

Record Detail \* (This section is required.)

Permit Type	Permit Number	Opened Date
Building/Residential/Misc/Tanks	B22000730	03/07/2022
Description of Work		
SFD/ INSTALL (1)1000 GAL UNDERGROUND PROPANE TANK		

[check spelling](#)

Address \* (This section is required.)

Search Reset Clear Get Parcel & Owner

Street #	Street Name	Street Type	
14552	AMBREEN	WAY	
Unit Type	Unit #	X Coordinate	Y Coordinate
--Select--		-77.0189	39.34495
City	State	Zip Code	Primary
COOKSVILLE	MD	21723	Yes

Approved 3/7/22  


Parcel \* (This section is required.)

Search Reset Clear Get Address & Owner

GIS ID *	Parcel	Parcel Area	Land Value	Improved Value	Exemption Value	Plan Area
11058487	237	0	0	0	0	RURAL

Legal Description  
 LOT 2 1.52 A.[ ]14552 AMBREEN WAY[ ]AMBREEN WOODS

[check spelling](#)

Block	Lot	Census Tract	Council Dist	Inspection Dist	Supervisor Dist	Map #	DAP Zone
	2	604001	5				
Plan Area	State Tax Id	Subdivision Name		Percival Property			
Section	Area	Tax Map		8			
Grid	Zoning District	ADC Map		4692-G5			
SDP No.	Final Plan No.	WP File No.					
Record Plat No.	WS Contract No.	FDP No.	Primary	Yes			
Owner Occupied	Year Built	Historic District		No			
Historic District Registry No.	Stat Area	Flood Plain		No			
Building No							

Owner \* (This section is required.)

Search Reset Clear

Name \*

BURKARD HOMES

Address Line 1

1511 RITCHIE HWY

Address Line 2

Address Line 3

Mail City

ARNOLD

Phone

Mail State

MD

Mail Zip Code

21012

Primary

Yes

E-mail

Cell Number      Fax Number

**Professionals** (This section is not required.)

Search      Reset      Clear

License # *	Business Name		
81215	THOMPSON GAS		
License Type *	First Name	Middle Name	Last Name
Propane Gs	▼ DENNIS		FEAGA
Primary	Address Line 1		
Yes	▼ 5260 WESTVIEW DRIVE #200		
	Address Line 2		
	City	State	ZIP Code
	FREDERICK	MD	▼ 21703
	Phone 1	Phone 2	Fax
	410-984-5681		
	E-mail		

**Applicant** (This section is not required.)

Search      As Owner      As Lic. Prof      As Contact

Type *	First Name	MI	Last Name
Applicant	▼ MICHELLE		CLANCY
Relationship	Full Name		
Applicant	▼ MICHELLE CLANCY		
Primary	Organization Name		
Yes	▼ APPLIED & APPROVED PERMITS LLC		
	Street Address		
	P.O. BOX 310		
	Address Line 2		
	City	State	Zip Code
	PERRY HALL	MD	▼ 21128
	Phone	Cell	Fax
	443-340-1229		
	E-mail *		
	MICHELLE@APPLIEDANDAPPROVED.COM		

**Addtl Info**

Est Construction Cost *	Housing Units *	Number of Buildings *	Public Owned
2000	0	0	No ▼
Construction Type			
--Select--			▼

**TANK INFORMATION**

**RESIDENTIAL TANK INFORMATION**

Capital Project-No Fee *	Capital Project Number	Fee Exempt *	Roadside Tree Project Permit *	Roadside Tree Permit #
<input type="radio"/> Yes <input checked="" type="radio"/> No		<input type="radio"/> Yes <input checked="" type="radio"/> No	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Existing Use	Number of Tanks Installed *	Number of Tanks Removed *		
SFD	▼ 1	0		
Water Supply	Sewage Disposal	Expiration Date	Relocate Existing Tank *	
Private ▼	Private ▼	9/3/2022	0	

**PAYMENT INFORMATION**

Check 1	Payee 1	Check 2	Payee 2	SAP Doc No	SAP Entered

Submit      Cancel



RECEIVED

JUN 16 2021

PERMIT NUMBER: B 21002242

DATE ACCEPTED:

**RESIDENTIAL BUILDING PERMIT APPLICATION** LICENSES & PERMITS DIVISION  
 HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES, AND PERMITS  
 3430 COURT HOUSE DRIVE, ELLICOTT CITY, MD 21043 - PHONE: (410) 313-2455 OPTION #4  
[www.howardcountymd.gov](http://www.howardcountymd.gov)

**BUILDING SITE ADDRESS REQUIRED**

Street Address: 14552 Ambreen Way Unit:  
 City: Cooksville State: MD Zip Code: 21723  
 Subdivision/Village/Complex Name: Ambreen Woods SDP/WP/BA #:  
 Lot: 2 Tax Map: 0008 Parcel: 0243 Grading Permit #:

**DESCRIPTION OF WORK REQUIRED**

Existing Use: Proposed Use: Single Family Dwelling Estimated Cost: \$ 220,000  
 Trade Work to Be Completed (Separate Permits Required):  Mechanical (HVACR)  Electrical  Plumbing  None

**PROPERTY OWNER INFORMATION REQUIRED**

Owner(s) Name(s) (As it appears on tax records): Burkard Homes LLC Primary Residence:  Yes  No  
 Owner's Street Address: 1511 Ritchie Hwy  
 City: Arnold State: MD Zip Code: 21012  
 Phone: 246-375-1052 Email: tim@burkardhomes.com

**APPLICANT NAME REQUIRED - INDIVIDUAL WHO SIGNS THIS APPLICATION**

Business Name: Burkard Homes LLC Contact Name: Tim Burkard  
 Street Address: 1511 Ritchie Hwy  
 City: Arnold State: MD Zip Code: 21012  
 Phone: 246-375-1052 Email: tim@burkardhomes.com

**CONTRACTOR INFORMATION REQUIRED**

Business Name: Burkard Homes, LLC  
 Licensee's Name: Burkard Homes, LLC License #: MHBPR-6300  
 Street Address: 1511 Ritchie Hwy  
 City: Arnold State: MD Zip Code: 21012  
 Phone: 246-375-1052 Email: tim@burkardhomes.com

**ARCHITECT/ENGINEER INFORMATION INDIVIDUAL WHO SIGNED PLANS, IF APPLICABLE**

Business Name: M. Idenberg, Boender & Assoc. Name: Mark Sweeder  
 Street Address: 7350-B Grace Drive  
 City: Columbia State: MD Zip Code: 21044  
 Phone: 410-997-0296 Email: msweeder@mba-eng.com

**BUILDING CHARACTERISTICS REQUIRED**

Primary Structure:  SF Dwelling  SF Townhouse  SF Duplex  Mobile Home  Multi-Family Dwelling (MF\*) Condo:  Yes  No  
 Utilities:  Electric  Gas  Water Supply:  Public  Private (Well) Sewage Disposal:  Public  Private (Septic)  
 Heating System:  Electric  Natural Gas  Propane  Other: Roadside Tree Project:  No  Yes: #  
 Sprinkler System:  NFPA 13  NFPA 13R  NFPA 13D  None Fire Alarm System:  Yes  No  Voice Evac

**ADDITIONAL RESIDENTIAL INFORMATION (PLEASE SELECT/COMPLETE ALL THAT APPLY)**

Model Name & Options: Seneca II Elevation 2 - Stone - Walkout - Sunroom  
 # of Bedrooms (SF): 4 # of efficiency units (MF\*): # of 1 BR (MF\*): # of 2 BR (MF\*): # of 3 BR (MF\*):  
 # Rooms: 12 # Full Baths: 3 # Half Baths: 1 # Fireplaces: 1  
 Garage/Carport Info:  Attached Garage  Detached Garage  Integral Garage  Carport  None  
 Basement/Foundation Info:  Slab on Grade  Post & Pier  Unfinished Basement  Finished Basement:  Full or  Partial  
 1<sup>st</sup> Fl Width: 48' 1<sup>st</sup> Fl Depth: 49.8' 2<sup>nd</sup> Fl Width: 48' 2<sup>nd</sup> Fl Depth: 45.8' Bsmt Width: 48' Bsmt Depth: 45.8'  
 Energy Method:  Prescriptive  Performance  UA Alternative  ERI Gross Area: 5403 sq ft Occupiable Area: 3170 sq ft

**AGREEMENT / DISCLAIMER REQUIRED**

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 ORIGINAL SIGNATURE: [Signature] DATE SIGNED: 6/15/21

**FOR OFFICE USE ONLY** CHECKS PAYABLE TO: DIRECTOR OF FINANCE OF HOWARD COUNTY

AGENCIES REQUIRED/APPROVALS:  
 PR  DPZ  DED  Health  SHA  OD

SUBMITTAL FEES: \$150.00 PAYMENT: CK# 11337 ACCEPTED BY: DROPBOX

PLAN'S  
 REF  
 2015  
 CODES  
 O/C

March 10, 2021

Mr. Jeff Williams, Program Supervisor  
Well & Septic Program  
Bureau of Environmental Health  
Howard County Health Department  
7178 Columbia Gateway Drive  
Columbia, Maryland 21046-2147

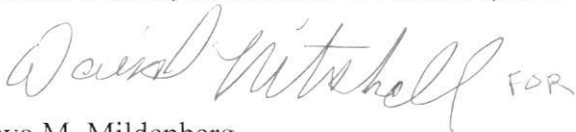
**RE: Ambreen Woods, Lot 2  
(F-17-036)  
Tax Map 8, Grid 5, Parcel 243**

Dear Mr. Williams:

On behalf of our client, we are submitting three (3) copies of Onsite Sewage Disposal Plan for your review and approval. We have addressed the one comment on locating the trenches more efficiently; please provide final comments so we can address the comments and submit final plans.

Thank you for your time and effort. If you have any questions or comments, please do not hesitate to contact this office.

Sincerely,  
MILDENBERG, BOENDER & ASSOC., INC.

A handwritten signature in cursive script that reads "David Mitchell" followed by the letters "FOR" in a smaller, blocky font.

