

Adams Soil Consulting, PLLC
1676 Mitchell Road
Angier, NC 27501
919-414-6761
alexadams@bcsoil.com

December 11, 2023
Project #1763

“This AOWE/PE submittal is pursuant to and meets the requirements of G.S. 130A-336.2

RE: 510 Ray Byrd Road – Lillington, NC - 3-bedroom Single Family Residence

To whom it may concern:

Adams Soil Consulting (ASC) conducted a preliminary soil evaluation on the above referenced parcel to determine the areas of soils which are suitable for subsurface wastewater disposal systems (conventional & LPP). The soil/site evaluation was performed using hand auger borings during moist soil conditions based on the criteria found in the State Subsurface Rules, 15ANCAC 18A .1900 “Laws and Rules for Sewage Treatment and Disposal Systems”. From this evaluation, ASC is providing the attached septic system design for a new single-family home sized for a 360 gallon/day septic system.

The suitable soils found on the subject property were somewhat variable in the initial and repair areas. The area designated for the initial/primary septic system (see attached septic plan) was found to contain soils with greater than 24 inches in depth before a restrictive horizon was encountered.

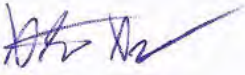
The initial and primary septic fields for the new home were sized based on a flow rate of 360 gallons/day and utilizing Accepted Status system for the initial and repair system. Any unauthorized site disturbance, filling, soil removal, or layout changes may result in the permit being revoked. Septic Area must be protected from any construction traffic.

The septic installer contractor shall install the primary system on contour, see attached site plan for the primary system and repair. No underground utilities, water lines, or sprinkler systems shall be placed into the initial or repair septic areas. Installation must meet all state and local county regulations for septic system installation. The trenches must be installed in the same location as the site plan. If flags are missing at the time of installation, they must be remarked by Adams Soil Consulting staff. Contact Alex Adams at 919-414-6761. A preconstruction conference is required with the septic installer prior to construction activities at least 14 days in advance of construction activities.

This report does not guarantee the future function of any waste water disposal system installed.

If you have any questions regarding the findings on the attached site plan or in this report, please feel free to contact me anytime.

Sincerely,



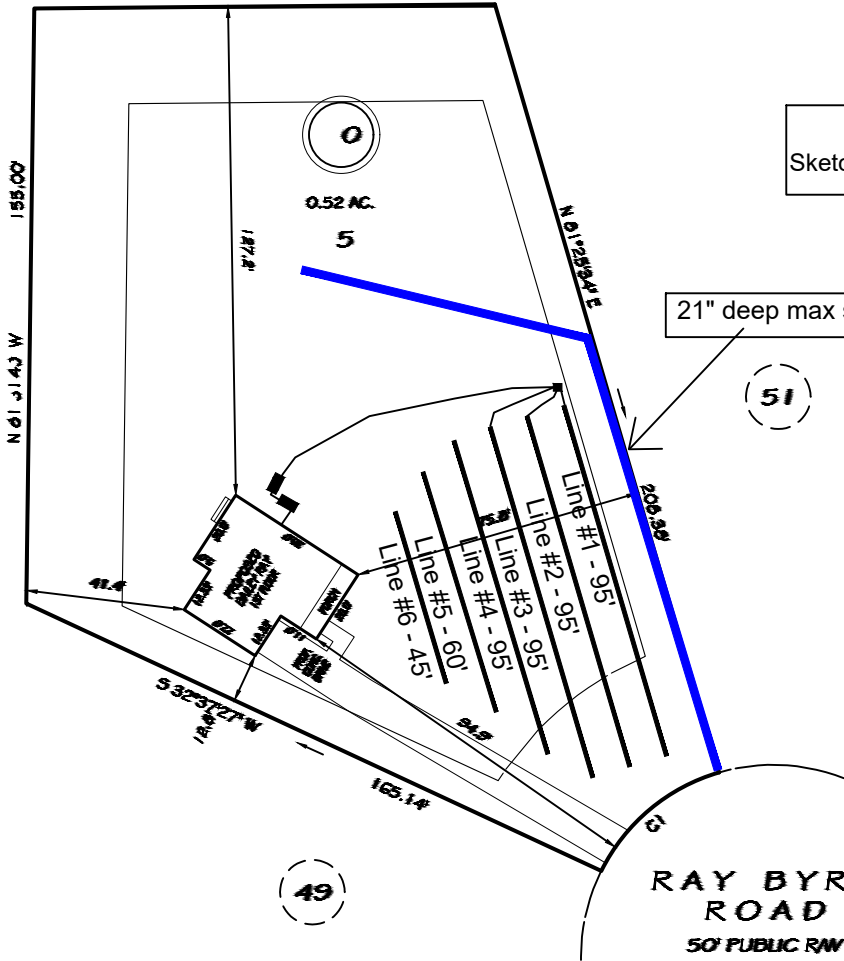
Alex Adams
NC Licensed Soil Scientist #1247
AOWE Certification: 10021E



