

DEPARTMENT OF HEALTH AND HUMAN SERVICES DIVISION OF PUBLIC HEALTH

ROY COOPER GOVERNOR

X PE

X LSS

LG

MANDY COHEN, MD, MPH SECRETARY

DANIEL STALEY
DIRECTOR

COMMON FORM FOR ENGINEERED OPTION PERMIT

See Instructions for Use in Appendix A

Except for "Date received", this Section to be completed by the Professional Engineer licensed in accordance with G.S. 89C LHD USE ONLY: Initial submittal of this NOI received: PART 1: Notice of Intent to Construct (NOI) X New Expansion Repair – LHD Permit Number Repair – EOP Permit Number 1. Facility Owner's name: (Owner, Company Name, Utility, Partnership, Individual, etc.): CUMMINGS BROTHERS ENTERPRISES Mailing address: PO BOX 591 _____City: MAMERS ____State: __NC _ Zip: _27552 Telephone number: 919-525-5856 E-mail Address: PLAMM@WADEJURNEYHOMES.COM 2. Professional Engineer (PE) name: ATHAN M PARKER, PE License number: 43250 Mailing address: PO BOX 4580 City: EMERALD ISLE State: NC Zip: 28594 Telephone number: 919-795-9594 E-mail Address: ATHAN.PARKER@AMPDENGINEERING.COM 3. Licensed Soil Scientist (LSS) name: HAYWOOD PITTMAN, LLS License number: 1262 Mailing address: 1073-1 GREGORY FORK RD City: RICHLANDS State: NC Zip: 28574 Telephone number: 910-324-2892 E-mail Address: PITTMANSOIL@YAHOO.COM 4. Licensed Geologist (LG) (if applicable) name: ______ License Number: _____ Mailing address: ______ State: ____ State: ____ Zip: _____ Telephone number: _____ E-mail Address: ____ 5. On-site Wastewater Contractor name: _HAYWOOD PITTMAN, LLS ____ License number: ____ 3825____ Mailing address: 1073-1 GREGORY FORK RD City: RICHLANDS State: NC Zip:28574 Telephone number: 910-324-2892 E-mail Address: PITTMANSOIL@YAHOO.COM 6. Proof of Errors and Omissions or other appropriate liability insurance for the following persons is attached that includes the name of the insurer, name of the insured and the effective dates of coverage:

WWW.NCDHHS.GOV
TEL 919-707-5874 • FAX 919-845-3972
LOCATION: 5605 SIX FORKS RD • RALEIGH, NC 27609
MAILING ADDRESS: 1642 MAIL SERVICE CENTER • RALEIGH, NC 27699-1642
AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER

X On-site Wastewater Contractor

7.	Property location (physical address, tax parcel identification number or subdivision lot, block number of the								
	property to be permitted): 165 MAPLE LEAF CT, PIN 0539-98-5468.000								
	County Name: HARNETT								
8.	Type of facility: Place of residence No. Bedrooms: 3 No. Occupants: 6								
	Place of business Basis for flow calculation:								
	Place of public assembly Basis for flow calculation:								
9.	Factors that would affect the wastewater load: NO KNOWN FACTORS TO AFFECT LOADING								
	,								
10.	Type, location, and classification (per Rule .1961) of wastewater system: $2-100'$ 25% REDUCTION LINES, TYPE III, 18" TB; LOCATED 10' FROM THE SOUTH PROPERTY LINE AND 12' FROM THE WEST PROPERTY LINE (LOCATED OFF-SITE ON LOT WEST OF LOT 26)								
11.	Design wastewater flow: <u>360</u> gpd (For flow > 3,000 gpd and industrial process, duplicate plans shall be sent to the State.)								
	Design wastewater strength: 🗵 domestic 🗌 high strength 🔲 industrial process								
12.	A plat as defined in G.S. 130A 334(7a) is attached: X Yes No								
13.	Owner meets requirements of ownership or control of the system per 15A NCAC 18A .1938(j): 🗵 Yes 🗌 No								
14.	Easement, right of way or encroachment agreement required per 15A NCAC 18A .1938(j): Yes 🗓 No								
	If yes, documentation filed in County Register of Deeds in Deed book Page								
15.	Multi-party agreements required, as applicable, pursuant to 15A NCAC 18A .1937(h): Yes X No								
	If yes, agreements filed in County Register of Deeds in Deed book Page								
16.	Location of proposed or existing wells (drinking water, irrigation, geothermal, groundwater monitoring,								
	sampling, etc.) and any potable and non-potable water conveyance lines is indicated on attached plans and								
	complies with 15A NCAC 18A .1950: X Yes No								
	This is a saprolite system. Yes No								
17.	Evaluation(s) of soil conditions and site features signed and sealed by a LSS, a LG, as applicable, is attached:								
	X Yes No								
18.	Proposed landscape, site, drainage, or soil modifications are attached: Yes X NA								
Att	estation by Professional Engineer licensed in North Carolina pursuant to G.S. 89C								
l, _	ATHAN M PARKER, PE hereby attest that the information required to be included with								
this	Registered Professional Engineer (Print Name) Notice of Intent to Construct is accurate and complete to the best of my knowledge and that the proposed								
syst	tem shall meet applicable federal, State, and local laws, regulations, rules and ordinances in accordance with								
G.S	. 130A-3361(e)(6).								
	Signature of Licensed Professional Engineer Date								
	SEAL 43250								
	MINGINEER								
	M. PANIC								

State of NC EQP

	inis section is for Owner use to	either designate PE as their legal representative or to self-submit the NOI.
	Designation of Registered Professiona	I Engineer as legal representative of Owner for this Notice of Intent:
P	1, /20 20	hereby designate <u>ATHAN M PARKER</u> , PE
	Print Name of Owner	Print Name of Registered Professional Engineer
	as my legal representative for purpose	s of this Notice of Intent pursuant to G.S. 130A-336.1.
	Jeny w / min	1-le-18
	Signature of Owner	Date
	Owner self-submittal of NOI: 🔊	
,	,	hereby submit this NOI prepared by
	Print Name of Owner Sursuant to G.S. 130A-336.1.	Print Name of Lisensed PE
	Notadout to dist 550A-22011	
0	Annature of Owler	Date

NOTES:

LIABILITY: The Department, the Department's outhorized agents or local health departments shall have no liability for wastewater systems designed, constructed and installed pursuant to an Engineered Option Permit. [(NC General Statute 130A-336.1(f))]

RIGHT OF ENTRY: The submittal of this Notice of Intent to Construct grants right of entry to the Local Health Department and the State to the referenced property.

ISSUANCE OF BUILDING PERMIT: Once the LHD deems that the Notice of Intent to Construct is complete via signature in the section above, the owner may apply to the local permitting agency for a permit for electrical, plumbing, heating, air conditioning or other construction, location or relocation activity under any provision of general or special law pursuant to G.S. 130A-338.

C+-+-	- C		-	_
State	OT	N(.	F()	Ρ

LHD Reference:	

This section for Local Health Department use only.

PART 2: LHD Completeness Review of the Notice of Intent to Construct

"(c) Completeness Review for Notice of Intent to Construct. – The local health department shall determine whether a notice of intent to construct, as required pursuant subsection (b) of this section, is complete within 15 business days after the local health department receives the notice of intent to construct. A determination of completeness means that the notice of intent to construct includes all of the required components. If the local health department determines that the notice of intent to construct is incomplete, the department shall notify the owner or the professional engineer of the components needed to complete the notice. The owner or professional engineer may submit additional information to the department to cure the deficiencies in the notice. The local health department shall make a final determination as to whether the notice of intent to construct is complete within 10 business days after the department receives the additional information from the owner or professional engineer. If the department fails to act within any time period set out in this subsection, the owner or professional engineer may treat the failure to act as a determination of completeness."

