

GENERAL NOTES

- THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- THE EXISTING TOPOGRAPHY SHOWN HEREON IS BASED ON HOWARD COUNTY GIS.
- THE PROJECT BOUNDARY IS BASED ON A PLATS 23334-23337 PREPARED BY MORRIS & RICHIE ASSOCIATES, INC.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT. HOWARD COUNTY MONUMENTS BM 35HA AND BM 35HB WERE USED FOR THIS PROJECT.
- THE SUBJECT PROPERTY IS ZONED "CEF-R" PER ZONING BOARD DECISION AND ORDER FOR CASE ZB-1104-M, ISSUED ON APRIL 6, 2015 AND IN ACCORDANCE WITH THE 10/6/13 ZONING REGULATIONS, AND IS SUBJECT TO THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS EFFECTIVE 10/22/03 PER COUNCIL BILL 05-2003.
- THIS SUBDIVISION LAYOUT AND DEVELOPMENT CONCEPT PLAN APPROVED ON APRIL 6, 2015 BY THE ZONING BOARD OF HOWARD COUNTY, CASE NO. ZB-1104-M. THE LAYOUT AMENDMENTS SHOWN HEREIN ADDRESS RECOMMENDATIONS BY DAP.
 - IN ACCORDANCE WITH SECTION 121.0; THE HOWARD COUNTY ZONING BOARD HELD A SECOND HEARING FOR A DETERMINATION OF MINOR MODIFICATION (CASE ZB-1104-M). ON NOVEMBER 10, 2016 THE HOWARD COUNTY ZONING BOARD APPROVED. THE REQUEST AND DETERMINED:
 - S-15-007 PROPOSES MINOR MODIFICATIONS TO THE APPROVED DEVELOPMENT CONCEPT PLAN IN THIS MATTER IN ACCORDANCE WITH ZONING REGULATION SEC. 02-01.1.
 - S-15-007, AS APPROVED, SHALL CONSTITUTE THE NEW DEVELOPMENT CONCEPT PLAN IN THIS CASE.
 - THE PETITIONER IS NOT REQUIRED TO COMMENCE A NEW CEF APPLICATION FOLLOWING THE SAME PROCEDURES USED FOR A PETITION TO CREATE A NEW CEF DISTRICTS AND
 - SECTION C.2 OF THE BULK REGULATIONS IN THIS CASE IS APPROVED TO BE AMENDED FROM SPECIFYING A 105' SETBACK FOR "BUILDING/USE" TO A 105' SETBACK FOR "PRINCIPAL STRUCTURE".
- THE GROUNDWATER USE RESTRICTION AREA SHOWN HEREON IS DESCRIBED IN A TITLE NOTICE DATED APRIL 7, 2008 AND RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND IN LIBER 11163 FOLIO 588. THE TITLE NOTICE DECLARES THAT THE AREA IS SUBJECT TO THE RESOURCE CONSERVATION AND RECOVERY CORRECTIVE ACTION PERMIT AND THE PROHIBITION AGAINST THE DEVELOPMENT OF ONSITE WELLS FOR DRINKING WATER OR OTHER DOMESTIC USES.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S) OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100-YEAR FLOODPLAIN. A WAIVER PETITION FOR ENVIRONMENTAL (STREAM AND STREAM BUFFER DISTURBANCE) IS PROPOSED FOR STORM DRAIN OUTFALLS AND SEWER EXTENSION.
- THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- WATER FOR THIS PROJECT IS TO BE PUBLIC EXTENSIONS OF CONTRACT NO. 44-3283-D.
- SEWER FOR THIS PROJECT IS TO BE PUBLIC EXTENSIONS OF CONTRACT NO. 34-3424-D.
- EXISTING UTILITIES LOCATED FROM TOPOGRAPHIC SURVEY AND AS-BUILT DRAWINGS. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE.
- A FLOODPLAIN IS LOCATED ONSITE AND WAS DELINEATED PER THE FLOOD INSURANCE RATE MAP #240044 0033 B.
- STEEP SLOPES OVER 20,000 SF CONTIGUOUS ARE SHOWN HEREON.
- FOREST CONSERVATION OBLIGATIONS FOR THIS PROJECT SHALL BE ADDRESSED BY A FOREST CONSERVATION PLAN SUBMITTED WITH THE SUBDIVISION PLANS.
- WETLANDS AND STREAMS SHOWN ONSITE ARE BASED ON THE DELINEATION BY GEO-TECHNOLOGY ASSOCIATES, INC. DATED MAY 31, 2013 AND REVISED FEBRUARY 2016.
- IN ACCORDANCE WITH ZONING BOARD DECISION AND ORDER FOR CASE ZB1104M, THE OPEN SPACE REQUIREMENTS FOR THIS CEF-R PROJECT IS 33% OF GROSS AREA (66.81 AC. GROSS AREA X 33% = 22.05 AC.). REFER TO PROPOSED OPEN SPACE SHOWN HEREON.
- GEOTECHNICAL INVESTIGATIONS SHALL COMPLETED AND SUBMITTED WITH THE FUTURE SUBDIVISION PLANS.
- A NOISE STUDY SHALL BE PREPARED BY PHOENIX NOISE AND VIBRATION MARCH 2016 AND SHALL BE SUBMITTED WITH THE FUTURE SUBDIVISION PLANS.
- FOREST STAND DELINEATION REPORT DATED MAY 29, 2015 WAS PREPARED BY GEO-TECHNOLOGY ASSOCIATES, INC.
- GRACE DRIVE IS CLASSIFIED AS A MINOR COLLECTOR.
- THE PROPOSED STREETS ARE CLASSIFIED AS PUBLIC ACCESS STREETS / PLACE.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL GROUNDS, CEMETERIES, OR HISTORIC STRUCTURES LOCATED ON THIS PROPERTY.
- THE PROPOSED UNITS SHALL HAVE AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM.
- STORMWATER MANAGEMENT FOR THE PROJECT IS PROVIDED BY THE USE OF NON STRUCTURAL AND MICRO-SCALE PRACTICES IN ACCORDANCE WITH ENVIRONMENTAL SITE DESIGN CRITERIA. MICRO-SCALE PRACTICES INCLUDE MICRO-BIORETENTION (M-R), BIO SWALES (M-S), RAIN BARRELS (M-1) AND DRYWELLS (M-5). ALSO, THE NON STRUCTURAL PRACTICE; DISCONNECTION OF ROOFTOP RUNOFF (N-1) WILL BE UTILIZED. THESE FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED.
- PER HOWARD COUNTY REQUIREMENT AND IN ACCORDANCE VOLUME 1, CHAPTER 5, SECTION 5.2.1.A, 10 & 100 YEAR QUANTITY MANAGEMENT HAVE CONCEPTUALLY BEEN PROVIDED.
 - IN ORDER TO MEET THE PROJECTS QUANTITY MANAGEMENT REQUIREMENTS, THE DEVELOPER PROPOSES THE FOLLOWING:
 - IN COOPERATION WITH W.R. GRACE, THE RECONSTRUCTION OF THE W.R. GRACE "FARM POND" FACILITY. AS PREVIOUSLY COMMENTED BY THE HOWARD SOIL CONSERVATION DISTRICT, THIS FACILITY WILL BE RECONSTRUCTED TO CURRENT MD-378 AND HOWARD COUNTY -VOLUME 1, CHAPTER 5 SPECIFICATIONS. CURRENTLY, THIS FACILITY IS A WET POND FACILITY. CONCEPTUALLY, THIS FACILITY SHALL BE RECONSTRUCTED AS A P-3 WET EXTENDED DETENTION POND.
 - A LARGE QUANTITY FACILITY WHICH SHALL PROVIDE 10 & 100 YEAR QUANTITY MANAGEMENT AND IS CONCEPTUALLY DESIGNED AS A F-1 SURFACE SAND FILTER.
 - A SMALL QUANTITY FACILITY WHICH SHALL PROVIDE 10 & 100 YEAR QUANTITY MANAGEMENT AND IS CONCEPTUALLY DESIGNED AS A F-6 BIORETENTION FACILITY.
 - MICRO-SCALE FACILITIES MANAGING ROAD RUNOFF SHALL BE DESIGNATED AS PRIVATELY OWNED AND JOINTLY MAINTAINED (H.O.A. AND HOWARD COUNTY); HOWARD COUNTY WILL MAINTAIN OUTLET STRUCTURES AND PIPES WHILE THE H.O.A. SHALL MAINTAIN MULCH, WEEDS, PERFORATED UNDERDRAINS, FEEDER PIPES, AND ROUTINE SOIL REPLACEMENT.
- APPROVAL OF THIS ENVIRONMENTAL CONCEPT PLAN (ECP) DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SUBDIVISION PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN AND/OR RED-LINE REVISION PLAN. REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE HOWARD COUNTY ZONING REGULATIONS SHALL OCCUR AT THE SUBDIVISION PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN AND/OR LINE REVISION PROCESS. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED REVIEW COMMENTS (INCLUDING COMMENTS THAT MAY ALTER THE OVERALL SITE DESIGN) AS THIS PROJECT PROGRESSES THROUGH THE PLAN REVIEW PROCESS.
- IN ACCORDANCE WITH SECTION 16.121(A)(4) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, RECREATION OPEN SPACE FOR THIS CEF-R PROJECT IS 1,000 SF / UNIT. THE OVERALL REQUIREMENT SHALL BE MET PER REGULATION OR IN COMBINATION WITH THE JUNE 2012 POLICY REGARDING THE ALLOWANCE OF A MAXIMUM 50% CREDIT FOR RECREATIONAL OPEN SPACE IN LIEU OF LAND AREA.
- APPROVAL OF THIS ENVIRONMENTAL CONCEPT PLAN (ECP) BY THE HOWARD SOIL CONSERVATION DISTRICT DOES NOT GRANT APPROVAL OF THE PROPOSED SEDIMENT CONTROL SCHEME. THE FINAL PLAN SHALL INCLUDE A SEQUENCE OF CONSTRUCTION WHICH SHALL DETAIL SEDIMENT AND EROSION CONTROLS AND PHASING AND ADDRESS THE PROJECT TEMPORARY STORMWATER MANAGEMENT REQUIREMENTS.
- TEMPORARY STORMWATER MANAGEMENT WILL BE USED ON DRAINAGE AREAS OF 2 ACRES OR MORE.
- THE DEPARTMENT OF PLANNING AND ZONING IN APRIL 2016 REVIEW OF THIS PLAN, DETERMINED THE EXISTING ENROACHMENT FOR THE STORM DRAIN OUTFALL OCCURRING ALONG GRACE DRIVE, THE DISTURBANCES REQUIRED FOR THE CONNECTION TO PUBLIC SEWER AND THE DISTURBANCES NECESSARY FOR THE RECONSTRUCTION OF THE OFF-SITE W.R. GRACE FARM POND TO MEET CURRENT MD-378 SPECIFICATIONS "NECESSARY DISTURBANCES" IN ACCORDANCE WITH SECTION 16.116(O) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- FURTHER DEVELOPMENT OF THE STORMWATER PRACTICES WITHIN GRACE DRIVE WILL BE EVALUATED IN COORDINATION WITH THE DEPARTMENT OF PUBLIC WORKS AS PART OF THE FINAL PLANS.
- THIS PROJECT IS SUBJECT TO A DESIGN MANUAL WAIVER. ON OCTOBER 22, 2015, THE CHIEF OF THE DEVELOPMENT ENGINEERING DIVISION DEFERRED THE REQUEST TO WAIVE THE REQUIREMENTS OF SECTION 2.5.B OF DESIGN MANUAL VOLUME III; WHICH REQUIRES A MINIMUM OF 250 FEET SPACING BETWEEN INTERSECTING ROAD CENTERLINES.
 - A REQUEST FOR RECONSIDERATION WAS SUBMITTED AND ON APRIL 25, 2016, THE CHIEF OF THE DEVELOPMENT ENGINEERING DIVISION APPROVED THE REQUEST TO WAIVE SECTION 2.5.B.1 TO REDUCE THE INTERSECTION SPACING FROM 250 FEET TO 240.79 FEET AND SECTION 2.3.A.3.E WHICH REQUIRES A SECOND MEANS OF ACCESS WHEN VOLUME EXCEEDS 1,000 ADT, PROVIDING AN ALTERNATE DESIGN AND SECTION 2.3.A.1 FOR REDUCTIONS IN CENTERLINE ROAD. APPROVAL IS SUBJECT TO THE CONDITION TO PROVIDE THE PAVEMENT WIDTH OF 22 FEET ON NORTH AND SOUTHBOUND ROAD A BETWEEN ROAD B & GRACE DRIVE AND PARKING ALONG REDUCED HORIZONTAL CURVES BE RESTRICTED.
- THIS PROJECT IS SUBJECT TO WP-16-073. ON JANUARY 4, 2016; THE PLANNING DIRECTOR APPROVED THE REQUEST TO WAIVE SECTION 16.144(D)(2) FOR A REVISED SUBMISSION OF A SKETCH PLAN WITHIN 45 DAYS AND SECTION 16.104(B)(1) FOR A REVISED SUBMISSION OF A WAIVER PETITION WITHIN 45 DAYS.
 - APPROVAL IS SUBJECT TO THE FOLLOWING CONDITION:
 - WITHIN 90 DAYS FROM THE DATE OF THE APPROVAL LETTER (APRIL 3, 2016) THE DEVELOPER SHALL RESUBMIT TO THE DEPARTMENT OF PLANNING AND ZONING THE REVISED SKETCH PLAN, S-15-007, AND REVISED WAIVER PETITION WP-16-038. IF THE SKETCH PLAN AND WAIVER PETITION ARE NOT RESUBMITTED WITHIN 90 DAYS, THE SKETCH PLAN WILL BE VOIDED AND THE WAIVER PETITION WILL BE DENIED. AFTER 90 DAYS ANY PLANS RESUBMITTED MUST BE PROCESSED AS A NEW SKETCH PLAN AND A NEW WAIVER PETITION REQUEST.
- THIS PROJECT IS SUBJECT TO WP-16-038. ON DECEMBER 5, 2016; THE PLANNING DIRECTOR APPROVED THE REQUEST TO WAIVE SECTION 16.1205(A)(7)&(10) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, WHICH REQUIRES THE RETENTION OF STATE CHAMPION TREES, TREES 75% OF THE DIAMETER OF STATE CHAMPION TREES, AND TREES 30" IN DIAMETER OR LARGER.
 - APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
 - APPROVAL IS TO REMOVE 41 SPECIMEN TREES IDENTIFIED ON THE ALTERNATIVE COMPLIANCE EXHIBIT. A SEPARATE ALTERNATIVE COMPLIANCE REQUEST MUST BE SUBMITTED AND APPROVED BY THE DEPARTMENT OF PLANNING AND ZONING FOR ANY OTHER SPECIMEN TREE TO BE REMOVED, UNLESS OTHERWISE NOTED IN THESE CONDITIONS OF APPROVAL.
 - SPECIMEN TREES WHERE THE CRITICAL ROOT ZONE IS IMPACTED BY THE LIMIT OF DISTURBANCE WILL REQUIRE PRE-PLANNING AND POST-CONSTRUCTION PRACTICES TO MINIMIZE IMPACT TO THE TREES. THESE SPECIFIC PRACTICES WILL BE IDENTIFIED WITHIN THE FINAL SUBDIVISION PLAN AND SHALL BE IMPLEMENTED AND/OR SUPERVISED IN THE FIELD BY A CERTIFIED ARBORIST.
 - SPECIMEN TREES WHERE THE CRITICAL ROOT ZONE IS IMPACTED BY THE LIMIT OF DISTURBANCE, AND INDICATED IN THE ALTERNATIVE COMPLIANCE EXHIBIT TO BE REMOVED OR FOR CONSERVATION. FOR THIS ALTERNATIVE COMPLIANCE REQUEST IF A CERTIFIED ARBORIST DETERMINES SURVIVAL OF THE TREE IS IMPROBABLE OR THE TREE MAY BE A POTENTIAL HAZARD TO THE DEVELOPMENT, PRIOR TO REMOVING THE TREE, THE APPLICANT SHALL SUBMIT A REPORT FROM THE CERTIFIED ARBORIST TO THE DEPARTMENT OF PLANNING AND ZONING DETAILING THE TREES CONDITION, THE PRACTICES EXAMINED TO SAVE THE TREE, AND THE REASONING FOR THE TREE'S REMOVAL.
 - REMOVAL OF THE 41 SPECIMEN TREES WILL REQUIRE MITIGATION AS ADDITIONAL LANDSCAPE PLANTINGS OR 1" CALIPER FOREST CONSERVATION PLANTINGS, OR A COMBINATION THEREOF. MITIGATION WILL BE DETERMINED BY THE DEPARTMENT OF PLANNING AND ZONING DURING THE REVIEW OF THE PRELIMINARY PLAN OR FINAL PLAN WHEN SITE DESIGN IS FURTHER ENGINEERED.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

12/15/16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE

12/14/16
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE

ENVIRONMENTAL CONCEPT PLAN SIMPSON OAKS

LOTS 1 - 184 AND OPEN SPACE LOTS 185 - 191
 A RESUBDIVISION OF GRACE TECH PARK - PARCELS 'B-1' & 'C'
 AND VILLAGE OF HICKORY RIDGE, SECTION 3, AREA 14
 PARCEL 'A' AND OPEN SPACE LOT 45
 HOWARD COUNTY, MD

NOTES:
 1. ALL WATER CONNECTIONS SHALL BE 1-1/2" WITH 1" OUTSIDE METER SETTINGS, UNLESS OTHERWISE NOTED. REFER TO HOWARD COUNTY DETAILS W-3.28 OUTSIDE METER SETTINGS.

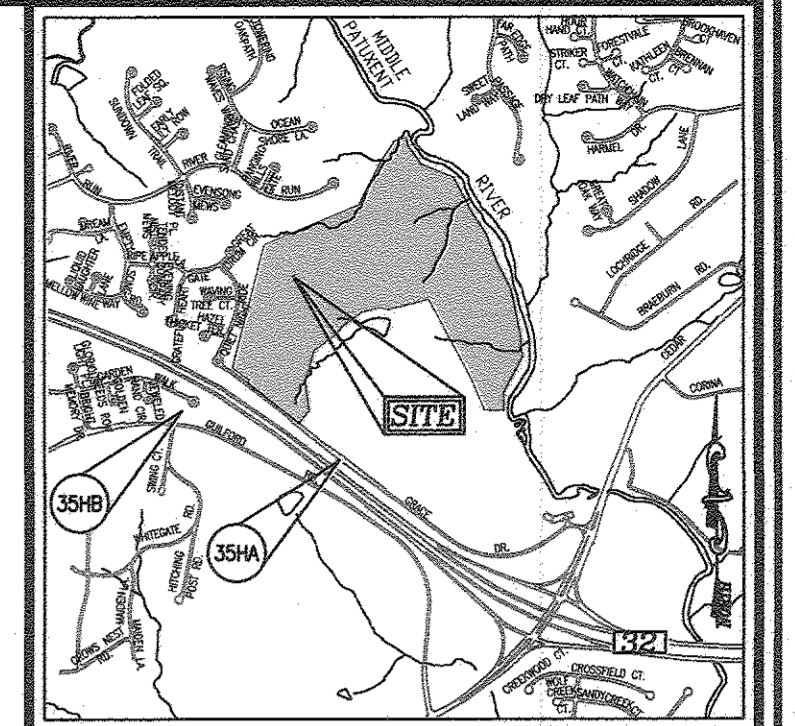
BENCHMARKS

BM 35HA*
 N 553,966.7457 E 1,340,476.9524
 NAD 83 (Adj: 07)
 NAVD 88
 ELEV. 404.584

BEING A STAMPED BRASS OR ALUMINUM DISC SET ON TOP OF A 3 FOOT DEEP COLUMN OF CONCRETE APPROXIMATELY 90' NORTH OF GRACE DRIVE AND 160' EAST OF THE EASTERN MOST ENTRY DRIVE FOR THE PROPERTY. (ALSO KNOWN AS "R-109" AND "0088").

BM 35HB*
 N 554,835.4156 E 1,337,888.3861
 NAD 83 (Adj: 07)
 NAVD 88
 ELEV. 449.699

BEING A STAMPED BRASS OR ALUMINUM DISC SET ON TOP OF A 3 FOOT DEEP COLUMN OF CONCRETE AT THE INTERSECTION OF GULFROAD ROAD AND WHITEGATE ROAD, APPROXIMATELY 5' NORTH OF GULFROAD ROAD.