Permit Requirements

- *8-10" of soil cover required over initial drainfield
- *surface water diversion drain/swale required.
- *System area will need to be reflagged prior to
- *Installer to contact Alex Adams prior to construction
- *System Area must be fenced off and protected from construction traffic.

SBM Homes, LLC
 3-Bedroom - Septic Design
 510 Ray Byrd Road - Lillington
 Harnett County PIN: 0558-38-0571



*Not a Survey
 Sketched from a plot plan supplied by owner

21" deep max swale to divert surface water - outlet to ditch

System: Pressure Manifold
 Lines: 1-3 (285')
 0.35 LTAR
 15" Max Trench Bottom
 Accepted Status System - Chambers
 Repair: Pressure Manifold
 Lines: 4-6 (200')
 0.35 LTAR
 15" Max Trench Bottom
 T&J Panel Bloce - 50% reduction system

**1000 Gallon Septic and Pump Tank
 Tank and trenches to be located minimum of 10'
 from any property line and minimum of 5'
 from any building foundation.
 *Do Not Cut, Fill, or Alter Drainfield or Repair Area
 *Comply with all setbacks
 *Contact local health dept. and/or Alex Adams prior to
 or during installation with any questions or concerns.

Adams
 Soil Consulting
 919-414-6761
 Job #1763
 12-11-23

GRAPHIC SCALE
 1" = 50'



SBM Homes, LLC

Soil Boring Location Map

510 Ray Byrd Road - Lillington

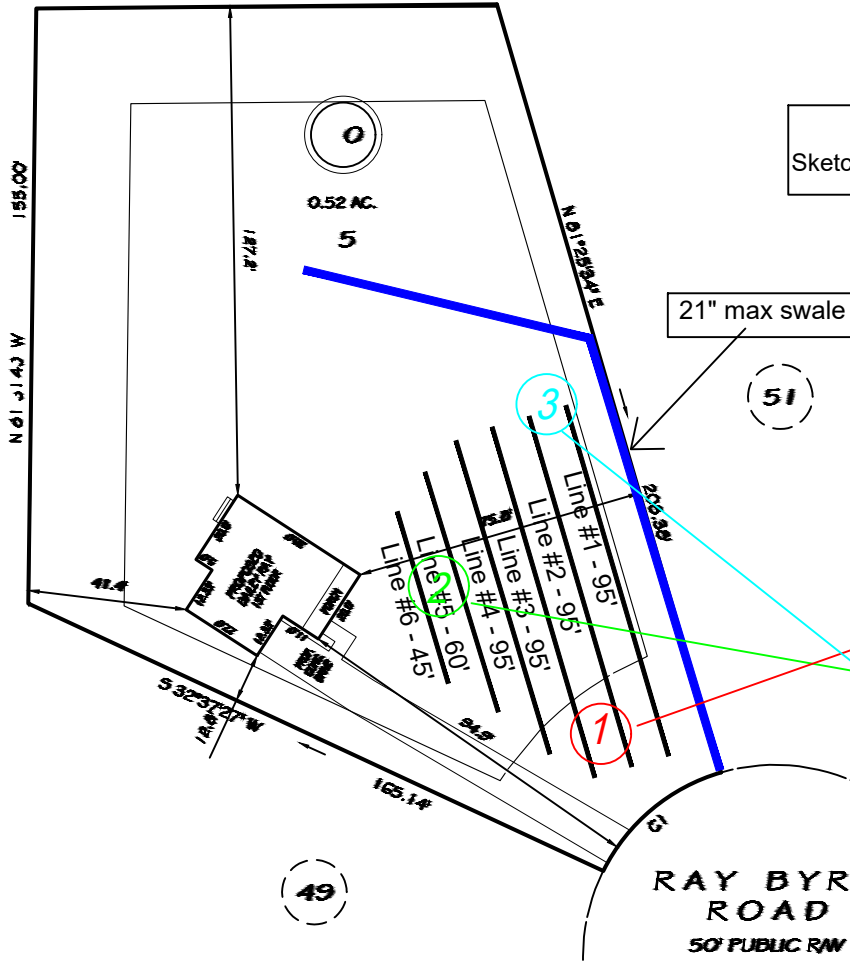
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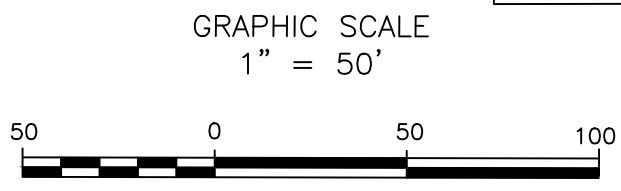
21" max swale to divert surface water - outlet to ditch



