



# Building Permit Application

Howard County Maryland  
Department of Inspections, Licenses and Permits  
3430 Court House Drive  
Permits: 410-313-2455  
www.howardcountymd.gov

Date Received: \_\_\_\_\_

Permit No.: B14004103

Building Address: 4706 Ashby Court  
City: Ellicott City State: MD Zip Code: 21042  
Suite/Apt. #: \_\_\_\_\_ SDP/WP/BA #: \_\_\_\_\_  
Census Tract: \_\_\_\_\_ Subdivision: Hamwood Crossing  
Section: \_\_\_\_\_ Area: \_\_\_\_\_ Lot: 78  
Tax Map: \_\_\_\_\_ Parcel: \_\_\_\_\_ Grid: \_\_\_\_\_  
Zoning: \_\_\_\_\_ Map Coordinates: \_\_\_\_\_ Lot Size: \_\_\_\_\_

Existing Use: Vacant lot  
Proposed Use: Residential Home  
Estimated Construction Cost: \$ 600,000  
Description of Work: Two story, 4 bedroom  
2 car garage

Occupant or Tenant: \_\_\_\_\_  
Was tenant space previously occupied? ☐ Yes ☒ No  
Contact Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

Commercial Building Characteristics	Residential Building Characteristics
Height: _____	<input checked="" type="checkbox"/> SF Dwelling <input type="checkbox"/> SF Townhouse
No. of stories: _____	Depth _____ Width _____
Gross area, sq. ft./floor: _____	1 <sup>st</sup> floor: _____
Area of construction (sq. ft.): _____	2 <sup>nd</sup> floor: _____
Use group: _____	Basement: _____
<b>Construction type:</b>	<input type="checkbox"/> Finished Basement
<input type="checkbox"/> Reinforced-Concrete	<input checked="" type="checkbox"/> Unfinished Basement
<input type="checkbox"/> Structural Steel	<input type="checkbox"/> Crawl Space
<input type="checkbox"/> Masonry	<input type="checkbox"/> Slab on Grade
<input checked="" type="checkbox"/> Wood Frame	No. of Bedrooms: <u>4</u>
<input type="checkbox"/> State Certified Modular	<u>Multi-Family Dwelling</u>
	No. of efficiency units: _____
	No. of 1 BR units: _____
	No. of 2 BR units: _____
	No. of 3 BR units: _____
	Other Structure: _____
	Dimensions: _____
<input checked="" type="checkbox"/> Roadside Tree Project/Permit	Footings: _____
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Roof: _____
Roadside Tree Project Permit # _____	<input type="checkbox"/> State Certified Modular
	<input type="checkbox"/> Manufactured Home

Property Owner's Name: Tell MD III LP  
Address: 14590 Edgewoods Way  
City: Gaithersburg State: MD Zip Code: 21042  
Phone: 410 489 2275 Fax: \_\_\_\_\_  
Email: Nbrandonberg@tellbrothersinc.com

Applicant's Name & Mailing Address, (if other than stated herein)  
Applicant's Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

Contractor Company: Tell MD III LP  
Contact Person: Nathan Brandonberg  
Address: 14590 Edgewoods Way  
City: Gaithersburg State: MD Zip Code: 21042  
License No.: 5048  
Phone: 410 489 2275 Fax: \_\_\_\_\_  
Email: Nbrandonberg@tellbrothersinc.com

Engineer/Architect Company: ESE  
Responsible Design Prof.: Mike Boyce  
Address: 7164 Colimbre Gateway Dr #730  
City: Colimbre State: MD Zip Code: 21046  
Phone: 410 365 4175 Fax: \_\_\_\_\_  
Email: mboyce@ESEENG.com

Utilities
<b>Water Supply</b>
<input type="checkbox"/> Public
<input checked="" type="checkbox"/> Private
<b>Sewage Disposal</b>
<input type="checkbox"/> Public
<input checked="" type="checkbox"/> Private
Electric: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Gas: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Heating System</b>
<input checked="" type="checkbox"/> Electric <input type="checkbox"/> Oil
<input checked="" type="checkbox"/> Natural Gas <input type="checkbox"/> Propane Gas
<input type="checkbox"/> Other: _____
<b>Sprinkler System:</b>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Grading Permit Number: <u>607060212</u>
Building Shell Permit Number: _____

THE UNDERSIGNED HEREBY CERTIFIES AND AGREES AS FOLLOWS: (1) THAT HE/SHE IS AUTHORIZED TO MAKE THIS APPLICATION; (2) THAT THE INFORMATION IS CORRECT; (3) THAT HE/SHE WILL COMPLY WITH ALL REGULATIONS OF HOWARD COUNTY WHICH ARE APPLICABLE THERETO; (4) THAT HE/SHE WILL PERFORM NO WORK ON THE ABOVE REFERENCED PROPERTY NOT SPECIFICALLY DESCRIBED IN THIS APPLICATION; (5) THAT HE/SHE GRANTS COUNTY OFFICIALS THE RIGHT TO ENTER ONTO THIS PROPERTY FOR THE PURPOSE OF INSPECTING THE WORK PERMITTED AND POSTING NOTICES.

Applicant's Signature: Nathan Brandonberg  
Email Address: Nbrandonberg@tellbrothersinc.com  
Title/Company: Tell Brothers Inc.

Print Name: Nathan Brandonberg  
Date: 11/10/14

Checks Payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY

\*\*PLEASE WRITE NEATLY & LEGIBLY\*\*  
-FOR OFFICE USE ONLY-

AGENCY	DATE	SIGNATURE OF APPROVAL
State Highways		
Building Officials		
PSZA (Zoning)		
PSZA (Engineering)		
Health	12/10/14	H. Oswald

Is Sediment Control approval required for issuance? ☐ Yes ☐ No  
☐ CONTINGENCY CONSTRUCTION START

DPZ SETBACK INFORMATION
Front: _____
Rear: _____
Side: _____
Side St.: _____
All minimum setbacks met? <input type="checkbox"/> Yes <input type="checkbox"/> No
Is Entrance Permit Required? <input type="checkbox"/> Yes <input type="checkbox"/> No
Historic District? <input type="checkbox"/> Yes <input type="checkbox"/> No
Lot Coverage for New Town Zone: _____
SDP/Red-line approval date: _____

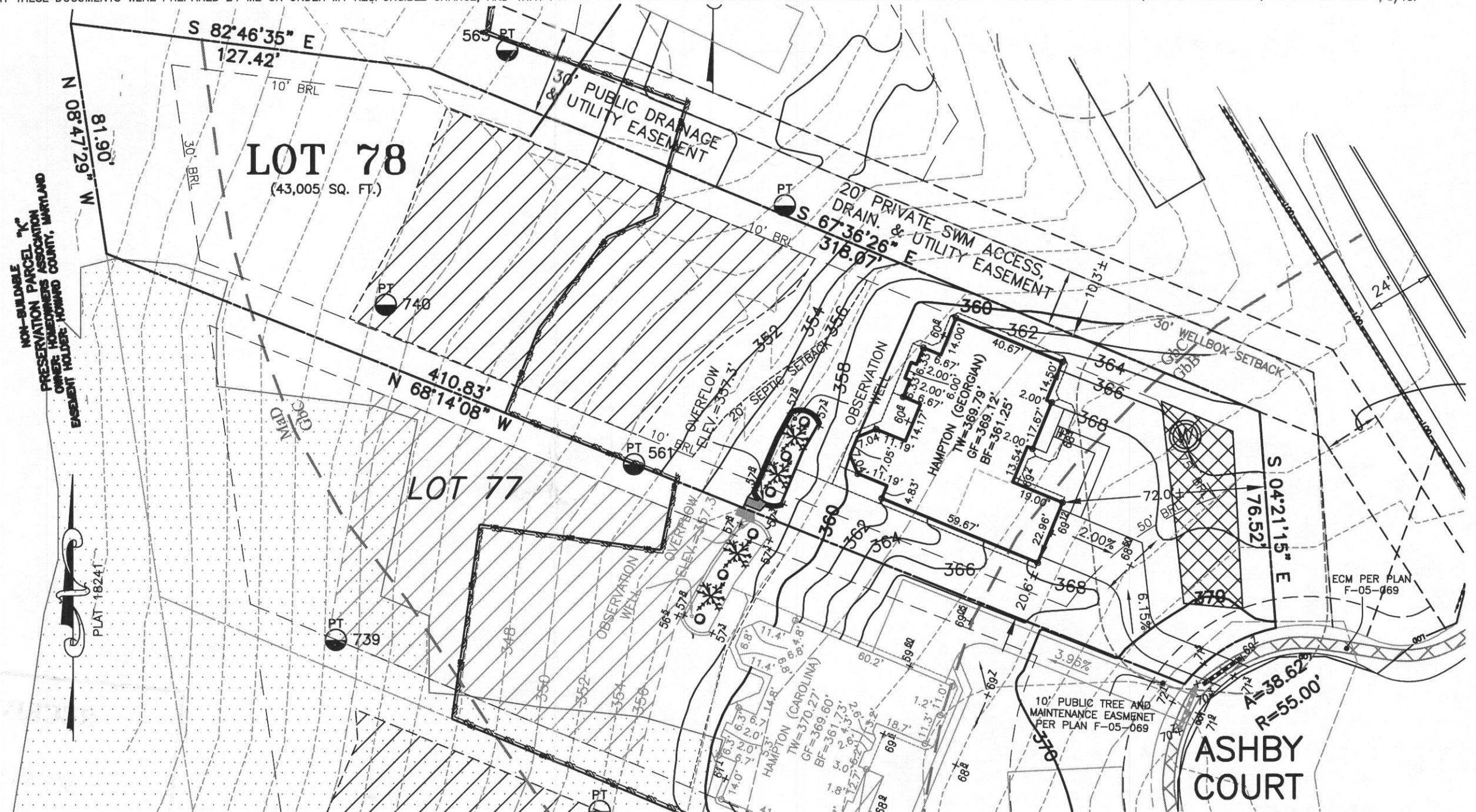
Filing Fee	\$ 100
Permit Fee	\$
Tech Fee	\$
Excise Tax	\$
PSFS	\$
Guaranty Fund	\$ 50
Add'l per Fee	\$
Total Fees	\$
Sub-Total Paid	\$
Balance Due	\$
Check	# D1140802

Distribution of Copies: White: Building Officials Green: PSZA, Zoning Yellow: PSZA, Engineering Pink: Health Gold: SHA



**LEGEND:**

- PT PERC TEST LOCATION
- W WELL LOCATION
- LOD- LIMITS OF DISTURBANCE
- SSF- SUPER SILT FENCE
- DRAINAGE AREA LIMITS
- SOIL TYPE LINE
- GbB GLADSTONE LOAM, 3% TO 8% SLOPES
- GbC GLADSTONE LOAM, 8% TO 15% SLOPES
- MaD MANOR LOAM, 15% TO 25% SLOPES
- DA-1 DRAINAGE AREA 1
- TW TOP OF WALL
- GF GARAGE FLOOR
- BF BASEMENT FLOOR
- BRL BUILDING RESTRICTION LINE
- STEEP SLOPE AREA



BUILDING SETBACKS (B.R.L.'s) SHOWN HEREON PER SITE DEVELOPEMENT PLAN  
SETBACK DISTANCES SHOWN HEREON AS "±" HAVE AN ACCURACY OF ±0.1' FOOT.

WELL TAG NUMBER: HO-94-2468

ADDRESS: 4706 ASHBY COURT  
ELLICOTT CITY, MD 21042

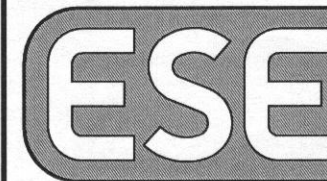


**HOUSE OPTIONS:**

TYPE: HAMPTON (GEORGIAN)	OPTION No. 017
WALK-OUT BASEMENT	OPTION No. 070
ADD'L 1' TO BASEMENT FOUNDATION WALLS	OPTION No. 529
NAPLES SUNROOM ADDITION	OPTION No. 673
BRICK SIDES AND REAR	

**PLOT PLAN  
LOT 78  
HOMWOOD CROSSING**

LIBER 9808, FOLIO 204  
PLAT NO. 18241  
FIFTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND



**Land Planning  
Engineering  
Land Surveying**

ESE Consultants, Inc.  
7164 Columbia Gateway Dr.  
Columbia, MD 21046  
Tel: 410-872-9105  
Fax: 410-872-4870

DATE: 11/03/14  
CHK'D: M.J.B.

