

GENERAL NOTES

- BOUNDARY NOTE**
BOUNDARY INFORMATION SHOWN HEREON FOR THE DEEP RUN PROPERTY MANAGEMENT LLC PARCEL IS BASED ON A FIELD RUN SURVEY PERFORMED BY MORRIS & RITCHE ASSOC., INC. IN DECEMBER 2007.
BOUNDARY INFORMATION SHOWN HEREON FOR THE HORSE FARM LLC PARCEL IS BASED ON SHA PLAT NO. 56632.
- TOPOGRAPHY NOTE**
TOPOGRAPHY SHOWN HEREON FOR THE DEEP RUN PROPERTY MANAGEMENT LLC PARCEL IS BASED ON A FIELD RUN TOPOGRAPHIC SURVEY PERFORMED BY MORRIS & RITCHE ASSOCIATES, INC. IN DECEMBER 2007.
TOPOGRAPHY SHOWN HEREON FOR THE HORSE FARM LLC PARCEL WAS ACQUIRED FROM A.B. CONSULTANTS, INC. AND IS BASED ON A FIELD RUN TOPOGRAPHIC SURVEY PERFORMED IN OCTOBER 2007.
- SURVEY NOTE**
SURVEYS WERE PERFORMED WITHOUT BENEFIT OF A TITLE REPORT. NO REPRESENTATIONS ARE MADE BY THE SURVEYOR AS TO THE EXISTENCE OR LOCATION OF ANY EASEMENT OR ANY OTHER ENCUMBRANCES BEYOND THOSE SHOWN HEREON.
- WETLANDS AND WATERS OF THE U.S. SHOWN HEREON WERE DELINEATED AND GPS LOCATED BY GEO-TECHNOLOGY ASSOCIATES, INC. ON DECEMBER 17, 2007 AND RECONFIRMED ON AUGUST 24, 2011.**
- SPECIMEN TREES ON THE HORSE FARM LLC PROPERTY WERE FIELD IDENTIFIED AND GPS LOCATED BY GEO-TECHNOLOGY ASSOCIATES, INC. IN OCTOBER 2007 AND RECONFIRMED BY FIELD INVESTIGATION BY FSD ON APRIL 9, 2014.**
- SPECIMEN TREES ON DEEP RUN PROPERTY MANAGEMENT LLC PROPERTY WERE FIELD IDENTIFIED AND GPS LOCATED BY GEO-TECHNOLOGY ASSOCIATES, INC. ON DECEMBER 17, 2007 AND RECONFIRMED BY FIELD INVESTIGATION BY FSD ON APRIL 9, 2014.**
- A FOREST STAND DELINEATION WAS PREPARED BY GEO-TECHNOLOGY ASSOCIATES, INC. DATED MAY 2008 AND RECONFIRMED BY FIELD INVESTIGATION BY FSD ON APRIL 9, 2014.**
- THE COORDINATES SHOWN HEREON ARE BASED ON THE PROJECTION OF THE MARYLAND NAD 83 COORDINATE SYSTEM BY THE HOWARD COUNTY OFFICE OF PLANNING AND ZONING. THE BASIS OF CONTROL FOR THE SITE ARE HOWARD COUNTY STATIONS 2028 AND 2031.**
- FLOOD PLAIN NOTE**
PORTIONS OF THIS SITE LIE WITHIN A 100 YEAR FLOOD PLAIN AS SHOWN ON SHA PLAT NO. 54587 DATED MARCH 13, 2007.
- EXISTING UTILITIES**
APPROXIMATE LOCATION OF THE EXISTING WATER LINE WAS OBTAINED FROM HOWARD COUNTY DRAWING NO. 320-0-0000.
APPROXIMATE LOCATION OF THE EXISTING SANITARY LINE WAS OBTAINED FROM HOWARD COUNTY DRAWING NO. 546-S.
- PERPETUAL EASEMENTS**
PERPETUAL EASEMENTS, FOR THE BENEFIT OF PARCEL 748, WERE PROVIDED BY THE STATE HIGHWAY ADMINISTRATION ON SHA PLAT 56632. THESE INCLUDE: PERPETUAL EASEMENTS FOR PUBLIC SANITARY SEWER LINE AND DRAINAGE RIGHT TO DISCHARGES.
- WAIVER PETITION WP-15-042, REQUESTING TO WAIVE SECTION 16.116(c)(1) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS WHICH STATES NO GRADING, REMOVAL OF VEGETATIVE COVER AND TREES, PAVING, AND NEW STRUCTURES SHALL NOT BE PERMITTED WITHIN 25 FEET OF A WETLAND IN ANY ZONING DISTRICT, WAS APPROVED BY HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING ON OCTOBER 16, 2014, ALLOWING FOR PUBLIC ROAD ACCESS TO BE EXTENDED TO PARCEL 753 THROUGH PARCEL 748.**
- THE SUBJECT PROPERTY IS ZONED R-SA-8 PER THE 10/6/13 COMPREHENSIVE ZONING PLAN.**
- SEDIMENT CONTROLS INTERRUPTED BY THE INSTALLATION OF UTILITY LINES WILL BE REPAIRED IMMEDIATELY.**
- APPROVAL OF THIS ECP DOES NOT CONSTITUTE ANY APPROVAL OF SUBSEQUENT SUBDIVISION OR SITE DEVELOPMENT PLANS. FURTHER COMMENTS WILL BE GENERATED UPON REVIEW OF THE APPLICABLE DEVELOPMENT PLANS IN ACCORDANCE WITH THE SUBDIVISION AND ZONING REGULATIONS. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED REVIEW COMMENTS INCLUDING COMMENTS THAT MAY ALTER THE OVERALL SITE DESIGN AS THE PROJECT PROGRESSES THROUGH THE PLAN REVIEW PROCESS.**
- AS OF FEBRUARY 18, 2015 THE DIRECTOR OF THE DEPARTMENT OF PLANNING AND ZONING HAS APPROVED THE REQUEST TO WAIVE SECTION 16.1205(c)(7)&(10) IF THE HOWARD COUNTY CODE FOR THE REMOVAL OF SPECIMEN TREE #4, BUT DENIED THE REQUEST TO REMOVE SPECIMEN TREE #5 (WP-15-085)**

DESIGN NARRATIVE

NATURAL RESOURCE PRESERVATION

THE SITE IS 18.6 ACRES IN SIZE, WITH 14.5 ACRES OF DISTURBANCE FOR CLEARING AND GRADING. THE NATURAL RESOURCES WITHIN THE PROPERTY INCLUDES EXISTING SPECIMEN TREES, ENVIRONMENTAL BUFFERS, STREAM CHANNELS, FLOODPLAIN, NON-TIDAL WETLANDS, FORESTS AND MEADOWS. STORM WATER RUNOFF FROM THE SITE FLOWS WESTWARD VIA SHEET FLOW AND CONCENTRATED FLOW AND DISCHARGES INTO DEEP RUN STREAM AND FLOODPLAIN. THERE ARE FOUR DISTINCTIVE SITE OUTFALLS.