Maya M. Mildenberg  
Vice President

Cc: Client

**SOILS TABLE**

SYMBOL	RATING	NAME	K FACTOR	MAP #
MoB	(B)	MANOR LOAM, 3-8% SLOPES	.24	3
MoC	(B)	MANOR LOAM, 8-15% SLOPES	.24	3

**SEPTIC TRENCH SIZING**

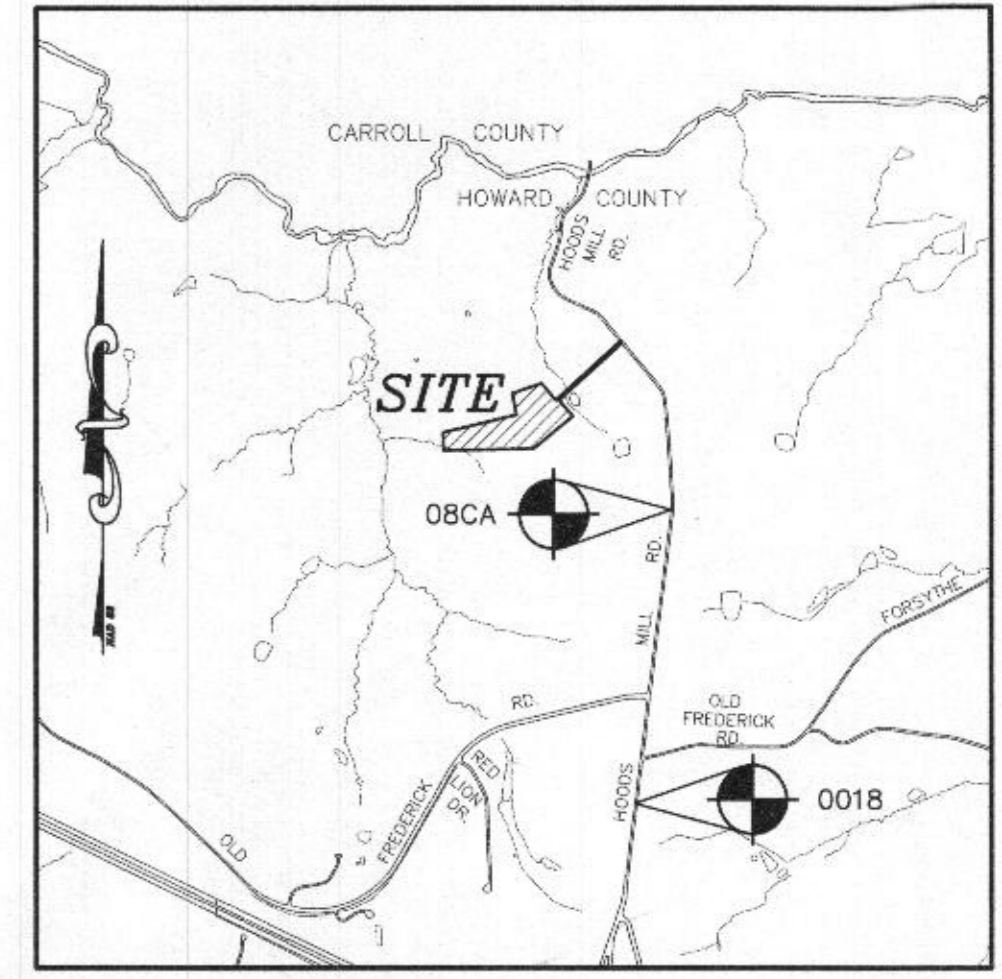
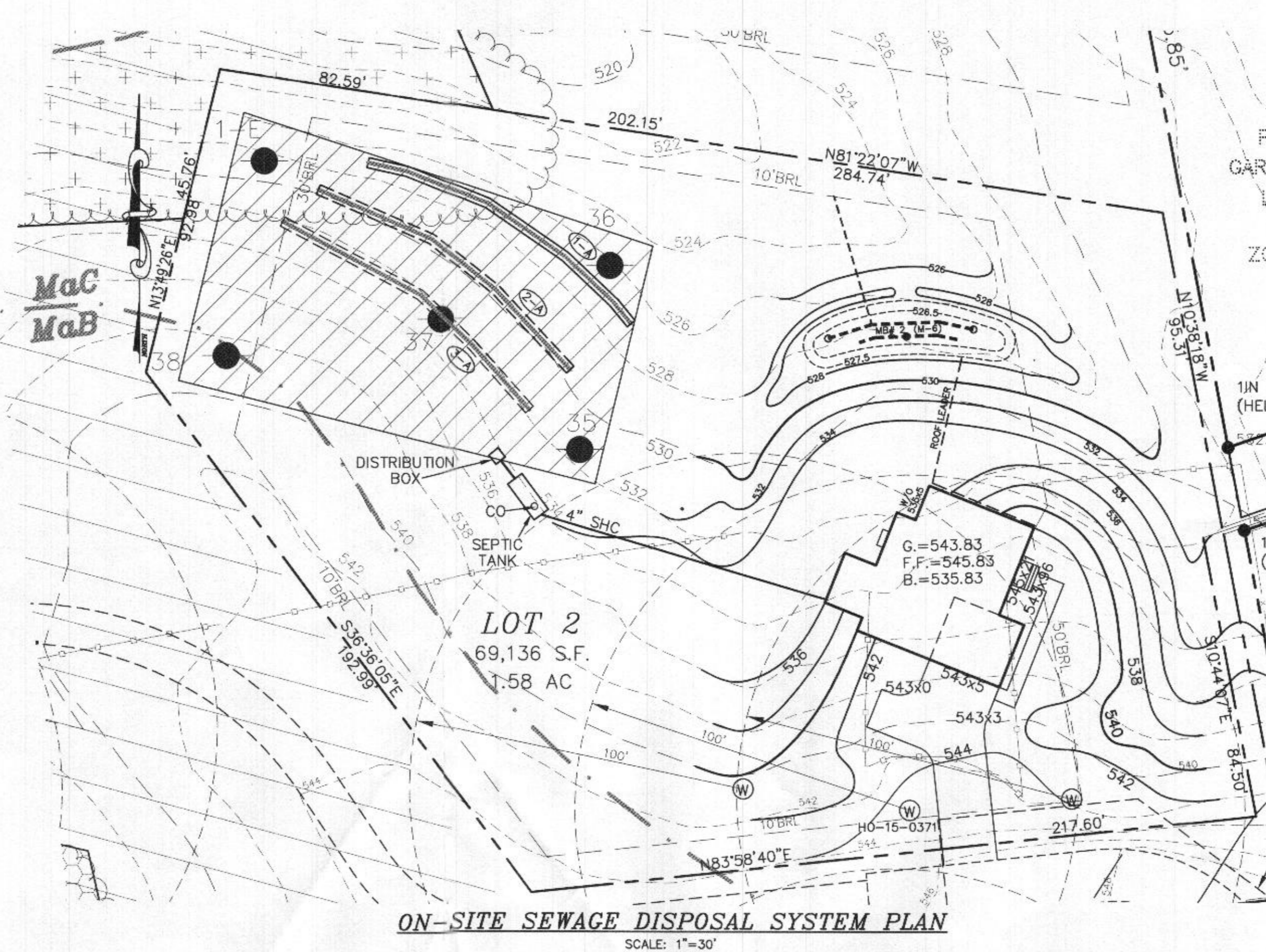
SYSTEM	APPLICATION RATE (GPD / SF)	MAXIMUM FLOW RATE (GPD)	AREA OF REQUIRED TRENCH (SF)	TRENCH WIDTH (FT)	LENGTH OF TRENCH (LF)	EFFECTIVE DEPTH BEGINS (FT)	TRENCH DEPTH (FT)	TRENCH REDUCTION FACTOR**	ADJUSTED LENGTH OF REQUIRED TRENCH (LF)	MINIMUM TRENCH SPACING (FT)	NUMBER OF TRENCHES	PROVIDED TRENCH LENGTH (FT)
PRIMARY	1.2	750	625	3	208.33	2.0	5.5	0.45	93.74	10.0	1	94
SECONDARY	1.2	750	625	3	208.33	2.0	5.5	0.45	93.74	10.0	1	94
TERTIARY	1.2	750	625	3	208.33	2.0	5.5	0.45	93.74	10.0	1	94

**SEPTIC TRENCH ELEVATIONS**

TRENCH	EX. GROUND ELEVATION	INVERT ELEVATION	BOTTOM OF TRENCH EL.
PRIMARY A	527.0	525.0	521.5
SECONDARY A	530.0	528.0	524.5
TERTIARY A	532.0	530.0	526.5

**SEWER SYSTEM CHART**

DESCRIPTION	VALUE
BASEMENT ELEVATION	535.83
INVERT OUT OF THE HOUSE	533.33
FINISHED GRADE AT SEPTIC TANK	534.0
TOP OF SEPTIC TANK	532.36
INVERT INTO SEPTIC TANK	531.53
INVERT OUT OF SEPTIC TANK	531.28
INVERT IN TO DISTRIBUTION BOX	531.14



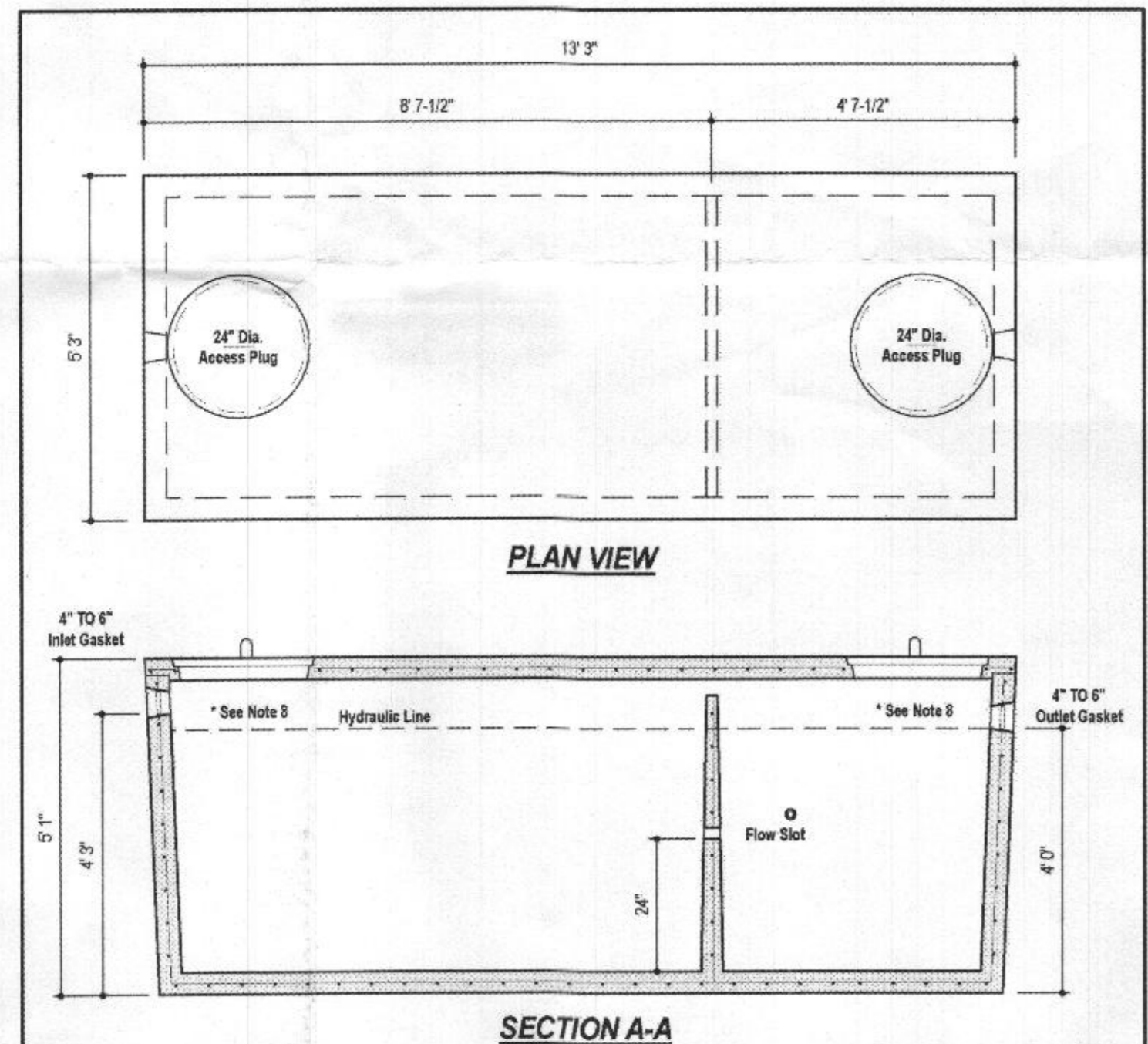
**VICINITY MAP**  
SCALE: 1"=2000'  
ADC MAP: 10 GRID: B-4