engineer may treat the failure to act as a determination of completeness.		ion, the owner or professional
The review for completeness of this Notice of Intent was conducte NOI is determined to be:	d in accordance with	G.S. 130A-336.1(c). This
INCOMPLETE (If box is checked, Information in this section is	s required.)	
Based upon review of information submitted by the PE in Part 1, tl	ne following items are	e missing:
Copies of this form listing missing items were sent to the design PE	and the Owner on _	
		Date
via with directions to re-submit missing	g items using Page 5 c	of this form.
Email, FAX, USPS, hand-delivered		
Print Name of Authorized Agent of the LHD Signature of Au	thorized Agent of the LHD	 Date
COMPLETE (If box is checked, information in this section is re	equired.)	
Based upon review of information submitted by the PE in Part 1 of	this form, this NOI is	deemed COMPLETE.
Copies of this signed form were sent to the design PE and the Own		·
	Date	Email, FAX, USPS, hand-delivered
A copy of this NOI and tracking information was sent to the State of	on via	
	Date	Email, FAX, USPS, hand-delivered
Print Name of Authorized Agent of the LHD Signature of Au	thorized Agent of the LHD	

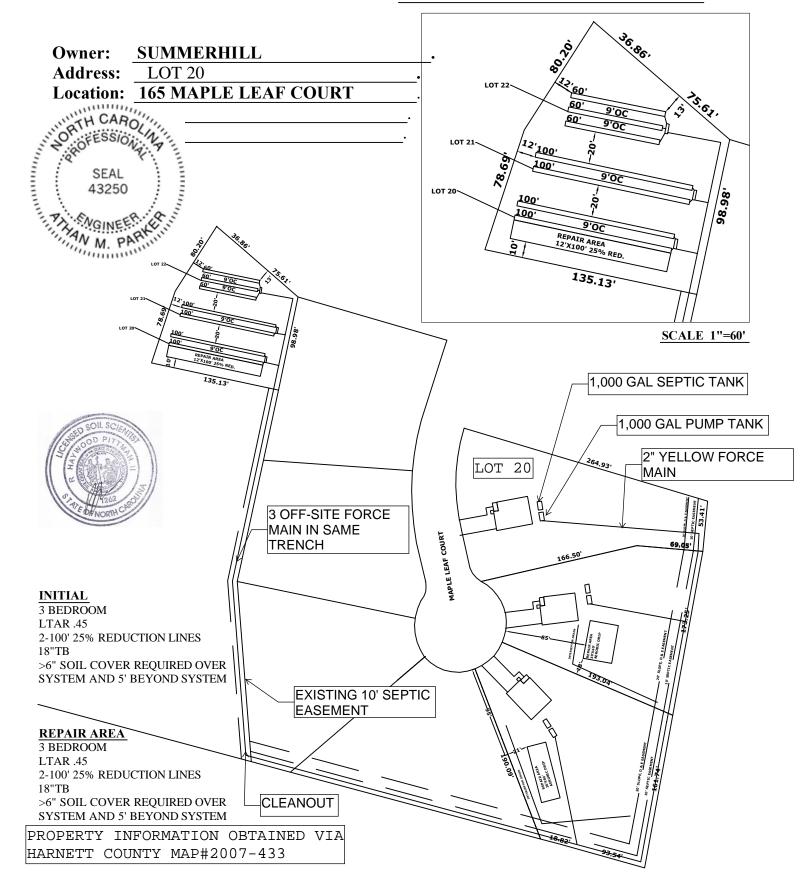
Re-submittal of NOI with missing items included

