	100-75
No. 40	0-60
No. 200	0-40

Plasticity Index (PI) <10 and Liquid Limit <35 per ASTM D-4318.  
B. Material can be site excavated soils where the above requirements can be met. Unsuitable soils for backfill (high plastic clays or organic soils) shall not be used in the reinforced soil mass.

**2.06 Geogrid Soil Reinforcement**

A. Geosynthetic reinforcement shall consist of geogrids manufactured specifically for soil reinforcement applications and shall be manufactured from high tenacity polyester yarn.

**2.07 Drainage Pipe**

A. The drainage pipe shall be perforated corrugated HDPE pipe manufactured in accordance with ASTM D-1248.

**PART 3 EXECUTION**

**3.01 Excavation**

A. Contractor shall excavate to the lines and grades shown on the construction drawings. Owner's representative shall be responsible for inspecting and approving the excavation prior to placement of leveling material or fill soils.

**3.02 Base Leveling Pad**

A. Leveling pad material shall be placed to the lines and grades shown on the construction drawings, to a minimum thickness of 6 inches and extend laterally a minimum of 6' in front and behind the modular wall unit.  
B. Leveling pad shall be prepared to insure full contact to the base surface of the concrete units.

**3.03 Modular Unit Installation**

A. First course of units shall be placed on the leveling pad at the appropriate line and grade. Alignment and level shall be checked in all directions and insure that all units are in full contact with the base and properly seated.  
B. Place the front of units side-by-side. Do not leave gaps between adjacent units. Layout of corners and curves shall be in accordance with manufacturer's recommendations.  
C. Install shear/connecting devices per manufacturer's recommendations.  
D. Place and compact drainage fill within and behind wall units. Place and compact backfill soil behind drainage fill. Follow wall erection and drainage fill closely with structure backfill.  
E. Maximum stacked vertical height of wall units, prior to unit drainage fill and backfill placement and compaction, shall not exceed three courses.

**3.04 Structural Geogrid Installation**

A. Geogrid shall be oriented with the highest strength axis perpendicular to the wall alignment.  
B. Geogrid reinforcement shall be placed at the strengths, lengths, and elevations shown on the construction design drawings or as directed by the Engineer.  
C. The geogrid shall be laid horizontally on compacted backfill and attached to the modular wall units. Place the next course of modular concrete units over the geogrid. The geogrid shall be pulled taut, and anchored prior to

backfill placement on the geogrid.  
D. Geogrid reinforcements shall be continuous throughout their embedment lengths and placed side-by-side to provide 100% coverage at each level. Spliced connections between shorter pieces of geogrid or gaps between adjacent pieces of geogrid are not permitted.

**3.05 Reinforced Backfill Placement**

A. Reinforced backfill shall be placed, spread, and compacted in such a manner that minimizes the development of slack in the geogrid and installation damage.  
B. Reinforced backfill shall be placed and compacted in lifts not to exceed 6 inches where hand compaction is used, or 8 - 10 inches where heavy compaction equipment is used. Lift thickness shall be decreased to achieve the required density as required.  
C. Reinforced backfill shall be compacted to 95% of the maximum density as determined by ASTM D698. The moisture content of the backfill material prior to and during compaction shall be uniformly distributed throughout each layer and shall be +3% to -3% of optimum.  
D. Only lightweight hand-operated equipment shall be allowed within 3 feet from the tail of the modular concrete unit.  
E. Tracked construction equipment shall not be operated directly upon the geogrid reinforcement. A minimum fill thickness of 6 inches is required prior to operation of tracked vehicles over the geogrid. Tracked vehicle turning should be kept to a minimum to prevent tracks from displacing the fill and damaging the geogrid.  
F. Rubber tired equipment may pass over geogrid reinforcement at slow speeds, less than 10 MPH. Sudden braking and sharp turning shall be avoided.  
G. At the end of each day's operation, the Contractor shall slope the last lift of reinforced backfill away from the wall units to direct runoff away from wall face. The Contractor shall not allow surface runoff from adjacent areas to enter the wall construction site.

**3.06 Cap Installation**

A. Cap units shall be glued to underlying units with an all-weather adhesive recommended by the manufacturer.

**3.07 Field Quality Control**

A. The Owner shall engage inspection and testing services, including independent laboratories, to provide quality assurance and testing services during construction.  
B. As a minimum, quality assurance testing should include foundation soil inspection, soil and backfill testing, verification of design parameters, and observation of construction for general compliance with design drawings and specifications.