VICINITY MAP
 SCALE: 1"=2000'
 ADC MAP COORDINATE: 32
 GRID B-3, C-3, B-4 & C-4

SHEET INDEX

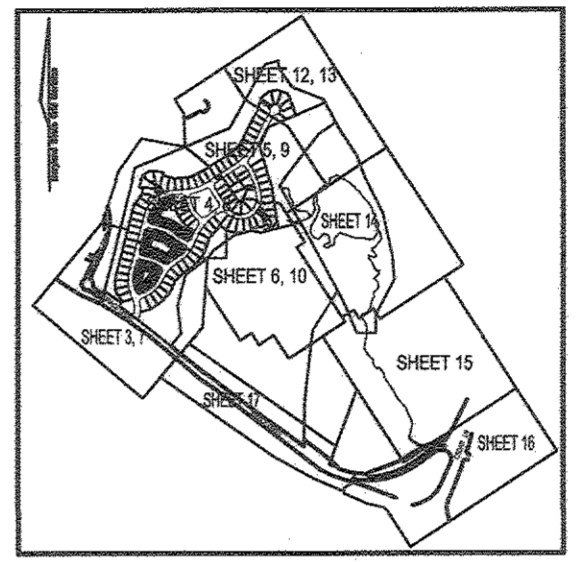
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SPECIMEN TREE CHARTS	2 OF 17
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SEWER OUTFALL PLAN	12 OF 17
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LEGEND

	PROPERTY LINE
	FRONT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	CENTERLINE OF EXISTING STREAM
	EXISTING CURB AND GUTTER
	PROPOSED CURB AND GUTTER

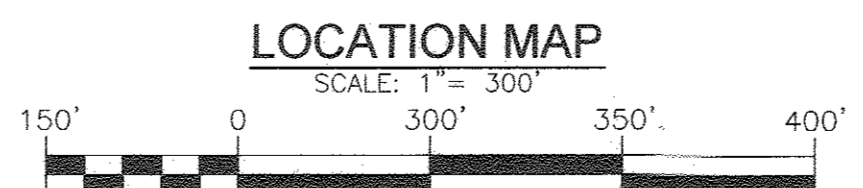
SITE ANALYSIS DATA

A. TOTAL GROSS AREA:	98.20 AC.
PARCELS 145, B-1 & C:	66.81 AC.
CONSERVATION PARCEL (PARCEL 412 - PARCEL A):	31.39
NET AREA:	64.82 AC.
B. PLAN SUBMISSION	0.39 AC.
C. WETLAND & WETLAND BUFFER AREA:	9.04 AC.
STREAM & STREAM BUFFER AREA:	9.04 AC.
D. 100 YEAR FLOODPLAIN	0.36 AC.
E. FOREST AREA:	43.70 AC.
F. MODERATE SLOPES (15% TO 24.99%) (PARCELS B-1 & C ONLY):	9.44 AC.±
STEEP SLOPES (25%+) (PARCELS B-1 & C ONLY):	2.78 AC.±
G. GROUNDWATER AREA:	2.17 AC.
H. LIMITS OF DISTURBANCE AREA:	48.96 AC.
I. PROPOSED USE:	RESIDENTIAL
(SINGLE FAMILY ATTACHED & SINGLE FAMILY DETACHED)	49.27 AC.
J. GREEN OPEN AREA PARCEL B-1 & C:	17.57 AC.
K. TOTAL IMPERVIOUS AREA:	17.57 AC.
CONSERVATION PARCEL (PARCEL 412 - PARCEL A):	0 AC.
L. ZONING:	CEF-R
CONSERVATION PARCEL (PARCEL 412 - PARCEL A):	NT
M. TOTAL OPEN SPACE:	63.37 AC.
PARCEL 145, B-1 & C:	31.98 AC.
CONSERVATION PARCEL (PARCEL 412 - PARCEL A):	31.39 AC.
N. NUMBER OF UNITS ALLOWED:	2.75 DWELLING UNITS/GROSS ACRE
O. NO. OF UNITS PROPOSED:	184
SINGLE FAMILY ATTACHED:	83
SINGLE FAMILY DETACHED:	101
P. DPZ FILE REFERENCES:	WP-09-227, F-10-023, ZB-1104-M, F-15-095, WP-15-094, ECP-15-080, WP-16-038, WP-16-073.

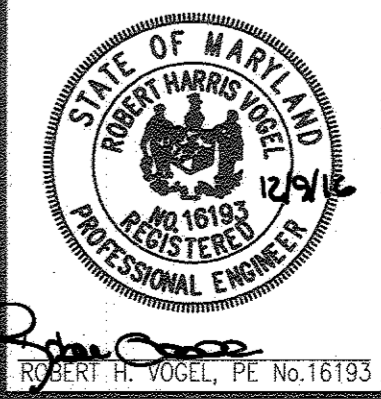


ENVIRONMENTAL SITE DESIGN NARRATIVE

- IN ACCORDANCE WITH CHECKLIST ITEM III.K.
- THE NATURAL AREAS ON THE PROJECT SITE ARE LOCATED AT OR NEAR THE PROJECT BOUNDARIES DRAINING TOWARD THE NORTHEAST. MINOR DISTURBANCES TO THE STREAM AND STREAM BUFFER AND THEIR WOODS RESOURCES IS PROPOSED FOR STORM DRAIN OUTFALLS AND THE PROJECTS SEWER EXTENSION. NO WETLAND AND/OR WETLAND BUFFER SHALL BE DISTURBED.
 - NO DRAMATIC DISTURBANCE TO THE NATURAL DRAINAGE PATTERNS ARE PROPOSED, PLEASE REFER TO THE PROPOSED CONCEPTUAL GRADING.
 - THE CONCEPTUAL REDUCTION IN IMPERVIOUS AREA THROUGH BETTER SITE DESIGN IS ACHIEVED THROUGH THE ENVIRONMENTAL SITE DESIGN (ESD) FOR THE PROJECT. THE ESD CONCEPT INCLUDES THE USE OF MICRO-SCALE AND NON STRUCTURAL PRACTICES INCLUDING MICRO-BIORETENTION FACILITIES (M-R), DRYWELLS (M-5), BIO-SWALES (M-S) AND RAIN BARRELS (M-1). ALSO, THE NON STRUCTURAL PRACTICE; DISCONNECTION OF ROOFTOP RUNOFF (N-1) IS PROPOSED. THESE FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED.
- Per Howard County requirement and in accordance Volume 1, Chapter 5, Section 5.2.1.A; 10 & 100 Year quantity management have conceptually been provided. In addition, the ESD computations show a P of 1.6" is required. A conceptual design meeting this requirement has been conceptually laid out on the Environmental Concept and Sketch Plan submissions.
- In order to meet the projects quantity management requirements, the developer proposes the following:
- In cooperation with W.R. Grace, the reconstruction of the W.R. Grace "Farm Pond" facility. As previously commented by the Howard Soil Conservation District, this facility will be reconstructed to current MD-378 and Howard County -Volume 1, Chapter 5 specifications. Currently, this facility is a wet pond facility. Conceptually, this facility shall be reconstructed as a P-3 Wet Extended Detention Pond.
 - A large quantity facility which shall provide 10 & 100 Year quantity management and is conceptually designed as a F-1 Surface Sand Filter.
 - A small quantity facility which shall provide 10 & 100 Year quantity management and is conceptually designed as a F-6 Bioretention Facility.
- SEDIMENT CONTROL FOR THIS SPECIFIC SITE PLAN WILL BE PROVIDED THROUGH THE USE A PROPOSED SUPER SILT FENCE PERIMETER CONTROLS, TRAPS AND BASINS. SEDIMENT CONTROL SHALL BE IN ACCORDANCE WITH CURRENT REQUIREMENTS AND SHALL BE APPROVED BY THE HOWARD SOIL CONSERVATION DISTRICT.
 - STORMWATER MANAGEMENT FOR THE PROJECT SHALL BE MET THROUGH THE USE OF MICRO-SCALE AND NON STRUCTURAL PRACTICES INCLUDING MICRO-BIORETENTION FACILITIES (M-R), DRYWELLS (M-5), BIO-SWALES (M-S) AND RAIN BARRELS (M-1). ALSO, THE NON STRUCTURAL PRACTICE; DISCONNECTION OF ROOFTOP RUNOFF (N-1) IS PROPOSED. THE RESULTS OF THE ENVIRONMENTAL SITE DESIGN FOR THIS PROJECT WILL REFLECT "WOODS IN GOOD CONDITION".
- TARGET PE = 1.6" PROVIDED PE = 1.6"
- AT THIS CONCEPT STAGE OF DEVELOPMENT, NO DESIGN MANUAL WAIVERS FOR ENVIRONMENTAL AND STORMWATER MANAGEMENT DESIGN ARE REQUIRED.
- REGARDING ALTERNATIVE COMPLIANCE REQUESTS: A. SEE GENERAL NOTE 29.



OWNER/DEVELOPER
 SIMPSON OAKS CRP3, LLC
 4750 OWINGS MILLS BOULEVARD
 OWINGS MILLS, MARYLAND 21117
 410-356-9900



PROFESSIONAL CERTIFICATE

DESIGN BY: CR/EDS
 DRAWN BY: ML/KG
 CHECKED BY: RHW
 DATE: DECEMBER 2016
 SCALE: AS SHOWN
 W.O. NO.: 15-55

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. 16193 EXPIRATION DATE: 09-27-2018

1 SHEET OF 17

MAPPED SOILS TYPES - CLARKSVILLE NE MAP #17									
SYMBOL	NAME / DESCRIPTION	GROUP	HYDRO	HYDRO	K FACTOR	PERM	PERM	STEEPS	STEEPS
		C/D	YES	NO		NO	YES	NO	YES
Bsa	BALE SILT LOAM, 0 TO 3 PERCENT SLOPES	C	NO	NO	0.37	NO	NO	NO	NO
Cc	COGONS & HARBOR SILT LOAM, 0-3% SLOPES	C	PARTIALLY	PARTIALLY	0.37	NO	NO	NO	NO
CgB	CLONG SILT LOAM, 3 TO 8 PERCENT SLOPES	C	NO	NO	0.28	YES	NO	NO	NO
CgD	CLONG-HORUM LAND COMPLEX, 0-3% SLOPES	B	NO	NO	0.28	NO	NO	NO	NO
GmB	GLENNVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	C	PARTIALLY	PARTIALLY	0.43	YES	YES	NO	NO
GmC	GLENNVILLE SILT LOAM, 8-10% SLOPES	C	NO	NO	0.43	NO	YES	NO	NO
GmD	GLENNVILLE-HORUM LAND-ROOFED COMPLEX, 0-8% SLOPES	C	NO	NO	0.43	NO	YES	NO	NO
MgB	MAJOR LOAM, 3-8% SLOPES	B	NO	NO	0.28	YES	NO	NO	NO
MgC	MAJOR LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.28	YES	NO	NO	NO
MgD	MAJOR LOAM, 15-25% SLOPES	B	NO	NO	0.28	NO	YES	NO	NO
MkF	MAJOR-BROOKLOM COMPLEX, 25-65% SLOPES, VERY ROCKY	B	NO	NO	0.32	NO	NO	NO	NO

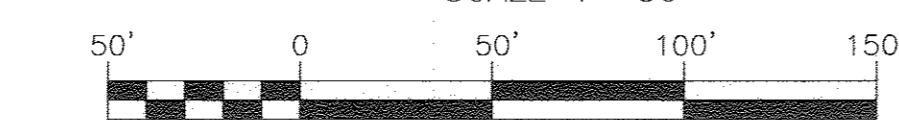
NOTE:
HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY

1. SOURCE: THE UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE'S WEB SOIL SURVEY, CONDUCTED ON DECEMBER 29, 2014. AVAILABLE ON LINE AT: <http://websoilsurvey.scisys.nrc.gov/home/page.do>

2. HYDRO SOILS INFORMATION ADAPTED FROM THE NATIONAL HYDRO SOILS USE - AT: <http://soils.usda.gov/soils/soiluse/soiluse.html>, CONSULTED ON DECEMBER 29, 2014.

EXISTING FEATURES & NATURAL RESOURCES MAP
SCALE 1"=50'

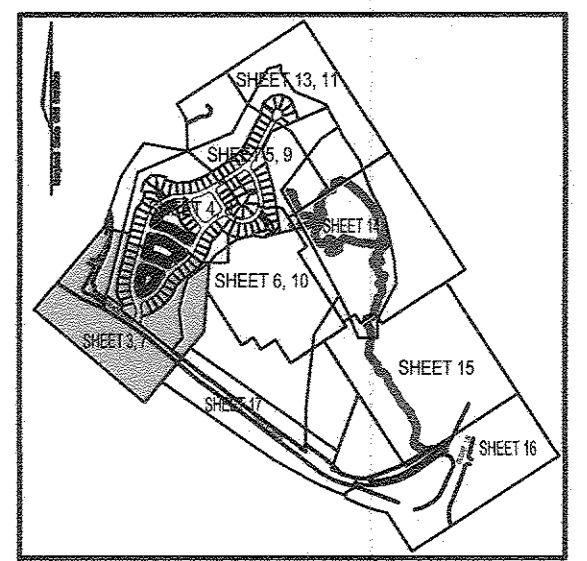


MATCHLINE SHEET 4

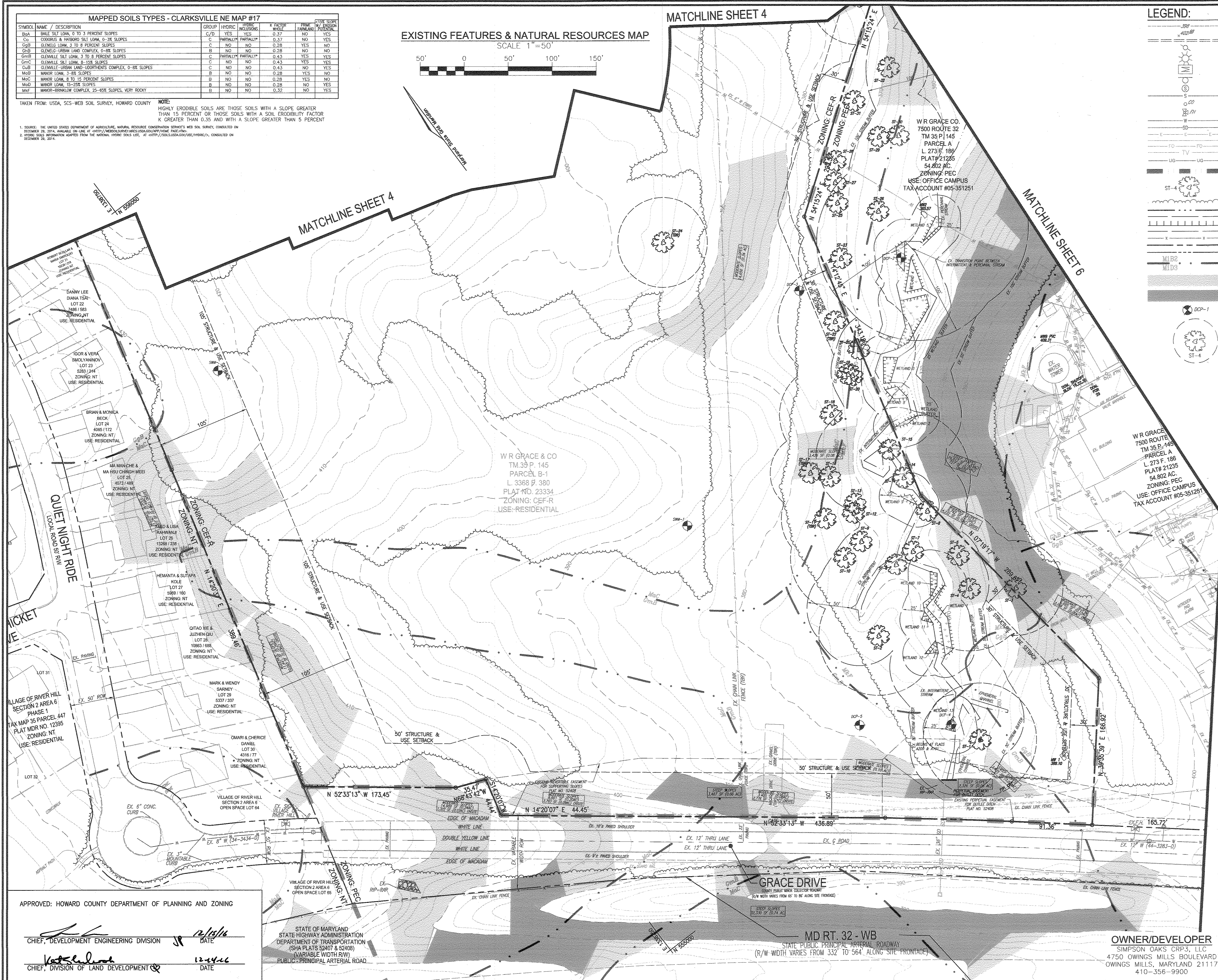
MATCHLINE SHEET 6

LEGEND:

- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- EXISTING CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING STORM DRAIN
- EX. ELECTRIC CONDUIT
- EX. GAS LINE
- EX. FIBER OPTIC
- EX. TV LINE
- EX. CONDUIT
- EX. ZONING LINE
- EXISTING SPECIMEN TREES
- EXISTING TREELINE (FIELD LOCATED)
- EXISTING STERAM
- EXISTING STERAM BUFFER
- EXISTING WETLAND
- EXISTING WETLAND BUFFER
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- SOILS BOUNDARY
- MODERATE SLOPES (15% - 24.99%)
- STEEP SLOPE (>25%)
- SOIL BORING
- EXISTING SPECIMEN TREES AND CRITICAL ROOT ZONE



KEY MAP
NOT TO SCALE



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION *JR* 12/15/16
DATE

CHIEF, DIVISION OF LAND DEVELOPMENT *KV* 12/14/16
DATE

STATE OF MARYLAND
STATE HIGHWAY ADMINISTRATION
DEPARTMENT OF TRANSPORTATION
(SHA PLATS 52407 & 52408)
(VARIABLE WIDTH ROW)
PUBLIC - PRINCIPAL ARTERIAL ROAD

MD RT. 32 - WB
STATE PUBLIC PRINCIPAL ARTERIAL ROADWAY
(R/W WIDTH VARIES FROM 332 TO 564' ALONG SITE FRONTAGE)

OWNER/DEVELOPER
SIMPSON OAKS CRP3, LLC
4750 OWINGS MILLS BOULEVARD
OWINGS MILLS, MARYLAND 21117
410-356-9900

NO.	REVISION	DATE

ENVIRONMENTAL CONCEPT PLAN
EXISTING FEATURES & NATURAL RESOURCES MAP
SIMPSON OAKS
LOTS 1 - 184 AND OPEN SPACE LOTS 185 - 191
A RESUBDIVISION OF GRACE TECH PARK - PARCELS 'B-1' & 'C'
AND VILLAGE OF HICKORY RIDGE - SECTION 3, AREA 14
PARCEL 'A' & OPEN SPACE LOT 45

TAX MAP 35 GRID 21 - ZONED: CEF-R - PARCEL 145
TAX MAP 35 GRID 16 - ZONED: NT - PARCEL 412
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET TEL: 410-461-7666
ELIOTT CITY, MD 21043 FAX: 410-461-8961

DESIGN BY: CR/EDS
DRAWN BY: ML/KC
CHECKED BY: RHV
DATE: DECEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 15-55

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2018

3 SHEET OF 17
ROBERT H. VOGEL, PE No.16193

MAPPED SOILS TYPES - CLARKSVILLE NE MAP #17

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRO	PERMEABILITY	K SAT	ERODIBILITY	DRY	WET	CRIPPLE
SLA	SHALE SILT LOAM, 0 TO 3 PERCENT SLOPES	S	NO	NO	0.37	NO	NO	NO	NO
CL	CLAY LOAM, 0 TO 3 PERCENT SLOPES	C	NO	NO	0.37	NO	NO	NO	NO
CLC	CLAY LOAM, 3 TO 8 PERCENT SLOPES	C	NO	NO	0.37	NO	NO	NO	NO
CLM	CLAY LOAM, 8 TO 15 PERCENT SLOPES	C	NO	NO	0.37	NO	NO	NO	NO
CLU	CLAY LOAM, 15 TO 25 PERCENT SLOPES	C	NO	NO	0.37	NO	NO	NO	NO
CLV	CLAY LOAM, 25 TO 35 PERCENT SLOPES	C	NO	NO	0.37	NO	NO	NO	NO
CLW	CLAY LOAM, 35 TO 45 PERCENT SLOPES	C	NO	NO	0.37	NO	NO	NO	NO
CLX	CLAY LOAM, 45 TO 55 PERCENT SLOPES	C	NO	NO	0.37	NO	NO	NO	NO
CLY	CLAY LOAM, 55 TO 65 PERCENT SLOPES	C	NO	NO	0.37	NO	NO	NO	NO
CLZ	CLAY LOAM, 65 TO 75 PERCENT SLOPES	C	NO	NO	0.37	NO	NO	NO	NO
CLAA	CLAY LOAM, 75 TO 85 PERCENT SLOPES	C	NO	NO	0.37	NO	NO	NO	NO
CLAB	CLAY LOAM, 85 TO 95 PERCENT SLOPES	C	NO	NO	0.37	NO	NO	NO	NO
CLAC	CLAY LOAM, 95 TO 100 PERCENT SLOPES	C	NO	NO	0.37	NO	NO	NO	NO
CLAD	CLAY LOAM, 0 TO 3 PERCENT SLOPES	C	NO	NO	0.37	NO	NO	NO	NO
CLAE	CLAY LOAM, 3 TO 8 PERCENT SLOPES	C	NO	NO	0.37	NO	NO	NO	NO
CLAF	CLAY LOAM, 8 TO 15 PERCENT SLOPES	C	NO	NO	0.37	NO	NO	NO	NO
CLAG	CLAY LOAM, 15 TO 25 PERCENT SLOPES	C	NO	NO	0.37	NO	NO	NO	NO
CLAH	CLAY LOAM, 25 TO 35 PERCENT SLOPES	C	NO	NO	0.37	NO	NO	NO	NO
CLAI	CLAY LOAM, 35 TO 45 PERCENT SLOPES	C	NO	NO	0.37	NO	NO	NO	NO
CLAJ	CLAY LOAM, 45 TO 55 PERCENT SLOPES	C	NO	NO	0.37	NO	NO	NO	NO
CLAK	CLAY LOAM, 55 TO 65 PERCENT SLOPES	C	NO	NO	0.37	NO	NO	NO	NO
CLAL	CLAY LOAM, 65 TO 75 PERCENT SLOPES	C	NO	NO	0.37	NO	NO	NO	NO
CLAM	CLAY LOAM, 75 TO 85 PERCENT SLOPES	C	NO	NO	0.37	NO	NO	NO	NO
CLAN	CLAY LOAM, 85 TO 95 PERCENT SLOPES	C	NO	NO	0.37	NO	NO	NO	NO
CLAO	CLAY LOAM, 95 TO 100 PERCENT SLOPES	C	NO	NO	0.37	NO	NO	NO	NO

TAKEN FROM USDA, SCS WEB SOIL SURVEY, HOWARD COUNTY

NOTE:
 HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

1. SOURCE: THE UNITED STATES DEPARTMENT OF AGRICULTURE, NATION RESOURCES CONSERVATION SERVICE, HOWARD COUNTY, MARYLAND, 1998. 2. SOURCE: 1984 SURVEY CONDUCTED BY THE NATIONAL ENGINEERING CONSULTANTS, CONSULTED ON DECEMBER 16, 2014.