This Se	ection is for use by PE to submit items Resubmittals must be acc	noted as missing during LHD Co	•	
LHD USE ONLY: This NO	DI resubmittal received:	Date	_ by	
Item # from initial NOI	Resubmittal descrip	tion		
Attestation by Profession	al Engineer licensed in Nor	th Carolina pursuant	to G.S. 89C	
I,	her Engineer (Print Name)	eby attest that the inf	formation re-submitte	d for this Notice o
Intent to Construct is accu	urate and complete to the bitate, and local laws, regular		· · ·	•
Signature of Licens	ed Professional Engineer			
The se	ction below is for Local Health Departi	ment use after submittal of ite	ms noted as missing above.	
LHD Follow-up Complete	ness Review of Notice of Int	tent to Construct		
This follow-up review for 336.1(c). This NOI is dete	completeness of this Notice	e and Intent was cond	ucted in accordance w	ith G.S. 130A-
	f information submitted by because the following item			ce of Intent
Copies of this signed form	were sent to the design PE	and the Owner on	via	
			Date Email, FA)	K, USPS, Hand-delivere
Print name of authorized Ager	nt of the LHD Sigr	nature of authorized Agent	of the LHD	 Date
	f information submitted by this form, this NOI is deeme		IITTAL above in additio	on to information
Copies of this signed form	were sent to the PE and th	e Owner on	via	·
	orm with tracking information		te:via	
Print name of authorized Ager	nt of the LHD Circ	nature of authorized Agent	of the LHD	
Print nume of uutnonzed Ager	it oj tile LAD Sigi	iuture oj uutriorizea Agerit i	טן נוופ בחט	Date

PART 3:	Authorization to Operate	e (ATO)			
Except for date r	eceived, the Section below is to be	completed by the Owner or by the F the EOP.	'E designated to ac	t as their legal represe	ntative for
LHD USE ONL	Y: Initial submittal of reque	est for ATO received:		by	
	Date of Post-construction	on Conference:	Date	Initials	
1. Signed and a. Signed b. Drawin c. Report d. Mana e. On-sit f. Signed 2. Fee (as ap 3. Notarized Attestation by I,	d sealed copy of the Engineer d and sealed evaluation of so angs, specifications, plans its on special inspections and gement Program manual ite Wastewater Contractor's id and sealed statement pursuplicable) letter documenting Owner's in the Owner or the PE for Autorian interior Professional Engineer	oil conditions and site feature d final inspection signed statement uant to 15A NCAC 18A .1938(s acceptance of the system fro	s (h) om the PE indicated above	Yes Yes Yes Yes Yes Yes Yes Yes Yes	No N
		ance with G.S. 130A-3361(e		_	
		This section for LHD Use Only.			
INCOMPLE Based upo	on review of information sub	mitted by the Owner or PE in for an Authorization to Oper		_	
Copies of this s	signed form were sent to the	e design PE and the Owner on		via Email, FAX, USPS, Hand	 1-delivered
Print name of au	ıthorized Agent of the LHD	Signature of authorized Age	ent of the LHD		Date
-		mitted by the Owner or PE in e with G.S. 130A-336.1(m).	the Section abo	ove, this Authoriza	tion to
A copy of this o	complete NOI/ATO with trac	king information was sent to	the State on		 and-delivered
Print name of au	uthorized Agent of the LHD	Signature of authorized Age	ent of the LHD		Date

ISSUANCE OF CERTIFICATE OF OCCUPANCY: Once the LHD determines completeness based upon the PE submission, the owner may apply to the local permitting agency for permanent electrical service to a residence, place of business or place of public assembly pursuant to G.S. 130A-339.

PITTMAN SOIL CONSULTING



Pittman Soil Consulting

1003 Gregory Fork Road Richlands, NC 28574 Phone (910)330-2784 pittmansoil@yahoo.com

October 1, 2018

Ref: EOP-Summerhill lot 20, 165 Maple Leaf Court, Harnett County

Dear Sir,

A soil evaluation was conducted on the above referenced tract to determine the sites suitability for septic. The current laws and rules of NC was used as guide for this evaluation.

Hand Auger borings on the site were used to characterize the soil texture, and depth to the soil wetness condition. The attached plot plan shows the location of the septic system in the most ideal location on the site(off-site septic). The soil wetness condition was found to be 30" from the surface with a sandy clay loam texture. I have assigned an LTAR of 0.45 gpd/sqft for a 360 gpd 3 bedroom residence. This will require the installation of 2-100' 25% reduction lines that shall be installed in accordance with the current rules. The depth to soil wetness of 30" would constitute an 18" trench bottom. The system will require 6" of Group II or III soil cover that shall extend 5' from the edge of the system. The system will require a 1000 gallon septic tank and a 1000 gallon pump tank..