- 1 Profile Description #1
See Soil/Site Evaluation Data Form
- 2 Profile Description #2
See Soil/Site Evaluation Data Form
- 3 Profile Description #3
See Soil/Site Evaluation Data Form

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510 Ray Byrd Road PRESSURE MANIFOLD DESIGN -

SBM Homes, LLC

of BDR: 3 Daily Flow: 360 gal/day L.T.A.R.: 0.2500 gal/day/sq.ft

Septic Tank: 1000 gals Pump Tank: 1000 gals Sq. Foot: 855 System Type: Accepted

Number of Taps: 3 Length of Trenches: 285 ft(See Tap Chart for Details)

Depth of Trenches: 15 in Manifold Length: 36 in

Manifold Diameter: 4in sch 80pvc Tap Configuration: 6 in spacing 1 side(s) of manifold

Supply Line: length: 75 ft Diameter: 2 in sch 40pvc

Friction Loss + Fitting Loss: 1.61 ft(supply line length + 70' for fittings in pump tank)

Design Head: 2 ft Elevation Head: 6.00 ft

Total Head: 9.61 ft Pump to Deliver: 21.33 gals/min at 9.61 ft head

Dosing Volume: 130 gals,

Drawdown: 130 gals divided by 21.4 gals/in = 6.1 inches

Simplex Control Panel required; elapsed time meter and cycle counter required; Floats to be determined by type of pump tank used. A septic tank filter is required.

TAP CHART

Benchmark	0	is = 100.00	set at				Design Head:	2								
Pump tank elev.	line	color	rod read	Elevation	Pump elev.	length	hole size	flow/tap	Manifold elev.	96.00	gal/day	trench area	LINE LTAR	# of Panels (PPBPS)	Change in Spacing of Panels (in)	
	1	Red	5.00	95.00	95	1/2in SCH 40	7.11	120.00	285	0.4211						
	2	Yellow	5.30	94.70	95	1/2in SCH 40	7.11	120.00	285	0.4211						
	3	Blue	5.50	94.50	95	1/2in SCH 40	7.11	120.00	285	0.4211						
				Total Feet =	285	gal/min =	21.33			LTAR =	0.3500					
				Feet Required =	257	Velocity =	2.04			(ltar + 5%)	0.3675					
						Des. Flow	360			(ltar w/25% red)	0.4667					
						Pump Run=	16.88			(ltar + 5%)	0.4900					
						Tank Gal/IN	21.4									
						Elev. Head	6.00									
Total # of Panels (PPBPS)																
% of Dose Vol.				<u>70</u>												
Dose Volume				130												
Dose Pump Time				6.08												
Drawdown in Inches				6.1												
Comments:																

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM
 (Complete all fields in full)

OWNER: SBM Homes, LLC

APPLICATION DATE:

ADDRESS:

DATE EVALUATED: 12-10-23

PROPOSED FACILITY: Single Family, 3-bedroom PROPOSED DESIGN FLOW (.1949): 360gpd

PROPERTY SIZE: ~0.59 Acres

LOCATION OF SITE: 510 Ray Byrd Road – Lillington, NC

WATER SUPPLY: Private Well

EVALUATION METHOD: Auger Boring

TYPE OF WASTEWATER: Sewage

P R O F I L E #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPT H	.1956 SAPRO CLASS	.1944 RESTR HORIZ	
1	Linear Slope/3%	0-8	GR/SL	FR/NS/NP/SEXP	32"	N/A	N/A	N/A	P.S .35
		8-30	SBK/SCL	FI/SEXP/S/P					
2	Linear Slope/3%	0-8	GR/SL	FR/NS/NP/SEXP	27"	N/A	N/A	N/A	P.S/.35
		8-30	SBK/SCL	FI/SEXP/S/P					
3	Linear Slope/3%	0-8	GR/SL	FR/NS/NP/SEXP	32"	N/A	N/A	N/A	P.S/.35
		8-30	SBK/SCL	FI/SEXP/S/P					
4									

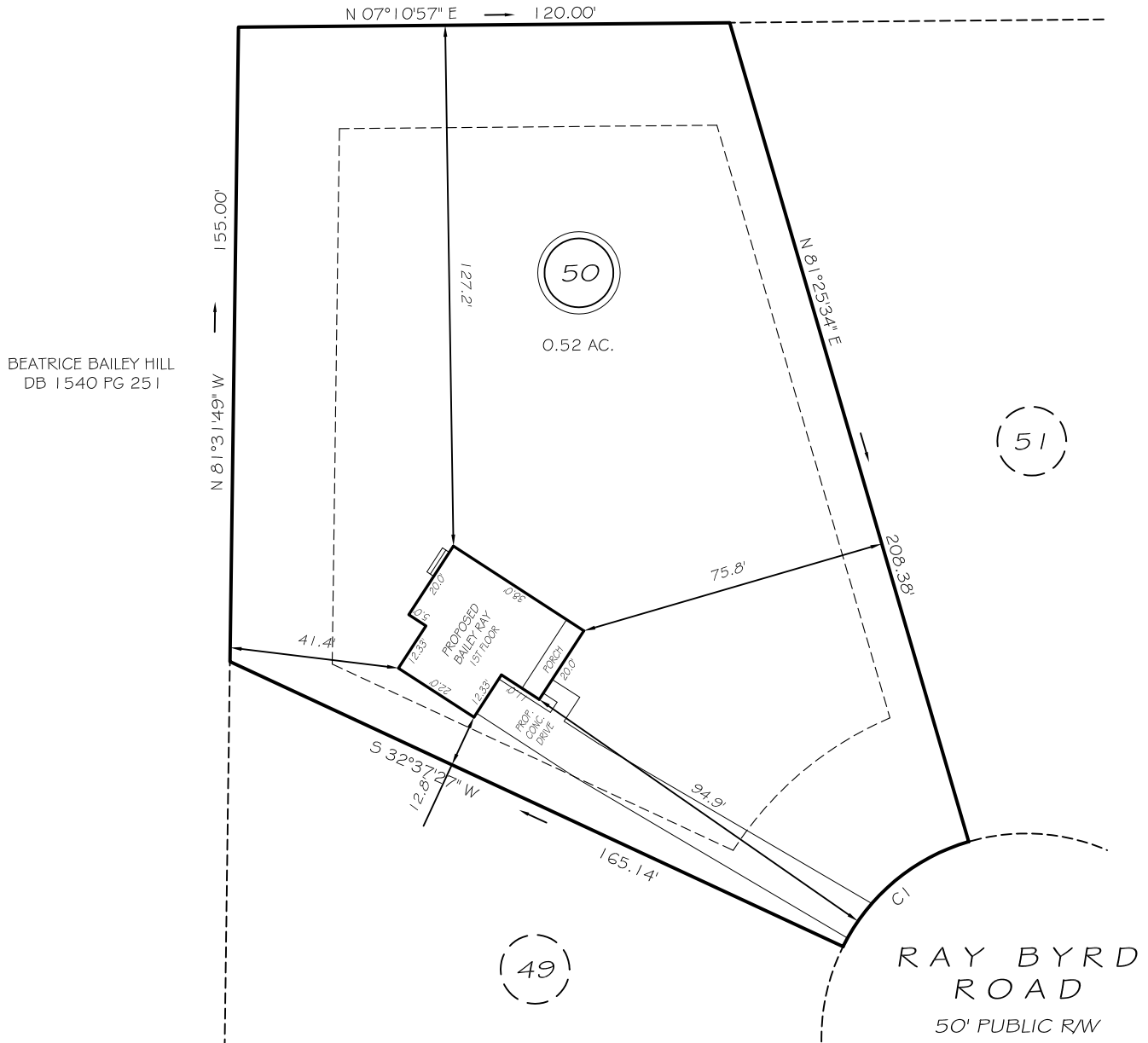
DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM	OTHER FACTORS (.1946): _____ SITE CLASSIFICATION (.1948): U/PS EVALUATED BY: A. Adams OTHER(S) PRESENT:
Available Space (.1945)	S	S	
System Type(s)	Type III (b)	Type III (b)	
Site LTAR	0.35	0.35	