**NOTES:**

- No trees shall be planted within 10 feet of the top of the retaining wall.
- Retaining walls shall only be constructed under the observation of a registered professional engineer and a (NICET, WACEL, or equiv.) certified soils technician.
- One soil boring shall be required every one hundred feet along the entire length of the wall. Copies of all boring reports shall be provided to the Howard County Inspector Prior to the start of construction.
- The required bearing pressure beneath the wall system shall be verified in the field by a certified soils technician. Testing documentation must be provided to the Howard County Inspector prior to start of construction. The required bearing test shall be the Dynamic Cone Penetrometer test ASTM STP-399.
- The suitability of fill material shall be confirmed by the on-site soils technician. Each 8" lift must be compacted to a minimum 95% standard proctor density and the testing report shall be made available to the Howard County Inspector upon completion of construction.
- Walls shall not be constructed on uncertified fill materials.
- Walls shall not be constructed within a Howard Co. right-of-way or easement.

NO AS-BUILT INFORMATION IS PROVIDED 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: 12-21-18

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

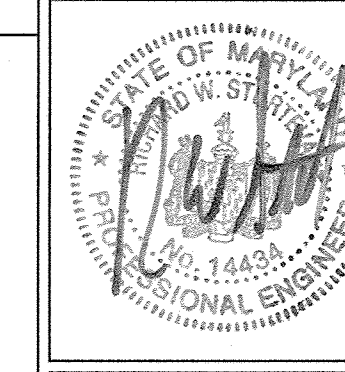
**OWNER / DEVELOPER**  
MANGIONE ENTERPRISES OF TURF VALLEY, LP  
ATTN: LOUIS MANGIONE  
1205 YORK ROAD, PENTHOUSE  
LUTHERVILLE, MARYLAND 21093  
410.825.8400

**WALL ELEVATIONS & DETAILS**  
**VANTAGE CONDOMINIUMS AT TURF VALLEY**  
(PODS B, C & H : SEC IV: RESIDENTIAL PHASE IV)  
ZONE: PGCC-1  
TAX MAP 16 GRID 12 & 18  
TAX MAP 17 GRID 7  
2ND ELECTION DISTRICT  
PARCEL 8  
HOWARD COUNTY, MARYLAND

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
CHIEF DEVELOPMENT ENGINEERING DIVISION  
DATE: 4/15/13  
CHIEF DIVISION OF LAND DEVELOPMENT  
DATE: 4/15/13  
DIRECTOR  
DATE: 4/16/10