The repair area will require 2-100' 25% reduction lines installed at 18" from the surface.

If you have any questions please feel free to contact me at 910-330-2784. Thank You.



R. Haywood Pittman II NC Licensed Soil Scientist



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 07/30/2018

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 have ADDITIONAL INSURED provisions or 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 confor rights to the certificate holder in liquid for the production of the policy.

this certaincate does not come rights to the certaincate notice in new or such endorsement										
	PRODUCER					CONTACT NAME:				
N.C. Farm Bureau Ins. Agency					PHONE FAX (A/C, No, Ext): (A/C, No):					
5301 Glenwood Avenue (27612)					E-MAIL ADDRESS:					
P.O.	Box 27427		INSURER(S) AFFORDING COVERAGE NAIC #					NAIC#		
Rale	eigh			NC 27611	INSURE	RA: Capitol S	pecialty Insura	nce Corporation		
INSU	RED			INSURE	RB:					
	Ronald H. Pittman, II DBA				INSURE	RC:				
	Pittman Soil Consulting				INSUREI	RD:	77 41			
	1003 Gregory Fork Rd				INSURE					
	Richlands			NC 28574	INSUREI					
COV	/ERAGES CER	TIFIC	ATE	NUMBER: CL182121237				REVISION NUMBER:		
TH	IIS IS TO CERTIFY THAT THE POLICIES OF	NSU	RANCE	E LISTED BELOW HAVE BEEN	ISSUED	TO THE INSU	RED NAMED A	BOVE FOR THE POLICY PER	IOD	
CE	DICATED. NOTWITHSTANDING ANY REQUI ERTIFICATE MAY BE ISSUED OR MAY PERT. CLUSIONS AND CONDITIONS OF SUCH PO	AIN, T	HE IN	ISURANCE AFFORDED BY TH	IE POLIC	IES DESCRIBE	D HEREIN IS S	WITH RESPECT TO WHICH T SUBJECT TO ALL THE TERMS	HIS S,	
INSR LTR	TYPE OF INSURANCE	ADDL	SUBR	POLICY NUMBER	T	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS		
LIK	COMMERCIAL GENERAL LIABILITY	INSD	WVD	FOLICI NUMBER		(MINIOD/TTTT)	(MINDD/1111)			0,000
	CLAIMS-MADE X OCCUR						-	DAMAGE TO RENTED	\$ 50,0	00
								MED EXP (Any one person)	\$ 5,00	0
Α	➤ Professional Liability			EV20182381-01		07/19/2018	07/19/2019		4	0,000
	GEN'L AGGREGATE LIMIT APPLIES PER:								\$ 2,00	
	PRO- JECT LOC							PRODUCTS - COMP/OP AGG	\$ 2,00	0,000
	OTHER:							Profess Occ/Agg	s 1m/2	2m
	AUTOMOBILE LIABILITY							COMBINED SINGLE LIMIT (Ea accident)	\$	
	ANY AUTO								\$	
	OWNED SCHEDULED							BODILY INJURY (Per accident)	\$	
	AUTOS ONLY AUTOS NON-OWNED							PROPERTY DAMAGE	\$	
	AUTOS ONLY AUTOS ONLY			2				(Per accident)	\$	
	LIMBELLALIAR		-							
	UMBRELLA LIAB OCCUR			s e					\$	
	EXCESS LIAB CLAIMS-MADE								\$	
	DED RETENTION \$	-							\$	
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N							PER OTH- STATUTE ER		
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED?	N/A						E.L. EACH ACCIDENT	\$	
	(Mandatory in NH) If yes, describe under			· ·				E.L. DISEASE - EA EMPLOYEE	\$	
	DESCRIPTION OF OPERATIONS below								\$ 4.00	0.000
	Contractors Pollution Liability-				-			Each Contractors	1,00	0,000
Α	Occurrence Form			EV20182381-01	-	07/19/2018	07/19/2019	Pollution Limit		
								Aggregate Limit	2,00	0,000
DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)										
			FI 1 AF 1511							
CEF	RTIFICATE HOLDER				CANC	ELLATION				
AMP'd Engineering, PLLC					SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.				D BEFORE	
	PO Box 4580				AUTHOR	RIZED REPRESEN	TATIVE	A MIT		
	Emerald Isle	NC 28594		Tek	ate	over	-			