THE PROPOSED LIMIT OF DISTURBANCE WILL BE LOCATED OUTSIDE OF THE EXISTING STREAM, FLOODPLAIN AND NON-TIDAL WETLAND AREAS EXCEPT FOR TWO SANITARY SEWER OUTFALL CONNECTIONS WHERE THE PROPOSED DISTURBANCE WILL BE MINIMAL AND TEMPORARY AND FOR THE PROPOSED ROAD CROSSING WHERE DISTURBANCE TO THE EXISTING NON-TIDAL WETLAND WILL BE MINIMIZED. THEREFORE, THE NATURAL AREAS WILL BE PROTECTED DURING CONSTRUCTION BY CONFINING THE ACTIVITY OUTSIDE OF THESE AREAS. THIS INCLUDES CONSTRUCTION EQUIPMENT AND VEHICLES, SITE CLEARING, GRADING, STOCKPILES, AND CONSTRUCTION MATERIALS. STEEP SLOPES LOCATED WITHIN THE LIMITS OF DISTURBANCE WILL BE REMOVED AND REGRADED FOR DEVELOPMENT AS ALLOWED BY COUNTY DEVELOPMENT REGULATIONS. HIGHLY ERODIBLE SOILS ARE LOCATED OUTSIDE OF THE LIMITS OF DISTURBANCE.

THE PROPOSED DEVELOPMENT IS DESIGNED BASED UPON PRINCIPLES OF "BETTER SITE DESIGN" AND "ENVIRONMENTAL SITE DESIGN". THIS APPROACH NOT ONLY PRESERVES NATURAL AREAS BUT ALSO USES "ESD TO THE MEP" TO MIMIC THE EXISTING HYDROLOGIC CONDITIONS. IN THE POST-DEVELOPED CONDITION, STORM WATER WILL LEAVE THE SITE IN THE SAME MANNER AS IN THE PRE-DEVELOPED CONDITION BY PROVIDING SHEET FLOW AND CONCENTRATED FLOWS AT THE SAME LOCATIONS. THE PROPOSED DEVELOPMENT USES CLUSTERING AND GARAGE PARKING TO MINIMIZE PROPOSED PAVEMENT. PERMEABLE PAVEMENT IS BEING USED IN PARKING COURTS. OPEN VEGETATED SWALES AND BIO-FILTERING DEVICES AS WELL AS LEVEL SPREADERS ARE EMPLOYED TO PROMOTE INFILTRATION AND GROUNDWATER RECHARGE.

ESD STORMWATER REQUIREMENTS & PROVISIONS

THE STORM WATER MANAGEMENT REQUIREMENT FOR THIS PROJECT INCLUDES A PE TARGET OF 1.8" AND ESD VOLUME OF 32,403 CF TO MEET "ESD TO THE MEP" FOR 13.9 ACRES OF DISTURBED AREA. THE PE TARGET AND ESD VOLUMES ARE MET THROUGH THE IMPLEMENTATION OF VARIOUS MICRO-SCALE PRACTICES AND ALTERNATIVE SURFACES. THESE INCLUDE: 22 MICRO-BIORETENTION, 5 BIO-SWALES, AND 3 AREAS OF PERMEABLE PAVEMENT.

ALTHOUGH THIS PROJECT IS LOCATED IN THE DEEP RUN WATERSHED, PEAK MANAGEMENT OF THE 10, 25, AND 100 YEAR STORM EVENTS WILL NOT BE REQUIRED DUE TO A RECENT CAPITAL PROJECT B-3856, "BRIDGE REPLACEMENT OLD MONTGOMERY ROAD OVER DEEP RUN". THIS PROJECT INCLUDED ENLARGING OF THE BRIDGE TO ALLOW SAFE CONVEYANCE OF THE 100-YEAR STORM, WHICH IS LOCATED 1600 FEET DOWNSTREAM OF OUTFALL #4.

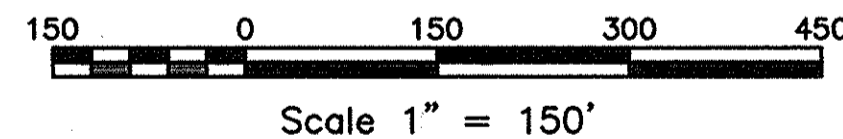
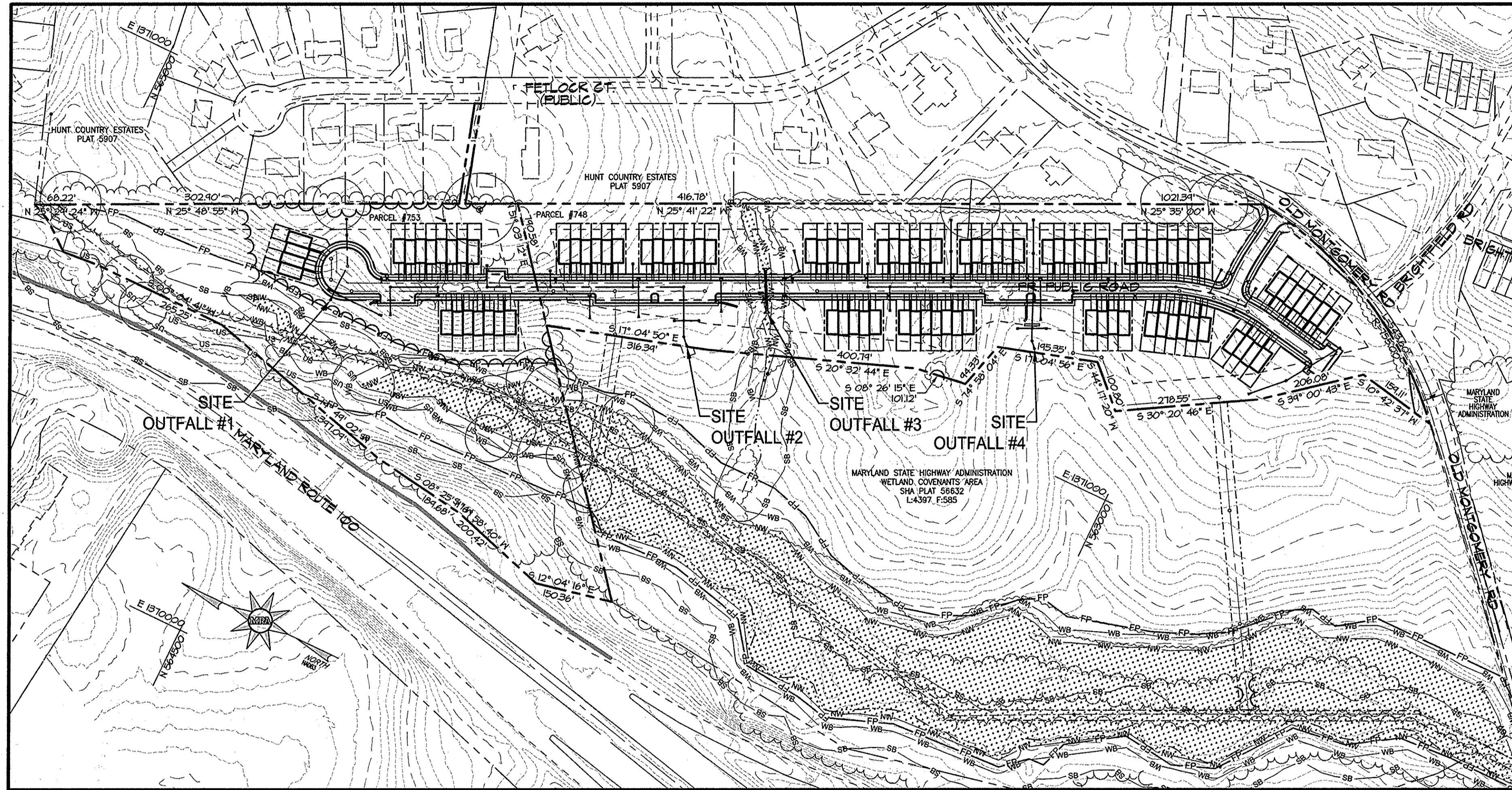
A DESIGN MANUAL WAIVER FOR 10 AND 100 YEAR PEAK MANAGEMENT IS BEING SOUGHT IN CONJUNCTION WITH THIS PROJECT.