HOWARD COUNTY MD,
 DEPT OF PARKS & RECREATION
 TAX MAP 35 PARCEL 467
 L. 4718 F. 41
 PARCEL 1
 146.41 AC.
 ZONING: NT
 USE: OPEN SPACE

COLUMBIA
 VILLAGE OF RIVER HILL
 SECTION 2 AREA 6
 PHASE 2
 OPEN SPACE LOT 200
 PLAT MDR NO. 12418
 ZONING: NT
 USE: RESIDENTIAL

W R GRACE & CO
 TM. 35 P. 145
 PARCEL B-1
 L. 3368 F. 380
 PLAT NO. 23334
 ZONING: CEF-R
 USE: RESIDENTIAL

ANDREW & NANCY
 COON
 LOT 18
 4147.566
 ZONING: NT
 USE: RESIDENTIAL

MUSA & TUBA
 SUBASHI
 LOT 20
 16557.476
 ZONING: NT
 USE: RESIDENTIAL

JAMES & NANCY
 GAYLOR
 LOT 18
 4091.862
 ZONING: NT
 USE: RESIDENTIAL

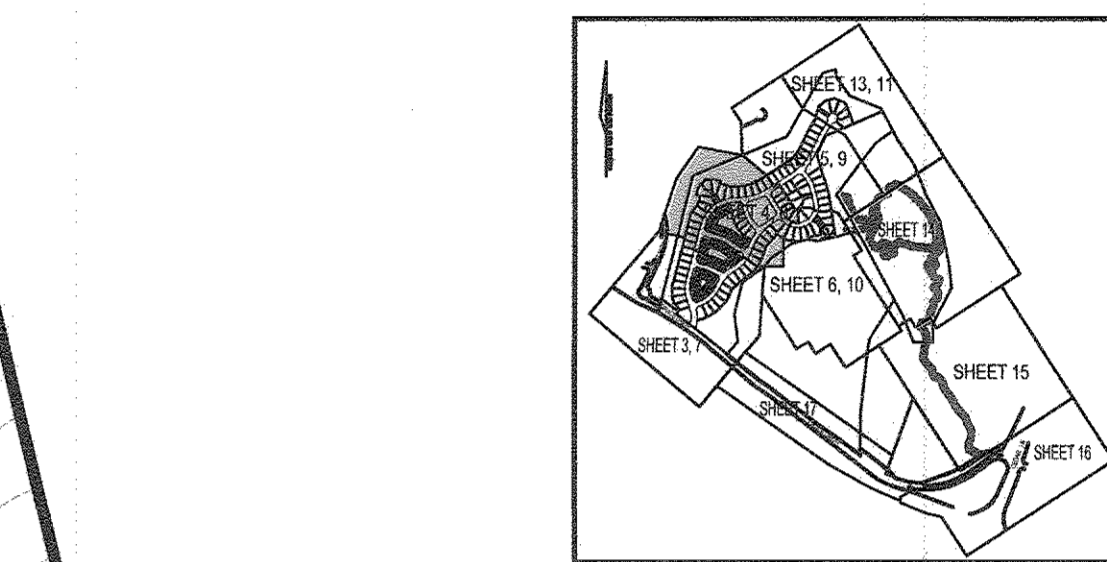
W R GRACE & CO
 7500 ROUTE 202
 PARCEL A
 273 F. 186
 PLAT NO. 21235
 ZONING: PEC
 USE: OFFICE CAMPUS
 TAX ACCOUNT #06/85125

30' STRUCTURE SETBACK
 30' SETBACK
 30' SETBACK

30' STRUCTURE & USE SETBACK

30' STRUCTURE & USE SETBACK

30' STRUCTURE & USE SETBACK



LEGEND:

	EXISTING CONTOUR
	EXISTING SPOT ELEVATION
	EXISTING CURB AND GUTTER
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	EX. ELECTRIC CONDUIT
	EX. ZONING LINE
	EXISTING SPECIMEN TREES
	EXISTING TREE LINE (FIELD LOCATED)
	EXISTING STREAM
	EXISTING STREAM BUFFER
	EXISTING WETLAND
	EXISTING WETLAND BUFFER
	EXISTING FENCE
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	SOILS BOUNDARY
	MODERATE SLOPES (10% - 24.99%)
	STEEP SLOPE (>25%)
	SOIL BORING
	EXISTING SPECIMEN TREES AND CRITICAL ROOT ZONE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 12/11/16
 DATE: 12/11/16

EXISTING FEATURES & NATURAL RESOURCES MAP
 SCALE 1" = 50'
 50' 0 50' 100' 150'

OWNER/DEVELOPER
 SIMPSON OAKS CRP3, LLC
 4750 OWINGS MILLS BOULEVARD
 OWINGS MILLS, MARYLAND 21117
 410-356-9900

NO.	REVISION	DATE

ENVIRONMENTAL CONCEPT PLAN
 EXISTING FEATURES & NATURAL RESOURCES MAP
SIMPSON OAKS
 LOTS 1 - 184 AND OPEN SPACE LOTS 185 - 191
 A RESUBDIVISION OF GRACE TECH PARK - PARCELS 'B-1' & 'C'
 AND VILLAGE OF HICKORY RIDGE, SECTION 3, AREA 14
 PARCEL 'A' & OPEN SPACE LOT 45
 TAX MAP 35 GRID 21 ZONED: CEF-R PARCEL 145
 TAX MAP 35 GRID 16 ZONED: NT PARCEL 412
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410-461-7666
 ELIOTT CITY, MD 21043 FAX: 410-461-8961

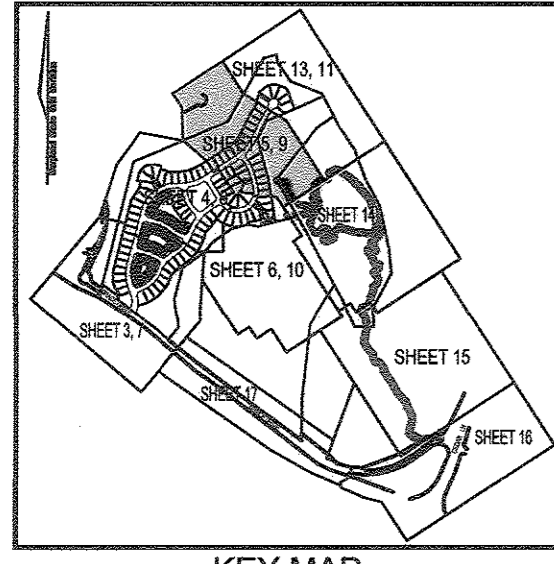
DESIGN BY: CR/EDS
 DRAWN BY: MI/KG
 CHECKED BY: RHV
 DATE: DECEMBER 2016
 SCALE: AS SHOWN
 W.O. NO.: 15-55

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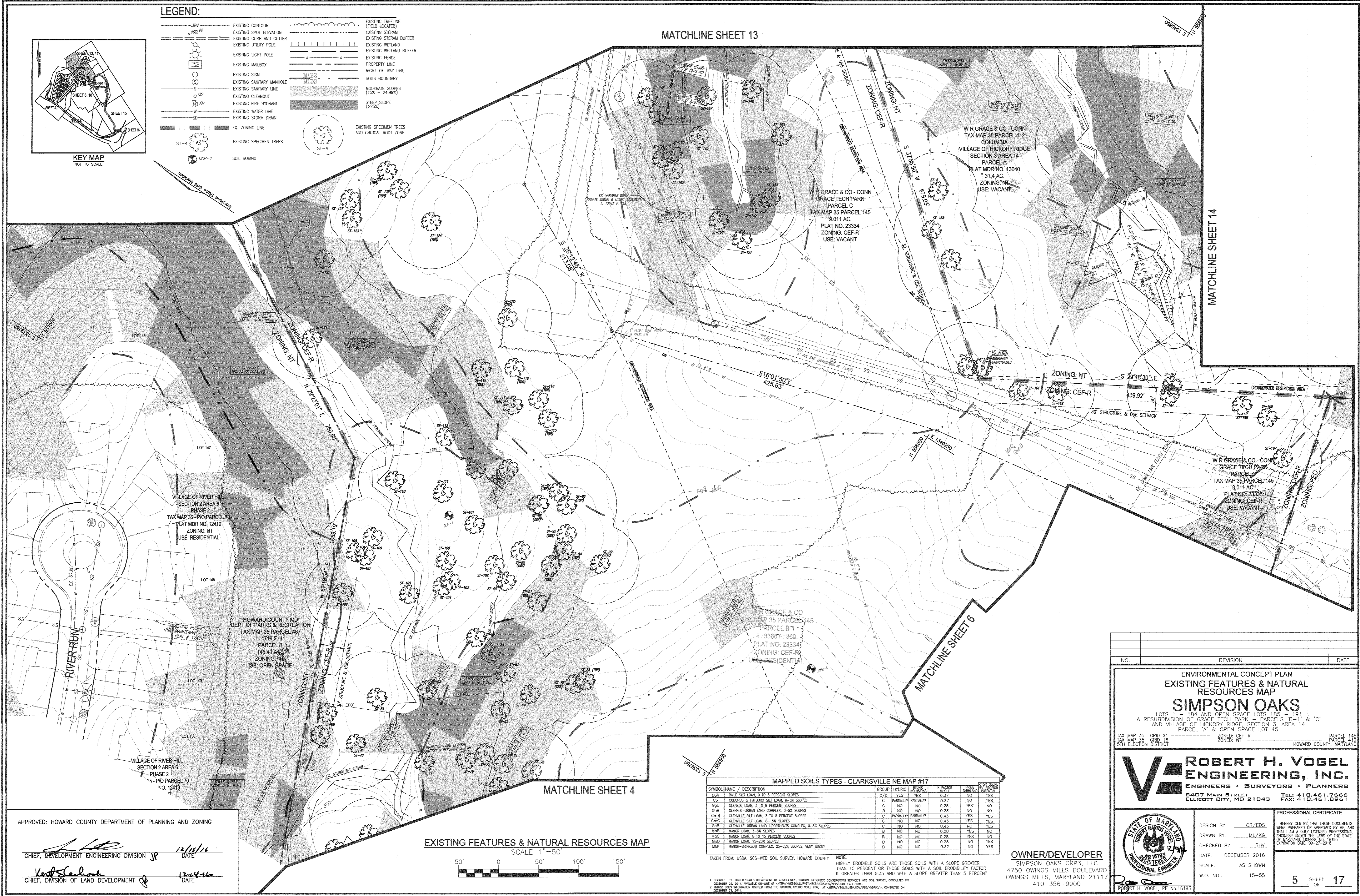
4 SHEET OF 17

LEGEND:

- 405' --- EXISTING CONTOUR
- 402.50' --- EXISTING SPOT ELEVATION
- --- EXISTING CURB AND GUTTER
- --- EXISTING UTILITY POLE
- --- EXISTING LIGHT POLE
- --- EXISTING MAILBOX
- --- EXISTING SIGN
- --- EXISTING SANITARY MANHOLE
- --- EXISTING SANITARY LINE
- --- EXISTING CLEANOUT
- --- EXISTING FIRE HYDRANT
- --- EXISTING WATER LINE
- --- EXISTING STORM DRAIN
- --- EX. ZONING LINE
- --- EXISTING SPECIMEN TREES
- --- SOIL BORING
- --- EXISTING TREETRINE (FIELD LOCATED)
- --- EXISTING STREAM
- --- EXISTING STREAM BUFFER
- --- EXISTING WETLAND
- --- EXISTING WETLAND BUFFER
- --- PROPERTY LINE
- --- RIGHT-OF-WAY LINE
- --- SOILS BOUNDARY
- --- MODERATE SLOPES (1-24.99%)
- --- STEEP SLOPE (>25%)
- --- EXISTING SPECIMEN TREES AND CRITICAL ROOT ZONE



MATCHLINE SHEET 13



VILLAGE OF RIVER HILL
SECTION 2 AREA 6
PHASE 2
TAX MAP 35 - PIO PARCEL 76
PLAT MDR NO. 12419
ZONING: NT
USE: RESIDENTIAL

HOWARD COUNTY MD
DEPT OF PARKS & RECREATION
TAX MAP 35 PARCEL 467
L. 4718 F. 41
PARCEL T
146.41 AC
ZONING: NT
USE: OPEN SPACE

W R GRACE & CO - CONN
GRACE TECH PARK
PARCEL C
TAX MAP 35 PARCEL 145
9.011 AC.
PLAT NO. 23334
ZONING: CEF-R
USE: VACANT

W R GRACE & CO - CONN
TAX MAP 35 PARCEL 412
COLUMBIA
VILLAGE OF HICKORY RIDGE
SECTION 3 AREA 14
PARCEL A
PLAT MDR NO. 13640
31.4 AC.
ZONING: NT
USE: VACANT

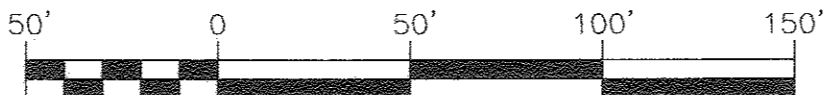
W R GRACE & CO - CONN
GRACE TECH PARK
PARCEL B-1
TAX MAP 35 PARCEL 145
9.011 AC.
PLAT NO. 23334
ZONING: CEF-R
USE: VACANT

MATCHLINE SHEET 4

MATCHLINE SHEET 6

MATCHLINE SHEET 14

EXISTING FEATURES & NATURAL RESOURCES MAP
SCALE 1"=50'



MAPPED SOILS TYPE - CLARKSVILLE NE #17

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	PERCENT	K FACTOR	ERODIBILITY	PERCENT	PERCENT
BuA	BALE Silt loam, 0 to 3 percent slopes	C/D	YES	YES	0.37	NO	YES	NO
Co	COORUS & HANCOCK Silt loam, 0 to 18 percent slopes	C	PARTIALLY	PARTIALLY	0.37	NO	YES	NO
GgB	GLENELO loam, 3 to 8 percent slopes	C	NO	NO	0.28	YES	NO	NO
GhB	GLENELO-urban land complex, 0-8% slopes	B	NO	NO	0.29	NO	NO	NO
GmB	GLENELO Silt loam, 1 to 8 percent slopes	C	PARTIALLY	PARTIALLY	0.43	YES	YES	NO
GmC	GLENELO Silt loam, 8-15% slopes	C	NO	NO	0.43	YES	YES	NO
GmD	GLENELO-urban land-complex, 0-8% slopes	C	NO	NO	0.43	NO	YES	NO
MdB	MANOR loam, 1-8% slopes	B	NO	NO	0.28	YES	NO	NO
MdC	MANOR loam, 8 to 15 percent slopes	B	NO	NO	0.28	NO	YES	NO
MdD	MANOR loam, 15-20% slopes	B	NO	NO	0.28	NO	NO	YES
MdE	MANOR-urbanland complex, 25-45% slopes, very rocky	B	NO	NO	0.32	NO	NO	YES

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

OWNER/DEVELOPER
SIMPSON OAKS CRP3, LLC
4750 OWINGS MILLS BOULEVARD
OWINGS MILLS, MARYLAND 21117
410-356-9900

ENVIRONMENTAL CONCEPT PLAN
EXISTING FEATURES & NATURAL RESOURCES MAP
SIMPSON OAKS
LOTS 1 - 184 AND OPEN SPACE LOTS 185 - 191
A RESUBDIVISION OF GRACE TECH PARK PARCELS B-1 & C
AND VILLAGE OF HICKORY RIDGE, SECTION 3, AREA 14
PARCEL A & OPEN SPACE LOT 45
TAX MAP 35 GRID 21 ZONED: CEF-R PARCEL 145
TAX MAP 35 GRID 18 ZONED: NT PARCEL 412
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET #1043 TEL: 410-461-7666
ELLICOTT CITY, MD 21043 FAX: 410-461-8961

DESIGN BY: GR/EDS
DRAWN BY: ML/KG
CHECKED BY: R/HV
DATE: DECEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 15-55

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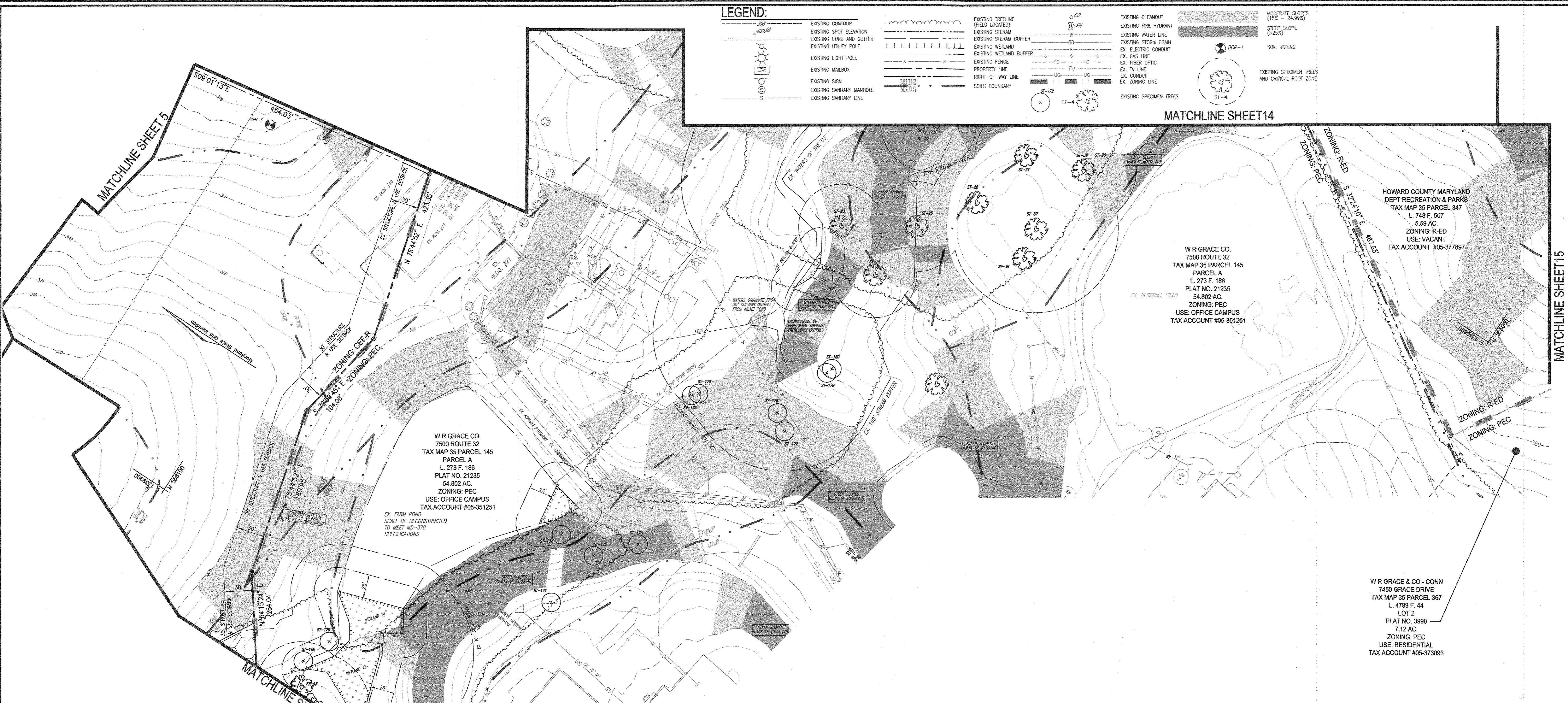
5 SHEET OF 17