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CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 3/6/2018

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 have ADDITIONAL INSURED provisions or 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					CONTACT NAME: Lindsay Lutz					
	Group, Inc.				PHONE	, Ext): 910-478	2_3373	FAX (A/C, No):	010-45	5_7/81	
	Gum Branch Road ksonville NC 28540				E-MAIL	ss: certs@sia	aroup com	(A/C, NO):	310-43	3-7-01	
Jac	KSUTVIIIE INC 20040				ADDRES						
					, ,				NAIC#		
INSU	DED.	30102					ERS CAS &	SURETY CO		19038	
	P'D Enginerring	00102			INSURE	RB:					
250	00 N Heritage St, Ste 2				INSURE	RC:					
Kin	ston NC 28504				INSURE	RD:					
					INSURE	RE:					
					INSURE	RF:					
				NUMBER: 178254178				REVISION NUMBER:			
IN Cl	HIS IS TO CERTIFY THAT THE POLICIES DICATED. NOTWITHSTANDING ANY RI ERTIFICATE MAY BE ISSUED OR MAY (CLUSIONS AND CONDITIONS OF SUCH	EQUIF PERT POLI	REMENTAIN, TOTAL CONTROL OF THE CONT	NT, TERM OR CONDITION THE INSURANCE AFFORDI LIMITS SHOWN MAY HAVE	OF ANY	CONTRACT THE POLICIES EDUCED BY F	OR OTHER DESCRIBED PAID CLAIMS.	DOCUMENT WITH RESPEC	TO Y	WHICH THIS	
INSR LTR	TYPE OF INSURANCE	ADDL	SUBR WVD	POLICY NUMBER		POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMIT	s		
	COMMERCIAL GENERAL LIABILITY							EACH OCCURRENCE	\$		
	CLAIMS-MADE OCCUR							DAMAGE TO RENTED PREMISES (Ea occurrence)	\$		
								MED EXP (Any one person)	\$		
								PERSONAL & ADV INJURY	\$		
	GEN'L AGGREGATE LIMIT APPLIES PER:							GENERAL AGGREGATE	\$		
	POLICY PRO- JECT LOC							PRODUCTS - COMP/OP AGG	\$		
								FRODUCTS - COMP/OF AGG	\$		
	OTHER: AUTOMOBILE LIABILITY							COMBINED SINGLE LIMIT	\$		
	ANY AUTO							(Ea accident) BODILY INJURY (Per person)	\$		
	OWNED SCHEDULED							BODILY INJURY (Per accident)	\$		
	AUTOS ONLY AUTOS NON-OWNED							PROPERTY DAMAGE	\$		
	AUTOS ONLY AUTOS ONLY							(Per accident)	\$		
	IMPREM A MAR								-		
	UMBRELLA LIAB OCCUR							EACH OCCURRENCE	\$		
	EXCESS LIAB CLAIMS-MADE	_						AGGREGATE	\$		
	DED RETENTION\$							DED OTH	\$		
WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N								PER OTH- STATUTE ER			
ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED?		N/A						E.L. EACH ACCIDENT	\$		
	(Mandatory in NH) If yes, describe under							E.L. DISEASE - EA EMPLOYEE	\$		
	DESCRIPTION OF OPERATIONS below							E.L. DISEASE - POLICY LIMIT	\$		
Α	Professional Liability			106460474		2/10/2018	2/10/2019	Each Occurrence Aggregate	1,000,0 2,000,0		
DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required) Office Use Only.											
	TIEICATE HOLDED				CANO	TELL ATION					
Office Use Only This certificate is for information purpose only. Certificate is not valid unless certificate is					CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.						
	issued with certificate hold filled in from SIA Group.				AUTHORIZED REPRESENTATIVE AUGUST EVENL						