**GENERAL NOTES:**

- THE SUBJECT PROPERTY IS ZONED RC-DEO PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
- PARCEL BACKGROUND:**  
TAX MAP: 8  
PARCEL: 243  
LOT: 2  
DEED REFERENCE: 15248/128  
ELECTION DISTRICT: FOURTH  
ZONING: RR-DEO  
AREA: 1.58 AC±  
DPZ FILES: EGP-16-054, F-17-036  
ADDRESS: 14552 AMBREEN WAY, COOKSVILLE, MD 21723
- 2' TOPOGRAPHY FOR THE DEVELOPED AREAS IS BASED ON FIELD RUN SURVEY PERFORMED BY MILDENBERG, BOENDER & ASSOC., INC. ON OR ABOUT DECEMBER 2014.
- PRIVATE WELL AND SEPTIC WILL BE UTILIZED.
- THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF AT LEAST 10,000 SQ. FT. AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THIS EASEMENT SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWERAGE EASEMENT. RECORDATION OF A MODIFIED EASEMENT SHALL NOT BE NECESSARY.
- ANY CHANGES TO THE LOCATION OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED PLAN MAY BE REQUIRED.
- THE MAXIMUM EARTH COVER OVER THE TANK IS THREE (3) FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
- THE WELL TAG # HO-15-0371 HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
- ANY WELLS OR SEPTIC SYSTEMS LOCATED WITHIN 100' OF THE PROPERTY BOUNDARIES AND 200' DOWN GRADIENT OF ANY WELL AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.
- INDICATES PASSED TEST PIT.

Approved Septic System Plan  
Howard County Health Department  
*Roma Bernard* 7-26-21  
**ON-SITE SEWAGE DISPOSAL SYSTEM:** Signature *Roma Bernard* Date *7-26-21*

**RESIDENTIAL SYSTEM DESIGN:**  
5 BEDROOM HOUSE  
**SEPTIC TANK SIZE:**  
PER COMAR 26.04.02.05  
5 BEDROOMS, USE 1500 GALLONS  
**VOLUME PER DAY:**  
150 GALLONS PER DAY X # OF BEDROOMS  
150 X 5 = 750 GPD  
**PRIMARY, SECONDARY AND TERTIARY SYSTEM:**  
PER RATE = 2-5 MINUTES/INCH  
APPLICATION RATE = 1.2 GPD/SQ.FT.  
DESIGN FLOW = APPLICATION RATE = SQ.FT. OF TRENCH REQUIRED  
750 ÷ 1.2 = 625.0 SQ.FT.  
SQ.FT. REQUIRED ÷ WIDTH OF TRENCH = LENGTH OF TRENCH  
625 ÷ 3.0' = 208.33 FT  
**PRIMARY SYSTEM:**  
USE 42" OF GRAVEL BELOW DRAIN PIPE  
208.33 X 0.45 = 93.47 USE 94 FT  
USE ONE (1) TRENCH, REQUIRED LENGTH OF (93.47'); PROVIDED (94')  
A MINIMUM OF 10' BETWEEN TRENCHES UTILIZING SIDEWALL REDUCTION CREDIT.  
MINIMUM TANK CAPACITY = 1,500 GALLONS  
USE MAYER BROS. PRODUCT OR EQUIVALENT.  
**SECONDARY SYSTEM:**  
USE 42" OF GRAVEL BELOW DRAIN PIPE  
208.33 X 0.45 = 93.47 USE 94 FT  
USE ONE (1) TRENCH, REQUIRED LENGTH OF (93.47'); PROVIDED (94')  
A MINIMUM OF 10' BETWEEN TRENCHES UTILIZING SIDEWALL REDUCTION CREDIT.  
**TERTIARY SYSTEM:**  
USE 42" OF GRAVEL BELOW DRAIN PIPE  
208.33 X 0.45 = 93.47 USE 94 FT  
USE ONE (1) TRENCH, REQUIRED LENGTH OF (93.47'); PROVIDED (94')  
A MINIMUM OF 10' BETWEEN TRENCHES UTILIZING SIDEWALL REDUCTION CREDIT.



**DESIGN DATA & GENERAL NOTES**

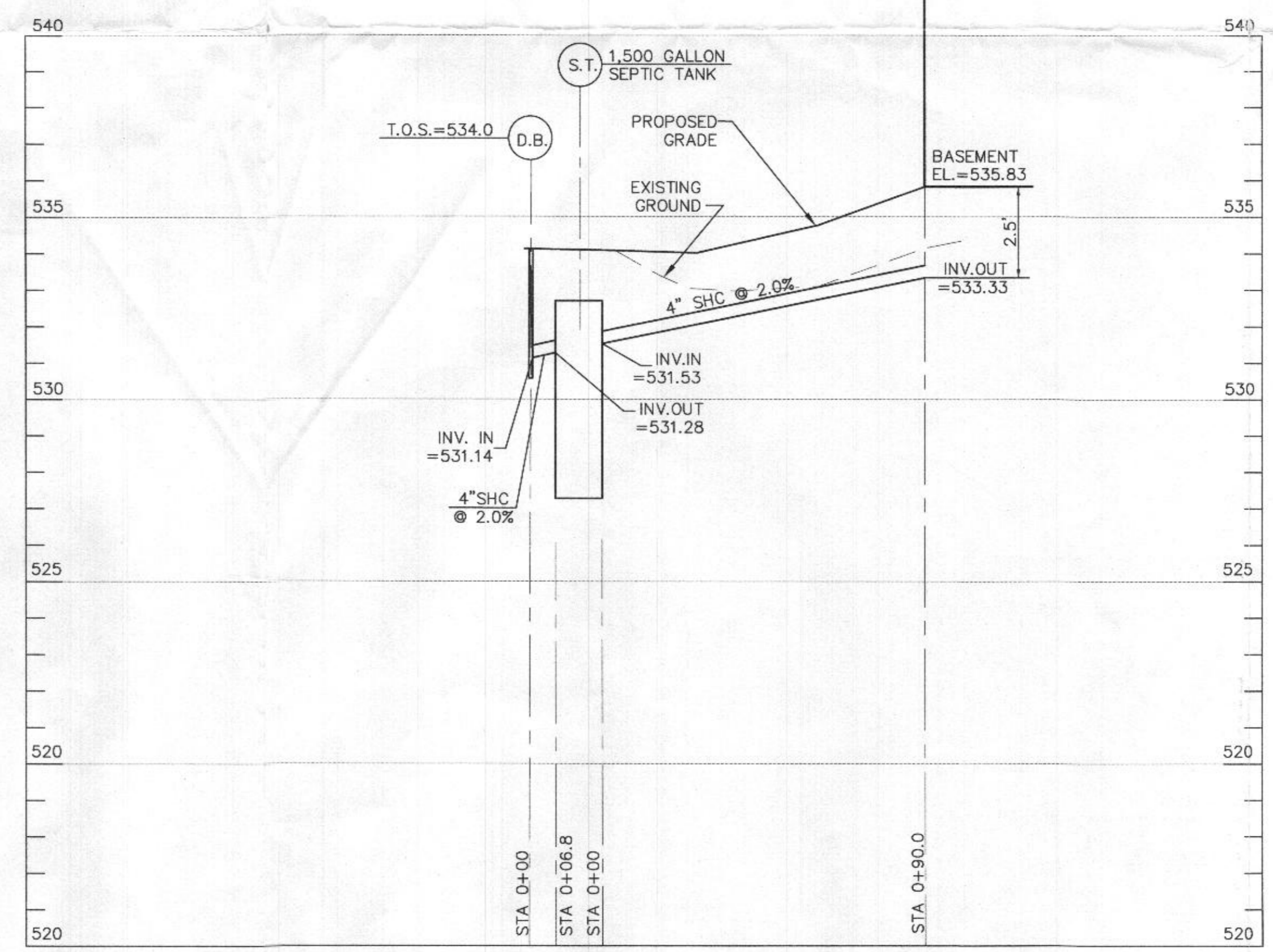
- Concrete strength Fc=4,000 p.s.i. @ 28 days. Density = 150 pcf.
- Cement - Portland Type III per ASTM C 150-02.
- Admixtures & plasticizers per ASTM C 260-90 & C 494-02.
- Reinforcing per ASTM A618. Size: #4 @ 12" cover.
- Top slab sealed with butyl rope mastic.
- 4" wall, base, & top thickness.
- Max 3/12' of cover.
- Depending on use of tank, Inlet & Outlet baffles may be required by code.

**WEIGHT = 16,750 lbs.**

**MAYER BROS., INC.**  
6264 Race Road  
Elkridge, Maryland 21075  
Tel: 410.796.1434  
Fax: 410.796.1432  
www.mayerbrospipe.com

**1,500 GALLON TANK (Non-Traffic) 2-Compartment**  
Stock Item

Dwg. No. 1500-2C No Scale Aug. 11, 2009



**ON-SITE SEWAGE DISPOSAL SYSTEM PROFILE**  
SCALE: HOR. 1"=30'  
VER. 1"=3'

- LEGEND**
- PASSED TEST PIT
  - (W) POTABLE WATER WELL LOCATION
  - CLEANOUT

P:\2024\18-010-AMBREEN WOODS (TWO) SEPTIC PLAN LOT 1.DWG

APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS  
COUNTY HEALTH OFFICER  
HOWARD COUNTY HEALTH DEPARTMENT  
DATE: 3/10/2021

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. 34027, EXP DATE 01/16/2021  
MICHAEL G. KRETSCH, P.E.  
DATE: 3/10/2021