BY MEETING THE PE TARGET AND ESD VOLUMES THE GOAL OF "WOODS IN GOOD HYDROLOGIC CONDITION" WHILE MAINTAINING THE NATURAL FLOW PATTERNS, RESOURCE PROTECTION, AND CONVEYING RUNOFF THROUGHOUT THE SITE AT A NON-EROSIVE VELOCITY HAS BEEN ACHIEVED.

TROTTER'S KNOLL SITE DATA
TAX MAP 37, GRIDS 2, PARCELS 748 & 753
PARCEL 748
DEED REFERENCE 10806/339
PARCEL 753
DEED REFERENCE 5551/813

1ST ELECTION DISTRICT
EXISTING ZONING: R-SA-8
PROPOSED ZONING: R-SA-8
GROSS SITE AREA: 18.6 AC.
FLOODPLAIN AREA: 3.9 AC.
NON-TIDAL WETLAND AREA: 1.1 AC.
WETLAND BUFFER AREA: 2.3 AC.
STREAM BUFFER AREA: 3.5 AC.
EX. STEEP SLOPE AREA (PER COUNTY DEFINITION): 0.0 AC.
NET TRACT AREA: 18.6 AC.
OPEN SPACE REQUIRED: 4.9 AC.
OPEN SPACE PROVIDED: 12.1 AC.
EX. STEEP SLOPE AREA (15%+24.9%): 2.7 AC.
EX. STEEP SLOPE AREA (24.9%): 0.8 AC.
HIGHLY ERODIBLE SOILS: 8.1 AC.
LIMIT OF DISTURBANCE AREA: 14.5 AC.
PROPOSED IMPERVIOUS AREA: 4.4 AC.
NUMBER OF UNITS PROPOSED: 134 D.U.
NUMBER OF UNITS PROPOSED: 98 D.U.
EXISTING USE: VACANT LAND
PROPOSED USE: FEE-SIMPLE TOWNHOUSES

TROTTER'S KNOLL HORSE FARM & CURTIS PROPERTIES ENVIRONMENTAL CONCEPT PLAN HOWARD COUNTY, MARYLAND



LOCATION PLAN
SCALE: 1" = 150'

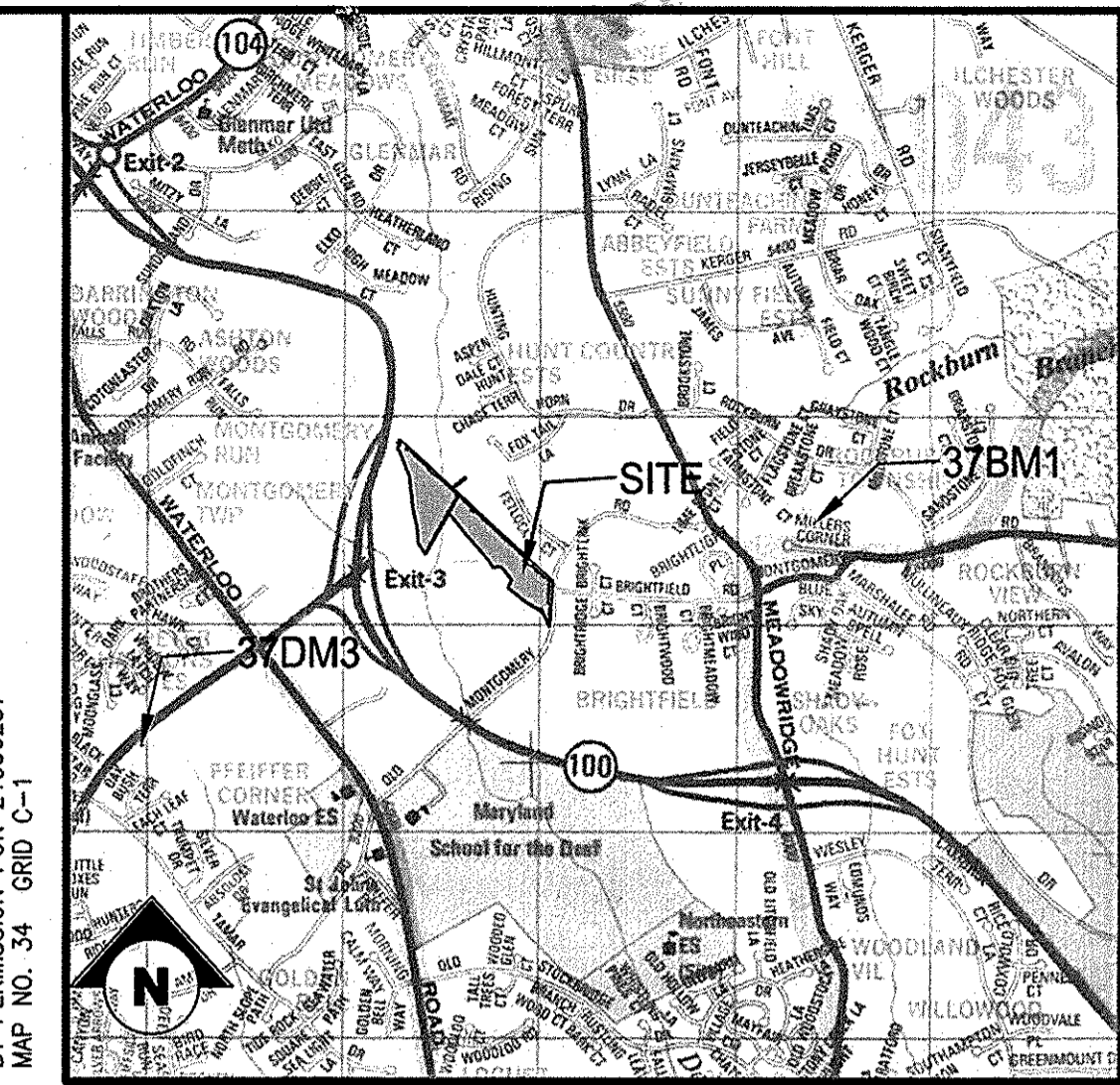
LEGEND

- EX. PROPERTY LINE
- - - EX. ADJACENT PROPERTY LINE
- EX. EASEMENT
- EX. ZONING LINE
- EX. BUILDING
- EX. CONCRETE
- EX. PAVEMENT
- EX. ROAD CENTERLINE
- EX. FENCE
- EX. OVERHEAD LINE
- EX. WATER LINE
- EX. SEWER LINE
- EX. STREAM
- EX. STREAM BUFFER
- EX. TREE LINE
- EX. GUARD RAIL
- EX. ELECTRIC CONDUIT
- EX. LIGHT POLES
- EX. GAS LINE
- EX. STORM DRAIN
- EX. CONDUIT
- EX. FIBER OPTIC
- EX. TV LINE
- EX. ELECTRIC MANHOLE
- EX. TELEPHONE MANHOLE
- B-1 BORING LOCATION
- EX. NON TIDAL WETLANDS
- EX. NON TIDAL WETLANDS
- EX. WETLAND BUFFER
- EX. FLOODPLAIN
- EX. WATERS OF THE US
- EX. STREAM BUFFER
- EX. SPECIMEN TREE
- EX. 2' CONTOUR
- EX. 10' CONTOUR
- PR. LOT LINE
- PR. BUILDING FOOTPRINT
- PR. BUILDING SETBACK
- PR. CURB AND GUTTER
- PR. SIDEWALK
- PR. TELEPHONE CONDUIT
- PR. ELECTRIC CONDUIT
- PR. SANITARY SEWER
- PR. STORM DRAIN
- PR. WATER LINE