Civil Engineer - Consulting Engineer - Land Development

PO Box 4580 Emerald Isle, NC 28594 (919) 795-9594-athan.parker@ampdengineering.com Firm License Number P-1532

WASTEWATER DISPOSAL SYSTEM

For

Wade Jurney Homes, Inc Harnett County, North Carolina

To serve: Lot 20 - 3 Bed Room Home

Owner: Wade Jurney Homes, Inc 3300 Battleground Ave, Ste 230 Greensboro, NC 27410-2490 919-525-5856

Agency: Environmental On-Site Health Department Harnett County Health Department

October 2018



Civil Engineer - Consulting Engineer - Land Development

I. Purpose

This report was prepared for the sole purpose of permitting 165 Maple Leaf Court, Lot 20 of Summerhill Subdivision in Harnett County, NC.

II. Description

The project will be consistent of one 3 bedroom single family home producing 360 GPD. The effluent will fall with gravity flow from the home to a 1,000 gallon septic and then into a 1,000 gallon pump tank.

Supply Line was designed to have 1,218 LF plus 10%, designed for a total of 1,440 feet. One pump will be utilized to operate the system.

III. Soil Investigation

Haywood Pittman, LSS, has provided soil analysis and has staked the proposed field for the project. As shown on the map, the disposal field is located approximately 250 feet West of the Collection Site.

IV. Site Evaluation

Soil suitability was evaluated by Haywood Pittman, LSS, and found to be that the wetness condition is greater than 30" from the surface with an assigned LTAR of 0.45 gpdpsf. For more soil information see report by Pittman Soil Consulting.

V. Design

The septic tank shall be located as shown on the attached plan or approved by engineer and the pump tank shall be located as shown on the attached plan or approved by engineer to collect wastewater from the home and meet all required setbacks.

Design Flow: 3 bed rooms x 120 gpd per bed room = 360 gpd

Septic Tank Size: V = 1,000 gallon

Pump Tank Size: V = 1,000

Civil Engineer - Consulting Engineer - Land Development

Gravity lines shall have cleanouts at 50' and shall be sloped per NC Building code and per Rule .1955(o)(1), shall be a minimum of 2%.

Pump tank shall have operable 24"x24" square hatch light in weight and be hinged with locking mechanism.

The nitrification field as shown should be 2-100' 25% reduction lines type IIIg with pressure manifold.

Haywood Pittman, LLS, established the LTAR at 0.45.

Total Dynamic head calculation is derived utilizing 25 gpm with a total distance of 1,440 feet from the pump tank at the collection site to the pressure manifold at the distribution site.

Supply line to be 2" PVC Sch 40. Force main to have cleanouts at the end of each line, at all main junctions and at least every 1,000 feet.

Dosing: Daily dose – 360 gallons to the distribution field, preferable 5 doses per day yielding 72 gallons per dose, the field yields a total flow from above 25 gpm, the tank shall run approximately 2.88 mins (72 gallons). For a tank size of 1,000 gallons yields approximately 300 gallons per foot or 25 gallons per inch or say 2.88 inches for typical dose.

Float Design: There shall be three (3) float system located at the collection site where simplex pump tank is utilized. The floats shall meet .1952(c)(5).

A float tree shall be constructed of PVC making the float system readily available to be removed and maintained or adjusted. They should be positioned to be free of turbulence within the tank. Simplex system shall have off, on and high alarm.

Control Panel shall be NEMA-4x and shall be clearly identified. Panel shall be mounted on a ground contact treated 4x4 within 10' of the pump tank and shall be 4' above grade. Control panel shall be a simplex system having the capability to tun off, on, and high-water alarm. Control panel shall be equipped with the following: H-O-A switch, event counter, elapsed time meter, run light, alarm light, audible alarm, convenience outlet and shall meet NC .1952 rules.