PLANNING BOARD APPROVAL BLOCK  
DATE: 04/01/2010  
EATS

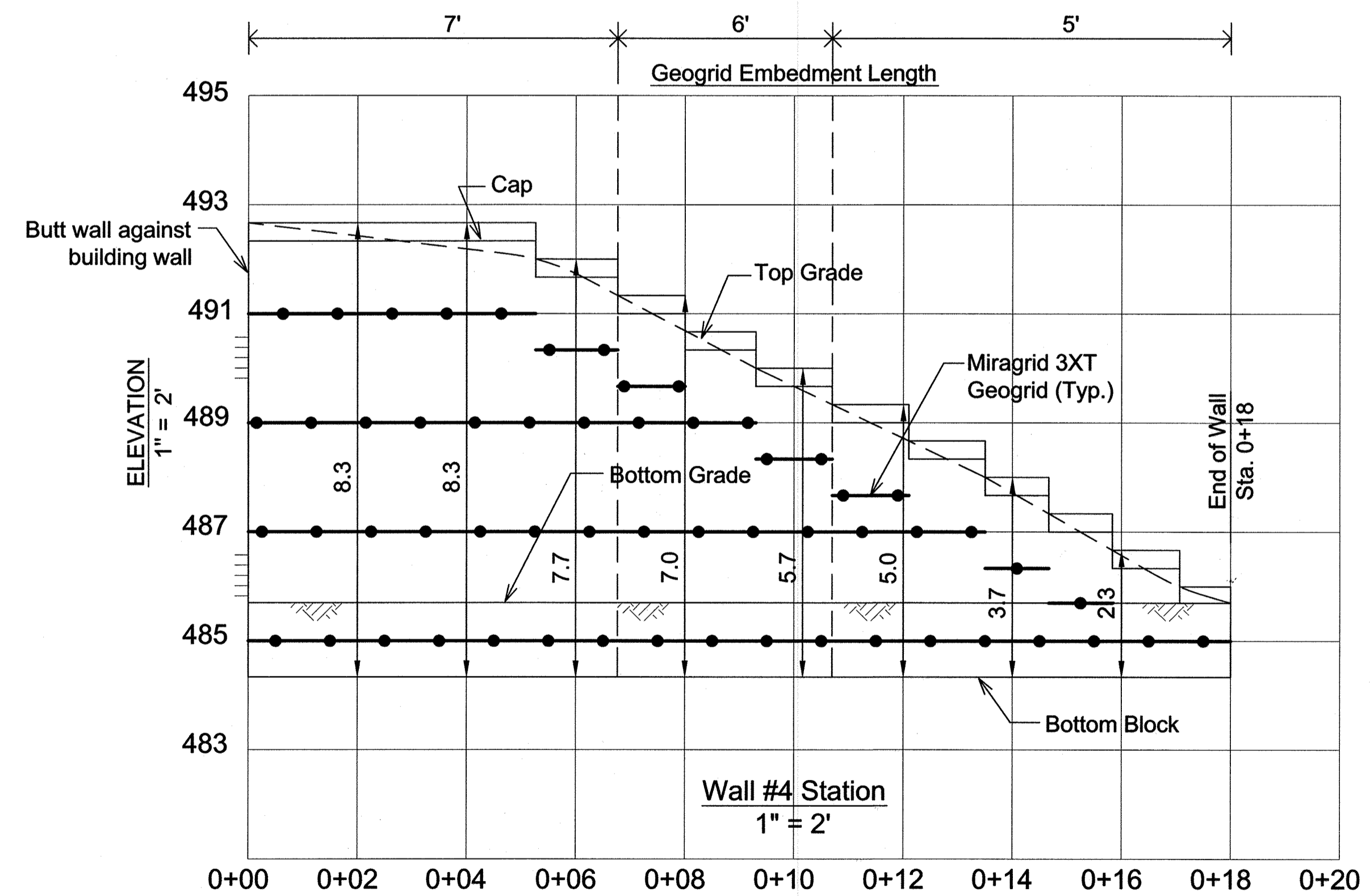