SCALE: 1"=40'  
JOB NO: 1214

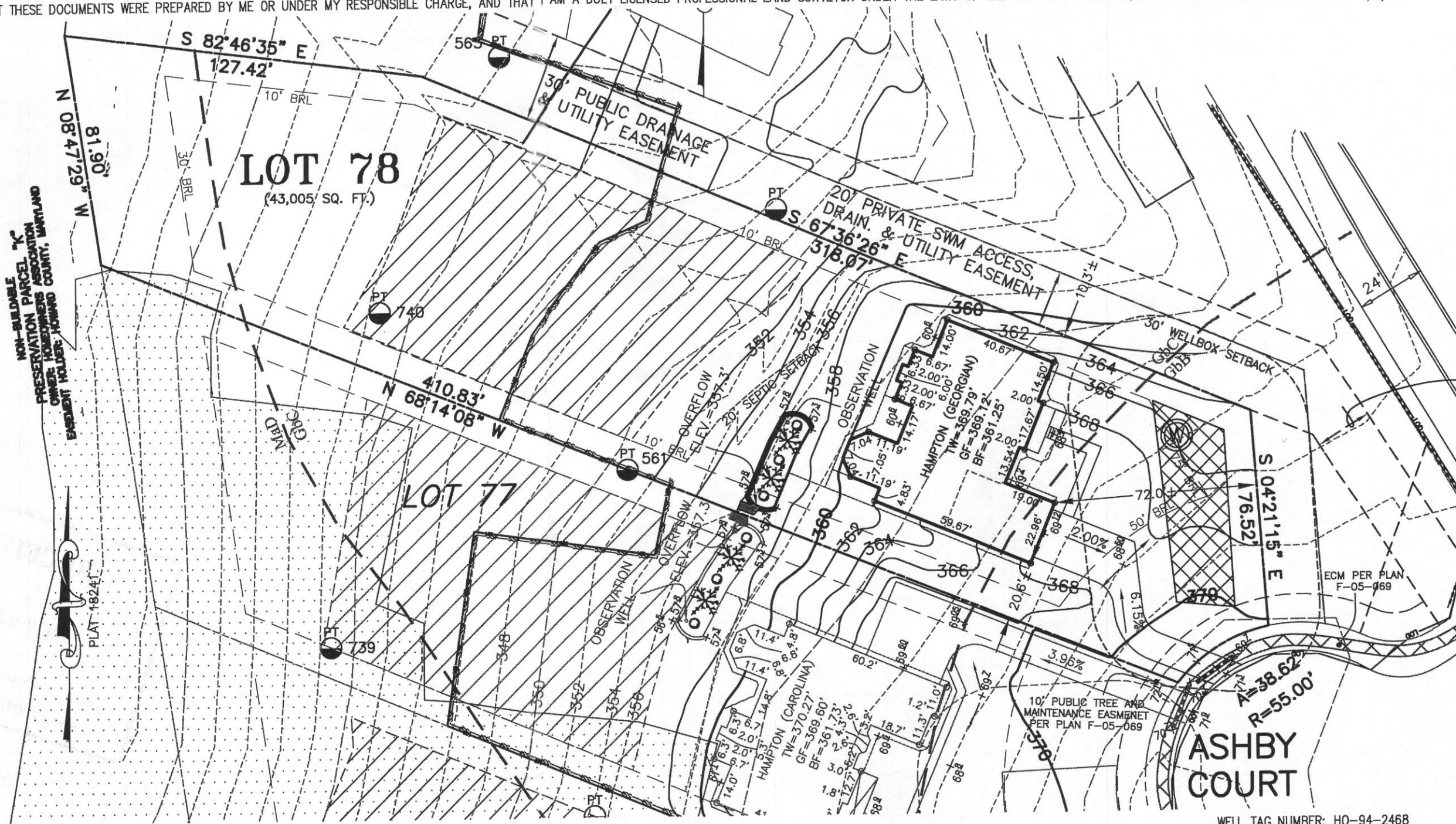
FILE: PP LOT 78  
DRAWN: R.C.K



PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21328, EXPIRATION DATE 1/8/15.

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PROPOSED GRADE OVER TANK: 357.2'  
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2. DISTRIBUTION BOX:  
EXISTING GRADE OVER BOX: 350.0'  
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3. TRENCH DESIGN:  
(5 BDRM x 150 GPD/BDRM = 750 GPD)  
750 GPD ÷ 0.8 APP. RATE = 937.50 SF  
USE 3' WIDE TRENCH WITH 84" GRAVEL BELOW PIPE  
10' MIN. SPACING BETWEEN TRENCH EDGES  
937.50 SF ÷ 3' WIDTH = 312.50 LF x 0.50 = 156.25 LF MIN. TRENCH  
USE 3 53' LONG TRENCHES = 159 LF  
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APP. RATE = 0.8  
EFFECTIVE SIDEWALL = 5'  
BOTTOM MAX. DEPTH = 8'

TRENCH 1 (T1):  
GROUND ABOVE = 349.8'  
INV. IN = 348.8'  
BOTTOM TRENCH = 341.8'

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GROUND ABOVE = 347.5'  
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TRENCH 3 (T3):  
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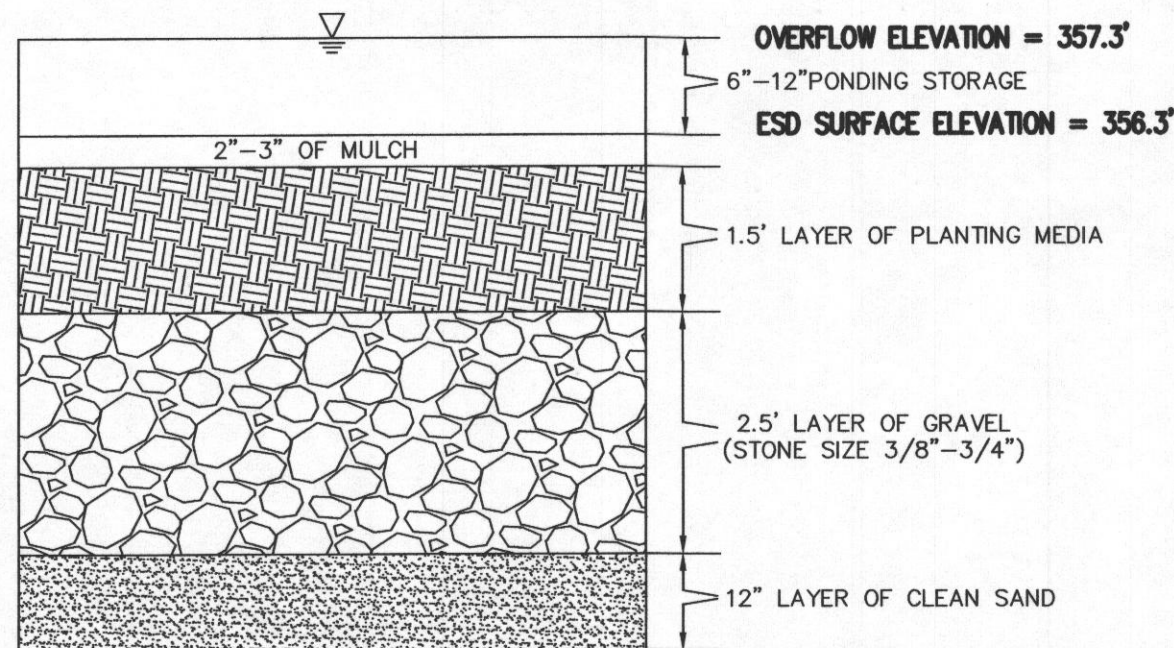
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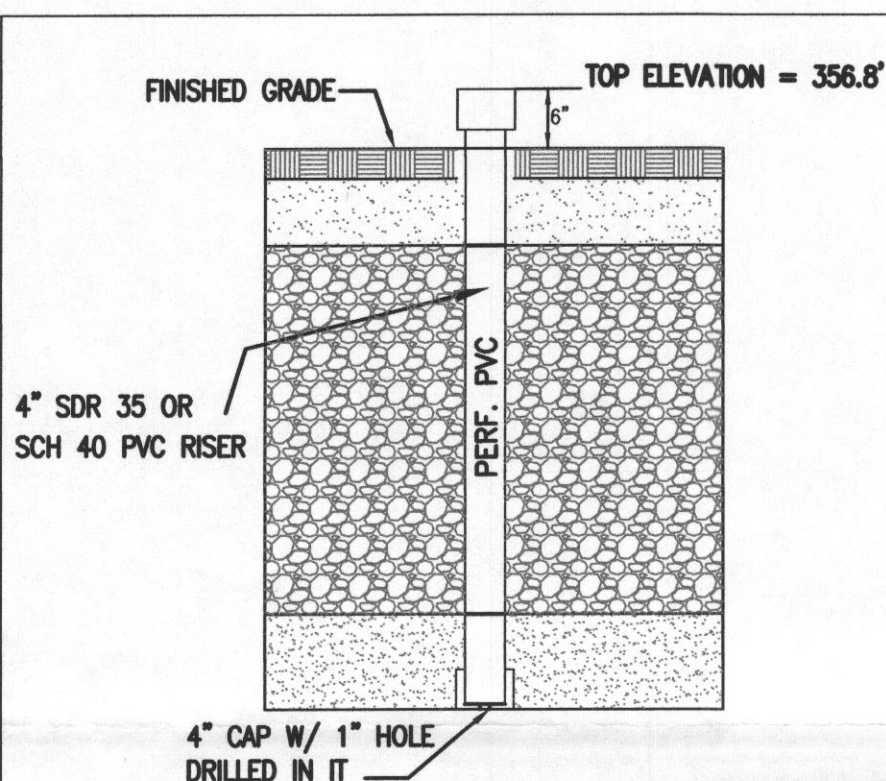
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\*FILTER FABRIC ON THE SIDES ONLY\*



LANDSCAPE INFILTRATION DETAIL  
NOT TO SCALE



OBSERVATION WELL DETAIL  
NOT TO SCALE

### STORMWATER MANAGEMENT COMPUTATIONS

#### DRAINAGE AREA NO. 1:

(ROOFTOP)  
HOUSE/ROOFTOP (IMPERVIOUS) = 3,651 SQ. FT. (0.0838 ACRES)

TOTAL OF DA-1 TO BE TREATED = 3,651 SQ. FT. (0.0838 ACRES)

#### DRAINAGE AREA NO. 2:

(DRIVEWAY AND GRASS)  
DRIVEWAY (IMPERVIOUS) = 513 SQ. FT. (0.0118 ACRES)  
GRASS (PERVIOUS) = 2,979 SQ. FT. (0.0684 ACRES)

TOTAL OF DA-2 TO BE TREATED = 3,492 SQ. FT. (0.0802 ACRES)

#### DRAINAGE AREA NO. 3 (NON-ROOFTOP DISCONNECT):

(DRIVEWAY)  
DRIVEWAY (IMPERVIOUS) = 536 SQ. FT. (0.0123 ACRES)

TOTAL OF DA-3 TO BE TREATED = 536 SQ. FT. (0.0123 ACRES)

#### TOTAL CALCULATIONS OF DRAINAGE AREAS COMBINED:

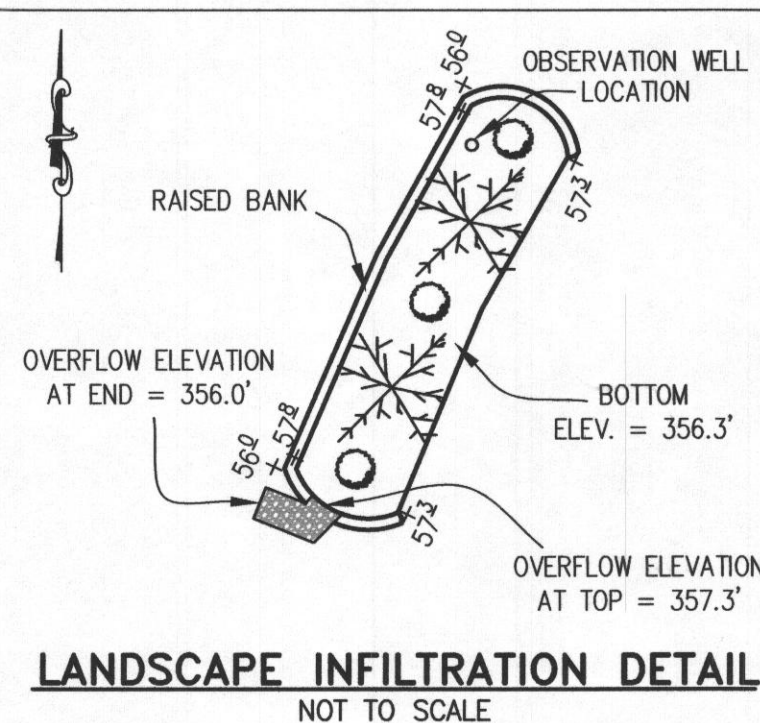
TOTAL IMPERVIOUS AREA TO BE TREATED = 4,700 SQ. FT. (0.1079 ACRES)  
TOTAL PERVIOUS AREA TO BE TREATED = 2,979 SQ. FT. (0.0684 ACRES)