BENCH MARKS

37BM1
N 563,400.0583 E 1,374,319.8700
MAD 83 (Adj 07)
NAVD 88

37DM3
N 561,077.4764 E 1,367,289.7870
MAD 83 (Adj 07)
NAVD 88



VICINITY MAP
SCALE: 1" = 2,000'

SHEET INDEX

1	COVER SHEET
2-3	EXISTING FEATURES & NATURAL RESOURCES MAP
4-5	DEVELOPMENT CONCEPT PLAN

OWNER/APPLICANT: TAX MAP 37, PARCEL 748 (HORSE FARM PROPERTY)

HORSE FARM LLC
C/O LOVELL AMERICA
9200 RUMSEY ROAD
SUITE 200
COLUMBIA, MD 21045

CONTACT: RICHARD HAYWARD
410-997-7222

OWNER/PETITIONER: TAX MAP 37, PARCEL 753 (CURTIS PROPERTY)

DEEP RUN PROPERTY MANAGEMENT LLC
191 MILLER HOLLOW LANE
LAKE CITY, TENNESSEE 37769
CONTACT: BOB CURTIS
865-494-0016

PETITIONER'S ATTORNEY:

MILES & STOCKBRIDGE
10490 LITTLE PATUXENT PARKWAY
SUITE 300
COLUMBIA, MD 21044

CONTACT: RON SCHIMMEL
410-381-6000
RSCHIMMEL@MILESANDSTOCKBRIDGE.COM

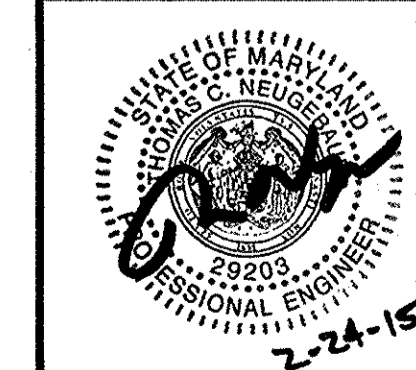
ADDRESS CHART

LOT/PARCEL #	STREET ADDRESS
748	8090 OLD MONTGOMERY ROAD, ELLICOTT CITY MD
753	WATERLOO ROAD, ELLICOTT CITY MD

SHEET:
ECP-01



MORRIS & RITCHE ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
14280 PARK CENTER DRIVE
LAUREL, MD 20707
(410) 792-9792 / (301) 776-1690
FAX: (410) 792-7395
MRAGTA.COM



TROTTER'S KNOLL
HORSE FARM & CURTIS PROPERTIES
COVER SHEET

TAX MAP 37 GRIDS 2 PARCELS 748 & 753 ZONED: R-SA-8
1ST ELECTION DISTRICT
HOWARD COUNTY, MD 21043

DATE	REVISIONS	JOB NO.:	15368 x 02
		SCALE:	AS SHOWN
		DATE:	12/23/14
		DRAWN BY:	RAH
		DESIGN BY:	RAH
		REVIEW BY:	TCN
		SHEET:	1 OF 5

MD 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. 29203,
EXPIRATION DATE:
06/15/2015.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

3/14/15
DATE

3/06/15
DATE



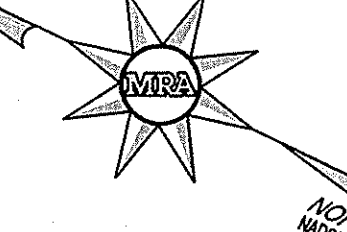
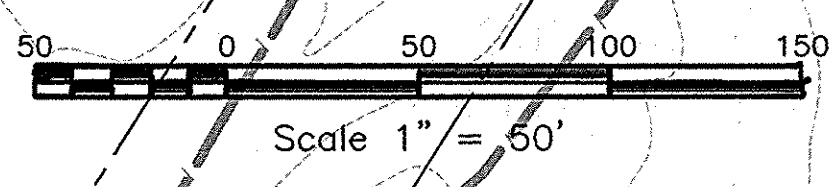
LEGEND

---	EX. PROPERTY LINE
- - - -	EX. ADJACENT PROPERTY LINE
---	EX. EASEMENT
---	EX. ZONING LINE
---	EX. BUILDING
---	EX. CONCRETE
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---	EX. ELECTRIC MANHOLE
---	EX. TELEPHONE MANHOLE
---	BORING LOCATION
---	EX. NON TIDAL WETLANDS
---	EX. NON TIDAL WETLANDS
---	EX. WETLAND BUFFER
---	EX. FLOODPLAIN
---	EX. WATERS OF THE US
---	EX. STREAM BUFFER
---	EX. SPECIMEN TREE
---	DRAINAGE PATTERN-CONCENTRATED FLOW
---	EXISTING SHEET FLOW
---	LIMIT OF DISTURBANCE-PROJECT AREA
---	EX. SOIL DIVIDE
---	EX. HIGHLY ERODIBLE SOIL
---	EX. SLOPES 15-25%
---	EX. SLOPES >25%
---	EX. 2' CONTOUR
---	EX. 10' CONTOUR

SITE DATA

EXISTING SITE AREA:	19.6 AC.
PROPOSED DISTURBED AREA:	14.5 AC.
EXISTING DISTURBED IMPERVIOUS AREA:	0.0 AC.
PROPOSED IMPERVIOUS AREA:	4.3 AC.
HYDROLOGICAL SOIL GROUP:	B (79%)
	C (16%)
	D (5%)

SEE MATCHLINE SHEET ECP-03



EX FEATURES & NATURAL RESOURCES MAP

SCALE: 1"=50'

SOILS LEGEND

SYMBOL	NAME/DESCRIPTION	SOIL TYPE 'K'	VALUE
ChC	CHILLUM-RUSSETT LOAMS, 5-10% SLOPES	B	0.10-0.37
CrD	CROOM AND EYEBORO SOILS, 10-15% SLOPES	C	0.15-0.37
Fa	FALLSINGTON SANDY LOAM, 0-2% SLOPES	D	0.02-0.24
Ha	HATBORO-CORDORUS SILT LOAMS, 0-3% LOAMS	D	0.20-0.37
JoB	JACKLAND SILT LOAM, 3-8%	D	0.15-0.55
LoC	LEGORE SILT LOAM, 8-15% SLOPES	B	0.02-0.43
SaB	SASSAFRAS LOAM, 2-5% SLOPES	B	0.17-0.37
SaC	SASSAFRAS LOAM, 5-10% SLOPES	B	0.17-0.32
UsB	URBAN LAND-FALLSINGTON COMPLEX, 0-2% SLOPES	D	0.17-0.37

HOWARD COUNTY SOIL CONSERVATION DISTRICT MAP NUMBER 14-036

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION *[Signature]* DATE 3/11/15

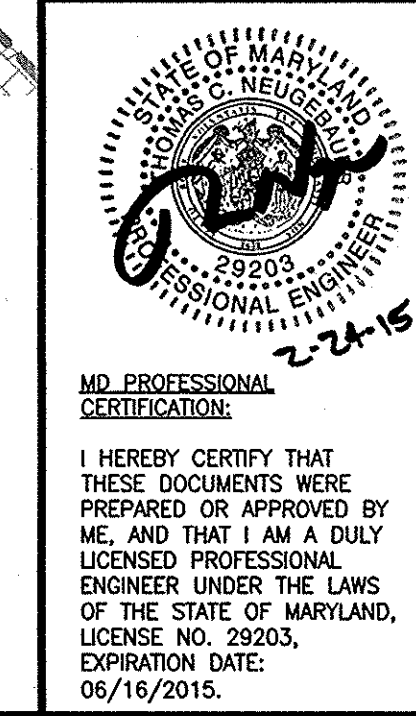
CHIEF, DIVISION & LAND DEVELOPMENT *[Signature]* DATE 3/06/15