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 12/16/16
CHIEF, DEVELOPMENT ENGINEERING DIVISION JP
[Signature] 12-14-16
CHIEF, DIVISION OF LAND DEVELOPMENT QB

LEGEND:

- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- EXISTING CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING TREE LINE (FIELD LOCATED)
- EXISTING STREAM
- EXISTING STREAM BUFFER
- EXISTING WETLAND
- EXISTING WETLAND BUFFER
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- SOILS BOUNDARY
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING STORM DRAIN
- EX. ELECTRIC CONDUIT
- EX. GAS LINE
- EX. FIBER OPTIC
- EX. TV LINE
- EX. CONDUIT
- EXISTING ZONING LINE
- EXISTING SPECIMEN TREES
- EXISTING SPECIMEN TREES AND CRITICAL ROOT ZONE
- MODERATE SLOPES (0.5% - 24.99%)
- STEEP SLOPE (>25%)
- SOIL BORING

MATCHLINE SHEET 14



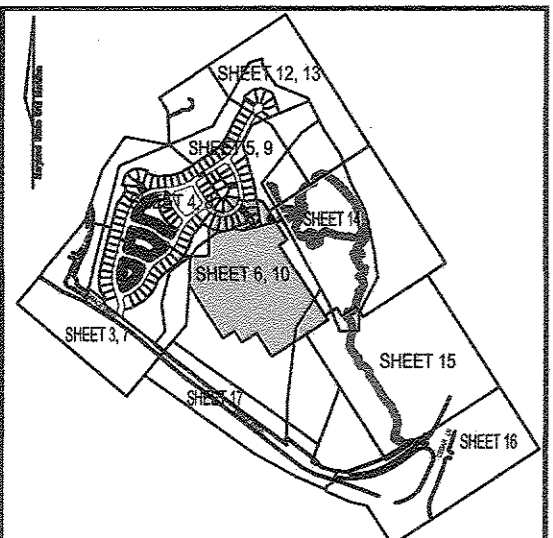
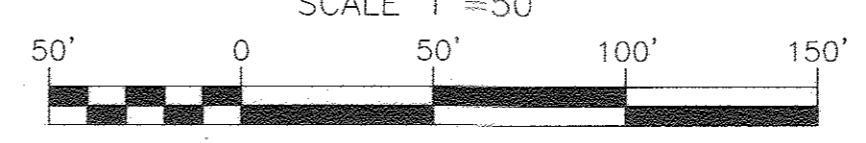
W R GRACE CO.
7500 ROUTE 32
TAX MAP 35 PARCEL 145
PARCEL A
L. 273 F. 186
PLAT NO. 21235
54.802 AC.
ZONING: PEC
USE: OFFICE CAMPUS
TAX ACCOUNT #05-351251

W R GRACE CO.
7500 ROUTE 32
TAX MAP 35 PARCEL 145
PARCEL A
L. 273 F. 186
PLAT NO. 21235
54.802 AC.
ZONING: PEC
USE: OFFICE CAMPUS
TAX ACCOUNT #05-351251

HOWARD COUNTY MARYLAND
DEPT RECREATION & PARKS
TAX MAP 35 PARCEL 347
L. 748 F. 507
5.59 AC.
ZONING: R-ED
USE: VACANT
TAX ACCOUNT #05-377897

W R GRACE & CO - CONN
7450 GRACE DRIVE
TAX MAP 35 PARCEL 367
L. 4799 F. 44
LOT 2
7.12 AC.
ZONING: PEC
USE: RESIDENTIAL
TAX ACCOUNT #05-373093

EXISTING FEATURES & NATURAL RESOURCES MAP



MAPPED SOILS TYPES - CLARKSVILLE NE MAP #17

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	ROCK INCLUSIONS	K FACTOR	PERMEABILITY	TYPE SOIL
BaA	BALE SILT LOAM, 0 TO 3 PERCENT SLOPES	C/D	YES	NO	0.37	NO	YES
Cn	COQUOSUS & HAYWARD SILT LOAM, 0-3% SLOPES	C	PARTIALLY*	PARTIALLY*	0.37	NO	YES
CgH	CLENGLE LOAM, 3 TO 8 PERCENT SLOPES	C	NO	NO	0.28	YES	NO
GbE	CLENGLE-URBAN LAND COMPLEX, 0-8% SLOPES	B	NO	NO	0.28	NO	NO
GmB	CLENGLE SILT LOAM, 3 TO 8 PERCENT SLOPES	C	PARTIALLY*	PARTIALLY*	0.43	YES	YES
GtHc	CLENGLE SILT LOAM, 8-15% SLOPES	C	NO	NO	0.43	YES	YES
Gub	CLENGLE-URBAN LAND-COURTMENTS COMPLEX, 0-8% SLOPES	C	NO	NO	0.43	NO	YES
MaB	MANOR LOAM, 3-8% SLOPES	B	NO	NO	0.28	YES	NO
MaC	MANOR LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.28	YES	NO
MaD	MANOR LOAM, 15-25% SLOPES	B	NO	NO	0.28	NO	YES
MuF	MANOR-BRINKLOW COMPLEX, 25-65% SLOPES, VERY ROCKY	B	NO	NO	0.32	NO	YES

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature] 12/15/16
CHIEF, DIVISION OF LAND DEVELOPMENT
[Signature] 12-14-16

OWNER/DEVELOPER
SIMPSON OAKS CRP3, LLC
4750 OWINGS MILLS BOULEVARD
OWINGS MILLS, MARYLAND 21117
410-356-9900

ENVIRONMENTAL CONCEPT PLAN
EXISTING FEATURES & NATURAL RESOURCES MAP
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AND VILLAGE OF HICKORY RIDGE, SECTION 3, AREA 14
PARCEL 'A' & OPEN SPACE LOT 45
TAX MAP 35 GRID 21 ZONED: CEF-R PARCEL 145
GRID 16 ZONED: NT PARCEL 412
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

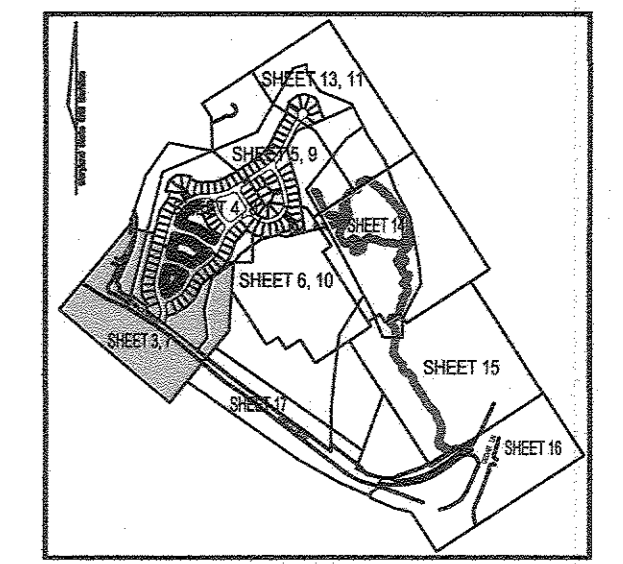
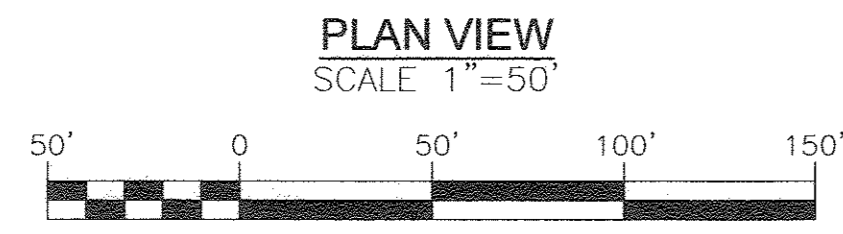
ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410-461-7666 FAX: 410-461-8961

DESIGN BY: CR/EDS
DRAWN BY: ML/KC
CHECKED BY: RHV
DATE: DECEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 15-55

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6 SHEET OF 17

- NOTE:**
- ON-SITE 6" PATHWAY SHALL BE CONCRETE ADJACENT TO ON-SITE PUBLIC ROADS, ASPHALT THROUGH OPEN AREAS.
 - ON-SITE 5' SIDEWALK SHALL BE CONCRETE PER HO.CO. R-3.05.
 - BIKEWAY SHOWN HEREON SHALL BE 8' ASPHALT OR 8' EXISTING PAVED SHOULDER.



KEY MAP
NOT TO SCALE

LEGEND:

- EXISTING CONTOUR
- PROPOSED CONTOUR
- + 40.00 EXISTING SPOT ELEVATION
- + 40.00 PROPOSED SPOT ELEVATION
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLET
- EXISTING SPECIMEN TREES
- EXISTING TREE LINE
- EXISTING FENCE
- EX. ELECTRIC CONDUIT
- EX. GAS LINE
- EX. FIBER OPTIC
- EX. TV LINE
- EX. CONDUIT
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- EXISTING STREAM
- EXISTING STREAM BUFFER
- EXISTING WETLAND
- EXISTING WETLAND BUFFER
- SIDEWALK (5' OR 6')
- 8' BIKEWAY
- SILT FENCE
- SUPER SILT FENCE
- LOD LOD LIMIT OF DISTURBANCE
- EX. ZONING LINE
- EARTH DIKE
- STABILIZED CONSTRUCTION ENTRANCE
- SOIL BORING
- ESD DRAINAGE AREA DIVIDE
- EXISTING SPECIMEN TREES AND CRITICAL ROOT ZONE

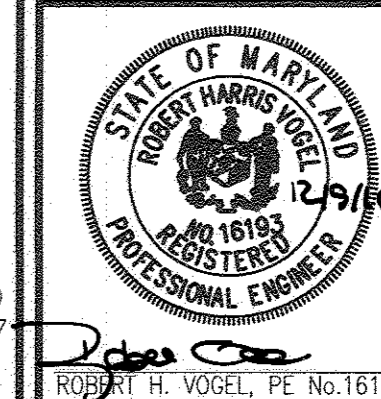
NOTE
THE DEPARTMENT OF PLANNING AND ZONING HAS DETERMINED THE EXISTING ENCROACHMENT FOR THE STORM DRAIN CUTFALL OCCURRING ALONG GRACE DRIVE A "NECESSARY DISTURBANCE" IN ACCORDANCE WITH SECTION 16.116(C) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.



NO.	REVISION	DATE

ENVIRONMENTAL CONCEPT PLAN
CONCEPT MAP
SIMPSON OAKS
LOTS 1 - 184 AND OPEN SPACE LOTS 185 - 191
A RESUBDIVISION OF GRACE TECH PARK PARCELS B-1 & 'C'
AND VILLAGE OF HICKORY RIDGE, SECTION 3, AREA 14
PARCEL A & OPEN SPACE LOT 45
TAX MAP 35 GRID 21 ZONED: CEF-R PARCEL 145
TAX MAP 35 GRID 16 ZONED: NT HOWARD COUNTY, MARYLAND
5TH ELECTION DISTRICT

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.1891



PROFESSIONAL CERTIFICATE
DESIGN BY: CR/EDS.
DRAWN BY: MI/KG.
CHECKED BY: RHV.
DATE: DECEMBER 2016.
SCALE: AS SHOWN.
W.O. NO.: 15-55.
7 SHEET OF 17

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 12/14/16
DATE: 12-14-16

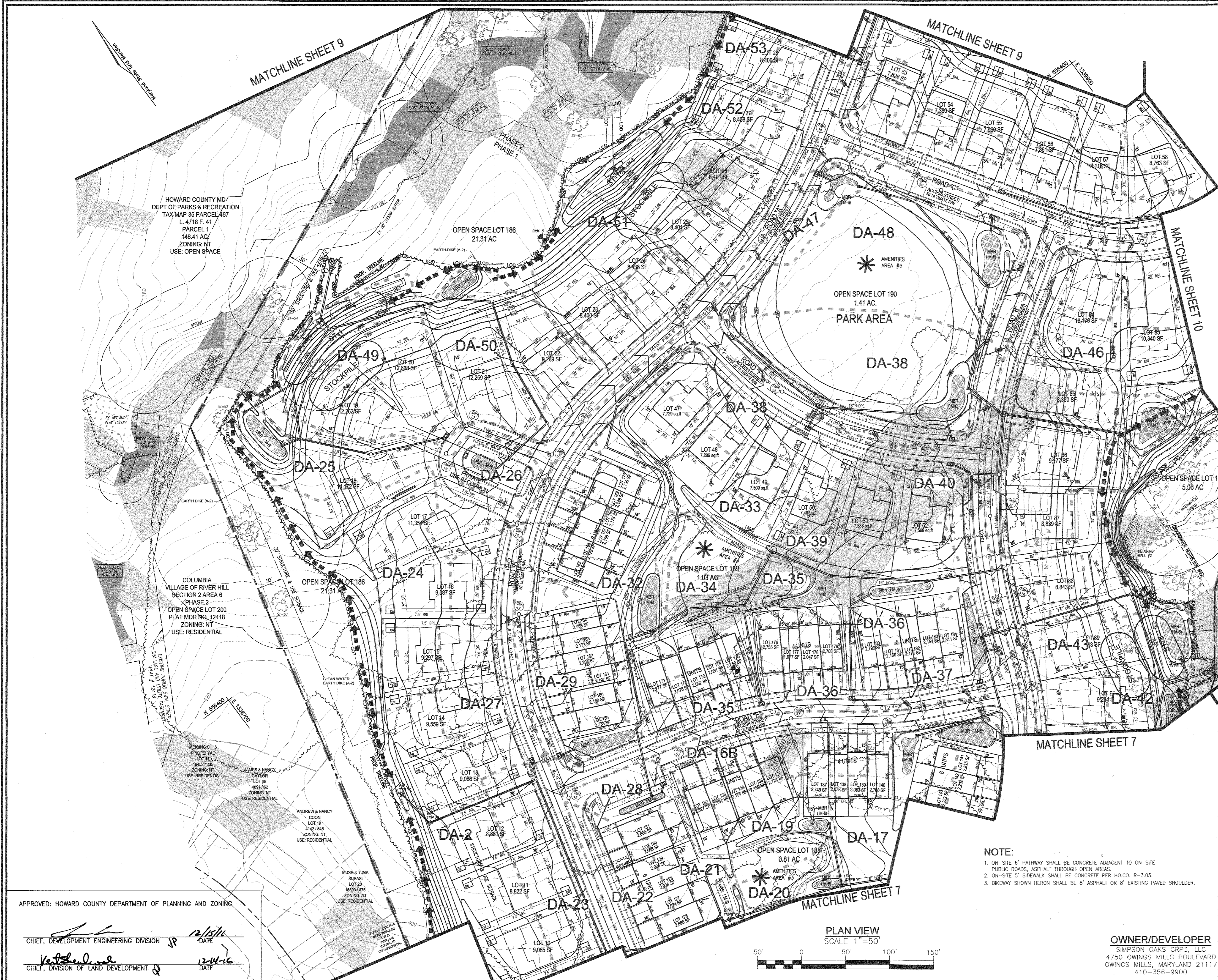
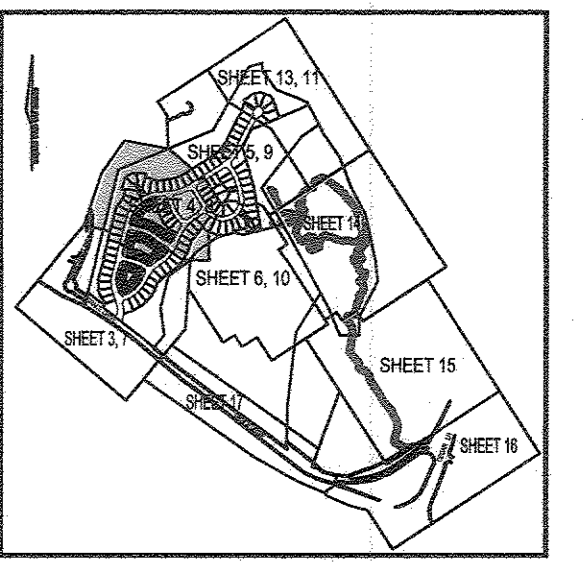
STATE OF MARYLAND
STATE HIGHWAY ADMINISTRATION
DEPARTMENT OF TRANSPORTATION
(SHA PLATS 52407 & 52408)
(VARIABLE WIDTH R/W)
PUBLIC PRINCIPAL ARTERIAL ROAD

MD RT. 32 - WB
STATE PUBLIC PRINCIPAL ARTERIAL ROADWAY
(R/W WIDTH VARIES FROM 332' TO 564' ALONG SITE FRONTAGE)

OWNER/DEVELOPER
SIMPSON OAKS CRP3, LLC
4750 OWINGS MILLS BOULEVARD
OWINGS MILLS, MARYLAND 21117
410-356-9900

LEGEND:

	EXISTING CONTOUR		EXISTING SPECIMEN TREES
	PROPOSED CONTOUR		EXISTING TREELINE
	PROPOSED SPOT ELEVATION		EXISTING FENCE
	EXISTING CURB AND GUTTER		PROPERTY LINE
	PROPOSED CURB AND GUTTER		RIGHT-OF-WAY LINE
	EXISTING UTILITY POLE		SIDEWALK (5' OR 6')
	EXISTING LIGHT POLE		SILT FENCE
	EXISTING MAILBOX		SUPER SILT FENCE
	EXISTING SIGN		LIMIT OF DISTURBANCE
	EXISTING SANITARY MANHOLE		EX. ZONING LINE
	EXISTING SANITARY LINE		EXISTING FLOOD PLAN
	EXISTING CLEANOUT		EARTH DIKE
	EXISTING FIRE HYDRANT		SOIL BORING
	EXISTING WATER LINE		ESD DRAINAGE AREA DIVIDE
	PROPOSED STORM DRAIN		EXISTING SPECIMEN TREES AND CRITICAL ROOT ZONE
	PROPOSED STORM DRAIN INLET		



HOWARD COUNTY MD/
DEPT OF PARKS & RECREATION
TAX MAP 35 PARCEL 467
L. 4718 F. 41
PARCEL 1
148.41 AC/
ZONING: NT
USE: OPEN SPACE

COLUMBIA
VILLAGE OF RIVER HILL
SECTION 2 AREA 6
PHASE 2
OPEN SPACE LOT 200
PLAT MDR NO. 12418
ZONING: NT
USE: RESIDENTIAL

MEICONG SHI &
PINGFEI YAO
LOT 17
19427.226
ZONING: NT
USE: RESIDENTIAL

JAMES & NANCY
MAYOR
LOT 18
18911.62
ZONING: NT
USE: RESIDENTIAL

ANDREW & NANCY
COON
LOT 19
18627.846
ZONING: NT
USE: RESIDENTIAL

MUSA & TUBA
SUBASHI
LOT 20
18657.478
ZONING: NT
USE: RESIDENTIAL

NO.	REVISION	DATE

ENVIRONMENTAL CONCEPT PLAN
CONCEPT PLAN

SIMPSON OAKS

LOTS 1 - 184 AND OPEN SPACE LOTS 185 - 191
A RESUBDIVISION OF GRACE TECH PARK - PARCELS "B-1" & "C"
AND VILLAGE OF HICKORY RIDGE, SECTION 3, AREA 14
PARCEL "A" & OPEN SPACE LOT 45

TAX MAP 35 GRID 21 ZONED: CEF-R PARCEL 145
TAX MAP 35 GRID 18 ZONED: NT PARCEL 417
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS

840 MAIN STREET
ELICOTT CITY, MD 21043

TEL: 410-461-7666
FAX: 410-461-8961

PROFESSIONAL CERTIFICATE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE 09-27-2019.