Civil Engineer - Consulting Engineer - Land Development

Line should be pressure tested prior to connection to ensure no leaks. Test per the following:

- 1. Close the downstream, normally open outlet valve at the pressure manifold.
- 2. Open the normally closed valve for flushing air from the line.
- 3. Fill the line to be tested and ensure all air is flushed from the line.
- 4. Carefully monitor the discharge (normally closed) valve which is open to ensure air is evacuated.
- 5. Hook up hydrostatic pump and increase pressure until 50 psi.
- 6. Hold 50 psi for two (2) hours for successful test.
- 7. If pressure does not hold, evaluate for leaking and re-test after repair until passed.

Manifold Design: Required ratio inside areas of manifold compared to laterals shall exceed 0.7:1.

Inside area of 1/2" pipe Sch 40 PVC – 0.311 inches radius = 0.304 sq inches

2 laterals present – 0.608 sq inches total present.

3" diameter manifold – comparison

Inside area of 3" pipe Sch 40 PVC – 1.534 inches radius = 7.393 sq inches

7.393/.608 = 12.16 > 0.7 required

2" schedule 40 force main

Friction loss per 100 feet @ 25 gpm = 1.27 feet

1,440 feet x 1.27 feet of head loss / 100 foot = 18.3 feet

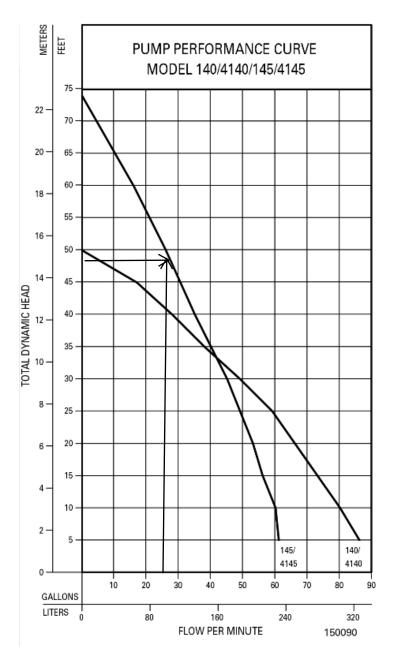
Total friction loss = 18.3 feet + 10 % = 20 feet

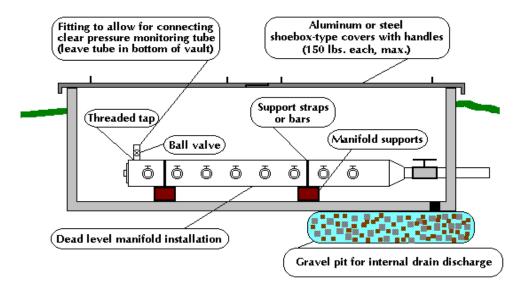
AMP'd Engineering, PLPC Civil Engineer - Consulting Engineer - Land Development

TDH for Nitrification Field

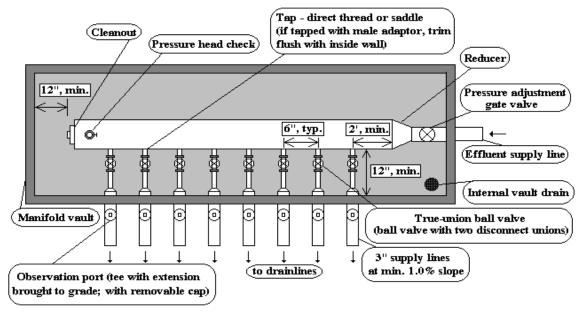
Pump to be used:

Zoller 145 or approved equal to match below pump curve.





Profile View of Pressure Manifold for Sloping Site Installation (not to scale)



Plan View of Pressure Manifold for Sloping Site Installation (not to scale)