OWNER / APPLICANT / DEVELOPER:

HORSE FARM, LLC.
 ADDRESS: 9200 RUMSEY ROAD, SUITE 200
 COLUMBIA, MD 21045
 CONTACT: RICHARD HAYWARD
 PHONE: 410-997-7222



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TROTTER'S KNOLL
HORSE FARM & CURTIS PROPERTIES

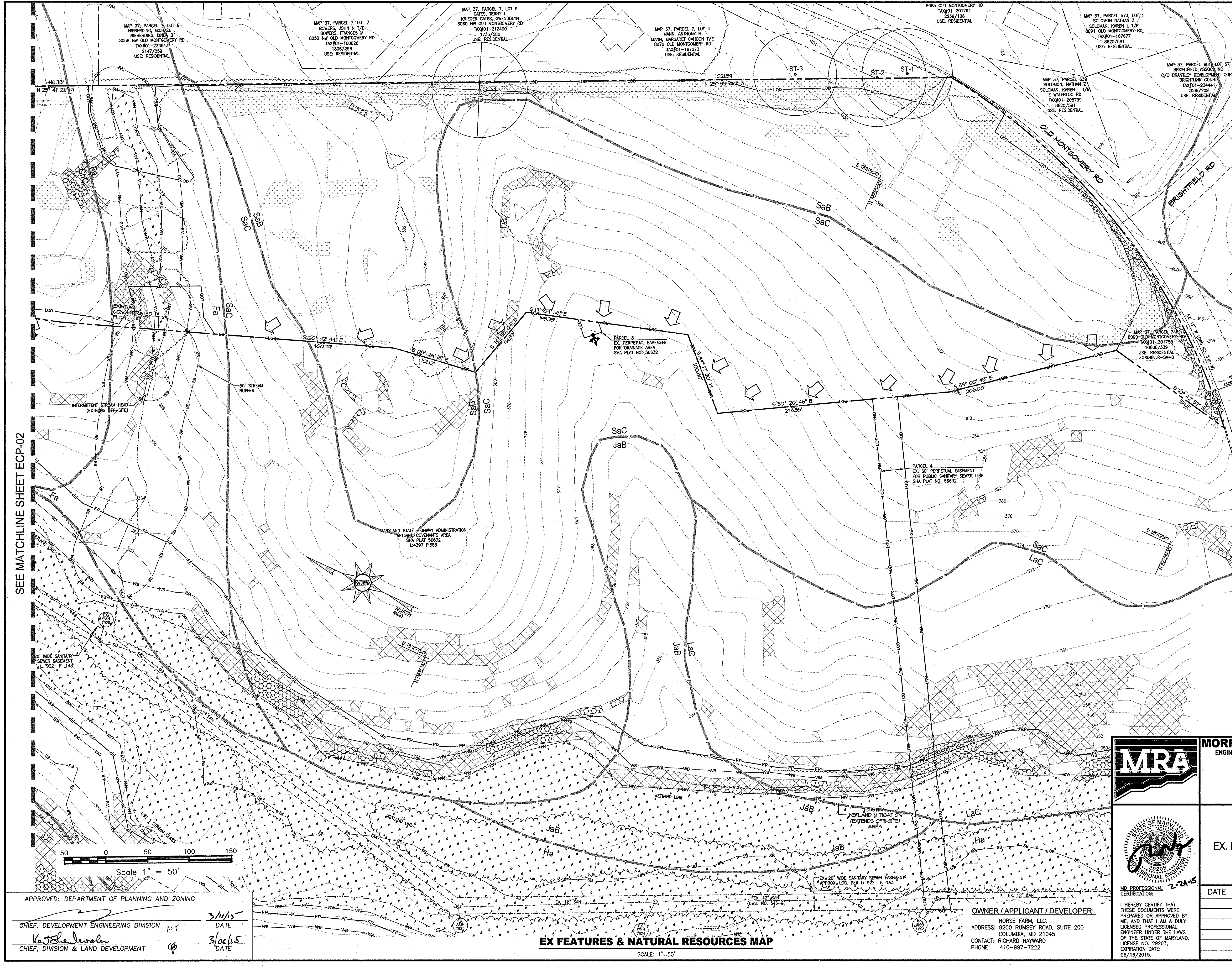
EX. FEATURES & NATURAL RESOURCES MAP

TAX MAP 37 GRIDS 2 PARCELS 748 & 753 ZONED: R-SA-8
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MD 21043

DATE	REVISIONS	JOB NO.:
		15368 x 02
		SCALE: 1" = 50'
		DATE: 12/23/14
		DRAWN BY: AT5
		DESIGN BY: RAH
		REVIEW BY: TON
		SHEET: 2 OF 5

SHEET: ECP-02

ECP-15-020



- ### LEGEND
- EX. PROPERTY LINE
 - - - EX. ADJACENT PROPERTY LINE
 - EX. EASEMENT
 - EX. ZONING LINE
 - EX. BUILDING
 - EX. CONCRETE
 - EX. PAVEMENT
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 - LIMIT OF DISTURBANCE-PROJECT AREA
 - EX. SOIL DIVIDE
 - EX. HIGHLY ERODIBLE SOIL
 - EX. SLOPES 15-25%
 - EX. SLOPES >25%
 - EX. 2' CONTOUR
 - EX. 10' CONTOUR

SITE DATA

EXISTING SITE AREA: 19.6 AC.
 PROPOSED DISTURBED AREA: 14.5 AC.
 EXISTING DISTURBED IMPERVIOUS AREA: 0.0 AC.
 PROPOSED IMPERVIOUS AREA: 4.3 AC.
 HYDROLOGICAL SOIL GROUP: B (79%)
 C (16%)
 D (5%)

SPECIMEN TREE LIST

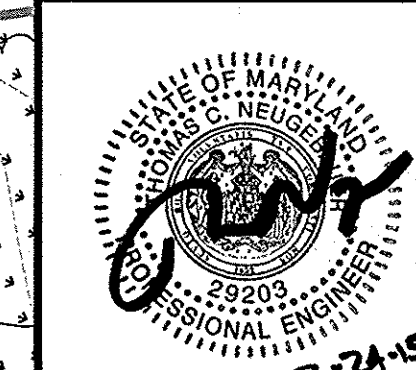
NUMBER	DBH	SPECIES	CONDITION	COMMENT
ST-1	36"	BLACK OAK	GOOD	TO BE REMOVED
ST-2	39"	BLACK OAK	GOOD	TO BE REMOVED
ST-3	33"	SOUTHERN RED OAK	GOOD	TO BE REMOVED
ST-4	38"	PIN OAK	GOOD	TO BE REMOVED
ST-5	47"	AMERICAN BEECH	GOOD	TO BE REMOVED
ST-6	33"	WHITE ASH	GOOD	TO REMAIN
ST-7	39"	AMERICAN SYCAMORE	GOOD	TO REMAIN
ST-8	34"	SILVER MAPLE	GOOD	TO REMAIN
ST-9	31"	GREEN ASH	FAIR	TO REMAIN
ST-10	40"	AMERICAN SYCAMORE	GOOD	TO REMAIN
ST-11	34"	SILVER MAPLE	GOOD	TO REMAIN
ST-12	30"	SILVER MAPLE	GOOD	TO REMAIN
ST-13	39"	AMERICAN SYCAMORE	GOOD	TO REMAIN
ST-14	40"	SILVER MAPLE	GOOD	TO REMAIN
ST-15	38"	SILVER MAPLE	GOOD	TO REMAIN
ST-16	48"	SILVER MAPLE	GOOD	TO REMAIN
ST-17	30"	AMERICAN SYCAMORE	POOR	TO REMAIN
ST-18	31"	SILVER MAPLE	GOOD	TO REMAIN
ST-19	35"	SILVER MAPLE	POOR	TO REMAIN