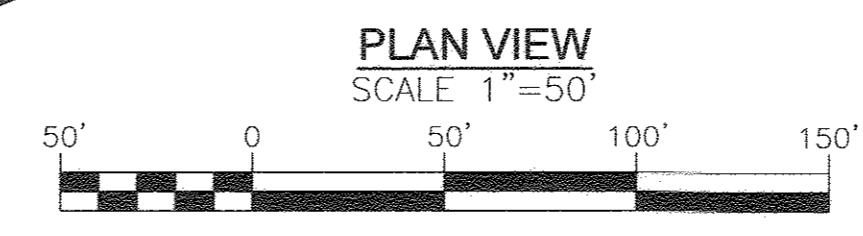
DESIGN BY: CR/EDS
DRAWN BY: ML/KG
CHECKED BY: RHV
DATE: DECEMBER 2018
SCALE: AS SHOWN
W.O. NO.: 15-55

8 SHEET OF 17

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

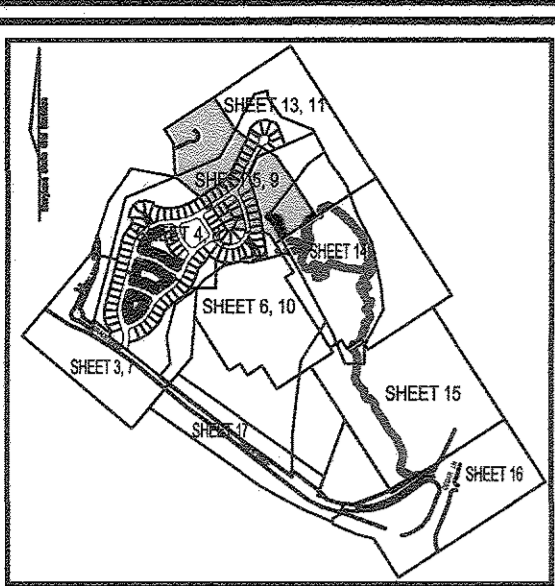
CHIEF, DEVELOPMENT ENGINEERING DIVISION
12/18/18
DATE

CHIEF, DIVISION OF LAND DEVELOPMENT
12/14/18
DATE



- NOTE:**
- ON-SITE 6' PATHWAY SHALL BE CONCRETE ADJACENT TO ON-SITE PUBLIC ROADS, ASPHALT THROUGH OPEN AREAS.
 - ON-SITE 5' SIDEWALK SHALL BE CONCRETE PER HO.CO. R-3.05.
 - BIKEWAY SHOWN HERON SHALL BE 8' ASPHALT OR 8' EXISTING PAVED SHOULDER.

OWNER/DEVELOPER
SIMPSON OAKS CRP3, LLC
4750 OWINGS MILLS BOULEVARD
OWINGS MILLS, MARYLAND 21117
410-356-9900



LEGEND:

	EXISTING CONTOUR		PROPOSED STORM DRAIN		5' ENVIRONMENTAL TRAIL
	PROPOSED SPOT ELEVATION		EXISTING SPECIMEN TREES		EXISTING SPECIMEN TREES AND CRITICAL ROOT ZONE
	EXISTING CURB AND GUTTER		EXISTING TREELINE		EXISTING FENCE
	EXISTING UTILITY POLE		PROPERTY LINE		RIGHT-OF-WAY LINE
	EXISTING LIGHT POLE		SIDEWALK (5' OR 6')		SILT FENCE
	EXISTING MAILBOX		SUPER SILT FENCE		LIMIT OF DISTURBANCE
	EXISTING SIGN		EX. ZONING LINE		SOIL BORING
	EXISTING SANITARY MANHOLE		8' ASPHALT PATH		
	EXISTING SANITARY LINE				
	EXISTING CLEANOUT				
	EXISTING FIRE HYDRANT				
	EXISTING WATER LINE				
	EARTH DIKE				

MATCHLINE SHEET 11



SWM NOTE:
1. ENVIRONMENTAL TRAIL IS A NON-IMPERVIOUS / EARTH SURFACE WHICH WILL SHEET STORM WATER FROM ITS SURFACE TO THE ENVIRONMENTAL AREAS

ONSITE POND #1 - SAND FILTER

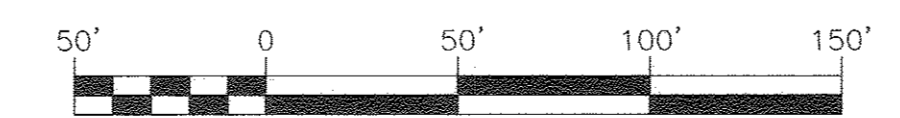
TYPE:	MD 378
HAZARD CLASS:	A
EX. DRAINAGE AREA:	23.58 AC. (B/C COMBINED)
PROP. DRAINAGE AREA:	7.5 AC.
BOTTOM ELEV.:	343.0 TOP SAND FILTER
SAND FILTER:	340.5 - 343.00 (SURFACE)
TOP OF EMBANKMENT:	352.00
EMERGENCY SPILLWAY:	N/A
Q1 (EX.):	1 CFS
Q10 (EX.):	32 CFS
Q100 (EX.):	73 CFS
Q1 (DEV.):	1 CFS
Q10 (DEV.):	1 YR SWM WSEL= 344.96
Q100 (DEV.):	10 YR SWM WSEL= 347.14
Q100 (DEV.):	8 CFS
Q100 (DEV.):	100 YR SWM WSEL= 348.79

POND #1
MD 378
HAZARD CLASSIFICATION "A"
F-1 SAND FILTER

ONSITE POND #2 - BIORETENTION

TYPE:	NON-MD 378
HAZARD CLASS:	A
EX. DRAINAGE AREA:	23.58 AC. (B/C COMBINED)
PROP. DRAINAGE AREA:	1.3 AC.
BOTTOM ELEV.:	354.0 TOP BIO MULCH
BIORETENTION:	350.0 - 354.0 (SURFACE)
TOP OF EMBANKMENT:	360.00
EMERGENCY SPILLWAY:	N/A
Q1 (EX.):	1 CFS
Q10 (EX.):	30 CFS
Q100 (EX.):	69 CFS
Q1 (DEV.):	1 CFS
Q10 (DEV.):	1 YR SWM WSEL= 354.73
Q100 (DEV.):	1 CFS
Q100 (DEV.):	10 YR SWM WSEL= 356.15
Q100 (DEV.):	2 CFS
Q100 (DEV.):	100 YR SWM WSEL= 357.02

PLAN VIEW
SCALE 1"=50'



- NOTE:**
- ON-SITE 6" PATHWAY SHALL BE CONCRETE ADJACENT TO ON-SITE PUBLIC ROADS, ASPHALT THROUGH OPEN AREAS.
 - ON-SITE 5' SIDEWALK SHALL BE CONCRETE PER HO.CO. R-3.05.
 - BIKEWAY SHOWN HERON SHALL BE 8' ASPHALT OR 8' EXISTING PAVED SHOULDER.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION
12/15/16
DATE

CHIEF, DIVISION OF LAND DEVELOPMENT
12-14-16
DATE

NO.	REVISION	DATE
ENVIRONMENTAL CONCEPT PLAN CONCEPT MAP		
SIMPSON OAKS		
LOTS 1 - 184 AND OPEN SPACE LOTS 185 - 191 A RESUBDIVISION OF GRACE TECH PARK - PARCELS 'B-1' & 'C' AND VILLAGE OF HICKORY RIDGE, SECTION 3, AREA 14 PARCEL 'A' & OPEN SPACE LOT 45		
TAX MAP 35 GRID 21	ZONED: CEF-R	PARCEL 145
GRID 16	ZONED: NT	PARCEL 412
5TH ELECTION DISTRICT		HOWARD COUNTY, MARYLAND
ROBERT H. VOGEL ENGINEERING, INC. ENGINEERS • SURVEYORS • PLANNERS		
8407 MAIN STREET ELIGOTT CITY, MD 21043 TEL: 410-461-7666 FAX: 410-461-8961		
DESIGN BY: CR/EDS		PROFESSIONAL CERTIFICATE I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2018.
DRAWN BY: ML/KG		
CHECKED BY: R/HV		
DATE: DECEMBER 2016		
SCALE: AS SHOWN		
W.O. NO.: 15-55		9 SHEET OF 17

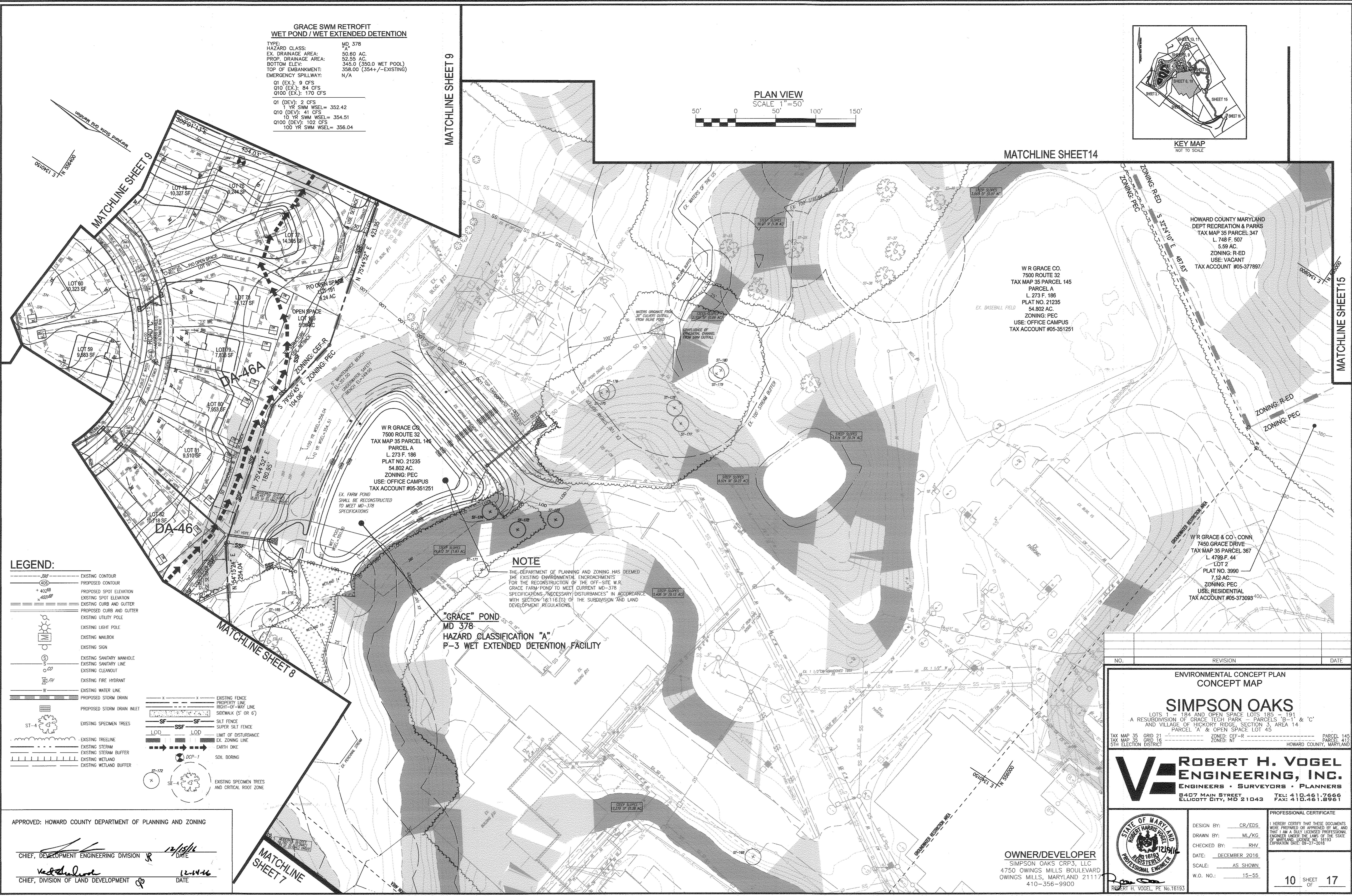
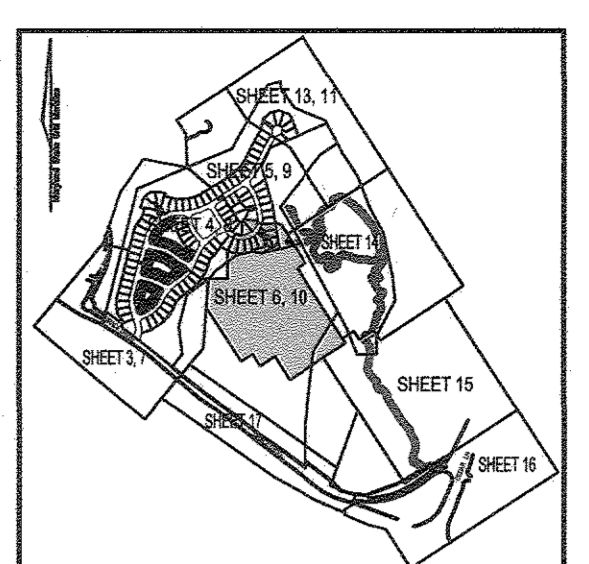
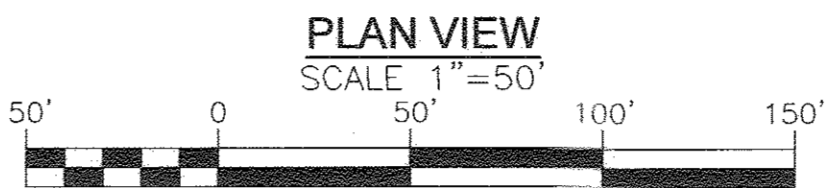
OWNER/DEVELOPER
SIMPSON OAKS CRP3, LLC
4750 OWINGS MILLS BOULEVARD
OWINGS MILLS, MARYLAND 21117
410-356-9900

**GRACE SWM RETROFIT
WET POND / WET EXTENDED DETENTION**

TYPE: MD 378
 HAZARD CLASS: "A"
 EX. DRAINAGE AREA: 50.60 AC.
 PROP. DRAINAGE AREA: 52.55 AC.
 BOTTOM ELEV.: 345.0 (350.0 WET POOL)
 TOP OF EMBANKMENT: 358.00 (354+/- EXISTING)
 EMERGENCY SPILLWAY: N/A

Q1 (EX.): 9 CFS
 Q10 (EX.): 84 CFS
 Q100 (EX.): 170 CFS

Q1 (DEV.): 2 CFS
 1 YR SWM WSEL = 352.42
 Q10 (DEV.): 41 CFS
 10 YR SWM WSEL = 354.51
 Q100 (DEV.): 102 CFS
 100 YR SWM WSEL = 356.04



LEGEND:

	EXISTING CONTOUR		EXISTING FENCE
	PROPOSED CONTOUR		PROPERTY LINE
	PROPOSED SPOT ELEVATION		RIGHT-OF-WAY LINE
	EXISTING SPOT ELEVATION		SIDEWALK (5' OR 6')
	EXISTING CURB AND GUTTER		SILT FENCE
	EXISTING UTILITY POLE		SUPER SILT FENCE
	EXISTING LIGHT POLE		LIMIT OF DISTURBANCE
	EXISTING MAILBOX		EX. ZONING LINE
	EXISTING SIGN		EARTH DIKE
	EXISTING SANITARY MANHOLE		SOIL BORING
	EXISTING SANITARY LINE		DCP-1
	EXISTING CLEANOUT		EXISTING SPECIMEN TREES
	EXISTING FIRE HYDRANT		EXISTING TREE LINE
	EXISTING WATER LINE		EXISTING STREAM
	PROPOSED STORM DRAIN		EXISTING STREAM BUFFER
	PROPOSED STORM DRAIN INLET		EXISTING WETLAND
	EXISTING SPECIMEN TREES		EXISTING WETLAND BUFFER
	EXISTING TREE LINE		
	EXISTING STREAM		
	EXISTING STREAM BUFFER		
	EXISTING WETLAND		
	EXISTING WETLAND BUFFER		

NOTE
 THE DEPARTMENT OF PLANNING AND ZONING HAS DEEMED THE EXISTING ENVIRONMENTAL ENCROACHMENTS FOR THE RECONSTRUCTION OF THE OFF-SITE W.R. GRACE FARM POND TO MEET CURRENT MD-378 SPECIFICATIONS "NECESSARY DISTURBANCES" IN ACCORDANCE WITH SECTION 16.116.(c) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.

**"GRACE" POND
 MD 378
 HAZARD CLASSIFICATION "A"
 P-3 WET EXTENDED DETENTION FACILITY**

HOWARD COUNTY MARYLAND
 DEPT RECREATION & PARKS
 TAX MAP 35 PARCEL 347
 L. 748 F. 507
 5.59 AC.
 ZONING: R-ED
 USE: VACANT
 TAX ACCOUNT #05-377897

W R GRACE CO.
 7500 ROUTE 32
 TAX MAP 35 PARCEL 145
 PARCEL A
 L. 273 F. 186
 54.802 AC.
 ZONING: PEC
 USE: OFFICE CAMPUS
 TAX ACCOUNT #05-351251

W R GRACE & CO - CONN
 7450 GRACE DRIVE
 TAX MAP 35 PARCEL 367
 L. 4789 F. 44
 LOT 2
 PLAT NO. 3990
 7.12 AC.
 ZONING: PEC
 USE: RESIDENTIAL
 TAX ACCOUNT #05-373089

NO.	REVISION	DATE

**ENVIRONMENTAL CONCEPT PLAN
 CONCEPT MAP**

SIMPSON OAKS
 LOTS 1 - 184 AND OPEN SPACE LOTS 185 - 191
 A RESUBDIVISION OF GRACE TECH PARK PARCELS 'B-1' & 'C'
 AND VILLAGE OF HICKORY RIDGE, SECTION 3, AREA 14
 PARCEL 'A' & OPEN SPACE LOT 45

TAX MAP 35 GRID 21 ZONED: CEF-R PARCEL 145
 TAX MAP 35 GRID 18 ZONED: NT PARCEL 347
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL
 ENGINEERING, INC.**
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410.461.7666
 ELLICOTT CITY, MD 21043 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE

DESIGN BY: CR/EDS
 DRAWN BY: ML/KG
 CHECKED BY: RHV
 DATE: DECEMBER 2016
 SCALE: AS SHOWN
 W.O. NO.: 15-55

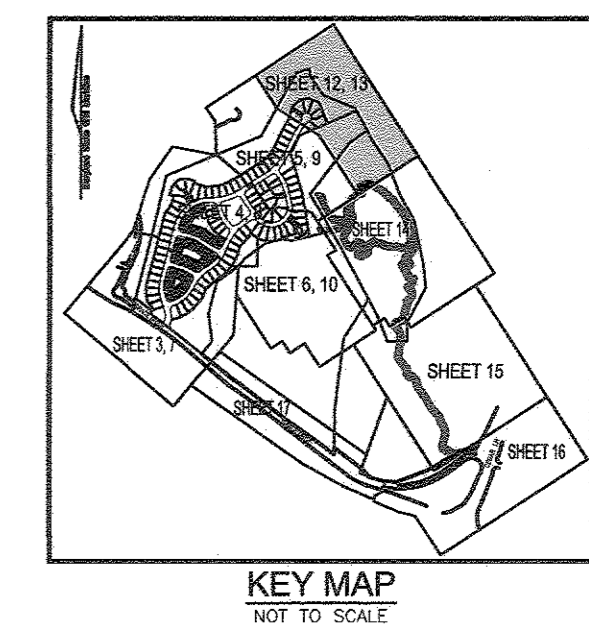
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2018

10 SHEET OF 17

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

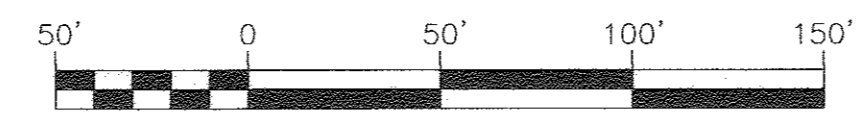
CHIEF, DEVELOPMENT ENGINEERING DIVISION *[Signature]* 12/15/16 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT *[Signature]* 12-14-16 DATE

OWNER/DEVELOPER
 SIMPSON OAKS CRP3, LLC
 4750 OWINGS MILLS BOULEVARD
 OWINGS MILLS, MARYLAND 21117
 410-356-9900



- LEGEND:**
- EXISTING CONTOUR
 - EXISTING SPOT ELEVATION
 - EXISTING CURB AND GUTTER
 - EXISTING SANITARY MANHOLE
 - EXISTING SANITARY LINE
 - EXISTING CLEANOUT
 - EX. ELECTRIC CONDUIT
 - EX. ZONING LINE
 - EXISTING SPECIMEN TREES
 - EXISTING TREETRINE (FIELD LOCATED)
 - EXISTING STREAM
 - EXISTING STREAM BUFFER
 - EXISTING WETLAND
 - EXISTING WETLAND BUFFER
 - EXISTING FENCE
 - PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - EXISTING FLOODPLAIN
 - PROPOSED STORM DRAIN
 - PROPOSED STORM DRAIN INLET
 - DCP-1 SOIL BORING

SEWER OUTFALL PLAN
SCALE 1"=50'



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION 12/14/16 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT 12-04-16 DATE

OWNER/DEVELOPER
 SIMPSON OAKS CRP3, LLC
 4750 OWINGS MILLS BOULEVARD
 OWINGS MILLS, MARYLAND 21117
 410-356-9900

NO.	REVISION	DATE

**ENVIRONMENTAL CONCEPT PLAN
SEWER OUTFALL PLAN**

SIMPSON OAKS
 LOTS 1 - 184 AND OPEN SPACE LOTS 185 - 191
 A RESUBDIVISION OF GRACE TECH PARK - PARCELS 'B-1' & 'C'
 AND VILLAGE OF HICKORY RIDGE, SECTION 3, AREA 14
 PARCEL 'A' & OPEN SPACE LOT 45

TAX MAP 35 GRID 21 ZONED: CEF-R PARCEL 145
 TAX MAP 35 GRID 18 ZONED: NT PARCEL 412
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 121913, EXPIRATION DATE: 09-27-2018.