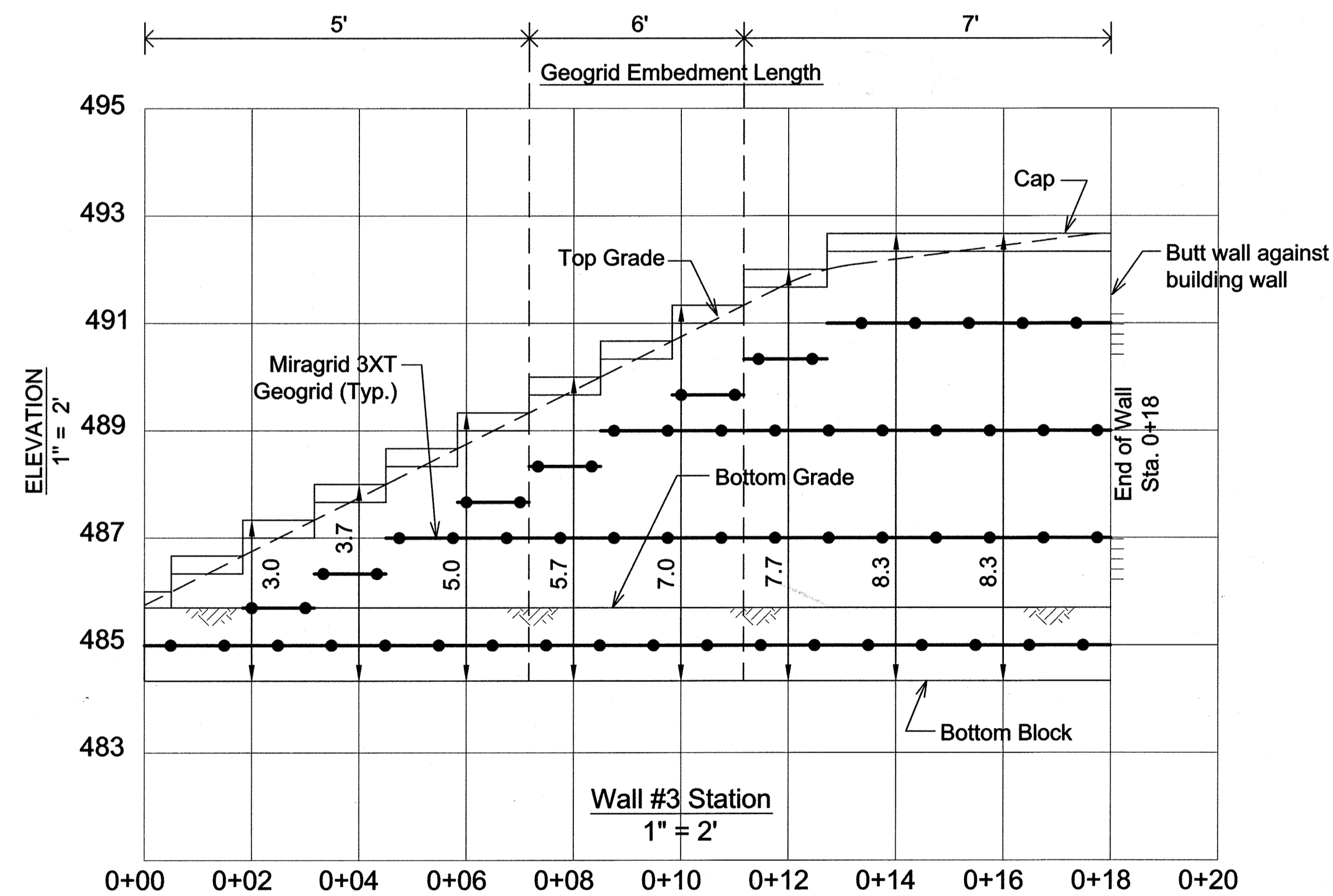
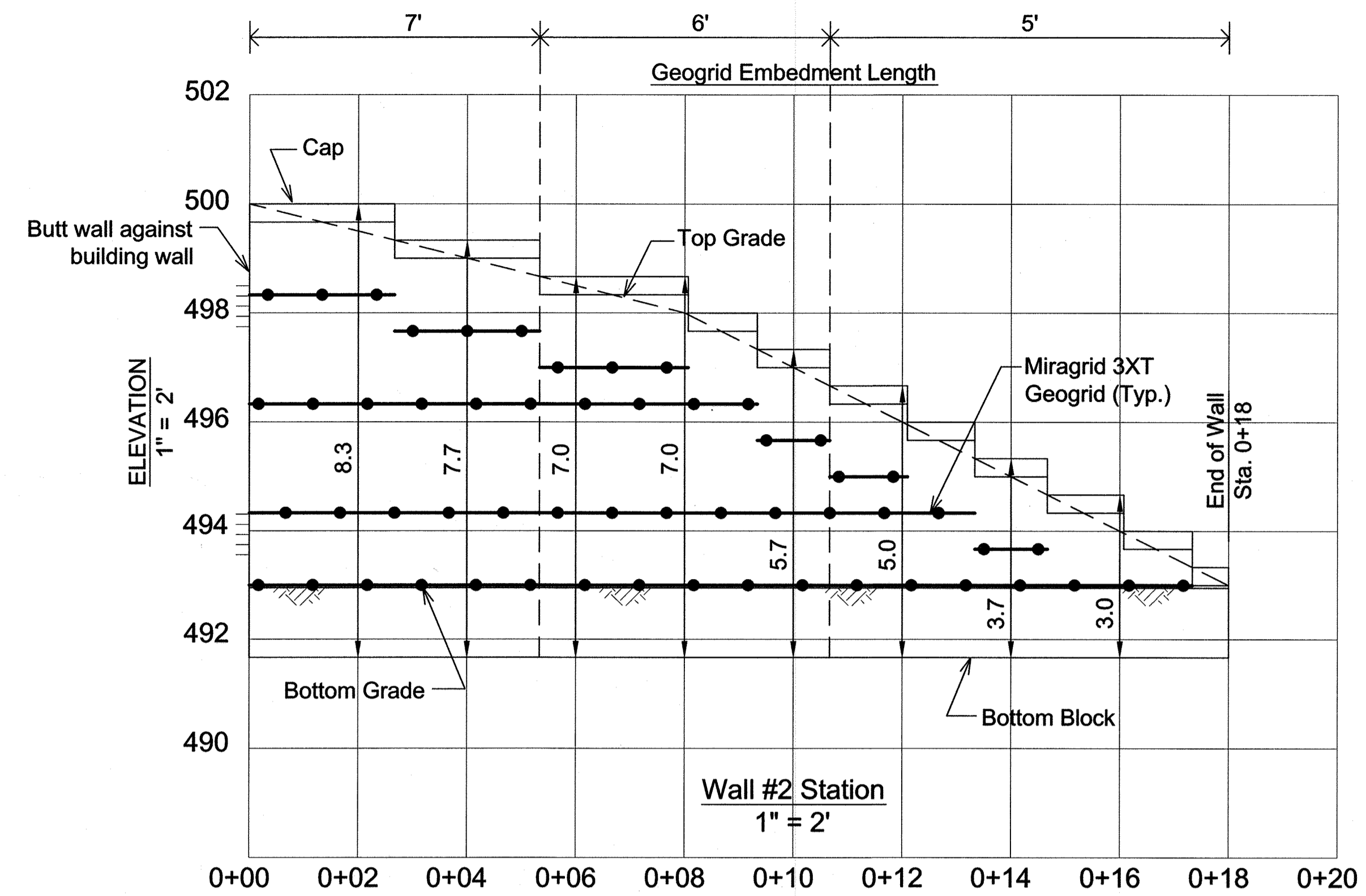