**DEVELOPER**  
BROOKE BURES  
JOHN BURES  
443-452-7573  
750 MIDDLETRAIL COURT  
MOUNT AIRY, MARYLAND 21771

Project	18-010	date	MAR. 2021
Illustration	MM	approval	MM
scale	1"=30'	SA	SA

description	revisions
no.	date

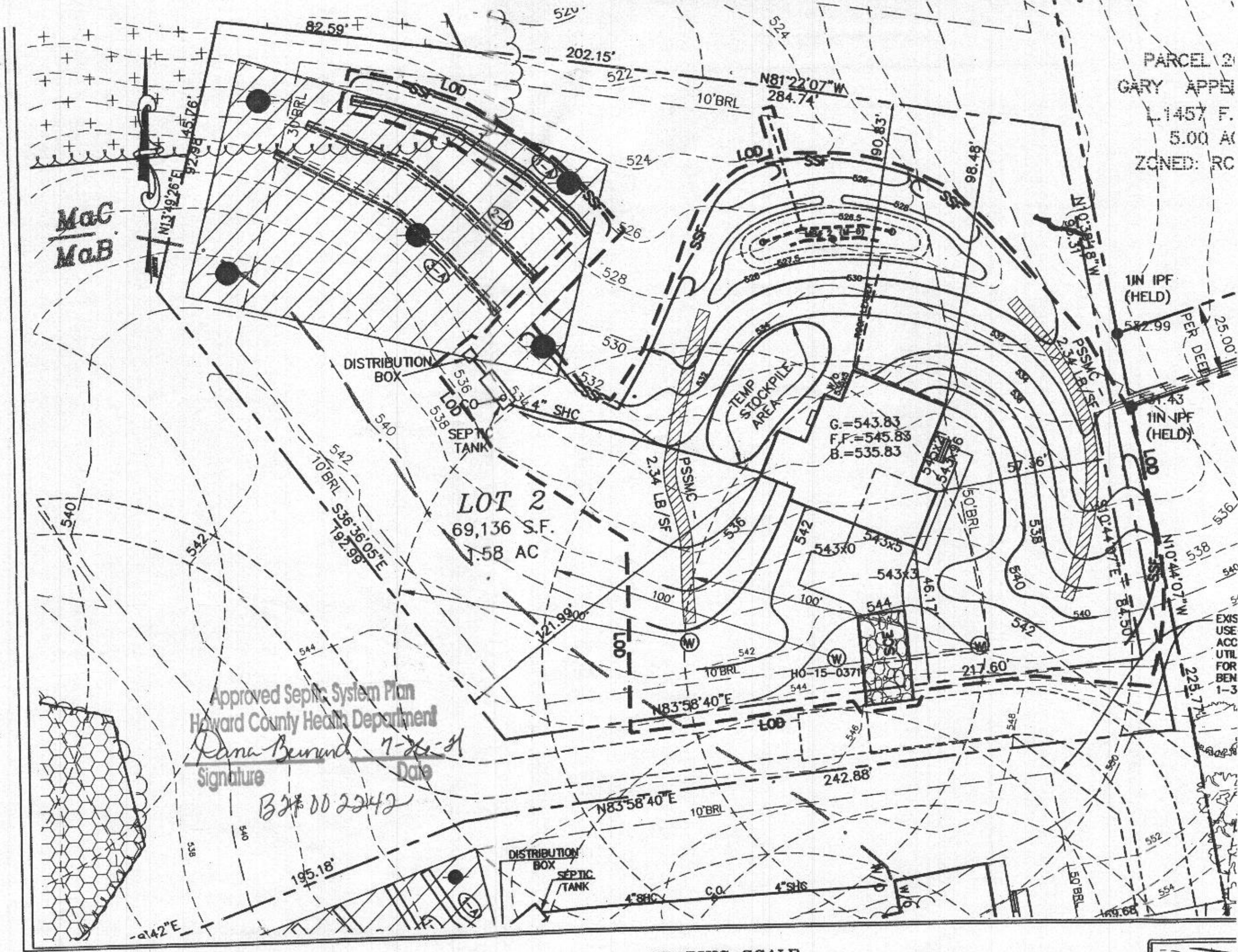
**AMBREEN WOODS, LOT 2**  
14552 AMBREEN WAY, COOKSVILLE, MD 21723  
TAX MAP 08, GRID 05, PARCEL 243, ZONED: RC-DEO  
FOURTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
ON-SITE SEPTIC DISPOSAL PLAN

**MILDENBERG, BOENDER & ASSOC., INC.**  
Engineers Planners Surveyors  
7850-B Cross Drive, Columbia, MD 21044  
(410) 997-0286 Tel. (410) 997-0288 Fax.

PARCEL 2  
 GARY APPEL  
 1.457 F.  
 5.00 AC  
 ZONED: RC

**SEDIMENT TRAP #2 (ST #1)**

DRAINAGE AREA:	0.45 AC.
TOTAL STORAGE REQUIRED:	1,620 C.F.
TOTAL STORAGE PROVIDED:	1,790 C.F.
WET STORAGE REQUIRED:	810 C.F.
WET STORAGE PROVIDED:	860 C.F.
DRY STORAGE REQUIRED:	810 C.F.
DRY STORAGE PROVIDED:	930 C.F.
EX. GROUND ELEV. @ OUTLET:	527.0
BOTTOM ELEVATION:	524.0
BOTTOM DIMENSIONS:	70'x2'
CLEANOUT ELEVATION:	325.0
WEIR LENGTH:	10'
WEIR CREST ELEV.:	527.0
TOP OF EMBANKMENT ELEV.:	528.0
WET STORAGE ELEV.:	526.0
TOP OF EMBANKMENT WIDTH:	4'
SIDE SLOPE:	2:1
OUTLET PROTECTION LENGTH:	10'
OUTLET PROTECTION DEPTH:	19"



Approved Septic System Plan  
 Howard County Health Department

*Rana Beard* 7-26-21  
 Signature Date

B2# 00 2242

GRAPHIC SCALE

### IECC CODE COMPLIANCE

2018 IECC CODE COMPLIANCE  
 R501 Climate zone 4A

R401.2 Compliance Method: Mandatory and Prescriptive Provisions

R402.1.1 Vapor Barrier: Wall assembly in the building thermal envelope shall comply with vapor retarder requirements of Section R702.1 of the International Residential Code, 2018 Edition.

R402.1.2 Attic Insulation: Raised-Roof Trusses R-49 R-38

R402.1.3 Flood-Prone Wall: R-20 or R-3 + R5 continuous insulation.

R402.1.4 Basement Wall Insulation: R-13/R-10 Foil-Faced Continuous, un-interrupted Batts Full Height

R402.1.5 Crawlspace Wall Insulation: R-15/R-10 Foil-Faced Continuous Batts Full Height extending from floor above to finish grade level and then vertically or horizontally an additional 2'-0".

R402.1.6 Floor Insulation over Unconditioned Space: R-19 batt insulation.

R402.1.7 Heated Slab Insulation: R-5 insulation shall be provided under the full slab area of a heated slab in addition to the required slab edge insulation R-value for slabs as indicated in the table. The slab edge insulation for heated slabs shall not be required to extend below the slab.

R402.1.8 Window U-Value/SHGC: .32 (U-Value)/.40 (SHGC)

R402.2.10 Slab on Grade Floor Less Than 12" Below Grade: R-10 Rigid Foam Board Under Slab Extending Either 2'-0" Horizontally or 2'-0" Vertically

R402.2.4 Attic Access: Attic access scuttle shall be weather-stripped and insulated R-49

R402.4 Building Thermal Envelope (air leakage): Exterior walls and penetrations shall be sealed per this section of the 2018 IECC with caulk, gaskets, weatherstripping or an air barrier of suitable material. Sealing methods between dissimilar materials shall allow sealing for differential expansion and contraction.

R402.4.1.1 Installation: The components of the building thermal envelope as indicated in Table

R402.4.1.1 shall be installed in accordance with the manufacturer's instructions and the criteria indicated in Table R402.4.1.1, as applicable to the method of construction.

R402.4.1.2 Building Thermal Envelope Tightness Test: Building envelope shall be tested and verified as having an air leakage rate of not exceeding 5 air changes per hour. Testing shall be conducted in accordance with ASTM E 1178 or ASTM E 1827 with (blower door) at a pressure of 0.2 inches a.g. (50 Pascals). Testing shall be conducted by an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the building inspector. T1B

R402.4.3 Fireplaces: Non wood-burning fireplaces shall have tight-fitting fire dampers or doors, and outdoor combustion air. Fireplace doors shall be listed and labeled in accordance with UL 127 Factory built fireplaces and UL 201 Factory fireplaces.

R402.4.4 Rooms containing fuel-burning appliances where open combustion air ducts provide combustion air to open combustion fuel-burning appliances, the appliances and combustion air shall be located outside the building thermal envelope or enclosed in a room isolated from the building thermal envelope.

Exceptions: 1. Direct vent appliances with both intake and exhaust pipes installed continuous to the outside. 2. Fireplaces and stoves complying with Section R402.4.2 and Section R1006 of the IRC.

R402.4.5 Recessed Lighting: Recessed luminaires installed in the building thermal envelope shall be sealed to limit air leakage.

R403.1 Controls: All ducting units shall have at least (1) programmable thermostat for each separate heating and cooling system per 2018 IECC Section 403.1.1.

R403.1.2 Where a heat pump system having supplementary electric resistance heat is used the thermostat shall prevent the supplementary heat from coming on when heat pump can meet heating load.

R403.3.1 Mechanical Duct Insulation: Supply and Return Ducts in Attic: R-6 minimum. R-6 and less than 3 inches. Supply and Return Ducts outside of conditioned space: R-6 minimum. All other ducts except those located completely inside the building thermal envelope: R-6 minimum. Ducts located under concrete slabs must be R-6 minimum.

R403.3.2 Duct Sealing: All ducts, air handlers, filter boxes shall be sealed. Joints and seams shall comply with section 1604.4.1 of the IRC. A duct tightness test ("Duct Blower" duct total leakage test) shall be performed on all homes and shall be verified by either a post-construction test or a rough-in test. Duct tightness test is not required if the air handler and all ducts are located within the conditioned space.

R403.5.6 Ducts Buried Within Ceiling Insulation: The supply and return ducts shall have an insulation R-value not less than R-6. At all points along each duct, the sum of the ceiling insulation R-value against and above the top of the duct, and against and below the bottom of the duct, shall be not less than R-6, excluding the R-value of the duct insulation. Sections of the supply duct that are less than 5 feet (154 mm) from the supply outlet shall not be required to comply with these requirements.

R403.6 Mechanical Ventilation: Outdoor (make-up and exhaust) air ducts to be provided with automatic or gravity damper that closes when the ventilation system is not operating.

R403.6.1 Whole-house mechanical ventilation system for efficiency to comply with TABLE R403.6.1.

R403.7 Equipment Sizing shall comply with R403.7.

R404.1 Lighting Equipment: A minimum of 90% of all area (lights) must be high-efficacy lamps. This contractor also responsible for generating Certificate of Compliance and affixing to electrical panel or within 6 feet of the electrical panel, and be readily visible.

R406.4 Energy-Related Compliance: Compliance based on an ERI analysis requires that the rated design be shown to have an ERI less than or equal to the appropriate value indicated in Table R406.4 when compared to the ERI reference design.