DESIGN BY: CR/EDS.
 DRAWN BY: MI/KG.
 CHECKED BY: RHV.
 DATE: DECEMBER 2016.
 SCALE: AS SHOWN.
 W.O. NO.: 15-55.

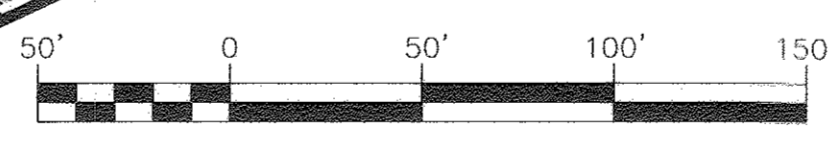
ROBERT H. VOGEL, PE No.121913

12 SHEET OF 17



MATCHLINE SHEET 14

PLAN VIEW
SCALE 1"=50'



LEGEND:

	EXISTING CONTOUR		EXISTING TREE LINE (FIELD LOCATED)
	PROPOSED CONTOUR		EXISTING STREAM
	EXISTING SPOT ELEVATION		EXISTING STREAM BUFFER
	EXISTING CURB AND GUTTER		EXISTING WETLAND BUFFER
	EXISTING UTILITY POLE		EXISTING FENCE
	EXISTING LIGHT POLE		PROPERTY LINE
	EXISTING MAILBOX		RIGHT-OF-WAY LINE
	EXISTING SIGN		SOILS BOUNDARY
	EXISTING SANITARY MANHOLE		MODERATE SLOPES (15% - 24.99%)
	EXISTING SANITARY LINE		STEEP SLOPE (>25%)
	EXISTING CLEANOUT		EXISTING FLOOD PLAN
	EXISTING FIRE HYDRANT		PROPOSED CURB
	EXISTING WATER LINE		LIMIT OF DISTURBANCE
	EXISTING STORM DRAIN		SUPER STIFF FENCE
	EX. ELECTRIC CONDUIT		EARTH DIKE
	EXISTING ZONING LINE		PROPOSED TRAIL
	EXISTING SPECIMEN TREES		ESD DRAINAGE AREA DIVIDE
	SIDEWALK		
	SOIL BORING		

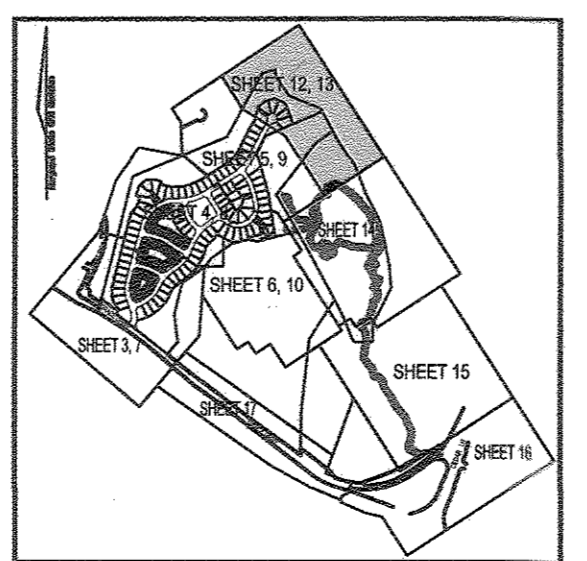
NOTE:

- ON-SITE 6" PATHWAY SHALL BE CONCRETE ADJACENT TO ON-SITE PUBLIC ROADS, ASPHALT THROUGH OPEN AREAS.
- ON-SITE 5' SIDEWALK SHALL BE CONCRETE PER H.O.CO. R-305.

MAPPED SOILS TYPES - CLARKSVILLE NE MAP #17

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	"WETSP"	INCLUSIONS	*FACTOR	PROB. EROSION	CLAY SEQUE	PERCENT
DBA	DRY Silt LOAM, 3 TO 3 PERCENT SLOPES	S2/D	YES	YES	NO	0.37	NO	NO	YES
CO	COODRUS & HATROBO Silt LOAM, 0-3% SLOPES	C	NO	NO	PARTIALLY	0.27	NO	NO	YES
GHF	GLENELE LOAM, 3 TO 8 PERCENT SLOPES	C	NO	NO	NO	0.28	YES	NO	YES
GHF	GLENELE-URBAN LAND COMPLEX, 0-3% SLOPES	B	NO	NO	NO	0.28	NO	NO	YES
GHF	GLENELE Silt LOAM, 3 TO 8 PERCENT SLOPES	C	NO	NO	PARTIALLY	0.43	YES	NO	YES
GHF	GLENELE Silt LOAM, 8-15% SLOPES	C	NO	NO	NO	0.43	YES	NO	YES
GHF	GLENELE-URBAN LAND-URBANSHIPS COMPLEX, 0-3% SLOPES	C	NO	NO	NO	0.43	NO	NO	YES
MSE	MAJOR LOAM, 3-8% SLOPES	B	NO	NO	NO	0.28	YES	NO	YES
MSE	MAJOR LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	NO	0.28	YES	NO	YES
MSE	MAJOR LOAM, 15-23% SLOPES	B	NO	NO	NO	0.28	NO	NO	YES
MSE	MAJOR-URBAN COMPLEX, 25-35% SLOPES, VERY ROCKY	B	NO	NO	NO	0.32	NO	NO	YES

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
 NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT
 1. SOURCE: THE UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE'S WEB SOIL SURVEY, CONSULTED ON FEBRUARY 26, 2014. AVAILABLE ON-LINE AT: HTTP://WEBDSSURVEY.NRCS.USDA.GOV/APP/HOME/PAGE/174
 2. HYDRIC SOIL INFORMATION TAKEN FROM THE NATIONAL HYDRIC SOILS LIST, AT: HTTP://SOILS.USDA.GOV/USDA/HYDRIC/24, CONSULTED ON FEBRUARY 26, 2014.



KEY MAP
NOT TO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 CHIEF, DEVELOPMENT ENGINEERING DIVISION 12/15/16
 DATE

 CHIEF, DIVISION OF LAND DEVELOPMENT 12-14-16
 DATE

NO.	REVISION	DATE

**ENVIRONMENTAL CONCEPT PLAN
 EXISTING FEATURES, NATURAL
 RESOURCES MAP & CONCEPT PLAN
 SIMPSON OAKS**

LOTS 1 - 184 AND OPEN SPACE LOTS 185 - 191
 A RESUBDIVISION OF GRACE TECH PARK PARCELS 'B-1' & 'C'
 AND VILLAGE OF HICKORY RIDGE, SECTION 3, AREA 14
 PARCEL 'A' & OPEN SPACE LOT 45

TAX MAP 35 GRID 21 ZONED: CEF-R PARCEL 145
 TAX MAP 35 GRID 16 ZONED: NT PARCEL 412
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

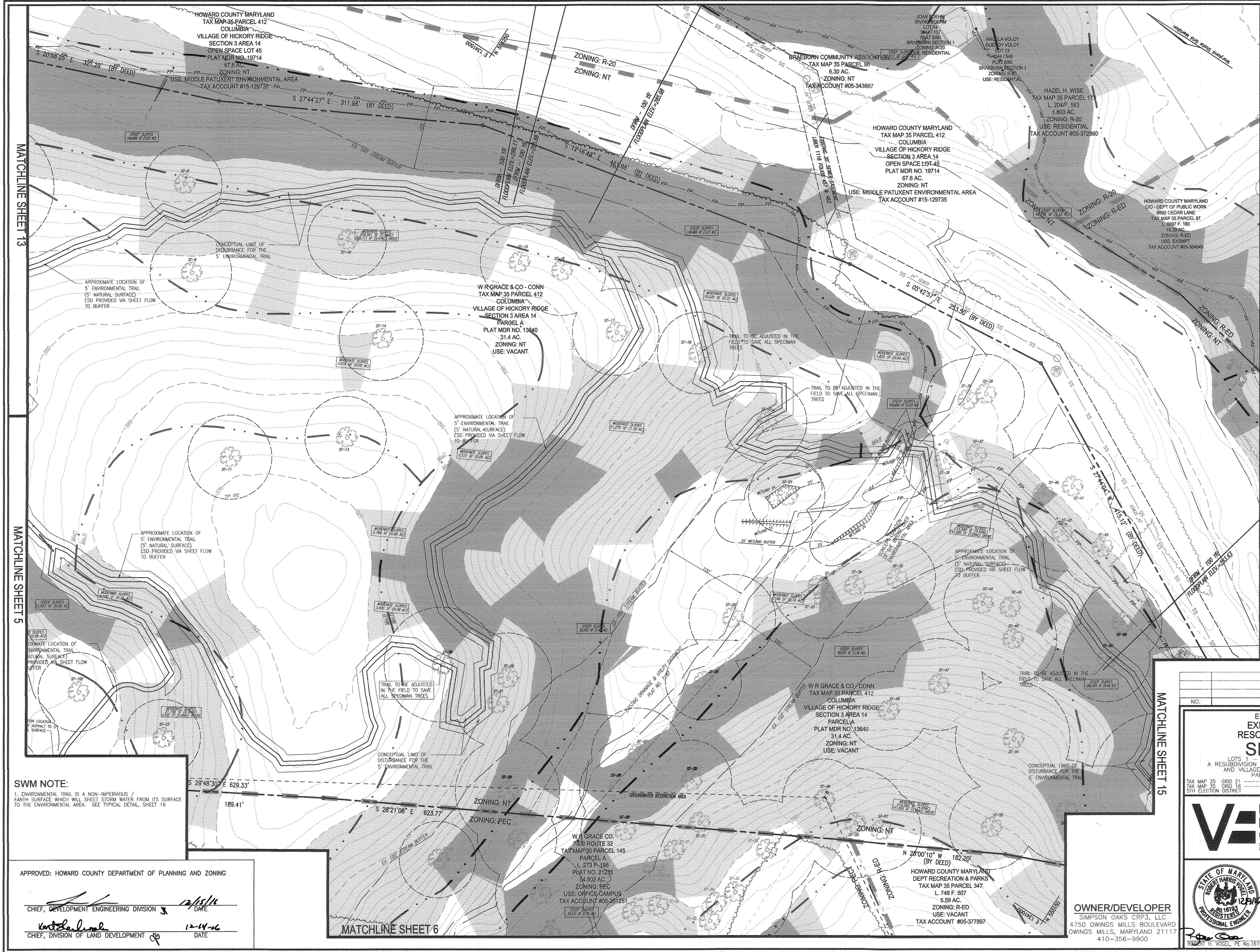
**ROBERT H. VOGEL
 ENGINEERS • SURVEYORS • PLANNERS**

8407 MAIN STREET 21043 TEL: 410-461-7666
 ELLICOTT CITY, MD 21043 FAX: 410-461-8961

DESIGN BY: CR/EDS
 DRAWN BY: ML/KC
 CHECKED BY: RHV
 DATE: DECEMBER 2016
 SCALE: AS SHOWN
 W.O. NO.: 15-55

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS
 WERE PREPARED OR APPROVED BY ME, AND
 THAT I AM A FULLY LICENSED PROFESSIONAL
 ENGINEER UNDER THE LAWS OF THE STATE
 OF MARYLAND, LICENSE NO. 16193
 EXPIRATION DATE: 09-27-2019

13 SHEET 17
 OF

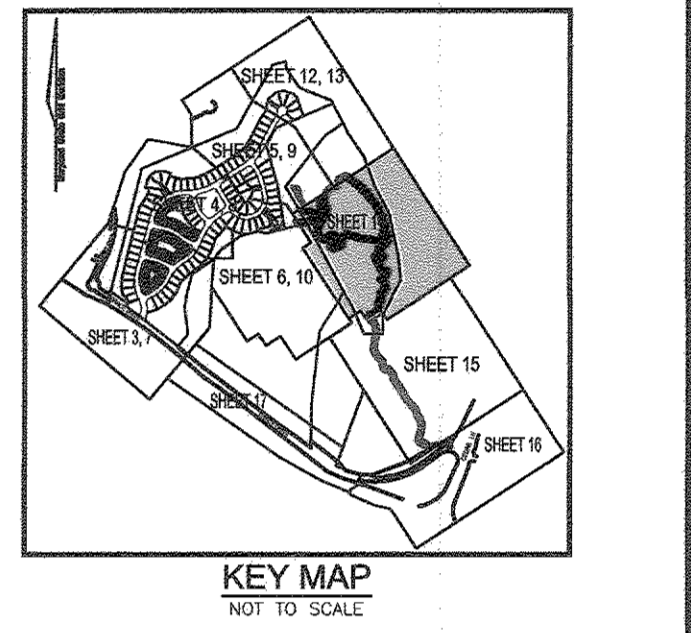


LEGEND:

	EXISTING CONTOUR
	PROPOSED CONTOUR
	EXISTING SPOT ELEVATION
	EXISTING CURB AND GUTTER
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	EXISTING STORM DRAIN
	EX. ELECTRIC CONDUIT
	EX. ZONING LINE
	EXISTING SPECIMEN TREES
	PROPOSED TRAIL
	EXISTING TREELINE
	EXISTING STREAM
	EXISTING STREAM BUFFER
	EXISTING WETLAND
	EXISTING WETLAND BUFFER
	EXISTING FENCE
	RIGHT-OF-WAY LINE
	SOILS BOUNDARY
	MODERATE SLOPES (15% - 24.99%)
	STEEP SLOPE (>25%)
	EXISTING FLOOD PLAIN
	LIMIT OF DISTURBANCE
	SUPER SILT FENCE

SOILS LEGEND:
REFER TO SHEET 13 FOR SOILS LEGEND

PLAN VIEW
SCALE 1"=50'



MATCHLINE SHEET 13

MATCHLINE SHEET 5

MATCHLINE SHEET 15

MATCHLINE SHEET 15

SWM NOTE:
1. ENVIRONMENTAL TRAIL IS A NON-IMPERVIOUS EARTH SURFACE WHICH WILL SHEET STORM WATER FROM ITS SURFACE TO THE ENVIRONMENTAL AREA. SEE TYPICAL DETAIL SHEET 16

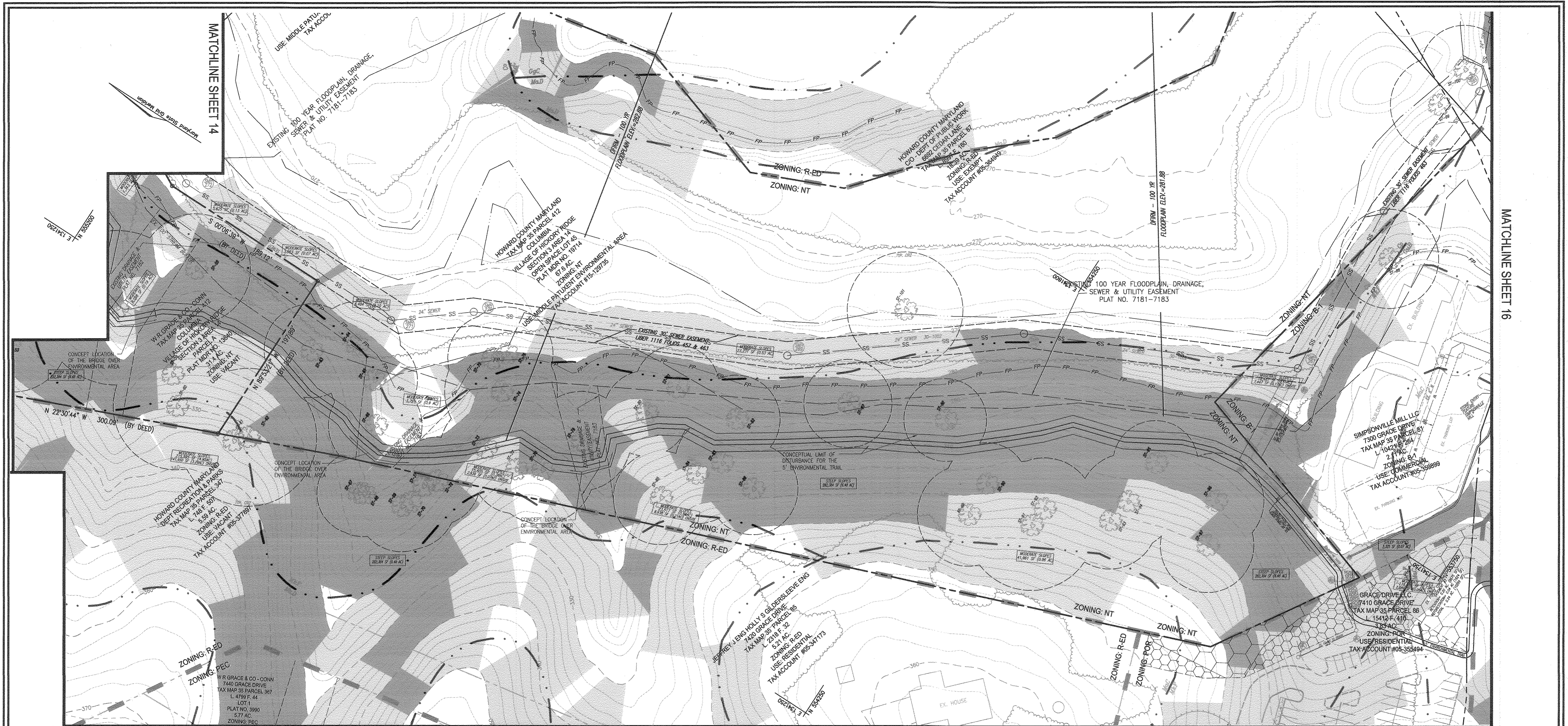
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION *[Signature]* 12/15/16 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT *[Signature]* 12-14-16 DATE

MATCHLINE SHEET 6

NO.	REVISION	DATE
ENVIRONMENTAL CONCEPT PLAN EXISTING FEATURES, NATURAL RESOURCES MAP & CONCEPT PLAN SIMPSON OAKS LOTS 184 AND OPEN SPACE LOTS 185 - 191 A RESUBDIVISION OF GRACE TECH PARK - PARCELS 'B-1' & 'C' AND VILLAGE OF HICKORY RIDGE, SECTION 3, AREA 14 PARCEL 'A' & OPEN SPACE LOT 45		
TAX MAP 35 GRID 21		PARCEL 145
TAX MAP 35 GRID 16		PARCEL 412
5TH ELECTION DISTRICT		HOWARD COUNTY, MARYLAND
ROBERT H. VOGEL ENGINEERING, INC. ENGINEERS • SURVEYORS • PLANNERS 8407 MAIN STREET TEL: 410.461.7666 ELLICOTT CITY, MD 21043 FAX: 410.461.8961		
DESIGN BY: CR/EDS DRAWN BY: ML/KG CHECKED BY: RHY DATE: DECEMBER 2016 SCALE: AS SHOWN W.O. NO.: 15-55		PROFESSIONAL CERTIFICATE 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. 16193, EXPIRATION DATE: 09-27-2018.
OWNER/DEVELOPER SIMPSON OAKS CRP3, LLC 4750 OWINGS MILLS BOULEVARD OWINGS MILLS, MARYLAND 21117 410-356-9900		14 SHEET OF 17