TOTAL AREA TO BE TREATED = 7,679 SQ. FT. (0.1763 ACRES)

### ESD CALCULATIONS:

A = (TOTAL DRAINAGE AREA) = 7,679 SQ. FT. (0.1763 ACRES)  
Pe = 1.0" (RAINFALL TARGET)  
(I) = (IMPERVIOUS AREA) ÷ (IMPERVIOUS AREA ÷ DRAINAGE AREA)  
(0.1079 ÷ 0.1763) = 0.6120 = 61%  
Rv = (THE DIMENSIONLESS VOLUMETRIC RUNOFF COEFFICIENT)  
0.05 + (0.009 x (I)) = 0.05 + (0.009 x (61%)) = 0.599  
Qe = (RUNOFF DEPTH IN INCHES THAT MUST BE TREATED)  
(Pe x Rv) = (1 x 0.599) = 0.599 INCHES  
ESDv = RUNOFF VOLUME (IN ACRES-FEET)  
(Pe) x (Rv) x (A) ÷ 12  
(1) x (0.599) x (7679) ÷ 12 = 4,599.72 ÷ 12 = 383.31 CF.  
PLANTING SCHEDULE:

PLANTS	MINIMUM NUMBER	TYPE
TREES	3	SPECIES TO BE DETERMINED BY LANDSCAPE CONTRACTOR CHOSEN FROM THE APPROVED SPECIES LIST AS DESCRIBED IN MDE MANUAL APPENDIX A.
SHRUBS / BUSHES	2	SPECIES TO BE DETERMINED BY LANDSCAPE CONTRACTOR, CHOSEN FROM APPROVED SPECIES LIST



LANDSCAPE INFILTRATION DETAIL  
NOT TO SCALE

### ESD SPECIFICATIONS:

LANDSCAPE INFILTRATION DESIGN (LESS THAN 10,000 SQ. FT.)  
DRAINAGE AREA = 7,679 SQ. FT.  
PROPOSED IMPERVIOUS AREA = 4,700 SQ. FT.  
SURFACE AREA = 384 SQ. FT.  
STORAGE AREA = (SURFACE AREA x DEPTH) (384 x 1) = 384 CF  
TOTAL STORAGE AREA = 384 CF

\*ESD TO THE MEP IS MET

APPROVED: FOR HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION

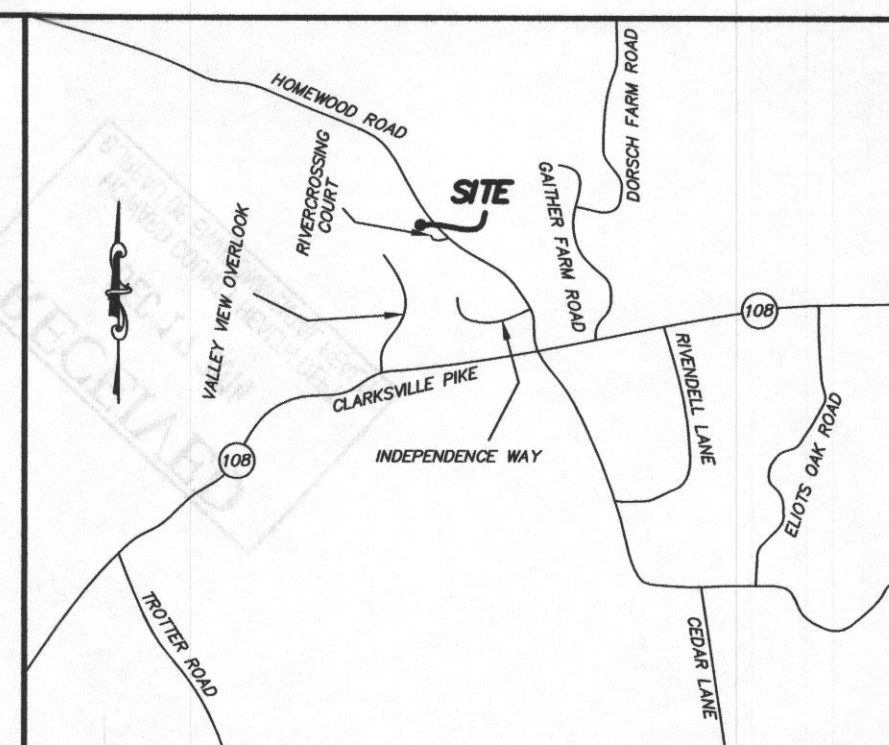
DATE

DIRECTOR

DATE

PROFESSIONAL ENGINEER

DATE



### VICINITY MAP

1" = 1000'

### GENERAL NOTES:

- THE LOT SHOWN HEREON WAS RECORDED ON MAY 2, 2006 AS PLAT NUMBER 18241. REFER TO THIS PLAT FOR DIMENSIONS, LOT AREAS, ALL EASEMENTS AND BUILDING RESTRICTIONS.
- THIS AREA DESIGNATES A PRIVATE SEWER EASEMENT OF AT LEAST 10,000 SQUARE FEET, AS REQUIRED BY THE STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA IS RESTRICTED UNTIL PUBLIC SEWER IS AVAILABLE. THIS EASEMENT SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE EASEMENT. ANY CHANGES TO A PRIVATE SEWAGE EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN. RECORDATION OF A MODIFIED EASEMENT SHALL NOT BE NECESSARY.
- EXACT LENGTH OF SEPTIC TRENCHES ARE TO BE DETERMINED BY THE HEALTH DEPARTMENT AT THE TIME OF PRE-CONSTRUCTION INSPECTION.
- SPOIL FROM THE TRENCHING OF THE SEPTIC AREA IS TO BE PLACED ON THE UPHILL SIDE OF THE EXCAVATION FOR EACH INDIVIDUAL LOT.
- SEDIMENT AND EROSION CONTROLS WERE APPROVED BY HOWARD SOIL CONSERVATION DISTRICT UNDER F-05-069 AND GP-14-034 AND SHALL COMPLY WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- STORMWATER MANAGEMENT FOR THIS LOT AS SHOWN.
- THE EXISTING WELL SHOWN ON THIS PLAN (IDENTIFIED WITH THE ATTACHED WELL TAG NUMBER HO-94-2468 HAS BEEN FIELD LOCATED BY ESE CONSULTANTS - PROFESSIONAL LAND SURVEYOR(S), AND IS ACCURATELY SHOWN.
- THE EXISTING TOPOGRAPHY WITHIN THE AREA OF PROPOSED WORK IS TAKEN FROM FIELD RUN SURVEY WITH MAXIMUM ONE FOOT CONTOUR INTERVALS PREPARED BY ESE. DATED 5/11/11.

### WELL AND SEPTIC NOTES:

TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THE FOLLOWING STATEMENTS ARE TRUE:

- ALL EXISTING WELLS, SEPTIC SYSTEMS AND SEWAGE DISPOSAL EASEMENTS WITHIN 100 FEET OF THE PROPERTY BOUNDARIES HAVE BEEN SHOWN. ALL EXISTING AND PROPOSED WELLS THAT ARE LOCATED WITHIN 200 FEET DOWNGRADIENT OF ANY EXISTING OR PROPOSED SEPTIC SYSTEM AND SEWAGE DISPOSAL EASEMENTS HAVE BEEN SHOWN. THE ENGINEER HAS USED ALL EFFORTS TO FIND THE LOCATIONS OF ALL SURROUNDING WELLS AND SEPTIC SYSTEMS.
- THE LOT SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP WIDTHS AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT AS SHOWN ON THE RECORD PLAT 18240 GENERAL NOTES ITEM 2.
- ANY CHANGES TO A PRIVATE SEWAGE EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
- THE SOIL TYPE FOR THIS LOT IS GbB, GbC AND MaD, HYDROLOGIC SOIL GROUP B.

### STORMWATER MANAGEMENT CONSTRUCTION AND MAINTENANCE NOTES:

- FINAL GRADING FOR LANDSCAPE INFILTRATION SHOULD NOT TAKE PLACE UNTIL SURROUNDING SITE IS STABILIZED.
- SUB SOIL SHALL NOT BE COMPACTED. EXCAVATION SHOULD BE CONDUCTED IN DRY CONDITIONS WITH EQUIPMENT LOCATED OUTSIDE OF THE PRACTICE TO MINIMIZE BOTTOM AND SIDEWALL COMPACTION.
- SEE APPENDIX B.4 OF THE MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL FOR SAND, GRAVEL AND PLANTING MEDIA.
- INSPECTION SHALL BE MADE AT THE FOLLOWING STAGES:
  - (a) DURING EXCAVATION TO SUB-GRADE
  - (b) DURING PLACEMENT OF BACKFILL AND OBSERVATION WELL
  - (c) DURING CONSTRUCTION OF APPURTENANT CONVEYANCE STRUCTURES
  - (d) UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION
- PRIVATELY OWNED PRACTICES SHALL HAVE A MAINTENANCE PLAN AND SHALL BE PROTECTED BY EASEMENT, DEED RESTRICTION, ORDINANCE OR OTHER LEGAL MEASURES PREVENTING ITS NEGLECT, ADVERSE ALTERATIONS AND REMOVAL.
- DURING FIRST YEAR OF OPERATION, INSPECTION FREQUENCY SHOULD BE AFTER EVERY MAJOR STORM AND POORLY ESTABLISHED AREAS RE-VEGETATED.
- THE TOP FEW INCHES OF THE PLANTING SOIL SHOULD BE REMOVED AND REPLACED WHEN WATER PONDS FOR MORE THAN 48 HOURS OR THERE IS ALGAE GROWTH ON THE SURFACE OF THE FACILITY.
- IF STANDING WATER PERSISTS AFTER FILTER MEDIA HAS BEEN MAINTAINED, THE GRAVEL, SOIL AND SAND MAY NEED TO BE CLEANED AND/OR REPLACED.
- OCCASIONAL PRUNING AND REPLACEMENT OF DEAD VEGETATION IS NECESSARY. IF SPECIFIC PLANTS ARE NOT SURVIVING, MORE APPROPRIATE SPECIES SHOULD BE USED. WATERING MAY BE REQUIRED DURING PROLONGED DRY PERIODS.

STORMWATER MANAGEMENT  
LANDSCAPE INFILTRATION DESIGN  
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DRAWN: R.C.K.



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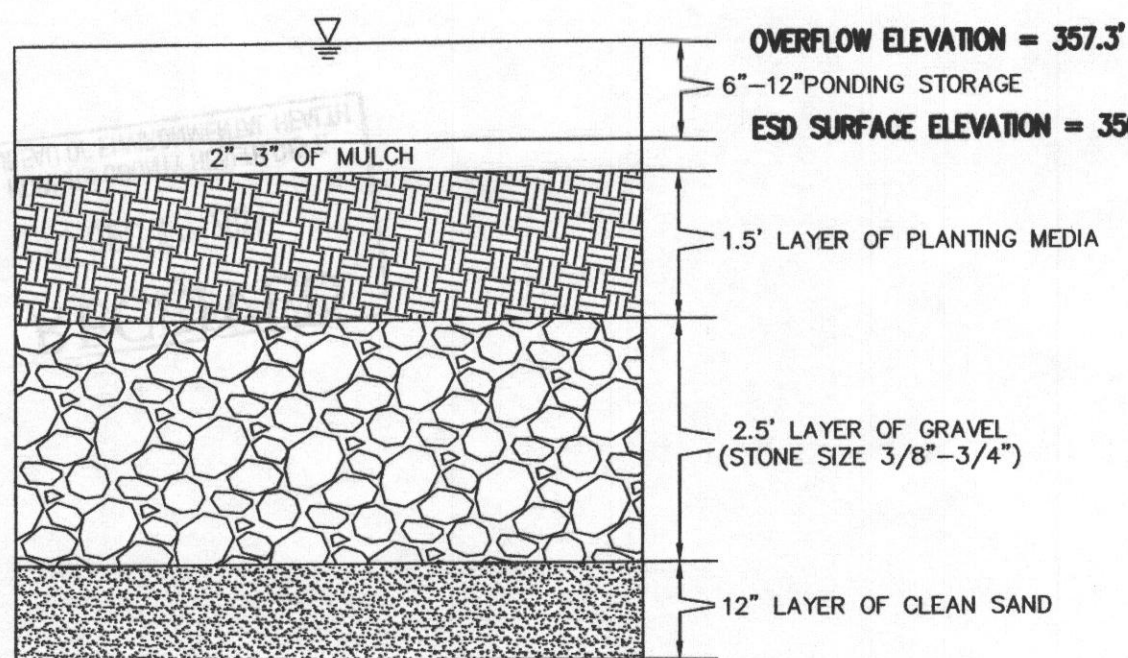
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- DRAINAGE AREA LIMITS
- SOIL TYPE LINE
- GbB GLADSTONE LOAM, 3% TO 8% SLOPES
- GbC GLADSTONE LOAM, 8% TO 15% SLOPES
- MaD MANOR LOAM, 15% TO 25% SLOPES
- DA-1 DRAINAGE AREA 1
- TW TOP OF WALL
- GF GARAGE FLOOR
- BF BASEMENT FLOOR
- BRL BUILDING RESTRICTION LINE
- STEEP SLOPE AREA