SEE MATCHLINE SHEET ECP-02

SHEET:
ECP-03



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TROTTER'S KNOLL
HORSE FARM & CURTIS PROPERTIES
 EX. FEATURES & NATURAL RESOURCES MAP
 TAX MAP 37 GRIDS 2 PARCELS 748 & 753 ZONED: R-SA-8
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MD 21043

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
Katherine J. Jovan
 CHIEF, DIVISION & LAND DEVELOPMENT

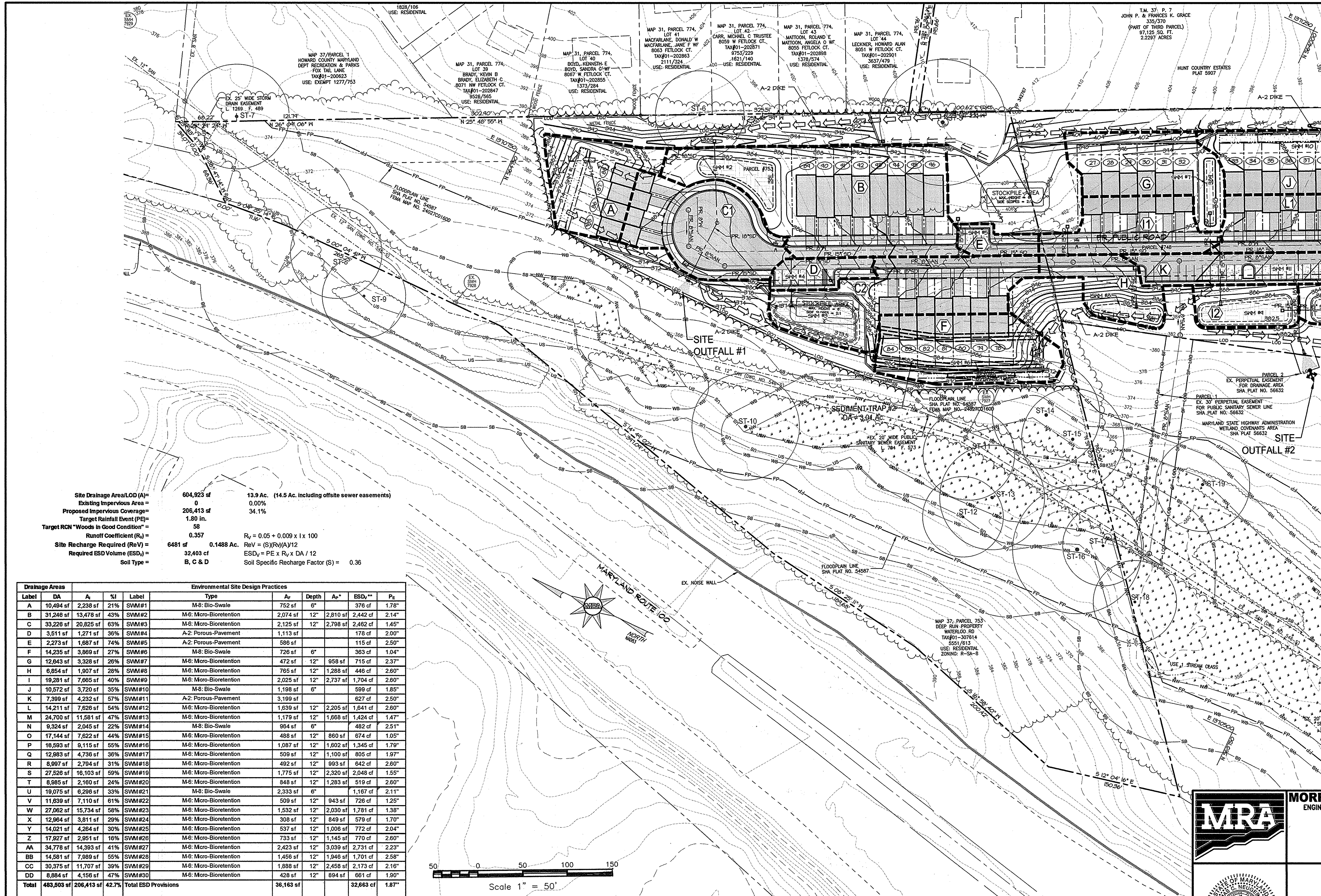
DATE: 3/11/15
 DATE: 3/02/15

OWNER / APPLICANT / DEVELOPER:
 HORSE FARM, LLC.
 ADDRESS: 9200 RUMSEY ROAD, SUITE 200
 COLUMBIA, MD 21045
 CONTACT: RICHARD HAYWARD
 PHONE: 410-997-7222

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. 29203, EXPIRATION DATE: 06/16/2015.

DATE	REVISIONS	JOB NO.:
		15368 x 02
		SCALE: 1" = 50'
		DATE: 12/23/14
		DRAWN BY: AJS
		DESIGN BY: RAH
		REVIEW BY: TON
		SHEET: 3 OF 5

EX FEATURES & NATURAL RESOURCES MAP
 SCALE: 1"=50'



LEGEND

---	EX. PROPERTY LINE
---	EX. ADJACENT PROPERTY LINE
---	EX. RIGHT OF WAY
---	EX. EASEMENT
---	EX. ZONING LINE
---	EX. BUILDING
---	EX. CONCRETE
---	EX. PAVEMENT
---	EX. ROAD CENTERLINE
---	EX. FENCE
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---	EX. CONDUIT
---	EX. FIBER OPTIC
---	EX. TV LINE
---	EX. ELECTRIC MANHOLE
---	EX. TELEPHONE MANHOLE
---	EX. BORING LOCATION
---	EX. NON TIDAL WETLANDS
---	EX. WETLAND BUFFER
---	EX. FLOODPLAIN
---	EX. WATERS OF THE US
---	EX. STREAM BUFFER
---	EX. SPECIMEN TREE
---	PR. IMPERVIOUS AREA
---	PR. LOT LINE
---	PR. BUILDING FOOTPRINT
---	PR. BUILDING SETBACK
---	PR. CURB AND GUTTER
---	PR. SIDEWALK
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---	PR. ELECTRIC CONDUIT
---	PR. SANITARY SEWER
---	PR. STORM DRAIN
---	PR. WATER LINE
---	PR. RIP RAP APRON
---	EX. 2' CONTOUR
---	EX. 10' CONTOUR
---	PR. 1' CONTOUR (ESC)
---	PR. 2' CONTOUR (ESC)
---	PR. EARTH DIKE
---	PR. SUPER SILT FENCE
---	PR. LIMIT OF DISTURBANCE
---	PR. STABILIZED CONSTRUCTION ENTRANCE
---	PR. MICRO-BIORETENTION (M-6)
---	PR. BIO-SWALE (M-8)
---	PR. SWM DRAINAGE AREA DIVIDE
---	PR. SWM DRAINAGE AREA LABEL

SEE MATCHLINE SHEET ECP-05

SHEET: ECP-04

Site Drainage Area/LOD (A) = 604,923 sf 13.9 Ac. (14.5 Ac. including offsite sewer easements)
 Existing Impervious Area = 206,413 sf 0.00%
 Proposed Impervious Coverage = 1.80 in. 34.1%
 Target Rainfall Event (P_E) = 59
 Target RCN "Woods in Good Condition" = 0.357
 Runoff Coefficient (R_v) = 0.357
 Site Recharge Required (ReV) = 6481 sf 0.1488 Ac. ReV = (S)(R_v)(A)/12
 Required ESD Volume (ESD_v) = 32,403 cf ESD_v = PE x R_v x DA / 12
 Soil Type = B, C & D Soil Specific Recharge Factor (S) = 0.36