LEGEND:

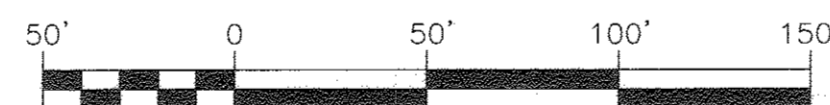
- | | | | |
|-------------|---------------------------|-----|------------------------------|
| --- 300 --- | EXISTING CONTOUR | --- | EXISTING FENCE |
| --- 300 --- | PROPOSED CONTOUR | --- | PROPERTY LINE |
| --- 300 --- | EXISTING SPOT ELEVATION | --- | RIGHT-OF-WAY LINE |
| --- | EXISTING CURB AND GUTTER | --- | SOILS BOUNDARY |
| --- | EXISTING UTILITY POLE | --- | MODERATE SLOPES (1% - 4.99%) |
| --- | EXISTING LIGHT POLE | --- | STEEP SLOPE (>5%) |
| --- | EXISTING MAILBOX | --- | LIMIT OF FLOOD PLAIN |
| --- | EXISTING SIGN | --- | LIMIT OF DISTURBANCE |
| --- | EXISTING SANITARY MANHOLE | --- | SUPER SILT FENCE |
| --- | EXISTING SANITARY LINE | --- | PROPOSED TRAIL |
| --- | EXISTING CLEANOUT | --- | EXISTING TREELINE |
| --- | EXISTING FIRE HYDRANT | --- | EXISTING STERAM |
| --- | EXISTING WATER LINE | --- | EXISTING STERAM BUFFER |
| --- | EXISTING STORM DRAIN | --- | EXISTING WETLAND |
| --- | EX. ELECTRIC CONDUIT | --- | EXISTING WETLAND BUFFER |
| --- | EX. ZONING LINE | --- | |
| --- | EXISTING SPECIMEN TREES | --- | |

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PLAN VIEW
SCALE 1"=50'



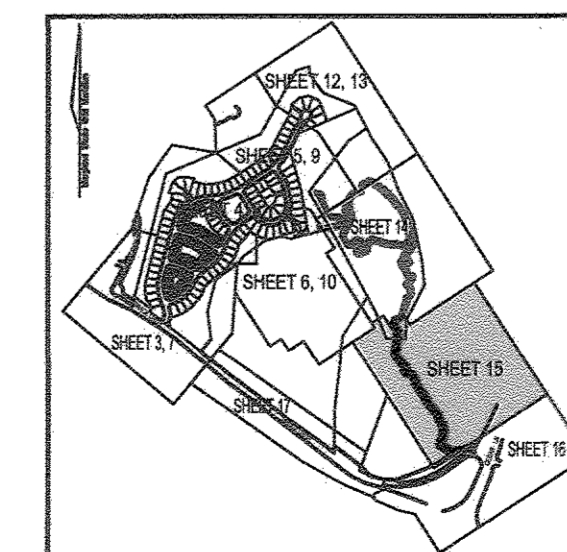
MATCHLINE SHEET 16

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

12/18/11

 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 12-14-16

 CHIEF, DIVISION OF LAND DEVELOPMENT



KEY MAP
NOT TO SCALE
OWNER/DEVELOPER
 SIMPSON OAKS CRP3, LLC
 4750 OWINGS MILLS BOULEVARD
 OWINGS MILLS, MARYLAND 21117
 410-356-9900

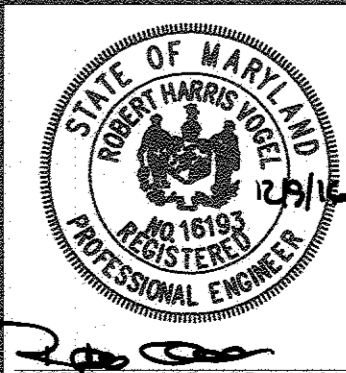
NO.	REVISION	DATE

**ENVIRONMENTAL CONCEPT PLAN
 EXISTING FEATURES, NATURAL
 RESOURCES MAP & CONCEPT PLAN
 SIMPSON OAKS**

LOTS 1 - 184 AND OPEN SPACE LOTS 185 - 191
 A RESUBDIVISION OF GRACE TECH PARK - PARCELS "B-1" & "C"
 AND VILLAGE OF HICKORY RIDGE, SECTION 3, AREA 14
 PARCEL "A" & OPEN SPACE LOT 45

TAX MAP 35 GRID 21
 TAX MAP 35 GRID 16
 5TH ELECTION DISTRICT

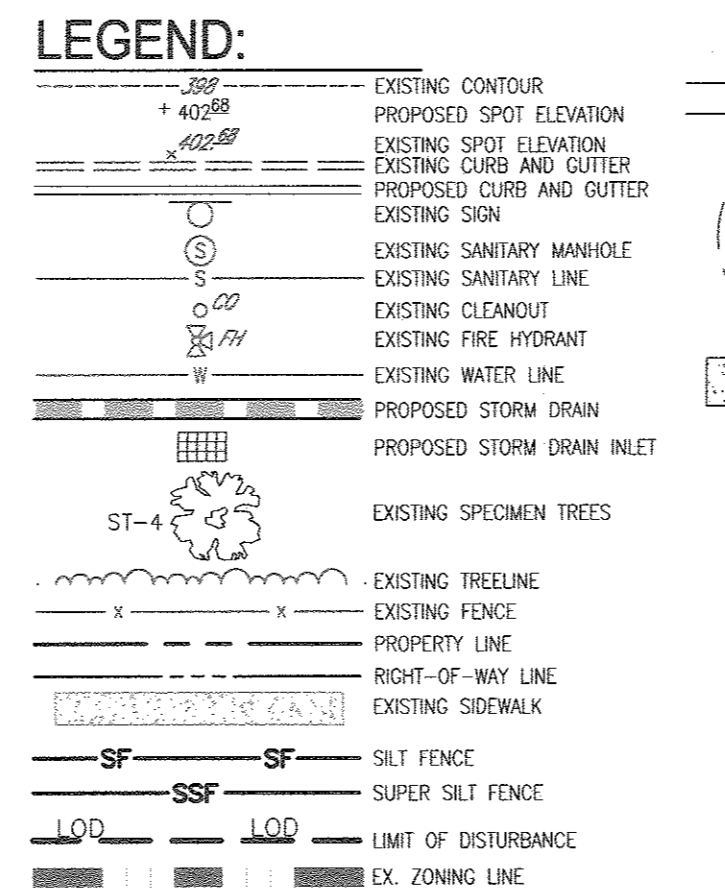
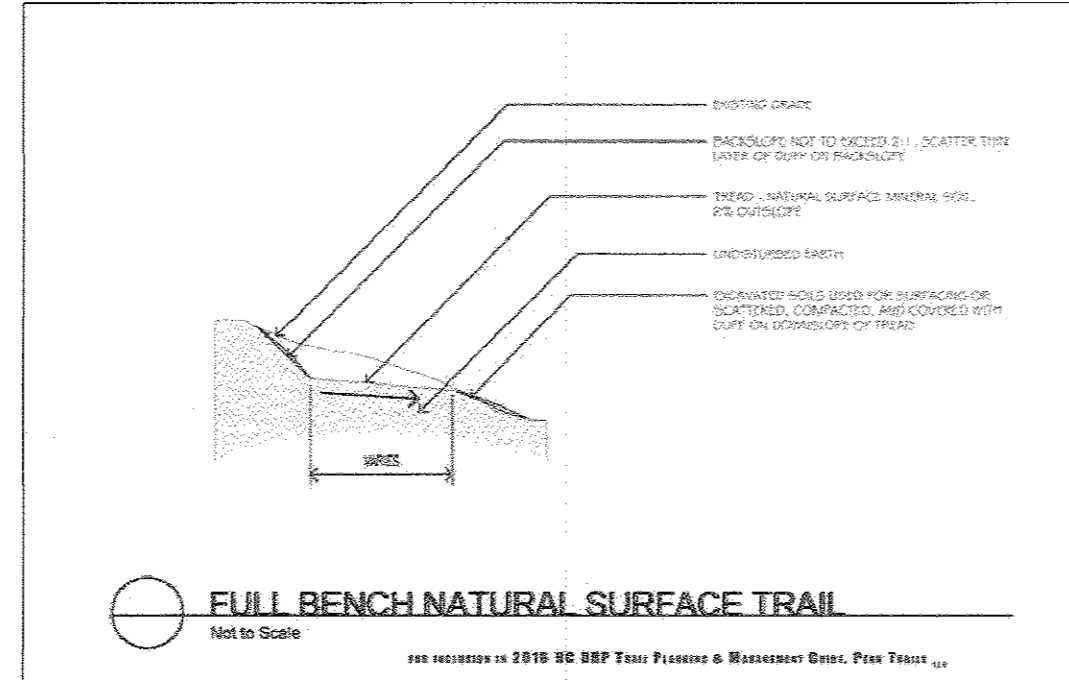
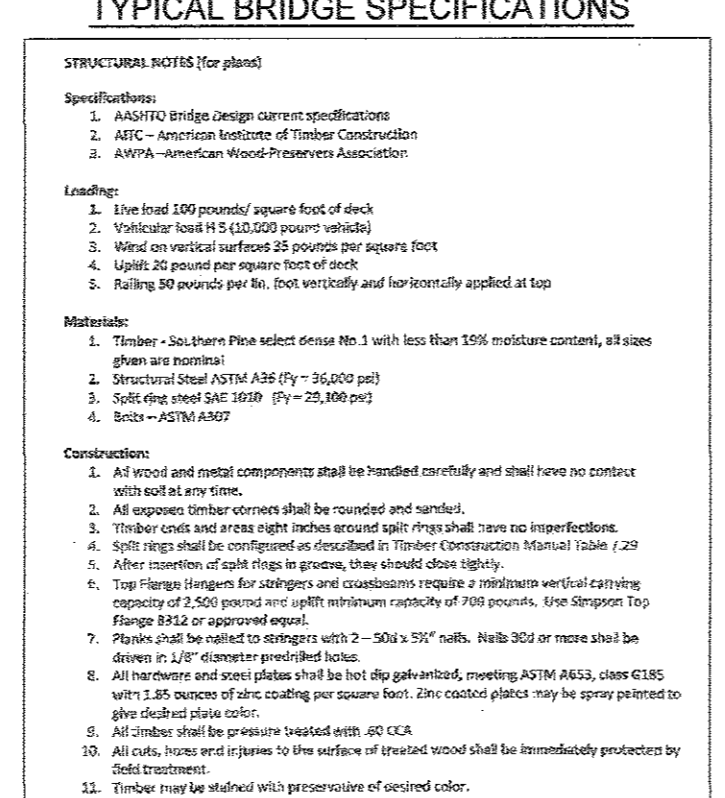
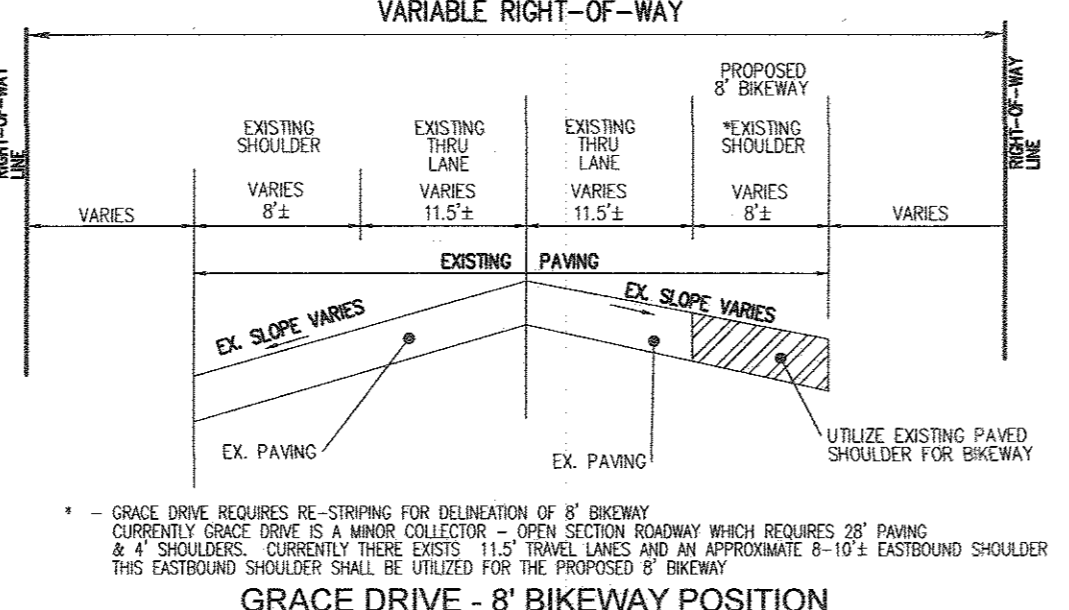
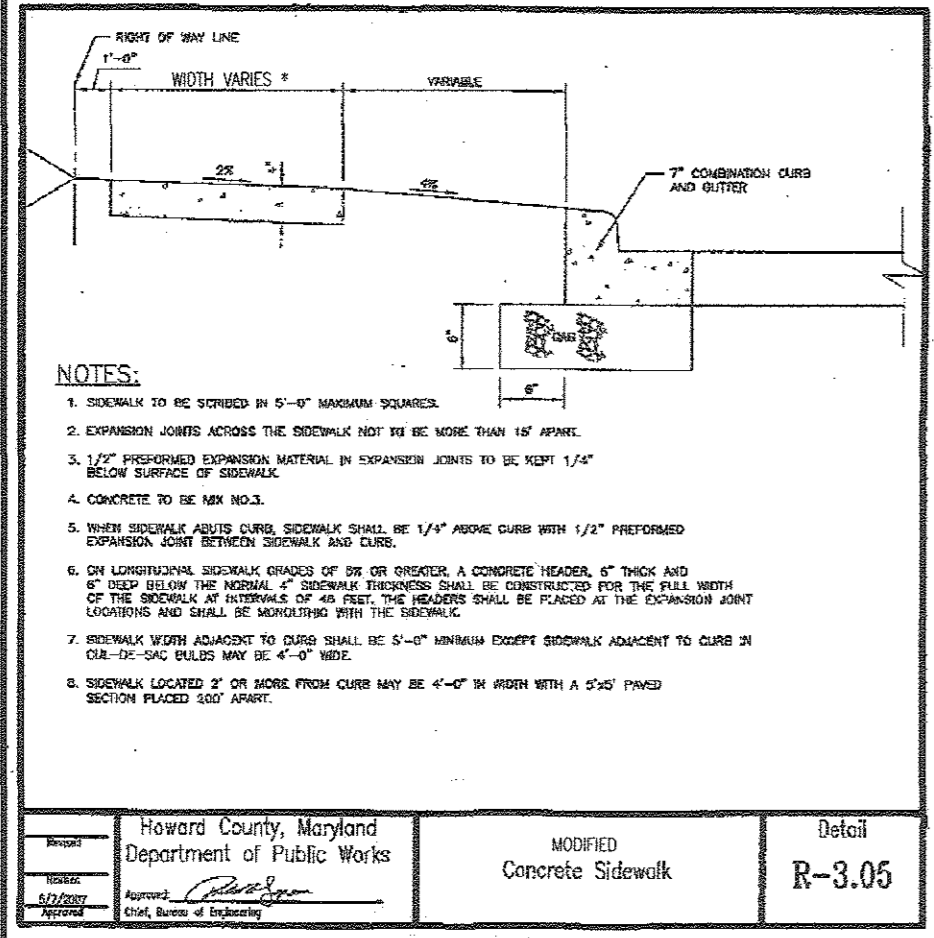
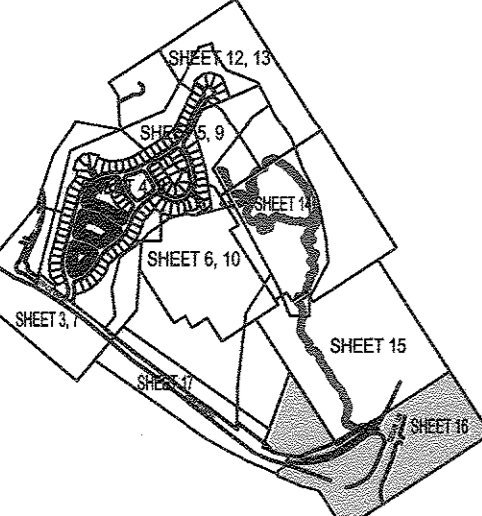
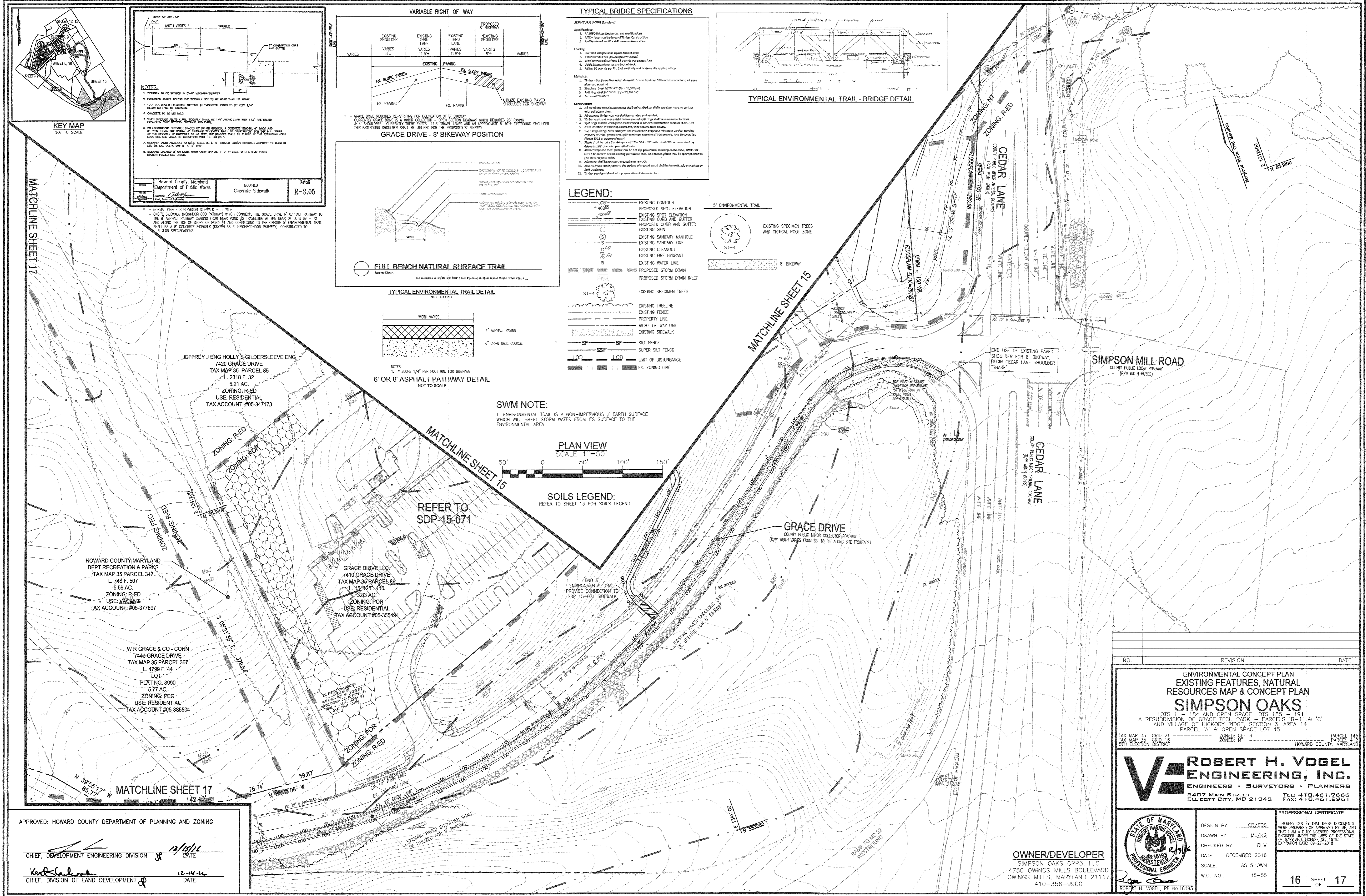
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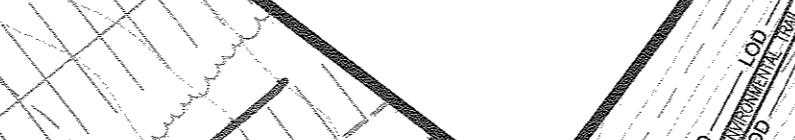
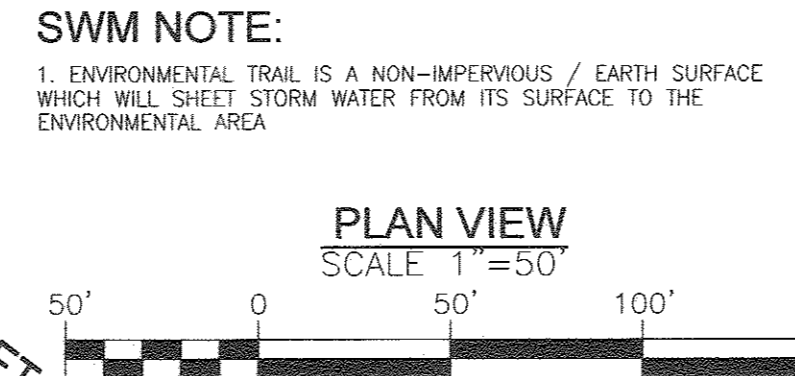
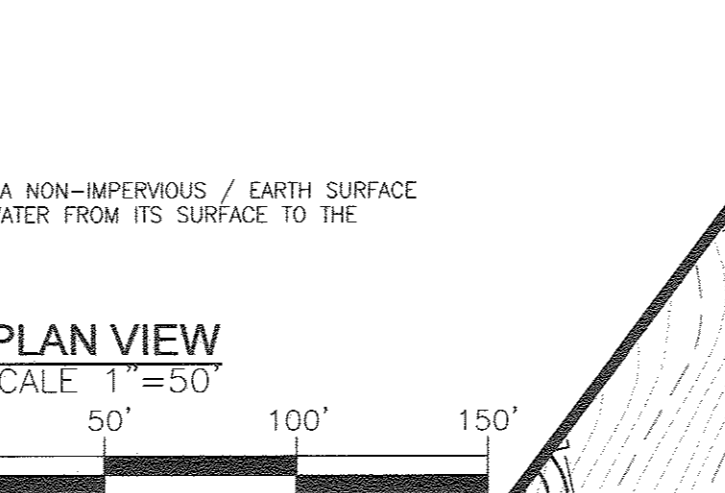
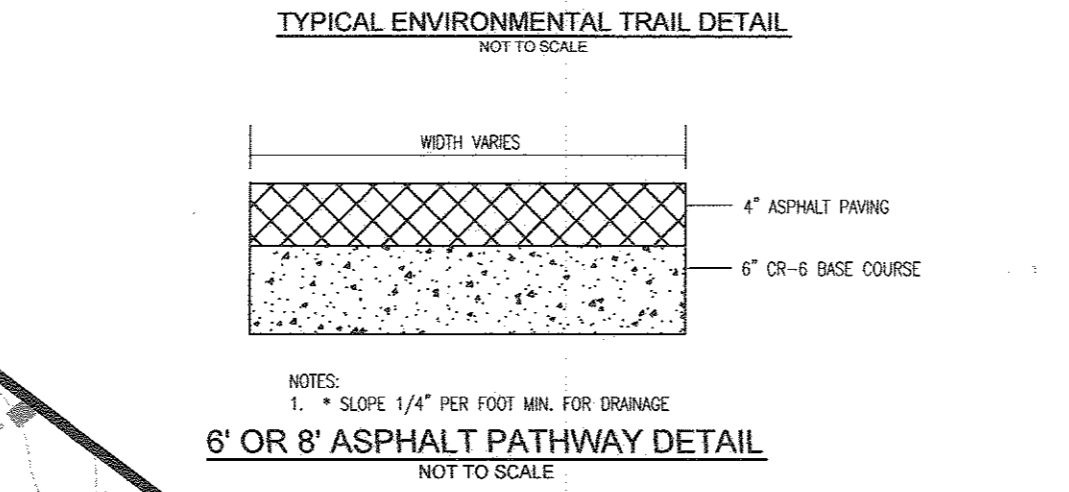
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 SCALE: AS SHOWN
 W.O. NO.: 15-55