### HOUSE OPTIONS:

TYPE: HAMPTON (GEORGIAN)  
WALK-OUT BASEMENT  
ADD 1' TO HEIGHT OF BASEMENT WALLS  
NAPLES SUNROOM ADDITION  
BRICK SIDES AND REAR

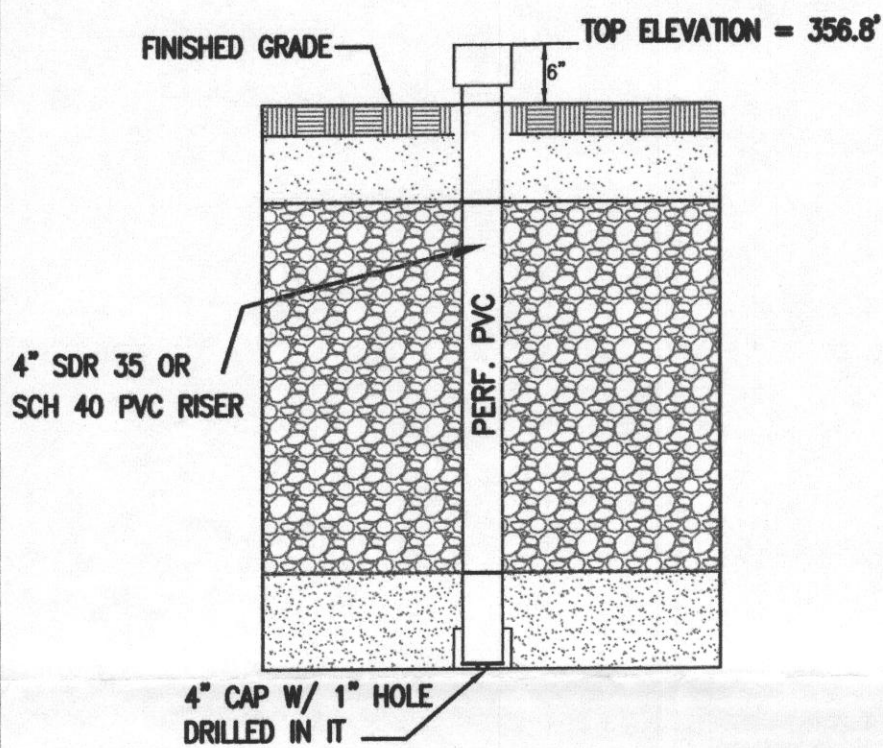
OPTION No. 017  
OPTION No. 070  
OPTION No. 529  
OPTION No. 673

\*FILTER FABRIC ON THE SIDES ONLY\*



### LANDSCAPE INFILTRATION DETAIL

NOT TO SCALE



### OBSERVATION WELL DETAIL

NOT TO SCALE

### STORMWATER MANAGEMENT COMPUTATIONS

#### DRAINAGE AREA NO. 1:

(ROOFTOP)  
HOUSE/ROOFTOP (IMPERVIOUS) = 3,651 SQ. FT. (0.0838 ACRES)

TOTAL OF DA-1 TO BE TREATED = 3,651 SQ. FT. (0.0838 ACRES)

#### DRAINAGE AREA NO. 2:

(DRIVEWAY AND GRASS)  
DRIVEWAY (IMPERVIOUS) = 513 SQ. FT. (0.0118 ACRES)  
GRASS (PERVIOUS) = 2,979 SQ. FT. (0.0684 ACRES)

TOTAL OF DA-2 TO BE TREATED = 3,492 SQ. FT. (0.0802 ACRES)

#### DRAINAGE AREA NO. 3 (NON-ROOFTOP DISCONNECT):

(DRIVEWAY)  
DRIVEWAY (IMPERVIOUS) = 536 SQ. FT. (0.0123 ACRES)

TOTAL OF DA-3 TO BE TREATED = 536 SQ. FT. (0.0123 ACRES)

#### TOTAL CALCULATIONS OF DRAINAGE AREAS COMBINED:

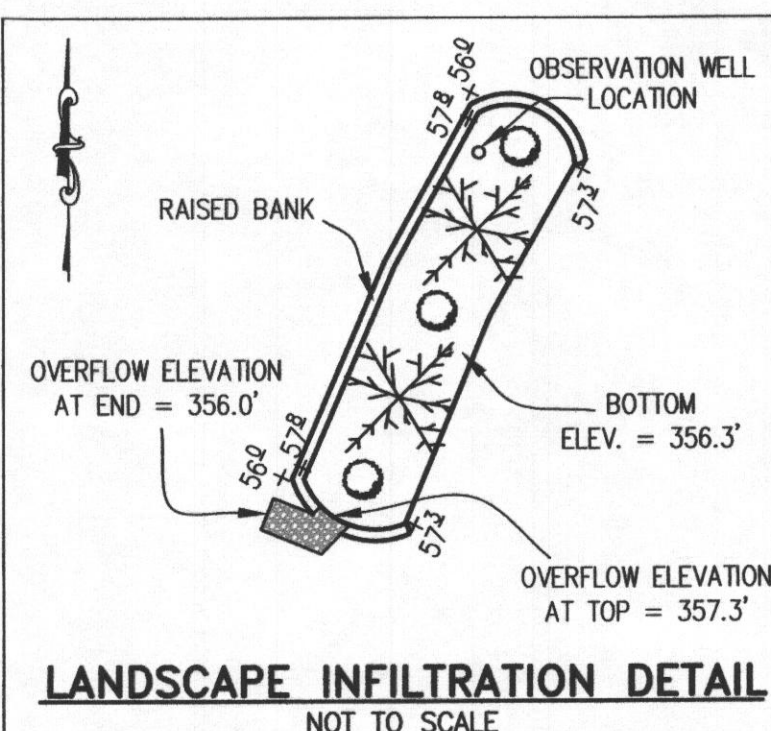
TOTAL IMPERVIOUS AREA TO BE TREATED = 4,700 SQ. FT. (0.1079 ACRES)  
TOTAL PERVIOUS AREA TO BE TREATED = 2,979 SQ. FT. (0.0684 ACRES)

TOTAL AREA TO BE TREATED = 7,679 SQ. FT. (0.1763 ACRES)

### ESD CALCULATIONS:

A = (TOTAL DRAINAGE AREA) = 7,679 SQ. FT. (0.1763 ACRES)  
Pe = 1.0" (RAINFALL TARGET)  
(I) = (IMPERVIOUS AREA) ÷ (DRAINAGE AREA)  
(0.1079 ÷ 0.1763) = 0.6120 = 61%  
Rv = (THE DIMENSIONLESS VOLUMETRIC RUNOFF COEFFICIENT)  
0.05 + (0.009 x (I)) = 0.05 + (0.009 x (61%)) = 0.599  
Qe = (RUNOFF DEPTH IN INCHES THAT MUST BE TREATED)  
(Pe x Rv) = (1 x 0.599) = 0.599 INCHES  
ESDv = RUNOFF VOLUME (IN ACRES-FEET)  
(Pe) x (Rv) x (A) ÷ 12  
(1) x (0.599) x (7,679) ÷ 12 = 4,599.72 ÷ 12 = 383.31 CF  
PLANTING SCHEDULE:

PLANTS	MINIMUM NUMBER	TYPE
TREES	3	SPECIES TO BE DETERMINED BY LANDSCAPE CONTRACTOR CHOSEN FROM THE APPROVED SPECIES LIST AS DESCRIBED IN MDE MANUAL APPENDIX A.
SHRUBS / BUSHES	2	SPECIES TO BE DETERMINED BY LANDSCAPE CONTRACTOR, CHOSEN FROM APPROVED SPECIES LIST



### ESD SPECIFICATIONS:

LANDSCAPE INFILTRATION DESIGN (LESS THAN 10,000 SQ. FT.)  
DRAINAGE AREA = 7,679 SQ. FT.  
PROPOSED IMPERVIOUS AREA = 4,700 SQ. FT.  
SURFACE AREA = 384 SQ. FT.  
STORAGE AREA = (SURFACE AREA x DEPTH) (384 x 1) = 384 CF  
TOTAL STORAGE AREA = 384 CF

\*ESD TO THE MEP IS MET



### VICINITY MAP

1" = 1000'

### GENERAL NOTES:

- THE LOT SHOWN HEREON WAS RECORDED ON MAY 2, 2006 AS PLAT NUMBER 18241. REFER TO THIS PLAT FOR DIMENSIONS, LOT AREAS, ALL EASEMENTS AND BUILDING RESTRICTIONS.
- THIS AREA DESIGNATES A PRIVATE SEWER EASEMENT OF AT LEAST 10,000 SQUARE FEET, AS REQUIRED BY THE STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA IS RESTRICTED UNTIL PUBLIC SEWER IS AVAILABLE. THIS EASEMENT SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE EASEMENT. ANY CHANGES TO A PRIVATE SEWAGE EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN. RECORDATION OF A MODIFIED EASEMENT SHALL NOT BE NECESSARY.
- EXACT LENGTH OF SEPTIC TRENCHES ARE TO BE DETERMINED BY THE HEALTH DEPARTMENT AT THE TIME OF PRE-CONSTRUCTION INSPECTION.
- SPOIL FROM THE TRENCHING OF THE SEPTIC AREA IS TO BE PLACED ON THE UPHILL SIDE OF THE EXCAVATION FOR EACH INDIVIDUAL LOT.
- SEDIMENT AND EROSION CONTROLS WERE APPROVED BY HOWARD SOIL CONSERVATION DISTRICT UNDER F-05-069 AND GP-14-034 AND SHALL COMPLY WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- STORMWATER MANAGEMENT FOR THIS LOT AS SHOWN.
- THE EXISTING WELL SHOWN ON THIS PLAN (IDENTIFIED WITH THE ATTACHED WELL TAG NUMBER HO-94-2468 HAS BEEN FIELD LOCATED BY ESE CONSULTANTS - PROFESSIONAL LAND SURVEYOR(S), AND IS ACCURATELY SHOWN.
- THE EXISTING TOPOGRAPHY WITHIN THE AREA OF PROPOSED WORK IS TAKEN FROM FIELD RUN SURVEY WITH MAXIMUM ONE FOOT CONTOUR INTERVALS PREPARED BY ESE. DATED 5/11/11.

### WELL AND SEPTIC NOTES:

TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THE FOLLOWING STATEMENTS ARE TRUE:

- ALL EXISTING WELLS, SEPTIC SYSTEMS AND SEWAGE DISPOSAL EASEMENTS WITHIN 100 FEET OF THE PROPERTY BOUNDARIES HAVE BEEN SHOWN. ALL EXISTING AND PROPOSED WELLS THAT ARE LOCATED WITHIN 200 FEET DOWNGRADIENT OF ANY EXISTING OR PROPOSED SEPTIC SYSTEM AND SEWAGE DISPOSAL EASEMENTS HAVE BEEN SHOWN. THE ENGINEER HAS USED ALL EFFORTS TO FIND THE LOCATIONS OF ALL SURROUNDING WELLS AND SEPTIC SYSTEMS.
- THE LOT SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP WIDTHS AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT AS SHOWN ON THE RECORD PLAT 18240 GENERAL NOTES ITEM 2.
- ANY CHANGES TO A PRIVATE SEWAGE EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
- THE SOIL TYPE FOR THIS LOT IS GbB, GbC AND MaD, HYDROLOGIC SOIL GROUP B.