Label	DA	A _i	%I	Label	Type	A _p	Depth	A _v	ESD _v **	P _E
A	10,494 sf	2,238 sf	21%	SWM#1	M-8: Bio-Swale	752 sf	6"	376 cf	1.78"	
B	31,246 sf	13,478 sf	43%	SWM#2	M-8: Micro-Bioretenion	2,074 sf	12"	2,810 sf	2,442 cf	2.14"
C	33,226 sf	20,825 sf	63%	SWM#3	M-8: Micro-Bioretenion	2,125 sf	12"	2,798 sf	2,462 cf	1.45"
D	3,511 sf	1,271 sf	36%	SWM#4	A-2: Porous-Pavement	1,113 sf		178 cf	2.00"	
E	2,273 sf	1,687 sf	74%	SWM#5	A-2: Porous-Pavement	586 sf		115 cf	2.50"	
F	14,235 sf	3,869 sf	27%	SWM#6	M-8: Bio-Swale	726 sf	6"	363 cf	1.04"	
G	12,843 sf	3,328 sf	26%	SWM#7	M-8: Micro-Bioretenion	472 sf	12"	958 sf	715 cf	2.37"
H	6,854 sf	1,807 sf	26%	SWM#8	M-8: Micro-Bioretenion	765 sf	12"	1,288 sf	446 cf	2.60"
I	19,281 sf	7,665 sf	40%	SWM#9	M-8: Micro-Bioretenion	2,025 sf	12"	2,737 sf	1,704 cf	2.60"
J	10,572 sf	3,720 sf	35%	SWM#10	M-8: Bio-Swale	1,198 sf	6"	599 cf	1.85"	
K	7,399 sf	4,232 sf	57%	SWM#11	A-2: Porous-Pavement	3,199 sf		627 cf	2.50"	
L	14,211 sf	7,626 sf	54%	SWM#12	M-8: Micro-Bioretenion	1,639 sf	12"	2,205 sf	1,641 cf	2.60"
M	24,700 sf	11,581 sf	47%	SWM#13	M-8: Micro-Bioretenion	1,179 sf	12"	1,668 sf	1,424 cf	1.47"
N	9,324 sf	2,045 sf	22%	SWM#14	M-8: Bio-Swale	964 sf	6"	482 cf	2.51"	
O	17,144 sf	7,622 sf	44%	SWM#15	M-8: Micro-Bioretenion	488 sf	12"	860 sf	674 cf	1.05"
P	18,593 sf	9,115 sf	49%	SWM#16	M-8: Micro-Bioretenion	1,087 sf	12"	1,602 sf	1,345 cf	1.79"
Q	12,893 sf	4,736 sf	36%	SWM#17	M-8: Micro-Bioretenion	509 sf	12"	1,100 sf	805 cf	1.97"
R	8,997 sf	2,794 sf	31%	SWM#18	M-8: Micro-Bioretenion	492 sf	12"	993 sf	642 cf	2.60"
S	27,526 sf	10,103 sf	37%	SWM#19	M-8: Micro-Bioretenion	1,775 sf	12"	2,320 sf	2,048 cf	1.55"
T	8,985 sf	2,160 sf	24%	SWM#20	M-8: Micro-Bioretenion	848 sf	12"	1,283 sf	519 cf	2.60"
U	19,075 sf	6,296 sf	33%	SWM#21	M-8: Bio-Swale	2,333 sf	6"	1,167 cf	2.11"	
V	11,839 sf	7,110 sf	61%	SWM#22	M-8: Micro-Bioretenion	509 sf	12"	943 sf	726 cf	1.25"
W	27,062 sf	15,734 sf	58%	SWM#23	M-8: Micro-Bioretenion	1,532 sf	12"	2,030 sf	1,781 cf	1.38"
X	12,964 sf	3,811 sf	29%	SWM#24	M-8: Micro-Bioretenion	308 sf	12"	849 sf	579 cf	1.70"
Y	14,021 sf	4,264 sf	30%	SWM#25	M-8: Micro-Bioretenion	537 sf	12"	1,006 sf	772 cf	2.04"
Z	17,827 sf	2,951 sf	16%	SWM#26	M-8: Micro-Bioretenion	733 sf	12"	1,145 sf	770 cf	2.60"
AA	34,778 sf	14,393 sf	41%	SWM#27	M-8: Micro-Bioretenion	2,423 sf	12"	3,039 sf	2,731 cf	2.23"
BB	14,581 sf	7,889 sf	54%	SWM#28	M-8: Micro-Bioretenion	1,456 sf	12"	1,946 sf	1,701 cf	2.58"
CC	30,375 sf	11,707 sf	39%	SWM#29	M-8: Micro-Bioretenion	1,888 sf	12"	2,458 sf	2,173 cf	2.16"
DD	8,884 sf	4,156 sf	47%	SWM#30	M-8: Micro-Bioretenion	426 sf	12"	894 sf	661 cf	1.90"
Total	483,903 sf	206,413 sf	42.7%	Total ESD Provisions		36,163 sf		32,663 cf	1.87"	
				Total ESD Requirements				32,403 cf	1.80"	

*A_i = Area at ponding elevation (sf)
 **ESD_v of micro-bioretenion facilities computed by averaging the A_p and A_v multiplied by ponding depth.
 PE = ESD_v x 12 / R_v x DA

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION 3/11/15 DATE
 CHIEF, DIVISION & LAND DEVELOPMENT 3/06/15 DATE

ST-5 SPECIFIC NOTES

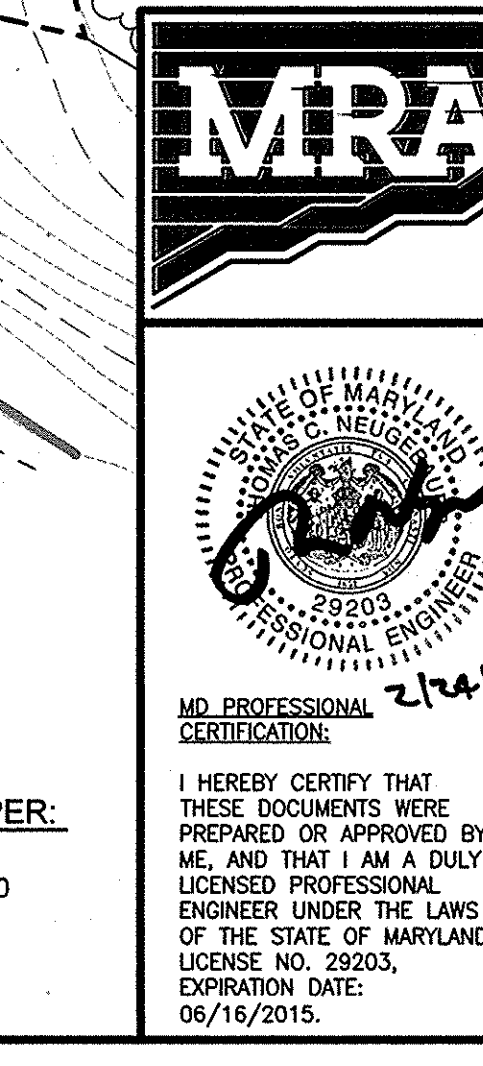
SCALE: 1"=50'

- ST-5 IS TO BE PROTECTED DURING CONSTRUCTION.
- A REGISTERED ARBORIST IS TO INSPECT THE TREE AND IMPLEMENT RECOMMENDATIONS FOR PROFESSIONAL PRUNING OF ROOTS AND FOLIAGE.
- ALL PRUNING IS TO BE PERFORMED BY A MARYLAND LICENSED TREE EXPERT.
- TREE PROTECTION FENCING IS TO BE INSTALLED AROUND ITS PERIMETER TO PREVENT ROOT AND FOLIAGE DAMAGE DURING CONSTRUCTION.
- PERIMETER SWALES ILLUSTRATED ON THE WAIVER PETITION EXHIBIT BE REDESIGNED AND RELOCATED AROUND THE TREE.
- THE CONSULTANT WILL EXPLORE ALTERNATIVE DESIGN OPTIONS DURING THE PRELIMINARY PLAN PHASE TO MINIMIZE ROOT DAMAGE.