15 SHEET OF 17



Project	Howard County Maryland Department of Public Works	Detail	R-3.05
Scale	As Shown	Modified	Concrete Sidewalk



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION *[Signature]* DATE 12/18/16

CHIEF, DIVISION OF LAND DEVELOPMENT *[Signature]* DATE 12/14/16

NO.	REVISION	DATE

**ENVIRONMENTAL CONCEPT PLAN
EXISTING FEATURES, NATURAL
RESOURCES MAP & CONCEPT PLAN
SIMPSON OAKS**

LOTS 184 AND OPEN SPACE LOTS 185 - 191
A RESUBDIVISION OF GRACE TECH PARK - PARCELS 'B-1' & 'C'
AND VILLAGE OF HICKORY RIDGE, SECTION 3, AREA 14
PARCEL 'A' & OPEN SPACE LOT 45

TAX MAP 35 GRID 21 PARCEL 145
TAX MAP 35 GRID 16 PARCEL 412
5TH ELECTION DISTRICT ZONED: CE-R HOWARD COUNTY, MARYLAND

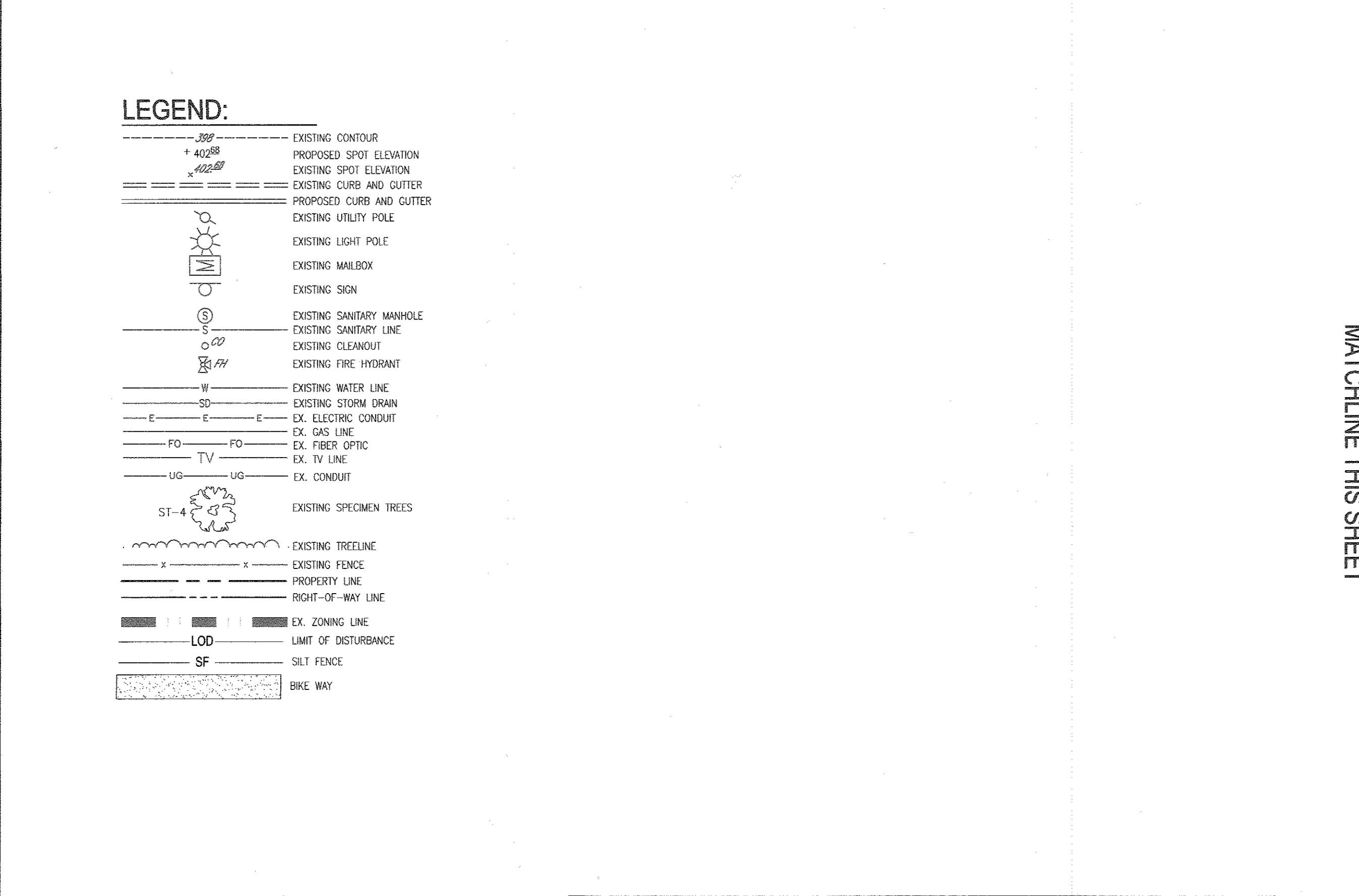
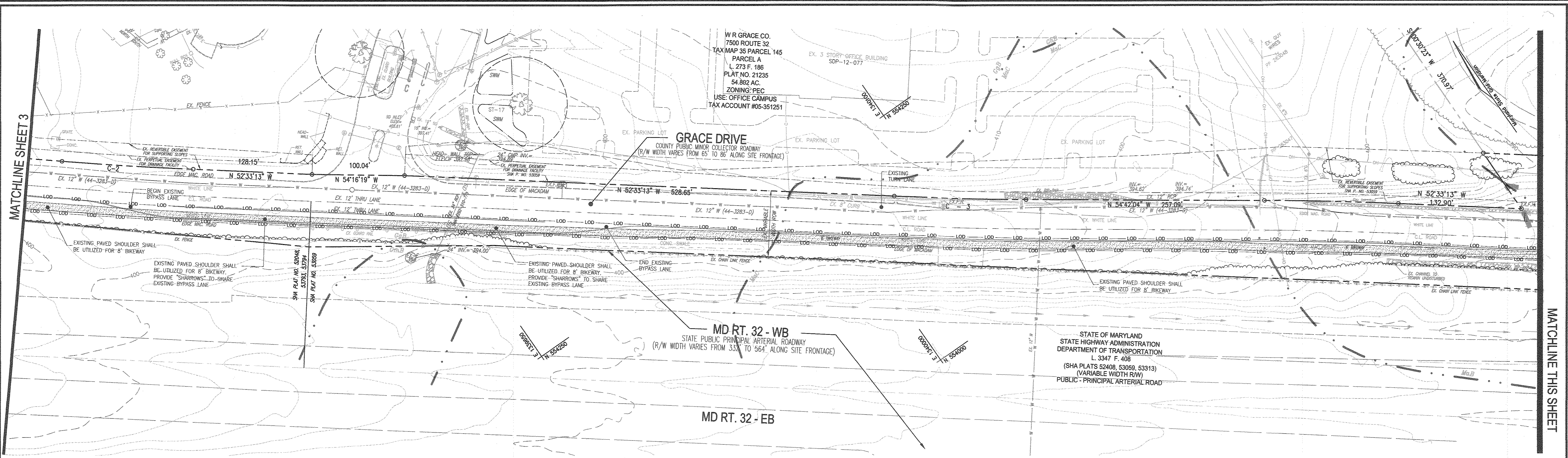
**ROBERT H. VOGEL
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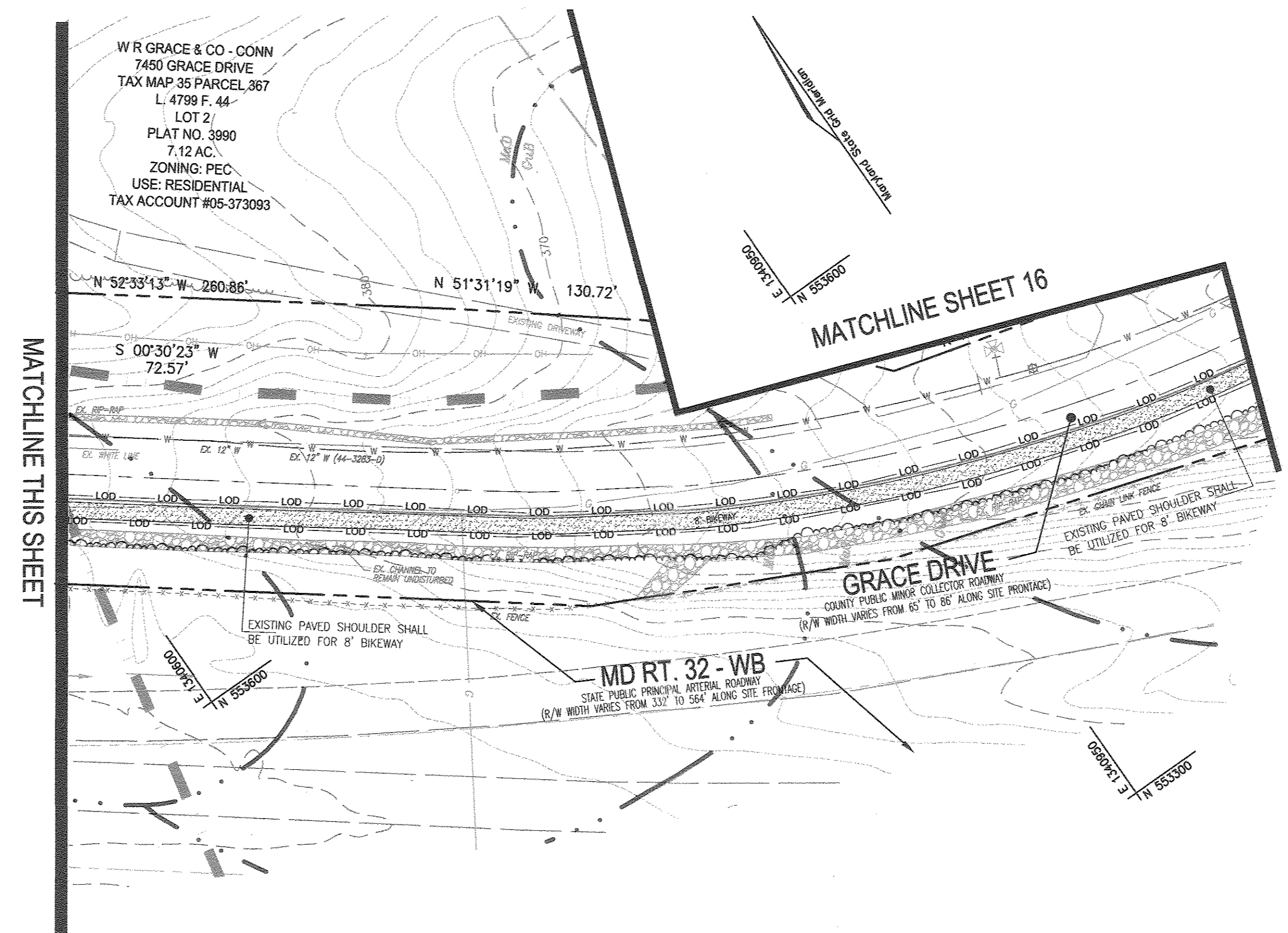
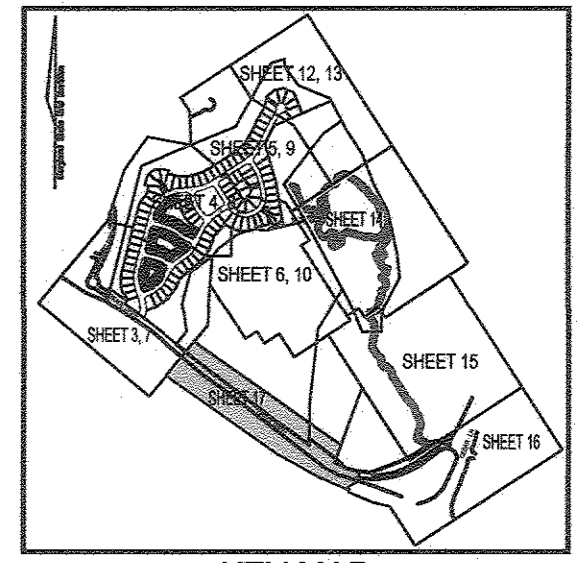
OWNER/DEVELOPER
SIMPSON OAKS CRP3, LLC
4750 OWINGS MILLS BOULEVARD
OWINGS MILLS, MARYLAND 21117
410-356-9900

16 SHEET OF 17



LEGEND:

- EXISTING CONTOUR
- + 40.258 PROPOSED SPOT ELEVATION
- EXISTING SPOT ELEVATION
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING STORM DRAIN
- EX. ELECTRIC CONDUIT
- EX. GAS LINE
- EX. FIBER OPTIC
- EX. TV LINE
- EX. CONDUIT
- EXISTING SPECIMEN TREES
- EXISTING TREELINE
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- EX. ZONING LINE
- LIMIT OF DISTURBANCE
- SILT FENCE
- BIKE WAY



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION *[Signature]* 12/15/16 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT *[Signature]* 12-19-16 DATE

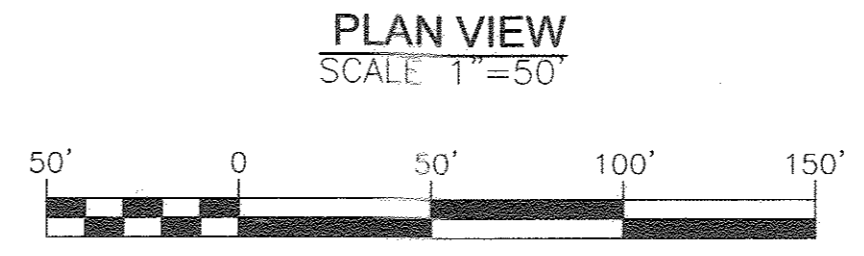
MAPPED SOILS TYPES - CLARKSVILLE NE MAP #17

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	PERCENT	K FACTOR	PERCENT	PERCENT	PERCENT	PERCENT
BhA	BARE SILT LOAM, 0 TO 3 PERCENT SLOPES	C/D	YES	YES	0.37	NO	YES	NO	NO
Co	COOPERS & HARBOR SILT LOAM, 0-3% SLOPES	C	PARTIALLY	PARTIALLY	0.37	NO	YES	NO	NO
Cnp	GLENELE LOAM, 3 TO 8 PERCENT SLOPES	C	NO	NO	0.28	YES	NO	NO	NO
Cnp	GLENELE-URBAN LAND COMPLEX, 0-8% SLOPES	B	NO	NO	0.28	NO	YES	NO	NO
Cnp	GLENELE SILT LOAM, 3 TO 8 PERCENT SLOPES	C	PARTIALLY	PARTIALLY	0.43	YES	YES	NO	NO
Cnp	GLENELE SILT LOAM, 0-3% SLOPES	C	NO	NO	0.43	YES	YES	NO	NO
Cnp	GLENELE-URBAN LAND-BOOTHBENS COMPLEX, 0-8% SLOPES	C	NO	NO	0.43	NO	YES	NO	NO
Msb	MANOR LOAM, 3-8% SLOPES	B	NO	NO	0.28	YES	NO	NO	NO
Msc	MANOR LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.28	YES	NO	NO	NO
Msd	MANOR LOAM, 15-25% SLOPES	B	NO	NO	0.28	NO	YES	NO	NO
Msf	MANOR-BROOKWOOD COMPLEX, 25-65% SLOPES, VERY ROCKY	B	NO	NO	0.32	NO	YES	NO	NO

NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

1. SOURCE: THE UNITED STATES DEPARTMENT OF AGRICULTURE, NATIONAL RESOURCE CONSERVATION SERVICE'S WEB SOIL SURVEY, CONSULTED ON DECEMBER 28, 2016. AVAILABLE ON-LINE AT: <http://websoilsurvey.nrcs.usda.gov/app/home.page.html>

2. HYDRIC SOILS INFORMATION ADAPTED FROM THE NATIONAL HYDRIC SOILS LIST. AT: <http://pubs.usda.gov/nrcs/soils/hydric/>, CONSULTED ON DECEMBER 28, 2016.



NO.	REVISION	DATE

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EXISTING FEATURES, NATURAL
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SIMPSON OAKS**

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TAX MAP 35 GRID 16 PARCEL 412
5TH ELECTION DISTRICT ZONED: CEF-R PARCEL 412
ZONED: NI HOWARD COUNTY, MARYLAND

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PROFESSIONAL CERTIFICATE

17 SHEET OF 17