### DESIGN CRITERIA

ROOF SNOW LOAD (pounds per square foot)	30
WIND PRESSURE (pounds per square foot)	17 +/- ( 80 m.p.h.)
SEISMIC CONDITION BY ZONE	B
SUBJECT TO DAMAGE	WEATHERING SEVERE
	FROST LINE DEPTH 30
	TERMITE MODERATE
	DECAY MODERATE
WINTER DESIGN TEMP. FOR HEAT. FACILITIES	13'
RADON RESISTANT CONSTRUCTION REQ.	
FLOOD ZONE	
ALL WORK SHALL COMPLY WITH 2018 INTERNATIONAL RESIDENTIAL CODE W/ AMENDMENTS	



## BASE PLAN - THE SENECA II

### DRAWING LIST

0.00	TITLE SHEET	4.01	SECOND FLOOR PLAN
0.02	GENERAL NOTES	4.02	SECOND FLOOR OPTIONS
1.01	FRONT ELEVATION - 1	4.03	SECOND FLOOR OPTIONS
1.02	FRONT ELEVATION - 2	4.51	FIRST FLOOR PLAN BRACING
1.03	FRONT ELEVATION - 3	4.52	SECOND FLOOR PLAN BRACING
1.04	FRONT ELEVATION - 4	4.52a	WORST CASE SCENARIO BRACING
1.11	PARTIAL PLANS - ELEVATIONS 1 & 2	4.53	ELEVATION BRACING
1.12	PARTIAL PLANS - ELEVATIONS 3 & 4	4.54	BRACING DETAILS
1.21	RIGHT ELEVATION	5.01	SECTION A-A
1.31	LEFT ELEVATION	5.02	SECTION B-B
1.41	REAR ELEVATION	5.03	SECTION C-C
2.01	FOUNDATION PLAN	5.10	TYPICAL WALL SECTIONS
2.02	FOUNDATION DETAILS	E2.01	FOUNDATION - ELECTRICAL
2.03	FOUNDATION OPTIONS	E3.01	FIRST FLOOR - ELECTRICAL
3.01	FIRST FLOOR PLAN	E4.01	SECOND FLOOR - ELECTRICAL
3.02	FIRST FLOOR OPTIONS		
3.03	FIRST FLOOR OPTIONS		
3.04	FIRST FLOOR OPTIONS		
3.05	FIRST FLOOR OPTIONS		
3.06	FIRST FLOOR OPTIONS		

### AREA INFO

LEVEL	SQUARE FEET
BASEMENT	1,406 s.f.
GROUND FLOOR	1,516 s.f.
SECOND FLOOR	1,654 s.f.
SUB TOTAL	4,576 s.f.
GARAGE	417 s.f.
TOTAL FINISHED AREA	3,170 s.f.

PROFESSIONAL CERTIFICATION  
 I certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of Maryland.  
 License Number #14678  
 Expiration Date: 6/30/2022

**BURKARD HOMES, LLC**  
 5300 DORSEY HALL DRIVE - SUITE 102  
 ELLICOTT CITY, MARYLAND 21042  
 240-375-1052

# CONCRETE

- Concrete work shall conform to American Concrete Institute Standard 318-88
- Bottom of all footings shall be located a minimum of 36" for as per local code below finished grade. Space or depth of footing / foundation may vary according to local site or field conditions.
- All interior concrete slabs shall have a 1/2" x 10" U.L.T.M. or control joints. From 1/2" down down slabs for townhouses shall have a control joint between units.
- Concrete used in exposed areas (uplift) to freezing and thawing (both during construction and service life) shall be air-entrained in accordance with local code. Exterior flat-work shall be coated with an approved curing compound.
- Foundation walls of habitable rooms located below grade shall be waterproofed or water proofed using materials and methods approved by local building jurisdiction.
- All work shall comply to local code.

Type of Concrete Construction	Minimum Specified Compressive Strength
- Footings	3000 PSI
- Interior Basement Slabs	3000 PSI
- Foundation Walls	3000 PSI
- Garage and Exterior Slabs	3500 PSI

(or as per local code)

- Concrete joints shall conform to American Concrete Institute Standard 318-88
- All interior concrete footings and slabs shall have a minimum 28 Day Compressive Strength of 2500 psi - unless noted otherwise.

**REINFORCING RODS:** ASTM A-618 and A-305 MESH and 1/4" x 1/4" W/ 20" x 20" Reinforcing in footings is required where variations in soil conditions may exist.

- All interior slabs of 30 FEET or more in any dimension shall have U.L.P. Control Joints, or Fiber Reinforcement.

- Vapor barrier under all slabs EXCEPT garages: 6 MIL Polyethylene, Lap all edges 6", Lay over 4" Gravel bed.

- Exterior Concrete Slabs: 5/8 to 1" Air Entrained and shall have a minimum 28 Day Compressive Strength of 2000 psi - unless noted otherwise.

- Foundation Walls: Formed in place cast shall have a minimum 28 Day Compressive Strength of 3000 PSI. (SEE 4.07)

# MECH. PLUMB. ELEC.

- Mechanical contractor is responsible for the design and installation of mechanical systems including duct sizes, trunk and register sizes for air conditioning and heating. Systems shall be installed per manufacturer's specifications and recommendations and as per applicable building codes.
- Plumbing contractor is responsible for the design and installation of plumbing and piping. All plumbing, piping and fixtures shall be installed per manufacturer's specifications and recommendations and as per all applicable codes.
- Electrical contractor is responsible for the design and installation of electrical systems. All electrical work shall meet the requirements of the National Electric Code, the local power company and all applicable codes. Fixtures and apparatus are selected by the builder and shall be UL approved.

- Smoke & Carbon Monoxide detectors - Provide a minimum of one ceiling mounted fixture per floor, hard wired to a nearby circuit and interconnected for simultaneous activation in the battery backup. Provide detectors in each sleeping room if required by local code. Provide detectors outside each sleeping area within 10'-0" of each door.

- Fire suppression systems shall be installed as per local building code.
- All work shall comply to local code.

# MASONRY

- Minimum vertical distance of unbalanced fill measured from the top of the lower level slab to outside finished grade shall not exceed the following for unreinforced walls where unstable soil or ground water conditions do not exist.

Type of Wall	Height of Fill
8" C.M.U.	4'-0"
12" C.M.U. (hollow)	6'-0"
12" C.M.U. (solid)	7'-0"
8" poured concrete	7'-0"
12" poured concrete	8'-0"

- Masonry veneer shall be installed over 3/4" flt. or approved after radiant sheathing. Through-wall flashing and weeps shall be provided at any location where masonry space projects beyond the face of the veneer, i.e. bay windows, off-set chimneys, etc.

- Masonry veneer shall be attached and anchored in accordance with the local code requirements.
- Walls over 7'-0" or on unstable soil shall be engineered and certified by a registered professional engineer.

- Concrete masonry units shall meet ASTM C-90 Grade A solid block or ASTM C-145 Grade B hollow and be 28 DAYS OLD before installation. Minimum net compressor strength of block to be 3000 psi.

- Flashing over CRTU walls to be not less than 3/8" Portland cement, parging from footing to finished grade. Parging and poured concrete walls shall be covered with a coat of approved bituminous material applied at the recommended rate (see table).

- MASONRY LINTELS: Provide lightweight precast lintels for all openings and no recesses in CRTU walls. Provide (1) 4#8 link for each 4' of wall thickness. Reinforce each link with two #4 bars at top and bottom and 1/4" x 1/4" x 1/4" spaced 8" O.C., unless noted otherwise. Precast lintel to have minimum 8" bearing at each end. Sill lintels shall not support any superimposed loads.

- Use Type III mortar for masonry below grade in contact with earth.
- Use Type N mortar for exterior above-grade load bearing and non-load bearing walls, and for other applications where another type is so indicated.

# DOORS and WINDOWS

- Provide safety glazing as required by local code.

- Garage door into dwelling shall be fire rated minimum 45 minute or as per local building code. The threshold of the door opening between the garage and the adjacent interior space shall not be less than 4" above the garage door. (or as per local code)

- All doors and windows shall be installed in accordance with manufacturer's specifications, and as per local code.

# SITework

- GENERAL: These drawings do not cover shoring, grading or landscaping.

- Building foundations have been designed based on an assumed soil bearing capacity of 3000 P.S.F. Additional engineering is required if soil bearing capacity is less than 3000 P.S.F.

- Provide continuous perimeter foundation drainage in accordance with local code requirements. Where both interior and exterior drains are required, provide exterior 1 1/2" dia. braided pipe through 1/2" dia. of footing at max 8' o.c. Gravity drains shall lead to sump pits or to positive daylight discharge points.

- Slope all stoops, porches, decks and garage slabs away from building 1/8" minimum per foot.

- All work shall comply to local code.

# WEATHER/THERMAL

- Insulation for slab on grade construction shall begin at the inside intersection of the slab and the foundation wall and shall extend for a minimum distance of 24" above the inside face of the foundation wall and horizontally 24" under the slab. For unheated slabs a material with an R-value of 42 is required, for heated slabs an R-value of 65 is required (or as per local code)

- 6" Insulation-compressible material shall be installed under all stud plates (foundation wall and wood floor systems) and sole plates (slab on grade)

R-Value	Thickness	Location
R-11 FBIS	5 1/2"	Basement Slabs
R-13	3 1/2"	2x4 Walls (exterior)
R-21	6 1/2"	2x6 Walls (exterior)
R-15	5 1/2"	Crawl Space
R-19	7"	Floors exposed to unheated condition
R-49 Batt	17"	Roof
R-45 Blown		Apply blown insulation as required by manufacturer's specifications

- Provide vents as per local code.

- Flashing: Pre-finished aluminum or equal at all roof eaves, chimneys, roof openings, pipes, vent pipes, ridges, corners and where roof intersects wall.

- Contractor shall maintain in all circumstances proper fire, sound and insulation ratings when penetrating through walls, floors, ceilings and roofs.

- All miscellaneous penetrations during construction shall be patched and repaired according to manufacturer's specifications and as per code.

- All exterior joints between windows, doors and other surfaces shall be caulked and sealed appropriately.

- DAMPROOFING: Apply (1) coat of asphalt emulsion to exterior of a masonry grade walls at basement conditions. When habitable space occurs below grade, provide waterproofing membrane, aqueous based elastomeric, vinyl acrylic, acrylic 36 mil. min. thickness or other approved equal.

- SLAB VAPOR BARRIER: 6 MIL polyethylene sheet shall extend on drainage overlay all edges 6".

- 6" SL SEALER: 16" x 5 1/2" compressible fiberglass beneath all exterior sill plates or other approved sill sealer.

- Provide approved corrosion-resistant flashing at the intersections of masonry and wood frame construction: over projecting wood trim, sheds, decks, porches, etc. attach to wood frame construction at wall and roof intersections at chimney and roof intersections in roof valleys at a roof penetration; and at all openings if recommended by window and door manufacturers.

- Sill penetrations exposed to outside or within 30" of grade: 45x24", either vertical or horizontal over slab intersection.

- ROOFING: unless noted otherwise, roofing shall be min 200# Class 'C' Fiberglass based asphalt shingles over 5 pound felt. Edge flashing to a point 24" inside or interior face of wall shall be also installed at the owner's discretion.

- WALLS: B-EATHING: As shown on drawings and listed in accordance with MANUFACTURER'S RECOMMENDATIONS.

- GUTTERS AND LEADERS: 0.03" Pre-finished aluminum gutters with .02" pre-finished aluminum leaders. Lead to downspouts or collector as required.

# MISCELLANEOUS

- Pre-built fireplace shall be UL approved and installed according to code and manufacturer's specifications and recommendations.