### STORMWATER MANAGEMENT CONSTRUCTION AND MAINTENANCE NOTES:

- FINAL GRADING FOR LANDSCAPE INFILTRATION SHOULD NOT TAKE PLACE UNTIL SURROUNDING SITE IS STABILIZED.
- SUB SOIL SHALL NOT BE COMPACTED. EXCAVATION SHOULD BE CONDUCTED IN DRY CONDITIONS WITH EQUIPMENT LOCATED OUTSIDE OF THE PRACTICE TO MINIMIZE BOTTOM AND SIDEWALL COMPACTION.
- SEE APPENDIX B.4 OF THE MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL FOR SAND, GRAVEL AND PLANTING MEDIA.
- INSPECTION SHALL BE MADE AT THE FOLLOWING STAGES:
  - (a) DURING EXCAVATION TO SUB-GRADE
  - (b) DURING PLACEMENT OF BACKFILL AND OBSERVATION WELL
  - (c) DURING CONSTRUCTION OF APPURTENANT CONVEYANCE STRUCTURES
  - (d) UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION
- PRIVATELY OWNED PRACTICES SHALL HAVE A MAINTENANCE PLAN AND SHALL BE PROTECTED BY EASEMENT, DEED RESTRICTION, ORDINANCE OR OTHER LEGAL MEASURES PREVENTING ITS NEGLECT, ADVERSE ALTERATIONS AND REMOVAL.
- DURING FIRST YEAR OF OPERATION, INSPECTION FREQUENCY SHOULD BE AFTER EVERY MAJOR STORM AND POORLY ESTABLISHED AREAS RE-VEGETATED.
- THE TOP FEW INCHES OF THE PLANTING SOIL SHOULD BE REMOVED AND REPLACED WHEN WATER PONDS FOR MORE THAN 48 HOURS OR THERE IS ALGAE GROWTH ON THE SURFACE OF THE FACILITY.
- IF STANDING WATER PERSISTS AFTER FILTER MEDIA HAS BEEN MAINTAINED, THE GRAVEL, SOIL AND SAND MAY NEED TO BE CLEANED AND/OR REPLACED.
- OCCASIONAL PRUNING AND REPLACEMENT OF DEAD VEGETATION IS NECESSARY. IF SPECIFIC PLANTS ARE NOT SURVIVING, MORE APPROPRIATE SPECIES SHOULD BE USED. WATERING MAY BE REQUIRED DURING PROLONGED DRY PERIODS.

APPROVED: FOR HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION

DATE

DIRECTOR

DATE

PROFESSIONAL ENGINEER

DATE

STORMWATER MANAGEMENT  
LANDSCAPE INFILTRATION DESIGN  
LOT 78  
HOMWOOD CROSSING  
LIBER 9808, FOLIO 204  
PLAT No. 18241  
TAX No. 05-443431  
FIFTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
ADDRESS: 4706 ASHBY COURT  
ELLICOTT CITY, MARYLAND

**ESE** Land Planning  
Engineering  
Land Surveying

ESE Consultants Inc.  
7164 Columbia Gateway Dr.  
Suite 203  
Columbia, MD 21046  
TEL: 410-872-9105  
FAX: 410-872-4870

DATE: 12/17/14  
CHK'D: M.J.B.

SCALE: 1"=40'  
JOB NO: 1214

FILE: SWM LOT 78\_rev1  
DRAWN: R.C.K.



### SEWAGE DISPOSAL SYSTEM DATA (5 BDRM)

E60 ECOPOD (2 CHAMBER SYSTEM)

PROPOSED INVERT AT FOUNDATION WALL: XXX.X'

1. EXISTING GRADE OVER TANK: XXX.X'

PROPOSED GRADE OVER TANK: XXX.X'

INVERT IN: XXX.X' INVERT OUT: XXX.X'

2. DISTRIBUTION BOX:

EXISTING GRADE OVER BOX: XXX.X'

PROPOSED GRADE OVER BOX: XXX.X'

INVERT IN: XXX.X' INVERT OUT: XXX.X'

3. TRENCH DESIGN:

(5 BDRM x 150 GPD/BDRM = 750 GPD)

750 GPD ÷ 0.8 APP. RATE = 937.50 SF

USE 3' WIDE TRENCH WITH 84" GRAVEL BELOW PIPE

10' MIN. SPACING BETWEEN TRENCH EDGES

937.50 SF ÷ 3' WIDTH = 312.50 LF x 0.50 = 156.25 LF MIN. TRENCH

USE 3 53' LONG TRENCHES = 159 LF

### TRENCH DATA:

APP. RATE = 0.8  
EFFECTIVE SIDEWALL = 5'  
BOTTOM MAX. DEPTH = 8'

TRENCH 1 (T1):

GROUND ABOVE = 349.8'

INV. IN = 348.8'

BOTTOM TRENCH = 341.8'

TRENCH 2 (T2):

GROUND ABOVE = 347.5'

INV. IN = 346.5'

BOTTOM TRENCH = 339.5'

TRENCH 3 (T3):

GROUND ABOVE = 345.8'

INV. IN = 344.8'

BOTTOM TRENCH = 337.8'

### LEGEND:

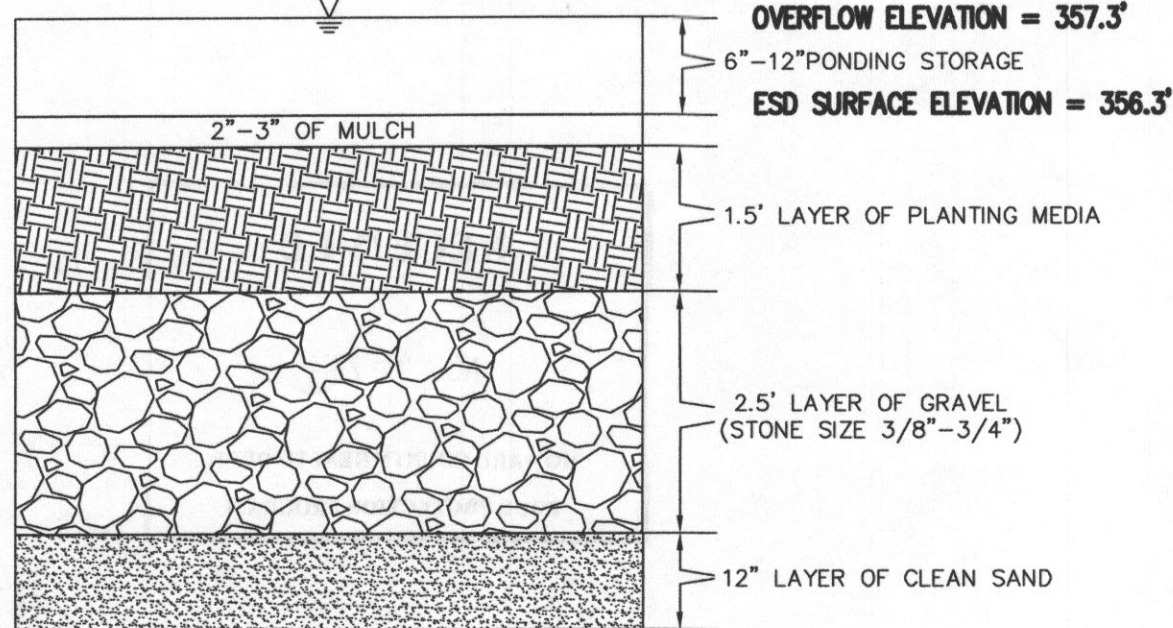
- PERC TEST LOCATION
- WELL LOCATION
- LIMITS OF DISTURBANCE
- SUPER SILT FENCE
- DRAINAGE AREA LIMITS
- SOIL TYPE LINE
- GbB GLADSTONE LOAM, 3% TO 8% SLOPES
- GbC GLADSTONE LOAM, 8% TO 15% SLOPES
- MoD MANOR LOAM, 15% TO 25% SLOPES
- DA-1 DRAINAGE AREA 1
- TW TOP OF WALL
- GF GARAGE FLOOR
- BF BASEMENT FLOOR
- BRL BUILDING RESTRICTION LINE
- STEEP SLOPE AREA

### HOUSE OPTIONS:

TYPE: HAMPTON (GEORGIAN)  
WALK-OUT BASEMENT  
ADD'L 1' TO HEIGHT OF BASEMENT WALLS  
NAPLES SUNROOM ADDITION  
BRICK SIDES AND REAR

OPTION No. 017  
OPTION No. 070  
OPTION No. 529  
OPTION No. 673

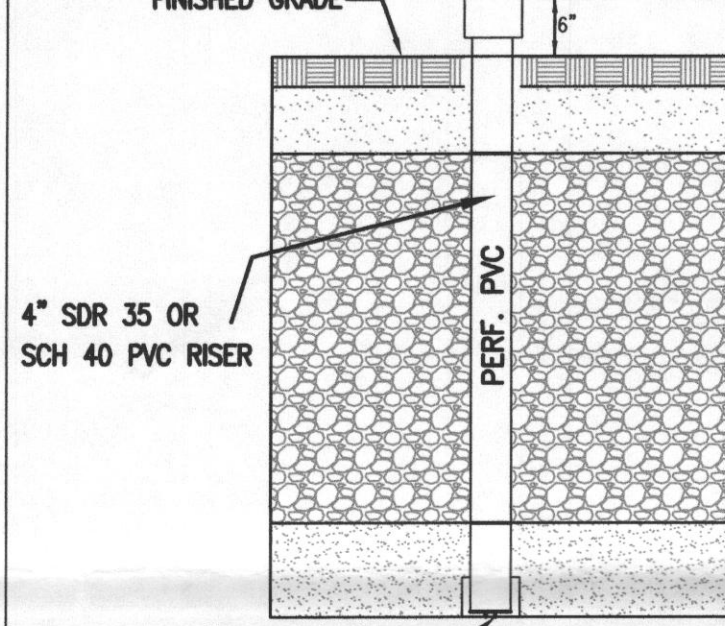
\*FILTER FABRIC ON THE SIDES ONLY\*



### LANDSCAPE INFILTRATION DETAIL

NOT TO SCALE

FINISHED GRADE TOP ELEVATION = 356.8'



### OBSERVATION WELL DETAIL

NOT TO SCALE

### STORMWATER MANAGEMENT COMPUTATIONS

DRAINAGE AREA NO. 1  
(DRIVEWAY AND ROOFTOP)  
HOUSE/ROOFTOP = 3,651 SQ. FT. (0.0838 ACRES)  
DRIVEWAY (IMPERVIOUS) = 372 SQ. FT. (0.0085 ACRES)  
GRASS (NON-IMPERVIOUS) = 3,119 SQ. FT. (0.0716 ACRES)

TOTAL IMPERVIOUS AREA TO BE TREATED = 4,023 SQ. FT. (0.0924 ACRES)

TOTAL PERVIOUS AREA TO BE TREATED = 3,119 SQ. FT. (0.0716 ACRES)

TOTAL AREA TO BE TREATED = 7,142 SQ. FT. (0.1640 ACRES)

### ESD CALCULATIONS:

A = (TOTAL DRAINAGE AREA) = 7,142 SQ. FT. (0.1640 ACRES)  
Pe = 1.0" (RAINFALL TARGET)  
(I) = (IMPERVIOUS AREA) = (IMPERVIOUS AREA ÷ DRAINAGE AREA)  
(0.0924 ÷ 0.1640) = 0.5634 = 56%  
Rv = (THE DIMENSIONLESS VOLUMETRIC RUNOFF COEFFICIENT)  
0.05 + (0.009 x (I)) = 0.05 + (0.009 x (56%)) = 0.554  
Qe = (RUNOFF DEPTH IN INCHES THAT MUST BE TREATED)  
(Pe x Rv) = (1 x 0.554) = 0.554 INCHES  
ESDv = RUNOFF VOLUME (IN ACRES-Feet)  
(Pe) x (Rv) x (A) ÷ 12  
(1) x (0.554) x (7142) ÷ 12 = 3,956.67 ÷ 12 = 329.72 CF

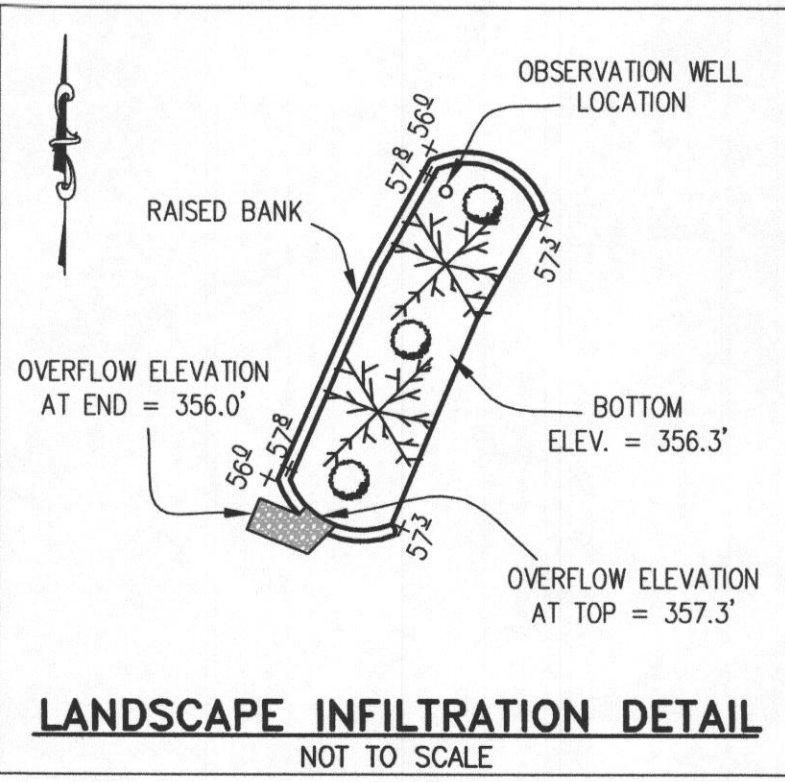
### ESD SPECIFICATIONS:

LANDSCAPE INFILTRATION DESIGN (LESS THAN 10,000 SQ. FT.)  
DRAINAGE AREA = 7,142 SQ. FT.  
PROPOSED IMPERVIOUS AREA = 4,023 SQ. FT.  
SURFACE AREA = 330 SQ. FT.  
STORAGE AREA = (SURFACE AREA x DEPTH) (340 x 1) = 330 CF  
TOTAL STORAGE AREA = 330 CF

\*ESD TO THE MEP IS MET

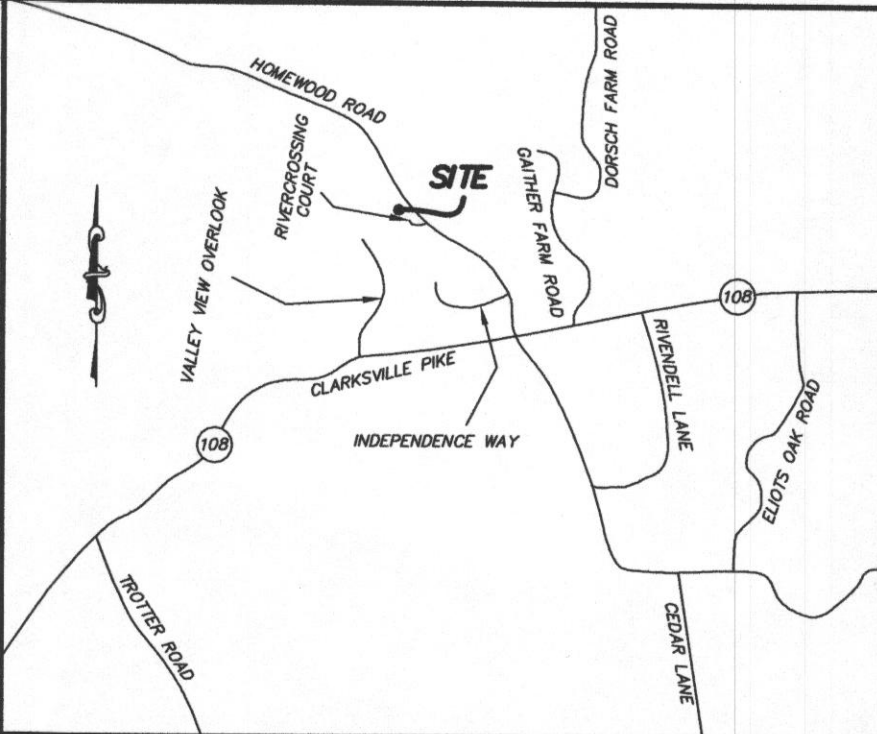
### PLANTING SCHEDULE:

PLANTS	MINIMUM NUMBER	TYPE
TREES	3	SPECIES TO BE DETERMINED BY LANDSCAPE CONTRACTOR CHOSEN FROM THE APPROVED SPECIES LIST AS DESCRIBED IN MDE MANUAL APPENDIX A.
SHRUBS / BUSHES	2	SPECIES TO BE DETERMINED BY LANDSCAPE CONTRACTOR, CHOSEN FROM APPROVED SPECIES LIST



### LANDSCAPE INFILTRATION DETAIL

NOT TO SCALE



### VICINITY MAP

1" = 1000'

### GENERAL NOTES:

- THE LOT SHOWN HEREON WAS RECORDED ON MAY 2, 2006 AS PLAT NUMBER 18241. REFER TO THIS PLAT FOR DIMENSIONS, LOT AREAS, ALL EASEMENTS AND BUILDING RESTRICTIONS.
- THIS AREA DESIGNATES A PRIVATE SEWER EASEMENT OF AT LEAST 10,000 SQUARE FEET, AS REQUIRED BY THE STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA IS RESTRICTED UNTIL PUBLIC SEWER IS AVAILABLE. THIS EASEMENT SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWER SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWER EASEMENT. ANY CHANGES TO A PRIVATE SEWER EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN. RECORDATION OF A MODIFIED EASEMENT SHALL NOT BE NECESSARY.
- EXACT LENGTH OF SEPTIC TRENCHES ARE TO BE DETERMINED BY THE HEALTH DEPARTMENT AT THE TIME OF PRE-CONSTRUCTION INSPECTION.
- SPOIL FROM THE TRENCHING OF THE SEPTIC AREA IS TO BE PLACED ON THE UPHILL SIDE OF THE EXCAVATION FOR EACH INDIVIDUAL LOT.
- SEDIMENT AND EROSION CONTROLS WERE APPROVED BY HOWARD SOIL CONSERVATION DISTRICT UNDER F-05-069 AND GP-14-034 AND SHALL COMPLY WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- STORMWATER MANAGEMENT FOR THIS LOT AS SHOWN.
- THE EXISTING WELL SHOWN ON THIS PLAN (IDENTIFIED WITH THE ATTACHED WELL TAG NUMBER HO-94-2468 HAS BEEN FIELD LOCATED BY ESE CONSULTANTS - PROFESSIONAL LAND SURVEYOR(S), AND IS ACCURATELY SHOWN.
- THE EXISTING TOPOGRAPHY WITHIN THE AREA OF PROPOSED WORK IS TAKEN FROM FIELD RUN SURVEY WITH MAXIMUM ONE FOOT CONTOUR INTERVALS PREPARED BY ESE. DATED 5/11/11.

### WELL AND SEPTIC NOTES:

TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THE FOLLOWING STATEMENTS ARE TRUE:

- ALL EXISTING WELLS, SEPTIC SYSTEMS AND SEWAGE DISPOSAL EASEMENTS WITHIN 100 FEET OF THE PROPERTY BOUNDARIES HAVE BEEN SHOWN. ALL EXISTING AND PROPOSED WELLS THAT ARE LOCATED WITHIN 200 FEET DOWNGRADIENT OF ANY EXISTING OR PROPOSED SEPTIC SYSTEM AND SEWAGE DISPOSAL EASEMENTS HAVE BEEN SHOWN. THE ENGINEER HAS USED ALL EFFORTS TO FIND THE LOCATIONS OF ALL SURROUNDING WELLS AND SEPTIC SYSTEMS.
- THE LOT SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP WIDTHS AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT AS SHOWN ON THE RECORD PLAT 18240 GENERAL NOTES ITEM 2.
- ANY CHANGES TO A PRIVATE SEWER EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
- THE SOIL TYPE FOR THIS LOT IS GbB, GbC AND MoD, HYDROLOGIC SOIL GROUP B.

### STORMWATER MANAGEMENT CONSTRUCTION AND MAINTENANCE NOTES:

- FINAL GRADING FOR LANDSCAPE INFILTRATION SHOULD NOT TAKE PLACE UNTIL SURROUNDING SITE IS STABILIZED.
- SUB SOIL SHALL NOT BE COMPACTED. EXCAVATION SHOULD BE CONDUCTED IN DRY CONDITIONS WITH EQUIPMENT LOCATED OUTSIDE OF THE PRACTICE TO MINIMIZE BOTTOM AND SIDEWALL COMPACTION.
- SEE APPENDIX B.4 OF THE MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL FOR SAND, GRAVEL AND PLANTING MEDIA.
- INSPECTION SHALL BE MADE AT THE FOLLOWING STAGES:
  - (a) DURING EXCAVATION TO SUB-GRADE
  - (b) DURING PLACEMENT OF BACKFILL AND OBSERVATION WELL
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  - (d) UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION
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- DURING FIRST YEAR OF OPERATION, INSPECTION FREQUENCY SHOULD BE AFTER EVERY MAJOR STORM AND POORLY ESTABLISHED AREAS RE-VEGETATED.
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APPROVED: FOR HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION

DATE

DIRECTOR

DATE

PROFESSIONAL ENGINEER

DATE

STORMWATER MANAGEMENT  
LANDSCAPE INFILTRATION DESIGN  
LOT 78  
**HOMELAND CROSSING**  
LIBER 9808, FOLIO 204  
PLAT No. 18241  
TAX No. 05-443431  
FIFTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
ADDRESS: 4706 ASHBY COURT  
ELLICOTT CITY, MARYLAND

**ESE**

Land Planning  
Engineering  
Land Surveying

ESE Consultants Inc.  
7164 Columbia Gateway Dr.  
Suite 203  
Columbia, MD 21046  
TEL: 410-872-9105  
FAX: 410-872-4870

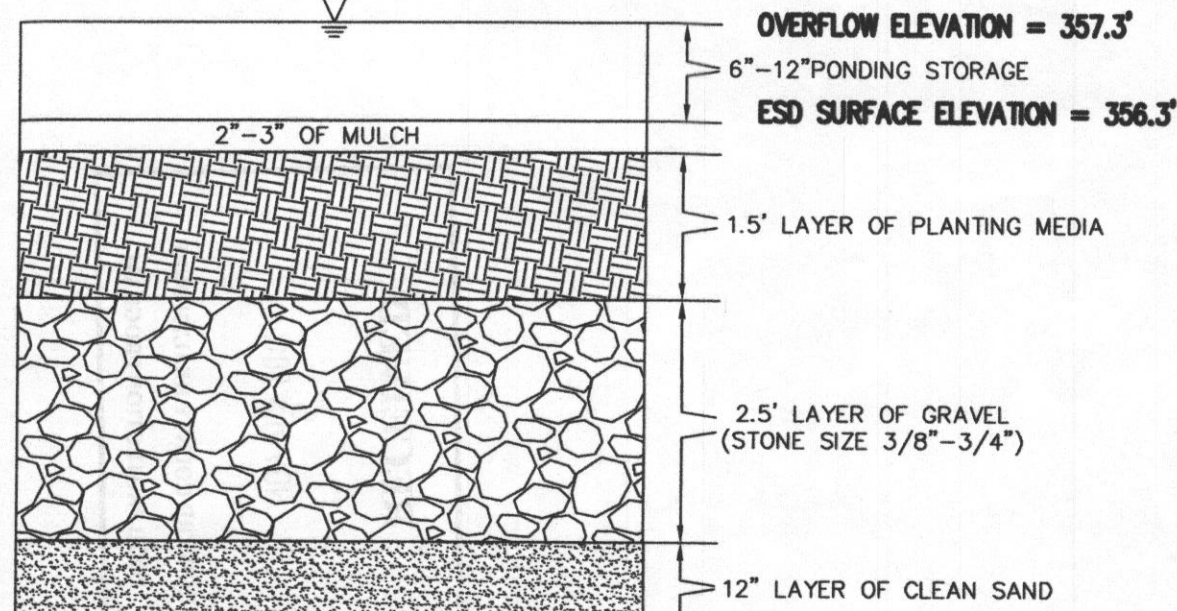
DATE: 10/29/14  
CHK'D: M.J.B.

SCALE: 1"=40'  
JOB NO: 1214

FILE: SWM LOT 78  
DRAWN: R.C.K.