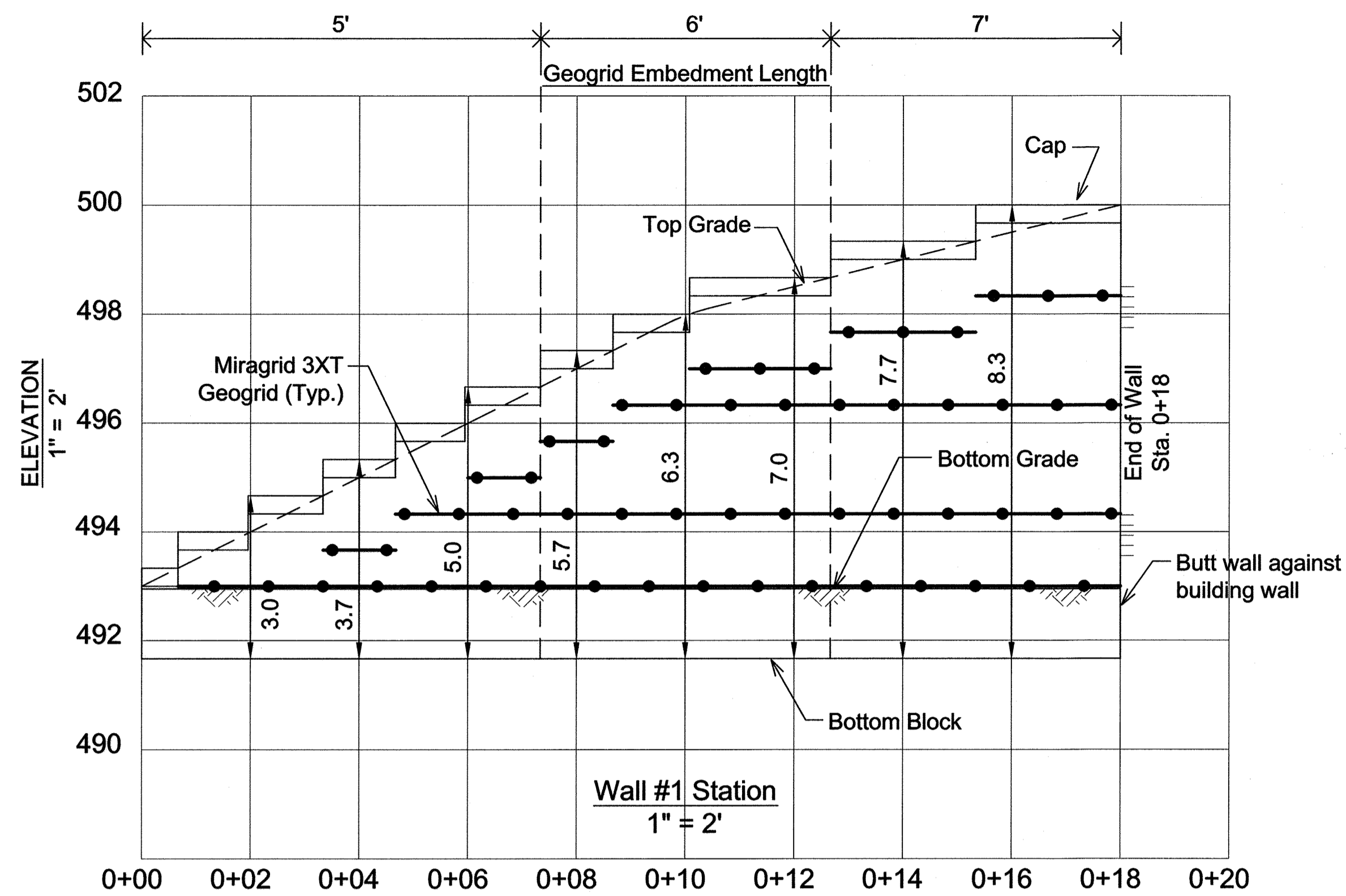
NO.	DESCRIPTION	DATE
1	REVISED PER NEW LAYOUT	7/11/14
REVISIONS		