- Chimney shall extend a minimum of 2'-0" above any roof structure within 10'-0".
- Provide overflow pans and drains for hot tub/appliances when located on bedroom level or as noted on plans.

- Provide 2 1/2" x 4" attic access with pull down light (or as per local code)

- Kitchen and bath plans are approximate. See manufacturer's plans for exact layout and dimensions.

# WOOD

- Wall bracing shall be installed as per local code.

- All roof trusses and floor systems shall be engineered by others.

- All roof trusses and floor systems shall be braced and installed per manufacturer's specifications and as per local code. See manufacturer's plans for exact layout and construction.

- All trusses are stressed and certified by a registered engineer and meet TP manufacturer's minimum requirements.

- See drawings for type of floor construction.
  - Tongue and groove floor decking glued and nailed or (SPLF) 2x8 or 2x10 or 2x12 floor joists at 8" o.c. exterior to meet the American Plywood Association 5x8-1F floor system
  - Tongue and groove floor decking glued and nailed or pre-engineered wood joists/trusses at 24" o.c. exterior to meet the American Plywood Association 5x8-1F floor system.

- Firestopping shall be provided to cutoff concealed draft openings and to form an effective fire barrier between stories as per local code.

- Structural lumber to have minimum bending stress of 1200 psi

- All exterior walls are 2x4 stud 16" centers, minimum 6PF stud grade unless otherwise noted.

- All interior walls are 2x4 stud 16" centers, minimum 6PF stud grade unless otherwise noted.

- All opening headers to be 2x10's unless noted otherwise.

- Joist hangers to be installed as required.

- All wood less than 8" from grade shall be pressure treated. All solid poles or sills shall be pressure treated.

- Provide bracing at all structural members as required by local code.

- All materials shall be installed per manufacturer's specifications and as per applicable building codes.

# METAL

- Strap anchors or anchor bolts shall be local code and building inspector approved. Minimum 2 strap/bolts per section of purlin 6" Max. from each end and with intermediate straps/bolts at 6'-0" o.c. maximum. (or as per local code)

- Galvanized metal brick ties shall be installed as per local code.

- All steel shall conform to ASTM Specs for A-36 Steel.

- All steel designed for minimum bending stress of 24,000 psi

- Metal Joist hangers (standard wood lodger) shall be used where required as joist without direct bearing and be 3/8 GA. galvanized steel. Use all sizes specified by the manufacturer.

- Veneer nail shall be 1" long 22 GA., galvanized steel installed 24" O.C. horizontally and 8" O.C. vertically.

- Steel lintels for all openings and recesses in brick or brick faced masonry shall not specifically detailed. Provide (1) steel angle for each 4' of wall thickness. Steel angles to have minimum bearing in each end. Horizontal leg shall be 3/8", unless noted otherwise.

- LITE. SCHEDULE (UNLESS NOTED OTHERWISE ON PLANS):

-1	3 1/2" x 1/2" x 1/16"	STEEL ANGLE	UP TO 3' OPG.
-2	4" x 3/4" x 1/16"	STEEL ANGLE	3' TO 5' OPG.
-3	5" x 3/4" x 1/8"	STEEL ANGLE	5' TO 6'-6" OPG.
-4	6" x 1/2" x 1/8"	STEEL ANGLE	UP TO 8' OPG.
-5	6" x 6" x 1/8"	STEEL ANGLE	UP TO 10'-0"
-6	8" OR 8" x 4" x 1/8"	STEEL ANGLE	18' GARAGE

- Lintels shown shall not support any superimposed loads.

- All steel angles in masonry walls are to be flange end painted.
- Paint all exterior ferrous or galvanized metal EXCEPT complying pre-finished factory items.

- All work shall comply to local code.

# GENERAL NOTES

- All work shall comply to all applicable local codes.
- All construction shall be classified as one family to allow for the following:
  - Use Group R-4 under the 2018 International Residential Code.

- All work shall comply to International Energy Conservation Code, 2018 edition.
- These plans are subject to modification as necessary to meet code requirements and to facilitate mechanical/plumbing installation or to incorporate design improvements. The Architect and the Owner reserves the right to make any changes, for any reason at any time providing they comply with the code.

- The Sub-Contractor shall prepare and coordinate all drawings. When a discrepancy or an error or omission exists, the contractor shall comply with the code and correct the Architect and the Owner in writing for proper adjustment.

- These plans are not to be used for Construction purposes. Written dimensions and notes supersede all scaled references.
- In the event certain features of Construction are not fully shown or the drawings their construction shall be of the same character as for similar conditions that are shown or noted.

- Inhabitance garages in dwelling units shall be separated from all adjacent living space with fire separation as required by local code.

- Field verify ALL existing dimensions

# DESIGN - LIVE LOADS

RECOMMENDED MINIMUMS:		
- Ground Snow Load	55 psf	
- Roof	40 psf	
- Bleaching Floors	30 psf	
- Living Floors	40 psf	
- Exterior Decks	60 psf	
- Stairs	100 psf	
- Garage Slab	50 psf	ATTC AREAS
- Landscaping	7 psf	UNACCESSIBLE: 10PSF
- Dead Load	10 psf	ACCESSIBLE: 20 PSF
- Overlays	20 psf	WIND LOAD: 15 PSF EXPOSURE C)
		FLD. PRESSURE: 50 PCF MAXIMUM

(or as per local code) at any point in any direction. LOADS GREATER THAN 30 PCF REQUIRE FOUNDATION WALLS TO BE ENGINEERED.

# STAIR CRITERIA

- INTERIOR and EXTERIOR STAIRS
  - All stairs shall comply with all local codes.
  - Minimum finish width: 36"
  - Minimum finished headroom height: 6'-8"
  - Minimum riser height: 7 3/4"
  - Minimum tread depth: 11"
  - Maximum space between balusters: 4"
  - Handrail height shall not be less than 34" or greater than 38" and may not project more than 3 1/2" into stair width.

- Provide a minimum of 1 1/2" space between handrail and wall.

- Stair winter shall have a minimum inside width of 6" and a minimum of a 9" tread when measured 12" from inside corner.

- Stair landings shall be a minimum of 36" x 36"

- Stairways with 3 or more risers are required to have a handrail.

# SPECIALTIES

- Concrete works shall conform to American Concrete Institute Standard 318-88

- FIREPLACES: Pre-built UL Approved, selected by the owner, and installed according to code and manufacturer's recommendations, IF APPLICABLE.

- Toilet and bath accessories per plan or by owner.

- MIRRORS: TBD by builder or by owner.

- Provide two metal bars for each full bath, one per powder room.

- Provide either shower rods 60" L.V., or tempered or safety treated glass doors per owner.

PROFESSIONAL CERTIFICATION  
I certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of Maryland.  
License Number: #14478  
Expiration Date: 6/31/2022

Jonathan Brown  
License Number #14478

**BURKARD HOMES, LLC**  
5300 DORSEY HALL DRIVE - SUITE 102  
ELLICOTT CITY, MARYLAND 21042  
240-375-1052

Seneca Base Plan  
SCALE: 3/16" = 1'-0" PRINT: Monday, July 12, 2021  
REVISED BASE SET  
04-38-18

GENERAL INFO  
**0.02**

PROFESSIONAL CERTIFICATION  
 I certify that these documents  
 were prepared or approved  
 by me, and that I am a duly  
 licensed professional  
 architect under the laws of the  
 State of Maryland,  
 License Number #14478  
 Expiration Date: 1/30/2022

Jonathan Eves  
 License Number #16678

ALL TRUSS OVERHANGS/EAVES ARE SHOWN AT 12"



**NOTE:**  
 STAIRS WITH 2 OR MORE RISERS SHALL BE PROVIDED WITH HANDRAILS. HANDRAILS SHALL BE A MINIMUM OF 34" IN HEIGHT AND NOT MORE THAN 38" IN HEIGHT. RAILS ARE TO BE MEASURED VERTICALLY FROM THE NOSING OF THE TREADS.

PORCHES, DECKS, BALCONIES OR RAISED FLOOR SURFACES LOCATED MORE THAN 30" ABOVE THE FLOOR OR GRADE BELOW SHALL HAVE GUARDS A MINIMUM OF 36" HIGH.

RISERS ARE TO BE CLOSED SUCH THAT THE OPENING BETWEEN THE TREADS DOES NOT PERMIT THE PASSAGE OF A 4' DIA SPHERE.