CONCEPT PLAN VIEW

SCALE: 1"=50'

OWNER / APPLICANT / DEVELOPER:
 HORSE FARM, LLC.
 ADDRESS: 9200 RUMSEY ROAD, SUITE 200
 COLUMBIA, MD 21045
 CONTACT: RICHARD HAYWARD
 PHONE: 410-997-7222



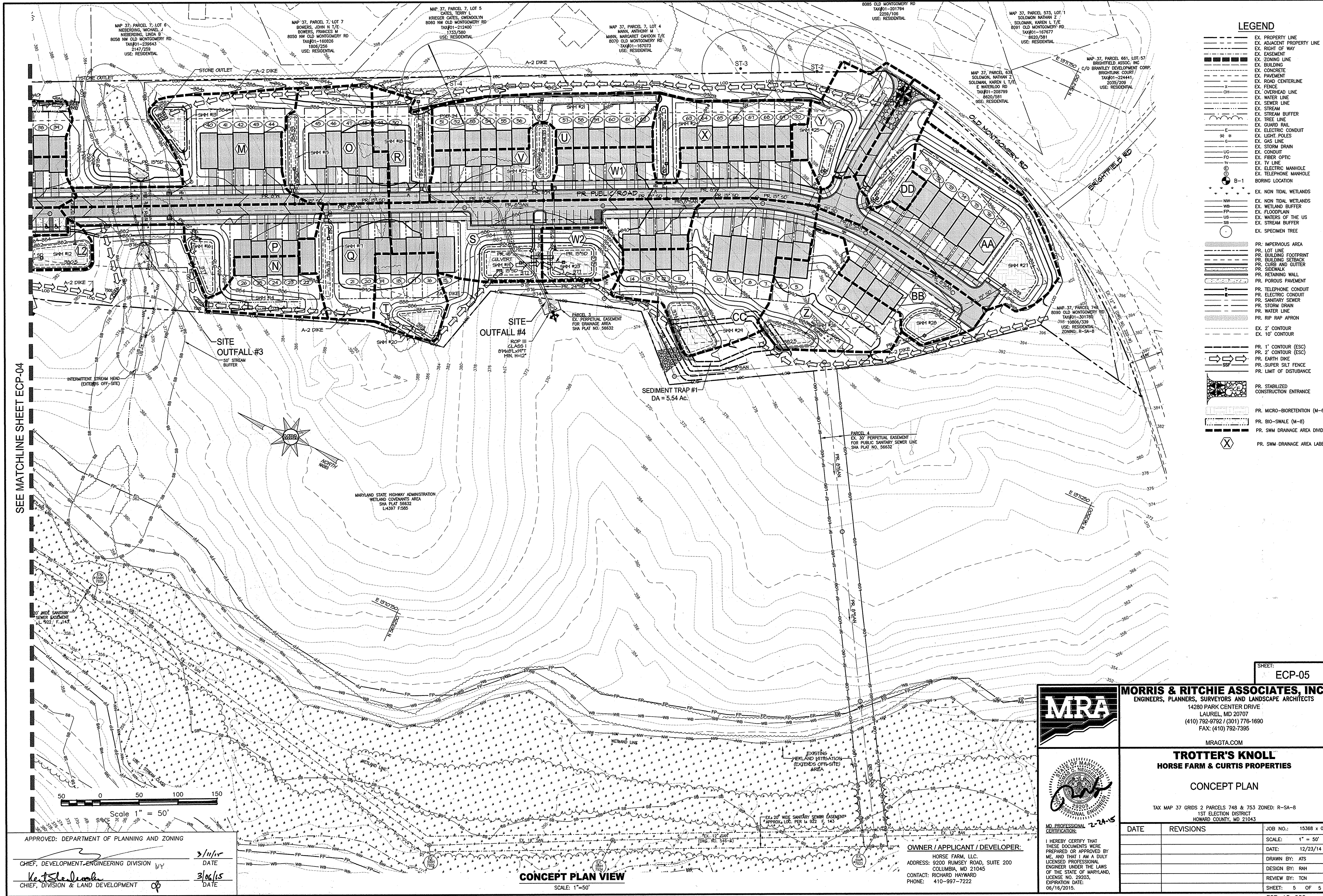
MORRIS & RITCHE ASSOCIATES, INC.
 ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
 14280 PARK CENTER DRIVE
 LAUREL, MD 20707
 (410) 792-9792 / (301) 776-1690
 FAX: (410) 792-7395
 MRAGTA.COM

TROTTER'S KNOLL
 HORSE FARM & CURTIS PROPERTIES

CONCEPT PLAN

TAX MAP 37 GRIDS 2 PARCELS 748 & 753 ZONED: R-SA-8
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MD 21043

DATE	REVISIONS	JOB NO.:
		15368 x 02
		SCALE: 1" = 50'
		DATE: 12/23/14
		DRAWN BY: AT5
		DESIGN BY: RAH
		REVIEW BY: TON
		SHEET: 4 OF 5



LEGEND

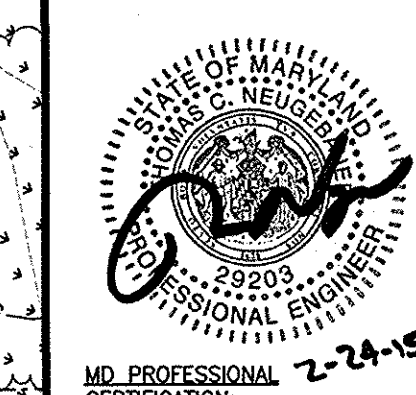
- EX. PROPERTY LINE
- - - EX. ADJACENT PROPERTY LINE
- - - EX. RIGHT OF WAY
- - - EX. EASEMENT
- - - EX. ZONING LINE
- - - EX. BUILDING
- - - EX. CONCRETE
- - - EX. PAVEMENT
- - - EX. ROAD CENTERLINE
- - - EX. FENCE
- - - EX. OVERHEAD LINE
- - - EX. WATER LINE
- - - EX. SEWER LINE
- - - EX. STREAM
- - - EX. STREAM BUFFER
- - - EX. TREE LINE
- - - EX. GUARD RAIL
- - - EX. ELECTRIC CONDUIT
- - - EX. LIGHT POLES
- - - EX. GAS LINE
- - - EX. STORM DRAIN
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CONCEPT PLAN

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		DATE:	12/23/14
		DRAWN BY:	ATS
		DESIGN BY:	RAH
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		SHEET:	5 OF 5

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CONTACT: RICHARD HAYWARD
PHONE: 410-997-7222

MD 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. 29203,
EXPIRATION DATE:
06/16/2015.

CONCEPT PLAN VIEW
SCALE: 1"=50'

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT-ENGINEERING DIVISION
Richard Hayward
CHIEF, DIVISION & LAND DEVELOPMENT

3/11/15
DATE
3/06/15
DATE

Scale 1" = 50'

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