**HILLIS-CARNES**  
ENGINEERING ASSOCIATES  
10975 Guilford Road, Suite A  
Annapolis Junction, Maryland  
Telephone: (410) 880 - 4788 Fax: (410) 880 - 4098

DESIGN BY: AM  
DRAWN BY: AM  
CHECKED BY: RWS  
SCALE: AS SHOWN  
DATE: FEBRUARY, 2013  
PROJECT #: 05171-B  
SHEET #: 20 of 21

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. 14434, EXPIRATION DATE: 05-13-13



NO AS-BUILT INFORMATION IS PROVIDED 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: 12-31-18

NOTE: THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

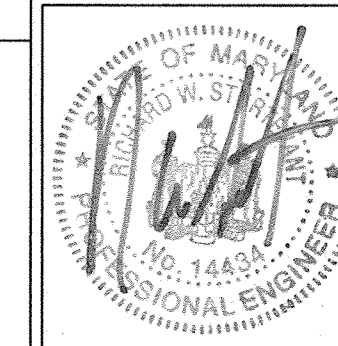
OWNER / DEVELOPER  
MANGIONE ENTERPRISES OF TURF VALLEY, LP  
ATTN: LOUIS MANGIONE  
1205 YORK ROAD, PENTHOUSE  
LUTHERVILLE, MARYLAND 21093  
410.825.8400

**WALL ELEVATIONS**  
**VANTAGE CONDOMINIUMS AT TURF VALLEY**  
(PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)  
ZONE: PGCC-1  
TAX MAP 16 GRID 12 & 18  
TAX MAP 17 GRID 7  
2ND ELECTION DISTRICT  
PARCEL 8  
HOWARD COUNTY, MARYLAND

NO.	DESCRIPTION	DATE
1	REVISED PER NEW LAYOUT	7/11/18
	REVISIONS	

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
CHIEF DEVELOPMENT ENGINEERING DIVISION  
Katherine Losh  
CHIEF DIVISION OF LAND DEVELOPMENT  
DATE: 4/15/13  
DATE: 4/15/13  
DATE: 4/15/13

PLANNING BOARD APPROVAL BLOCK  
DATE: 04/01/2010  
[Signature]



**HILLIS-CARNES**  
ENGINEERING ASSOCIATES  
10975 Guilford Road, Suite A  
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Telephone: (410) 880-4788 Fax: (410) 880-4098

DESIGN BY: AM  
DRAWN BY: AM  
CHECKED BY: RWS  
SCALE: AS SHOWN  
DATE: FEBRUARY, 2013  
PROJECT #: 05171-B  
SHEET #: 21 of 21

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. 14434, EXPIRATION DATE: 05-13-13