**BURKARD HOMES, LLC**  
 5300 DORSEY HALL DRIVE - SUITE 102  
 ELLICOTT CITY, MARYLAND 21042  
 240-375-1052

**Seneca Base Plan**  
 SCALE: 3/16" = 1'-0"  
 04-30-18  
 PRINT: Monday, July 12, 2021  
 REVISED BASE SET

FRONT  
 ELEV  
**1.01A**

**SOILS TABLE**

SYMBOL	RATING	NAME	K FACTOR	MAP #
MoB	(B)	MANOR LOAM, 3-8% SLOPES	.24	3
MoC	(B)	MANOR LOAM, 8-15% SLOPES	.24	3

**SEPTIC TRENCH SIZING**

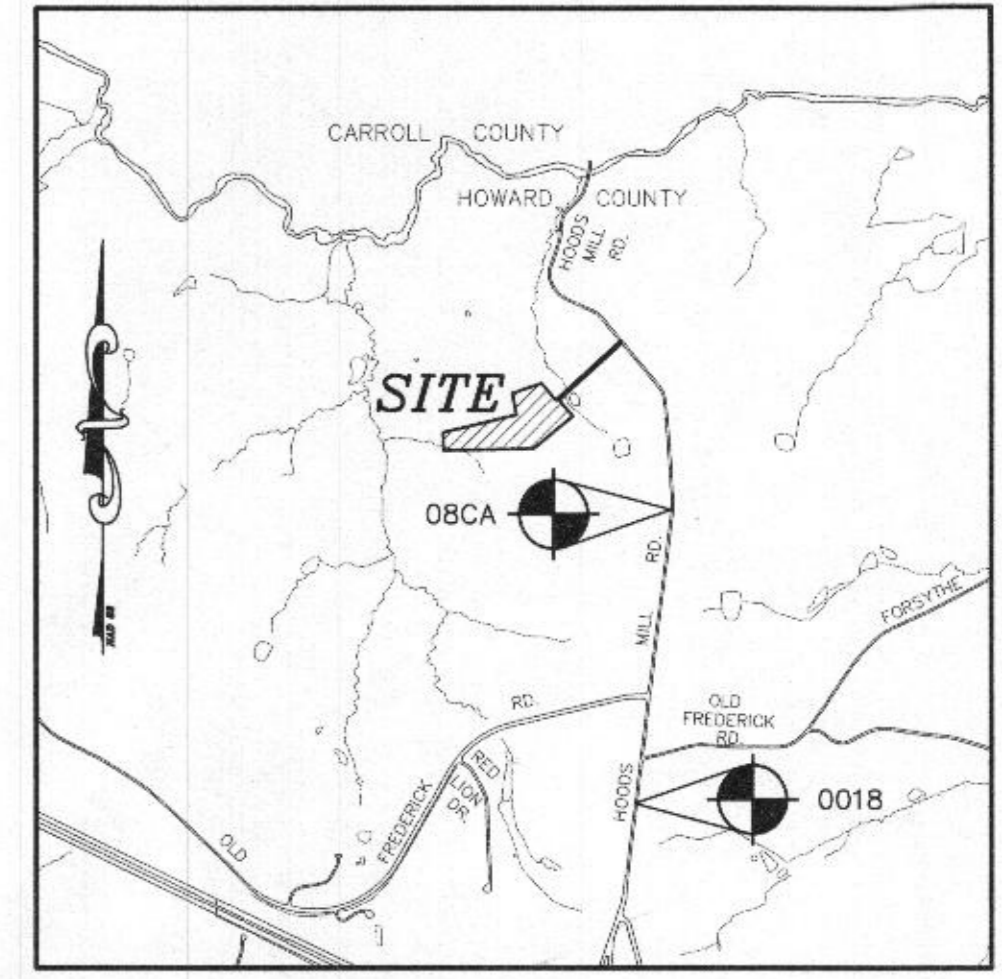
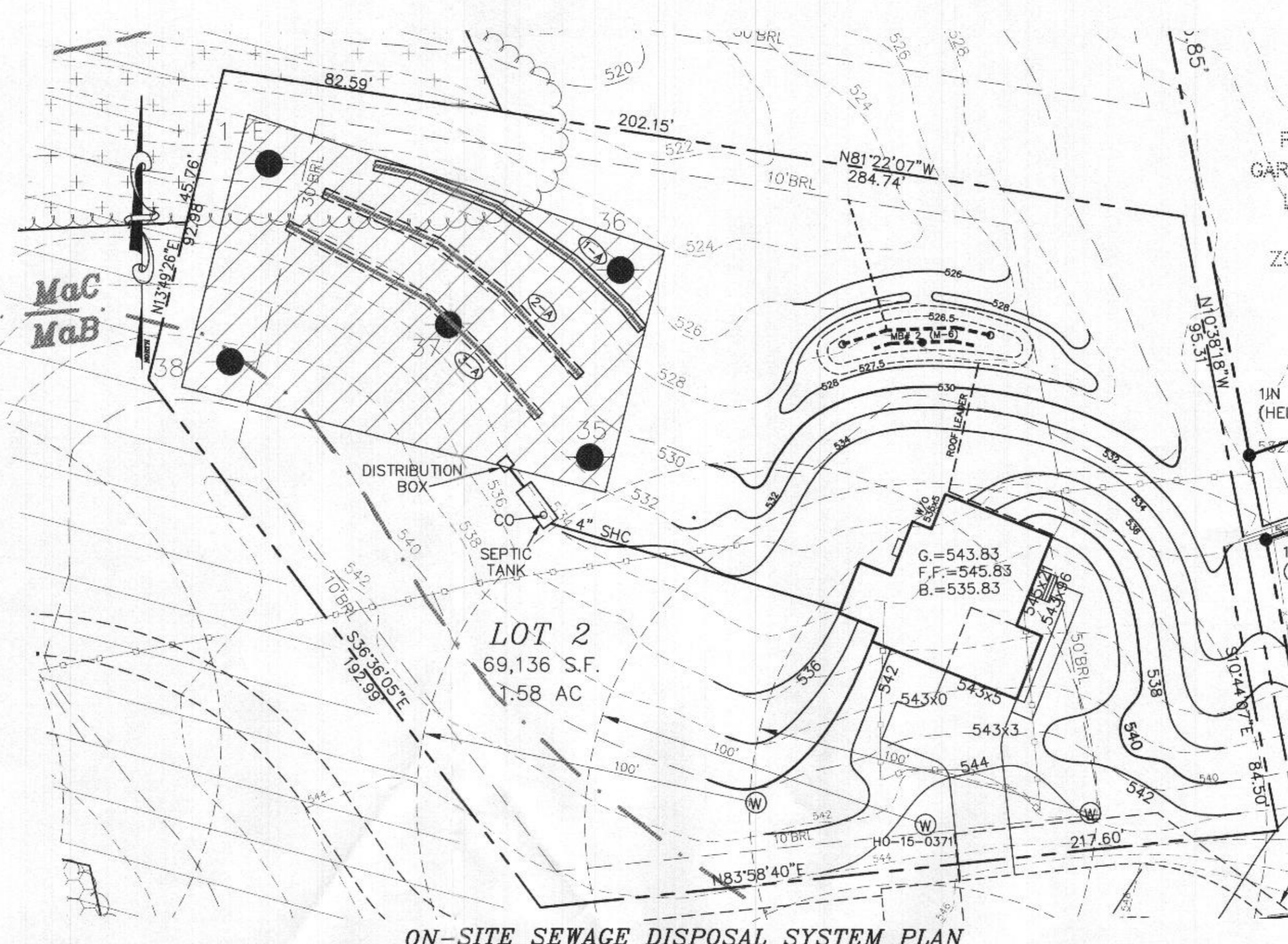
SYSTEM	APPLICATION RATE (GPD / SF)	MAXIMUM FLOW RATE (GPD)	AREA OF REQUIRED TRENCH (SF)	TRENCH WIDTH (FT)	LENGTH OF TRENCH (LF)	EFFECTIVE DEPTH BEGINS (FT)	TRENCH DEPTH (FT)	TRENCH REDUCTION FACTOR**	ADJUSTED LENGTH OF REQUIRED TRENCH (LF)	MINIMUM TRENCH SPACING (FT)	NUMBER OF TRENCHES	PROVIDED TRENCH LENGTH (FT)
PRIMARY	1.2	750	625	3	208.33	2.0	5.5	0.45	93.74	10.0	1	94
SECONDARY	1.2	750	625	3	208.33	2.0	5.5	0.45	93.74	10.0	1	94
TERTIARY	1.2	750	625	3	208.33	2.0	5.5	0.45	93.74	10.0	1	94

**SEPTIC TRENCH ELEVATIONS**

TRENCH	EX. GROUND ELEVATION	INVERT ELEVATION	BOTTOM OF TRENCH EL.
PRIMARY A	527.0	525.0	521.5
SECONDARY A	530.0	528.0	524.5
TERTIARY A	532.0	530.0	526.5

**SEWER SYSTEM CHART**

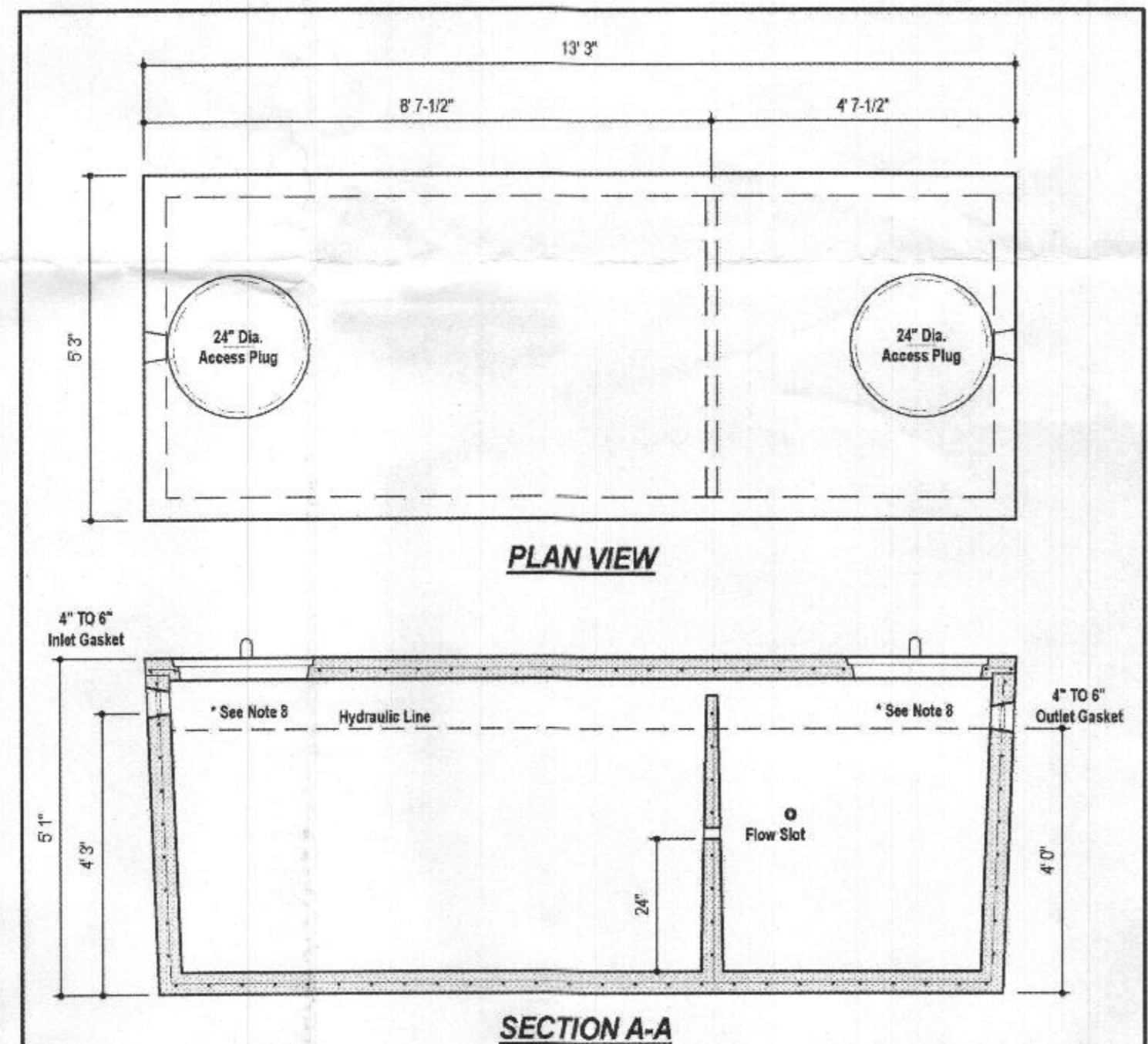
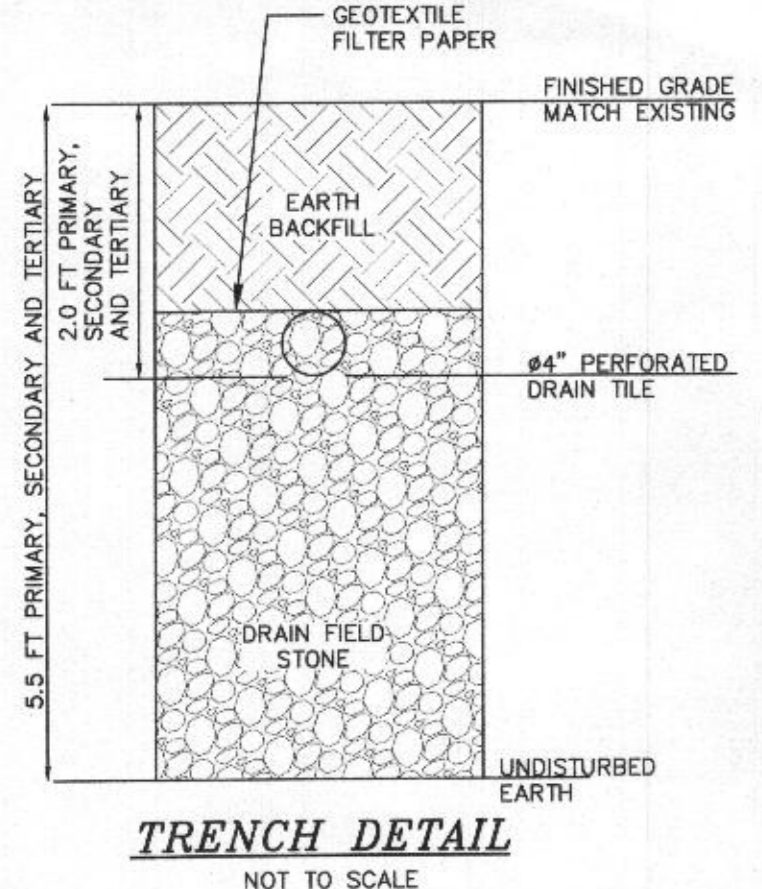
DESCRIPTION	VALUE
BASEMENT ELEVATION	535.83
INVERT OUT OF THE HOUSE	533.33
FINISHED GRADE AT SEPTIC TANK	534.0
TOP OF SEPTIC TANK	532.36
INVERT INTO SEPTIC TANK	531.53
INVERT OUT OF SEPTIC TANK	531.28
INVERT IN TO DISTRIBUTION BOX	531.14