\*FILTER FABRIC ON THE SIDES ONLY\*



LANDSCAPE INFILTRATION DETAIL  
NOT TO SCALE

### SEWAGE DISPOSAL SYSTEM DATA (5 BDRM)

EGO ECOPOD (2 CHAMBER SYSTEM)

PROPOSED INVERT AT FOUNDATION WALL: XXX.X'

1. EXISTING GRADE OVER TANK: XXX.X'

PROPOSED GRADE OVER TANK: XXX.X'

INVERT IN: XXX.X' INVERT OUT: XXX.X'

2. DISTRIBUTION BOX:

EXISTING GRADE OVER BOX: XXX.X'

PROPOSED GRADE OVER BOX: XXX.X'

INVERT IN: XXX.X' INVERT OUT: XXX.X'

3. TRENCH DESIGN:

(5 BDRM x 150 GPD/BDRM = 750 GPD)

750 GPD ÷ 0.8 APP. RATE = 937.50 SF

USE 3' WIDE TRENCH WITH 84" GRAVEL BELOW PIPE

10' MIN. SPACING BETWEEN TRENCH EDGES

937.50 SF ÷ 3' WIDTH = 312.50 LF x 0.50 = 156.25 LF MIN. TRENCH

USE 3 53' LONG TRENCHES = 159 LF

### TRENCH DATA

APP. RATE = 0.8  
EFFECTIVE SIDEWALL = 5'  
BOTTOM MAX. DEPTH = 8'

#### TRENCH 1 (T1):

GROUND ABOVE = 349.8'  
INV. IN = 348.8'  
BOTTOM TRENCH = 341.8'

#### TRENCH 2 (T2):

GROUND ABOVE = 347.5'  
INV. IN = 346.5'  
BOTTOM TRENCH = 339.5'

#### TRENCH 3 (T3):

GROUND ABOVE = 345.8'  
INV. IN = 344.8'  
BOTTOM TRENCH = 337.8'

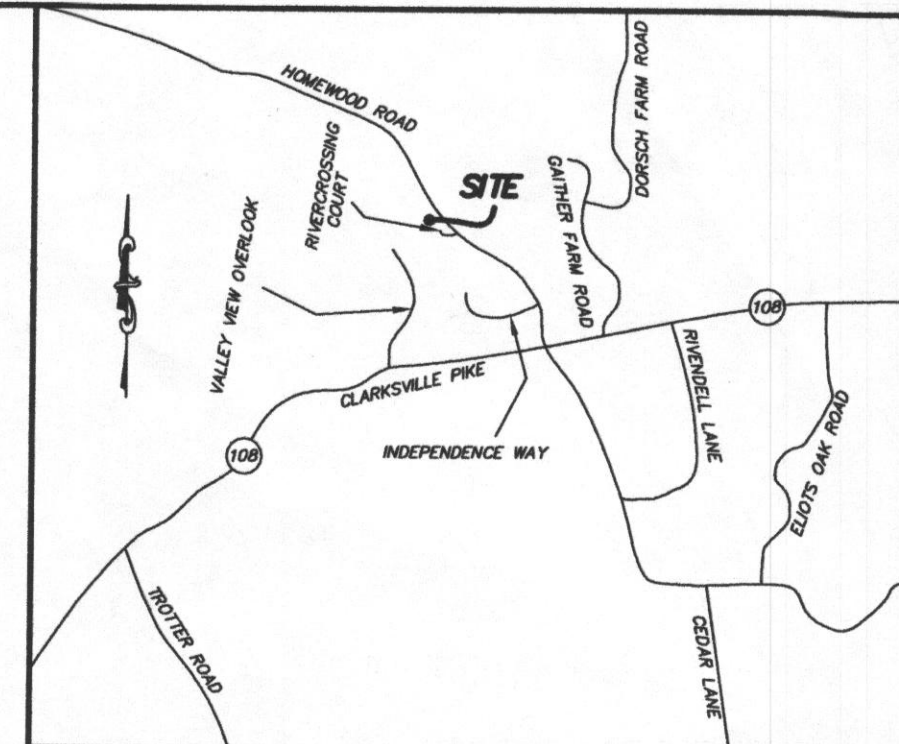
### LEGEND:

- PERC TEST LOCATION
- WELL LOCATION
- LIMITS OF DISTURBANCE
- SUPER SILT FENCE
- DRAINAGE AREA LIMITS
- SOIL TYPE LINE
- GbB GLADSTONE LOAM, 3% TO 8% SLOPES
- GbC GLADSTONE LOAM, 8% TO 15% SLOPES
- MoD MANOR LOAM, 15% TO 25% SLOPES
- DA-1 DRAINAGE AREA 1
- TW TOP OF WALL
- GF GARAGE FLOOR
- BF BASEMENT FLOOR
- BRL BUILDING RESTRICTION LINE
- STEEP SLOPE AREA

### HOUSE OPTIONS:

TYPE: HAMPTON (GEORGIAN)  
WALK-OUT BASEMENT  
ADDL 1' TO HEIGHT OF BASEMENT WALLS  
NAPLES SUNROOM ADDITION  
BRICK SIDES AND REAR

OPTION No. 017  
OPTION No. 070  
OPTION No. 529  
OPTION No. 673



VICINITY MAP  
1" = 1000'

### GENERAL NOTES:

- THE LOT SHOWN HEREON WAS RECORDED ON MAY 2, 2006 AS PLAT NUMBER 18241. REFER TO THIS PLAT FOR DIMENSIONS, LOT AREAS, ALL EASEMENTS AND BUILDING RESTRICTIONS.
- THIS AREA DESIGNATES A PRIVATE SEWER EASEMENT OF AT LEAST 10,000 SQUARE FEET, AS REQUIRED BY THE STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA IS RESTRICTED UNTIL PUBLIC SEWER IS AVAILABLE. THIS EASEMENT SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWER SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWER EASEMENT. ANY CHANGES TO A PRIVATE SEWER EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN. RECORDATION OF A MODIFIED EASEMENT SHALL NOT BE NECESSARY.
- EXACT LENGTH OF SEPTIC TRENCHES ARE TO BE DETERMINED BY THE HEALTH DEPARTMENT AT THE TIME OF PRE-CONSTRUCTION INSPECTION.
- SPOIL FROM THE TRENCHING OF THE SEPTIC AREA IS TO BE PLACED ON THE UPHILL SIDE OF THE EXCAVATION FOR EACH INDIVIDUAL LOT.
- SEDIMENT AND EROSION CONTROLS WERE APPROVED BY HOWARD SOIL CONSERVATION DISTRICT UNDER F-05-069 AND GP-14-034 AND SHALL COMPLY WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- STORMWATER MANAGEMENT FOR THIS LOT AS SHOWN.
- THE EXISTING WELL SHOWN ON THIS PLAN (IDENTIFIED WITH THE ATTACHED WELL TAG NUMBER HO-94-2468 HAS BEEN FIELD LOCATED BY ESE CONSULTANTS - PROFESSIONAL LAND SURVEYOR(S), AND IS ACCURATELY SHOWN.
- THE EXISTING TOPOGRAPHY WITHIN THE AREA OF PROPOSED WORK IS TAKEN FROM FIELD RUN SURVEY WITH MAXIMUM ONE FOOT CONTOUR INTERVALS PREPARED BY ESE. DATED 5/11/11.

### WELL AND SEPTIC NOTES:

TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THE FOLLOWING STATEMENTS ARE TRUE:

- ALL EXISTING WELLS, SEPTIC SYSTEMS AND SEWAGE DISPOSAL EASEMENTS WITHIN 100 FEET OF THE PROPERTY BOUNDARIES HAVE BEEN SHOWN. ALL EXISTING AND PROPOSED WELLS THAT ARE LOCATED WITHIN 200 FEET DOWNGRADIENT OF ANY EXISTING OR PROPOSED SEPTIC SYSTEM AND SEWAGE DISPOSAL EASEMENTS HAVE BEEN SHOWN. THE ENGINEER HAS USED ALL EFFORTS TO FIND THE LOCATIONS OF ALL SURROUNDING WELLS AND SEPTIC SYSTEMS.
- THE LOT SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP WIDTHS AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT AS SHOWN ON THE RECORD PLAT 18240 GENERAL NOTES ITEM 2.
- ANY CHANGES TO A PRIVATE SEWER EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
- THE SOIL TYPE FOR THIS LOT IS GbB, GbC AND MoD, HYDROLOGIC SOIL GROUP B.

### STORMWATER MANAGEMENT CONSTRUCTION AND MAINTENANCE NOTES:

- FINAL GRADING FOR LANDSCAPE INFILTRATION SHOULD NOT TAKE PLACE UNTIL SURROUNDING SITE IS STABILIZED.
- SUB SOIL SHALL NOT BE COMPACTED. EXCAVATION SHOULD BE CONDUCTED IN DRY CONDITIONS WITH EQUIPMENT LOCATED OUTSIDE OF THE PRACTICE TO MINIMIZE BOTTOM AND SIDEWALL COMPACTION.
- SEE APPENDIX B.4 OF THE MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL FOR SAND, GRAVEL AND PLANTING MEDIA.
- INSPECTION SHALL BE MADE AT THE FOLLOWING STAGES:
  - (a) DURING EXCAVATION TO SUB-GRADE
  - (b) DURING PLACEMENT OF BACKFILL AND OBSERVATION WELL
  - (c) DURING CONSTRUCTION OF APPURTENANT CONVEYANCE STRUCTURES
  - (d) UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION
- PRIVATELY OWNED PRACTICES SHALL HAVE A MAINTENANCE PLAN AND SHALL BE PROTECTED BY EASEMENT, DEED RESTRICTION, ORDINANCE OR OTHER LEGAL MEASURES PREVENTING ITS NEGLECT, ADVERSE ALTERATIONS AND REMOVAL.
- DURING FIRST YEAR OF OPERATION, INSPECTION FREQUENCY SHOULD BE AFTER EVERY MAJOR STORM AND POORLY ESTABLISHED AREAS RE-VEGETATED.
- THE TOP FEW INCHES OF THE PLANTING SOIL SHOULD BE REMOVED AND REPLACED WHEN WATER PONDS FOR MORE THAN 48 HOURS OR THERE IS ALGAE GROWTH ON THE SURFACE OF THE FACILITY.
- IF STANDING WATER PERSISTS AFTER FILTER MEDIA HAS BEEN MAINTAINED, THE GRAVEL, SOIL AND SAND MAY NEED TO BE CLEANED AND/OR REPLACED.
- OCCASIONAL PRUNING AND REPLACEMENT OF DEAD VEGETATION IS NECESSARY. IF SPECIFIC PLANTS ARE NOT SURVIVING, MORE APPROPRIATE SPECIES SHOULD BE USED. WATERING MAY BE REQUIRED DURING PROLONGED DRY PERIODS.

### STORMWATER MANAGEMENT COMPUTATIONS

DRAINAGE AREA NO. 1  
(DRIVEWAY AND ROOFTOP)  
HOUSE/ROOFTOP = 3,651 SQ. FT. (0.0838 ACRES)  
DRIVEWAY (IMPERVIOUS) = 372 SQ. FT. (0.0085 ACRES)  
GRASS (NON-IMPERVIOUS) = 3,119 SQ. FT. (0.0716 ACRES)

TOTAL IMPERVIOUS AREA TO BE TREATED = 4,023 SQ. FT. (0.0924 ACRES)  
TOTAL PERVIOUS AREA TO BE TREATED = 3,119 SQ. FT. (0.0716 ACRES)

TOTAL AREA TO BE TREATED = 7,142 SQ. FT. (0.1640 ACRES)

### ESD CALCULATIONS:

A = (TOTAL DRAINAGE AREA) = 7,142 SQ. FT. (0.1640 ACRES)  
Pe = 1.0" (RAINFALL TARGET)  
(I) = (IMPERVIOUS AREA) ÷ (IMPERVIOUS AREA ÷ DRAINAGE AREA)  
(0.0924 ÷ 0.1640) = 0.5634 = 56%  
Rv = (THE DIMENSIONLESS VOLUMETRIC RUNOFF COEFFICIENT)  
0.05 + (0.009 x (I)) = 0.05 + (0.009 x (56%)) = 0.554  
Qe = (RUNOFF DEPTH IN INCHES THAT MUST BE TREATED)  
(Pe x Rv) = (1 x 0.554) = 0.554 INCHES  
ESDv = RUNOFF VOLUME (IN ACRES-FEET)  
(Pe) x (Rv) x (A) ÷ 12  
(1) x (0.554) x (7142) ÷ 12 = 3,956.67 ÷ 12 = 329.72 CF

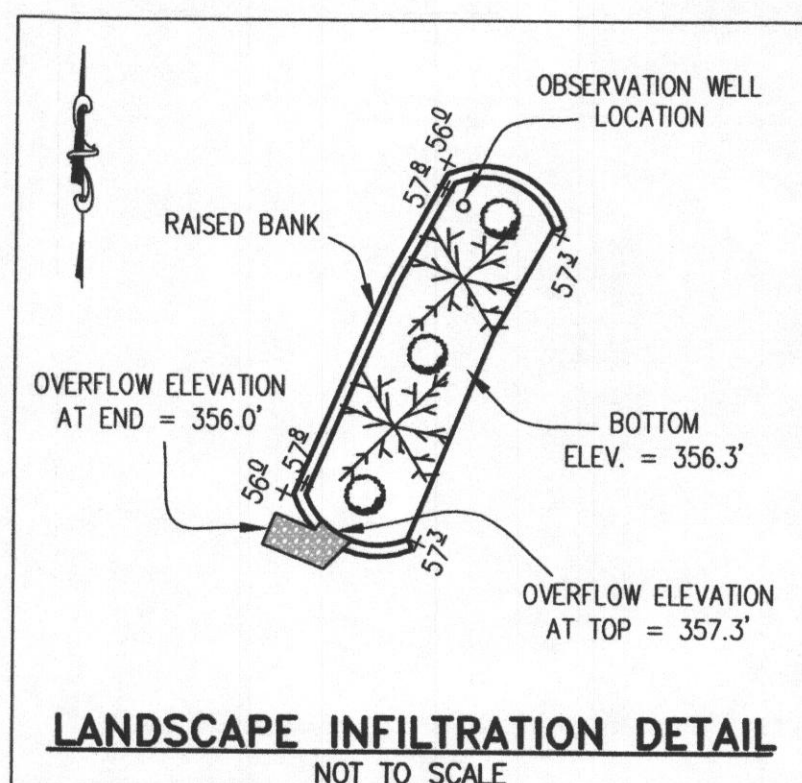
### ESD SPECIFICATIONS:

LANDSCAPE INFILTRATION DESIGN (LESS THAN 10,000 SQ. FT.)  
DRAINAGE AREA = 7,142 SQ. FT.  
PROPOSED IMPERVIOUS AREA = 4,023 SQ. FT.  
SURFACE AREA = 330 SQ. FT.  
STORAGE AREA = (SURFACE AREA x DEPTH) (340 x 1) = 330 CF  
TOTAL STORAGE AREA = 330 CF

\*ESD TO THE MEP IS MET

### PLANTING SCHEDULE:

PLANTS	MINIMUM NUMBER	TYPE
TREES	3	SPECIES TO BE DETERMINED BY LANDSCAPE CONTRACTOR CHOSEN FROM THE APPROVED SPECIES LIST AS DESCRIBED IN MDE MANUAL APPENDIX A.
SHRUBS / BUSHES	2	SPECIES TO BE DETERMINED BY LANDSCAPE CONTRACTOR, CHOSEN FROM APPROVED SPECIES LIST



LANDSCAPE INFILTRATION DETAIL  
NOT TO SCALE

APPROVED: FOR HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION

DATE

DIRECTOR

DATE

PROFESSIONAL ENGINEER

DATE

STORMWATER MANAGEMENT  
LANDSCAPE INFILTRATION DESIGN  
LOT 78  
HOMWOOD CROSSING  
LIBER 9808, FOLIO 204  
PLAT No. 18241  
TAX No. 05-443431  
FIFTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
ADDRESS: 4706 ASHBY COURT  
ELLICOTT CITY, MARYLAND

ESE Land Planning  
Engineering  
Land Surveying

ESE Consultants Inc.  
7164 Columbia Gateway Dr.  
Suite 203  
Columbia, MD 21046  
TEL: 410-872-9105  
FAX: 410-872-4870

DATE: 10/29/14

SCALE: 1"=40'

FILE: SWM LOT 78

CHK'D: M.J.B.

JOB NO: 1214

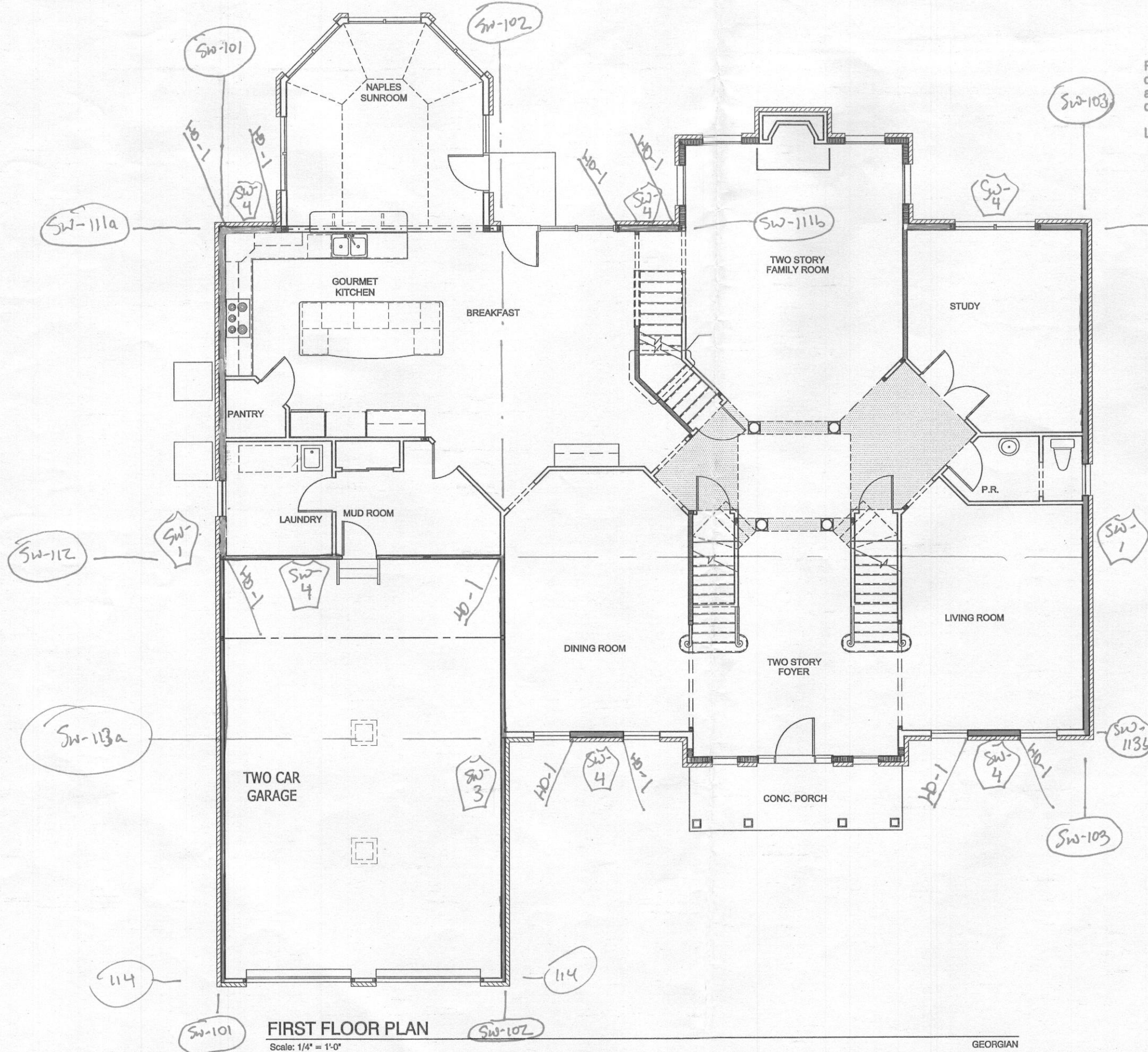
DRAWN: R.C.K.



DATE: Friday, October 17, 2014 - 10:34:07 AM

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**FIRST FLOOR PLAN**  
Scale: 1/4" = 1'-0"

GEORGIAN

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. 40099 Expiration Date: 3/5/15



BW LINE	REA'D	PROPOSED
101	12.78'	SW-101
102	37.99'	SW-102
103	18.82'	SW-103
111	14.91'	SW-111a,b,c
112	30.18'	SW-112
113	9.23'	SW-113a,b
114	14.91'	SW-112, 113a,b

**Toll Architecture**

A Toll Brothers, Inc. Company

PHILADELPHIA ■ DALLAS  
ORLANDO ■ SEATTLE

**EASTERN DIVISION** 615.995.5300 ■ FAX 615.995.5313  
2 NORTH ■ 259 GIBBALTAR ROAD ■ HOBOKEN ■ NJ 07030

DRAWN BY  
**B. BIDINGER**

CHECKED BY  
**T. BAUER**

SCALE  
AS NOTED

SHEET DATE  
**10-23-2014**

SHEET REVISION INFO

SHEET DESCRIPTION  
**FIRST FLOOR PLAN**

PRODUCT LINE  
**ESTATE**

MODEL/PROJECT NAME  
**HAMPTON**

ELEVATION NAME  
**GEORGIAN**

SHEET NUMBER  
**A2L**

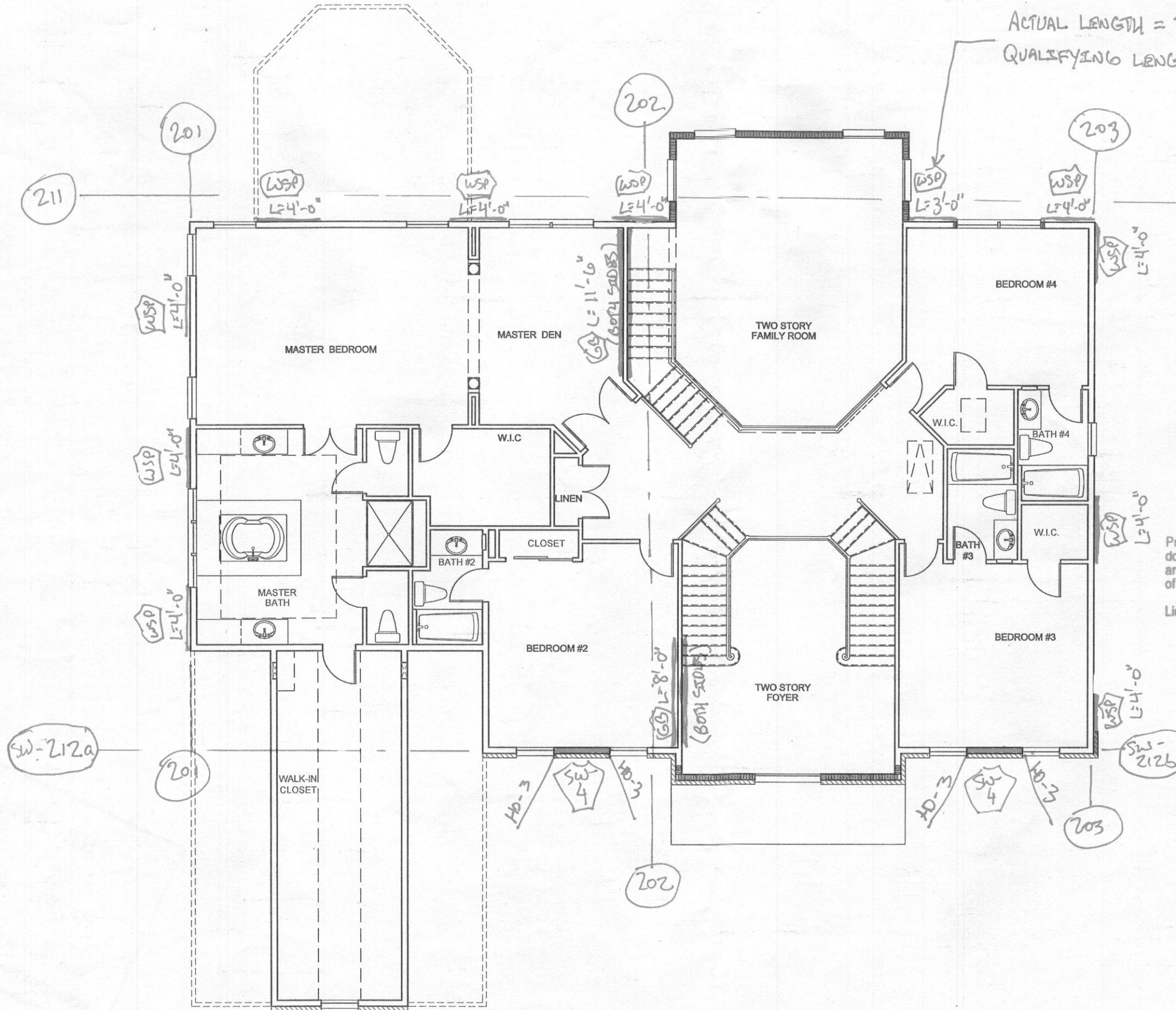
SERIAL NUMBER **1012.1**

LEFT HAND SET PATUXENT CHASE - LOT #078 - AO#97304



DATE: 10/23/2014, 10:23:21 AM  
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SECOND FLOOR PLAN

Scale: 1/4" = 1'-0"

GEORGIAN



Professional certification. I hereby certify that these documents were prepared or approved by me and I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 40099, Expiration Date: 3/15/15

BW LINE	REV'S	PROVIDED
201	10.44'	12'
202	17.66'	19.5'
203	10.44'	12'
211	10.19'	19'
212	8.34'	SW-212a, b

LEFT HAND SET PATUXENT CHASE - LOT#078 - AO#97304

Toll Architecture

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PHILADELPHIA ■ DALLAS ■ ORLANDO ■ SEATTLE

EASTERN DIVISION 610.928.5300 ■ FAX 610.928.5313  
2 NORTH ■ 226 GIBBALTAR ROAD ■ HORSHEAM, PA ■ 19044

DRAWN BY  
B. BIDINGER

CHECKED BY  
T. BAUER

SCALE  
AS NOTED

SHEET DATE  
10-23-2014

SHEET REVISION INFO

SHEET DESCRIPTION  
SECOND FLOOR PLAN

PRODUCT LINE  
ESTATE

MODEL/PROJECT NAME  
HAMPTON

ELEVATION NAME  
GEORGIAN

SHEET NUMBER  
A3L

SERIAL NUMBER 1012.1