I, MICHAEL P. GRIFFIN, certify that under my direction and supervision this map was drawn from an actual field survey; that the error of closure of the survey as calculated by coordinates is 1: 10,000+; that the area shown hereon was calculated by coordinates.

Witness my hand and seal this day of MONTH 2023.

PB 2002 PG 89
HARNETT CO. REGISTRY

JOSHUA MCCORMICK
& ERNESTINE STOKES
DB 4165 PG 93



REVISION: MOVE & ROTATE HOUSE 11/30/23

CI R=50.00' L=41.15' S32°09'07\"/>

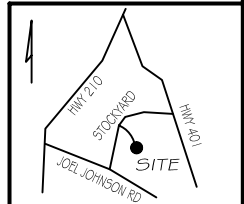
SETBACKS

FRONT	35'
REAR	25'
SIDE	10'
CORNER SIDE	20'

PRELIMINARY
NOT FOR RECORDATION,
SALES OR CONVEYANCE

LEGEND

EIP	EXISTING IRON PIPE	FES	FLARED END SECTION
IPS	IRON PIPE SET	WM	WATER METER
R/W	RIGHT OF WAY	CO	CLEAN OUT
N/F	NOW OR FORMERLY	FH	FIRE HYDRANT
EIS	EXISTING IRON STAKE	CB	CATCH BASIN



GRIFFIN LAND SURVEYING, INC.

P. O. BOX 148
FUQUAY-VARINA, NC 27526
(919) - 567 - 1963

PLOT PLAN FOR

SBM HOMES LLC

STOCKYARD ROAD ESTATES II

LOT 50

510 RAY BYRD ROAD

LILLINGTON, N.C.

HARNETT COUNTY LILLINGTON TOWNSHIP

DRAWN BY KDF

DATE 11/2/23

CHECKED BY MPG

SCALE 1" = 40'



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

4/7/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Wade Associates, LLC 250 Pollock St. New Bern NC 28560	CONTACT NAME: Angela Sensenig PHONE (A/C, No, Ext): (252) 631-5269 E-MAIL ADDRESS: asensenig@wadeict.com	FAX (A/C, No): (252) 649-2443
	INSURER(S) AFFORDING COVERAGE	
INSURED Alex Adams, DBA: Adams Soil Consulting 1676 Mitchell Rd. Angier NC 27501	INSURER A: Markel Insurance Company	
	INSURER B:	
	INSURER C:	
	INSURER D:	
	INSURER E:	
	INSURER F:	

COVERAGES

CERTIFICATE NUMBER: 23-24 Master

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
	COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:						EACH OCCURRENCE	\$
							DAMAGE TO RENTED PREMISES (Ea occurrence)	\$
							MED EXP (Any one person)	\$
							PERSONAL & ADV INJURY	\$
							GENERAL AGGREGATE	\$
							PRODUCTS - COMP/OP AGG	\$
								\$
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident)	\$
							BODILY INJURY (Per person)	\$
							BODILY INJURY (Per accident)	\$
							PROPERTY DAMAGE (Per accident)	\$
								\$
	UMBRELLA LIAB <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS-MADE DED <input type="checkbox"/> RETENTION \$						EACH OCCURRENCE	\$
							AGGREGATE	\$
								\$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	N/A				PER STATUTE	OTHER
							E.L. EACH ACCIDENT	\$
							E.L. DISEASE - EA EMPLOYEE	\$
							E.L. DISEASE - POLICY LIMIT	\$
A	Errors & Omissions			ME011181	1/31/2023	1/31/2024	General Aggregate	\$1,000,000
							Each Occurrence	\$1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER**CANCELLATION**

FOR INFORMATIONAL PURPOSES ONLY

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

N Whitsett/RACHEL

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