**VICINITY MAP**  
SCALE: 1"=2000'  
ADC MAP: 10 GRID: B-4

**GENERAL NOTES:**

- THE SUBJECT PROPERTY IS ZONED RC-DEO PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
- PARCEL BACKGROUND:**  
TAX MAP: 8  
PARCEL: 243  
LOT: 2  
DEED REFERENCE: 15248/128  
ELECTION DISTRICT: FOURTH  
ZONING: RR-DEO  
AREA: 1.58 AC±  
DPZ FILES: EGP-16-054, F-17-036  
ADDRESS: 14552 AMBREEN WAY, COOKSVILLE, MD 21723
- 2' TOPOGRAPHY FOR THE DEVELOPED AREAS IS BASED ON FIELD RUN SURVEY PERFORMED BY MILDENBERG, BOENDER & ASSOC., INC. ON OR ABOUT DECEMBER 2014.
- PRIVATE WELL AND SEPTIC WILL BE UTILIZED.
- THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF AT LEAST 10,000 SQ. FT. AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THIS EASEMENT SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWERAGE EASEMENT. RECORDATION OF A MODIFIED EASEMENT SHALL NOT BE NECESSARY.
- ANY CHANGES TO THE LOCATION OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED PLAN MAY BE REQUIRED.
- THE MAXIMUM EARTH COVER OVER THE TANK IS THREE (3) FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
- THE WELL TAG # HO-15-0371 HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
- ANY WELLS OR SEPTIC SYSTEMS LOCATED WITHIN 100' OF THE PROPERTY BOUNDARIES AND 200' DOWN GRADIENT OF ANY WELL AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.
- INDICATES PASSED TEST PIT.



**DESIGN DATA & GENERAL NOTES**

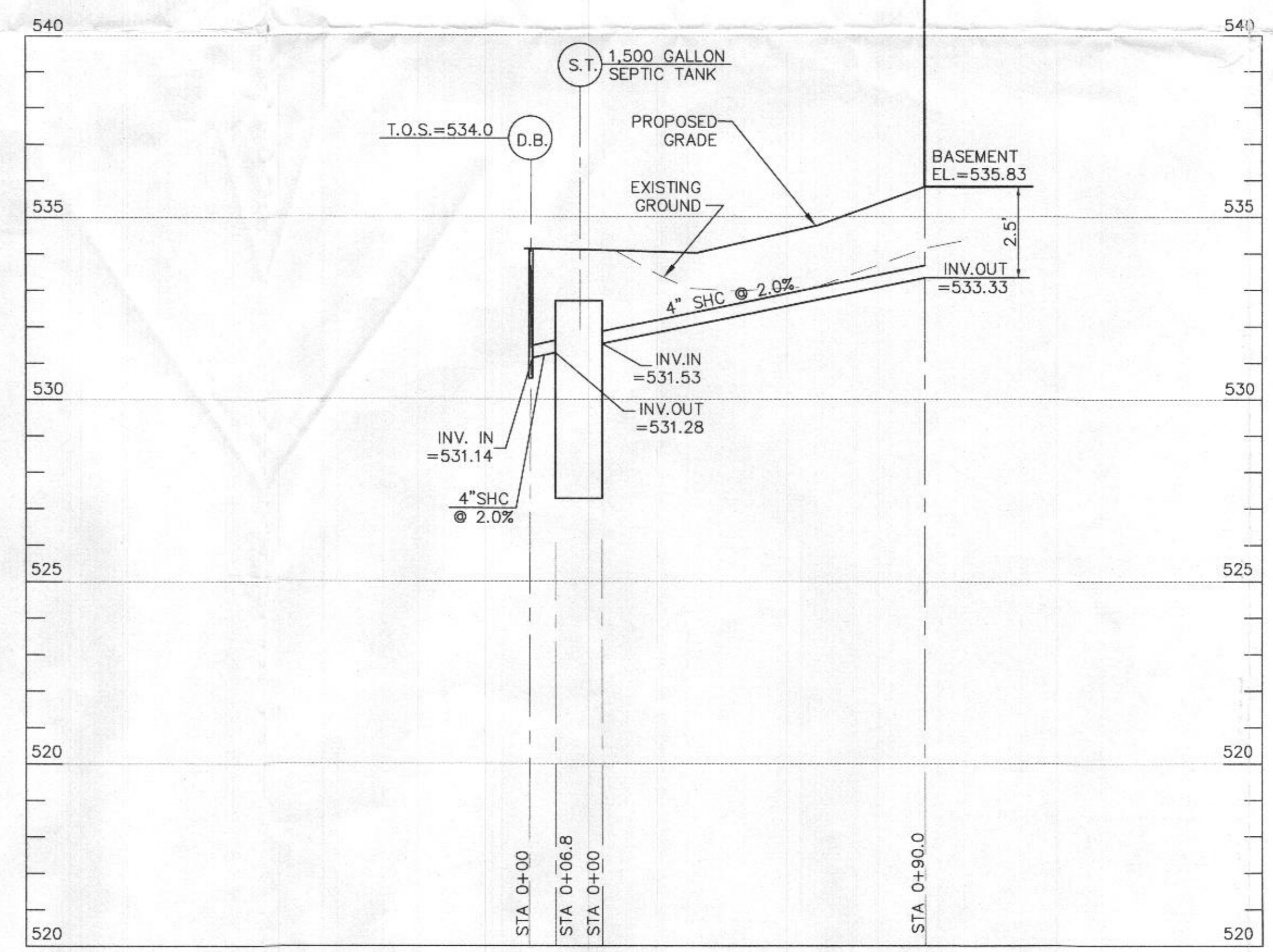
- Concrete strength Fc=4,000 p.s.i. @ 28 days. Density = 150 pcf.
- Cement - Portland Type III per ASTM C 150-02.
- Admixtures & plasticizers per ASTM C 260-90 & C 494-02.
- Reinforcing per ASTM A 618. Min. 1/4" cover.
- Top slab sealed with butyl rope mastic.
- 4" wall, base, & top thickness.
- Max 3/12' of cover.
- Depending on use of tank, Inlet & Outlet baffles may be required by code.

**WEIGHT = 16,750 lbs.**

**MAYER BROS., INC.**  
6264 Race Road  
Elkridge, Maryland 21075  
Tel. 410.796.1434  
Fax. 410.796.1432  
www.mayerbrospipe.com

**1,500 GALLON TANK (Non-Traffic) 2-Compartment**  
Stock Item

Dwg. No. 1500-2C No Scale Aug. 11, 2009



**ON-SITE SEWAGE DISPOSAL SYSTEM PROFILE**  
SCALE: HOR. 1"=30'  
VER. 1"=3'

- LEGEND**
- PASSED TEST PIT
  - (W) POTABLE WATER WELL LOCATION
  - CLEANOUT

Approved Septic System Plan  
Howard County Health Department  
*Roma Bernard* 7-26-21  
**ON-SITE SEWAGE DISPOSAL SYSTEM:** Signature *Roma Bernard* Date *7-26-21*

RESIDENTIAL SYSTEM DESIGN:  
5 BEDROOM HOUSE

SEPTIC TANK SIZE:  
PER COMAR 26.04.02.05  
5 BEDROOMS, USE 1500 GALLONS

VOLUME PER DAY:  
150 GALLONS PER DAY X # OF BEDROOMS  
150 X 5 = 750 GPD

**PRIMARY, SECONDARY AND TERTIARY SYSTEM:**  
PERC RATE = 2-5 MINUTES/INCH  
APPLICATION RATE = 1.2 GPD/SQ.FT.  
USE ONE (1) TRENCH, REQUIRED LENGTH OF (93.47'); PROVIDED (94')  
A MINIMUM OF 10' BETWEEN TRENCHES UTILIZING SIDEWALL REDUCTION CREDIT.  
MINIMUM TANK CAPACITY = 1,500 GALLONS  
USE MAYER BROS. PRODUCT OR EQUIVALENT.

**PRIMARY SYSTEM:**  
USE 42" OF GRAVEL BELOW DRAIN PIPE  
208.33 X 0.45 = 93.47 USE 94 FT

**SECONDARY SYSTEM:**  
USE 42" OF GRAVEL BELOW DRAIN PIPE  
208.33 X 0.45 = 93.47 USE 94 FT

**TERTIARY SYSTEM:**  
USE 42" OF GRAVEL BELOW DRAIN PIPE  
208.33 X 0.45 = 93.47 USE 94 FT

Project	date	18-010	MAR. 2021
Illustration	MM	MM	MM
scale	1"=30'		
approval			

description	no.	date
revisions		

**AMBREEN WOODS, LOT 2**  
14552 AMBREEN WAY, COOKSVILLE, MD 21723  
TAX MAP 08, GRID 05, PARCEL 243, ZONED: RC-DEO  
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
ON-SITE SEPTIC DISPOSAL PLAN

**MILDENBERG, BOENDER & ASSOC., INC.**  
Engineers Planners Surveyors  
7850-B Cross Drive, Columbia, MD 21044  
(410) 997-0286 Tel. (410) 997-0288 Fax.

F:\2024\18-010-AMBREEN WOODS (TWO) SEPTIC PLAN LOT 1.DWG  
M:\2024\18-010-AMBREEN WOODS (TWO) SEPTIC PLAN LOT 1.DWG

APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS  
COUNTY HEALTH OFFICER  
HOWARD COUNTY HEALTH DEPARTMENT  
DATE



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. 34027, EXP DATE 01/16/2021  
MICHAEL G. KRETSCHE, P.E.  
DATE: 3/10/2021

**DEVELOPER**  
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